EAU

Mar 08, 2022

PROJECT ID: 8953-04-72

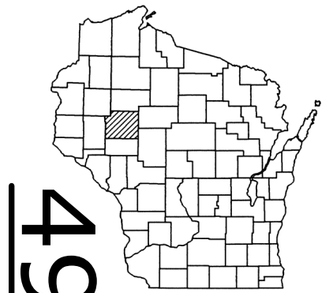
WITH: N/A

COUNTY: CHIPPEWA

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 = 172



49

N

DESIGN DESIGNATION

A.A.D.T.	(2022)	=	1060
A.A.D.T.	(2042)	=	1165
D.H.V.		=	152
D.D.		=	62/38
T.		=	24.3%
DESIGN SPEED		=	55 MPH
ESALS		=	690,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BLOOMER - NEW AUBURN

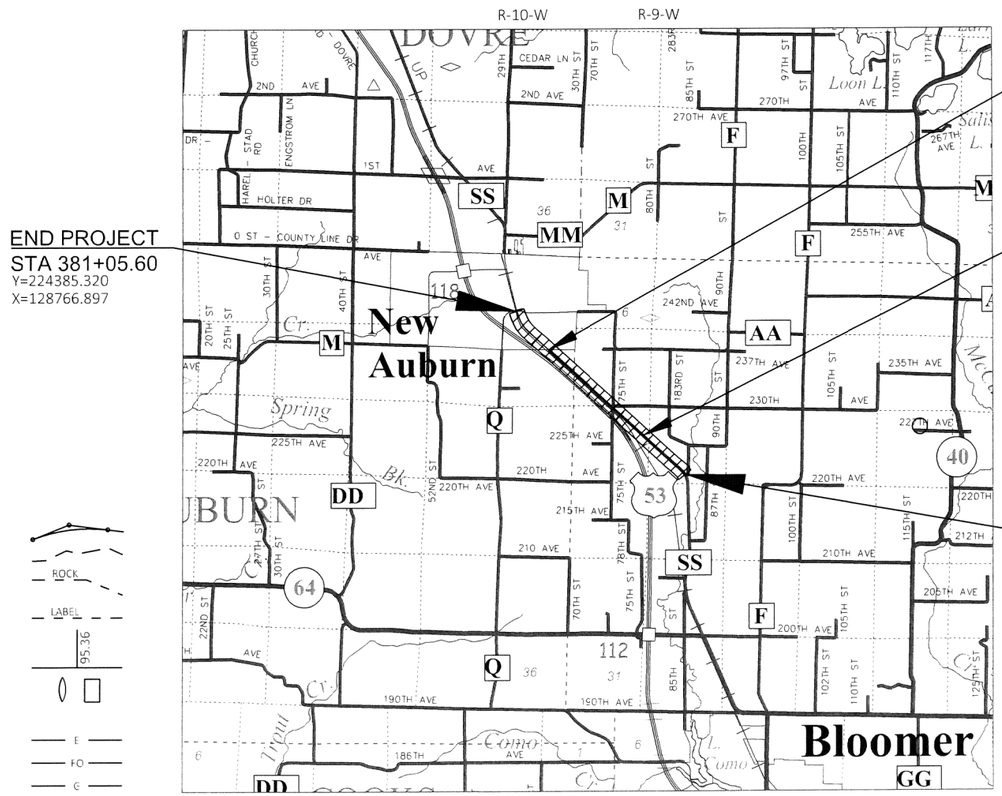
83RD STREET TO CTH Q

CTH SS

CHIPPEWA COUNTY

STATE PROJECT NUMBER
8953-04-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8953-04-72	WISC 2022265	1



END PROJECT
STA 381+05.60
Y=224385.320
X=128766.897

STRUCTURE B-09-0397
STA 342+02.39

STRUCTURE B-09-0391
STA 241+08.38

T-31-N

BEGIN PROJECT
STA 215+33.11
Y=213015.511
X=140750.396

LAYOUT

SCALE 0 2.0 MI

TOTAL NET LENGTH OF CENTERLINE = 3.139 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM, CHIPPEWA 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.

ACCEPTED FOR CHIPPEWA COUNTY

DATE: 10-25-21 (Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

JT ENGINEERING, INC

WISCONSIN
MATTHEW J. SOLIN
E-42459
CHIPPEWA FALLS WI
PROFESSIONAL ENGINEER

DATE: 10/25/2021 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JT ENGINEERING, INC
Designer	JT ENGINEERING, INC
Project Manager	MATTHEW THORNSEN, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT

DATE: 10/26/2021 (Signature)

E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\C10101_TI.DWG

PLOT DATE : 10/24/2021 10:11 AM PLOT BY : MATT SOLIN PLOT NAME :

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 16.31 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.70 ACRES

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGER'S HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

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

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING ASPHALTIC DRIVEWAYS AND PAVEMENT AT FULL DEPTH REMOVAL LIMITS.

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

CONDUCT CONSTRUCTION OPERATIONS SUCH THAT WATER IS NOT TRAPPED ON THE ROADWAY OR BASE AGGREGATE SURFACE.

THE EXISTING RIGHT OF WAY IS BASED OFF OF CHIPPEWA COUNTY GIS AND IS SHOWN FOR GRAPHICAL PURPOSES ONLY.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOILED, FERTILIZED, SEEDED, AND EROSION MAT.

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

ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD), THE STANDARD DETAIL DRAWINGS (SDD), AND THE GENERAL NOTES LISTED IN THE SDD'S.

UTILITY CONTACTS

MIKE LYDON
DAIRYLAND POWER COOPERATIVE - ELECTRICITY
3200 EAST AVE S
PO BOX 817
LA CROSSE, WI 54602
(608) 787-1458
MICHAEL.LYDON@DAIRYLANDPOWER.COM

DARRELL DOUGHTY
CITIZENS TELEPHONE COOPERATIVE - COMMUNICATION
328 W MAIN ST
PO BOX 127
NEW AUBURN, WI 54757
(715) 237-2605
DDOUGHTY@CITIZENS-CONNECTED.COM

NIC ALBERSON
CHIPPEWA VALLEY ELECTRIC COOPERATIVE - ELECTRICITY
317 S 8TH ST
PO BOX 575
CORNELL, WI 54732
(715) 239-6800
NALBERSON@CVE.COOP

TRAVIS MCFARLANE
BLOOMER TELEPHONE COMPANY - COMMUNICATION
1120 15TH AVE
BLOOMER, WI 54724
(715) 568-4830
TRAVIS.MCFARLANE@BLOOMER.NET

DANIEL MOOS
VILLAGE OF NEW AUBURN - SEWER & WATER
130 E ELM ST
PO BOX 100
NEW AUBURN, WI 54757
(715) 237-2223
PUBLICWORKS@NEWAUBURN-WI.COM

CHADWICK ERICKSON
XCEL ENERGY - ELECTRICITY
2911 SOUTH PIONEER AVENUE
RICE LAKE, WI 54868
(715) 651-0845
CHADWICK.P.ERICKSON@XCELENERGY.COM

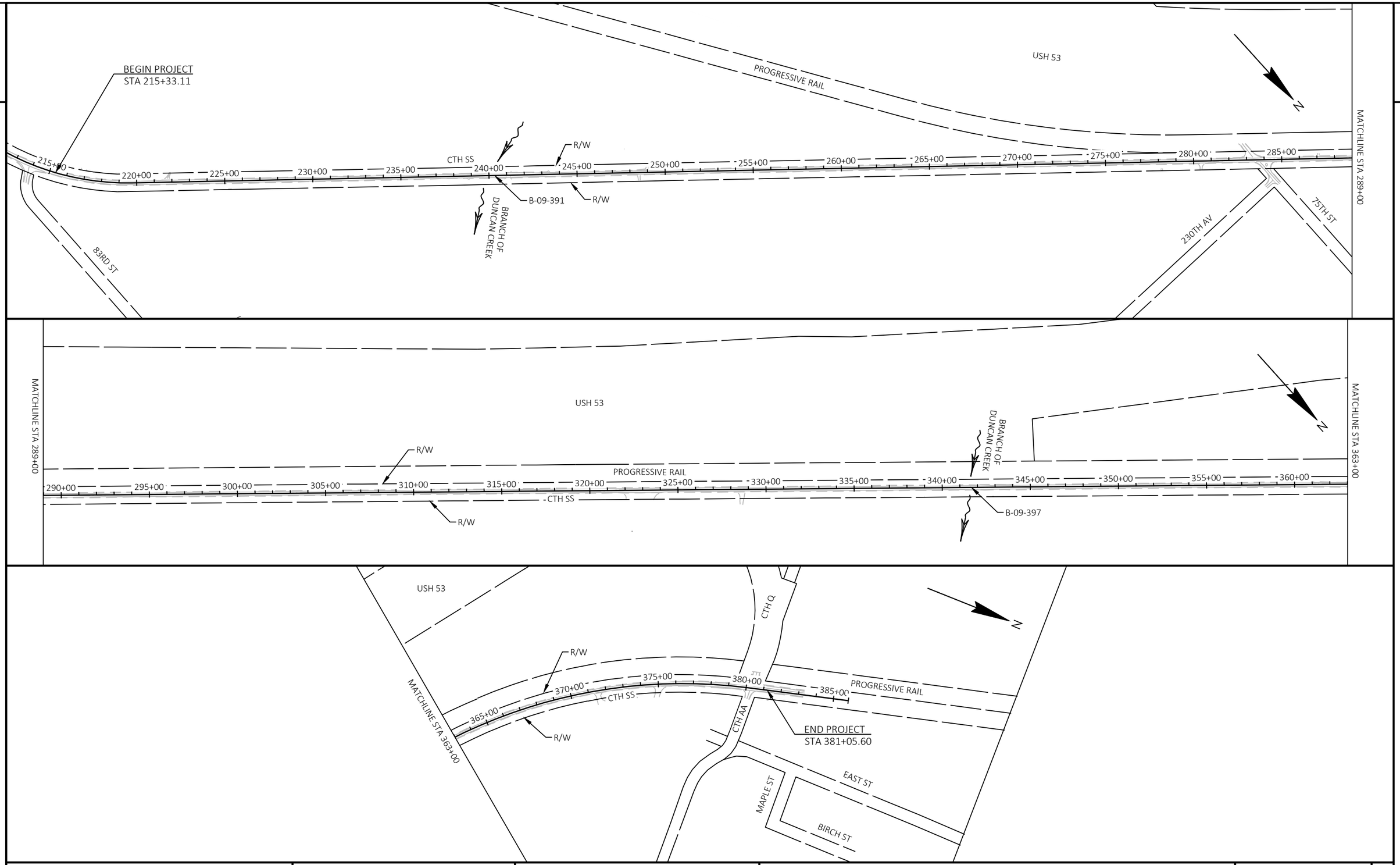
MITCHELL DIENGER
XCEL ENERGY - TRANSMISSION
414 NICOLLET MALL, 5TH FLOOR
MINNEAPOLIS, MN 55401
(612) 321-3109
MITCHELL.A.DIENGER@XCELENERGY.COM

TERRY WRIGHT
CHARTER COMMUNICATIONS - COMMUNICATION
1201 MCCANN DRIVE
ALTOONA, WI 54720
(715) 491-4514
TERRY.WRIGHT@CHARTER.COM

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

WISCONSIN DNR LIAISON

LEAH NICOL
DNR NORTHWEST
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-934-9014
E-MAIL: LEAH.NICOL@WISCONSIN.GOV



PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PROJECT OVERVIEW	SHEET 3	E

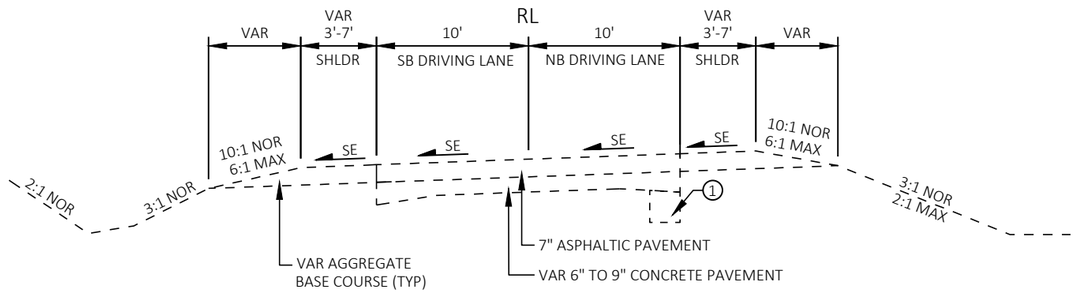
FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - Project Overview

PLOT DATE : 11/1/2021 5:00 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

NOTES:

1. EXISTING 12" CUTOFF WALL:
   STA 215+11 TO STA 216+65
2. PAVEMENT CROSS SLOPE VARIES 0.5% TO 5%.
3. SHOULDER CROSS SLOPE VARIES 4% TO 8%.
4. SHOULDERS ARE PAVED 3.0' WIDE FROM:
   STA 239+90 TO STA 242+42 LT
   STA 239+73 TO STA 242+30 RT

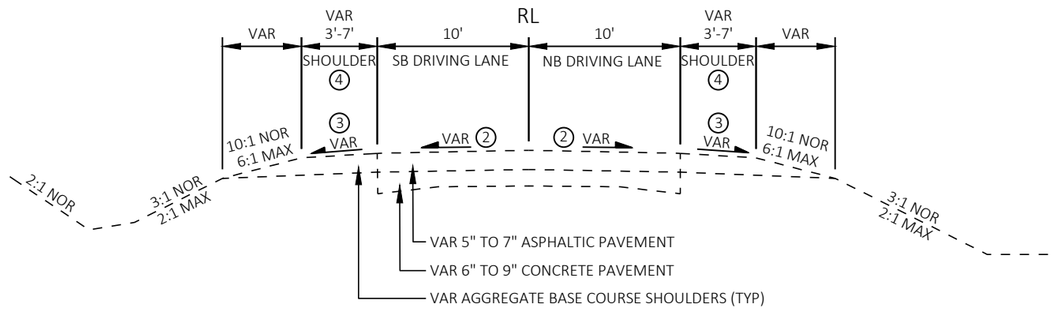


TYPICAL EXISTING SUPERELEVATED SECTION - SOUTH CURVE

STA 215+33.11 TO STA 222+15.51

PAVEMENT BORING LOG

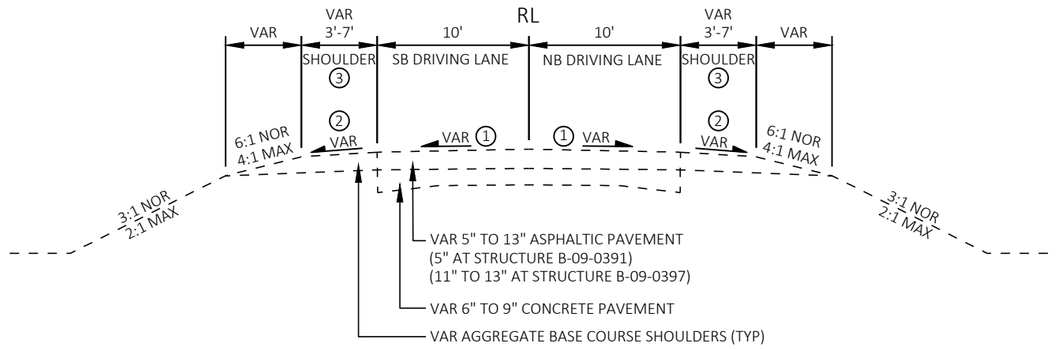
BORING NO.	STATION	OFFSET	UNDERLAYING MATERIAL
B-1	217+22	5.2' RT	7" ASPHALT 7" CONCRETE
B-2	245+44	4.9' LT	7" ASPHALT 6" CONCRETE
B-3	271+58	5.0' RT	7" ASPHALT 6" CONCRETE
B-8	281+75	3.5' LT	8" ASPHALT 6.5" CONCRETE
B-9	285+75	2.3' RT	10"ASPHALT 20" GRAVEL 6" CONCRETE
B-4	299+98	7.3' LT	7"ASPHALT 7" GRAVEL 6" CONCRETE
B-5	320+11	4.6' RT	8" ASPHALT 8" GRAVEL 8" CONCRETE
B-6	340+09	6.1' RT	9.5" ASPHALT 14.5" GRAVEL 8"CONCRETE
B-7	371+74	6.1' LT	11" ASPHALT 6" GRAVEL 4" CONCRETE



TYPICAL EXISTING SECTION

STA 222+15.51 TO STA 240+88.00
STA 241+26.00 TO STA 282+50.00

2

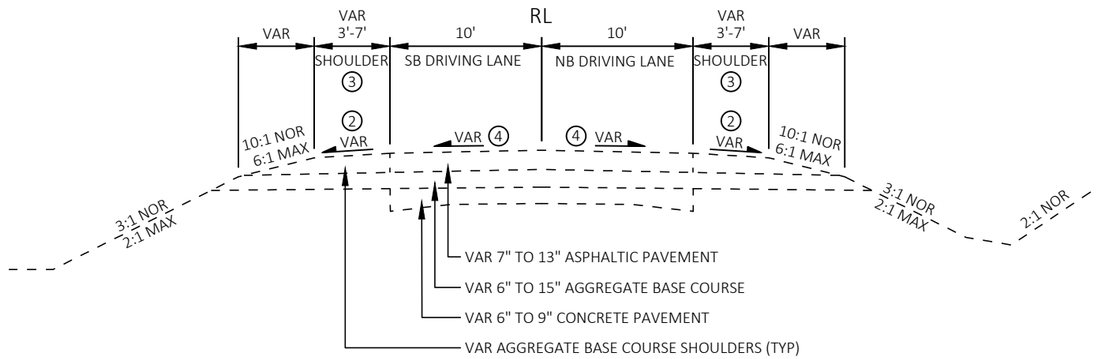


TYPICAL EXISTING SECTION

STA 240+88.00 TO STA 241+26.00
STA 341+88.00 TO STA 342+20.00

NOTES:

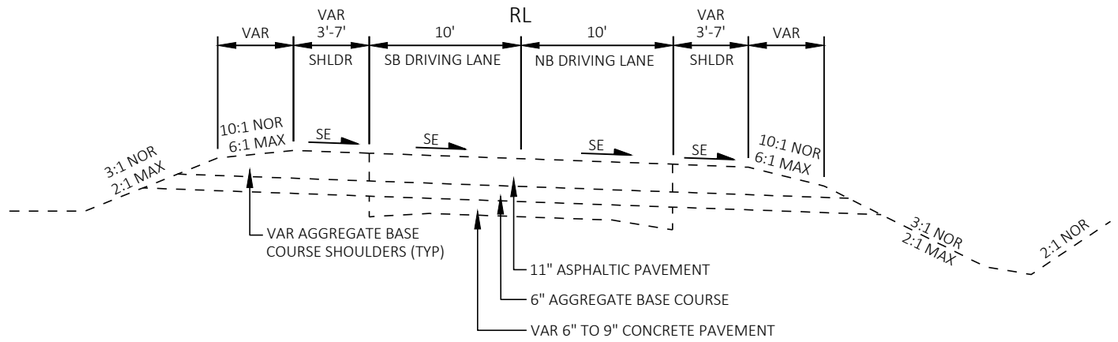
1. PAVEMENT CROSS SLOPE VARIES 1% TO 3%.
2. SHOULDER CROSS SLOPE VARIES 4% TO 8%.
3. SHOULDERS ARE PAVED 3.0' WIDE FROM:
   STA 239+90 TO STA 242+42 LT
   STA 239+73 TO STA 242+30 RT
   STA 341+45 TO STA 342+64 LT
   STA 341+45 TO STA 342+56 RT
4. PAVEMENT CROSS SLOPE VARIES 1% TO 6%.



TYPICAL EXISTING SECTION

STA 282+50.00 TO STA 341+88.00
STA 342+20.00 TO STA 361+41.73

2



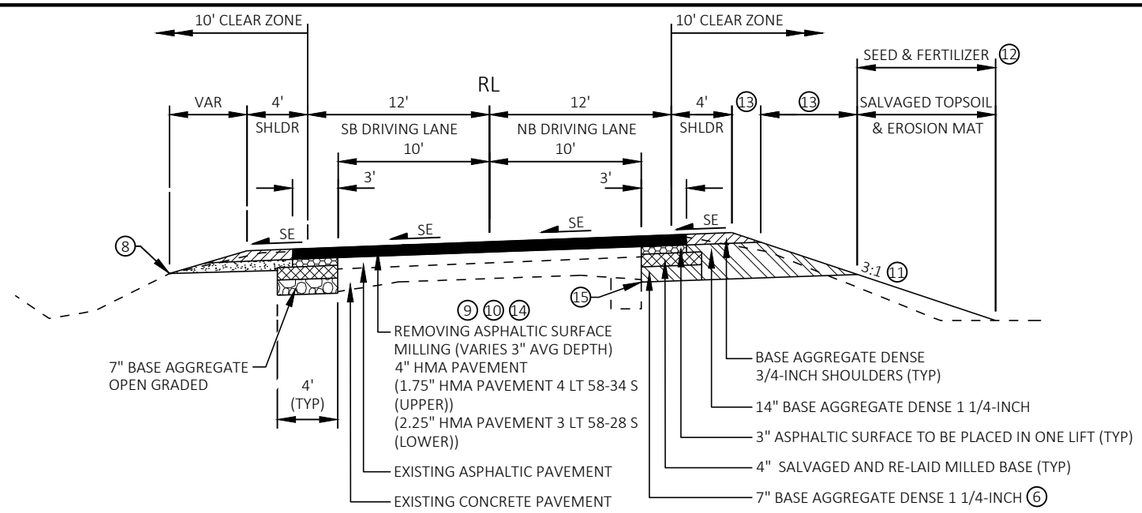
TYPICAL EXISTING SUPERELEVATED SECTION - NORTH CURVE

STA 361+41.73 TO STA 381+05.06

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 6	E

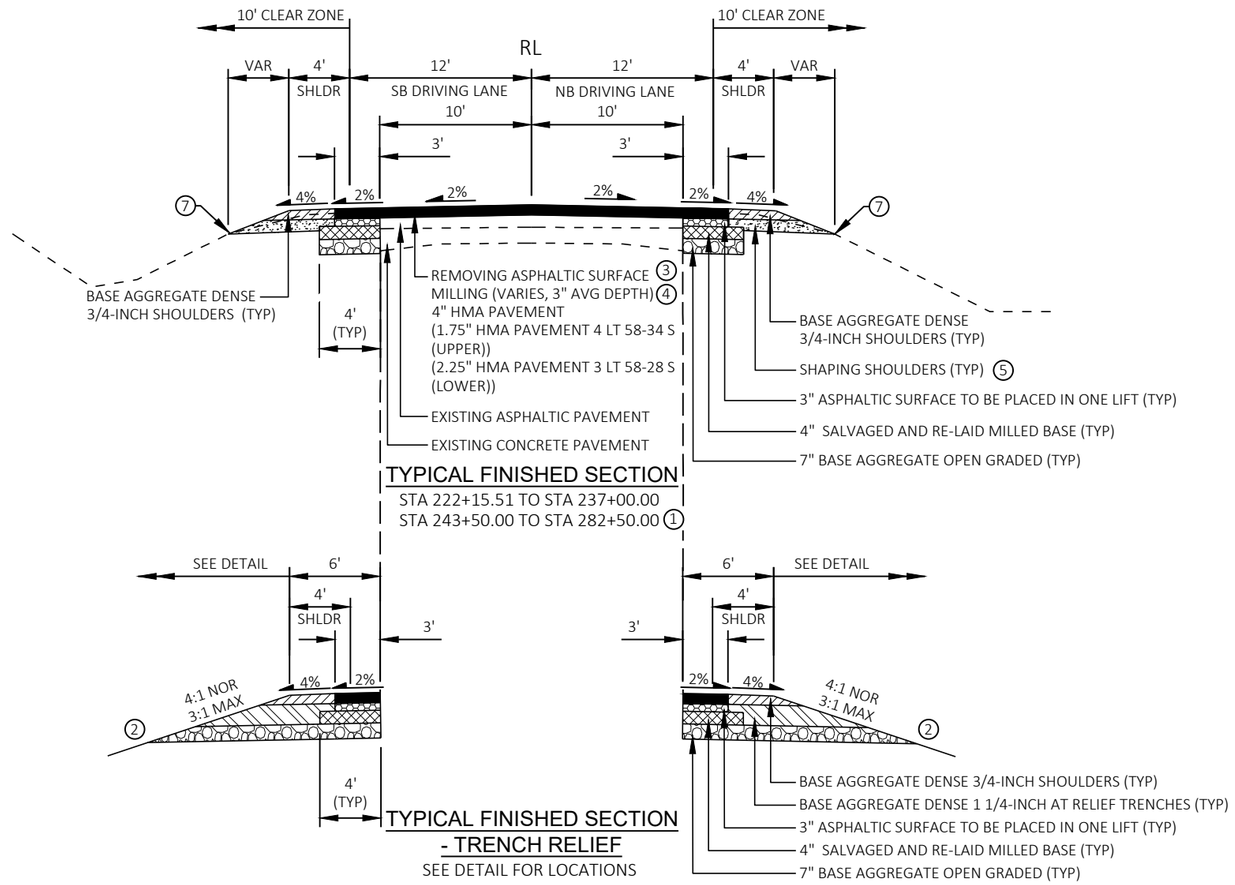
FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - Typical 3

PLOT DATE : 11/1/2021 8:57 PM PLOT BY : MATT SOLIN PLOT NAME : PLOT SCALE : 1 IN:10 FT



TYPICAL FINISHED SUPERELEVATED SECTION - SOUTH CURVE

STA 215+33.11 TO STA 222+15.51



TYPICAL FINISHED SECTION

STA 222+15.51 TO STA 237+00.00
STA 243+50.00 TO STA 282+50.00 (1)

TYPICAL FINISHED SECTION - TRENCH RELIEF

SEE DETAIL FOR LOCATIONS

NOTES:

SAFETY EDGE TO BE CONSTRUCTED AT EDGE OF HMA PAVED SHOULDER PER SDD SAFETY EDGE.

(1) ADJUST LOCATION OF FINISHED SECTION TO FIT FIELD CONDITIONS.

(2) RELIEF TRENCHES SPACED AT 300 FT (TYP) OR AS DIRECTED BY ENGINEER. SEE DRAINAGE RELIEF TRENCH DETAIL.

(3) EXISTING CROSS SLOPE VARIES 0.5% TO 5%.

(4) MILL CONSTANT CROSS SLOPE OF 2.0%.

(5) SHAPING SHOULDERS. PAYMENT FOR THIS ITEM INCLUDES BLADING, SHAPING AND COMPACTING THE EXISTING SHOULDER BASE COURSE MATERIAL ACCORDING TO THE STANDARD SPECIFICATION PRIOR TO THE PLACEMENT OF THE HMA PAVEMENT.

(6) 7" BASE AGGREGATE OPEN GRADED FROM:
STA 220+73 TO STA 221+35 RT

(7) TIE INTO EXISTING GRAVEL RUNOUT WITH VARIABLE SLOPE (3:1 NORMAL) AND VARIABLE WIDTH.

(8) TIE INTO EXISTING GRAVEL RUNOUT WITH VARIABLE SLOPE (10:1 NORMAL) AND VARIABLE WIDTH.

(9) MILL CROSS SLOPE AT SUPERELEVATION AS SHOWN ON THE PLAN. MILL DEPTH 3" AT CENTERLINE AND VARIES AT LANE EDGES.

(10) ADDITIONAL THICKNESS OF HMA PAVEMENT ON THE LOWER LAYER MAY BE REQUIRED NEAR THE OUTSIDE EDGE OF THE SUPERELEVATED PAVEMENT TO ACHIEVE THE FINAL CROSS SLOPE ACROSS THE ENTIRE WIDTH OF PAVEMENT.

(11) REFER TO CROSS SECTIONS FOR GRADING LOCATIONS ON OUTSIDE OF CURVE.

(12) EXTEND SEED AND FERTILIZER APPLICATION 5' BEYOND SLOPE INTERCEPT IN GRADING AREAS OR AS DIRECTED BY ENGINEER.

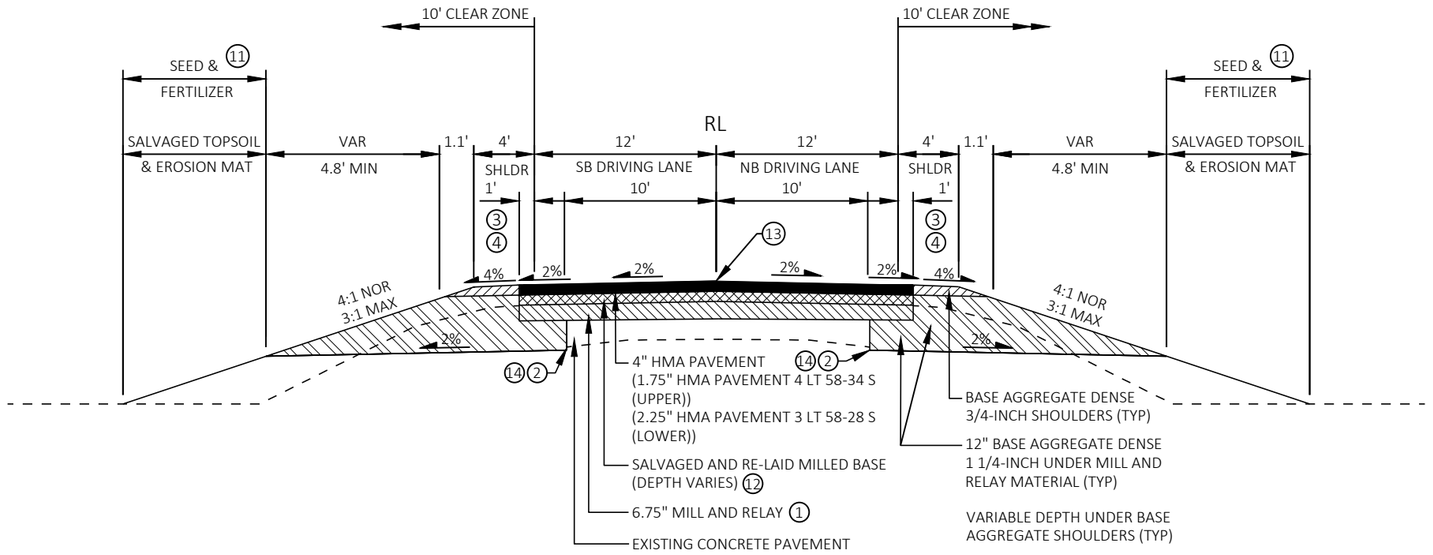
(13) WIDTHS VARY TO MAINTAIN 3:1 INSLOPES THRU SUPERELEVATIONS AND TRANSITIONS.

(14) ADDITIONAL THICKNESS OF HMA PAVEMENT ON THE UPPER LAYER MAY BE REQUIRED FROM STA 215+33 TO STA 216+50 TO ACHIEVE THE FINISHED PROFILE FOR THE BEGIN PROJECT TRANSITION (SEE DETAIL).

(15) POINT REFERRED TO ON CROSS SECTION WHERE CROSS SECTIONS ARE INCLUDED IN PLANS.

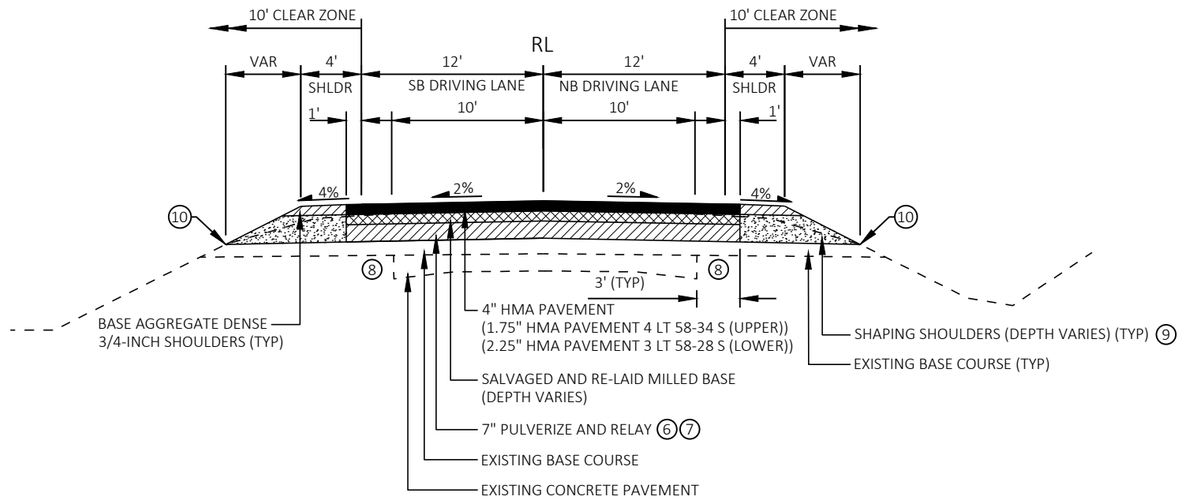
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 7	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - Typical 4
PLOT DATE : 1/6/2022 10:24 AM
PLOT BY : MATT SOLIN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



TYPICAL FINISHED SECTION

STA 237+00.00 TO STA 243+50.00



TYPICAL FINISHED SECTION

(5) STA 282+50.00 TO STA 339+25.00
STA 345+35.00 TO STA 361+41.73

NOTES:

SAFETY EDGE TO BE CONSTRUCTED AT EDGE OF HMA PAVED SHOULDER PER SDD SAFETY EDGE.

(1) MILL AND RELAY SHALL CONSIST OF MILLING THE FULL DEPTH OF EXISTING ASPHALTIC MATERIAL AND RELAYING THE MATERIAL AT THE AVERAGE COMPACTED DEPTH OF 6.75" AND WIDTH AS SHOWN ON THE PLAN. COMPACTED DEPTH VARIES FROM 6.00" TO 7.50" FOR CROWN CORRECTION.

(2) VERTICAL BENCH CUT AT EDGE OF EXISTING CONCRETE PAVEMENT (TYPICALLY 10.0' OFFSET).

(3) PAVED SHOULDER WIDTH VARIES 1.0' - 5.0':
STA 238+49.11 TO STA 238+89.11 RT
STA 239+11.61 TO STA 239+51.61 LT
STA 242+65.15 TO STA 243+05.16 RT
STA 243+27.65 TO STA 243+67.65 LT

(4) PAVED SHOULDER WIDTH VARIES 5.0' - 3.0':
STA 238+89.11 TO STA 239+39.13 RT
STA 239+51.61 TO STA 240+01.61 LT
STA 242+15.15 TO STA 242+65.15 RT
STA 242+77.65 TO STA 243+27.65 RT

(5) ADJUST LOCATION OF FINISHED SECTION TO FIT FIELD CONDITIONS.

(6) EXISTING PAVEMENT SHALL BE PRE-MILLED TO REDUCE TOTAL EXISTING PAVEMENT THICKNESS TO APPROXIMATELY 7 INCHES. PRE-MILL DEPTH SHALL BE VARIABLE BASED ON PAVEMENT BORINGS AND ADJUSTED TO FIT FIELD CONDITIONS.

(7) PULVERIZE AND RELAY SHALL CONSIST OF PULVERIZING AN AVERAGE DEPTH OF 7" OF EXISTING ASPHALTIC MATERIAL AND 1" MINIMUM OF EXISTING BASE COURSE. RELAY THE MATERIAL AT THE COMPACTED DEPTH OF 7" AND WIDTH AS SHOWN ON THE PLAN.

(8) PREPARE FOUNDATION FOR BASE AGGREGATE. PAYMENT FOR THIS ITEM INCLUDES EXCAVATING EXISTING SHOULDER BASE COURSE MATERIAL, SHAPING TO REQUIRED GRADE AND CROSS SLOPE AND COMPACTING AS NECESSARY ACCORDING TO THE STANDARD SPECIFICATIONS TO ACCOMMODATE THE PULVERIZE AND RELAY BASE MATERIAL.

(9) SHAPING SHOULDERS. PAYMENT FOR THIS ITEM INCLUDES BLADING, SHAPING AND COMPACTING THE EXISTING SHOULDER BASE COURSE MATERIAL ACCORDING TO THE STANDARD SPECIFICATION AFTER THE PULVERIZE AND RELAY, AND SALVAGED AND RE-LAID MILLED BASE LAYERS ARE CONSTRUCTED. USE SURPLUS SHOULDER BASE MATERIAL FROM THE ADJACENT FOUNDATION PREP OPERATION AS NEEDED.

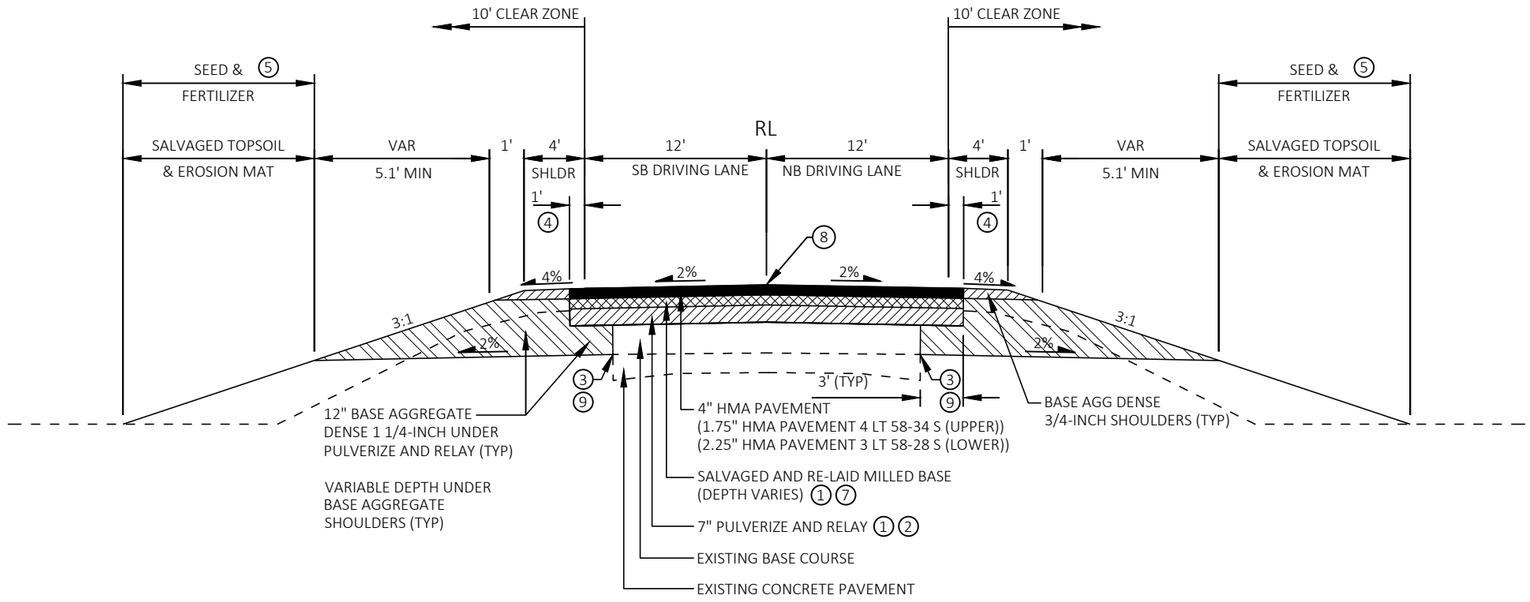
(10) TIE INTO EXISTING GRAVEL RUNOUT WITH VARIABLE SLOPE (3:1 NORMAL) AND VARIABLE WIDTH.

(11) EXTEND SEED AND FERTILIZER APPLICATION 5' BEYOND SLOPE INTERCEPT IN GRADING AREAS OR AS DIRECTED BY ENGINEER.

(12) SALVAGED AND RE-LAID MILLED BASE SHALL BE USED TO ACHIEVE THE FINISHED PROFILE FROM STA 237+00.00 TO STA 243+50.00.

(13) POINT REFERRED TO ON PROFILE.

(14) POINTS REFERRED TO ON CROSS SECTION.



TYPICAL FINISHED SECTION

STA 339+25.00 TO STA 345+35.00

NOTES:

SAFETY EDGE TO BE CONSTRUCTED AT EDGE OF HMA PAVED SHOULDER PER SDD SAFETY EDGE.

(1) EXISTING PAVEMENT SHALL BE PRE-MILLED TO REDUCE TOTAL EXISTING PAVEMENT THICKNESS TO APPROXIMATELY 7 INCHES. PRE-MILL DEPTH SHALL BE VARIABLE BASED ON PAVEMENT BORINGS AND ADJUSTED TO FIT FIELD CONDITIONS.

(2) PULVERIZE AND RELAY SHALL CONSIST OF PULVERIZING AN AVERAGE DEPTH OF 7" OF EXISTING ASPHALTIC MATERIAL AND 1" MINIMUM OF EXISTING BASE COURSE. RELAY THE MATERIAL AT THE COMPACTED DEPTH OF 7" AND WIDTH AS SHOWN ON THE PLAN.

(3) VERTICAL BENCH CUT AT EDGE OF EXISTING CONCRETE PAVEMENT (TYPICALLY 10.0')

(4) PAVED SHOULDER WIDTH VARIES 1.0' - 3.0'
STA 339+60.11 TO STA 339+80.10 RT
STA 340+47.62 TO STA 340+67.62 LT
STA 343+37.16 TO STA 343+57.16 RT
STA 344+24.66 TO STA 344+44.66 LT

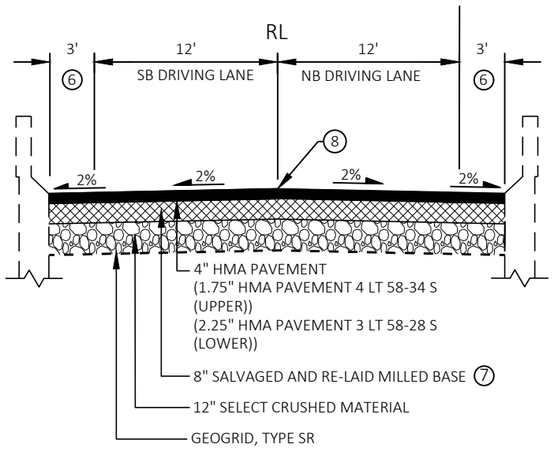
(5) EXTEND SEED AND FERTILIZER APPLICATION 5' BEYOND SLOPE INTERCEPT IN GRADING AREAS OR AS DIRECTED BY ENGINEER.

(6) SHOULDER WIDTH MATCHES STRUCTURE CLEAR ROADWAY WIDTH.

(7) SALVAGED AND RE-LAID MILLED BASE SHALL BE USED TO ACHIEVE THE FINISHED PROFILE FROM STA 339+25.00 TO STA 345+35.00.

(8) POINT REFERRED TO ON PROFILE.

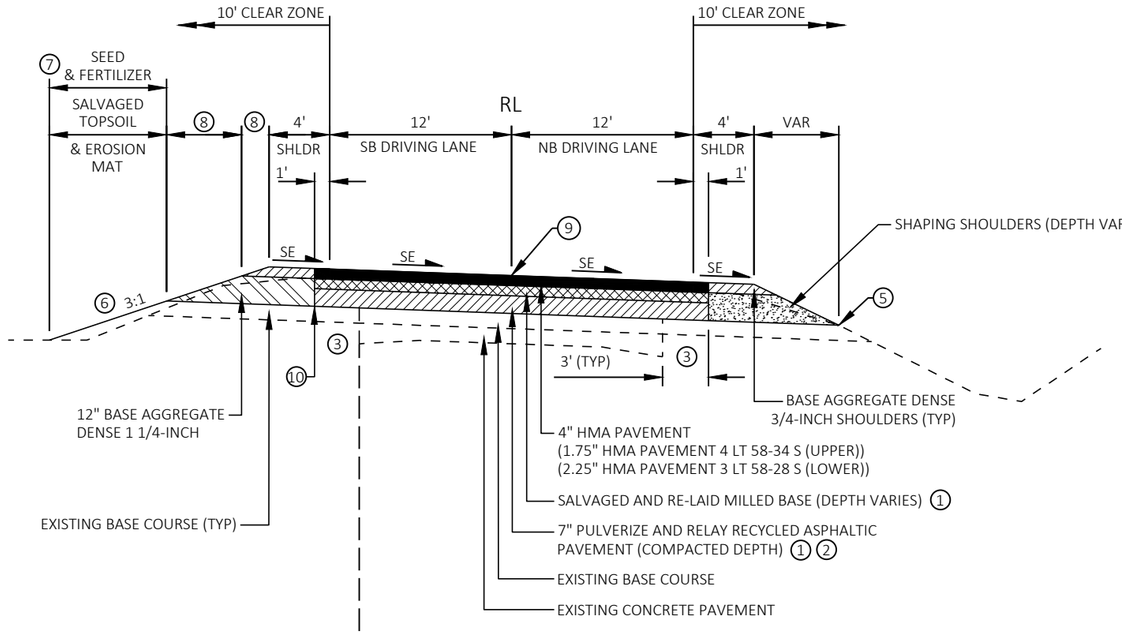
(9) POINTS REFERRED TO ON CROSS SECTION.



TYPICAL BRIDGE APPROACH SECTION

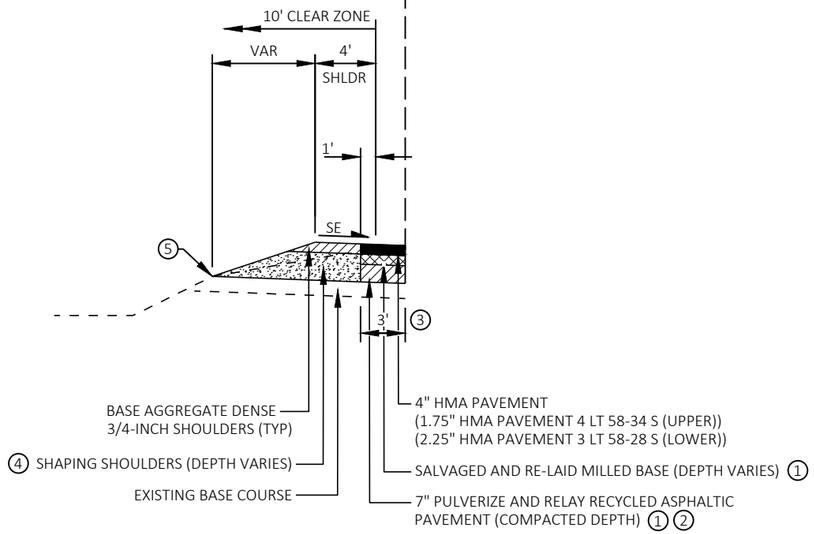
STA 240+79.13 TO STA 240+89.13
STA 241+27.63 TO STA 241+37.63
STA 341+45.00 TO STA 341+80.14
STA 342+24.64 TO STA 342+34.64

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 9	E



TYPICAL FINISHED SUPERELEVATED SECTION - NORTH CURVE

STA 361+41.73 TO STA 381+05.06



TYPICAL FINISHED SUPERELEVATED SECTION

STA 370+50.00 TO STA 381+05.06

NOTES:

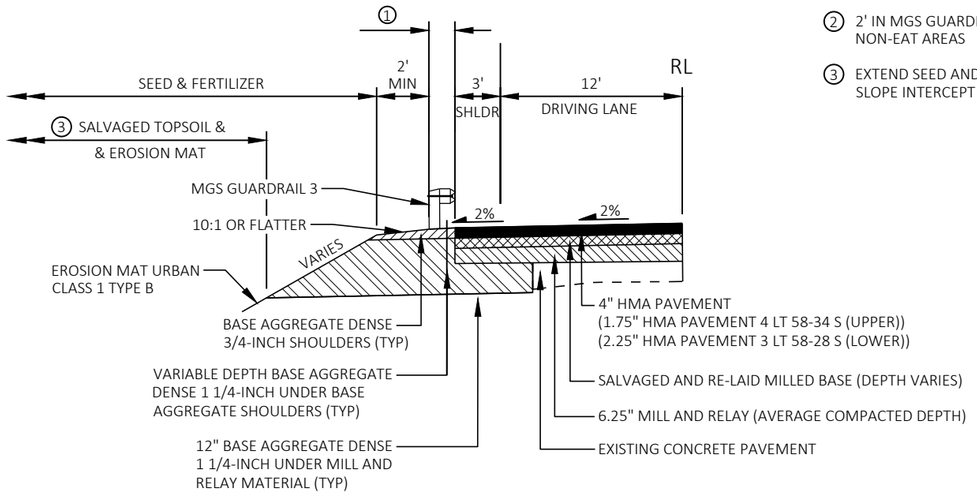
SAFETY EDGE TO BE CONSTRUCTED AT EDGE OF HMA PAVED SHOULDER PER SDD SAFETY EDGE.

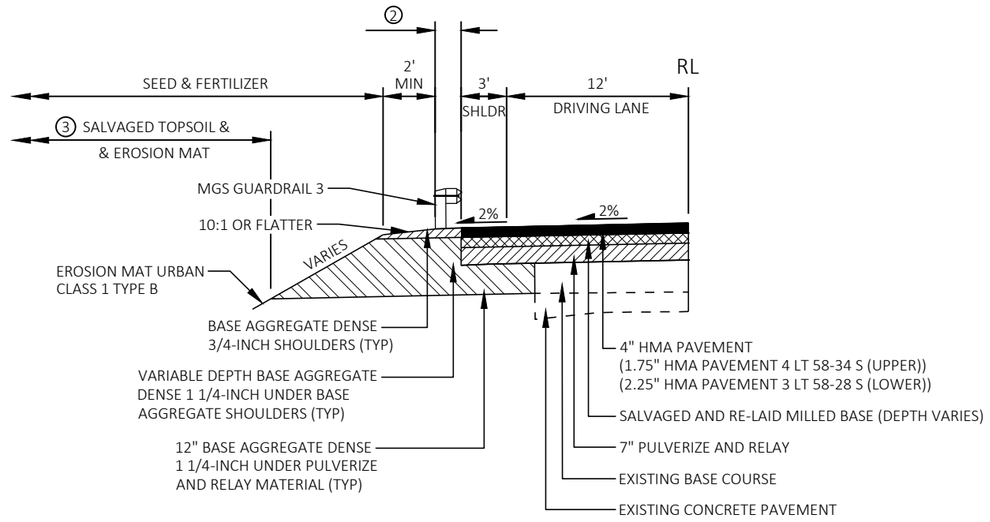
1. EXISTING PAVEMENT SHALL BE PRE-MILLED TO REDUCE TOTAL EXISTING PAVEMENT THICKNESS TO APPROXIMATELY 7 INCHES. PRE-MILL DEPTH SHALL BE VARIABLE BASED ON PAVEMENT BORINGS AND ADJUSTED TO FIT FIELD CONDITIONS.
2. PULVERIZE AND RELAY SHALL CONSIST OF PULVERIZING AN AVERAGE DEPTH OF 7" OF EXISTING ASPHALTIC MATERIAL AND 1" MINIMUM OF EXISTING BASE COURSE. RELAY THE MATERIAL AT THE COMPACTED DEPTH OF 7" AND WIDTH AS SHOWN ON THE PLAN.
3. PREPARE FOUNDATION FOR BASE AGGREGATE. PAYMENT FOR THIS ITEM INCLUDES EXCAVATING EXISTING SHOULDER GRAVEL, SHAPING TO REQUIRED GRADE AND CROSS SLOPE AND COMPACTING AS NECESSARY ACCORDING TO THE STANDARD SPECIFICATIONS TO ACCOMMODATE THE PULVERIZE AND RELAY BASE MATERIAL.
4. SHAPING SHOULDERS. PAYMENT FOR THIS ITEM INCLUDES BLADING, SHAPING AND COMPACTING THE EXISTING SHOULDER BASE COURSE MATERIAL ACCORDING TO THE STANDARD SPECIFICATION AFTER THE PULVERIZE AND RELAY, AND SALVAGED AND RE-LAID MILLED BASE LAYERS ARE CONSTRUCTED. USE SURPLUS SHOULDER BASE MATERIAL FROM THE ADJACENT FOUNDATION PREP OPERATION AS NEEDED.
5. TIE INTO EXISTING GRAVEL RUNOUT WITH VARIABLE SLOPE (3:1 NORMAL) AND VARIABLE WIDTH.
6. REFER TO CROSS SECTIONS FOR GRADING LOCATIONS ON OUTSIDE OF CURVE.
7. EXTEND SEED AND FERTILIZER APPLICATION 5' BEYOND SLOPE INTERCEPT IN GRADING AREAS OR AS DIRECTED BY ENGINEER.
8. WIDTHS VARY TO MAINTAIN 3:1 INSLOPES THRU SUPERELEVATIONS FROM STA 361+41.73 TO STA 370+50.00.
9. POINT REFERRED TO ON PROFILE.
10. POINT REFERRED TO ON CROSS SECTION WHERE CROSS SECTIONS ARE INCLUDED IN PLANS.

2

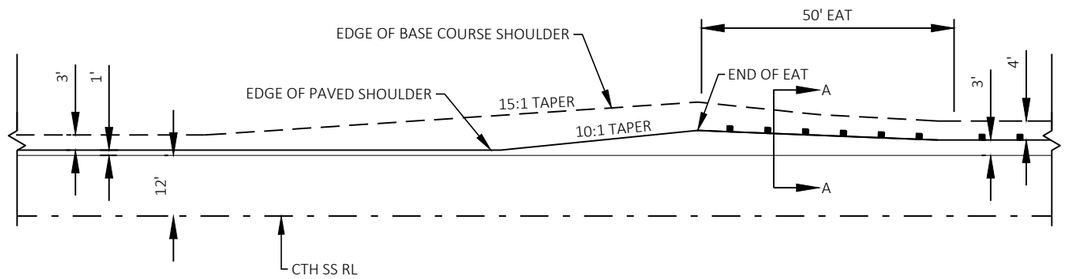
NOTES:

1. 4' IN MGS GUARDRAIL TERMINAL EAT AREAS
   2' IN NON-EAT AREAS
2. 2' IN MGS GUARDRAIL TERMINAL EAT AREAS AND IN NON-EAT AREAS
3. EXTEND SEED AND FERTILIZER APPLICATION 5' BEYOND SLOPE INTERCEPT OR AS DIRECTED BY ENGINEER.

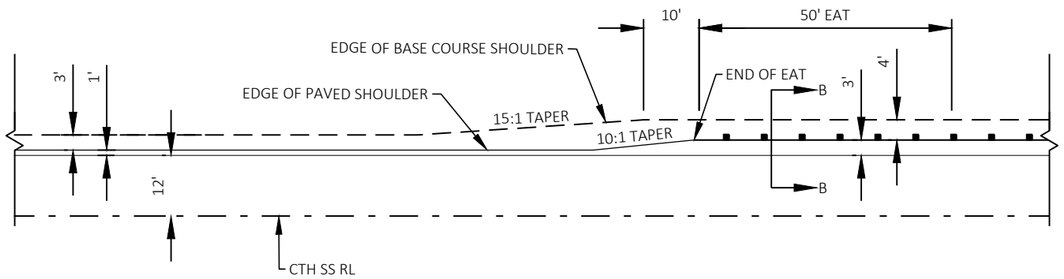




SECTION A-A



SECTION B-B



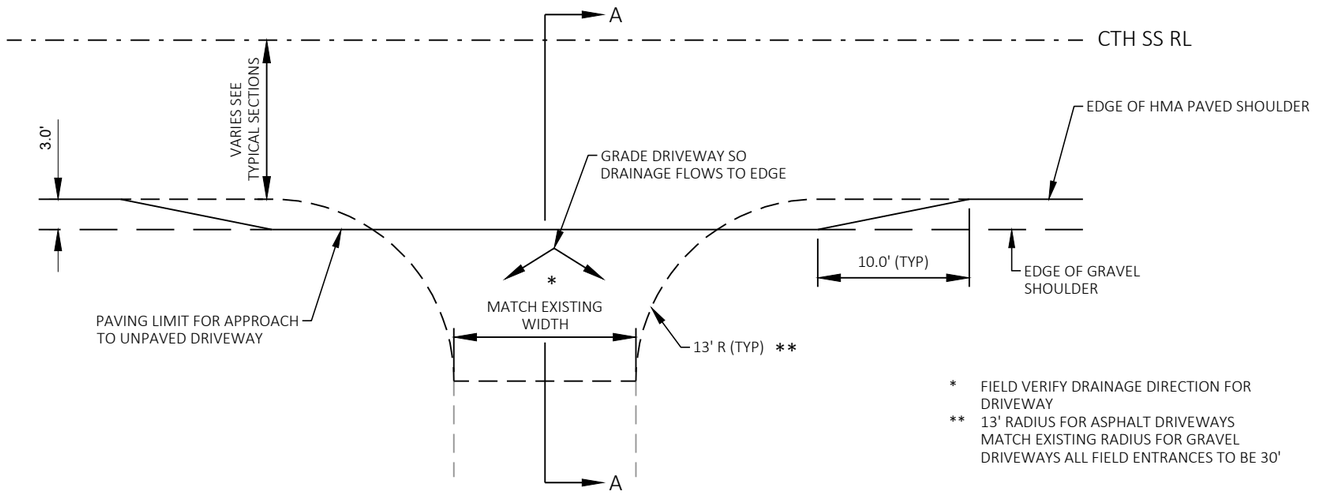
ASPHALTIC SHOULDERS AT GUARDRAIL W/ STANDARD GRADING (FLARED EAT)

STA 238+89.11 TO STA 240+81.63 RT
STA 239+51.61 TO STA 240+81.63 LT
STA 241+35.13 TO STA 242+65.15 RT
STA 241+35.13 TO STA 243+27.65 LT

ASPHALTIC SHOULDERS AT GUARDRAIL W/ ALTERNATIVE GRADING (NO EAT FLARE)

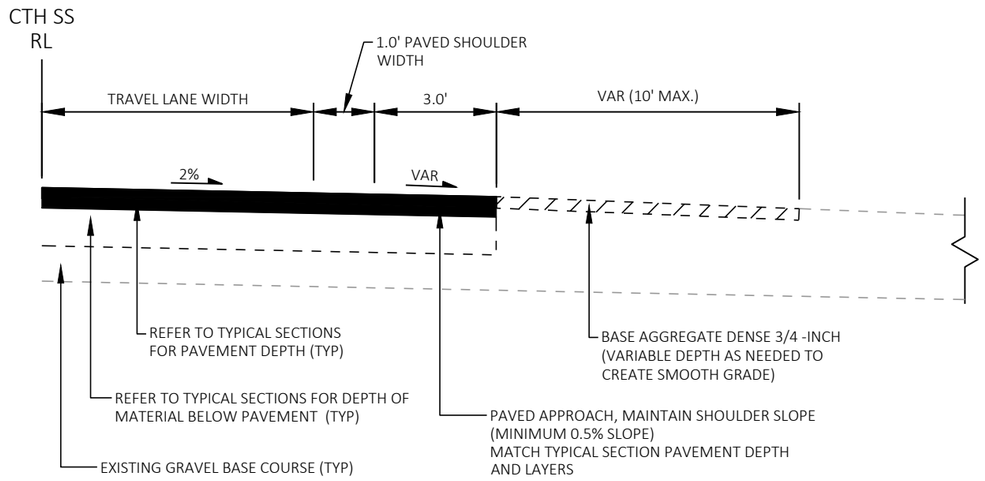
STA 339+80.12 TO STA 341+72.64 RT
STA 340+67.62 TO STA 341+72.64 LT
STA 342+32.14 TO STA 343+37.16 RT
STA 342+32.14 TO STA 344+24.66 LT

2



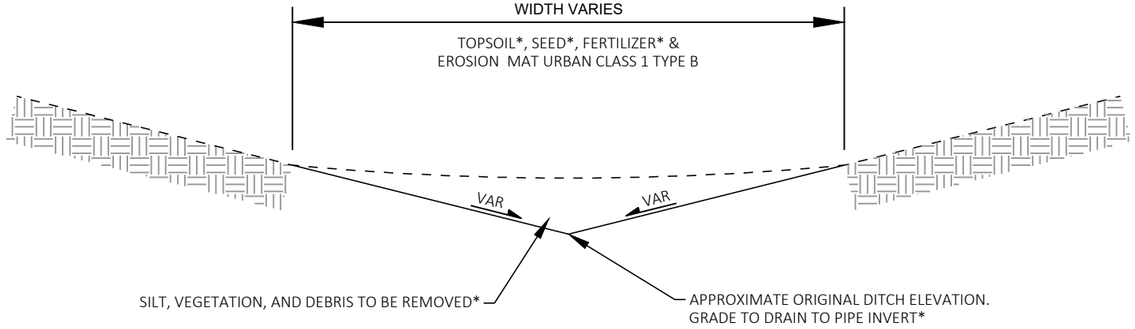
* FIELD VERIFY DRAINAGE DIRECTION FOR DRIVEWAY
** 13' RADIUS FOR ASPHALT DRIVEWAYS MATCH EXISTING RADIUS FOR GRAVEL DRIVEWAYS ALL FIELD ENTRANCES TO BE 30'

DRIVEWAY



SECTIONS A-A DRIVEWAY PAVING - GRAVEL DRIVEWAY

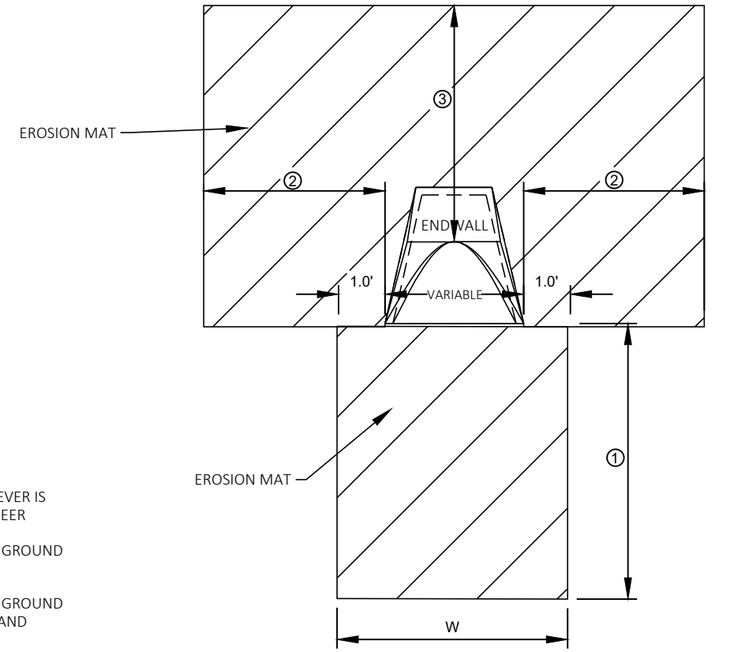
STA 216+89 LT	STA 280+43 RT
STA 221+78 LT	STA 287+08 LT
STA 225+87 LT	STA 310+09 RT
STA 228+76 LT	STA 321+00 RT
STA 238+47 LT	STA 322+88 RT
STA 238+48 RT	STA 328+64 RT
STA 248+50 RT	STA 356+28 RT
STA 248+98 LT	STA 371+54 RT
STA 265+42 LT	STA 375+02 RT
STA 266+16 RT	



DITCH CLEANING

SEE PLAN VIEW SHEETS FOR LOCATIONS

* ITEMS ARE INCIDENTAL TO DITCH CLEANING ITEM



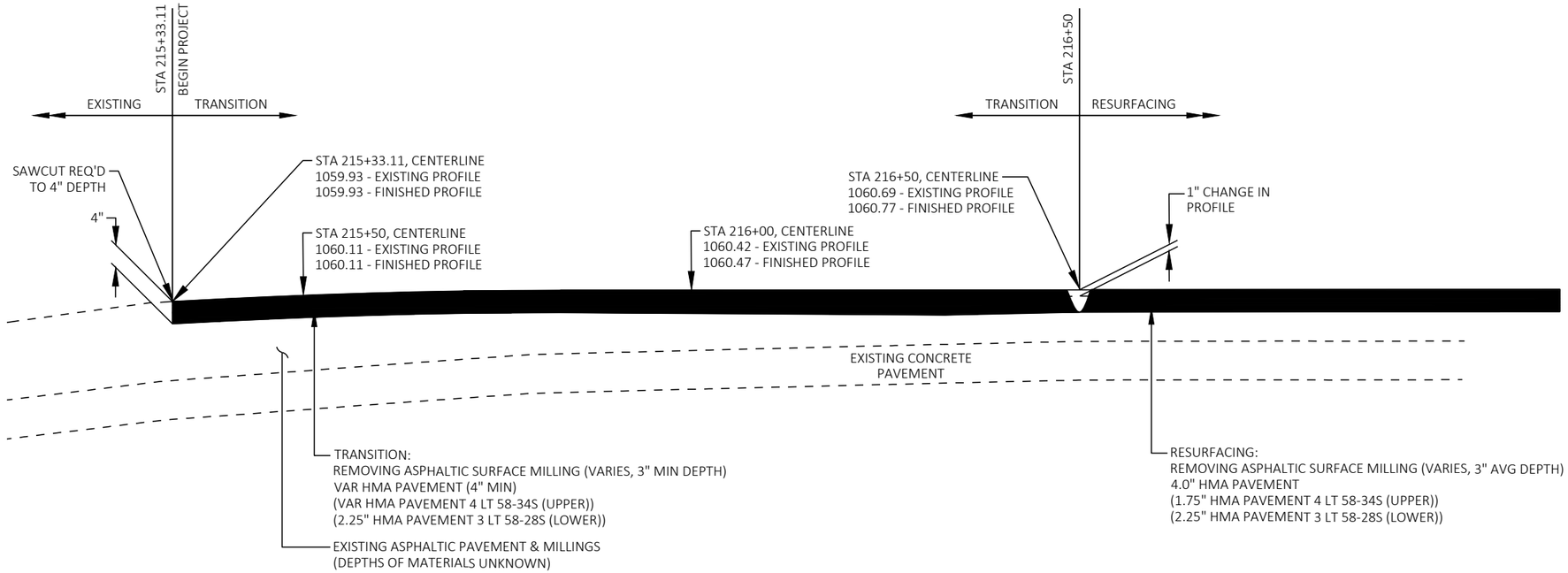
① L=2W (TYP) OR TO R/W LINE, WHICHEVER IS SHORTER, OR AS DIRECTED BY ENGINEER

② INSTALL EROSION MAT TO LIMITS OF GROUND DISTURBANCE, 4' MIN.

③ INSTALL EROSION MAT TO LIMITS OF GROUND DISTURBANCE BETWEEN SHOULDER AND ENDWALL, 4' MIN.

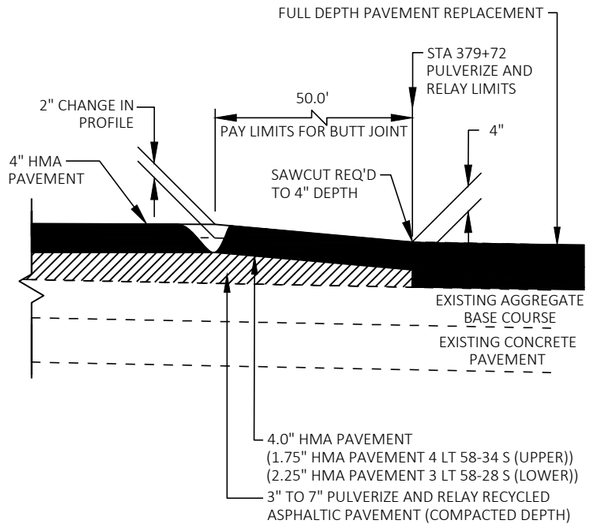
EROSION MAT TREATMENT AT CULVERT ENDWALLS

2



BEGIN PROJECT TRANSITION

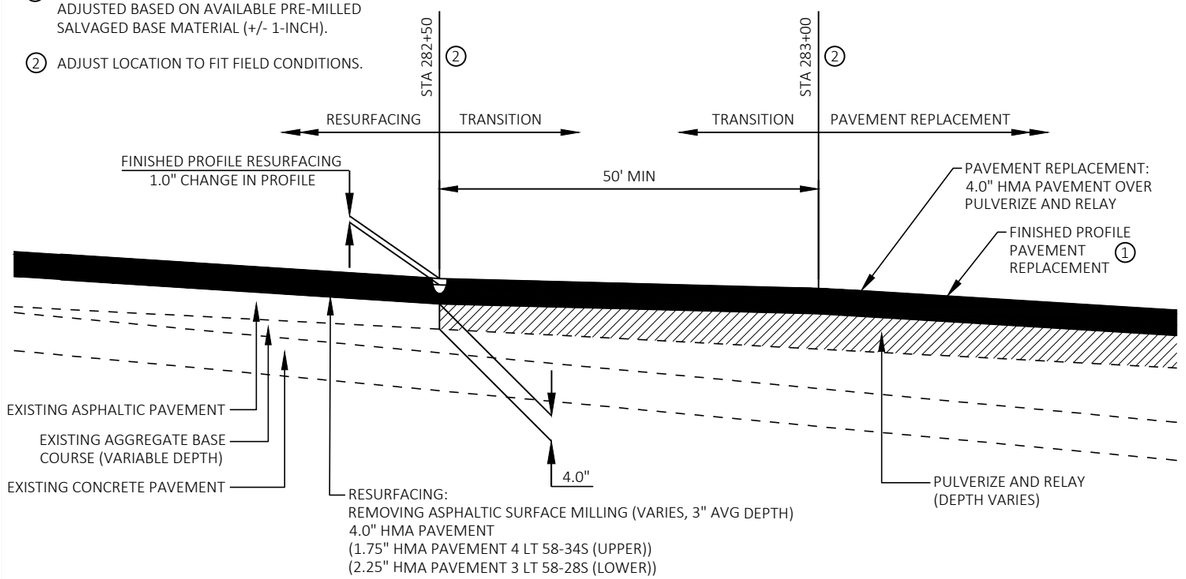
STA 215+33.11 TO STA 216+50



CTH SS BUTT JOINT

NOTES:

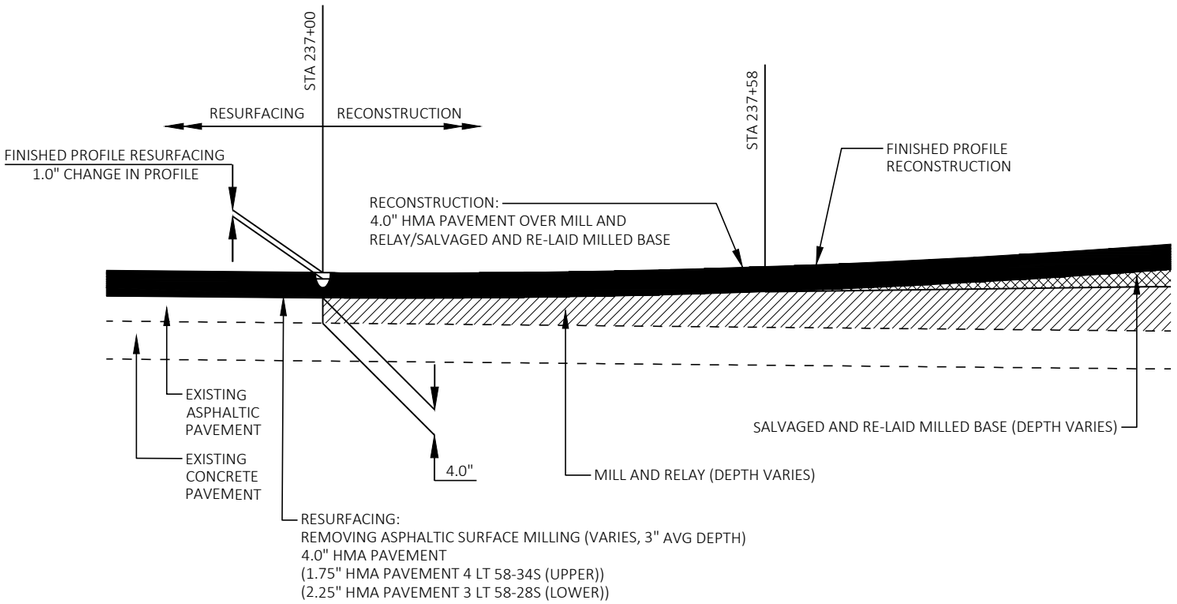
1. ACTUAL ELEVATION MAY NEED TO BE ADJUSTED BASED ON AVAILABLE PRE-MILLED SALVAGED BASE MATERIAL (+/- 1-INCH).
2. ADJUST LOCATION TO FIT FIELD CONDITIONS.

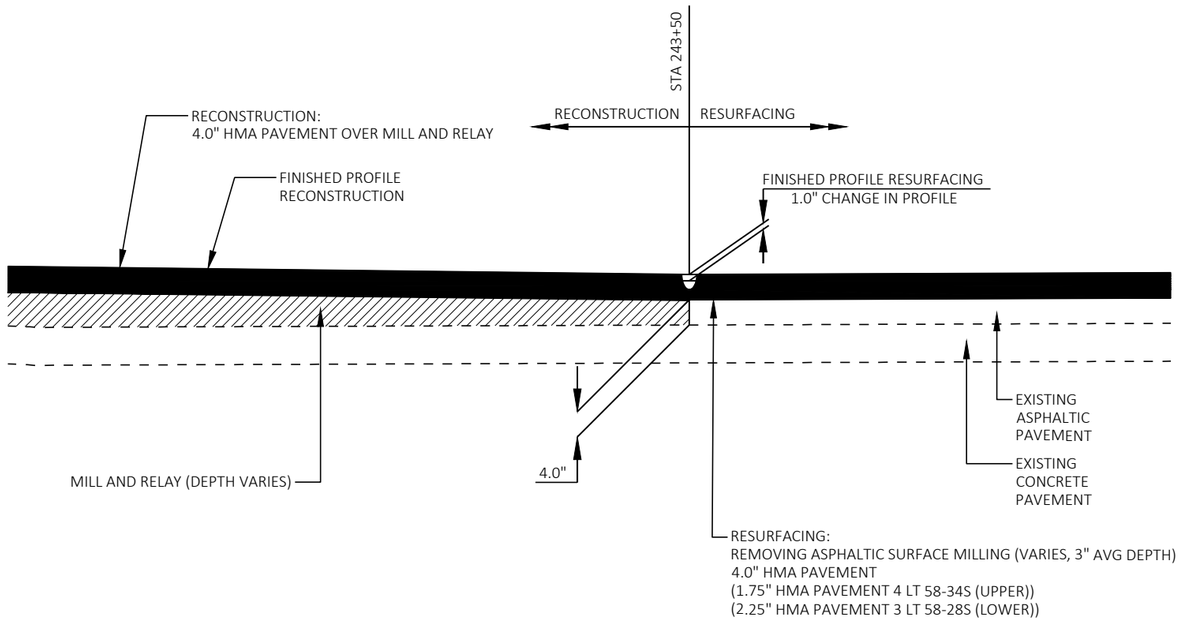


RESURFACING TO PAVEMENT REPLACEMENT TRANSITION

STA 282+50 TO STA 283+00

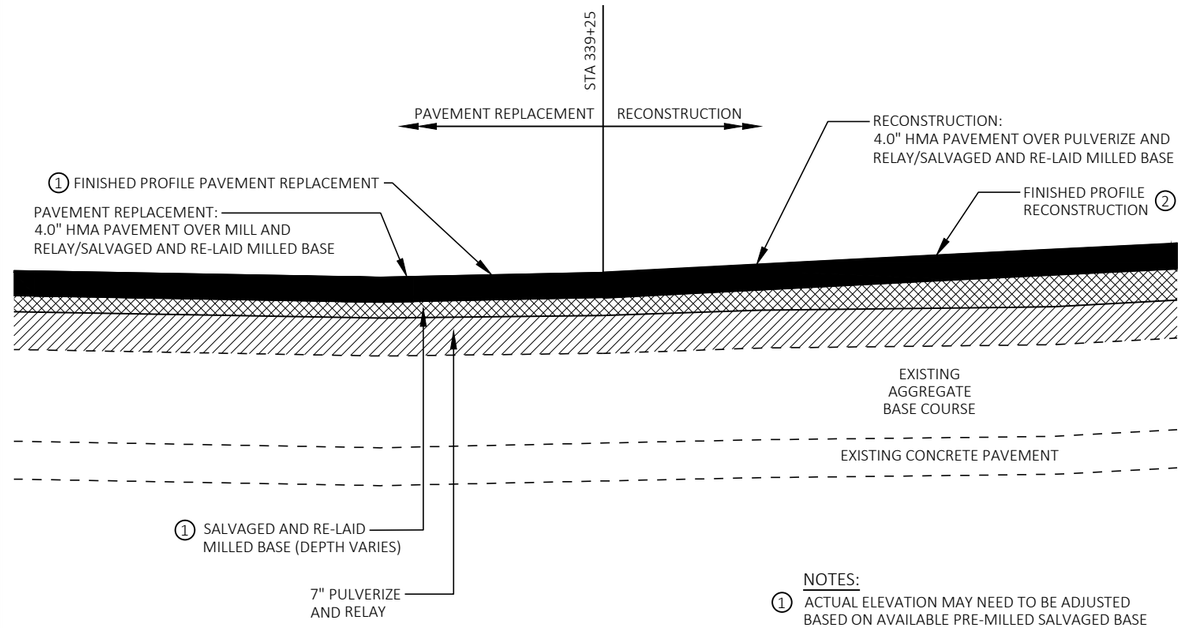
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CONSTRUCTION DETAILS	SHEET 14	E





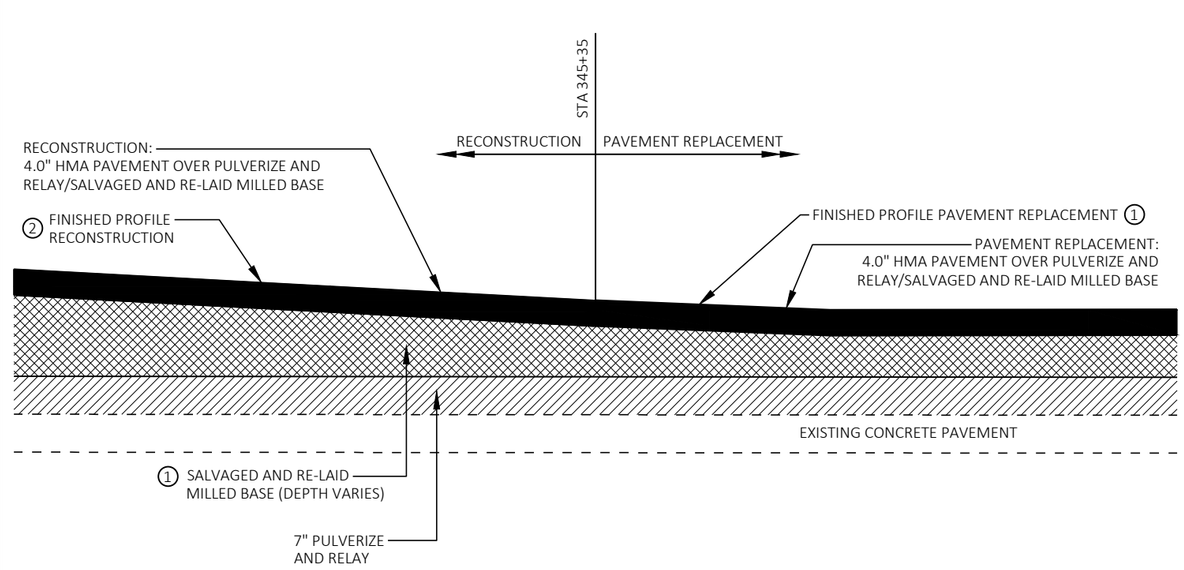
RESURFACING TO RECONSTRUCTION TRANSITION

STA 237+00 &
STA 243+50



NOTES:

1. ACTUAL ELEVATION MAY NEED TO BE ADJUSTED BASED ON AVAILABLE PRE-MILLED SALVAGED BASE MATERIAL (+/- 1-INCH).
2. FINISHED PROFILE ELEVATION PER PLAN PROFILE WITHIN RECONSTRUCTION LIMITS.



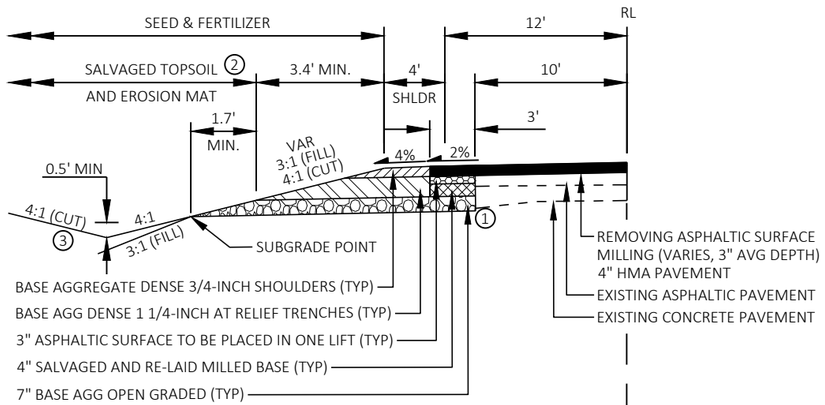
PAVEMENT REPLACEMENT TO RECONSTRUCTION TRANSITION

STA 339+25 &
STA 345+35

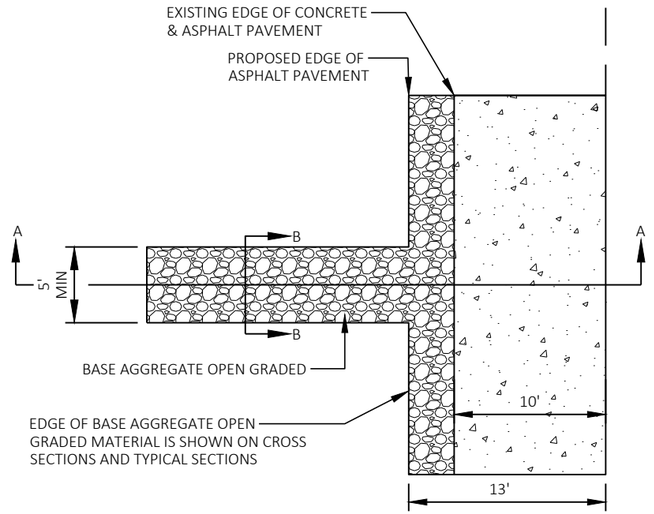
2

CONSTRUCT DRAINAGE RELIEF TRENCHES AT LEAST 300' AND AT EACH SAG VERTICAL IN THE PROFILE AT THE FOLLOWING LOCATIONS OR AS DETERMINED BY THE ENGINEER

STA 215+35 LT	STA 253+00 LT & RT
STA 217+25 LT	STA 254+50 LT & RT
STA 220+25 LT	STA 256+00 LT & RT
STA 220+75 RT	STA 257+50 LT & RT
STA 222+00 LT & RT	STA 260+50 LT & RT
STA 227+00 LT & RT	STA 263+50 LT & RT
STA 231+50 LT & RT	STA 266+50 LT & RT
STA 234+50 LT & RT	STA 269+50 LT & RT
STA 236+95 RT	STA 272+50 LT & RT
STA 243+80 LT & RT	STA 275+50 LT & RT
STA 246+50 LT & RT	STA 277+50 LT & RT
STA 249+50 LT & RT	STA 282+50 LT & RT
STA 251+50 LT & RT	STA 285+00 RT



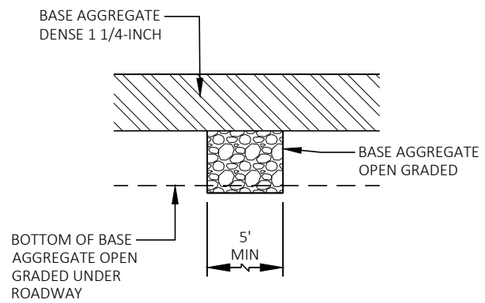
SECTION A-A



DRAINAGE RELIEF TRENCH

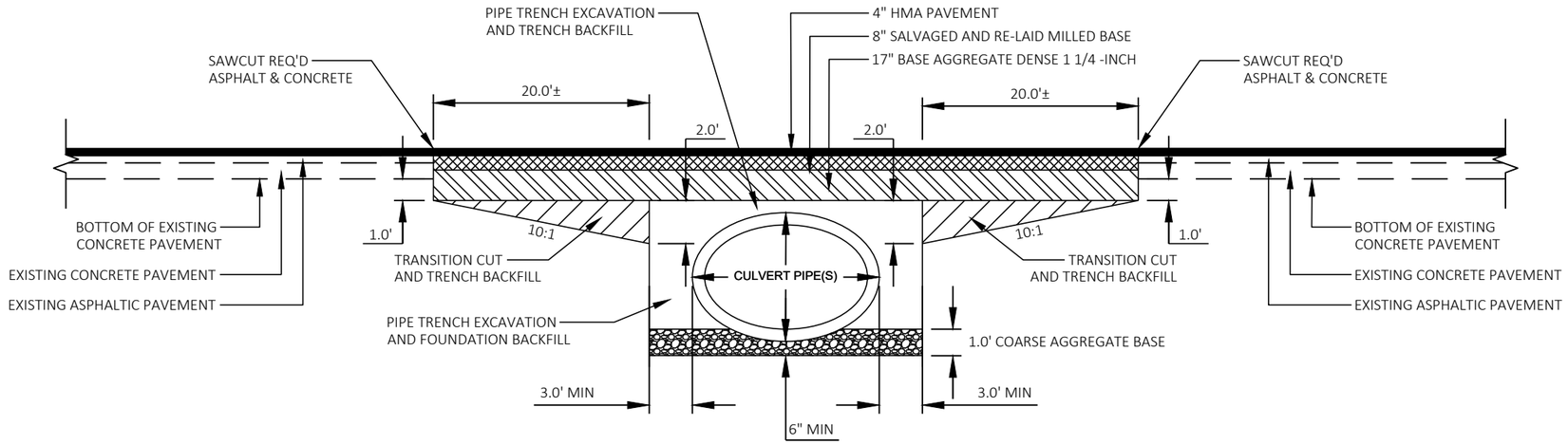
NOTES:

1. EXCAVATE ALONG EDGE OF EXISTING CONCRETE PAVEMENT TO 1" MINIMUM BELOW EXISTING CONCRETE PAVEMENT FOR AVERAGE DEPTH OF 17". MAINTAIN SMOOTH PROFILE ALONG EDGE AND MAINTAIN CROSS SLOPE OF TRENCH.
2. TOPSOIL OVER RELIEF TRENCH WHEN TRENCH IS LOCATED ADJACENT TO MAINTAINED YARD AND THIN TOPSOIL TO 2".
3. DITCH BOTTOM TO BE MINIMUM 6" DEPTH BELOW RELIEF TRENCH. PROVIDE DITCH CLEANING AS REQUIRED 25 LF EACH DIRECTION FROM RELIEF TRENCH END.



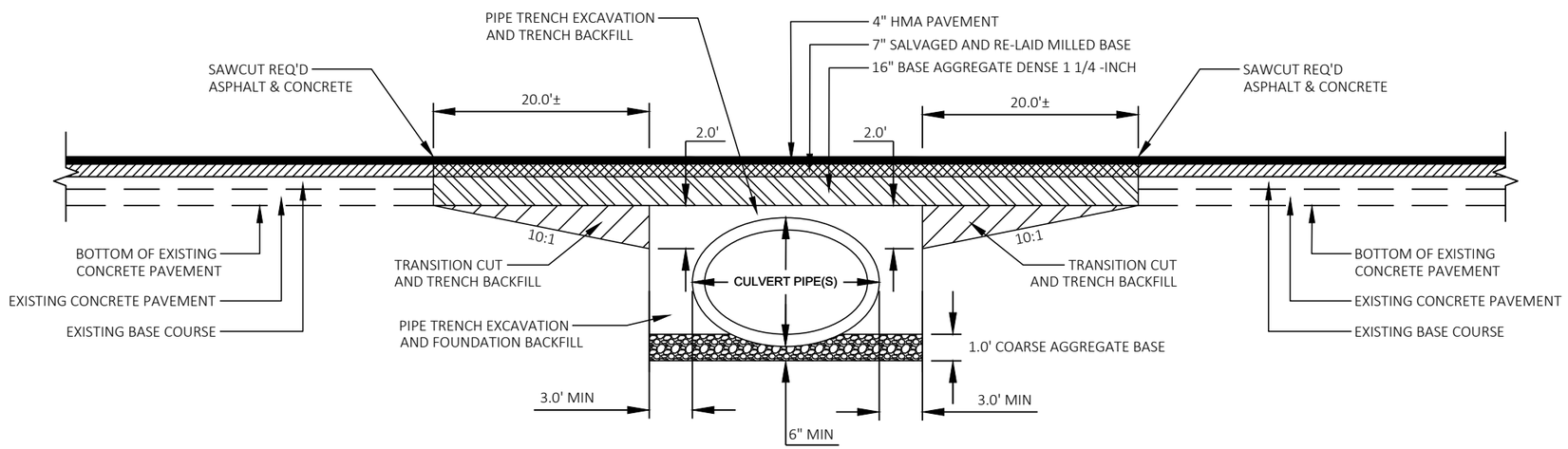
SECTION B-B

2



CULVERT PIPE TRANSITION

STA 219+95
STA 252+64



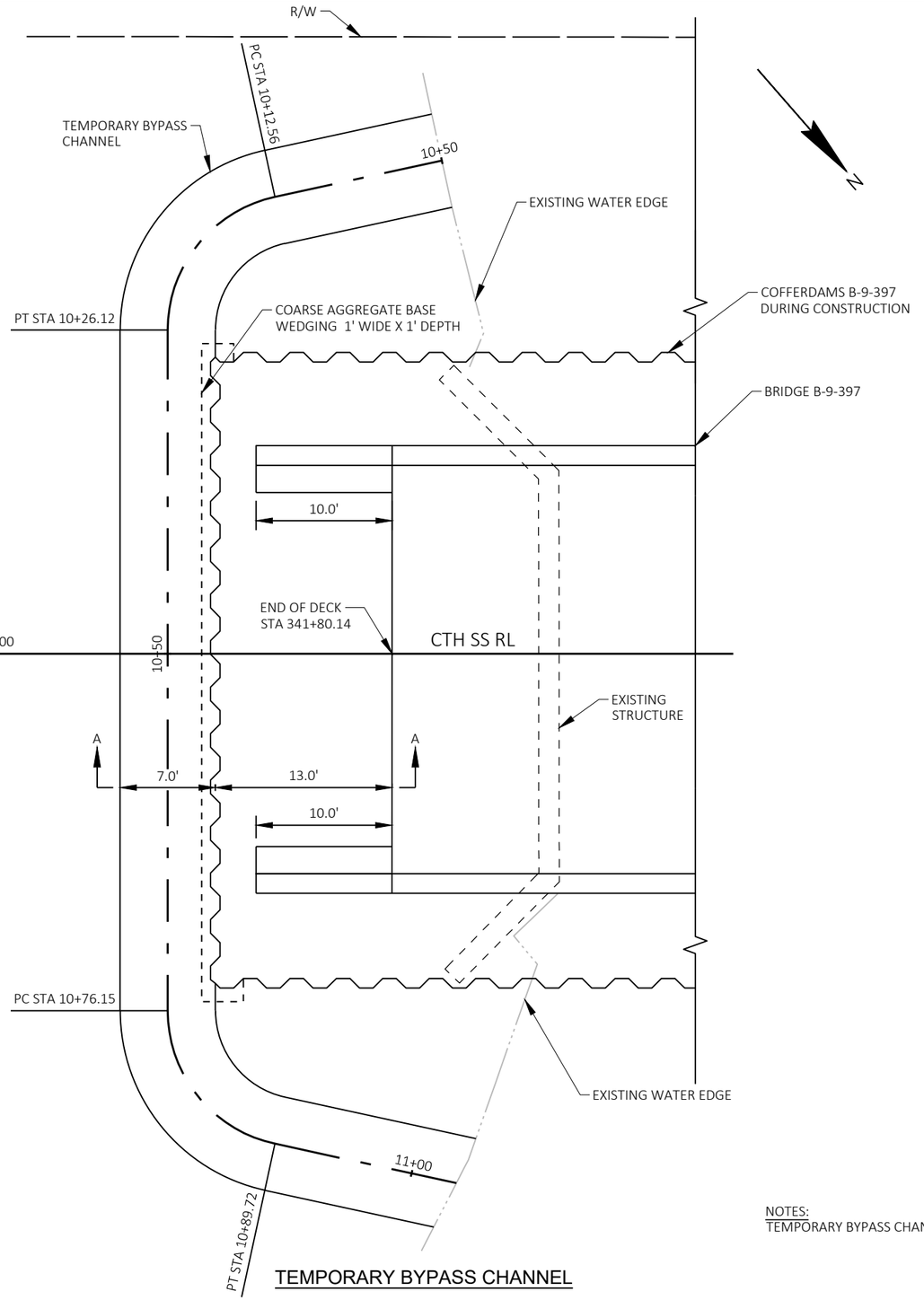
CULVERT PIPE TRANSITION

STA 301+57
STA 305+90

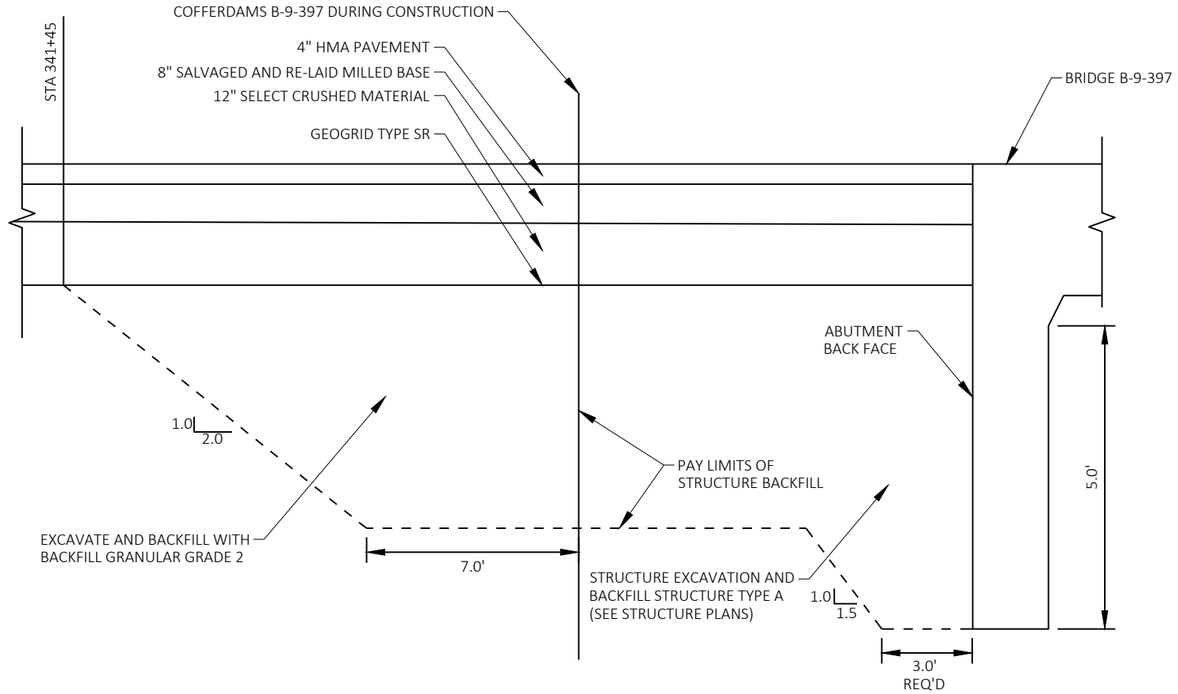
NOTES:
PIPE TRENCH EXCAVATION, EXCLUDING TRANSITION CUT, IS CONSIDERED INCIDENTAL TO PIPE INSTALLATION. TRANSITION CUT WILL BE PAID FOR AS EXCAVATION COMMON.

BACKFILL IN ACCORDANCE WITH STANDARD SPEC 520.2.5. BACKFILL WITHIN PIPE TRENCH IS INCIDENTAL TO CULVERT PIPE ITEM. BACKFILL WITHIN TRANSITION CUT IS INCIDENTAL TO EXCAVATION COMMON ITEM.

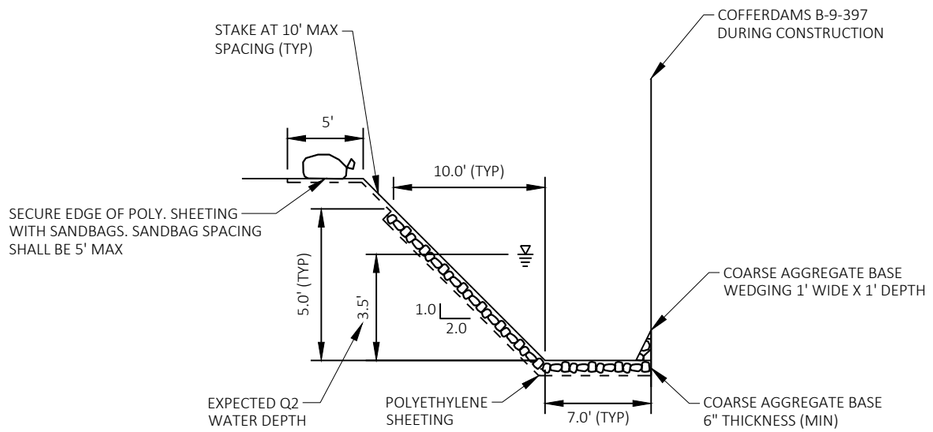
THE SALVAGED AND RE-LAID MILLED BASE SHALL BE PLACED 26 FT WIDE TO MATCH THE WIDTH OF THE HMA PAVEMENT.



TEMPORARY BYPASS CHANNEL

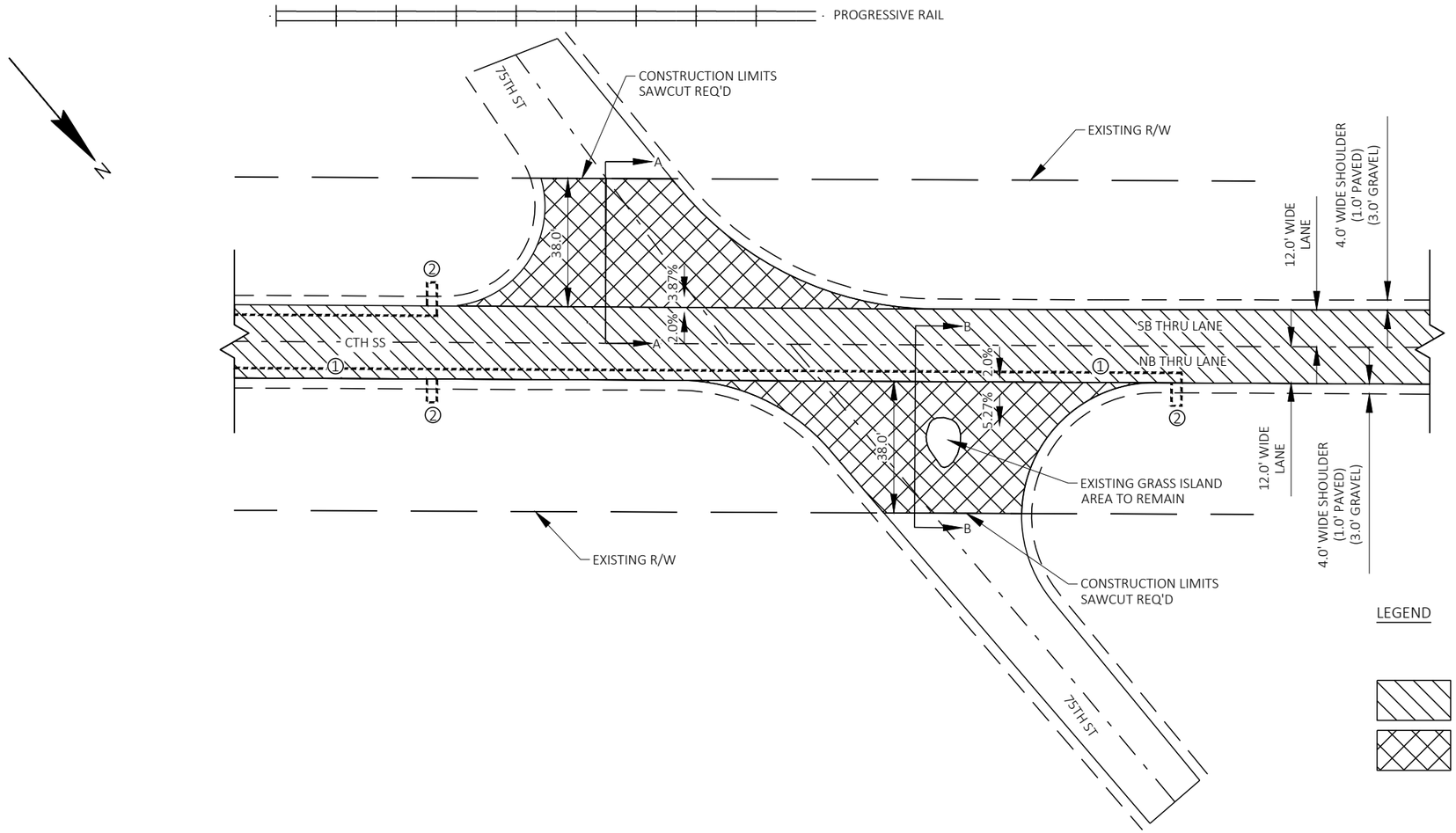


TEMPORARY BYPASS CHANNEL BACKFILL DETAIL



SECTION A-A

NOTES:
TEMPORARY BYPASS CHANNEL IS PAID FOR THROUGH INDIVIDUAL BID ITEMS.



NOTES:

① 7" OPEN GRADED BASE, 4" SALVAGED AND RE-LAID MILLED BASE, AND 3" ASPHALTIC SURFACE THROUGH INTERSECTION PER APPLICABLE TYPICAL SECTION

② DRAINAGE RELIEF TRENCH
STA 282+50.00 LT & RT
STA 285+00.00 RT

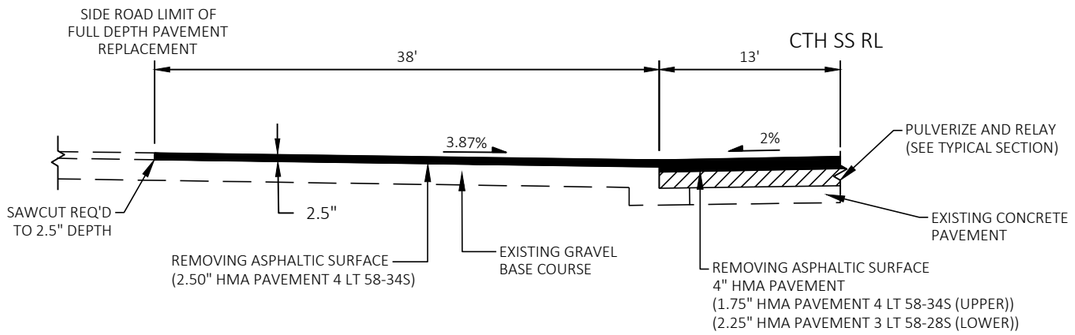
LEGEND

PULVERIZE/RELAY

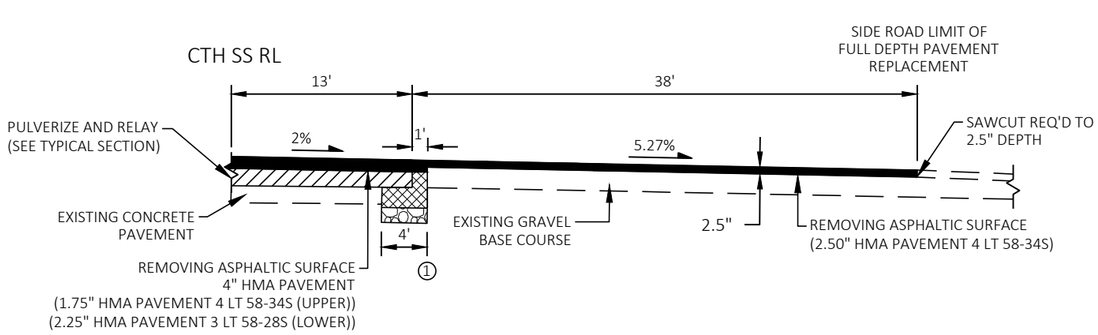
FULL DEPTH PAVEMENT REPLACEMENT

INTERSECTION PAVING

75TH STREET LT



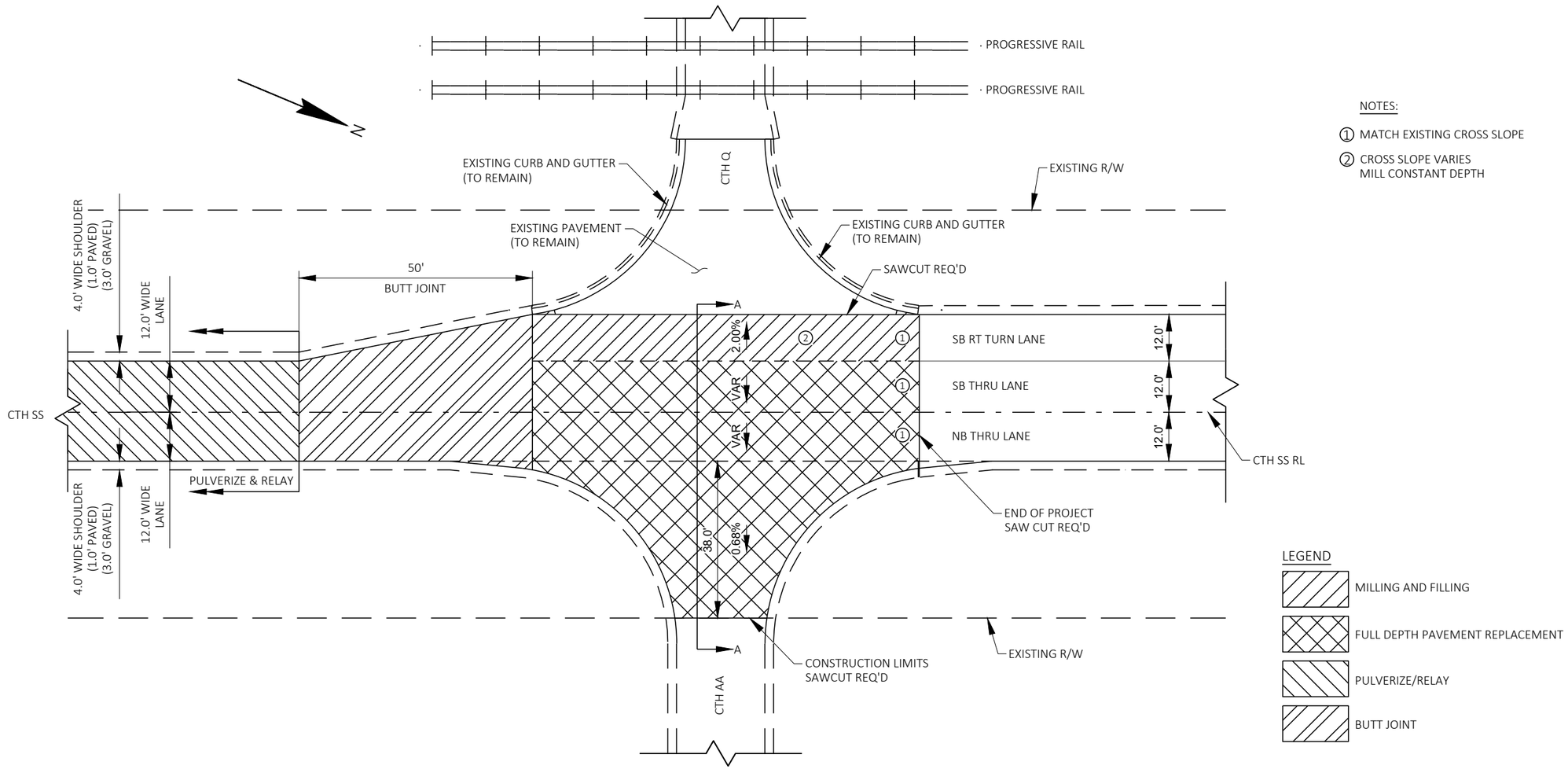
SECTION A-A



SECTION B-B

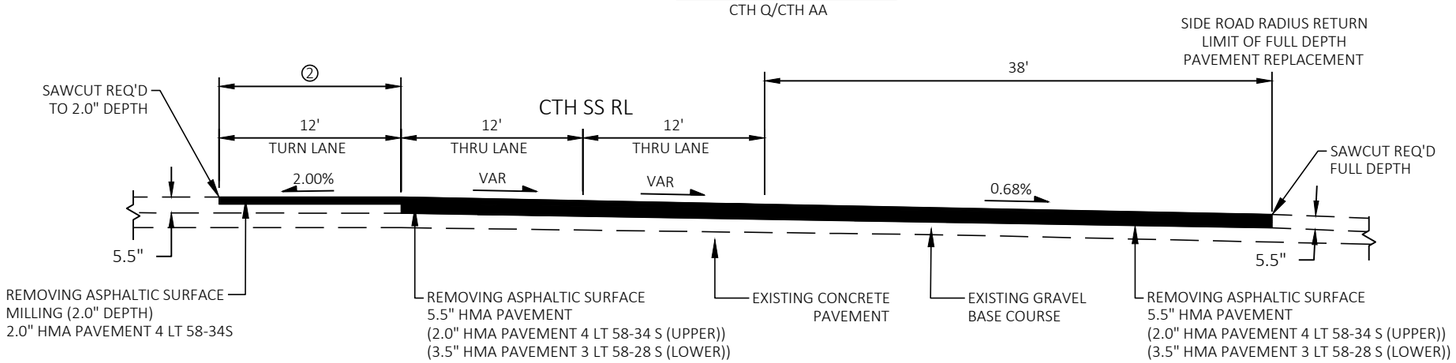
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	INTERSECTION DETAIL	SHEET 19	E

2



INTERSECTION PAVING

CTH Q/CTH AA



SECTION A-A

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	INTERSECTION DETAIL	SHEET 20	E

2

STA 239+76.6, 16' LT
BEAM GUARD POST 5

STA 239+51.6 TO STA 240+81.6
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS GUARDRAIL THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT

STA 238+51.6, 17' LT
BEAM GUARD POST 1 FOR EAT

STA 240+01.6, 15' LT
BEAM GUARD POST 9

SLOPE INTERCEPT (TYP)

STRUCTURE B-9-391

STA 241+35.1 TO STA 243+27.6
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS GUARDRAIL THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT

R/W

STA 242+77.6, 15' LT
BEAM GUARD POST 9

STA 243+02.6, 16' LT
BEAM GUARD POST 5

STA 243+27.6, 17' LT
BEAM GUARD POST 1 FOR EAT

+17.6
+14.6
+73.2
+76.2
+11.6
+67.6

238+00 239+00 240+00 241+00 242+00 243+00 244+00

CTH SS CTH SS

+21.5
+25.5
+05.2
+83.6

STA 238+89.1, 17' RT
BEAM GUARD POST 1 FOR EAT

STA 239+14.1, 16' RT
BEAM GUARD POST 5

STA 239+39.1, 15' RT
BEAM GUARD POST 9

STA 238+89.1 TO STA 240+81.6
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS GUARDRAIL THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT

BRANCH OF DUNCAN CREEK

R/W

CHARTER COMMUNICATIONS

STA 241+35.1 TO STA 242+65.1
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS GUARDRAIL THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT

STA 242+15.2, 17' RT
BEAM GUARD POST 9

STA 242+40.2, 16' RT
BEAM GUARD POST 5

STA 242+65.1, 17' RT
BEAM GUARD POST 1 FOR EAT

XCEL ENERGY

LEGEND

- SILT FENCE
- RIPRAP HEAVY
- EROSION MAT URBAN CLASS 1 TYPE B

STA 341+17.6, 15' LT
BEAM GUARD POST 9

STA 340+92.6, 15' LT
BEAM GUARD POST 5

STA 340+67.6 TO STA 341+72.6
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT
(ALTERNATIVE GRADING FOR TANGENT TERMINAL)

CHIPPEWA VALLEY ELECTRIC COOP

R/W

STA 340+67.6, 15' LT
BEAM GUARD POST 1 FOR EAT

STRUCTURE B-9-397

STA 342+32.1 TO STA 344+24.6
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT
(ALTERNATIVE GRADING FOR TANGENT TERMINAL)

STA 343+74.6, 15' LT
BEAM GUARD POST 9

STA 343+99.6, 15' LT
BEAM GUARD POST 5

STA 344+24.6, 15' LT
BEAM GUARD POST 1 FOR EAT

WETLANDS (TYP)

+12.5
+47.6
+44.7
+78.7

339+00 340+00 341+00 342+00 343+00 344+00 345+00

CTH SS CTH SS

+26
+60.1
+57.2
+91.1

R/W

XCEL ENERGY

BRANCH OF DUNCAN CREEK

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT

STA 339+80.1, 15' RT
BEAM GUARD POST 1 FOR EAT

STA 340+05.1, 15' RT
BEAM GUARD POST 5

STA 340+20.1, 15' RT
BEAM GUARD POST 9

CHARTER COMMUNICATIONS

STA 339+80.1 TO STA 341+72.6
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT
(ALTERNATIVE GRADING FOR TANGENT TERMINAL)
BARRIER SYSTEM GRADING SHAPING FINISHING

STA 342+32.1 TO STA 343+37.1
REMOVING GUARDRAIL
MGS GUARDRAIL 3
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT
(ALTERNATIVE GRADING FOR TANGENT TERMINAL)
BARRIER SYSTEM GRADING SHAPING FINISHING

STA 343+37.2, 15' RT
BEAM GUARD POST 1 FOR EAT

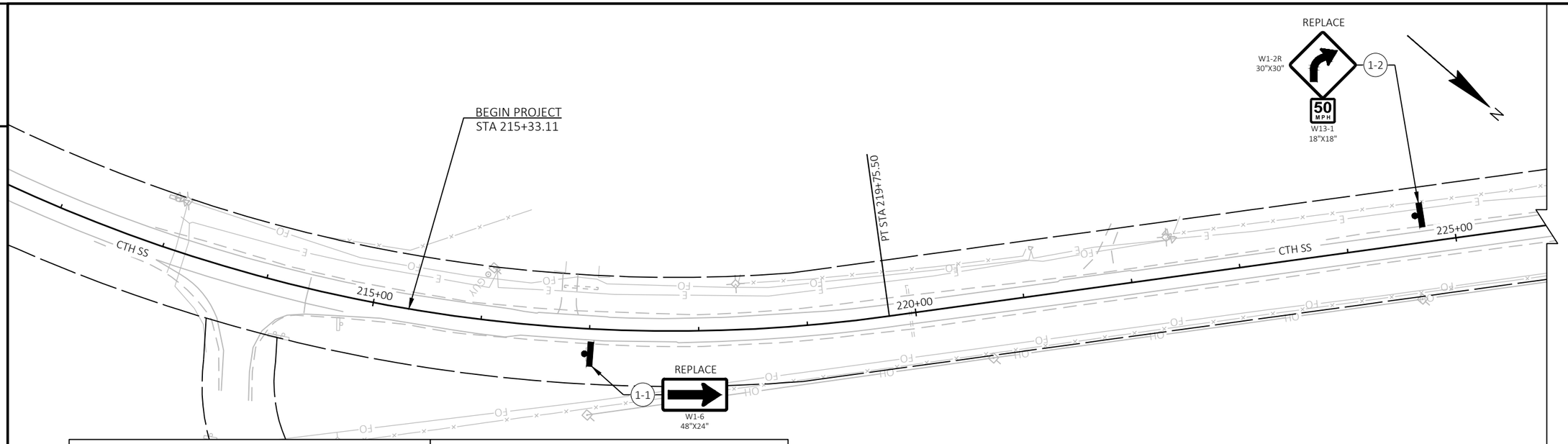
STA 343+12.2, 15' RT
BEAM GUARD POST 5

STA 342+87.2, 15' RT
BEAM GUARD POST 9

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN DETAILS - GUARDRAIL	SHEET 21	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\021201-PD_GUARDRAIL.DWG
LAYOUT NAME - Plan Dbl 1 IN 100 FT

PLOT DATE : 11/1/2021 8:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : ##########



PERMANENT SIGNING GENERAL NOTES:

PERMANENT SIGN LOCATIONS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY ENGINEER.

REPLACE = REMOVING SIGNS TYPE II, REMOVING SMALL SIGN SUPPORTS (WHEN ON EXISTING POST), SIGNS TYPE II REFLECTIVE H/F AND POSTS WOOD.

SIGN LEGEND:

SIGNS TYPE II REFLECTIVE H/F ON ONE/TWO WOOD POST(S)

X-X — SIGN GROUP NUMBERS

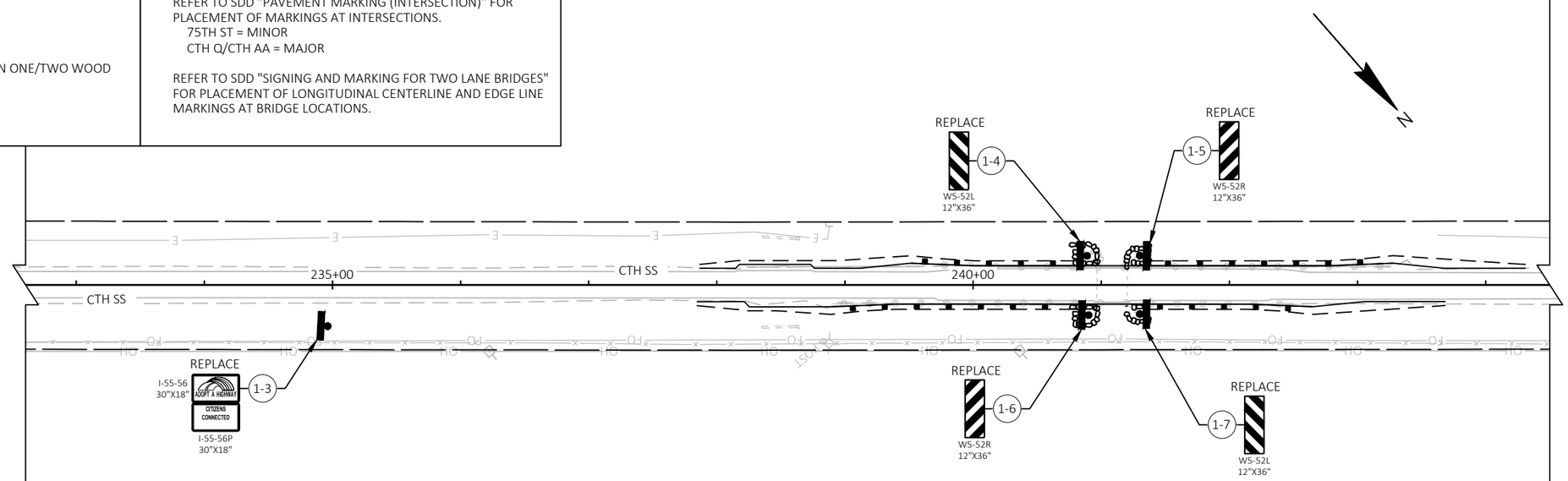
PAVEMENT MARKING GENERAL NOTES:

ALL PAVEMENT MARKINGS SHALL BE EPOXY.

REFER TO SDD "LONGITUDINAL MARKING (MAINLINE)" FOR PLACEMENT OF LONGITUDINAL CENTERLINE AND EDGELINE MARKINGS.

REFER TO SDD "PAVEMENT MARKING (INTERSECTION)" FOR PLACEMENT OF MARKINGS AT INTERSECTIONS.
75TH ST = MINOR
CTH Q/CTH AA = MAJOR

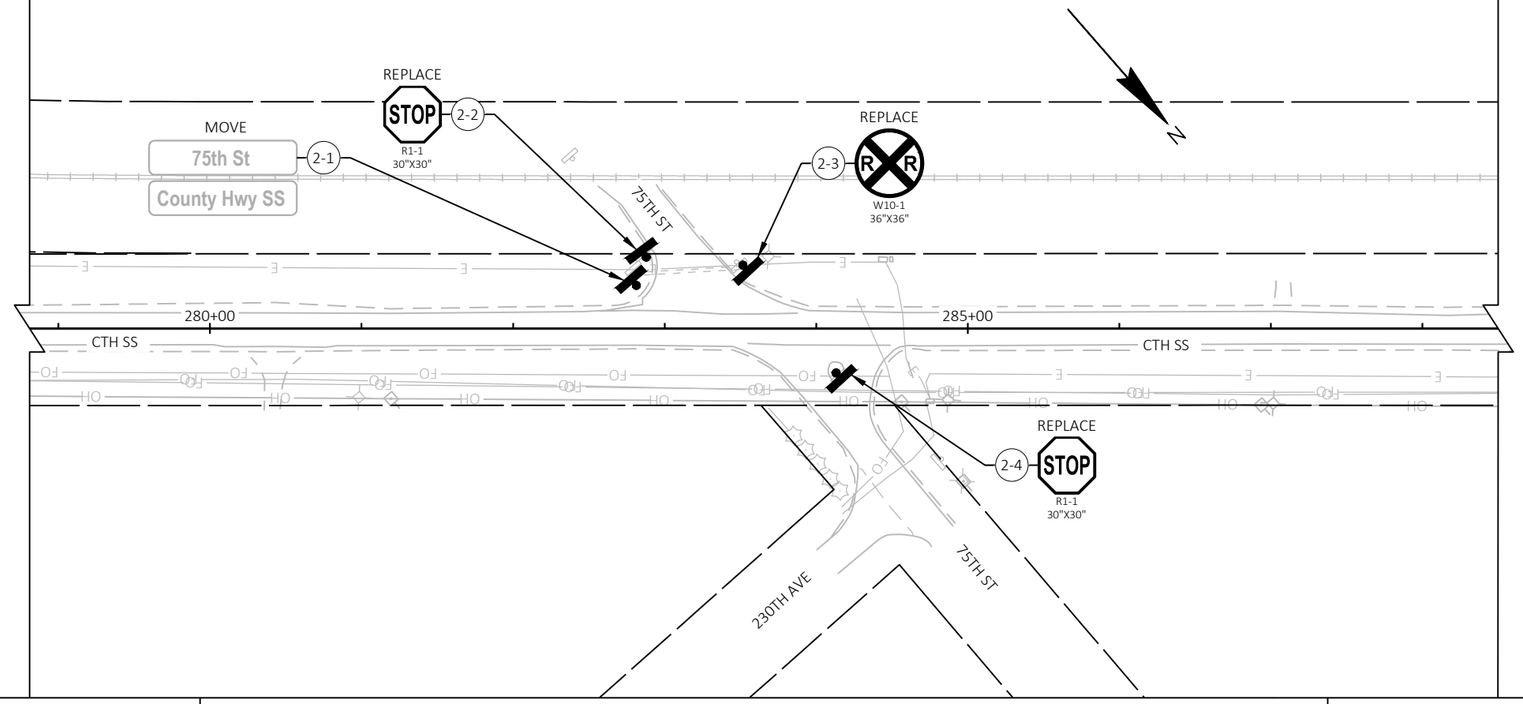
REFER TO SDD "SIGNING AND MARKING FOR TWO LANE BRIDGES" FOR PLACEMENT OF LONGITUDINAL CENTERLINE AND EDGE LINE MARKINGS AT BRIDGE LOCATIONS.



PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 22	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\023201-PS_PM.DWG
LAYOUT NAME - Signing Plan
PLOT DATE : 11/1/2021 5:11 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

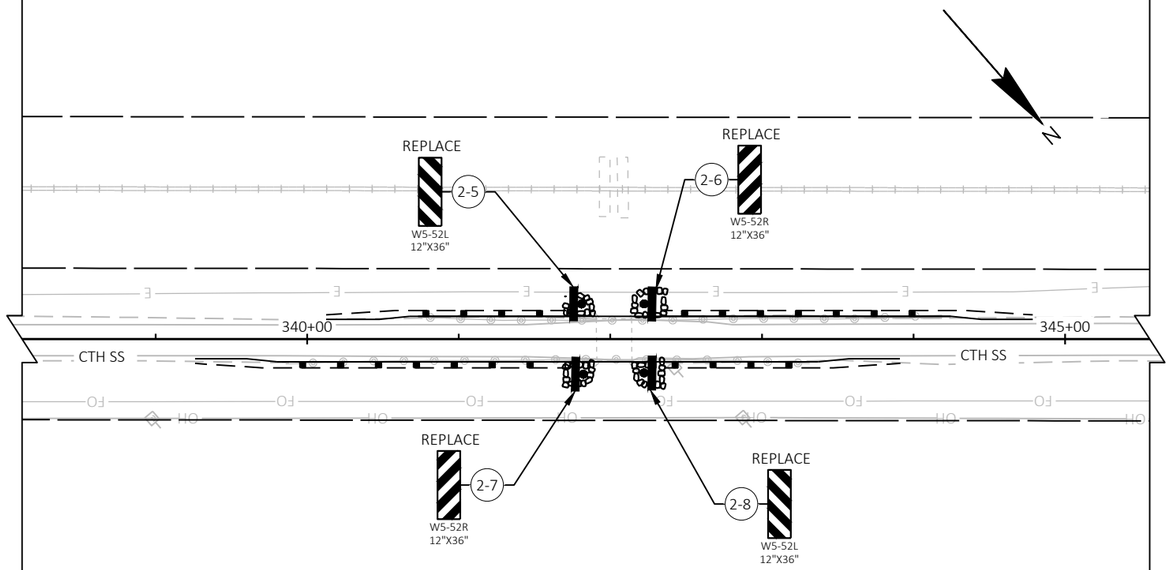
2



SIGN LEGEND:

SIGNS TYPE II REFLECTIVE H/F ON ONE/TWO WOOD POST(S)

X-X — SIGN GROUP NUMBERS



PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PERMANENT SIGNING & PAVMENT MARKING	SHEET 23	E

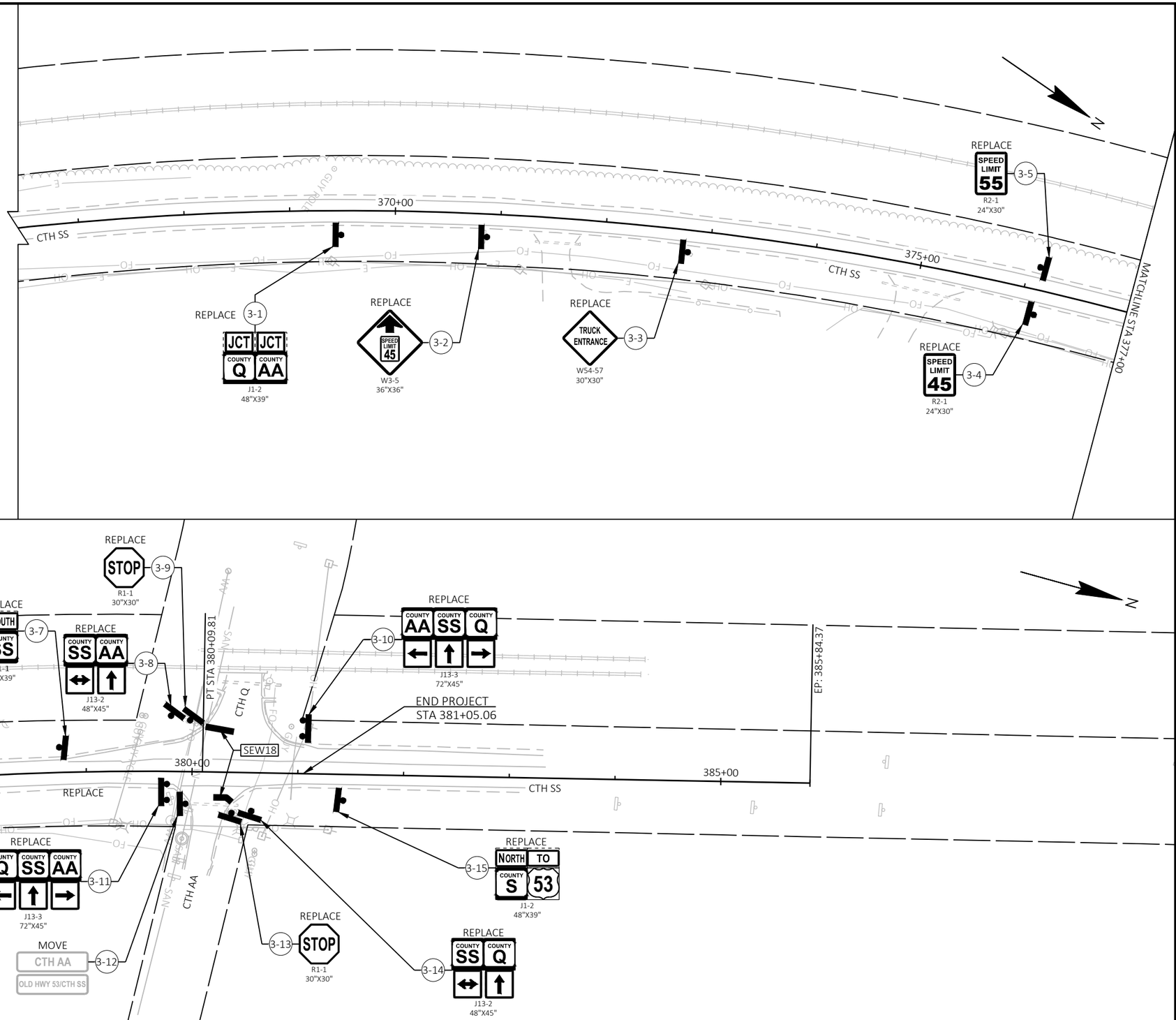
SIGN LEGEND:

SIGNS TYPE II REFLECTIVE H/F ON ONE/TWO WOOD POST(S)

X-X SIGN GROUP NUMBERS

PAVEMENT MARKING LEGEND:

SEW18 MARKING STOP LINE EPOXY 18-INCH (WHITE)



PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 24	E

LEGEND:

WORK ZONE

TYPE III BARRICADE
WITH/WITHOUT ATTACHED SIGN

TRAFFIC CONTROL SIGN ON
WOOD OR STEEL POST

NOTES:

DRAWING IS NOT TO SCALE.

THE TRAFFIC CONTROL ON THIS SHEET SHALL BE IN PLACE WHEN CTH SS IS CLOSED TO TRAFFIC.

THE PROJECT SHALL BE DETOURED USING CTH M, USH 53, AND STH 64. THE TRAFFIC CONTROL ASSOCIATED WITH THE DETOUR WILL BE COMPLETED BY THE CHIPPEWA COUNTY HIGHWAY DEPARTMENT.

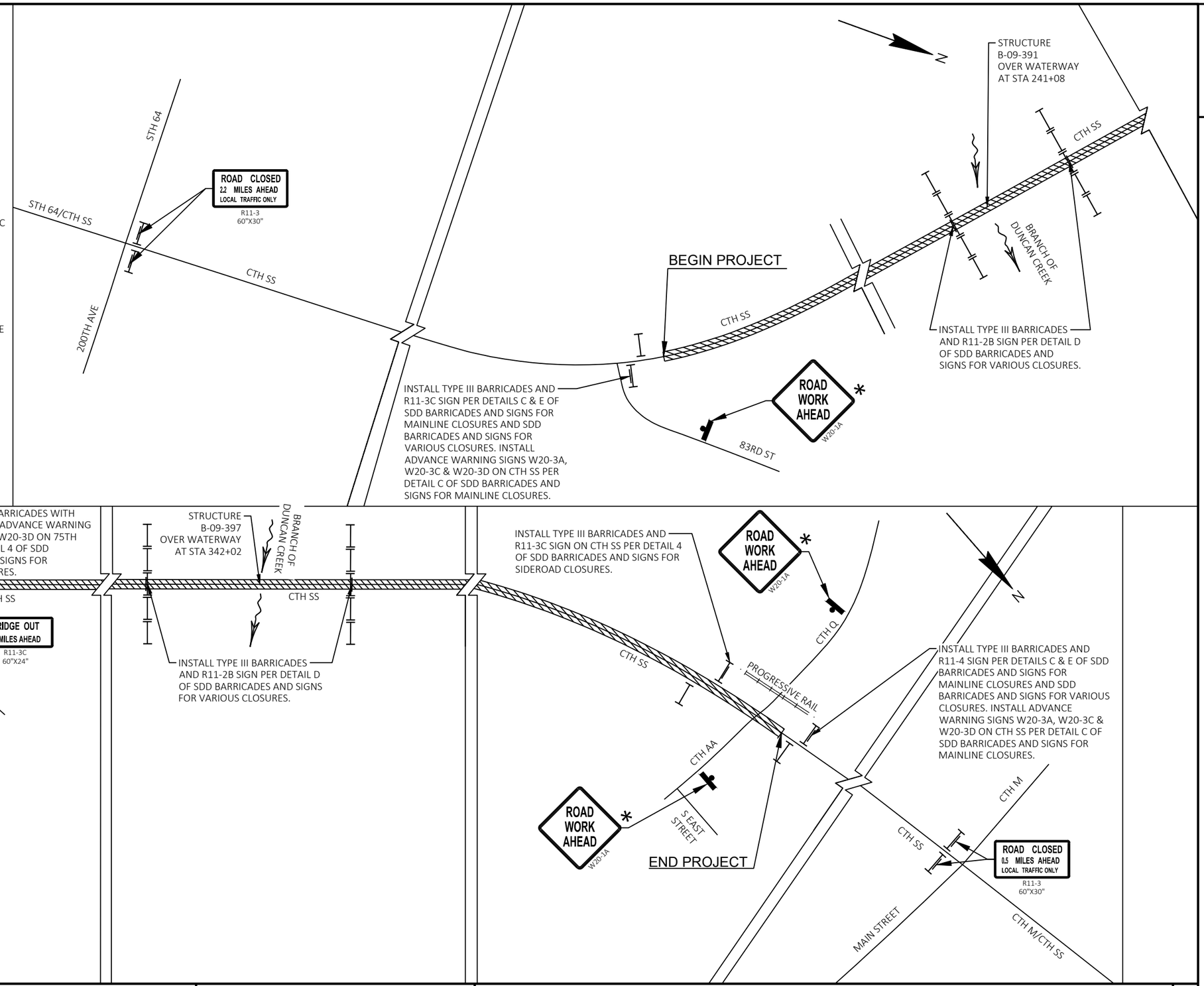
ALL TRAFFIC CONTROL SIGNS AND DEVICES AND THEIR LOCATIONS SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD), THE PLANS, STANDARD SPECIFICATIONS AND APPLICABLE STANDARD DETAIL DRAWINGS.

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

ALL W20 SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

ALL SIGNS INAPPROPRIATE TO THE WORK ZONE, INCLUDING PRE-EXISTING SIGNS, SHALL BE COVERED, REMOVED, OR ALTERED AS SPECIFIED IN THE PLANS AND/OR SPECIALS PROVISIONS OR AS DIRECTED BY THE ENGINEER.

* 500' MAX FROM INTERSECTION



PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	TRAFFIC CONTROL	25	E

8953-04-72

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	11.000	11.000
0004	203.0220	Removing Structure (structure) 01. 219+95	EACH	1.000	1.000
0006	203.0220	Removing Structure (structure) 02. 252+64	EACH	1.000	1.000
0008	203.0220	Removing Structure (structure) 03. 301+57	EACH	1.000	1.000
0010	203.0220	Removing Structure (structure) 04. 305+90	EACH	1.000	1.000
0012	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. B-09-0391	EACH	1.000	1.000
0014	203.0250	Removing Structure Over Waterway Remove Debris (structure) 02. B-09-0397	EACH	1.000	1.000
0016	204.0100	Removing Concrete Pavement	SY	830.000	830.000
0018	204.0110	Removing Asphaltic Surface	SY	1,090.000	1,090.000
0020	204.0115	Removing Asphaltic Surface Butt Joints	SY	200.000	200.000
0022	204.0120	Removing Asphaltic Surface Milling	SY	34,200.000	34,200.000
0024	205.0100	Excavation Common	CY	5,037.000	5,037.000
0026	206.1000	Excavation for Structures Bridges (structure) 01. B-09-0391	LS	1.000	1.000
0028	206.1000	Excavation for Structures Bridges (structure) 02. B-09-0397	LS	1.000	1.000
0030	206.5000	Cofferdams (structure) 01. B-09-0397	LS	1.000	1.000
0032	209.2500	Backfill Granular Grade 2	TON	200.000	200.000
0034	210.1500	Backfill Structure Type A	TON	445.000	445.000
0036	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 8953-04-72	LS	1.000	1.000
0038	211.0500	Prepare Foundation for Base Aggregate	STA	90.000	90.000
0040	213.0100	Finishing Roadway (project) 01. 8953-04-72	EACH	1.000	1.000
0042	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,040.000	4,040.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,080.000	5,080.000
0046	305.0500	Shaping Shoulders	STA	292.000	292.000
0048	310.0110	Base Aggregate Open-Graded	TON	2,250.000	2,250.000
0050	312.0110	Select Crushed Material	TON	140.000	140.000
0052	325.0100	Pulverize and Relay	SY	28,000.000	28,000.000
0054	330.0100	Mill and Relay	SY	1,900.000	1,900.000
0056	455.0605	Tack Coat	GAL	4,820.000	4,820.000
0058	460.2000	Incentive Density HMA Pavement	DOL	7,100.000	7,100.000
0060	460.5223	HMA Pavement 3 LT 58-28 S	TON	6,350.000	6,350.000
0062	460.5244	HMA Pavement 4 LT 58-34 S	TON	5,020.000	5,020.000
0064	465.0105	Asphaltic Surface	TON	700.000	700.000
0066	502.0100	Concrete Masonry Bridges	CY	343.000	343.000
0068	502.3200	Protective Surface Treatment	SY	280.000	280.000
0070	502.3210	Pigmented Surface Sealer	SY	122.000	122.000
0072	505.0400	Bar Steel Reinforcement HS Structures	LB	7,800.000	7,800.000
0074	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	48,850.000	48,850.000
0076	516.0500	Rubberized Membrane Waterproofing	SY	40.000	40.000
0078	520.3418	Culvert Pipe Class III-A Non-metal 18-Inch	LF	166.000	166.000
0080	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	28.000	28.000
0082	522.0418	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	60.000	60.000
0084	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	152.000	152.000
0086	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	176.000	176.000
0088	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0090	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	6.000	6.000
0092	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	8.000	8.000
0094	522.2419	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	22.000	22.000
0096	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	2.000	2.000
0098	522.2638	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	EACH	4.000	4.000

8953-04-72

Line	Item	Item Description	Unit	Total	Qty
0100	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,440.000	1,440.000
0102	606.0300	Riprap Heavy	CY	250.000	250.000
0104	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	400.000	400.000
0106	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	8.000	8.000
0108	614.0920	Salvaged Rail	LF	1,427.000	1,427.000
0110	614.2300	MGS Guardrail 3	LF	500.000	500.000
0112	614.2500	MGS Thrie Beam Transition	LF	315.000	315.000
0114	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000
0116	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8953-04-72	EACH	1.000	1.000
0118	619.1000	Mobilization	EACH	1.000	1.000
0120	624.0100	Water	MGAL	370.000	370.000
0122	625.0500	Salvaged Topsoil	SY	10,700.000	10,700.000
0124	627.0200	Mulching	SY	1,800.000	1,800.000
0126	628.1504	Silt Fence	LF	4,900.000	4,900.000
0128	628.1520	Silt Fence Maintenance	LF	4,900.000	4,900.000
0130	628.1905	Mobilizations Erosion Control	EACH	7.000	7.000
0132	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0134	628.2008	Erosion Mat Urban Class I Type B	SY	10,700.000	10,700.000
0136	628.5505	Polyethylene Sheeting	SY	300.000	300.000
0138	628.7504	Temporary Ditch Checks	LF	200.000	200.000
0140	628.7555	Culvert Pipe Checks	EACH	40.000	40.000
0142	629.0210	Fertilizer Type B	CWT	9.000	9.000
0144	630.0120	Seeding Mixture No. 20	LB	300.000	300.000
0146	630.0140	Seeding Mixture No. 40	LB	38.000	38.000
0148	630.0500	Seed Water	MGAL	210.000	210.000
0150	633.5200	Markers Culvert End	EACH	10.000	10.000
0152	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	8.000	8.000
0154	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	11.000	11.000
0156	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	11.000	11.000
0158	637.2210	Signs Type II Reflective H	SF	153.220	153.220
0160	637.2230	Signs Type II Reflective F	SF	62.820	62.820
0162	638.2102	Moving Signs Type II	EACH	4.000	4.000
0164	638.2602	Removing Signs Type II	EACH	31.000	31.000
0166	638.3000	Removing Small Sign Supports	EACH	30.000	30.000
0168	638.4000	Moving Small Sign Supports	EACH	2.000	2.000
0170	642.5001	Field Office Type B	EACH	1.000	1.000
0172	643.0420	Traffic Control Barricades Type III	DAY	3,960.000	3,960.000
0174	643.0705	Traffic Control Warning Lights Type A	DAY	5,720.000	5,720.000
0176	643.0900	Traffic Control Signs	DAY	3,190.000	3,190.000
0178	643.5000	Traffic Control	EACH	1.000	1.000
0180	645.0111	Geotextile Type DF Schedule A	SY	176.000	176.000
0182	645.0120	Geotextile Type HR	SY	530.000	530.000
0184	645.0220	Geogrid Type SR	SY	225.000	225.000
0186	646.1020	Marking Line Epoxy 4-Inch	LF	44,600.000	44,600.000
0188	646.6120	Marking Stop Line Epoxy 18-Inch	LF	47.000	47.000
0190	648.0100	Locating No-Passing Zones	MI	3.140	3.140
0192	650.5000	Construction Staking Base	LF	1,260.000	1,260.000
0194	650.6000	Construction Staking Pipe Culverts	EACH	18.000	18.000
0196	650.6500	Construction Staking Structure Layout (structure) 01. B-09-0391	LS	1.000	1.000

8953-04-72

Line	Item	Item Description	Unit	Total	Qty
0198	650.6500	Construction Staking Structure Layout (structure) 02. B-09-0397	LS	1.000	1.000
0200	650.8000	Construction Staking Resurfacing Reference	LF	16,573.000	16,573.000
0202	650.9910	Construction Staking Supplemental Control (project) 01. 8953-04-72	LS	1.000	1.000
0204	650.9920	Construction Staking Slope Stakes	LF	2,840.000	2,840.000
0206	690.0150	Sawing Asphalt	LF	490.000	490.000
0208	690.0250	Sawing Concrete	LF	270.000	270.000
0210	715.0502	Incentive Strength Concrete Structures	DOL	2,056.000	2,056.000
0212	740.0440	Incentive IRI Ride	DOL	12,560.000	12,560.000
0214	801.0117	Railroad Flagging Reimbursement	DOL	36,000.000	36,000.000
0216	999.2005.S	Maintaining Bird Deterrent System (station) 01. 342+02	EACH	1.000	1.000
0218	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	800.000	800.000
0220	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	630.000	630.000
0222	SPV.0060	Special 01. Sand Bags	EACH	70.000	70.000
0224	SPV.0090	Special 01. Ditch Cleaning	LF	550.000	550.000
0226	SPV.0090	Special 02. Culvert Pipe Reinforced Conc Horiz Elliptical Class HE-VI 38x60-Inch	LF	84.000	84.000
0228	SPV.0195	Special 01. Salvaged and Re-laid Milled Base	TON	5,900.000	5,900.000
0230	SPV.0195	Special 02. Coarse Aggregate Base	TON	430.000	430.000

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	AVAILABLE MATERIAL (3)	UNEXPANDED FILL	EXPANDED FILL (4) FACTOR 1.25	MASS ORDINATE +/- (5)	WASTE	208.0100 BORROW	COMMENT
DIVISION 1										
QR-BYPASS CHANNEL	10+00/11+03.37		123	123	0	0	123	123	0	
QR-CTH SS	215+33/370+50		4,914	4,914	1,445	1,806	3,108	3,108	0	
DIVISION 1 SUBTOTAL			5,037	5,037	1,445	1,806	3,231	3,231	0	
GRAND TOTAL			5,037	5,037	1,445	1,806	3,231	3,231	0	
TOTAL COMMON EXC			5,037							

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(4) EXPANDED FILL FACTOR = 1.25

DEPENDING ON SELECTIONS: EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR

(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

REMOVING SMALL PIPE CULVERTS & STRUCTURES

STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	203.0220 REMOVING STRUCTURE 01. STA 219+95 EACH	203.0220 REMOVING STRUCTURE 02. STA 252+64 EACH	203.0220 REMOVING STRUCTURE 03. STA 301+57 EACH	203.0220 REMOVING STRUCTURE 04. STA 305+90 EACH
219+95	-	-	1	-	-	-
228+75	LT	1	-	-	-	-
238+47	LT	1	-	-	-	-
238+49	RT	1	-	-	-	-
249+00	LT	1	-	-	-	-
252+64	-	-	-	1	-	-
265+43	RT	1	-	-	-	-
283+51	LT	1	-	-	-	-
301+57	-	-	-	-	1	-
305+90	-	-	-	-	-	1
320+97	RT	1	-	-	-	-
356+26	RT	1	-	-	-	-
371+55	RT	1	-	-	-	-
375+07	RT	1	-	-	-	-
380+17	RT	1	-	-	-	-
ITEM TOTAL		11	1	1	1	1

REMOVING CONCRETE PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 SY
CTH SS				
219+70	-	220+20	-	112
252+30	-	252+91	-	138
301+28	-	301+85	-	131
305+63	-	306+20	-	131
STRUCTURE B-09-0391				
240+79	-	240+96	-	53
241+21	-	241+38	-	53
STRUCTURE B-09-0397				
341+45	-	341+91	-	145
342+14	-	342+35	-	67
ITEM TOTAL				830

REMOVING ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	(1) 204.0110 SY	204.0115 BUTT JOINTS SY	204.0120 MILLING SY
CTH SS						
215+33	-	244+00	-	-	-	5,122
244+00	-	267+00	-	-	-	5,194
267+00	-	293+00	-	-	-	6,079
293+00	-	319+00	-	-	-	3,447
319+00	-	345+00	-	-	-	6,070
345+00	-	371+00	-	-	-	6,071
371+00	-	381+05	-	-	-	2,041
BEGIN PROJECT						
215+33	-	215+58	-	-	-	-
SIDE ROAD 75TH ST						
282+62		284+61	-	560	-	-
INTERSECTION CTH AA/Q						
378+76	-	381+06	-	530	200	176
ITEM TOTAL				1,090	200	34,200

(1) QUANTITY INCLUDES DRIVEWAYS, NON-MILLING, AND NON-PULVERIZED AREAS

PREPARE FOUNDATION FOR ASPHALTIC PAVING (8953-04-72)

STATION	TO	STATION	211.0100 LS
215+33	-	381+05	1
ITEM TOTAL			1

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

GRANULAR, BASE, SUBGRADE AGGREGATE ITEMS

STATION	TO	STATION	LOCATION	211.0500 PREPARE FOUNDATION FOR BASE AGGREGATE STA	209.2500 BACKFILL GRANULAR GRADE 2 TON	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	310.0110 BASE AGGREGATE OPEN-GRADED TON	312.0110 SELECT CRUSHED MATERIAL TON	645.0220 GEOGRID TYPE SR SY
CTH SS											
215+33	-	244+00	-	-	-	723	2,185	44	739	-	-
244+00	-	267+00	-	-	-	550	225	46	871	-	-
267+00	-	293+00	-	9	-	612	28	50	639	-	-
293+00	-	319+00	-	26	-	602	405	52	-	-	-
319+00	-	345+00	-	20	-	700	1,895	41	-	-	-
345+00	-	371+00	-	26	-	602	342	42	-	-	-
371+00	-	381+05	-	9	-	252	-	18	-	-	-
STRUCTURE B-09-0391											
240+79	-	240+89	-	-	-	-	-	-	-	22	33
240+27	-	240+37	-	-	-	-	-	-	-	22	33
STRUCTURE B-09-0397											
341+45	-	341+80	-	-	200	-	-	-	-	74	125
342+25	-	342+35	-	-	-	-	-	-	-	22	33
ITEM TOTAL				90	200	4,040	5,080	292	2,250	140	225

RELAID ASPHALTIC ITEMS

STATION	TO	STATION	LOCATION	325.0100 PULVERIZE AND RELAY SY	330.0100 MILL AND RELAY SY	SPV.0195.01 SALVAGED AND RE-LAID MILLED BASE TON
215+33	-	244+00	-	-	1,900	741
244+00	-	267+00	-	-	-	531
267+00	-	293+00	-	3,037	-	746
293+00	-	319+00	-	7,517	-	445
319+00	-	345+00	-	7,534	-	1,522
345+00	-	371+00	-	7,517	-	1,516
371+00	-	381+05	-	2,394	-	398
ITEM TOTAL				28,000	1,900	5,900

ASPHALTIC ITEMS

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.5223 (1) HMA PAVEMENT 3 LT 58-28 S TON	460.5244 (1) HMA PAVEMENT 4 LT 58-34 S TON	465.0105 ASPHALTIC SURFACE TON
215+33	-	244+00	-	1,184	1,136	873	250
244+00	-	267+00	-	930	866	675	260
267+00	-	293+00	-	840	972	844	190
293+00	-	319+00	-	527	971	756	-
319+00	-	345+00	-	528	984	765	-
345+00	-	371+00	-	527	970	756	-
371+00	-	381+05	-	284	451	351	
ITEM TOTAL				4,820	6,350	5,020	700

(1) QUANTITY INCLUDES PAVEMENT TO SIDE ROAD LIMITS.

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

3

GUARDRAIL ITEMS

STATION	TO	STATION	LOCATION	614.0920 SALVAGED RAIL LF	614.2300 GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 GUARDRAIL TERMINAL EAT EACH
238+89	-	242+65	RT	368	138	79	2
239+52	-	243+28	LT	368	138	79	2
339+80	-	343+37	RT	346	112	79	2
340+68	-	344+25	LT	346	112	79	2
ITEM TOTAL				1,427	500	315	8

WATER

STATION	TO	STATION	LOCATION	624.0100 MGAL
215+33	-	244+00	-	72
244+00	-	267+00	-	31
267+00	-	293+00	-	41
293+00	-	319+00	-	54
319+00	-	345+00	-	89
345+00	-	371+00	-	64
371+00	-	381+05	-	20
ITEM TOTAL				370

EROSION MOBILIZATION ITEMS

STATION	TO	STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
215+33	-	381+05		7	3
ITEM TOTAL				7	3

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.5505 POLYETHYLENE SHEETING SY	628.7504 TEMPORARY DITCH CHECKS LF	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0500 SEED WATER MGAL	SPV.0060.01 SAND BAGS EACH
215+33	-	244+00	-	4,194	1,194	2,150	2,150	4,194	-	60	3	124	22	92	-
244+00	-	267+00	-	2,272	-	440	440	2,272	-	40	1	52	6	39	-
267+00	-	293+00	-	967	-	-	-	967	-	-	1	22	3	16	-
293+00	-	319+00	-	444	-	-	-	444	-	-	0	10	-	7	-
319+00	-	345+00	-	1,579	-	1,200	1,200	1,579	300	-	1	36	4	28	70
345+00	-	371+00	-	862	539	970	970	862	-	40	1	32	-	25	-
371+00	-	381+05		150	-	-	-	150	-	40	0	3	-	3	-
UNDISTRIBUTED				232	67	140	140	232	-	20	1	20	3	-	-
ITEM TOTAL				10,700	1,800	4,900	4,900	10,700	300	200	9	300	38	210	70

CULVERT PIPE ITEMS

STATION	LOCATION	520.3418 CULVERT PIPE CLASS III-A NON-METAL 18-INCH LF	520.3424 CULVERT PIPE CLASS III-A NON-METAL 24-INCH LF	522.0418 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.0430 CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.2419 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH LF	SPV.0090.02 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 38X60-INCH LF	522.2619 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 19X30-INCH EACH	522.2638 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 38X60-INCH EACH	628.7555 CULVERT PIPE CHECKS EACH	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	REMARKS
219+95	-	-	-	-	46	-	-	2	-	-	-	-	-	3	2	1	MAINLINE
228+75	LT	-	28	-	-	-	-	-	-	-	-	-	-	3	-	1	FIELD ENTRANCE
238+47	LT	30	-	-	-	-	-	-	-	-	-	-	-	3	-	1	FIELD ENTRANCE
238+49	RT	30	-	-	-	-	-	-	-	-	-	-	-	3	-	1	FIELD ENTRANCE
249+00	LT	-	-	-	-	-	-	-	-	22	-	2	-	2	-	1	DRIVEWAY
252+64	-	-	-	-	-	-	-	-	-	-	84	-	4	4	2	2	MAINLNE
265+43	RT	24	-	-	-	-	-	-	-	-	-	-	-	2	-	1	FIELD ENTRANCE
283+51	LT	-	-	-	60	-	-	2	-	-	-	-	-	3	-	1	SIDEROAD
301+57	-	-	-	-	-	88	-	-	4	-	-	-	-	3	2	2	MAINLINE
305+90	-	-	-	-	-	88	-	-	4	-	-	-	-	3	2	2	MAINLINE
320+97	RT	20	-	-	-	-	-	-	-	-	-	-	-	2	-	1	DRIVEWAY
356+26	RT	20	-	-	-	-	-	-	-	-	-	-	-	2	-	1	FIELD ENTRANCE
371+55	RT	42	-	-	-	-	-	-	-	-	-	-	-	2	-	1	DRIVEWAY
375+07	RT	-	-	60	-	-	2	-	-	-	-	-	-	2	-	1	DRIVEWAY
380+17	RT	-	-	-	46	-	-	2	-	-	-	-	-	3	2	1	SIDEROAD
ITEM TOTAL		166	28	60	152	176	2	6	8	22	84	2	4	40	10	18	

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	MISCELLANEOUS QUANTITIES	SHEET 33	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\030201-MQ.DWG
LAYOUT NAME - 05

PLOT DATE : 1/5/2022 4:58 AM PLOT BY : MATT SOLIN PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 42

3

SIGN GROUP	SIGN CODE	SIGN MESSAGE	SIZE	634.0612 POSTS WOOD 4X6-INCH 12-FT EACH	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH 18-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
1-1	W1-6	NIGHT ARROW (SINGLE)	48 X 24	-	1	-	-	8.00	-	1	1	-	REPLACE
1-2	W1-2R	RIGHT CURVE	30 X 30	-	-	1	-	6.25	-	1	1	-	REPLACE
	W13-1	ADVISORY SPEED PLATE	18 X 18	-	-	-	-	2.25	-	1	-	-	REPLACE
1-3	I55-56	ADOPT-A-HIGHWAY	30 X 18	-	1	-	3.75	-	-	1	1	-	REPLACE
	I-55-56P	ADOPT-A-HIGHWAY SPONSOR	30 X 18	-	-	-	3.75	-	-	1	-	-	REPLACE
1-4	W5-52-L	CLEARANCE STRIPER DOWN LEFT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
1-5	W5-52-R	CLEARANCE STRIPER DOWN RIGHT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
1-6	W5-52-R	CLEARANCE STRIPER DOWN RIGHT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
1-7	W5-52-L	CLEARANCE STRIPER DOWN LEFT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
2-1		75TH		-	-	-	-	-	1	-	-	1	MOVE
		COUNTY HWY SS		-	-	-	-	-	1	-	-	-	MOVE
2-2	R1-1	STOP	30 X 30	-	1	-	5.18	-	-	1	1	-	REPLACE
2-3	W10-1	RAILROAD CROSSING	36 X 36	-	1	-	-	7.07	-	1	1	-	REPLACE
2-4	R1-1	STOP	30 X 30	-	1	-	5.18	-	-	1	1	-	REPLACE
2-5	W5-52-L	CLEARANCE STRIPER DOWN LEFT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
2-6	W5-52-R	CLEARANCE STRIPER DOWN RIGHT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
2-7	W5-52-R	CLEARANCE STRIPER DOWN RIGHT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
2-8	W5-52-L	CLEARANCE STRIPER DOWN LEFT	12 X 36	1	-	-	-	3.00	-	1	1	-	REPLACE
3-1	J1-2	JUNCTION ASSEMBLY	48 X 39	-	-	1	13.00	-	-	1	1	-	REPLACE
3-2	W3-5	SPEED LIMIT 45 MPH AHEAD [ARROW]	36 X 36	-	-	1	-	9.00	-	1	1	-	REPLACE
3-3	W54-57	TRUCK ENTRANCE	30 X 30	-	1	-	-	6.25	-	1	1	-	REPLACE
3-4	R2-1	SPEED LIMIT 45 MPH	24 X 30	-	1	-	5.00	-	-	1	1	-	REPLACE
3-5	R2-1	SPEED LIMIT 55 MPH	24 X 30	-	1	-	5.00	-	-	1	1	-	REPLACE
3-6	I55-56	ADOPT-A-HIGHWAY	30 X 18	-	1	-	3.75	-	-	1	1	-	REPLACE
	I-55-56P	ADOPT-A-HIGHWAY SPONSOR	30 X 18	-	-	-	3.75	-	-	1	-	-	REPLACE
3-7	J1-1	ROUTE TURN WITHOUT CARDNIAL	24 X 39	-	-	1	6.50	-	-	1	1	-	REPLACE
3-8	J13-2	ROUTE TURN WITHOUT CARDNIAL	48 X 45	-	-	1	15.00	-	-	1	1	-	REPLACE
3-9	R1-1	STOP	30 X 30	-	1	-	5.18	-	-	1	1	-	REPLACE
3-10	J13-3	ROUTE TURN WITHOUT CARDNIAL	72 X 45	-	-	2	22.50	-	-	1	2	-	REPLACE
3-11	J13-3	ROUTE TURN WITHOUT CARDNIAL	72 X 45	-	-	2	22.50	-	-	1	2	-	REPLACE
3-12		CTH AA		-	-	-	-	-	1	-	-	1	MOVE
		OLD HWY 53/CTH SS		-	-	-	-	-	1	-	-	-	MOVE
3-13	R1-1	STOP	30 X 30	-	1	-	5.18	-	-	1	1	-	REPLACE
3-14	J13-2	ROUTE TURN WITHOUT CARDNIAL	48 X 45	-	-	1	15.00	-	-	1	1	-	REPLACE
3-15	J1-2	JUNCTION ASSEMBLY	48 X 39	-	-	1	13.00	-	-	1	1	-	REPLACE
ITEM TOTAL				8	11	11	153.22	62.82	4	31	30	2	

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

TRAFFIC CONTROL

STATION	TO	STATION	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.0900 SIGNS DAY	643.5000 EACH
CTH SS						
215+33	-	244+00	1320	1760	660	1
244+00	-	267+00	-	-	-	-
267+00	-	293+00	660	880	990	-
293+00	-	319+00	-	-	-	-
319+00	-	345+00	1100	1320	220	-
345+00	-	371+00	-	-	-	-
371+00	-	381+05	440	880	770	-
						-
STH 64			220	440	220	-
83RD ST			-	-	110	-
CTH M/MAIN ST			220	440	220	-
ITEM TOTAL			3,960	5,720	3,190	1

PAVEMENT MARKING ITEMS

STATION	TO	STATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.6120 MARKING STOP LINE EPOXY 18-INCH LF
CTH SS				
215+33	-	244+00	9,339	-
244+00	-	267+00	5,189	-
267+00	-	293+00	5,652	-
293+00	-	319+00	5,988	-
319+00	-	345+00	7,628	-
345+00	-	371+00	7,232	-
371+00	-	381+05	3,572	-
INTERSECTION CTH AA/Q				
6+00	-	7+00	-	20
8+00	-	9+00	-	27
ITEM TOTAL			44,600	47

LOCATING NO-PASSING ZONES

STATION	TO	STATION	648.0100 MI
215+33	-	381+05	3.14
ITEM TOTAL			3.14

3

CONSTRUCTION STAKING

STATION	TO	STATION	650.5000 BASE LF	650.8000 RESURFACING REFERENCE LF	650.9910 SUPPLEMENTAL CONTROL (8953-04-72) LS	650.9920 SLOPE STAKES LF
215+33	-	381+05	1,260	16,573	1	2,840
ITEM TOTAL			1,260	16,573	1	2,840

SAWCUT ITEMS

STATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
215+33	25	-	BEGIN PROJECT
219+95	40	40	CULVERT EXCAVATION
240+79	-	27	STRUCTURE B-09-0391
241+38	-	27	STRUCTURE B-09-0391
252+64	40	40	CULVERT EXCAVATION
301+57	40	40	CULVERT EXCAVATION
305+90	40	40	CULVERT EXCAVATION
283+13	40	-	INTERSECTION 75TH ST (NORTH)
284+16	40	-	INTERSECTION 75TH ST (SOUTH)
341+45	-	28	STRUCTURE B-09-0397
342+35	-	28	STRUCTURE B-09-0397
378+76	25	-	BUTT JOINT INTERSECTION CTH SS/Q
380+15	27	-	INTERSECTION CTH SS/AA
380+39	138	-	TURN LANE CTH SS/Q
381+06	35	-	END PROJECT
ITEM TOTAL	490	270	

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

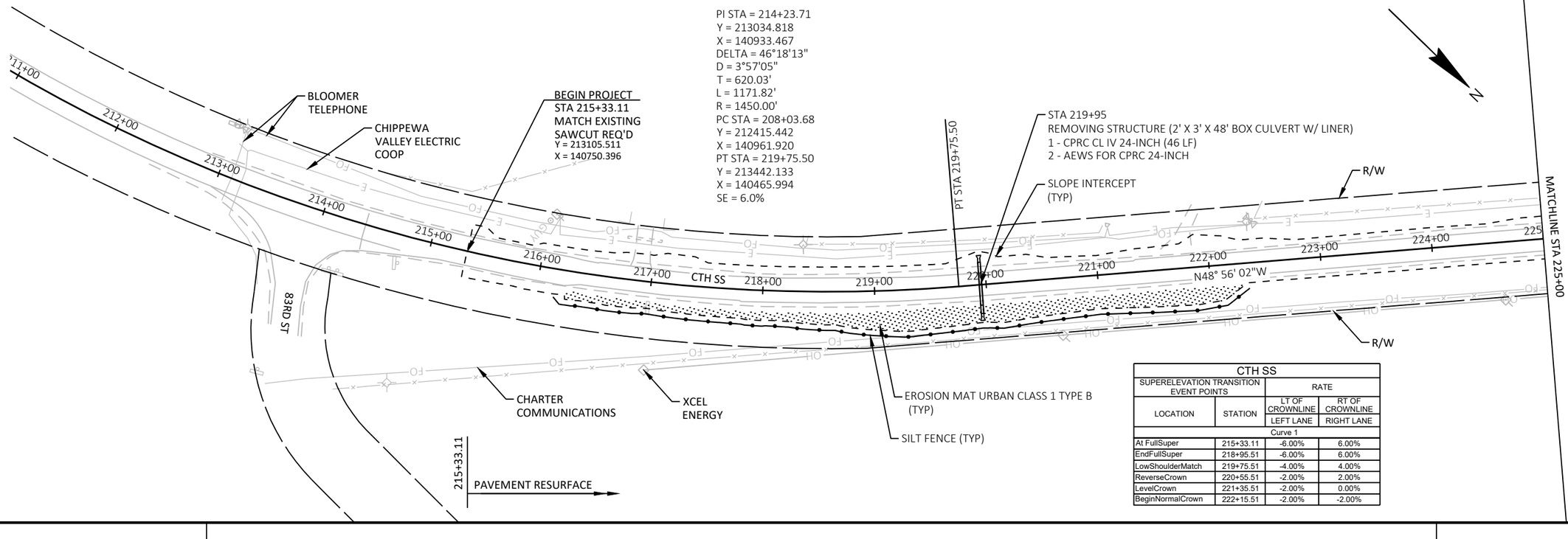
DITCH CLEANING

STATION	TO	STATION	LOCATION	SPV.0090.01 DITCH CLEANING LF	REMARKS
217+13	-	217+38	LT	25	RELIEF TRENCH
219+13	-	219+38	LT	25	RELIEF TRENCH
221+88	-	222+13	LT	25	RELIEF TRENCH
246+85	-	248+85	LT	200	
266+38	-	266+63	LT	25	RELIEF TRENCH
269+38	-	269+63	LT & RT	50	RELIEF TRENCH
272+38	-	272+63	LT	25	RELIEF TRENCH
275+38	-	275+63	LT	25	RELIEF TRENCH
277+38	-	277+63	LT	25	RELIEF TRENCH
UNDISTRIBUTED QUANTITY				125	
ITEM TOTAL				550	

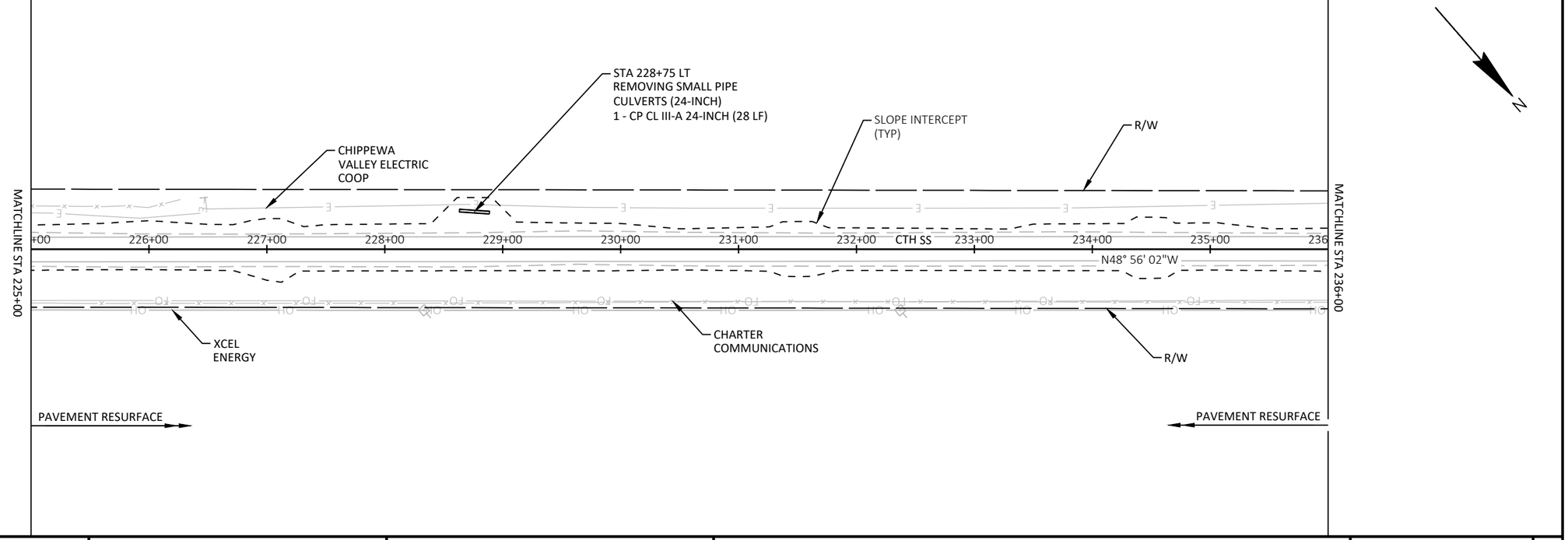
COARSE AGGREGATE BASE

STATION	TO	STATION	LOCATION	SPV.0195.02 COARSE AGGREGATE BASE TON	REMARKS
219+95	-		-	50	MAINLINE CULVERT
252+64	-		-	102	MAINLINE CULVERT
301+57	-		-	90	MAINLINE CULVERT
305+90	-		-	90	MAINLINE CULVERT
341+64	-		-	98	TEMPORARY CHANNEL
ITEM TOTAL				430	

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

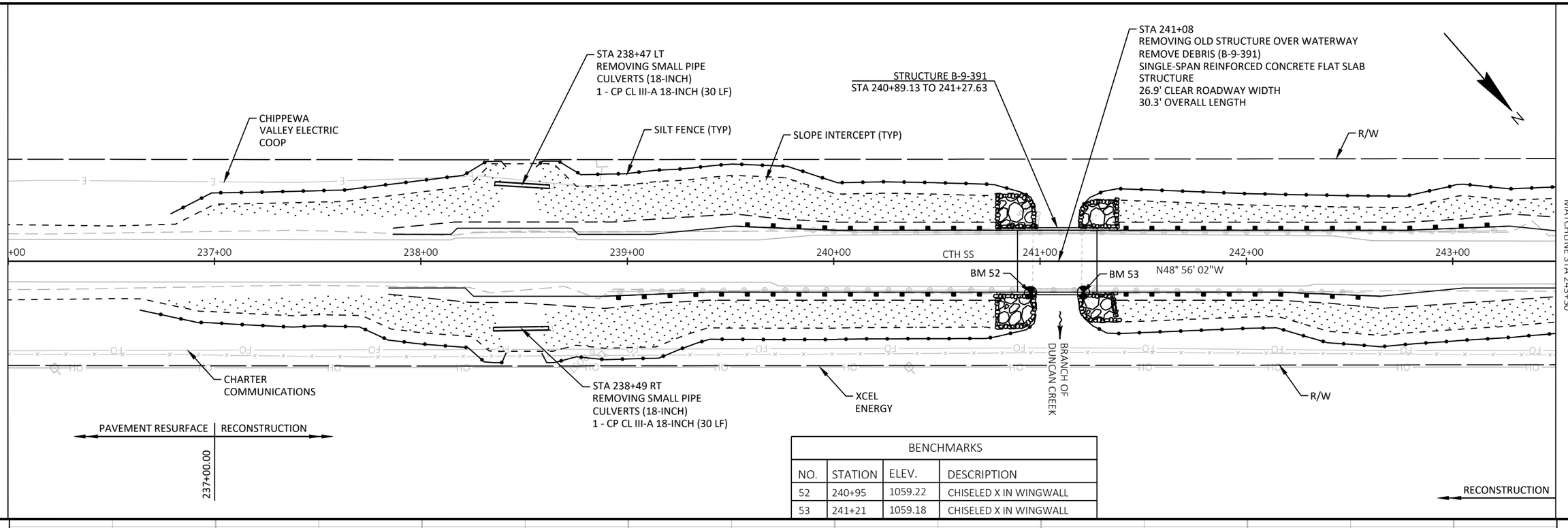


CTH SS			
SUPERELEVATION TRANSITION EVENT POINTS		RATE	
LOCATION	STATION	LT OF CROWNLINE LEFT LANE	RT OF CROWNLINE RIGHT LANE
Curve 1			
At FullSuper	215+33.11	-6.00%	6.00%
EndFullSuper	218+95.51	-6.00%	6.00%
LowShoulderMatch	219+75.51	-4.00%	4.00%
ReverseCrown	220+55.51	-2.00%	2.00%
LevelCrown	221+35.51	-2.00%	0.00%
BeginNormalCrown	222+15.51	-2.00%	-2.00%

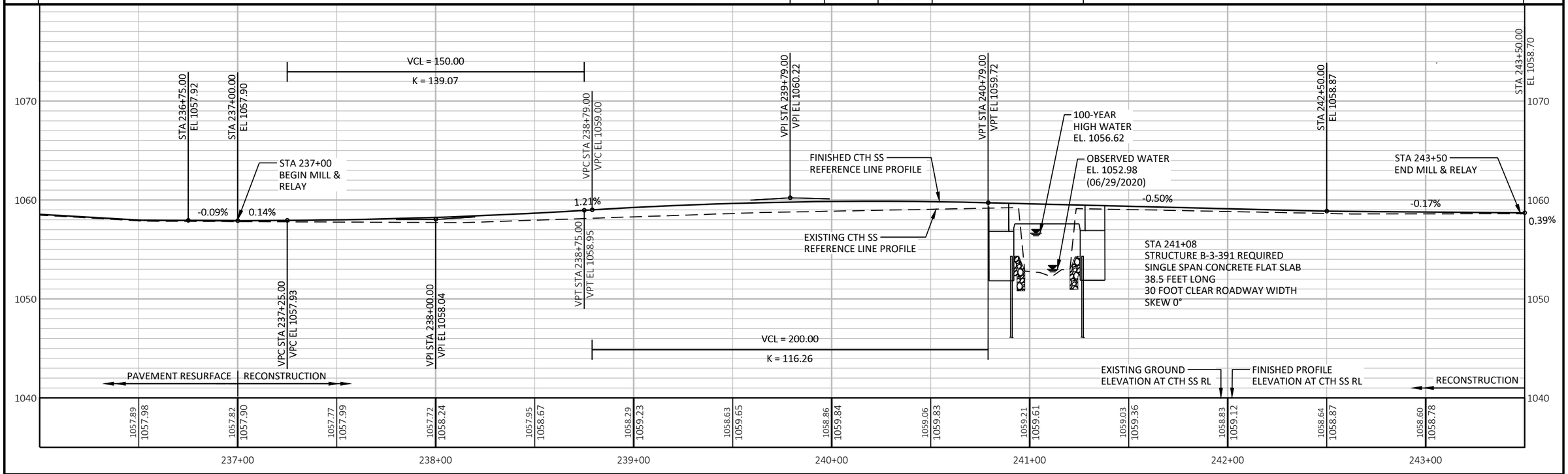


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN: CTH SS	SHEET 37	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\050201-PP.DWG
LAYOUT NAME - Plan Sheet - (1)
PLOT DATE : 11/1/2021 9:09 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
52	240+95	1059.22	CHISELED X IN WINGWALL
53	241+21	1059.18	CHISELED X IN WINGWALL



PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 38	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\050201-PP.DWG
LAYOUT NAME - Bridge P&P - (2)
PLOT DATE : 11/1/2021 9:09 PM
PLOT BY : STEVE LIPPERT
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

STA 246+85 TO STA 248+85 LT
DITCH CLEANING

SILT FENCE (TYP)

CHIPPEWA VALLEY ELECTRIC COOP

R/W

CITIZENS CONNECTED

STA 249+00 LT
REMOVING SMALL PIPE CULVERTS (18-INCH)
1 - CPRCHE HE-IV 19X30-INCH (22 LF)
2 - 19"X30" CPRC AEW REQ'D

WETLANDS (TYP)

SLOPE INTERCEPT (TYP)

MATCHLINE STA 243+50

244+00 245+00 246+00 247+00 248+00 249+00 CTH SS 250+00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258

MATCHLINE STA 258+00

N48° 56' 02"W

CHARTER COMMUNICATIONS

R/W

CHIPPEWA VALLEY ELECTRIC COOP

CITIZENS CONNECTED

SILT FENCE (TYP)

EROSION MAT URBAN CLASS 1 TYPE B (TYP)

XCEL ENERGY

STA 252+64
REMOVING STRUCTURE (3' X 6' X 49' BOX CULVERT)
2 - CPRCHE HE-IV 38X60-INCH (42 LF EACH PIPE)
4 - AEWS FOR CPRCHE 38X60-INCH

PAVEMENT RESURFACE

5

5

PROGRESSIVE RAIL

CHIPPEWA VALLEY ELECTRIC COOP

R/W

SLOPE INTERCEPT (TYP)

MATCHLINE STA 258+00

+00 259+00 260+00 261+00 262+00 263+00 CTH SS 264+00 265+00 266+00 267+00 268+00 269+00 270+00 271+00 272+00 273

MATCHLINE STA 273+00

N48° 56' 02"W

CHARTER COMMUNICATIONS

R/W

CITIZENS CONNECTED

XCEL ENERGY

STA 265+43 RT
REMOVING SMALL PIPE CULVERTS (12-INCH)
1 - CP CL III-A 18-INCH (24 LF)

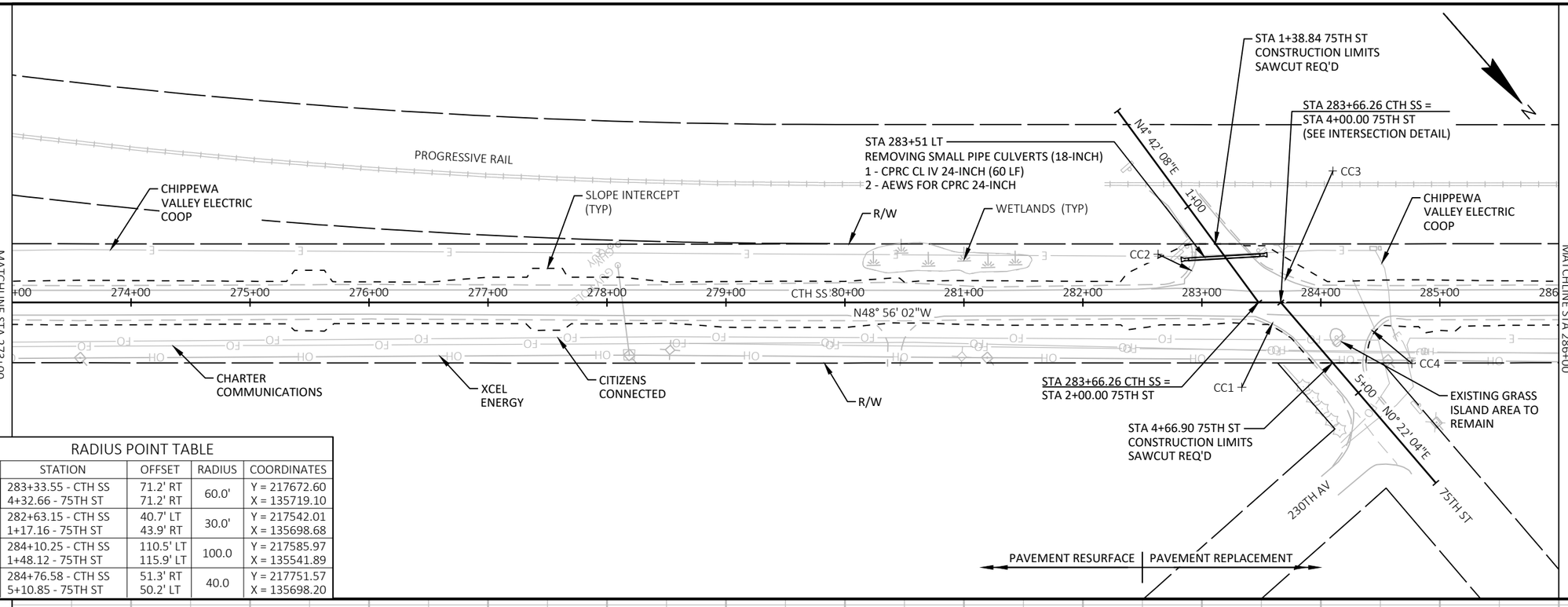
PAVEMENT RESURFACE

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN CTH SS	SHEET 39	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\050201-PP.DWG
LAYOUT NAME - Plan Sheet - (3)

PLOT DATE : 11/1/2021 9:09 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

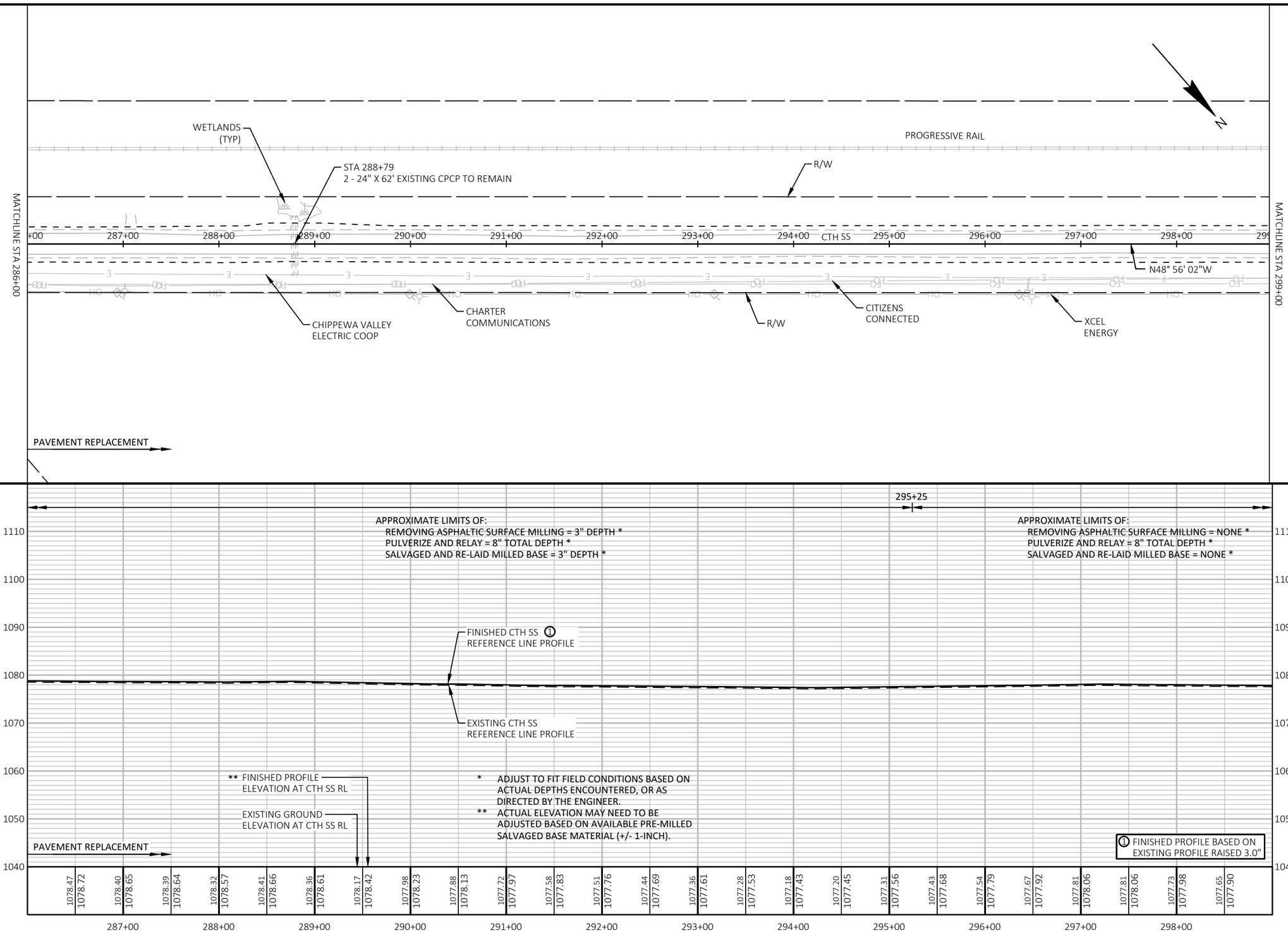
WISDOT/CADDS SHEET 44



RADIUS POINT TABLE				
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC1	283+33.55 - CTH SS 4+32.66 - 75TH ST	71.2' RT 71.2' RT	60.0'	Y = 217672.60 X = 135719.10
CC2	282+63.15 - CTH SS 1+17.16 - 75TH ST	40.7' LT 43.9' RT	30.0'	Y = 217542.01 X = 135698.68
CC3	284+10.25 - CTH SS 1+48.12 - 75TH ST	110.5' LT 115.9' LT	100.0	Y = 217585.97 X = 135541.89
CC4	284+76.58 - CTH SS 5+10.85 - 75TH ST	51.3' RT 50.2' LT	40.0	Y = 217751.57 X = 135698.20

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 40	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\050201-PP.DWG
LAYOUT NAME - P&P - (4)
PLOT DATE : 1/6/2022 10:55 AM
PLOT BY : STEVE LIPPERT
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



5

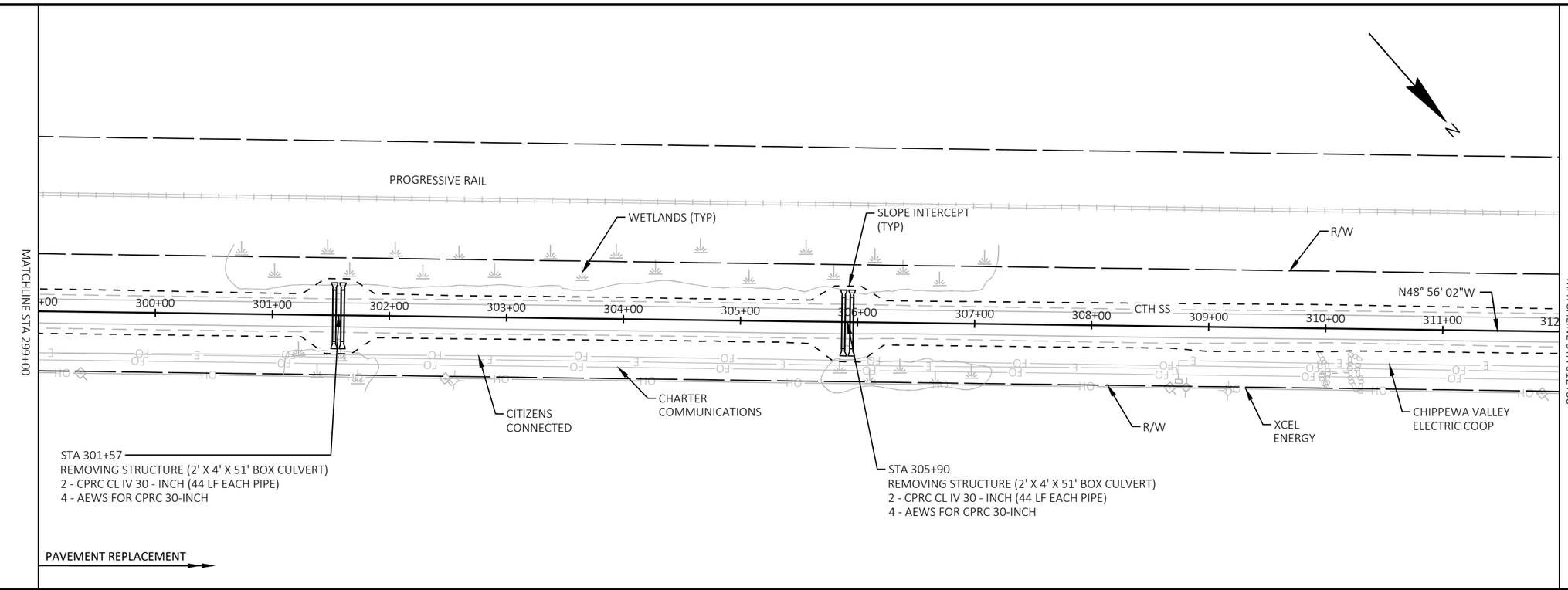
5

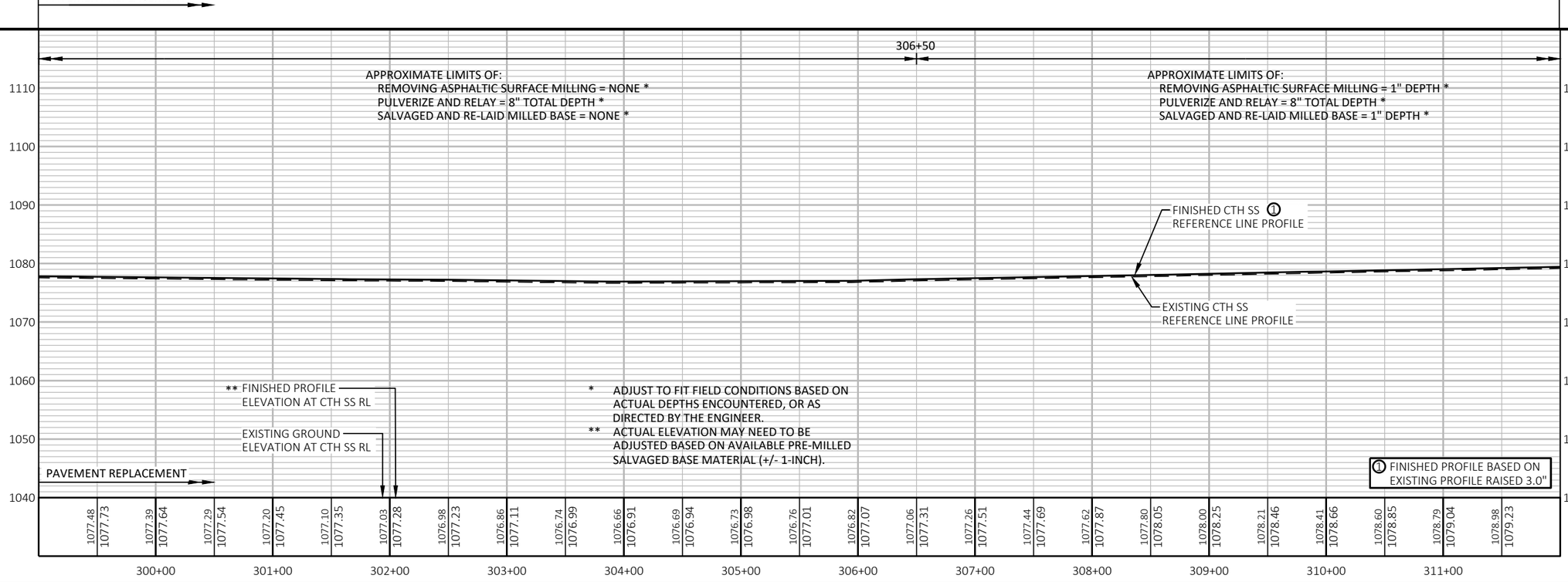
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 41	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\050201-PP.DWG
LAYOUT NAME - P&P - (5)

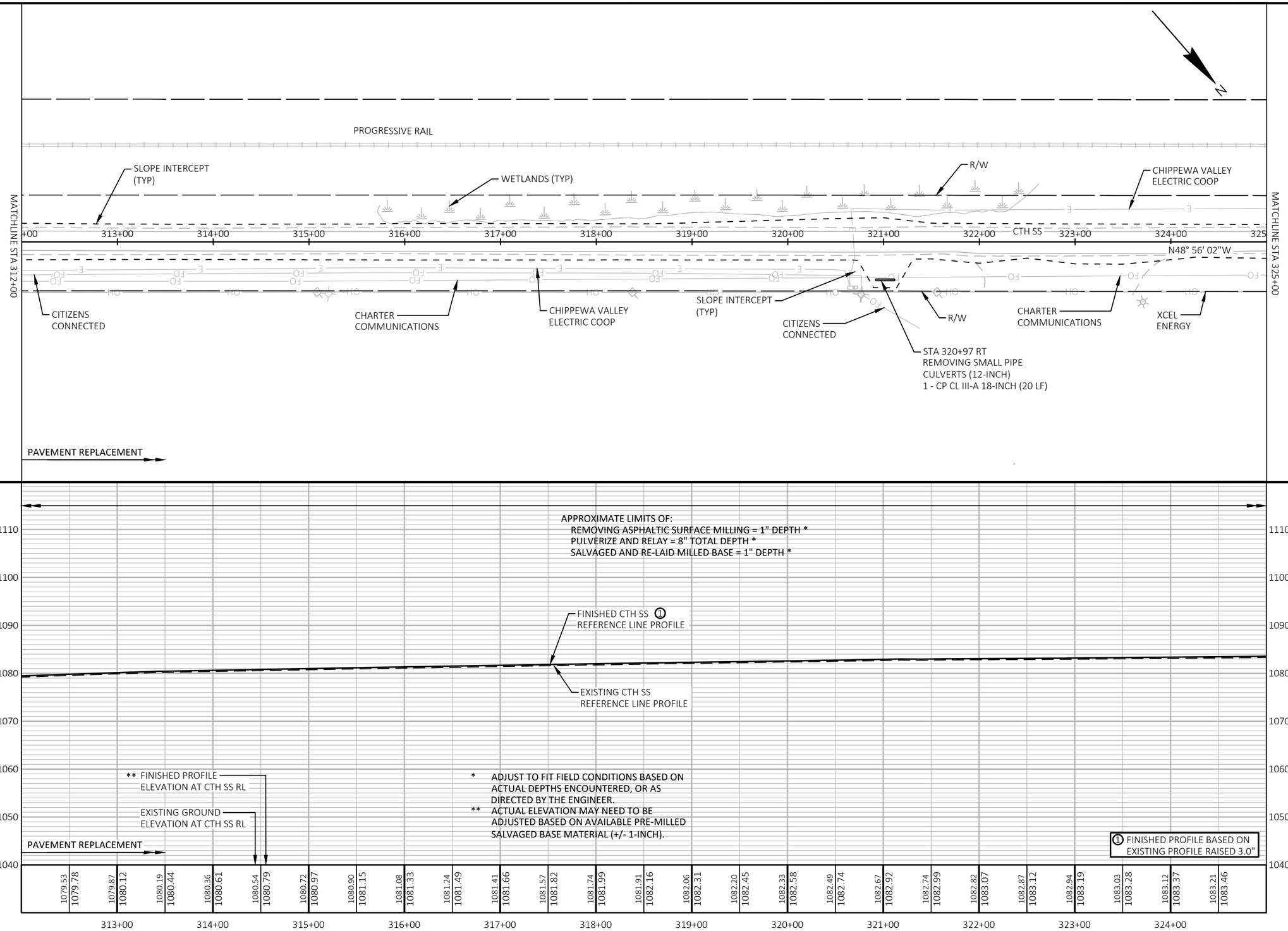
PLOT DATE : 1/6/2022 10:56 AM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 42	E



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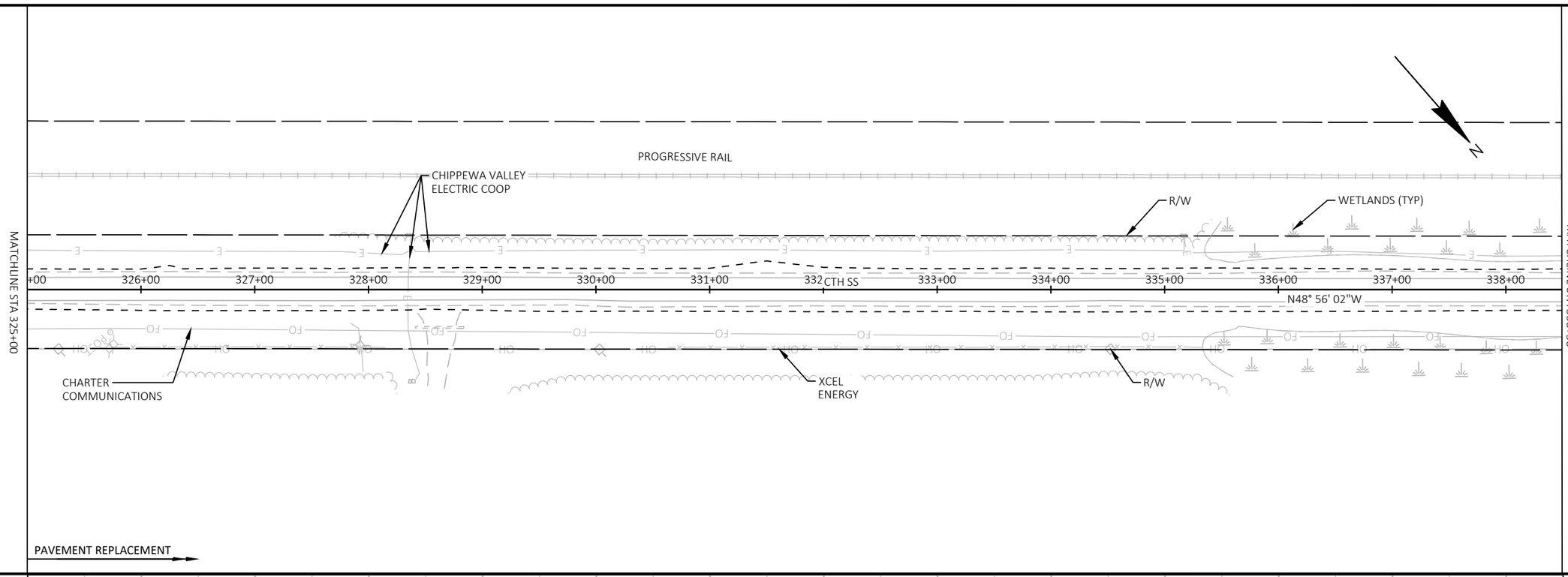
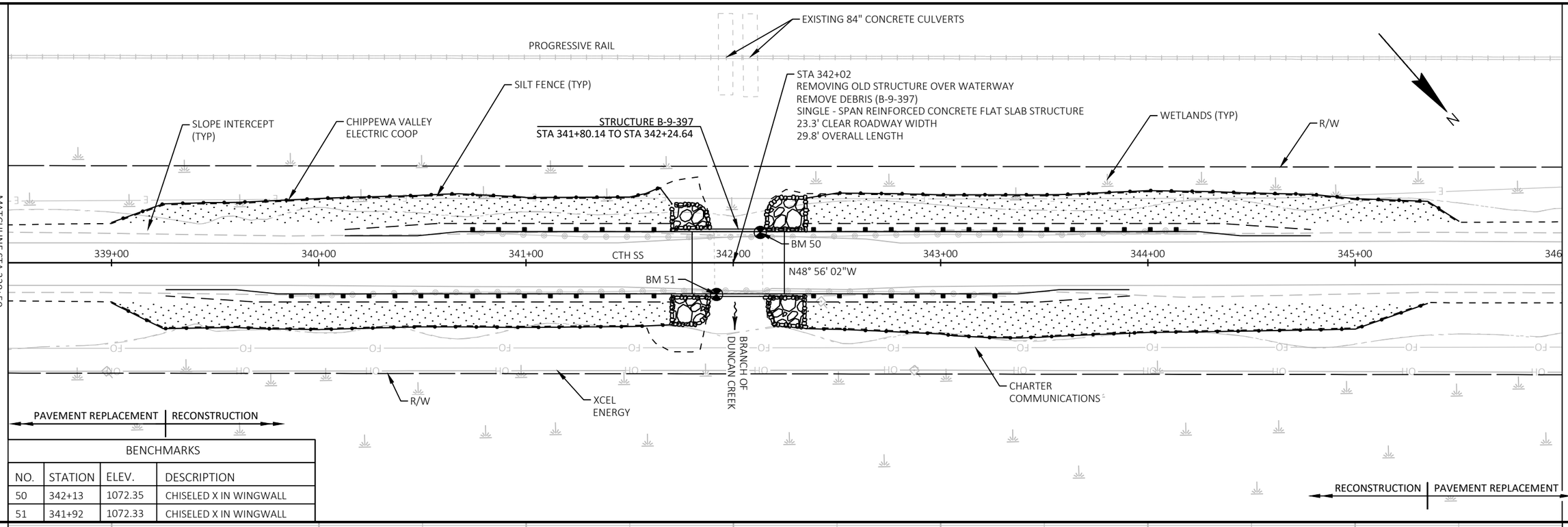
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 43	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\050201-PP.DWG
LAYOUT NAME - P&P - (7)
PLOT DATE : 1/6/2022 11:25 AM PLOT BY : MATT SOLIN PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

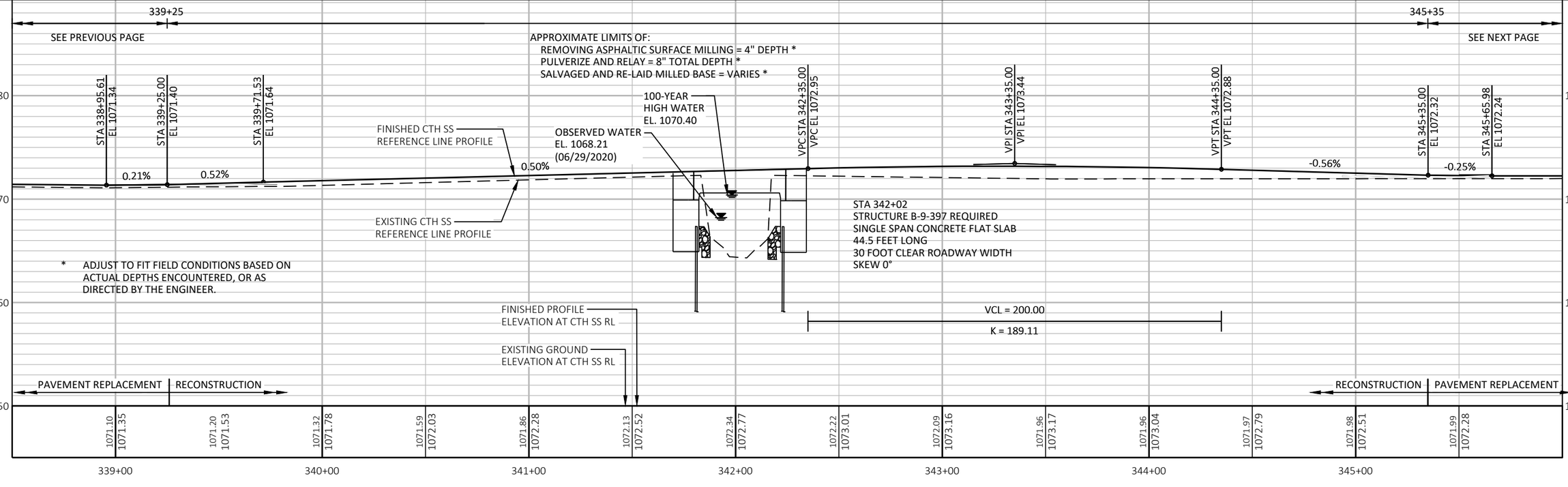


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 44	E

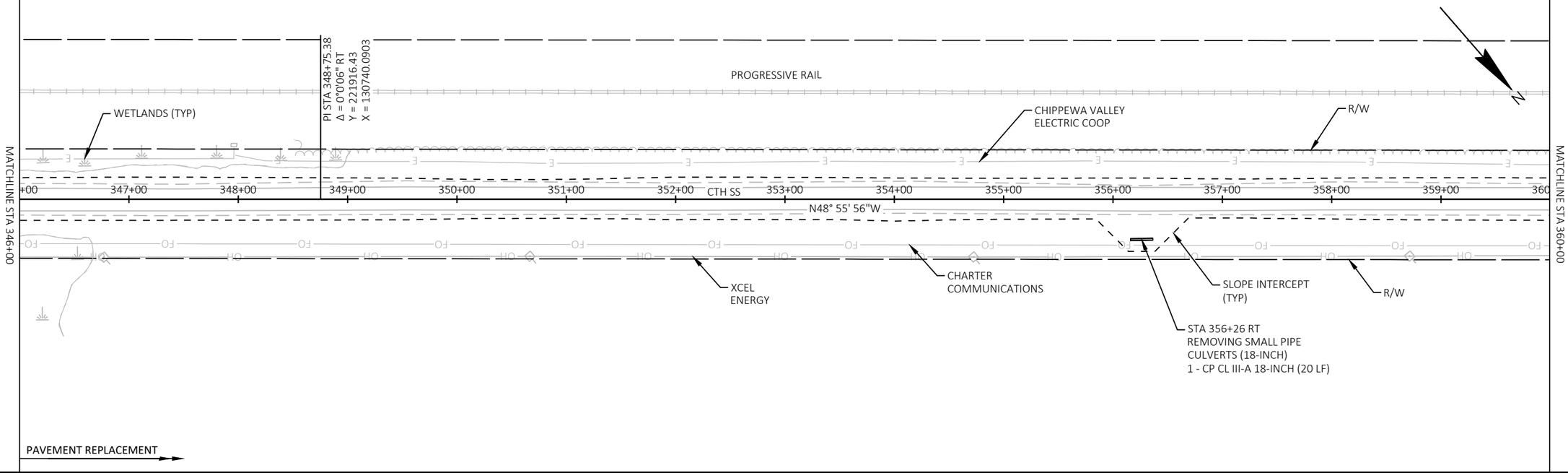
FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\050201-PP.DWG
LAYOUT NAME - P&P - (8)
PLOT DATE : 1/6/2022 10:59 AM
PLOT BY : STEVE LIPPERT
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

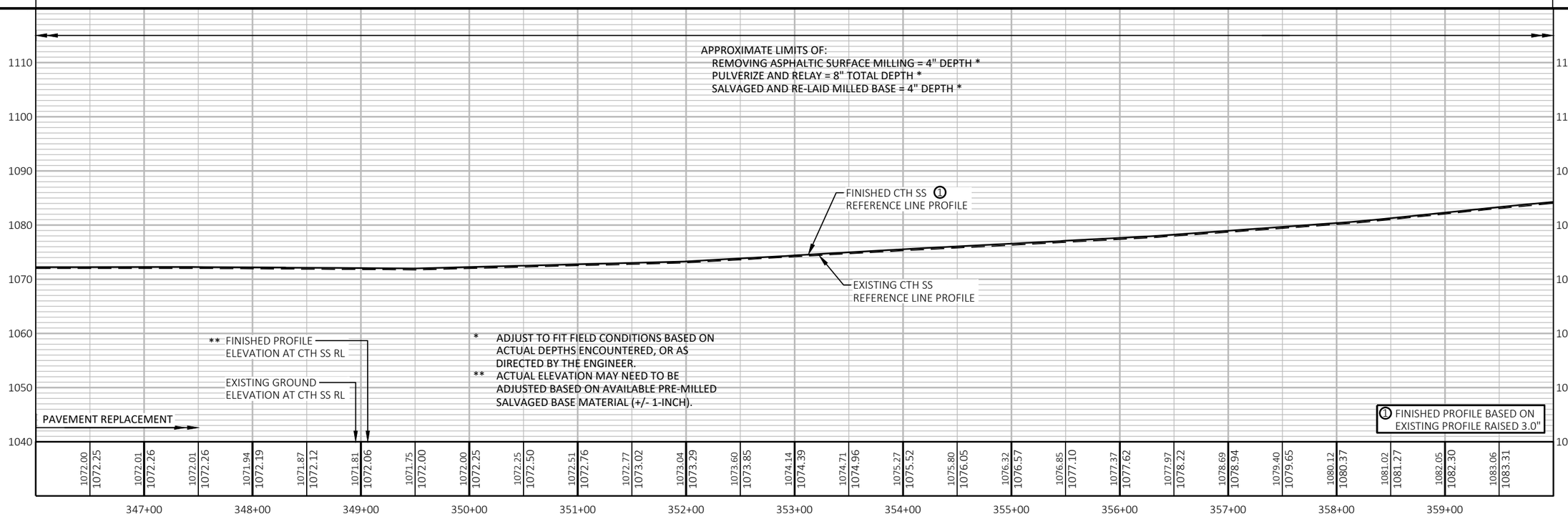


BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	342+13	1072.35	CHISELED X IN WINGWALL
51	341+92	1072.33	CHISELED X IN WINGWALL

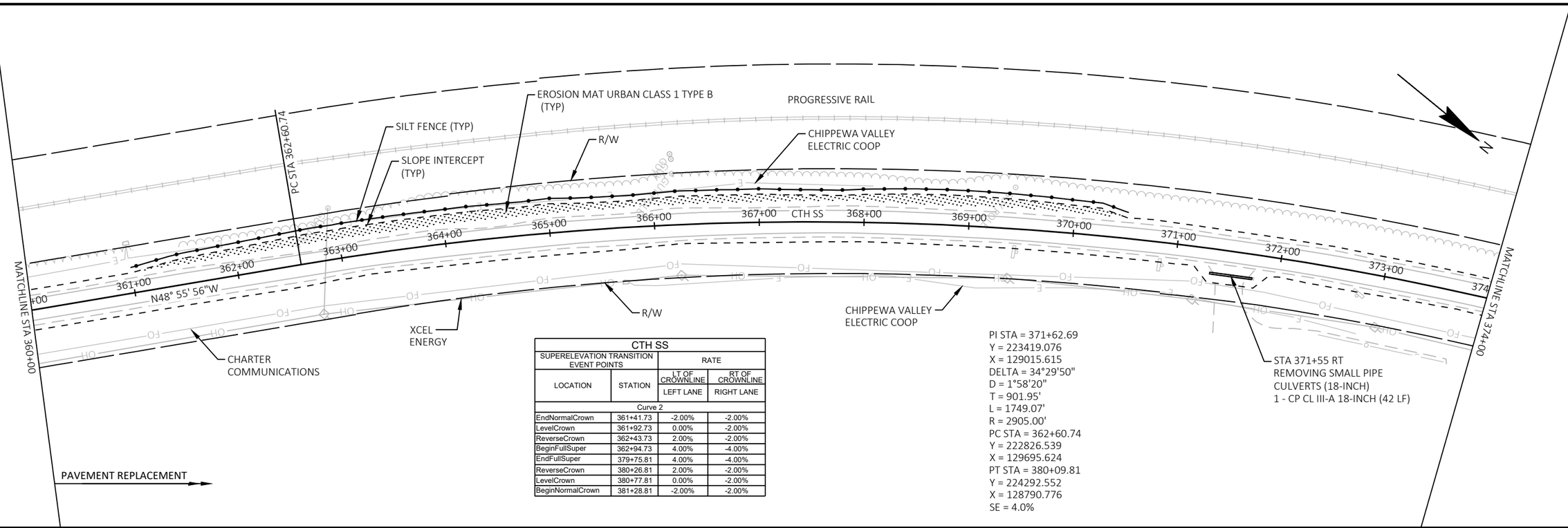


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 45	E



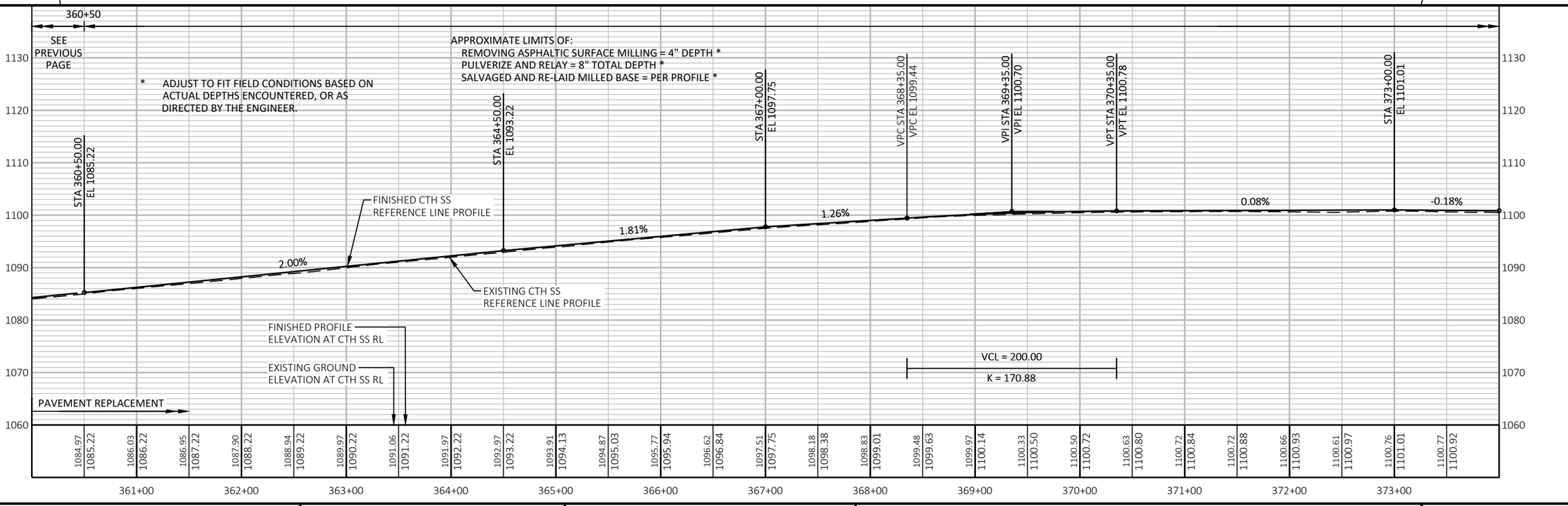


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 46	E

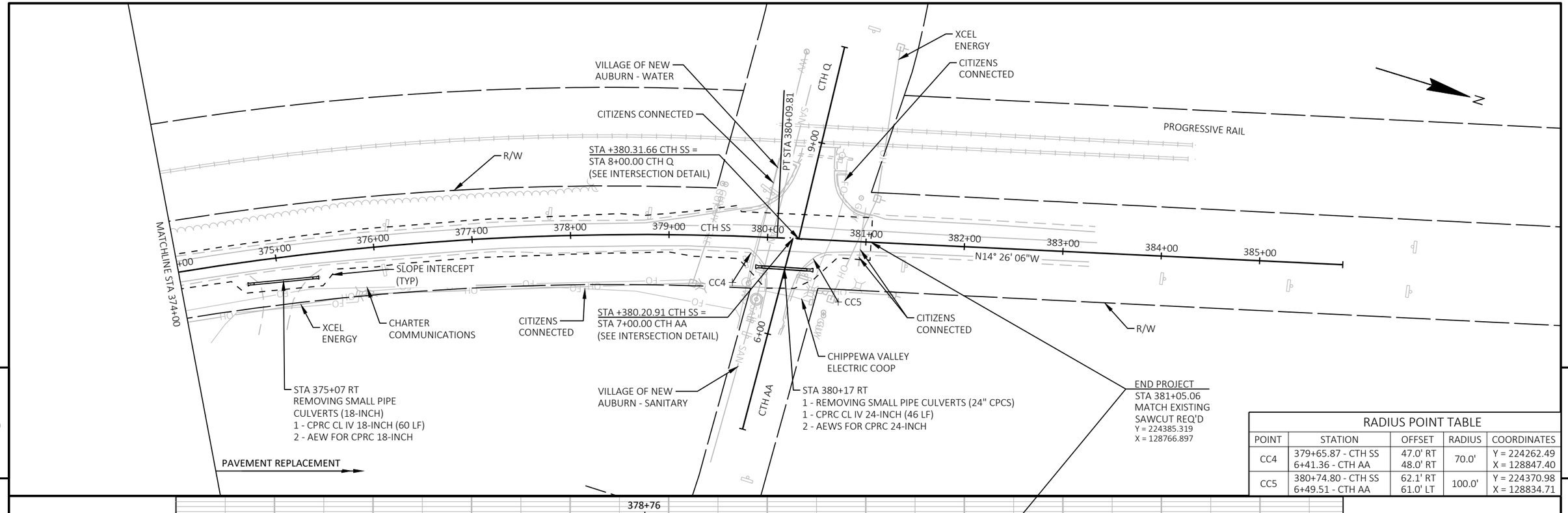


CTH SS			
SUPERELEVATION TRANSITION EVENT POINTS		RATE	
LOCATION	STATION	LT OF CROWNLINE LEFT LANE	RT OF CROWNLINE RIGHT LANE
Curve 2			
EndNormalCrown	361+41.73	-2.00%	-2.00%
LevelCrown	361+92.73	0.00%	-2.00%
ReverseCrown	362+43.73	2.00%	-2.00%
BeginFullSuper	362+94.73	4.00%	-4.00%
EndFullSuper	379+75.81	4.00%	-4.00%
ReverseCrown	380+26.81	2.00%	-2.00%
LevelCrown	380+77.81	0.00%	-2.00%
BeginNormalCrown	381+28.81	-2.00%	-2.00%

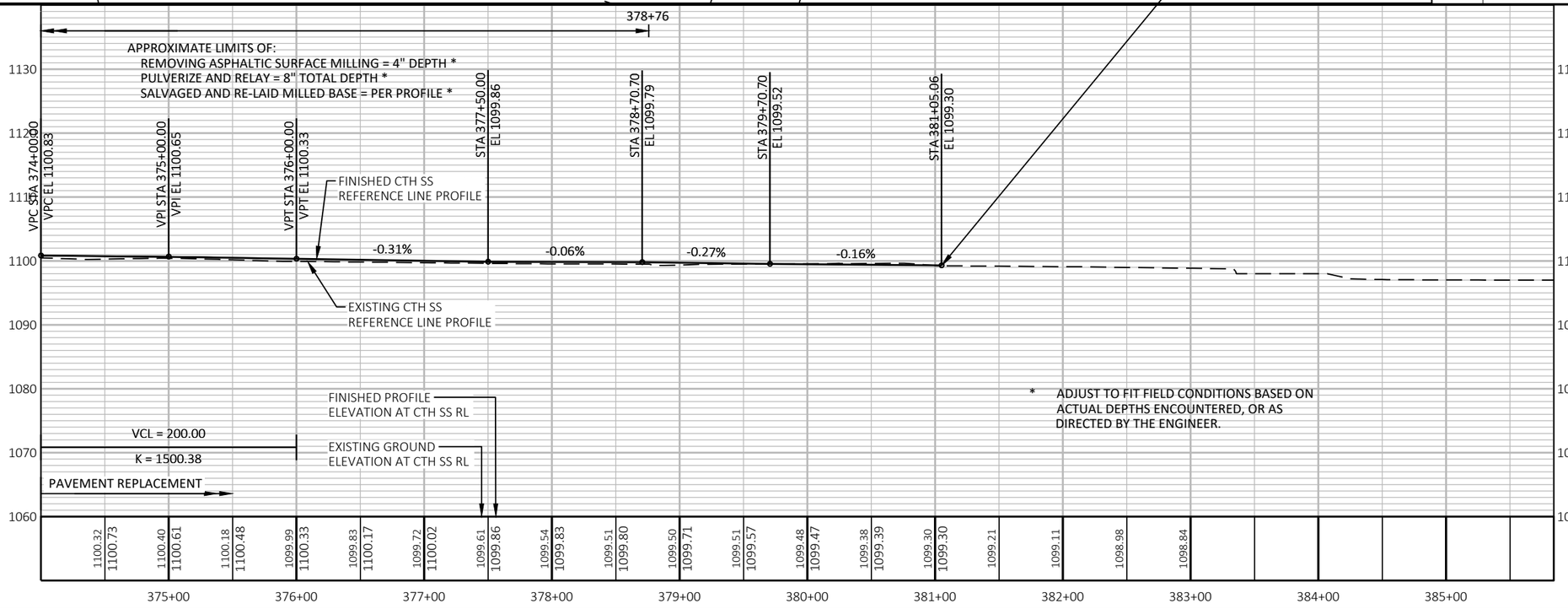
PI STA = 371+62.69
Y = 223419.076
X = 129015.615
DELTA = 34°29'50"
D = 1°58'20"
T = 901.95'
L = 1749.07'
R = 2905.00'
PC STA = 362+60.74
Y = 222826.539
X = 129695.624
PT STA = 380+09.81
Y = 224292.552
X = 128790.776
SE = 4.0%



PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 47	E



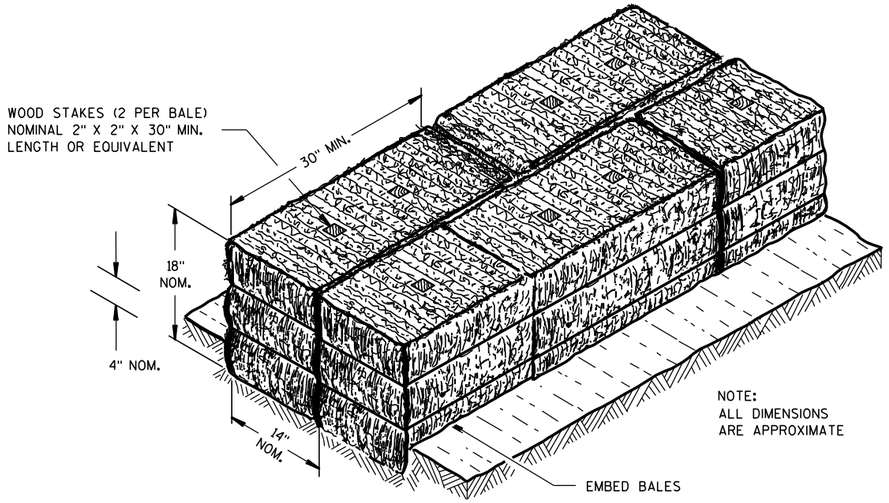
RADIUS POINT TABLE				
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC4	379+65.87 - CTH SS 6+41.36 - CTH AA	47.0' RT 48.0' RT	70.0'	Y = 224262.49 X = 128847.40
CC5	380+74.80 - CTH SS 6+49.51 - CTH AA	62.1' RT 61.0' LT	100.0'	Y = 224370.98 X = 128834.71



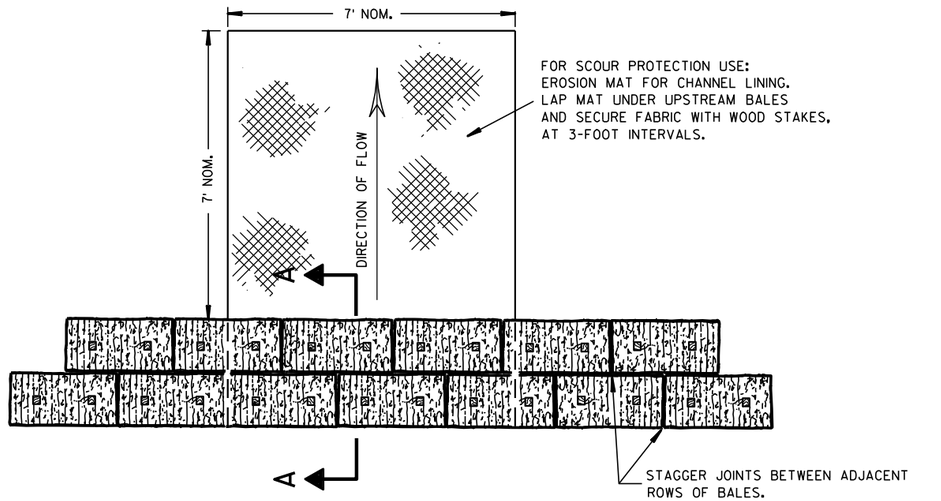
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	PLAN AND PROFILE: CTH SS	SHEET 48	E

Standard Detail Drawing List

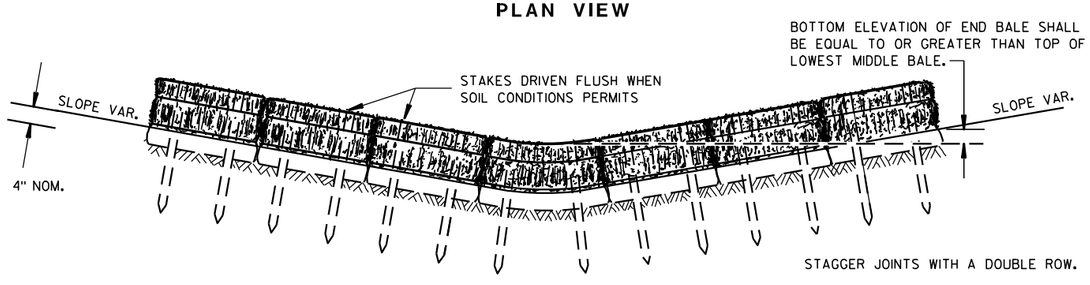
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
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)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL



SECTION A-A



PLAN VIEW



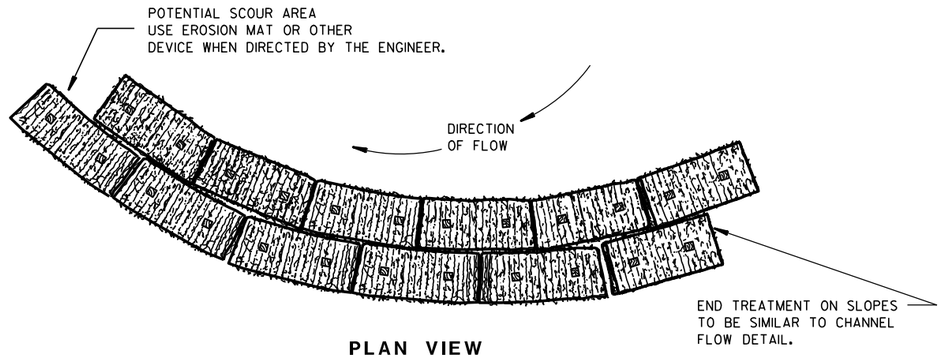
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

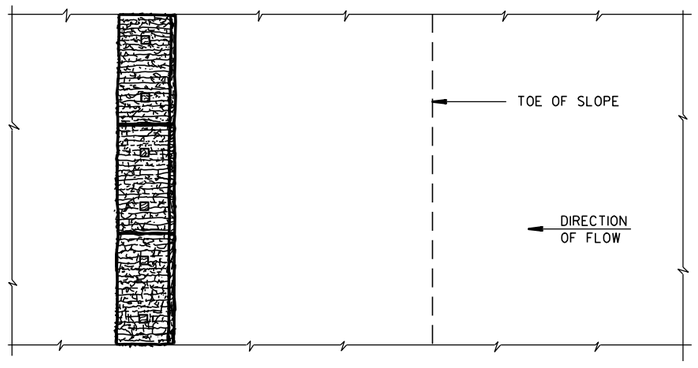
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

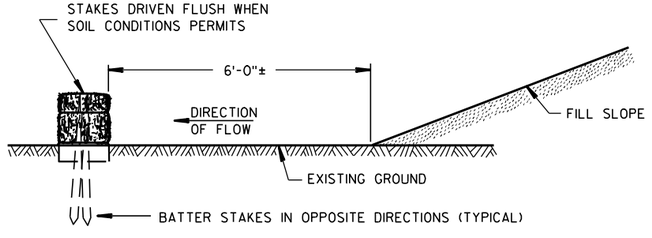


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

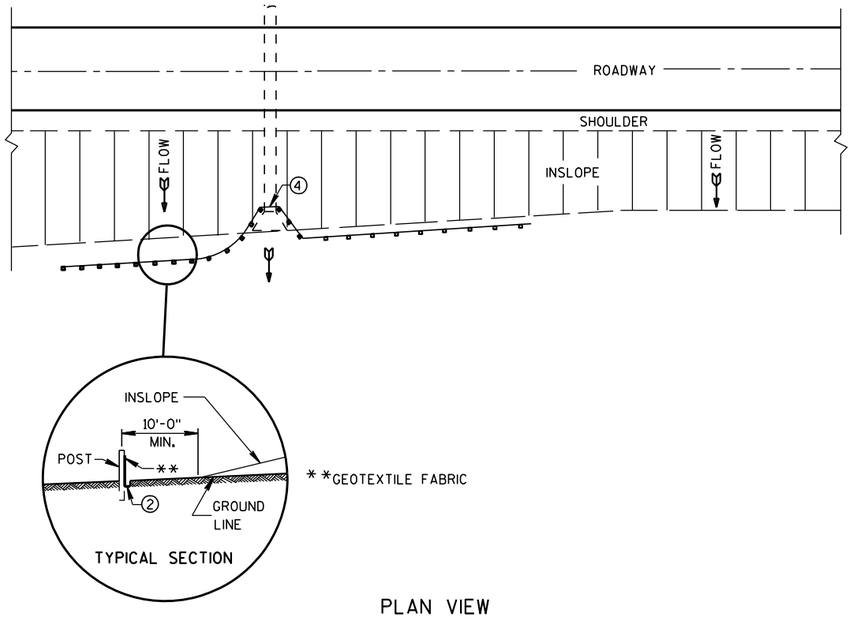
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

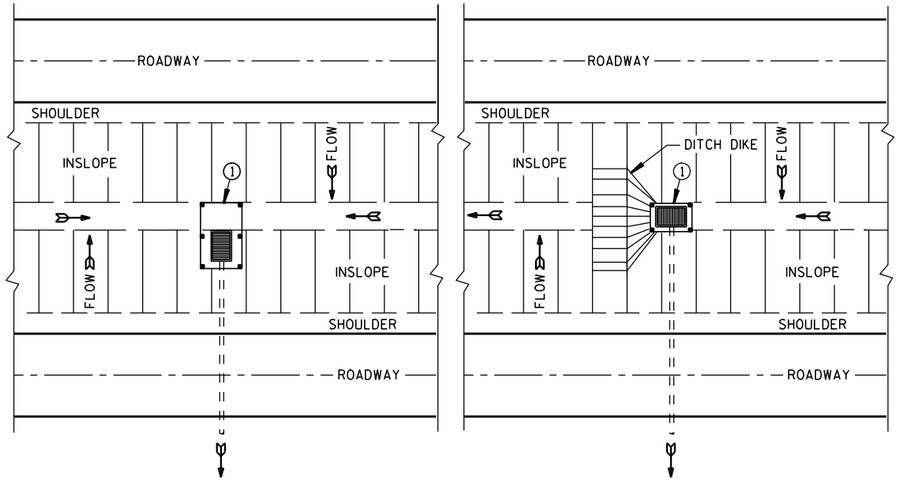
FHWA

6
S.D.D. 8 E 8-3



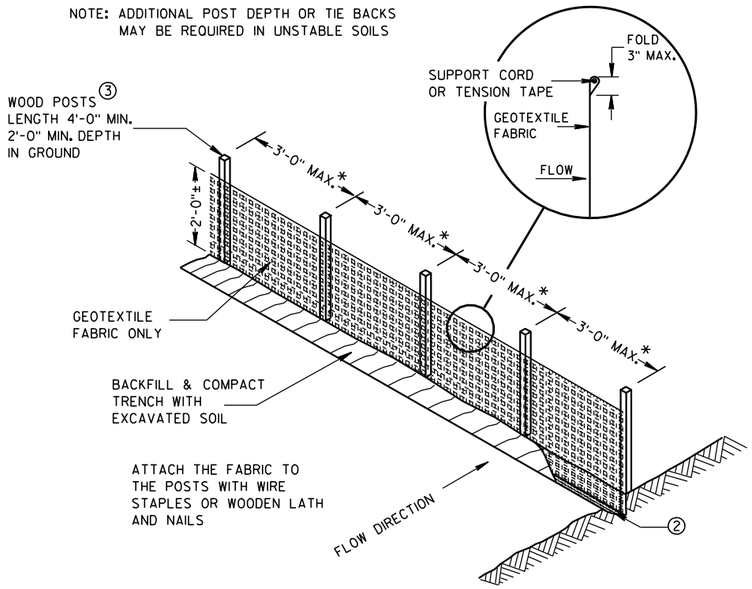
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



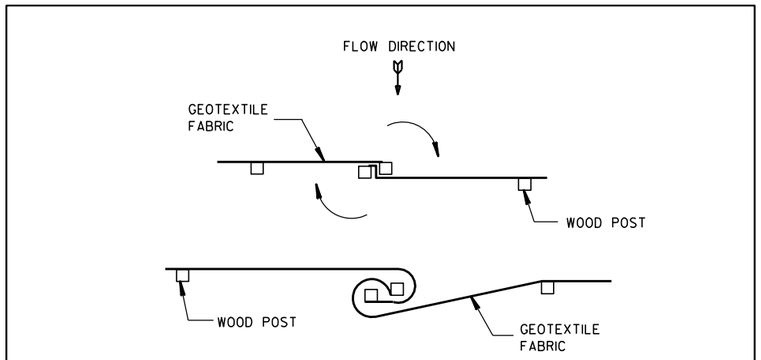
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

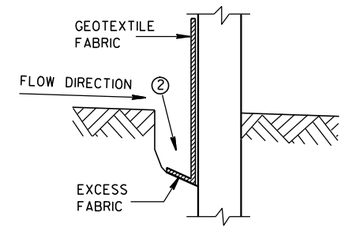


JOINING TWO LENGTHS OF SILT FENCE 5

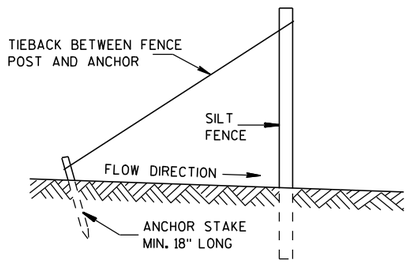
GENERAL NOTES

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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

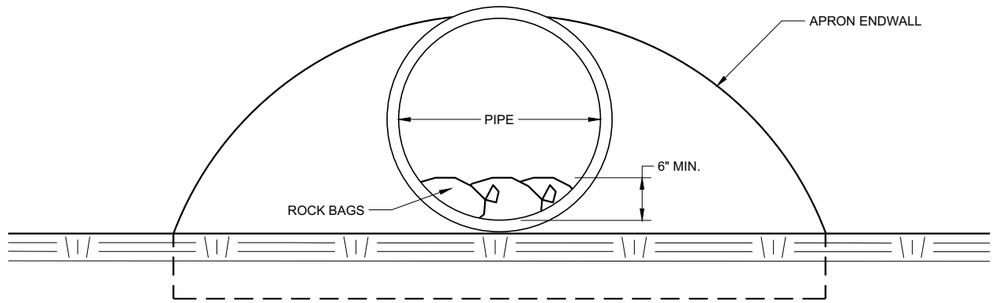
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

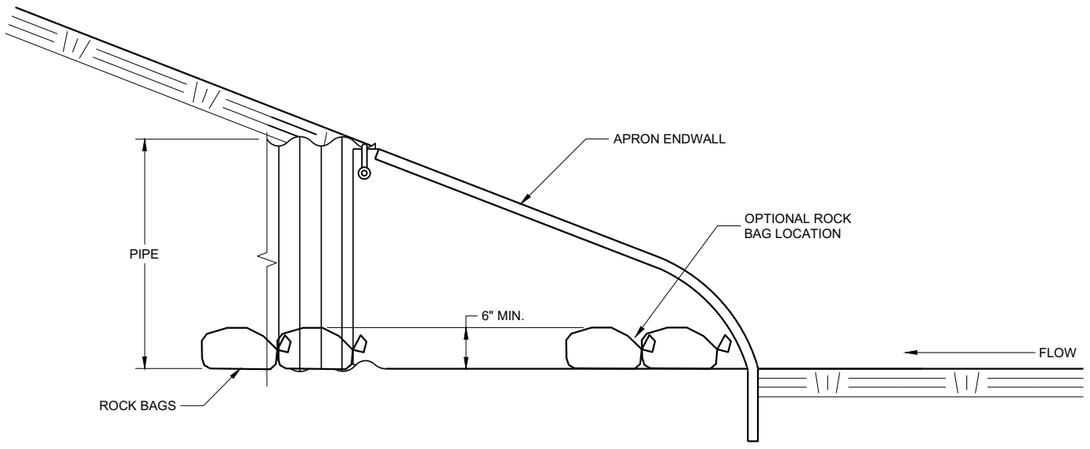
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

6

SDD 08E15 - 01

METAL APRON ENDWALLS

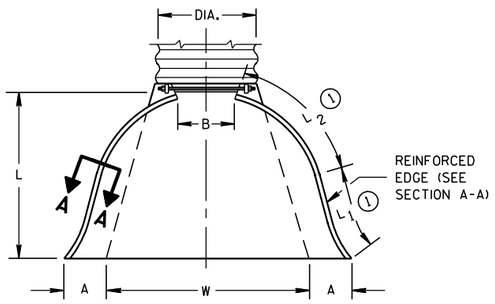
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

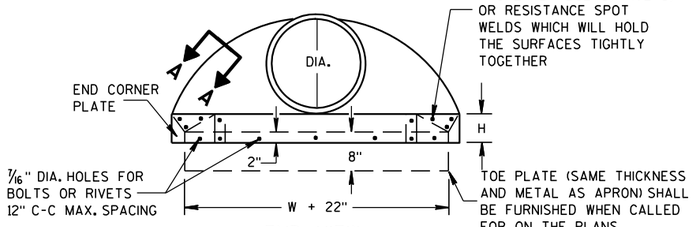
REINFORCED CONCRETE APRON ENDWALLS

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

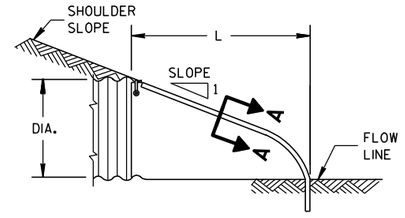
*MINIMUM
**MAXIMUM



PLAN VIEW

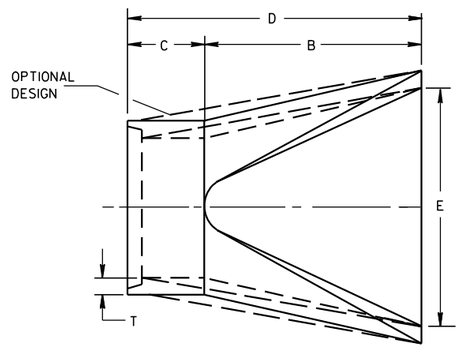


END VIEW

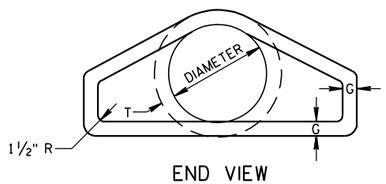


SIDE ELEVATION

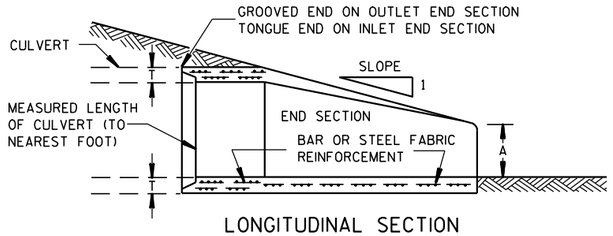
METAL ENDWALLS



PLAN

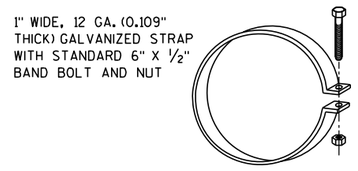


END VIEW



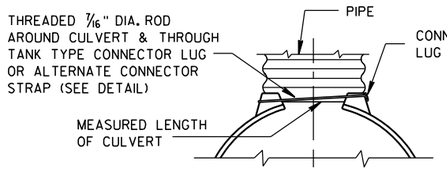
LONGITUDINAL SECTION

CONCRETE ENDWALLS

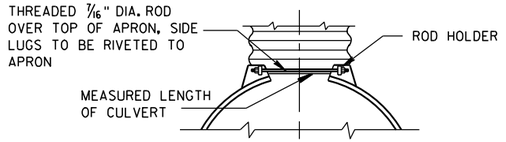


ALTERNATE FOR TYPE 1 CONNECTION

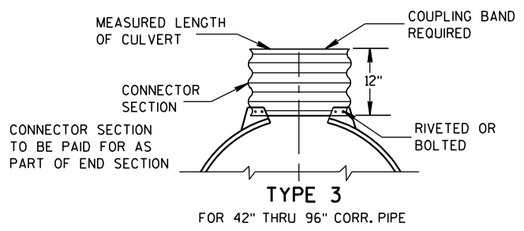
END SECTION CONNECTOR STRAP



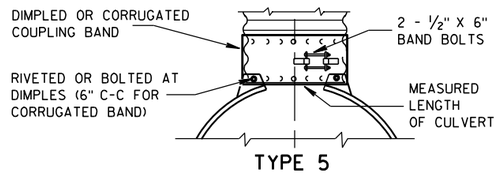
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

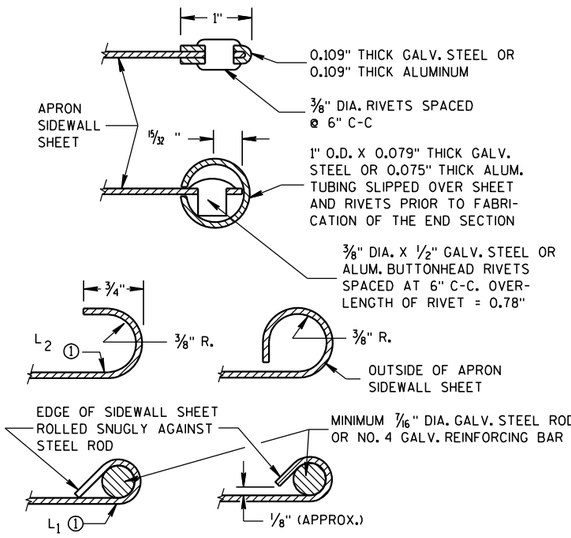
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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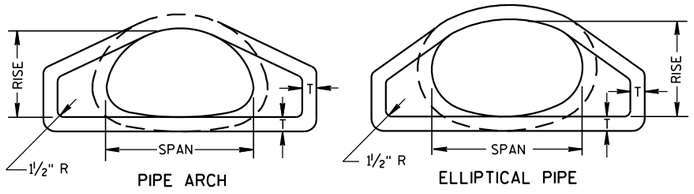
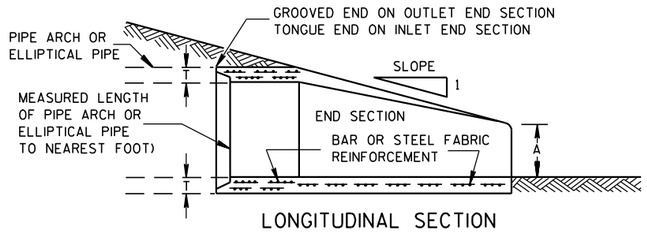
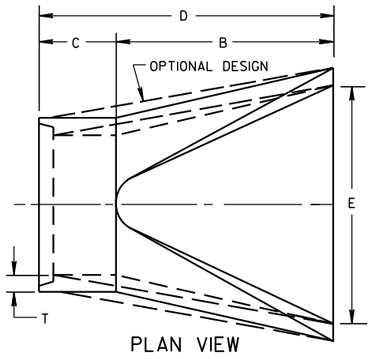
S.D.D. 8 F 1-11



END VIEW

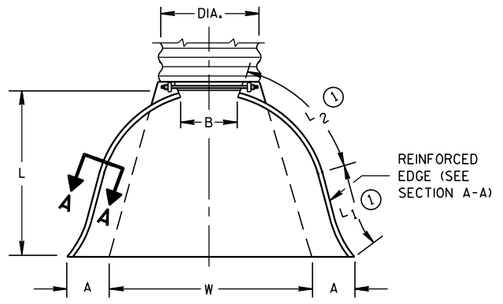


LONGITUDINAL SECTION

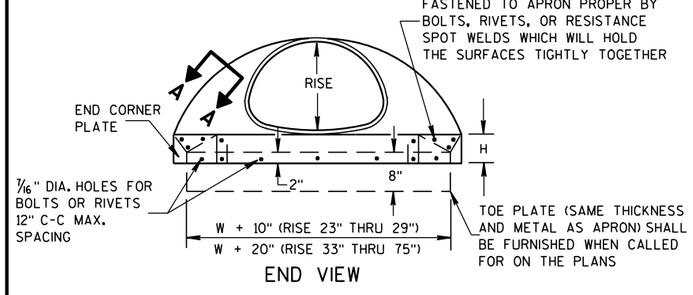


PLAN VIEW

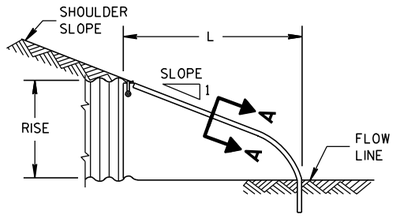
CONCRETE ENDWALLS



PLAN VIEW

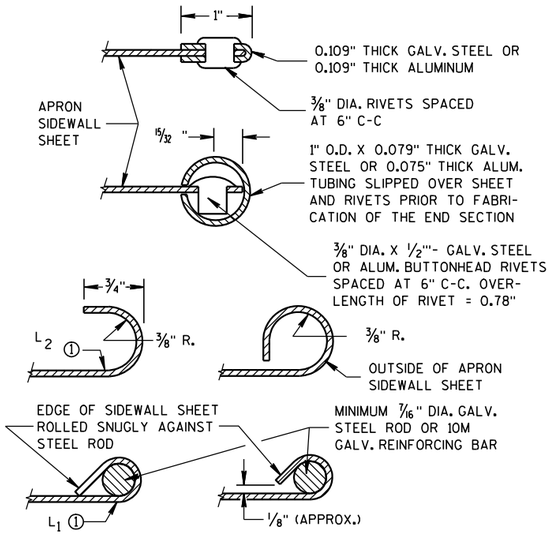


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

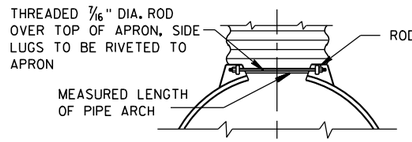
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

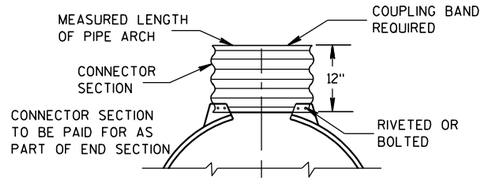
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



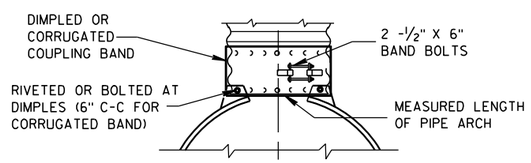
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

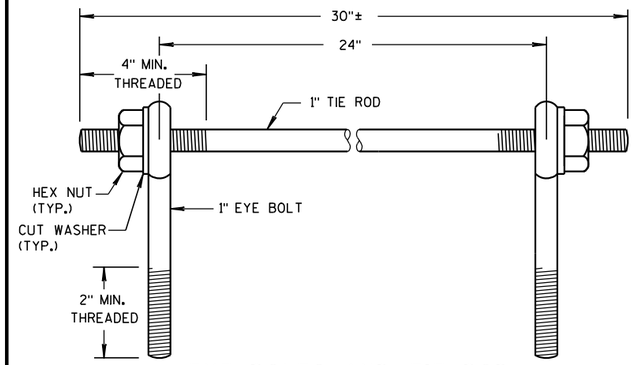
FHWA

6

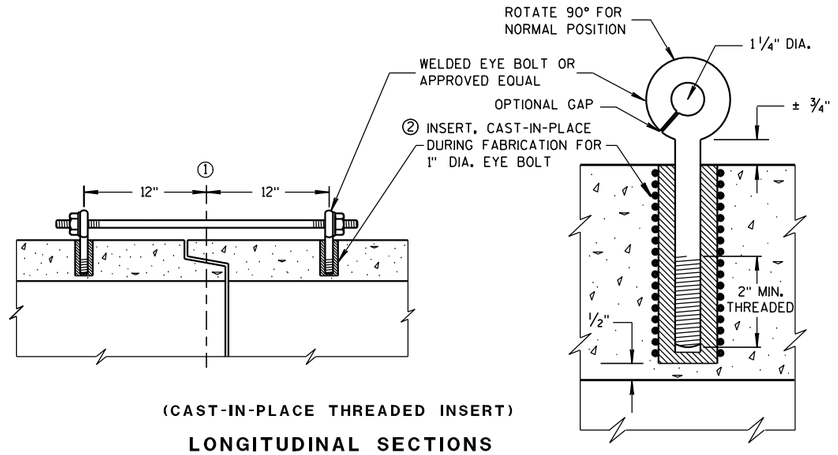
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

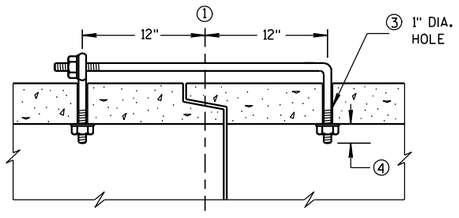
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

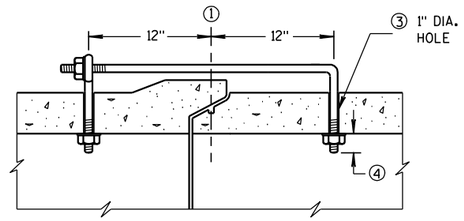
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

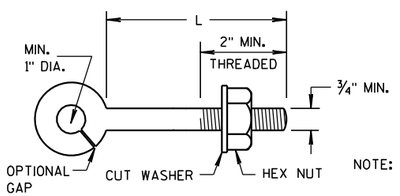


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

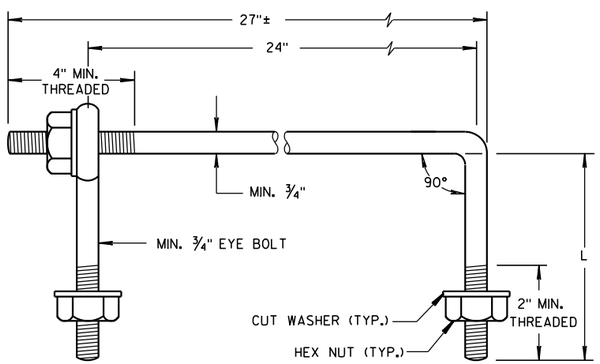
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

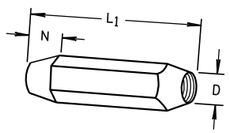
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



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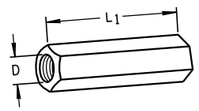
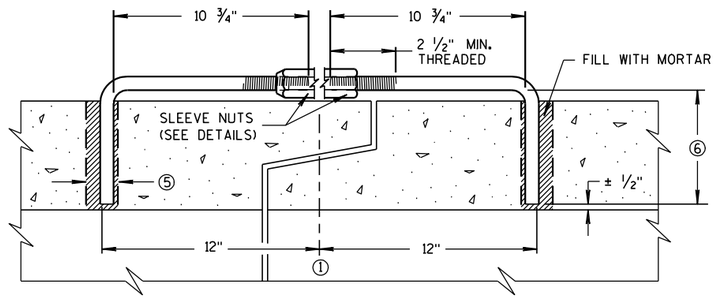


PLAIN

RIGHT AND LEFT THREADS

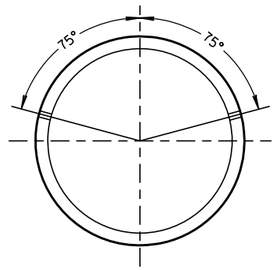
SLEEVE NUTS



LONGITUDINAL SECTION

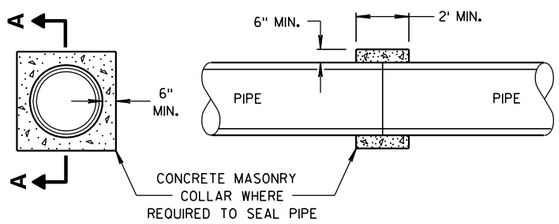
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
55
FHWA

6

S.D.D. 8 F 4-7

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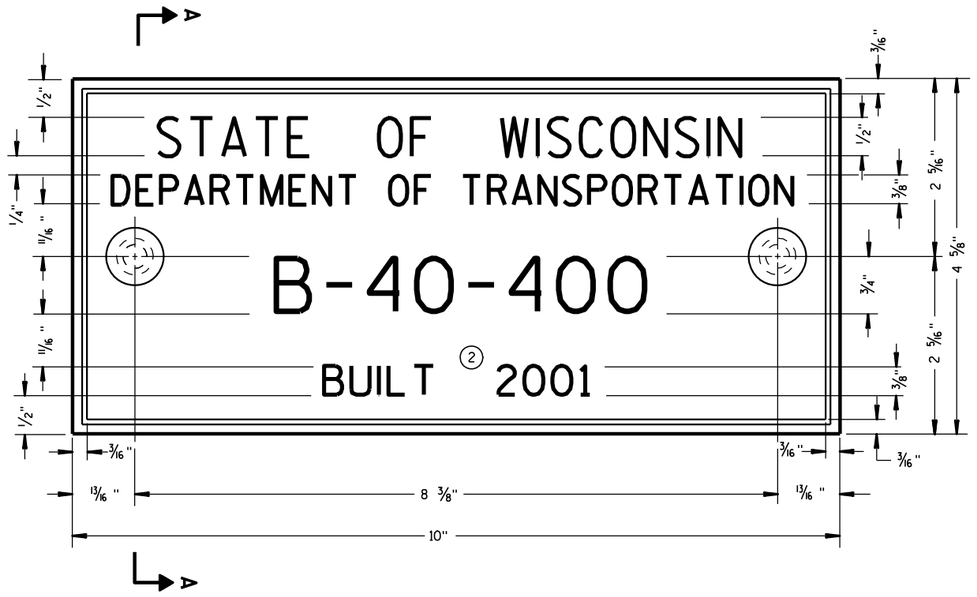
S.D.D. 8 F 4-7



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

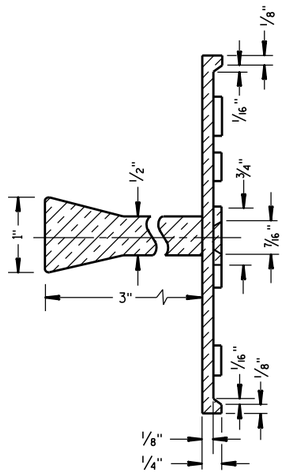
GENERAL NOTES

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

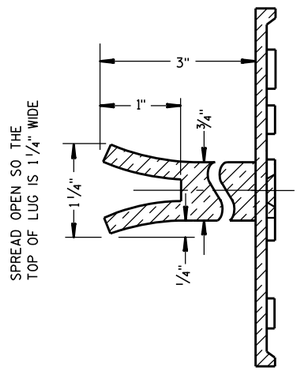
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

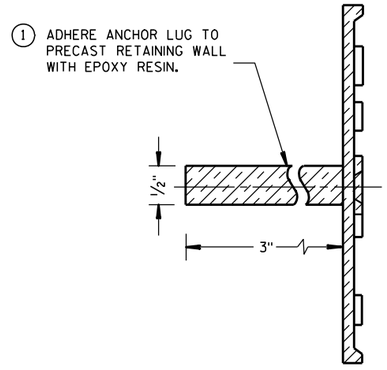
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION MULTI-UNIT STRUCTURES



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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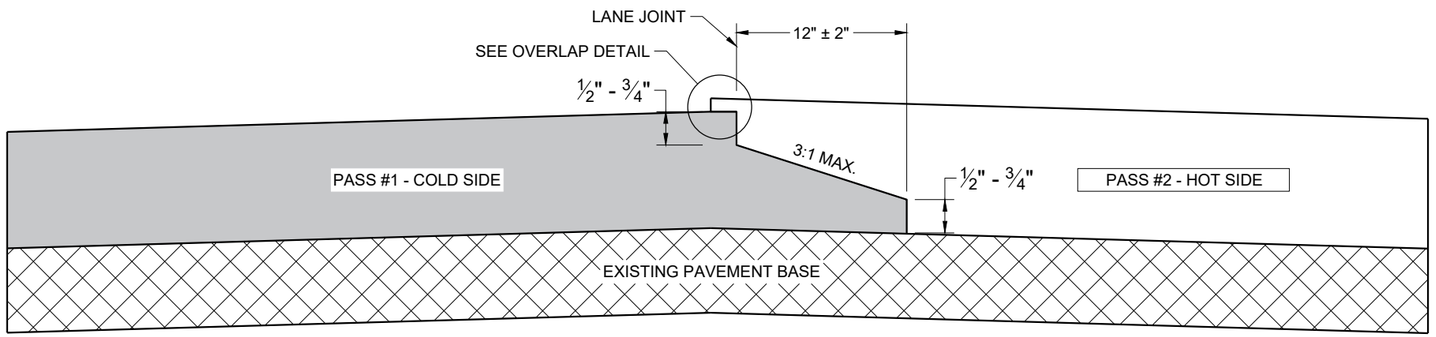
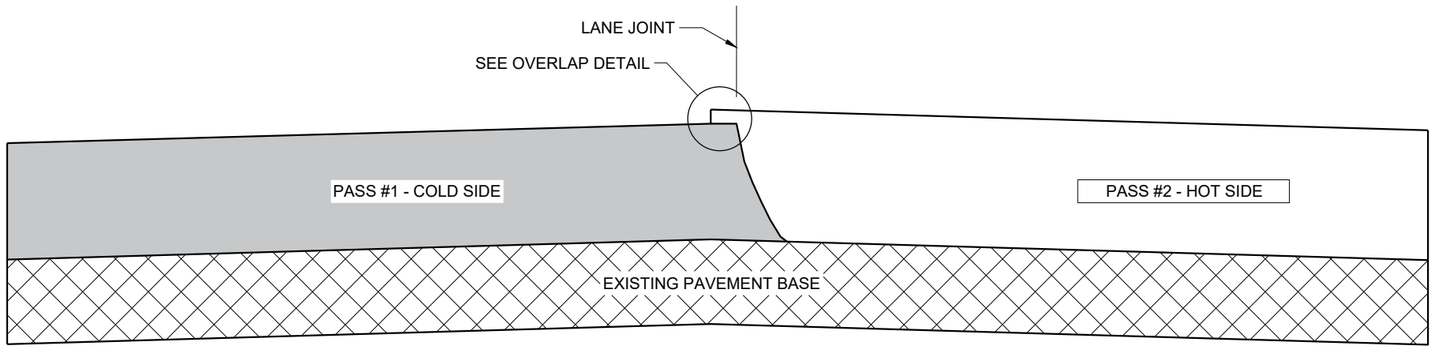
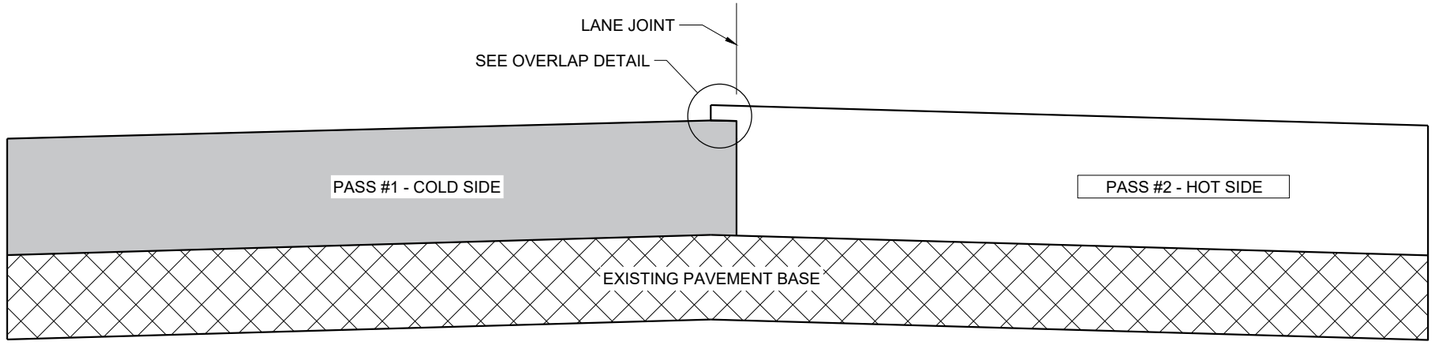
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

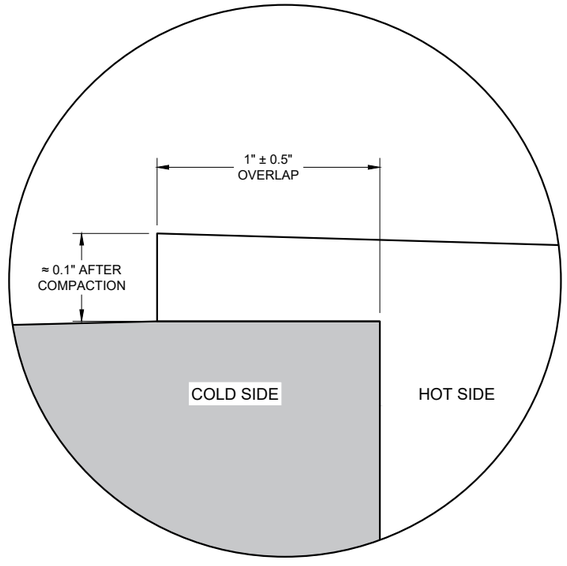
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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SDD 13C19 - 03

SDD 13C19 - 03

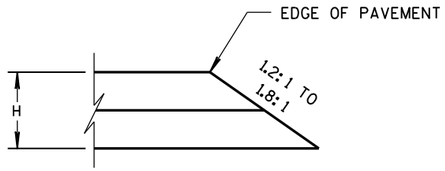
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

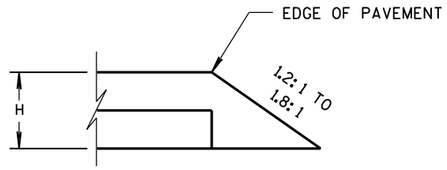
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



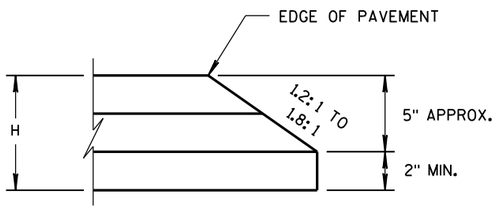
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



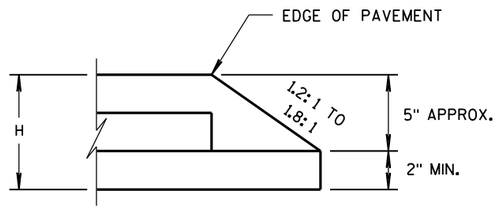
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

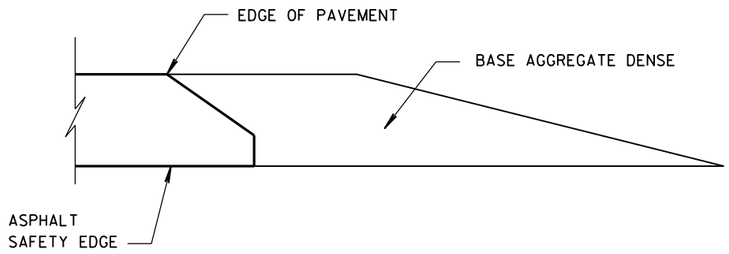
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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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.

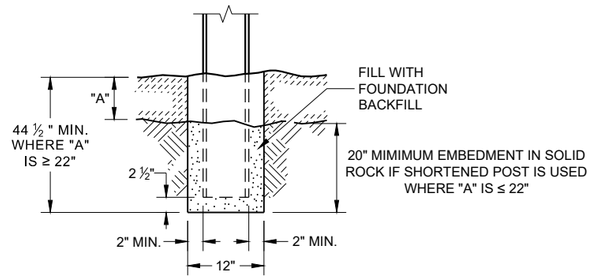
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

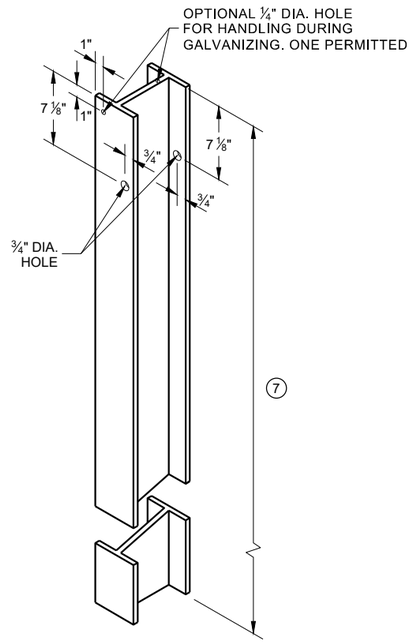
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

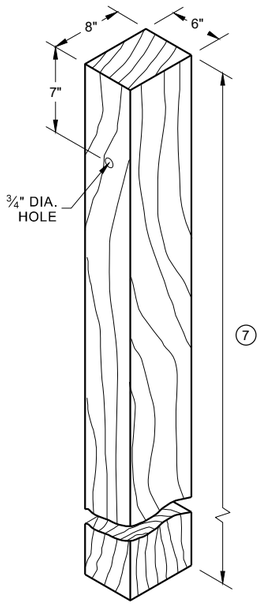
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



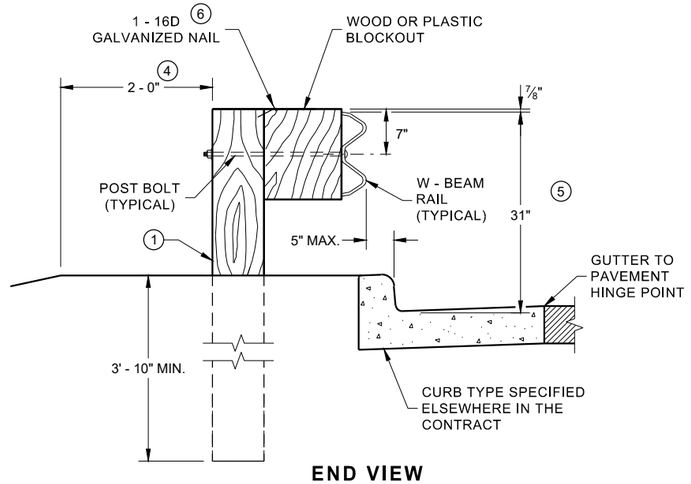
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



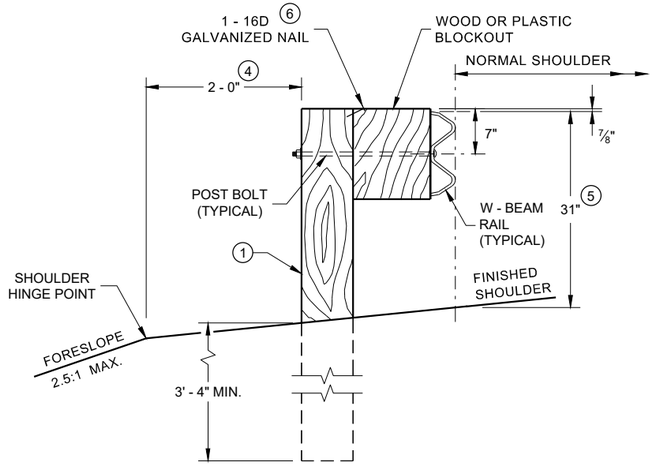
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



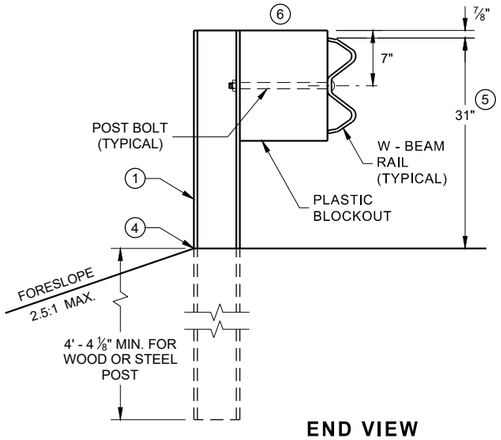
WOOD POST (6" X 8") NOMINAL (1)



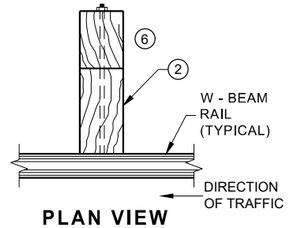
END VIEW
LOCATED ALONG A CURBED ROADWAY



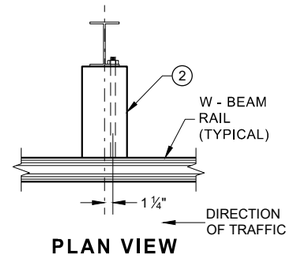
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



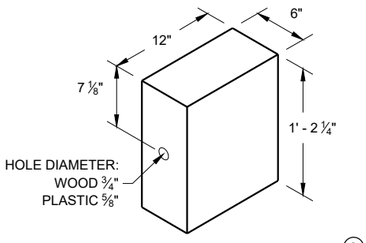
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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

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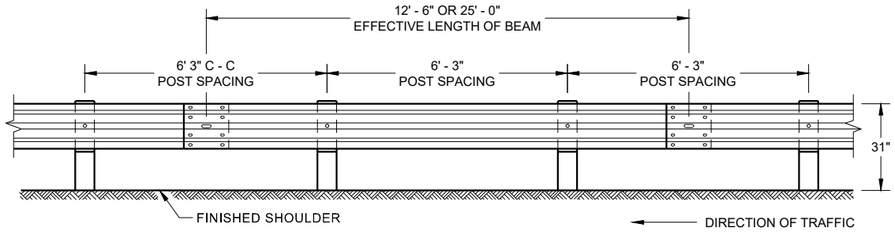
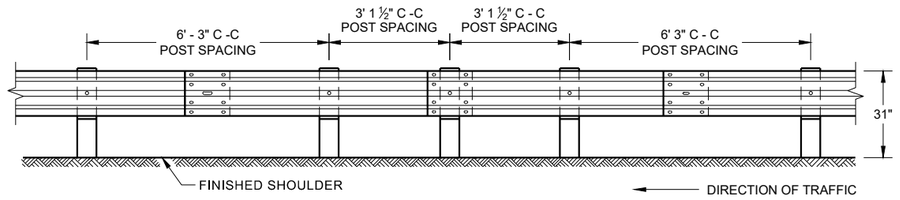
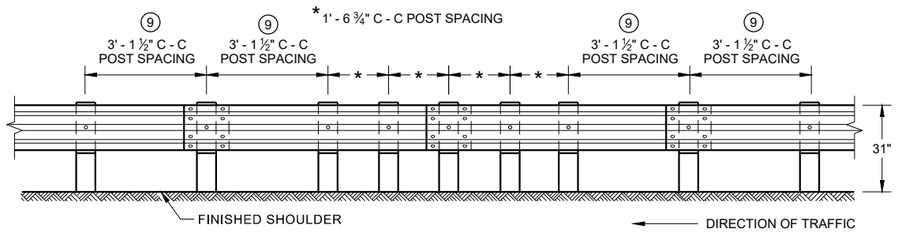
SDD 14B42 - 07a



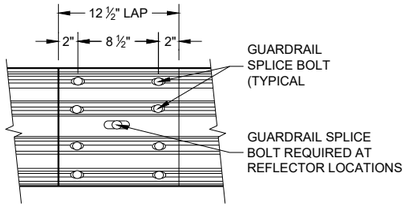
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

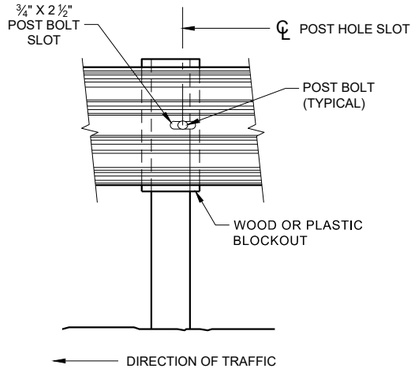
GENERAL NOTES

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

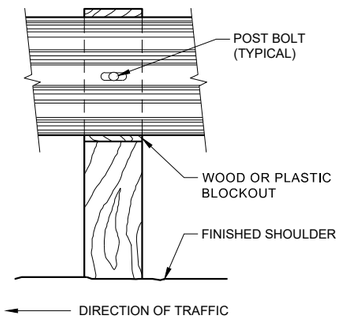
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

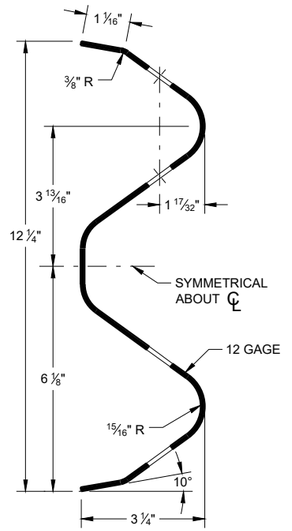
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



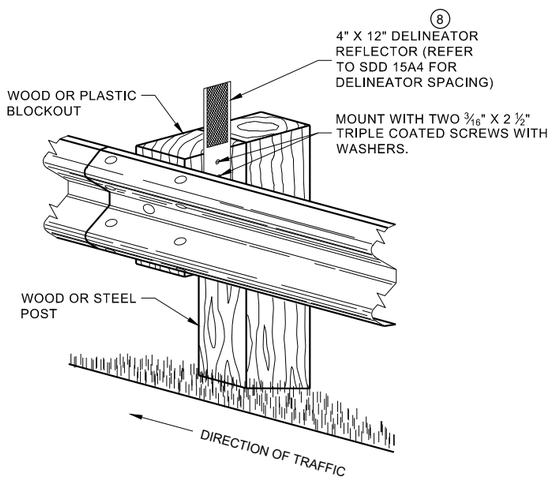
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



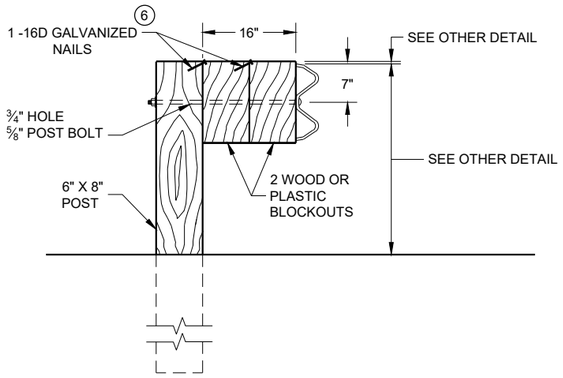
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b

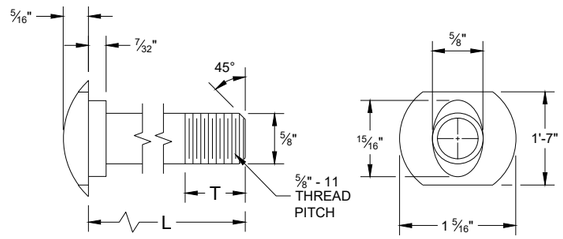


DETAIL FOR 16" BLOCKOUT DEPTH

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.

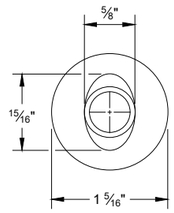
NOTE:

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.

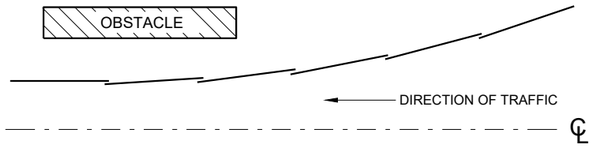


POST BOLT TABLE

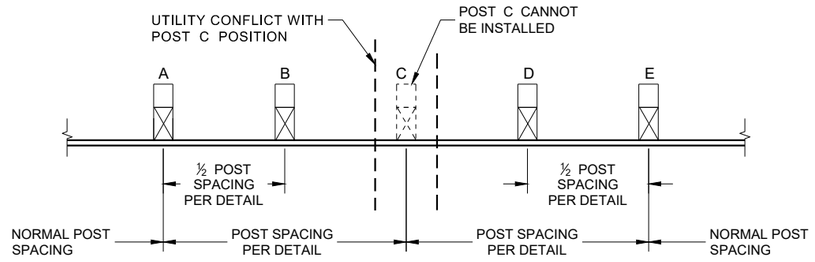
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



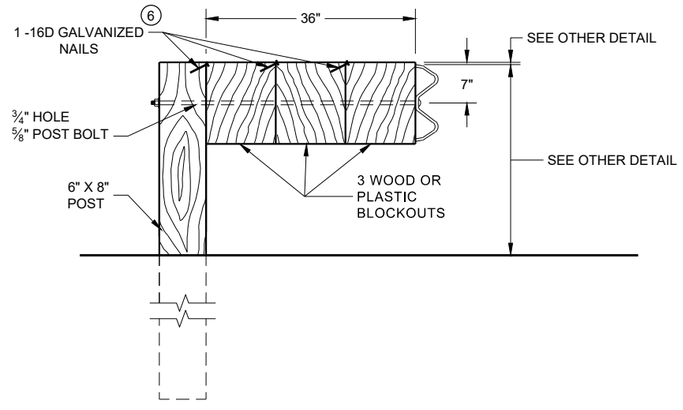
ALTERNATE BOLT HEAD



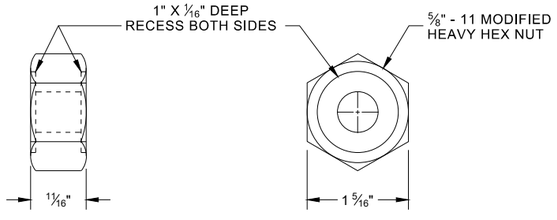
PLAN VIEW
BEAM LAPPING DETAIL



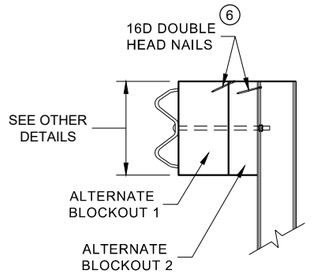
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



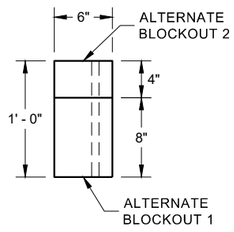
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

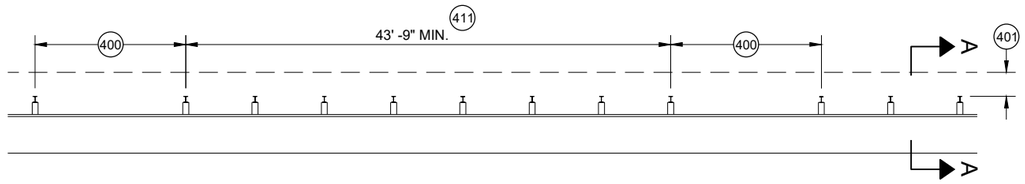
ALTERNATE WOOD BLOCKOUT DETAIL

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.

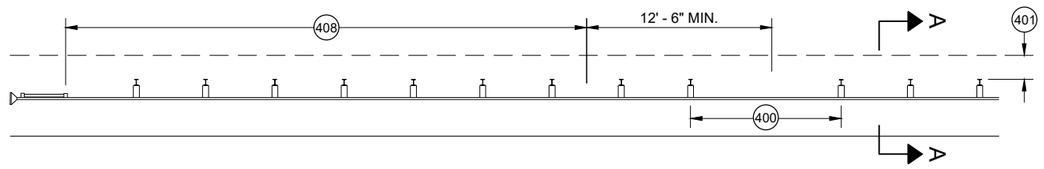
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

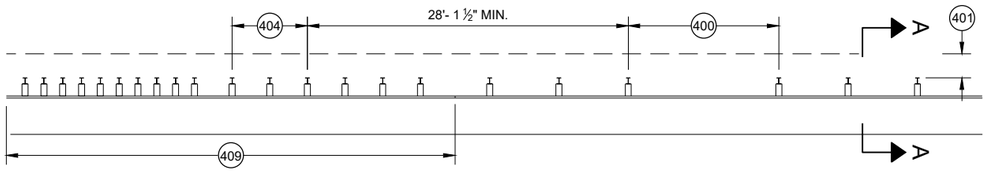
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



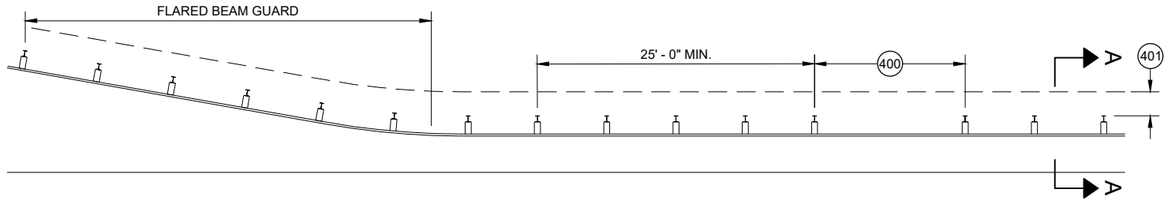
MISSING POST IN MGS GUARDRAIL



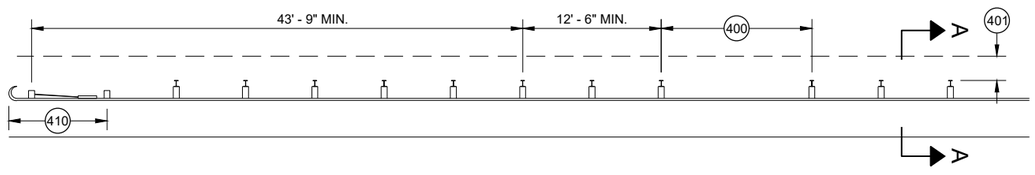
MISSING POST IN MGS GUARDRAIL NEAR EAT



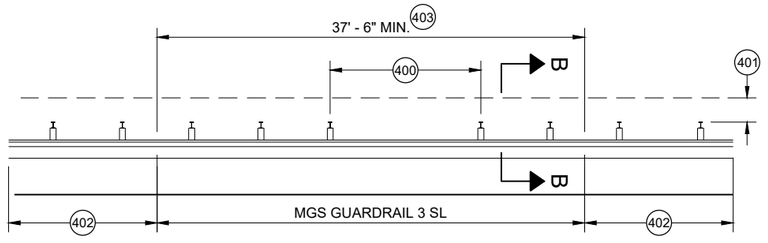
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

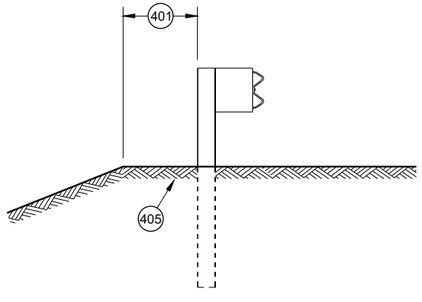


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

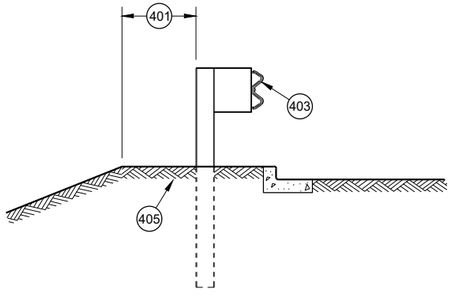


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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

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SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

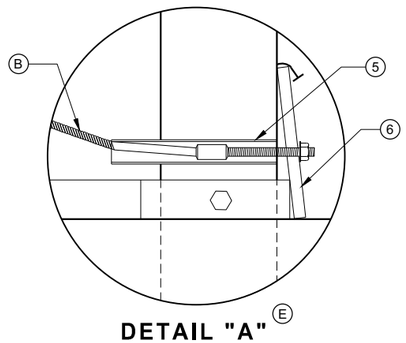
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

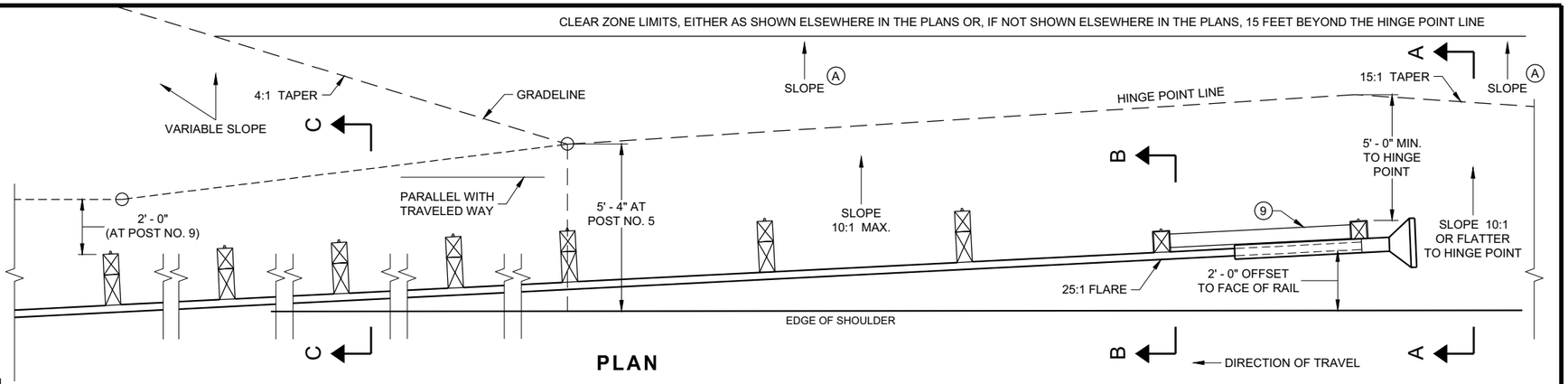
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

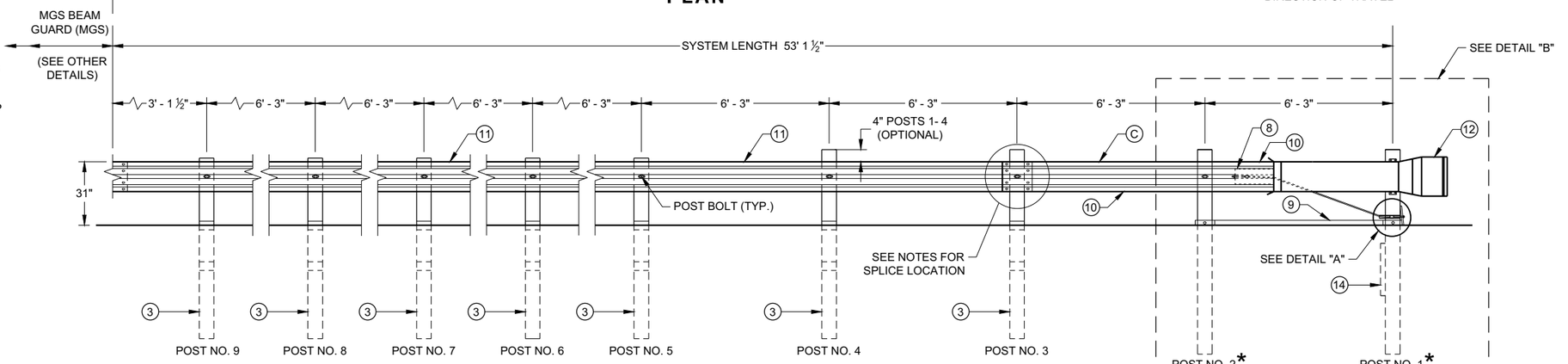
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

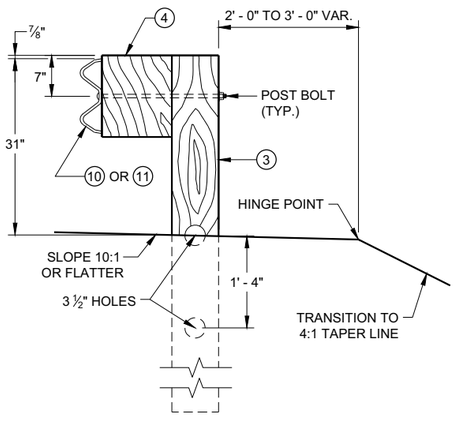
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



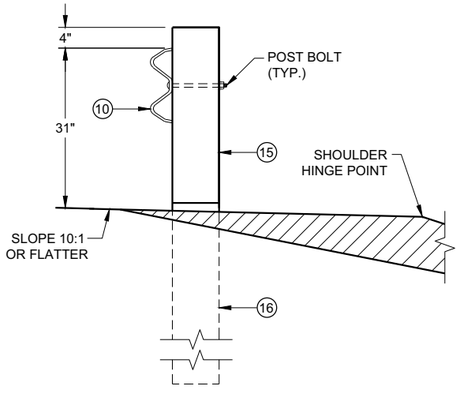
DETAIL "A" (E)



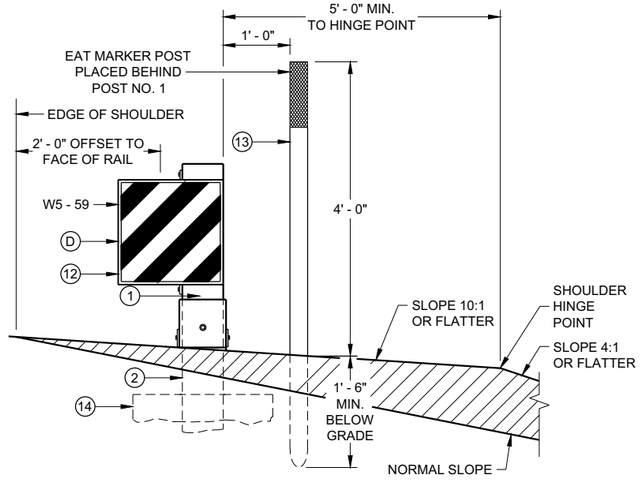




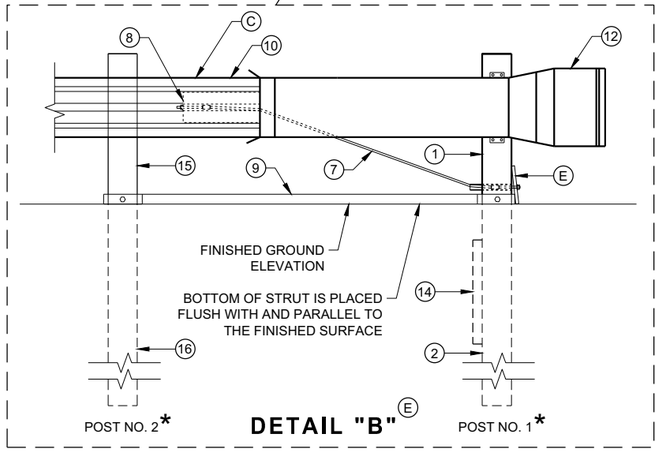
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



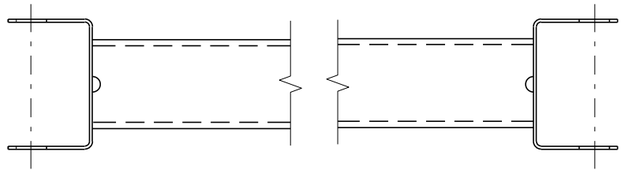
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

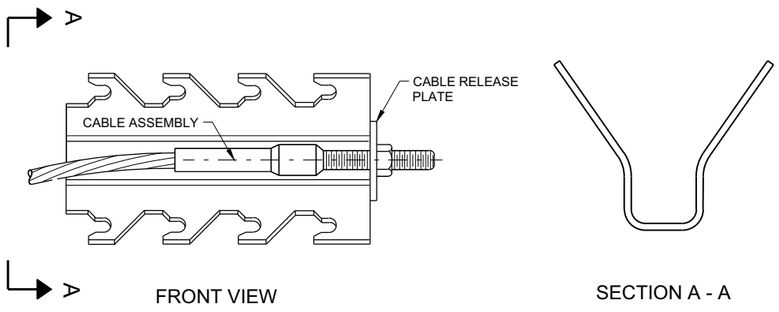
SDD 14B44 - 04a



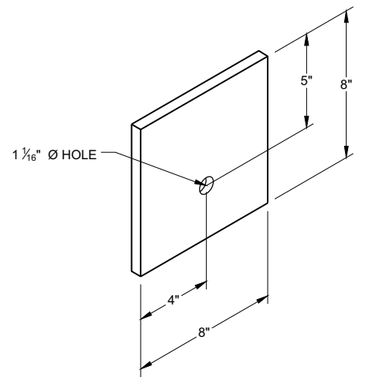
GENERIC GROUND STRUT ⑨ Ⓔ

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 ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

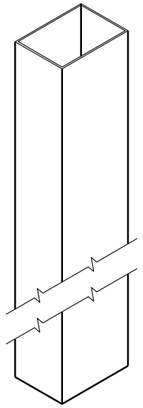
6

SDD 14B44 - 04b

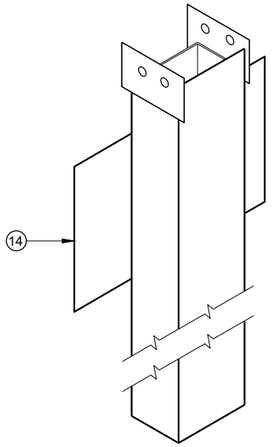
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

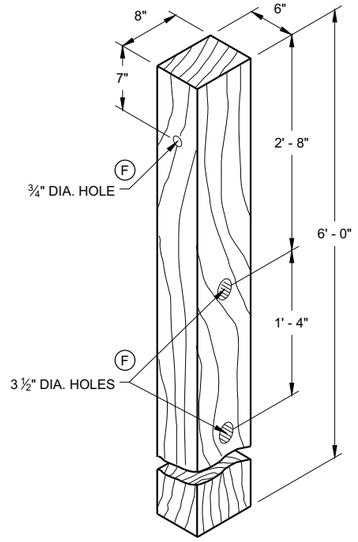
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



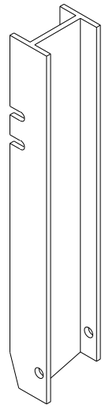
UPPER POST NO. 1 (1) (E)



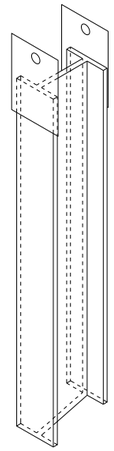
LOWER POST NO. 1 (2) (E)



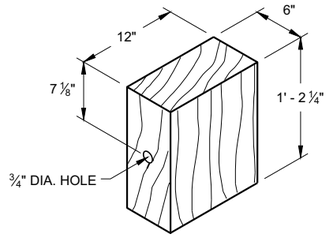
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



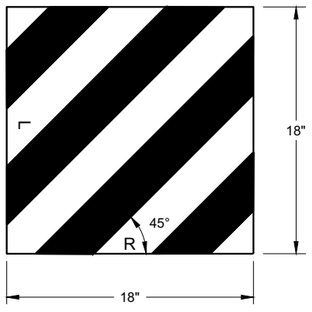
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

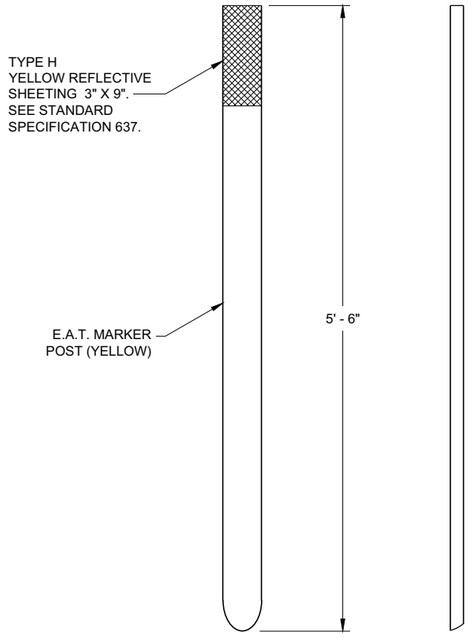


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



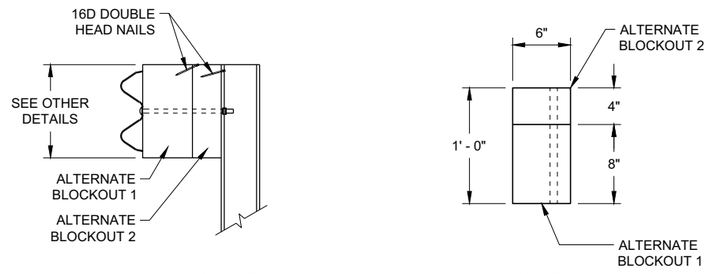
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

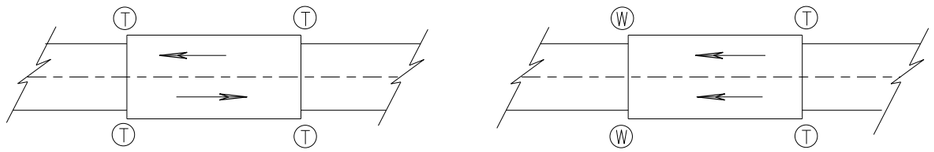
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

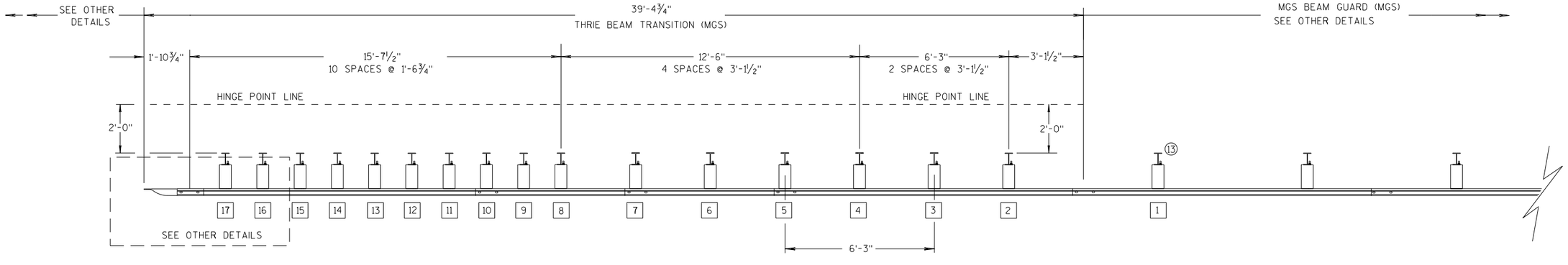
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

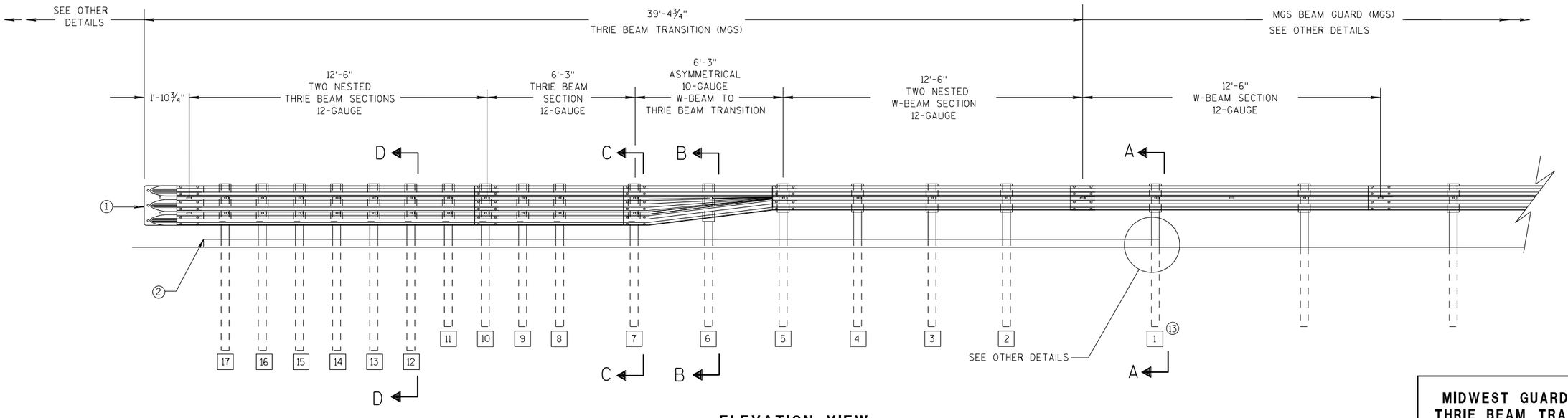
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

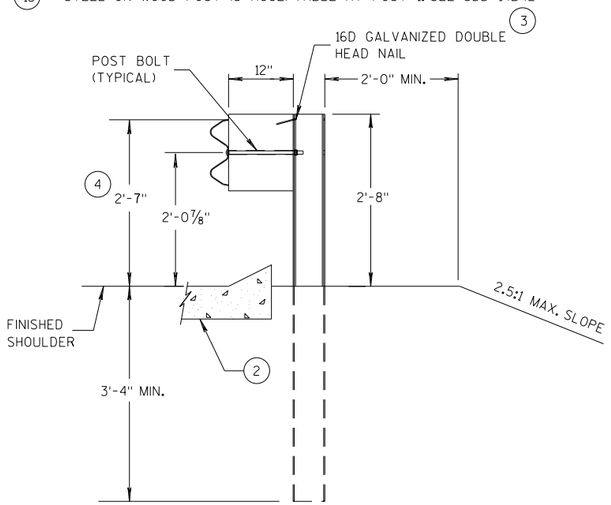
GENERAL NOTES

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

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

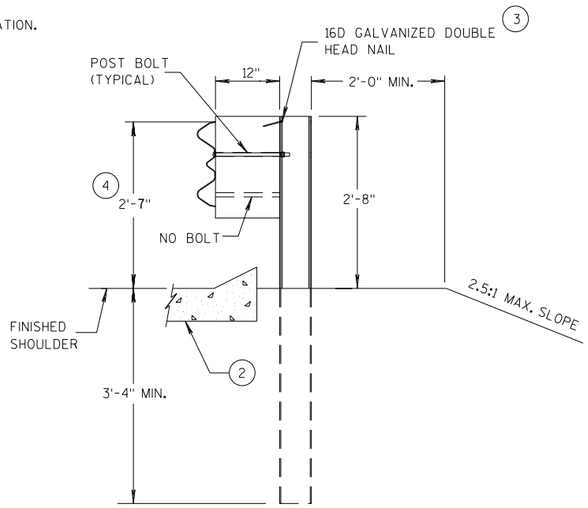
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



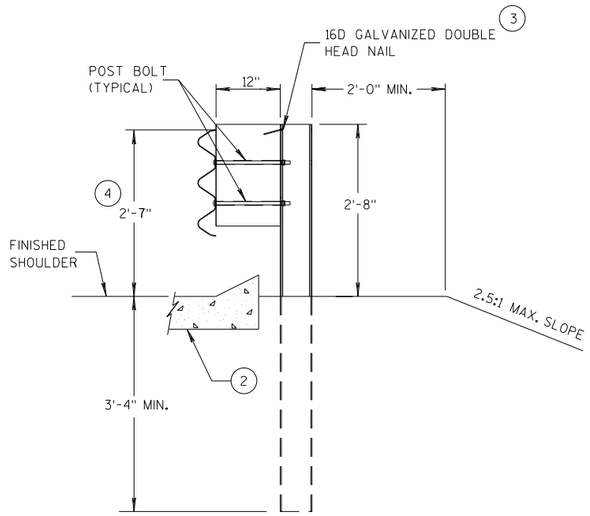
SECTION A-A (13)

POSTS 1-5



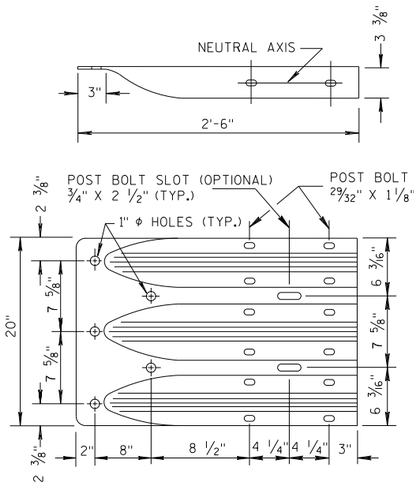
SECTION B-B

POST 6

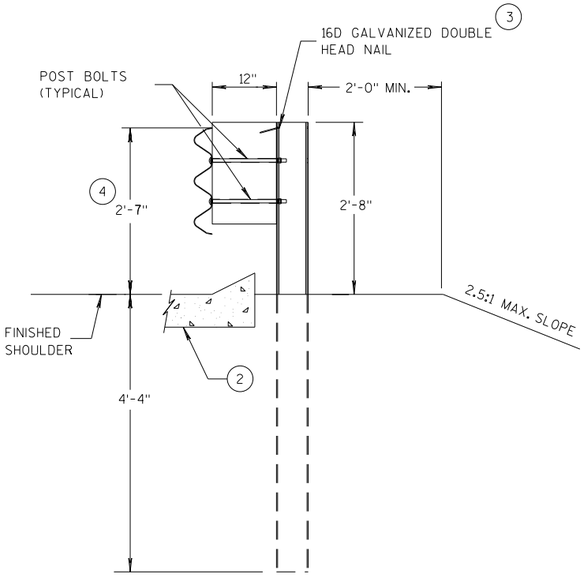


SECTION C-C

POSTS 7-11

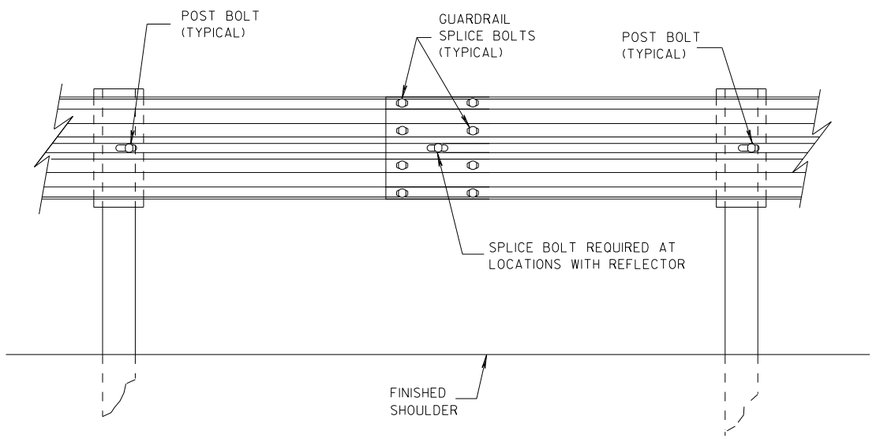


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

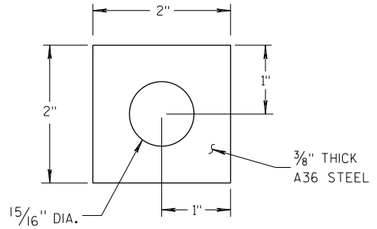


PLATE WASHER DETAIL

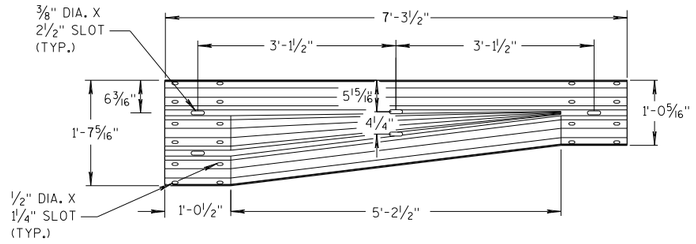
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

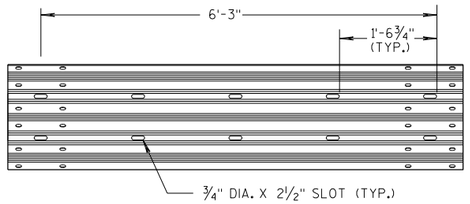
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

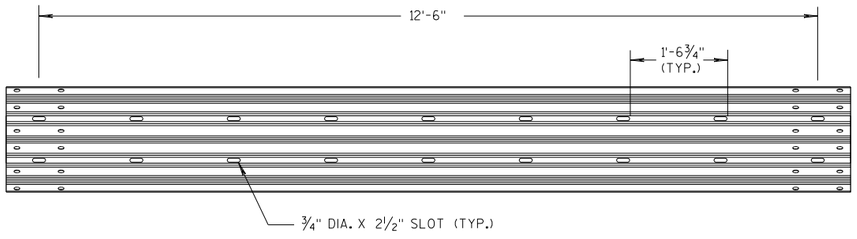
S.D.D. 14 B 45-5b



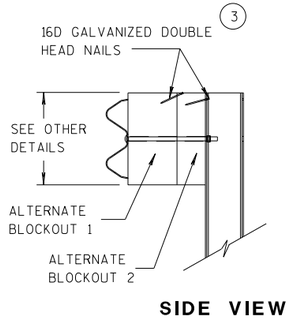
W-BEAM TO THRIE BEAM TRANSITION SECTION



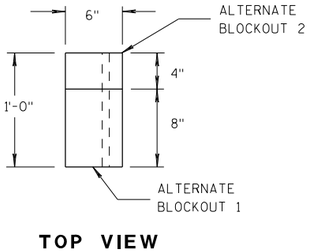
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

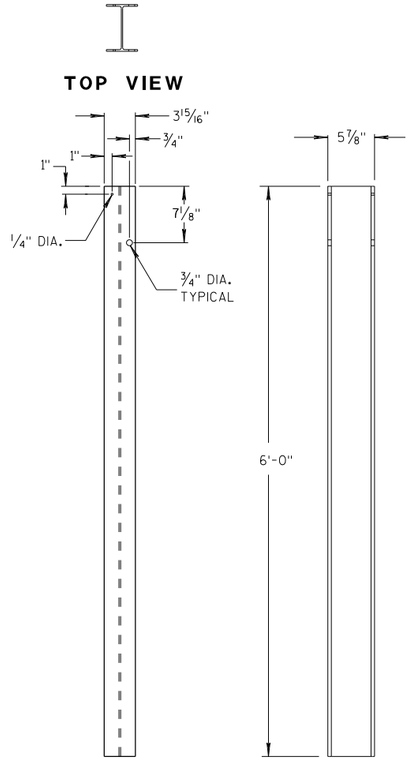


SIDE VIEW



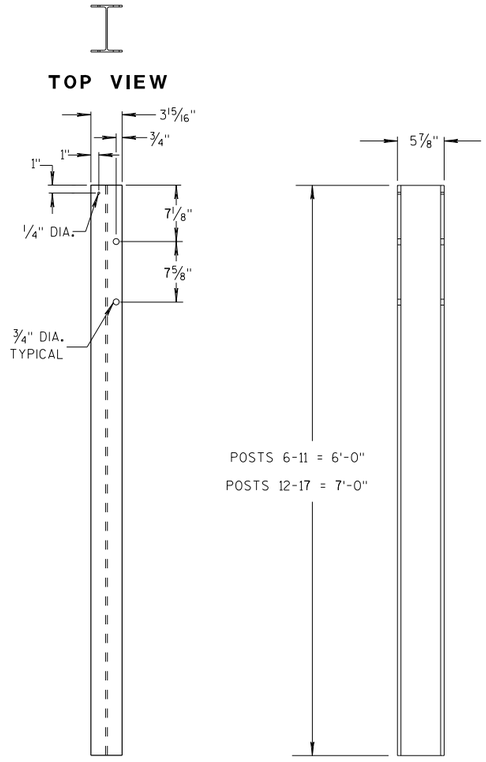
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



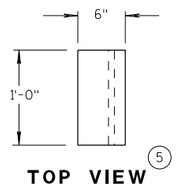
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

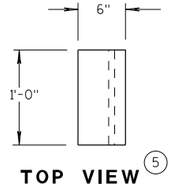


FRONT VIEW SIDE VIEW

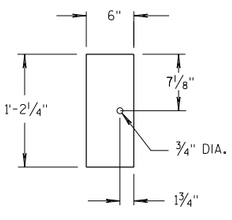
STEEL POSTS 6-17



TOP VIEW (5)

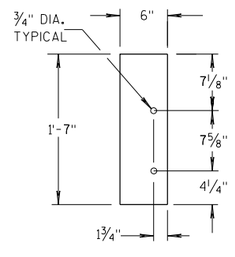


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

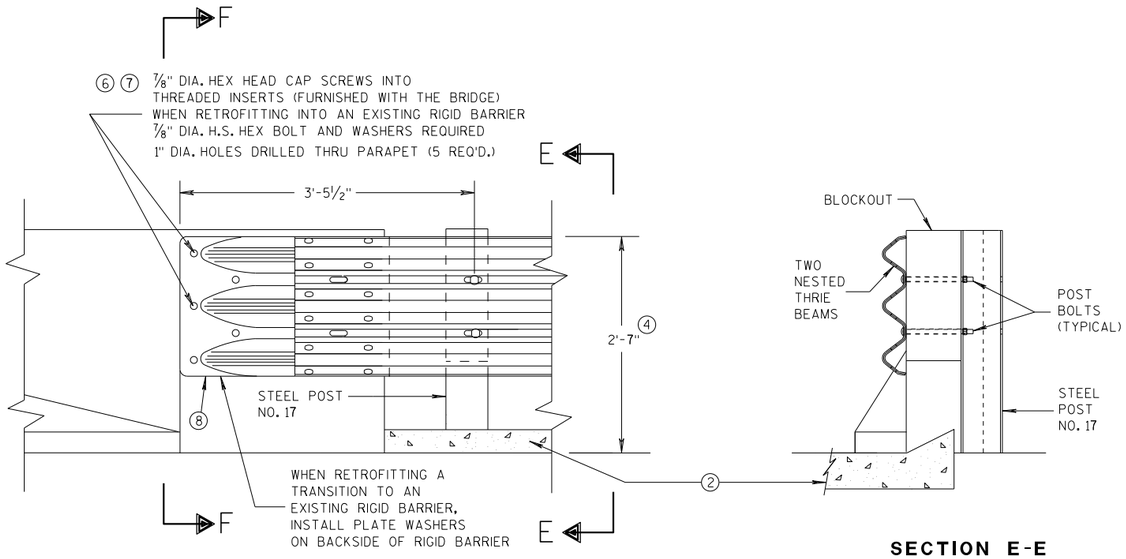
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

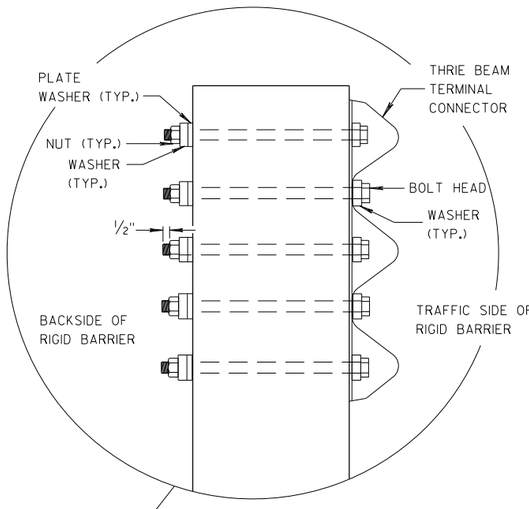
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

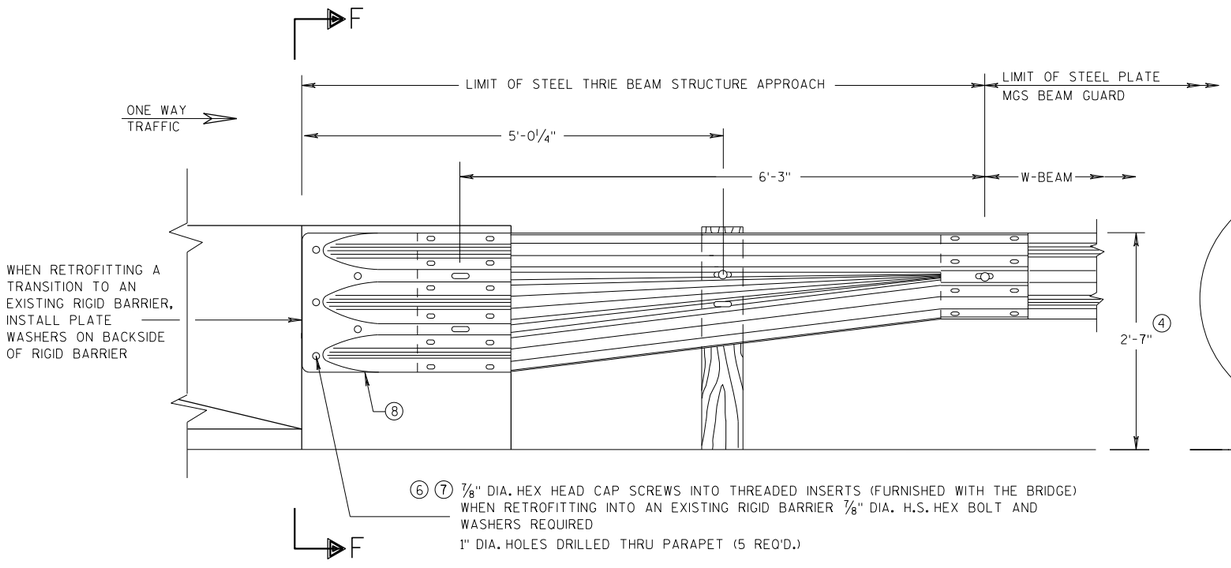
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

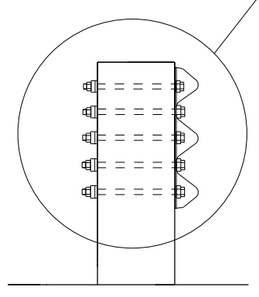
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

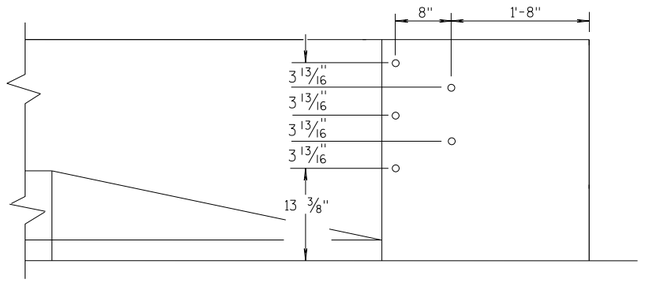




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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.

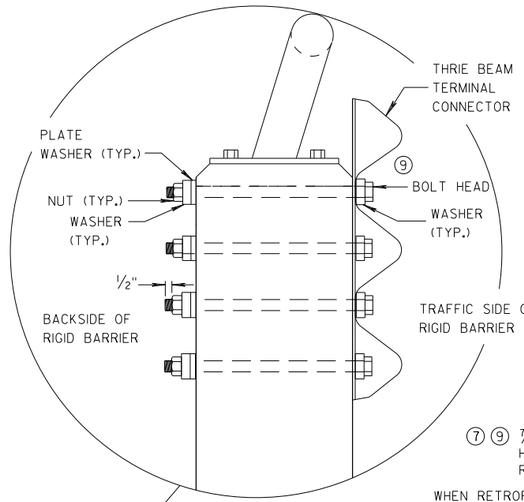
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

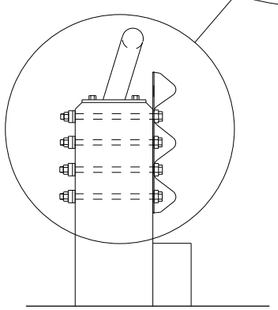
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

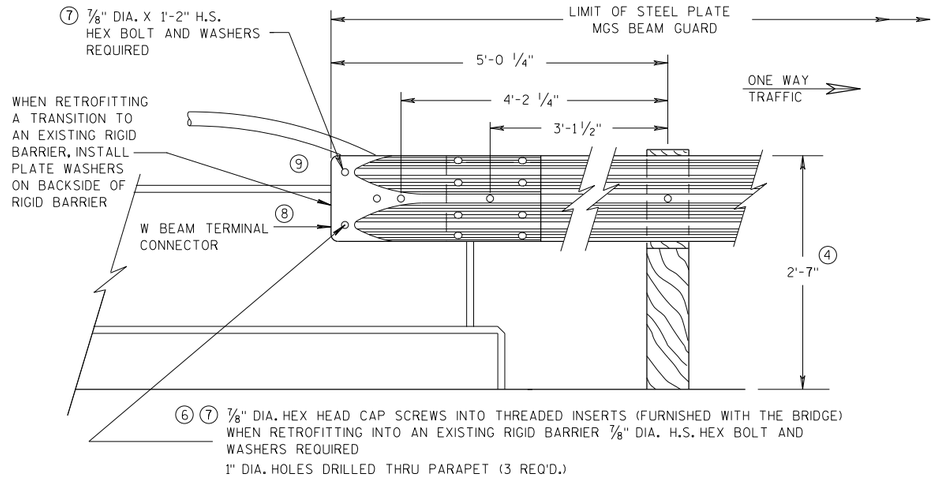
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





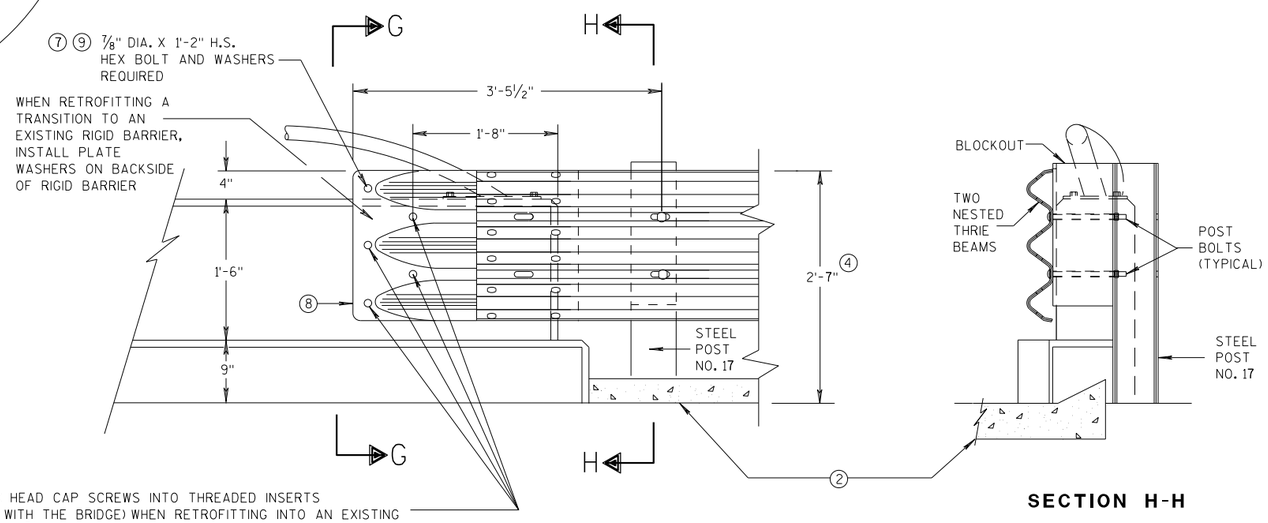
SECTION G-G



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

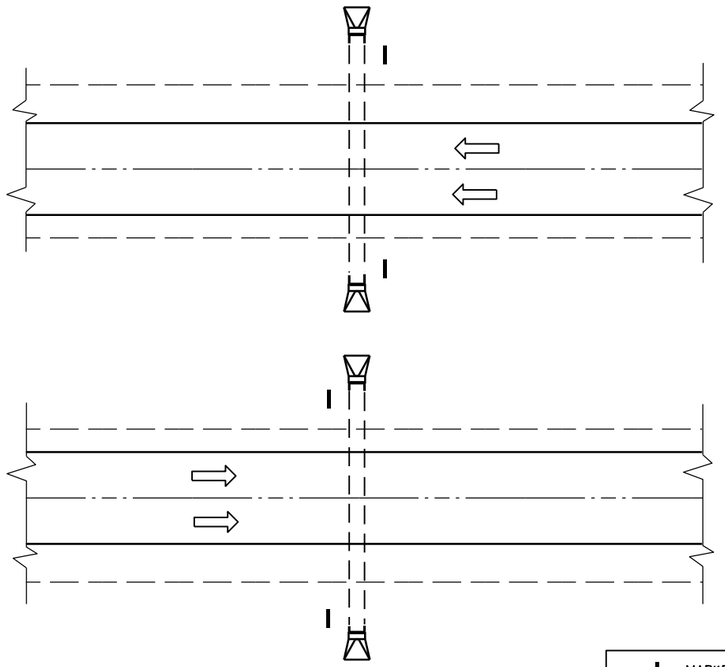
APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

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

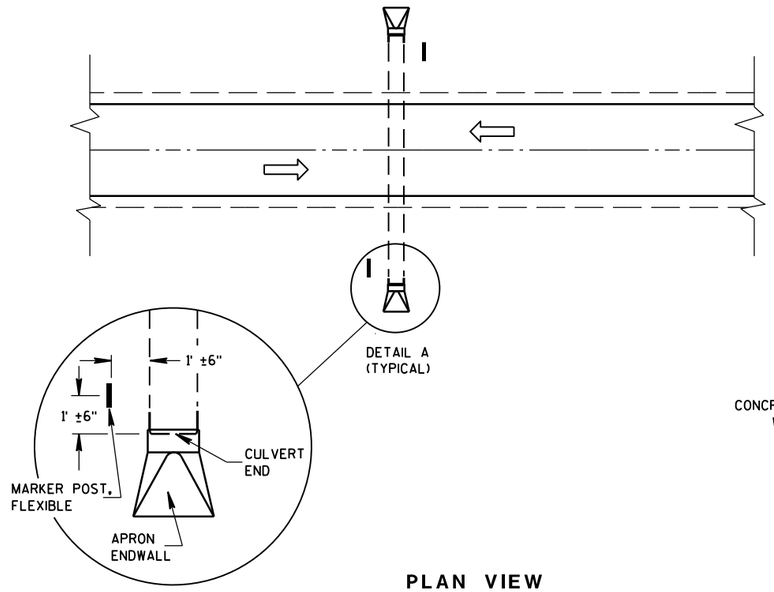
6

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



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

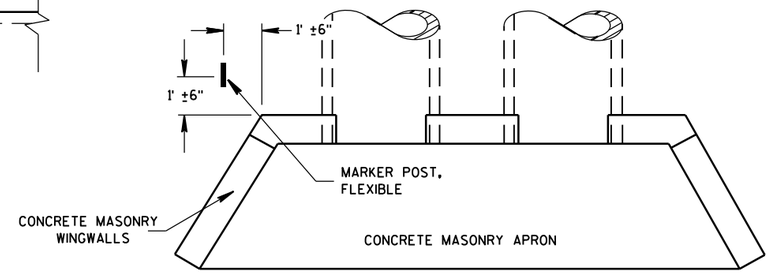
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

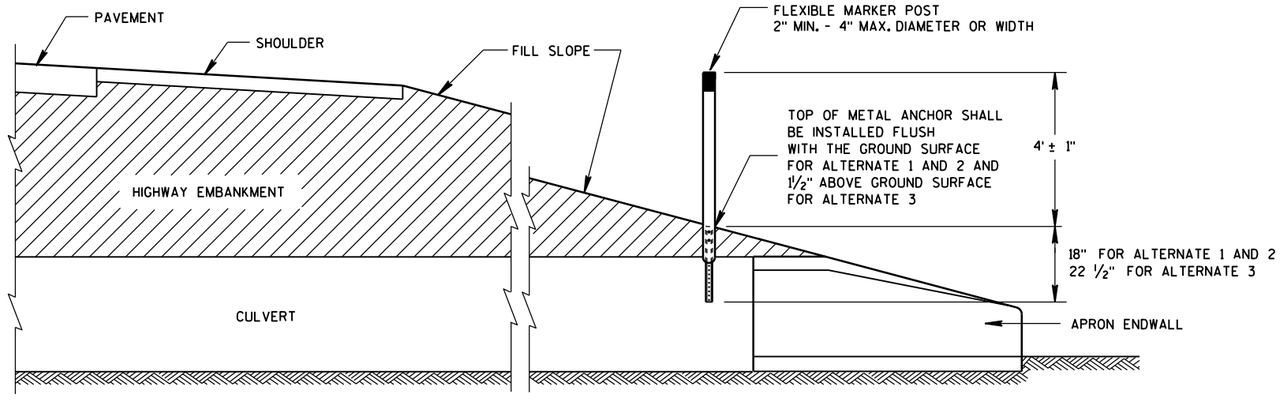
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

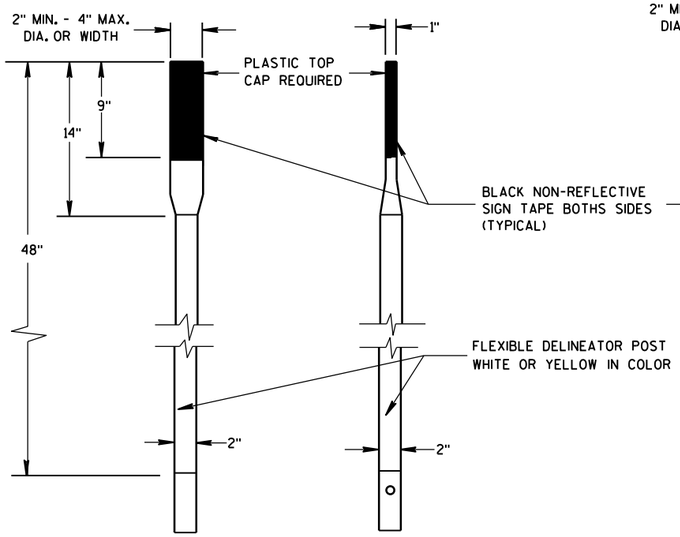
FLEXIBLE MARKER POST

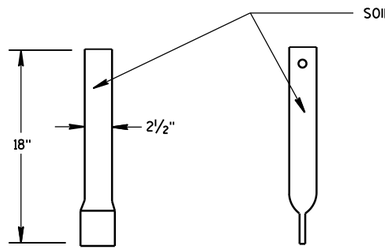
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

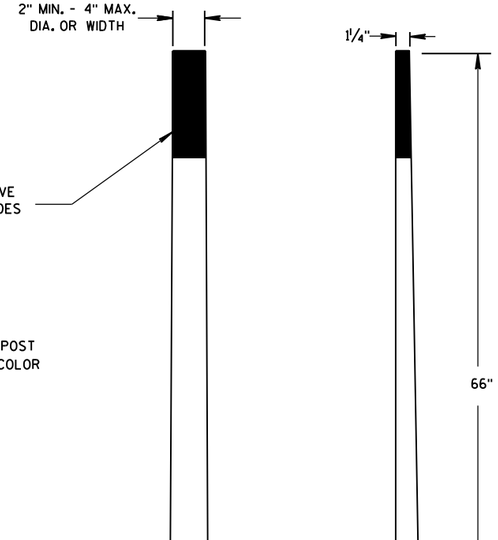
S.D.D. 15 A 3-2a





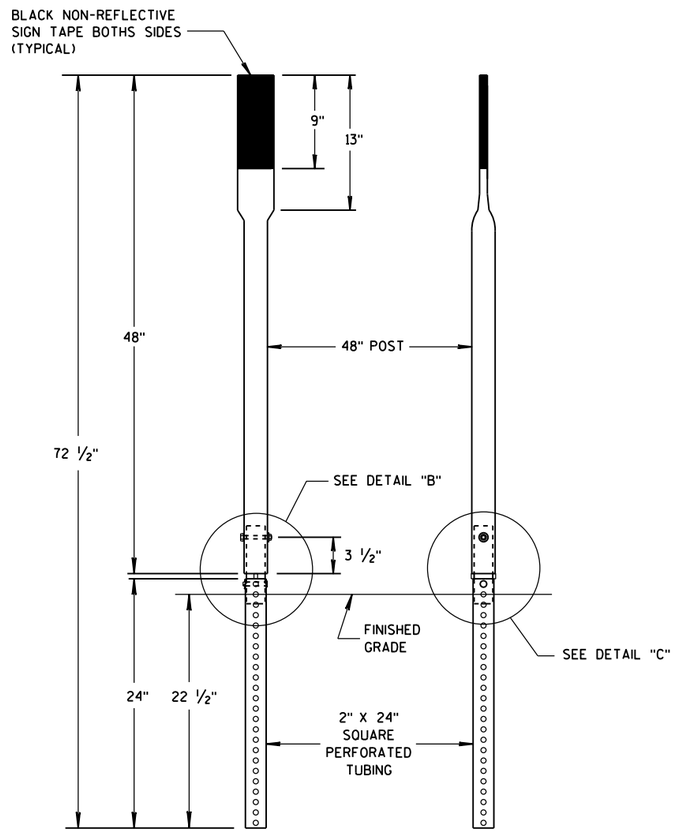
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

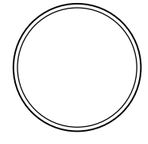
ALTERNATE 2



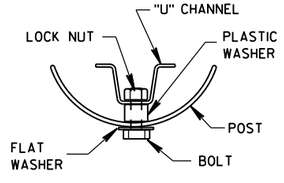
FRONT VIEW SIDE VIEW

ALTERNATE 3

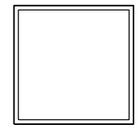
FLEXIBLE MARKER POSTS



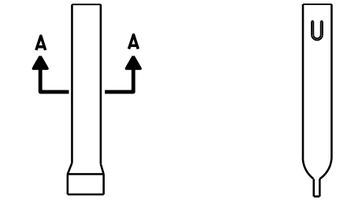
SECTION A-A



SECTION B-B

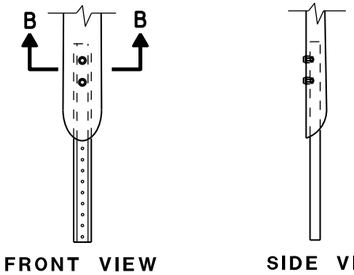


SECTION C-C



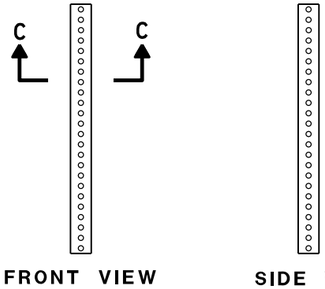
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

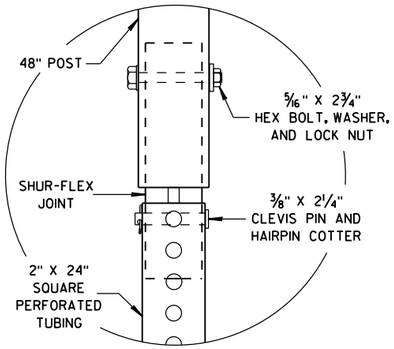
ALTERNATE 2



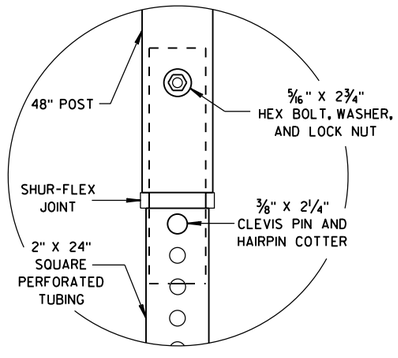
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
IGN
FHWA

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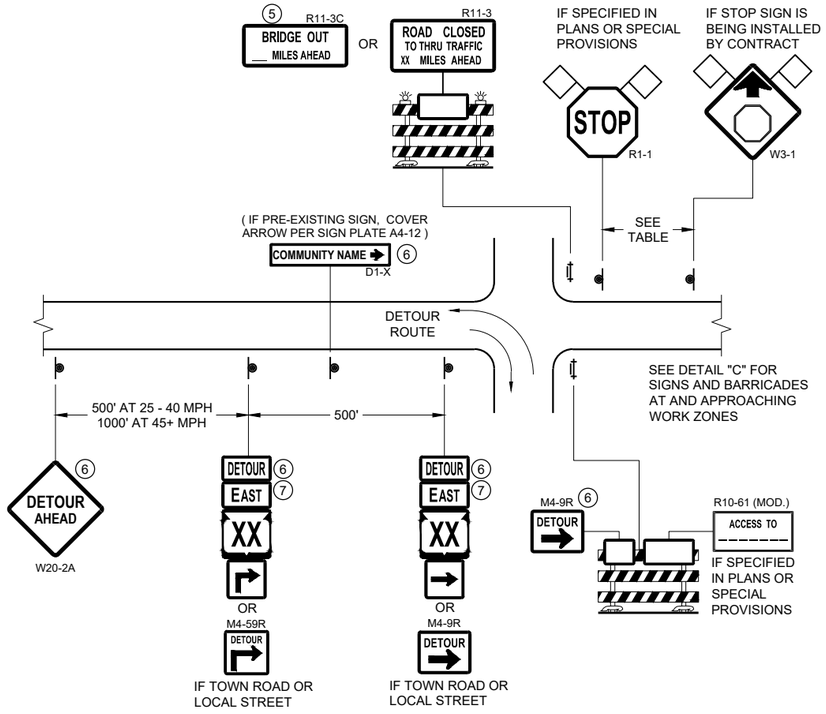
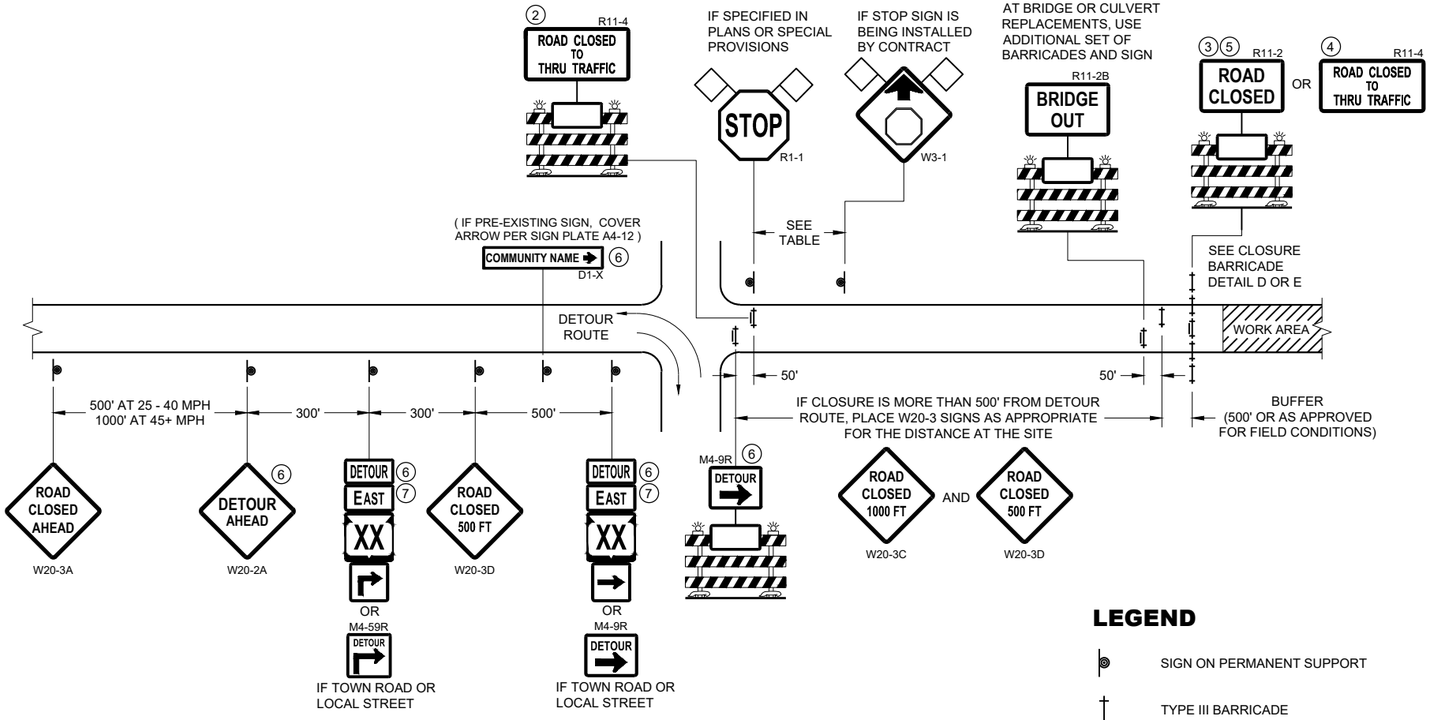
S.D.D. 15 A 3-2b



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



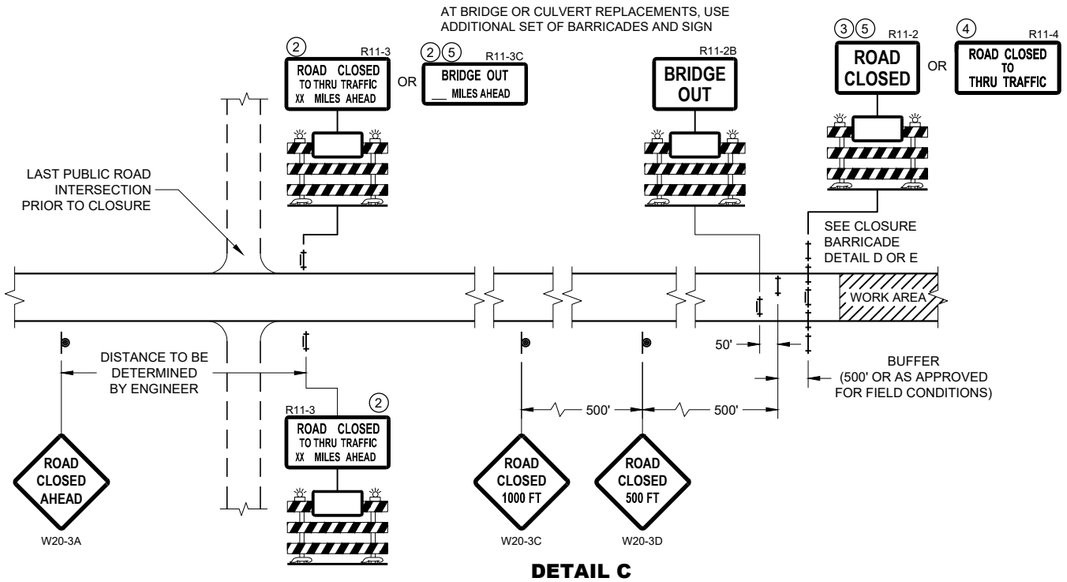
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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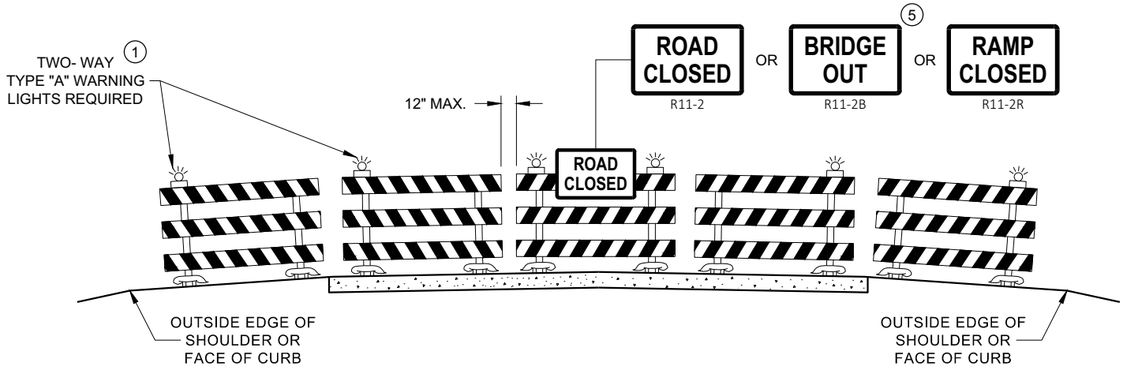
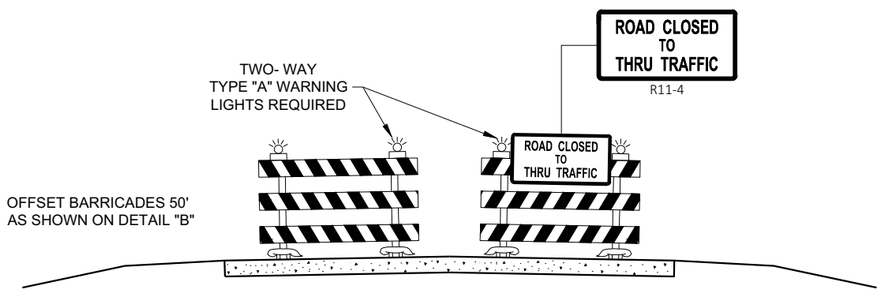
SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 08b

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

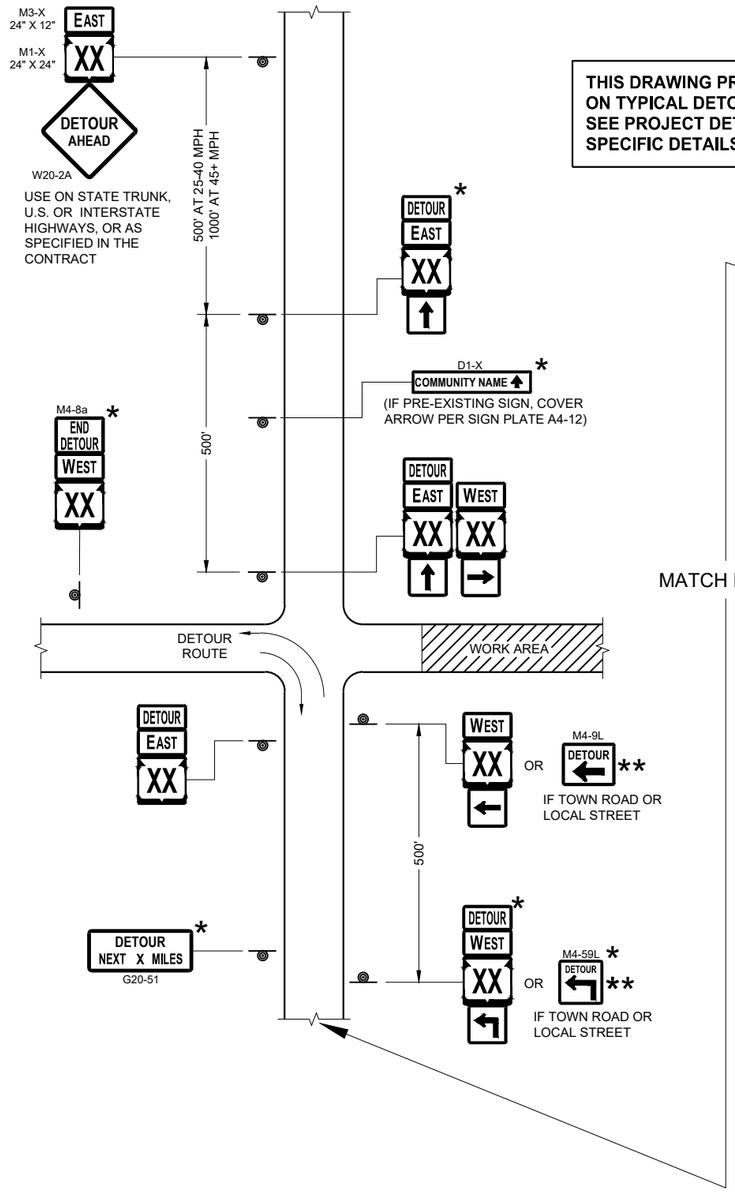
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

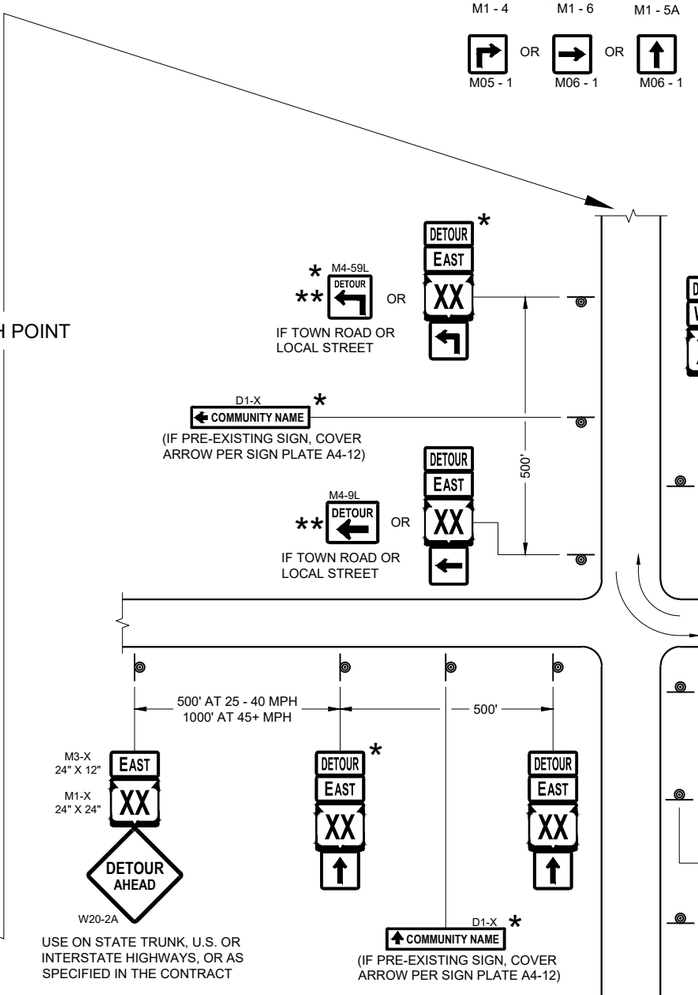
SIGN SIZES SHALL BE AS FOLLOWS:

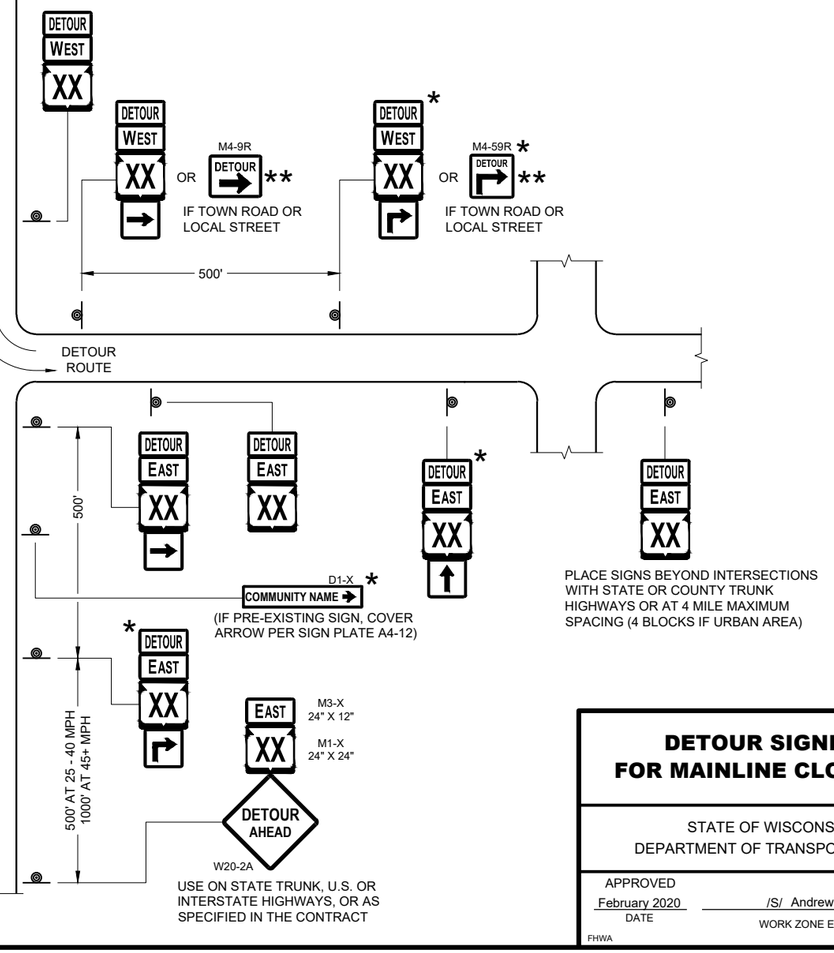
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

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

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







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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 08c

SDD 15C02 - 08c

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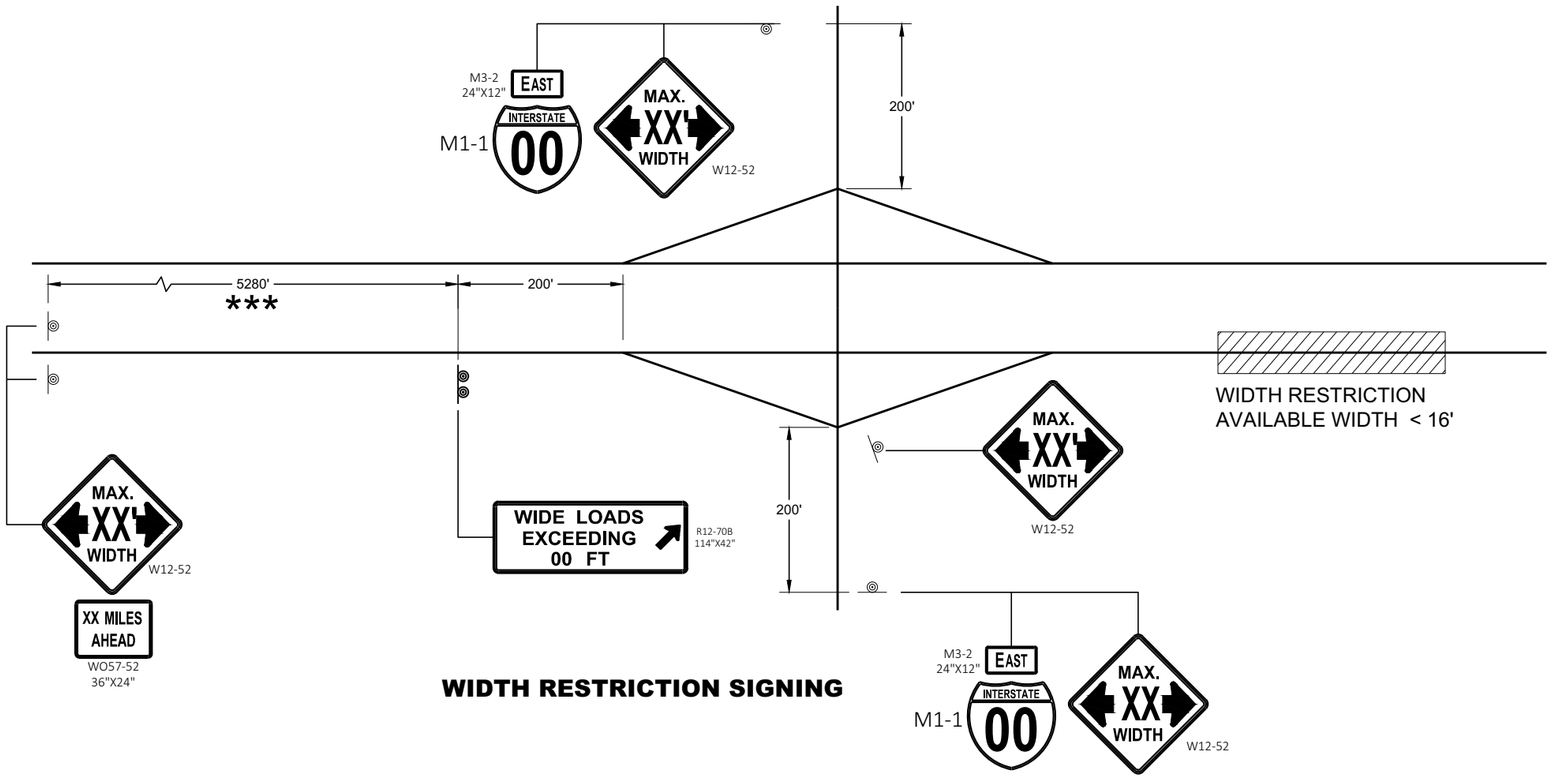


WIDTH RESTRICTION SIGNING

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.

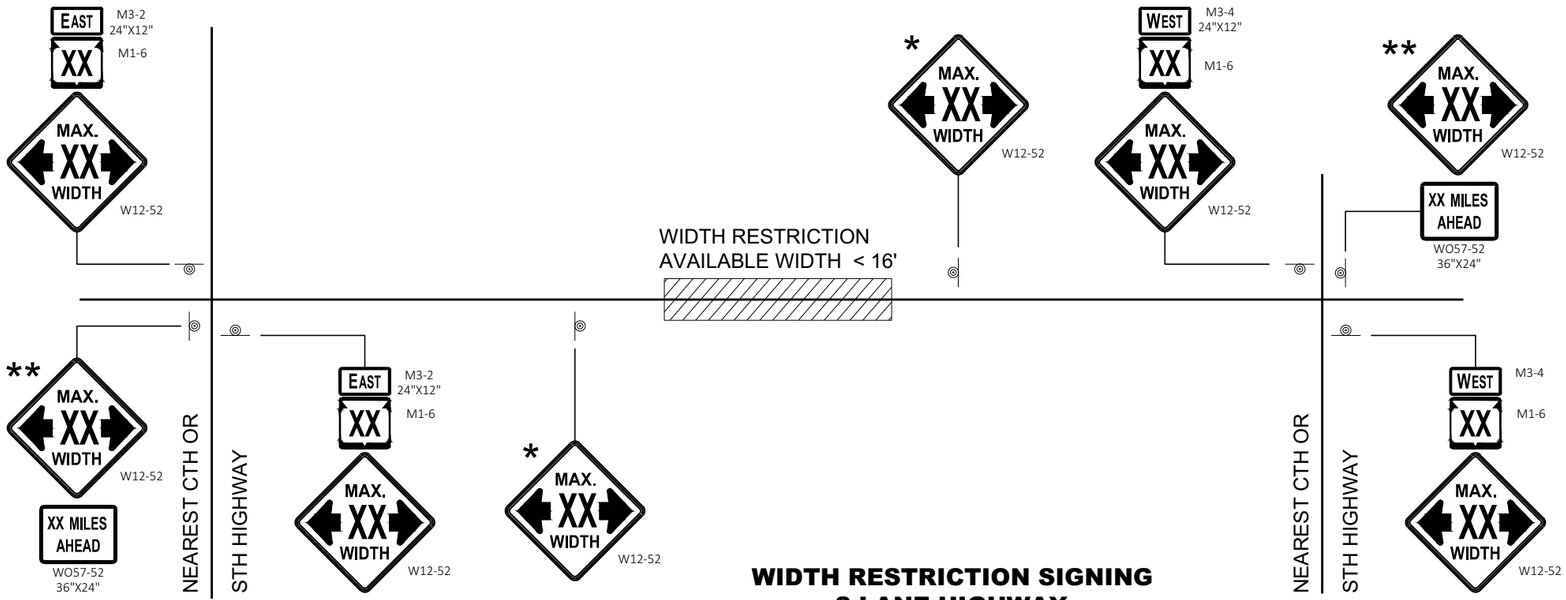
WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* 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



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

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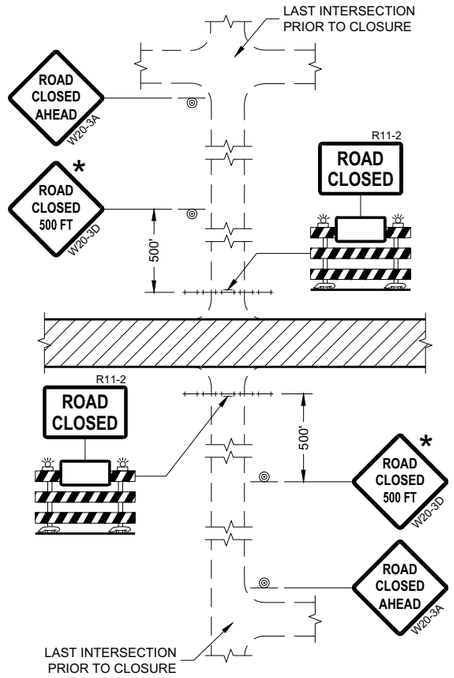
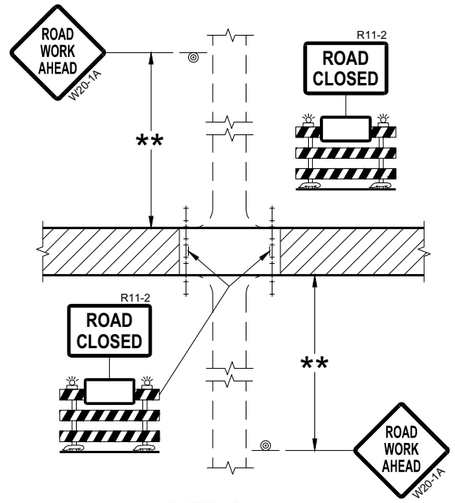
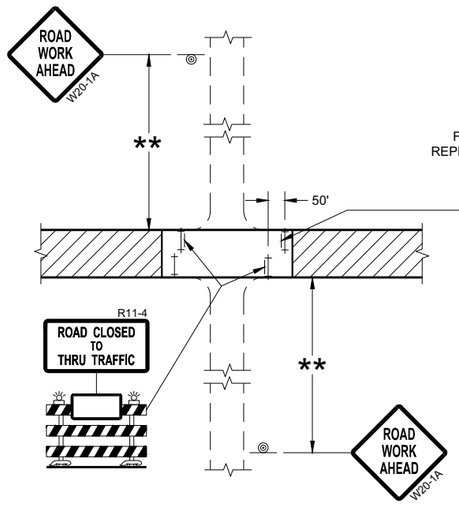
SDD 15C02 - 08f



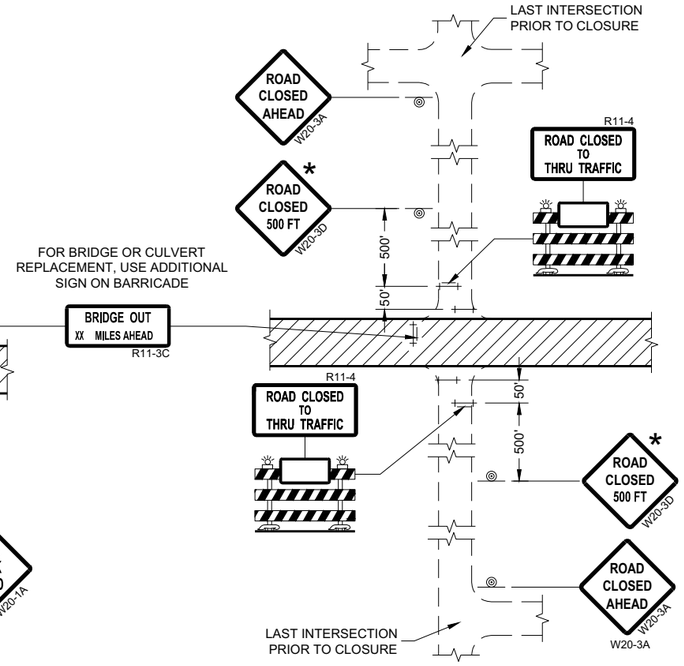
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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.

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

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

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

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

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C03 - 05

GENERAL NOTES

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

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

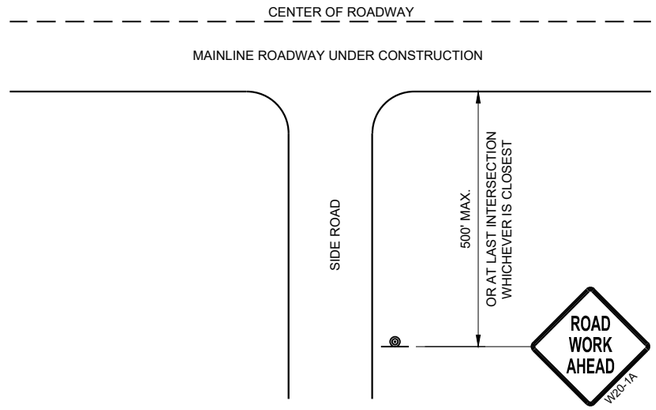
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

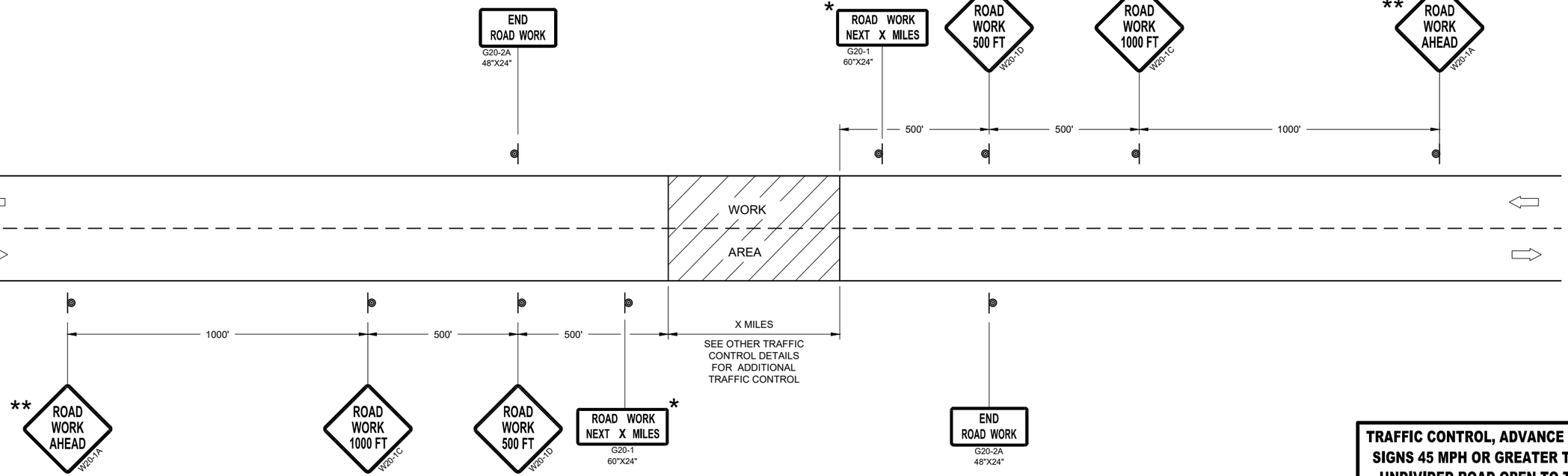
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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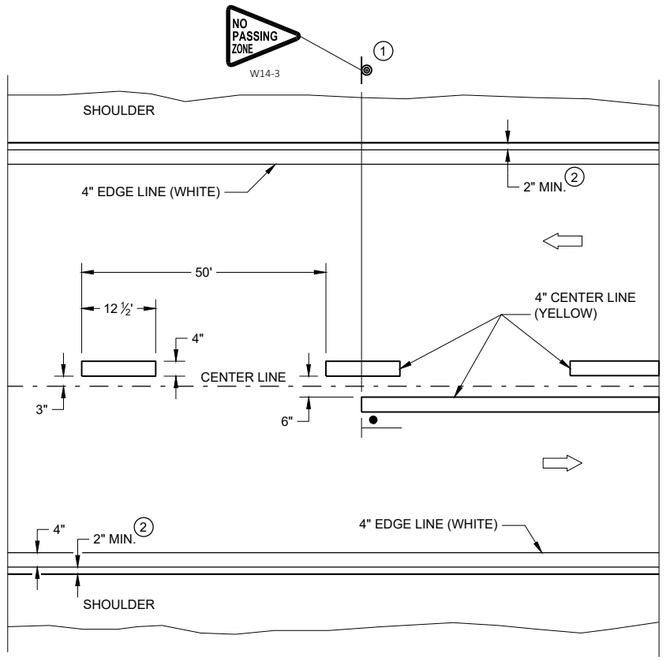
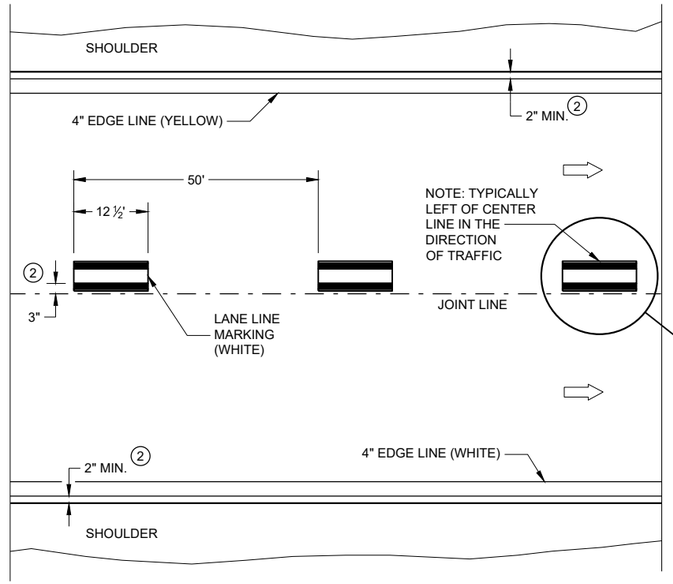
SDD 15C04 - 05

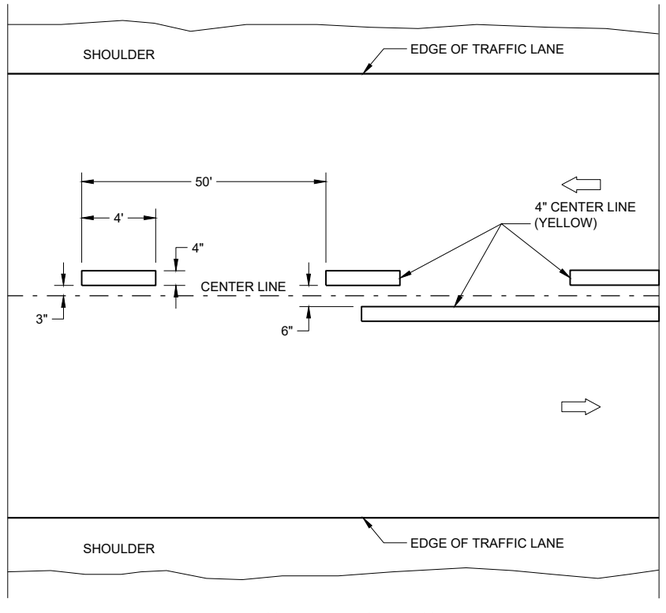


TWO WAY TRAFFIC

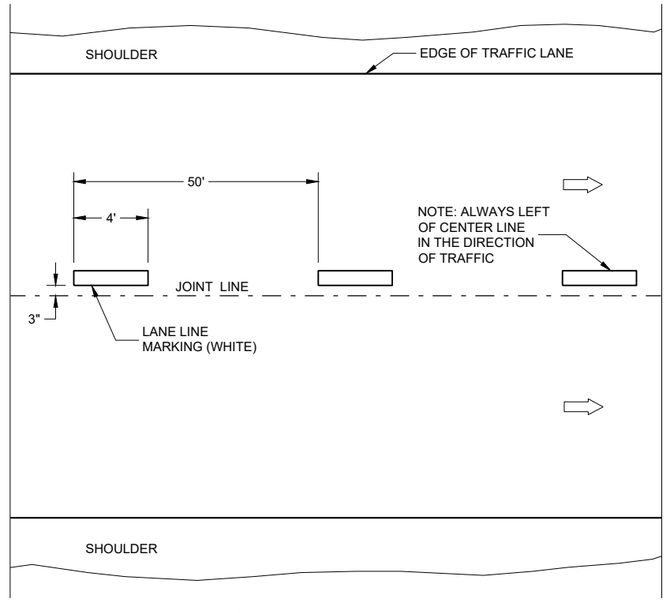


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

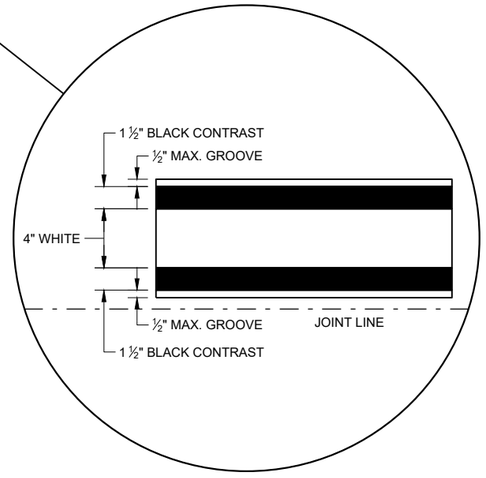
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

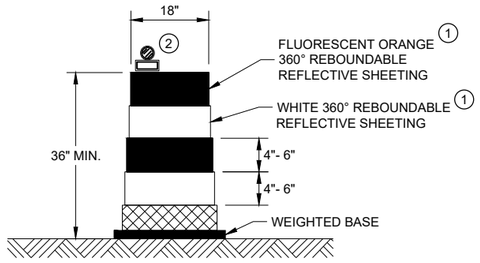
FHWA

SDD 15C08 - 20a

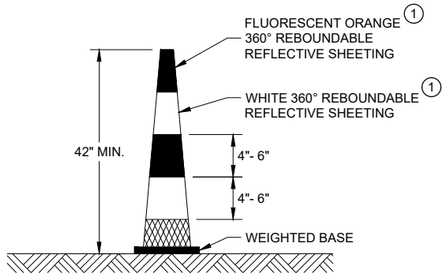
SDD 15C08 - 20a

GENERAL NOTES

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

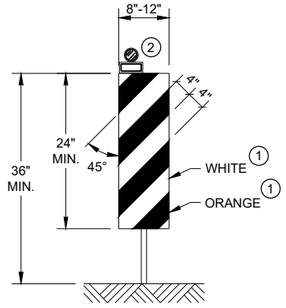


DRUM



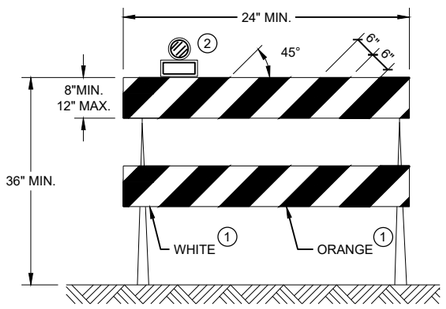
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



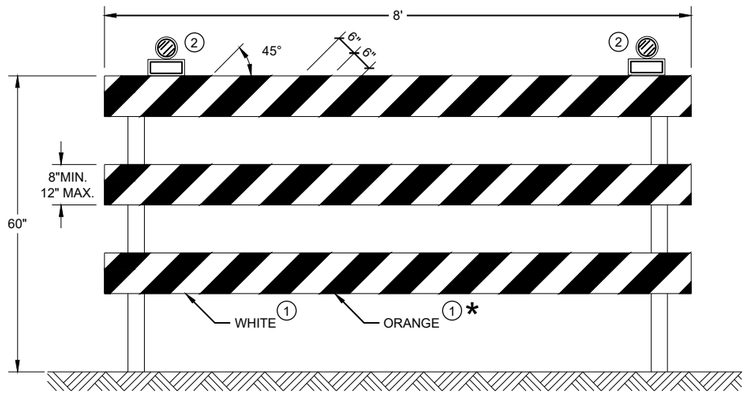
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15C11 - 09b

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SDD 15C11 - 09b

LEGEND

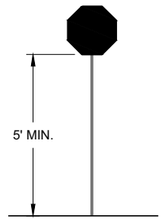
SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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



STOP/SLOW PADDLE ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

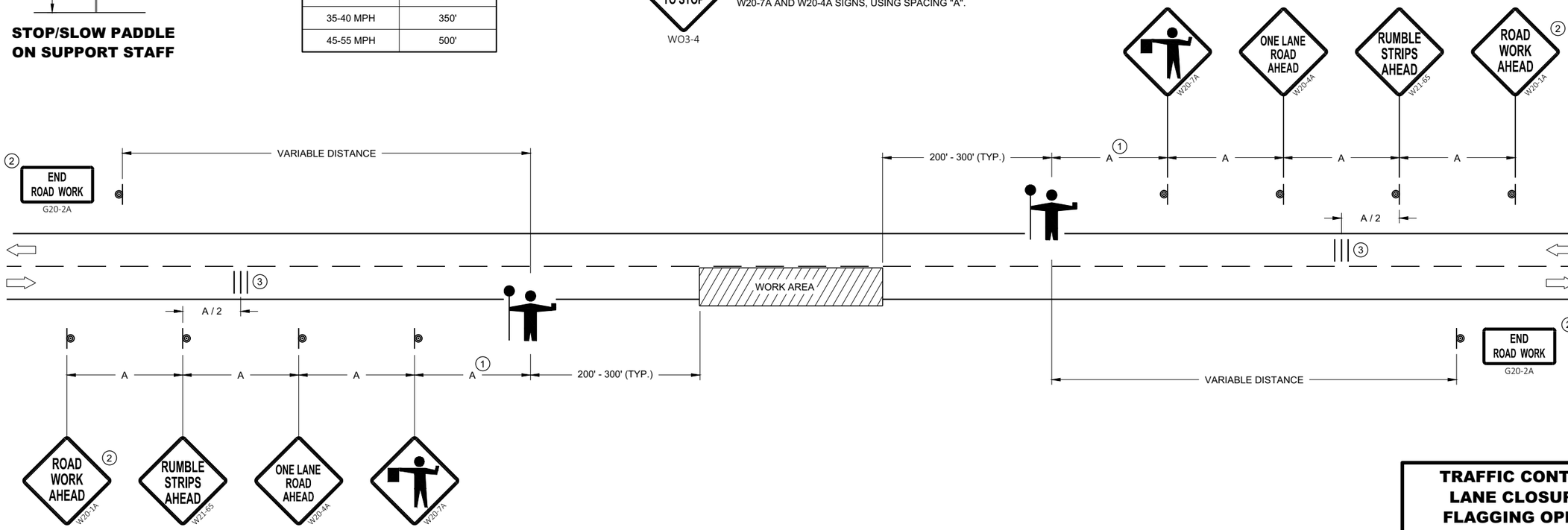
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

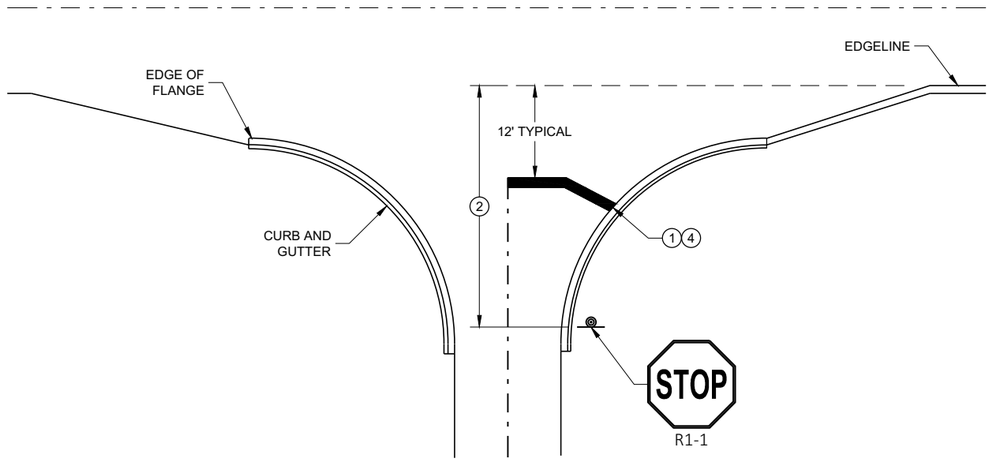
SDD 15C12 - 07

SDD 15C12 - 07

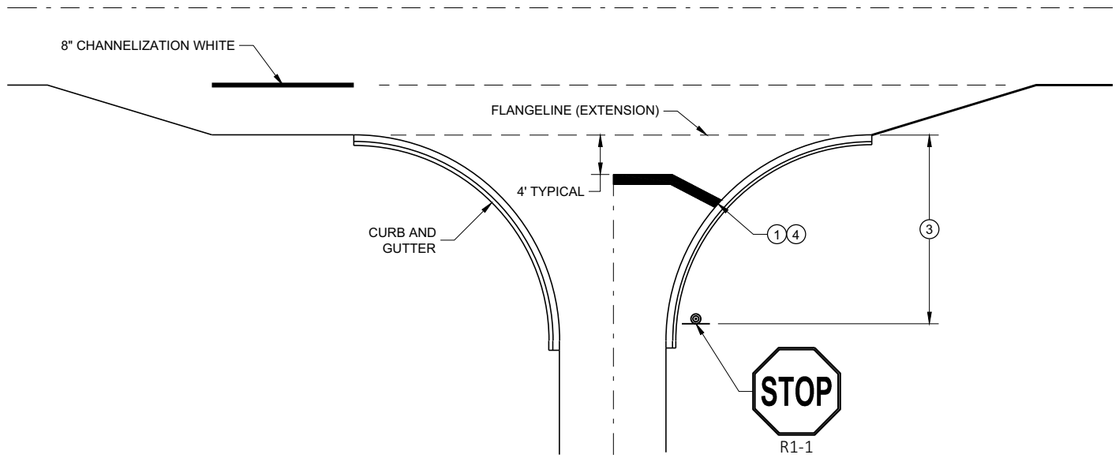
GENERAL NOTES

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

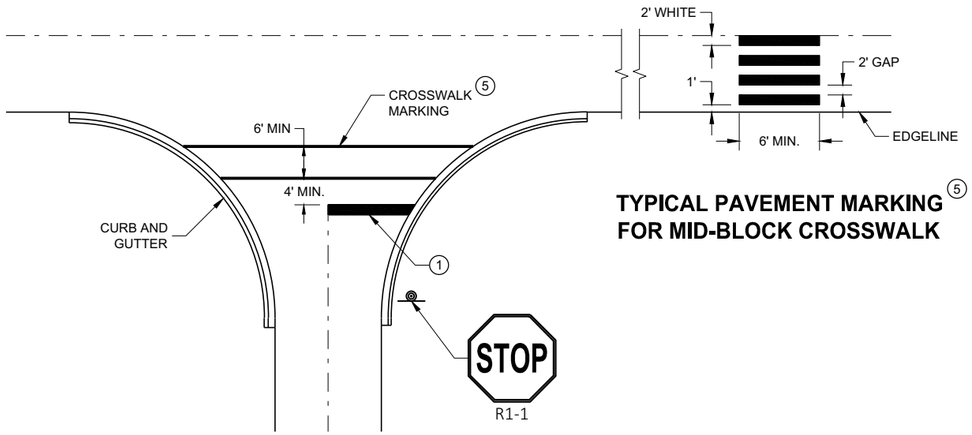
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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

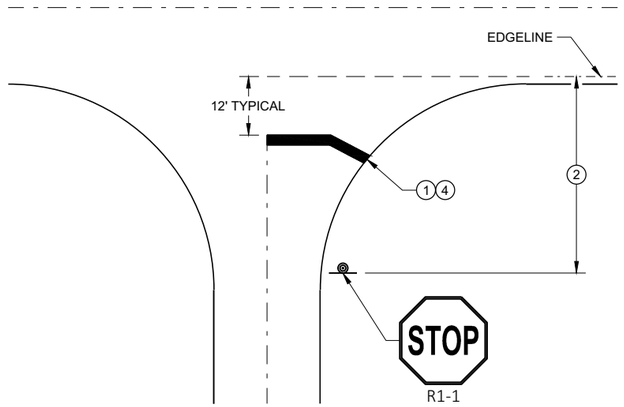


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



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

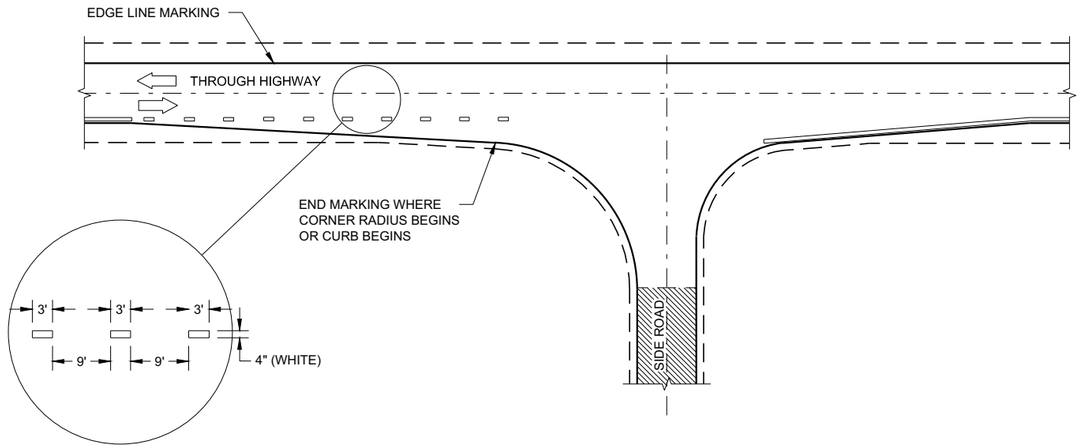
GENERAL NOTES

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

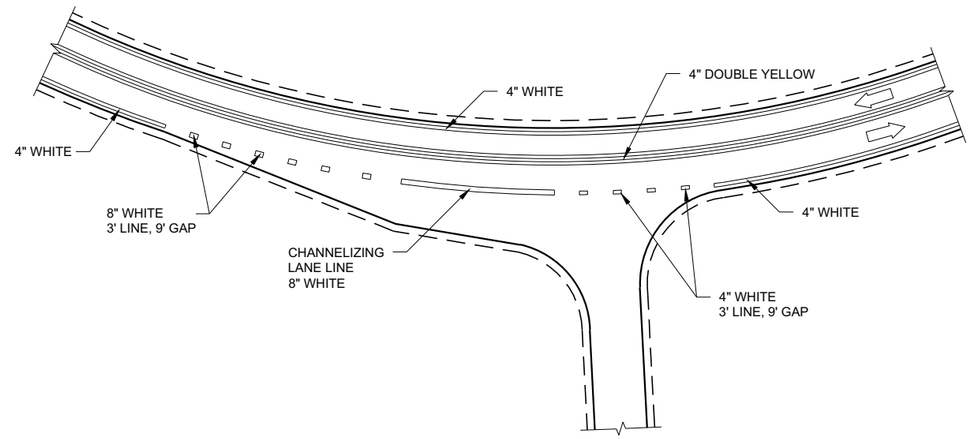
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

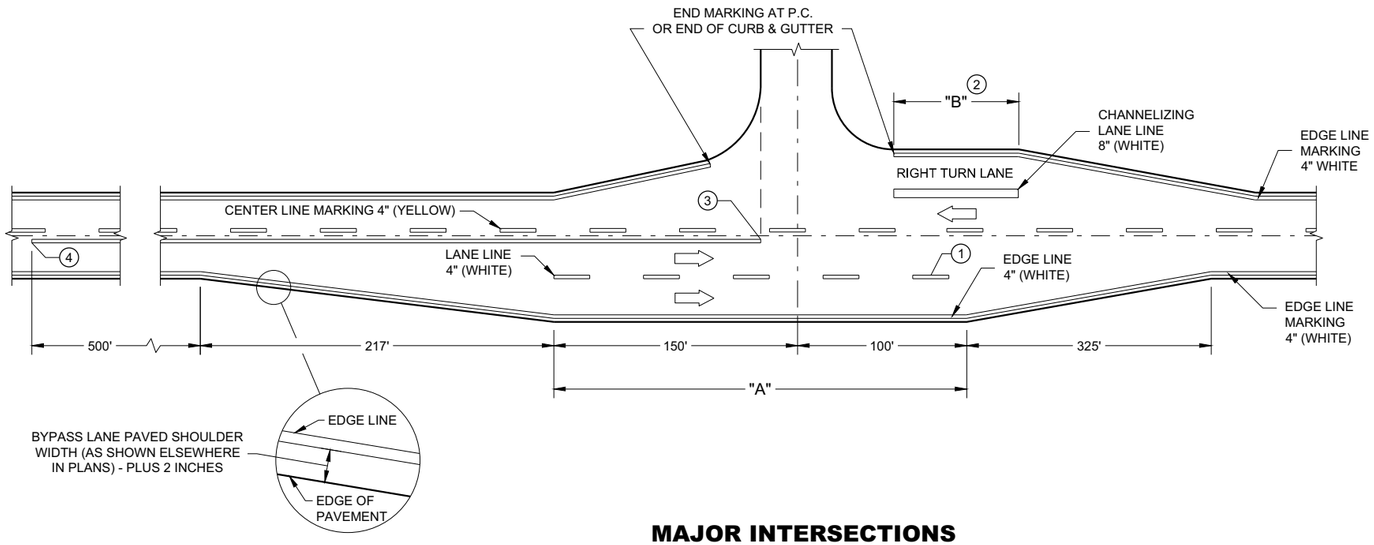
DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 04a

6

SDD 15C35 - 04a

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.

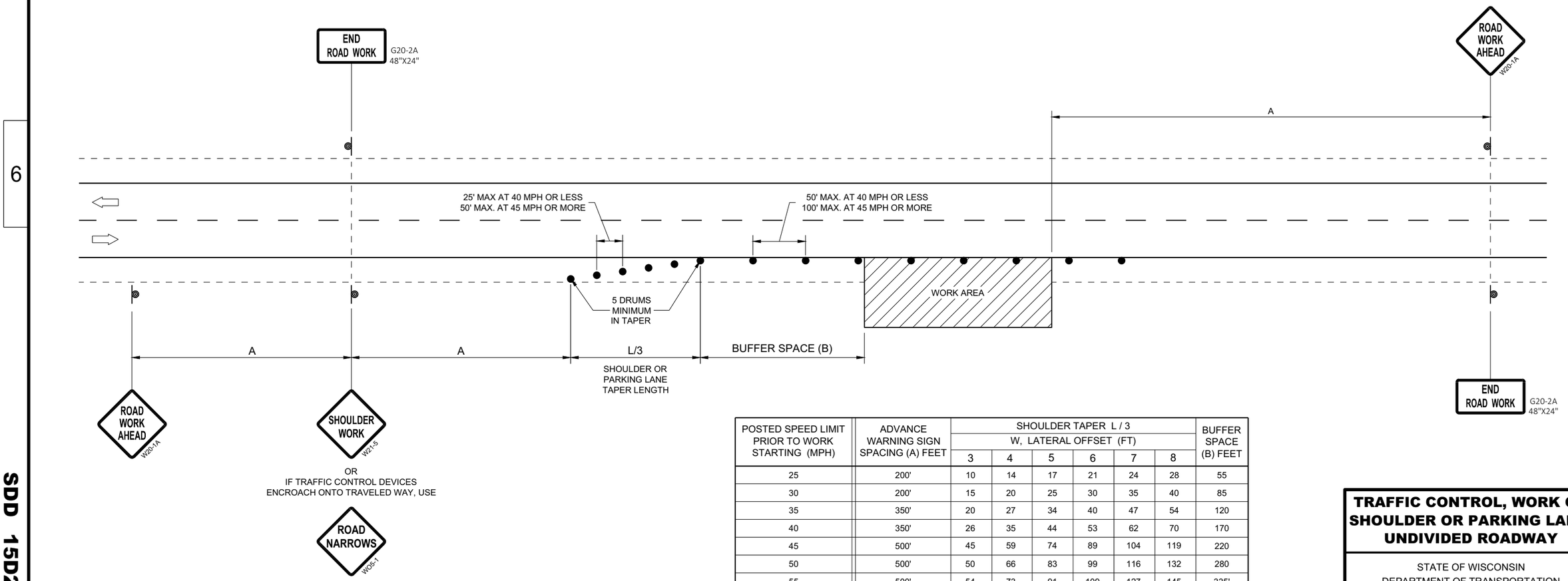
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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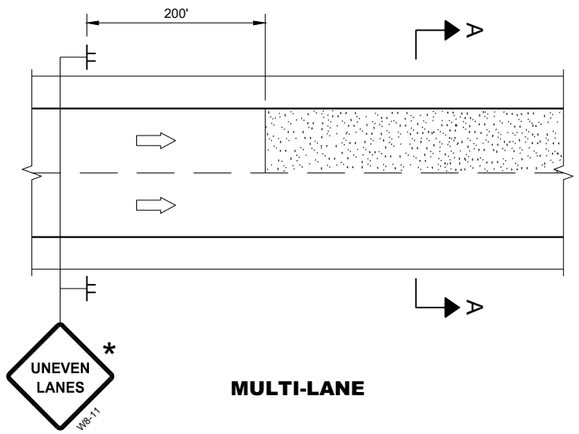
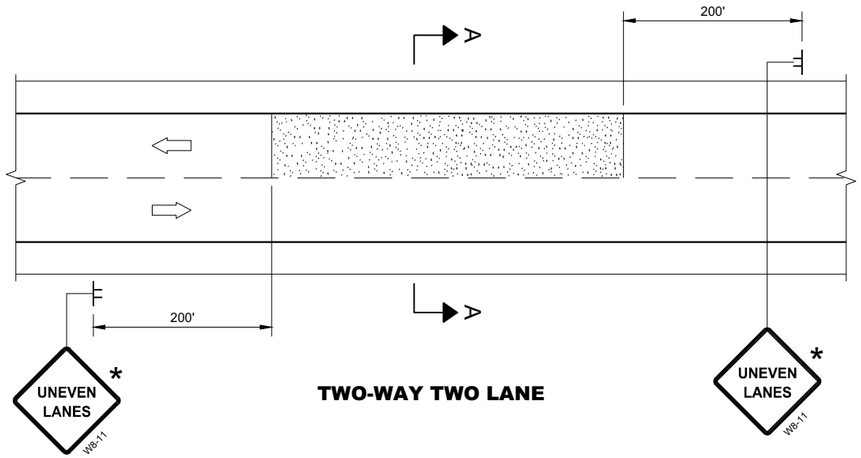
SDD 15D28 - 04

6

SDD 15D28 - 04



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.

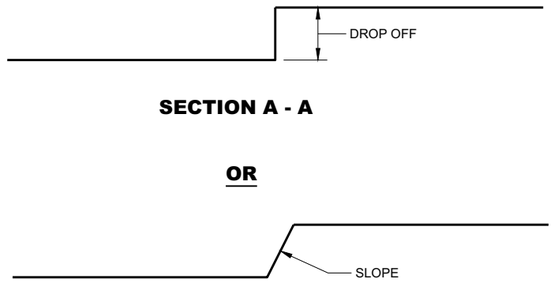
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* 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.

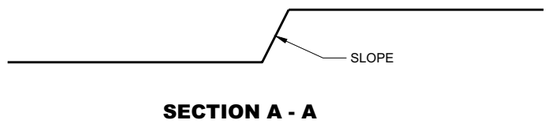
LEGEND

- 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

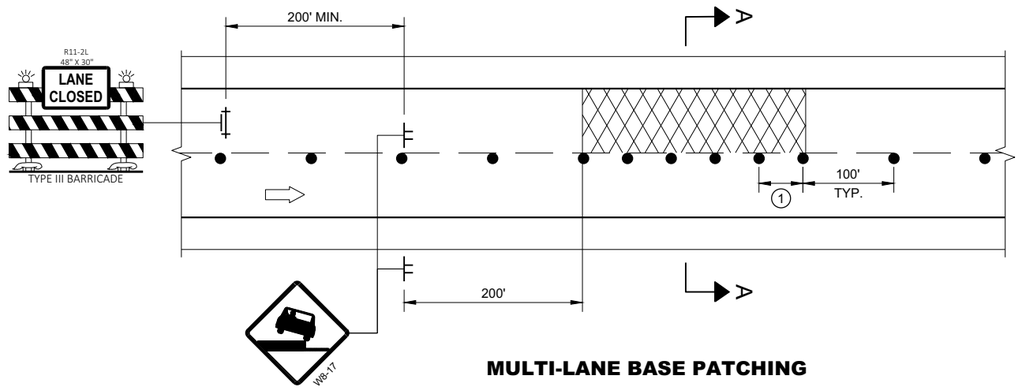


SECTION A - A

OR

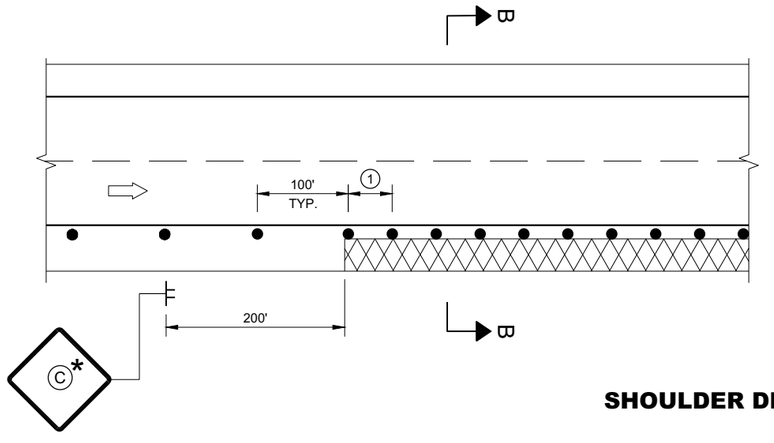


SECTION A - A

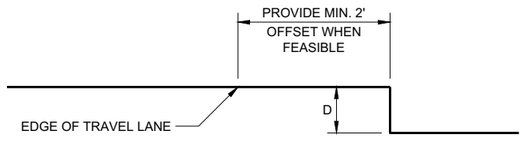


MULTI-LANE BASE PATCHING

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 CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

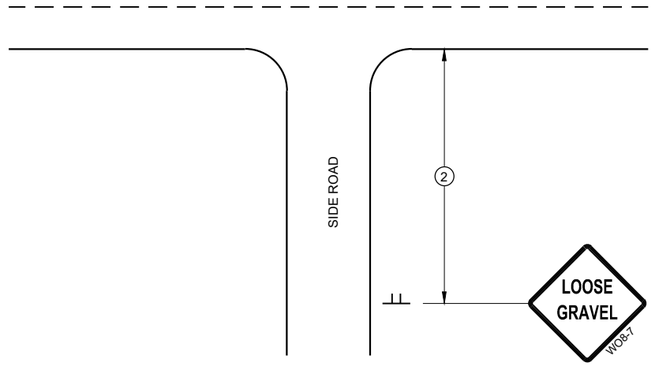
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

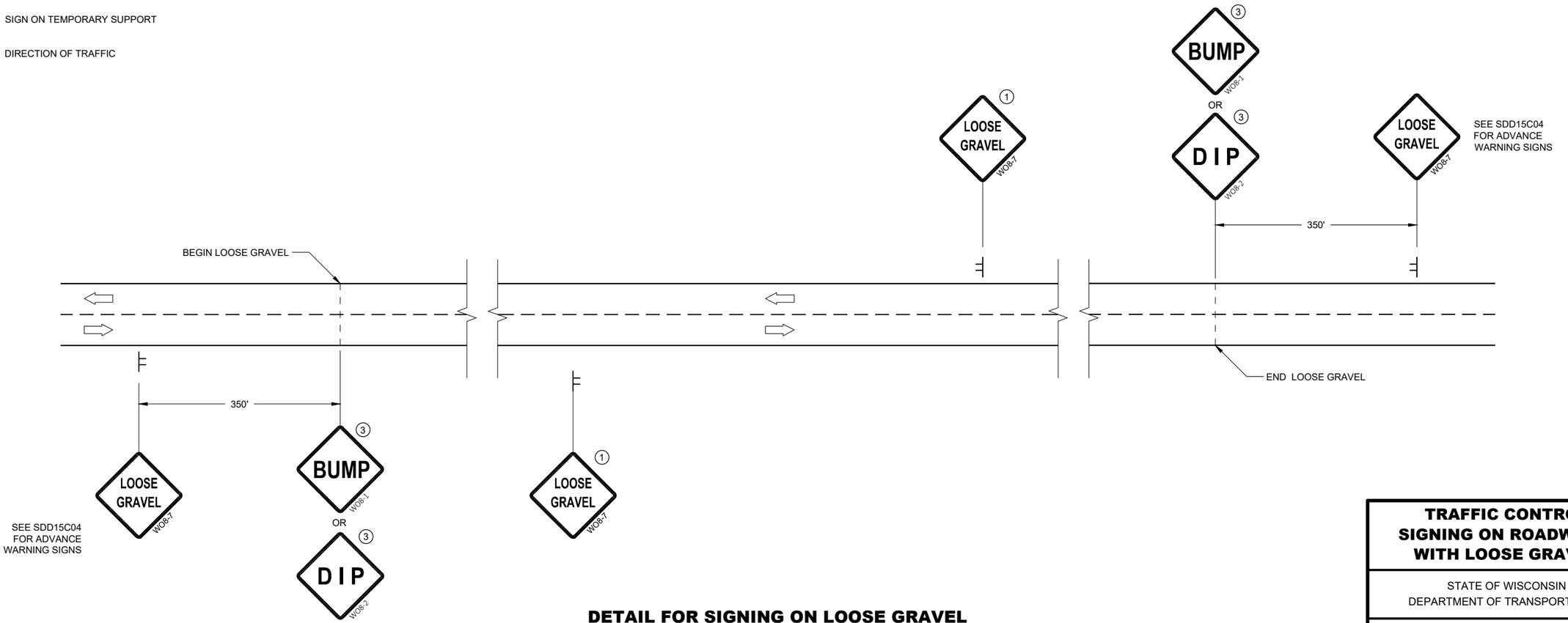
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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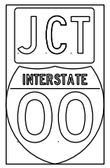
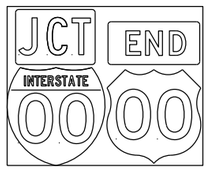
SDD 15D45 - 03

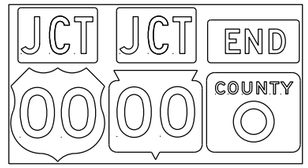
TYPICAL ASSEMBLIES



J1-1



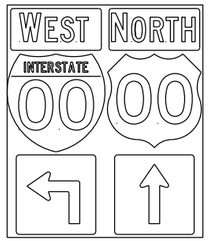
J1-2



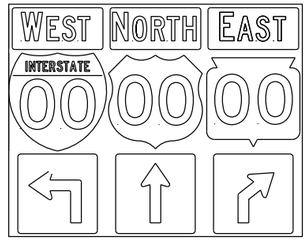
J1-3

JR1-1

J2-1

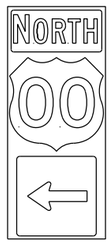


J2-2

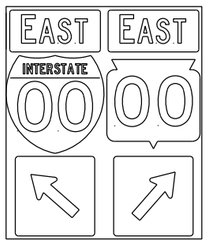


J2-3

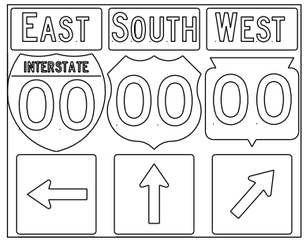
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



J3-2



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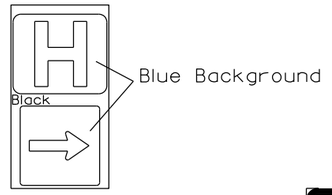
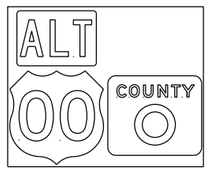
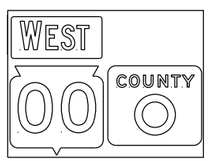


JH-1

J4-1

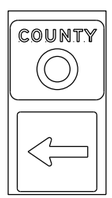


J4-2



J4-2

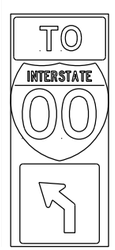
J12-1



J13-1

J32-1

J33-1



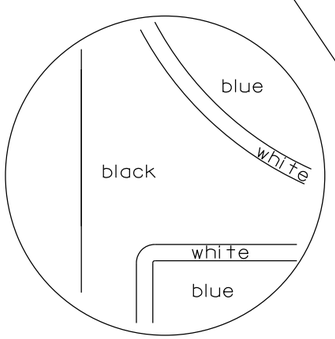
J22-1

J23-1

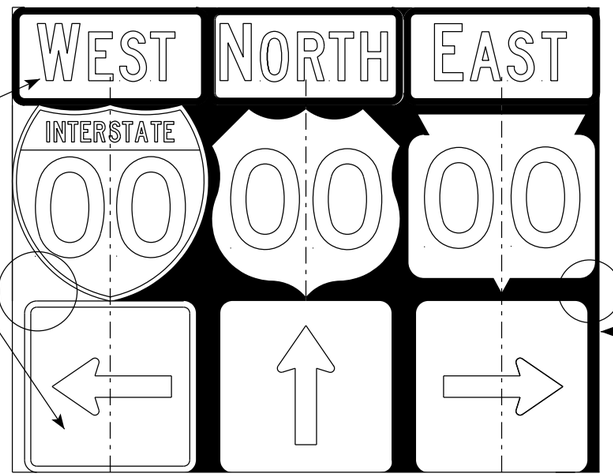
JR13-1

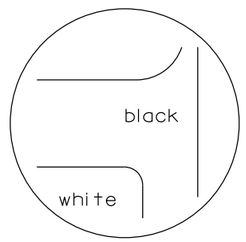
JR23-1

JR99-1



blue background
with interstate





black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 87 E

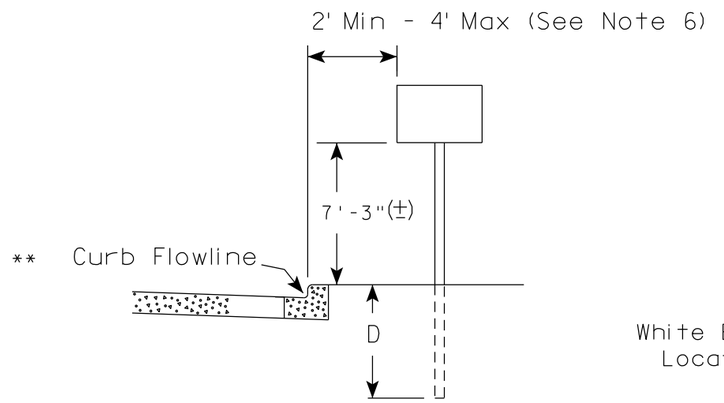
FILE NAME : C:\CAEfiles\Projects\tr_stdplate_A21S.dgn PLOT DATE : 18-MAR 2021 1:37 PLOT BY : mscj9h PLOT NAME :

WISDOT/CADDS SHEET 42

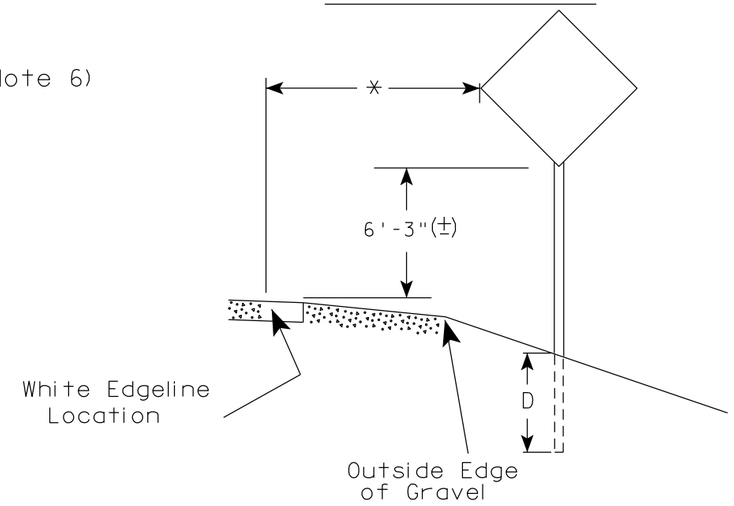
7

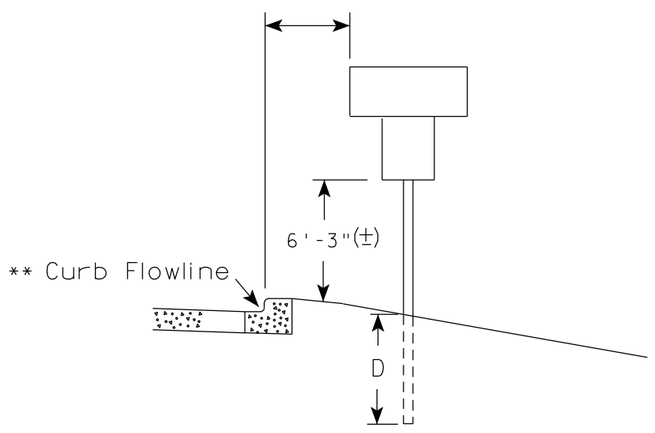
7

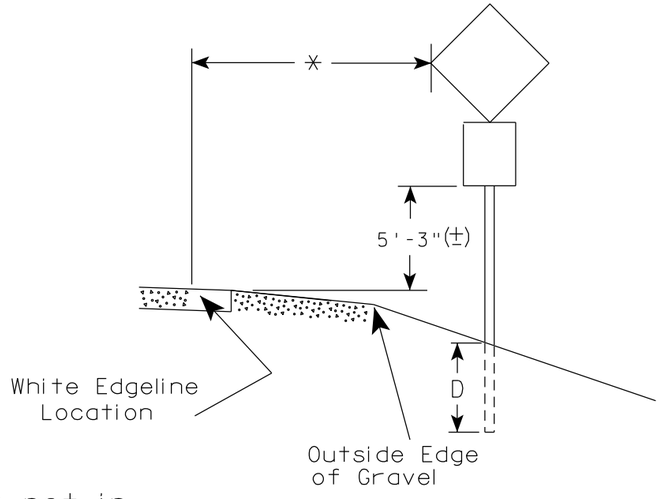
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

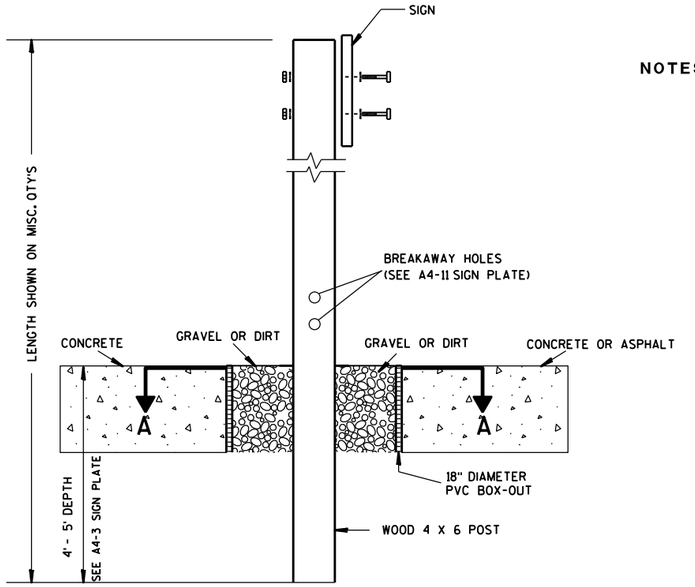
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

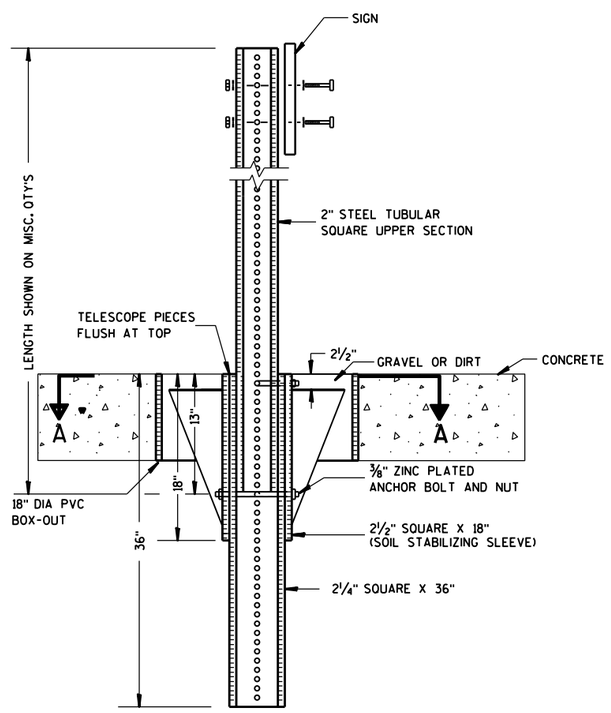
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 88	E



ELEVATION VIEW

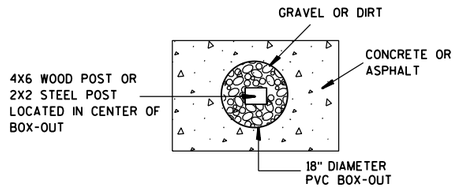
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

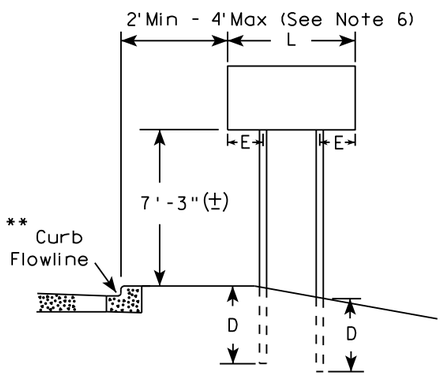
APPROVED Matthew R Rauch
for State Traffic Engineer

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

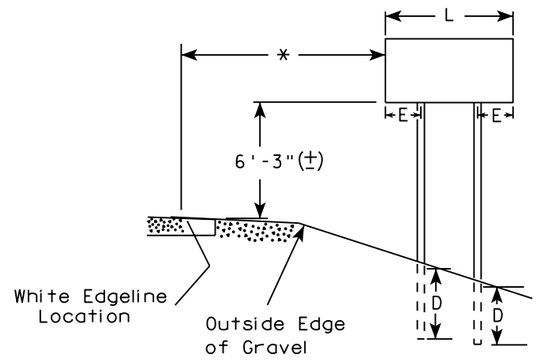
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

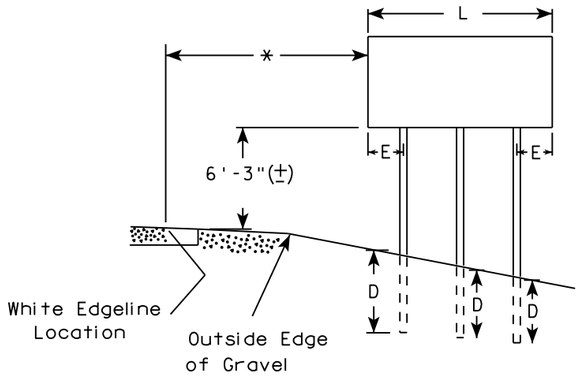
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

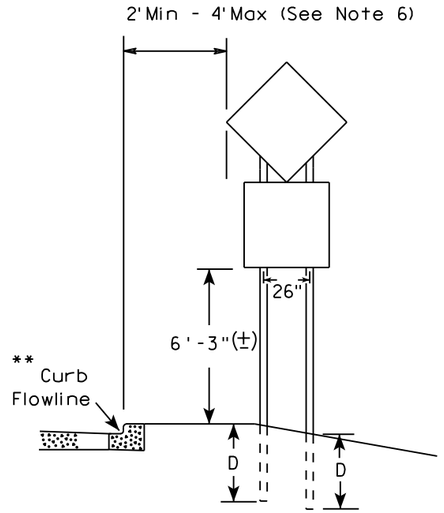
URBAN AREA



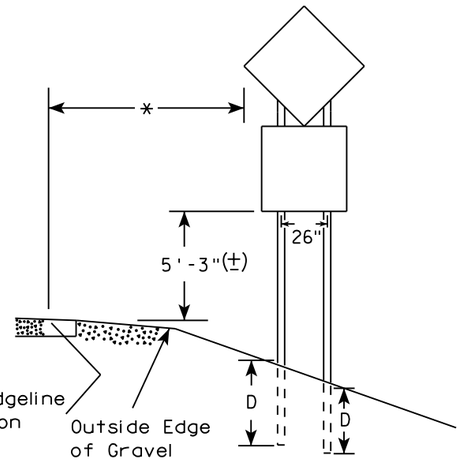
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

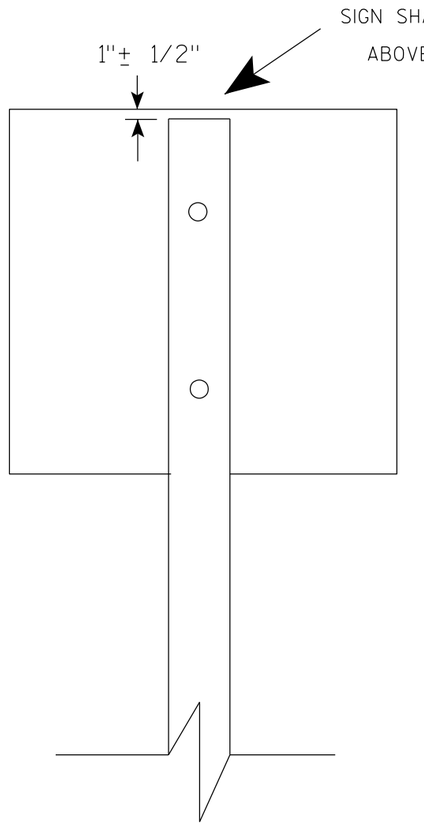
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

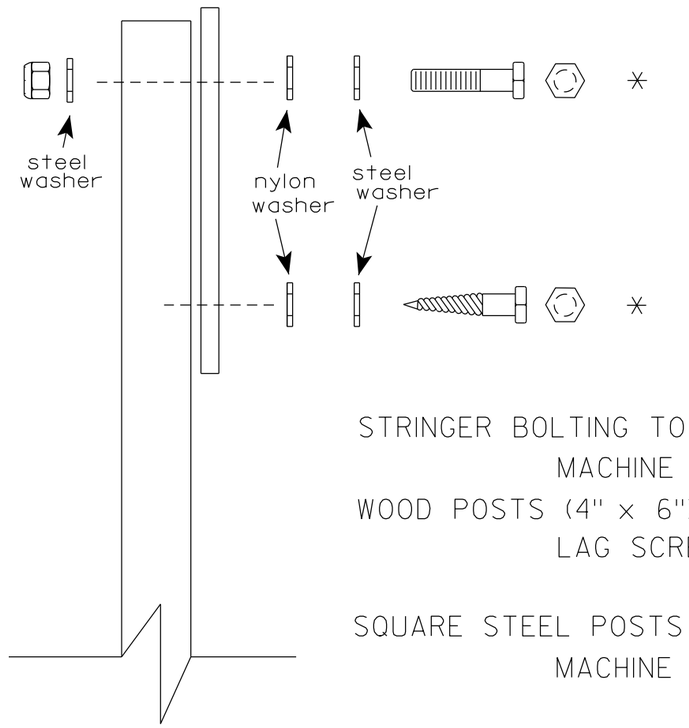
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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





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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

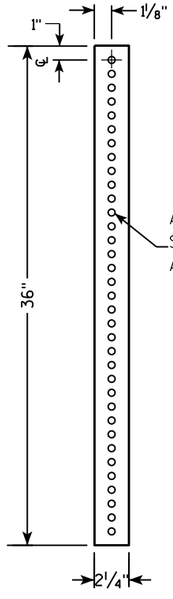
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

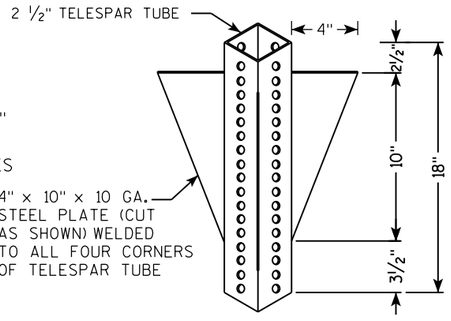
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

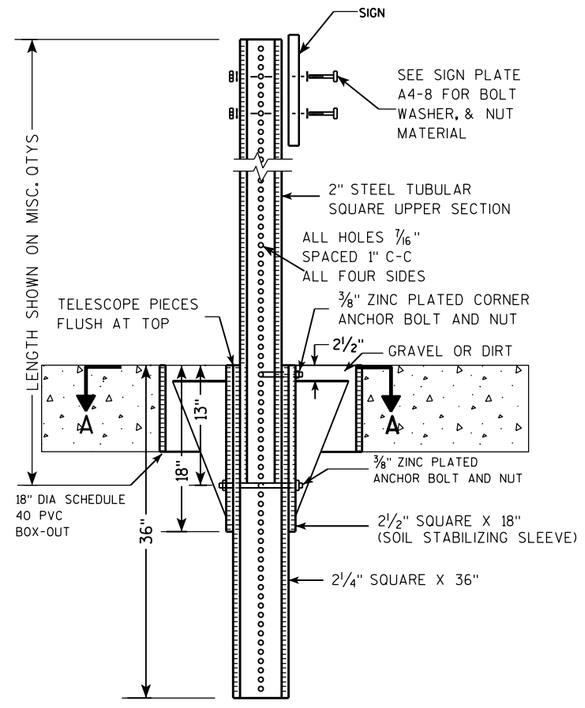
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



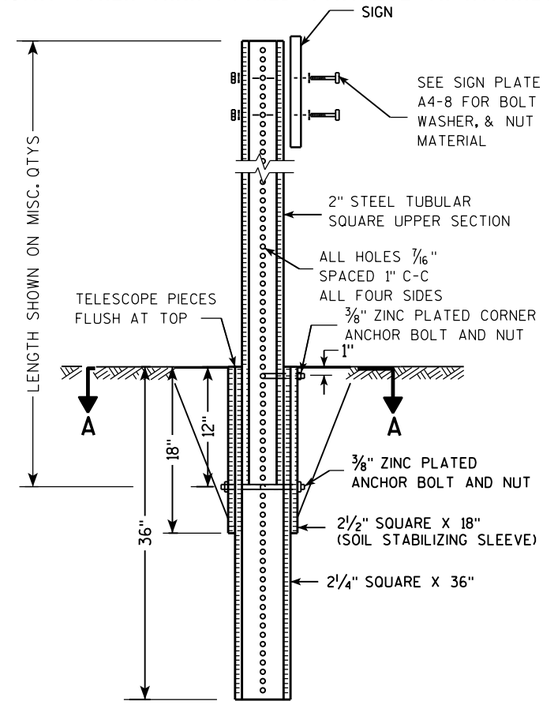
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

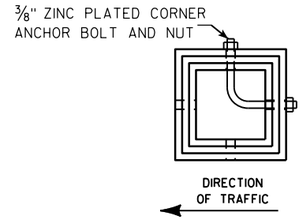


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

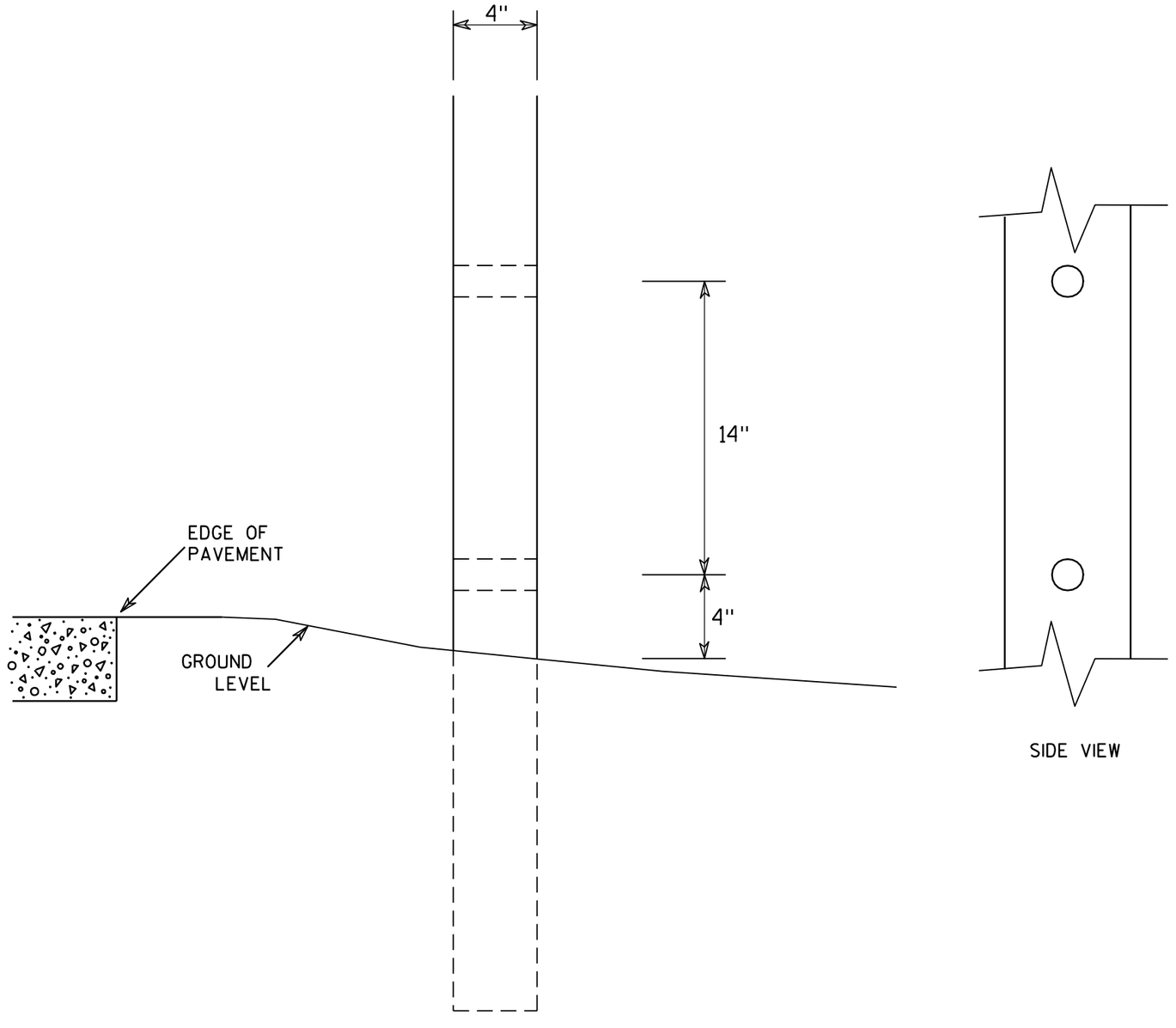
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 92 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

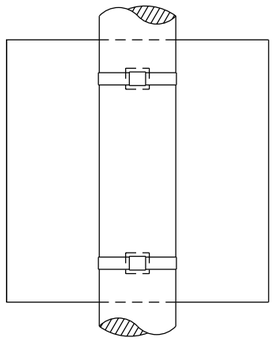
APPROVED Chester J Spang for State Traffic Engineer

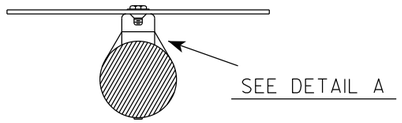
DATE 3/27/97 PLATE NO. A4-11.2

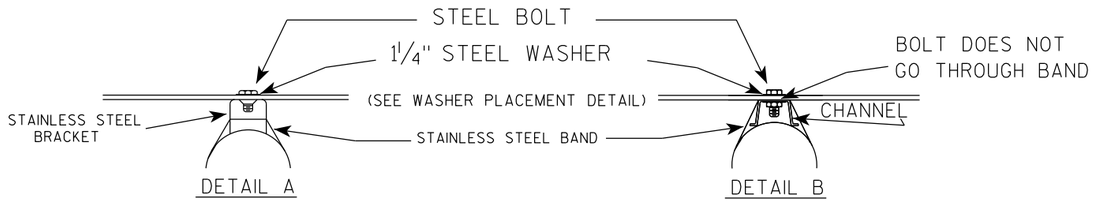
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 93	E

BANDING

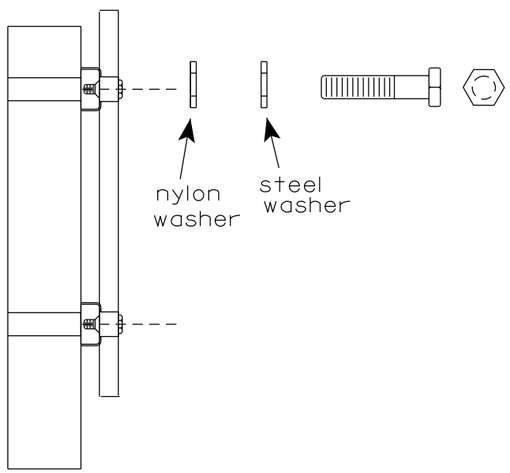
SINGLE SIGN







WASHER PLACEMENT

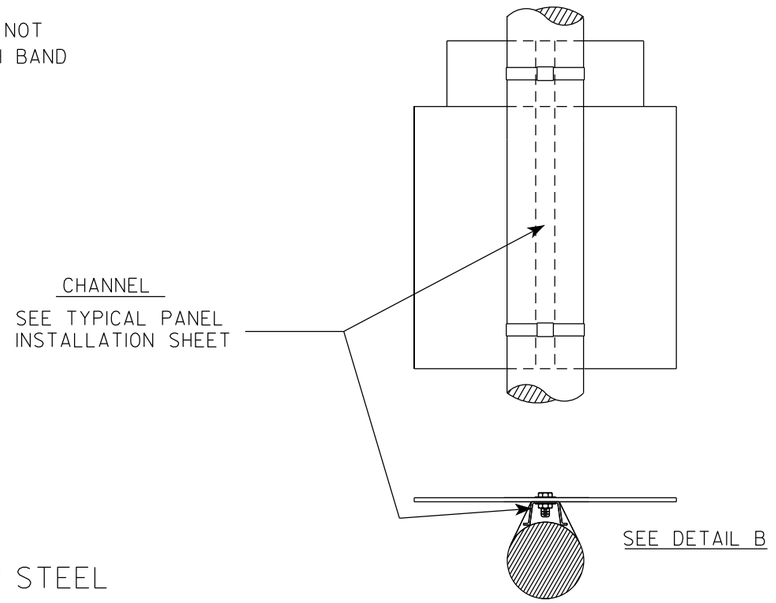


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

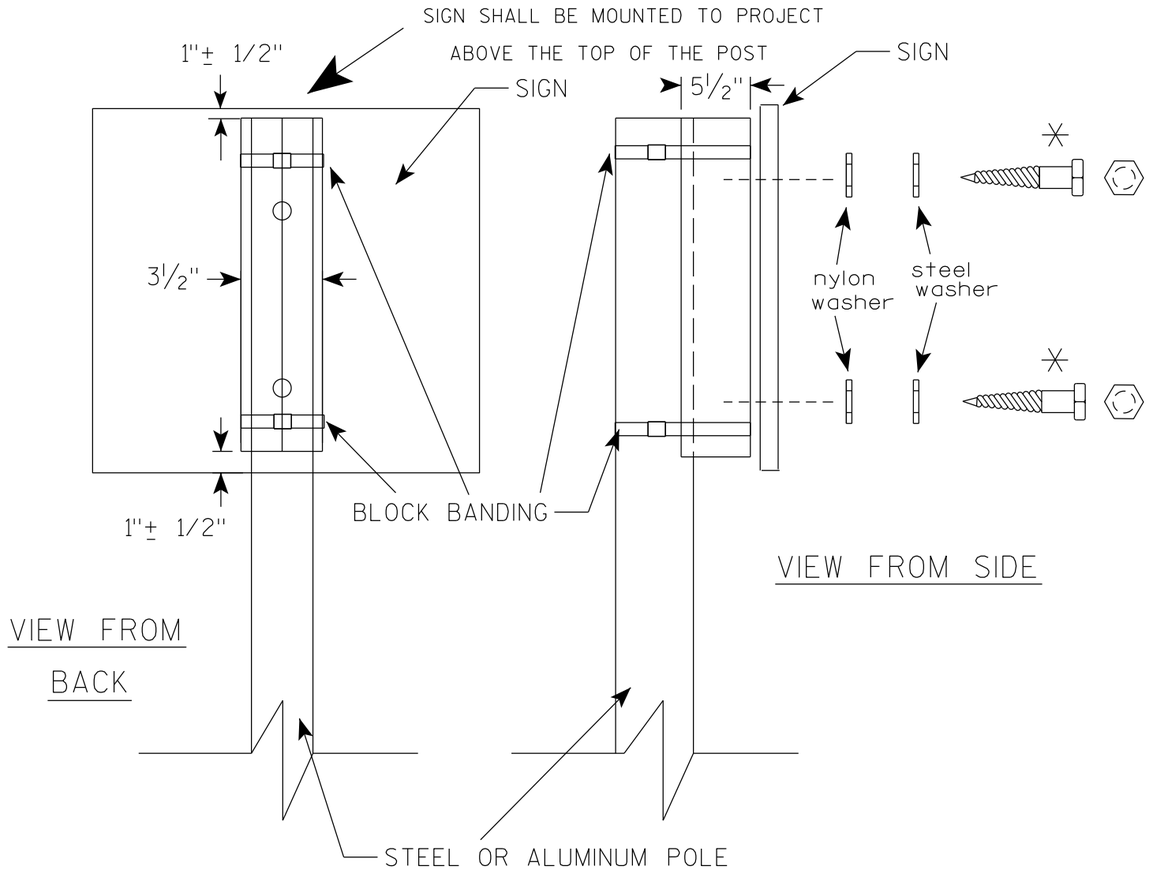
DATE 6/10/19 PLATE NO. A5-9.4

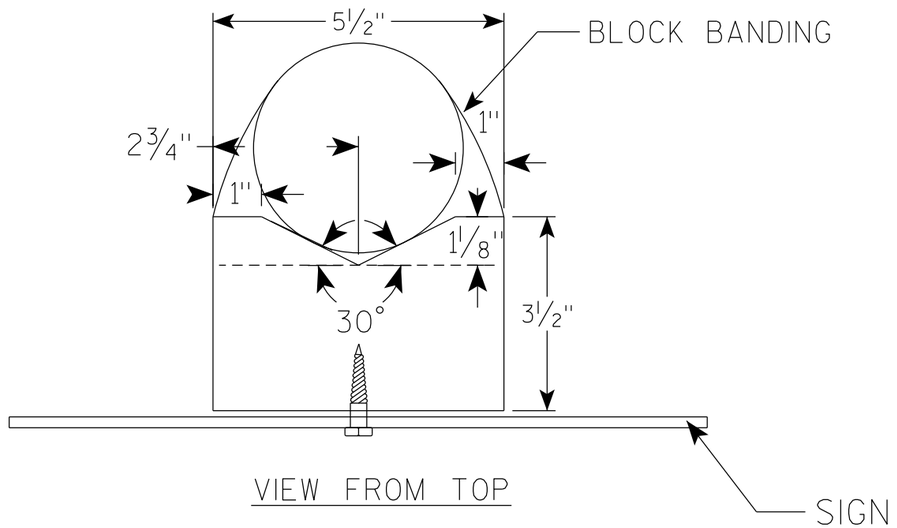
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 94	E

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

7

7





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

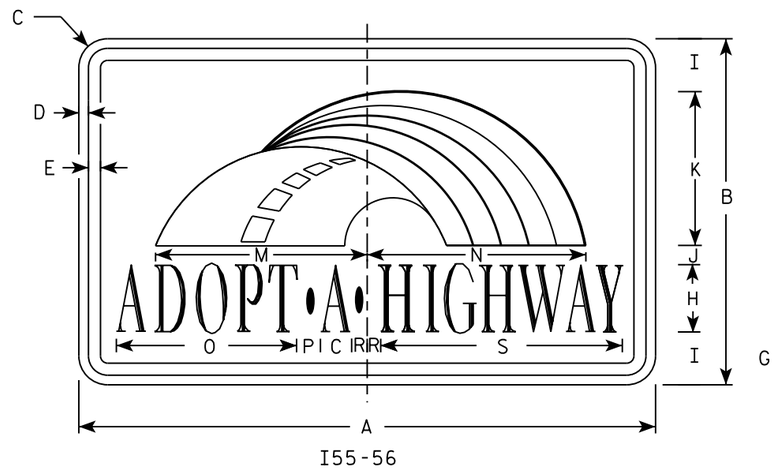
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

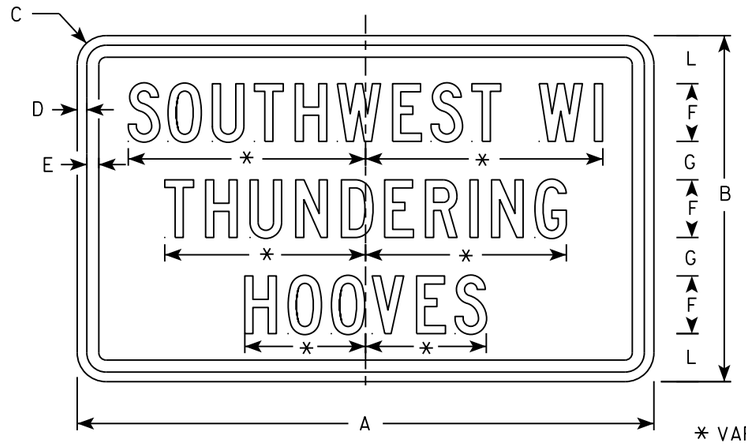
APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:				SHEET NO: 95	E



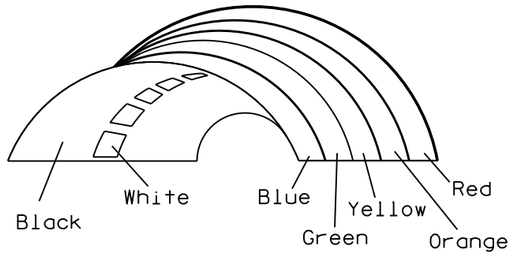
I55-56



I55-56P

* VARIES

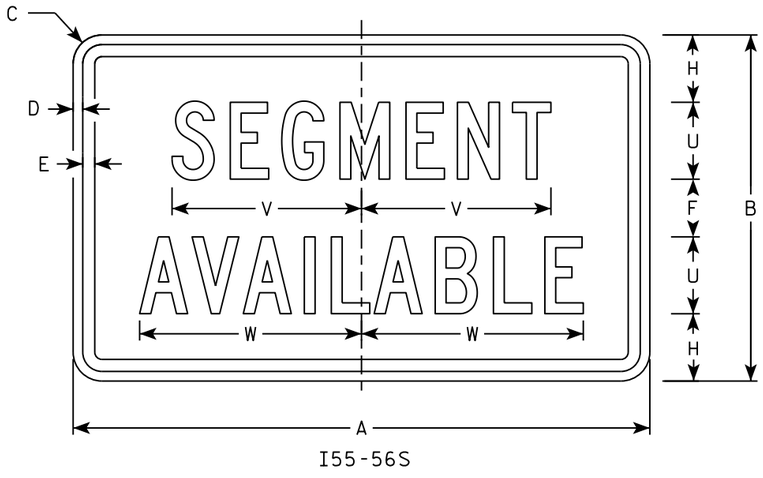
Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue
   Adopt a Highway - Red
   All other Text - Blue
5. Adopt a Highway - Dutch 8011L
   All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.



I55-56S

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	18	1 1/2	1/2	5/8	3	2	3 1/2	2 3/4	1	8	2 1/2	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

STANDARD SIGN
I55-56

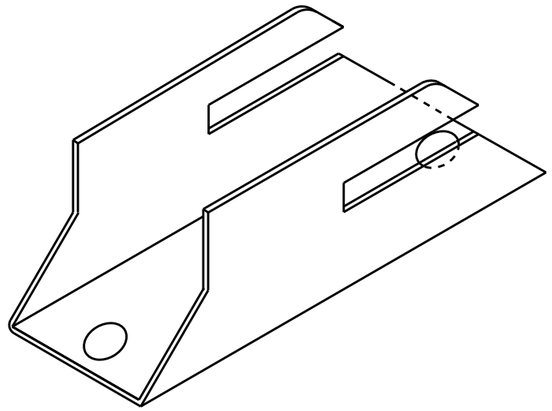
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

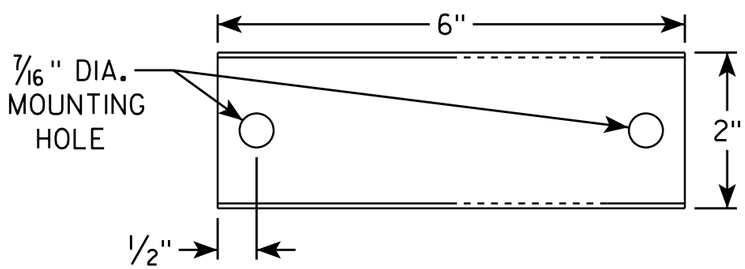
DATE 2/20/18 PLATE NO. I55-56.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 96 | E

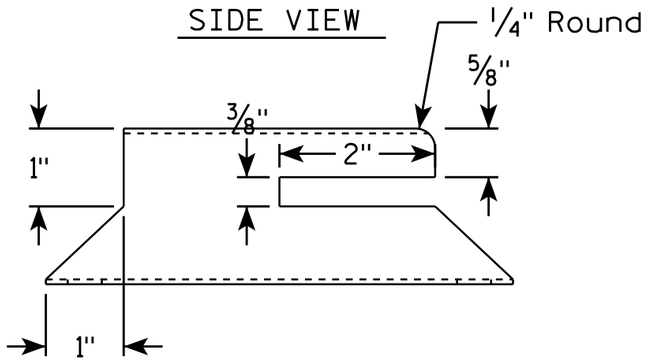
ISOMETRIC VIEW



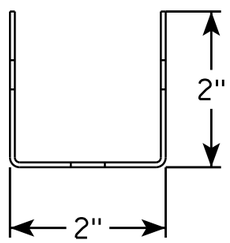
TOP VIEW



SIDE VIEW



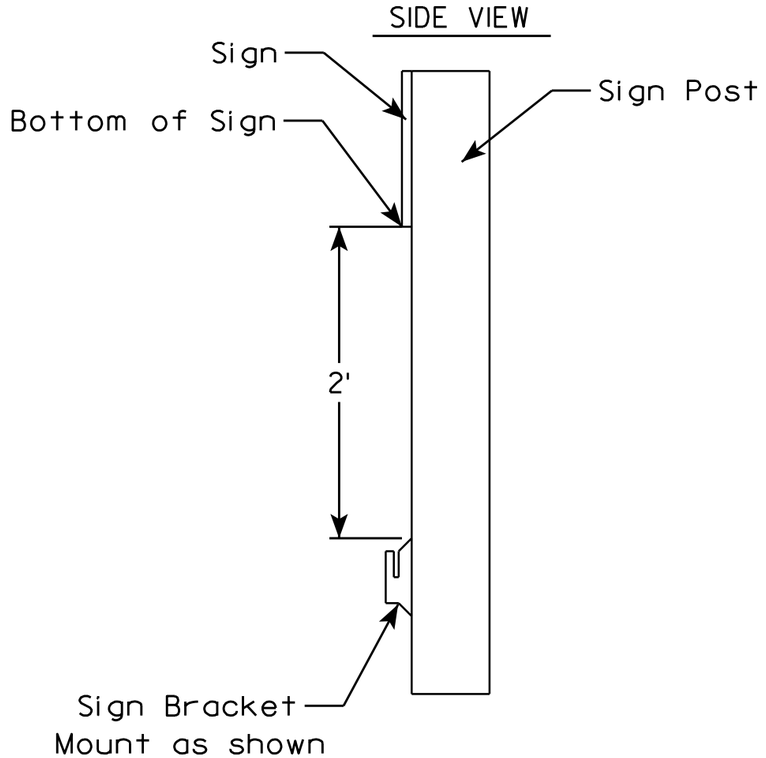
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

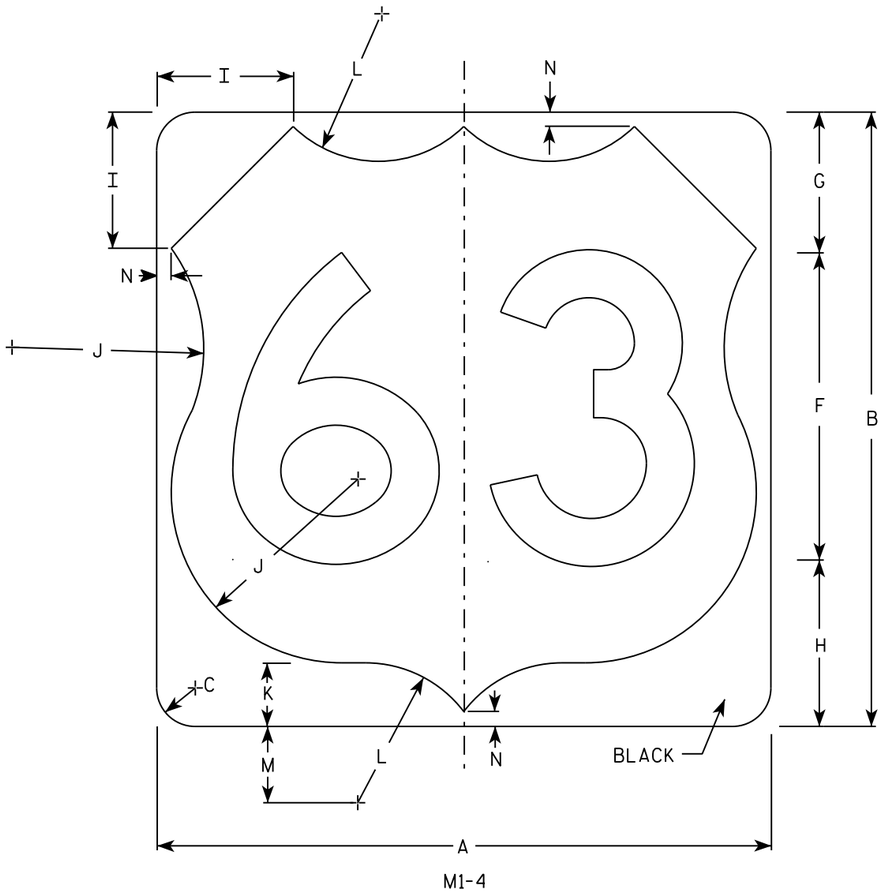
DATE 4/26/16 PLATE I55-56B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

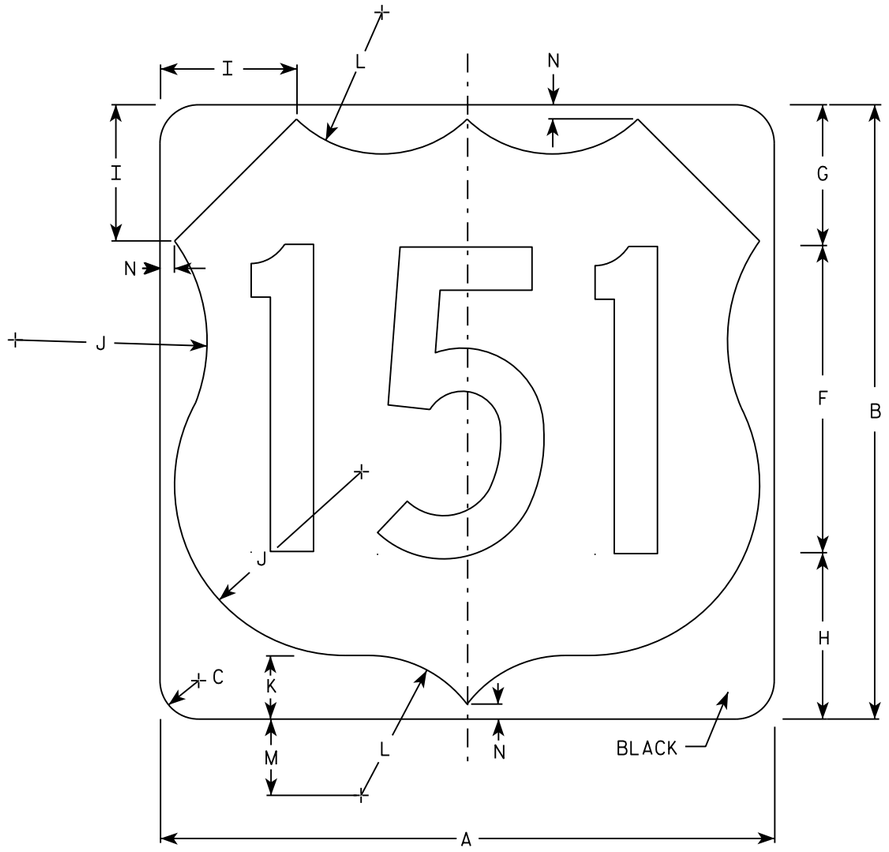
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\I5556B.DGN PLOT DATE : 26-APR-2016 17:29 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.945842:1.000000
WISDOT/CADDS SHEET 42

NOTES

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



M1-4



M1-4

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

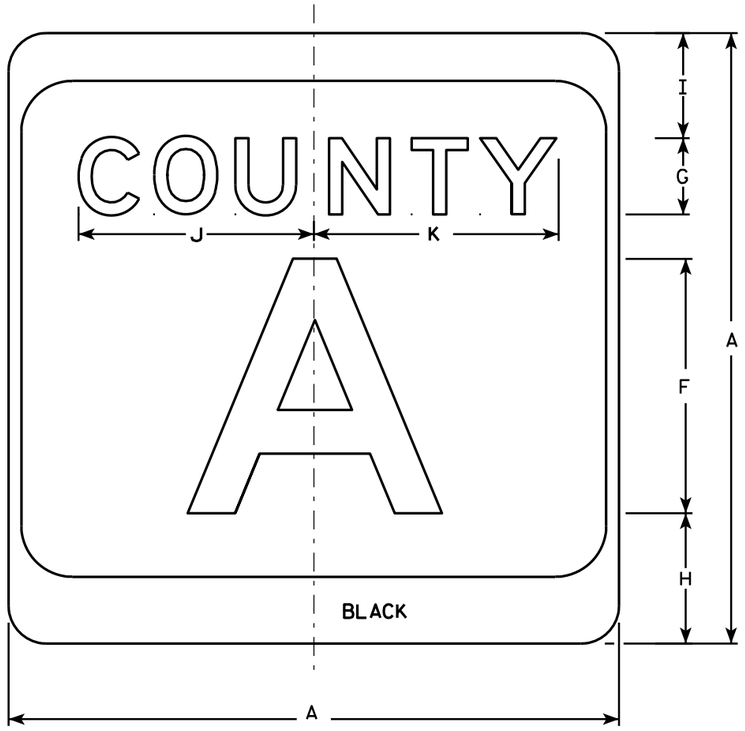
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

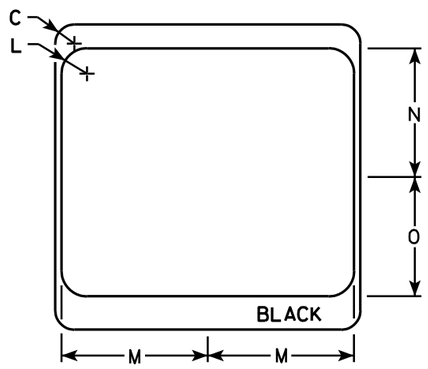
APPROVED Matthew R Rauch
for State Traffic Engineer

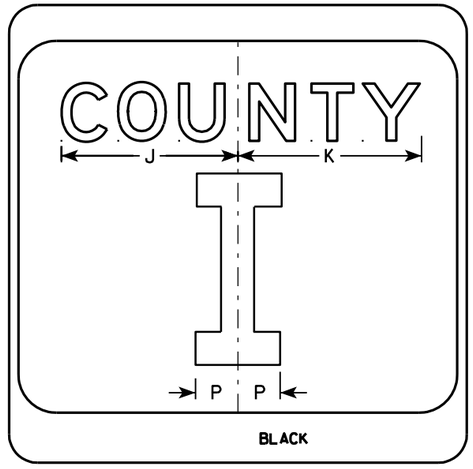
DATE 3/16/18 PLATE NO. M1-4.10

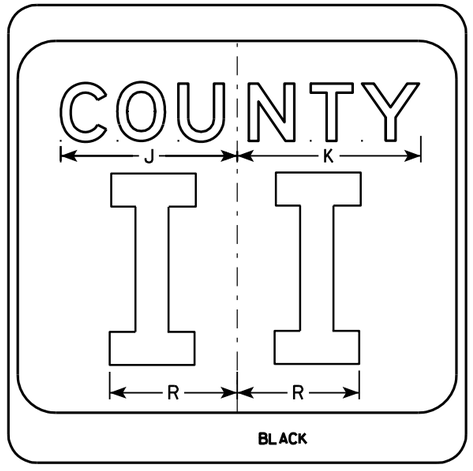
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 98	E



M1-5A







NOTES

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

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

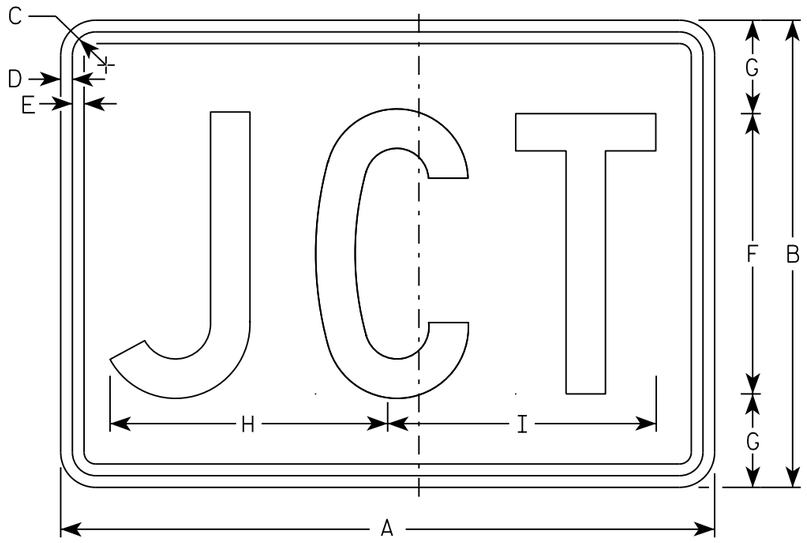
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

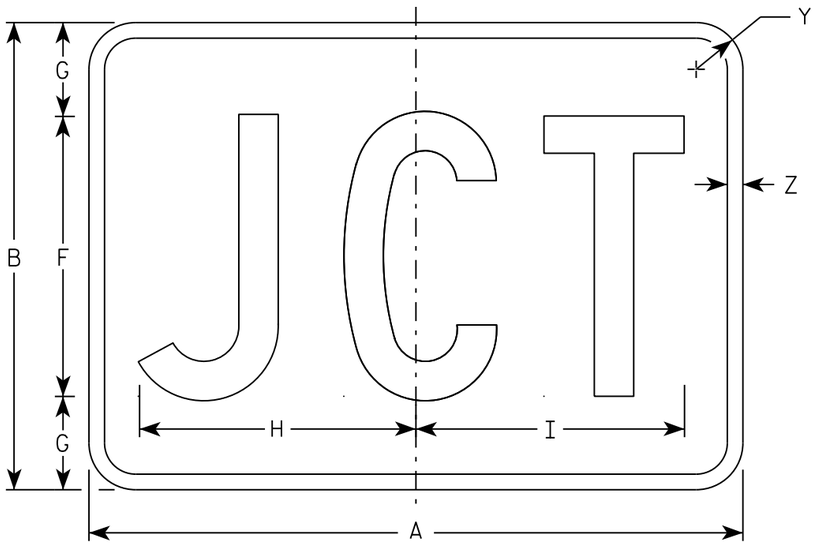
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 99	E



M2-1
MM2-1
MP2-1



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

NOTES

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

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

STANDARD SIGN
M2-1

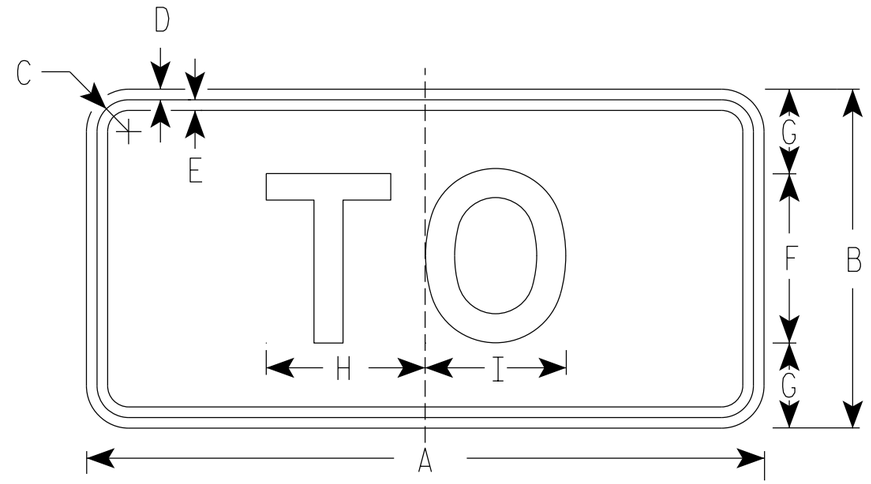
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

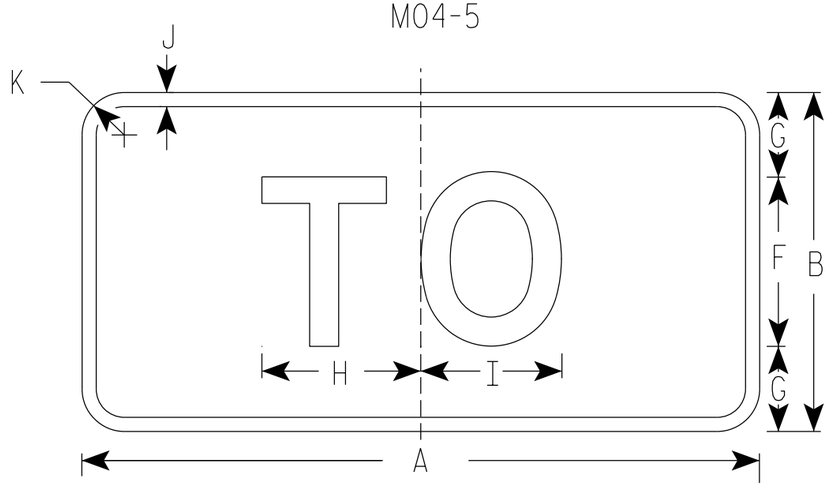
DATE 10/15/15 PLATE 100 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

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

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

   M04-5 Background - Orange Type F Reflective
   Message - Black

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

STANDARD SIGN
M4-5

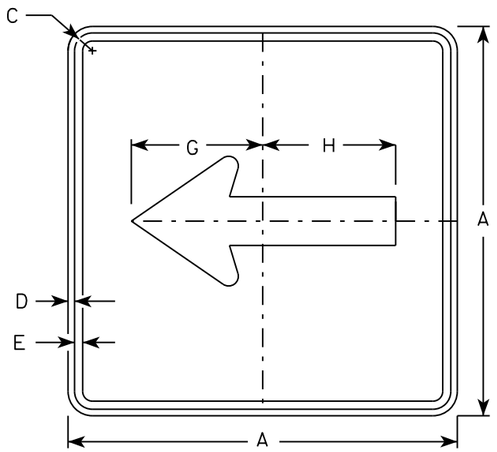
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

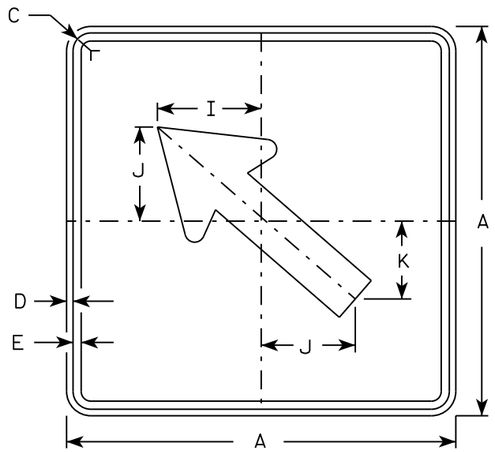
DATE 03/7/19 PLATE NO. M4-5.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 101 | E

7



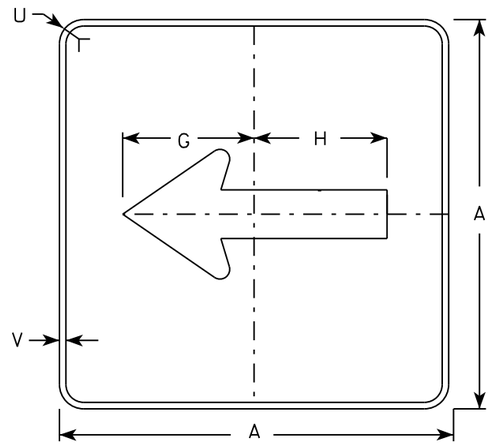
M6-1
MM6-1
MO6-1
MP6-1



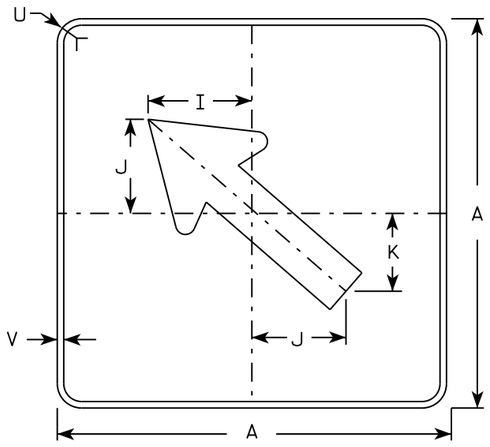
M6-2
MM6-2
MO6-2
MP6-2

NOTES

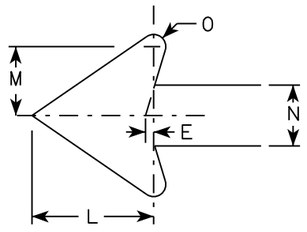
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background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



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



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



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

STANDARD SIGN
M6-1 & M6-2
SERIES

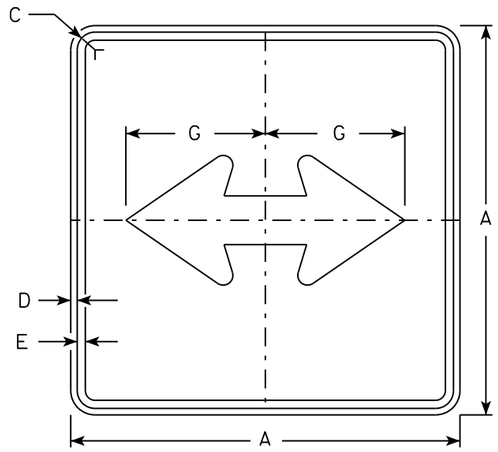
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

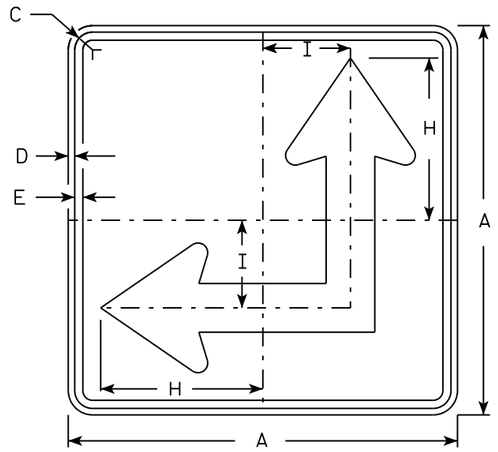
DATE 10/15/15 PLATE 102 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



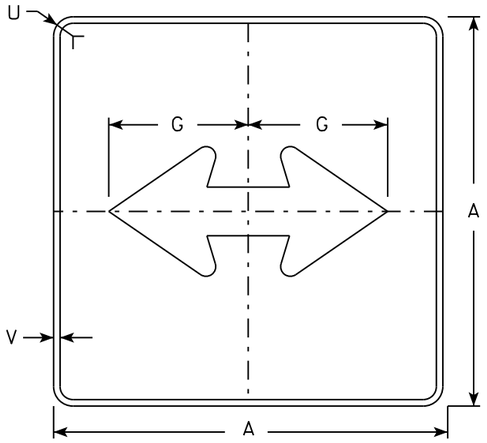
M6-4
MM6-4
MO6-4
MP6-4



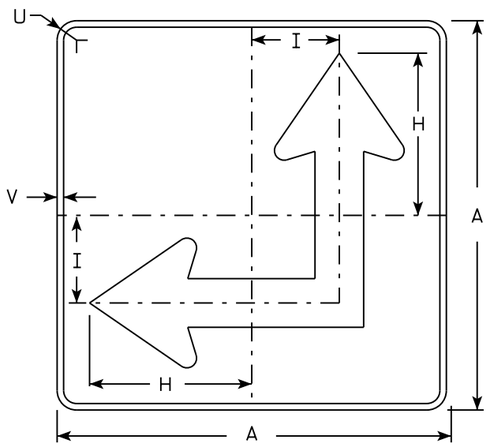
M6-6
MM6-6
MO6-6
MP6-6

NOTES

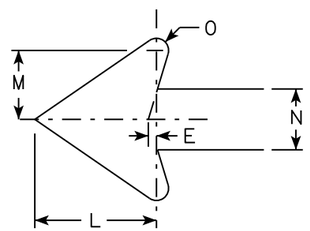
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

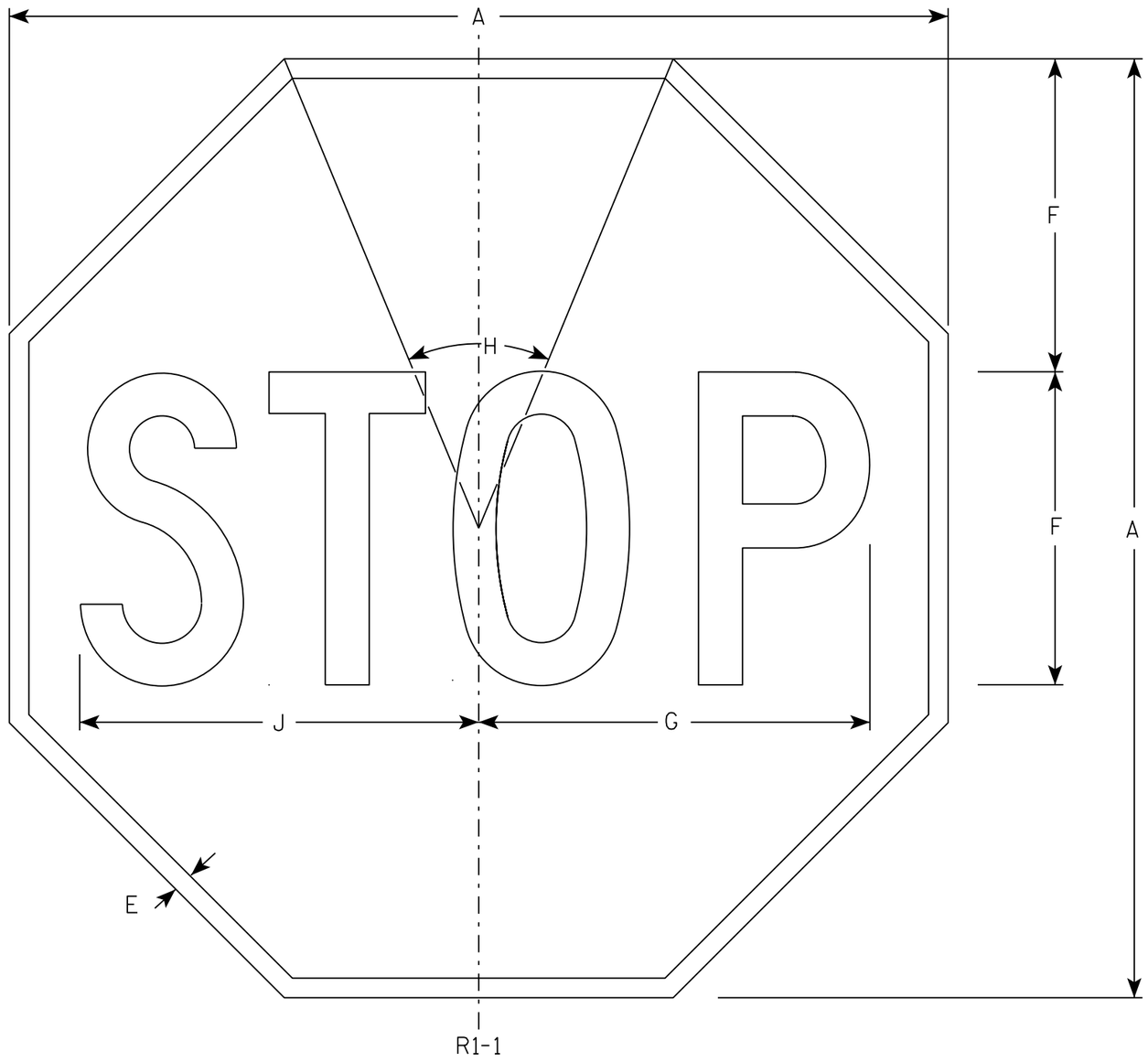
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/15/15 PLATE 103 M6-4.10

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

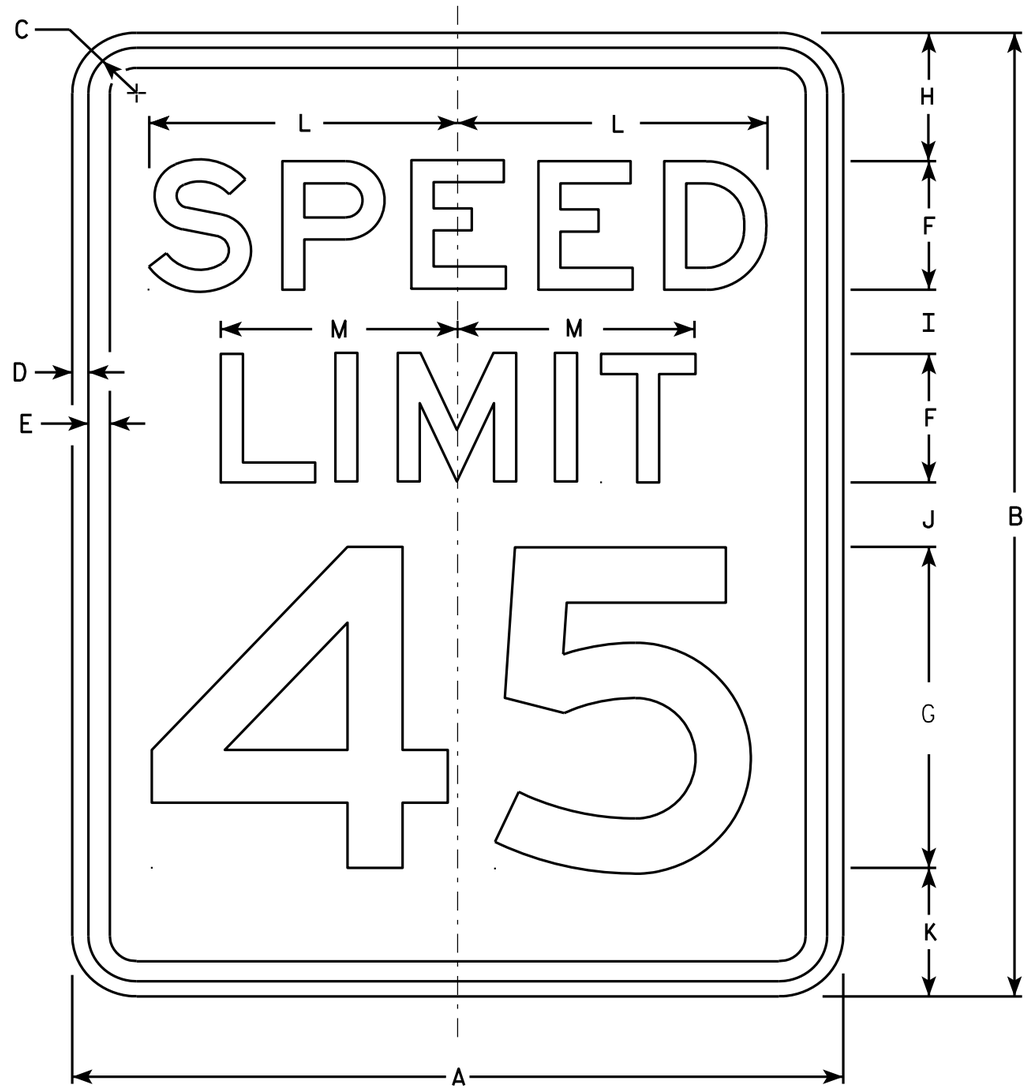
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 104	E



R2-1

NOTES

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

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

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

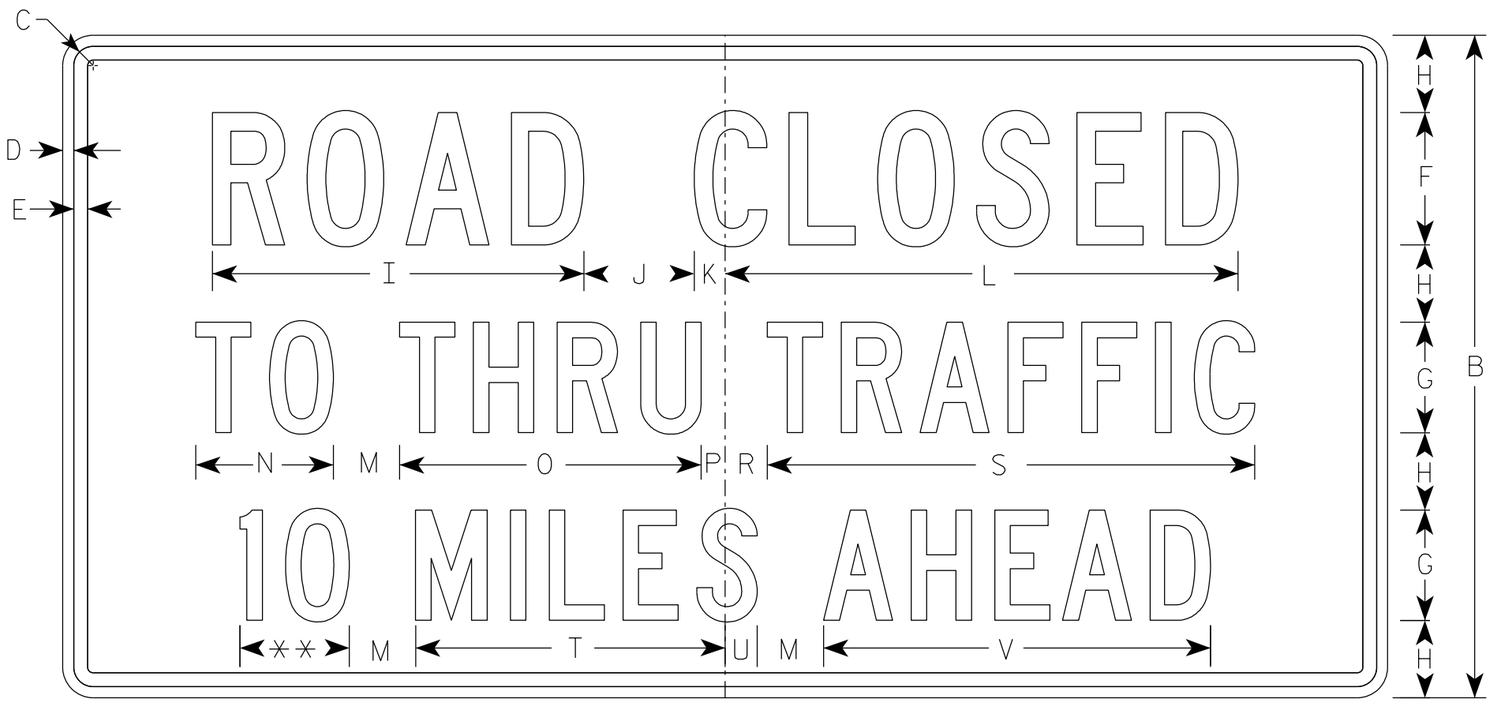
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 105	E

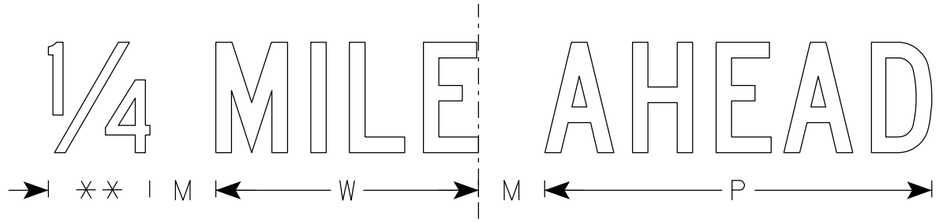
NOTES

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



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/4	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

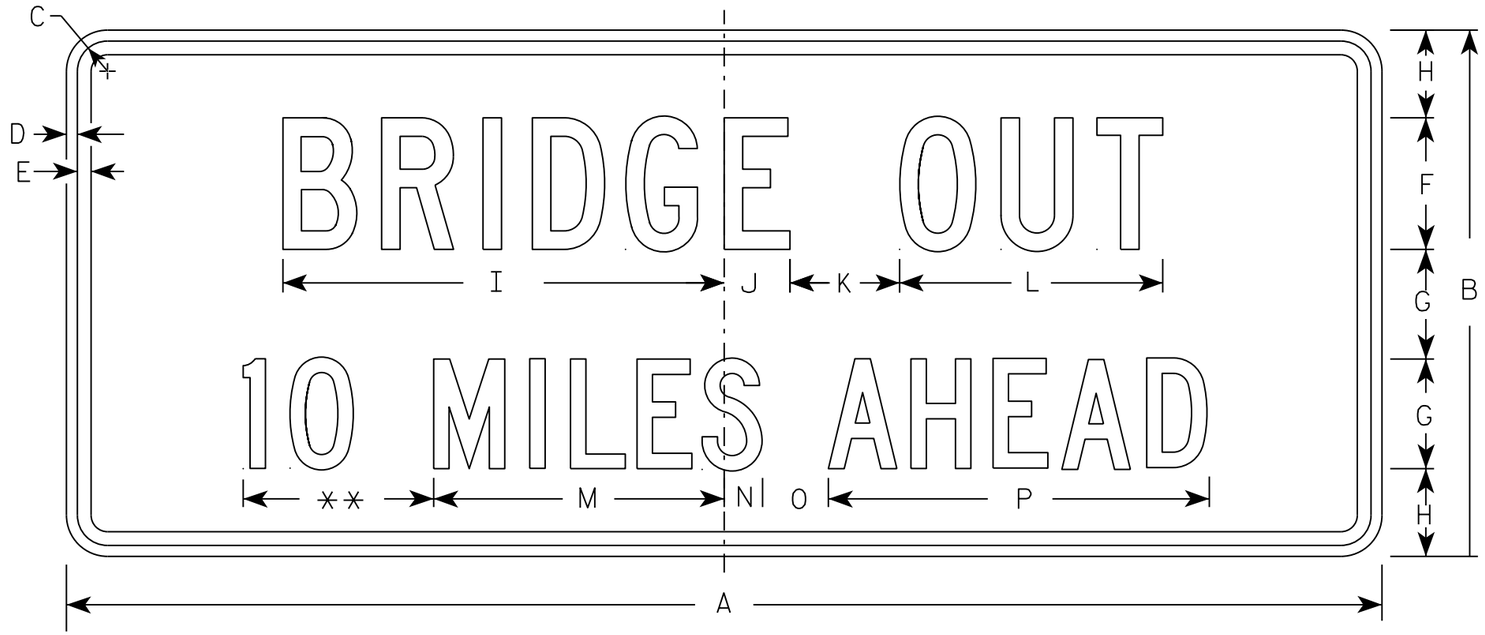
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 6/14/2021 PLATE NO. R11-3.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 106	E

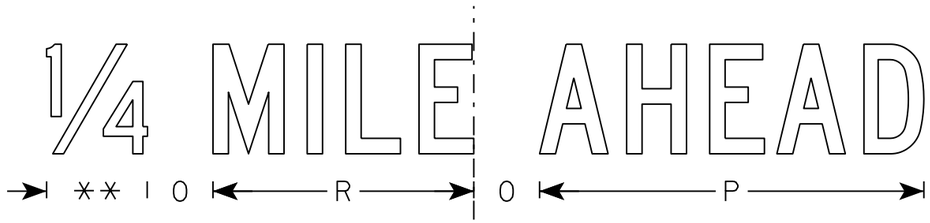
NOTES

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



R11-3C

** See Note 5



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

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 107 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R113C.DGN PLOT DATE : 15-MAR-2017 15:33 PLOT BY : $$...plotuser...$$

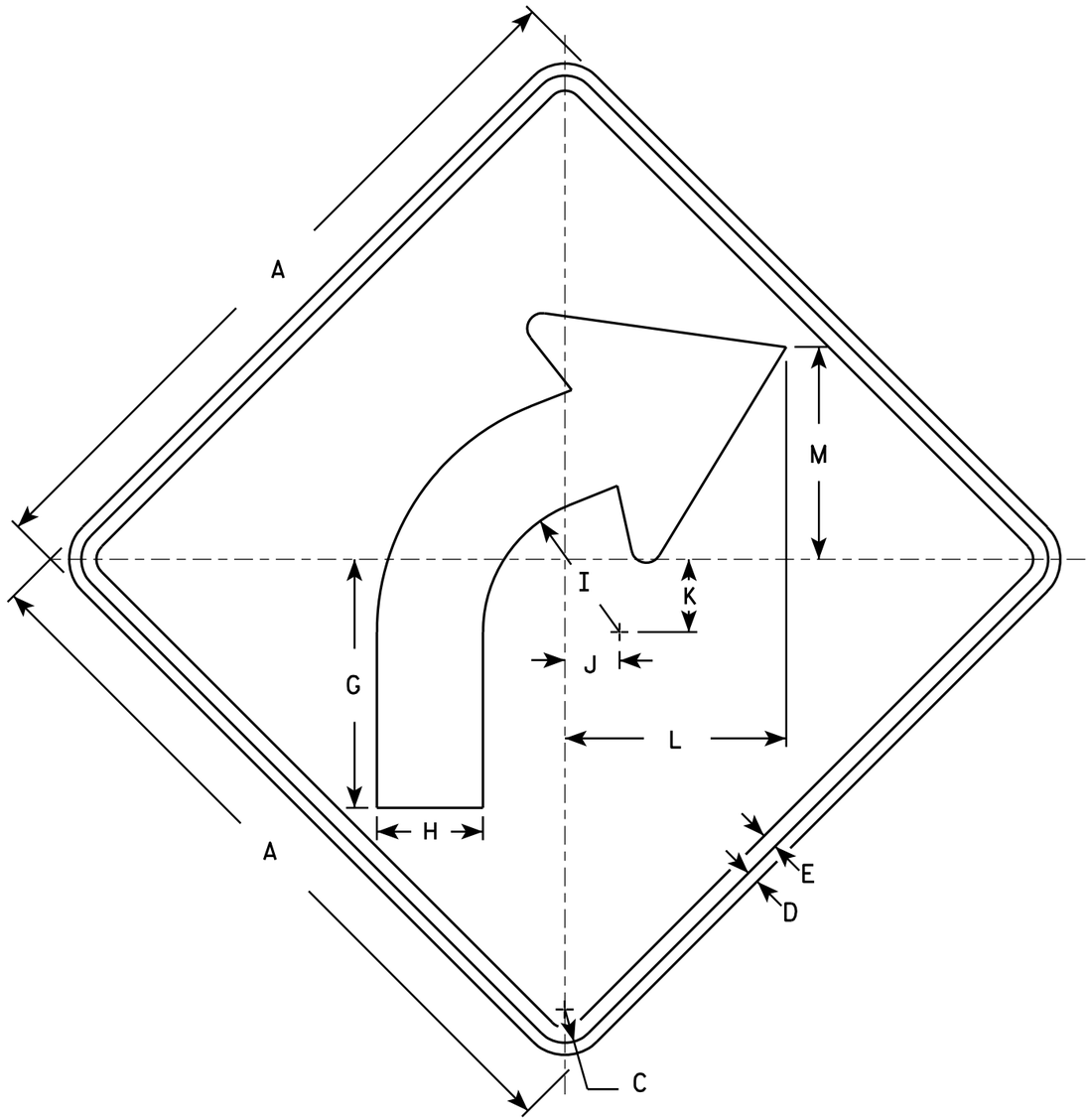
WISDOT/CADDS SHEET 42

7

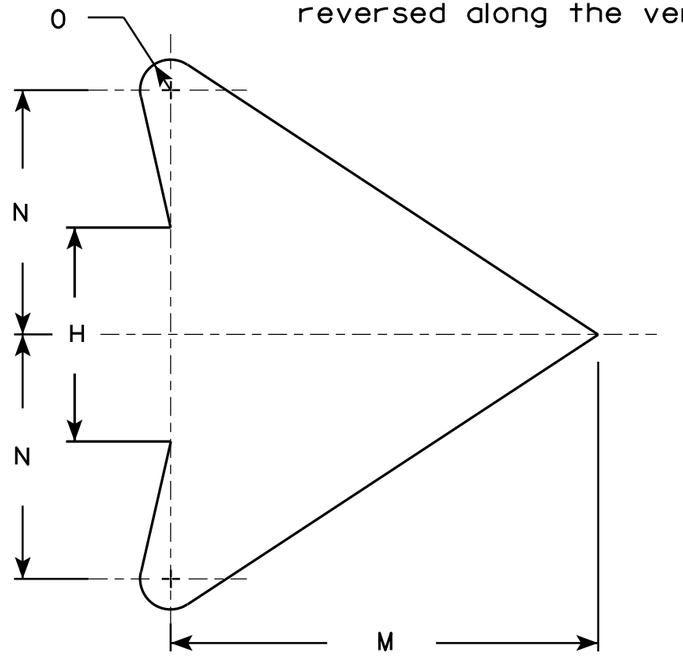
7

NOTES

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



W1-2R



ARROW DETAIL

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

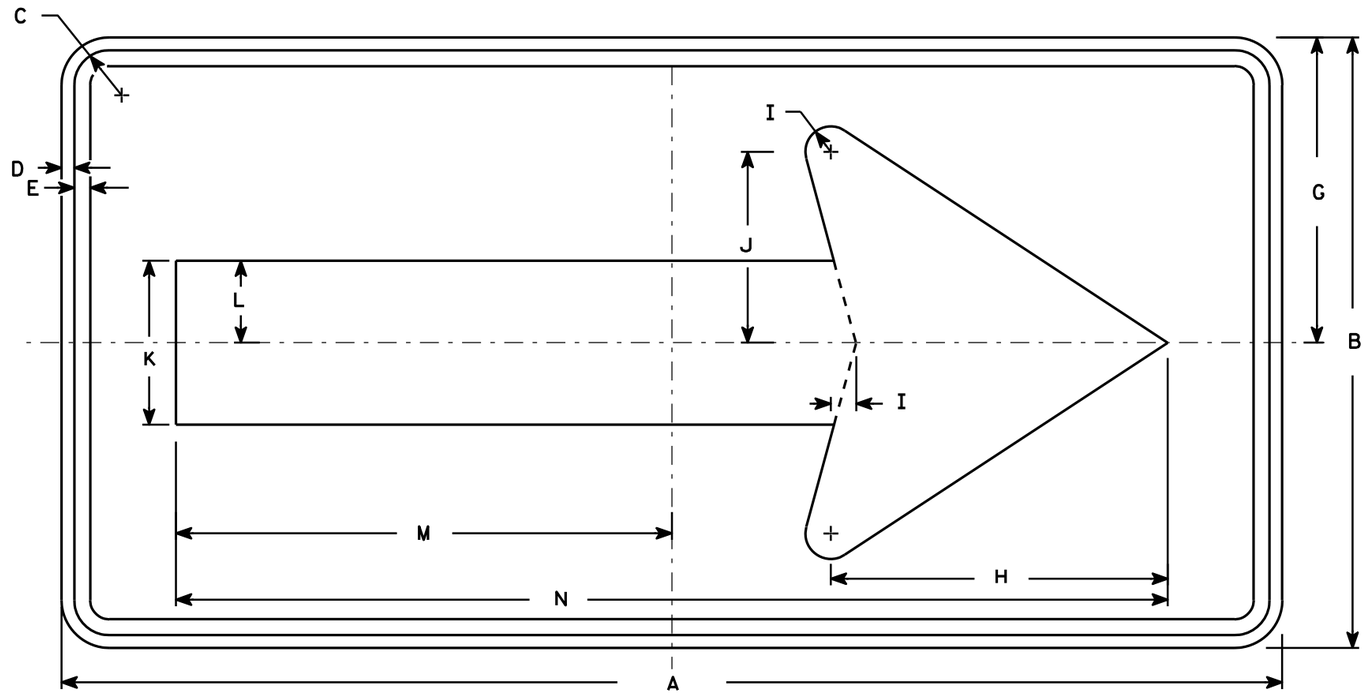
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E



W1-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

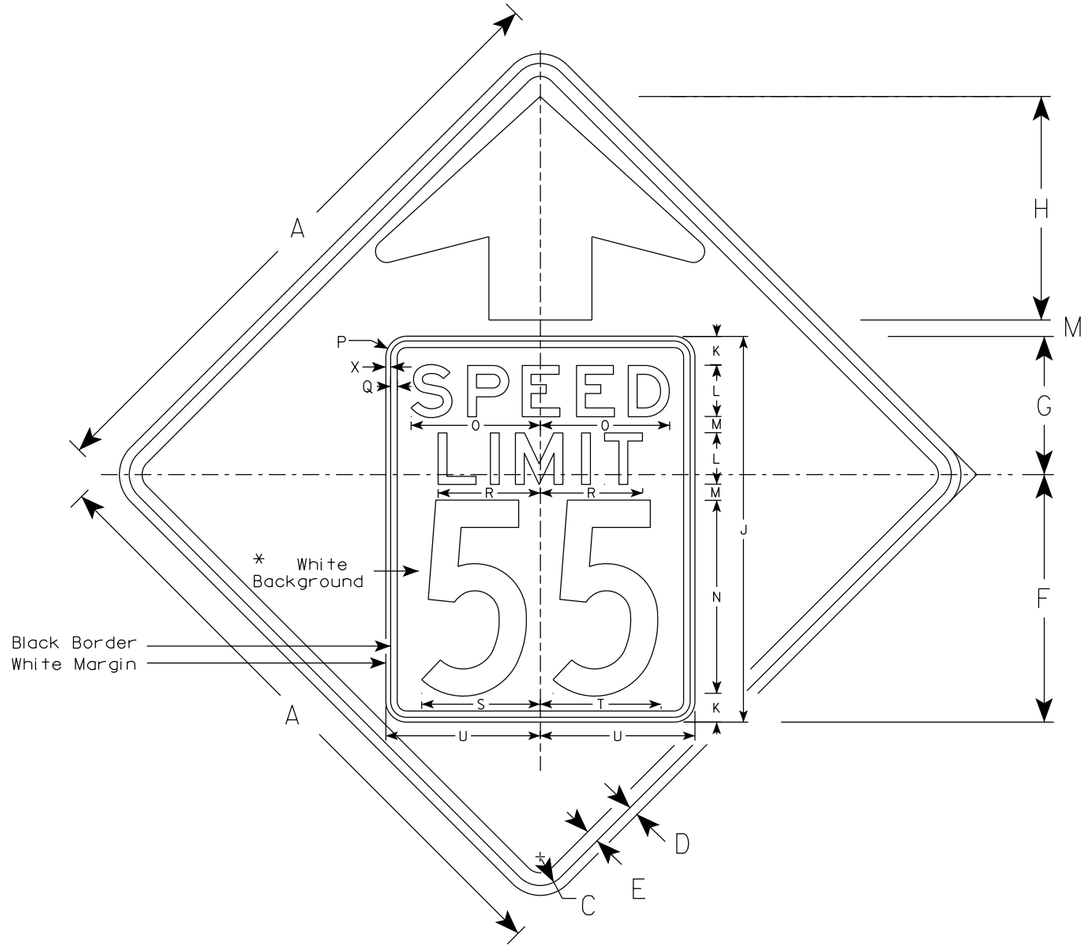
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 109

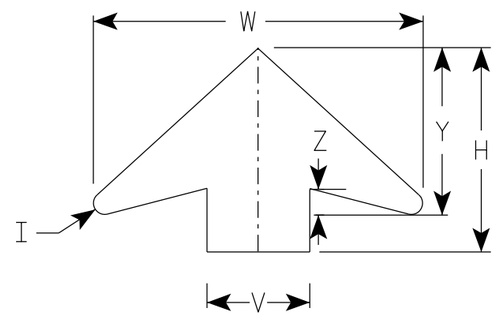


W3-5

NOTES

1. Sign is Type II - See Note 2 for Sheeting Type
2. Color: *
   Background - Yellow* (Type F Reflective)
   Message - Black
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background with black message (Type SH Reflective)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

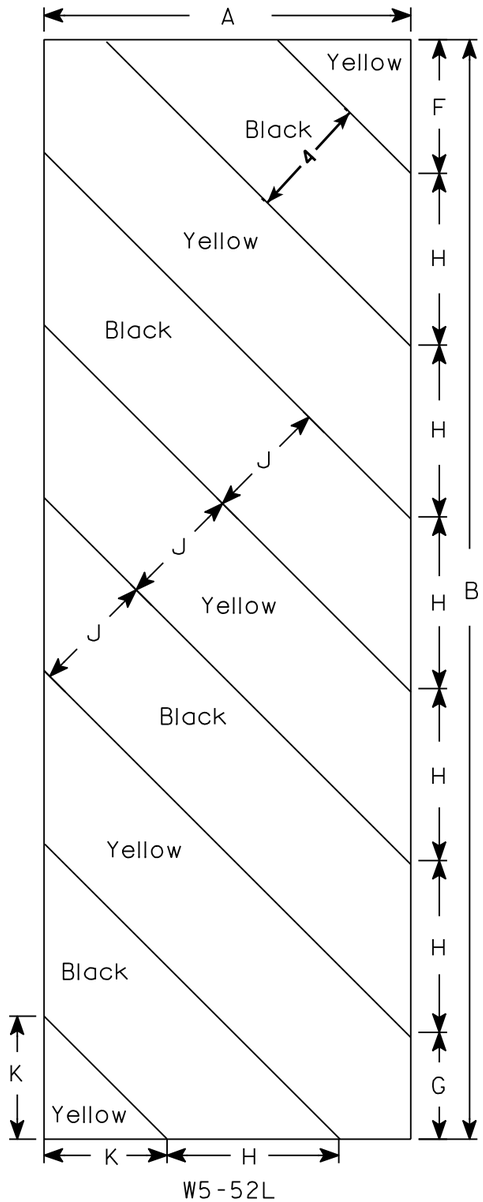
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

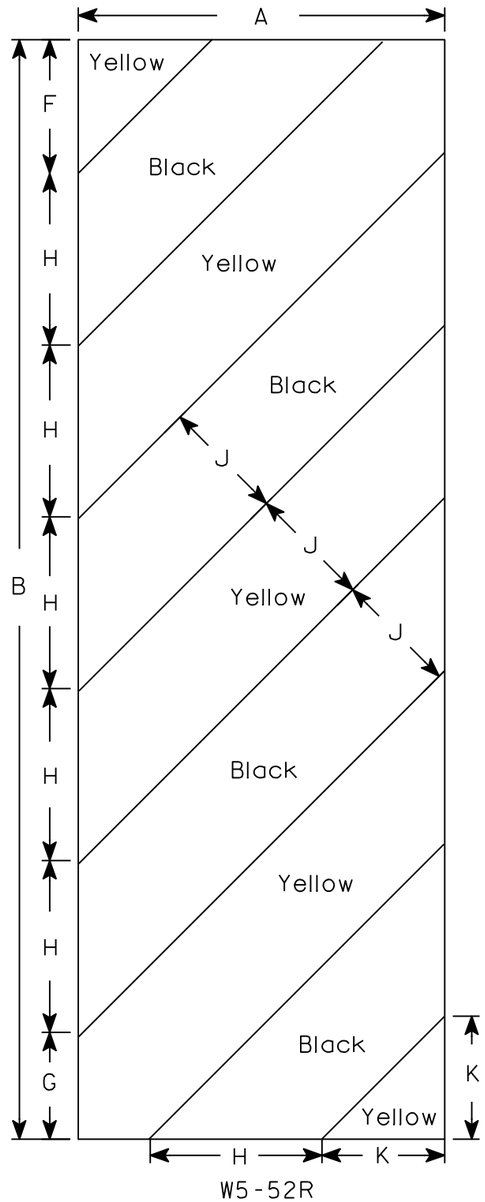
DATE 7/27/2020 PLATE NO. W3-5.6

PROJECT NO:

SHEET NO: 110 E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

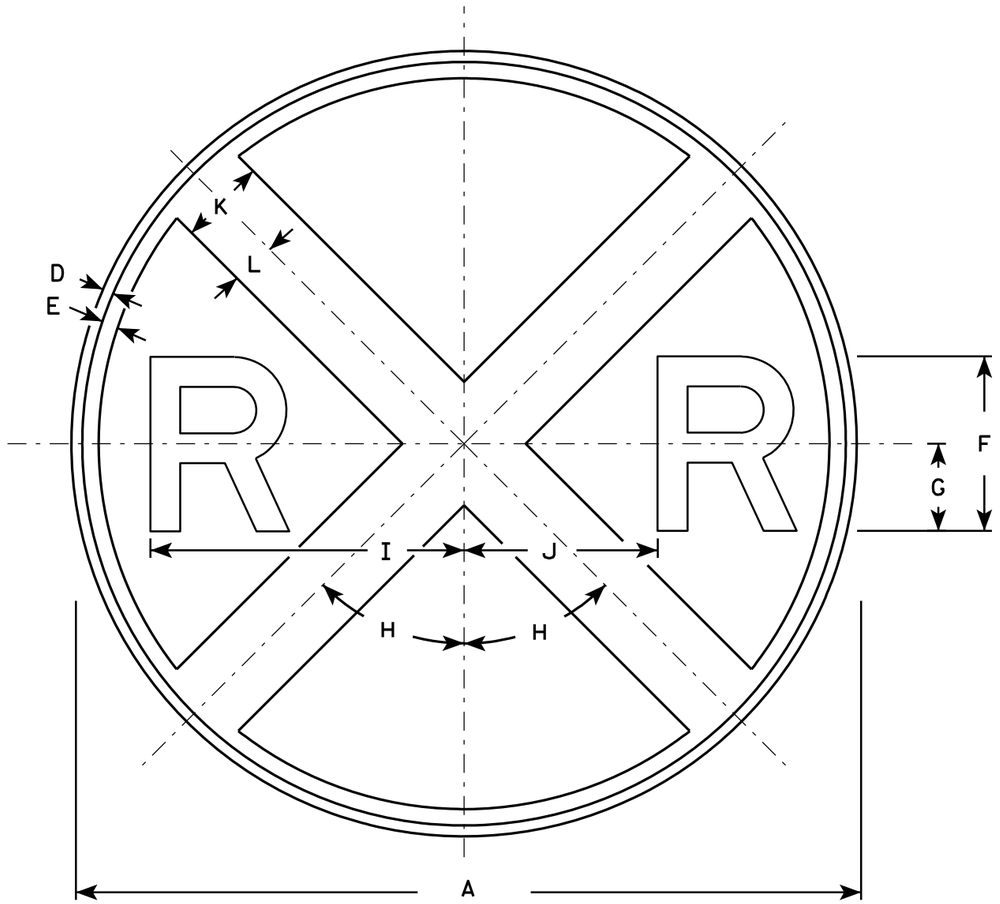
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 111 | E



W10-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30			3/8	5/8	7	3 1/2	45°	12 3/8	7 1/8	3	1 1/2															4.91
2S	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
2M	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
3																											
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57
5																											

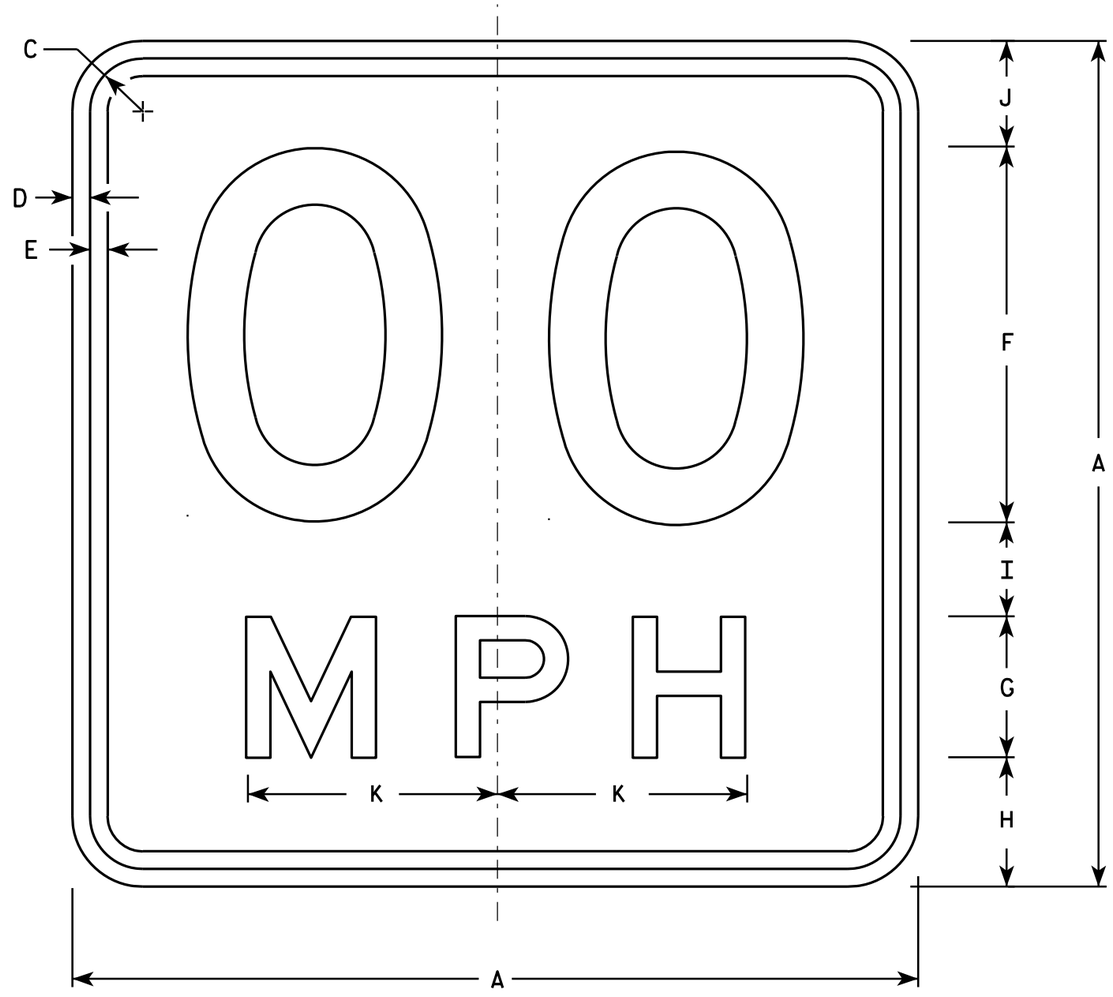
STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 112	E



W13-1

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

NOTES

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

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

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

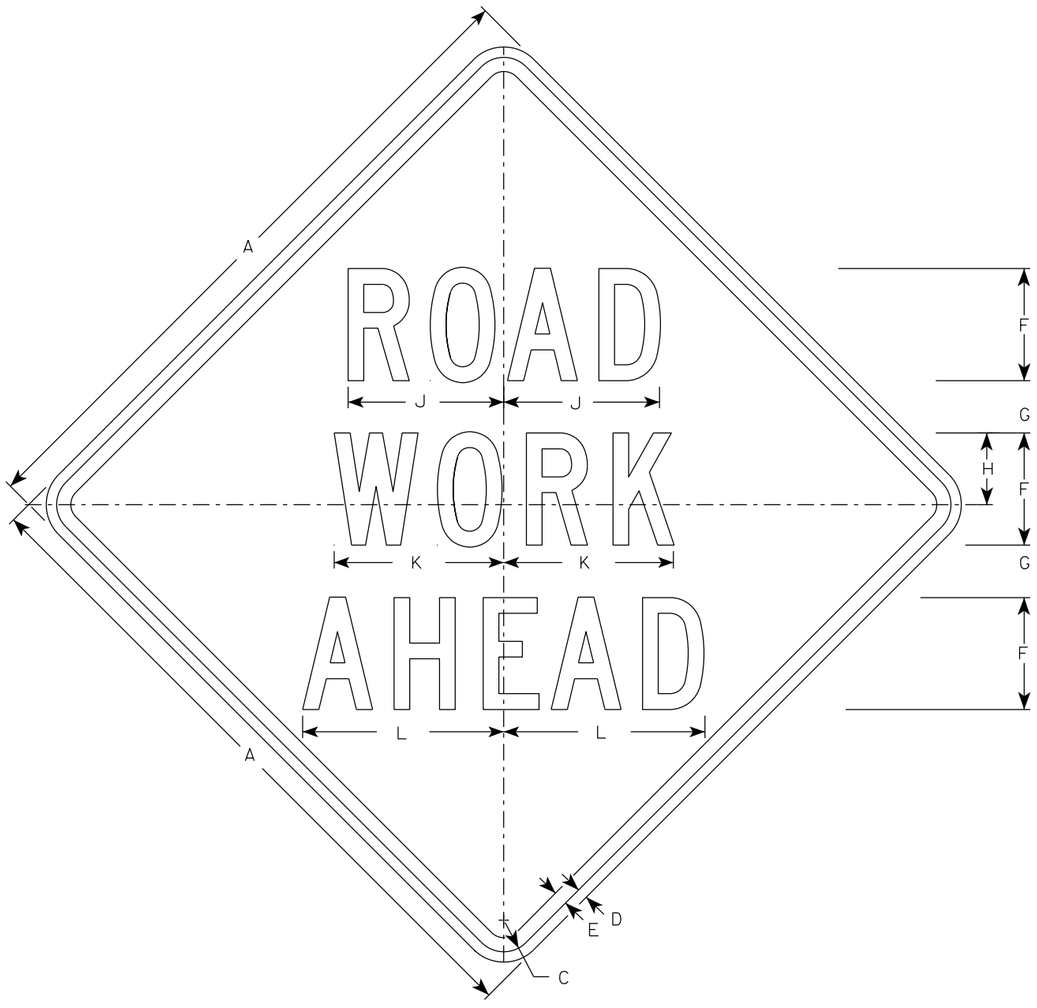
APPROVED Matthew R Rauch
for State Traffic Engineer

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

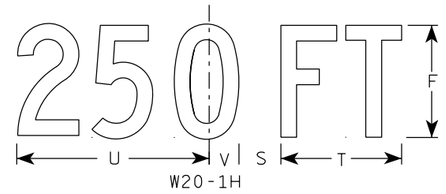
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 113 | E

NOTES

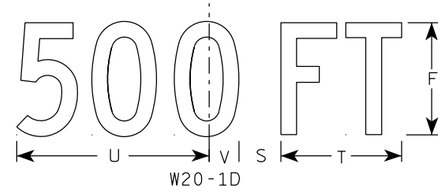
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A

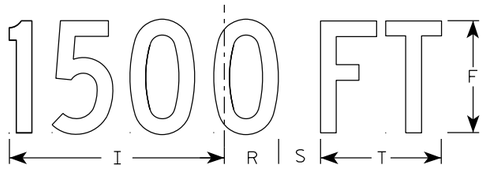


W20-1H

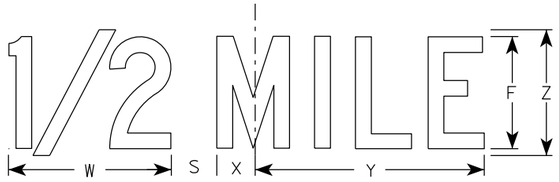


W20-1D

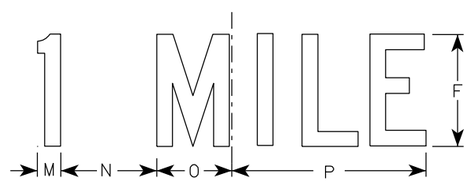
W20-1C



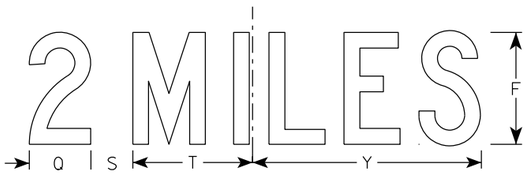
W20-1B



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

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

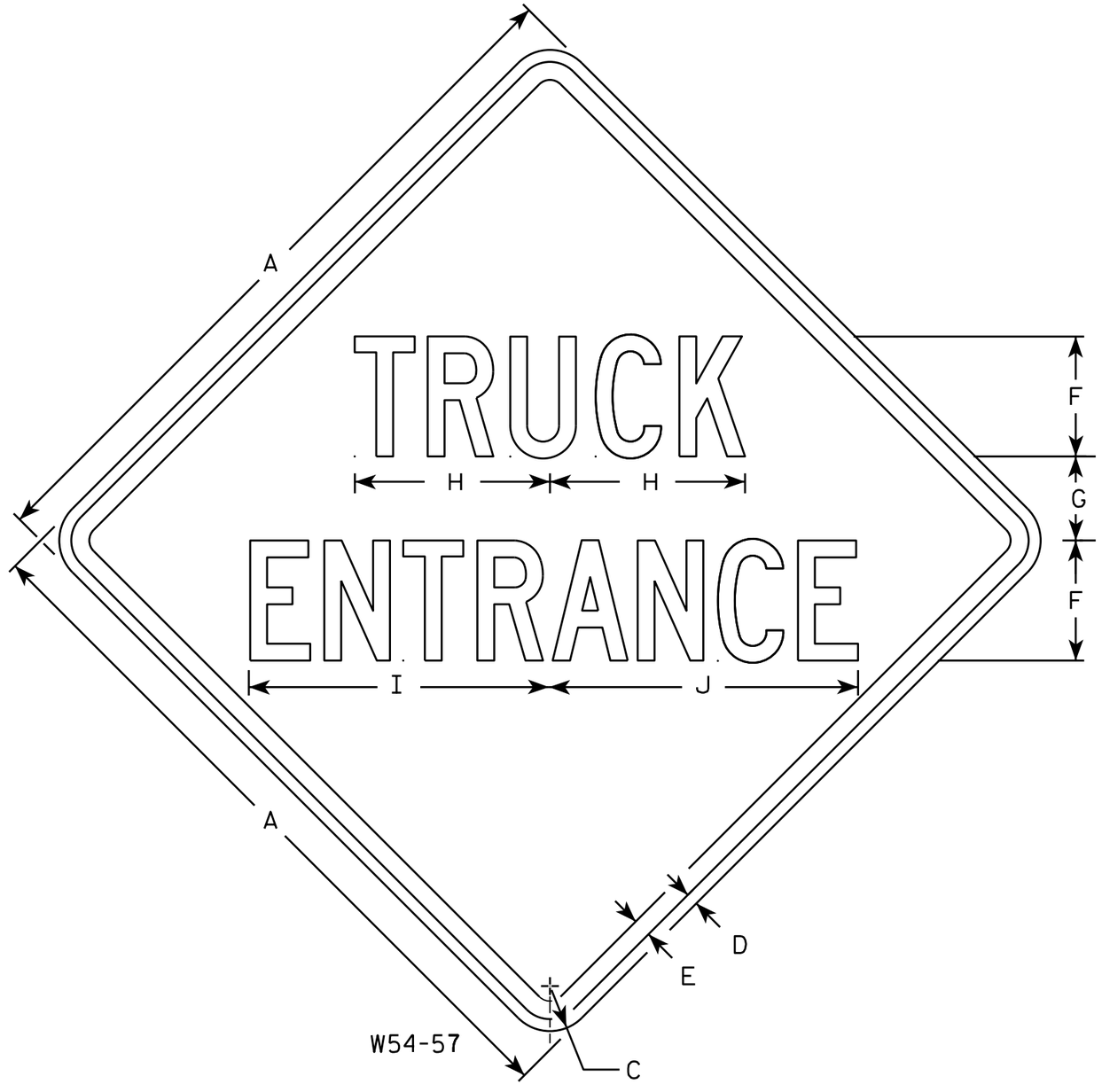
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

SHEET NO: E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 3/8	1/2	5/8	5	3 1/2	8 1/8	12 1/2	12 7/8																	6.25
2M	36		1 5/8	5/8	3/4	6	4 1/4	9 5/8	15	15 3/8																	9.00
3	36		1 5/8	5/8	3/4	6	4 1/4	9 5/8	15	15 3/8																	9.00
4	48		2 1/4	3/4	1	8	5 1/2	13	20	20 5/8																	16.00
5																											

STANDARD SIGN
W54-57

WISCONSIN DEPT OF TRANSPORTATION

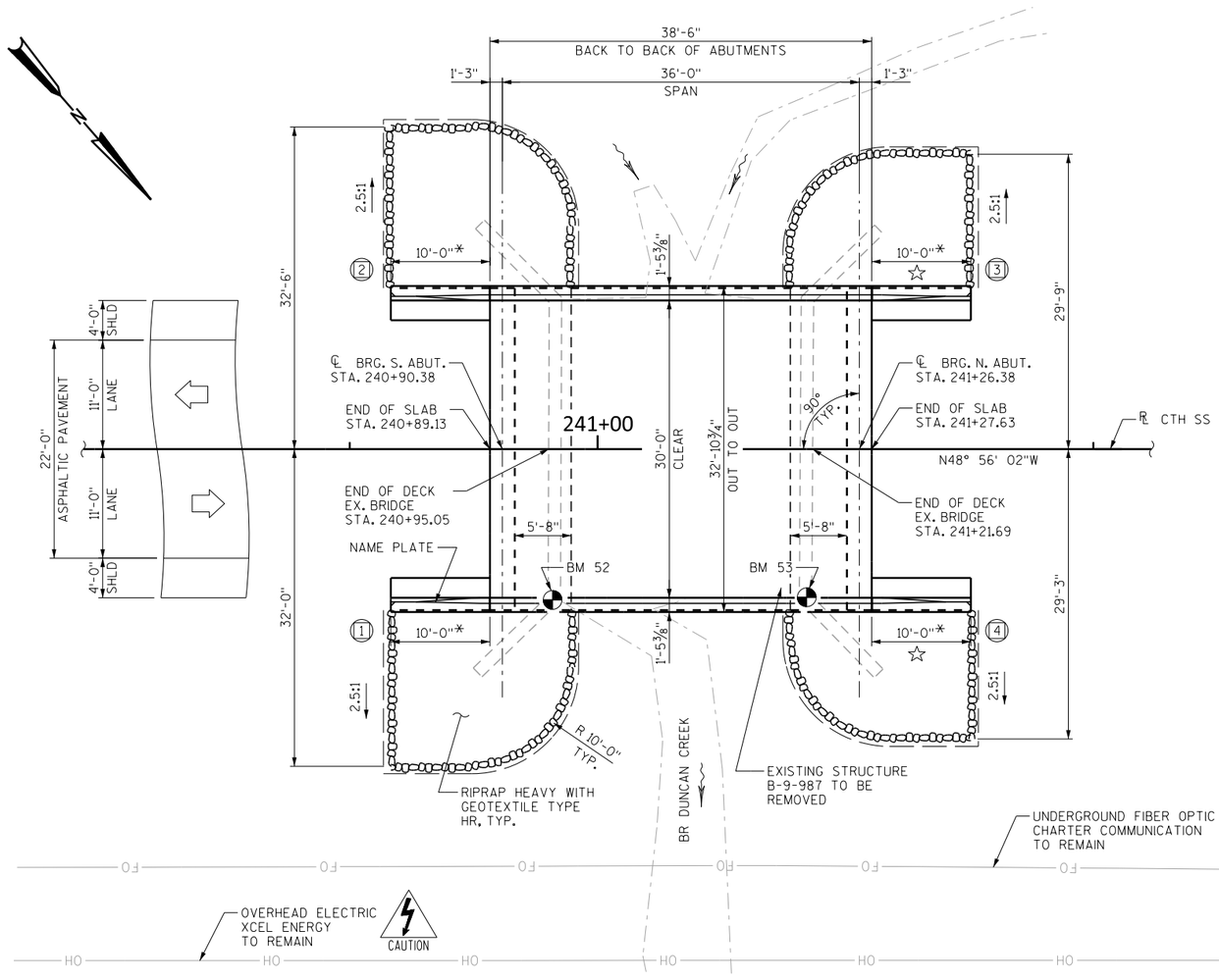
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE W54-57.9

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

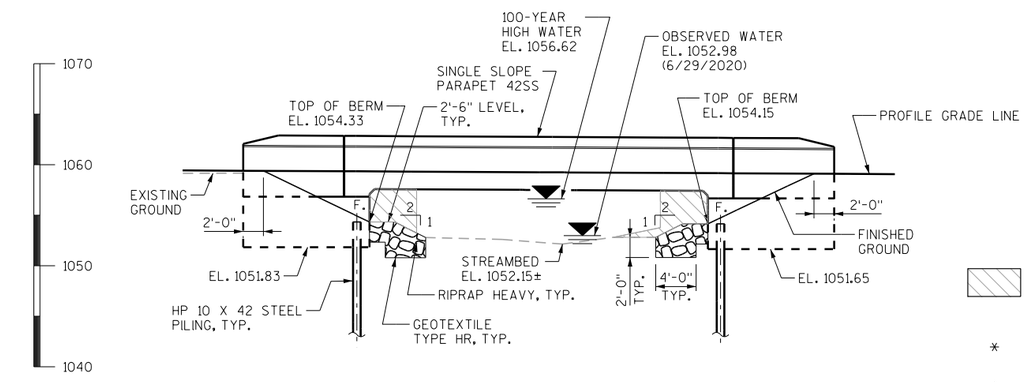
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W5457.DGN PLOT DATE : 27-APR-2016 10:05 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.594294:1.000000 WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER
8953-04-72



PLAN

SINGLE SPAN CONCRETE FLAT SLAB



ELEVATION

LOOKING WEST

LEGEND

- COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURE BRIDGES B-9-391".
- * ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD REQUIRED.
- ☆ SURFACE DRAIN ANCHORS REQUIRED.
- (X) INDICATES WINGWALL NUMBER
- F. FIXED BEARING

DESIGN DATA

LIVE LOAD:
DESIGN LOAD: HL-93
INVENTORY RATING FACTOR = 1.15
OPERATING RATING FACTOR = 1.50
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF.

MATERIAL PROPERTIES:
CONCRETE MASONRY:
SUPERSTRUCTURE.....f'c = 4,000 PSI
ALL OTHER.....f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB AND DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED 60'-0' LONG AT SOUTH ABUTMENT.
ESTIMATED 60'-0' LONG AT NORTH ABUTMENT.

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

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 520 C.F.S
VEL. = 4.98 F.P.S.
HW_{100} = EL. 1056.62
WATERWAY AREA = 104 SQ. FT.
DRAINAGE AREA = 0.35 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 100 C.F.S.
VEL. = 1.79 F.P.S.
HW_2 = EL. 1054.80

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. CROSS SECTION AND QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. ABUTMENT BILL OF BARS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. SINGLE SLOPE PARAPET 42SS TRANSITION

TRAFFIC DATA

CTH SS
A.D.T. = 1,060 (2022)
A.D.T. = 1,165 (2042)
R.D.S. = 55 MPH

BENCH MARK

NO.	STATION	DESCRIPTION	ELEVATION
52	240+95.45, 15.22' RT.	CHIS. "X" IN EX. WING 1	1059.22
53	241+21.08, 14.96' RT.	CHIS. "X" IN EX. WING 4	1059.18

WISCONSIN
VINCENT J. DIFRANCES
E-45790
MILWAUKEE
WI
PROFESSIONAL ENGINEER
6/30/2021

STRUCTURES DESIGN CONTACTS
BRIDGE OFFICE:
AARON BONK (608) 261-0261

CONSULTANT:
VINCENT DIFRANCES, P.E. (920) 468-4771

NO.	DATE	REVISION	BY

jt ENGINEERING, INC
Consultant Services

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/24/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-9-391

CTH SS OVER BR DUNCAN CREEK

COUNTY	TOWN
CHIPPEWA	BLOOMER

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	FKH	VJD	FKH

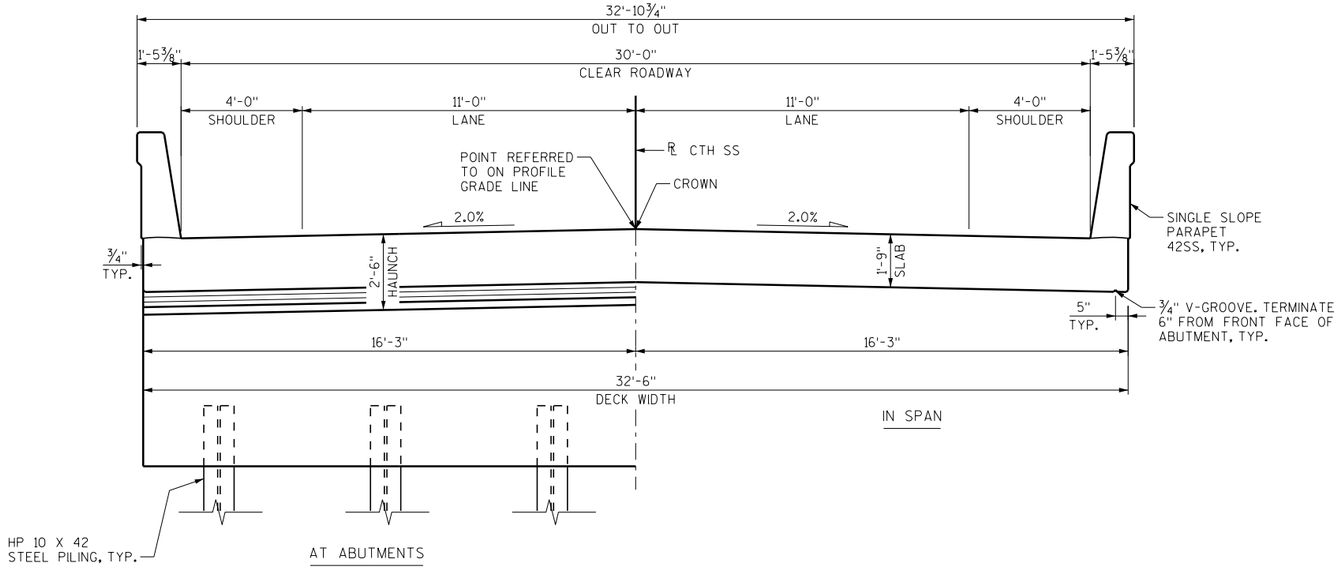
GENERAL PLAN AND ELEVATION

SHEET 1 OF 11
116

8

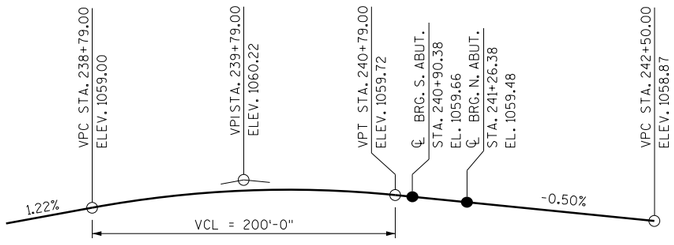
8

STATE PROJECT NUMBER
8953-04-72

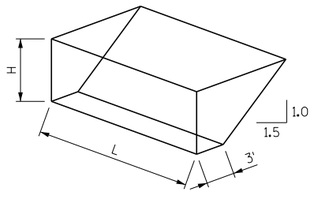


CROSS SECTION THRU BRIDGE

LOOKING NORTH



PROFILE GRADE LINE - CTH SS



ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NAVD 88 (2012). HORIZONTAL POSITIONS ARE WISCONSIN COUNTY COORDINATES, CHIPPEWA COUNTY, NAD 83 (2011).

THE EXISTING STRUCTURE, B-9-987, IS A SINGLE SPAN CONCRETE FLAT SLAB STRUCTURE WITH AN OVERALL WIDTH OF 30'-7" AND AN END OF DECK TO END OF DECK LENGTH OF 26'-7". THE EXISTING STRUCTURE B-9-937 IS TO BE REMOVED.

EXISTING SUBSTRUCTURE LOCATIONS ARE BASED ON SURVEY AND AVAILABLE AS-BUILT INFORMATION. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO CONSTRUCT NEW SUBSTRUCTURES. COST OF REMOVAL IS INCIDENTAL TO THE "REMOVING OLD STRUCTURE OVER WATERWAY REMOVE DEBRIS B-9-391" BID ITEM.

THE UPPER LIMIT OF "EXCAVATION FOR STRUCTURES BRIDGES B-9-391" SHALL BE THE EXISTING GROUNDLINE.

FILL AND/OR EXCAVATE TO THE BOTTOM OF THE ABUTMENT ELEVATION PRIOR TO DRIVING PILES.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

⚠ 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.

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

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENTS SHOWN ON SHEET 1. RIPRAP HEAVY SHALL BE PLACED PRIOR TO THE ERECTION OF FALSEWORK.

ABUTMENT CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

THE FIRST DIGIT OF A THREE DIGIT OR FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

PREFORMED FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II OR III OR M213.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE ENTIRE ROADWAY SURFACE OF THE BRIDGE DECK.

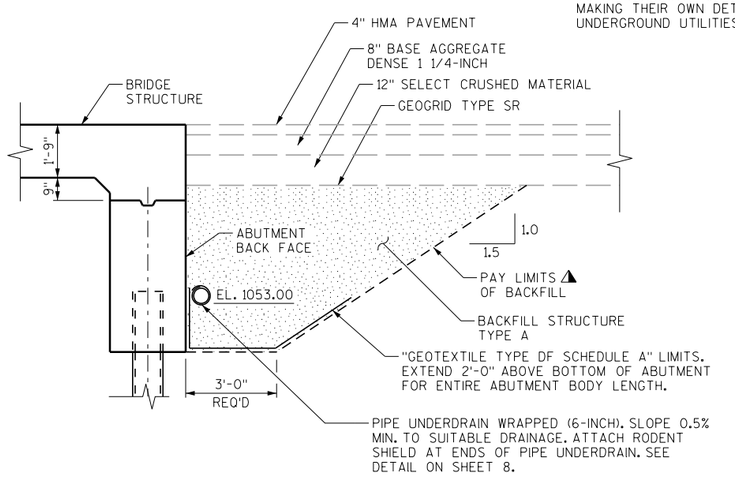
PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ROADWAY FACE AND THE TOP OF THE CONCRETE PARAPETS.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S. ABUT.	N. ABUT.	SUPER	TOTAL
203.0250.01	REMOVING OLD STRUCTURE OVER WATERWAY REMOVE DEBRIS B-9-391	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-9-391	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	100	100	-	200
502.0100	CONCRETE MASONRY BRIDGES	CY	33	33	94	160
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	130	130
502.3210	PIGMENTED SURFACE SEALER	SY	10	10	38	58
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,950	1,950	-	3,900
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,020	2,050	17,260	21,330
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	10	-	20
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	360	360	-	720
606.0300	RIPRAP HEAVY	CY	65	55	-	120
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	100		200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	2	-	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	44	44	-	88
645.0120	GEOTEXTILE TYPE HR	SY	135	120	-	255
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				1/2" & 3/4"
	NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1

ALL B-9-391 BID ITEMS ARE CATEGORY 0020



STRUCTURE BACKFILL DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

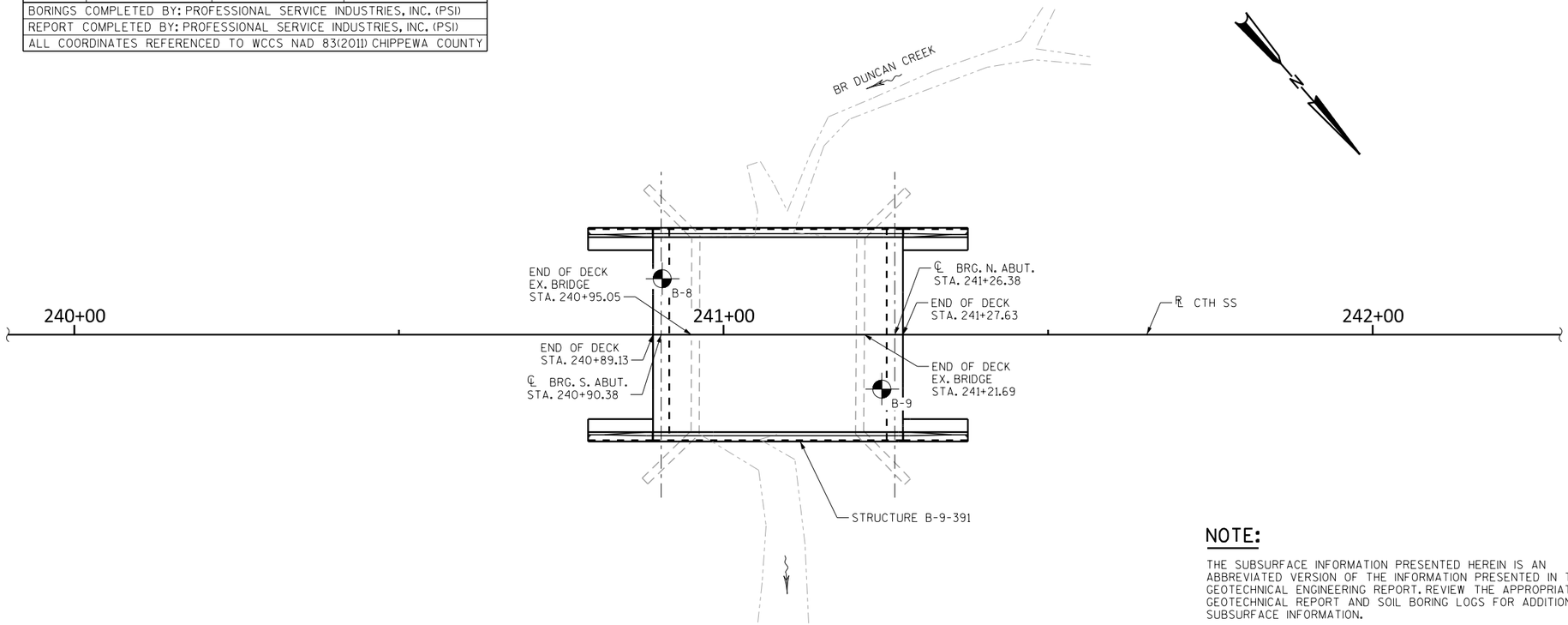
CROSS SECTION AND QUANTITIES

SHEET 2 OF 11
117

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
8	JUNE 8 & 13, 2020	214825.077	138865.693
9	JUNE 8 & 13, 2020	214860.110	138851.338
BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI)			
REPORT COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI)			
ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) CHIPPEWA COUNTY			

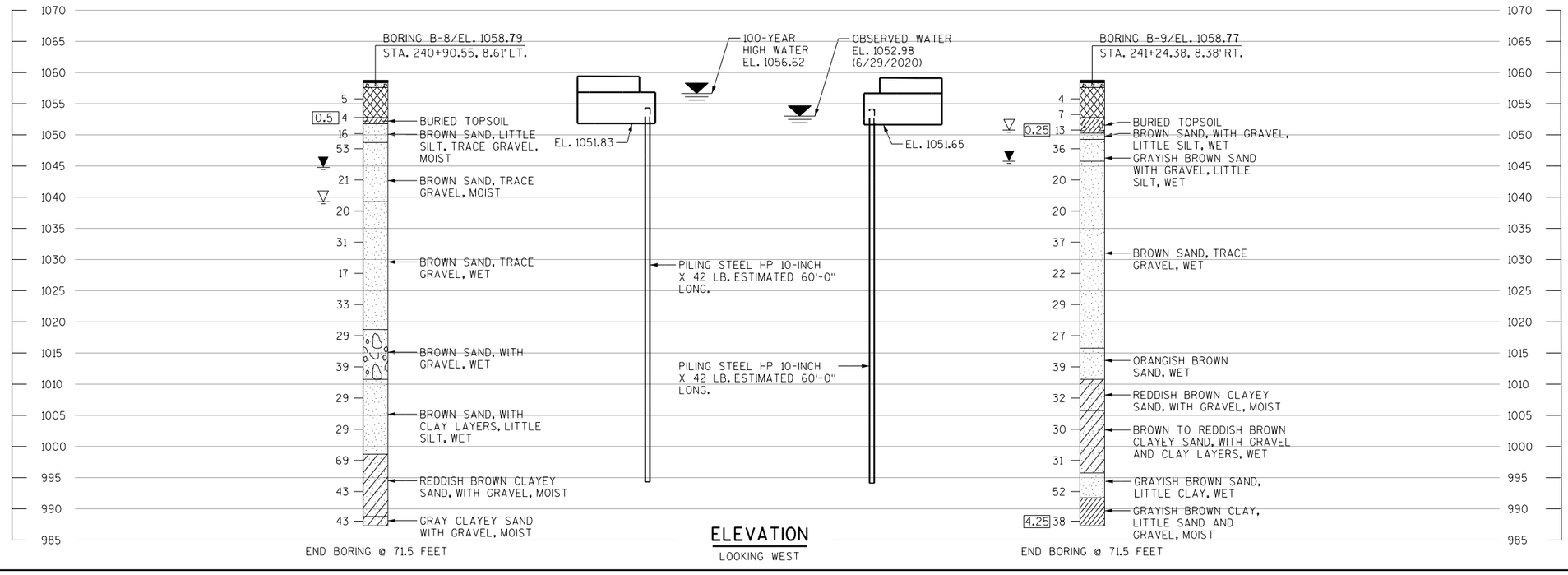


PLAN

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ CTH SS.



ELEVATION
LOOKING WEST

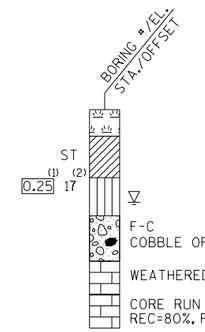
STATE PROJECT NUMBER

8953-04-72

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

SUBSURFACE EXPLORATION

SHEET 3 OF 11
118

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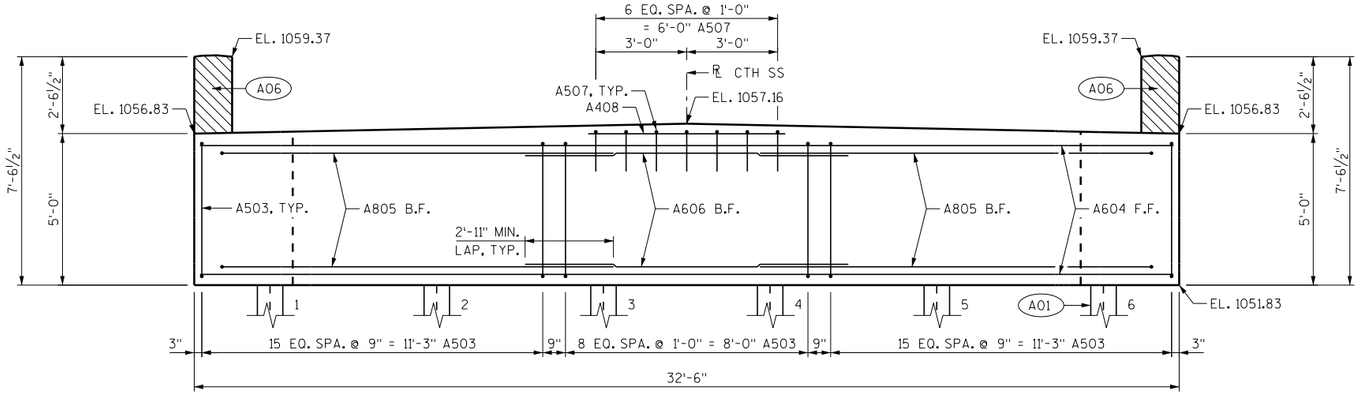
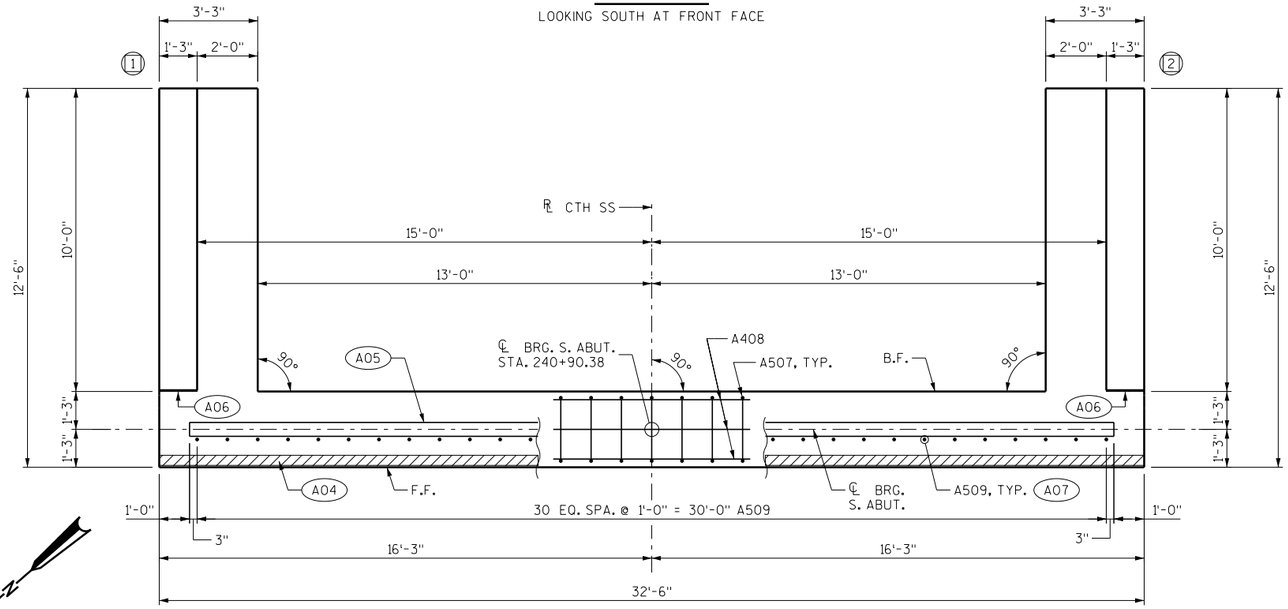
STATE PROJECT NUMBER

8953-04-72

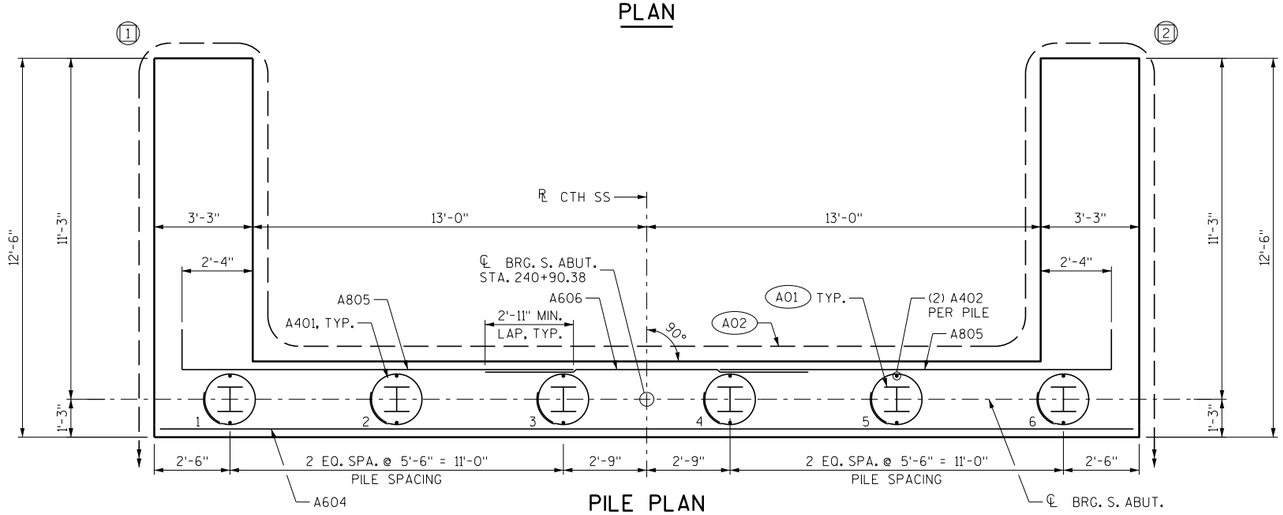


ELEVATION

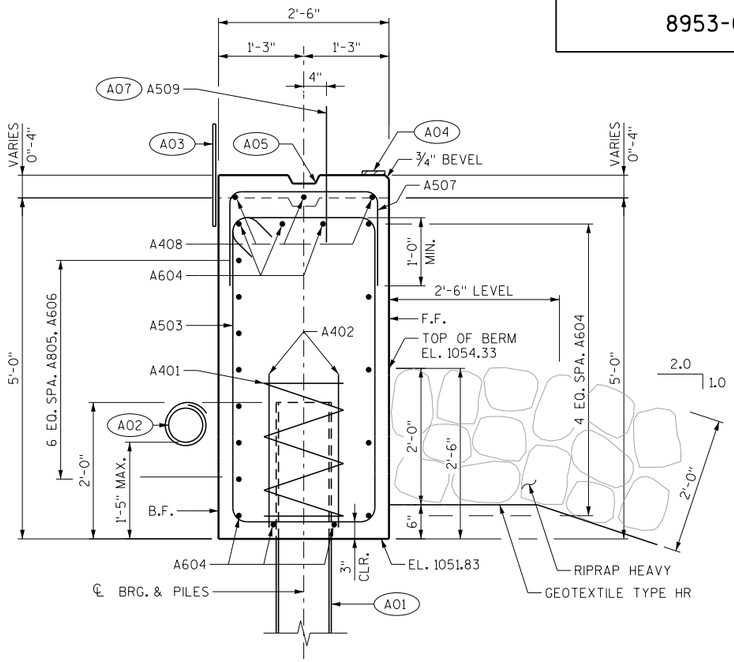
LOOKING SOUTH AT FRONT FACE



PLAN

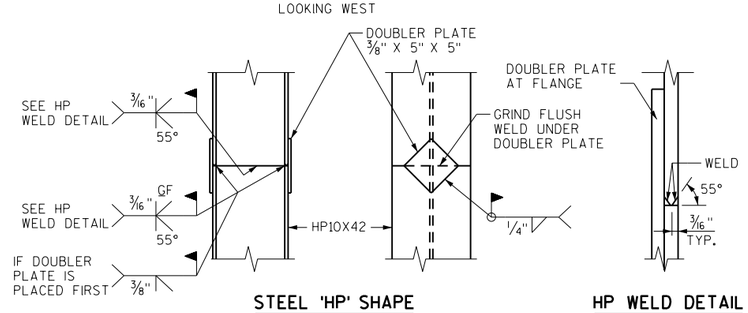


PILE PLAN



SECTION THRU BODY

LOOKING WEST



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10-INCH X 42 LB STEEL PILING. ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TON.
- (A02) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 8.
- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- (A04) ¾" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (A05) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".
- (A06) ½" FILLER. EXTEND FROM SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH.
- (A07) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".
- (X) INDICATES WINGWALL NUMBER.

F.F. = FRONT FACE B.F. = BACK FACE

NOTES

SEE SHEET 8 FOR SOUTH ABUTMENT BILL OF BARS.

SPACE A503 TO MISS PILE LOCATIONS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

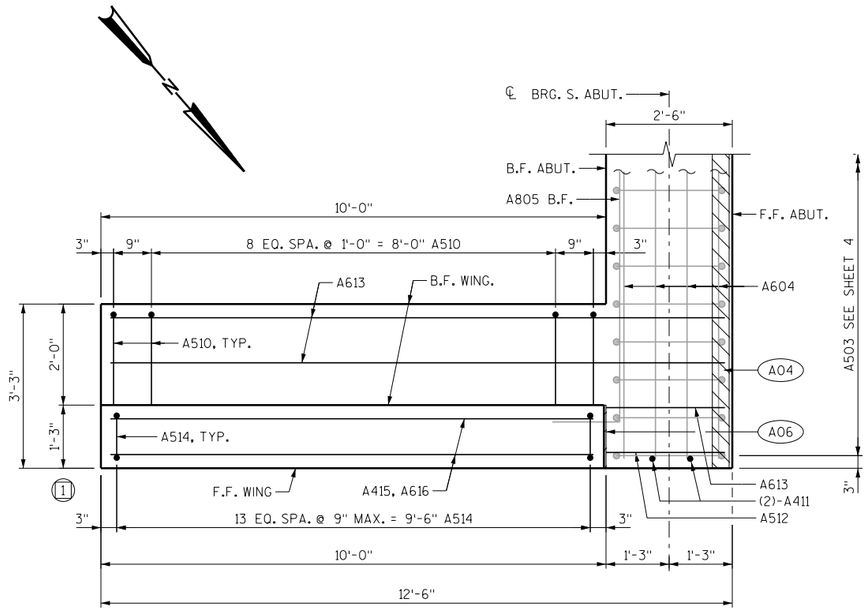
SOUTH ABUTMENT

SHEET 4 OF 11
119

8

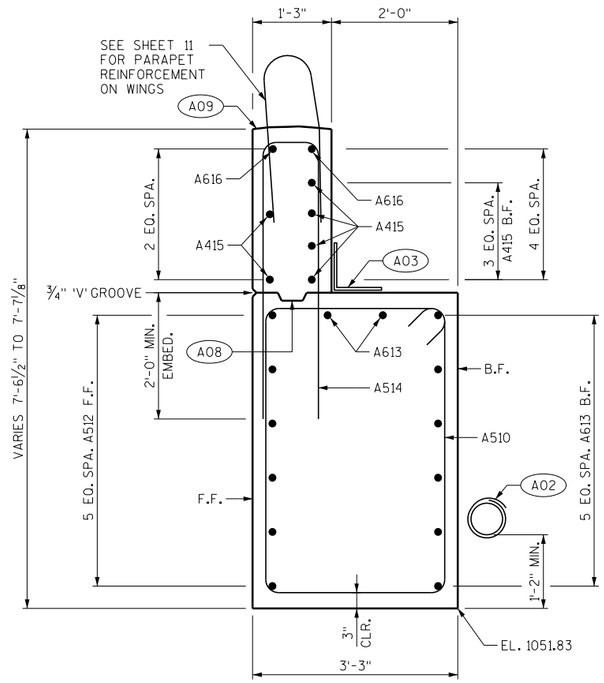
8

STATE PROJECT NUMBER
8953-04-72



WING PLAN

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY



SECTION THRU WING

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY

NOTES

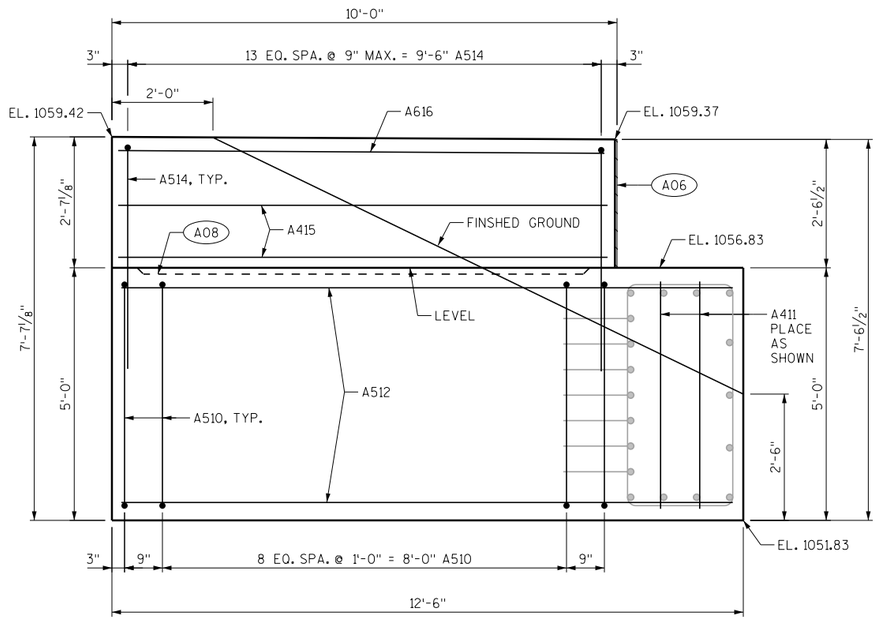
SEE SHEET 8 FOR SOUTH ABUTMENT BILL OF BARS.

SEE SHEET 8 FOR TYPICAL FILL SECTIONS AT WING TIPS.

SEE SHEET 11 FOR SECTIONS THRU PARAPET AND TRANSITION, AND FOR PARAPET REINFORCEMENT IN WING WALLS.

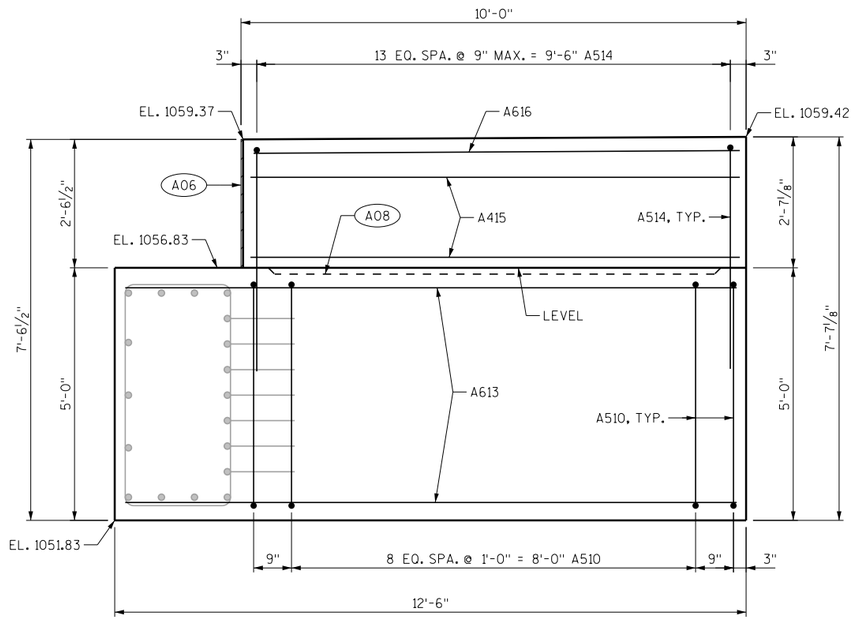
CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SHADED REINFORCEMENT SHOWN ON THIS SHEET IS DETAILED ON SHEET 4 FOR THE ABUTMENT BODY.



FRONT FACE WING ELEVATION

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE



BACK FACE WING ELEVATION

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE

LEGEND

- (A02) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 8.
- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- (A04) ¾" X 4" PREFORMED FILLER, CUT TO OUT OF ABUTMENT.
- (A06) ½" FILLER. EXTEND FROM SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH.
- (A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- (A09) STRIKE OFF AS SHOWN AND LEAVE ROUGH. FINISH HORIZONTAL SURFACES NOT COVERED BY PARAPET.
- (X) INDICATES WING WALL NUMBER.
- F.F. = FRONT FACE
- B.F. = BACK FACE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

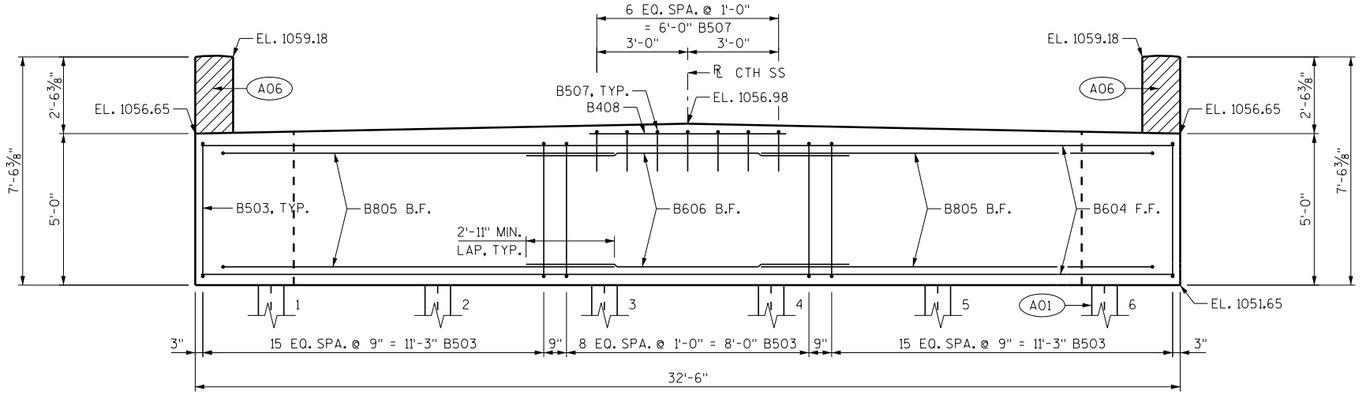
DRAWN BY VJD | PLANS CK'D. FKH

SOUTH ABUTMENT DETAILS

SHEET 5 OF 11
120

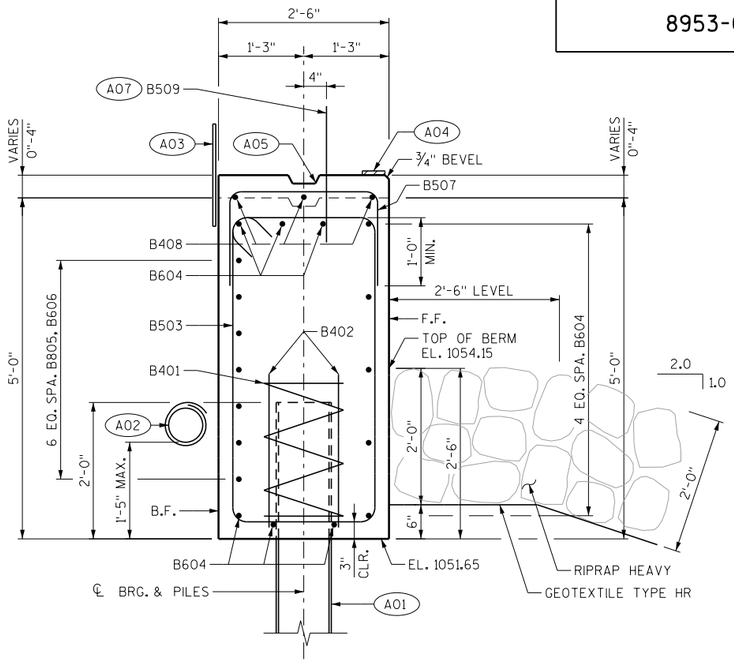
STATE PROJECT NUMBER

8953-04-72



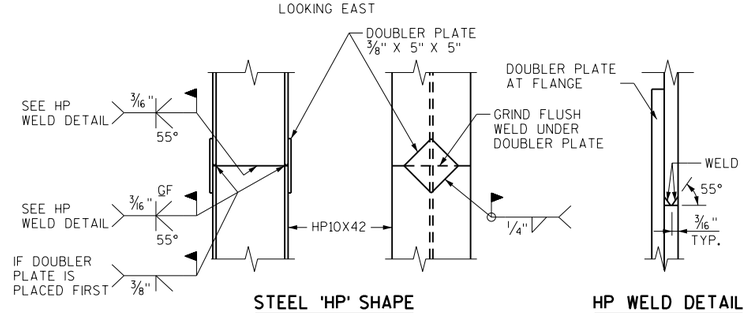
ELEVATION

LOOKING NORTH AT FRONT FACE



SECTION THRU BODY

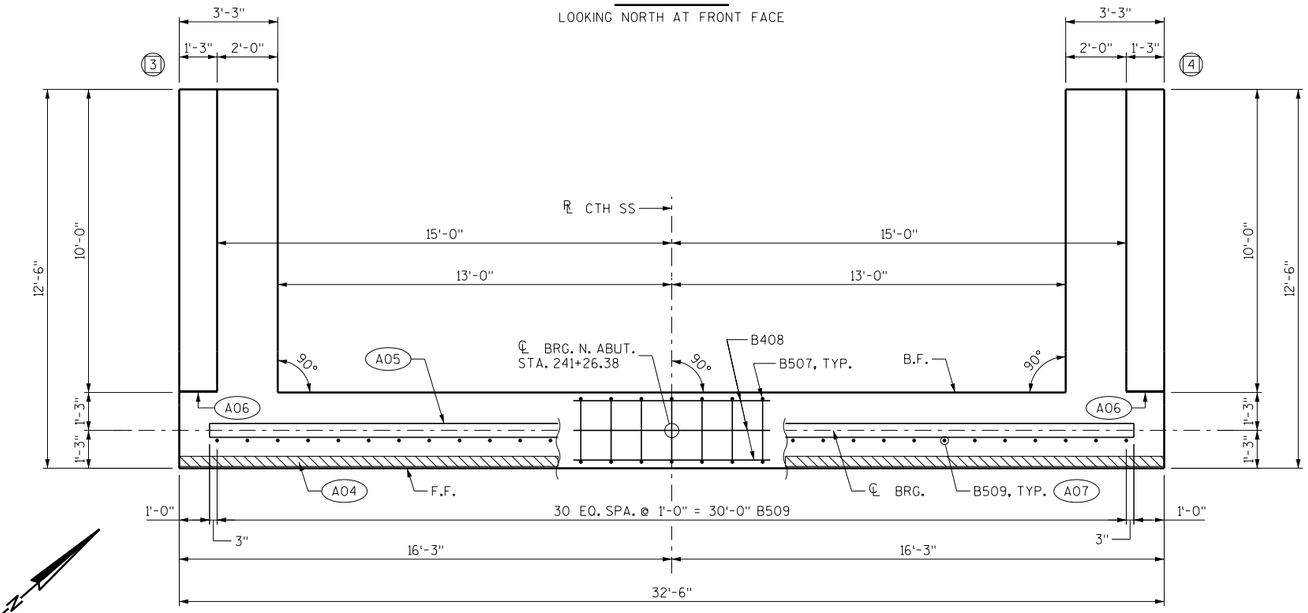
LOOKING EAST



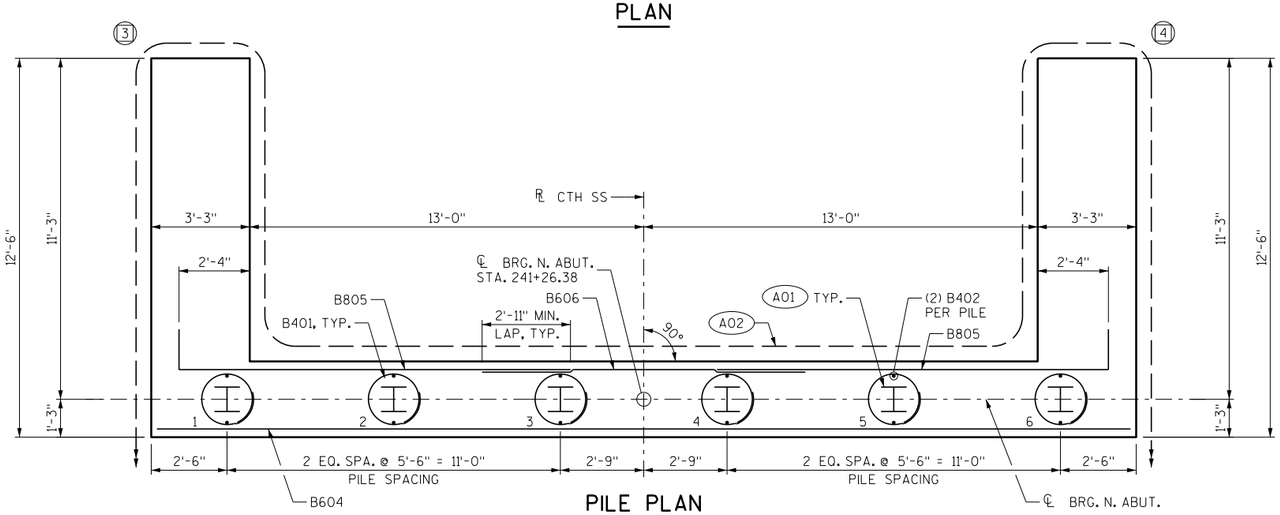
STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR



PLAN



PILE PLAN

PILE SPLICE DETAIL

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- (A04) 3/4" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (A05) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".
- (A06) 1/2" FILLER. EXTEND FROM SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH.
- (A07) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".
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F.F. = FRONT FACE B.F. = BACK FACE

NOTES

SEE SHEET 8 FOR NORTH ABUTMENT BILL OF BARS.

SPACE B503 TO MISS PILE LOCATIONS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

NORTH ABUTMENT

SHEET 6 OF 11

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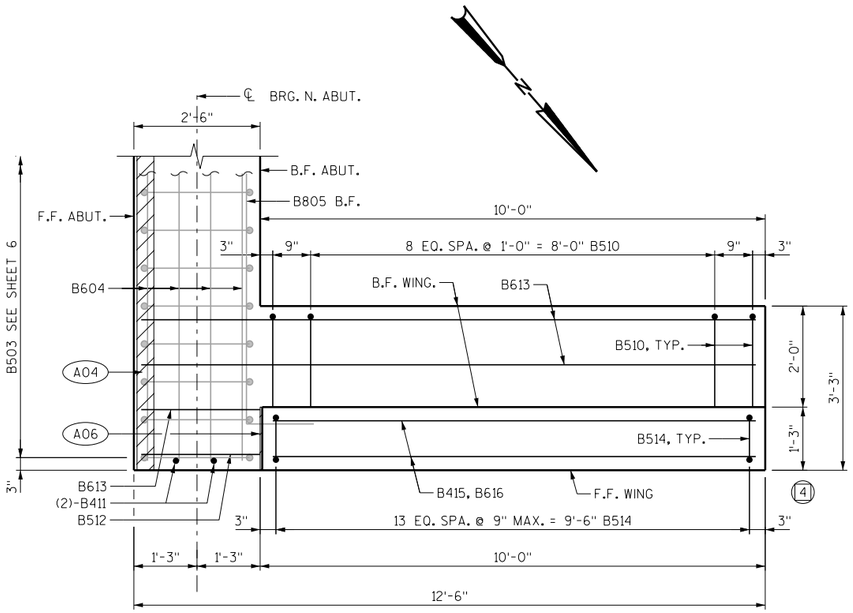
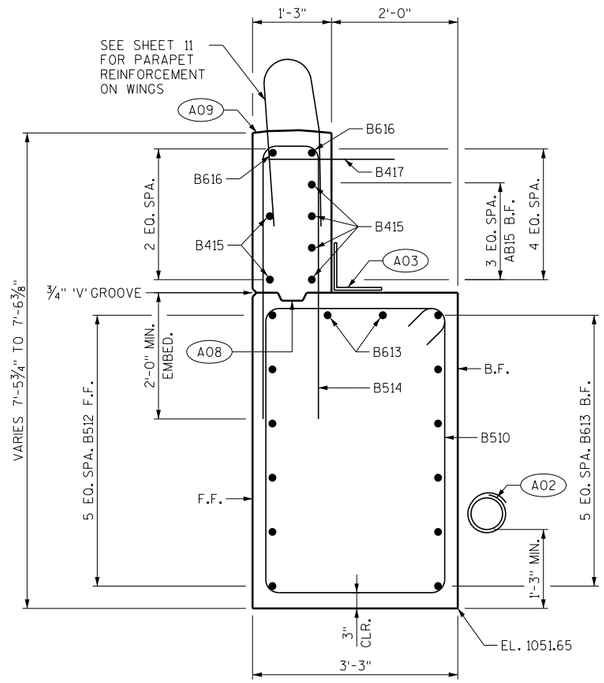
STATE PROJECT NUMBER

8953-04-72



WING PLAN

WING 4 SHOWN, WING 3 SIMILAR
PARAPET NOT SHOWN FOR CLARITY



SECTION THRU WING

WING 4 SHOWN, WING 3 SIMILAR
PARAPET NOT SHOWN FOR CLARITY

NOTES

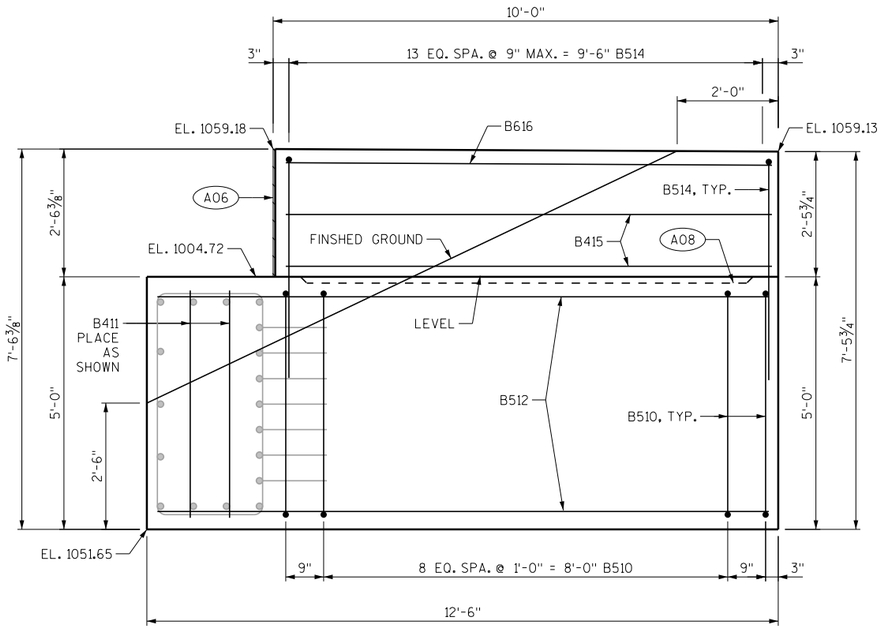
SEE SHEET 8 FOR NORTH ABUTMENT BILL OF BARS.

SEE SHEET 8 FOR TYPICAL FILL SECTIONS AT WING TIPS.

SEE SHEET 11 FOR SECTIONS THRU PARAPET AND TRANSITION, AND FOR PARAPET REINFORCEMENT IN WING WALLS.

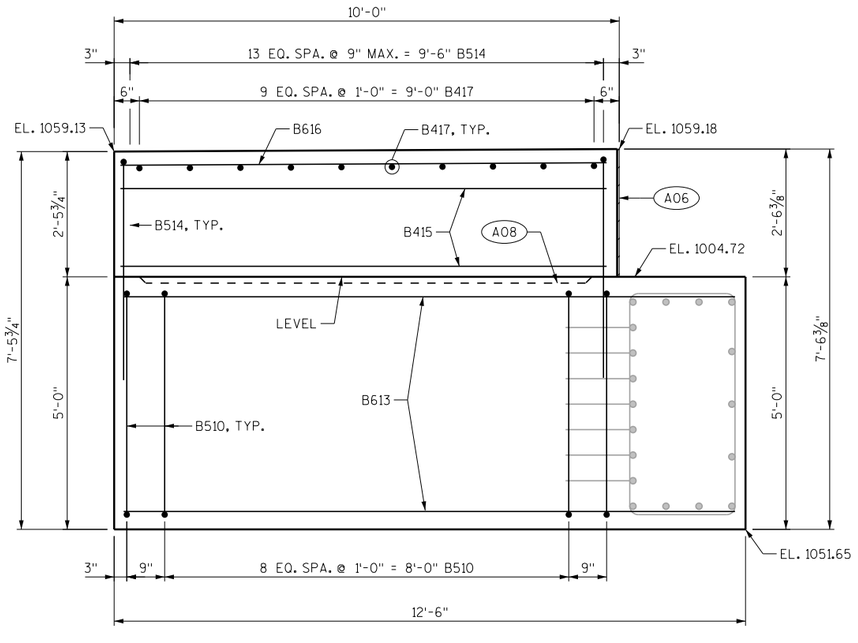
CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SHADED REINFORCEMENT SHOWN ON THIS SHEET IS DETAILED ON SHEET 6 FOR THE ABUTMENT BODY.



FRONT FACE WING ELEVATION

WING 4 SHOWN, WING 3 SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE



BACK FACE WING ELEVATION

WING 4 SHOWN, WING 3 SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE

LEGEND

- (A02) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON THIS SHEET 8.
- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

NORTH ABUTMENT DETAILS

SHEET 7 OF 11

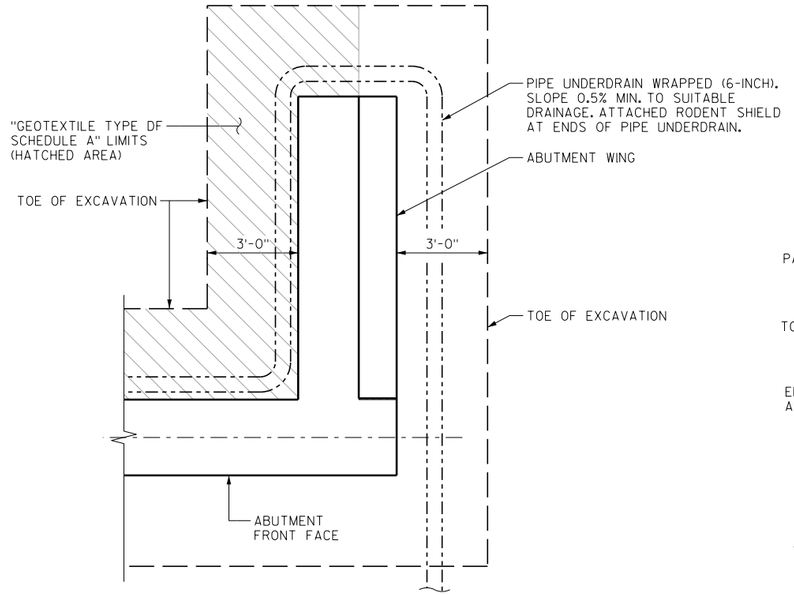
122

STATE PROJECT NUMBER

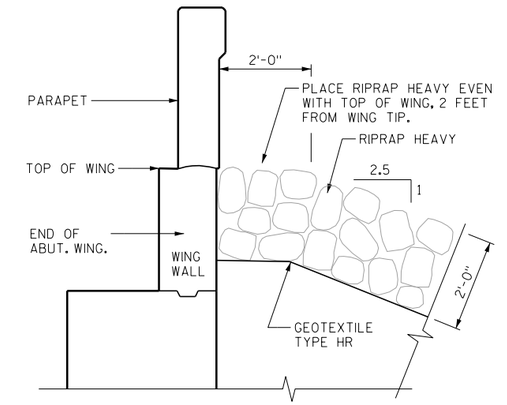
8953-04-72

BILL OF BARS - SOUTH ABUTMENT						COATED: 1,290 LBS UNCOATED: 1,950 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401		6	28'-0"	X		PILES - 1 PER PILE
A402		12	2'-3"			PILES - 2 PER PILE
A503		41	13'-8"	X		BODY - STIRRUP
A604		11	32'-1"			BODY - HORIZ. - F.F. & B.F.
A805		14	14'-1"	X		BODY - HORIZ. - B.F.
A606		7	10'-9"			BODY - HORIZ. - B.F.
A507		7	5'-2"	X		BODY - VERT. - HIGH SEAT
A408		3	6'-6"			BODY - HORIZ. - HIGH SEAT
A509	X	31	2'-0"			BODY - VERT DOWELS
A510	X	22	15'-4"	X		WINGS - BODY - STIRRUP
A411	X	4	4'-6"			WINGS - BODY - VERT. - AT ABUT. ENDS
A512	X	12	12'-1"			WINGS - BODY - HORIZ. - F.F.
A613	X	16	12'-1"			WINGS - BODY - HORIZ. - B.F.
A514	X	28	9'-7"	X		WINGS - STEM - VERT.
A415	X	12	9'-7"			WINGS - STEM - HORIZ. - F.F. & B.F.
A616	X	4	9'-7"			WINGS - STEM - HORIZ. - TOP

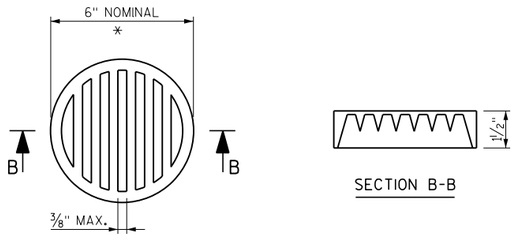
BILL OF BARS - NORTH ABUTMENT						COATED: 1,320 LBS UNCOATED: 1,950 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B401		6	28'-0"	X		PILES - 1 PER PILE
B402		12	2'-3"			PILES - 2 PER PILE
B503		41	13'-8"	X		BODY - STIRRUP
B604		11	32'-1"			BODY - HORIZ. - F.F. & B.F.
B805		14	14'-1"	X		BODY - HORIZ. - B.F.
B606		7	10'-9"			BODY - HORIZ. - B.F.
B507		7	5'-2"	X		BODY - VERT. - HIGH SEAT
B408		3	6'-6"			BODY - HORIZ. - HIGH SEAT
B509	X	31	2'-0"			BODY - VERT DOWELS
B510	X	22	15'-4"	X		WINGS - BODY - STIRRUP
B411	X	4	4'-6"			WINGS - BODY - VERT. - AT ABUT. ENDS
B512	X	12	12'-1"			WINGS - BODY - HORIZ. - F.F.
B613	X	16	12'-1"			WINGS - BODY - HORIZ. - B.F.
B514	X	28	9'-7"	X		WINGS - STEM - VERT.
B415	X	12	9'-7"			WINGS - STEM - HORIZ. - F.F. & B.F.
B616	X	4	9'-7"			WINGS - STEM - HORIZ. - TOP
B417	X	20	2'-0"			WINGS - SURFACE DRAIN ANCHORS



ABUTMENT PLAN WITH WING



TYPICAL FILL SECTION AT WING TIPS

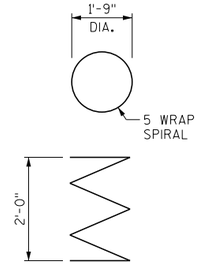


RODENT SHIELD DETAIL

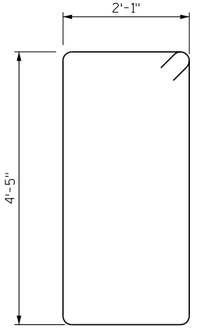
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

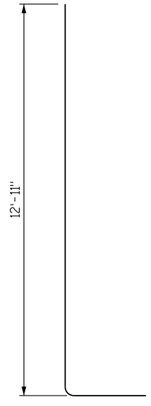
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X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



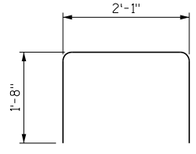
A401, B401



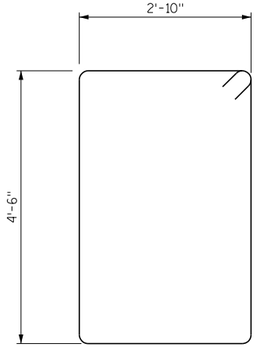
A503, B503



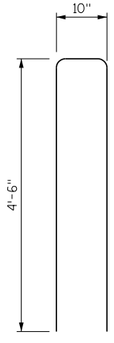
A805, B805



A507, B507



A510, B510



A514, B514

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

ABUTMENT BILL OF BARS

SHEET 8 OF 11

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STATE PROJECT NUMBER

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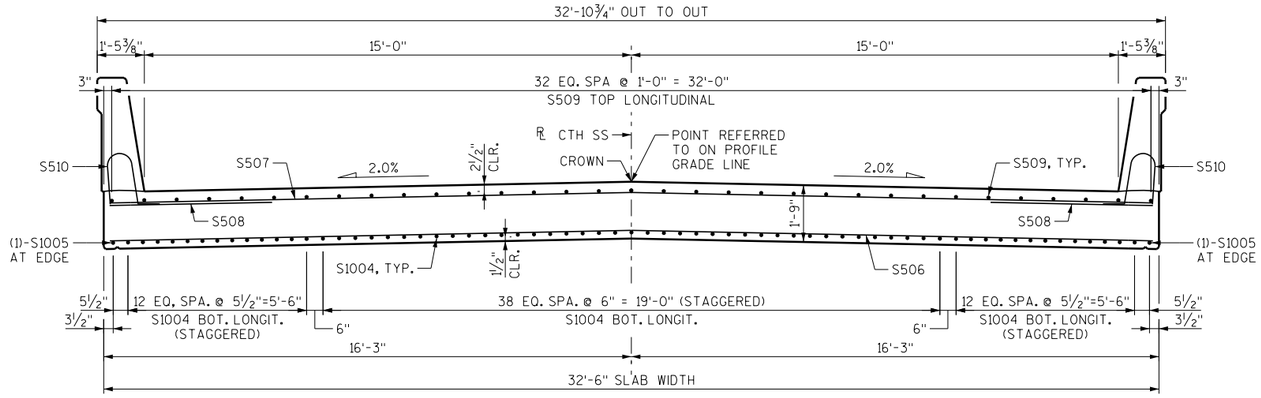
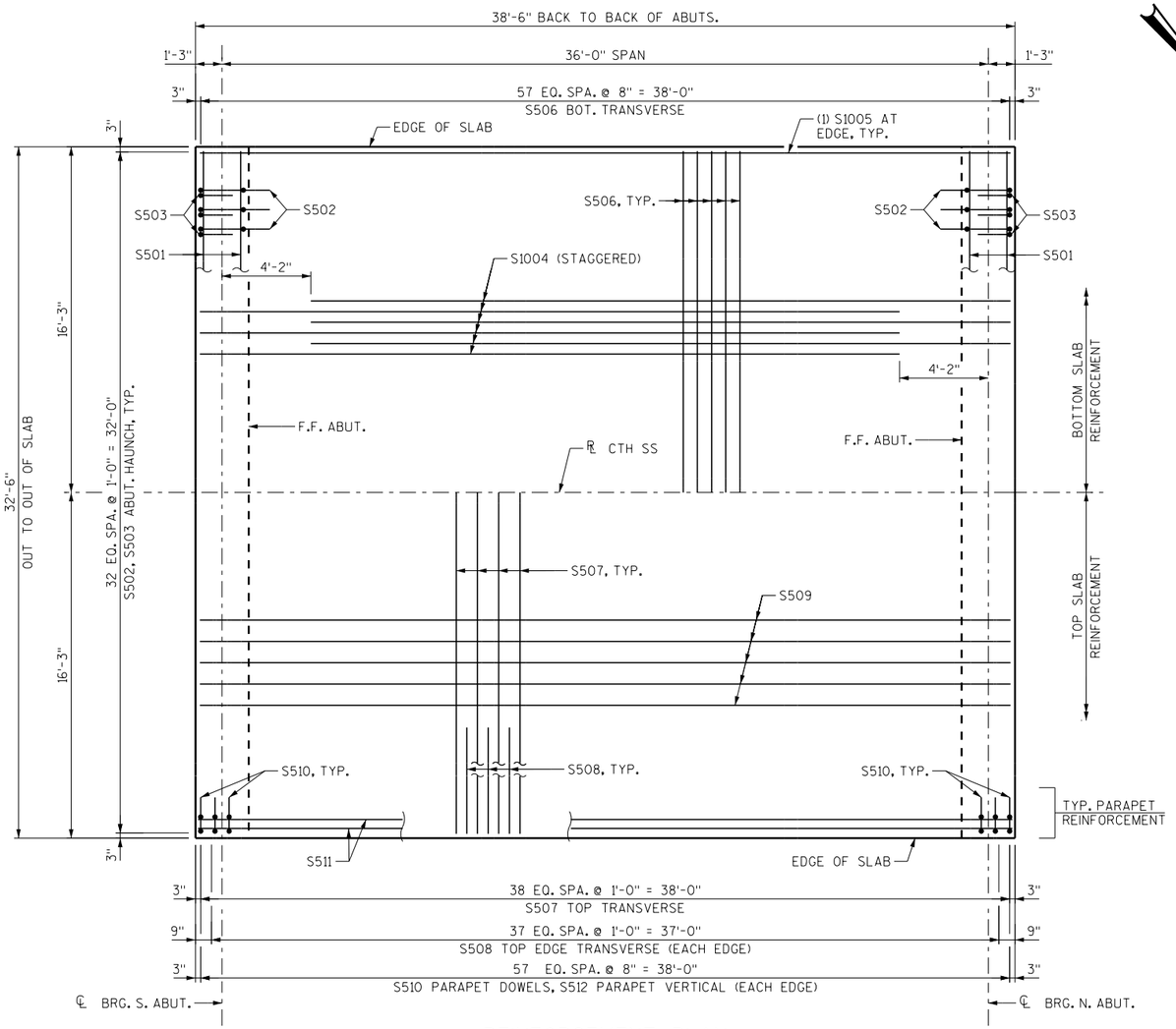
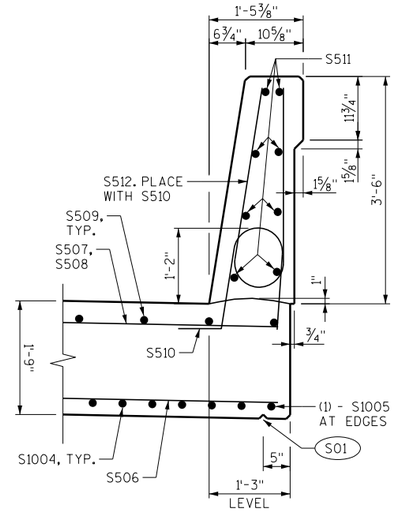


REINFORCEMENT CROSS SECTION

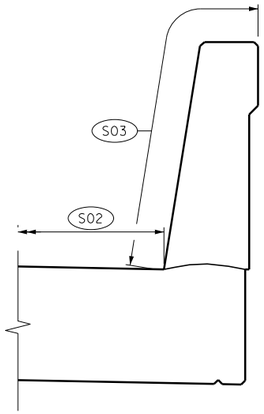


REINFORCEMENT PLAN

PARAPET NOT SHOWN FOR CLARITY



SECTION THRU PARAPET



SECTION THRU PARAPET

SHOWING LIMITS OF PIGMENTED SURFACE SEALER AND PROTECTIVE SURFACE TREATMENT

LEGEND

(S01) ¾" V-GROOVE REQ'D. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPH.

(S02) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE DECK SURFACE.

(S03) COAT WITH "PIGMENTED SURFACE SEALER" AS PER THE STANDARD SPECIFICATIONS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE AND TOP FACES OF PARAPET, INCLUDING PARAPETS ON WINGS.

NOTES

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

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

SEE SHEET 10 FOR LONGITUDINAL SECTION THRU SLAB AND ADDITIONAL SLAB REINFORCEMENT DETAILS.

FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 10.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

SUPERSTRUCTURE

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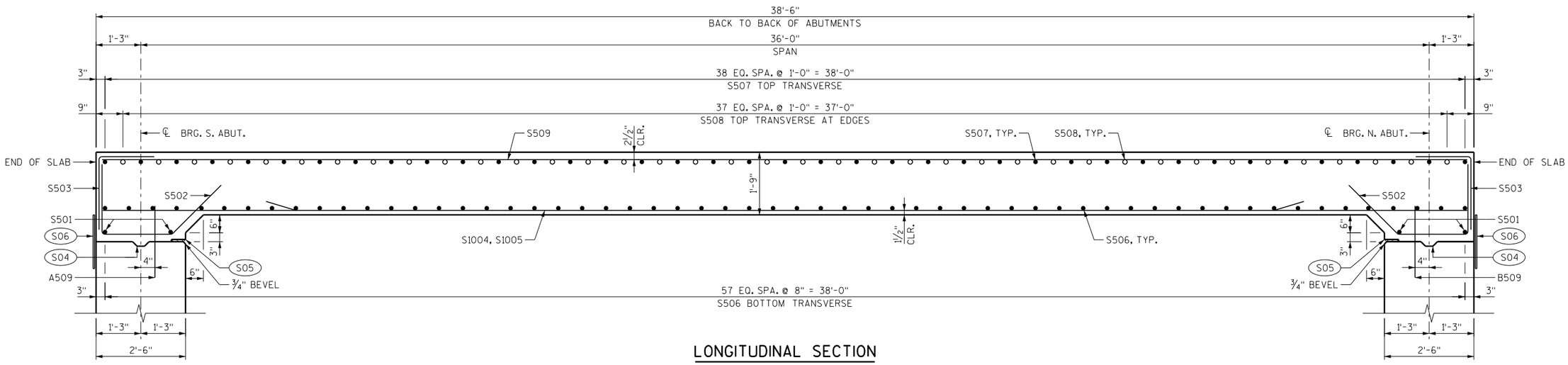


LONGITUDINAL SECTION

LOOKING WEST

BILL OF BARS - SUPERSTRUCTURE

COATED: 17,260 LBS
UNCOATED: 0 LBS

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	4	32'-1"			ABUT. DIAPH. - HORIZ.
S502	X	66	5'-11"	X		ABUT. DIAPH. - VERT.
S503	X	66	3'-6"	X		ABUT. DIAPH. - VERT.
S1004	X	65	32'-11"			SLAB - BOTT. LONGIT.
S1005	X	2	38'-1"			SLAB - BOTT. LONGIT. - EDGE
S506	X	58	32'-1"			SLAB - BOTT. TRANS.
S507	X	39	32'-1"			SLAB - TOP TRANS.
S508	X	76	5'-0"			SLAB - TOP TRANS. - EDGE
S509	X	33	38'-1"			SLAB - TOP LONGIT.
S510	X	116	4'-5"	X		SLAB - PARAPET DOWELS
S511	X	16	38'-1"			PARAPET - HORIZ.
S512	X	116	6'-8"	X		PARAPET - VERT.

NOTES

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

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

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE TABLE ON THIS SHEET FOR "AS-BUILT" PLANS.

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

LEGEND

(S04) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".

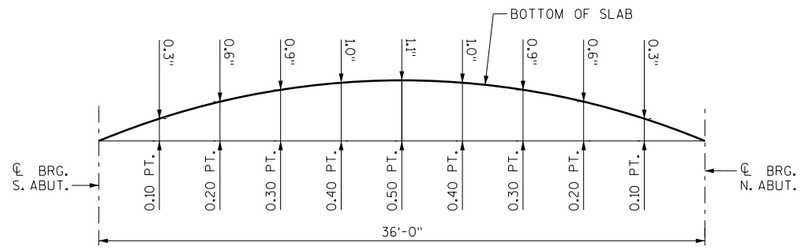
(S05) 4" X ¾" PREFORMED JOINT FILLER. SEE ABUTMENT SHEETS FOR ADDITIONAL DETAILS.

(S06) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.

LOCATION	CL BRG. S. ABUT.	0.10 PT	0.20 PT	0.30 PT	0.40 PT	0.50 PT	0.60 PT	0.70 PT	0.80 PT	0.90 PT	CL BRG. N. ABUT.
W. GUTTER LINE	1059.36	1059.35	1059.33	1059.31	1059.29	1059.27	1059.26	1059.24	1059.22	1059.20	1059.18
CROWN (REF. LINE)	1059.66	1059.65	1059.63	1059.61	1059.59	1059.57	1059.56	1059.54	1059.52	1059.50	1059.48
E. GUTTER LINE	1059.36	1059.35	1059.33	1059.31	1059.29	1059.27	1059.26	1059.24	1059.22	1059.20	1059.18

TOP OF DECK ELEVATIONS

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES FOR DEAD LOAD DEFLECTION AND FUTURE CREEP

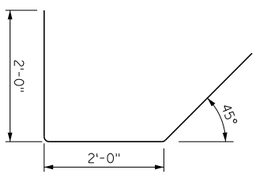


CAMBER DIAGRAM

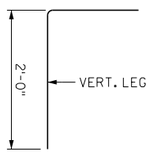
SEE NOTES

	S. ABUT.	0.50 PT	N. ABUT.
WEST GUTTER LINE			
CROWN			
EAST GUTTER LINE			

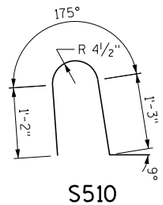
SURVEY TOP OF DECK ELEVATIONS



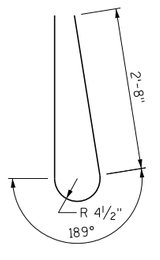
S502



S503



S510



S512

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

SUPERSTRUCTURE DETAILS

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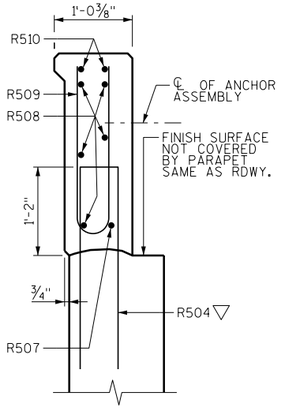
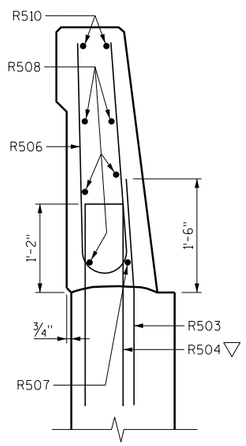
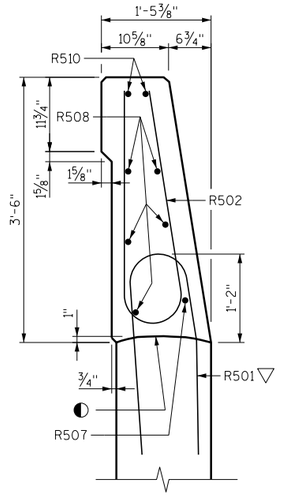


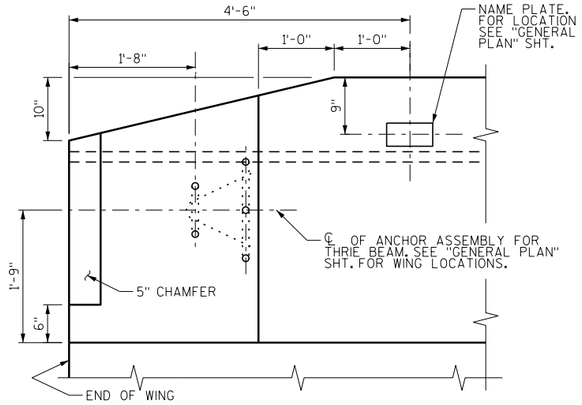
SECTION A-A



SECTION B-B

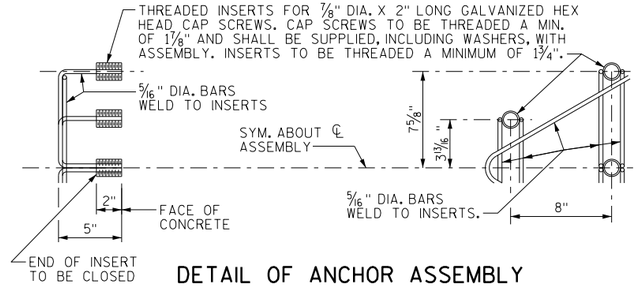


SECTION C-C



PARAPET END TREATMENT DETAIL

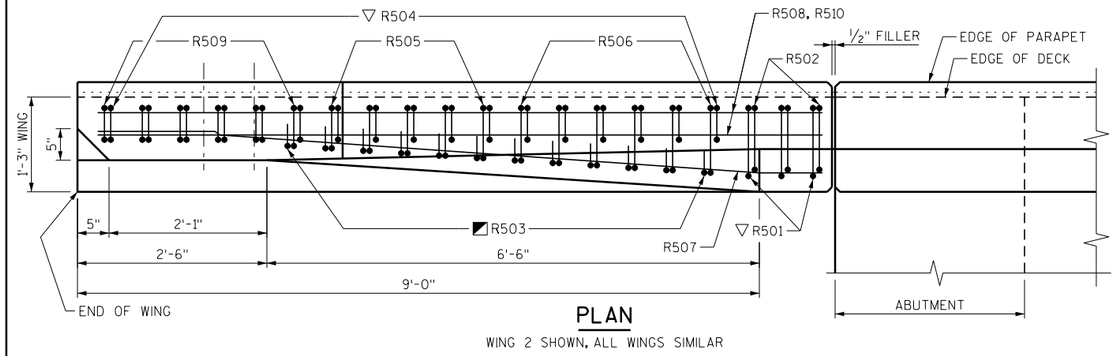
LOOKING AT INSIDE FACE OF PARAPET



DETAIL OF ANCHOR ASSEMBLY

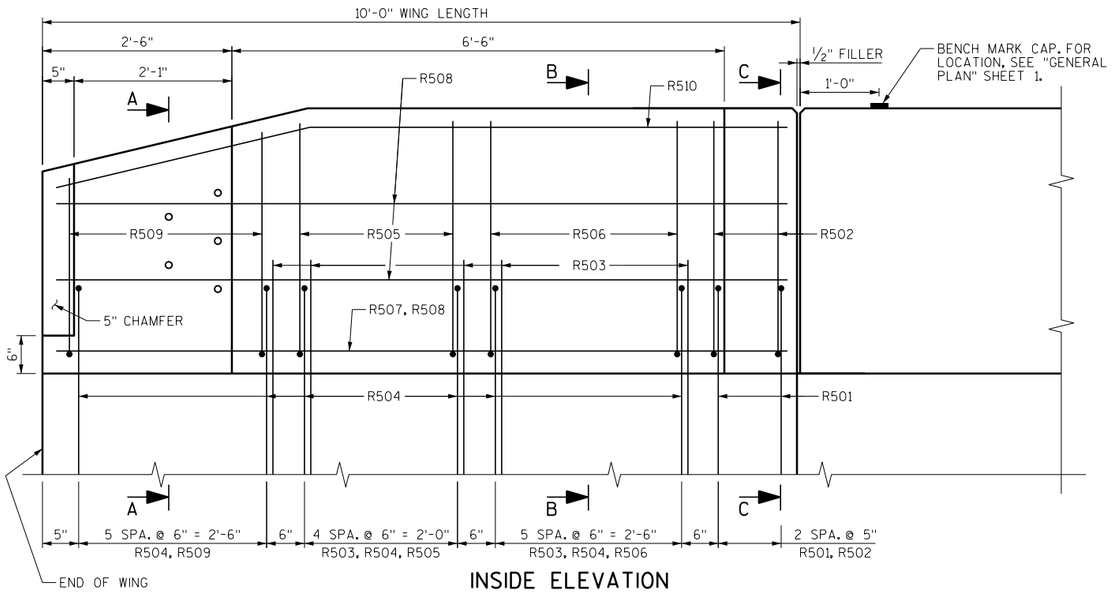
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASSHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



PLAN

WING 2 SHOWN, ALL WINGS SIMILAR



INSIDE ELEVATION

WING 2 SHOWN, ALL WINGS SIMILAR

BILL OF BARS - ABUTMENT PARAPETS

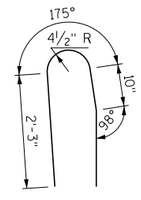
COATED (S. ABUT.)	730	LBS
COATED (N. ABUT.)	730	LBS

BAR MARK	COAT	S. ABUT. NO. REQD	N. ABUT. NO. REQD	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	5'-10"	X		PARAPET - VERTICAL
R502	X	6	6	6'-8"	X		PARAPET - VERTICAL
R503	X	24	24	3'-0"	X		PARAPET - VERTICAL
R504	X	34	34	5'-7"	X		PARAPET - VERTICAL
R505	X	10	10	6'-5"	X		PARAPET - VERTICAL
R506	X	12	12	6'-6"	X		PARAPET - VERTICAL
R507	X	2	2	9'-7"	X		PARAPET - HORIZ.
R508	X	10	10	9'-7"			PARAPET - HORIZ.
⚠ R509	X	12	12	5'-5"	X	X	PARAPET - VERTICAL
R510	X	4	4	9'-6"	X		PARAPET - HORIZ.

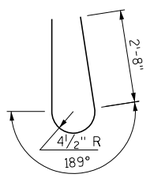
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE		
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

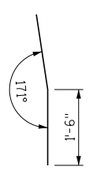
BUNDLE AND TAG EACH SERIES SEPARATELY.



R501

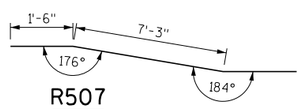


R502

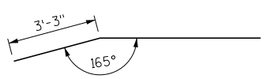


R503

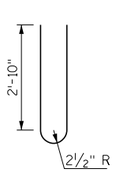
R504



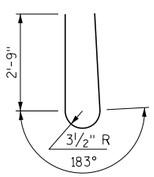
R507



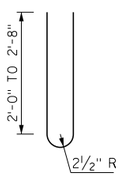
R510



R505



R506



R509

LEGEND

◓ CONST. JOINT - STRIKE OFF AS SHOWN.

◩ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-391

DRAWN BY VJD | PLANS CK'D. FKH

SINGLE SLOPE PARAPET 42SS TRANSITION

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STATE PROJECT NUMBER
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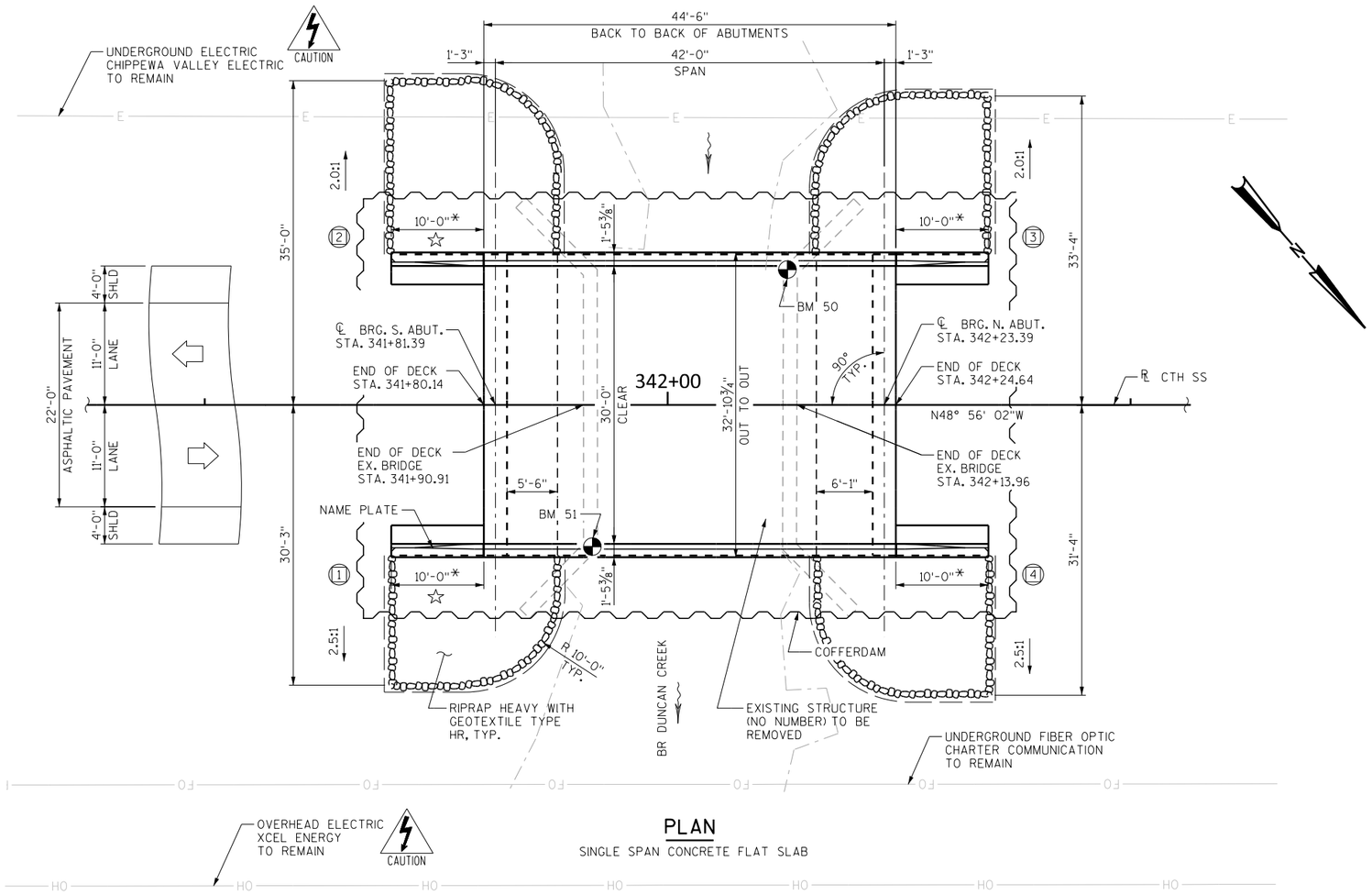
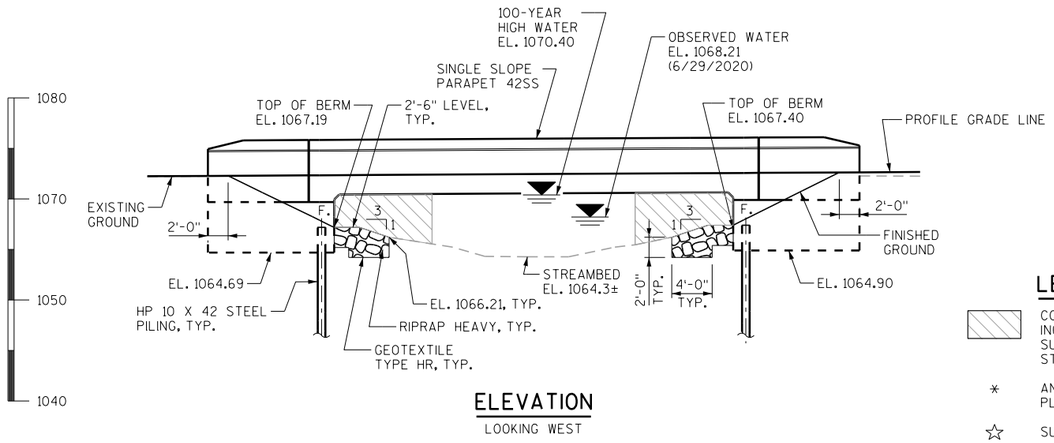


PLAN

SINGLE SPAN CONCRETE FLAT SLAB



ELEVATION

LOOKING WEST

DESIGN DATA

LIVE LOAD:
DESIGN LOAD: HL-93
INVENTORY RATING FACTOR = 1.21
OPERATING RATING FACTOR = 1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF.

MATERIAL PROPERTIES:
CONCRETE MASONRY:
SUPERSTRUCTURE.....f'c = 4,000 PSI
ALL OTHER.....f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB AND DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED 60'-0' LONG AT SOUTH ABUTMENT.
ESTIMATED 60'-0' LONG AT NORTH ABUTMENT.

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

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 950 C.F.S
VEL. = 6.31 F.P.S.
HW_{100} = EL. 1070.40
WATERWAY AREA = 151 SQ. FT.
DRAINAGE AREA = 2.2 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 220 C.F.S.
VEL. = 3.14 F.P.S.
HW_2 = EL. 1067.95

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. CROSS SECTION AND QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. ABUTMENT BILL OF BARS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. SINGLE SLOPE PARAPET 42SS TRANSITION

TRAFFIC DATA

CTH SS
A.D.T. = 1,060 (2022)
A.D.T. = 1,165 (2042)
R.D.S. = 55 MPH

BENCH MARK

NO.	STATION	DESCRIPTION	ELEVATION
50	342+12.93, 14.60' LT.	CHIS. "X" IN EX. WING 3	1072.35
51	341+91.87, 15.30' RT.	CHIS. "X" IN EX. WING 1	1072.33

LEGEND

	COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURE BRIDGES B-9-397".
*	ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD REQUIRED.
☆	SURFACE DRAIN ANCHORS REQUIRED.
(X)	INDICATES WINGWALL NUMBER
F.	FIXED BEARING

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK (608) 261-0261

CONSULTANT:
VINCENT DIFRANCES, P.E. (920) 468-4771

NO.	DATE	REVISION	BY

JT ENGINEERING, INC
Consultant Services

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/24/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-9-397

CTH SS OVER BR DUNCAN CREEK

COUNTY	TOWN
CHIPPEWA	AUBURN

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
VJD	FKH	VJD	FKH

GENERAL PLAN AND ELEVATION

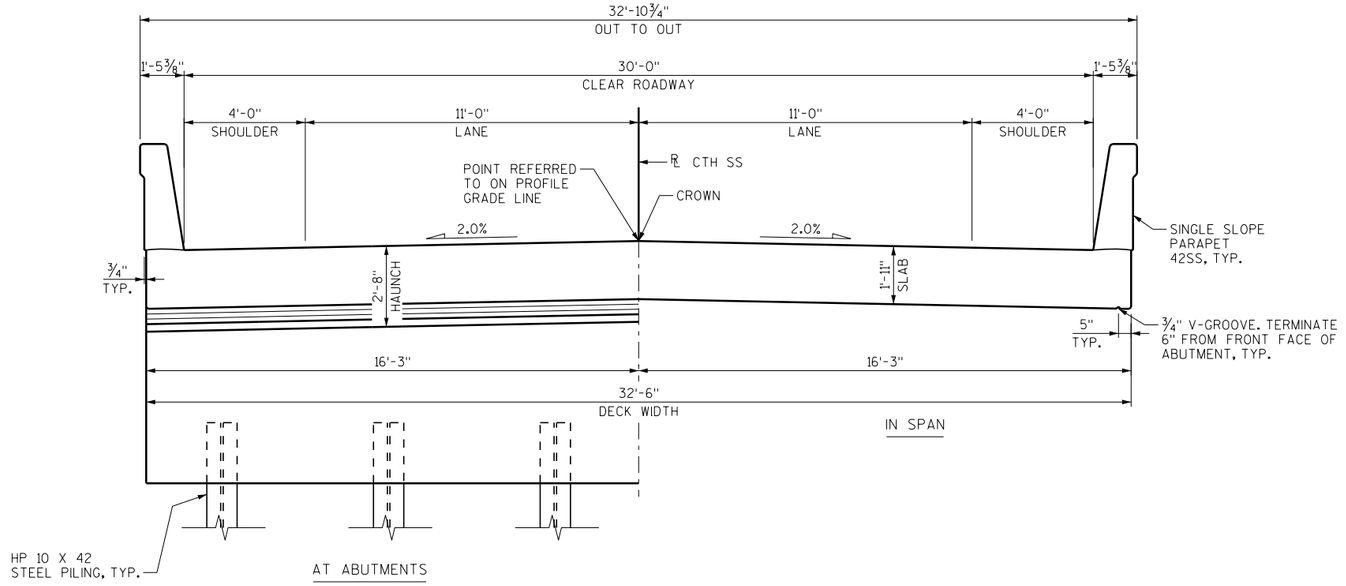
SHEET 1 OF 11
127

8

8

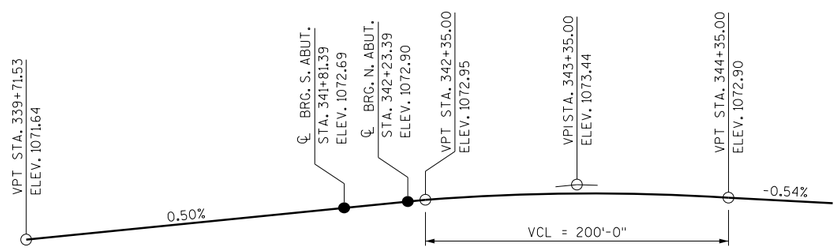
STATE PROJECT NUMBER

8953-04-72

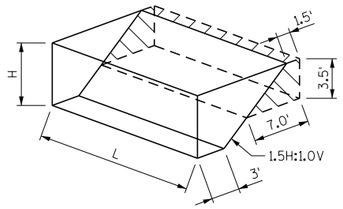


CROSS SECTION THRU BRIDGE

LOOKING NORTH



PROFILE GRADE LINE - CTH SS



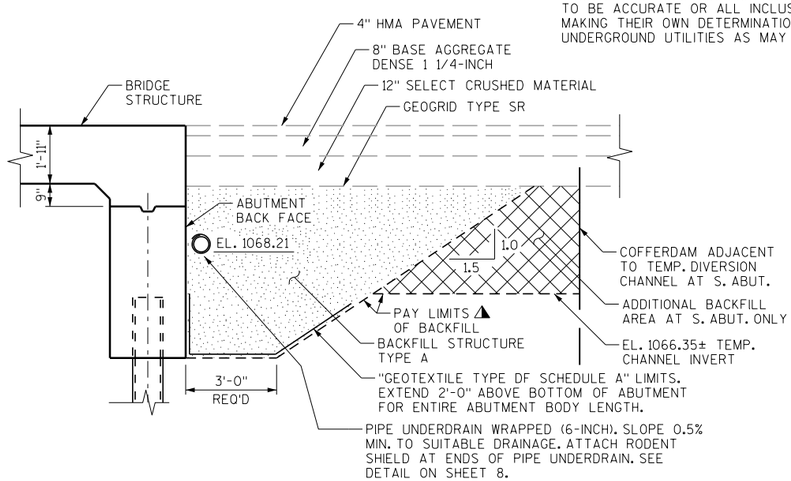
ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) AT N. ABUT.
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (L)(0.5)(7.0+1.5)(3.5) AT S. ABUT.
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S.ABUT	N.ABUT.	SUPER	TOTAL
203.0250.02	REMOVING OLD STRUCTURE OVER WATERWAY REMOVE DEBRIS B-9-397	LS	-	-	-	1
206.1000.02	EXCAVATION FOR STRUCTURES BRIDGES B-9-397	LS	-	-	-	1
206.5000	COFFERDAMS B-9-397	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	140	105	-	245
502.0100	CONCRETE MASONRY BRIDGES	CY	33	33	117	183
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	150	150
502.3210	PIGMENTED SURFACE SEALER	SY	10	10	44	64
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,950	1,950	-	3,900
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,060	2,030	23,430	27,520
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	10	-	20
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	360	360	-	720
606.0300	RIPRAP HEAVY	CY	65	65	-	130
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	100	-	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	2	-	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	44	44	-	88
645.0120	GEOTEXTILE TYPE HR	SY	135	140	-	275
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				1/2" & 3/4"
	NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1

ALL B-9-397 BID ITEMS ARE CATEGORY 0030



STRUCTURE BACKFILL DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NAVD 88 (2012). HORIZONTAL POSITIONS ARE WISCONSIN COUNTY COORDINATES, CHIPPEWA COUNTY, NAD 83 (2011).

THE EXISTING STRUCTURE IS A SINGLE SPAN CONCRETE FLAT SLAB STRUCTURE WITH AN OVERALL WIDTH OF 30'-3" AND AN END OF DECK TO END OF DECK LENGTH OF 23'-1". THE EXISTING STRUCTURE IS TO BE REMOVED.

EXISTING SUBSTRUCTURE LOCATIONS ARE BASED ON SURVEY INFORMATION. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO CONSTRUCT NEW SUBSTRUCTURES. COST OF REMOVAL IS INCIDENTAL TO THE "REMOVING OLD STRUCTURE OVER WATERWAY REMOVE DEBRIS B-9-397" BID ITEM.

THE UPPER LIMIT OF "EXCAVATION FOR STRUCTURES BRIDGES B-9-397" SHALL BE THE EXISTING GROUNDLINE.

COFFERDAM AND COFFERDAM DEWATERING REQUIRED. COFFERDAM SHALL BE DEWATERED PRIOR TO PLACING ABUTMENT CONCRETE. DEWATERING IS ALSO REQUIRED TO THE EXTENTS NECESSARY TO INSTALL SLAB FALSEWORK WITH WORKABLE FREEBOARD CLEARANCES.

FILL AND/OR EXCAVATE TO THE BOTTOM OF THE ABUTMENT ELEVATION PRIOR TO DRIVING PILES.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

⚠ 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.

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

A TEMPORARY DIVERSION CHANNEL IS REQUIRED TO MAINTAIN FLOW AROUND THE COFFERDAM DURING CONSTRUCTION. SEE ROADWAY PLANS FOR DETAILS.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENTS SHOWN ON SHEET 1. RIPRAP HEAVY SHALL BE PLACED PRIOR TO THE ERECTION OF FALSEWORK.

THE FIRST DIGIT OF A THREE DIGIT OR FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

PREFORMED FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II OR III OR M213.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE ENTIRE ROADWAY SURFACE OF THE BRIDGE DECK.

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ROADWAY FACE AND THE TOP OF THE CONCRETE PARAPETS.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-397

DRAWN BY VJD | PLANS CK'D. FKH

CROSS SECTION AND QUANTITIES

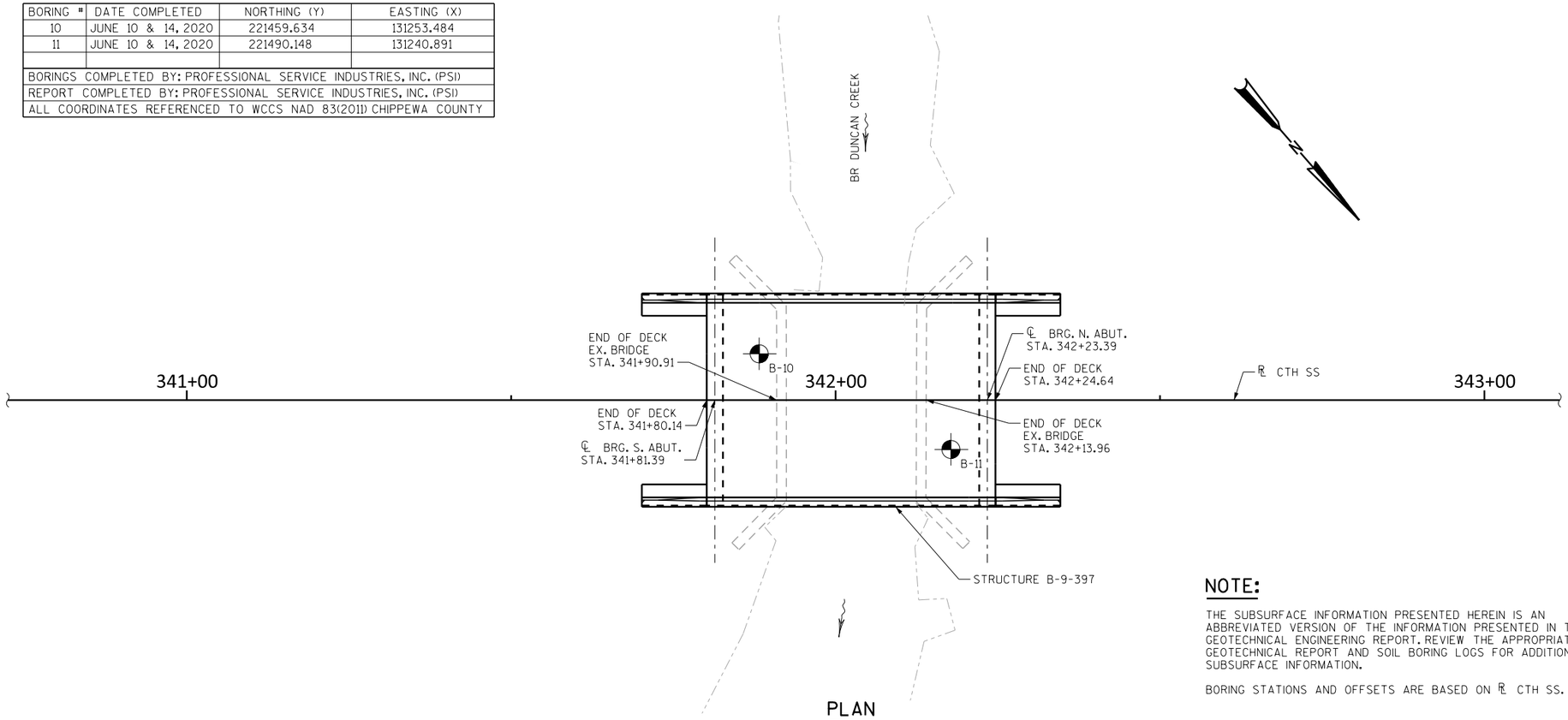
SHEET 2 OF 11
128

8

8

FILE NAME : X:\Projects\Chippewa\8953-04-02_CTH SS_83rd St to CTH Q\Structure\CAD\Sheets\B-09-0397 (North)\B09397_080102_xs.dgn PLOT DATE : 7/29/2021 4:32:10 PM PLOT BY : vdifrances PLOT SCALE : 5.0000 sf / in.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
10	JUNE 10 & 14, 2020	221459.634	131253.484
11	JUNE 10 & 14, 2020	221490.148	131240.891
BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI)			
REPORT COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI)			
ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) CHIPPEWA COUNTY			

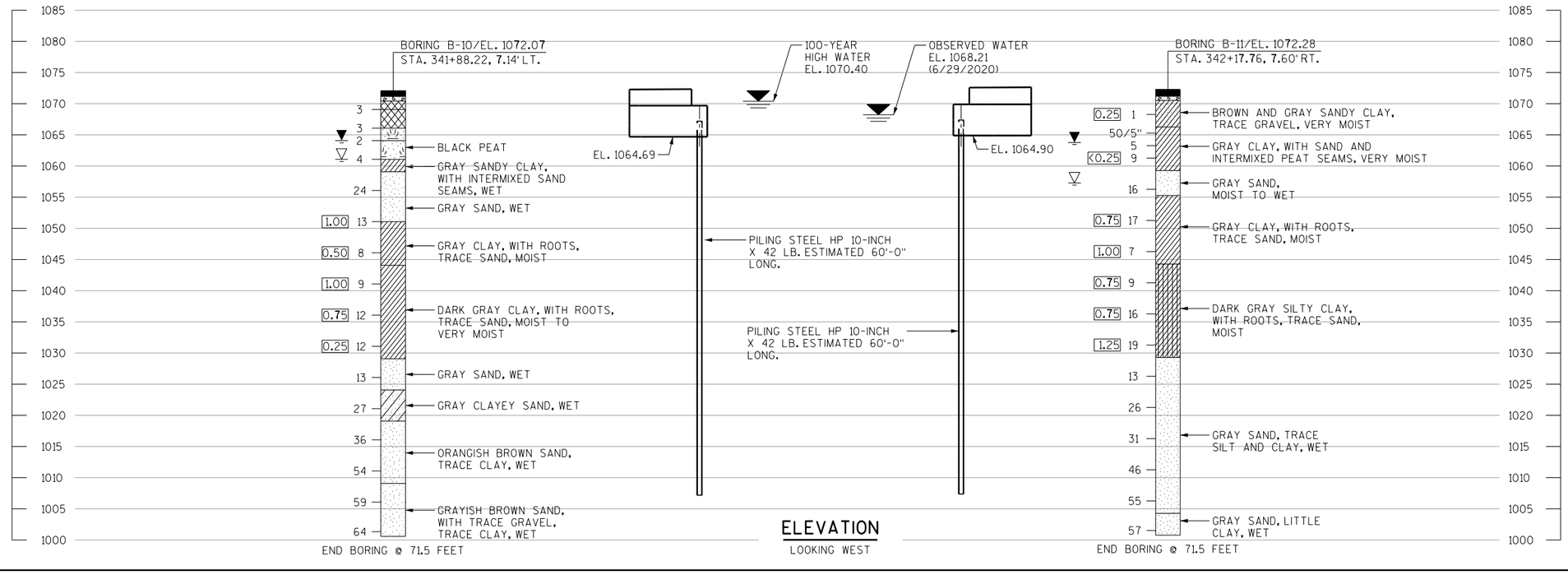


PLAN

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ CTH SS.



ELEVATION

LOOKING WEST

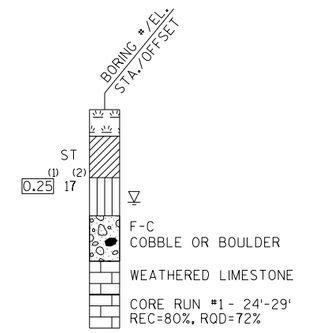
STATE PROJECT NUMBER

8953-04-72

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-397

DRAWN BY VJD | PLANS CK'D. FKH

SUBSURFACE EXPLORATION

SHEET 3 OF 11

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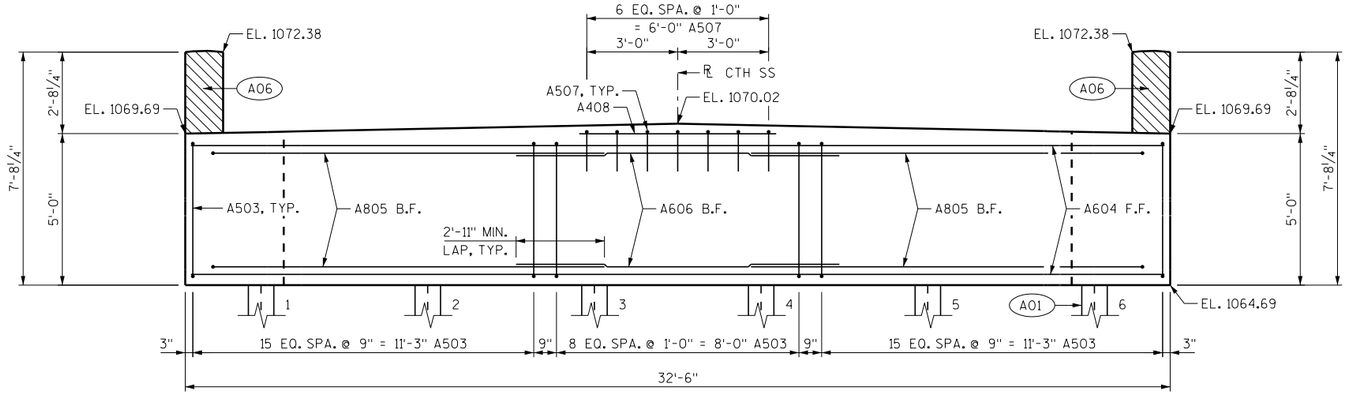
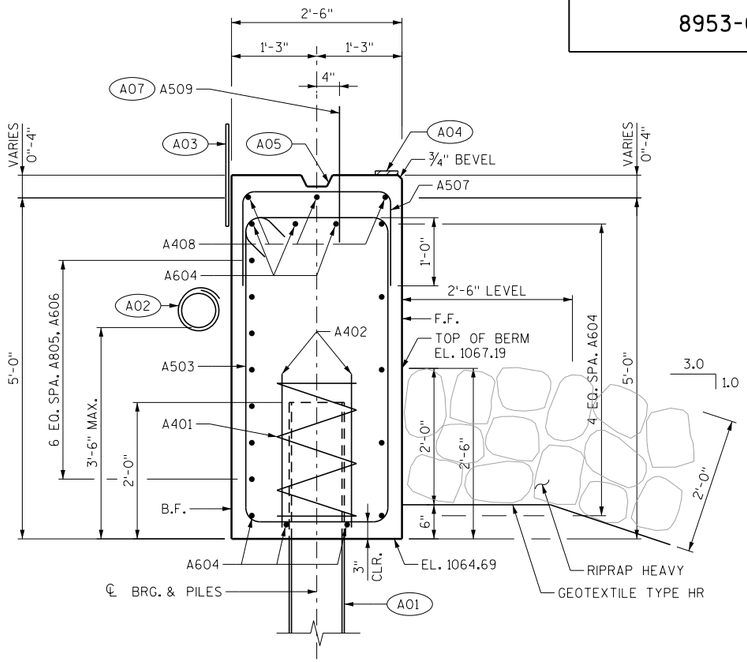
STATE PROJECT NUMBER

8953-04-72



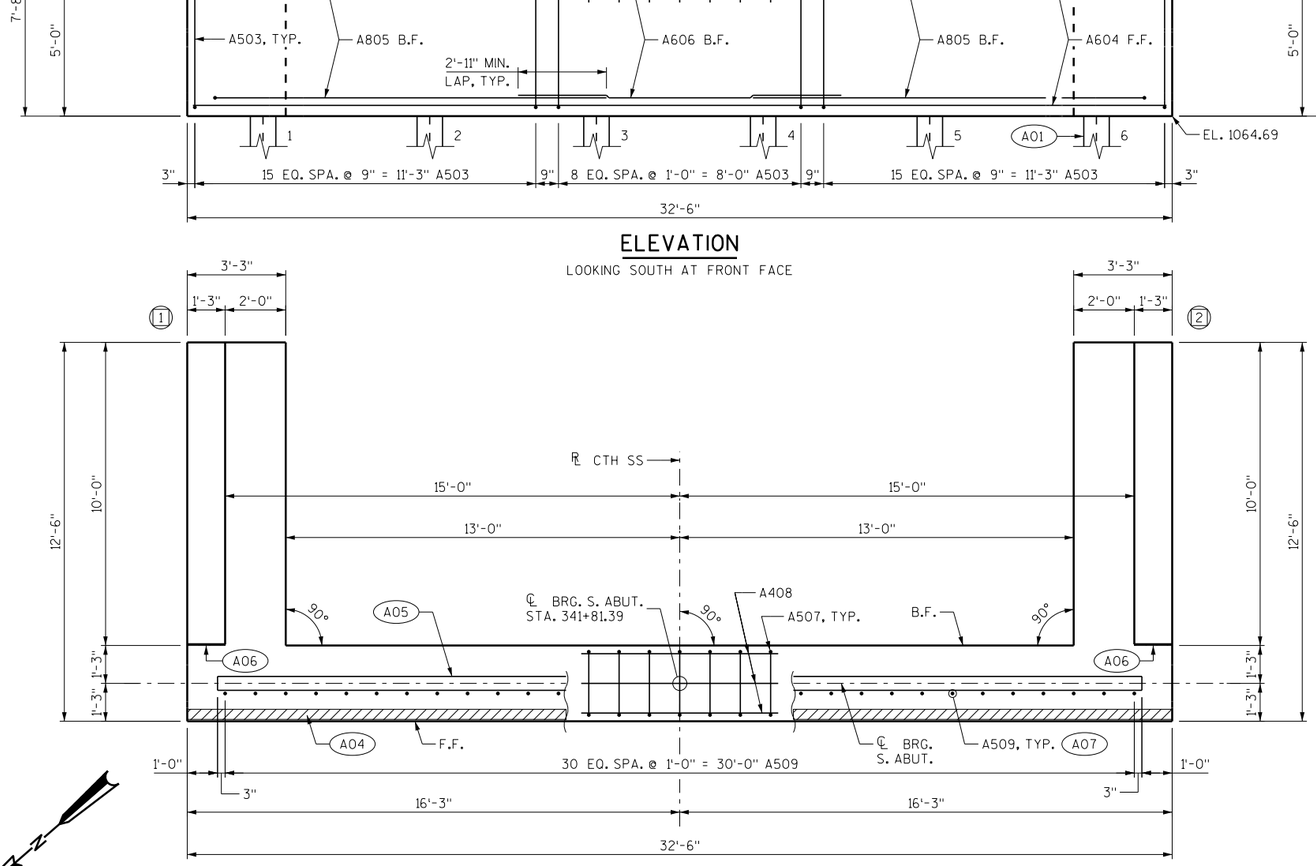
ELEVATION

LOOKING SOUTH AT FRONT FACE

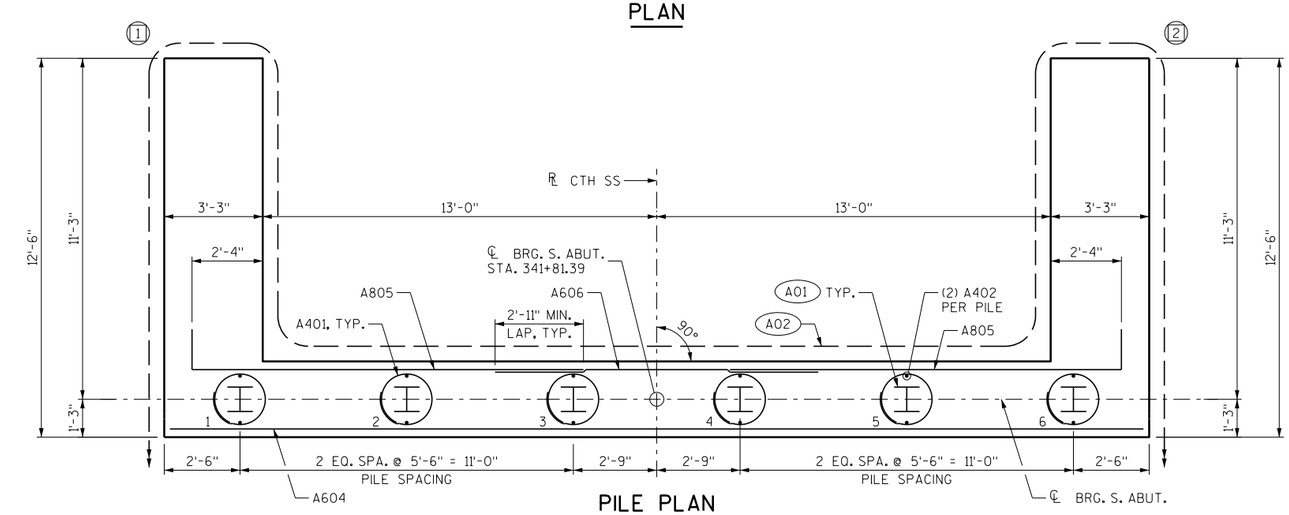


SECTION THRU BODY

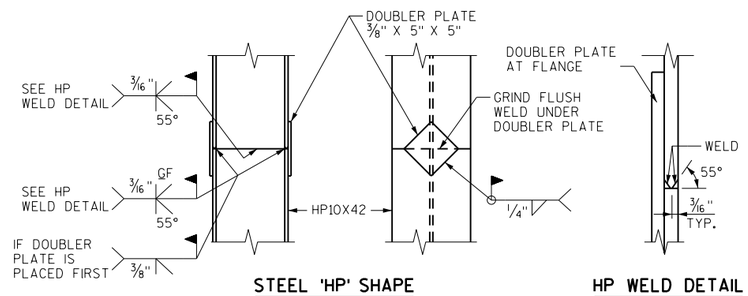
LOOKING WEST



PLAN



PILE PLAN



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10-INCH X 42 LB STEEL PILING. ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TON.
- (A02) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 8.
- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- (A04) ¾" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (A05) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".
- (A06) ½" FILLER. EXTEND FROM SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH.
- (A07) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".
- (X) INDICATES WINGWALL NUMBER.

F.F. = FRONT FACE B.F. = BACK FACE

NOTES

SEE SHEET 8 FOR SOUTH ABUTMENT BILL OF BARS.

SPACE A503 TO MISS PILE LOCATIONS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-397

DRAWN BY VJD | PLANS CK'D. FKH

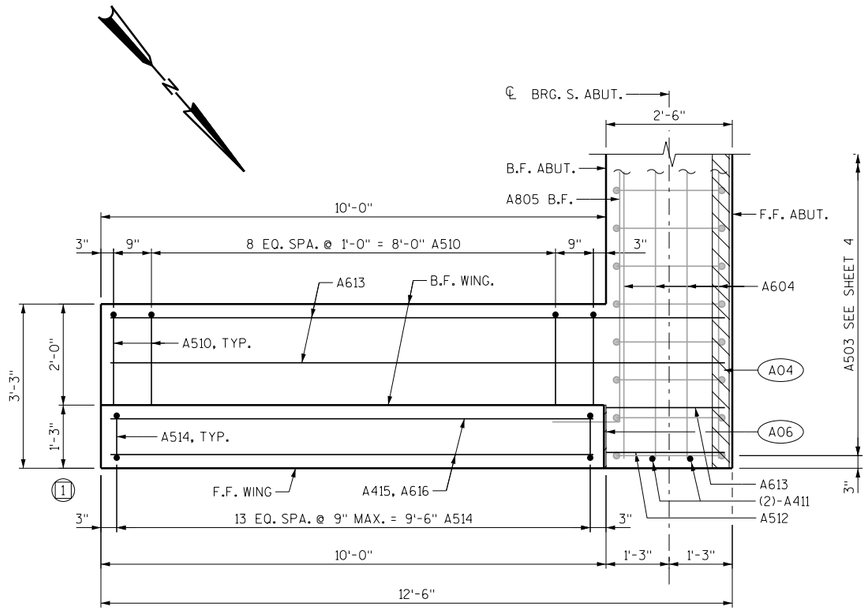
SOUTH ABUTMENT

SHEET 4 OF 11
130

8

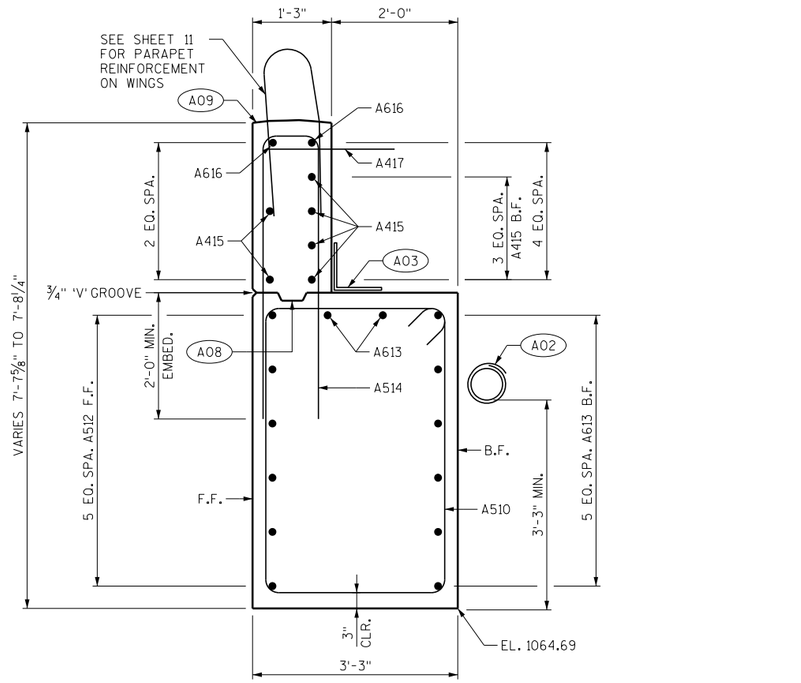
8

STATE PROJECT NUMBER
8953-04-72



WING PLAN

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY



SECTION THRU WING

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY

NOTES

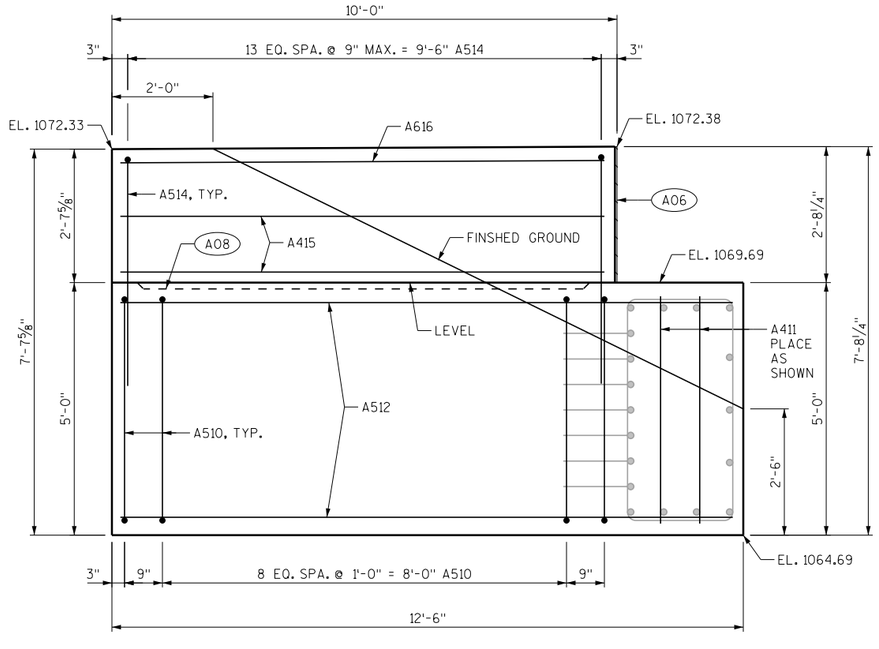
SEE SHEET 8 FOR SOUTH ABUTMENT BILL OF BARS.

SEE SHEET 8 FOR TYPICAL FILL SECTIONS AT WING TIPS.

SEE SHEET 11 FOR SECTIONS THRU PARAPET AND TRANSITION, AND FOR PARAPET REINFORCEMENT IN WING WALLS.

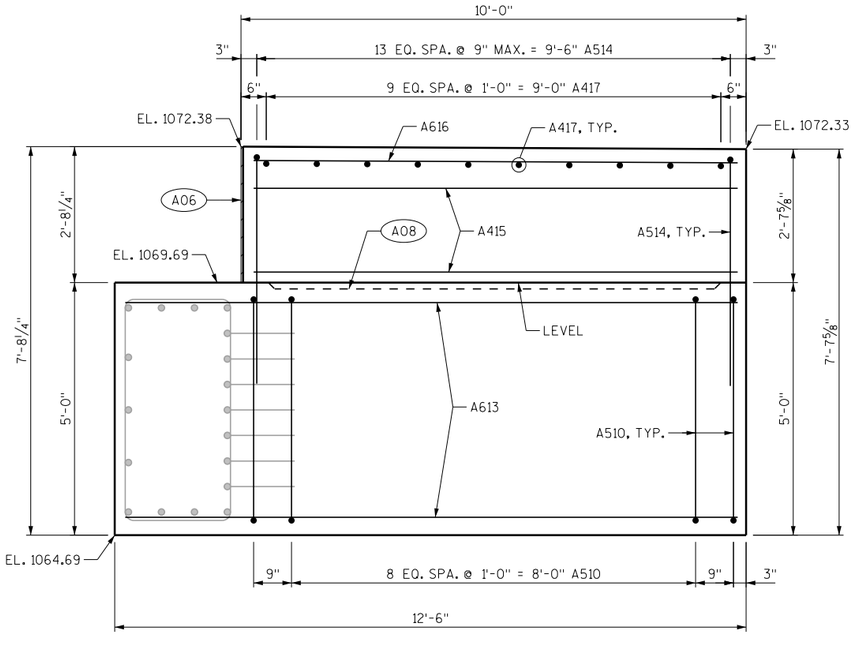
CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SHADED REINFORCEMENT SHOWN ON THIS SHEET IS DETAILED ON SHEET 4 FOR THE ABUTMENT BODY.



FRONT FACE WING ELEVATION

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE



BACK FACE WING ELEVATION

WING 1 SHOWN, WING 2 SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE

LEGEND

- (A02) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 8.
- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- (A04) ¾" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (A06) ½" FILLER. EXTEND FROM SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH.
- (A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- (A09) STRIKE OFF AS SHOWN AND LEAVE ROUGH. FINISH HORIZONTAL SURFACES NOT COVERED BY PARAPET.
- (X) INDICATES WING WALL NUMBER.
- F.F. = FRONT FACE
- B.F. = BACK FACE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-397

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SOUTH ABUTMENT DETAILS

SHEET 5 OF 11
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STATE PROJECT NUMBER

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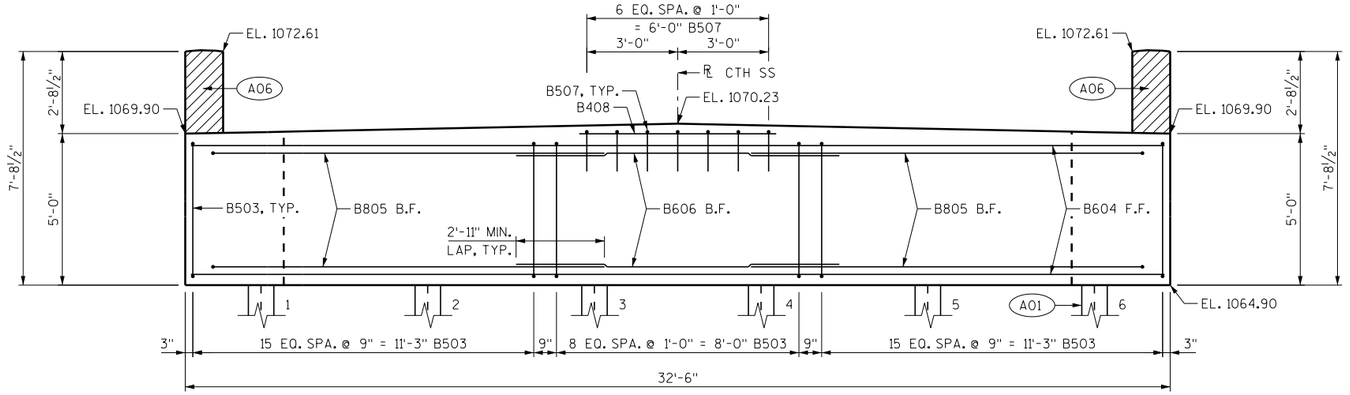
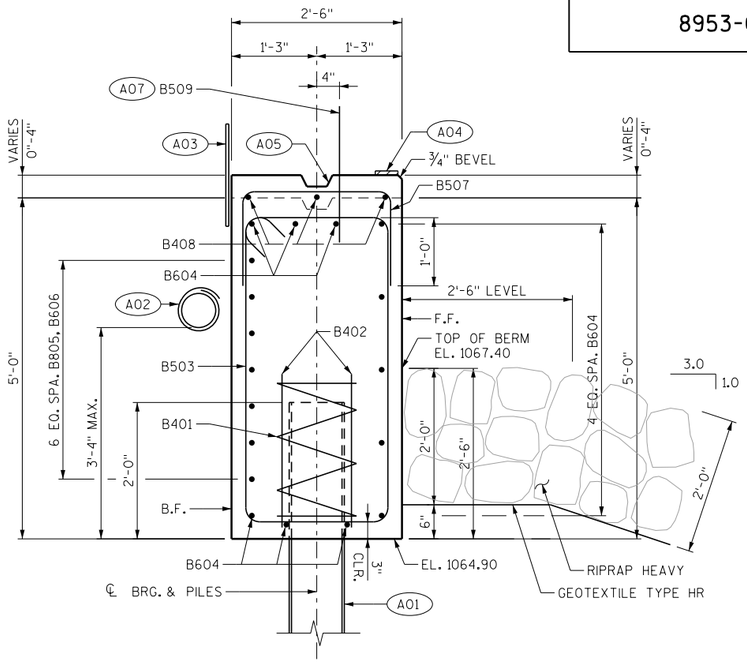


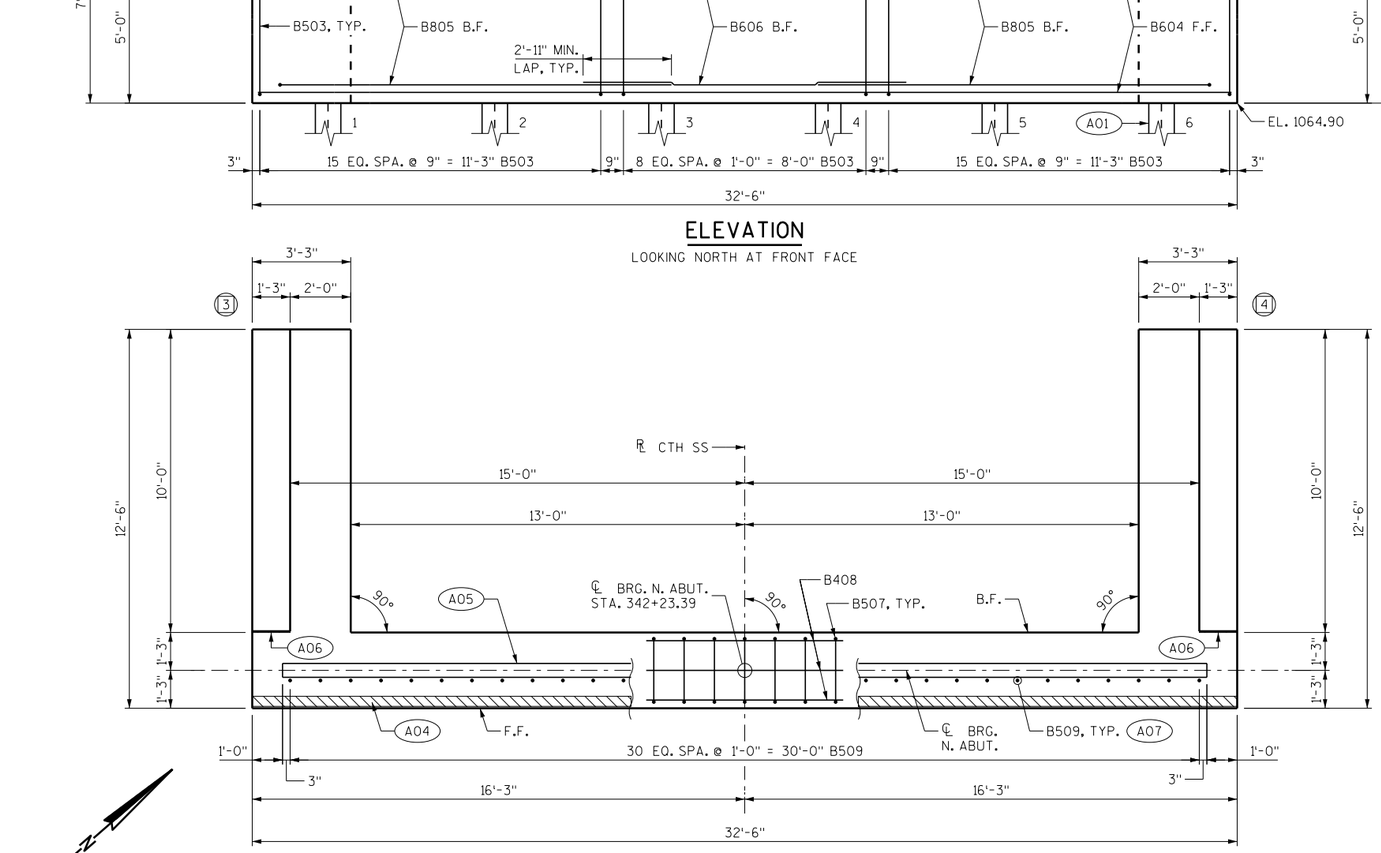
ELEVATION

LOOKING NORTH AT FRONT FACE

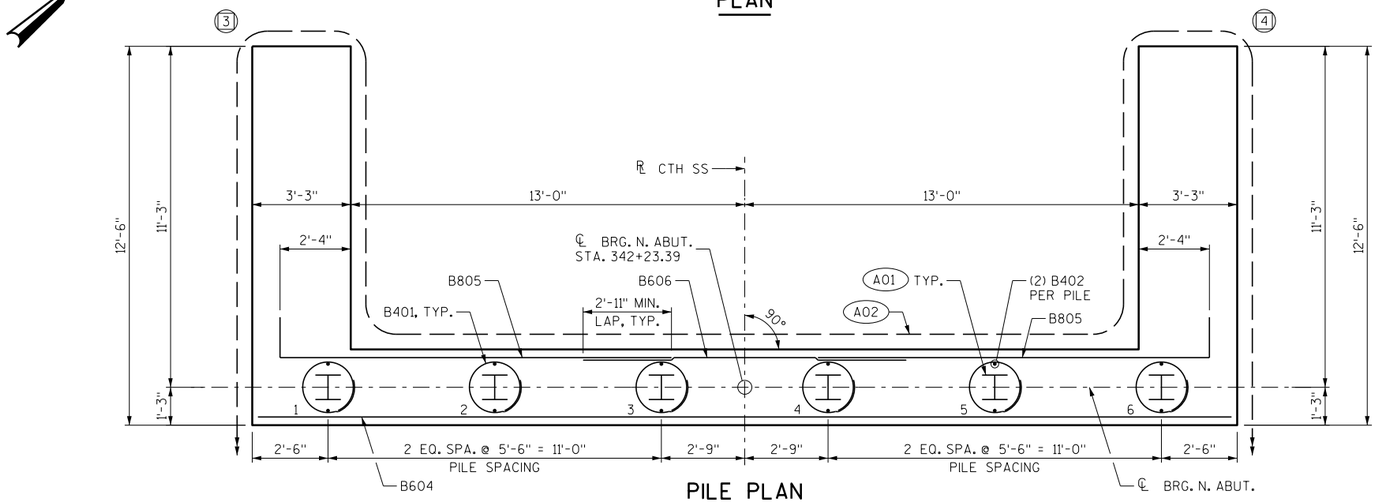


SECTION THRU BODY

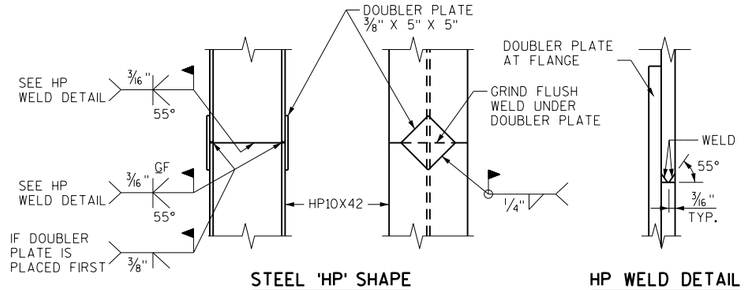
LOOKING EAST



PLAN



PILE PLAN



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10-INCH X 42 LB STEEL PILING. ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TON.
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- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- (A04) ¾" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (A05) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".
- (A06) ½" FILLER. EXTEND FROM SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH.
- (A07) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".
- (X) INDICATES WINGWALL NUMBER.

F.F. = FRONT FACE B.F. = BACK FACE

NOTES

SEE SHEET 8 FOR NORTH ABUTMENT BILL OF BARS.

SPACE B503 TO MISS PILE LOCATIONS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

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NORTH ABUTMENT

SHEET 6 OF 11
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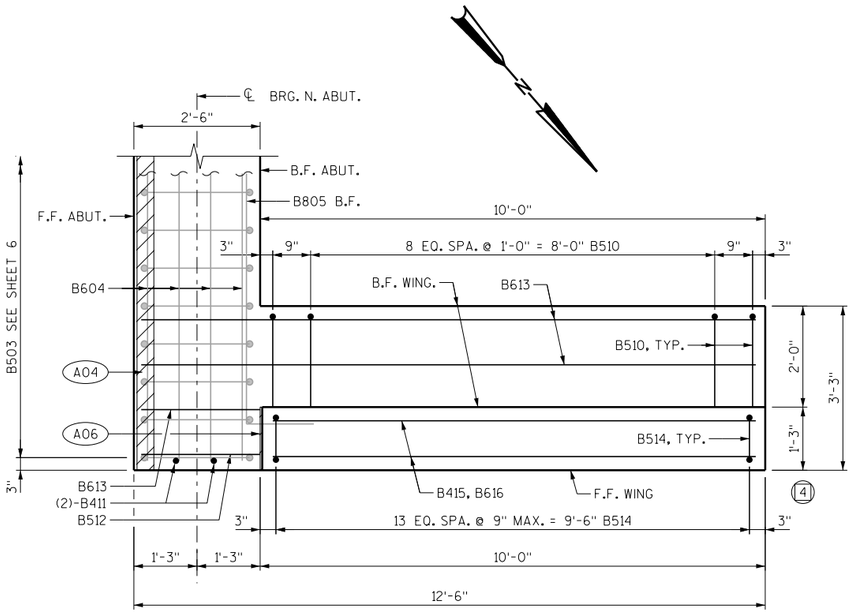
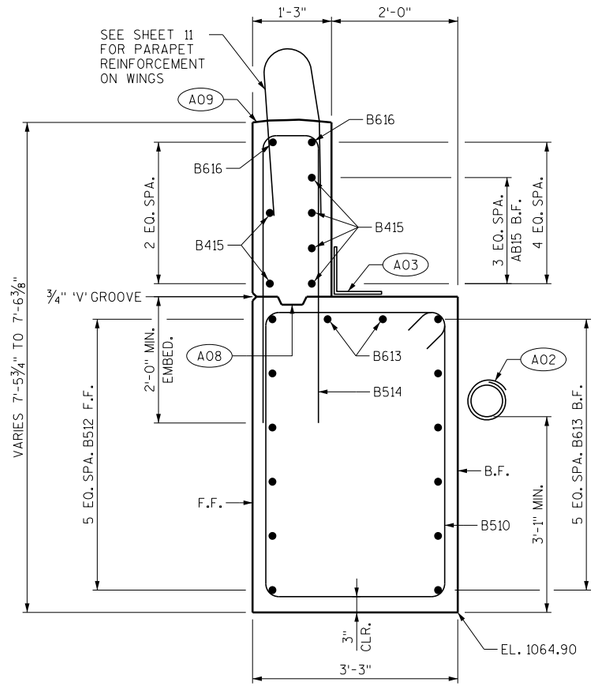


WING PLAN

WING 4 SHOWN, WING 3 SIMILAR
PARAPET NOT SHOWN FOR CLARITY



SECTION THRU WING

WING 4 SHOWN, WING 3 SIMILAR
PARAPET NOT SHOWN FOR CLARITY

NOTES

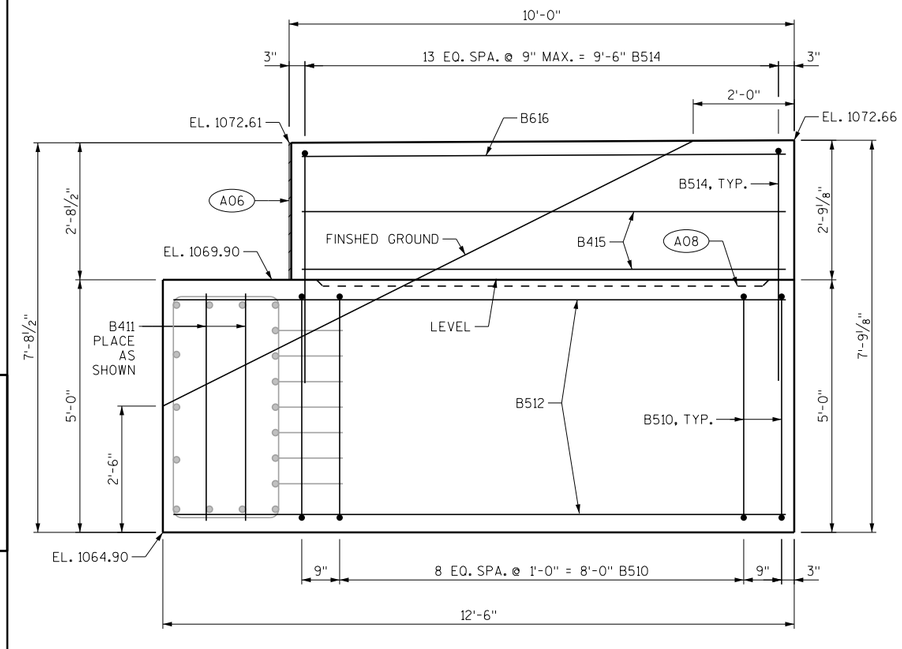
SEE SHEET 8 FOR NORTH ABUTMENT BILL OF BARS.

SEE SHEET 8 FOR TYPICAL FILL SECTIONS AT WING TIPS.

SEE SHEET 11 FOR SECTIONS THRU PARAPET AND TRANSITION, AND FOR PARAPET REINFORCEMENT IN WING WALLS.

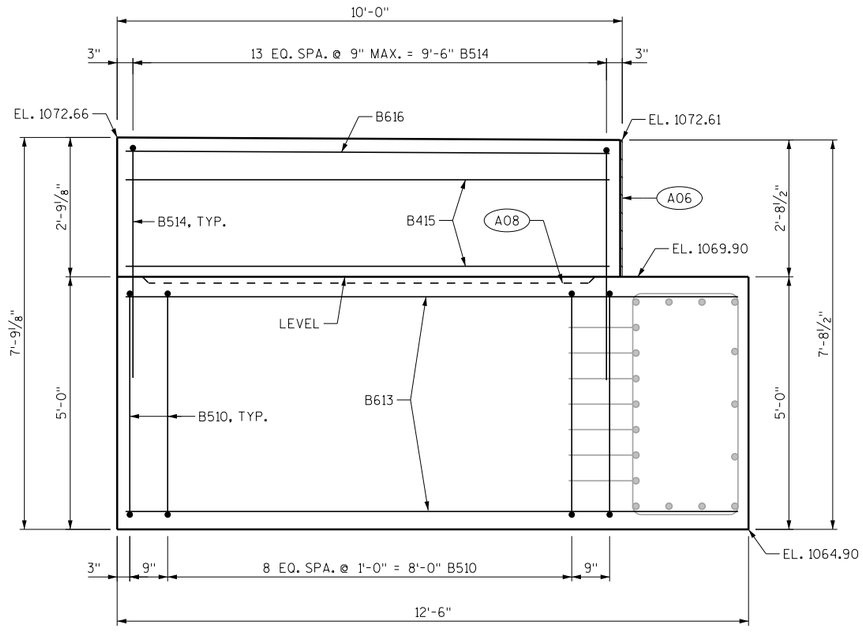
CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

SHADED REINFORCEMENT SHOWN ON THIS SHEET IS DETAILED ON SHEET 6 FOR THE ABUTMENT BODY.



FRONT FACE WING ELEVATION

WING 4 SHOWN, WING 3 SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE



BACK FACE WING ELEVATION

LOOKING EAST
WING 4 SHOWN, WING 3 SIMILAR
DIMENSIONS AND ELEVATIONS ARE AT FRONT FACE

LEGEND

- (A02) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON THIS SHEET 8.
- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- (A04) ¾" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (A06) ½" FILLER. EXTEND FROM SEAT TO TOP OF WING. FILLER INCLUDED IN WING LENGTH.
- (A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- (A09) STRIKE OFF AS SHOWN AND LEAVE ROUGH. FINISH HORIZONTAL SURFACES NOT COVERED BY PARAPET.
- (X) INDICATES WING WALL NUMBER.
- F.F. = FRONT FACE
- B.F. = BACK FACE

8

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NORTH ABUTMENT DETAILS

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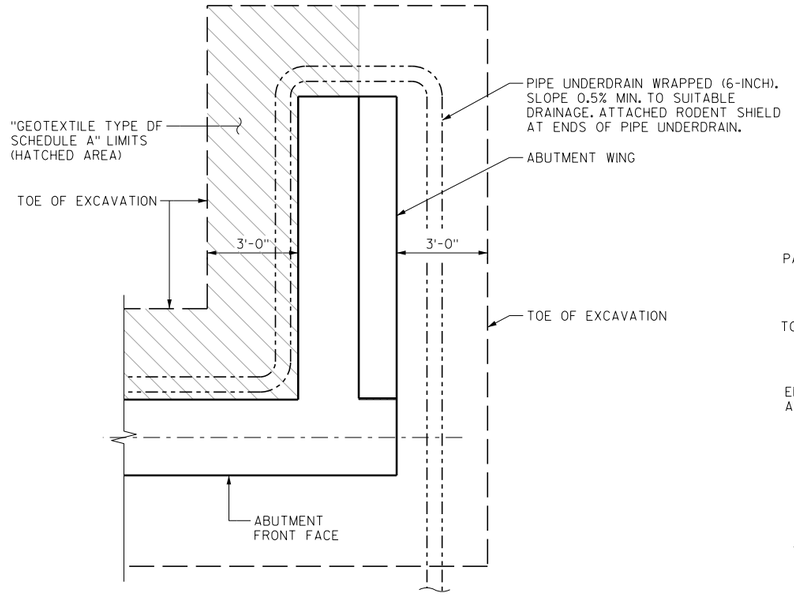
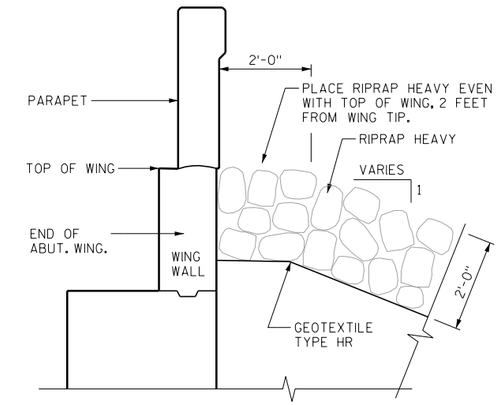
BILL OF BARS - SOUTH ABUTMENT						COATED: 1,330 LBS UNCOATED: 1,950 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401		6	28'-0"	X		PILES - 1 PER PILE
A402		12	2'-3"			PILES - 2 PER PILE
A503		41	13'-8"	X		BODY - STIRRUP
A604		11	32'-1"			BODY - HORIZ. - F.F. & B.F.
A805		14	14'-1"	X		BODY - HORIZ. - B.F.
A606		7	10'-9"			BODY - HORIZ. - B.F.
A507		7	5'-2"	X		BODY - VERT. - HIGH SEAT
A408		3	6'-6"			BODY - HORIZ. - HIGH SEAT
A509	X	31	2'-0"			BODY - VERT. - DOWELS
A510	X	22	15'-4"	X		WINGS - BODY - STIRRUP
A411	X	4	4'-6"			WINGS - BODY - VERT. - AT ABUT. ENDS
A512	X	12	12'-1"			WINGS - BODY - HORIZ. - F.F.
A613	X	16	12'-1"			WINGS - BODY - HORIZ. - B.F.
A514	X	28	9'-11"	X		WINGS - STEM - VERT.
A415	X	12	9'-7"			WINGS - STEM - HORIZ. - F.F. & B.F.
A616	X	4	9'-7"			WINGS - STEM - HORIZ. - TOP
A417	X	20	2'-0"			WINGS - STEM - DRAIN ANCHORS

BILL OF BARS - NORTH ABUTMENT						COATED: 1,300 LBS UNCOATED: 1,950 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B401		6	28'-0"	X		PILES - 1 PER PILE
B402		12	2'-3"			PILES - 2 PER PILE
B503		41	13'-8"	X		BODY - STIRRUP
B604		11	32'-1"			BODY - HORIZ. - F.F. & B.F.
B805		14	14'-1"	X		BODY - HORIZ. - B.F.
B606		7	10'-9"			BODY - HORIZ. - B.F.
B507		7	5'-2"	X		BODY - VERT. - HIGH SEAT
B408		3	6'-6"			BODY - HORIZ. - HIGH SEAT
B509	X	31	2'-0"			BODY - VERT. - DOWELS
B510	X	22	15'-4"	X		WINGS - BODY - STIRRUP
B411	X	4	4'-6"			WINGS - BODY - VERT. - AT ABUT. ENDS
B512	X	12	12'-1"			WINGS - BODY - HORIZ. - F.F.
B613	X	16	12'-1"			WINGS - BODY - HORIZ. - B.F.
B514	X	28	9'-11"	X		WINGS - STEM - VERT.
B415	X	12	9'-7"			WINGS - STEM - HORIZ. - F.F. & B.F.
B616	X	4	9'-7"			WINGS - STEM - HORIZ. - TOP

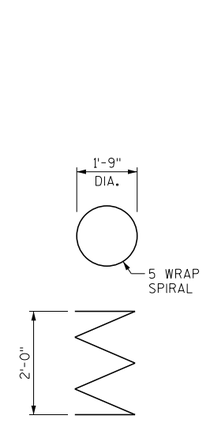


ABUTMENT PLAN WITH WING

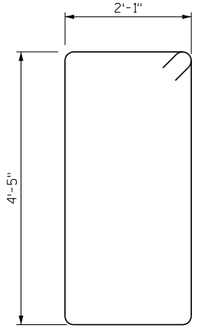


TYPICAL FILL SECTION AT WING TIPS

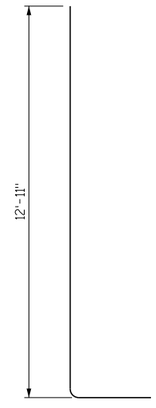
SEE GENERAL PLAN FOR FILL SLOPES BY LOCATION



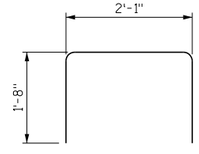
A401, B401



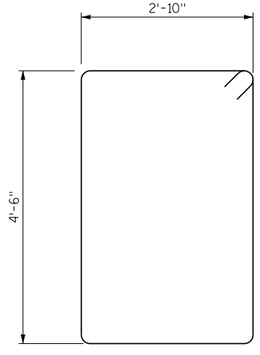
A503, B503



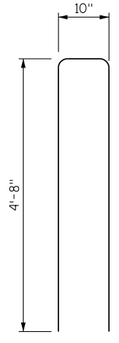
A805, B805



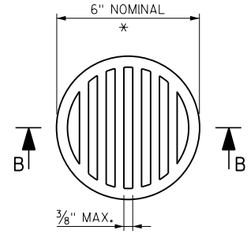
A507, B507

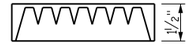


A510, B510



A514, B514





SECTION B-B

RODENT SHIELD DETAIL

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

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

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

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ABUTMENT BILL OF BARS

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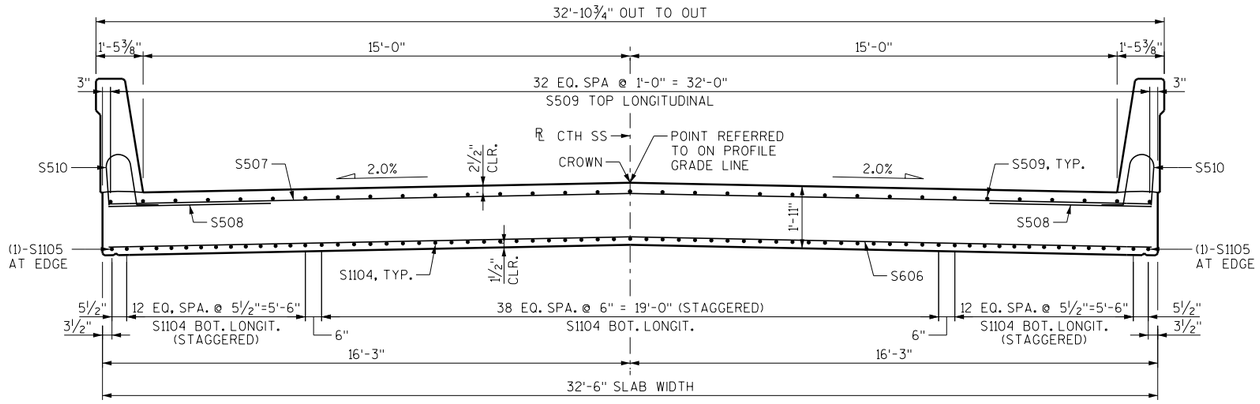
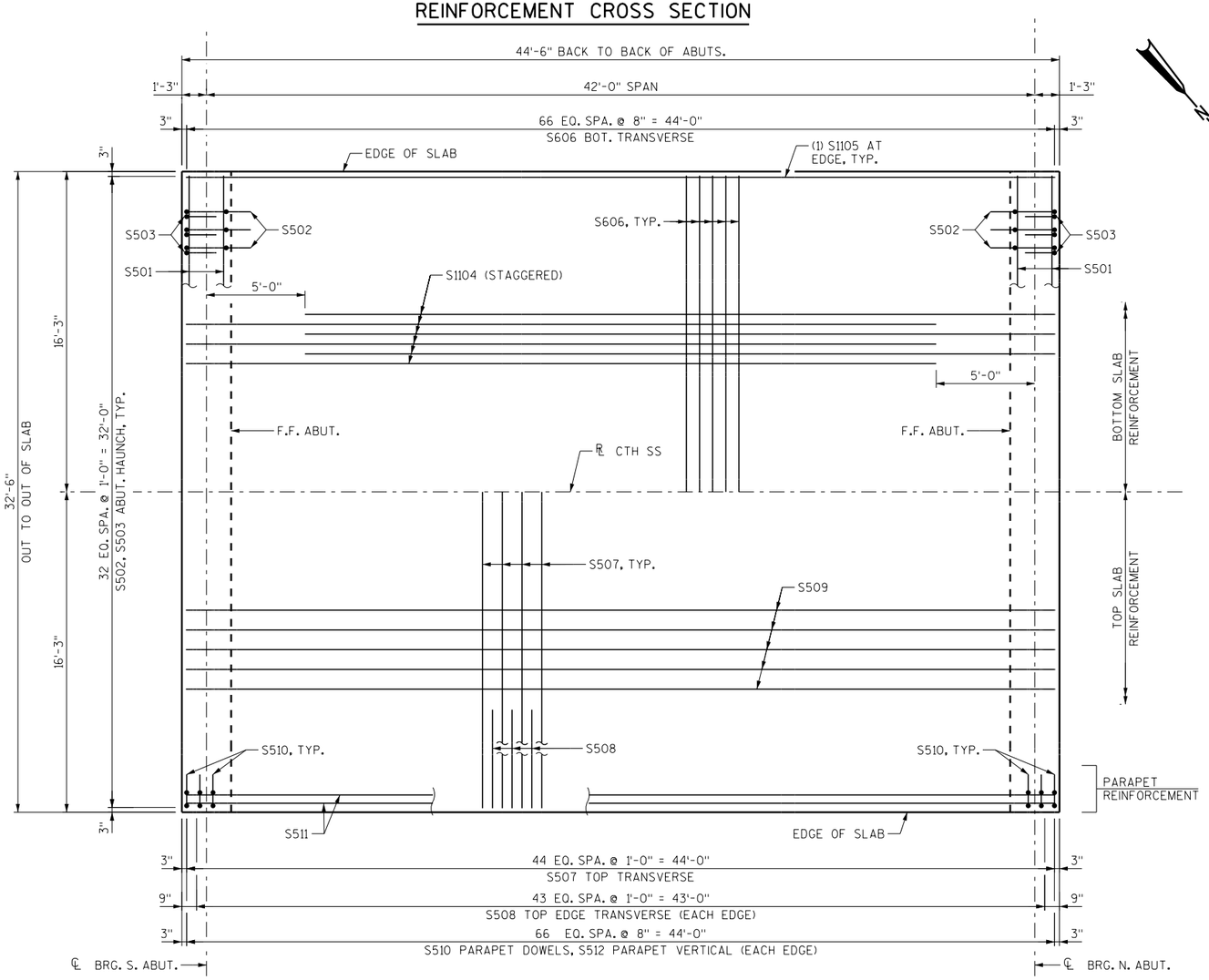
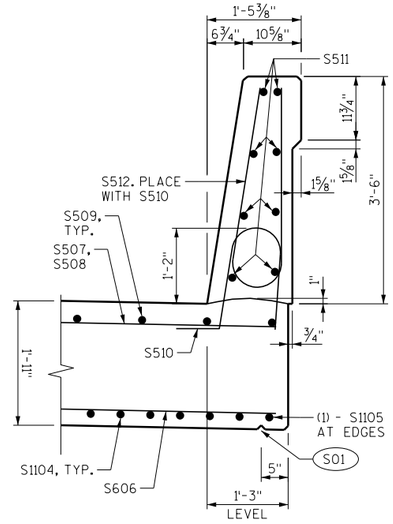


REINFORCEMENT CROSS SECTION

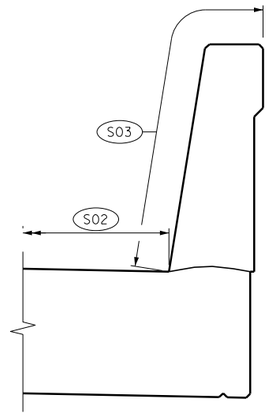


REINFORCEMENT PLAN

PARAPET NOT SHOWN FOR CLARITY



SECTION THRU PARAPET



SECTION THRU PARAPET

SHOWING LIMITS OF PIGMENTED SURFACE SEALER AND PROTECTIVE SURFACE TREATMENT

LEGEND

(S01) ¾" V-GROOVE REQ'D. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPH.

(S02) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE DECK SURFACE.

(S03) COAT WITH "PIGMENTED SURFACE SEALER" AS PER THE STANDARD SPECIFICATIONS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE AND TOP FACES OF PARAPET, INCLUDING PARAPETS ON WINGS.

NOTES

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

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

SEE SHEET 10 FOR LONGITUDINAL SECTION THRU SLAB AND ADDITIONAL SLAB REINFORCEMENT DETAILS.

FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 10.

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SUPERSTRUCTURE

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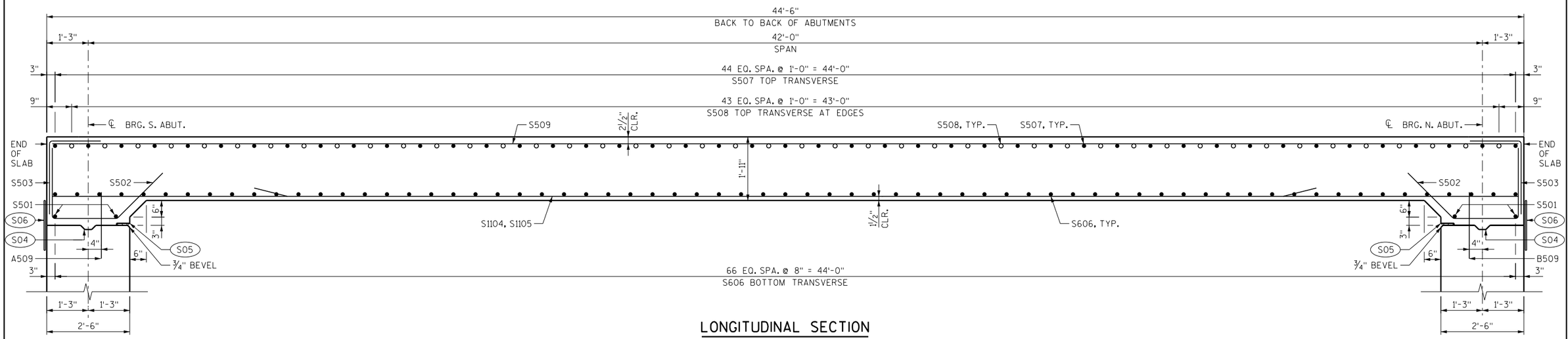


LONGITUDINAL SECTION

LOOKING WEST

BILL OF BARS - SUPERSTRUCTURE						COATED: 23,430 LBS UNCOATED: 0 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	4	32'-1"			ABUT. DIAPH. - HORIZ.
S502	X	66	6'-1"	X		ABUT. DIAPH. - VERT.
S503	X	66	3'-8"	X		ABUT. DIAPH. - VERT.
S1104	X	65	38'-1"			SLAB - BOTT. LONGIT.
S1105	X	2	44'-1"			SLAB - BOTT. LONGIT. - EDGE
S606	X	67	32'-1"			SLAB - BOTT. TRANS.
S507	X	45	32'-1"			SLAB - TOP TRANS.
S508	X	88	5'-0"			SLAB - TOP TRANS. - EDGE
S509	X	33	44'-1"			SLAB - TOP LONGIT.
S510	X	134	4'-5"	X		SLAB - PARAPET DOWELS
S511	X	16	44'-1"			PARAPET - HORIZ.
S512	X	134	6'-8"	X		PARAPET - VERT.

NOTES

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

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

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE TABLE ON THIS SHEET FOR "AS-BUILT" PLANS.

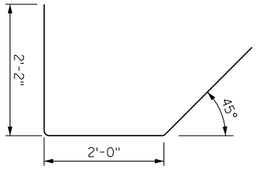
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

LEGEND

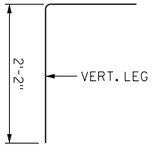
(S04) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".

(S05) 4" X ¾" PREFORMED JOINT FILLER. SEE ABUTMENT SHEETS FOR ADDITIONAL DETAILS.

(S06) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.



S502



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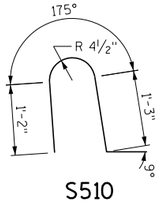
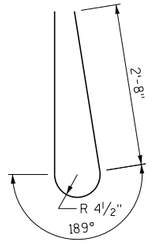


S510

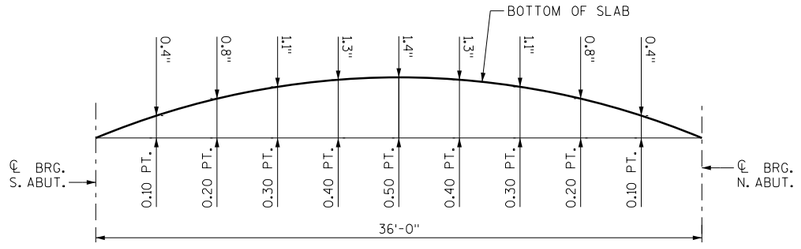


S512

LOCATION	CL BRG. S. ABUT.	0.10 PT	0.20 PT	0.30 PT	0.40 PT	0.50 PT	0.60 PT	0.70 PT	0.80 PT	0.90 PT	CL BRG. N. ABUT.
W. GUTTER LINE	1072.39	1072.41	1072.43	1072.45	1072.47	1072.49	1072.52	1072.54	1072.56	1072.58	1072.60
CROWN (REF. LINE)	1072.69	1072.71	1072.73	1072.75	1072.77	1072.79	1072.82	1072.84	1072.86	1072.88	1072.90
E. GUTTER LINE	1072.39	1072.41	1072.43	1072.45	1072.47	1072.49	1072.52	1072.54	1072.56	1072.58	1072.60

TOP OF DECK ELEVATIONS

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES FOR DEAD LOAD DEFLECTION AND FUTURE CREEP



CAMBER DIAGRAM

SEE NOTES

	S. ABUT.	0.50 PT	N. ABUT.
WEST GUTTER LINE			
CROWN			
EAST GUTTER LINE			

SURVEY TOP OF DECK ELEVATIONS

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SUPERSTRUCTURE DETAILS

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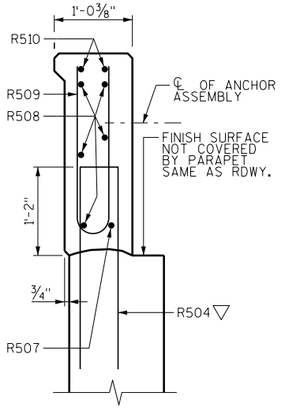
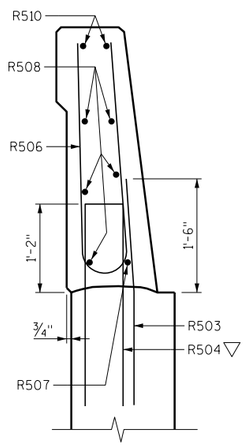
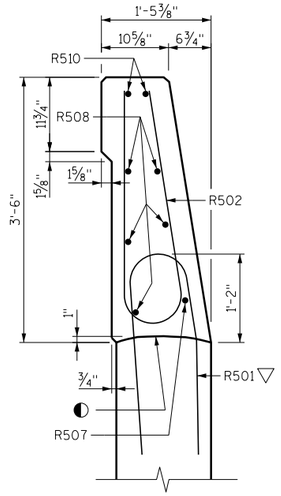


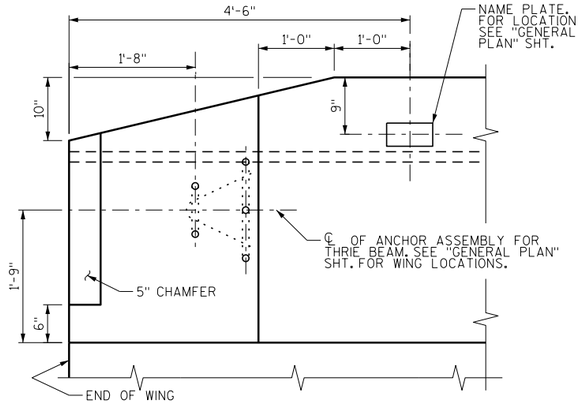
SECTION A-A



SECTION B-B

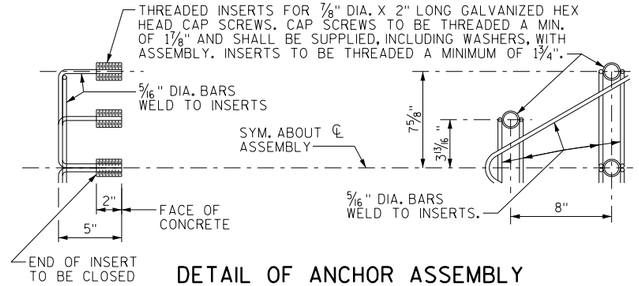


SECTION C-C



PARAPET END TREATMENT DETAIL

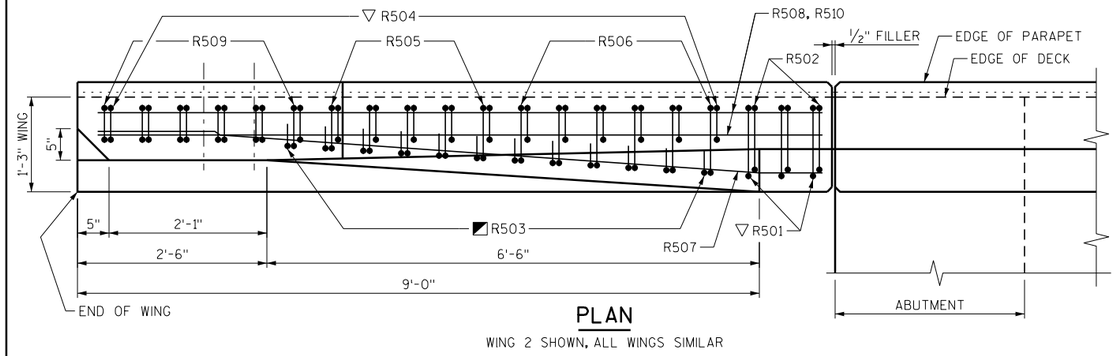
LOOKING AT INSIDE FACE OF PARAPET



DETAIL OF ANCHOR ASSEMBLY

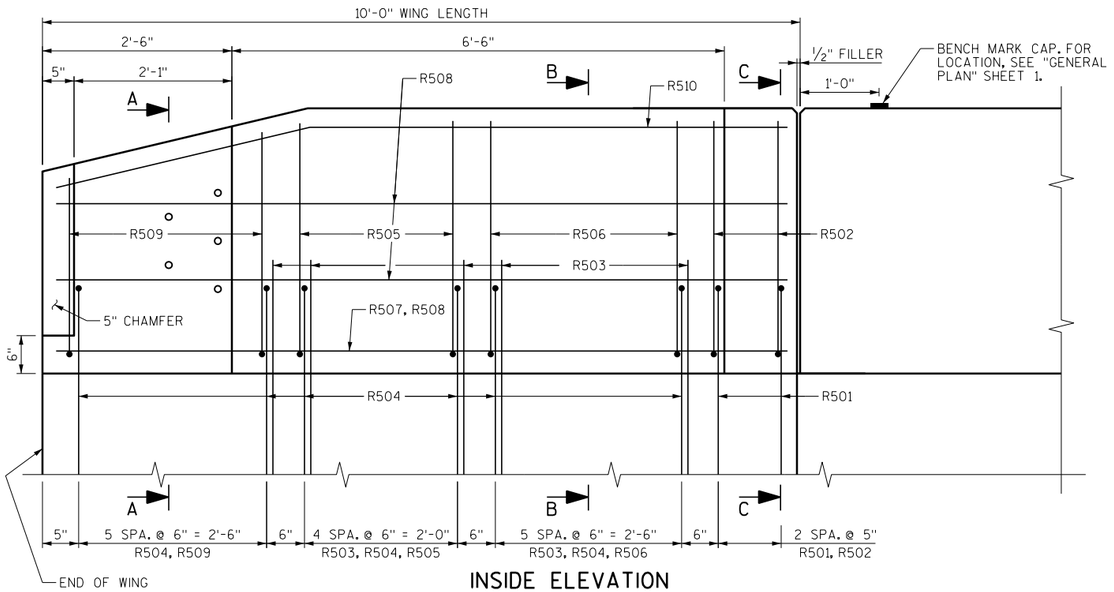
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASSHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



PLAN

WING 2 SHOWN, ALL WINGS SIMILAR



INSIDE ELEVATION

WING 2 SHOWN, ALL WINGS SIMILAR

BILL OF BARS - ABUTMENT PARAPETS

COATED (S. ABUT.)	730	LBS
COATED (N. ABUT.)	730	LBS

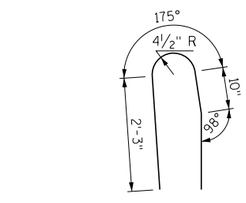
BAR MARK	COAT	S. ABUT. NO. REQD	N. ABUT. NO. REQD	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	5'-10"	X		PARAPET - VERTICAL
R502	X	6	6	6'-8"	X		PARAPET - VERTICAL
R503	X	24	24	3'-0"	X		PARAPET - VERTICAL
R504	X	34	34	5'-7"	X		PARAPET - VERTICAL
R505	X	10	10	6'-5"	X		PARAPET - VERTICAL
R506	X	12	12	6'-6"	X		PARAPET - VERTICAL
R507	X	2	2	9'-7"	X		PARAPET - HORIZ.
R508	X	10	10	9'-7"			PARAPET - HORIZ.
⚠ R509	X	12	12	5'-5"	X	X	PARAPET - VERTICAL
R510	X	4	4	9'-6"	X		PARAPET - HORIZ.

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

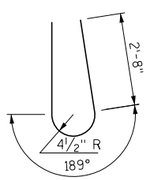
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

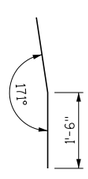
BUNDLE AND TAG EACH SERIES SEPARATELY.



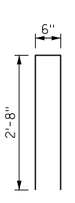
R501



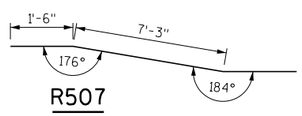
R502



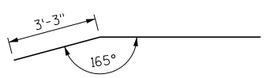
R503



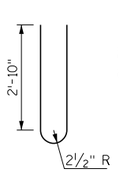
R504



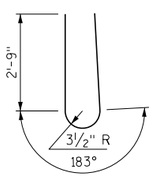
R507



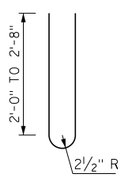
R510



R505



R506



R509

LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-397

DRAWN BY VJD | PLANS CK'D. FKH

SINGLE SLOPE PARAPET 42SS TRANSITION

SHEET 11 OF 11

137

8

8

DIVISION 1 - CTH SS

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
215+33	21533.00	0.00	22.54	0.00	0	0	0	0	0
215+50	21550.00	17.00	14.22	0.08	12	0	12	0	12
216+00	21600.00	50.00	16.10	0.00	28	0	40	0	40
216+50	21650.00	50.00	15.88	2.05	30	2	70	3	68
217+00	21700.00	50.00	17.94	1.56	31	3	101	6	95
217+50	21750.00	50.00	17.41	2.64	33	4	134	11	123
218+00	21800.00	50.00	17.37	2.66	32	5	166	18	149
218+50	21850.00	50.00	15.98	4.39	31	7	197	26	171
219+00	21900.00	50.00	14.36	17.38	28	20	225	51	174
219+50	21950.00	50.00	12.61	23.61	25	38	250	99	151
220+00	22000.00	50.00	11.87	19.81	23	40	273	149	124
220+50	22050.00	50.00	11.93	12.78	22	30	295	186	109
221+00	22100.00	50.00	12.91	7.64	23	19	318	210	108
221+50	22150.00	50.00	16.07	8.95	27	15	345	229	116
222+50	22250.00	100.00	11.95	0.34	52	17	397	250	147
223+00	22300.00	50.00	10.39	0.60	21	1	418	251	167
223+50	22350.00	50.00	10.68	0.92	20	1	438	253	186
224+00	22400.00	50.00	10.92	0.80	20	2	458	255	203
224+50	22450.00	50.00	10.97	0.34	20	1	478	256	222
225+00	22500.00	50.00	12.82	0.21	22	1	500	258	243
225+50	22550.00	50.00	14.96	0.12	26	0	526	258	269
226+00	22600.00	50.00	17.32	0.06	30	0	556	258	299
226+50	22650.00	50.00	14.12	0.21	29	0	585	258	328
227+50	22750.00	100.00	12.40	0.76	49	2	634	260	374
228+00	22800.00	50.00	13.48	0.73	24	1	658	261	397
228+50	22850.00	50.00	14.31	0.66	26	1	684	263	422
229+00	22900.00	50.00	16.38	0.57	28	1	712	264	448
229+50	22950.00	50.00	16.38	0.57	30	1	742	265	477
230+00	23000.00	50.00	15.30	0.67	29	1	771	266	505
230+50	23050.00	50.00	11.89	0.23	25	1	796	268	529
231+00	23100.00	50.00	10.82	1.33	21	1	817	269	548
232+00	23200.00	100.00	10.78	0.82	40	4	857	274	583
232+50	23250.00	50.00	10.76	0.67	20	1	877	275	602
233+00	23300.00	50.00	10.76	0.51	20	1	897	276	621
233+50	23350.00	50.00	11.93	0.59	21	1	918	278	641
234+00	23400.00	50.00	12.31	0.62	22	1	940	279	661
235+00	23500.00	100.00	14.18	0.27	49	2	989	281	708
235+50	23550.00	50.00	10.69	0.65	23	1	1,012	283	730
236+00	23600.00	50.00	10.05	1.65	19	2	1,031	285	746
236+50	23650.00	50.00	11.23	0.60	20	2	1,051	288	764
237+00	23700.00	50.00	28.45	0.23	37	1	1,088	289	799
237+50	23750.00	50.00	28.94	0.82	53	1	1,141	290	851
238+00	23800.00	50.00	33.78	12.49	58	12	1,199	305	894
238+50	23850.00	50.00	15.79	2.50	46	14	1,245	323	923
239+00	23900.00	50.00	29.53	40.55	42	40	1,287	373	915
239+50	23950.00	50.00	32.14	29.13	57	65	1,344	454	890
240+00	24000.00	50.00	26.67	20.44	54	46	1,398	511	887
240+50	24050.00	50.00	23.31	26.09	46	43	1,444	565	879
241+50	24150.00	100.00	22.92	14.72	86	76	1,530	660	870
242+00	24200.00	50.00	24.87	4.65	44	18	1,574	683	892
242+50	24250.00	50.00	28.34	6.68	49	10	1,623	695	928
243+00	24300.00	50.00	31.48	8.99	55	15	1,678	714	964
243+50	24350.00	50.00	13.20	7.34	41	15	1,719	733	987

DIVISION 1 - CTH SS (Continued)

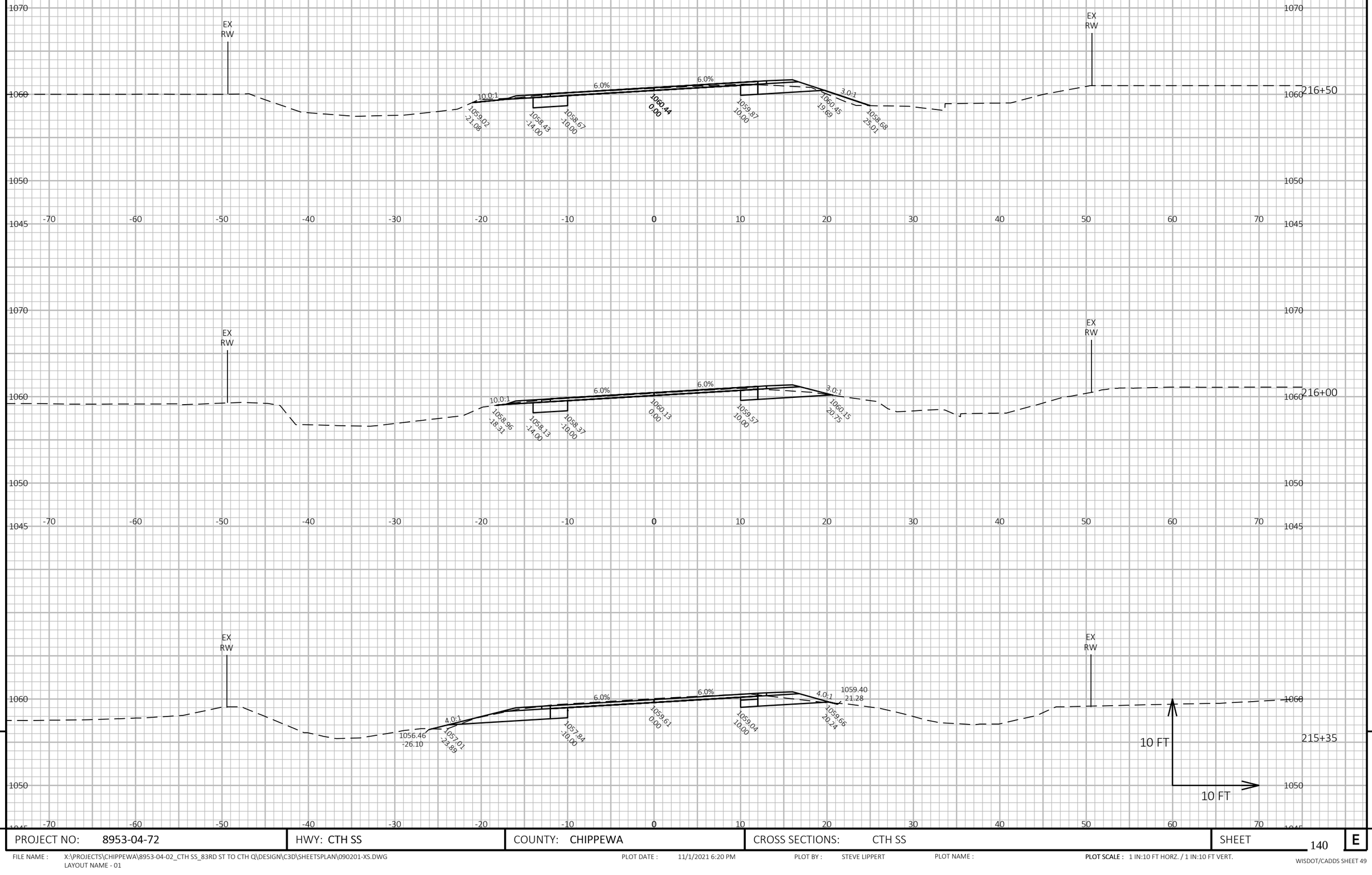
STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
245+00	24500.00	150.00	14.64	0.00	77	20	1,796	758	1,039
245+50	24550.00	50.00	14.79	0.00	27	0	1,823	758	1,066
246+00	24600.00	50.00	14.89	0.00	27	0	1,850	758	1,093
247+00	24700.00	100.00	16.05	0.00	57	0	1,907	758	1,150
247+50	24750.00	50.00	17.28	0.00	31	0	1,938	758	1,181
248+00	24800.00	50.00	18.31	0.00	33	0	1,971	758	1,214
248+50	24850.00	50.00	23.34	0.00	39	0	2,010	758	1,253
249+00	24900.00	50.00	17.83	0.15	38	0	2,048	758	1,291
250+00	25000.00	100.00	11.01	0.40	53	1	2,101	759	1,342
250+50	25050.00	50.00	10.52	0.90	20	1	2,121	760	1,361
251+00	25100.00	50.00	10.34	1.39	19	2	2,140	763	1,378
252+00	25200.00	100.00	9.87	17.53	37	35	2,177	806	1,371
252+50	25250.00	50.00	9.56	24.15	18	39	2,195	855	1,340
253+50	25350.00	100.00	9.79	2.22	36	49	2,231	916	1,315
254+00	25400.00	50.00	10.02	1.81	18	4	2,249	921	1,328
255+00	25500.00	100.00	10.42	1.36	38	6	2,287	929	1,358
255+50	25550.00	50.00	10.40	1.46	19	3	2,306	933	1,374
256+50	25650.00	100.00	10.48	1.71	39	6	2,345	940	1,405
257+00	25700.00	50.00	10.61	1.63	20	3	2,365	944	1,421
258+00	25800.00	100.00	10.88	0.63	40	4	2,405	949	1,456
258+50	25850.00	50.00	11.03	0.19	20	1	2,425	950	1,475
259+00	25900.00	50.00	11.10	0.09	20	0	2,445	950	1,495
259+50	25950.00	50.00	10.78	0.27	20	0	2,465	950	1,515
260+00	26000.00	50.00	10.58	0.66	20	1	2,485	951	1,534
261+00	26100.00	100.00	10.32	1.80	39	5	2,524	958	1,567
261+50	26150.00	50.00	10.31	2.02	19	4	2,543	963	1,581
262+00	26200.00	50.00	10.31	2.08	19	4	2,562	968	1,595
262+50	26250.00	50.00	10.25	2.29	19	4	2,581	973	1,609
263+00	26300.00	50.00	10.31	2.35	19	4	2,600	978	1,623
264+00	26400.00	100.00	10.73	1.78	39	8	2,639	988	1,652
264+50	26450.00	50.00	10.93	1.45	20	3	2,659	991	1,668
265+00	26500.00	50.00	11.04	1.02	20	2	2,679	994	1,685
265+50	26550.00	50.00	11.36	0.39	21	1	2,700	995	1,705
266+00	26600.00	50.00	11.33	0.67	21	1	2,721	996	1,725
267+00	26700.00	100.00	11.55	0.08	42	1	2,763	998	1,766
267+50	26750.00	50.00	13.61	0.12	23	0	2,786	998	1,789
268+00	26800.00	50.00	13.49	0.17	25	0	2,811	998	1,814
268+50	26850.00	50.00	13.37	0.19	25	0	2,836	998	1,839
269+00	26900.00	50.00	13.24	0.21	25	0	2,861	998	1,864
270+00	27000.00	100.00	13.31	0.21	49	1	2,910	999	1,911
270+50	27050.00	50.00	13.73	0.15	25	0	2,935	999	1,936
271+00	27100.00	50.00	14.18	0.06	26	0	2,961	999	1,962
271+50	27150.00	50.00	14.71	0.00	27	0	2,988	999	1,989
272+00	27200.00	50.00	13.13	0.09	26	0	3,014	999	2,015
273+00	27300.00	100.00	9.76	0.93	42	2	3,056	1,001	2,055
273+50	27350.00	50.00	9.13	1.94	17	3	3,073	1,005	2,068
274+00	27400.00	50.00	9.39	1.68	17	3	3,090	1,009	2,081
274+50	27450.00	50.00	9.93	1.15	18	3	3,108	1,013	2,096
275+00	27500.00	50.00	10.43	0.71	19	2	3,127	1,015	2,112
276+00	27600.00	100.00	11.44	0.19	40	2	3,167	1,018	2,150
276+50	27650.00	50.00	11.26	0.18	21	0	3,188	1,018	2,171
277+00	27700.00	50.00	12.56	0.21	22	0	3,210	1,018	2,193

DIVISION 1 - CTH SS (Continued)

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
278+00	27800.00	100.00	12.43	0.24	46	1	3,256	1,019	2,237
278+50	27850.00	50.00	10.21	0.10	21	0	3,277	1,019	2,258
279+00	27900.00	50.00	11.53	0.16	20	0	3,297	1,019	2,278
279+50	27950.00	50.00	11.89	0.15	22	0	3,319	1,019	2,300
280+00	28000.00	50.00	12.04	0.02	22	0	3,341	1,019	2,322
280+50	28050.00	50.00	9.62	0.13	20	0	3,361	1,019	2,342
281+00	28100.00	50.00	9.14	1.78	17	2	3,378	1,021	2,357
281+50	28150.00	50.00	9.04	2.19	17	4	3,395	1,026	2,369
282+00	28200.00	50.00	9.43	1.74	17	4	3,412	1,031	2,381
282+55	28255.00	55.00	24.65	0.00	35	2	3,447	1,034	2,413
Trench Relief (46)					90	0	3,537	1,034	2,503
75th Trench					65	0	3,537	1,034	2,568
Culvert Pipe Transition					479	0	4,015	1,034	3,046
Sub Total							4,015	1,034	3,046
339+25	33925.00	0.00	29.85	10.93	0	0	4,015	1,034	3,046
339+50	33950.00	25.00	28.92	9.36	27	9	4,042	1,045	3,062
340+00	34000.00	50.00	29.99	13.59	55	21	4,097	1,071	3,091
340+50	34050.00	50.00	31.86	18.06	57	29	4,154	1,108	3,112
341+00	34100.00	50.00	34.66	15.96	62	31	4,216	1,146	3,135
341+50	34150.00	50.00	34.66	18.28	64	32	4,280	1,186	3,159
342+50	34250.00	100.00	36.97	27.41	133	85	4,413	1,293	3,186
343+00	34300.00	50.00	40.04	24.03	71	48	4,484	1,353	3,197
343+50	34350.00	50.00	39.10	24.73	73	45	4,557	1,409	3,213
344+00	34400.00	50.00	37.25	24.16	71	45	4,628	1,465	3,228
344+50	34450.00	50.00	35.99	20.03	68	41	4,696	1,516	3,245
345+00	34500.00	50.00	35.31	10.81	66	29	4,762	1,553	3,275
345+35	34535.00	35.00	21.52	4.79	37	10	4,799	1,565	3,299
Sub Total							4,799	1,565	3,299
361+00	36100.00	0.00	2.66	5.64	0	0	4,799	1,565	3,299
361+50	36150.00	50.00	3.02	1.62	5	7	4,804	1,574	3,295
362+00	36200.00	50.00	1.43	4.35	4	6	4,808	1,581	3,292
362+50	36250.00	50.00	0.54	8.81	2	12	4,810	1,596	3,279
363+00	36300.00	50.00	0.25	11.85	1	19	4,811	1,620	3,256
363+50	36350.00	50.00	0.40	10.12	1	20	4,812	1,645	3,232
364+00	36400.00	50.00	0.73	8.88	1	18	4,813	1,668	3,211
364+50	36450.00	50.00	0.49	8.85	1	16	4,814	1,688	3,192
365+00	36500.00	50.00	0.83	8.12	1	16	4,815	1,708	3,173
365+50	36550.00	50.00	1.27	3.79	2	11	4,817	1,721	3,161
366+00	36600.00	50.00	2.09	1.85	3	5	4,820	1,728	3,158
366+50	36650.00	50.00	2.37	1.90	4	3	4,824	1,731	3,158
367+00	36700.00	50.00	2.44	3.40	4	5	4,828	1,738	3,156
367+50	36750.00	50.00	2.06	0.14	4	3	4,832	1,741	3,156
368+00	36800.00	50.00	2.02	2.90	4	3	4,836	1,745	3,156
368+50	36850.00	50.00	1.11	7.63	3	10	4,839	1,758	3,147
369+00	36900.00	50.00	0.75	8.32	2	15	4,841	1,776	3,130
369+50	36950.00	50.00	1.12	5.32	2	13	4,843	1,793	3,116
370+00	37000.00	50.00	1.53	3.41	2	8	4,845	1,803	3,108
370+50	37050.00	50.00	2.43	0.05	4	3	4,849	1,806	3,108

DIVISION 1 - TEMP BYPASS CHANNEL

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
10+00	1000.00	0.00	5.28	0.00	0	0	0	0	0
10+25	1025.00	25.00	10.70	0.00	7	0	7	0	7
10+27.62	1027.62	2.62	13.86	0.06	1	0	8	0	8
10+50	1050.00	22.38	82.67	0.00	40	0	48	0	48
10+73.442	1073.44	23.44	41.76	0.00	54	0	102	0	102
10+76.153	1076.15	2.71	19.37	0.00	3	0	105	0	105
11+00	1100.00	23.85	19.24	0.00	17	0	122	0	122
11+03.37	1103.37	3.37	4.47	0.00	1	0	123	0	123



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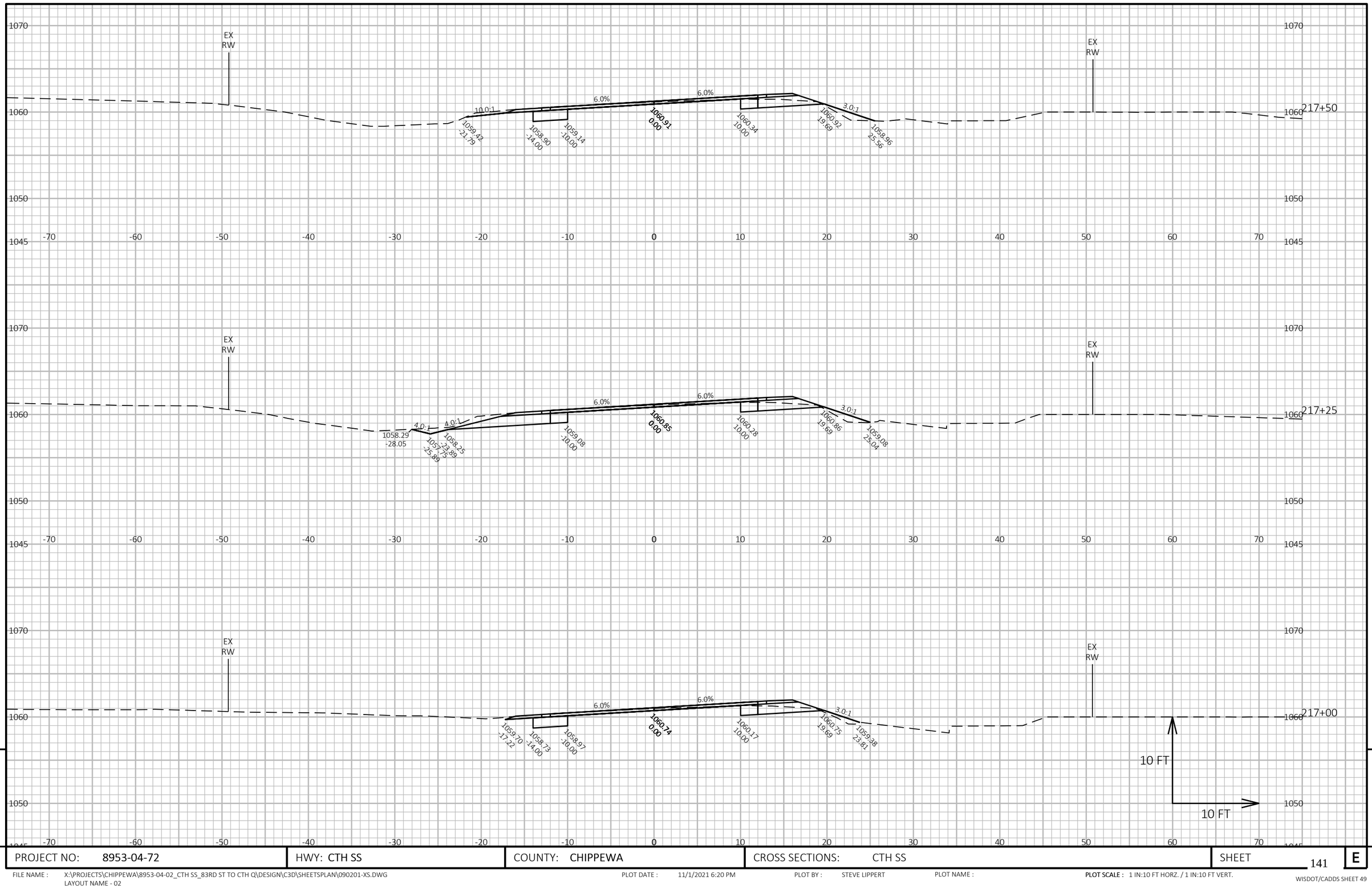
9

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 140	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 11/1/2021 6:20 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

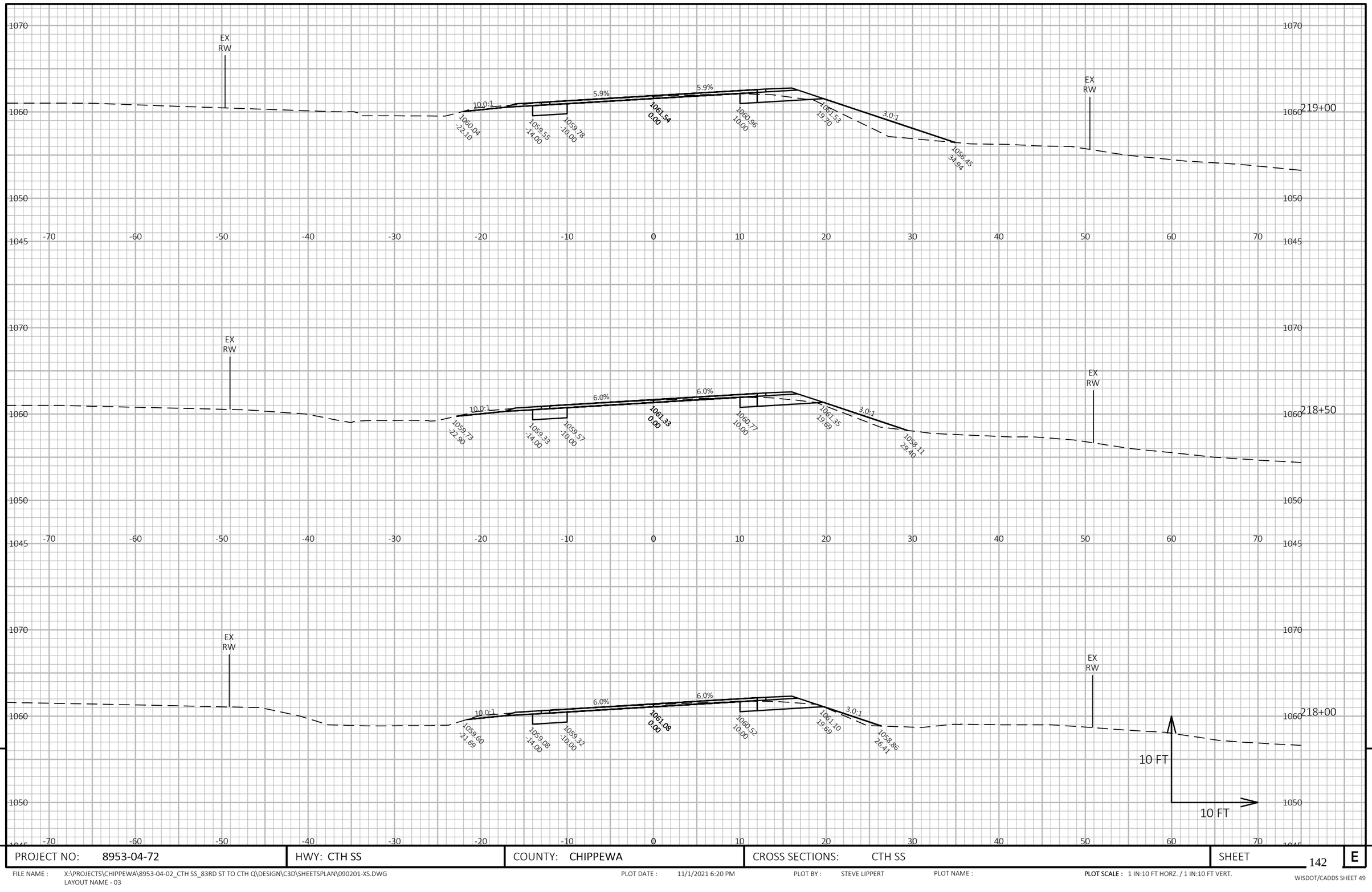


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 141	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 11/1/2021 6:20 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

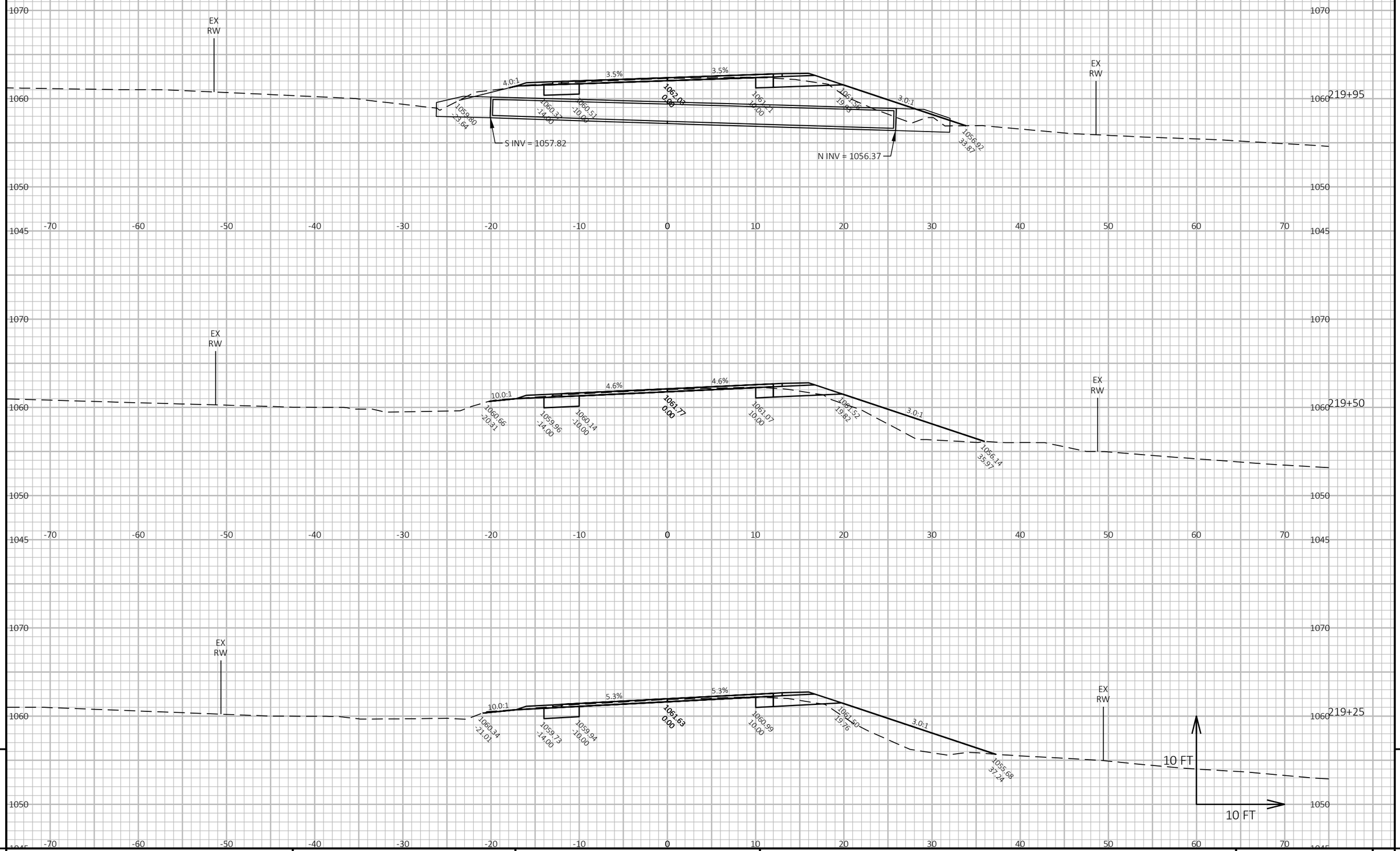


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 142	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 11/1/2021 6:20 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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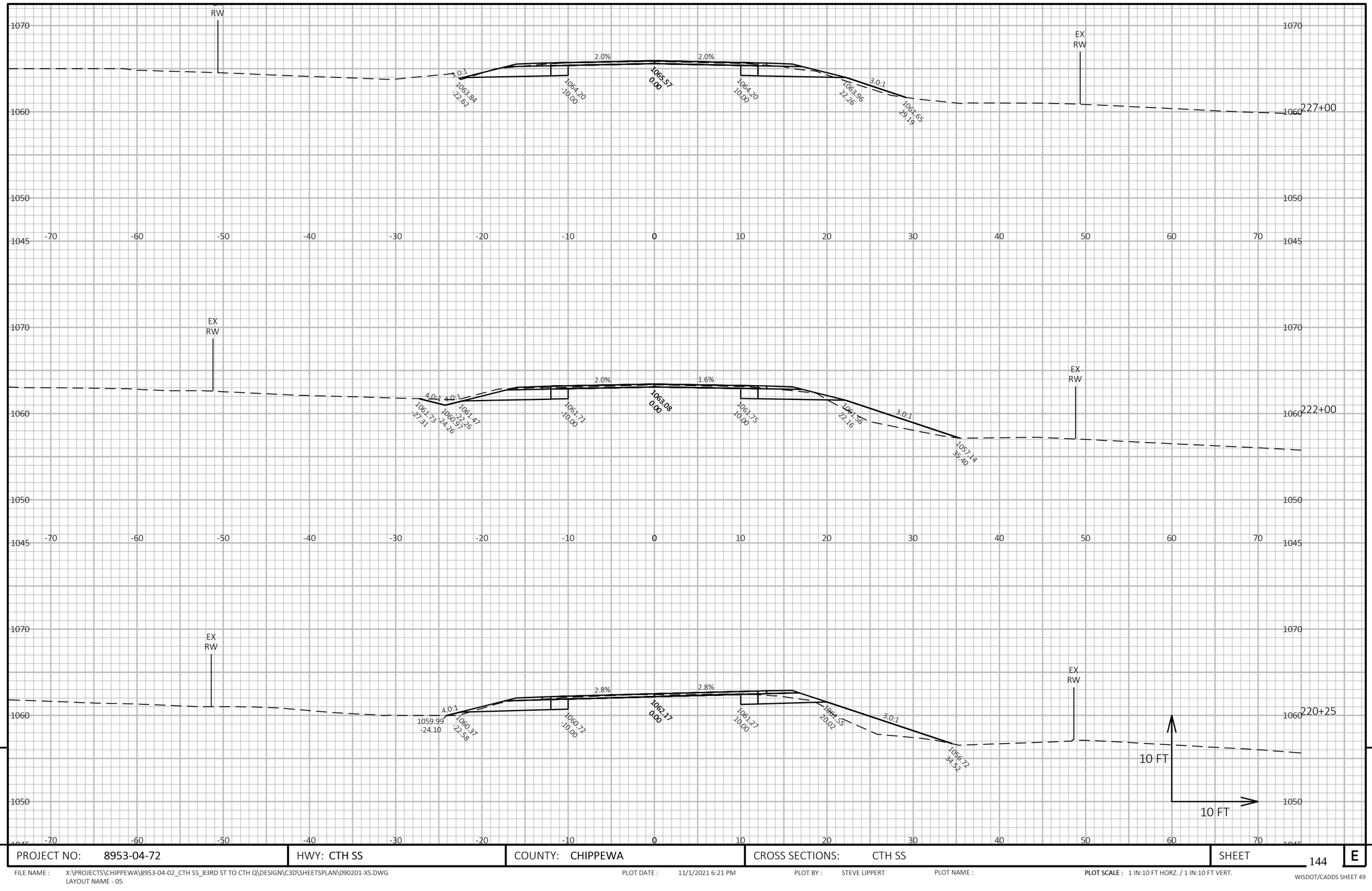
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 143	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 11/1/2021 6:20 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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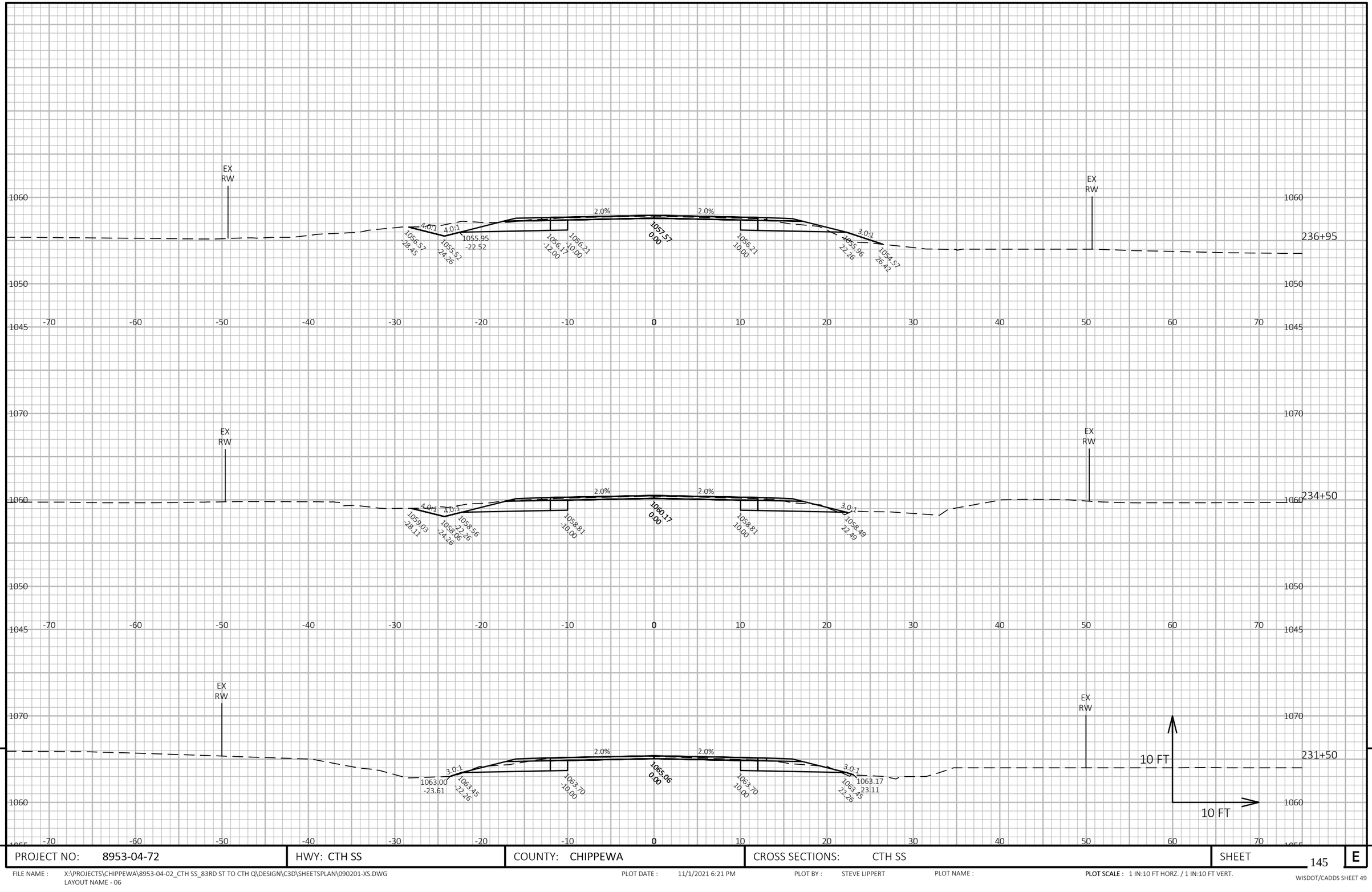
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 144	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05

PLOT DATE : 11/1/2021 6:21 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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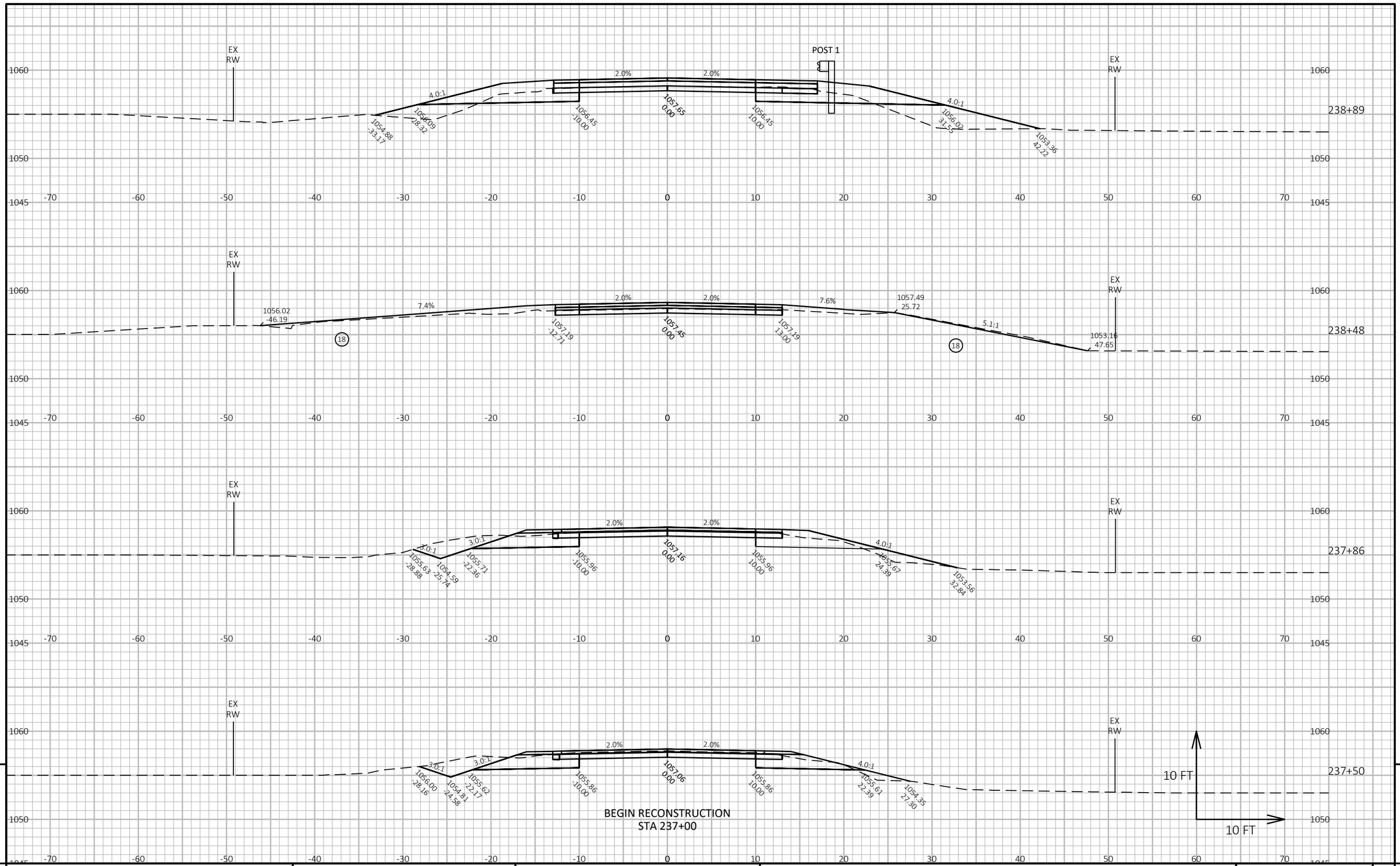
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 145	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06

PLOT DATE : 11/1/2021 6:21 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

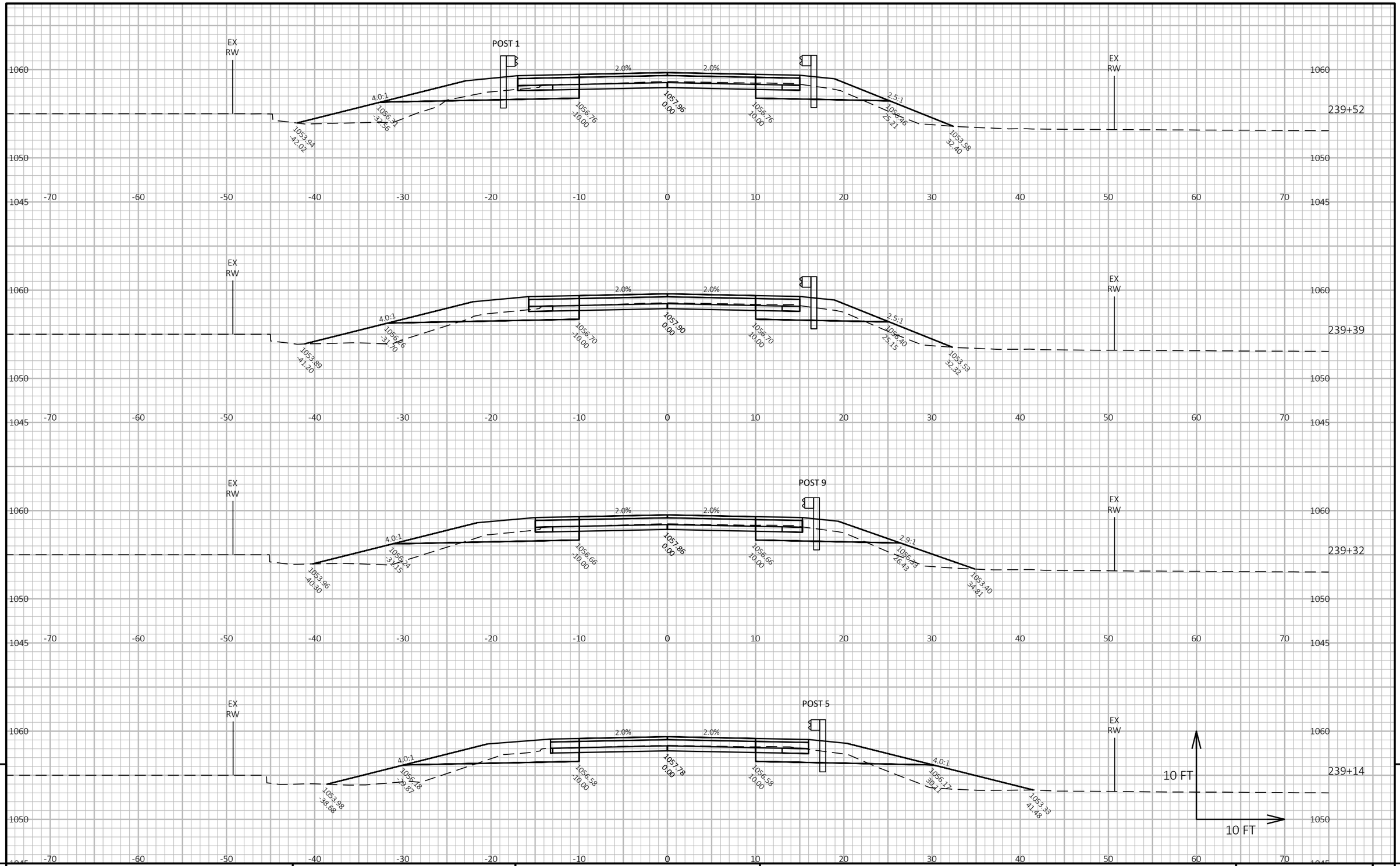


9 9

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 146	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 07

PLOT DATE : 11/1/2021 6:21 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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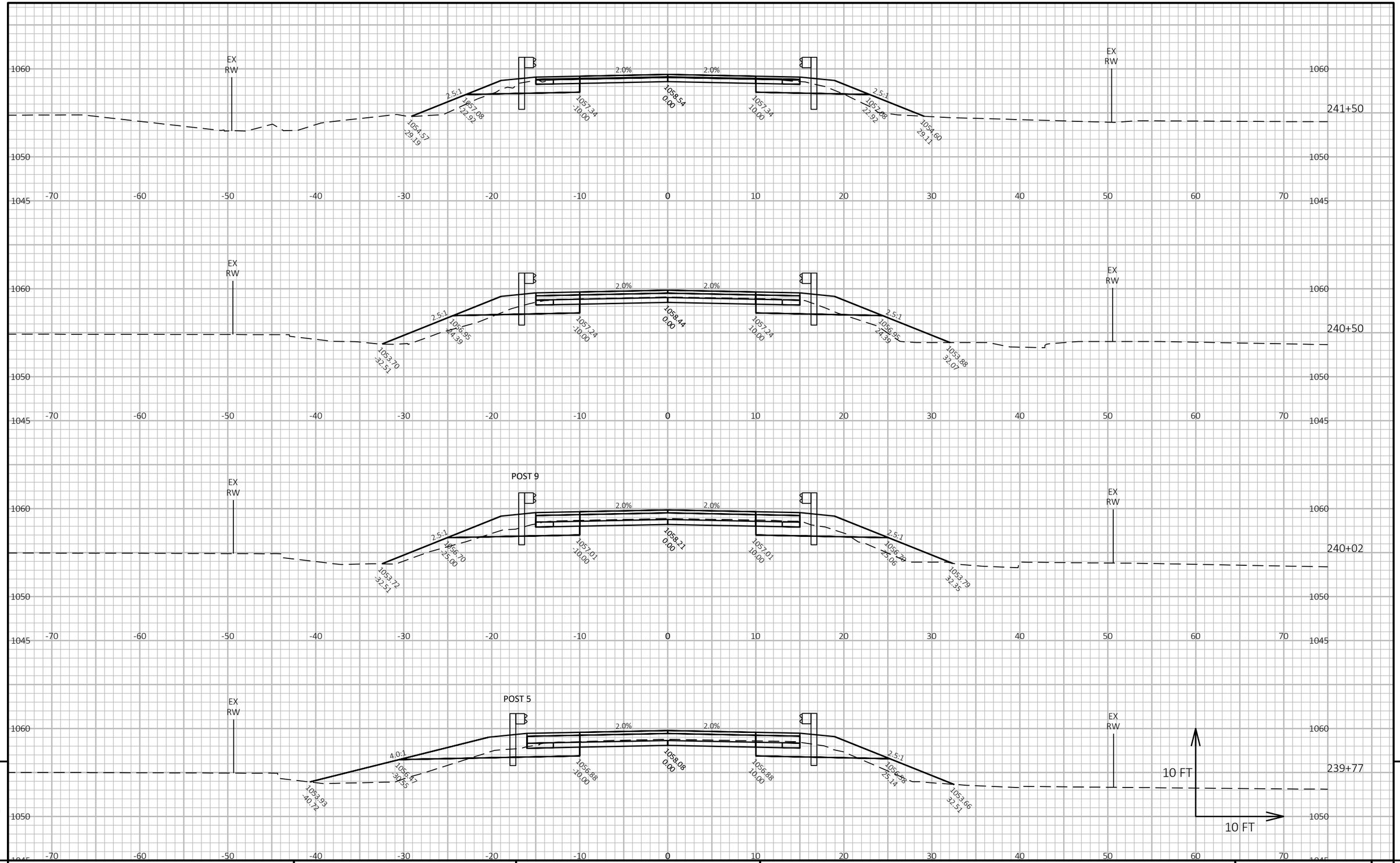
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 147	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 08

PLOT DATE : 11/1/2021 6:22 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

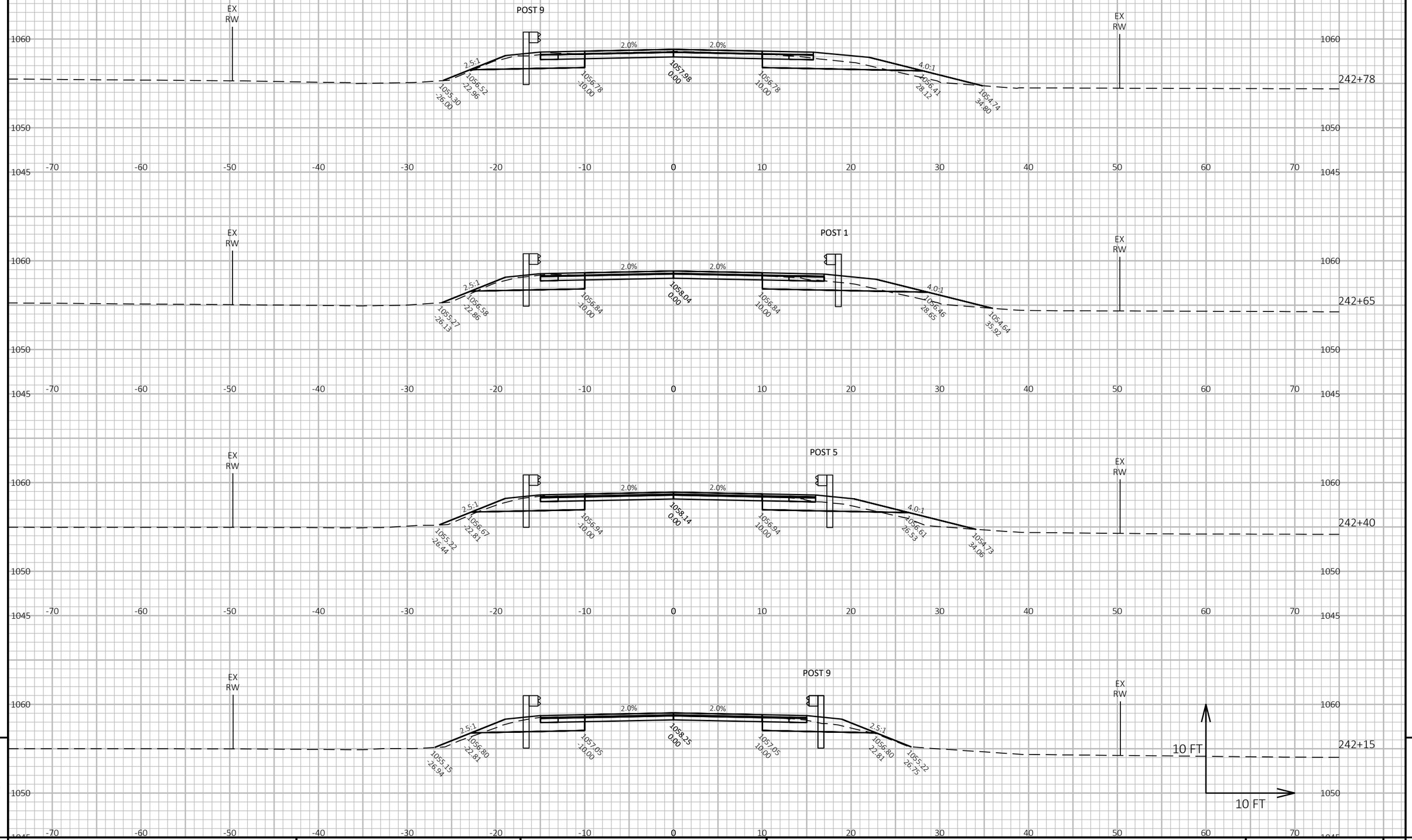


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 148	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 09

PLOT DATE : 11/1/2021 6:22 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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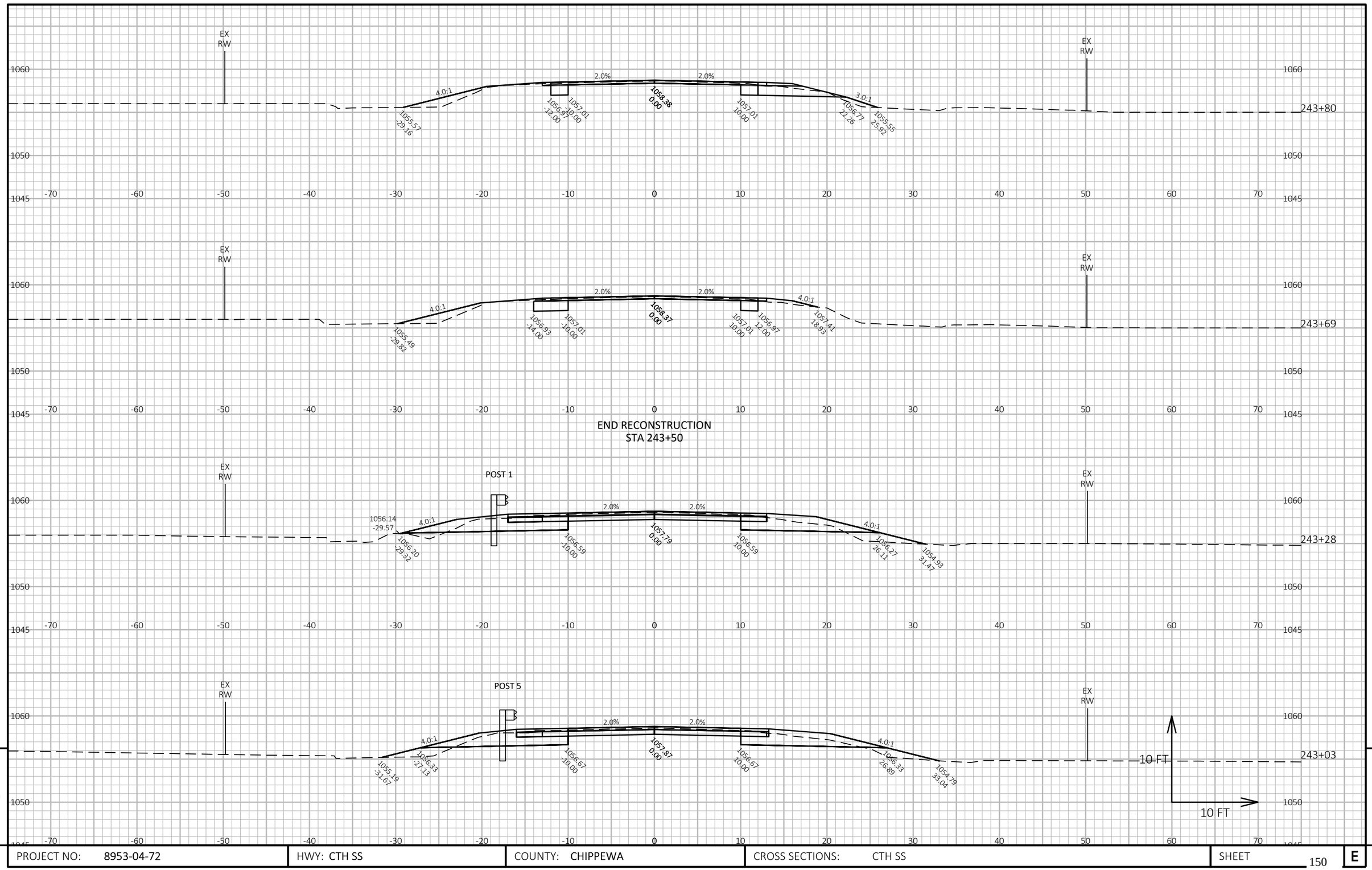
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 149	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 10

PLOT DATE : 11/1/2021 6:22 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

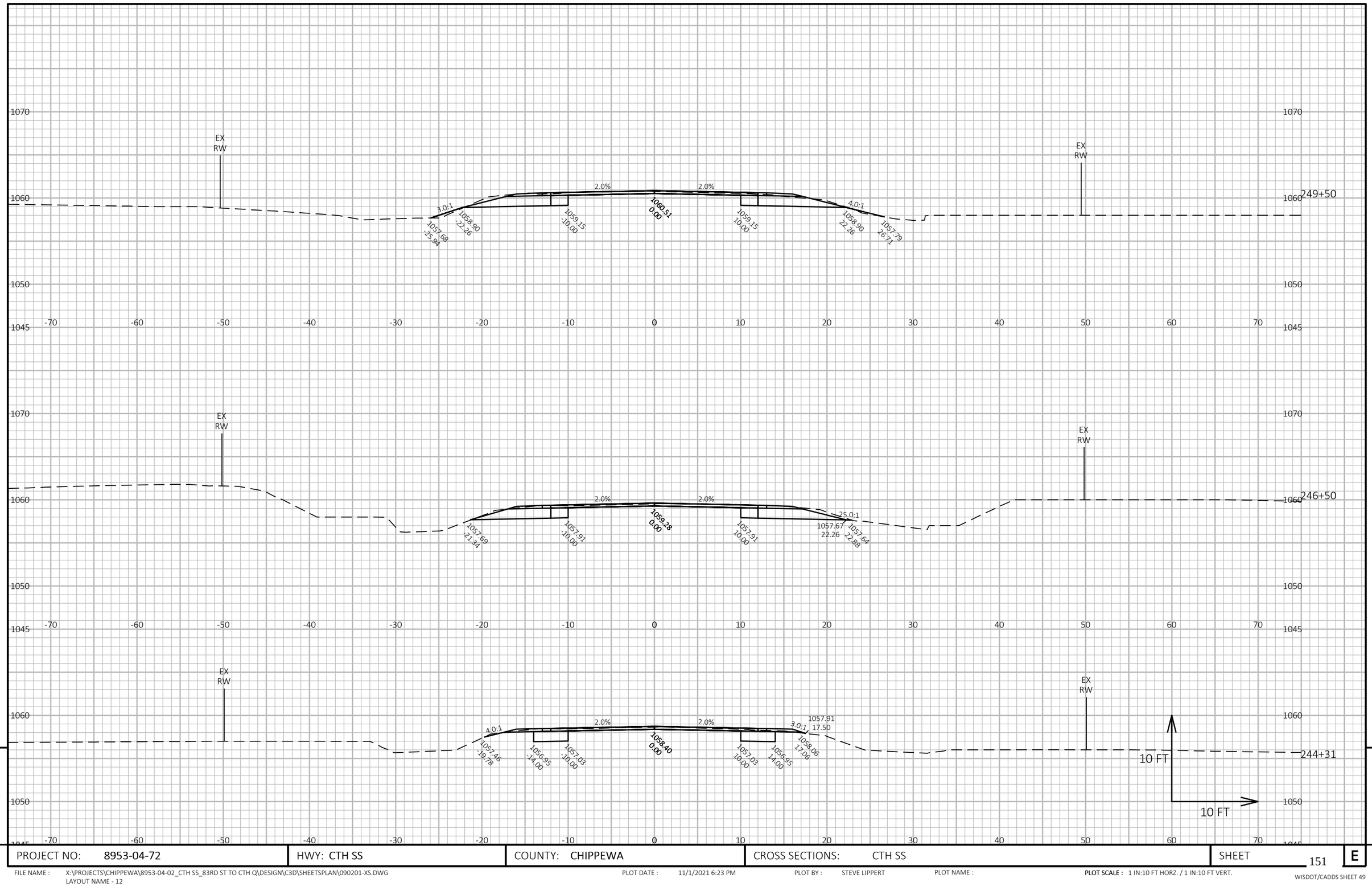


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 150	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 11

PLOT DATE : 11/1/2021 6:22 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

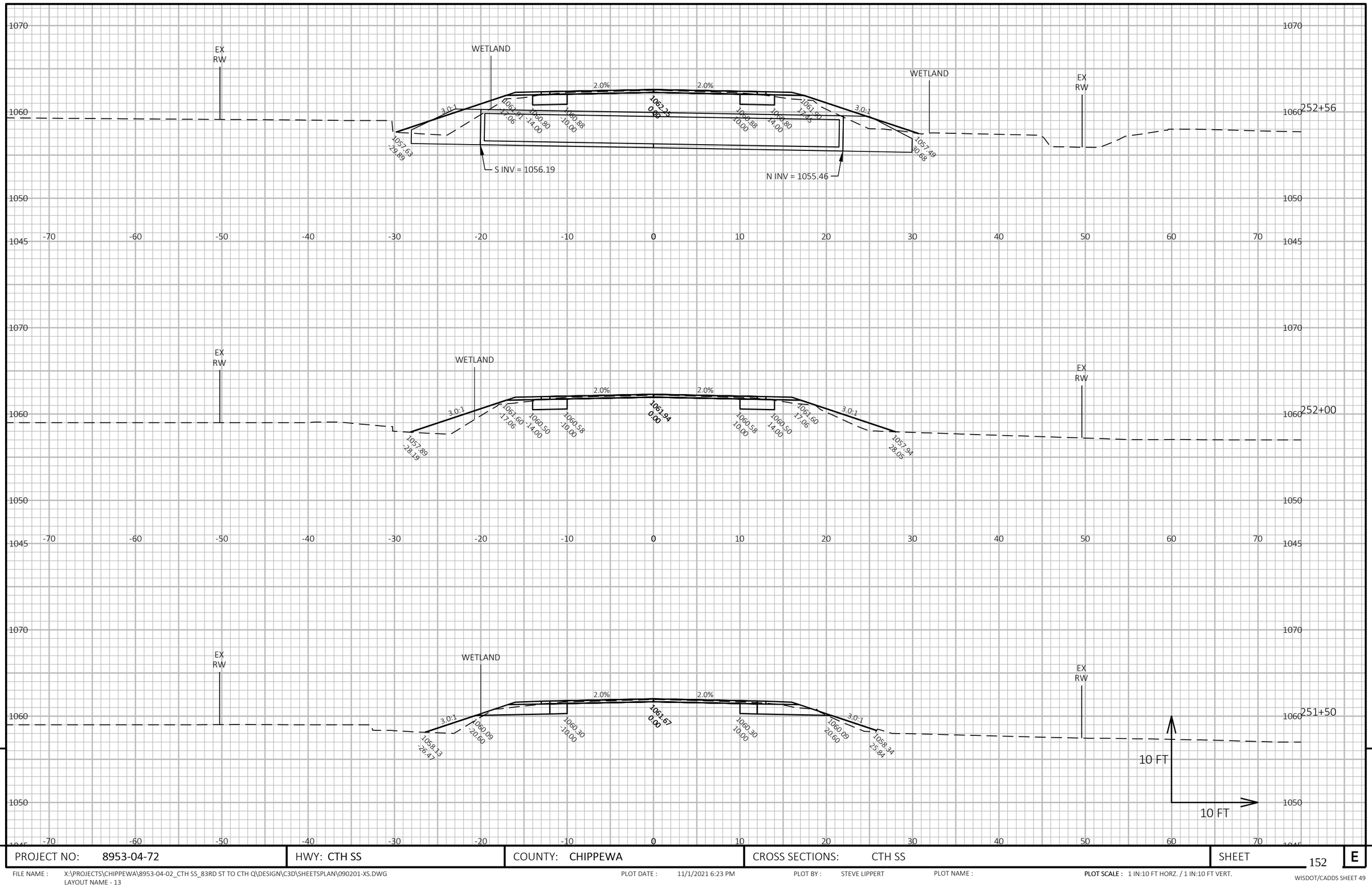


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 151	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 12

PLOT DATE : 11/1/2021 6:23 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

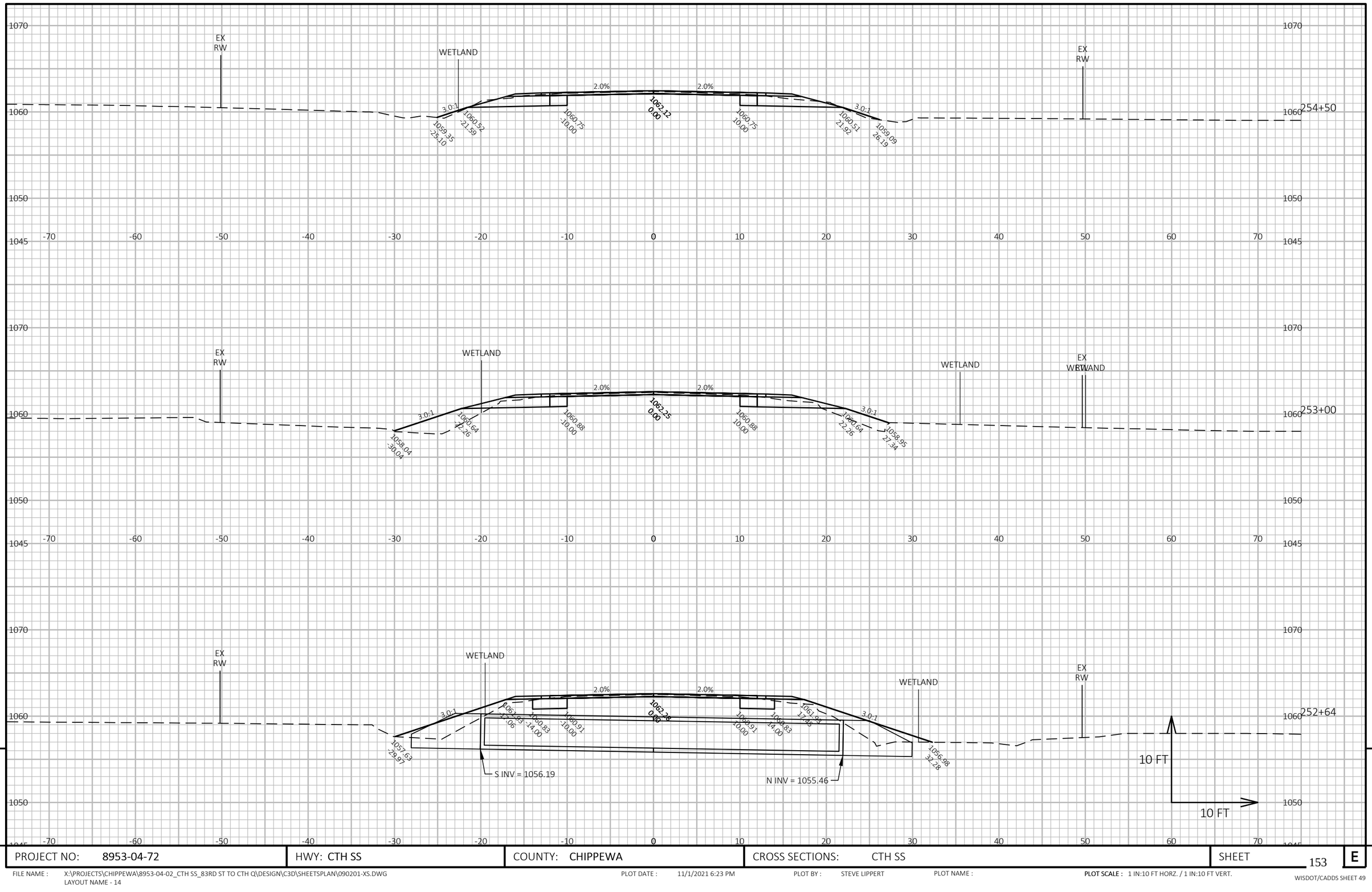


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 152	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 13

PLOT DATE : 11/1/2021 6:23 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



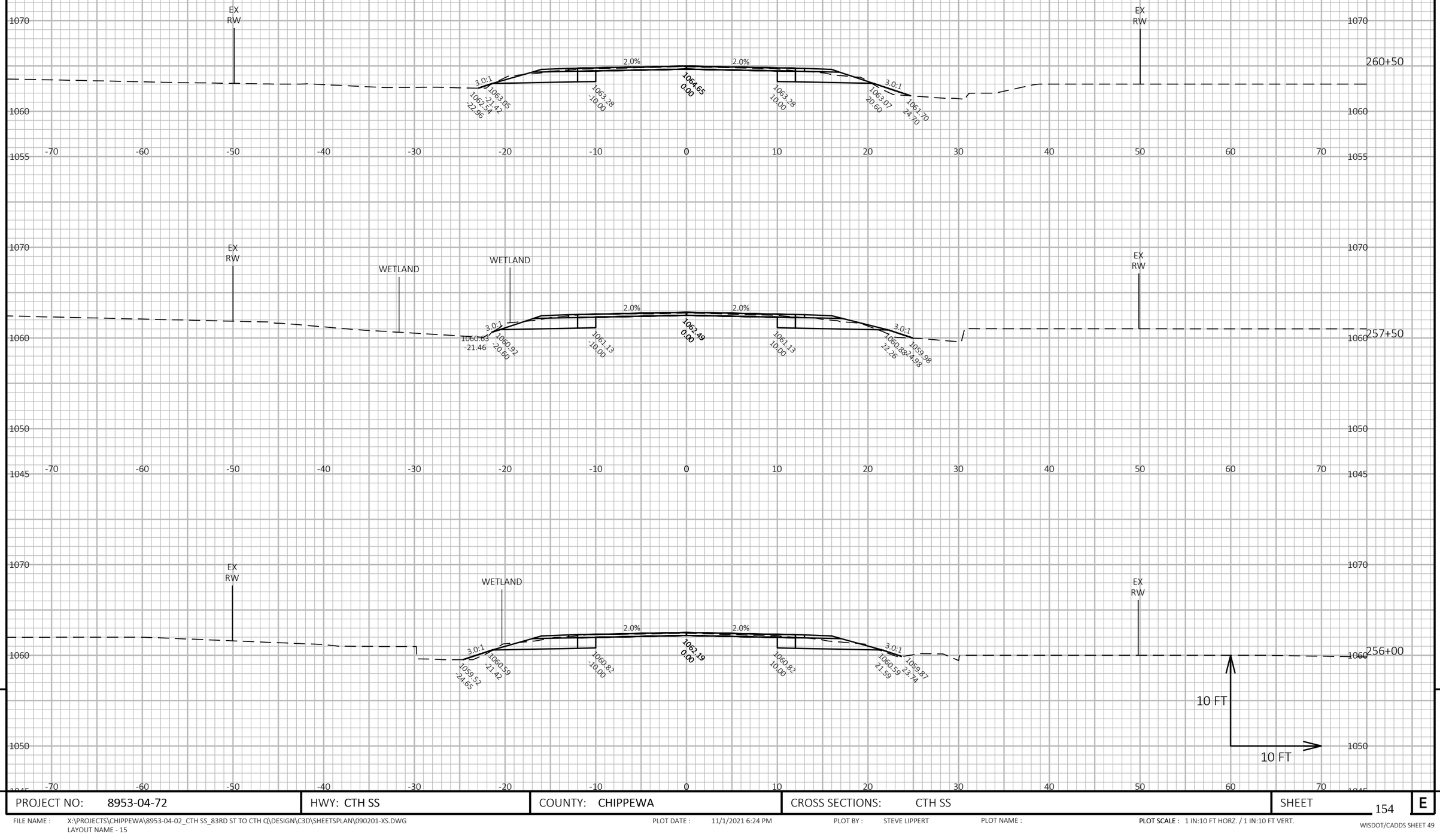
9

9

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 153	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 14

PLOT DATE : 11/1/2021 6:23 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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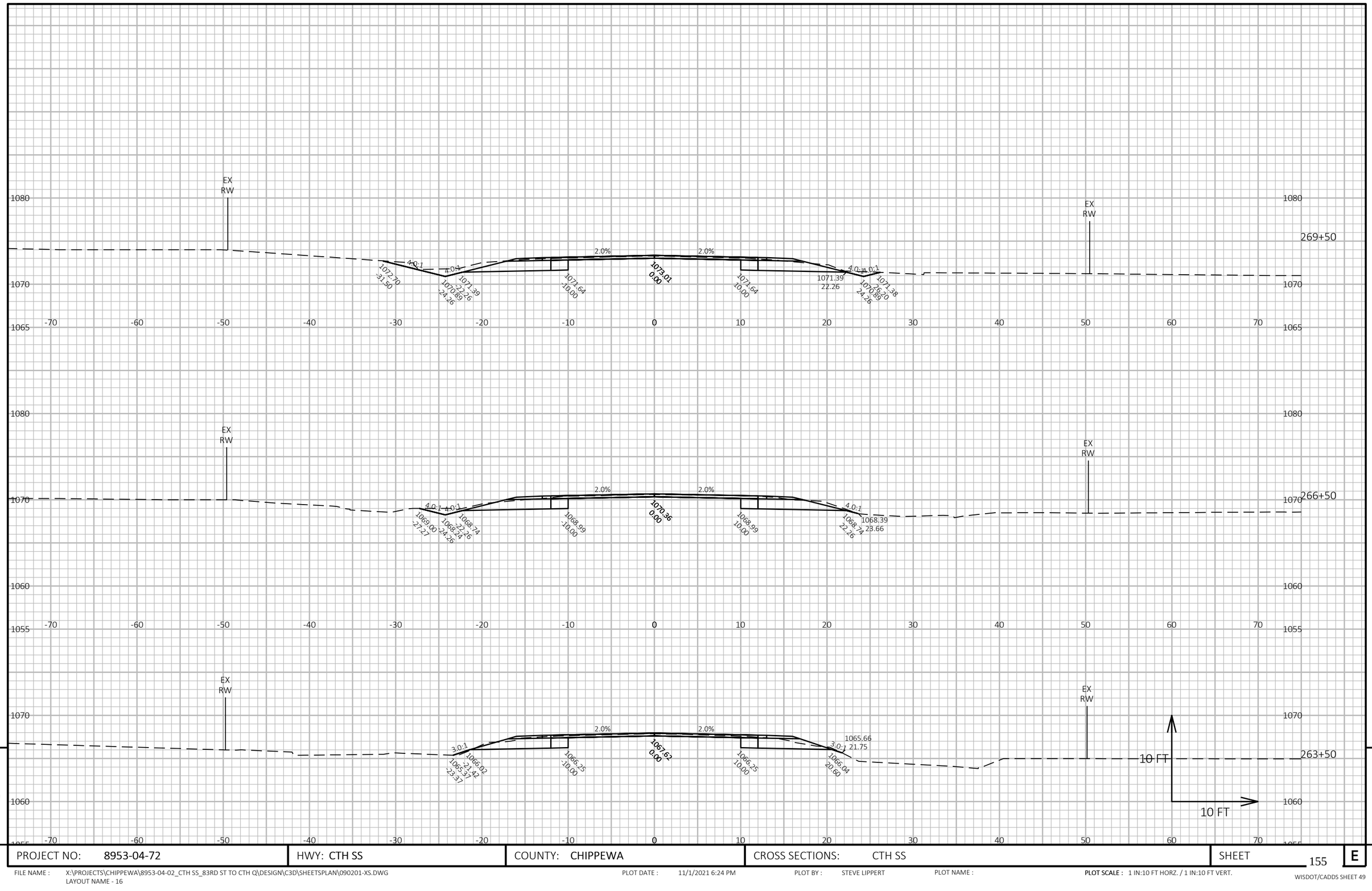
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 154	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 15

PLOT DATE : 11/1/2021 6:24 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

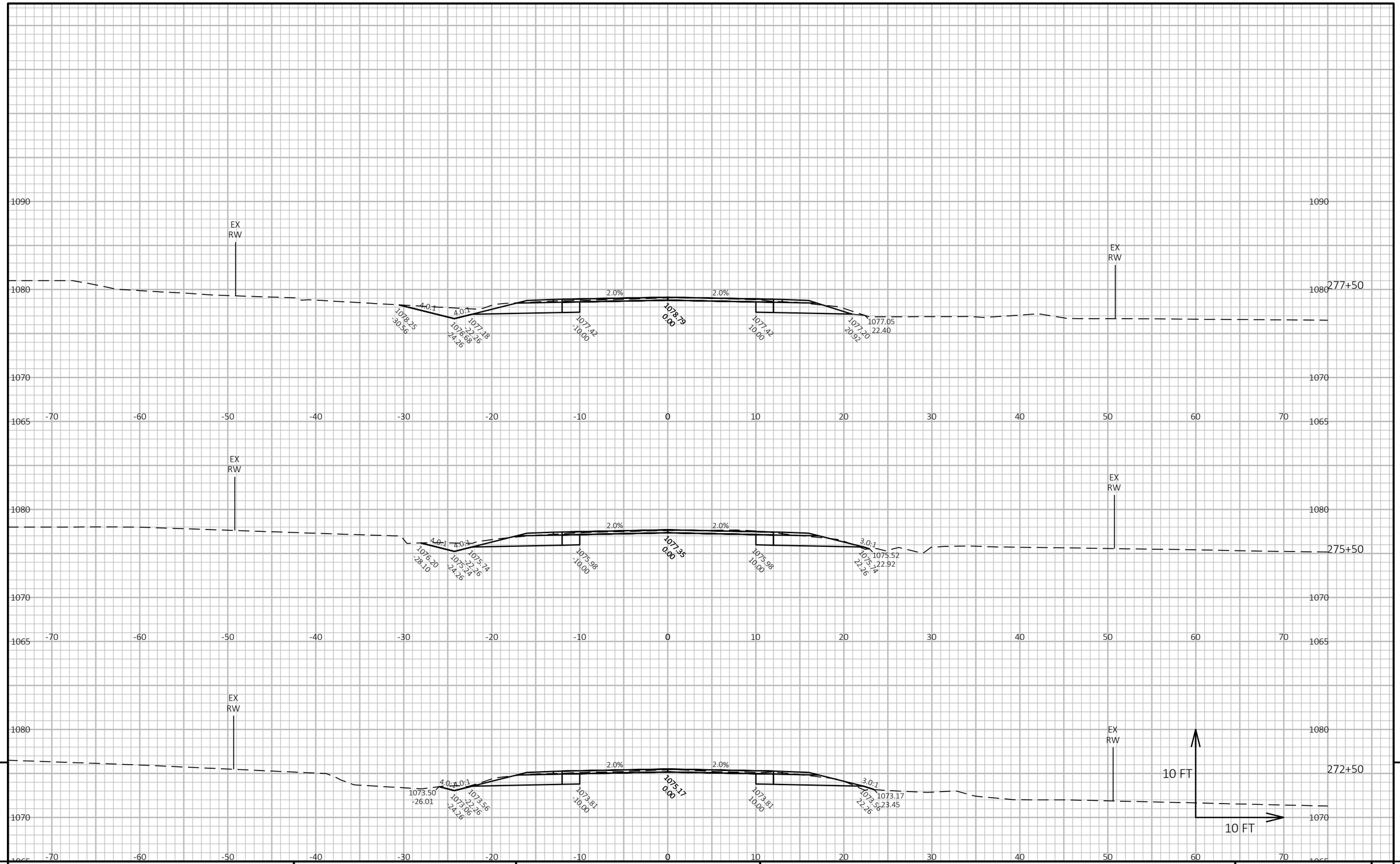


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 155	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 16

PLOT DATE : 11/1/2021 6:24 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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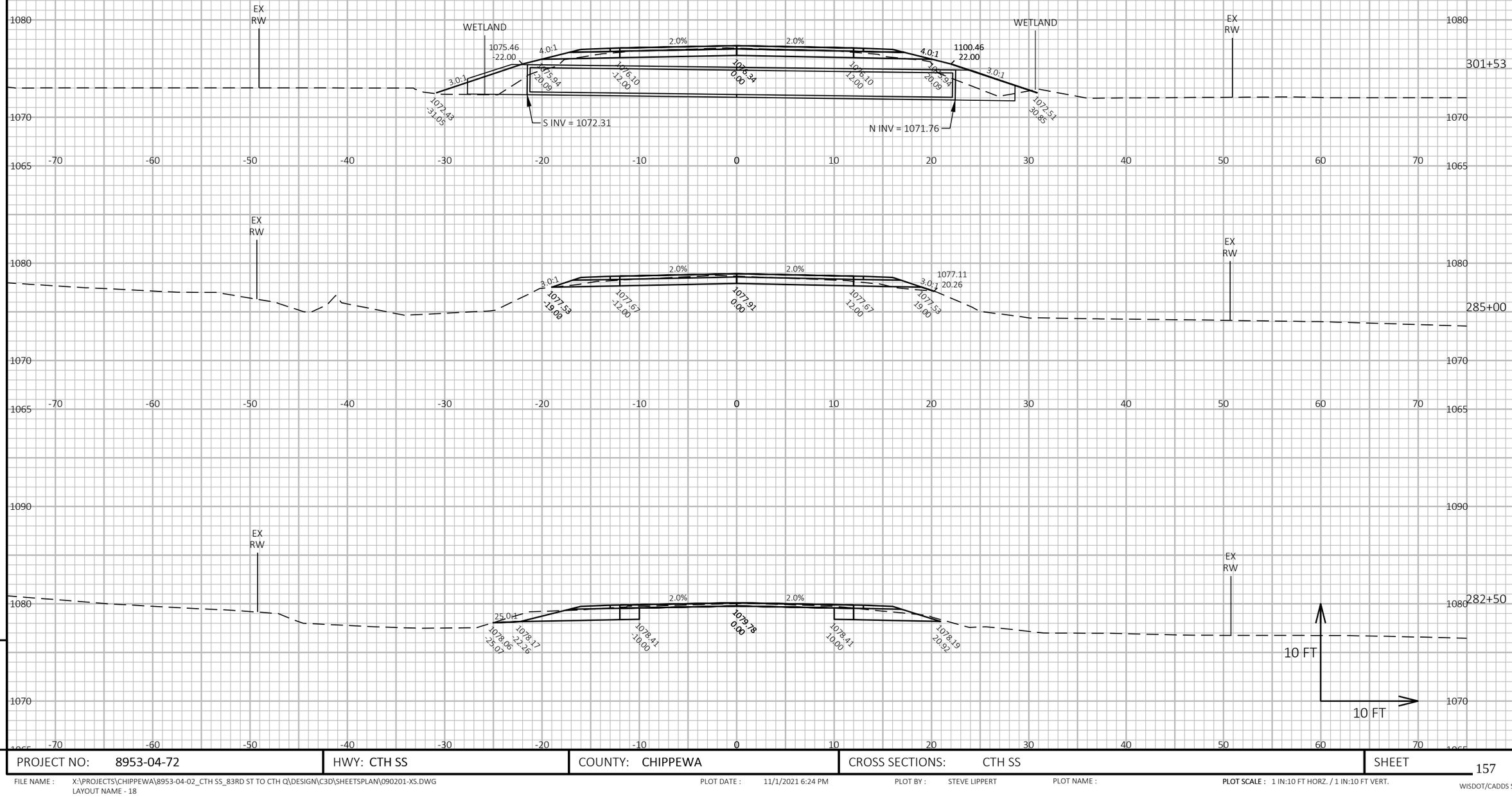
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 156	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 17

PLOT DATE : 11/1/2021 6:24 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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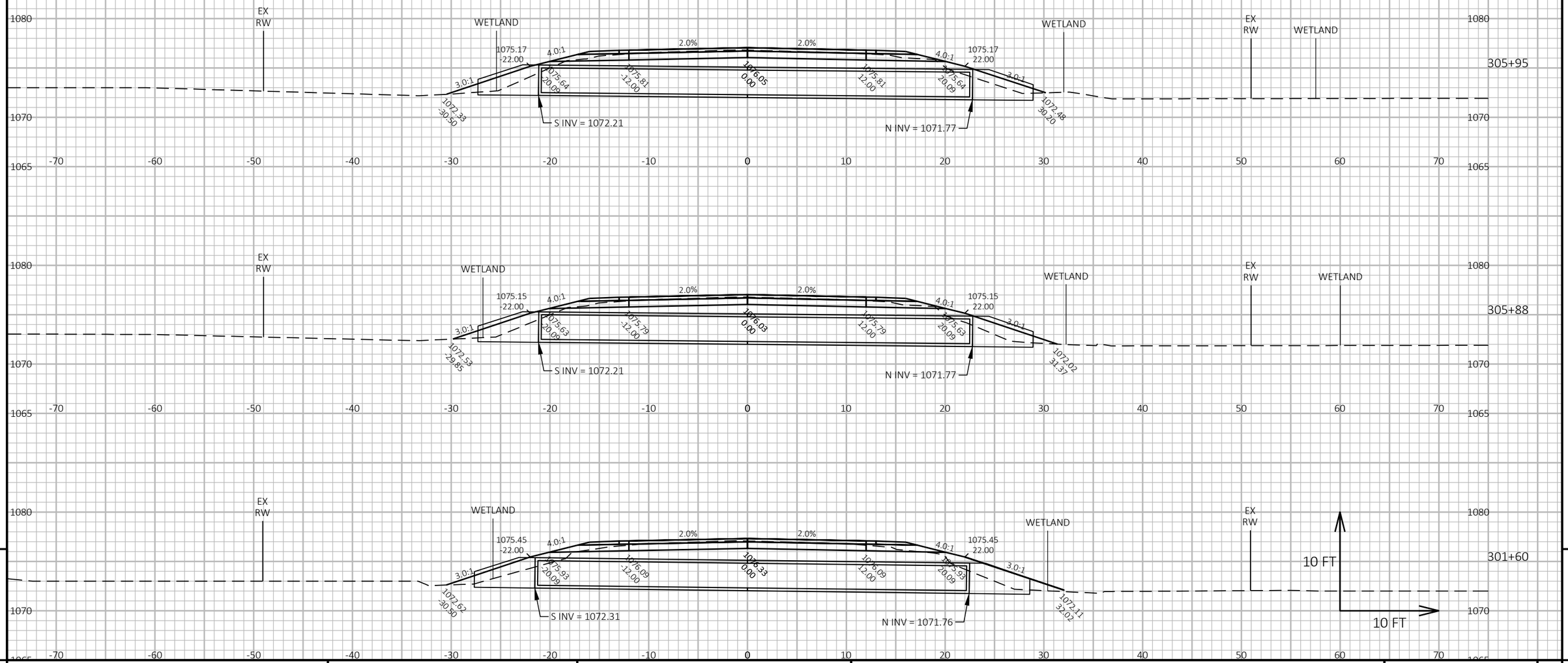
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 157	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 18

PLOT DATE : 11/1/2021 6:24 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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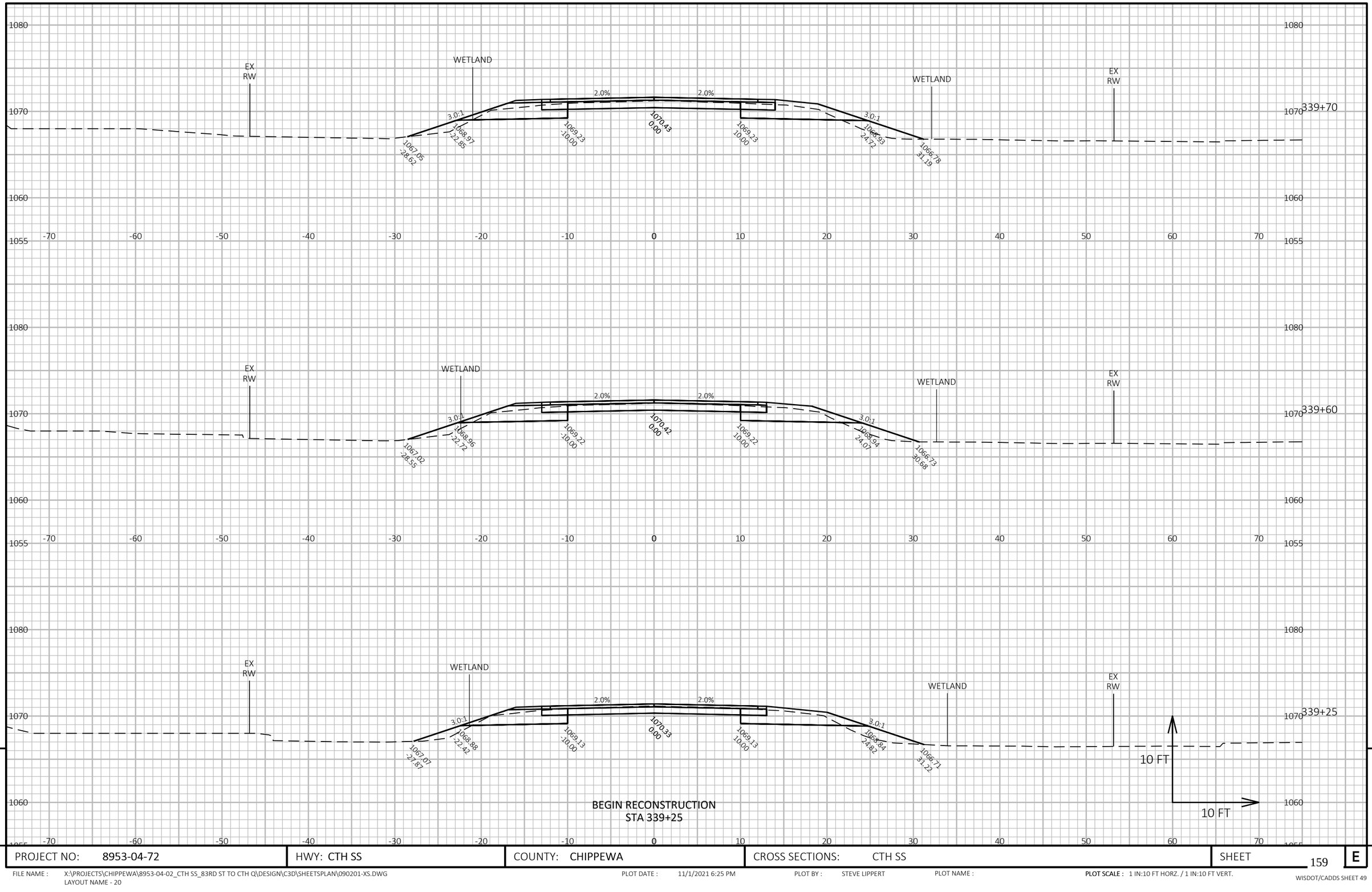
9

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 158	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 19

PLOT DATE : 11/1/2021 6:25 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

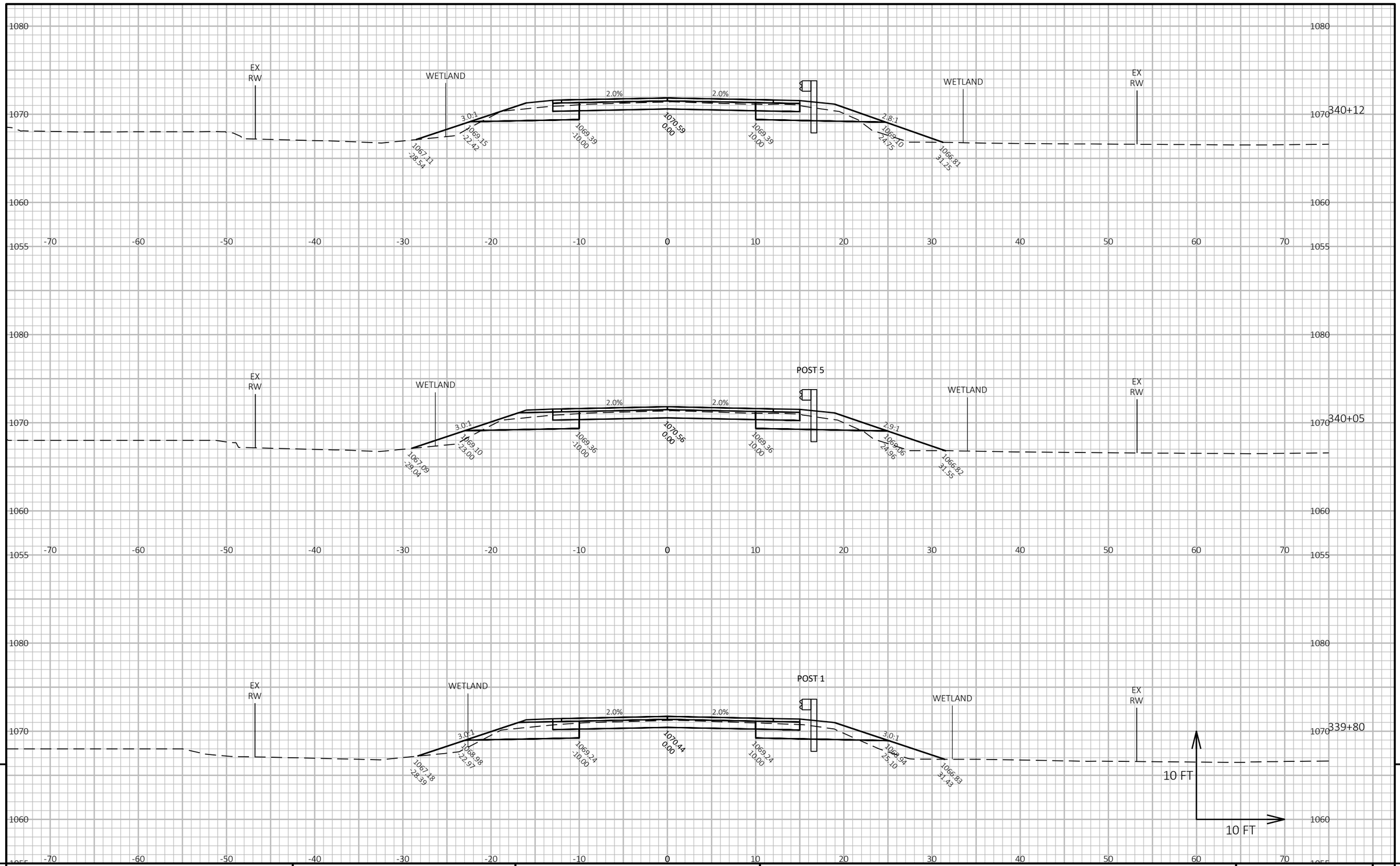


BEGIN RECONSTRUCTION
STA 339+25

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 159	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 20

PLOT DATE : 11/1/2021 6:25 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

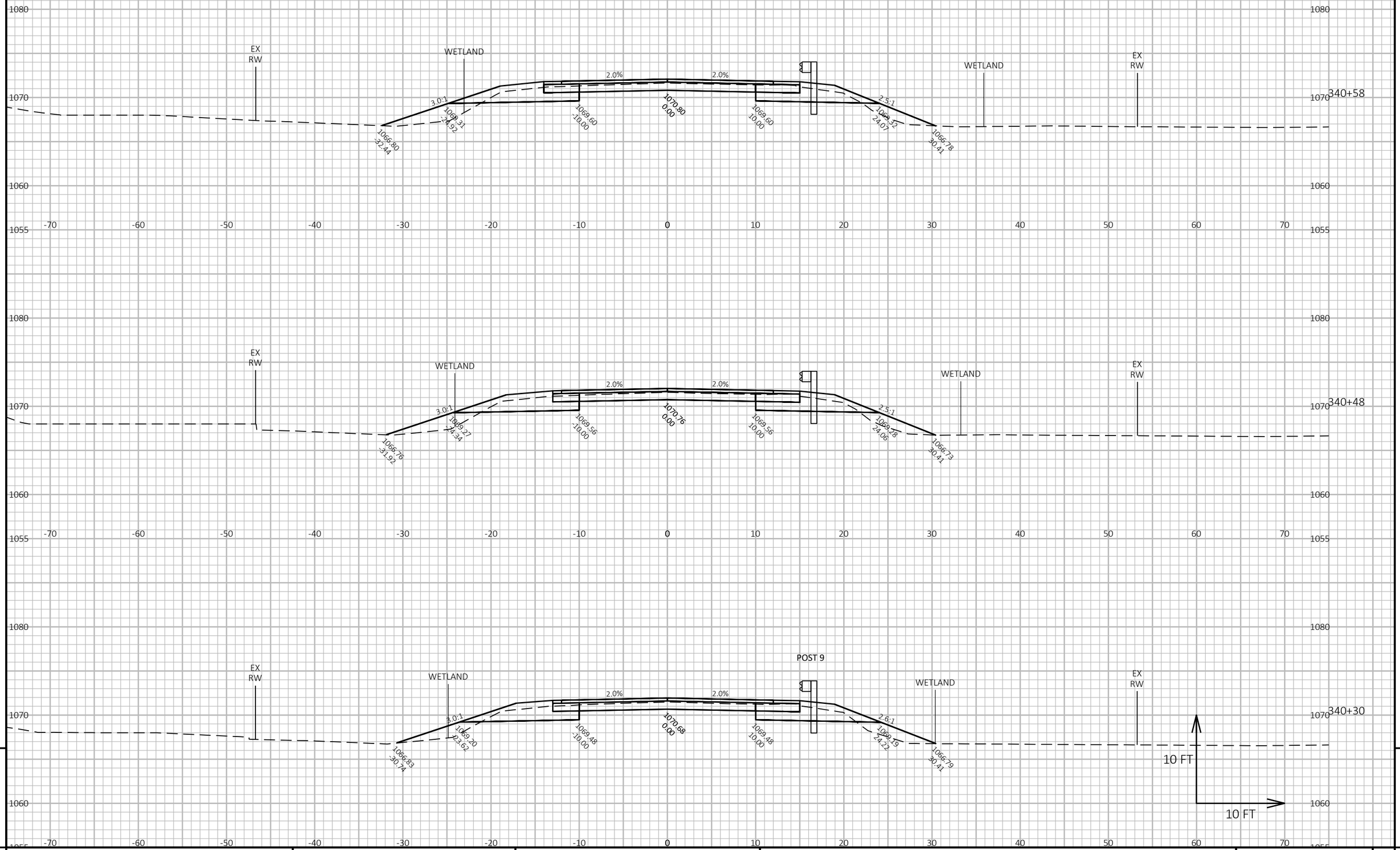


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 160 E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 21

PLOT DATE : 11/1/2021 6:25 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 161	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 22

PLOT DATE : 11/1/2021 6:25 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

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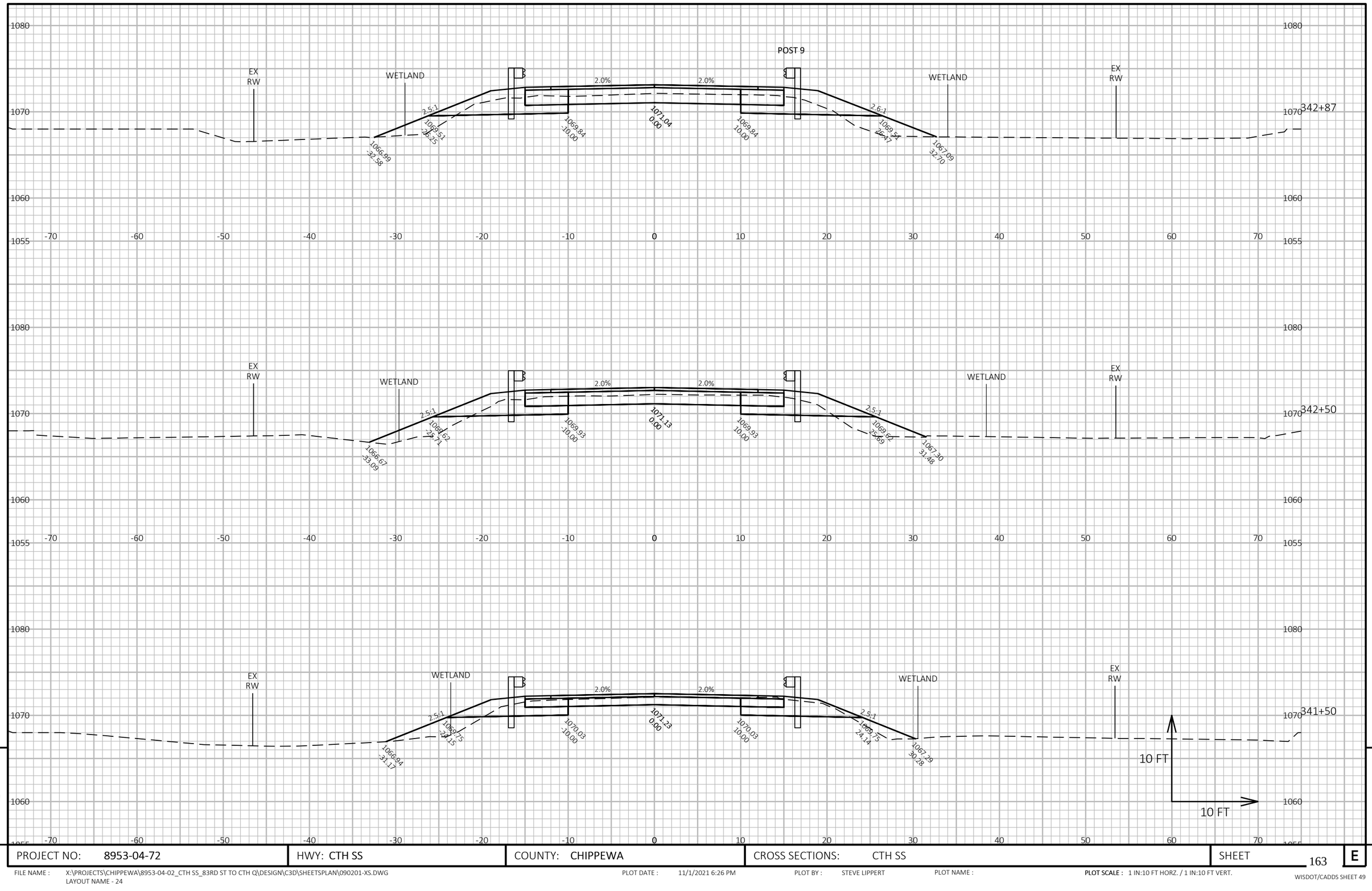
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 162	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 23

PLOT DATE : 11/1/2021 6:26 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

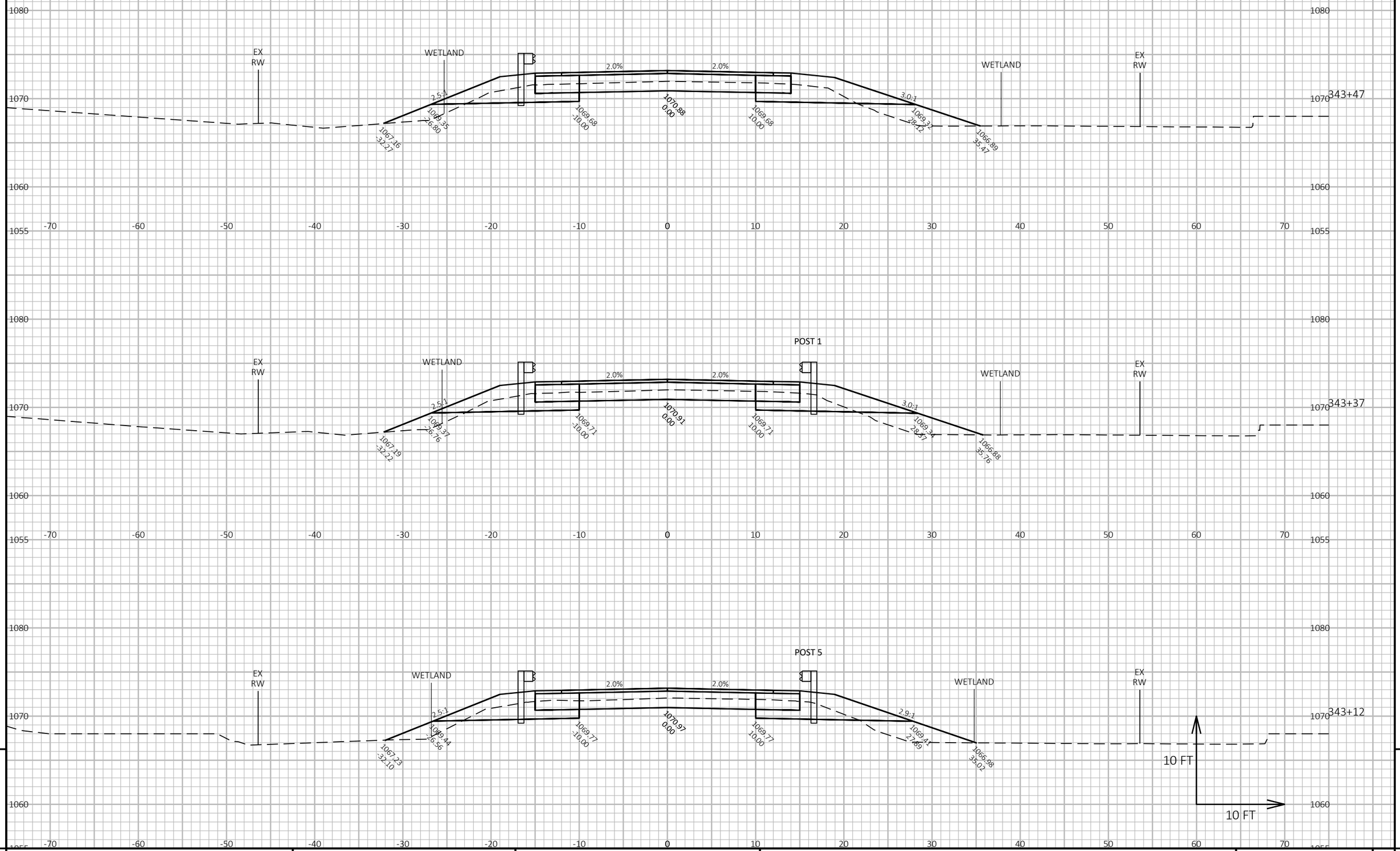
9

PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 163	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 24

PLOT DATE : 11/1/2021 6:26 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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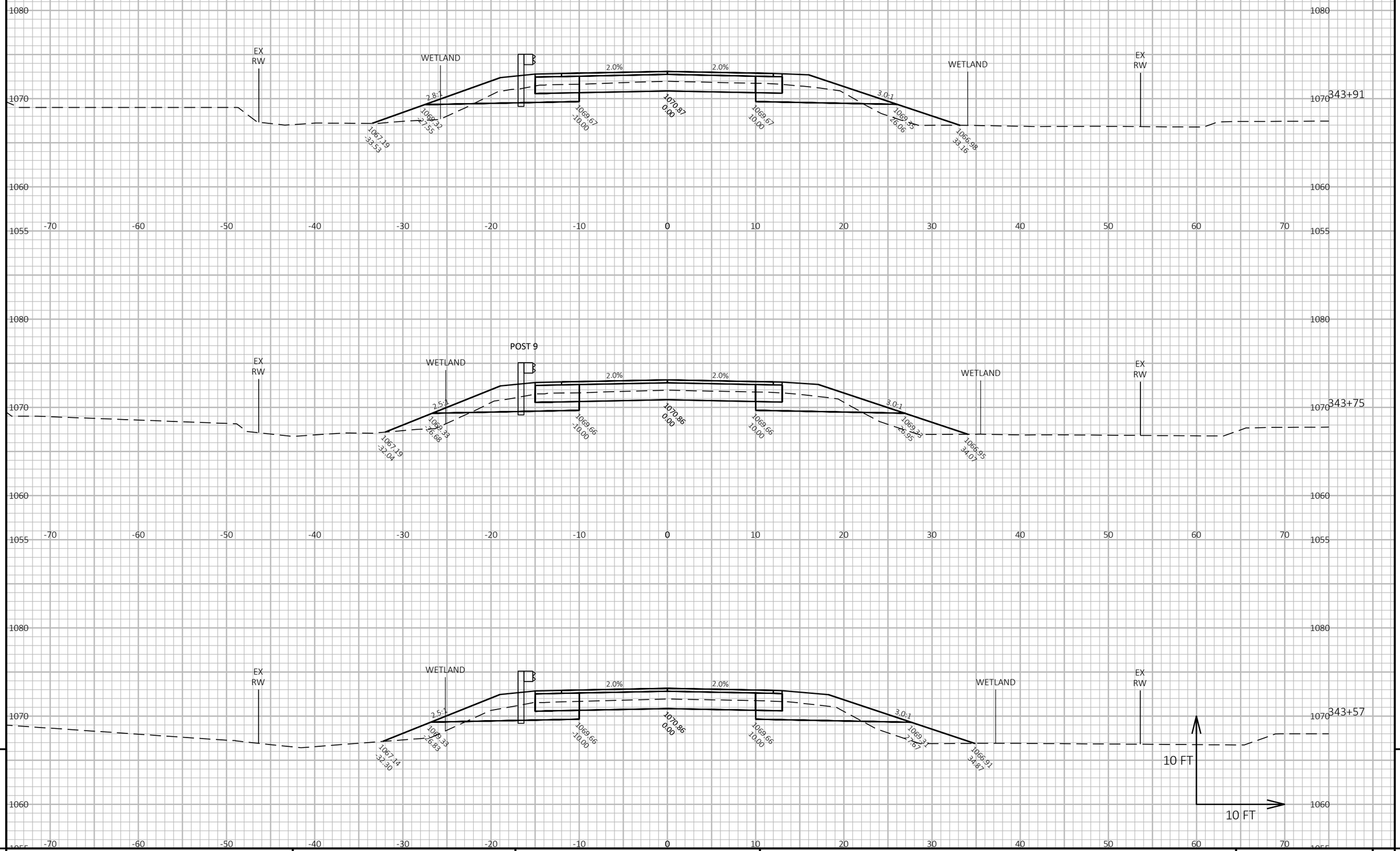
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 164	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 25

PLOT DATE : 11/1/2021 6:26 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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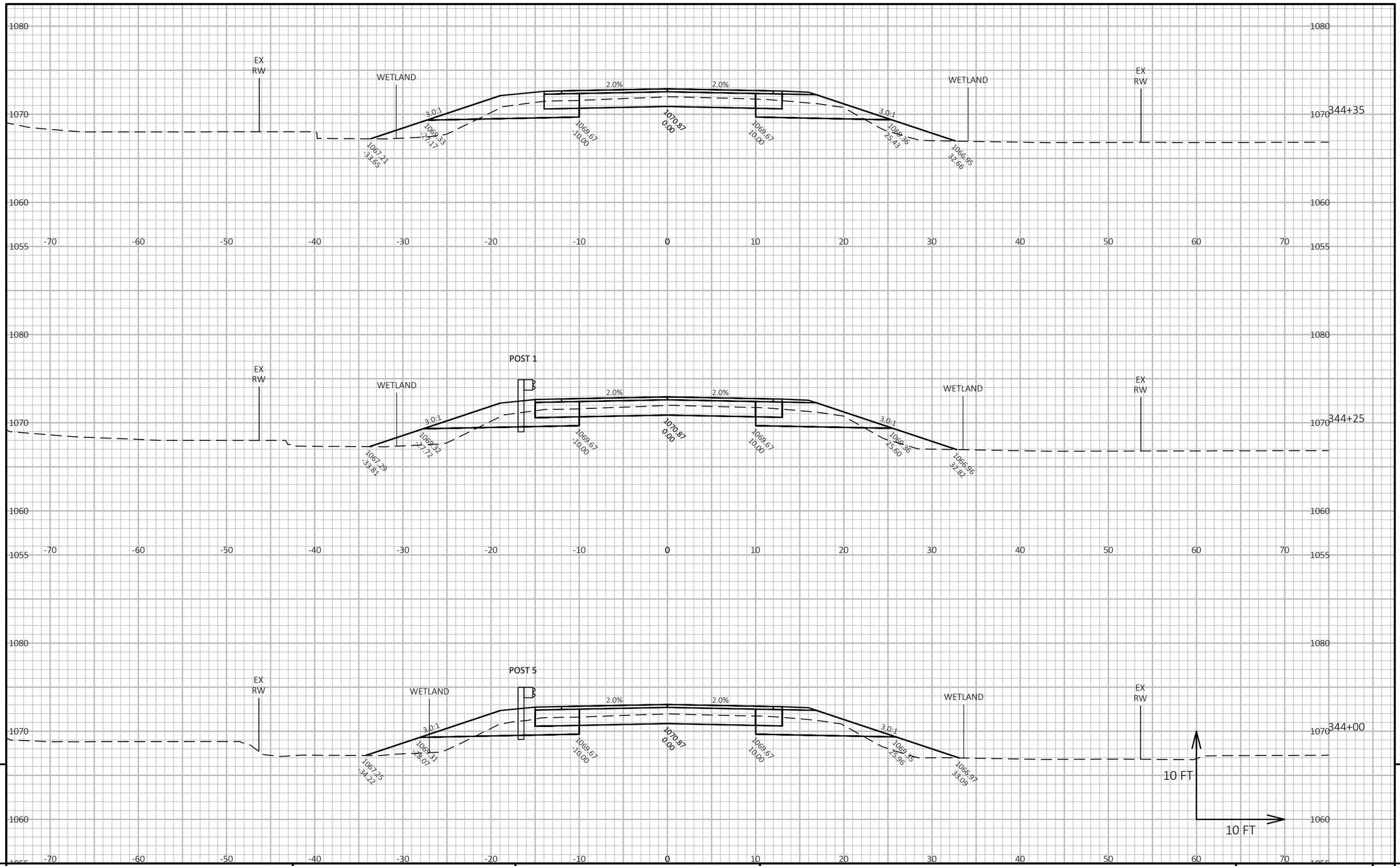
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 165	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 26

PLOT DATE : 11/1/2021 6:27 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

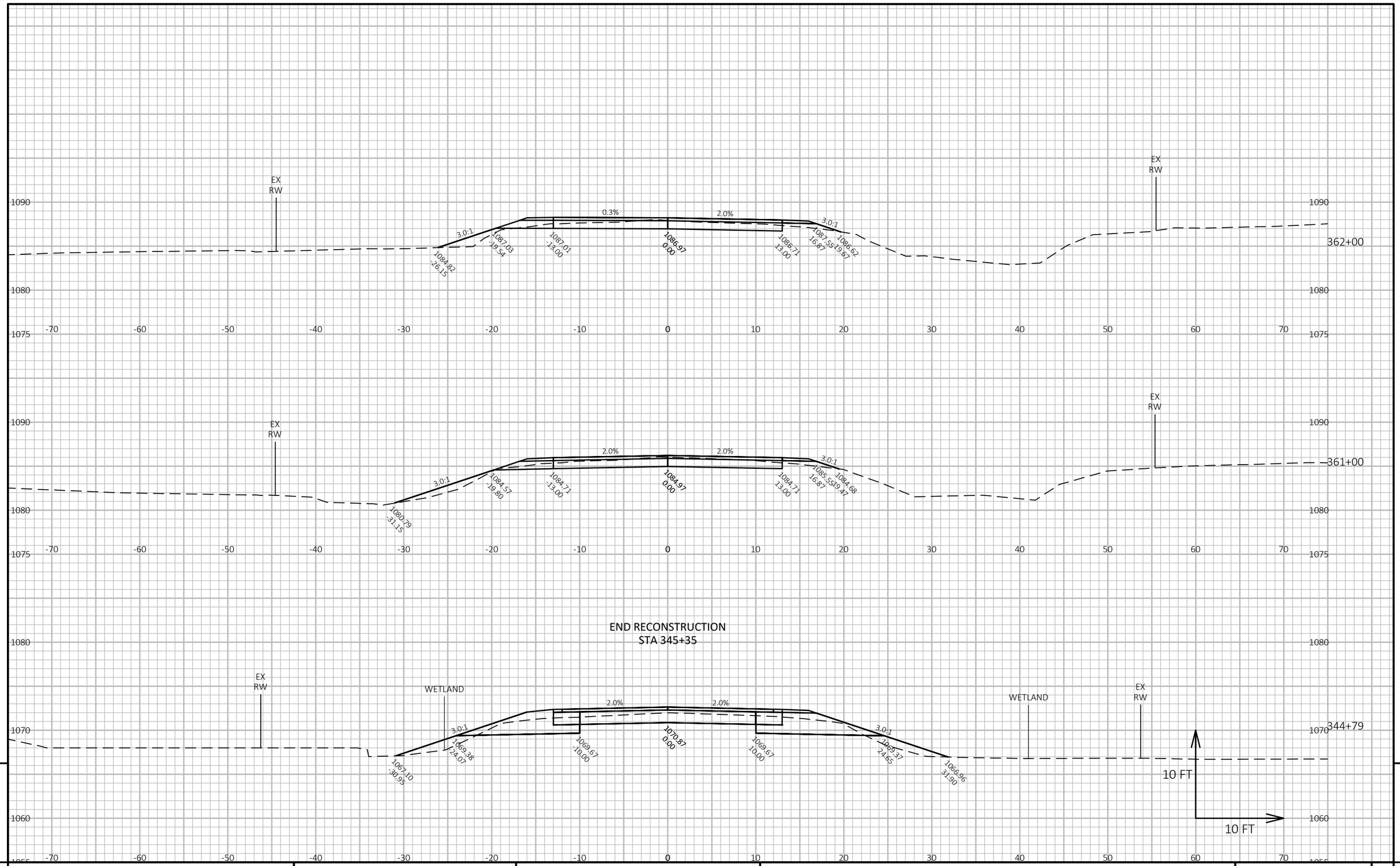


PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 166	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 27

PLOT DATE : 11/1/2021 6:27 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 167	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 28

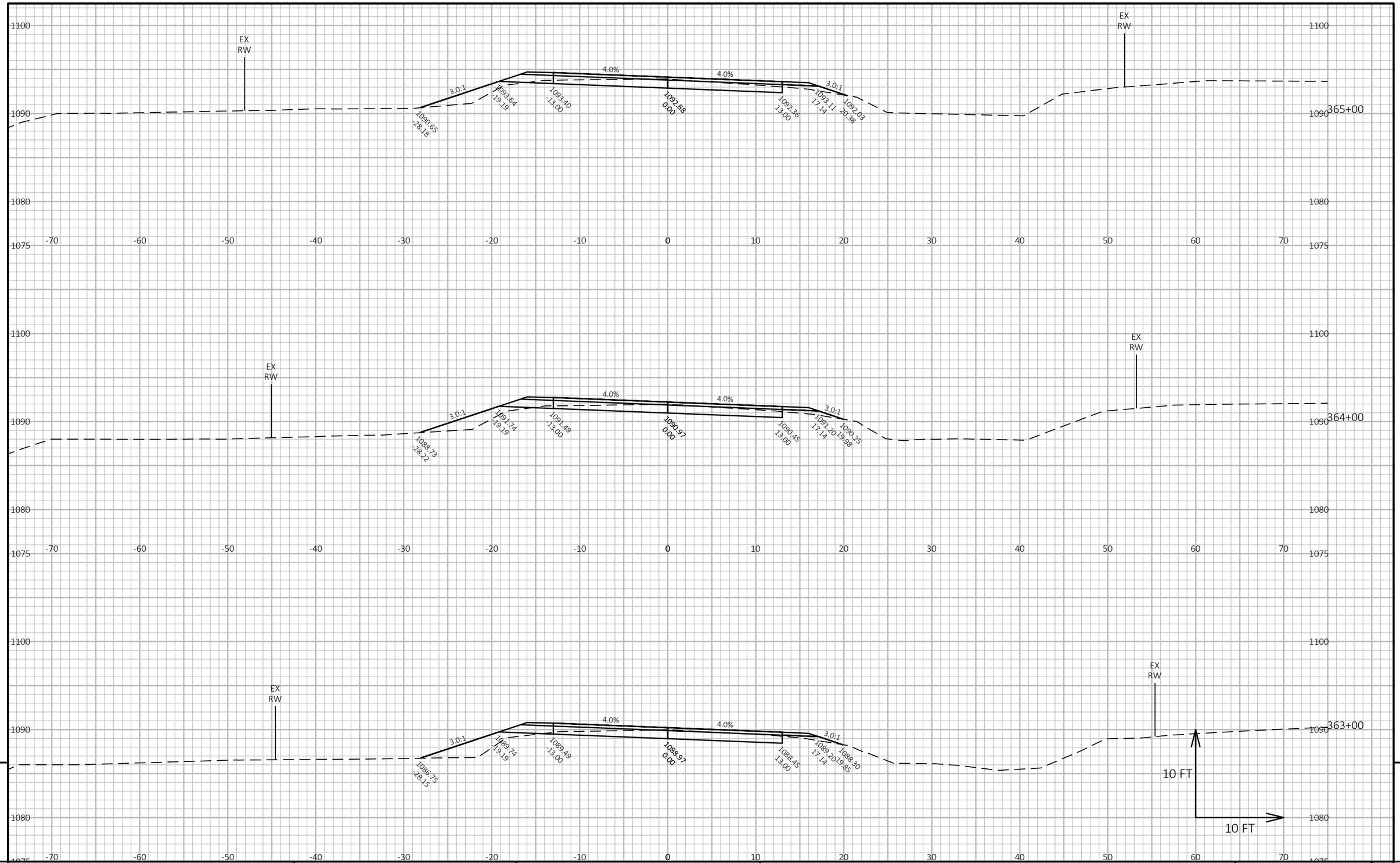
PLOT DATE : 11/1/2021 6:27 PM

PLOT BY : STEVE LIPPERT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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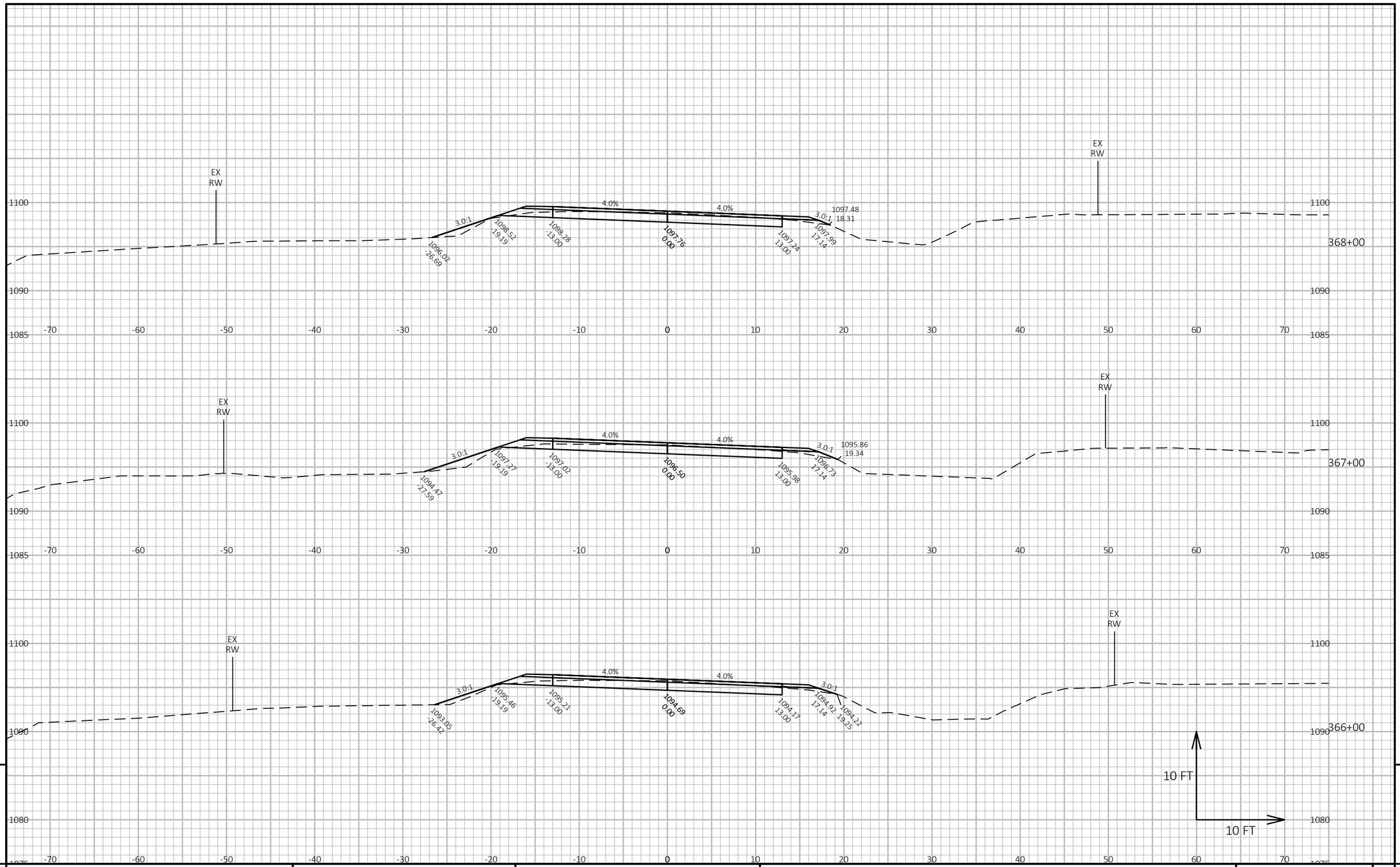
PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 168	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 29

PLOT DATE : 11/1/2021 6:27 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 169	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 30

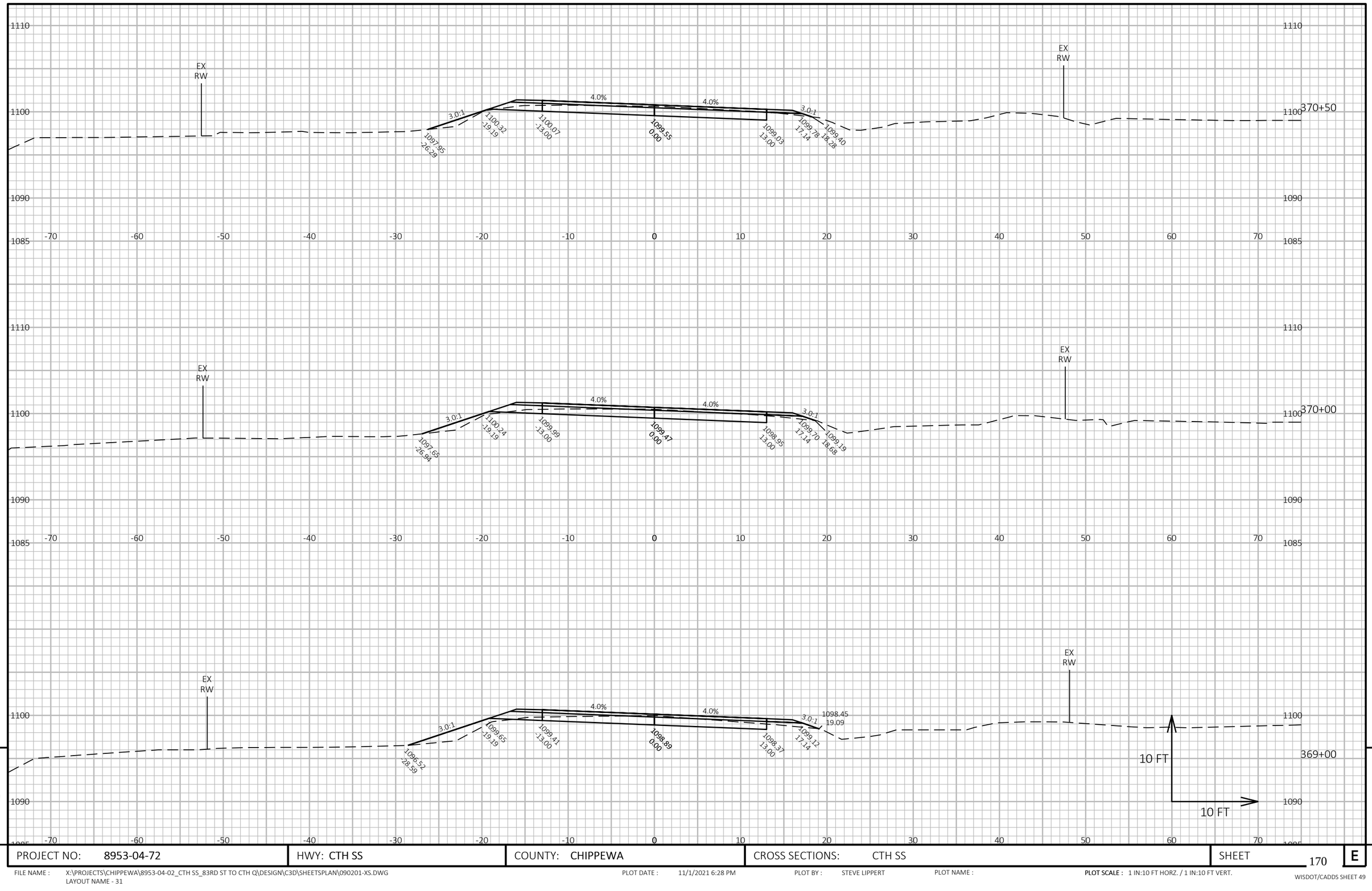
PLOT DATE : 11/1/2021 6:28 PM

PLOT BY : STEVE LIPPERT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 8953-04-72	HWY: CTH SS	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH SS	SHEET 170	E

FILE NAME : X:\PROJECTS\CHIPPEWA\8953-04-02_CTH SS_83RD ST TO CTH Q\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 31

PLOT DATE : 11/1/2021 6:28 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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