PROJECT ID: 2697-22-70
WITH: N/A

COUNTY: OZAUKEE

ORDER OF SHEETS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

HIGHLAND ROAD BIKE SPUR

ROTARY PARK TO OZAUKEE INTERURBAN TRAIL

HIGHLAND ROAD
OZAUKEE COUNTY

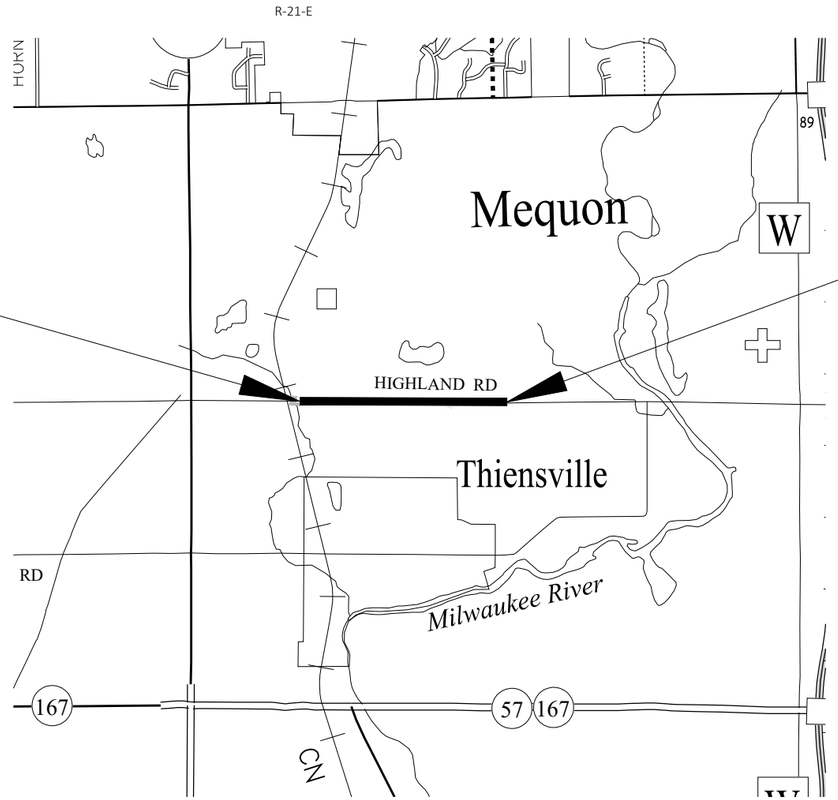
STATE PROJECT NUMBER
2697-22-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2697-22-70		

THIS IS A FEDERALLY FUNDED PROJECT
DBE GOAL IS DISCRETIONARY

AUGUST 8, 2025
BID SET

N



BEGIN PROJECT
STA 100+47.44
X=584476.037
Y=376914.658

END PROJECT
STA 175+23.57
X=376874.500
Y=591944.841

DESIGN DESIGNATION			HIGHLAND ROAD
A.A.D.T.	2023	=	6,200 - 7,700
A.A.D.T.		=	
D.H.V.		=	
D.D.		=	
T.		=	
DESIGN SPEED		=	45 MPH
ESALS		=	

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 1.41 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), OZAUKEE 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.

CONVENTIONAL SYMBOLS

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

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

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

ORIGINAL PLANS PREPARED BY

kapur

WISCONSIN
KURT A. FARRENKOPF
E-27600
MENOMONEE FALLS WI
PROFESSIONAL ENGINEER

DATE: 08/08/25

PREPARED BY

Surveyor	AYRES & ASSOC. / KAPUR & ASSOCIATES
Designer	KAPUR & ASSOCIATES
Project Manager	KURT FARRENKOPF

PROJECT SPONSOR MT TRAIL FOUNDATION

DATE: _____ (Signature)

E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\010101-TI.DWG PLOT DATE : 8/8/2025 10:01 AM PLOT BY : WALTER A. WOLAK II PLOT NAME :

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE CITY OF MEQUON.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXISTING UTILITIES ARE SHOWN FROM FIELD LOCATES AND AS-BUILT PLANS PROVIDED BY THE UTILITY. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING ITEMS SHALL BE FILLED WITH BACKFILL GRANULAR GRADE BACKFILL GRANULAR IS INCIDENTAL TO THE REMOVAL ITEM.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE PLACED WITH 6-INCH TYPICAL DEPTH.

RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND ENGINEER IN THE FIELD.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED.

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) WILL BE DETERMINED BY THE ENGINEER. BACKFILL EBS AREAS WITH GRANULAR BACKFILL GRADE 2.

CONCRETE CURB AND GUTTER GRADES ARE TO THE FLANGE OF CURB AND GUTTER. DISTANCES SHOWN FOR CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE LINE.

THE EXACT LOCATION OF DRIVEWAYS IS TO BE DETERMINED BY THE ENGINEER AND REPLACED IN KIND UNLESS NOTED OTHERWISE.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" WILL BE COVERED AS DIRECTED BY THE ENGINEER.

CONTRACTOR SHALL CONTACT PROJECT ENGINEER AND SEWRPC AT LEAST TWO WEEKS PRIOR TO CONDUCTING WORK NEAR ANY PUBLIC SURVEY MONUMENT.

A SAWED JOINT IS REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

LOCATIONS OF SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
BTWN	BETWEEN
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPERELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT

2

UTILITY/AGENCY CONTACTS

ATC MANAGEMENT, INC. - ELECTRICITY-TRANSMISSION
TRANS 220 MAILBOX
801 O'KEEFE ROAD
DE PERE, WI 54115
PHONE: (920) 338-6582
EMAIL: DL-ATCDOTNOTIFICATIONS@ATCLLC.COM

AT&T WISCONSIN - COMMUNICATION LINE
STEVE BURTCH
220 WISCONSIN AVE
WAUKESHA, WI 53186
PHONE: (262) 506-2849
EMAIL: SB7561@ATT.COM

EVERSTREAM - COMMUNICATION LINE
EVERSTREAM UTILITY COORDINATION
324 E WISCONSIN AVE, SUITE 730
MILWAUKEE, WI 53202
PHONE: (414) 409-1709
EMAIL: WI-RELOCATIONS@EVERSTREAM.NET

MIDWEST FIBER NETWORKS LLC - COMMUNICATION LINE
MWFN UTILITY COORDINATOR
6070 NORTH FLINT ROAD
GLENDALE, WI 53209
PHONE: (414) 672-5612
EMAIL: RELOCATIONREQUESTS@MIDWESTFIBERNETWORKS.COM

SPECTRUM - COMMUNICATION LINE
BEAU ABUYA
1320 N. DR. MARTIN LUTHER KING JR DRIVE
MILWAUKEE, WI 53212
PHONE: (414) 908-1343
EMAIL: CHTR_WI_CONST@CHARTER.COM

WINDSTREAM KDL, LLC - COMMUNICATION LINE
969 WAUBE LANE
GREEN BAY, WI 54304
PHONE: (920) 410-6902
EMAIL: LORI.KETTER@WINDSTREAM.COM

UTILITY/AGENCY CONTACTS

VERIZON BUSINESS - COMMUNICATION LINE
RJ CICATELLO JR.
15725 WEST RYERSON ROAD
NEW BERLIN, WI 53151
PHONE: (262) 782-9836
EMAIL: RANDY.CICATELLO@VERIZON.COM

WE ENERGIES - ELECTRICITY
WE ENERGIES UTILITY COORDINATOR
500 S 116TH STREET
PHONE: (414) 944-5738
EMAIL: WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

WE ENERGIES - GAS/PETROLEUM
WE ENERGIES UTILITY COORDINATOR
500 S 116TH STREET
PHONE: (414) 944-5738
EMAIL: WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

OTHER CONTACTS

CITY OF MEQUON DEPARTMENT OF PUBLIC WORKS
KRISTEN LUNDEEN
11333 N CEDARBURG ROAD
MEQUON, WI 53092
PHONE: (262) 236-2938
EMAIL: KLUNDEEN@CI.MEQUON.WI.US

CITY OF MEQUON DEPARTMENT OF PUBLIC WORKS
COLE MCCRAW
11333 N CEDARBURG ROAD
MEQUON, WI 53092
PHONE: (262) 236-2957
EMAIL: CMCCRAW@CI.MEQUON.WI.US

OZAUKEE COUNTY
JON EDGREN
410 SOUTH SPRING ST
PORT WASHINGTON, WI 53074
PHONE: (262) 238-8335
EMAIL: JEDGREN@CO.OZAUKEE.WI.US

SEWRPC
ROB MERRY
W239 N1812 ROCKWOOD DRIVE
PO BOX 1607
WAUKESHA, WI 53187-1607
PHONE (262) 953-4289
E-MAIL: RMERRY@SEWRPC.ORG

SEWRPC
ANDY TRAEGER
W239 N1812 ROCKWOOD DRIVE
PO BOX 1607
WAUKESHA, WI 53187-1607
PHONE (262) 953-4296
E-MAIL: ATRAEGER@SEWRPC.ORG

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
BENTON STELZEL
141 NW BARSTOW STREET #180
WAUKESHA, WI 53188
PHONE: (262) 623-0194
BENTON.STELZEL@WISCONSIN.GOV

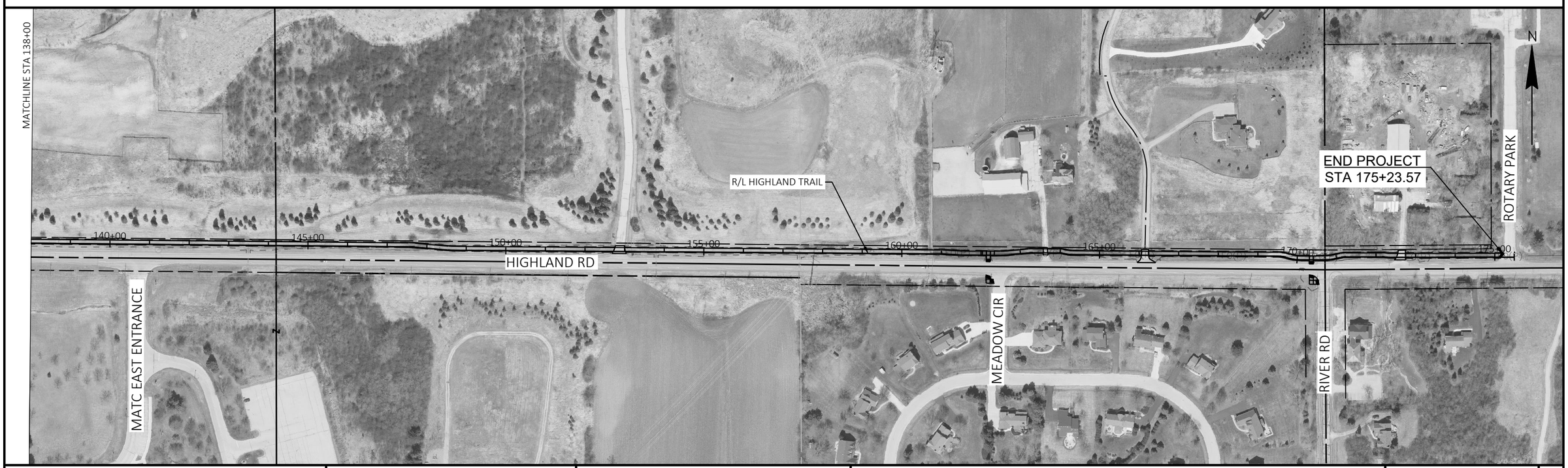
KAPUR & ASSOCIATES
KURT A. FARRENKOPF
7711 N. PORT WASHINGTON ROAD MILWAUKEE, WI 53217
PHONE: (414) 751-7226
EMAIL: KFARRENKOPF@KAPURINC.COM

ORDER OF SECTION 2 SHEETS

GENERAL NOTES/UTILITY CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
CURB RAMP DETAILS
CONTOUR PLAN
EROSION CONTROL PLAN
CULVERT PIPE PLAN
PERMANENT SIGNING
TRAFFIC SIGNAL PLAN
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT PLAN

2

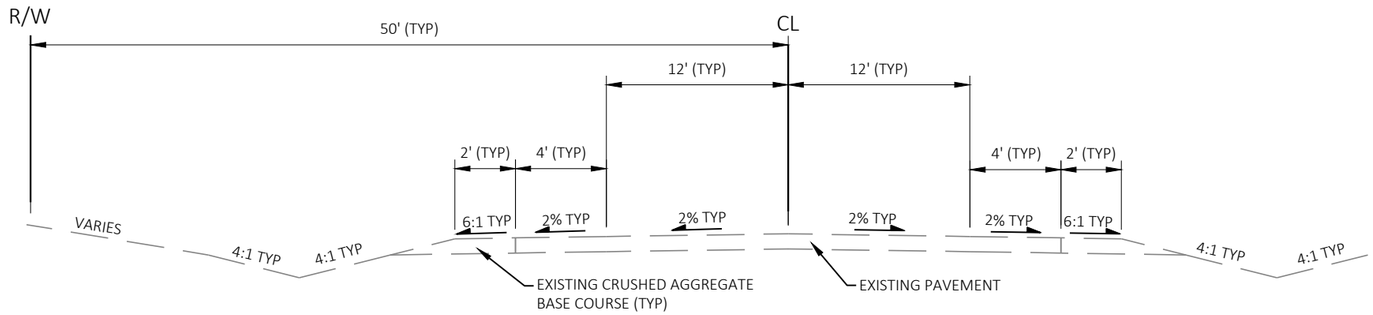
2



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\020201-PO.DWG
LAYOUT NAME - PO-01
PLOT DATE : 8/7/2025 1:46 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:250 FT
WISDOT/CADDS SHEET 42

2



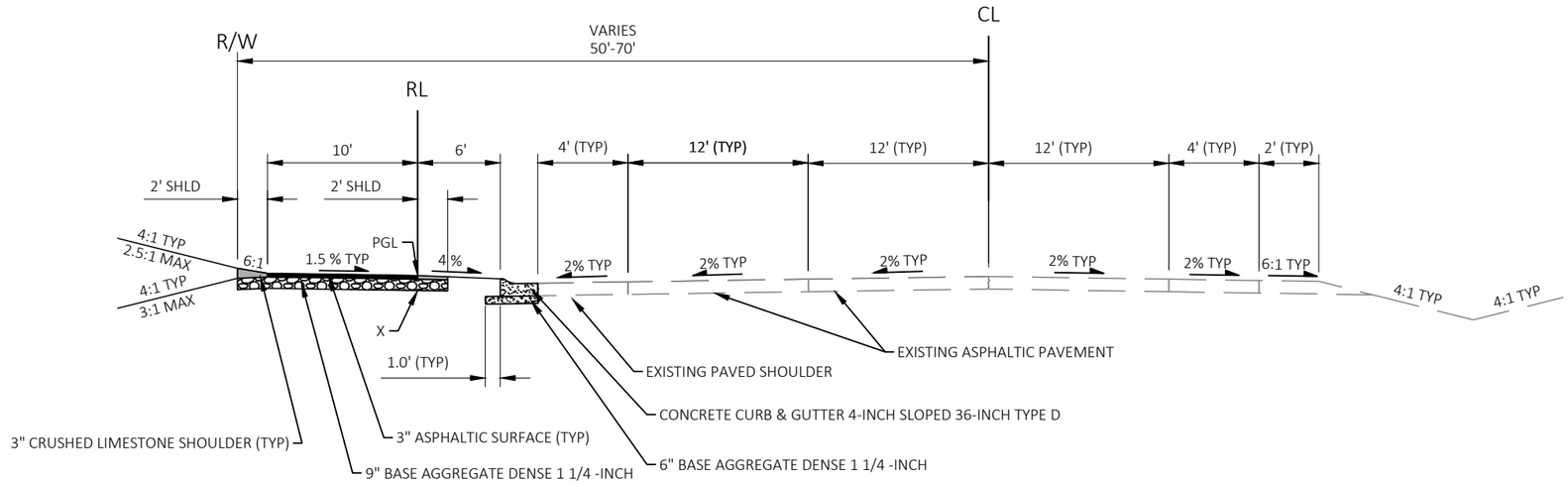
EXISTING TYPICAL SECTION

HIGHLAND RD

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EXISTING TYPICAL SECTIONS	SHEET 5	E

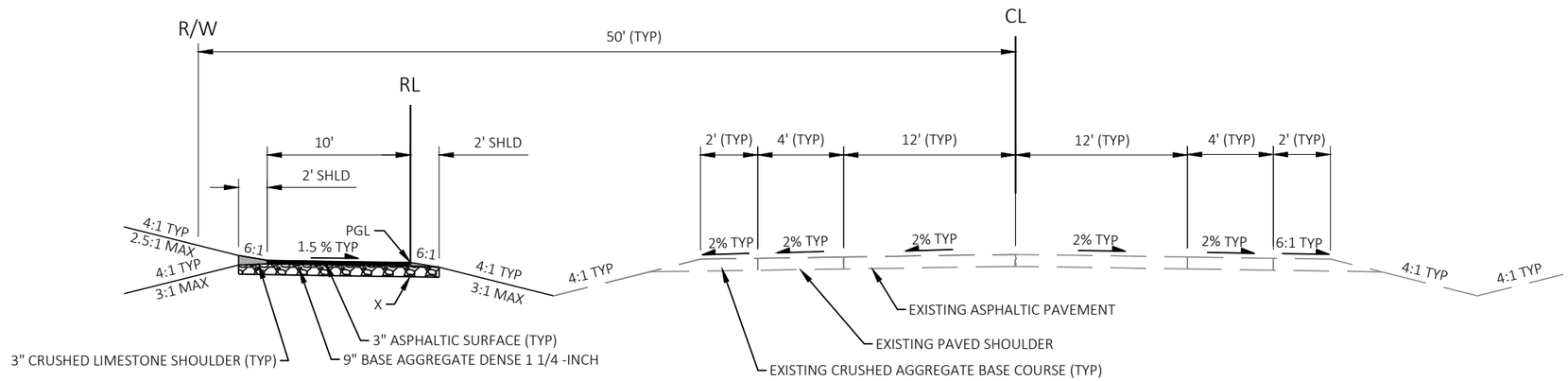
FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\020301-TS.DWG
LAYOUT NAME - TS-01
PLOT DATE : 8/6/2024
PLOT BY : BMELCHIOR
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



FINISHED TYPICAL SECTION

STA 101+11 - 104+72



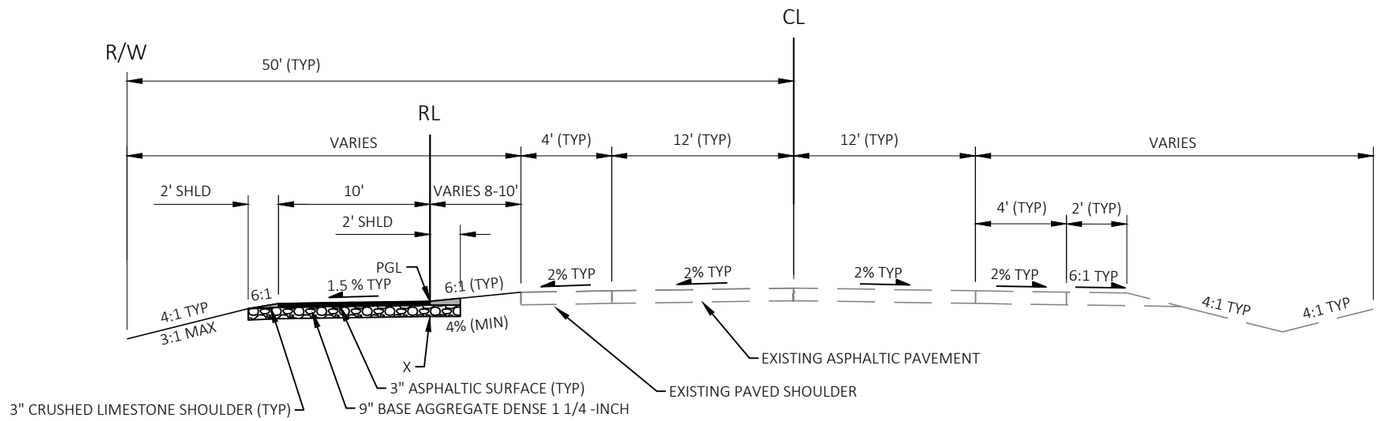
FINISHED TYPICAL SECTION

STA 104+72 - 122+66
STA 125+59 - 175+23

PGL = POINT REFERENCE ON PROFILE
X = POINT REFERENCED ON CROSS SECTIONS
SEE NEXT SHEET FOR PATH CROSS SLOPE TABLE

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PROPOSED TYPICAL SECTIONS	SHEET 6	E

2



FINISHED TYPICAL SECTION

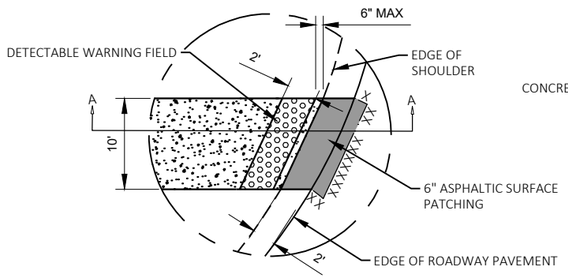
STA 122+66 - 125+59

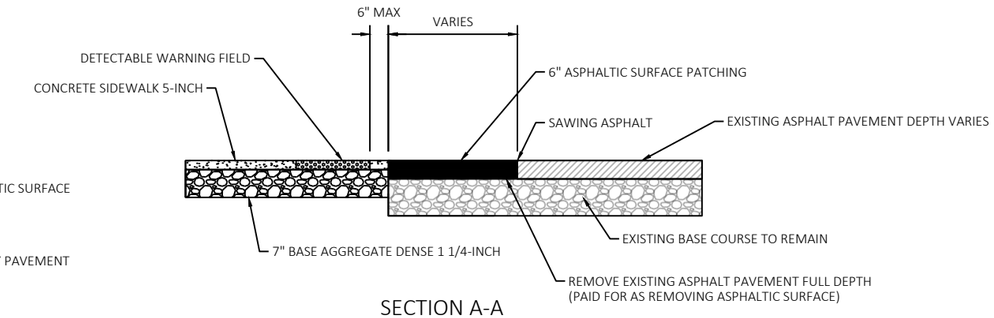
PATH CROSS SLOPE TABLE			
START STA.	START SLOPE	END STA.	END SLOPE
101+23.48	-1.50%	102+06.77	-1.50%
103+20	-1.50%	104+50.00	-1.50%
104+50.00	-1.50%	105+00.00	+1.50%
120+50.00	+1.50%	121+00.00	-1.50%
121+00.00	-1.50%	121+26.07	-1.50%
122+10.00	+1.50%	122+50.00	-1.50%
122+50.00	-1.50%	125+00.00	-1.50%
125+00.00	-1.50%	125+50.00	+1.50%

NOTE: NEGATIVE (-) SLOPE IS TO THE LEFT & POSITIVE (+) SLOPE IS TO THE RIGHT

PGL = POINT REFERENCE ON PROFILE
X = POINT REFERENCED ON CROSS SECTIONS

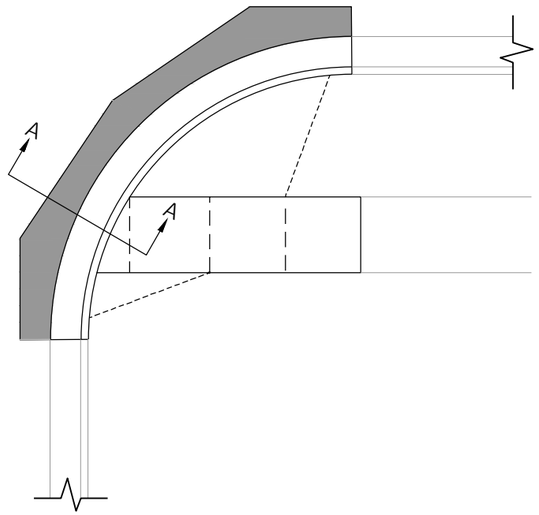
2

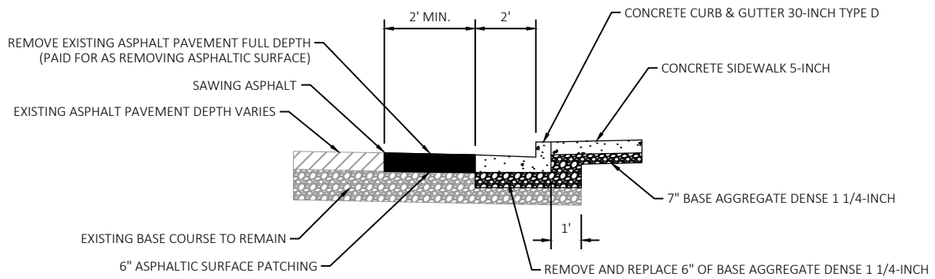




SECTION A-A

DETECTABLE WARNING FIELD WITH NO CURB



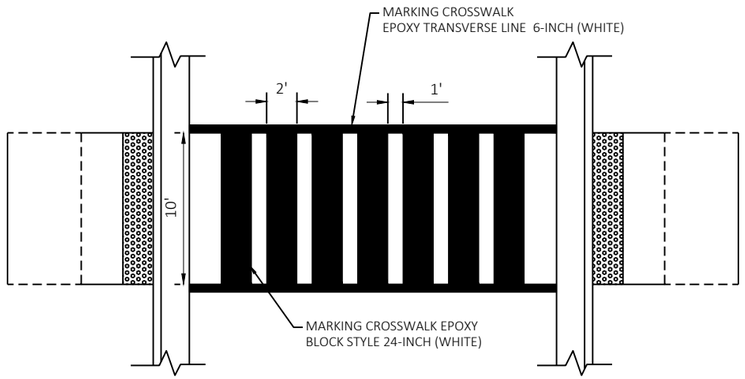


SECTION A-A

CURB & GUTTER REPLACEMENT ADJACENT TO ASPHALT PAVEMENT

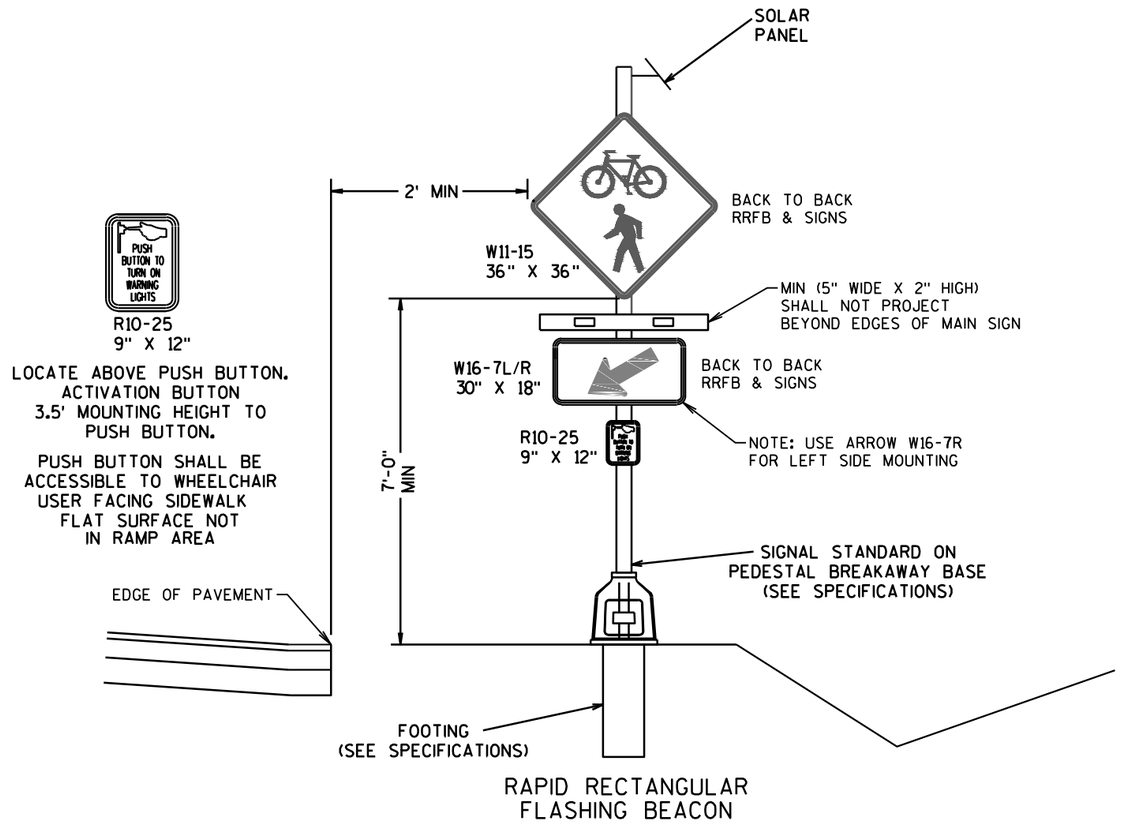
NTS

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONSTRUCTION DETAILS	SHEET 8	E



BLOCK STYLE CROSSWALK PAVEMENT MARKING DETAIL

SEE PAVEMENT MARKING PLAN FOR LOCATIONS

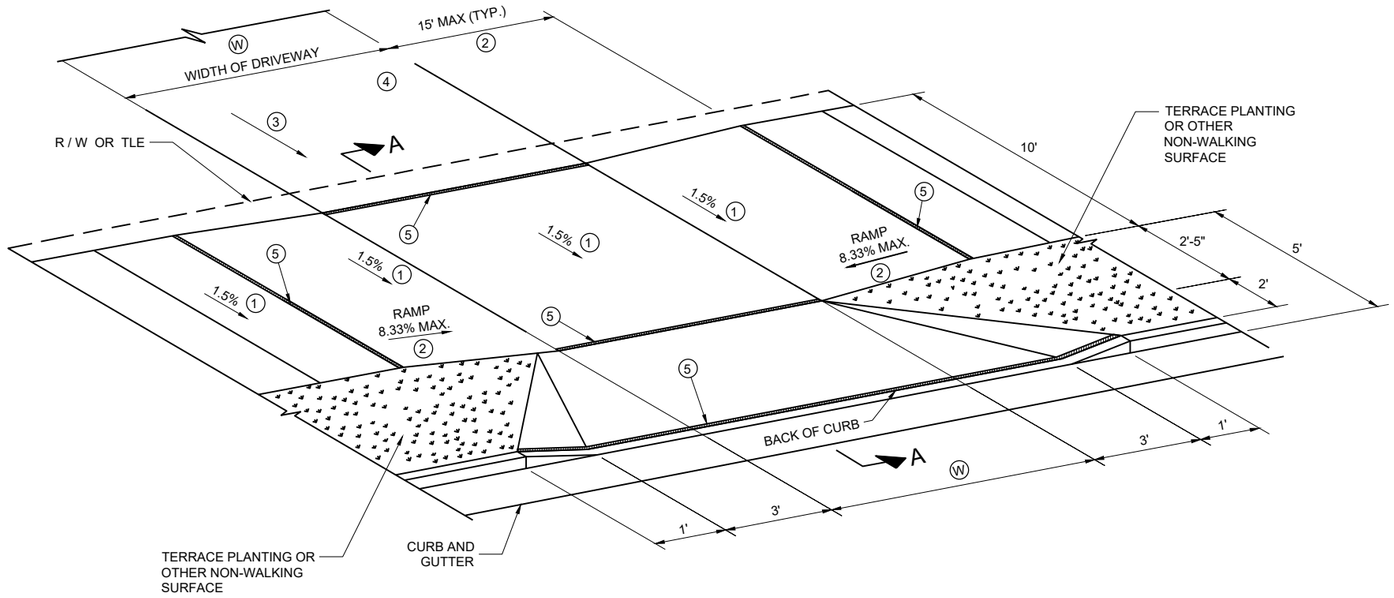


RAPID RECTANGULAR
FLASHING BEACON

RECTANGULAR RAPID FLASHING BEACON DETAIL

SEE PERMANENT SIGNING PLANS FOR LOCATIONS

2



SIDEWALK WITH 5 FOOT TERRACE

NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY 6-INCH.

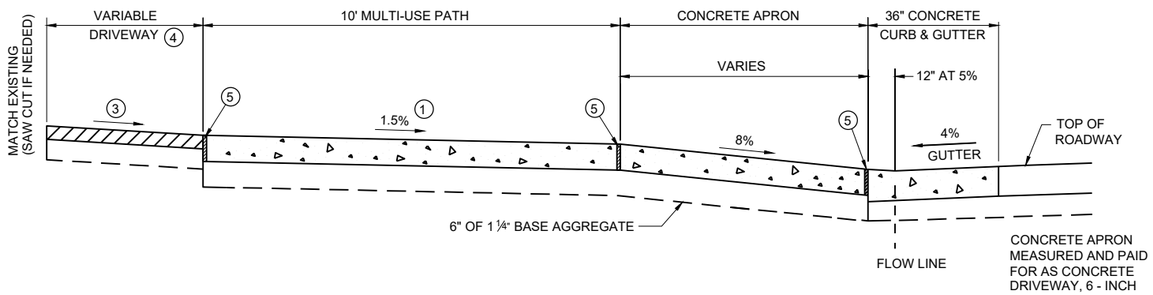
(1) CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM
13.5% UP AWAY FROM SIDEWALK (SAG)
10.5% DOWN AWAY FROM SIDEWALK (CREST)

(4) DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

(5) ½" EXPANSION JOINT FILLER.

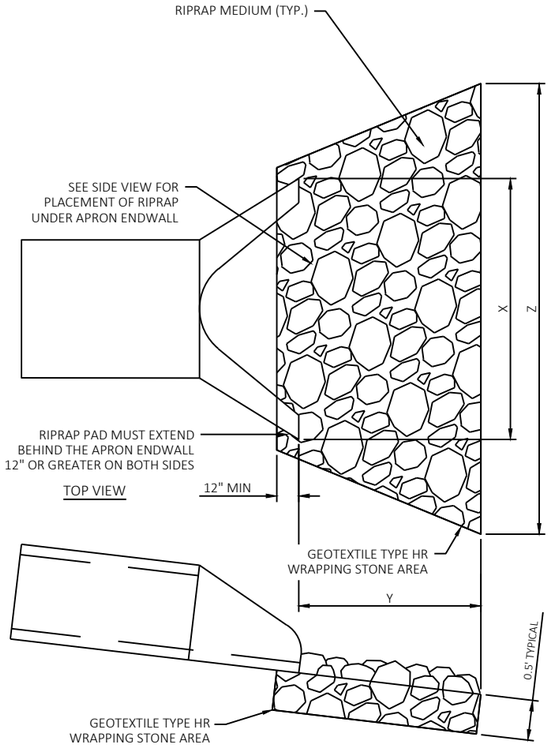


DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER - 5 FOOT TERRACE

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONSTRUCTION DETAILS	SHEET 10	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021001-CD.DWG
LAYOUT NAME - 03
PLOT DATE : 8/7/2025 1:47 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



DIA (INCH)	X (INCH)	Y (INCH)	Z (INCH)
12	24	120	48
15	30	120	60
18	36	120	60
21	42	120	72
24	48	120	72
27	54	120	81
30	60	120	90
36	72	120	108
42	78	120	120
48	84	120	120
54	90	120	150
60	96	120	162
66	102	120	174
72	108	120	186

NOTES:
1) STANDARD SPECIFICATION SHALL APPLY TO ALL INSTALLATIONS.

RIPRAP AT ENDWALLS

NOT TO SCALE
SEE EROSION CONTROL PLAN

2

WETLAND BOUNDARY (TYP)

N CEDARBURG RD

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

MATCH LINE 106+00

BEGIN PROJECT
STA 100+47.44

HIGHLAND RD

101+00 102+00 104+00 105+00 106

RM01 RM02 RM06 RM07 RM08 CLR

N

REMOVAL LEGEND

- RM01 REMOVING CURB AND GUTTER
- RM02 REMOVING ASPHALTIC SURFACE
- CLR CLEARING AND GRUBBING
- RM05 REMOVING FENCE
- RM06 REMOVING RIPRAP (INCIDENTAL TO EXCAVATION COMMON)
- RM07 REMOVING ROCK (INCIDENTAL TO EXCAVATION COMMON)
- RM08 MARKING REMOVAL LINE 6-INCH
- XXXXX SAWING ASPHALT
- YYYYY SAWING CONCRETE
- —RM— REMOVING SMALL PIPE CULVERT

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

EXISTING R/W

MATCH LINE 112+00

MATCH LINE 106+00

HIGHLAND RD

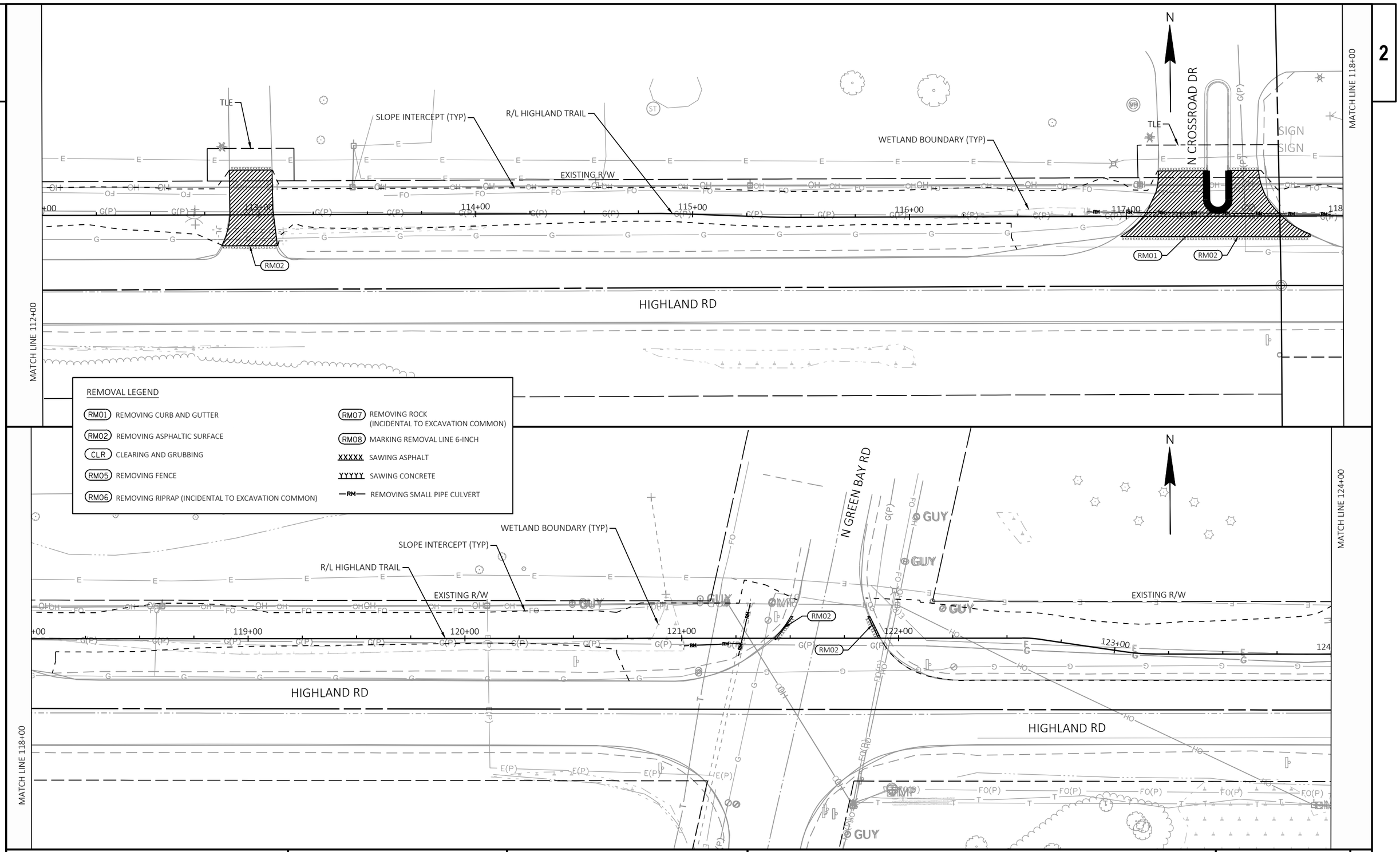
WETLAND BOUNDARY (TYP)

107+00 108+00 109+00 110+00 111+00 112

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	REMOVAL PLANS	SHEET 12	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021201-RM.DWG
LAYOUT NAME - RM1

PLOT DATE : 8/7/2025 1:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	REMOVAL PLANS	SHEET 13	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021201-RM.DWG
LAYOUT NAME - RM2

PLOT DATE : 8/7/2025 1:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

2

N

WETLAND BOUNDARY (TYP)

RM06

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

MATCH LINE 130+10

+00

125+00

126+00

127+00

128+00

129+00

130+00

MATCH LINE 124+00

HIGHLAND RD

REMOVAL LEGEND

- RM01 REMOVING CURB AND GUTTER
- RM02 REMOVING ASPHALTIC SURFACE
- CLR CLEARING AND GRUBBING
- RM05 REMOVING FENCE
- RM06 REMOVING RIPRAP (INCIDENTAL TO EXCAVATION COMMON)
- RM07 REMOVING ROCK (INCIDENTAL TO EXCAVATION COMMON)
- RM08 MARKING REMOVAL LINE 6-INCH
- XXXXX SAWING ASPHALT
- YYYYY SAWING CONCRETE
- —RM— REMOVING SMALL PIPE CULVERT

N

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

MATCH LINE 136+15

EXISTING R/W

131+00

132+00

133+00

134+00

135+00

136+00

MATCH LINE 130+10

CLR

RM02

HIGHLAND RD

RM02

RM01

MATC

WEST ENTRANCE

SIGN

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	REMOVAL PLANS	SHEET 14	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021201-RM.DWG
LAYOUT NAME - RM3

PLOT DATE : 8/7/2025 1:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 136+15

REMOVAL LEGEND

- RM01 REMOVING CURB AND GUTTER
- RM02 REMOVING ASPHALTIC SURFACE
- CLR CLEARING AND GRUBBING
- RM05 REMOVING FENCE
- RM06 REMOVING RIPRAP (INCIDENTAL TO EXCAVATION COMMON)
- RM07 REMOVING ROCK (INCIDENTAL TO EXCAVATION COMMON)
- RM08 MARKING REMOVAL LINE 6-INCH
- XXXXX SAWING ASPHALT
- YYYYY SAWING CONCRETE
- —RM— REMOVING SMALL PIPE CULVERT

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

137+00 138+00 139+00 140+00 141+00 142+00

WETLAND BOUNDARY (TYP)

HIGHLAND RD

MATC EAST ENTRANCE

SIGN

MATCH LINE 142+20

MATCH LINE 148+25

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

143+00 144+00 145+00 146+00 147+00 148+00

RM06

HIGHLAND RD

2

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	REMOVAL PLANS	SHEET 15	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021201-RM.DWG
LAYOUT NAME - RM4

PLOT DATE : 8/7/2025 1:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 148+25

MATCH LINE 154+35

2

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

149+00 150+00 151+00 152+00 153+00 154+00

RM06

RM02

RM06

WETLAND BOUNDARY (TYP)

HIGHLAND RD

REMOVAL LEGEND

- RM01 REMOVING CURB AND GUTTER
- RM02 REMOVING ASPHALTIC SURFACE
- CLR CLEARING AND GRUBBING
- RM05 REMOVING FENCE
- RM06 REMOVING RIPRAP (INCIDENTAL TO EXCAVATION COMMON)
- RM07 REMOVING ROCK (INCIDENTAL TO EXCAVATION COMMON)
- RM08 MARKING REMOVAL LINE 6-INCH
- XXXXX SAWING ASPHALT
- YYYYY SAWING CONCRETE
- —RM— REMOVING SMALL PIPE CULVERT

MATCH LINE 160+35

WETLAND BOUNDARY (TYP)

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

RM06

EXISTING R/W

155+00 156+00 157+00 158+00 159+00 160+00

HIGHLAND RD

MATCH LINE 154+35

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	REMOVAL PLANS	SHEET 16	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021201-RM.DWG
LAYOUT NAME - RM5

PLOT DATE : 8/7/2025 1:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

MATCH LINE 160+35

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

CLR

161+00

162+00

163+00

164+00

EXISTING R/W

165+00

166+00

SLOPE INTERCEPT (TYP)

MATCH LINE 166+40

RM02

HIGHLAND RD

MEADOW CIR

POST

REMOVAL LEGEND

- RM01 REMOVING CURB AND GUTTER
- RM02 REMOVING ASPHALTIC SURFACE
- CLR CLEARING AND GRUBBING
- RM05 REMOVING FENCE
- RM06 REMOVING RIPRAP (INCIDENTAL TO EXCAVATION COMMON)
- RM07 REMOVING ROCK (INCIDENTAL TO EXCAVATION COMMON)
- RM08 MARKING REMOVAL LINE 6-INCH
- XXXXX SAWING ASPHALT
- YYYYY SAWING CONCRETE
- —RM— REMOVING SMALL PIPE CULVERT

MATCH LINE 166+40

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

167+00

168+00

169+00

170+00

171+00

CLEAR TO 2' FROM ERW LINE

CLR

RM05

HIGHLAND RD

REMOVING SMALL PIPE CULVERTS

CONCRETE CHANNEL REMOVAL PAID FOR AS REMOVING CONCRETE SIDEWALK

RIVER RD

MATCH LINE 171+61.30

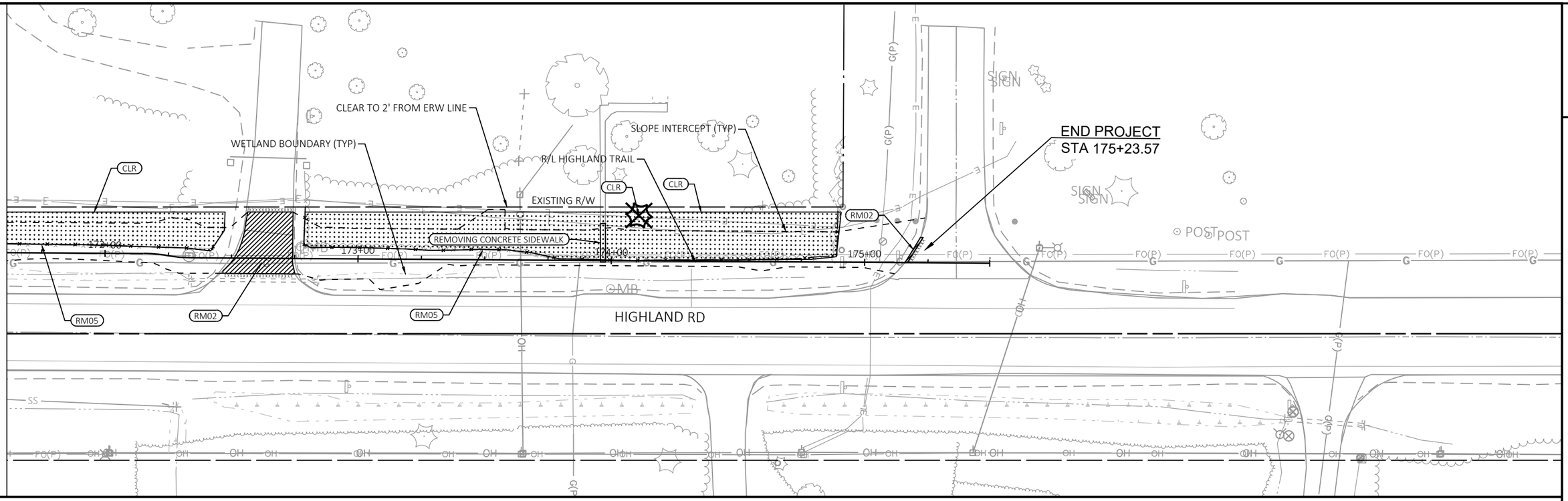
2

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	REMOVAL PLANS	SHEET 17	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021201-RM.DWG
LAYOUT NAME - RM6

PLOT DATE : 8/7/2025 1:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

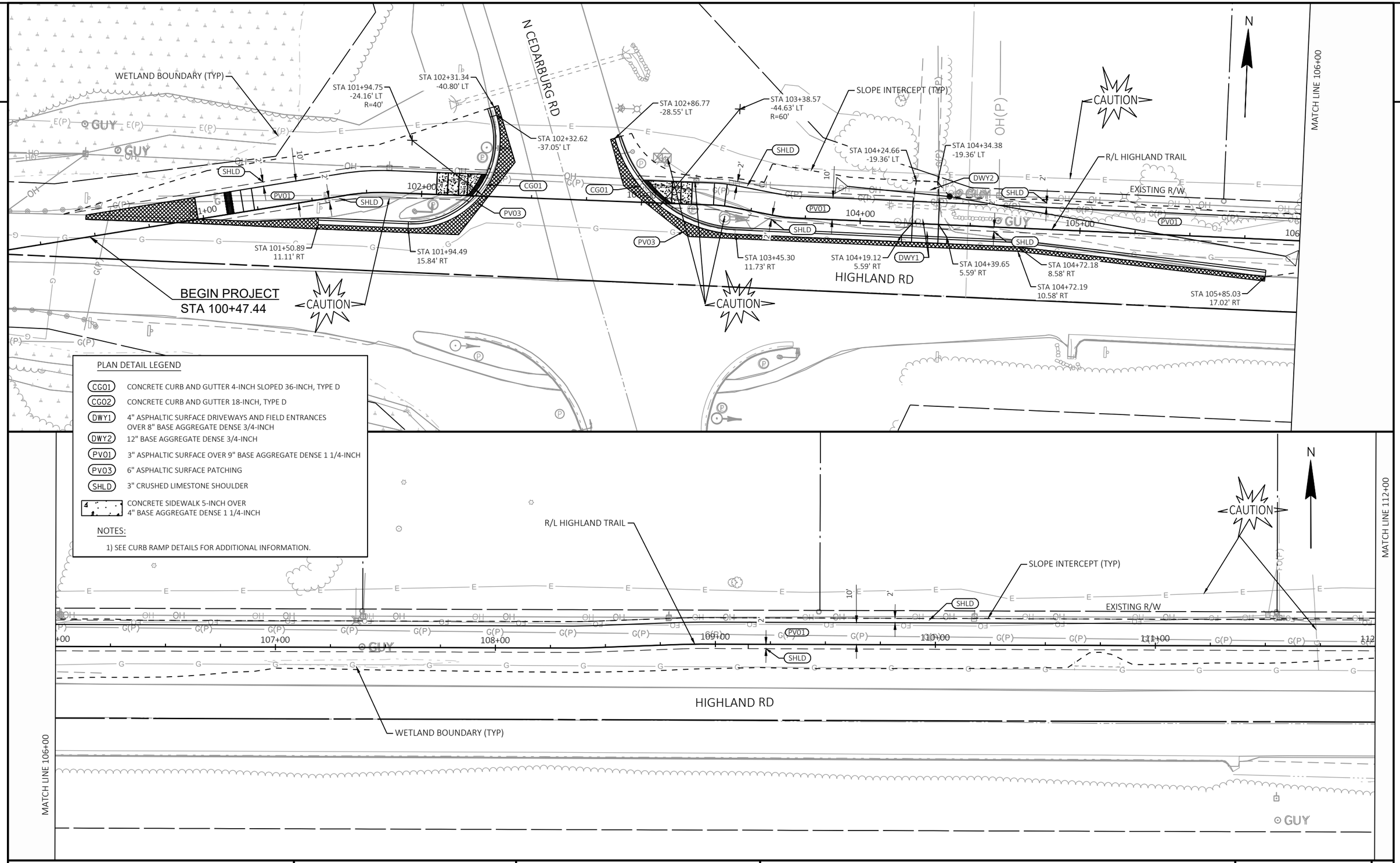


REMOVAL LEGEND

- RM01 REMOVING CURB AND GUTTER
- RM02 REMOVING ASPHALTIC SURFACE
- CLR CLEARING AND GRUBBING
- RM05 REMOVING FENCE
- RM06 REMOVING RIPRAP (INCIDENTAL TO EXCAVATION COMMON)
- RM07 REMOVING ROCK (INCIDENTAL TO EXCAVATION COMMON)
- RM08 MARKING REMOVAL LINE 6-INCH
- XXXXX SAWING ASPHALT
- YYYYY SAWING CONCRETE
- —RM— REMOVING SMALL PIPE CULVERT

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	REMOVAL PLANS	SHEET 18	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021201-RM.DWG
LAYOUT NAME - RM7
PLOT DATE : 8/7/2025 1:48 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



PLAN DETAIL LEGEND

CG01	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH, TYPE D
CG02	CONCRETE CURB AND GUTTER 18-INCH, TYPE D
DWY1	4" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 8" BASE AGGREGATE DENSE 3/4-INCH
DWY2	12" BASE AGGREGATE DENSE 3/4-INCH
PV01	3" ASPHALTIC SURFACE OVER 9" BASE AGGREGATE DENSE 1 1/4-INCH
PV03	6" ASPHALTIC SURFACE PATCHING
SHLD	3" CRUSHED LIMESTONE SHOULDER
4	CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

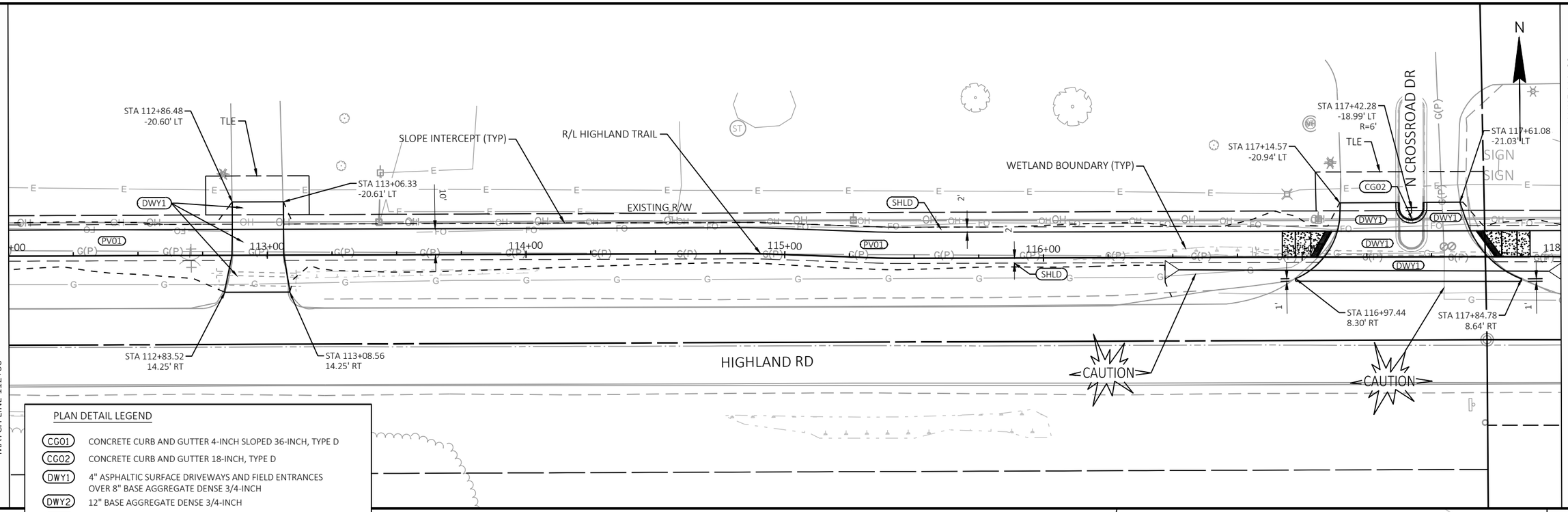
NOTES:

1) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 19	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021203-PD.DWG
LAYOUT NAME - PD1
PLOT DATE : 8/7/2025 1:48 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

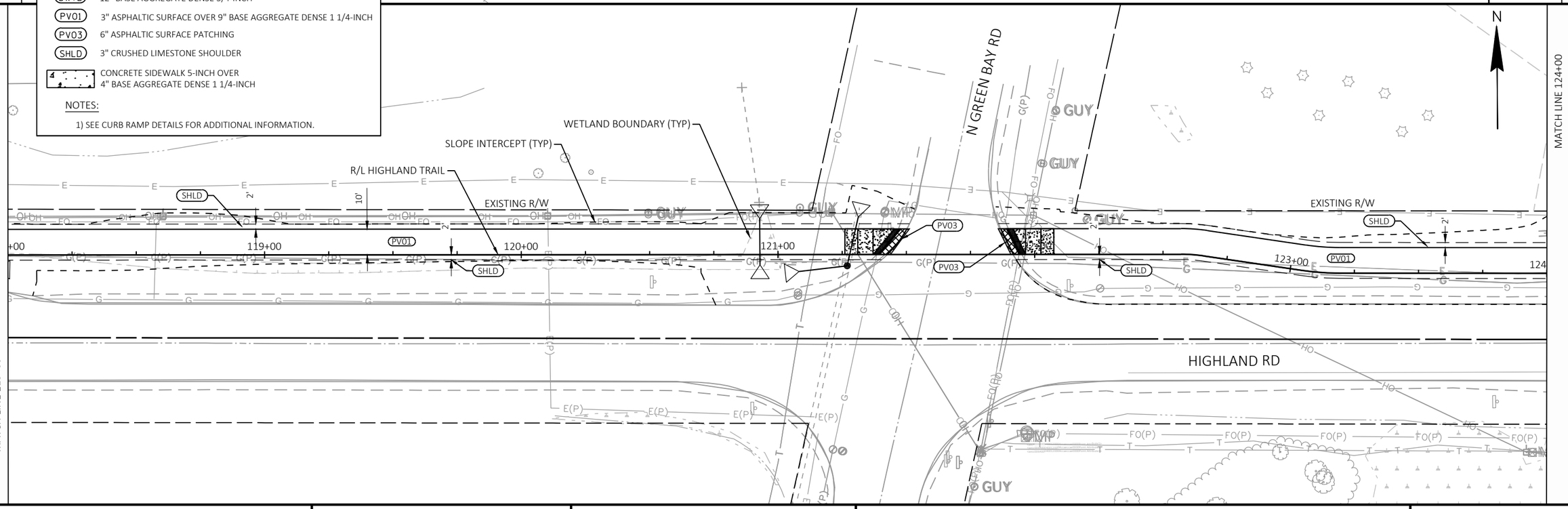


PLAN DETAIL LEGEND

CG01	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH, TYPE D
CG02	CONCRETE CURB AND GUTTER 18-INCH, TYPE D
DWY1	4" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 8" BASE AGGREGATE DENSE 3/4-INCH
DWY2	12" BASE AGGREGATE DENSE 3/4-INCH
PV01	3" ASPHALTIC SURFACE OVER 9" BASE AGGREGATE DENSE 1 1/4-INCH
PV03	6" ASPHALTIC SURFACE PATCHING
SHLD	3" CRUSHED LIMESTONE SHOULDER
	CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

NOTES:

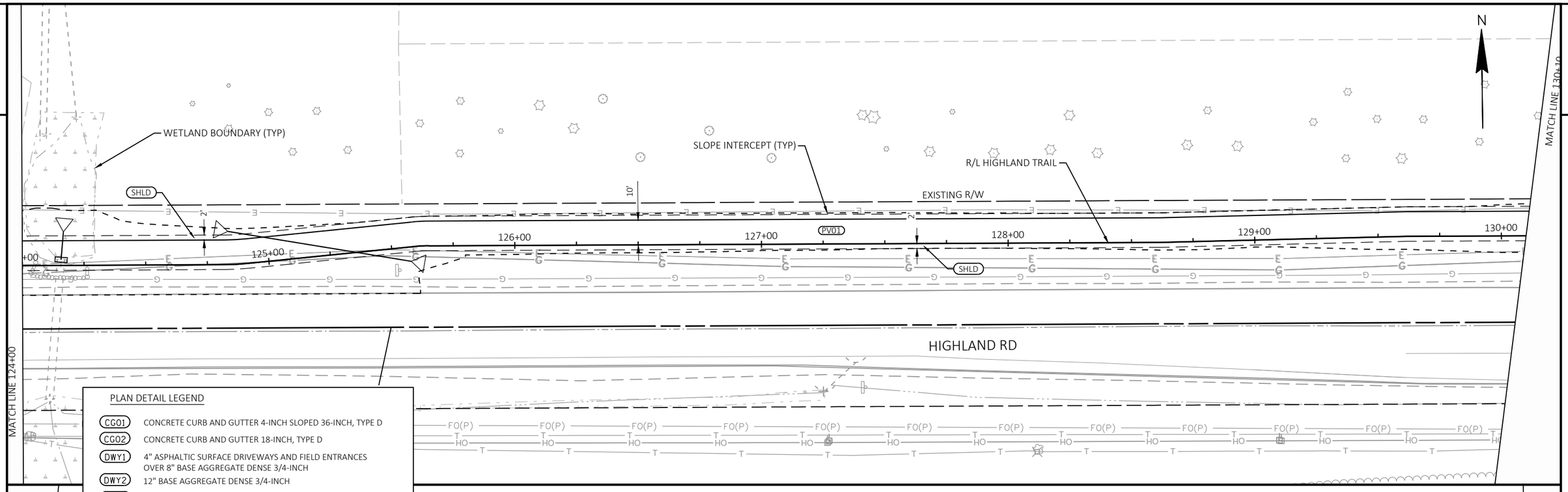
1) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 20	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021203-PD.DWG
LAYOUT NAME - PD2
PLOT DATE : 8/7/2025 1:49 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

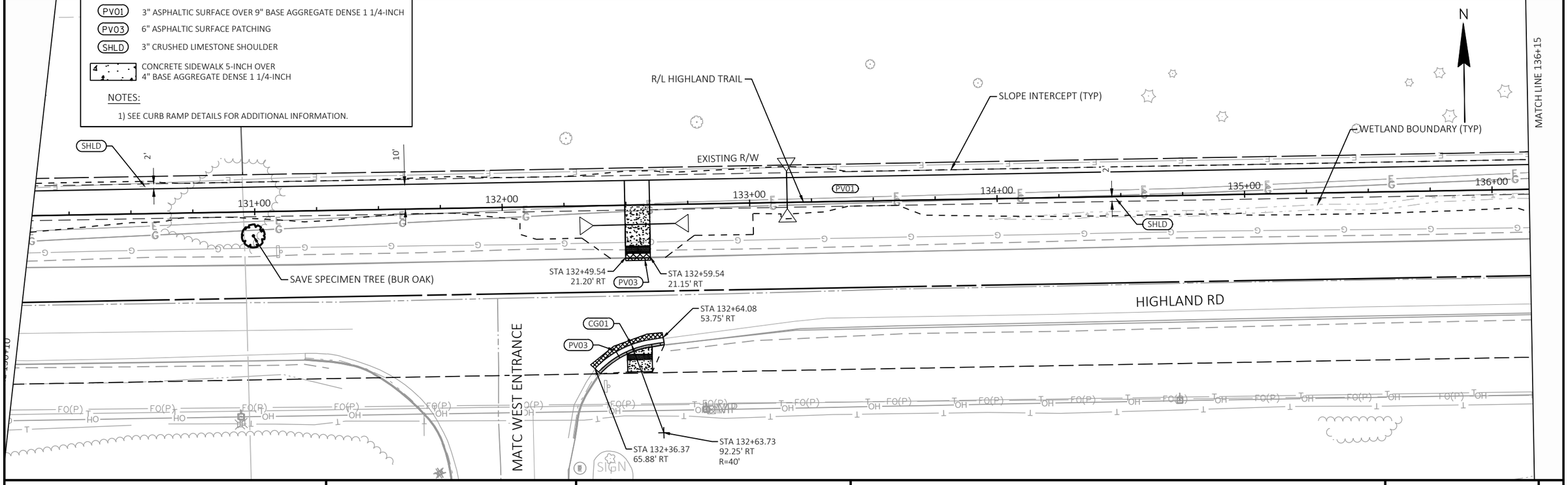


PLAN DETAIL LEGEND

CG01	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH, TYPE D
CG02	CONCRETE CURB AND GUTTER 18-INCH, TYPE D
DWY1	4" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 8" BASE AGGREGATE DENSE 3/4-INCH
DWY2	12" BASE AGGREGATE DENSE 3/4-INCH
PV01	3" ASPHALTIC SURFACE OVER 9" BASE AGGREGATE DENSE 1 1/4-INCH
PV03	6" ASPHALTIC SURFACE PATCHING
SHLD	3" CRUSHED LIMESTONE SHOULDER
	CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

NOTES:

1) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 21	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021203-PD.DWG
LAYOUT NAME - PD3
PLOT DATE : 8/7/2025 1:49 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

MATCH LINE 136+15

N

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

SHLD

2'

10'

EXISTING R/W

137+00 138+00 139+00 PV01 140+00 141+00 142+00

SHLD

MATCH LINE 142+20

2

WETLAND BOUNDARY (TYP)

HIGHLAND RD

MATC EAST ENTRANCE

POST

SIGN

PLAN DETAIL LEGEND

CGO1	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH, TYPE D
CGO2	CONCRETE CURB AND GUTTER 18-INCH, TYPE D
DWY1	4" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 8" BASE AGGREGATE DENSE 3/4-INCH
DWY2	12" BASE AGGREGATE DENSE 3/4-INCH
PVO1	3" ASPHALTIC SURFACE OVER 9" BASE AGGREGATE DENSE 1 1/4-INCH
PVO3	6" ASPHALTIC SURFACE PATCHING
SHLD	3" CRUSHED LIMESTONE SHOULDER
	CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

NOTES:

1) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.

MATCH LINE 142+20

N

SHLD

2'

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

10'

143+00 144+00 145+00 PV01 146+00 147+00 148+00

SHLD

MATCH LINE 148+25

HIGHLAND RD

POST

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 22	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021203-PD.DWG
LAYOUT NAME - PD4

PLOT DATE : 8/7/2025 1:49 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

MATCH LINE 148+25

MATCH LINE 154+35

2

N

WETLAND BOUNDARY (TYP)

STA 152+99.82
-14.94' LT

STA 152+76.44
-14.94' LT

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

SHLD

DWY1

PV01

149+00

150+00

151+00

152+00

153+00

154+00

STA 152+68.60
5.05' RT

STA 153+04.24
5.06' RT

WETLAND BOUNDARY (TYP)

HIGHLAND RD

PLAN DETAIL LEGEND

CG01	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH, TYPE D
CG02	CONCRETE CURB AND GUTTER 18-INCH, TYPE D
DWY1	4" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 8" BASE AGGREGATE DENSE 3/4-INCH
DWY2	12" BASE AGGREGATE DENSE 3/4-INCH
PV01	3" ASPHALTIC SURFACE OVER 9" BASE AGGREGATE DENSE 1 1/4-INCH
PV03	6" ASPHALTIC SURFACE PATCHING
SHLD	3" CRUSHED LIMESTONE SHOULDER
	CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

NOTES:

1) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.

N

MATCH LINE 160+35

MATCH LINE 154+35

WETLAND BOUNDARY (TYP)

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

EXISTING R/W

SHLD

PV01

155+00

156+00

157+00

158+00

159+00

160+00

HIGHLAND RD

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 23	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021203-PD.DWG
LAYOUT NAME - PD5

PLOT DATE : 8/7/2025 1:49 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

EXISTING FIELD ENTRANCE TO REMAIN

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

SHLD

DWY1

STA 163+57.15
-12.99' LT

STA 163+67.53
-13.39' LT

EXISTING R/W

SLOPE INTERCEPT (TYP)

STA 166+06.28
-14.80' LT

STA 166+23.66
-14.94' LT

MATCH LINE 166+40

2

MATCH LINE 160+35

161+00

162+00

163+00

164+00

165+00

166+00

PV01

STA 162+07.61
15.46' RT

PV03

STA 162+29.61
15.55' RT

STA 163+57.36
5.16' RT

STA 163+70.02
5.00' RT

STA 165+95.28
18.27' RT

HIGHLAND RD

STA 162+13.61
51.19' RT

STA 162+23.61
54.34' RT

STA 162+29.68
60.64' RT

MEADOW CIR

STA 162+32.40
70.64' RT

N

PLAN DETAIL LEGEND

CG01	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH, TYPE D
CG02	CONCRETE CURB AND GUTTER 18-INCH, TYPE D
DWY1	4" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 8" BASE AGGREGATE DENSE 3/4-INCH
DWY2	12" BASE AGGREGATE DENSE 3/4-INCH
PV01	3" ASPHALTIC SURFACE OVER 9" BASE AGGREGATE DENSE 1 1/4-INCH
PV03	6" ASPHALTIC SURFACE PATCHING
SHLD	3" CRUSHED LIMESTONE SHOULDER
	CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

NOTES:

1) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.

N

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

SHLD

EXISTING R/W

MATCH LINE 171+61.30

167+00

168+00

169+00

170+00

171+00

PV01

STA 166+41.74
18.26' RT

STA 170+30.82
8.43' RT

PV03

STA 170+40.80
8.40' RT

HIGHLAND RD

STA 170+30.69
39.17' RT

STA 170+40.68
40.26' RT

STA 170+52.19
51.64' RT

STA 170+53.09
61.64' RT

RIVER RD

MATCH LINE 166+40

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN DETAILS	SHEET 24	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021203-PD.DWG
LAYOUT NAME - PD6

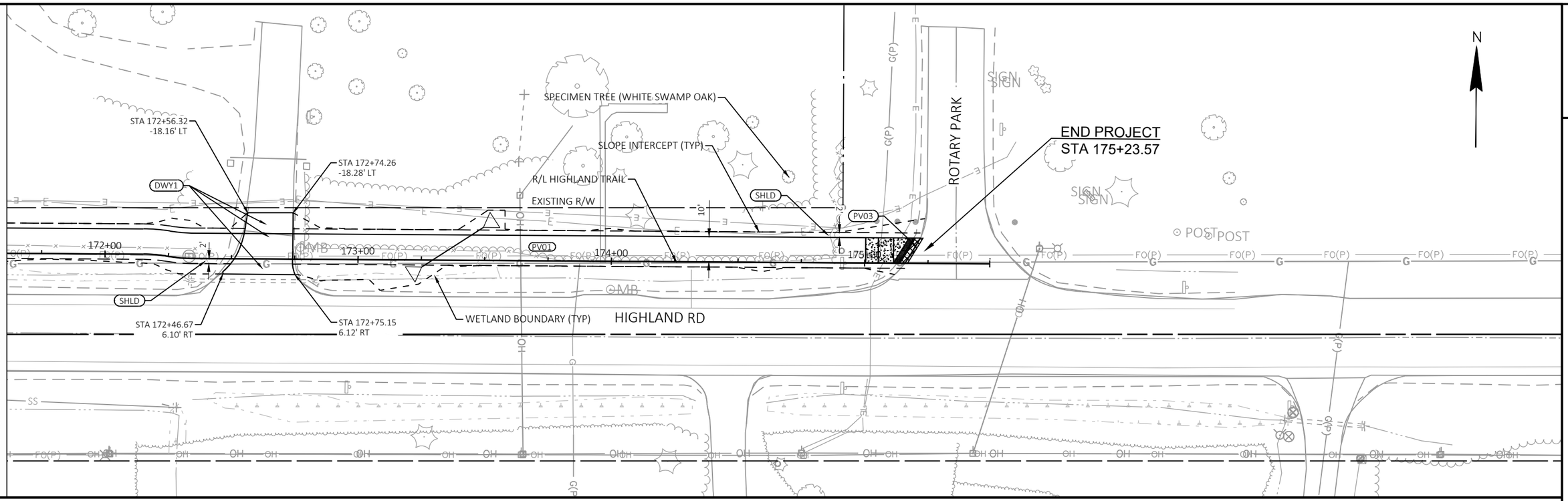
PLOT DATE : 8/7/2025 1:49 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



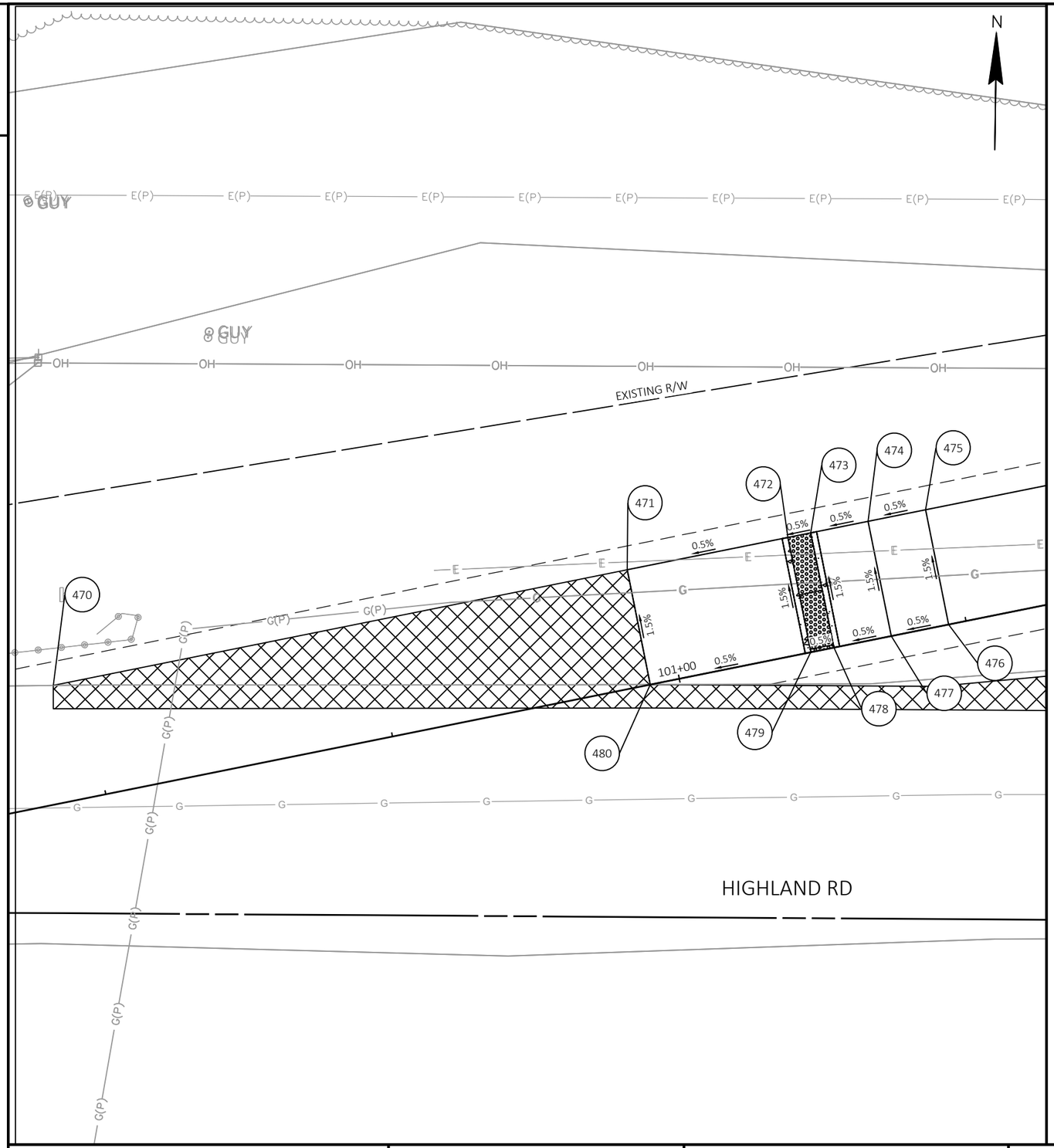
2

PLAN DETAIL LEGEND

CGO1	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH, TYPE D
CGO2	CONCRETE CURB AND GUTTER 18-INCH, TYPE D
DWY1	4" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 8" BASE AGGREGATE DENSE 3/4-INCH
DWY2	12" BASE AGGREGATE DENSE 3/4-INCH
PV01	3" ASPHALTIC SURFACE OVER 9" BASE AGGREGATE DENSE 1 1/4-INCH
PV03	6" ASPHALTIC SURFACE PATCHING
SHLD	3" CRUSHED LIMESTONE SHOULDER
	CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

NOTES:

1) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.

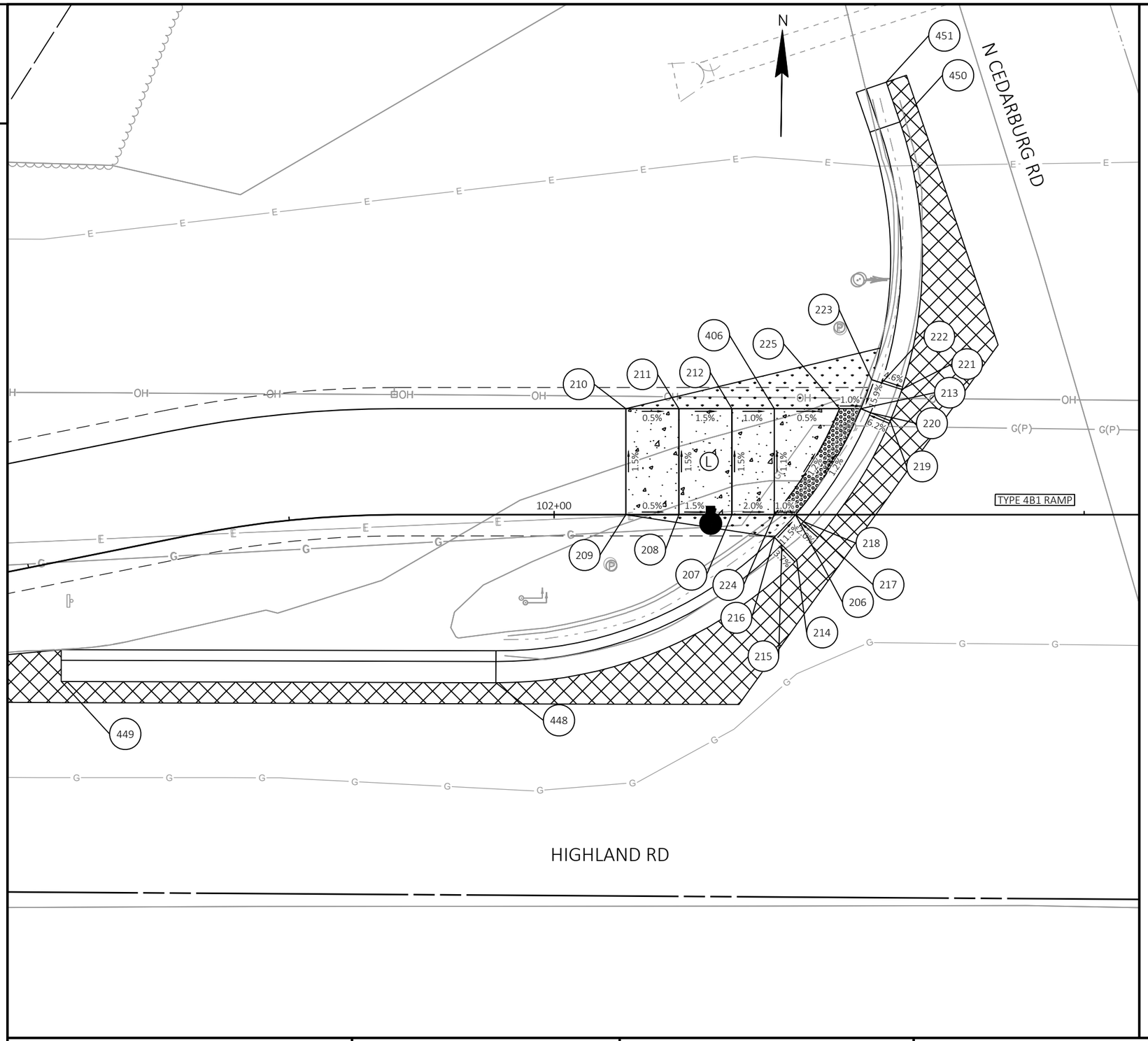


STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
470	100+47.44	10.00 LT	376924.462	584474.063	678.36
471	100+97.47	10.00 LT	376934.338	584523.106	677.07
472	101+11.48	10.00 LT	376937.103	584536.840	678.35
473	101+13.48	10.00 LT	376937.498	584538.801	678.36
474	101+18.48	10.00 LT	376938.485	584543.702	678.39
475	101+23.48	10.00 LT	376939.472	584548.604	678.41
476	101+23.48	0.00 RT	376929.669	584550.578	678.56
477	101+18.48	0.00 RT	376928.682	584545.676	678.54
478	101+13.48	0.00 RT	376927.695	584540.775	678.51
479	101+11.47	0.00 RT	376927.298	584538.802	678.50
480	100+97.47	0.00 RT	376924.535	584525.080	678.41

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 26	E

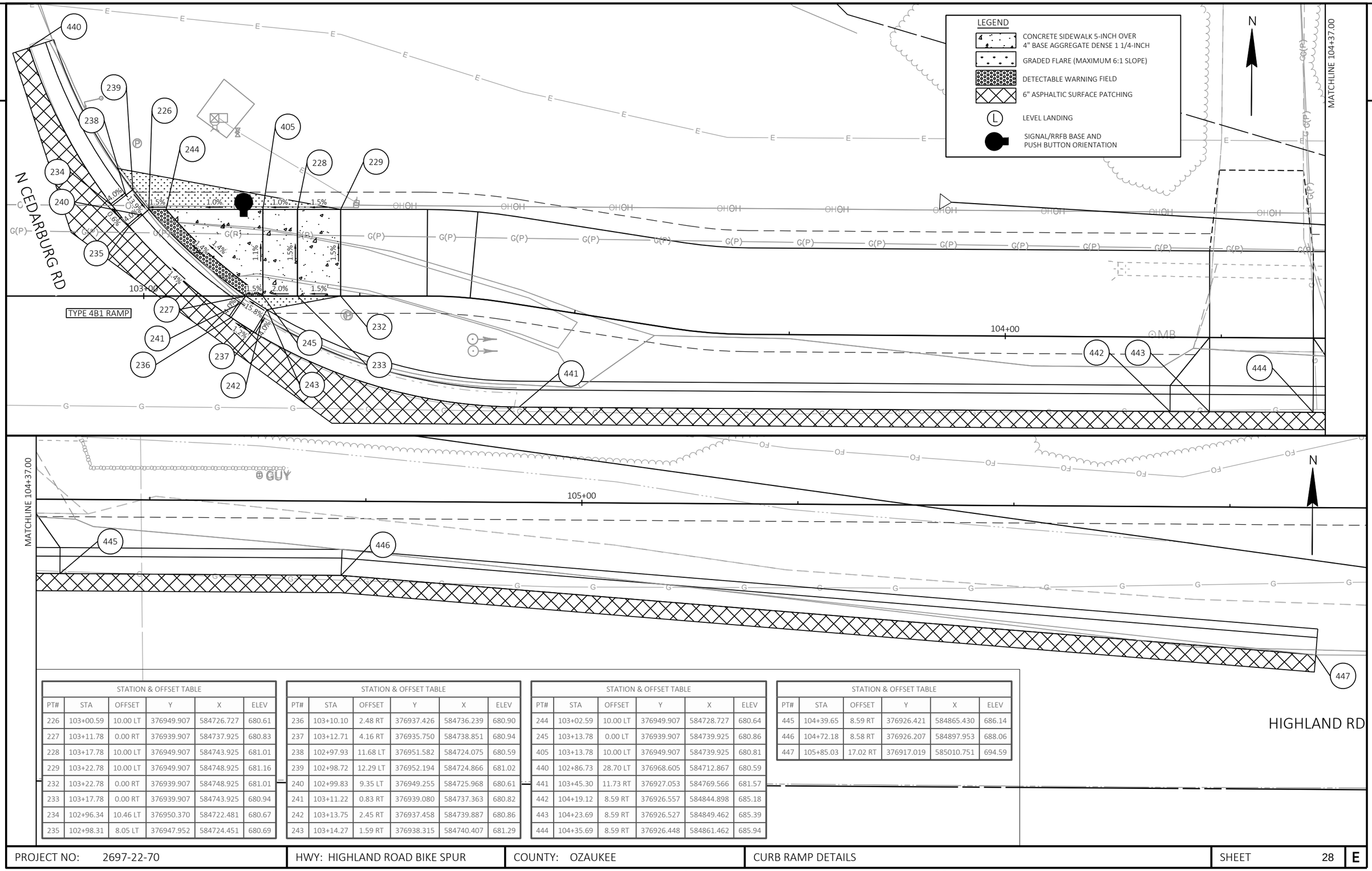


STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
206	102+22.77	0.00 RT	376939.906	584648.910	679.68
207	102+16.77	0.00 RT	376939.906	584642.911	679.77
208	102+11.77	0.00 RT	376939.906	584637.911	679.85
209	102+06.77	0.00 LT	376939.907	584632.911	679.87
210	102+06.77	10.00 LT	376949.907	584632.911	679.72
211	102+11.77	10.00 LT	376949.907	584637.911	679.70
212	102+16.77	10.00 LT	376949.907	584642.911	679.62
213	102+28.93	10.00 LT	376949.907	584655.072	679.53
214	102+22.89	4.27 RT	376935.640	584649.028	679.66
215	102+21.48	2.84 RT	376937.064	584647.617	679.59
216	102+20.78	2.13 RT	376937.772	584646.917	680.01
217	102+25.04	1.96 RT	376937.948	584651.183	679.71
218	102+23.53	0.65 RT	376939.254	584649.668	679.68
219	102+31.70	8.85 LT	376948.760	584657.841	679.90
220	102+29.85	9.62 LT	376949.524	584655.995	679.77
221	102+32.80	11.82 LT	376951.722	584658.936	679.97
222	102+30.89	12.43 LT	376952.339	584657.033	680.06
223	102+29.94	12.74 LT	376952.648	584656.082	680.02
224	102+20.77	0.00 LT	376939.907	584646.911	679.69
225	102+26.93	10.00 LT	376949.907	584653.072	679.55
406	102+20.77	10.00 LT	376949.907	584646.911	679.58
448	101+94.49	15.83 RT	376924.073	584620.632	679.28
449	101+50.89	11.11 RT	376924.189	584579.641	678.90
450	102+32.62	37.05 LT	376976.954	584658.757	680.41
451	102+31.34	40.80 LT	376980.705	584657.481	680.41

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 27	E



STATION & OFFSET TABLE

PT#	STA	OFFSET	Y	X	ELEV
226	103+00.59	10.00 LT	376949.907	584726.727	680.61
227	103+11.78	0.00 RT	376939.907	584737.925	680.83
228	103+17.78	10.00 LT	376949.907	584743.925	681.01
229	103+22.78	10.00 LT	376949.907	584748.925	681.16
232	103+22.78	0.00 RT	376939.907	584748.925	681.01
233	103+17.78	0.00 RT	376939.907	584743.925	680.94
234	102+96.34	10.46 LT	376950.370	584722.481	680.67
235	102+98.31	8.05 LT	376947.952	584724.451	680.69

STATION & OFFSET TABLE

PT#	STA	OFFSET	Y	X	ELEV
236	103+10.10	2.48 RT	376937.426	584736.239	680.90
237	103+12.71	4.16 RT	376935.750	584738.851	680.94
238	102+97.93	11.68 LT	376951.582	584724.075	680.59
239	102+98.72	12.29 LT	376952.194	584724.866	681.02
240	102+99.83	9.35 LT	376949.255	584725.968	680.61
241	103+11.22	0.83 RT	376939.080	584737.363	680.82
242	103+13.75	2.45 RT	376937.458	584739.887	680.86
243	103+14.27	1.59 RT	376938.315	584740.407	681.29

STATION & OFFSET TABLE

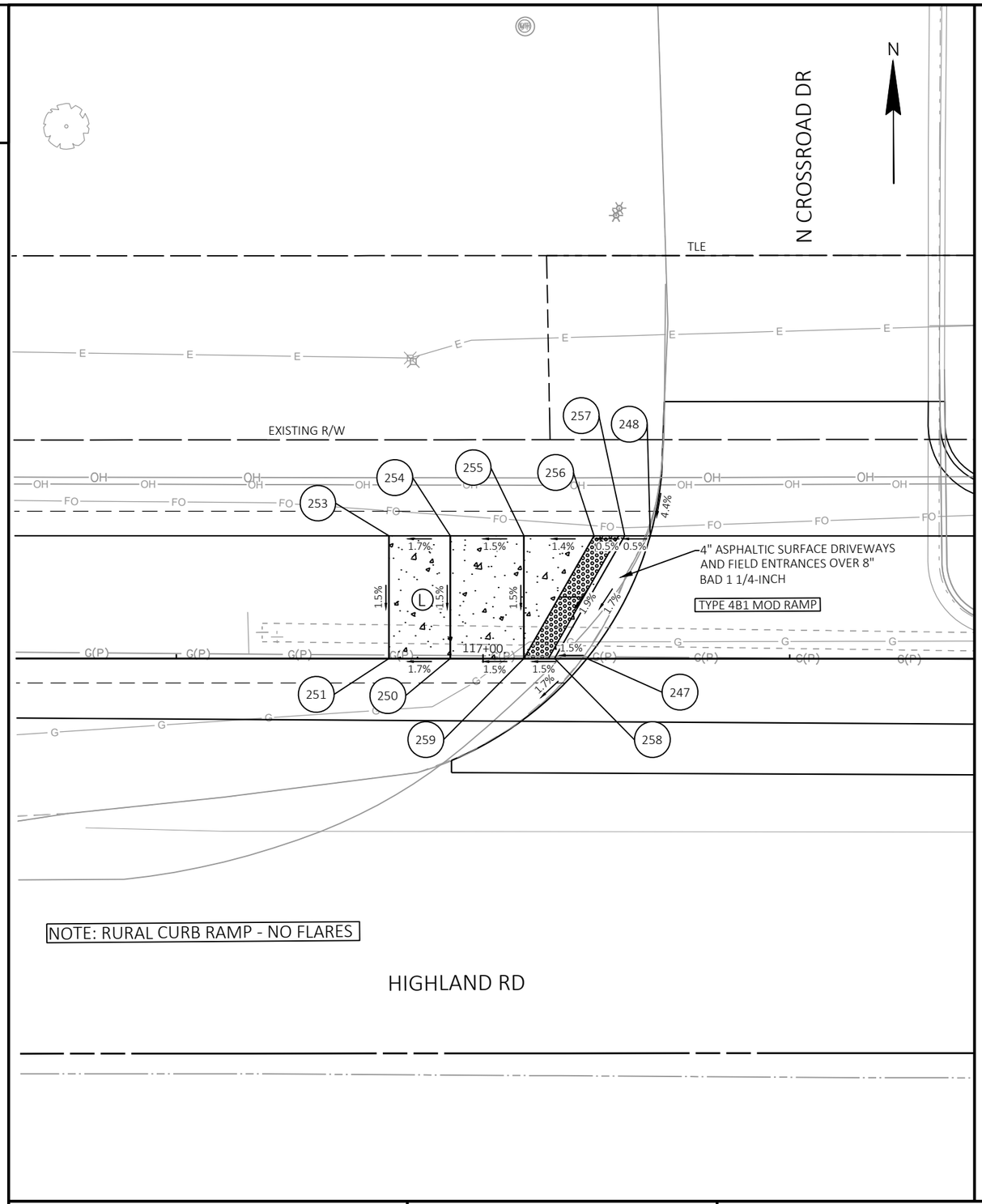
PT#	STA	OFFSET	Y	X	ELEV
244	103+02.59	10.00 LT	376949.907	584728.727	680.64
245	103+13.78	0.00 LT	376939.907	584739.925	680.86
405	103+13.78	10.00 LT	376949.907	584739.925	680.81
440	102+86.73	28.70 LT	376968.605	584712.867	680.59
441	103+45.30	11.73 RT	376927.053	584769.566	681.57
442	104+19.12	8.59 RT	376926.557	584844.898	685.18
443	104+23.69	8.59 RT	376926.527	584849.462	685.39
444	104+35.69	8.59 RT	376926.448	584861.462	685.94

STATION & OFFSET TABLE

PT#	STA	OFFSET	Y	X	ELEV
445	104+39.65	8.59 RT	376926.421	584865.430	686.14
446	104+72.18	8.58 RT	376926.207	584897.953	688.06
447	105+85.03	17.02 RT	376917.019	585010.751	694.59

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 28	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021301-CR.DWG
LAYOUT NAME - CR02
PLOT DATE : 8/7/2025 2:11 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
247	117+08.48	0.00 RT	376926.231	586134.203	701.34
248	117+13.64	10.00 LT	376936.193	586139.437	701.50
250	116+97.34	0.00 RT	376926.314	586123.069	701.59
251	116+92.34	0.00 RT	376926.351	586118.069	701.67
253	116+92.34	10.00 LT	376936.351	586118.143	701.82
254	116+97.34	10.00 LT	376936.314	586123.143	701.74
255	117+03.34	10.00 LT	376936.269	586129.143	701.59
256	117+09.05	10.00 LT	376936.227	586134.853	701.56
257	117+11.55	10.00 LT	376936.208	586137.353	701.52
258	117+05.84	0.00 RT	376926.251	586131.568	701.38
259	117+03.34	0.00 RT	376926.270	586129.068	701.42

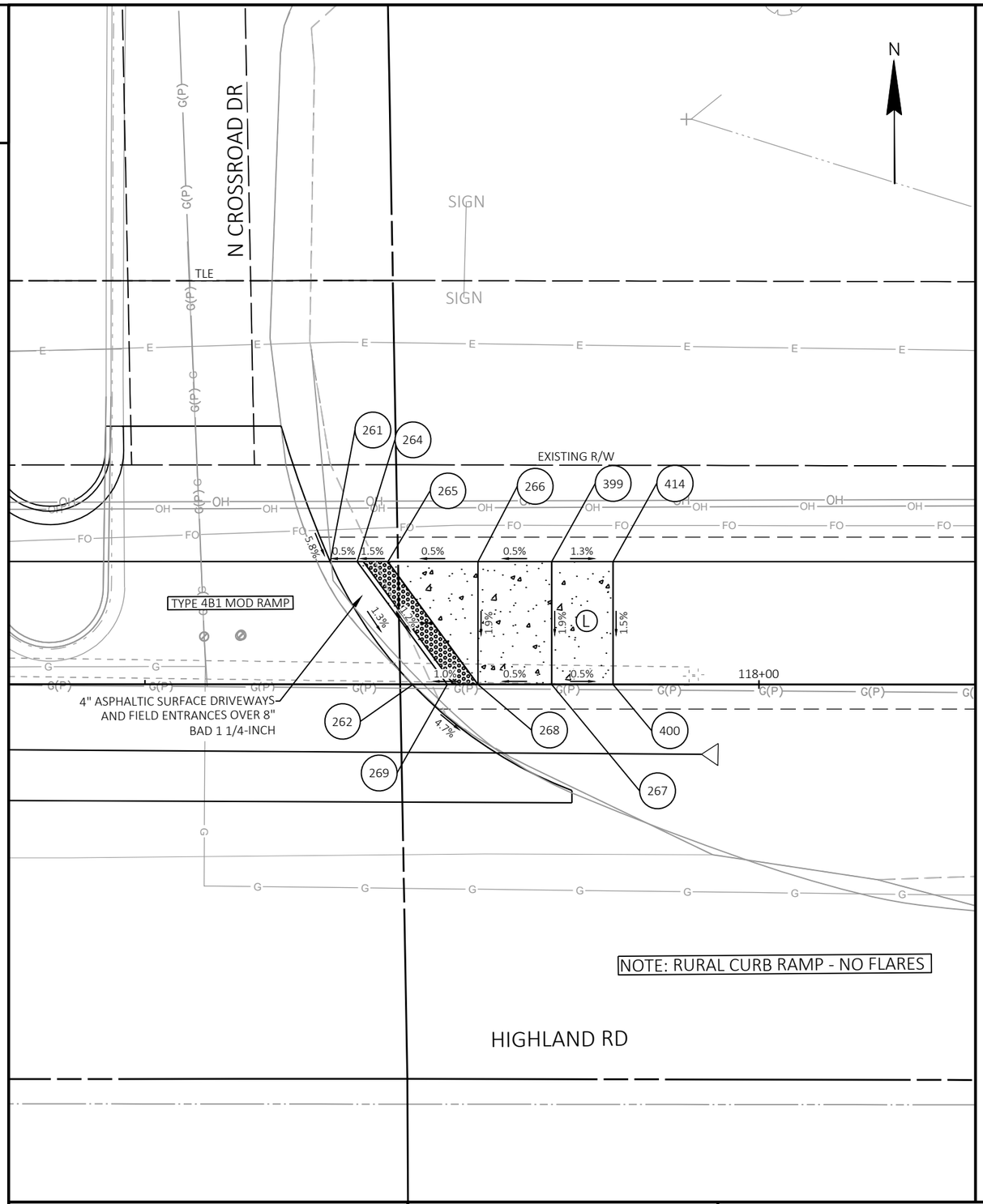
LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

2

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 29	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021301-CR.DWG
LAYOUT NAME - CR03
PLOT DATE : 8/7/2025 2:11 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

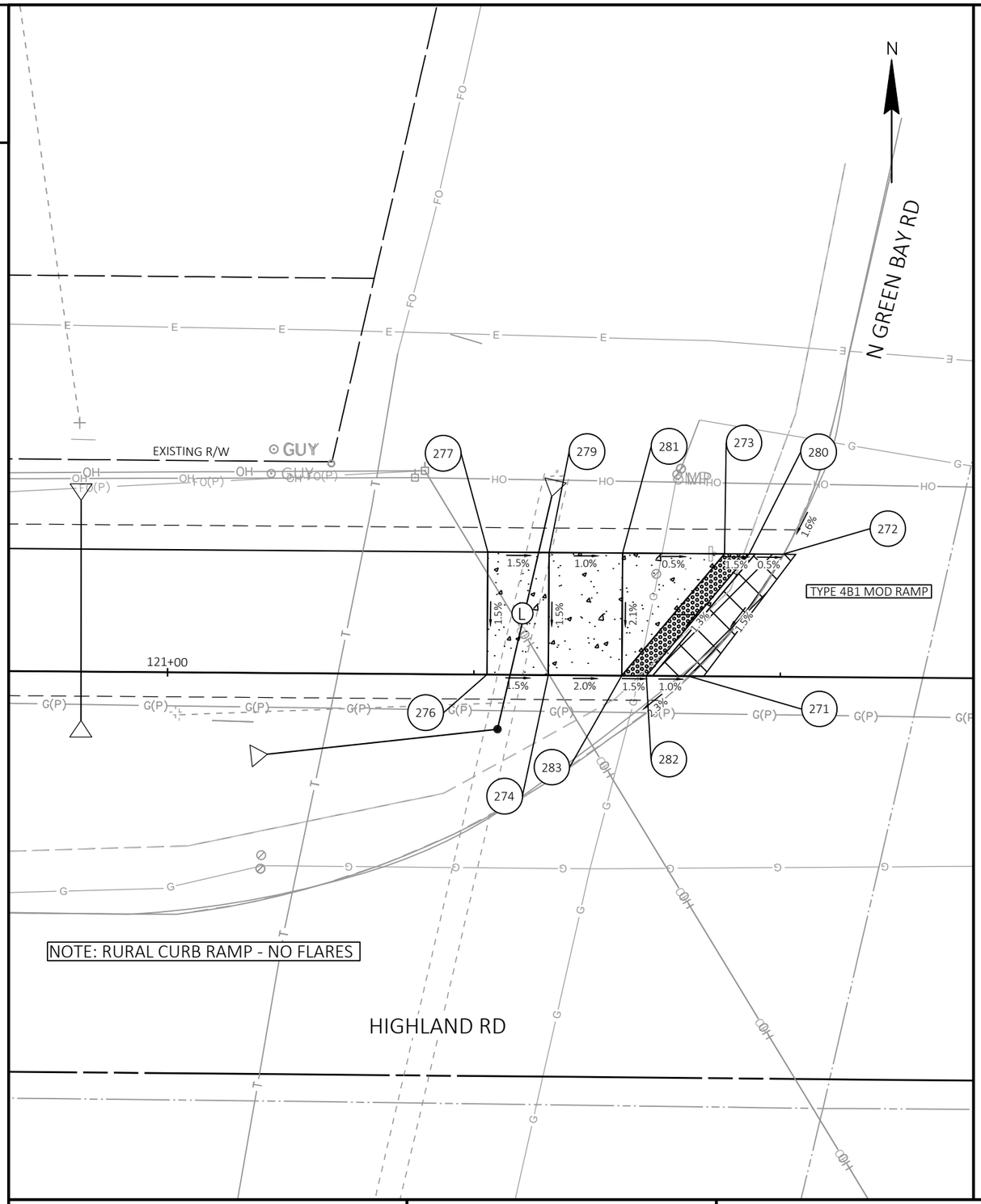


STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
261	117+65.09	10.00 LT	376935.811	586190.886	700.88
262	117+71.82	0.00 RT	376925.761	586197.546	700.73
264	117+67.29	10.00 LT	376935.795	586193.087	700.90
265	117+69.79	10.00 LT	376935.776	586195.587	700.93
266	117+77.11	10.00 LT	376935.722	586202.913	700.97
267	117+83.11	0.00 RT	376925.678	586208.839	700.81
268	117+77.11	0.00 RT	376925.722	586202.839	700.78
269	117+74.61	0.00 RT	376925.741	586200.339	700.74
399	117+83.11	10.00 LT	376935.677	586208.913	701.00
400	117+88.11	0.00 RT	376925.640	586213.838	700.79
414	117+88.11	10.00 LT	376935.640	586213.913	700.94

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 30	E

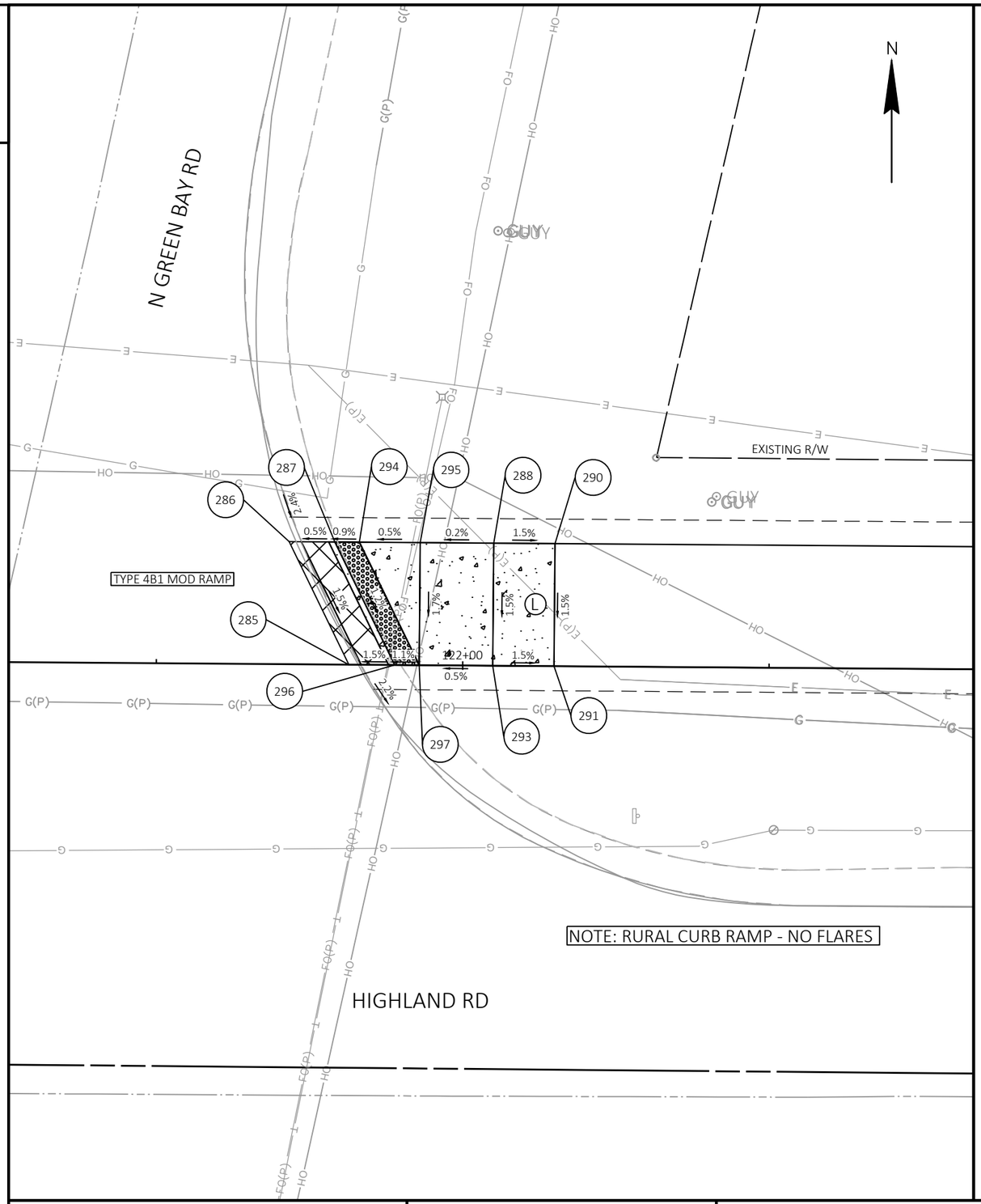


STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
271	121+42.53	0.00 RT	376923.011	586568.247	696.67
272	121+50.14	10.00 LT	376932.954	586575.926	696.86
273	121+45.38	10.00 LT	376932.989	586571.168	696.91
274	121+31.07	0.00 RT	376923.096	586556.787	696.86
276	121+26.07	0.00 RT	376923.133	586551.787	696.94
277	121+26.07	10.00 LT	376933.132	586551.861	697.09
279	121+31.07	10.00 LT	376933.095	586556.861	697.01
280	121+47.38	10.00 LT	376932.974	586573.168	696.88
281	121+37.07	10.00 LT	376933.051	586562.861	696.95
282	121+39.07	0.00 RT	376923.036	586564.787	696.71
283	121+37.07	0.00 RT	376923.051	586562.787	696.74

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 31	E



STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
285	121+90.72	0.00 RT	376922.653	586616.434	696.26
286	121+85.77	10.00 LT	376932.689	586611.554	696.53
287	121+89.50	10.00 LT	376932.662	586615.286	696.51
288	122+02.45	10.00 LT	376932.566	586628.240	696.57
290	122+07.45	10.00 LT	376932.529	586633.240	696.50
291	122+07.45	0.00 RT	376922.529	586633.165	696.35
293	122+02.45	0.00 RT	376922.566	586628.165	696.42
294	121+91.50	10.00 LT	376932.647	586617.286	696.53
295	121+96.45	10.00 LT	376932.610	586622.240	696.56
296	121+94.45	0.00 RT	376922.625	586620.166	696.37
297	121+96.45	0.00 RT	376922.610	586622.166	696.39

LEGEND

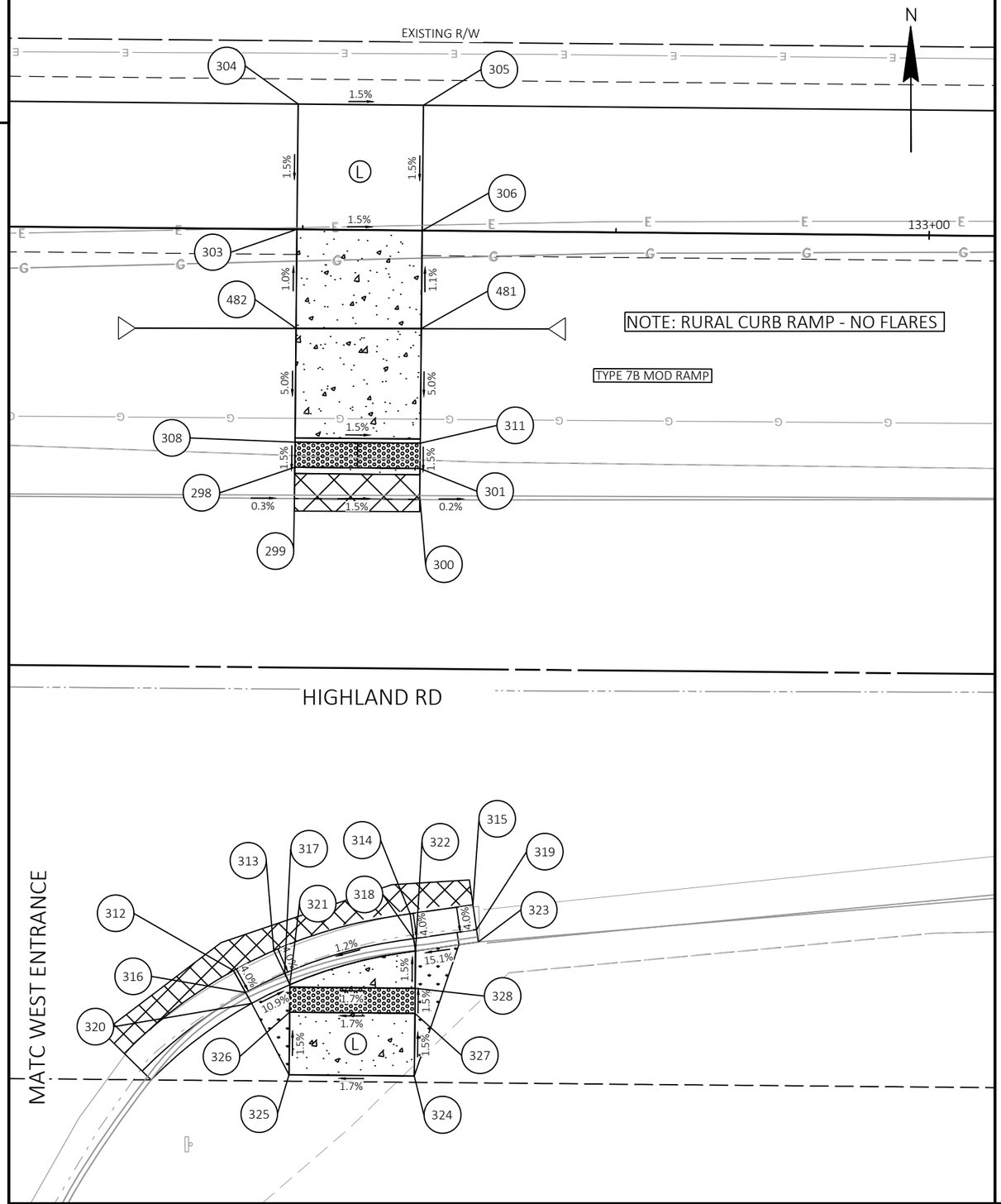
- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 32	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021301-CR.DWG
LAYOUT NAME - CR06

PLOT DATE : 8/7/2025 2:12 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



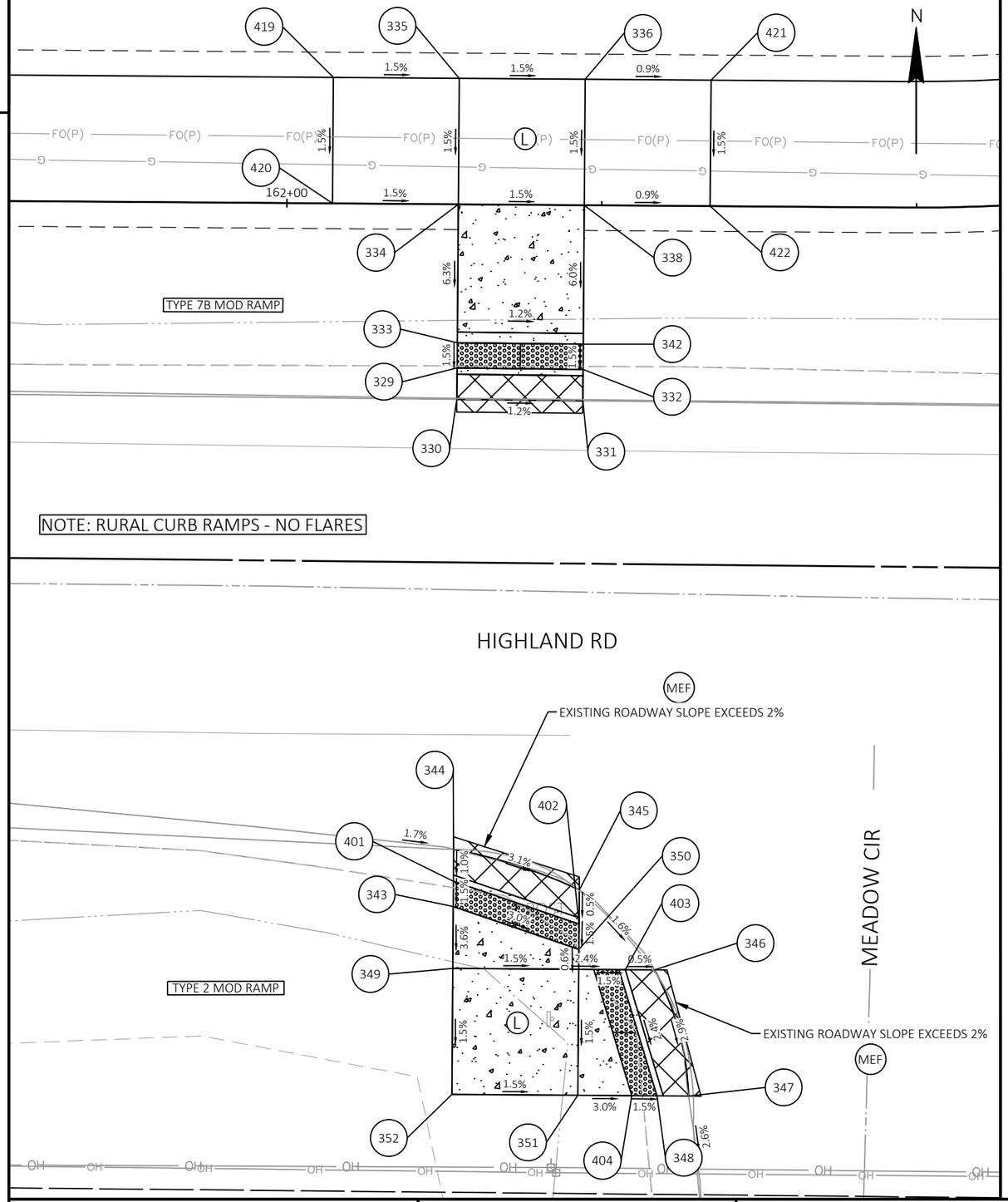
STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
298	132+49.54	18.97 RT	376896.008	587674.200	709.93
299	132+49.53	21.47 RT	376893.509	587674.175	709.88
300	132+59.56	21.45 RT	376893.432	587684.205	709.85
301	132+59.54	18.97 RT	376895.915	587684.200	709.78
303	132+49.54	0.00 RT	376914.980	587674.378	710.32
304	132+49.54	10.00 LT	376924.979	587674.471	710.47
305	132+59.54	10.00 LT	376924.886	587684.471	710.32
306	132+59.53	0.00 RT	376914.886	587684.375	710.17
308	132+49.53	16.97 RT	376898.008	587674.208	709.96
311	132+59.54	16.97 RT	376897.915	587684.218	709.81
481	132+59.53	7.82 RT	376907.063	587684.302	710.17
482	132+49.53	7.90 RT	376907.081	587674.302	710.17

STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
312	132+45.02	59.17 RT	376855.852	587669.307	709.00
313	132+48.22	57.56 RT	376857.440	587672.522	709.13
314	132+59.08	54.51 RT	376860.379	587683.411	709.26
315	132+64.08	53.75 RT	376861.100	587688.418	709.31
316	132+46.00	60.91 RT	376854.102	587670.275	708.92
317	132+49.10	59.35 RT	376855.632	587673.383	709.05
318	132+59.38	56.49 RT	376858.399	587683.696	709.18
319	132+64.38	55.72 RT	376859.121	587688.703	709.23
320	132+46.50	61.79 RT	376853.226	587670.761	709.42
321	132+49.54	60.25 RT	376854.729	587673.813	709.05
322	132+59.54	57.48 RT	376857.409	587683.839	709.18
323	132+64.54	56.71 RT	376858.131	587688.846	709.73
324	132+59.54	67.45 RT	376847.436	587683.746	709.33
325	132+49.54	67.45 RT	376847.530	587673.746	709.15
326	132+49.54	62.45 RT	376852.529	587673.793	709.08
327	132+59.54	62.45 RT	376852.436	587683.792	709.25
328	132+59.54	60.45 RT	376854.436	587683.811	709.22

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 33	E



STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
329	162+13.61	12.98 RT	376866.790	590637.806	727.17
330	162+13.61	15.48 RT	376864.290	590637.790	727.04
331	162+23.61	15.52 RT	376864.177	590647.789	727.02
332	162+23.62	13.02 RT	376866.677	590647.818	727.05
333	162+13.60	10.98 RT	376868.790	590637.817	727.20
334	162+13.61	0.00 RT	376879.772	590637.902	727.89
335	162+13.61	10.00 LT	376889.772	590637.975	728.04
336	162+23.61	10.00 LT	376889.699	590647.974	727.89
338	162+23.61	0.00 RT	376879.700	590647.902	727.74
342	162+23.61	11.02 RT	376868.677	590647.822	727.08
419	162+03.62	10.00 LT	376889.844	590627.982	728.18
420	162+03.62	0.00 RT	376879.844	590627.910	728.03
421	162+33.61	10.00 LT	376889.627	590657.974	727.80
422	162+33.61	0.00 RT	376879.627	590657.902	727.65

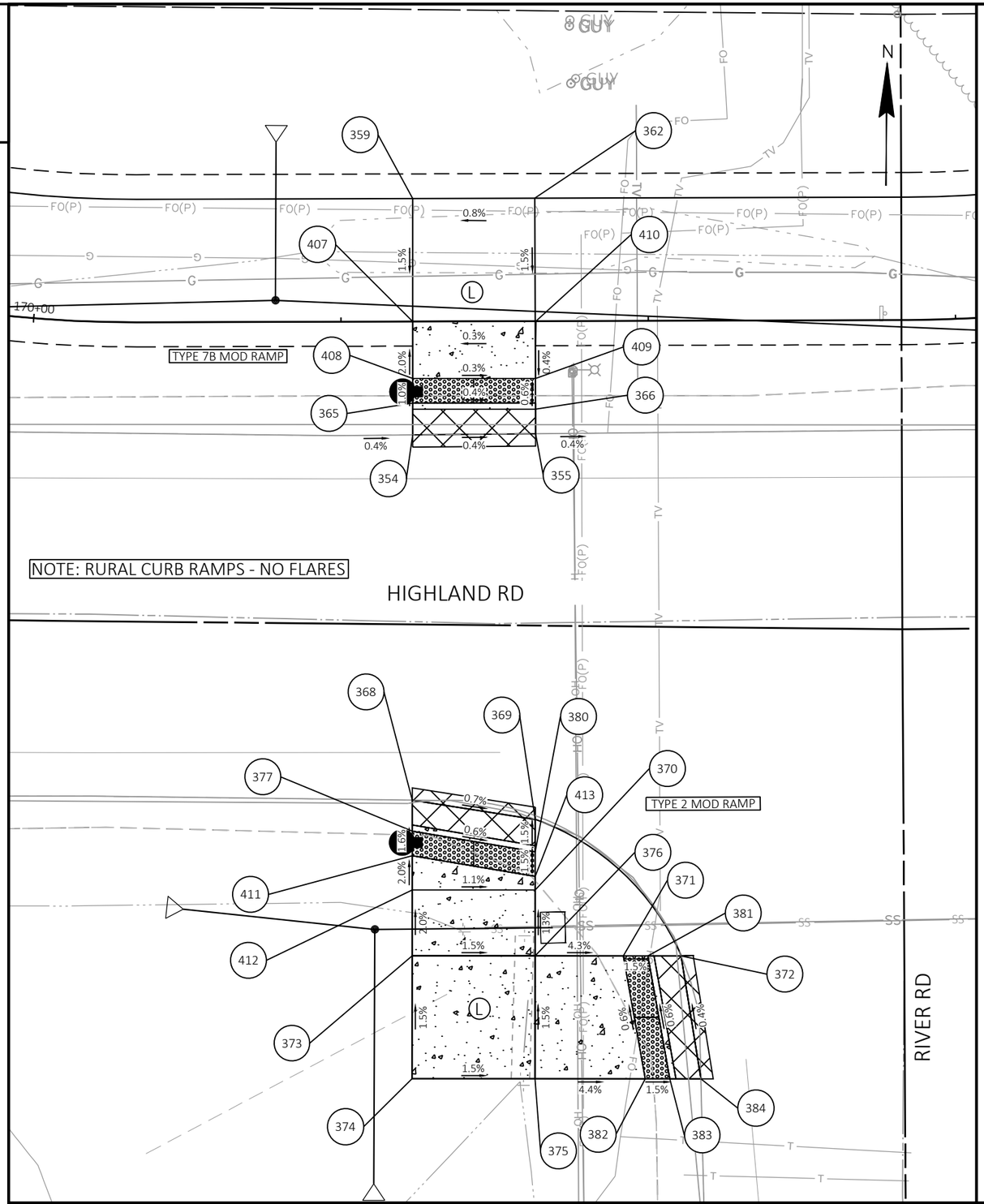
STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
343	162+13.61	55.73 RT	376824.046	590637.499	726.89
344	162+13.61	51.22 RT	376828.552	590637.532	726.95
345	162+23.61	54.34 RT	376825.362	590647.509	726.62
346	162+29.62	60.64 RT	376819.015	590653.478	726.48
347	162+32.40	70.64 RT	376808.995	590656.185	726.18
348	162+29.90	70.64 RT	376809.013	590653.683	726.25
349	162+13.61	60.64 RT	376819.130	590637.464	726.71
350	162+23.61	59.05 RT	376820.648	590647.475	726.57
351	162+23.61	70.64 RT	376809.058	590647.391	726.41
352	162+13.61	70.64 RT	376809.131	590637.391	726.56
401	162+13.61	53.73 RT	376826.046	590637.514	726.92
402	162+23.61	57.05 RT	376822.647	590647.489	726.60
403	162+27.30	60.64 RT	376819.031	590651.157	726.49
404	162+27.90	70.64 RT	376809.027	590651.684	726.28

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 34	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021301-CR.DWG
LAYOUT NAME - CR08
PLOT DATE : 8/7/2025 2:12 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



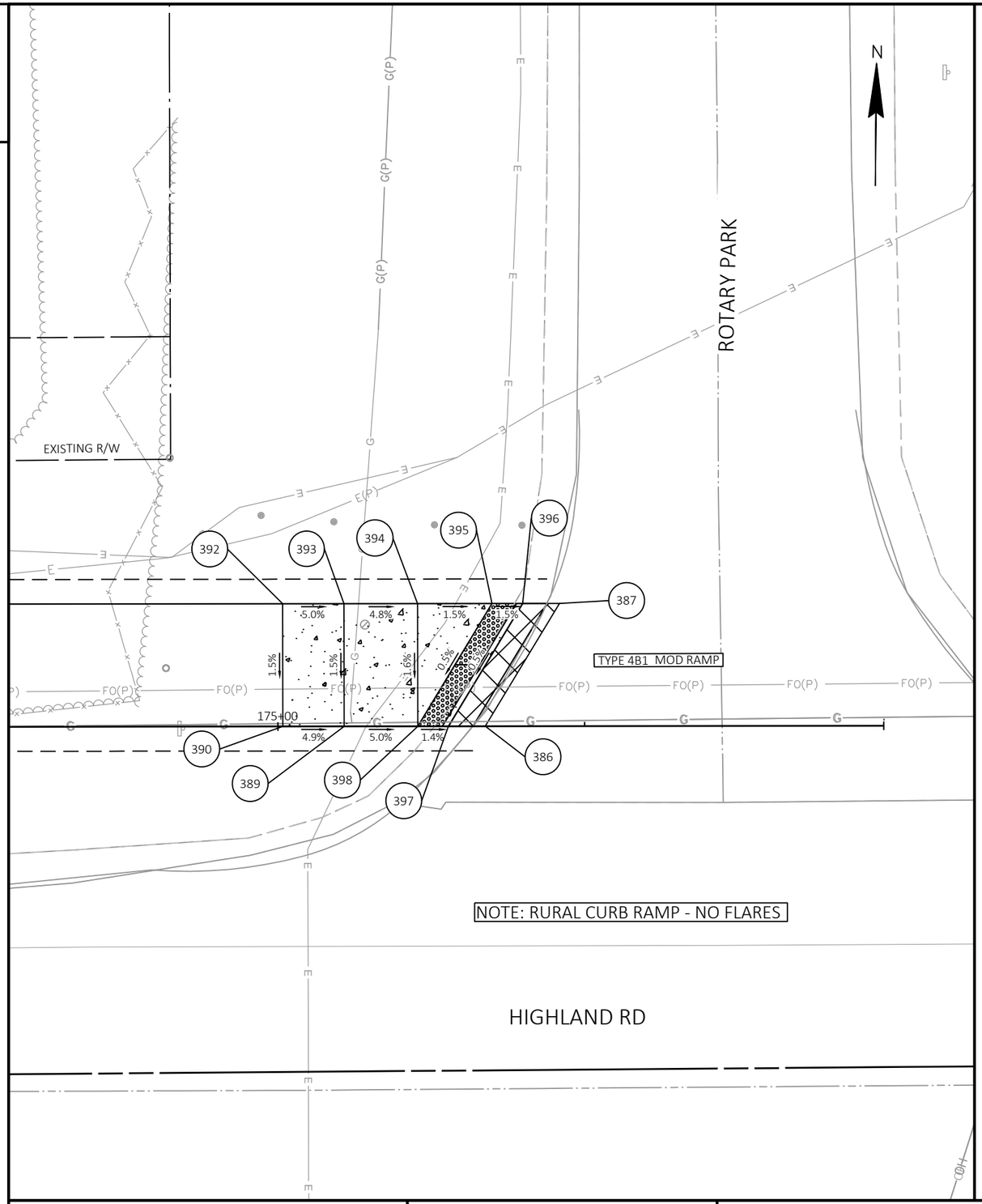
STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
354	170+30.80	9.22 RT	376858.639	591453.450	713.04
355	170+40.80	9.16 RT	376858.732	591463.450	712.94
359	170+30.86	10.00 LT	376877.862	591453.456	0.00
362	170+40.80	10.00 LT	376877.891	591463.394	0.00
365	170+30.81	6.63 RT	376861.230	591453.451	713.01
366	170+40.78	7.16 RT	376860.732	591463.421	712.90
407	170+30.83	0.00 RT	376867.862	591453.449	0.00
408	170+30.82	4.63 RT	376863.230	591453.456	712.98
409	170+40.82	4.66 RT	376863.236	591463.453	712.86
410	170+40.86	0.00 RT	376867.891	591463.485	0.00

STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
368	170+30.70	38.93 RT	376828.933	591453.429	713.02
369	170+40.69	40.52 RT	376827.371	591463.428	712.95
370	170+40.67	46.26 RT	376821.629	591463.424	713.04
371	170+47.82	51.64 RT	376816.277	591470.592	712.80
372	170+52.53	51.65 RT	376816.273	591475.297	712.73
373	170+30.65	51.57 RT	376816.288	591453.421	713.26
374	170+30.61	61.57 RT	376806.288	591453.414	713.41
375	170+40.61	61.61 RT	376806.281	591463.414	713.26
376	170+40.65	51.61 RT	376816.281	591463.421	713.11
377	170+30.69	41.45 RT	376826.409	591453.428	713.06
380	170+40.68	43.16 RT	376824.733	591463.426	712.99
381	170+49.82	51.64 RT	376816.275	591472.592	712.77
382	170+49.57	61.64 RT	376806.275	591472.373	712.86
383	170+51.57	61.65 RT	376806.274	591474.373	712.83
384	170+54.10	61.66 RT	376806.272	591476.898	712.77
411	170+30.68	43.45 RT	376824.409	591453.426	713.09
412	170+30.67	46.23 RT	376821.635	591453.424	713.14
413	170+40.67	45.16 RT	376822.733	591463.425	713.02

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 35	E



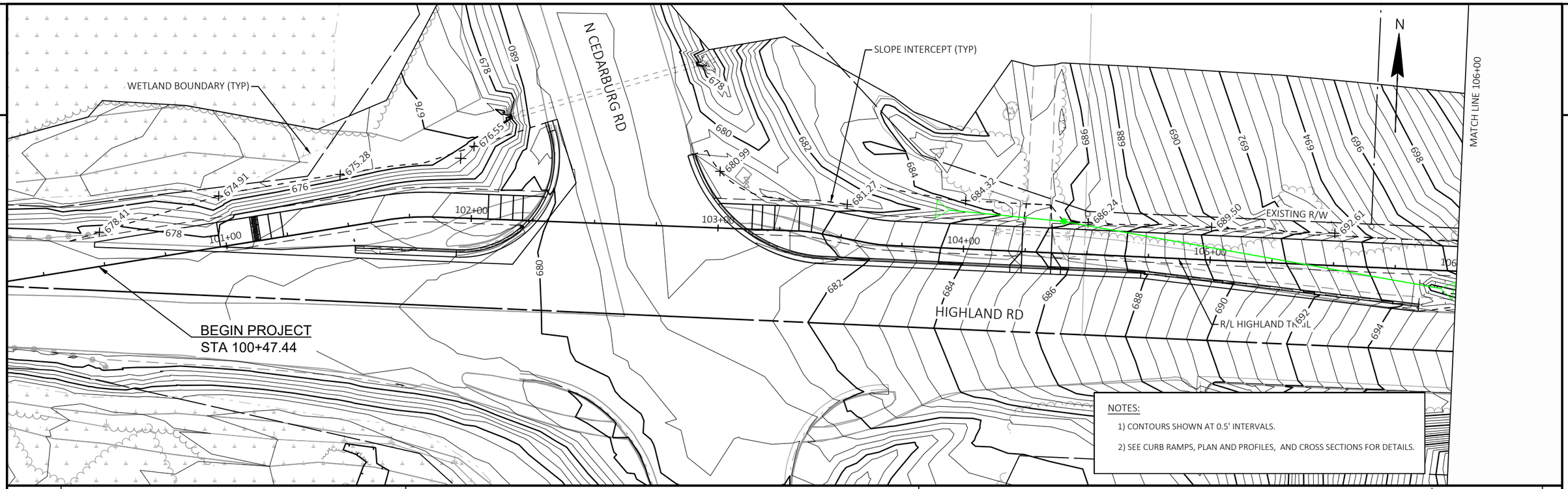
STATION & OFFSET TABLE					
PT#	STA	OFFSET	Y	X	ELEV
386	175+16.90	0.00 RT	376874.493	591938.781	716.14
387	175+22.96	10.00 LT	376884.500	591944.829	716.27
389	175+05.40	0.00 RT	376874.479	591927.281	716.52
390	175+00.40	0.00 LT	376874.475	591922.281	716.73
392	175+00.40	10.00 LT	376884.473	591922.269	716.88
393	175+05.40	10.00 LT	376884.479	591927.269	716.67
394	175+11.40	10.00 LT	376884.486	591933.269	716.27
395	175+17.46	10.00 LT	376884.493	591939.328	716.24
396	175+19.96	10.00 LT	376884.496	591941.829	716.20
397	175+13.90	0.01 LT	376874.495	591935.783	716.14
398	175+11.40	0.00 RT	376874.486	591933.280	716.18

LEGEND

- CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- GRADED FLARE (MAXIMUM 6:1 SLOPE)
- DETECTABLE WARNING FIELD
- 6" ASPHALTIC SURFACE PATCHING
- (L) LEVEL LANDING
- SIGNAL/RRFB BASE AND PUSH BUTTON ORIENTATION

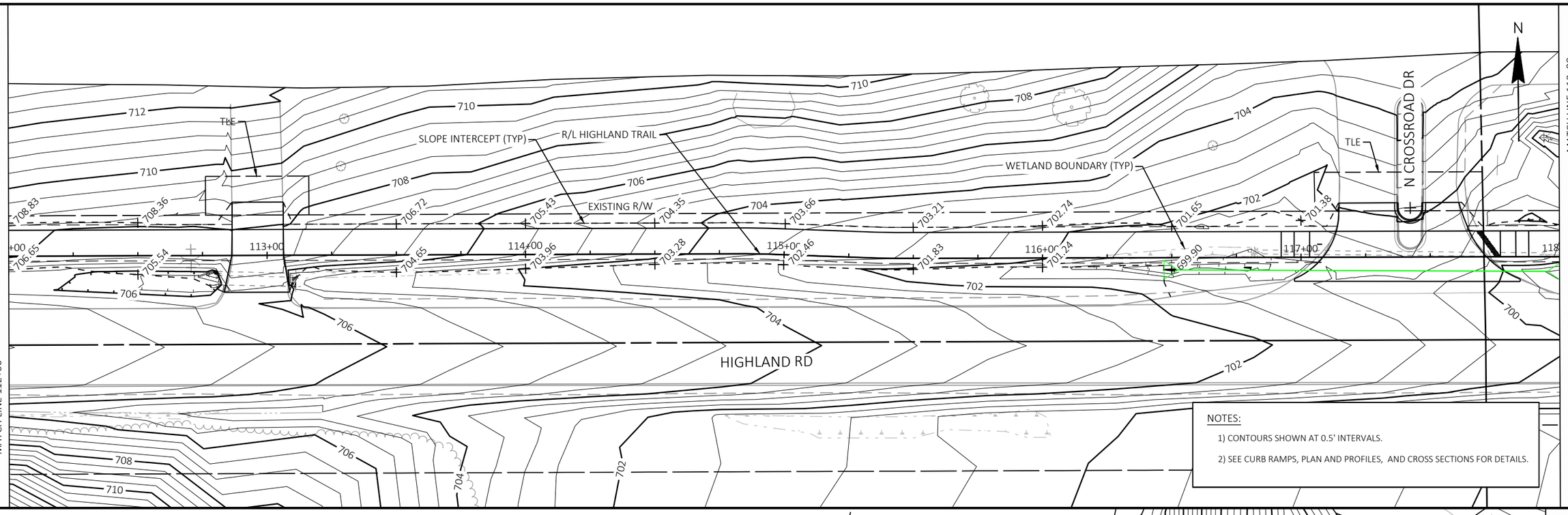
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CURB RAMP DETAILS	SHEET 36	E

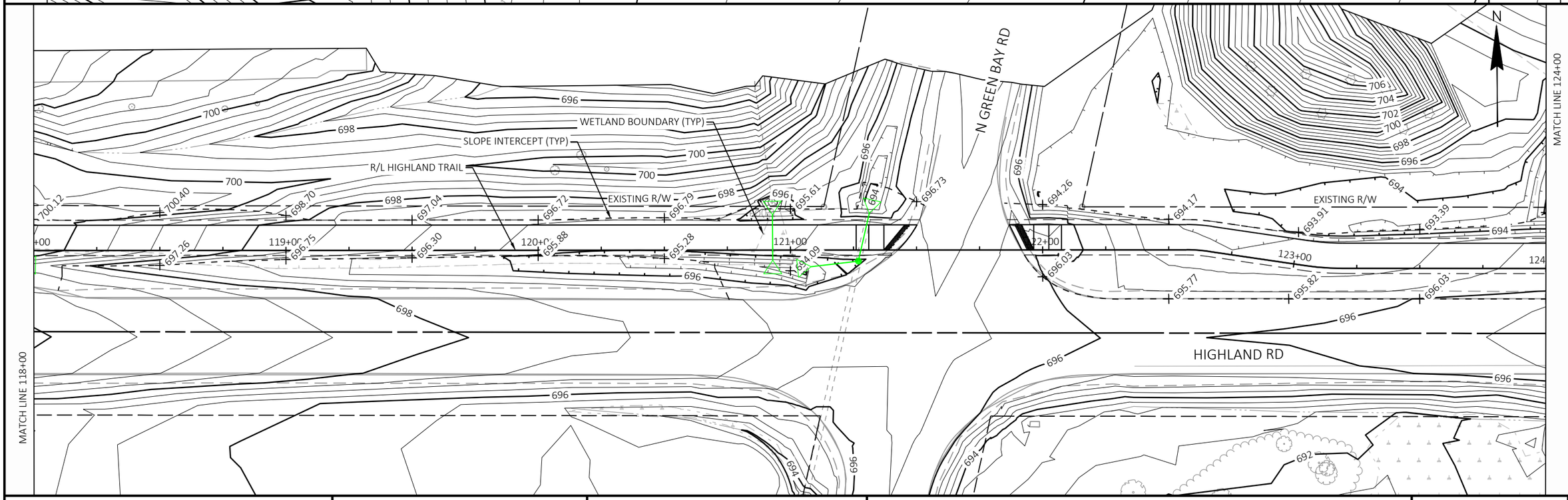
FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021301-CR.DWG
LAYOUT NAME - CR10
PLOT DATE : 8/7/2025 2:12 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONTOUR PLAN	SHEET 37	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021701-CM.DWG
LAYOUT NAME - CM1
PLOT DATE : 8/8/2025 9:24 AM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

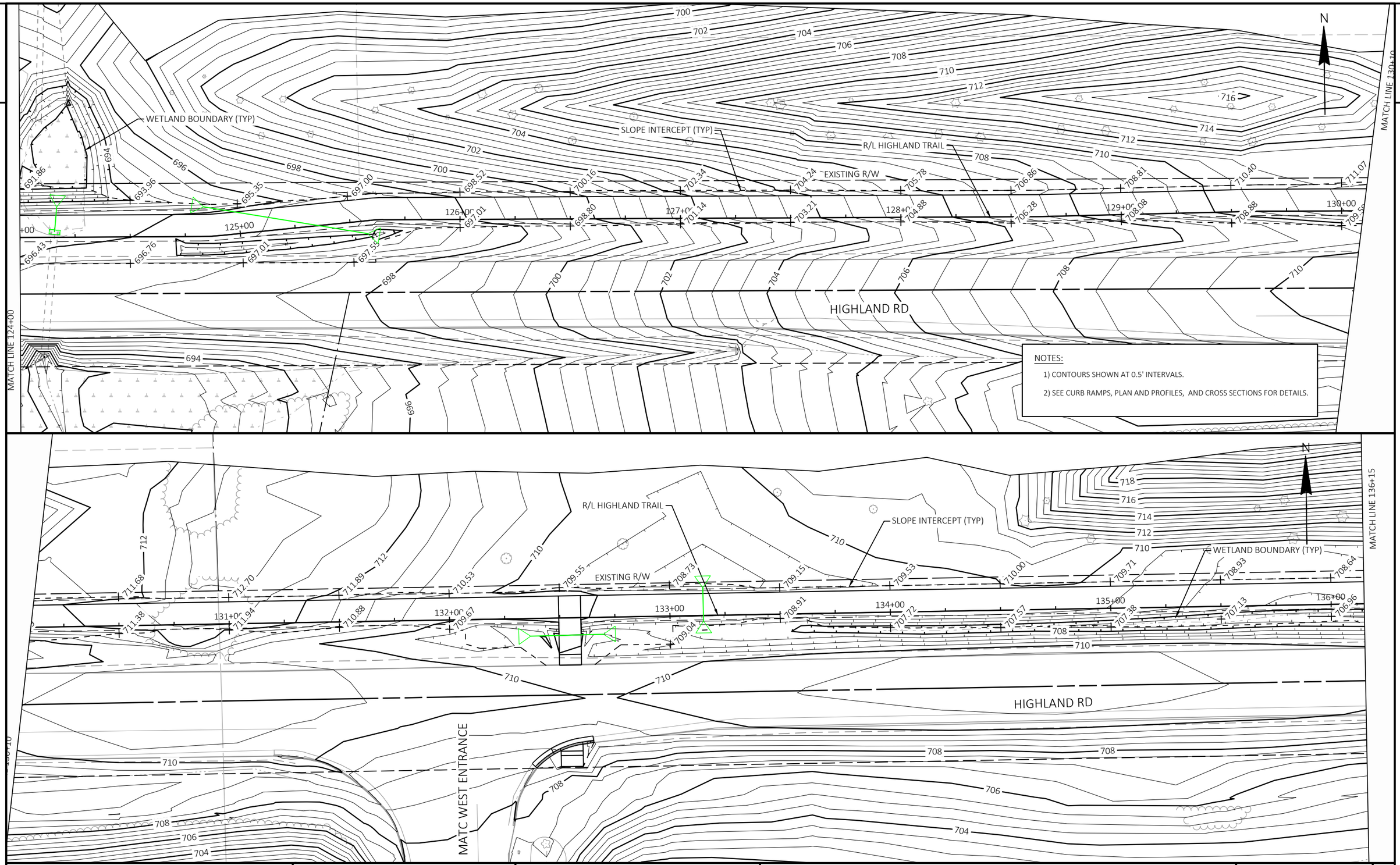




PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONTOUR PLAN	SHEET 38	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021701-CM.DWG
LAYOUT NAME - CM2

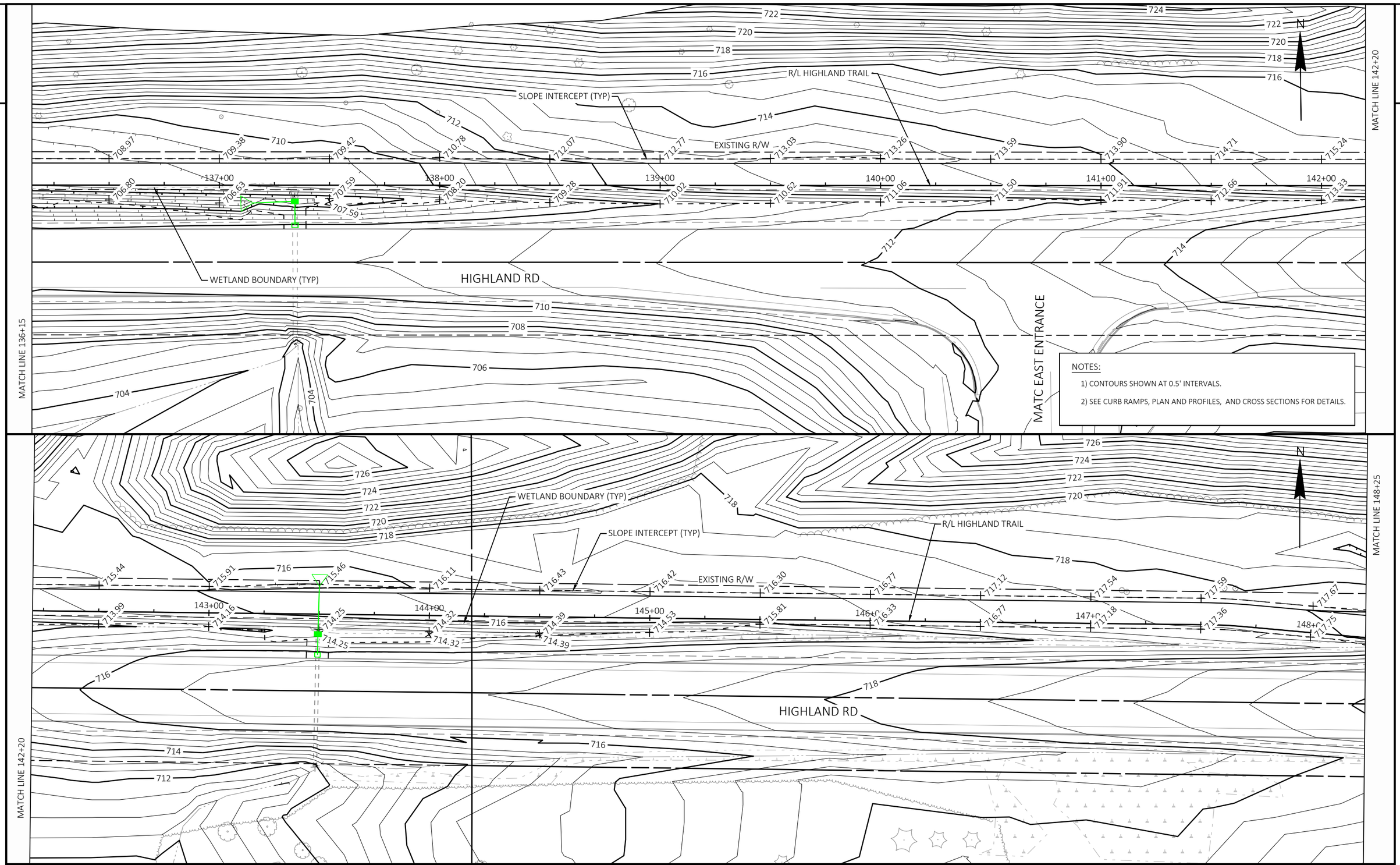
PLOT DATE : 8/8/2025 9:24 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONTOUR PLAN	SHEET 39	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021701-CM.DWG
LAYOUT NAME - CM3
PLOT DATE : 8/8/2025 9:24 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



NOTES:

1) CONTOURS SHOWN AT 0.5' INTERVALS.

2) SEE CURB RAMPS, PLAN AND PROFILES, AND CROSS SECTIONS FOR DETAILS.

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONTOUR PLAN	SHEET 40	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021701-CM.DWG
LAYOUT NAME - CM4

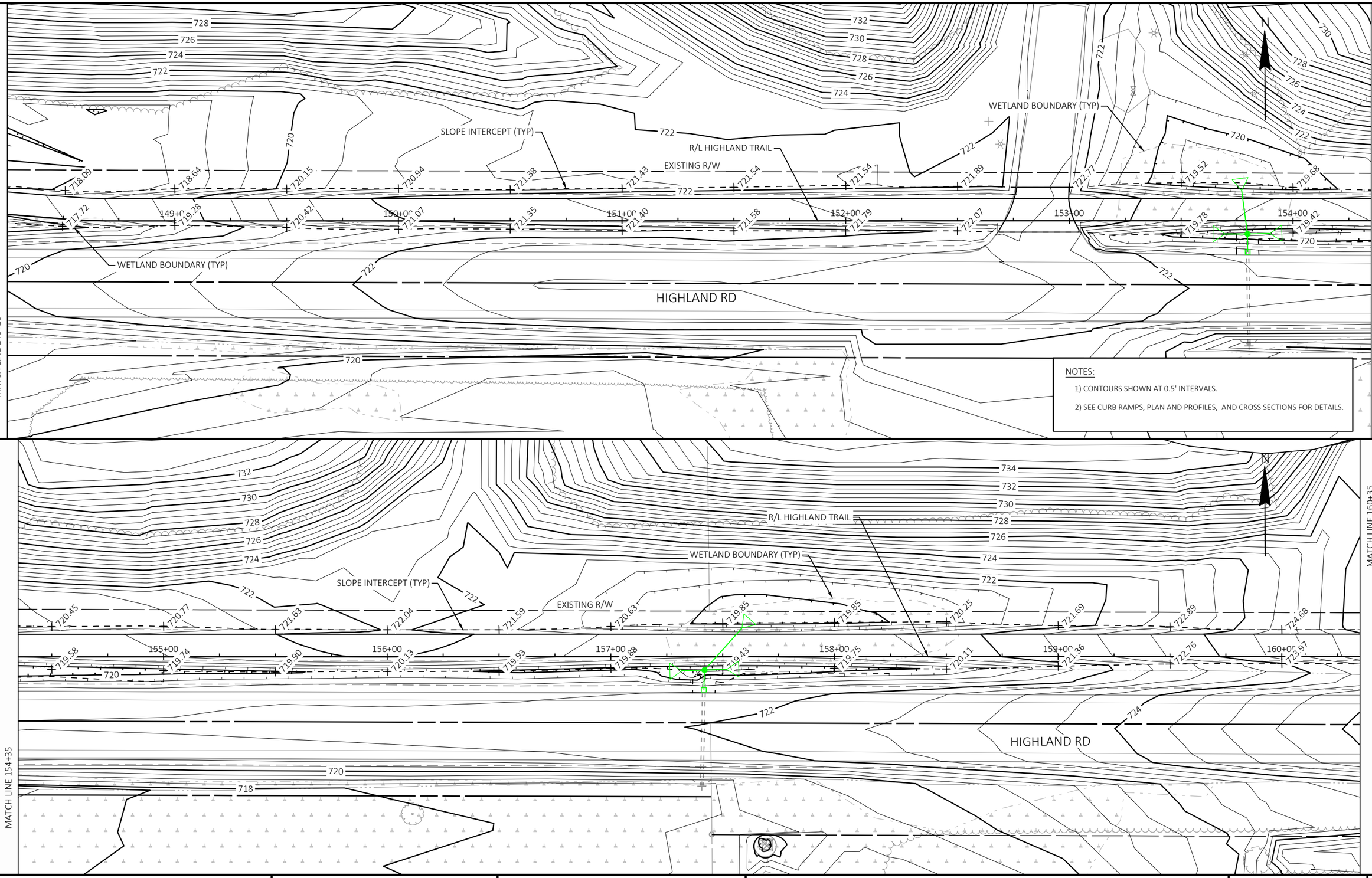
PLOT DATE : 8/8/2025 9:24 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

MATCH LINE 148+25

MATCH LINE 154+35

2



NOTES:

1) CONTOURS SHOWN AT 0.5' INTERVALS.

2) SEE CURB RAMPS, PLAN AND PROFILES, AND CROSS SECTIONS FOR DETAILS.

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONTOUR PLAN	SHEET 41	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021701-CM.DWG
LAYOUT NAME - CM5

PLOT DATE : 8/8/2025 9:24 AM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

EXISTING FIELD ENTRANCE TO REMAIN

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

SLOPE INTERCEPT (TYP)

MATCH LINE 166+40

MATCH LINE 160+35

HIGHLAND RD

MEADOW CIR

NOTES:

1) CONTOURS SHOWN AT 0.5' INTERVALS.

2) SEE CURB RAMPS, PLAN AND PROFILES, AND CROSS SECTIONS FOR DETAILS.

N

R/L HIGHLAND TRAIL

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

EXISTING R/W

MATCH LINE 171+61.30

MATCH LINE 166+40

HIGHLAND RD

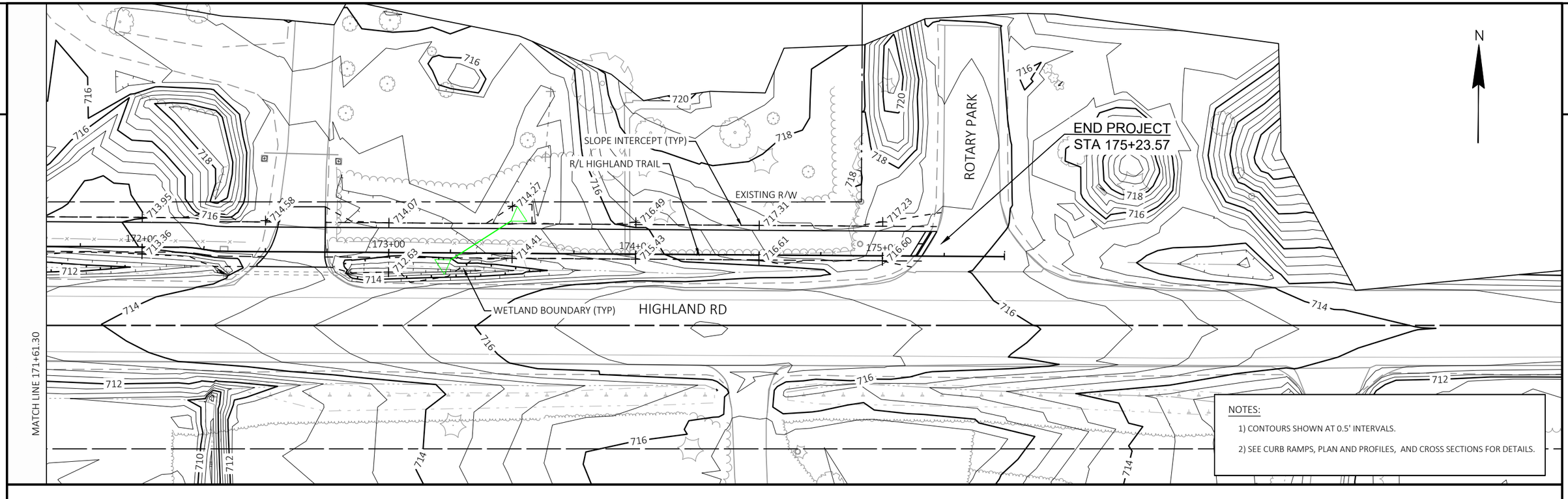
RIVER RD

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONTOUR PLAN	SHEET 42	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021701-CM.DWG
LAYOUT NAME - CM6

PLOT DATE : 8/8/2025 9:24 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CONTOUR PLAN	SHEET 43	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\021701-CM.DWG
LAYOUT NAME - CM7

PLOT DATE : 8/8/2025 9:24 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WETLAND BOUNDARY (TYP)

N CEDARBURG RD

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

MATCH LINE 106+00

BEGIN PROJECT
STA 100+47.44

HP 678.92

HP 695.4

101+00

102+00

103+00

104+00

105+00

HIGHLAND RD

EROSION CONTROL LEGEND

- SILT FENCE
- EROSION BALE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION TYPE B
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- WETLANDS

NOTES:

1) RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

MATCH LINE 106+00

MATCH LINE 112+00

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

EXISTING R/W

107+00

108+00

109+00

110+00

111+00

HP 706.60

HIGHLAND RD

WETLAND BOUNDARY (TYP)

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 44	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022002-EC.DWG
LAYOUT NAME - EC1

PLOT DATE : 8/7/2025 2:18 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 112+00

TLE

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

WETLAND BOUNDARY (TYP)

N

N CROSSROAD DR

SIGN

SIGN

MATCH LINE 118+00

2

+00 113+00 114+00 115+00 116+00 117+00 118

HIGHLAND RD

EROSION CONTROL LEGEND

- SILT FENCE
- EROSION BALE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION TYPE B
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- WETLANDS

NOTES:

1) RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

MATCH LINE 118+00

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

N GREEN BAY RD

N

MATCH LINE 124+00

+00 119+00 120+00 121+00 122+00 123+00 124

HIGHLAND RD

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 45	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022002-EC.DWG
LAYOUT NAME - EC2

PLOT DATE : 8/7/2025 2:18 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

MATCH LINE 130+10

MATCH LINE 124+00

125+00

126+00

127+00

128+00

129+00

130+00

HIGHLAND RD

EROSION CONTROL LEGEND

- SILT FENCE
- EROSION BALE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION TYPE B
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- WETLANDS

NOTES:

1) RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

N

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

EXISTING R/W

MATCH LINE 136+15

131+00

132+00

133+00

134+00

135+00

136+00

HP 710.69

HIGHLAND RD

MATC

WEST ENTRANCE

SIGN

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 46	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022002-EC.DWG
LAYOUT NAME - EC3

PLOT DATE : 8/7/2025 2:18 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

MATCH LINE 136+15

MATCH LINE 142+25

2

N

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

137+00 138+00 139+00 140+00 141+00 142+00

HIGHLAND RD

WETLAND BOUNDARY (TYP)

MATC
EAST ENTRANCE

SIGN

POST

EROSION CONTROL LEGEND

- SILT FENCE
- EROSION BALE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION TYPE B
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- WETLANDS

NOTES:

1) RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

MATCH LINE 142+25

MATCH LINE 148+25

N

R/L HIGHLAND TRAIL

SLOPE INTERCEPT (TYP)

EXISTING R/W

143+ HP 714.19 144+00 145+00 146+00 147+00 148+00

HIGHLAND RD

WETLAND BOUNDARY (TYP)

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 47	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022002-EC.DWG
LAYOUT NAME - EC4

PLOT DATE : 8/7/2025 2:18 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

MATCH LINE 148+25

MATCH LINE 154+25

2

EROSION CONTROL LEGEND

- SILT FENCE
- EROSION BALE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- (B) INLET PROTECTION TYPE B
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- WETLANDS

NOTES:

1) RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

SLOPE INTERCEPT (TYP)

EXISTING R/W

R/L HIGHLAND TRAIL

WETLAND BOUNDARY (TYP)

149+00 150+00 151+00 152+00 HP 722.92 153+00 154+00

WETLAND BOUNDARY (TYP)

HIGHLAND RD

N

MATCH LINE 154+25

MATCH LINE 160+35

SLOPE INTERCEPT (TYP)

EXISTING R/W

WETLAND BOUNDARY (TYP)

R/L HIGHLAND TRAIL

155+00 156+00 HP 720.24 157+00 158+00 159+00 160+00

HIGHLAND RD

N

MATCH LINE 154+25

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 48	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022002-EC.DWG
LAYOUT NAME - EC5

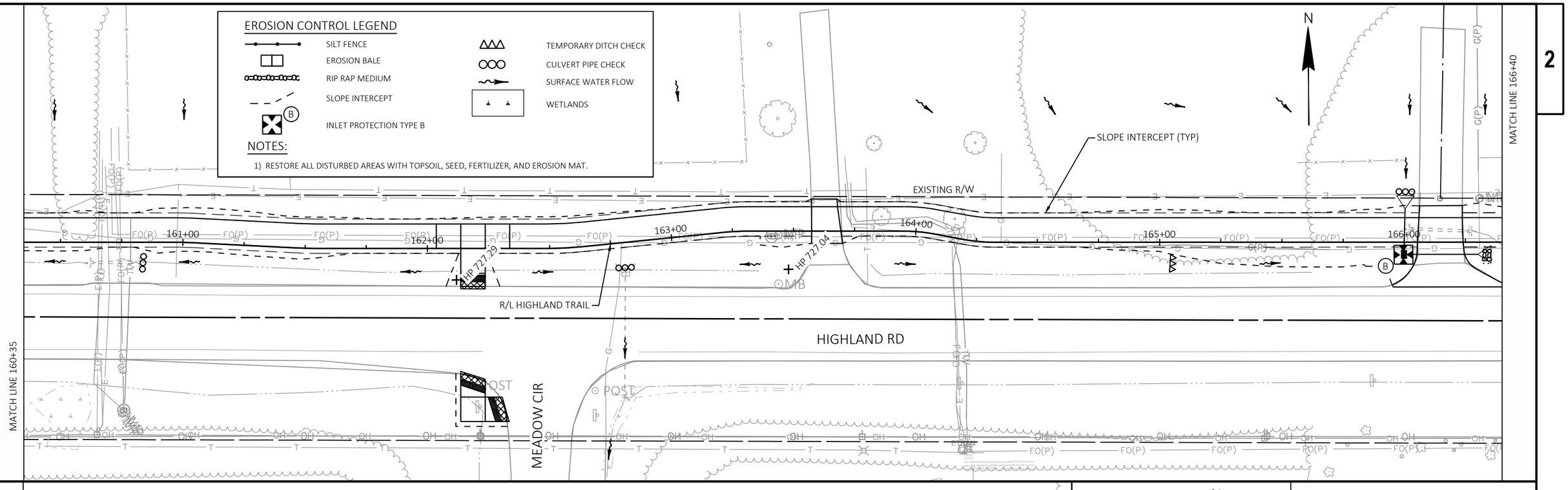
PLOT DATE : 8/7/2025 2:18 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

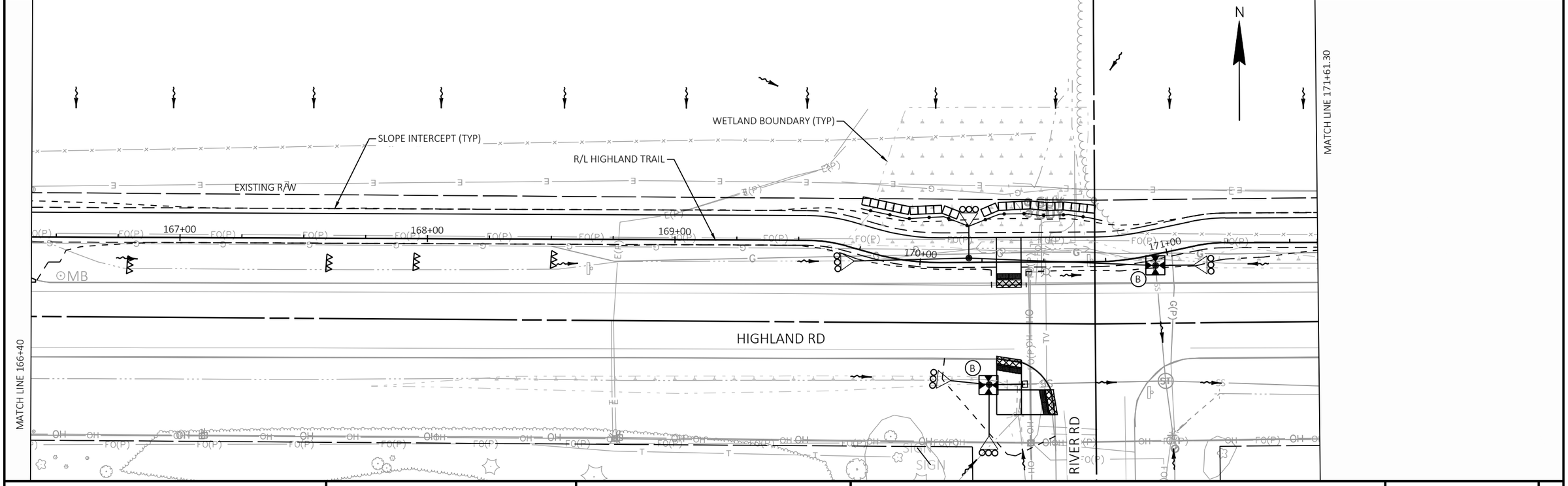
EROSION CONTROL LEGEND

- SILT FENCE
- EROSION BALE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION TYPE B
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- WETLANDS

NOTES:

1) RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

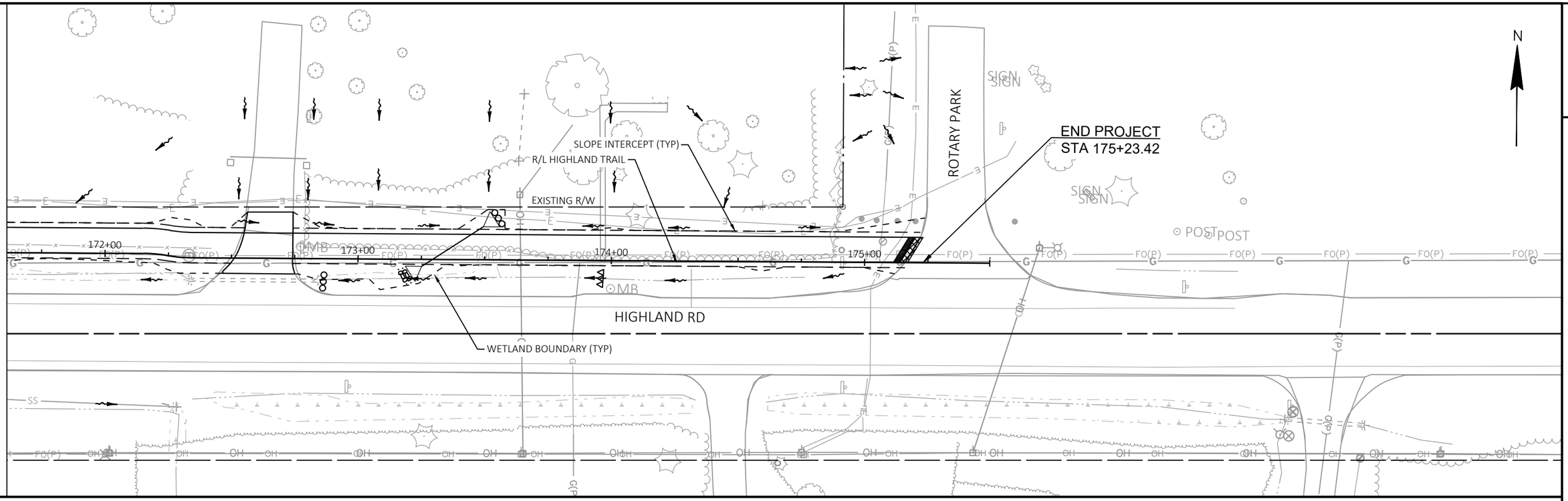




PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 49	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022002-EC.DWG
LAYOUT NAME - EC6

PLOT DATE : 8/7/2025 2:18 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



2

EROSION CONTROL LEGEND

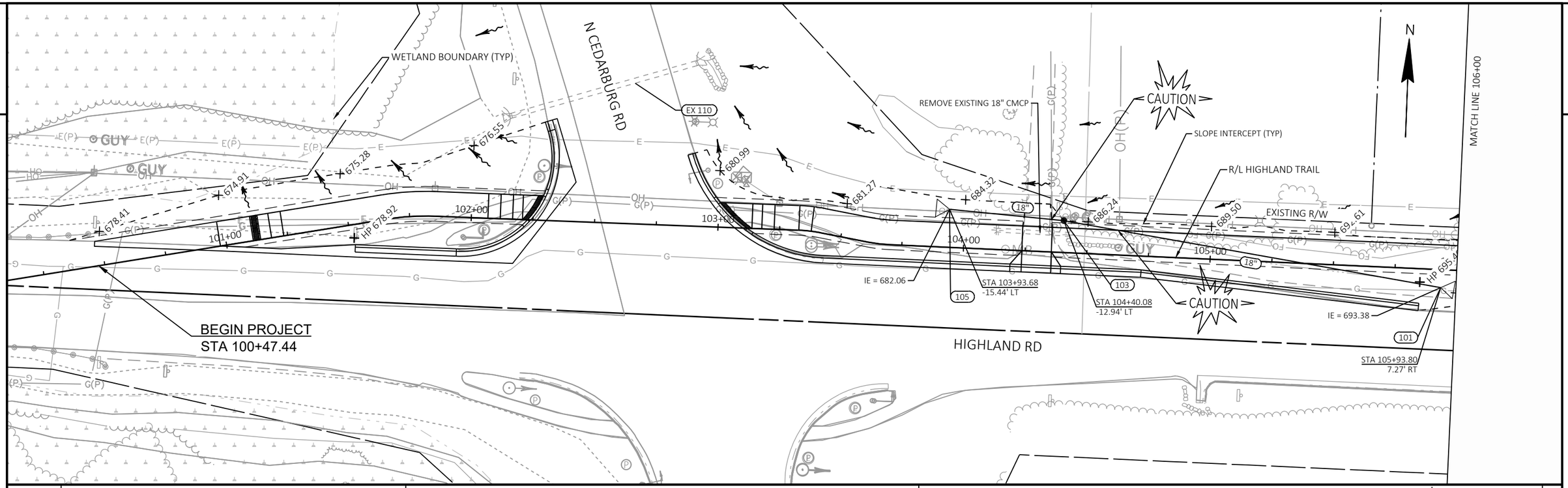
- SILT FENCE
- EROSION BALE
- RIP RAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION TYPE B
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- WETLANDS

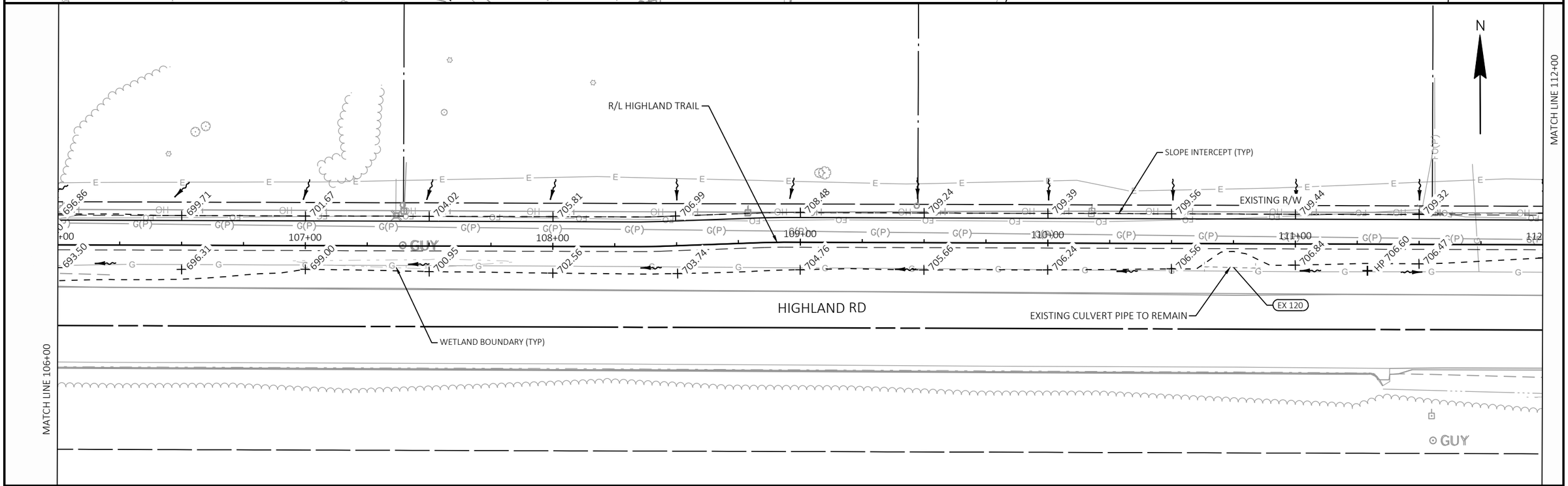
NOTES:

1) RESTORE ALL DISTURBED AREAS WITH TOPSOIL, SEED, FERTILIZER, AND EROSION MAT.

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	EROSION CONTROL	SHEET 50	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022002-EC.DWG
LAYOUT NAME - EC7
PLOT DATE : 8/7/2025 2:18 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



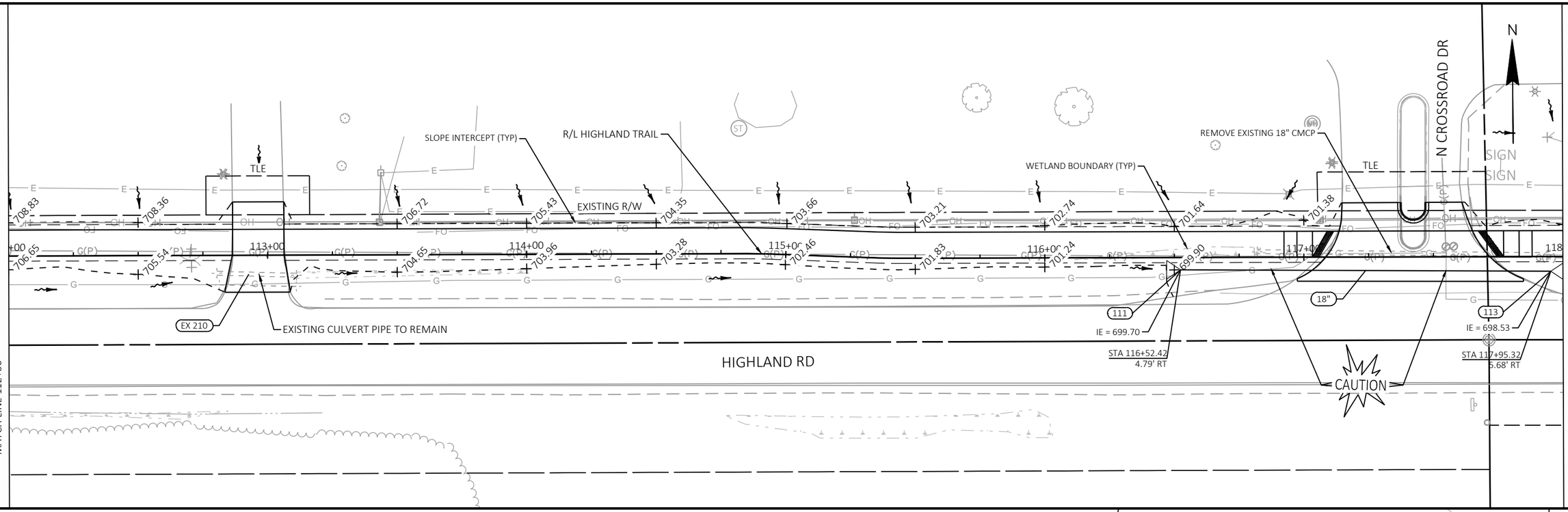


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CULVERT PIPE PLAN	SHEET 51	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022501_SS.DWG
LAYOUT NAME - SS1

PLOT DATE : 8/7/2025 3:08 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CULVERT PIPE PLAN	SHEET 52	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022501_SS.DWG
LAYOUT NAME - SS2

PLOT DATE : 8/7/2025 3:08 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 124+00

N

WETLAND BOUNDARY (TYP)

131

STA 124+16.68
-13.62' LT

IE = 690.87

137

IE = 694.56

STA 124+83.55
-13.43' LT

15"

47" x 71"

STA 124+15.69
-2.33' LT

133

CONNECT TO EXISTING 47"X71" CMCP

EX 310

CAUTION

2 GAS LINES AND 2 ELECTRIC LINES

135

IE = 695.16

STA 125+57.48
5.85' RT

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

HIGHLAND RD

691.86 693.96 695.35 697.00 698.52 700.16 702.34 704.24 705.78 706.86 708.81 710.40 711.07

696.43 696.76 697.01 697.55

125+00 126+00 127+00 128+00 129+00 130+00

697.01 698.80 701.14 703.21 704.88 706.28 708.08 708.88 709.59

MATCH LINE 130+10

MATCH LINE 136+15

N

R/L HIGHLAND TRAIL

145

IE = 708.28

STA 133+15.09
-12.50' LT

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

EXISTING R/W

711.68 712.70 711.89 710.53 709.55 708.73 709.15 709.53 710.00 709.71 709.21 708.92

711.38 711.94 710.88 709.67 709.04 708.91 707.72 707.57 707.38 707.13 706.96

131+00 132+00 133+00 134+00 135+00 136+00

HP 710.69

15"

141

IE = 708.71

STA 132+36.71
8.00' RT

143

IE = 708.44

STA 132+69.69
7.75' RT

147

IE = 708.13

STA 133+15.20
2.53' RT

CAUTION

HIGHLAND RD

MATC
WEST ENTRANCE

SIGN

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CULVERT PIPE PLAN	SHEET 53	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022501_SS.DWG
LAYOUT NAME - SS3

PLOT DATE : 8/7/2025 3:08 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 136+15

WETLAND BOUNDARY (TYP)

153

STA 137+34.29
7.29' RT

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

709.19 709.47 709.08 710.78 712.07 712.75 712.70 712.92 713.59 713.90 714.71 715.24

137+00 138+00 139+00 140+00 141+00 142+00

706.80 706.63 707.59 708.20 709.28 710.02 710.62 711.06 711.50 711.91 712.66 713.33

15"

707.59

151

IE = 706.37

STA 137+15.21
8.10' RT

155

CONNECT TO EXISTING 24" CMCP

STA 137+34.35
18.15' RT

HIGHLAND RD

CAUTION

EX 410

POST

MATC
EAST ENTRANCE

SIGN

MATCH LINE 142+25

N

2

MATCH LINE 142+25

STA 143+49.98
12.57' LT

CAUTION

IE = 714.48

161

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

715.44 715.91 715.46 716.11 716.43 716.42 716.30 716.77 717.12 717.54 717.59 717.67

143+00 144+00 145+00 146+00 147+00 148+00

713.99 HP 714.19 714.16 714.25 714.32 714.39 714.53 715.81 716.33 716.77 717.18 717.36 717.75

15"

714.25

163

714.25

18"

714.32

714.39

STA 143+49.54
9.03' RT

165

CONNECT TO EXISTING 18" CMCP

STA 143+49.44
18.46' RT

EX 420

HIGHLAND RD

POST

MATCH LINE 148+25

N

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CULVERT PIPE PLAN	SHEET 54	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022501_SS.DWG
LAYOUT NAME - SS4

PLOT DATE : 8/7/2025 3:08 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

MATCH LINE 148+25

MATCH LINE 154+25

2

N

CAUTION

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

EXISTING R/W

R/L HIGHLAND TRAIL

HIGHLAND RD

718.09 718.64 720.15 720.94 721.38 721.43 721.54 721.54 721.89 722.77 719.52 719.68

717.72 719.28 720.42 721.07 721.35 721.40 721.58 721.79 722.07 722.92 719.78 719.42

149+00 150+00 151+00 152+00 153+00 154+00

WETLAND BOUNDARY (TYP)

HP 722.92

171
STA 153+77.05
-13.53' LT
IE = 719.04
15"

173
IE = 718.85
STA 153+69.61
5.88' RT

175
IE = 718.85
STA 153+89.61
5.70' RT

179
STA 153+79.74
13.97' RT

177
STA 153+79.61
5.92' RT

CONNECT TO EXISTING 12" CMCP

EX 510

N

CAUTION

SLOPE INTERCEPT (TYP)

EXISTING R/W

R/L HIGHLAND TRAIL

HIGHLAND RD

720.45 720.77 721.63 722.04 721.59 720.63 719.85 719.85 720.25 721.69 722.89 724.68

719.58 719.74 719.90 720.13 720.24 719.93 719.88 719.43 719.75 720.11 721.36 722.76 723.97

155+00 156+00 157+00 158+00 159+00 160+00

181
IE = 719.60
STA 157+41.75
6.05' RT

STA 157+58.54
-12.69' LT

WETLAND BOUNDARY (TYP)

187

183
IE = 719.09
STA 157+31.75
6.35' RT

185
IE = 719.09
STA 157+51.74
5.75' RT

189
STA 157+41.54
14.80' RT

CONNECT TO EXISTING 15" CMCP

EX 520

MATCH LINE 154+25

MATCH LINE 160+35

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CULVERT PIPE PLAN	SHEET 55	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022501_SS.DWG
LAYOUT NAME - SS5

PLOT DATE : 8/7/2025 3:08 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 160+35

MATCH LINE 166+45

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

EXISTING R/W

SLOPE INTERCEPT (TYP)

REMOVE EXISTING 12" CMCP

IE = 721.81

STA 166+00.30
-13.61' LT

191

15"

EXISTING CULVERT PIPE TO REMAIN

EX 610

HIGHLAND RD

CAUTION

193

195

IE = 720.36

STA 165+99.86
5.00' RT

STA 166+30.07
5.00' RT

EXISTING CULVERT PIPE TO REMAIN

EX 620

MEADOW CIR

MATCH LINE 166+45

MATCH LINE 171+76.30

CONNECT TO EXISTING 18" CMCP

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

R/L HIGHLAND TRAIL

201

STA 170+19.77
-14.62' LT

IE = 710.64

CAUTION

209

STA 170+94.43
4.39' RT

WETLAND BOUNDARY (TYP)

EXISTING R/W

15"

203

IE = 711.01

STA 169+74.19
5.03' RT

205

STA 170+19.68
-1.74' LT

207

STA 171+09.49
7.43' RT

IE = 710.55

HIGHLAND RD

211

IE = 710.69

STA 170+12.04
47.73' RT

CAUTION

215

STA 170+27.61
49.43' RT

STA 170+42.10
49.32' RT

217

EX 630

EX 640

CAUTION

18"

CONNECT TO EXISTING 18" CMCP

IE = 710.43

STA 170+27.47
70.11' RT

213

RIVER RD

MATCH LINE 166+45

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CULVERT PIPE PLAN	SHEET 56	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022501_SS.DWG
LAYOUT NAME - SS6

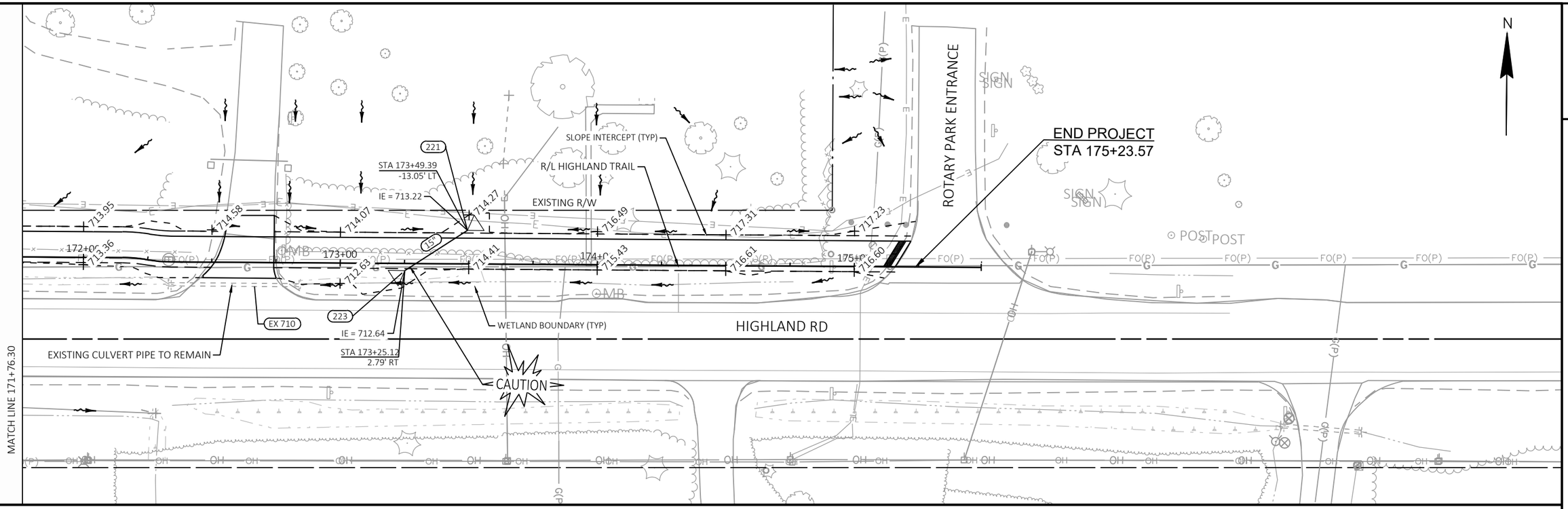
PLOT DATE : 8/7/2025 3:08 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

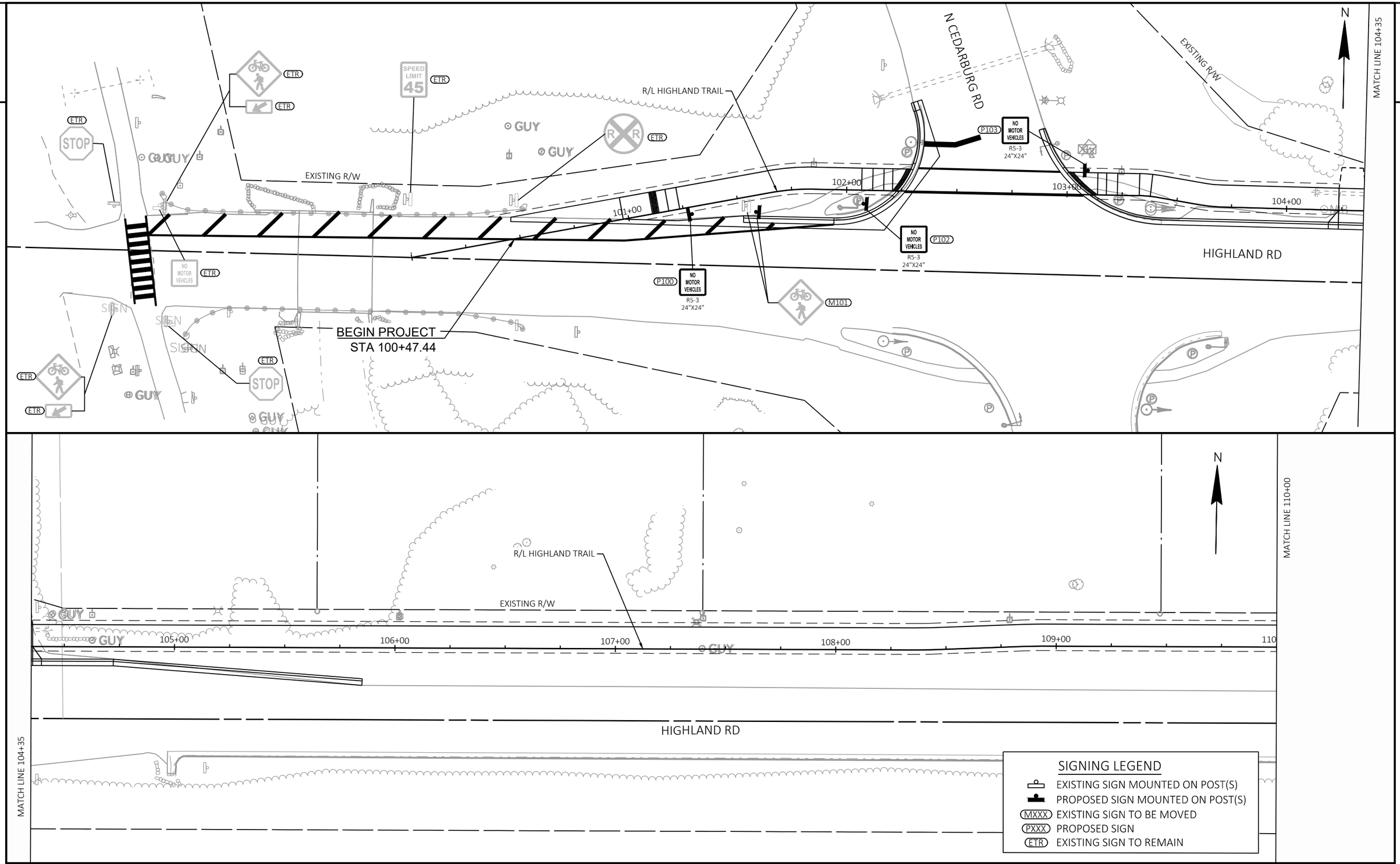
WISDOT/CADDS SHEET 44



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CULVERT PIPE PLAN	SHEET 57	E

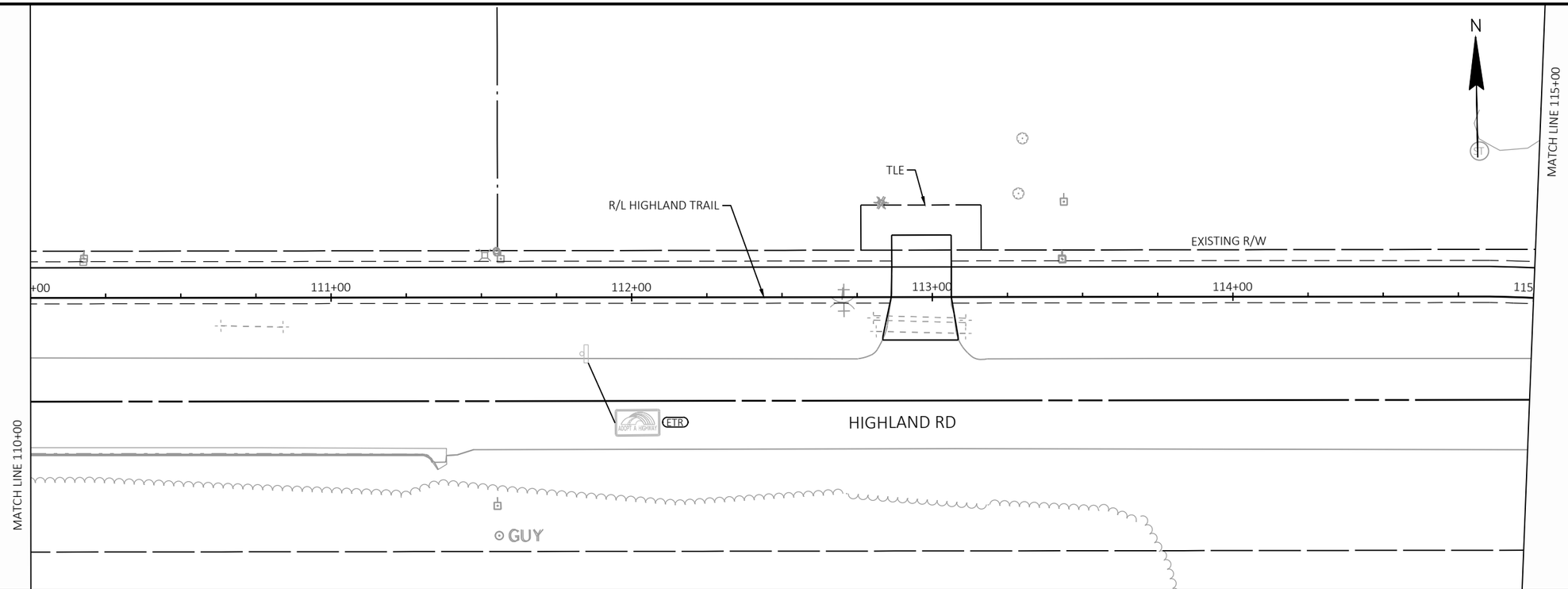
FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\022501_SS.DWG
LAYOUT NAME - SS7

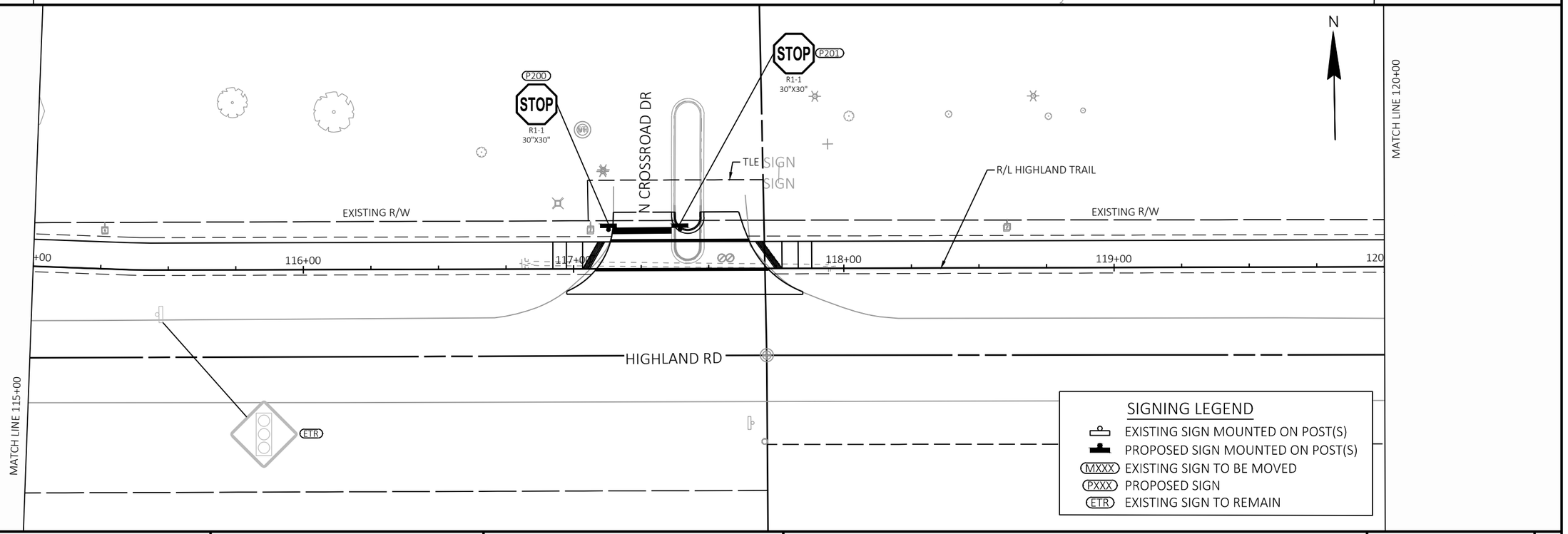
PLOT DATE : 8/7/2025 3:08 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 58	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\023201-PS.DWG
LAYOUT NAME - PS1
PLOT DATE : 8/7/2025 2:20 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

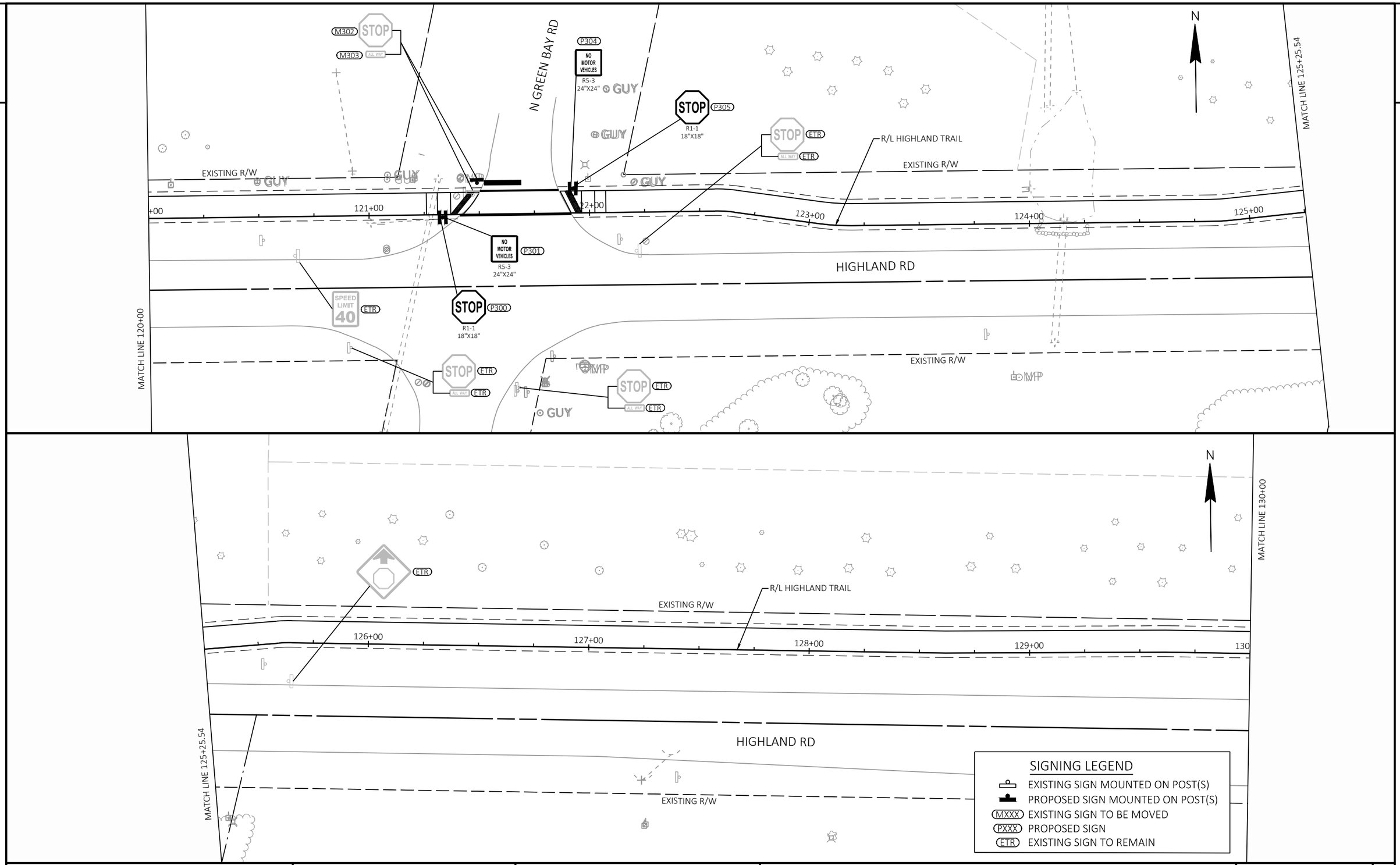




PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 59	E

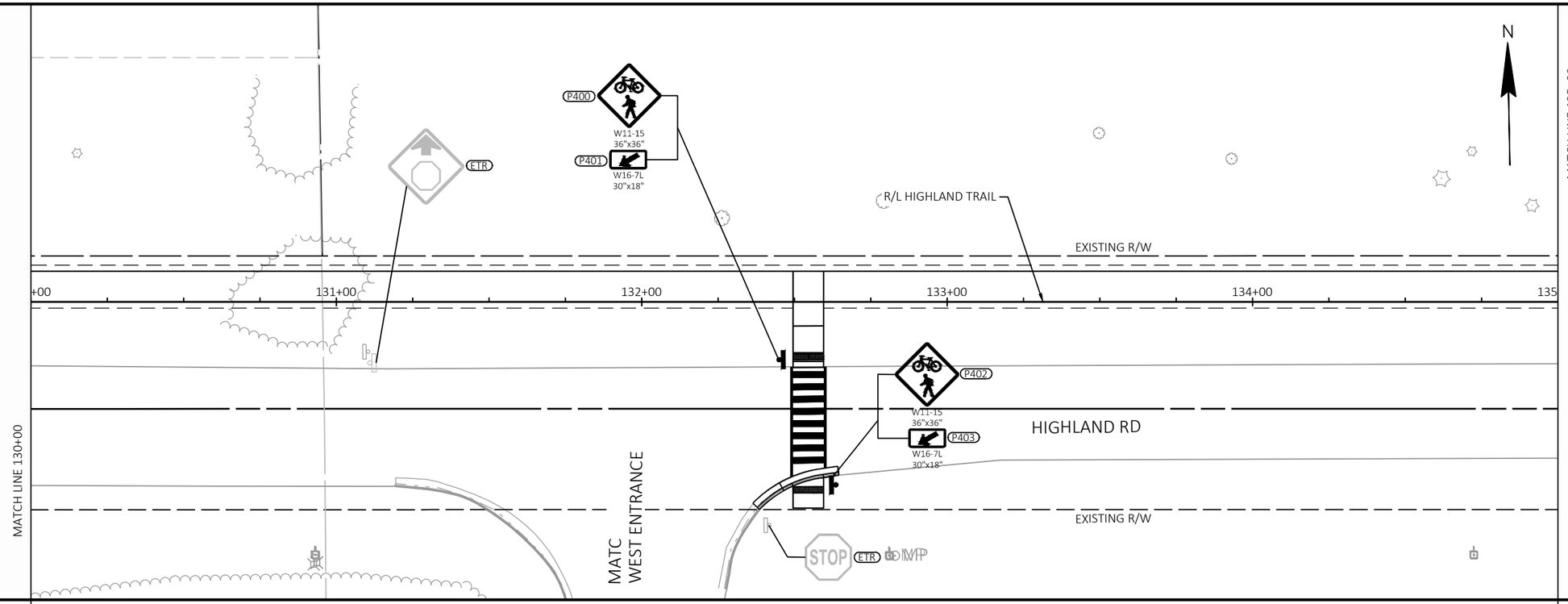
FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\023201-PS.DWG
LAYOUT NAME - PS2

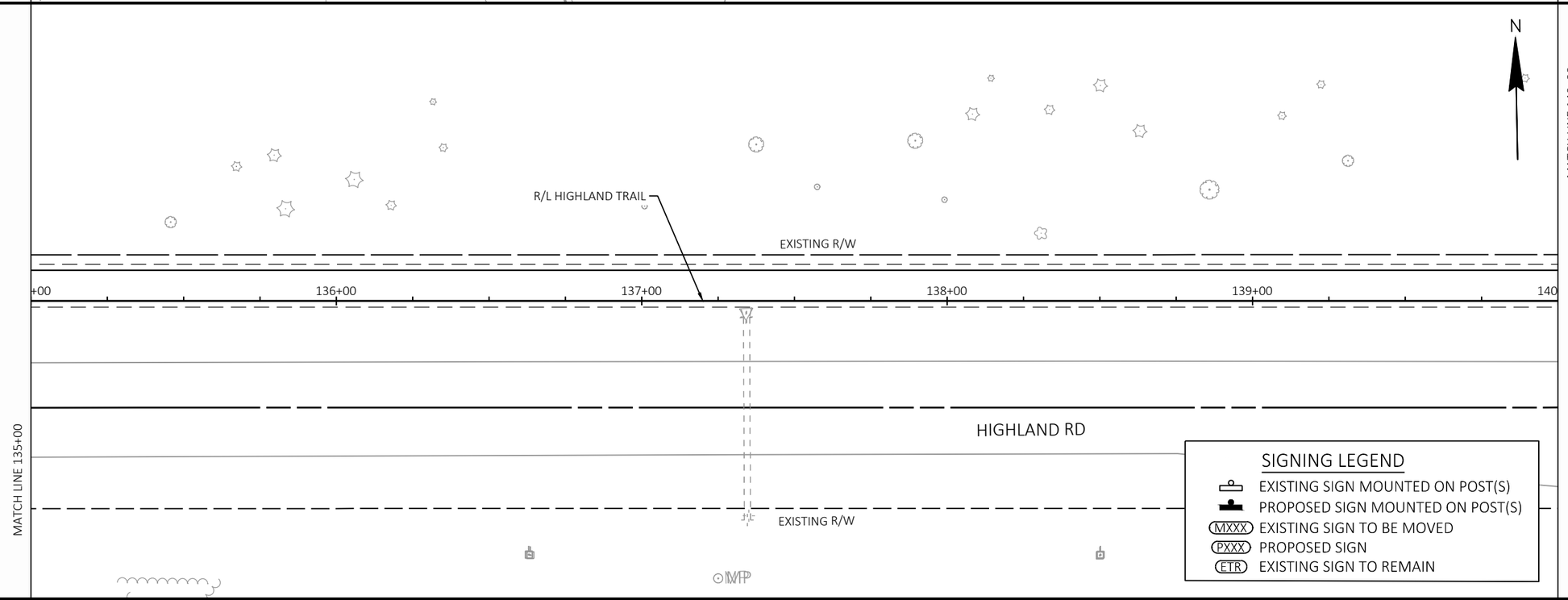
PLOT DATE : 8/7/2025 2:20 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 60	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\023201-PS.DWG
LAYOUT NAME - PS3
PLOT DATE : 8/7/2025 2:20 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

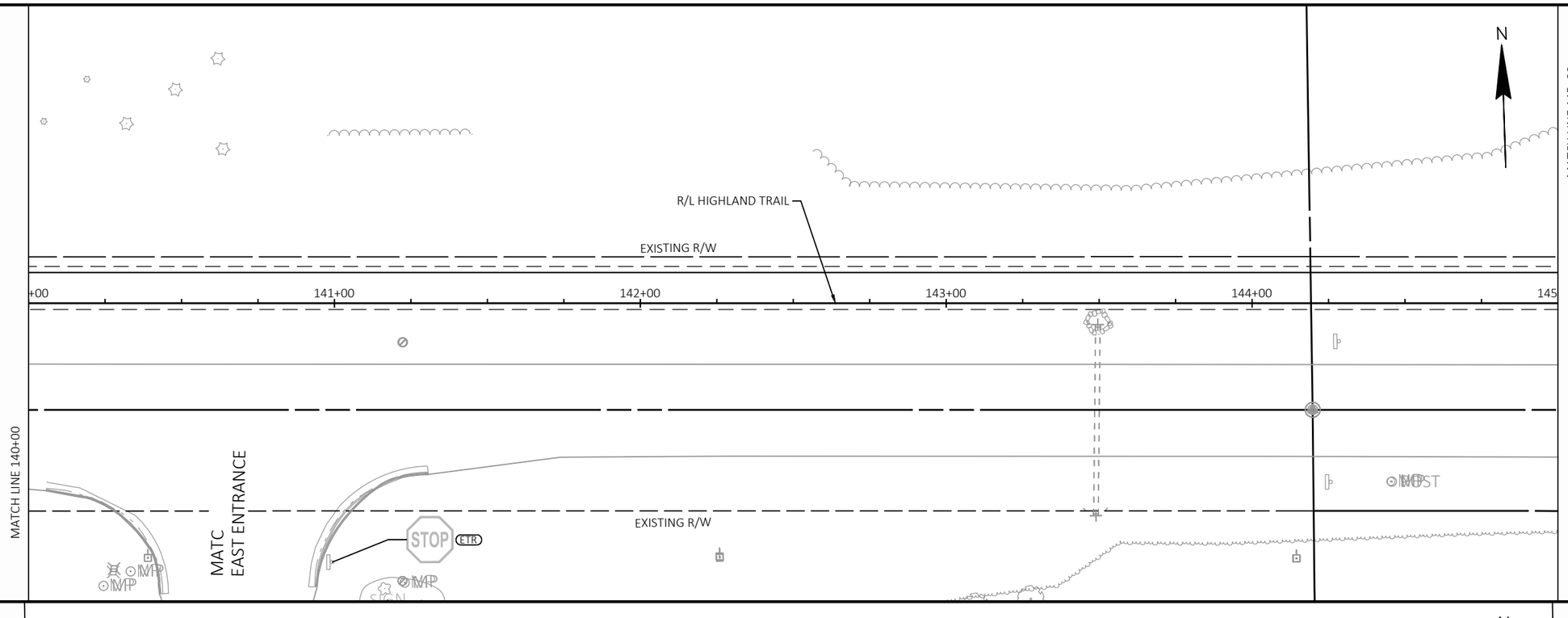


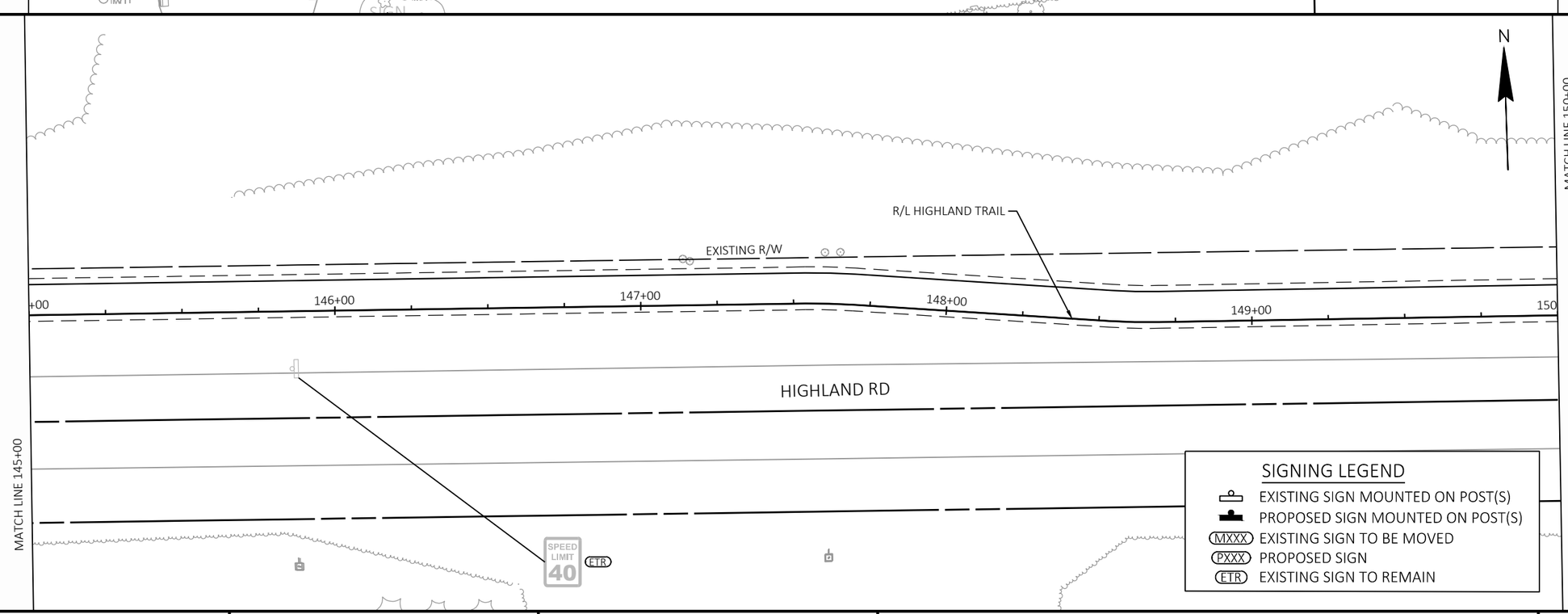


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 61	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\023201-PS.DWG
LAYOUT NAME - PS4

PLOT DATE : 8/7/2025 2:20 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



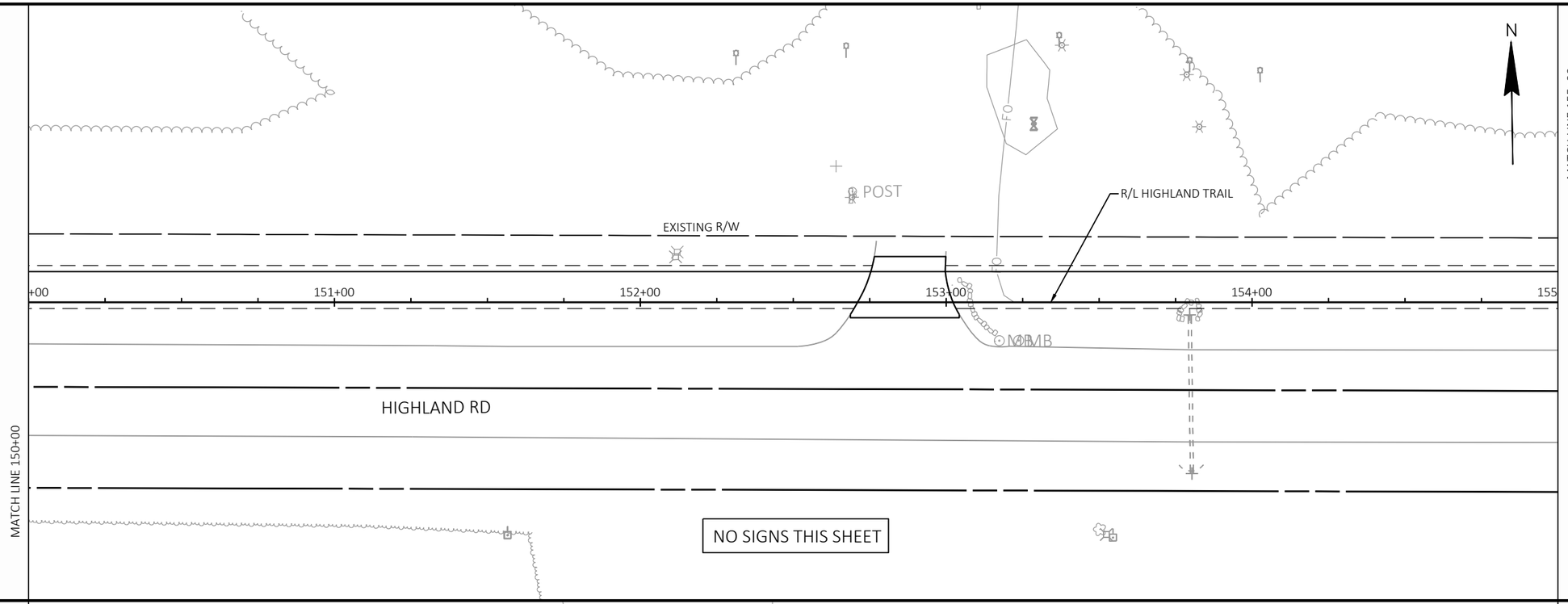


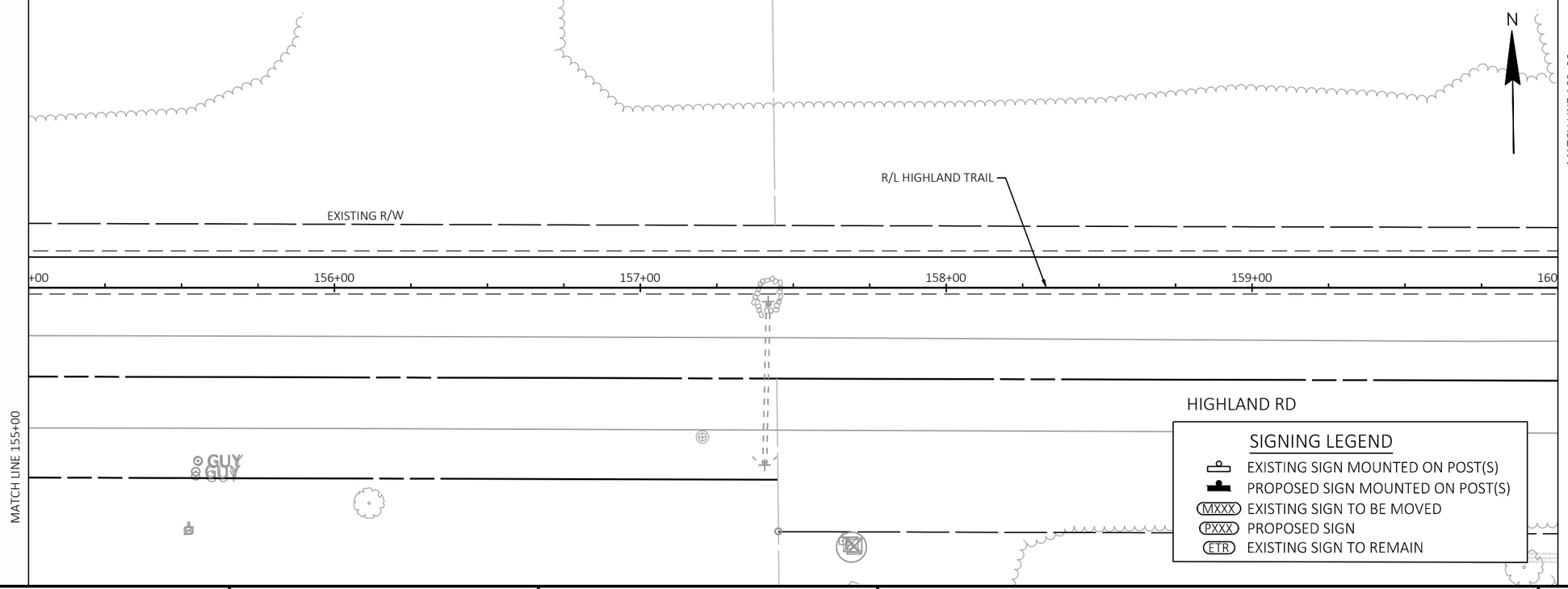
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 62	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\023201-PS.DWG
LAYOUT NAME - PS5

PLOT DATE : 8/7/2025 2:20 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



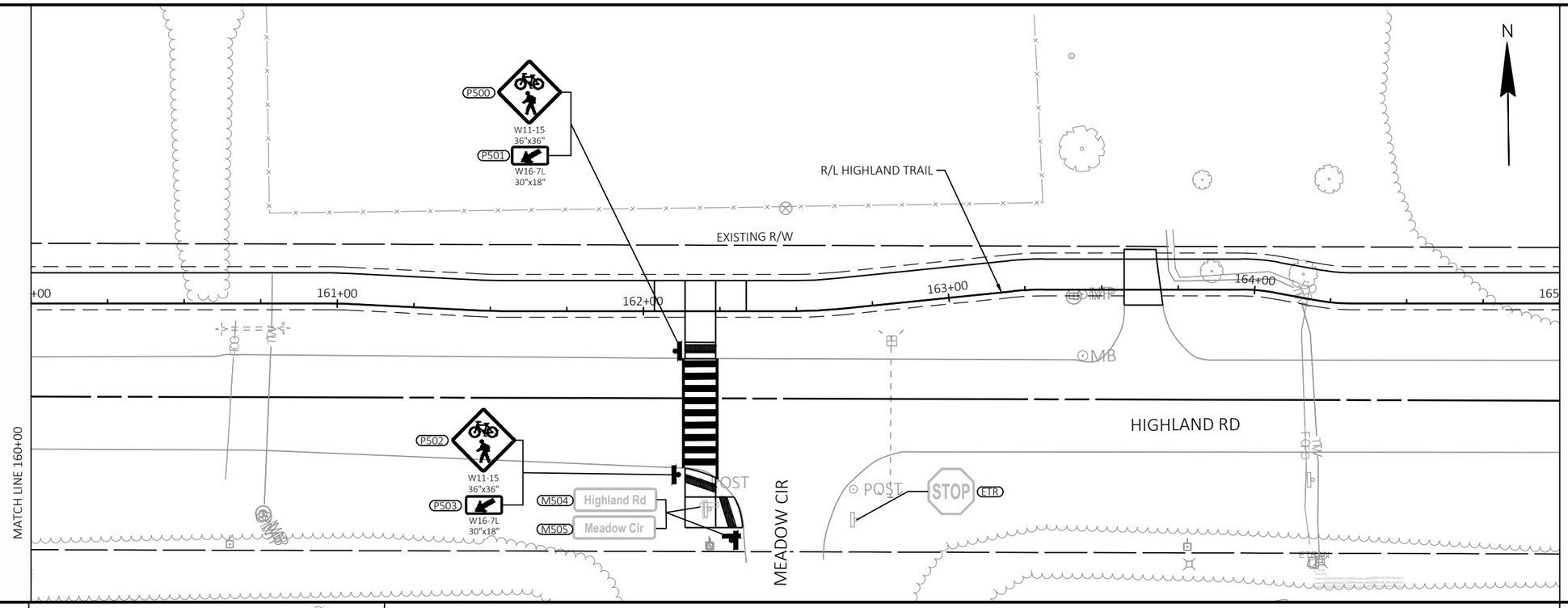


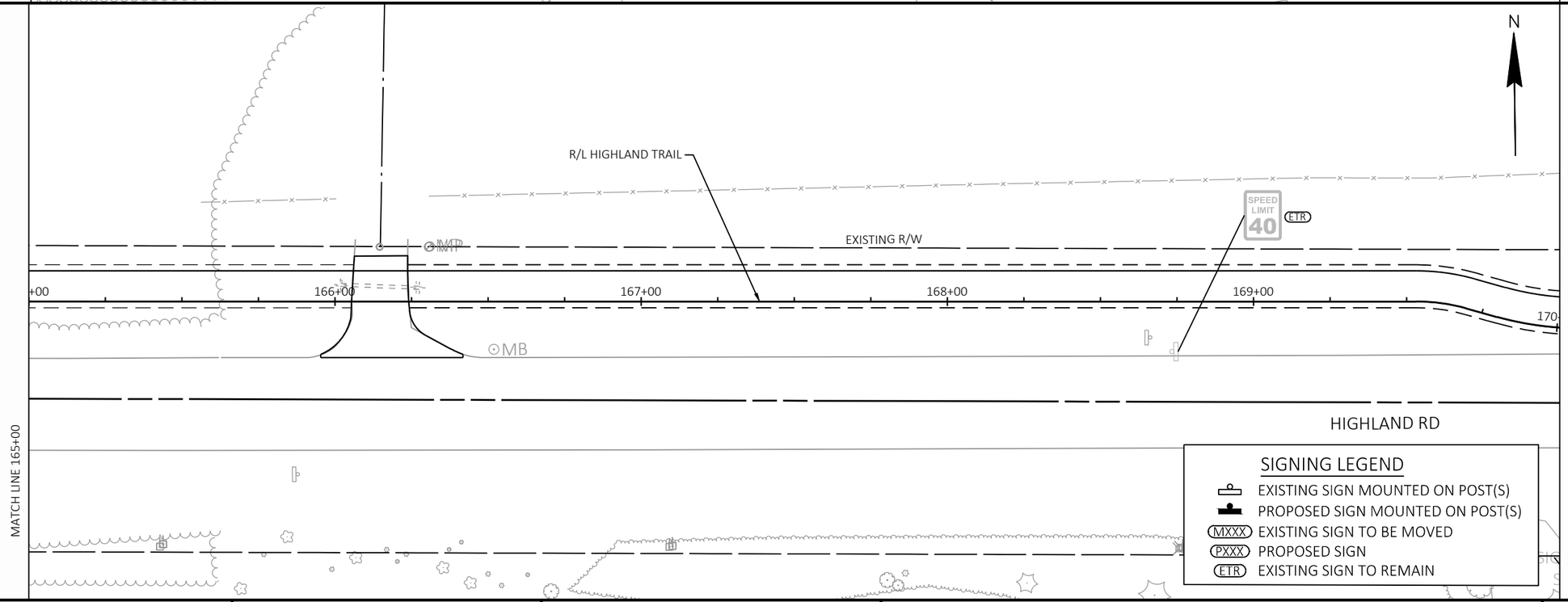
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 63	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\023201-PS.DWG
LAYOUT NAME - PS6

PLOT DATE : 8/7/2025 2:21 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

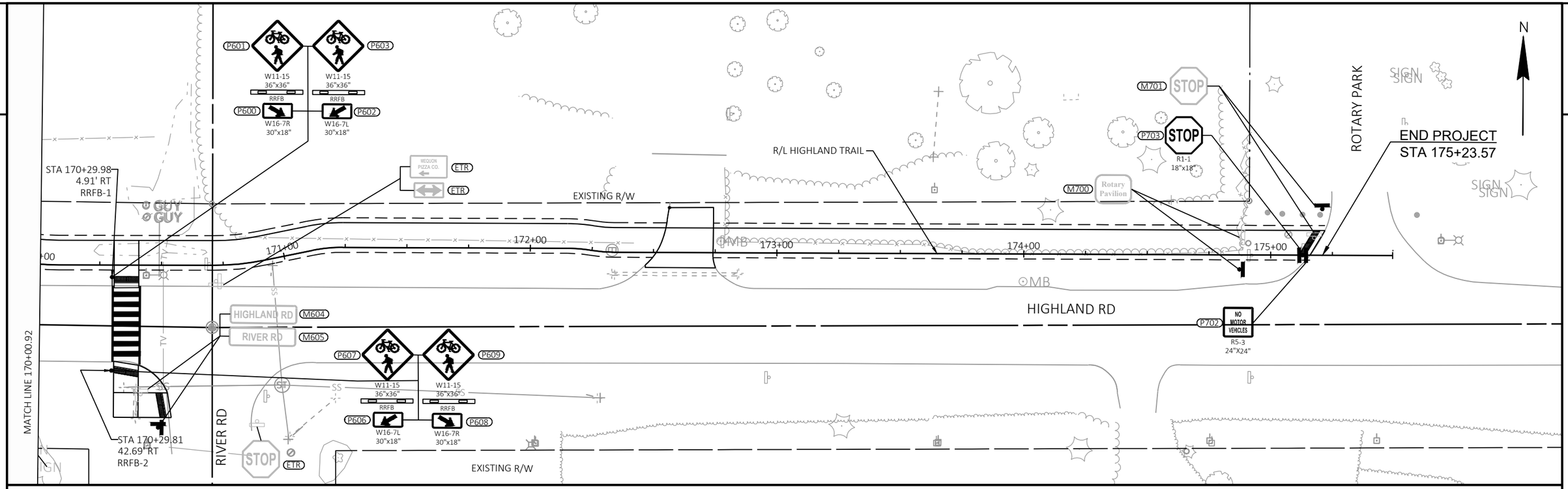




PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 64	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\023201-PS.DWG
LAYOUT NAME - PS7

PLOT DATE : 8/7/2025 2:21 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (MXXX) EXISTING SIGN TO BE MOVED
- (PXXX) PROPOSED SIGN
- (ETR) EXISTING SIGN TO REMAIN

LEGEND

● TYPE 1 BASE AND POLE FOR RECTANGULAR RAPID FLASHING BEACON (SEE CONSTRUCTION DETAIL)

NOTE

1) ALL RECTANGULAR RAPID FLASHING BEACON LOCATIONS CONSIST OF BACK TO BACK SIGNS AND BACK TO BACK RECTANGULAR RAPID FLASHING BEACONS.

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PERMANENT SIGNING	SHEET 65	E

2

2

N

A

A

B

B

N CEDARBURG RD

EXISTING R/W

HIGHLAND RD

SPEED LIMIT 45 MPH

6' x 10'
6 TURNS

210' TO NEAR
RIGHT SIGNAL

2 - 6' x 20'
3 TURNS EA.

2 - 6' x 20'
2 TURNS EA.

250' TO NEAR
RIGHT SIGNAL

6' x 6'
6 TURNS

GUY

SIGN

101 102 103 104 105 106

SB9 SB10

EPB1 EPB2 EPB3 EPB4 EPB5 EPB6 EPB7 EPB8 EPB9 EPB10 EPB11

ESB1 ESB2 ESB3 ESB4 ESB5 ESB6 ESB7 ESB8 ESB9 ESB10

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- ACCESSIBLE PEDESTRIAN PUSH BUTTON
- PULL BOX, 24" X 36"
- CONTROL CABINET
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- LUMINAIRE
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- WALK/DON'T WALK INDICATOR 16"

NOTES:

- GRAYSHADE REPRESENTS EXISTING
- EXISTING LOOPS TO REMAIN SHOWN AS GRAY

REVISION				
REV. NO.	INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTONS AND HEADS TO POLE IN THE NW AND NE CORNERS			
	APPROVAL RECOMMENDED		APPROVED	
1	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	XX/XX/25	NAME	XX/XX/25	NAME

TRAFFIC CONTROL SIGNAL
HIGHLAND RD & CEDARBURG RD
OZAUKEE COUNTY

SIGNAL NO. 445

MUNICIPAL CONTACT:TIM WEYKER
DESIGNED BY: KAPUR & ASSOCIATES, INC.
REVISED BY:

PAGE 1

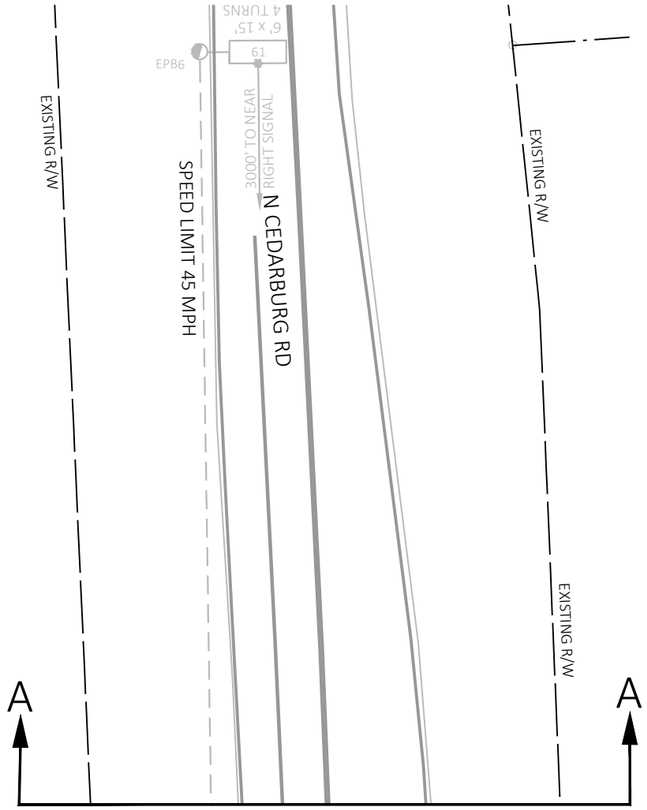
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	TRAFFIC SIGNAL PLAN	SHEET 66	E

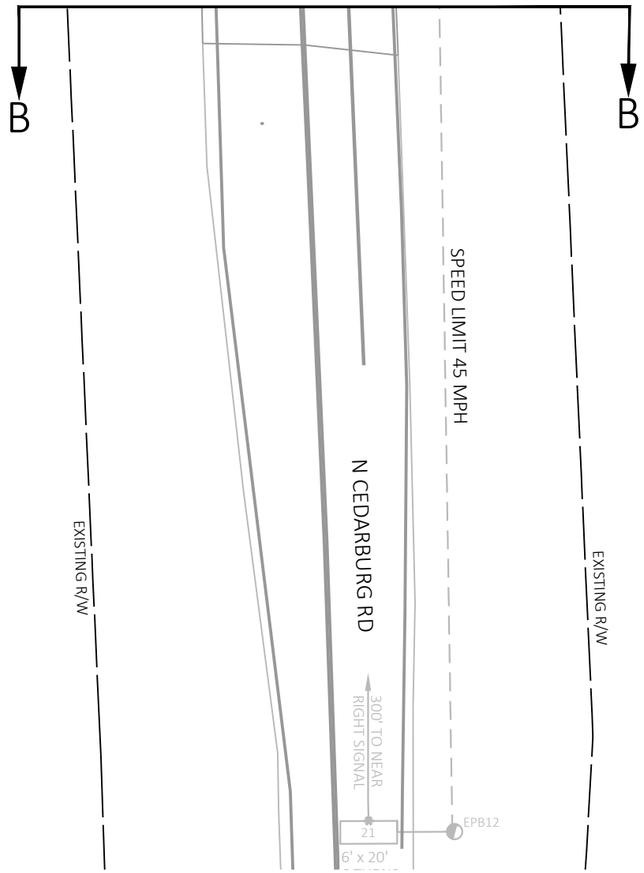
FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024201-SP.DWG
LAYOUT NAME - SP01

PLOT DATE : 8/7/2025 2:21 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2





LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- ACCESSIBLE PEDESTRIAN PUSH BUTTON
- PULL BOX, 24" X 36"
- CONTROL CABINET
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- LUMINAIRE
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- Y YELLOW ARROW
- G GREEN ARROW
- XX DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

NOTES:

- GRAYSHADE REPRESENTS EXISTING
- EXISTING LOOPS TO REMAIN SHOWN AS GRAY

REVISION				
REV. NO.	INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTONS AND HEADS TO POLE IN THE NW AND NE CORNERS			
	APPROVAL RECOMMENDED		APPROVED	
1	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	XX/XX/25	NAME	XX/XX/25	NAME

TRAFFIC CONTROL SIGNAL
HIGHLAND RD & CEDARBURG RD
OZAUKEE COUNTY

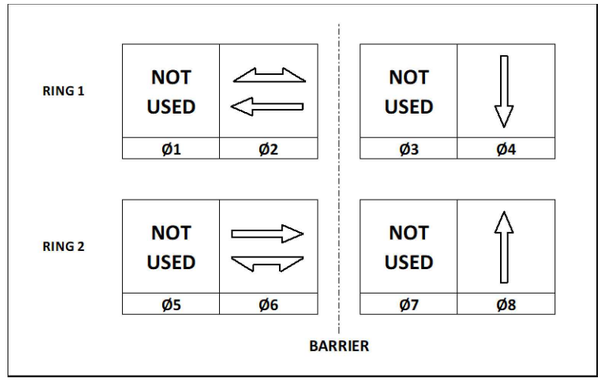
SIGNAL NO. 445

MUNICIPAL CONTACT:TIM WEYKER
DESIGNED BY: KAPUR & ASSOCIATES, INC.
REVISED BY:

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	TRAFFIC SIGNAL PLAN	SHEET 67	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024201-SP.DWG
LAYOUT NAME - SP02
PLOT DATE : 8/7/2025 2:21 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : ##########

	HEAD NUMBERS	FLASH
Ø1		
Ø2	10,11,12	
Ø3		
Ø4	4,5,6	
Ø5		
Ø6	7,8,9	
Ø7		
Ø8	1,2,3	
Ø2P	13,14	
Ø4P		
Ø6P	15,16	
Ø8P		
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	X
3				
4		8		X
5				
6	X	2	MIN	X
7				
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION		
NONE		X
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM NO:	SS-	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE CITY LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	1	3	5	7	9	11	13	15	49	51	53	55	57	59	61	63	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	21	42	61	82													PLAN LOOP DETECTOR*(S)
CALLED PHASE	2	4	6	8													CALLED PHASE
CALL OPTION		X		X													CALL OPTION
DELAY TIME		X		X													DELAY TIME
EXTENTION OPTION	X	X	X	X													EXTENTION OPTION
EXTEND TIME	X		X														EXTEND TIME
USE ADDED INITIAL																	USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

DETECTOR INPUT	2	4	6	8	10	12	14	16	50	52	54	56	58	60	62	64	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	41	43	81	83													PLAN LOOP DETECTOR*(S)
CALLED PHASE	4	4	8	8													CALLED PHASE
CALL OPTION		X		X													CALL OPTION
DELAY TIME		X		X													DELAY TIME
EXTENTION OPTION	X	X	X	X													EXTENTION OPTION
EXTEND TIME	X		X														EXTEND TIME
USE ADDED INITIAL																	USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

REVISION				
REV. NO.	INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTONS AND HEADS TO POLE IN THE NW AND NE CORNERS			
	APPROVAL RECOMMENDED		APPROVED	
1	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	XX/XX/25	NAME	XX/XX/25	NAME

TRAFFIC CONTROL SIGNAL
HIGHLAND RD & CEDARBURG RD
OZAUKEE COUNTY

SIGNAL NO. 445

MUNICIPAL CONTACT:TIM WEYKER
DESIGNED BY: KAPUR & ASSOCIATES, INC.
REVISED BY:

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	SEQUENCE OF OPERATIONS	SHEET 68	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024201-SP.DWG
LAYOUT NAME - SP03
PLOT DATE : 8/7/2025 2:21 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

PROJECT ID:	2697-22-70
INTERSECTION:	HIGHLAND ROAD & CEDARBURG ROAD

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED NEUTRAL	OTHER
ESB1	5	6	RED	ORANGE	GREEN								
ESB2	12	7	RED	ORANGE	GREEN								
		11	RED/BLK	ORG/BLK	GRN/BLK								
		16								BLU	BLK		
		B										WHT/BLK	BLU/BLK
ESB3	7	12	RED	ORANGE	GREEN								
		13								BLU	BLK		
ESB4	12	2	RED	ORANGE	GREEN								
		4	RED/BLK	ORG/BLK	GRN/BLK								
ESB5	5	3	RED	ORANGE	GREEN								
ESB6	12	8	RED	ORANGE	GREEN								
		10	RED/BLK	ORG/BLK	GRN/BLK								
		14								BLU	BLK		
ESB7	12	9	RED	ORANGE	GREEN								
		15								BLU	BLK		
		B										WHT/BLK	BLU/BLK
ESB8	12	1	RED	ORANGE	GREEN								
		5	RED/BLK	ORG/BLK	GRN/BLK								
SB9	12	B										WHT/BLK	BLU/BLK
SB10	12	B										WHT/BLK	BLU/BLK

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

(CONTINUED ON NEXT SHEET)

REVISION				
REV. NO.	INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTONS AND HEADS TO POLE IN THE NW AND NE CORNERS			
	APPROVAL RECOMMENDED		APPROVED	
1	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	XX/XX/25	NAME	XX/XX/25	NAME

TRAFFIC CONTROL SIGNAL
HIGHLAND RD & CEDARBURG RD
OZAUKEE COUNTY

SIGNAL NO. 445

MUNICIPAL CONTACT:TIM WEYKER
DESIGNED BY: KAPUR & ASSOCIATES, INC. PAGE 4
REVISED BY:

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CABLE ROUTING	SHEET 69	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024201-SP.DWG
LAYOUT NAME - SP04
PLOT DATE : 8/7/2025 2:21 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

(CONTINUED)

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	ESB6
ESB6	SB10
ESB6	ESB7
ESB7	ESB8
ESB8	ESB1
ESB1	ESB2
ESB2	ESB3
ESB3	ESB4
ESB4	SB9
ESB4	ESB5
ESB5	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
EPB1	ESB1
EPB2	ESB2
EPB3	ESB2
EPB4	ESB3
EPB5	ESB4
EPB6	ESB4
EPB7	CB1
EPB8	ESB6
EPB9	ESB6
EPB10	ESB7
EPB11	ESB8
EPB12	ESB8

LIGHTING UF #12 W/ GROUND	
FROM	TO
CB1	ESB3
CB1	ESB5
CB1	ESB7

REVISION				
REV. NO.	INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTONS AND HEADS TO POLE IN THE NW AND NE CORNERS			
	APPROVAL RECOMMENDED		APPROVED	
1	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	XX/XX/25	NAME	XX/XX/25	NAME

TRAFFIC CONTROL SIGNAL
HIGHLAND RD & CEDARBURG RD
OZAUKEE COUNTY

SIGNAL NO. 445

MUNICIPAL CONTACT:TIM WEYKER
DESIGNED BY: KAPUR & ASSOCIATES, INC.
REVISED BY:

PAGE 5

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CABLE ROUTING	SHEET 70	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024201-SP.DWG
LAYOUT NAME - SP05
PLOT DATE : 8/7/2025 2:21 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

N

N CEDARBURG RD

EXISTING R/W

R/L HIGHLAND TRAIL

EXISTING R/W

102+00

103+00

104+00

101+00

STA 100+96.42
9.60' RT

BEGIN PROJECT
STA 100+47.44

HIGHLAND RD

LEGEND

1	MARKING LINE EPOXY 6-INCH
2	MARKING LINE EPOXY 18-INCH
3	MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH
4	MARKING LINE EPOXY 12-INCH DIAGONAL
5	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH

N

N CROSSROAD DR

TLE

R/L HIGHLAND TRAIL

EXISTING R/W

N GREEN BAY RD

117+00

118+00

119+00

120+00

121+00

122+00

HIGHLAND RD

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PAVEMENT MARKING	SHEET 71	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024501-PM.DWG
LAYOUT NAME - PM1

PLOT DATE : 8/7/2025 2:22 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

EXISTING R/W

R/L HIGHLAND TRAIL

160+00 161+00 162+00 163+00 164+00 165+00

HIGHLAND RD

MEADOW CIR

EXISTING R/W

LEGEND

1	MARKING LINE EPOXY 6-INCH
2	MARKING LINE EPOXY 18-INCH
3	MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH
4	MARKING LINE EPOXY 12-INCH DIAGONAL
5	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH

N

R/L HIGHLAND TRAIL

EXISTING R/W

130+00 131+00 132+00 133+00 134+00 135+00

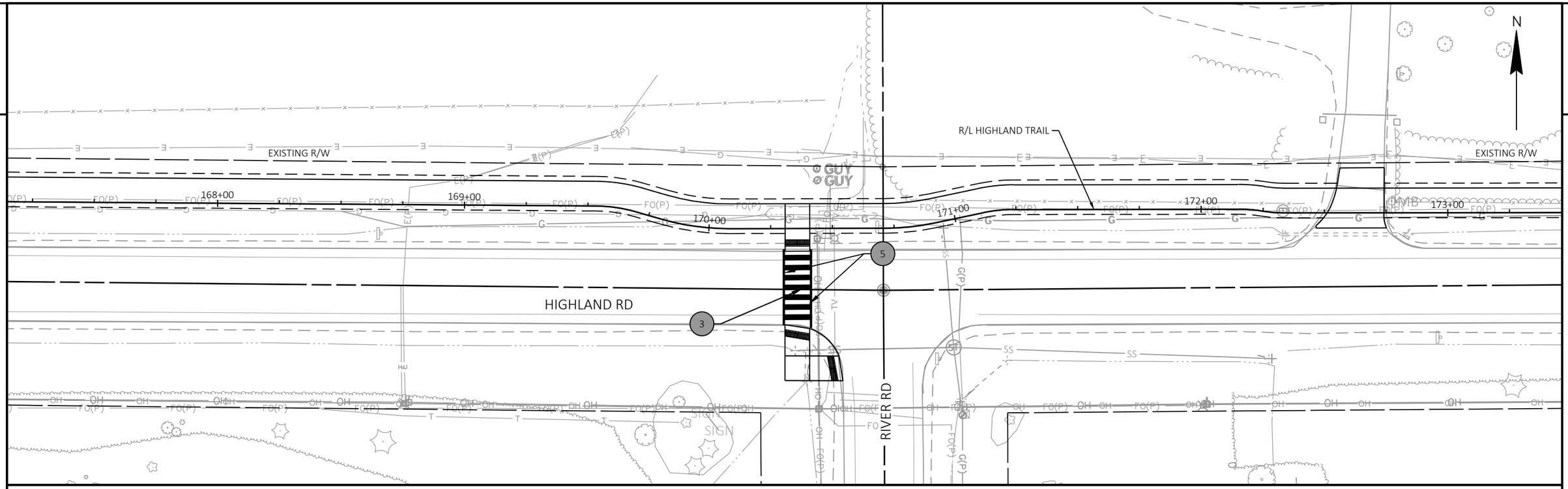
HIGHLAND RD

MATC WEST ENTRANCE

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PAVEMENT MARKING	SHEET 72 E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024501-PM.DWG
LAYOUT NAME - PM2

PLOT DATE : 8/7/2025 2:22 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT



LEGEND

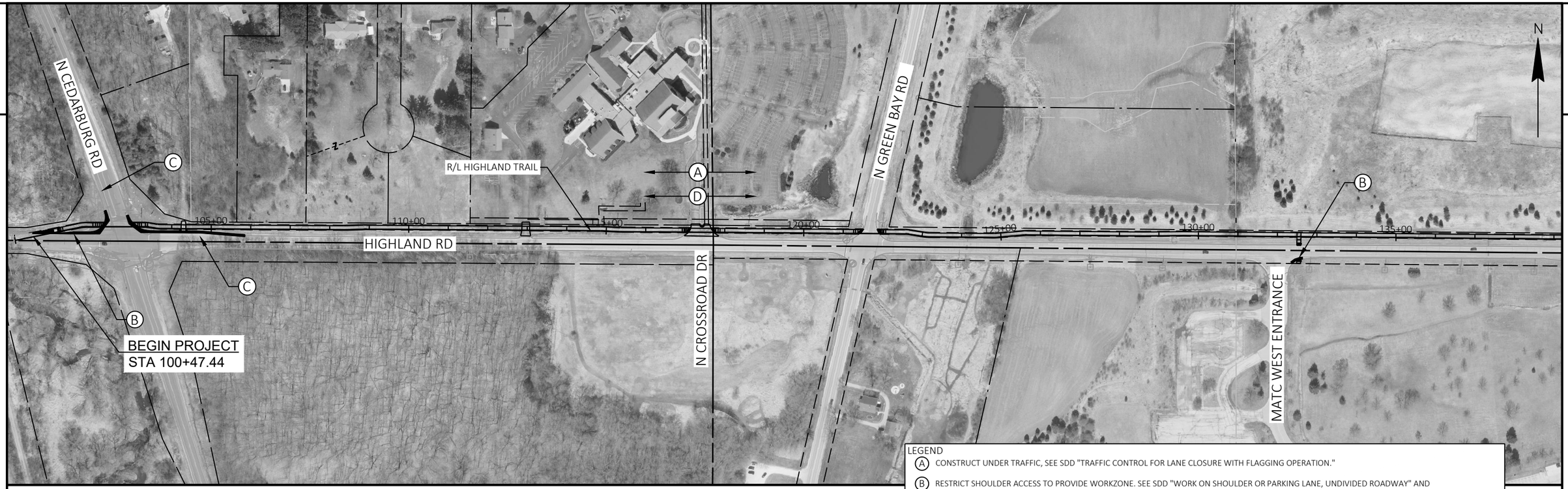
1	———	MARKING LINE EPOXY 6-INCH
2	▬▬▬	MARKING LINE EPOXY 18-INCH
3	▬▬▬	MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH
4	▬▬▬	MARKING LINE EPOXY 12-INCH DIAGONAL
5	———	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PAVEMENT MARKING	SHEET 73	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\024501-PM.DWG
LAYOUT NAME - PM3

PLOT DATE : 8/7/2025 2:22 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



LEGEND

- (A) CONSTRUCT UNDER TRAFFIC, SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION."
- (B) RESTRICT SHOULDER ACCESS TO PROVIDE WORKZONE. SEE SDD "WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" AND "INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE."
- (C) PROVIDE AUXILLARY LANE CLOSURE. SEE SDD "ADDED LANE CLOSURE WITHOUT LANE SHIFT."
- (D) RESTRICT PEDESTRIAN ACCESS TO PATH AT CROSSINGS, ENTRANCES AND DRIVEWAYS UNTIL PROJECT COMPLETION. SEE SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMODATION."

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	TRAFFIC CONTROL	SHEET 74	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\025100-TC.DWG
LAYOUT NAME - TC-01

PLOT DATE : 8/7/2025 2:24 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:250 FT

WISDOT/CADDS SHEET 42

2

N

BEGIN PROJECT
STA 100+47.44
N= 376914.658
E= 584476.037

PC: 101+65.37
N= 376937.938
E = 584591.642

PT: 101+85.24
N= 376939.906
E = 584611.381

PC: 103+32.44
N= 376939.907
E = 584758.581

PC: 103+61.39
N= 376936.175
E = 584787.262

PT: 103+70.23
N= 376935.467
E = 584796.062

PT: 108+43.36
N= 376932.485
E = 585269.186

PT: 114+93.42
N= 376929.646
E = 585919.203

PC: 115+35.52
N= 376927.671
E = 585961.258

PC: 122+56.98
N= 376922.161
E = 586682.690

PT: 122+65.78
N= 376921.452
E = 586691.452

PC: 123+04.78
N= 376915.467
E = 586729.996

PT: 123+19.31
N= 376914.287
E = 586744.463

PC: 124+82.17
N= 376912.857
E = 586907.314

PT: 124+91.76
N= 376913.232
E = 586916.891

PC: 125+59.32
N= 376919.109
E = 586984.203

PT: 125+65.10
N= 376919.334
E = 586989.976

PI: 129+61.68
N= 376917.676
E = 587386.536

CP 100

N89°59'58"E
147.20'

CURVE 1

N78°36'53"E
165.37'

CURVE 3

CURVE 4

105+00

S89°37'11"E
465.20'

110+00

S89°36'05"E
592.00'

CURVE 5

CURVE 6

115+00

S89°34'29"E
713.55'

CP 104

120+00

S89°29'49"E
162.86'

125+00

S89°28'17"E
296.58'

130+00

135+00

140+00

S89°27'48"E
1792.17'

145+00

CP 102

CURVE 2

CP 121

CP 122

S81°10'55"E
19.72'

CP 101

CP 103

CP 120

CP 116

CURVE 7

S81°10'24"E
39.01'

CURVE 8

CP 105

CURVE 10

N85°00'35"E
67.57'

CURVE 9

CP 106

N89°22'57"E
100.00'

CP 107

R/L HIGHLAND TRAIL

HIGHLAND RD

N GREEN BAY RD

N CEDARBURG RD

BP: 100+00.00
N= 376905.293
E = 584429.526

PT: 103+41.67
N= 376939.198
E = 584767.779

PC: 108+35.43
N= 376932.381
E = 585261.254

N88°06'27"E
42.06'

PC: 108+85.43
N= 376933.875
E = 585311.227

PT: 108+93.42
N= 376933.979
E = 585319.224

PC: 114+85.43
N= 376929.861
E = 585911.212

S87°18'41"E
42.10'

PT: 115+43.42
N= 376927.456
E = 585969.156

PI: 128+61.68
N= 376916.598
E = 587286.542

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	ALIGNMENT PLAN	SHEET 75	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\027201-AD.DWG
LAYOUT NAME - 01

PLOT DATE : 8/7/2025 2:25 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:300 FT

2

2

N

S89°27'48"E
1792.17'

PC: 147+53.85
N= 376900.891
E = 589178.625

PC: 148+53.63
N= 376892.768
E = 589278.058

CURVE 12

145+00

150+00

S89°35'08"E
1228.37'

HIGHLAND RD

155+00

CURVE 11

CP 108

S84°58'40"E
84.12'

PT: 147+69.51
N= 376900.132
E = 589194.260

PT: 148+69.71
N= 376892.005
E = 589294.119

R/L HIGHLAND TRAIL

PC: 160+98.08
N= 376883.123
E = 590522.461

PC: 161+46.89
N= 376880.444
E = 590571.194

PC: 162+48.93
N= 376879.517
E = 590673.227

CURVE 15

S86°42'20"E
43.78'

CURVE 13

CP 109

CURVE 14

160+00

PT: 161+03.11
N= 376882.960
E = 590527.484

PT: 161+54.43
N= 376880.200
E = 590578.730

S89°35'08"E
94.50'

MEADOW CIR

N84°37'14"E
56.84'

CURVE 16

PT: 162+64.10
N= 376880.173
E = 590688.375

S89°35'08"E
64.58'

CURVE 17

PC: 163+20.94
N= 376885.502
E = 590744.967

PC: 163+95.64
N= 376885.473
E = 590819.646

PT: 163+31.06
N= 376885.940
E = 590755.065

PT: 164+06.32
N= 376884.447
E = 590830.268

S79°22'54"E
14.69'

CURVE 18

165+00

PC: 164+21.01
N= 376881.741
E = 590844.704

PT: 164+31.70
N= 376880.715
E = 590855.327

PC: 169+53.17
N= 376876.944
E = 591376.784

CURVE 19

PT: 169+69.52
N= 376874.613
E = 591392.916

PC: 169+80.13
N= 376871.684
E = 591403.110

PT: 170+08.39
N= 376867.797
E = 591431.014

170+00

S89°35'08"E
521.47'

S73°58'14"E
10.61'

CP 110

CURVE 20

N89°50'00"E
62.80'

CP 115

RIVER RD

PC: 170+71.20
N= 376867.979
E = 591493.818

PT: 170+91.56
N= 376870.104
E = 591514.036

N78°09'56"E
20.15'

PC: 171+11.71
N= 376874.236
E = 591533.755

CURVE 21

CURVE 22

PT: 171+24.03
N= 376875.512
E = 591545.987

175+00

N89°55'47"E
91.05'

CP 113

N89°55'47"E
315.29'

CP 111

CP 112

PC: 172+15.08
N= 376875.623
E = 591637.038

BM 900

S81°26'36"E
0.95'

CURVE 23

PC: 172+25.06
N= 376874.814
E = 591646.977

PT: 172+24.11
N= 376874.955
E = 591646.039

CURVE 24

PT: 172+34.10
N= 376874.146
E = 591655.978

EP: 175+49.39
N= 376874.533
E = 591971.271

END PROJECT
STA 175+23.57
N= 376874.500
E= 591944.841

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	ALIGNMENT PLAN	SHEET 76	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\027201-AD.DWG
LAYOUT NAME - 02

PLOT DATE : 8/7/2025 2:25 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:300 FT

WISDOT/CADDS SHEET 42

CURVE 1
PI STA = 101+75.34
Y = 376939.906
X = 584601.413
DELTA = 11°23'06" RT
D = 57°17'45"
T = 9.97'
L = 19.87'
R = 100.00'
PC STA = 101+65.37
Y = 376937.938
X = 584591.642
PT STA = 101+85.24
Y = 376939.906
X = 584611.381
DB = N78°36'53"E
DA = N89°59'58"E

CURVE 2
PI STA = 103+65.82
Y = 376935.497
X = 584791.636
DELTA = 8°26'16" LT
D = 95°29'35"
T = 4.43'
L = 8.84'
R = 60.00'
PC STA = 103+61.39
Y = 376936.175
X = 584787.262
PT STA = 103+70.23
Y = 376935.467
X = 584796.062
DB = S81°10'55"E
DA = S89°37'11"E

CURVE 3
PI STA = 108+39.40
Y = 376932.354
X = 585265.222
DELTA = 2°16'22" LT
D = 28°38'52"
T = 3.97'
L = 7.93'
R = 200.00'
PC STA = 108+35.43
Y = 376932.381
X = 585261.254
PT STA = 108+43.36
Y = 376932.485
X = 585269.186
DB = S89°37'11"E
DA = N88°06'27"E

CURVE 4
PI STA = 108+89.43
Y = 376934.007
X = 585315.224
DELTA = 2°17'28" RT
D = 28°38'52"
T = 4.00'
L = 8.00'
R = 200.00'
PC STA = 108+85.43
Y = 376933.875
X = 585311.227
PT STA = 108+93.42
Y = 376933.979
X = 585319.224
DB = N88°06'27"E
DA = S89°36'05"E

CURVE 5
PI STA = 114+89.42
Y = 376929.833
X = 585915.210
DELTA = 2°17'25" RT
D = 28°38'52"
T = 4.00'
L = 7.99'
R = 200.00'
PC STA = 114+85.43
Y = 376929.861
X = 585911.212
PT STA = 114+93.42
Y = 376929.646
X = 585919.203
DB = S89°36'05"E
DA = S87°18'41"E

CURVE 6
PI STA = 115+39.47
Y = 376927.485
X = 585965.205
DELTA = 2°15'49" LT
D = 28°38'52"
T = 3.95'
L = 7.90'
R = 200.00'
PC STA = 115+35.52
Y = 376927.671
X = 585961.258
PT STA = 115+43.42
Y = 376927.456
X = 585969.156
DB = S87°18'41"E
DA = S89°34'29"E

CURVE 7
PI STA = 122+61.38
Y = 376922.129
X = 586687.097
DELTA = 8°24'06" RT
D = 95°29'35"
T = 4.41'
L = 8.80'
R = 60.00'
PC STA = 122+56.98
Y = 376922.161
X = 586682.690
PT STA = 122+65.78
Y = 376921.452
X = 586691.452
DB = S89°34'29"E
DA = S81°10'24"E

CURVE 8
PI STA = 123+12.06
Y = 376914.350
X = 586737.187
DELTA = 8°19'25" LT
D = 57°17'45"
T = 7.28'
L = 14.53'
R = 100.00'
PC STA = 123+04.78
Y = 376915.467
X = 586729.996
PT STA = 123+19.31
Y = 376914.287
X = 586744.463
DB = S81°10'24"E
DA = S89°29'49"E

CURVE 9
PI STA = 124+86.97
Y = 376912.815
X = 586912.112
DELTA = 5°29'36" LT
D = 57°17'45"
T = 4.80'
L = 9.59'
R = 100.00'
PC STA = 124+82.17
Y = 376912.857
X = 586907.314
PT STA = 124+91.76
Y = 376913.232
X = 586916.891
DB = S89°29'49"E
DA = N85°00'35"E

CURVE 10
PI STA = 125+62.22
Y = 376919.361
X = 586987.084
DELTA = 5°31'08" RT
D = 95°29'35"
T = 2.89'
L = 5.78'
R = 60.00'
PC STA = 125+59.32
Y = 376919.109
X = 586984.203
PT STA = 125+65.10
Y = 376919.334
X = 586989.976
DB = N85°00'35"E
DA = S89°28'17"E

CURVE 11
PI STA = 147+61.68
Y = 376900.818
X = 589186.457
DELTA = 4°29'08" RT
D = 28°38'52"
T = 7.83'
L = 15.66'
R = 200.00'
PC STA = 147+53.85
Y = 376900.891
X = 589178.625
PT STA = 147+69.51
Y = 376900.132
X = 589194.260
DB = S89°27'48"E
DA = S84°58'40"E

CURVE 12
PI STA = 148+61.67
Y = 376892.063
X = 589286.073
DELTA = 4°36'28" LT
D = 28°38'52"
T = 8.05'
L = 16.08'
R = 200.00'
PC STA = 148+53.63
Y = 376892.768
X = 589278.058
PT STA = 148+69.71
Y = 376892.005
X = 589294.119
DB = S84°58'40"E
DA = S89°35'08"E

CURVE 13
PI STA = 161+00.60
Y = 376883.104
X = 590524.975
DELTA = 2°52'49" RT
D = 57°17'45"
T = 2.51'
L = 5.03'
R = 100.00'
PC STA = 160+98.08
Y = 376883.123
X = 590522.461
PT STA = 161+03.11
Y = 376882.960
X = 590527.484
DB = S89°35'08"E
DA = S86°42'20"E

CURVE 14
PI STA = 161+50.66
Y = 376880.227
X = 590574.959
DELTA = 2°52'49" LT
D = 38°11'50"
T = 3.77'
L = 7.54'
R = 150.00'
PC STA = 161+46.89
Y = 376880.444
X = 590571.194
PT STA = 161+54.43
Y = 376880.200
X = 590578.730
DB = S86°42'20"E
DA = S89°35'08"E

CURVE 15
PI STA = 162+56.52
Y = 376879.462
X = 590680.818
DELTA = 5°47'37" LT
D = 38°11'50"
T = 7.59'
L = 15.17'
R = 150.00'
PC STA = 162+48.93
Y = 376879.517
X = 590673.227
PT STA = 162+64.10
Y = 376880.173
X = 590688.375
DB = S89°35'08"E
DA = N84°37'14"E

CURVE 16
PI STA = 163+26.00
Y = 376885.977
X = 590750.005
DELTA = 5°47'37" RT
D = 57°17'45"
T = 5.06'
L = 10.11'
R = 100.00'
PC STA = 163+20.94
Y = 376885.502
X = 590744.967
PT STA = 163+31.06
Y = 376885.940
X = 590755.065
DB = N84°37'14"E
DA = S89°35'08"E

CURVE 17
PI STA = 164+01.00
Y = 376885.434
X = 590825.003
DELTA = 10°12'14" RT
D = 95°29'35"
T = 5.36'
L = 10.69'
R = 60.00'
PC STA = 163+95.64
Y = 376885.473
X = 590819.646
PT STA = 164+06.32
Y = 376884.447
X = 590830.268
DB = S89°35'08"E
DA = S79°22'54"E

CURVE 18
PI STA = 164+26.37
Y = 376880.754
X = 590849.970
DELTA = 10°12'14" LT
D = 95°29'35"
T = 5.36'
L = 10.69'
R = 60.00'
PC STA = 164+21.01
Y = 376881.741
X = 590844.704
PT STA = 164+31.70
Y = 376880.715
X = 590855.327
DB = S79°22'54"E
DA = S89°35'08"E

CURVE 19
PI STA = 169+61.40
Y = 376876.884
X = 591385.010
DELTA = 15°36'49" RT
D = 95°29'35"
T = 8.23'
L = 16.35'
R = 60.00'
PC STA = 169+53.17
Y = 376876.944
X = 591376.784
PT STA = 169+69.52
Y = 376874.613
X = 591392.916
DB = S89°35'08"E
DA = S73°58'20"E

CURVE 20
PI STA = 169+94.35
Y = 376867.755
X = 591416.785
DELTA = 16°11'46" LT
D = 57°17'45"
T = 14.23'
L = 28.27'
R = 100.00'
PC STA = 169+80.13
Y = 376871.684
X = 591403.110
PT STA = 170+08.39
Y = 376867.797
X = 591431.014
DB = S73°58'14"E
DA = N89°50'00"E

CURVE 21
PI STA = 170+81.42
Y = 376868.009
X = 591504.035
DELTA = 11°40'04" LT
D = 57°17'45"
T = 10.22'
L = 20.36'
R = 100.00'
PC STA = 170+71.20
Y = 376867.979
X = 591493.818
PT STA = 170+91.56
Y = 376870.104
X = 591514.036
DB = N89°50'00"E
DA = N78°09'56"E

CURVE 22
PI STA = 171+17.89
Y = 376875.504
X = 591539.805
DELTA = 11°45'51" RT
D = 95°29'35"
T = 6.18'
L = 12.32'
R = 60.00'
PC STA = 171+11.71
Y = 376874.236
X = 591533.755
PT STA = 171+24.03
Y = 376875.512
X = 591545.987
DB = N78°09'56"E
DA = N89°55'47"E

CURVE 23
PI STA = 172+19.61
Y = 376875.629
X = 591641.563
DELTA = 8°37'37" RT
D = 95°29'35"
T = 4.53'
L = 9.03'
R = 60.00'
PC STA = 172+15.08
Y = 376875.623
X = 591637.038
PT STA = 172+24.11
Y = 376874.955
X = 591646.039
DB = N89°55'47"E
DA = S81°26'36"E

CURVE 24
PI STA = 172+29.59
Y = 376874.141
X = 591651.452
DELTA = 8°37'37" LT
D = 95°29'35"
T = 4.53'
L = 9.03'
R = 60.00'
PC STA = 172+25.06
Y = 376874.814
X = 591646.977
PT STA = 172+34.10
Y = 376874.146
X = 591655.978
DB = S81°26'36"E
DA = N89°55'47"E

CONTROL POINTS AND BENCHMARKS

POINT NAME	Y	X	ELEVATION	DESCRIPTION	POINT NAME	Y	X	ELEVATION	DESCRIPTION
CP 100	376882.918	584371.019	679.42	CP MAG NAIL	CP 110	376817.856	591071.988	719.69	CP 10 NAIL
CP 101	376863.289	584800.728	682.26	CP 10 NAIL	CP 111	376817.238	591693.120	712.73	CP 10 NAIL
CP 102	376920.866	585065.023	697.10	CP 10 NAIL	CP 112	376871.744	591997.256	715.02	CP 3/4 REBAR W CAP
CP 103	376931.522	585504.359	709.16	CP 10 NAIL	CP 113	376931.532	591674.001	715.01	CP 10 NAIL
CP 104	376937.427	586263.562	700.28	CP 3/4 REBAR W CAP	CP 115	376815.825	591469.807	712.52	CP 12 HUB
CP 105	376903.696	586996.035	697.16	CP 3/4 REBAR W CAP	CP 116	376854.553	586632.445	693.19	CP_MAG-HUB
CP 106	376856.364	587537.952	710.42	CP MAG NAIL	CP 120	376813.461	585556.220	723.31	CP TEMP 10 NAIL
CP 107	376847.999	588425.164	711.44	CP MAG NAIL	CP 121	376836.046	585102.749	714.00	CP 10 NAIL
CP 108	376882.559	589553.796	721.98	CP 3/4 REBAR W CAP	CP 122	376814.570	584884.176	681.26	CP 10 NAIL
CP 109	376871.352	590513.564	726.17	CP 3/4 REBAR W CAP	BM 900	376704.537	591571.835	715.52	BM NW COR TOP STEP (NORTH SIDE)

CLEARING AND GRUBBING

STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA
104+00	-	106+00	LT	2	2
130+50	-	131+50	LT/RT	1	1
160+00	-	161+00	LT	1	1
164+00	-	166+00	LT/RT	2	2
170+00	-	175+00	LT	5	5
			TOTAL	11	11

REMOVING SMALL PIPE CULVERTS

ROADWAY	STATION	OFFSET	203.0100 REMOVING SMALL PIPE CULVERTS EACH	NOTES
HIGHLAND ROAD				
	104+30.47	8' LT	1	18 IN
	117+41.98	1' LT	1	18 IN
	121+15.00	4' RT	1	24 IN
	121+26.95	4' RT	1	24 IN - PARTIAL CULVERT REMOVAL
	137+34.30	8' RT	1	24 IN - PARTIAL CULVERT REMOVAL
	143+49.56	8' RT	1	18 IN - PARTIAL CULVERT REMOVAL
	153+79.61	8' RT	1	12 IN - PARTIAL CULVERT REMOVAL
	157+41.70	8' RT	1	15 IN - PARTIAL CULVERT REMOVAL
	166+14.66	5' LT	1	12 IN
	170+38.19	50' RT	1	18 IN - PARTIAL CULVERT REMOVAL
	170+40.00	55' RT	1	18 IN
	TOTAL		11	

REMOVALS

LOCATION	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	204.0170 REMOVING FENCE LF
HIGHLAND ROAD PATH	217	4	427
TOTAL	217	4	427

REMOVING ASPHALTIC SURFACE

LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY
HIGHLAND ROAD PATH	859
TOTAL	859

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (CY) (1)	EBS EXCAVATION (CY) (2)	AVAILABLE MATERIAL (CY)	UNEXPANDED FILL (CY)	EXPANDED FILL (3) FACTOR 1.00	MASS ORDINATE +/- (CY) (4)	WASTE (CY)	BORROW (CY)
DIVISION 1										
HIGHLAND ROAD PATH	100+90.37/175+10.302		2,113	423	2,113	1,298	1,298	815	815	0
DIVISION 1 SUBTOTAL			2,113	423	2,113	1,298	1,298	815	815	0
GRAND TOTAL			2,113	423	2,113	1,298	1,298	815	815	0
TOTAL EXCAVATION COMMON			2,536							

NOTES:

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

(2) EXCAVATION BELOW SUBGRADE (EBS) IS ESTIMATED AT 20% OF CUT

(3) EXPANDED FILL FACTOR = 1.00

(4) 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.

(5) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

AGGREGATE

LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
HIGHLAND ROAD PATH	4,928
TOTAL	4,928

ASPHALTIC SURFACE

LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
HIGHLAND ROAD PATH	1,342	84	124
TOTAL	1,342	84	124

3

CURB & GUTTER

LOCATION	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D LF	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF
HIGHLAND ROAD PATH	20	462
TOTAL	20	462

CONCRETE SIDEWALK

LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	602.0615 CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA SF
HIGHLAND ROAD PATH	2,231	280	40
TOTAL	2,231	280	40

3

RIPRAP

LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
HIGHLAND ROAD PATH	7	37
TOTAL	7	37

MOBILIZATION

PROJECT	619.1000 MOBILIZATION EACH
2697-00-70	1
TOTAL	1

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	MISCELLANEOUS QUANTITIES	SHEET 80	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\030201-MQ.DWG
LAYOUT NAME - 03
PLOT DATE : 8/8/2025 3:44 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42

3

3

EROSION CONTROL

LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.7010 INLET PROTECTION TYPE B EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
HIGHLAND ROAD PATH	4,281	4,281	--	573	573	--	--	4,281	9	340	96	3	193	116	240
UNDISTRIBUTED	429	429	100	2,000	2,000	3	6	429	1	34	20	1	20	12	25
TOTAL	4,710	4,710	100	2,573	2,573	3	6	4,710	10	374	116	4	213	128	266

PAVEMENT MARKING

LOCATION	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.2020 MARKING LINE EPOXY 6-INCH (WHITE) LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE 6-INCH LF	646.7520 MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH LF	646.9002 MARKING REMOVAL LINE 6-INCH LF
HIGHLAND ROAD PATH	89	311	158	636	330	120
TOTAL	89	311	158	636	330	120

TRAFFIC CONTROL

LOCATION	643.5000 TRAFFIC CONTROL EACH
PROJECT 2697-00-70	1
TOTAL	1

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	MISCELLANEOUS QUANTITIES	SHEET 81	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\030201-MQ.DWG
LAYOUT NAME - 04

PLOT DATE : 8/8/2025 3:44 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1" = 1'

SIGNING

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-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	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS / NEW SIGN LOCATION
P100	R5-3	NO MOTOR VEHICLES	24	x	24	1	4.00	--	--	--	NEW POST
M101	W11-15	BIKE/PED CROSSING	30	x	30	--	--	--	1	1	MOVE POST
P102	R5-3	NO MOTOR VEHICLES	24	x	24	1	4.00	--	--	--	NEW POST
P103	R5-3	NO MOTOR VEHICLES	24	x	24	1	4.00	--	--	--	NEW POST
P200	R1-1	STOP	30	x	30	1	5.18	--	--	--	NEW POST
P201	R1-1	STOP	30	x	30	1	5.18	--	--	--	NEW POST
P300	R1-1	STOP	18	x	18	1	1.59	--	--	--	NEW POST WITH P301
P301	R5-3	NO MOTOR VEHICLES	24	x	24	--	4.00	--	--	--	SHARE POST WITH P300
M302	R1-1	STOP	30	x	30	--	--	--	1	1	MOVE POST WITH M303
M303	R1-3P	ALL WAY	18	x	6	--	--	--	1	--	MOVE POST WITH M302
P304	R5-3	NO MOTOR VEHICLES	24	x	24	--	4.00	--	--	--	NEW POST WITH P305
P305	R1-1	STOP	18	x	18	1	1.59	--	--	--	NEW POST WITH P304
P400	W11-15	BIKE/PED CROSSING	36	x	36	1	--	9.00	--	--	NEW POST WITH P401
P401	W16-7L	DIAGONAL ARROW LEFT	30	x	18	--	--	3.75	--	--	NEW POST WITH P400
P402	W11-15	BIKE/PED CROSSING	36	x	36	1	--	9.00	--	--	NEW POST WITH P403
P403	W16-7L	DIAGONAL ARROW LEFT	30	x	18	--	--	3.75	--	--	NEW POST WITH P402
P500	W11-15	BIKE/PED CROSSING	36	x	36	1	--	9.00	--	--	NEW POST WITH P601
P501	W16-7L	DIAGONAL ARROW LEFT	30	x	18	--	--	3.75	--	--	NEW POST WITH P600
P502	W11-15	BIKE/PED CROSSING	36	x	36	1	--	9.00	--	--	NEW POST WITH P603
P503	W16-7L	DIAGONAL ARROW LEFT	30	x	18	--	--	3.75	--	--	NEW POST WITH P602
M504	SPECIAL	HIGHLAND RD	--	x	--	--	--	--	1	1	MOVE POST WITH M505
M505	SPECIAL	MEADOW CIR	--	x	--	--	--	--	1	--	SHARE POST WITH M504
P600	W16-7R	DIAGONAL ARROW RIGHT	30	x	18	--	--	3.75	--	--	NEW POST WITH P601, P602 & P603
P601	W11-15	BIKE/PED CROSSING	36	x	36	1	--	9.00	--	--	NEW POST WITH P600, P602 & P603
P602	W16-7L	DIAGONAL ARROW LEFT	30	x	18	--	--	3.75	--	--	NEW POST WITH P600, P601 & P603
P603	W11-15	BIKE/PED CROSSING	36	x	36	--	--	9.00	--	--	NEW POST WITH P600, P602 & P603
M604	SPECIAL	HIGHLAND RD	--	x	--	--	--	--	1	1	MOVE POST WITH M605
M605	SPECIAL	RIVER RD	--	x	--	--	--	--	1	--	SHARE POST WITH M604
P606	W16-7L	DIAGONAL ARROW LEFT	30	x	18	--	--	3.75	--	--	NEW POST WITH P605, P606 & P607
P607	W11-15	BIKE/PED CROSSING	36	x	36	1	--	9.00	--	--	NEW POST WITH P604, P606 & P607
P608	W16-7R	DIAGONAL ARROW RIGHT	30	x	18	--	--	3.75	--	--	NEW POST WITH P604, P605 & P607
P609	W11-15	BIKE/PED CROSSING	36	x	36	--	--	9.00	--	--	NEW POST WITH P604, P605 & P606
M700	SPECIAL	ROTARY PAVILION	--	x	--	--	--	--	1	1	MOVE SPECIAL POST
M701	R1-1	STOP	30	x	30	--	--	--	1	1	MOVE POST
P702	R5-3	NO MOTOR VEHICLES	24	x	24	--	4.00	--	--	--	SHARE POST WITH M701 & P703
P703	R1-1	STOP	18	x	18	--	1.59	--	--	--	SHARE POST WITH M701 & P702
		TOTAL				13	39.13	102.00	9	6	

3

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET**	LOCATION	RIM*** ELEVATION	INVERT**** ELEVATION	DEPTH***** FT	611.0530 MANHOLE COVERS TYPE J EACH	611.0612 INLET COVERS TYPE C EACH	611.0642 INLET COVERS TYPE MS EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	RE MARKS
103	104+40.08	12.94' LT	HIGHLAND ROAD	685.53	682.53	1.76	--	1	--	--	1	--	--	
129	121+26.95	4.44' RT	HIGHLAND ROAD	695.83	692.83	1.76	--	1	--	--	1	--	--	
153	137+34.29	7.29' RT	HIGHLAND ROAD	707.40	705.05	2.35	--	--	1	--	--	--	1	
163	143+49.54	9.03' RT	HIGHLAND ROAD	714.25	712.25	2.00	--	--	1	--	--	--	1	
177	153+79.61	5.92' RT	HIGHLAND ROAD	720.85	718.35	1.76	--	1	--	1	--	--	--	NO RING ADJUSTMENTS AT THIS STRUCTURE
187	157+41.75	6.05' RT	HIGHLAND ROAD	721.09	718.59	1.76	--	1	--	--	--	1	--	NO RING ADJUSTMENTS AT THIS STRUCTURE
193	165+99.86	5.00' RT	HIGHLAND ROAD	722.66	720.66	2.00	--	--	1	--	--	--	1	
205	170+19.68	1.74' LT	HIGHLAND ROAD	712.82	709.82	1.76	1	--	--	1	--	--	--	
209	170+94.43	4.39' RT	HIGHLAND ROAD	712.44	709.94	1.76	--	1	--	--	1	--	--	NO RING ADJUSTMENTS AT THIS STRUCTURE
215	170+27.61	49.43' RT	HIGHLAND ROAD	712.72	710.22	1.76	--	1	--	--	1	--	--	NO RING ADJUSTMENTS AT THIS STRUCTURE
			TOTAL				1	6	3	2	4	1	3	

REMARKS:
**STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE. FOR APRON ENDWALLS, CALLOUT IS AT THE POINT OF CONNECTION OF ENDWALL AND PIPE
***RIM ELEV IS AT THE INLET COVER FLANGE LOCATION
****FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE
*****DEPTH = RIM ELEV - STRUCTURE INVERT ELEVATION - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

3

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET**	LOCATION	INVERT**** ELEVATION	520.1015 APRON ENDWALLS FOR CULVERT PIPE 15-INCH EACH	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	520.8000 CONCRETE COLLARS EACH	521.1271 APRON ENDWALLS FOR PIPE ARCH STEEL 71x47-INCH EACH	RE MARKS
101	105+93.80	7.27' RT	HIGHLAND ROAD	693.38	--	1	--	--	--	
105	103+93.68	15.44' LT	HIGHLAND ROAD	682.06	--	1	--	--	--	
111	116+52.42	4.79' RT	HIGHLAND ROAD	699.70	--	1	--	--	--	
113	117+95.32	5.68' RT	HIGHLAND ROAD	698.27	--	1	--	--	--	
121	120+92.85	13.98' LT	HIGHLAND ROAD	694.52	1	--	--	--	--	
123	120+92.96	3.99' RT	HIGHLAND ROAD	694.34	1	--	--	--	--	
125	121+08.21	6.62' RT	HIGHLAND ROAD	693.75	--	--	1	--	--	
127	121+31.25	14.57' LT	HIGHLAND ROAD	693.58	--	--	1	--	--	
131	124+16.68	13.62' LT	HIGHLAND ROAD	690.87	--	--	--	--	1	
133	124+15.69	2.33' LT	HIGHLAND ROAD	690.53	--	--	--	1	--	
135	125+57.48	5.85' RT	HIGHLAND ROAD	695.16	1	--	--	--	--	
137	124+83.55	13.43' LT	HIGHLAND ROAD	694.56	1	--	--	--	--	
141	132+36.71	8.00' RT	HIGHLAND ROAD	708.71	1	--	--	--	--	
143	132+69.69	7.75' RT	HIGHLAND ROAD	708.44	1	--	--	--	--	
145	133+15.09	12.50' LT	HIGHLAND ROAD	708.28	1	--	--	--	--	
147	133+05.20	2.53' RT	HIGHLAND ROAD	708.13	1	--	--	--	--	
151	137+15.21	8.10' RT	HIGHLAND ROAD	706.37	1	--	--	--	--	
155	137+34.35	18.15' RT	HIGHLAND ROAD	704.78	--	--	--	1	--	
161	143+49.98	12.57' LT	HIGHLAND ROAD	714.45	1	--	--	--	--	
165	143+49.44	18.46' RT	HIGHLAND ROAD	712.19	--	--	--	1	--	
171	153+77.05	13.53' LT	HIGHLAND ROAD	719.04	1	--	--	--	--	
173	153+69.61	5.88' RT	HIGHLAND ROAD	718.85	1	--	--	--	--	
175	153+89.61	5.70' RT	HIGHLAND ROAD	718.85	1	--	--	--	--	
179	153+79.73	13.97' RT	HIGHLAND ROAD	718.30	--	--	--	1	--	
181	157+58.54	12.69' LT	HIGHLAND ROAD	719.60	1	--	--	--	--	
183	157+31.75	6.35' RT	HIGHLAND ROAD	719.09	1	--	--	--	--	
185	157+51.74	5.75' RT	HIGHLAND ROAD	719.09	1	--	--	--	--	
189	157+41.56	14.80' RT	HIGHLAND ROAD	718.51	--	--	--	1	--	
191	166+00.30	13.61' LT	HIGHLAND ROAD	721.81	1	--	--	--	--	
195	166+30.07	5.00' RT	HIGHLAND ROAD	720.36	1	--	--	--	--	
201	170+19.77	14.62' LT	HIGHLAND ROAD	710.64	1	--	--	--	--	
203	169+74.19	5.03' RT	HIGHLAND ROAD	711.01	1	--	--	--	--	
207	171+09.49	7.43' RT	HIGHLAND ROAD	710.55	1	--	--	--	--	
211	170+12.04	47.73' RT	HIGHLAND ROAD	710.69	--	1	--	--	--	
213	170+27.47	70.11' RT	HIGHLAND ROAD	710.43	--	1	--	--	--	
217	170+42.10	49.32' RT	HIGHLAND ROAD	710.12	--	--	--	1	--	
221	173+49.39	13.05' LT	HIGHLAND ROAD	713.22	1	--	--	--	--	
223	173+25.12	2.79' RT	HIGHLAND ROAD	712.64	1	--	--	--	--	
		TOTAL			23	6	2	6	1	

REMARKS:
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***RIM ELEV IS AT THE INLET COVER FLANGE LOCATION
****FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE
*****DEPTH = RIM ELEV - STRUCTURE INVERT ELEVATION - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

								STORM SEWER PIPES						
PIPE CALLOUT	FROM	-	TO	LOCATION	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT	521.3118 CULVERT PIPE CORRUGATED STEEL 18-IN LF	521.3124 CULVERT PIPE CORRUGATED STEEL 24-IN LF	521.3771 PIPE ARCH CORRUGATED STEEL 71X47-IN LF	530.0115 CULVERT PIPE CORRUGATED POLYPROPYLENE 15-IN LF	530.0118 CULVERT PIPE CORRUGATED POLYPROPYLENE 18-IN LF	530.0124 CULVERT PIPE CORRUGATED POLYPROPYLENE 24-IN LF	NOTES
101	101	-	103	HIGHLAND ROAD	693.38	682.53	7.00%	--	--	--		155	--	
103	103	-	105	HIGHLAND ROAD	682.53	682.06	1.00%	--	--	--	--	46	--	
111	111	-	113	HIGHLAND ROAD	699.70	698.27	1.00%	--	--	--	--	143	--	
121	121	-	123	HIGHLAND ROAD	694.52	694.34	1.00%	--	--	--	18	--	--	
125	125	-	129	HIGHLAND ROAD	693.75	693.00	4.00%	--	--	--	--	--	19	
127	127	-	129	HIGHLAND ROAD	693.58	693.00	3.00%	--	--	--	--	--	20	
131	131	-	133	HIGHLAND ROAD	690.87	690.53	3.00%	--	--	11	--	--	--	
135	135	-	137	HIGHLAND ROAD	695.16	694.56	0.80%	--	--	--	75	--	--	
141	141	-	143	HIGHLAND ROAD	708.70	708.44	0.80%	--	--	--	33	--	--	
145	145	-	147	HIGHLAND ROAD	708.28	708.13	1.00%	--	--	--	15	--	--	
151	151	-	153	HIGHLAND ROAD	706.37	705.80	3.00%	--	--	--	19	--	--	
153	153	-	155	HIGHLAND ROAD	705.05	704.78	2.50%	--	11	--	--	--	--	
161	161	-	163	HIGHLAND ROAD	714.45	712.50	9.00%	--	--	--	22	--	--	
163	163	-	165	HIGHLAND ROAD	712.25	712.19	0.67%	--	--	--	--	9	--	
171	171	-	177	HIGHLAND ROAD	719.04	718.35	3.50%	--	--	--	20	--	--	
173	173	-	177	HIGHLAND ROAD	718.85	718.35	5.00%	--	--	--	10	--	--	
175	175	-	177	HIGHLAND ROAD	718.85	718.35	5.00%	--	--	--	10	--	--	
177	177	-	179	HIGHLAND ROAD	718.35	718.30	0.63%	--	--	--	8	--	--	
181	181	-	187	HIGHLAND ROAD	719.60	718.59	4.00%	--	--	--	25	--	--	
183	183	-	187	HIGHLAND ROAD	719.09	718.59	5.00%	--	--	--	10	--	--	
185	185	-	187	HIGHLAND ROAD	719.09	718.59	5.00%	--	--	--	10	--	--	
187	187	-	189	HIGHLAND ROAD	718.59	718.51	0.93%	--	--	--	9	--	--	
191	191	-	193	HIGHLAND ROAD	721.81	720.88	5.00%	--	--	--	19	--	--	
193	193	-	195	HIGHLAND ROAD	720.66	720.36	1.00%	--	--	--	30	--	--	
201	201	-	205	HIGHLAND ROAD	710.64	710.32	2.50%	--	--	--	13	--	--	
203	203	-	205	HIGHLAND ROAD	711.01	710.32	1.50%	--	--	--	46	--	--	
205	205	-	209	HIGHLAND ROAD	710.32	709.94	0.50%	--	--	--	76	--	--	
207	207	-	209	HIGHLAND ROAD	710.55	709.94	4.00%	--	--	--	15	--	--	
211	211	-	215	HIGHLAND ROAD	710.69	710.22	3.00%	--	--	--	--	16	--	
213	213	-	215	HIGHLAND ROAD	710.43	710.22	1.00%	--	--	--	--	21	--	
215	215	-	217	HIGHLAND ROAD	710.22	710.12	0.70%	14	--	--	--	--	--	
221	221	-	223	HIGHLAND ROAD	713.22	712.64	2.00%	--	--	--	29	--	--	
EX110	STA 102+90	-	STA 102+12	HIGHLAND ROAD	676.64	676.18	0.59%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX120	STA 110+84	-	STA 110+63	HIGHLAND ROAD	706.50	706.41	0.44%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX210	STA 112+80	-	STA 113+11	HIGHLAND ROAD	704.30	703.76	1.75%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX220	STA 121+26	-	STA 121+06	HIGHLAND ROAD	693.00	692.14	3.39%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX310	STA 124+16	-	STA 124+11	HIGHLAND ROAD	690.30	689.99	0.55%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX410	STA 137+34	-	STA 137+34	HIGHLAND ROAD	705.84	703.71	3.20%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX420	STA 143+49	-	STA 143+49	HIGHLAND ROAD	712.38	711.84	0.87%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX510	STA 153+80	-	STA 153+80	HIGHLAND ROAD	718.42	718.04	0.73%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX520	STA 157+41	-	STA 157+42	HIGHLAND ROAD	718.60	718.11	0.93%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX610	STA 160+83	-	STA 160+62	HIGHLAND ROAD	725.03	724.21	4.02%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX620	STA 162+80	-	STA 162+80	HIGHLAND ROAD	726.30	723.16	5.91%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX630	STA 170+43	-	STA 172+32	HIGHLAND ROAD	710.12	709.23	1.70%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX640	STA 170+95	-	--	HIGHLAND ROAD	709.96	--	--	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
EX710	STA 172+85	-	STA 172+33	HIGHLAND ROAD	712.51	712.20	0.60%	--	--	--	--	--	--	FOR INFORMATIONAL USE ONLY
				TOTAL				14	11	11	512	390	39	

3

SAWING

LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
HIGHLAND ROAD PATH	1,075	11
TOTAL	1,075	11

RRFB RIVER ROAD / HIGHLAND RD

STATION	OFFSET	POLE NO	SPV.0060.01 RRFB SYSTEM RIVER ROAD CROSSING NORTH ASSEMBLY EACH	SPV.0060.02 RRFB SYSTEM RIVER ROAD CROSSING SOUTH ASSEMBLY EACH
170+29.98	4.91' RT	RRFB 1	1	--
170+29.81	42.69' RT	RRFB 2	--	1
	TOTAL		1	1

3

CONSTRUCTION STAKING PROJECT

LOCATION	SPV.0060.04 CONSTRUCTION STAKING PROJECT EACH
HIGHLAND ROAD PATH	1
TOTAL	1

CRUSHED LIMESTONE

LOCATION	LOCATION	SPV.0195.05 CRUSHED LIMESTONE TON
HIGHLAND ROAD PATH	SHOULDER	228
TOTAL		228

3

CONCRETE BASES

BASE NO	STATION	OFFSET	654.0101 CONCRETE BASES TYPE 1 EACH
SB9	102+14	1' RT	1
SB10	103+11	11' LT	1
		TOTAL	2

MONOTUBES & POLES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH
SB9	1	1
SB10	1	1
TOTAL	2	2

3

ABOVE GROUND SIGNAL CABLE

FROM	TO HEAD NO.	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
ESB3	13	15
ESB6	14	15
	TOTAL	30

* - ADDITIONAL QUANTITY SHOWN ELSEWHERE

UNDERGROUND CABLE

FROM	TO	* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
CB1	SB9	154
CB1	SB10	54
	TOTAL	208

* - ADDITIONAL QUANTITY SHOWN ELSEWHERE

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
EPB5	SB9	20
EPB7	SB10	12
	TOTAL	32

PEDESTRIAN PUSH BUTTONS (N CEDARBURG RD)

LOCATION	SPV.0060.03 FURNISH AND INSTALL ACCESSIBLE PEDESTRIAN PUSH BUTTON AT N CEDARBURG RD & HIGHLAND RD EACH	REMARKS
CEDARBURG RD & HIGHLAND RD	1	
TOTAL	1	

SIGNAL FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
13	ESB3	1
14	ESB6	1
	TOTAL	2

4

R/W PROJECT NUMBER: 2697-22-00	EXHIBIT NUMBER: 1

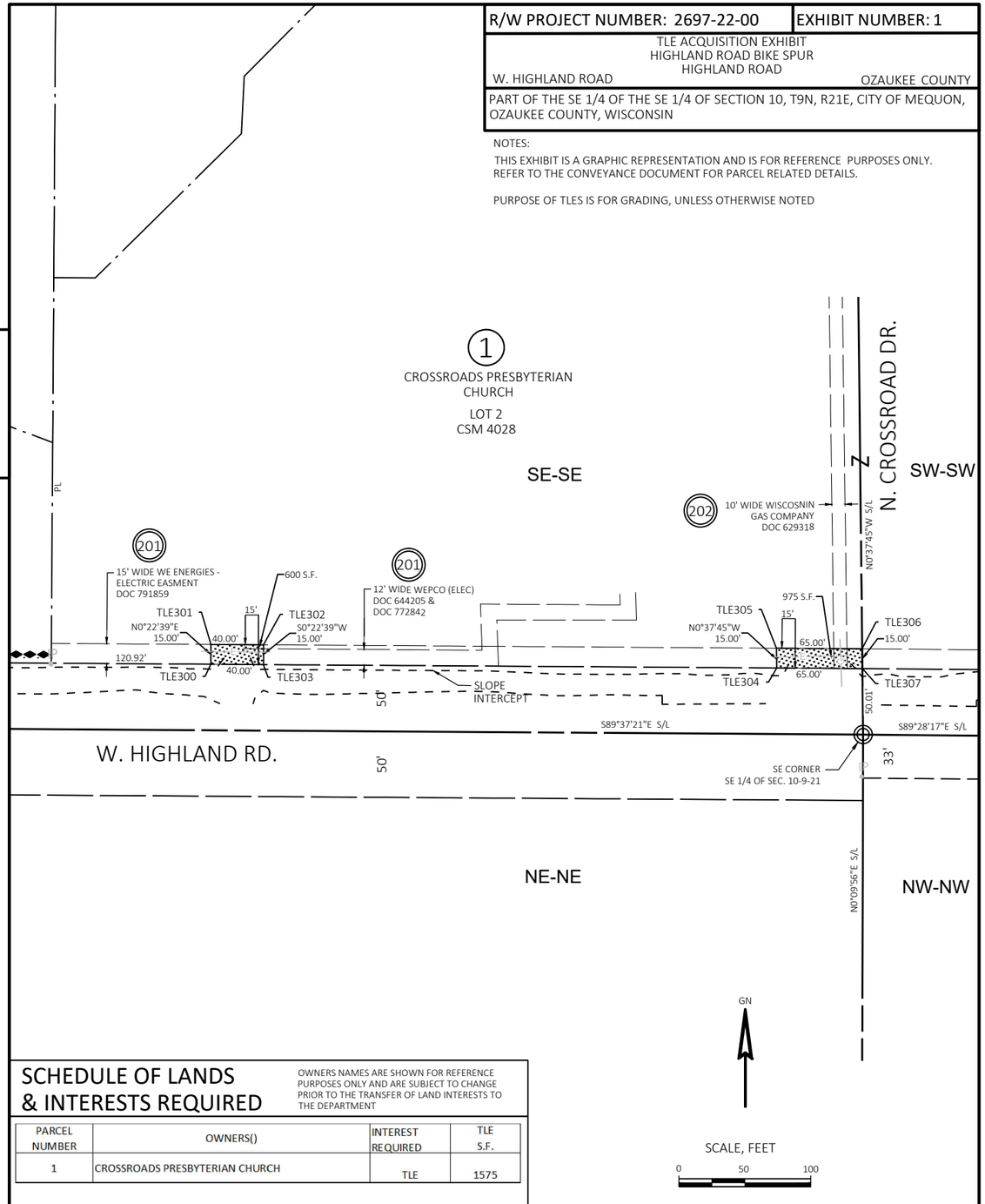
TLE ACQUISITION EXHIBIT
HIGHLAND ROAD BIKE SPUR
HIGHLAND ROAD

W. HIGHLAND ROAD — OZAUKEE COUNTY

PART OF THE SE 1/4 OF THE SE 1/4 OF SECTION 10, T9N, R21E, CITY OF MEQUON, OZAUKEE COUNTY, WISCONSIN

NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.

PURPOSE OF TLES IS FOR GRADING, UNLESS OTHERWISE NOTED



SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

PARCEL NUMBER	OWNERS()	INTEREST REQUIRED	TLE S.F.
1	CROSSROADS PRESBYTERIAN CHURCH	TLE	1575

UTILITY INTERESTS REQUIRED

PARCEL NUMBER	UTILITIES OWNERS()	INTEREST REQUIRED
201	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS
202	WISCONSIN GAS COMPANY	RELEASE OF RIGHTS

THIS MAP IS APPROVED FOR THE MEQUON-THIENSVILLE TRAIL FOUNDATION

SIGNATURE: Lori H Lorenz DATE: 7/11/25

PRINT NAME: Lori H Lorenz

FILE NAME : 240017_TLE_EXHIBITS.DWG PLOT DATE : 5/22/2025 7:32 AM R/W PROJECT: R/W PROJ NO

4

R/W PROJECT NUMBER:	EXHIBIT NUMBER:

TLE ACQUISITION EXHIBIT

HIGHWAY — COUNTY

NOTES:
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PURPOSE OF TLES IS FOR GRADING, UNLESS OTHERWISE NOTED

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SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

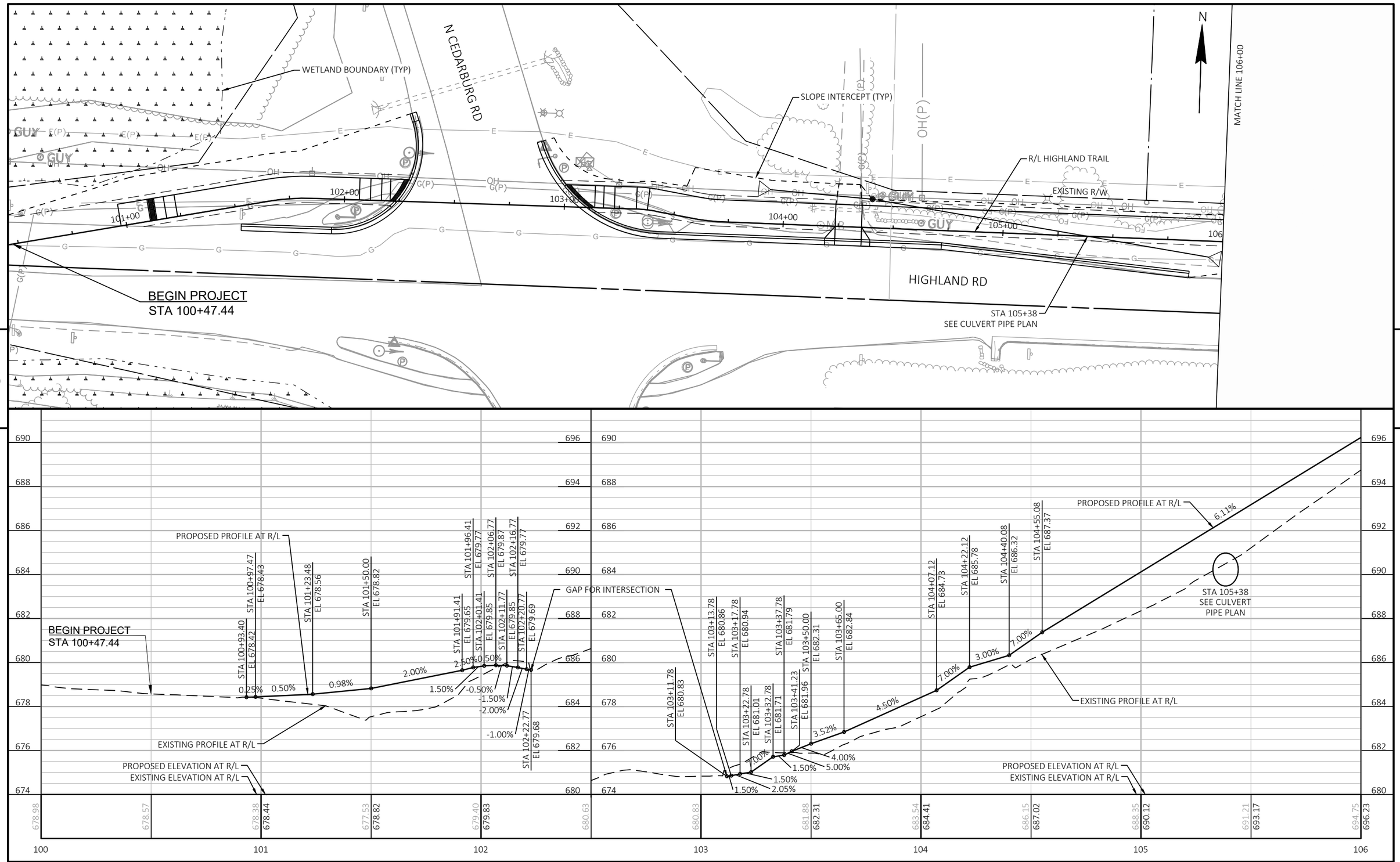
UTILITY INTERESTS REQUIRED

THIS MAP IS APPROVED FOR THE MEQUON-THIENSVILLE TRAIL FOUNDATION

SIGNATURE: _____ DATE: _____

PRINT NAME:

FILE NAME : 240017_TLE_EXHIBITS.DWG PLOT DATE : 5/22/2025 7:32 AM R/W PROJECT: R/W PROJ NO

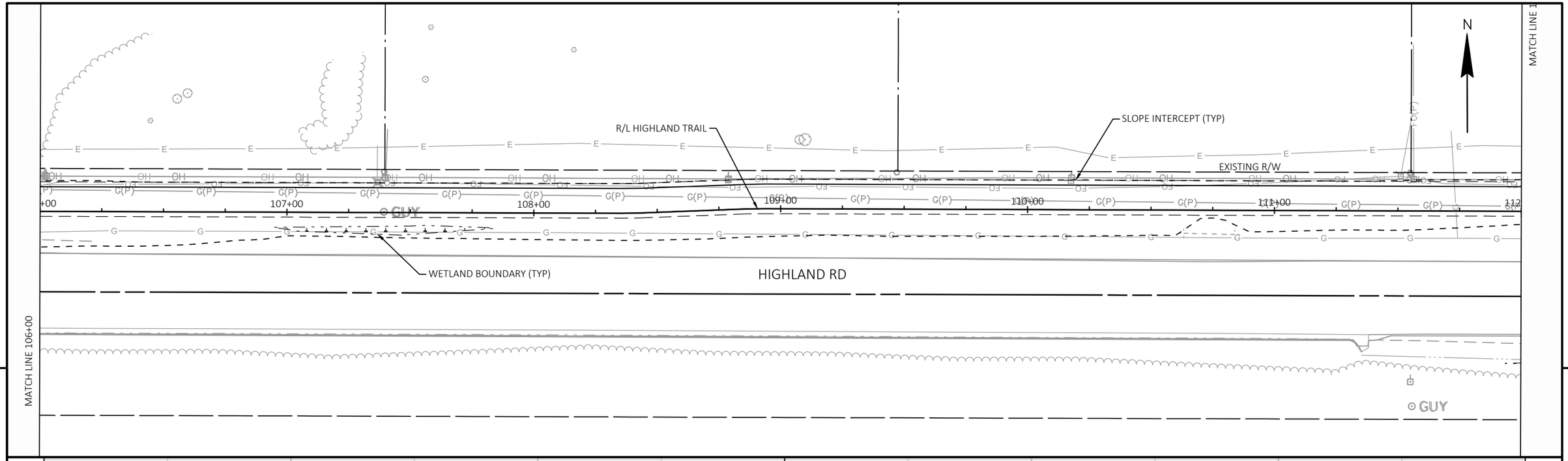


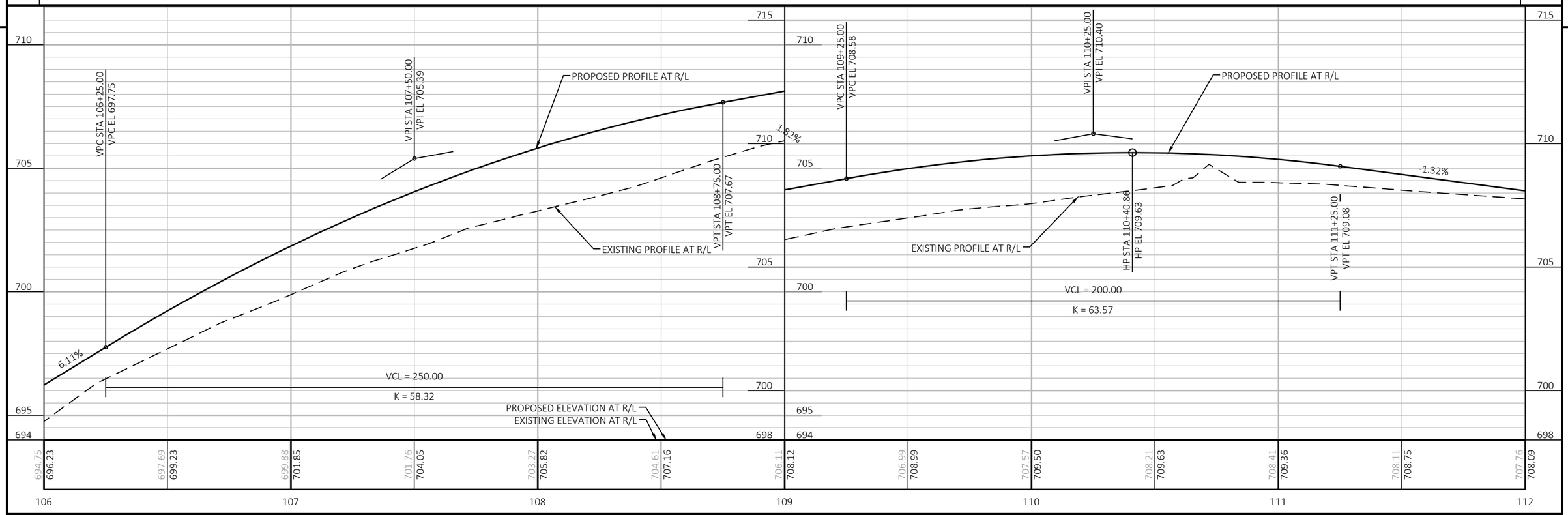
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 89	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 01

PLOT DATE : 8/7/2025 2:26 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

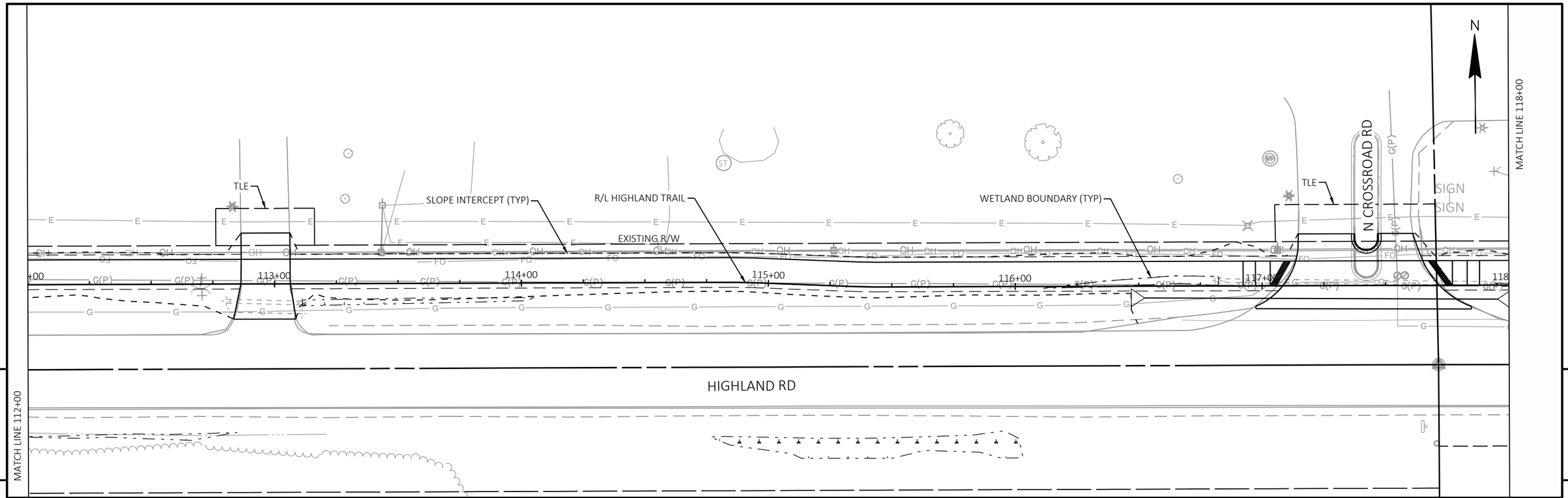
WISDOT/CADDS SHEET 44

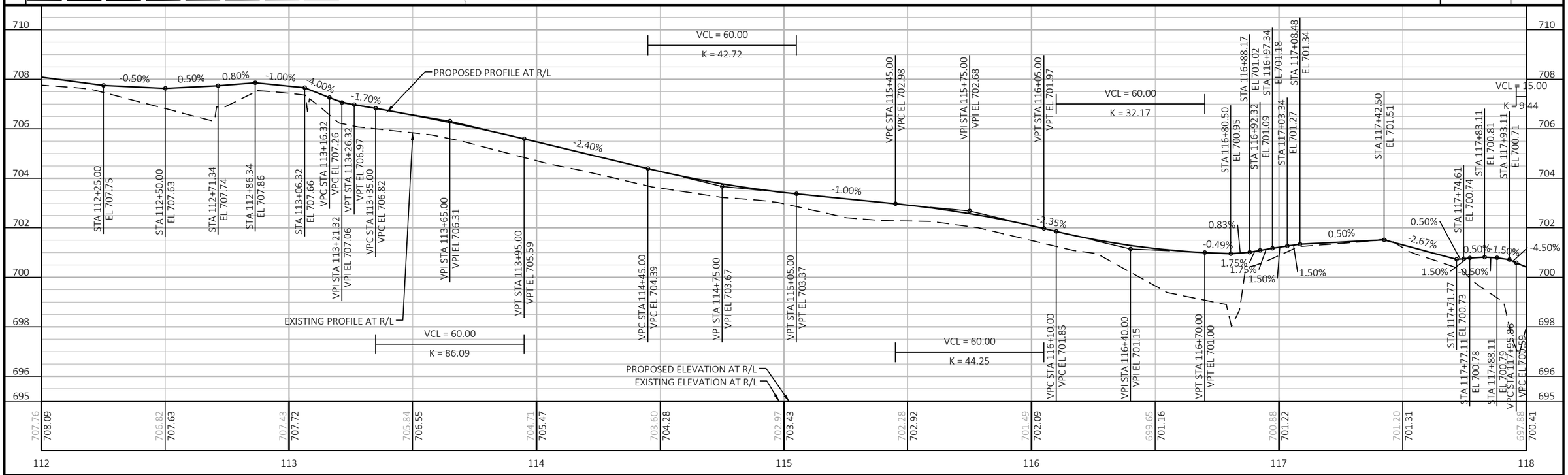




PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 90	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 02
PLOT DATE : 8/7/2025 2:26 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



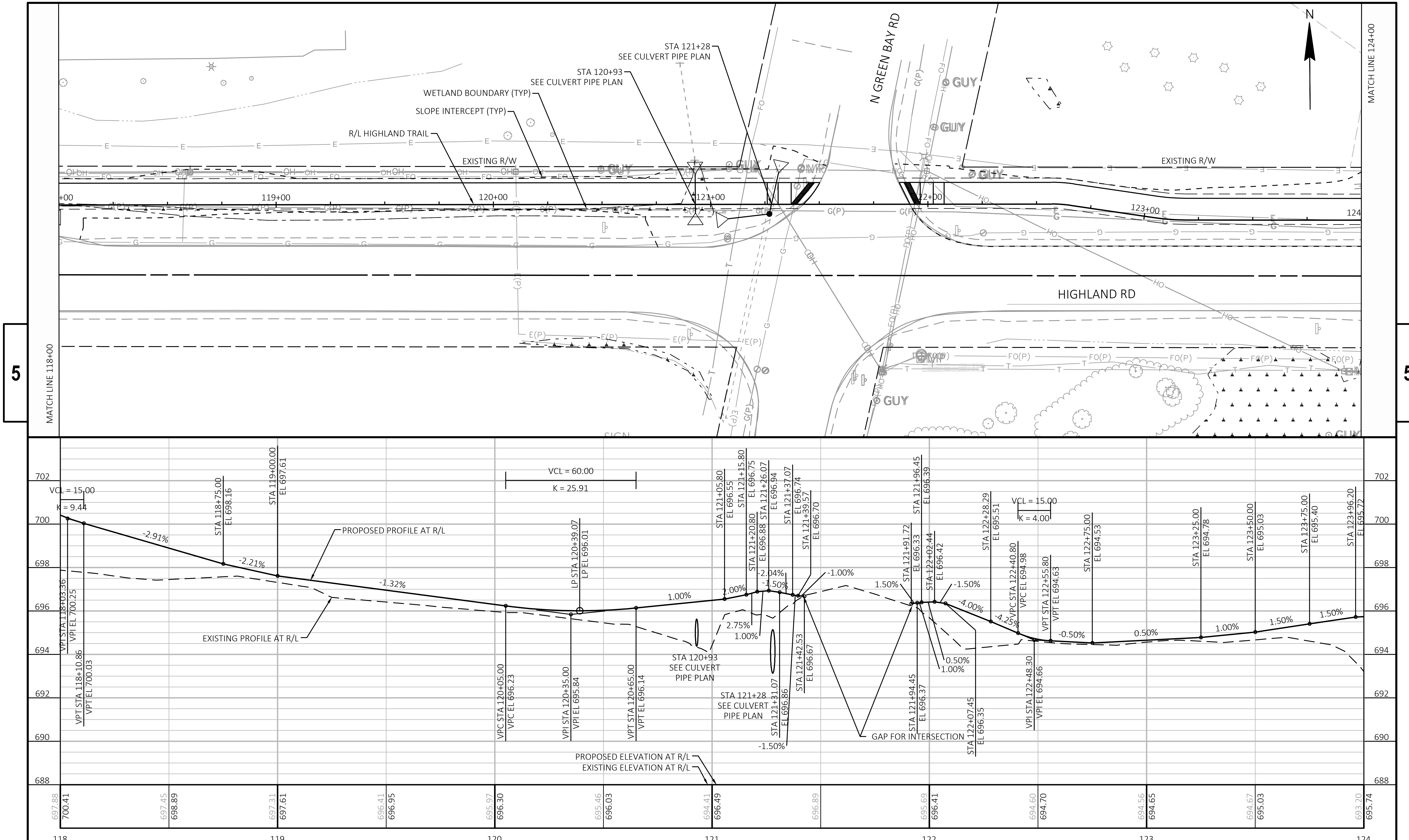


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 91	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 03

PLOT DATE : 8/7/2025 2:26 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 92	E

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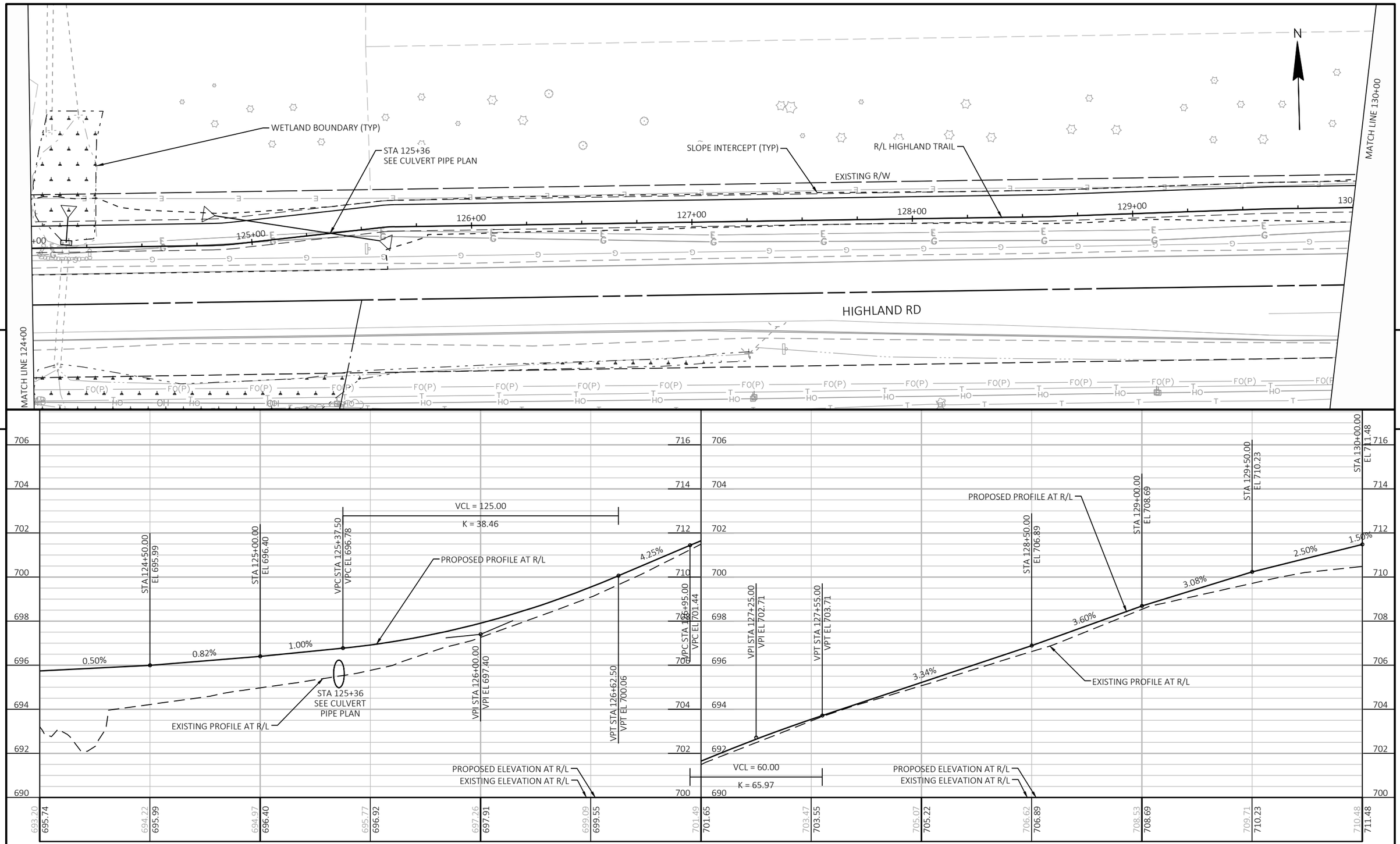
LAYOUT NAME - 04
PLOT DATE : 8/7/2025 2:26 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 93	E

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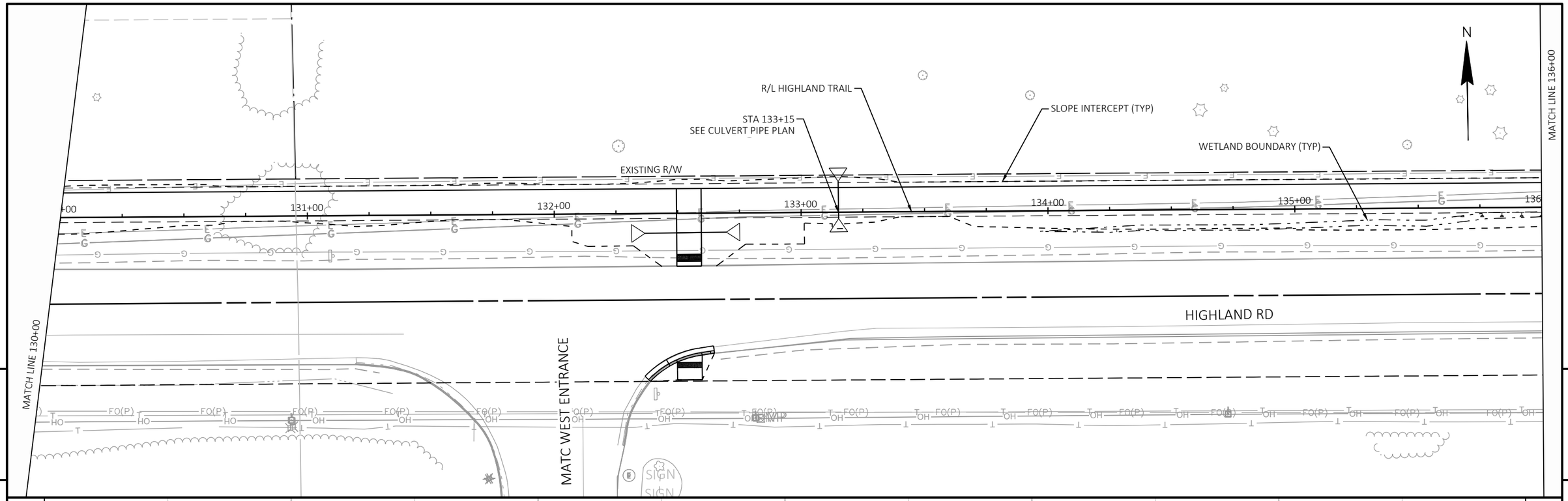
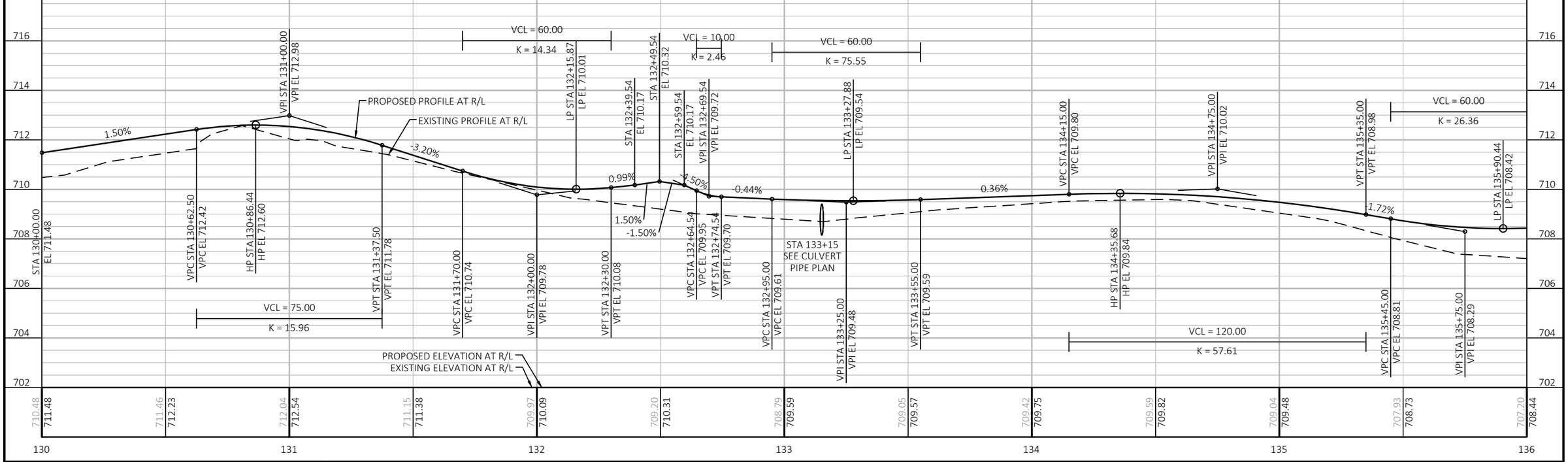
LAYOUT NAME - 05

PLOT DATE : 8/7/2025 2:26 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 94	E

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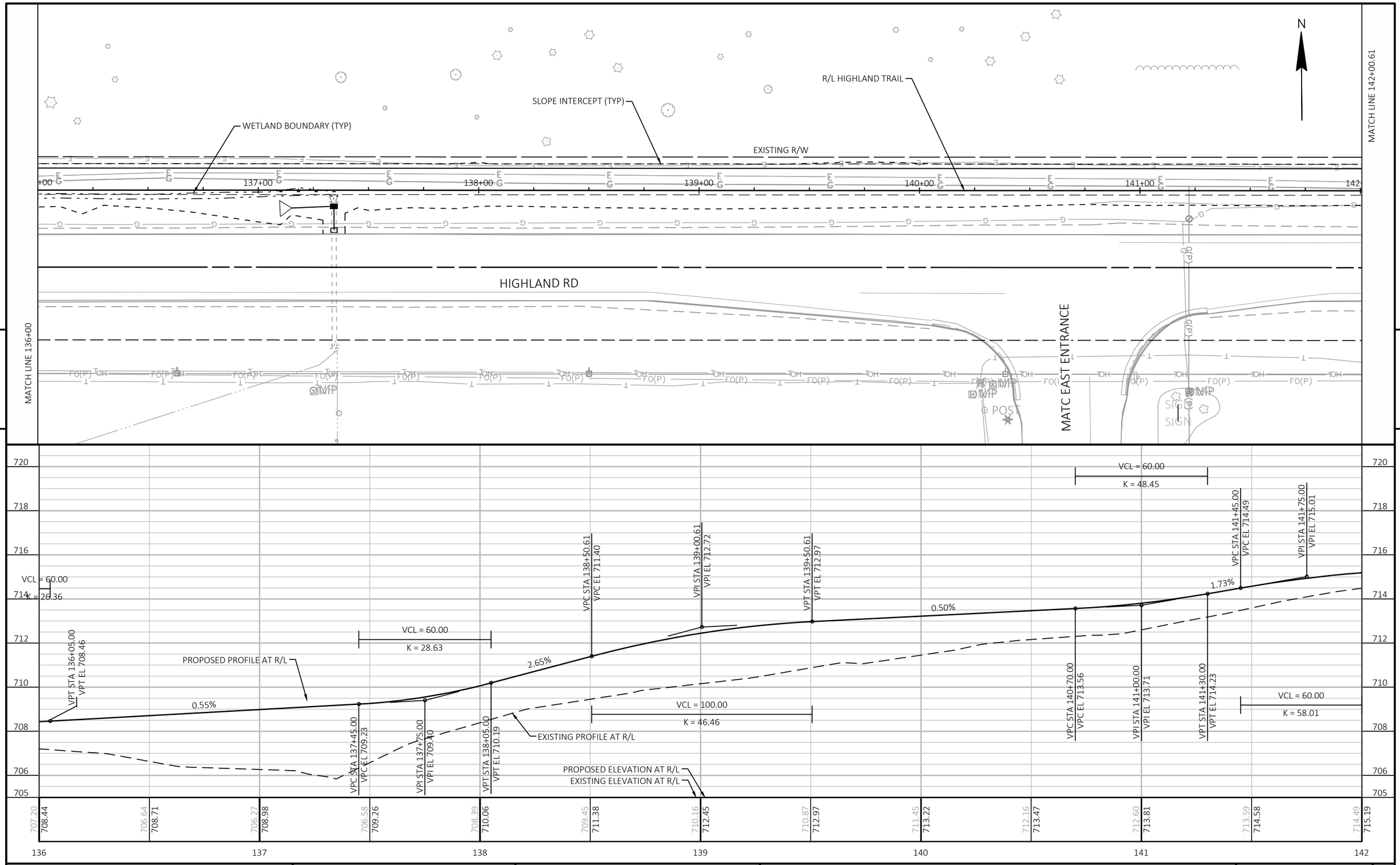
LAYOUT NAME - 06
PLOT DATE : 8/7/2025 2:26 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

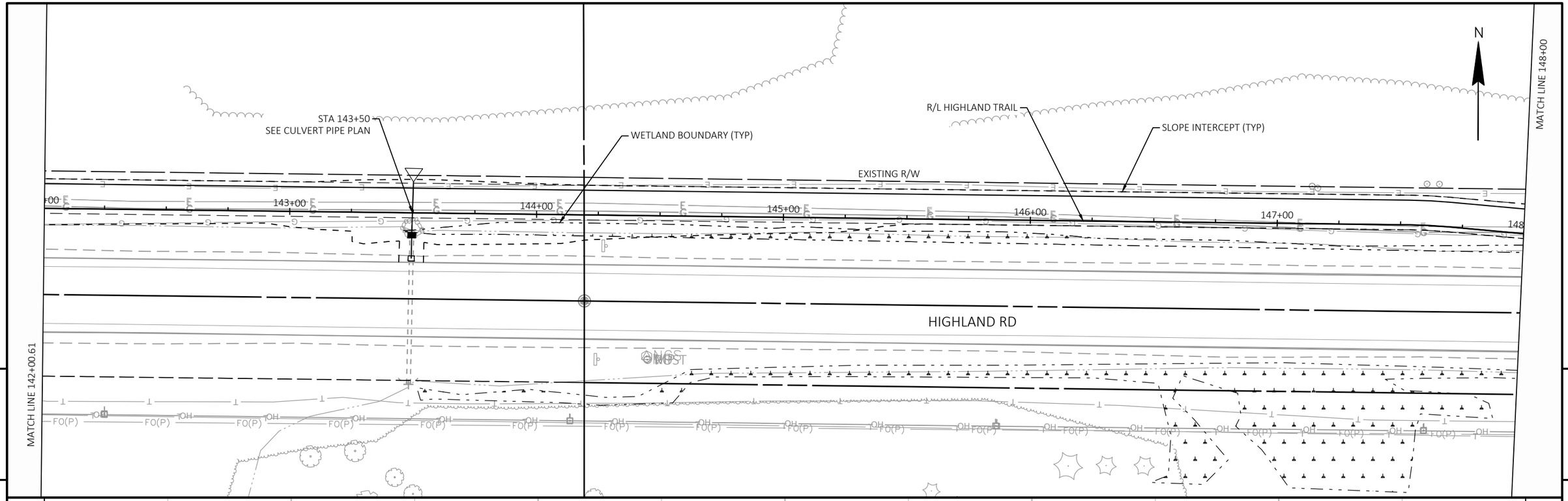


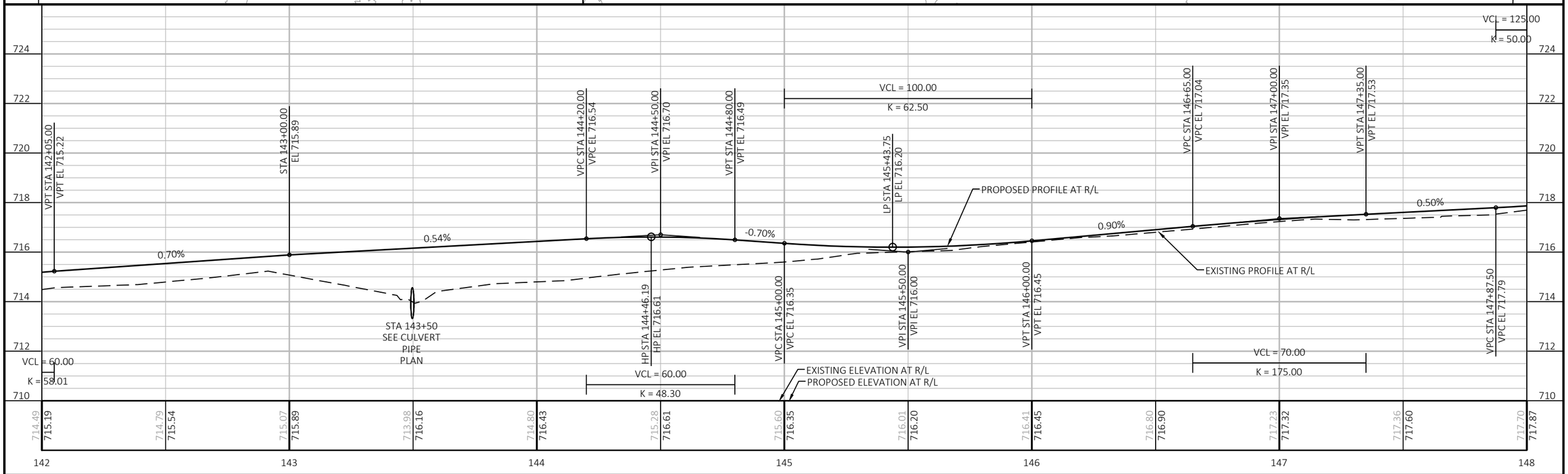
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 95	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 07

PLOT DATE : 8/7/2025 2:27 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

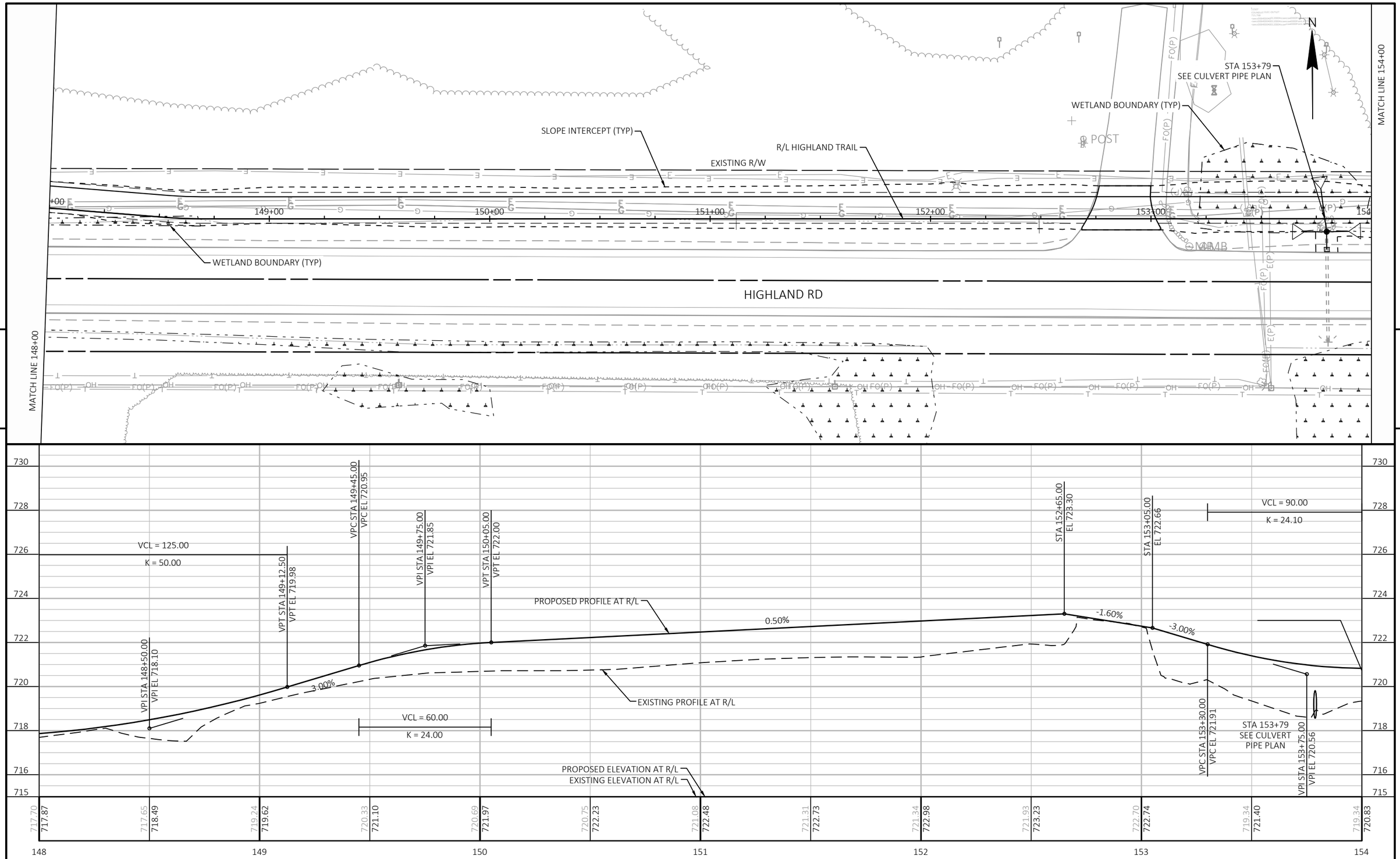
WISDOT/CADDS SHEET 44





PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 96	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 08
PLOT DATE : 8/7/2025 2:27 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

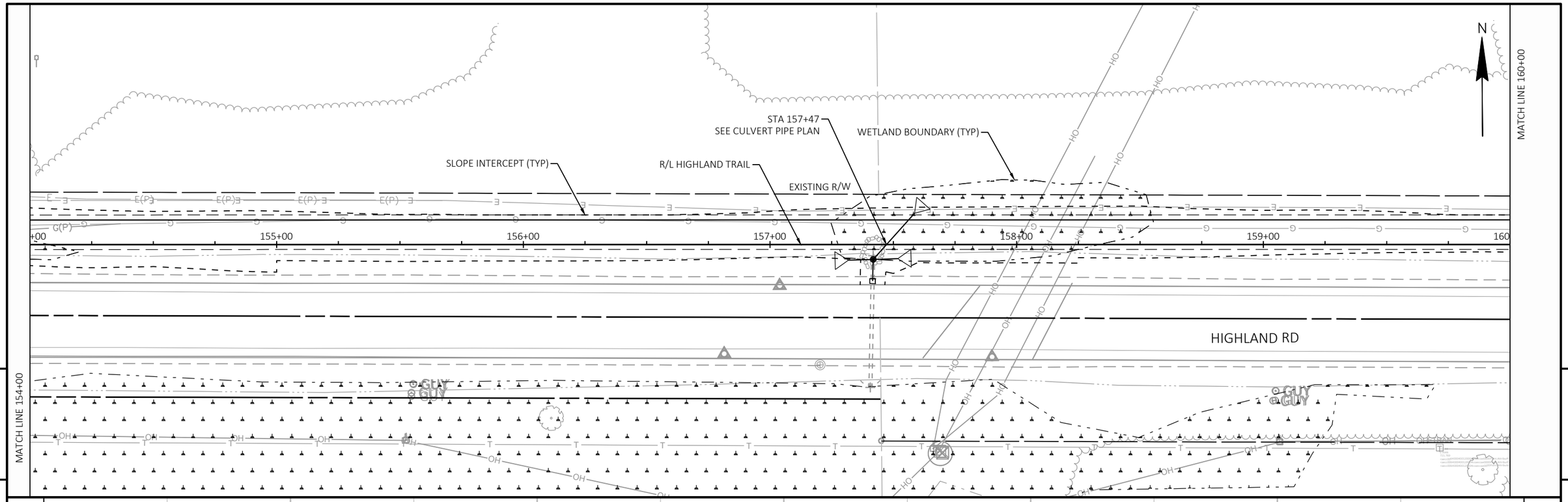


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 97	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 09

PLOT DATE : 8/7/2025 2:27 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 98	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 10

PLOT DATE : 8/7/2025 2:27 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

MATCH LINE 160+00

MATCH LINE 166+00

5

5

N

R/L HIGHLAND TRAIL

STA 166+00
SEE CULVERT PIPE PLAN

SLOPE INTERCEPT (TYP)

EXISTING R/W

HIGHLAND RD

MEADOW CIR

WETLAND BOUNDARY (TYP)

VCL = 60.00
K = 46.04

VCL = 60.00
K = 31.29

VCL = 15.00
K = 5.00

VCL = 60.00
K = 20.81

VCL = 40.00
K = 27.71

VCL = 60.00
K = 100.00

VCL = 125.00
K = 56.27

PROPOSED PROFILE AT R/L

EXISTING PROFILE AT R/L

PROPOSED ELEVATION AT R/L

EXISTING ELEVATION AT R/L

VPI STA 160+00.00
VPI EL 724.58

VPT STA 160+30.00
VPT EL 725.60

STA 160+70.00
EL 726.96

STA 160+80.00
EL 727.15

VPC STA 161+45.00
VPC EL 728.05

VPI STA 161+75.00
VPI EL 728.47

HP STA 161+73.79
HP EL 728.25

VPT STA 162+05.00
VPT EL 728.02

STA 162+13.61
EL 727.89

STA 162+23.61
EL 727.74

STA 162+29.61
EL 727.68

VPC STA 162+45.00
VPC EL 727.53

VPI STA 162+75.00
VPI EL 727.24

LP STA 162+75.48
LP EL 727.38

VPC STA 163+10.00
VPC EL 727.57

VPT STA 163+05.00
VPT EL 727.52

VPI STA 163+30.00
VPI EL 727.76

HP STA 163+36.14
HP EL 727.69

VPT STA 163+50.00
VPT EL 727.66

STA 163+69.33
EL 727.56

VPC STA 163+76.83
VPC EL 727.30

VPC STA 163+95.00
VPC EL 726.98

VPT STA 163+91.83
VPT EL 727.00

VPI STA 163+84.33
VPI EL 727.04

VPI STA 164+25.00
VPI EL 726.83

VPT STA 164+55.00
VPT EL 726.50

VPT STA 164+62.50
VPC EL 726.42

VPI STA 165+25.00
VPI EL 725.73

VPT STA 165+87.50
VPT EL 723.66

STA 166+00
SEE CULVERT
PIPE PLAN

3.40%
1.90%
1.38%
-1.50%
-0.90%
-0.97%
0.94%
-0.50%
-3.50%
-0.50%
-1.10%
-3.32%

724.38	725.88	727.18	727.85	727.97	727.45	727.42	727.23	726.65	726.53	725.03	724.62	722.15
724.68	726.28	727.43	728.11	728.08	727.49	727.48	727.66	726.96	726.56	725.88	724.78	723.24

160	161	162	163	164	165	166

PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 99	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 11

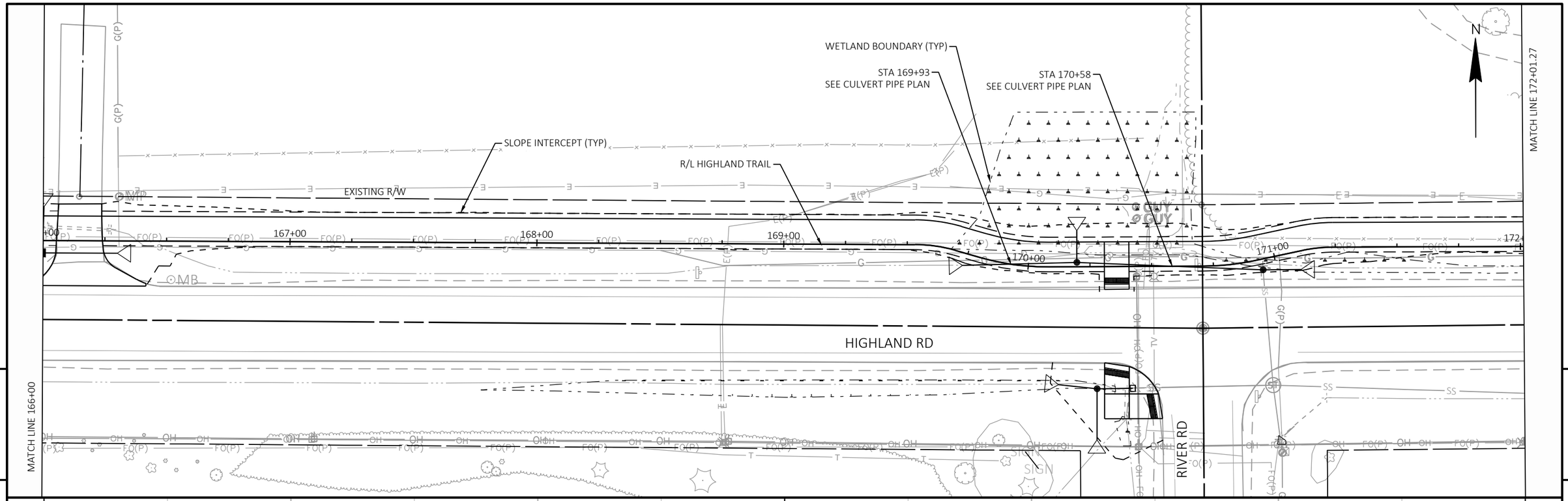
PLOT DATE : 8/7/2025 2:27 PM

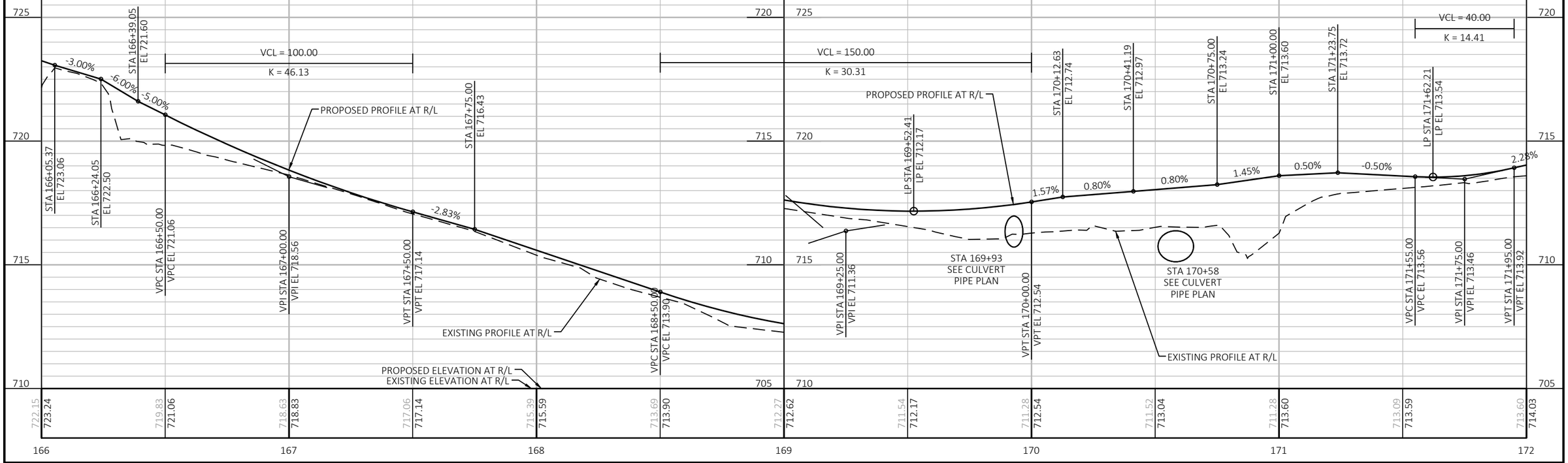
PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

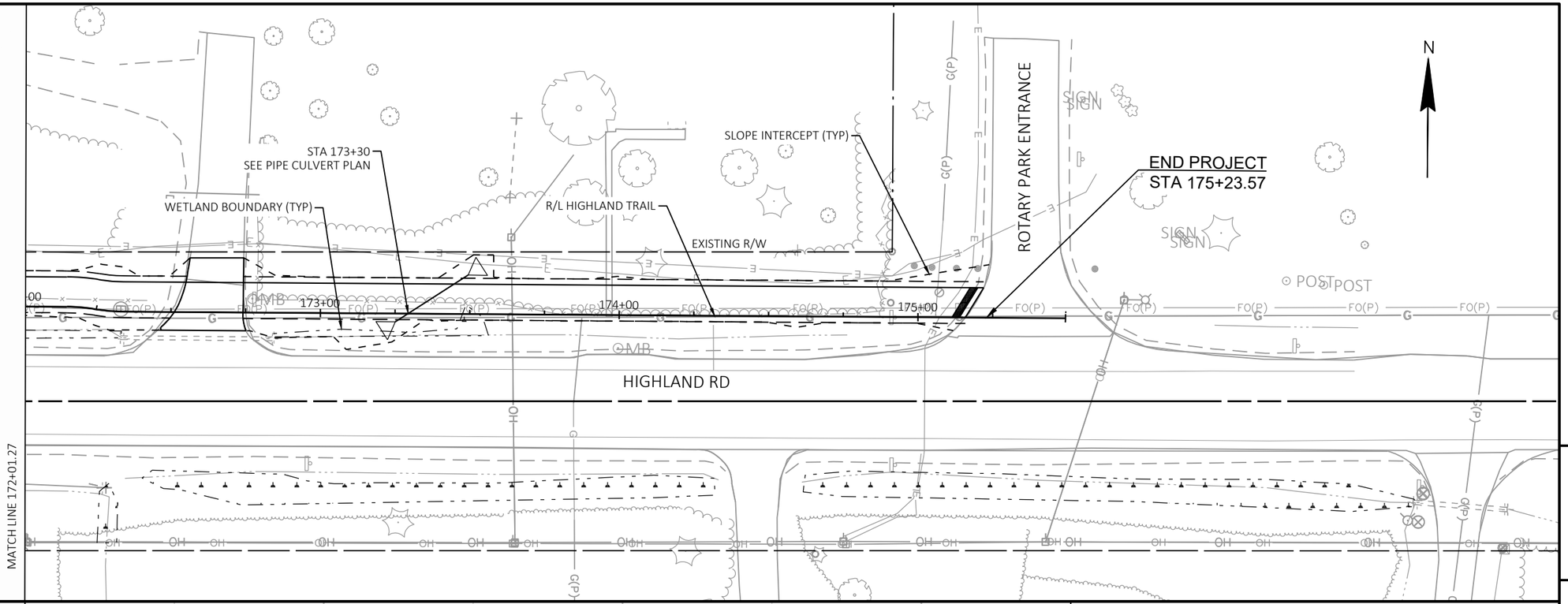
WISDOT/CADDS SHEET 44

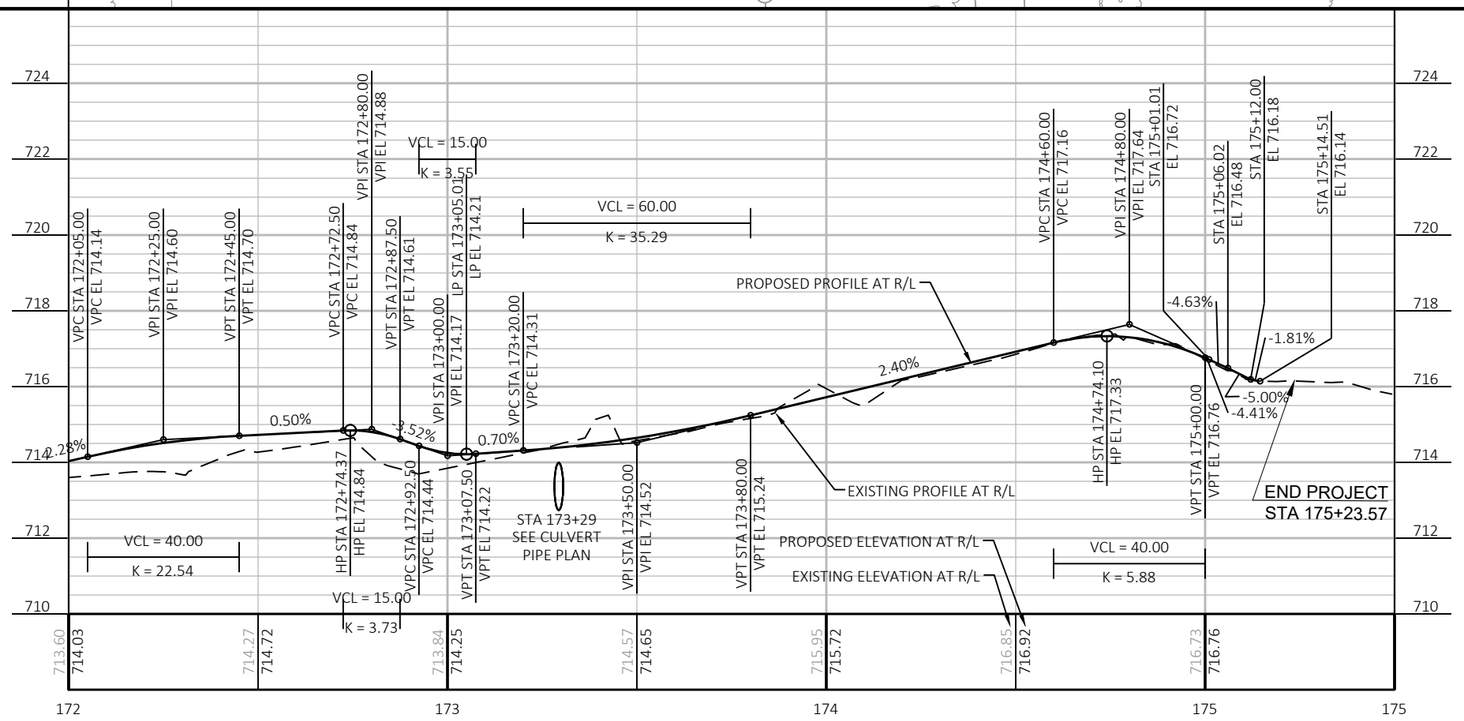




PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 100	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 12
PLOT DATE : 8/7/2025 2:27 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



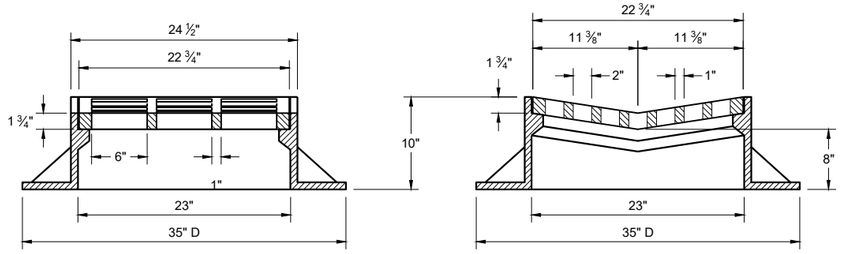


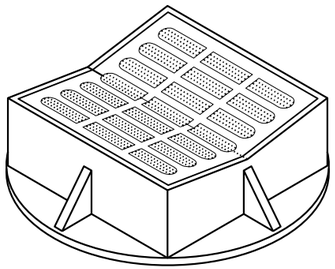
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	PLAN AND PROFILE: HIGHLAND ROAD BIKE SPUR	SHEET 101	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\050101-PP.DWG
LAYOUT NAME - 13

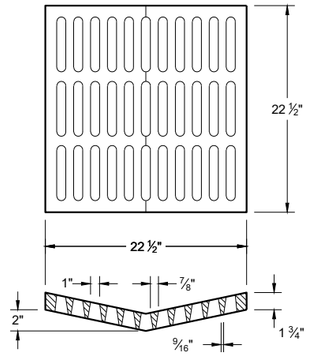
PLOT DATE : 8/7/2025 2:27 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44





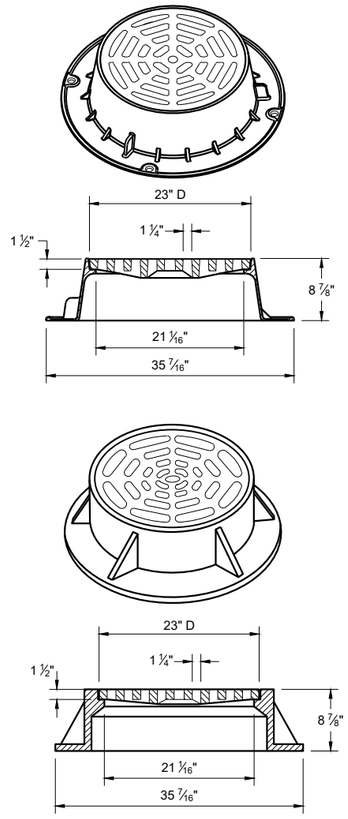
TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE

NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

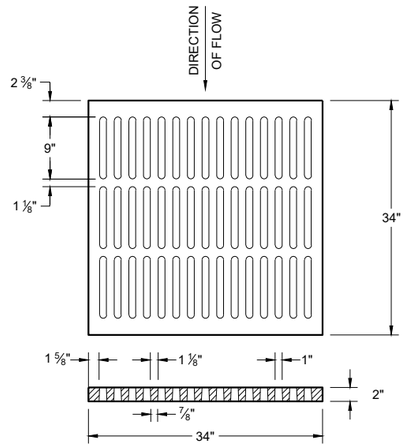
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

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

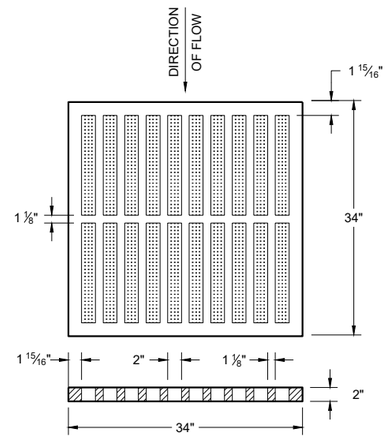
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

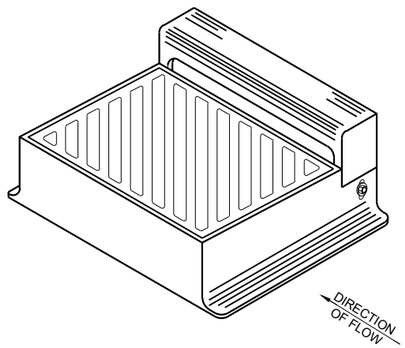
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



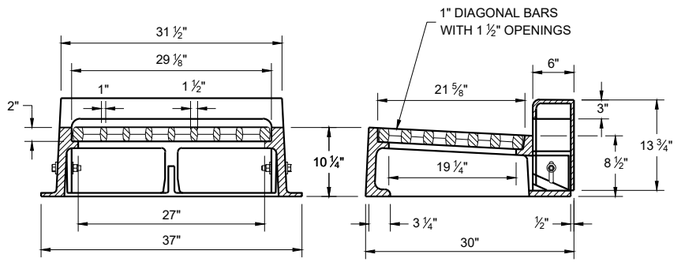
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON THE DRAINAGE TABLE

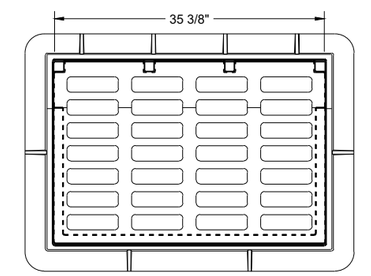


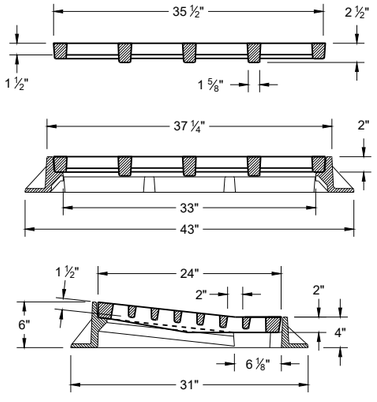
DIAGONAL SLOTS SHALL BE ORIENTEDTO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



TYPE "WM"

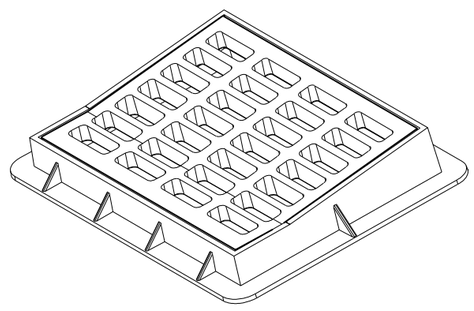
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

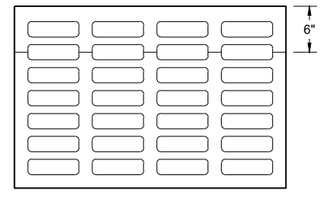




TYPE "DW"

NOTES: FOR USE IN A SUMP CONDITION. THIS OPTION IS ONLY TO BE USED IF NO OTHER INLETS ARE APPLICABLE.





INLET COVERS
TYPES B, B-A, C,
MS, MS-A ,DW AND WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

6

SDD 08A05-22b

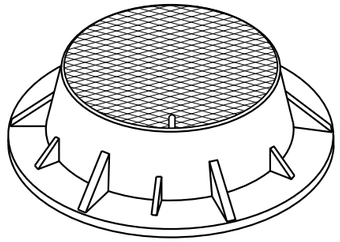
SDD 08A05-22b

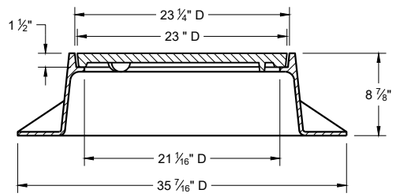
GENERAL NOTES

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

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

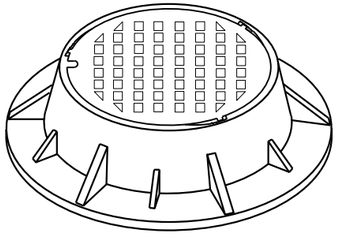
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

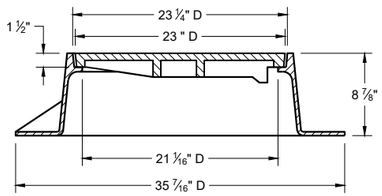




TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

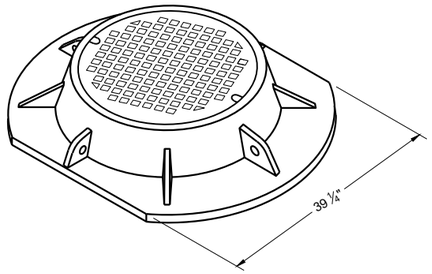


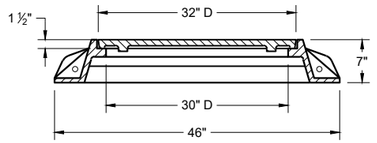


TYPE "J" SPECIAL

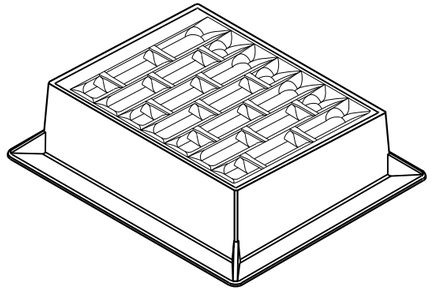
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

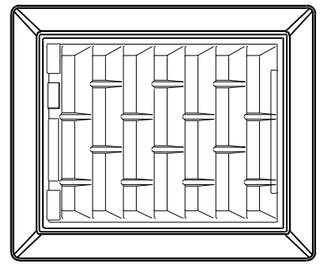
NOTE: EITHER CASTING IS ACCEPTABLE

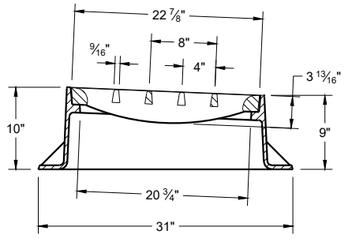


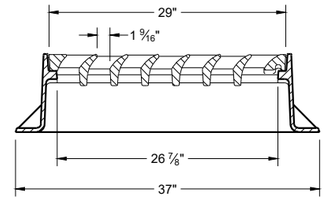


TYPE "K"

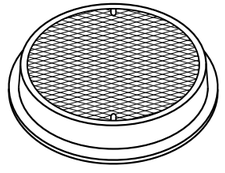


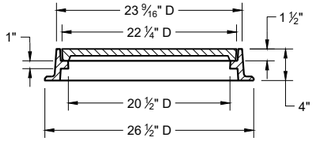




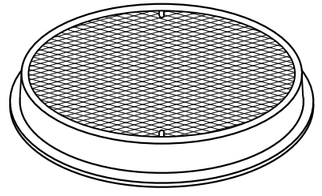


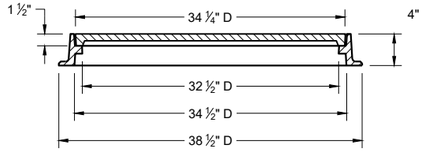
INLET COVER TYPE "BW"





TYPE "L"





TYPE "M"

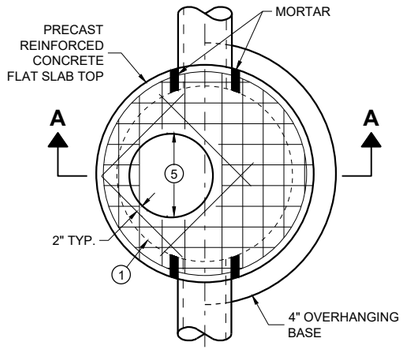
INLET COVERS TYPES BW
MANHOLE COVERS TYPES K, J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

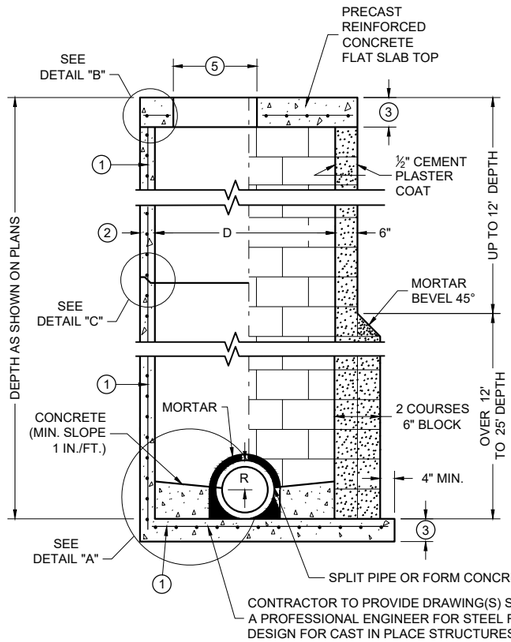
FHWA

6
SDD 08A05-22e



PLAN VIEW

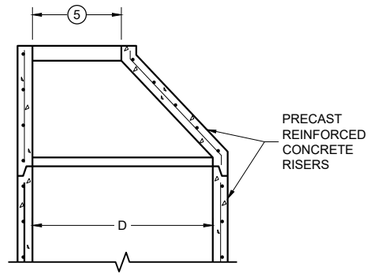
CIRCULAR OPENING



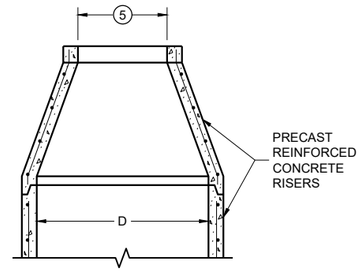
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

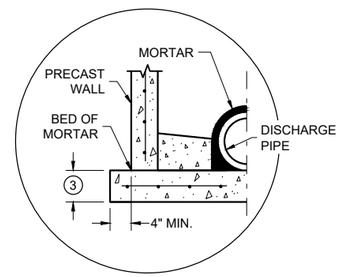
MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) (5) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

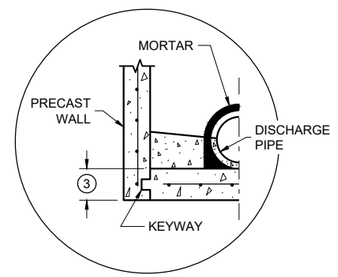
PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42 *	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

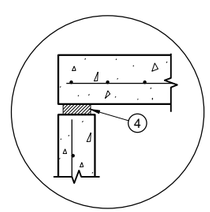


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

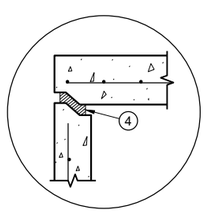


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

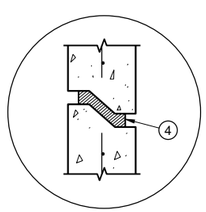
DETAIL "A"



TOP WITH PLAIN END JOINT

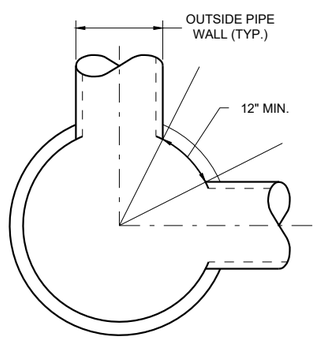


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B" **DETAIL "C"**



MINIMUM HORIZONTAL PIPE SEPARATION

DETAIL "D"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

(1) FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

(5) SEE MANHOLE COVER OPENING MATRIX.

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

SDD 08B09-04

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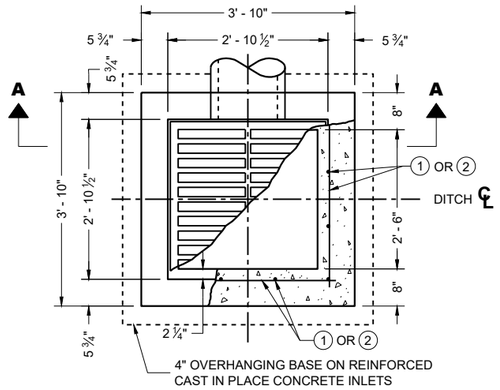
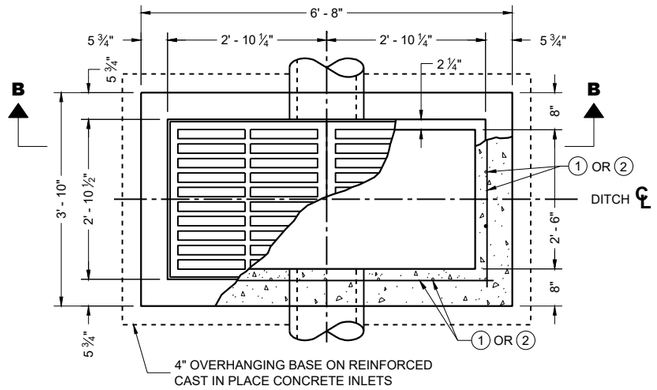
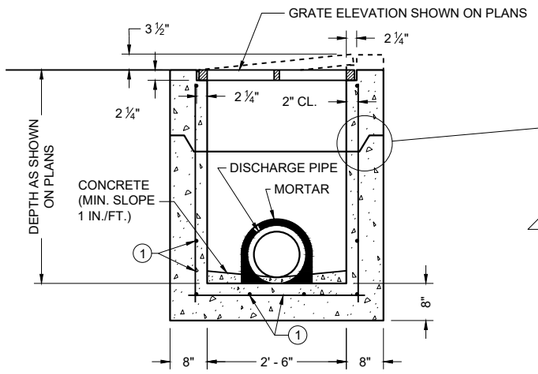
SDD 08B09-04



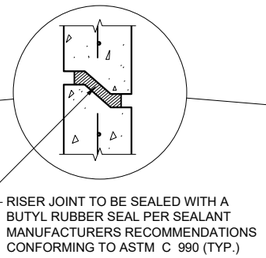
PLAN VIEW

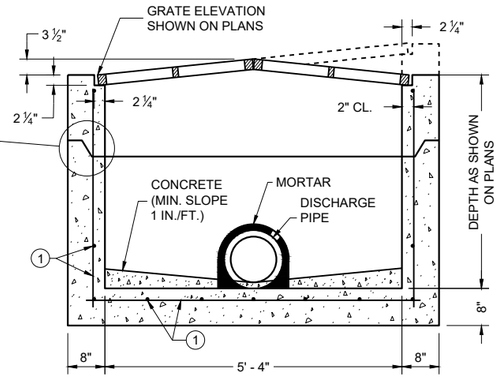


PLAN VIEW

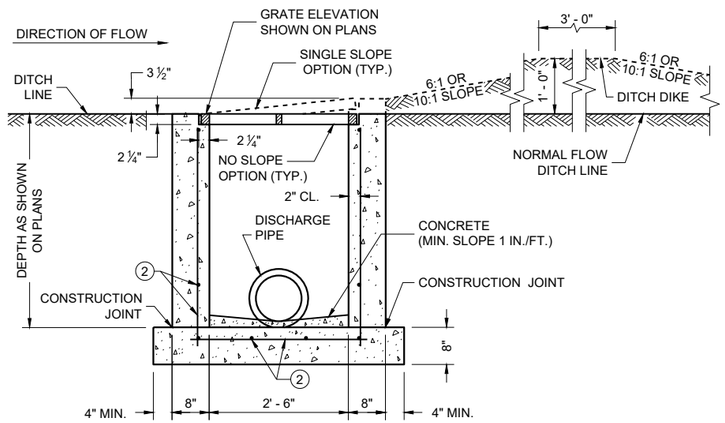


PRECAST REINFORCED CONCRETE SECTION A - A



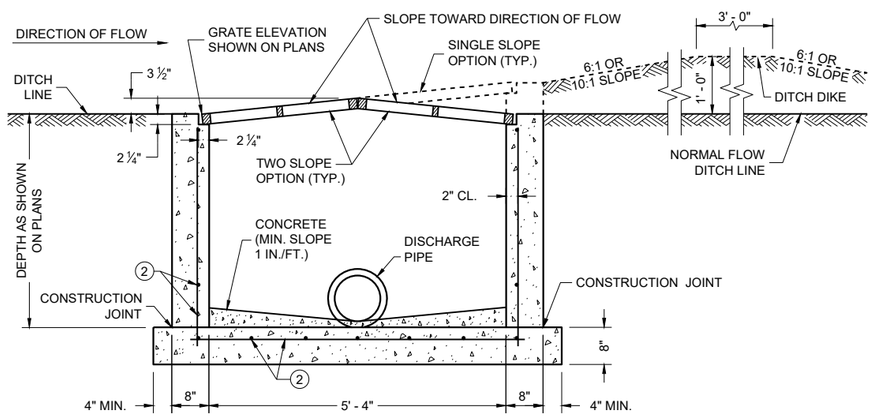


PRECAST REINFORCED CONCRETE SECTION B - B



REINFORCED CAST IN PLACE CONCRETE SECTION A - A

INLETS MEDIAN 1 GRATE



REINFORCED CAST IN PLACE CONCRETE SECTION B - B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

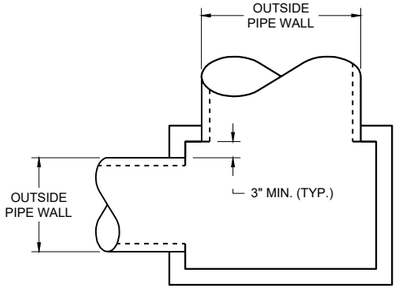
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

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

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

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



DETAIL "A"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42

INLETS
MEDIAN 1 AND 2 GRATE

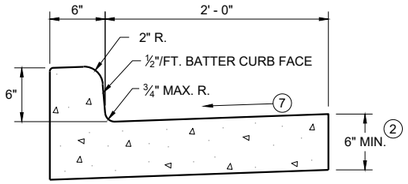
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

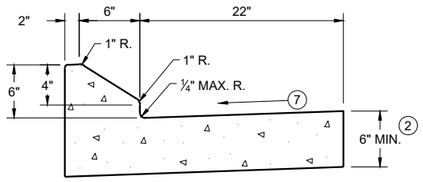
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

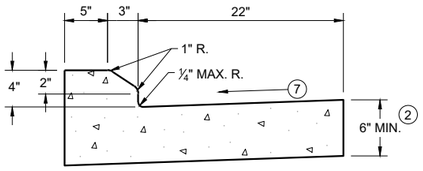
6
SDD 08C08-03



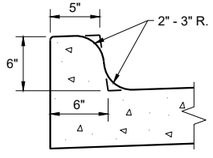
TYPES A (1) & D



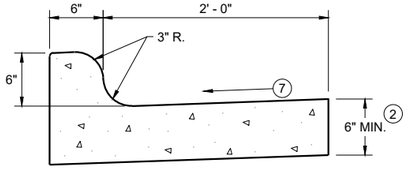
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

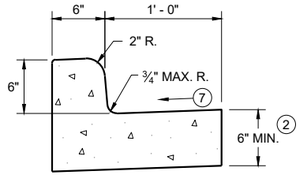


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



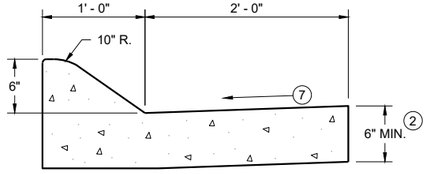
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

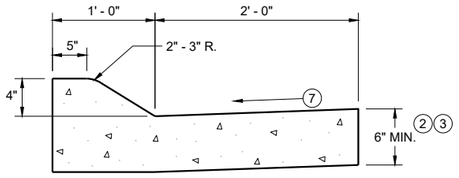


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

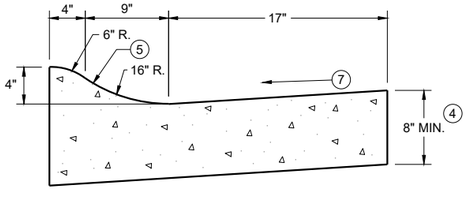


6" SLOPED CURB TYPES A (1) & D



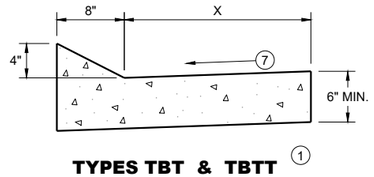
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T
CONCRETE CURB AND GUTTER 30"

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

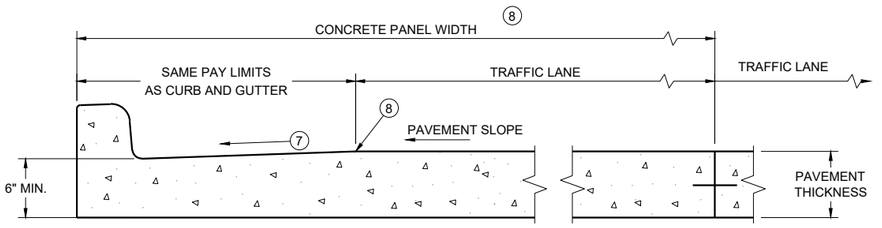


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

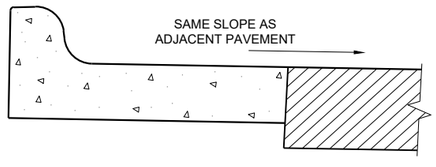
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

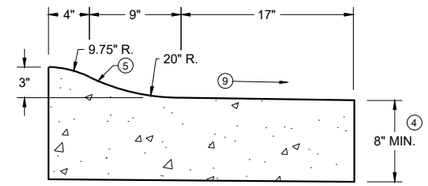
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

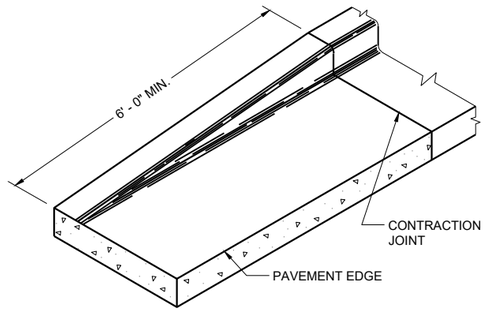
(9) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



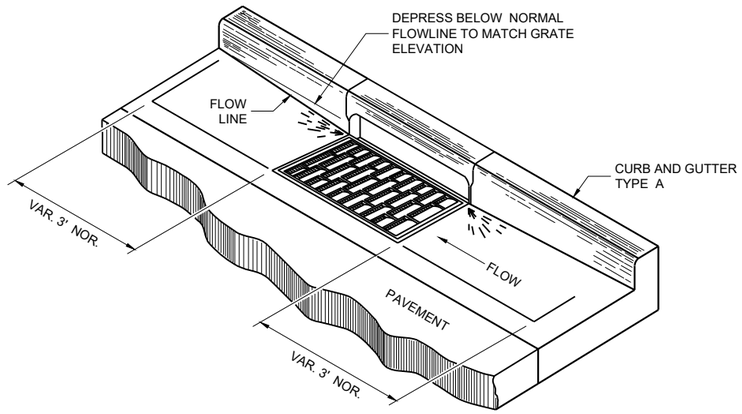
3" SLOPED CURB TYPES R (1) & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

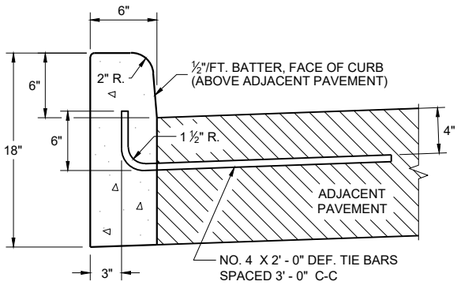
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

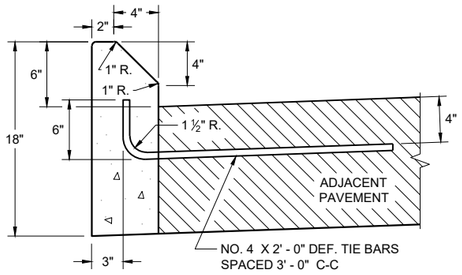
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

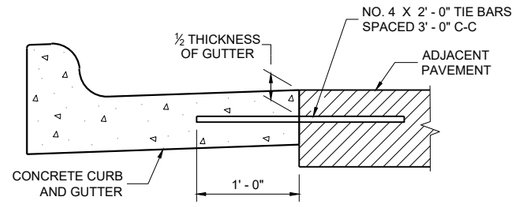


TYPES A (1) & D

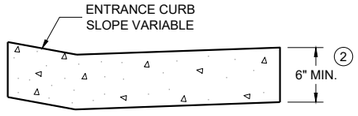


TYPES G (1) & J

CONCRETE CURB

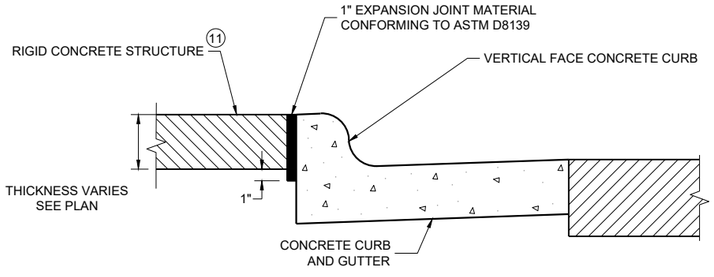


TYPICAL TIE BAR LOCATION (1)

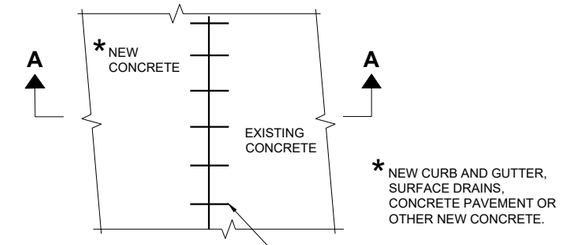


DRIVEWAY ENTRANCE CURB (10)

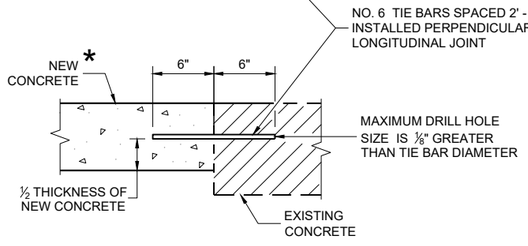
(WHEN DIRECTED BY THE ENGINEER)



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 08D01-24b

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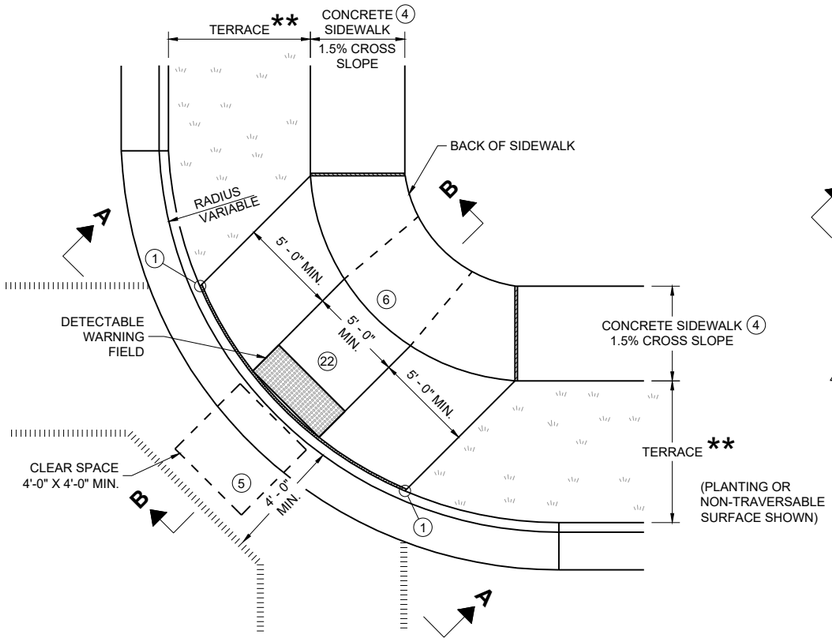
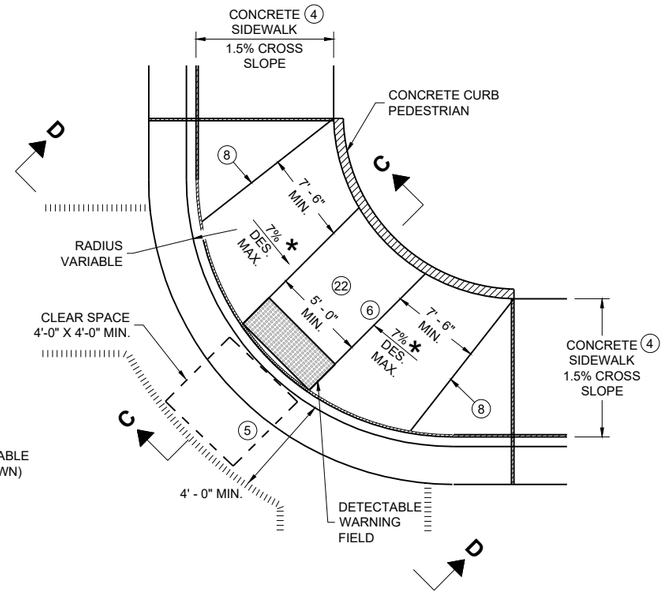
SDD 08D01-24b



PLAN VIEW

CURB RAMP TYPE 1

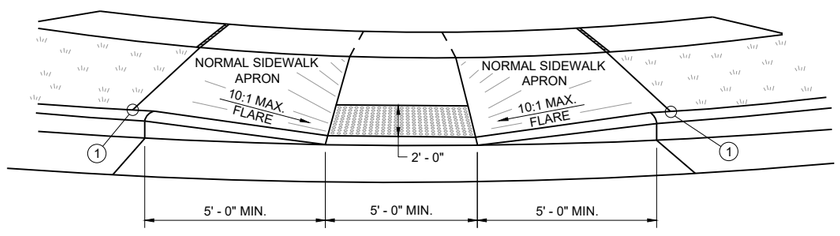
(CENTER OF CORNER RADIUS)



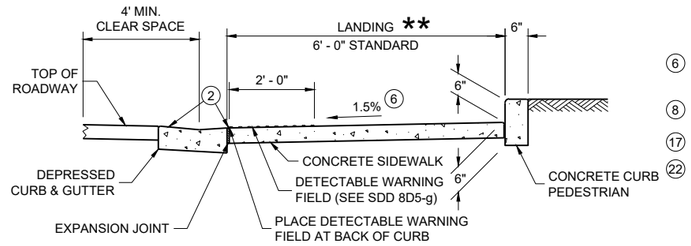
PLAN VIEW

CURB RAMP TYPE 1 - A

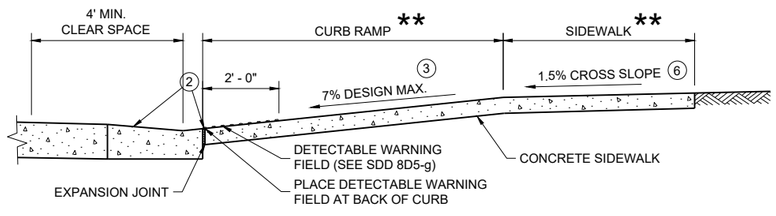
(NO TERRACE)



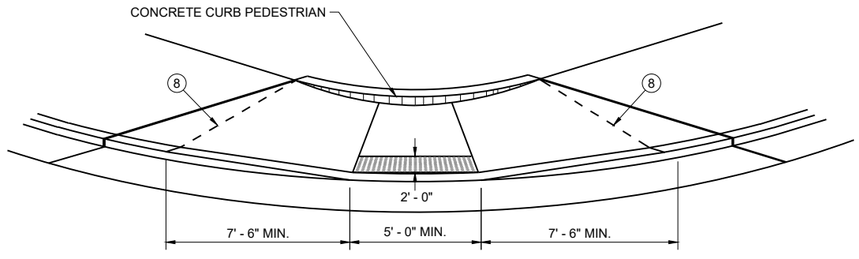
VIEW A - A FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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

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

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

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

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

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

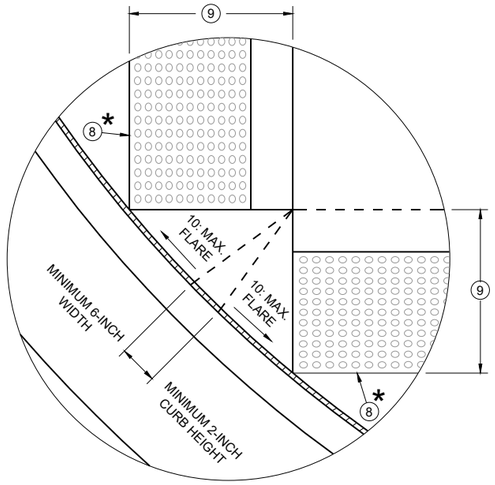
═══	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT FIELD LOCATED
ıı ıı ıı ıı	PAVEMENT MARKING CROSSWALK (WHITE)
*	MAXIMUM 8.3%
**	WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS TYPE 1 AND 1-A

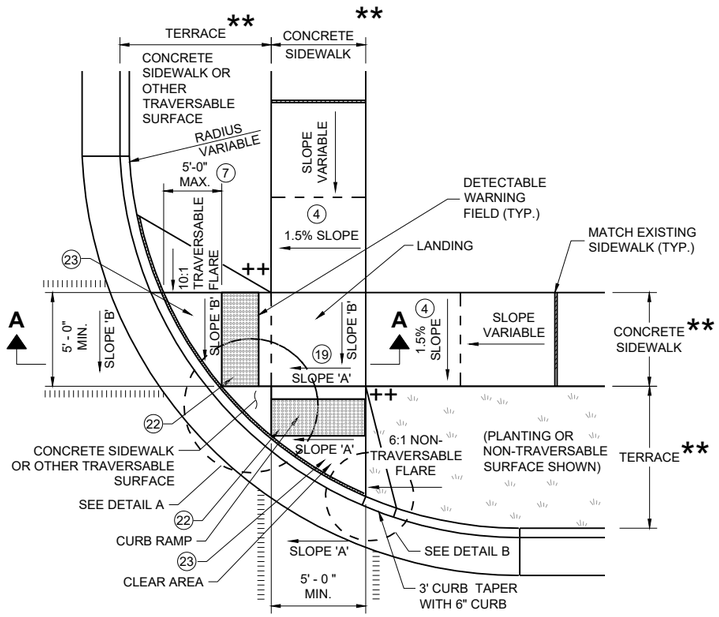
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05-22a



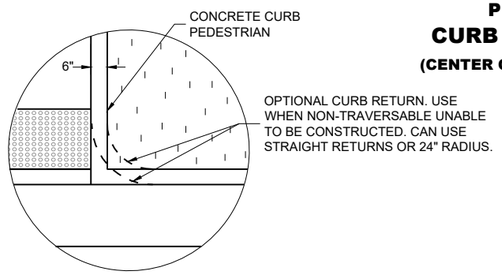
DETAIL A



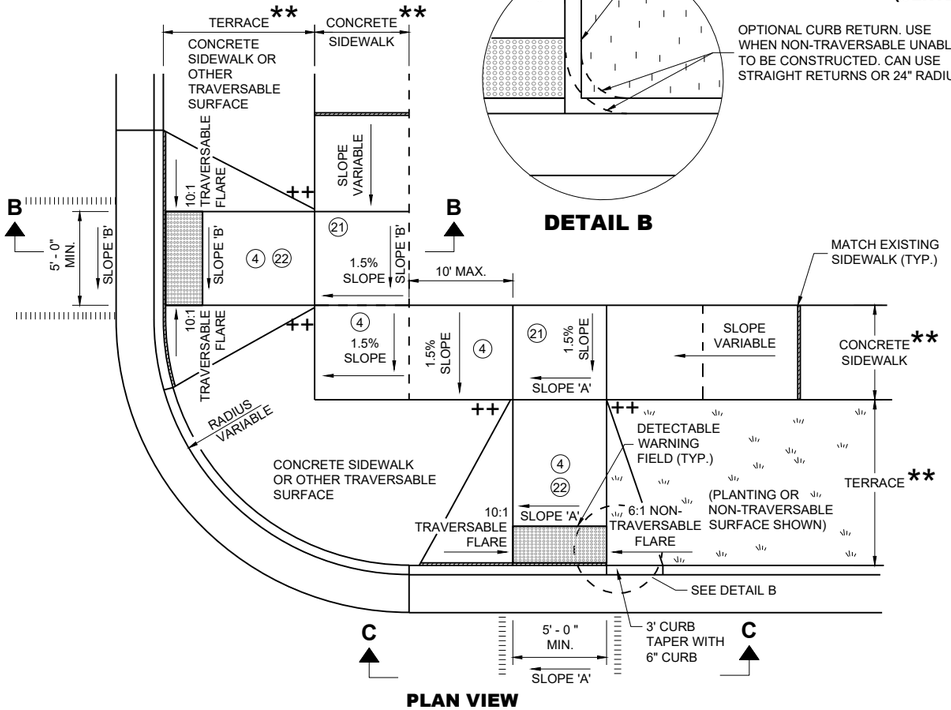
PLAN VIEW

CURB RAMP TYPE 2

(CENTER OF CORNER RADIUS)



DETAIL B



PLAN VIEW

CURB RAMP TYPE 3

(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

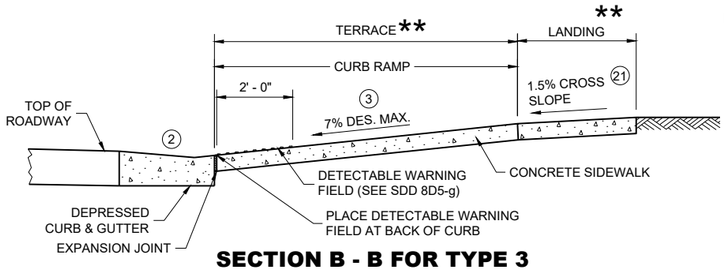
(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

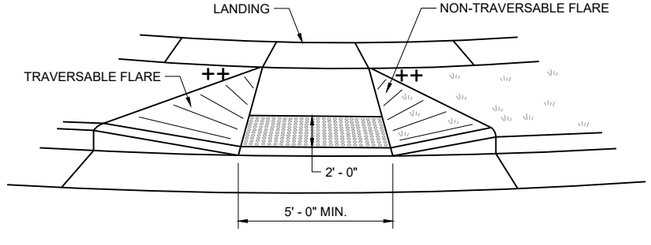
(21) PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

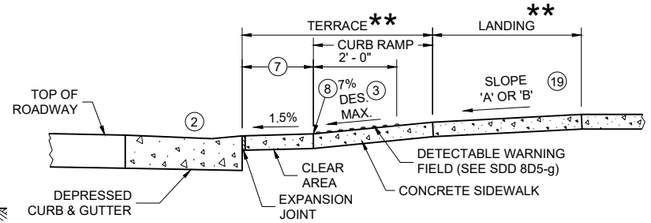
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3



SECTION A - A FOR TYPE 2

LEGEND

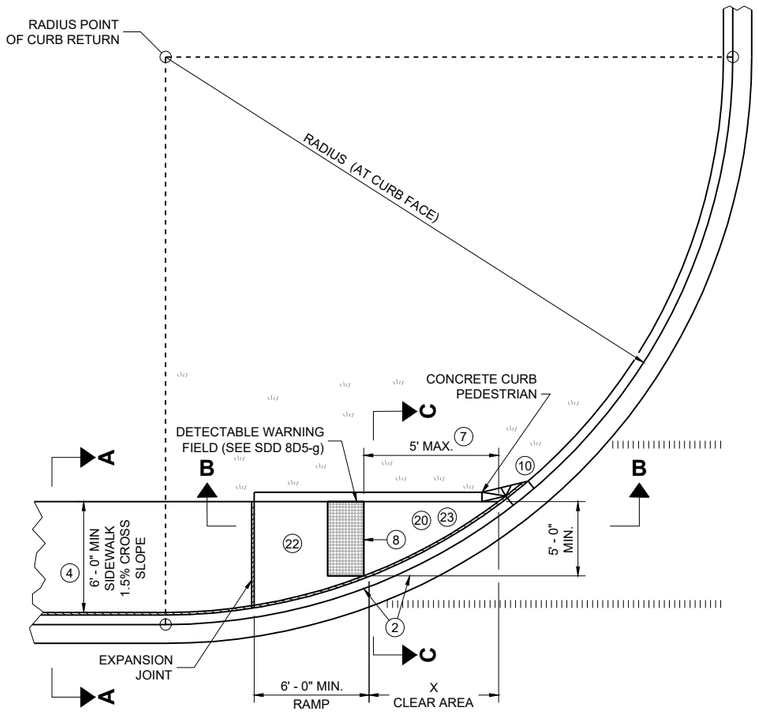
▨	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT SIDEWALK
ıllıllıllıllıllı	PAVEMENT MARKING CROSSWALK (WHITE)
*	MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
**	WIDTH SHOWN ELSEWHERE IN THE PLANS
++	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

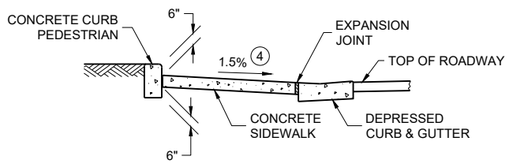
6

SDD 08D05-22b

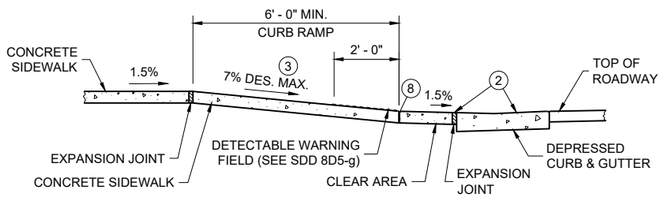


PLAN VIEW

CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A



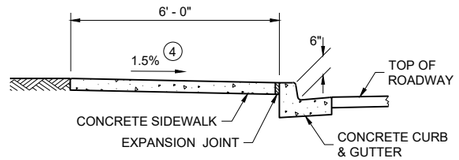
SECTION B - B FOR TYPE 4A AND TYPE 4A1

LEGEND

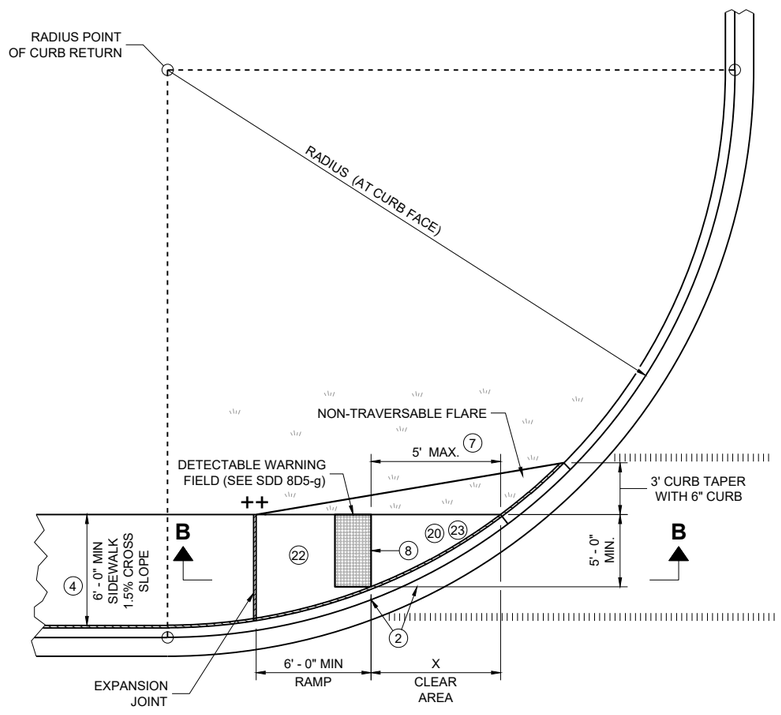
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



PLAN VIEW

CURB RAMP TYPE 4A1

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

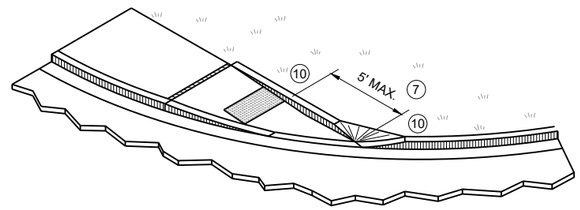
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

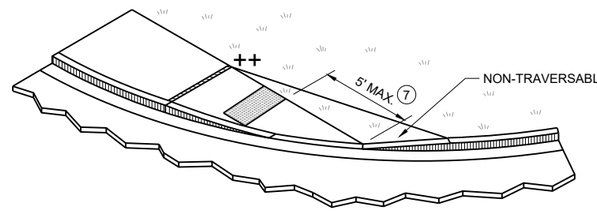
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



ISOMETRIC VIEW FOR TYPE 4A

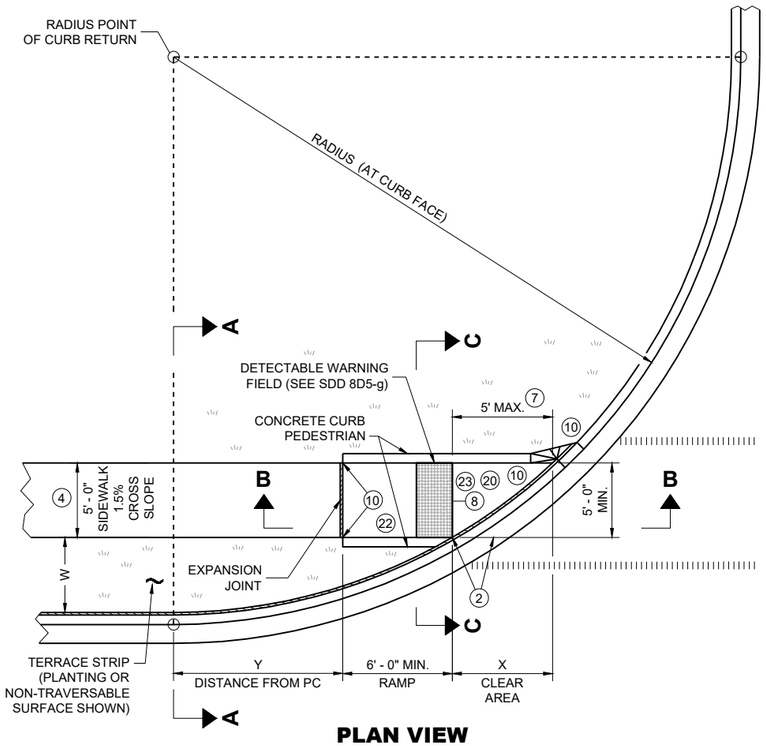


ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

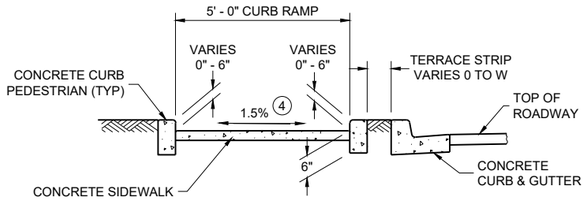
6
SDD 08D05-22c



PLAN VIEW
CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET			4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET									4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET															4' - 10 ¾"	19' - 8 ¼"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

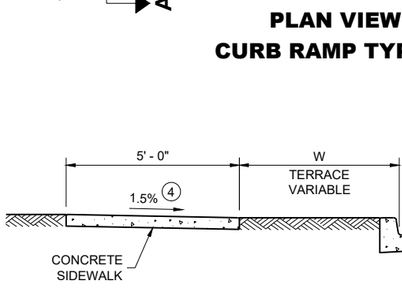
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

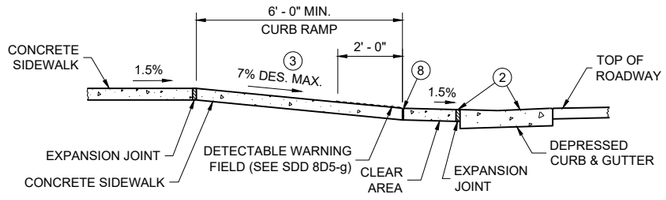
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

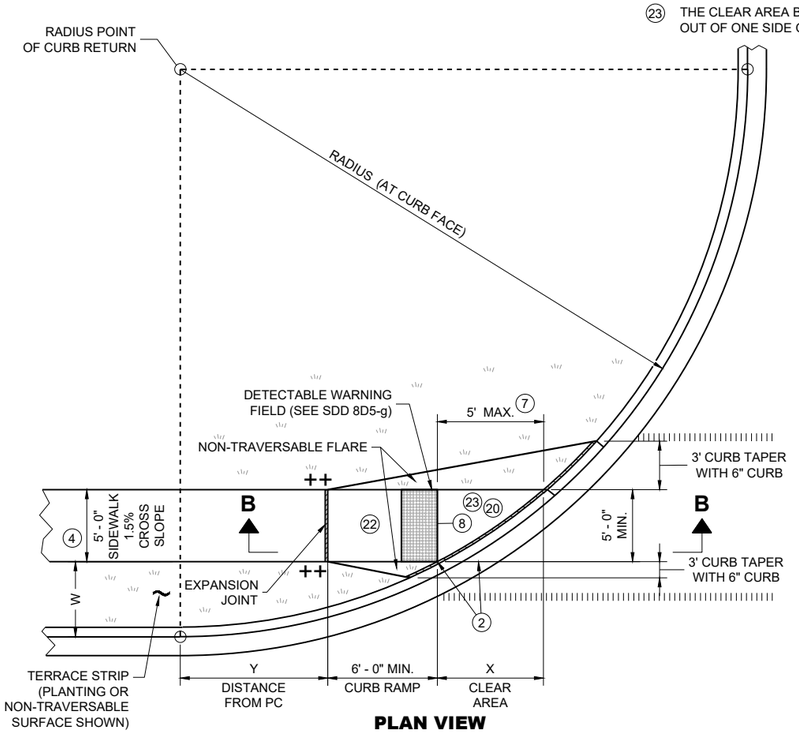
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



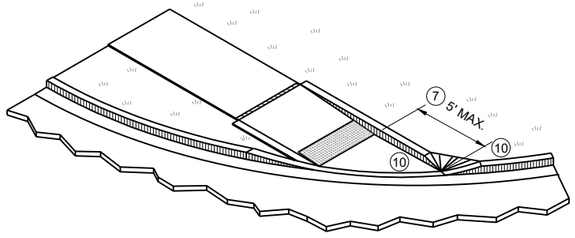
SECTION A - A FOR TYPE 4B



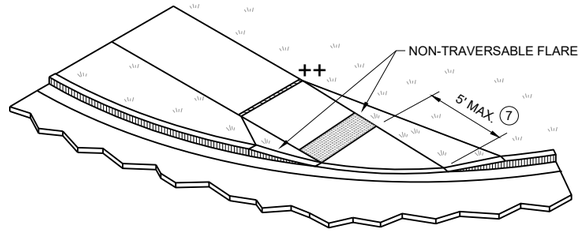
SECTION B - B FOR TYPE 4B AND TYPE 4B1



PLAN VIEW
CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



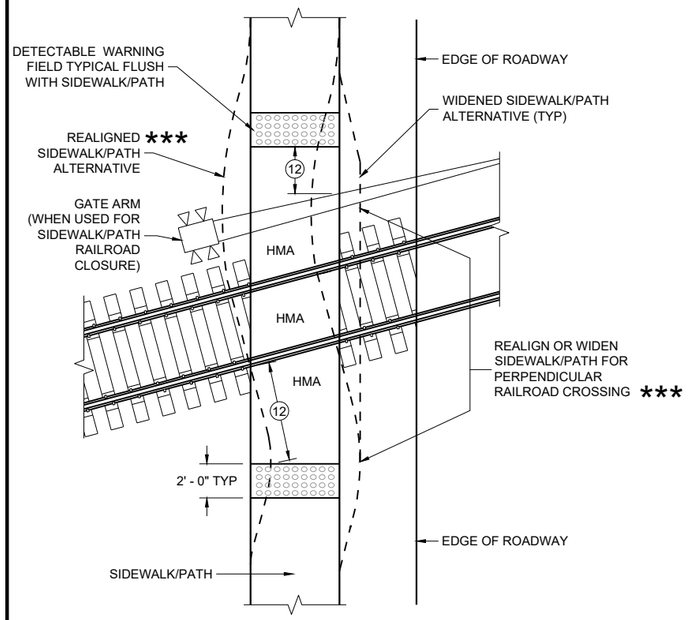
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

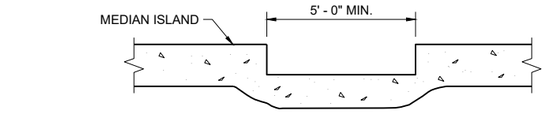
6

SDD 08D05-22d

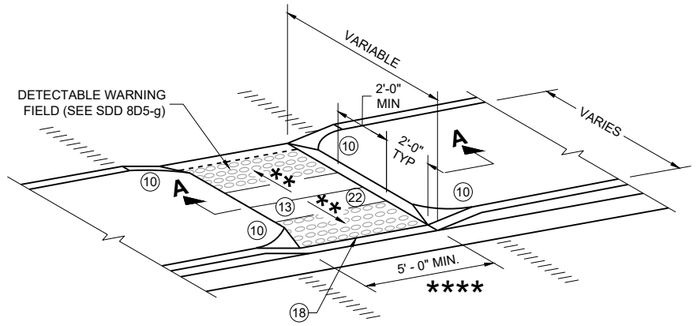


CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

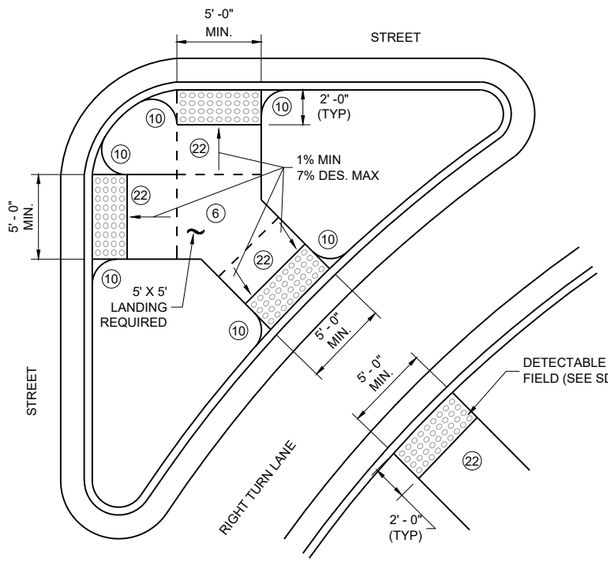
(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH, WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.

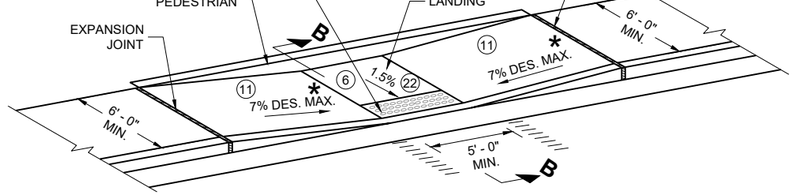
(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.



CURB RAMP TYPE 6

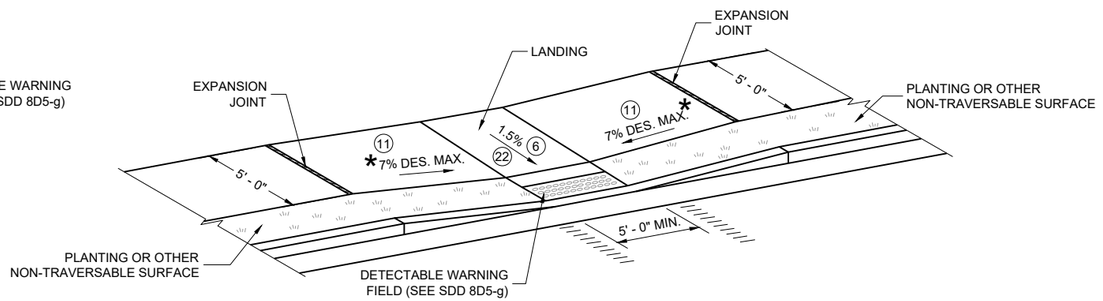
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

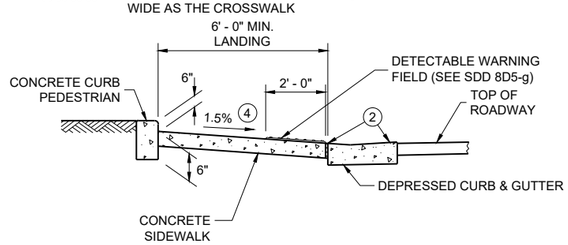


CURB RAMP TYPE 7B

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

LEGEND

═══	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT FIELD LOCATED
ıı ıı ıı ıı	PAVEMENT MARKING CROSSWALK (WHITE)
*	MAXIMUM 8.3%
**	1% MINIMUM (PROVIDE DRAINAGE)
***	DETAILS TO BE DETERMINED BY ENGINEER
****	FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK



SECTION B - B FOR TYPE 7A

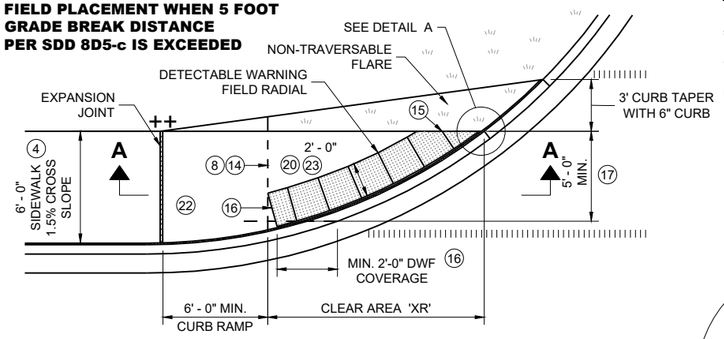
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05-22e

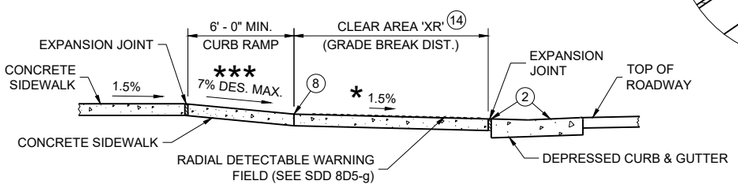
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 4A1

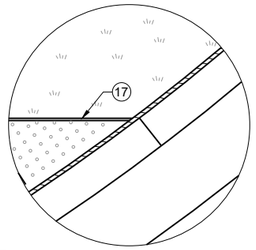
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



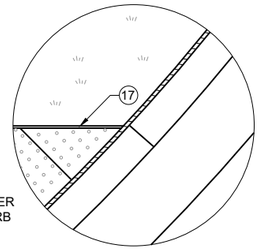
SECTION A - A FOR TYPE 4A1

LEGEND

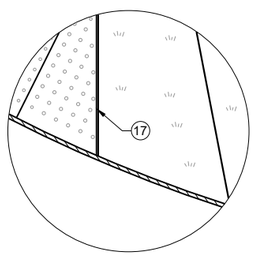
═══	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT SIDEWALK
ıı ıı ıı ıı	PAVEMENT MARKING CROSSWALK (WHITE)
**	WIDTH SHOWN ELSEWHERE IN THE PLANS
***	MAXIMUM 8.3%
++	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



DETAIL A

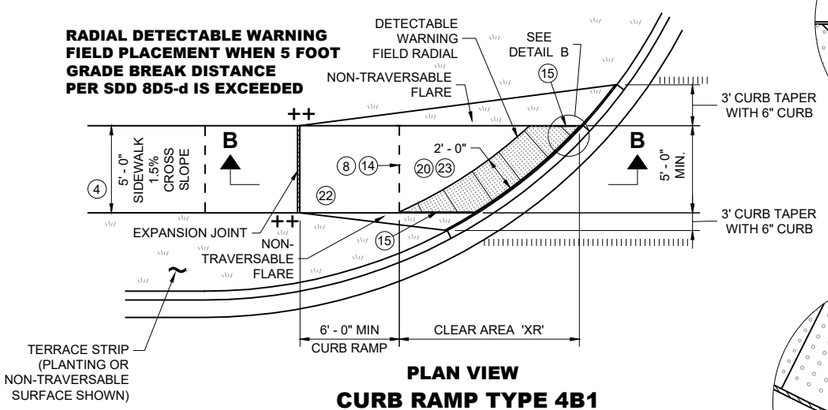


DETAIL B



DETAIL C

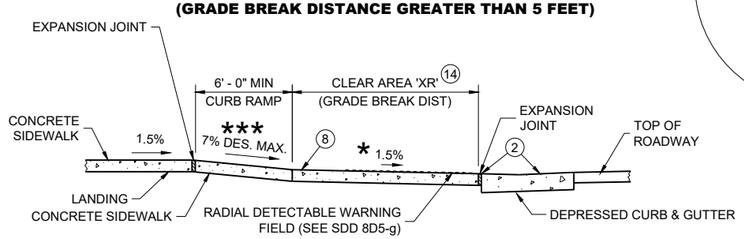
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



PLAN VIEW

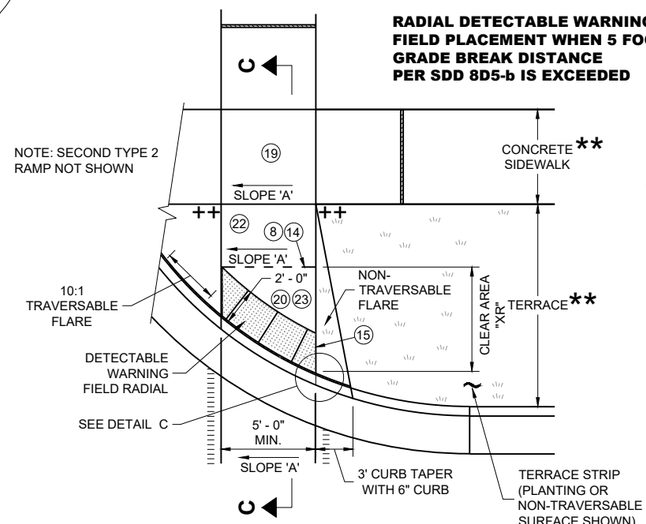
CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

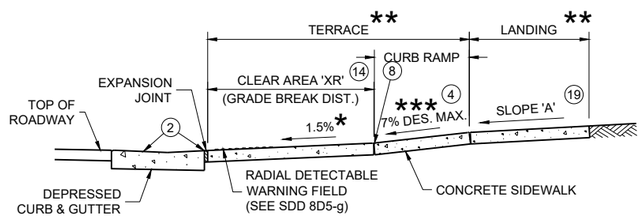


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)



SECTION C - C FOR TYPE 2

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

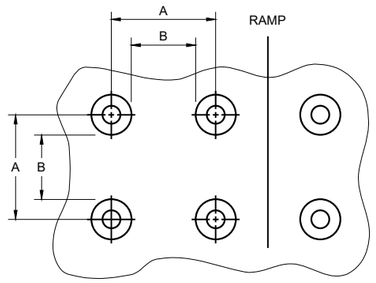
(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

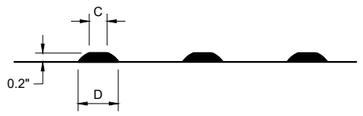
CURB RAMPS
RADIAL DETECTABLE WARNING

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

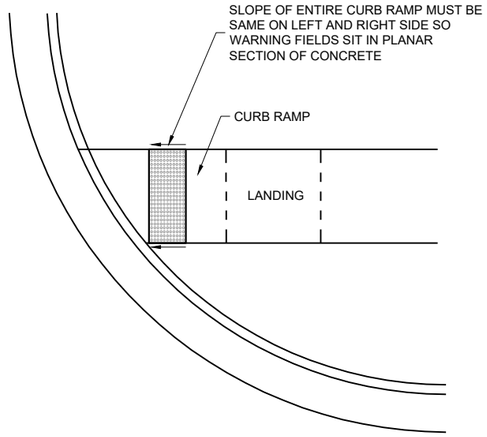
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

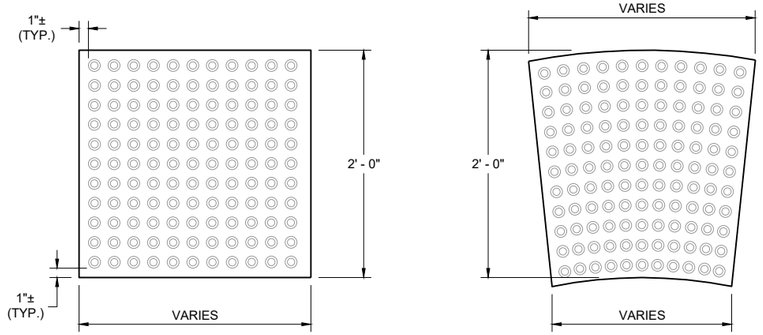
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

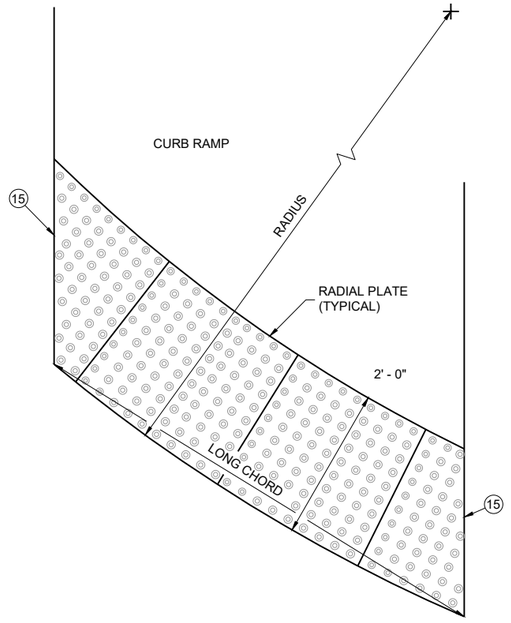
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



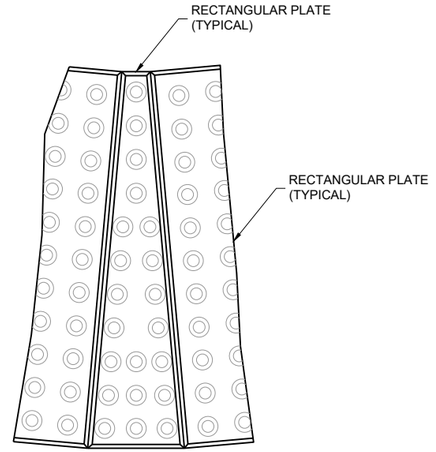
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodney Taylor — <position>

FHWA

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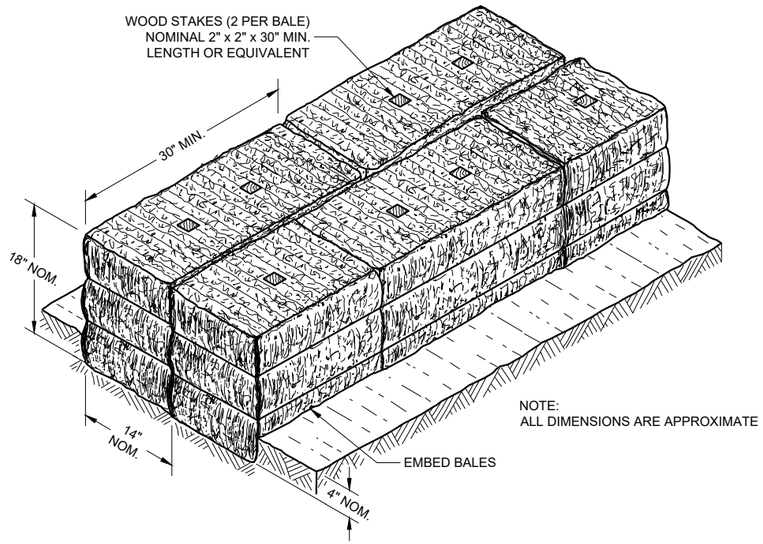
SDD 08D05-22g

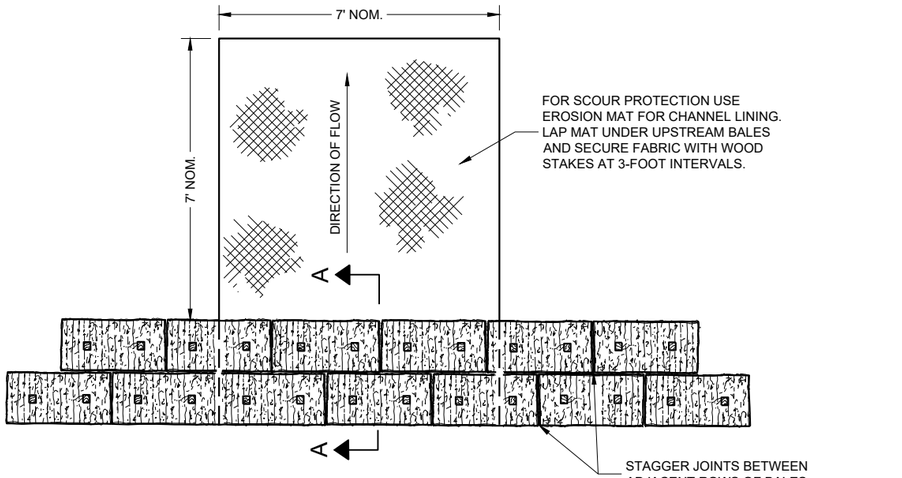
6

SDD 08D05-22g

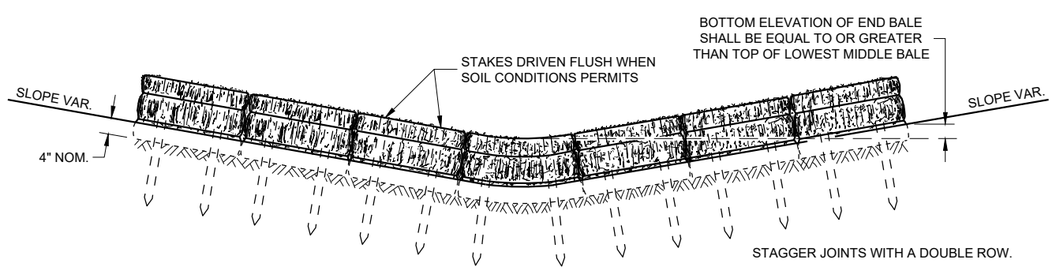
SDD 08E08 Typical Installations of Erosion Bales / Temporary Ditch Checks



SECTION A - A



PLAN VIEW



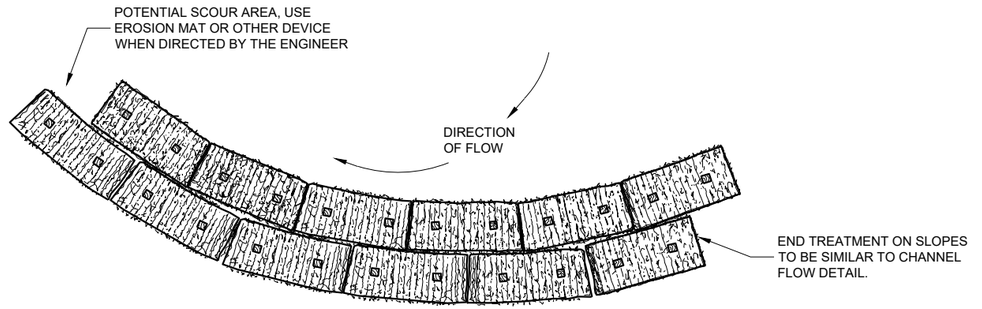
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

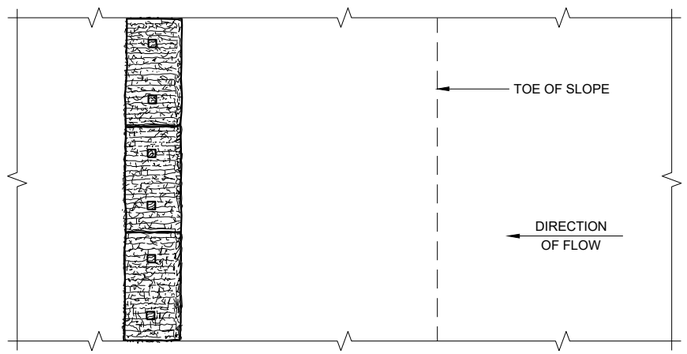
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

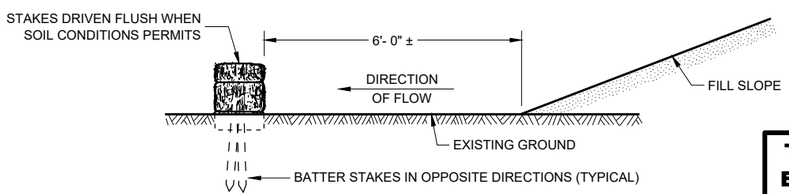


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN ELEVATION



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
6/4/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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SDD 08E08 - 03

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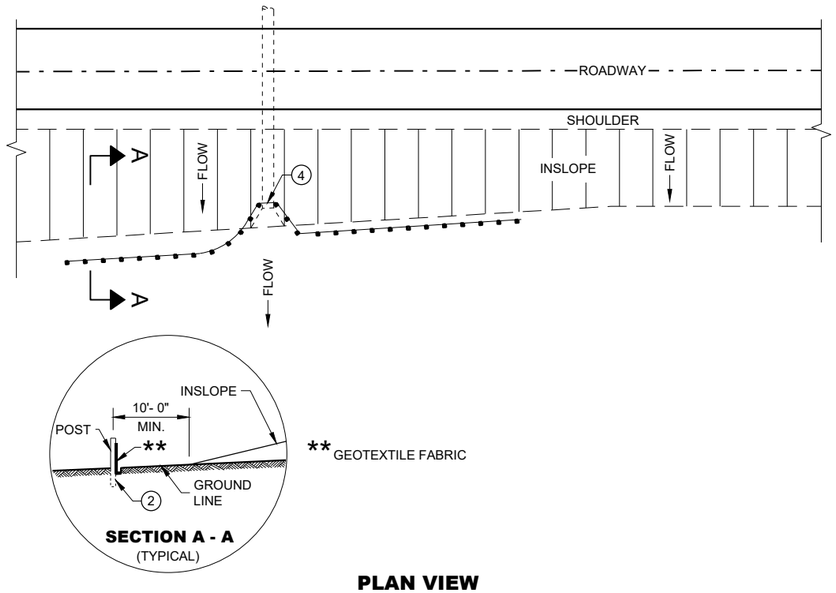
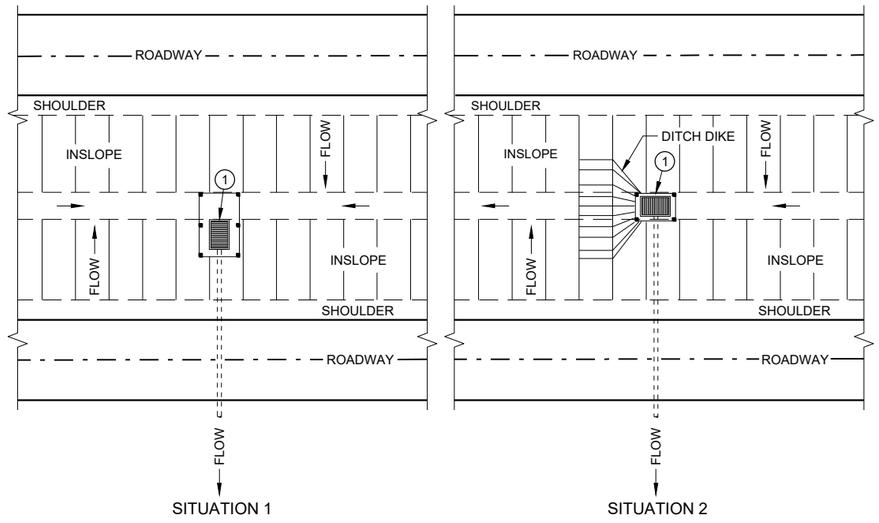
SDD 08E08 - 03



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



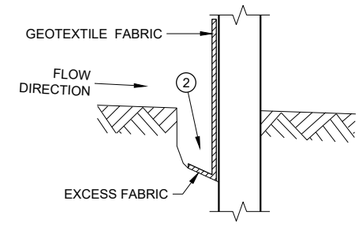
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

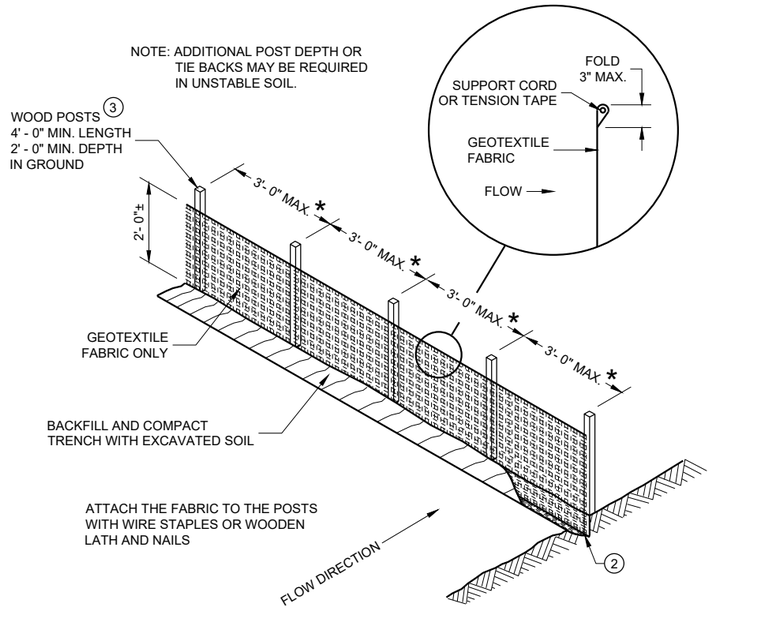
GENERAL NOTES

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

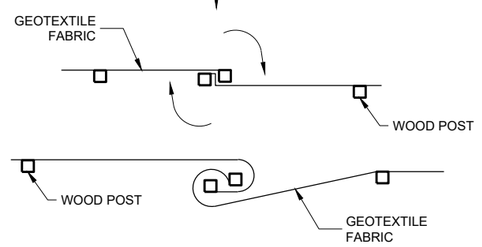
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE AND 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 ⅛" X 1 ⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



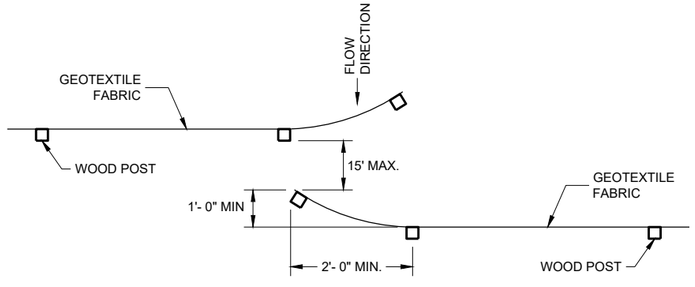
TRENCH DETAIL



SILT FENCE

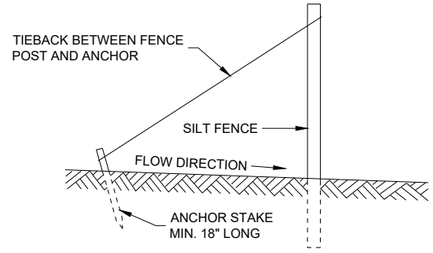


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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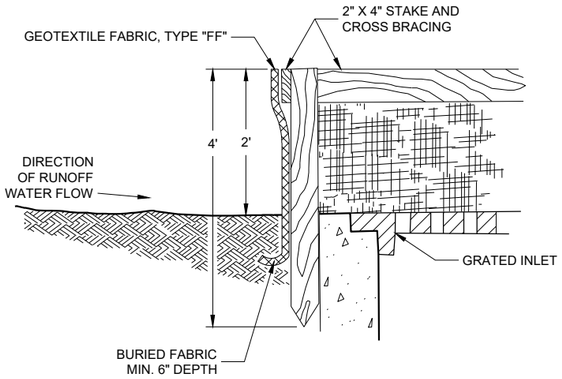
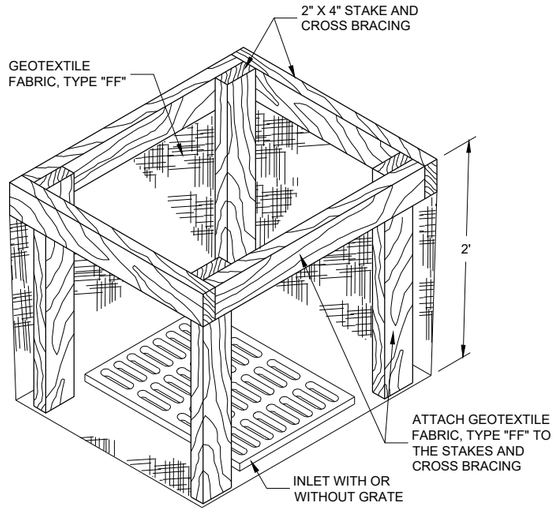
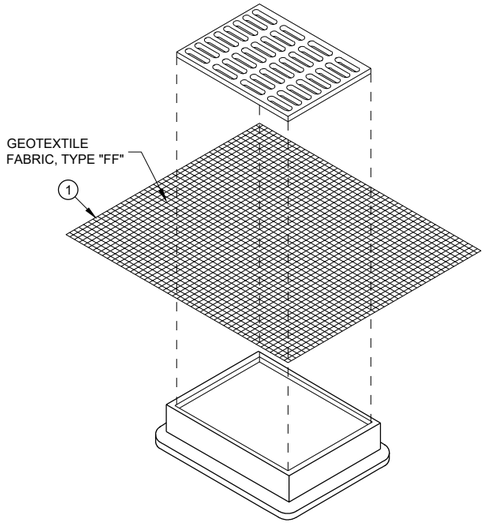
SDD 08E09 - 06

SDD 08E10 Inlet Protection, Types A, B, C and D



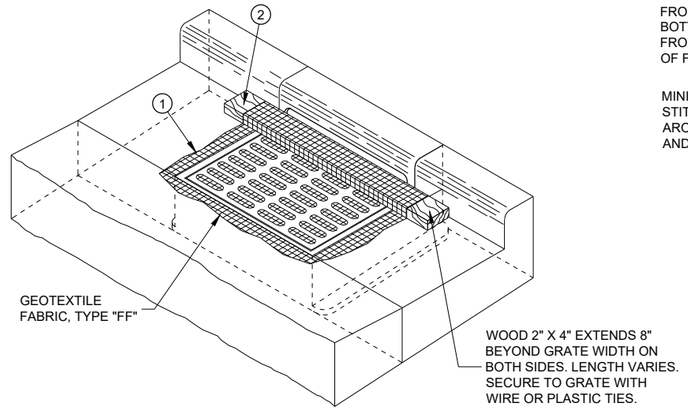


INLET PROTECTION, TYPE "A"

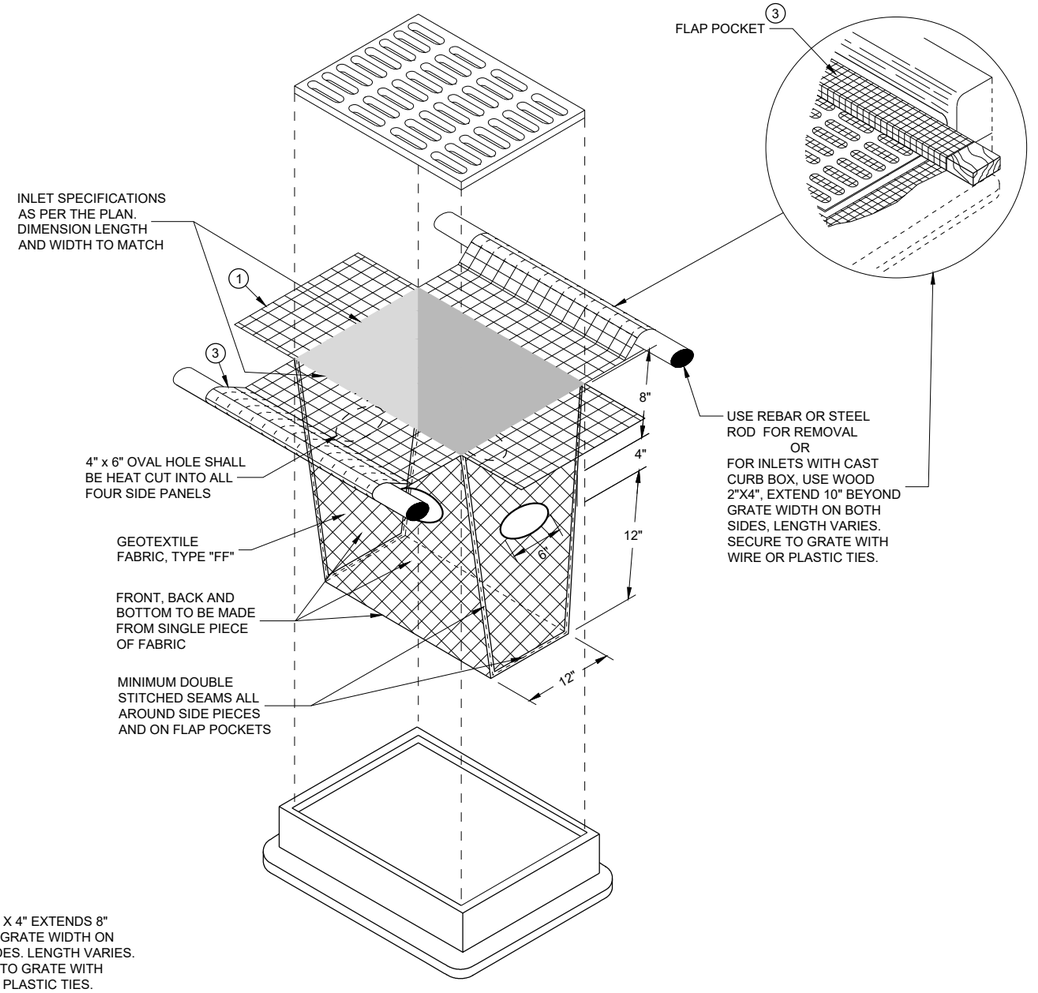


INLET PROTECTION, TYPE "B" (WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE "C" (WITH CURB BOX)



INLET PROTECTION, TYPE "D"

(CAN BE INSTALLED IN ANY INLET WITH OR WITHOUTA CURB BOX AS PER NOTE (2))

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPES B & C

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

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

TYPE D

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

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

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

INLET PROTECTION TYPES A, B, C AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 — DATE
/S/ Beth Cannestra — ROADWAY STANDARDS DEVELOPMENT ENGINEER

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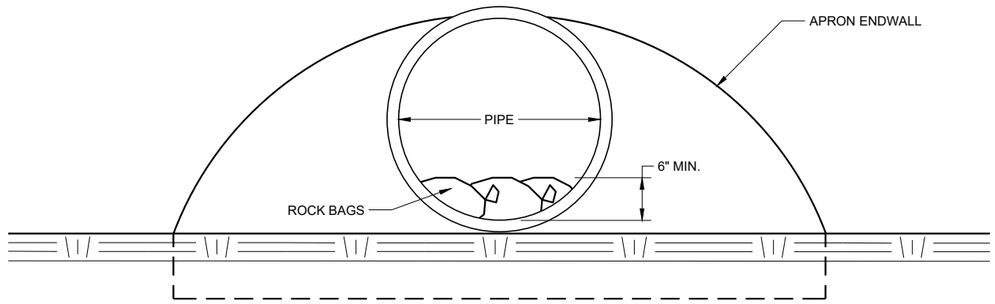
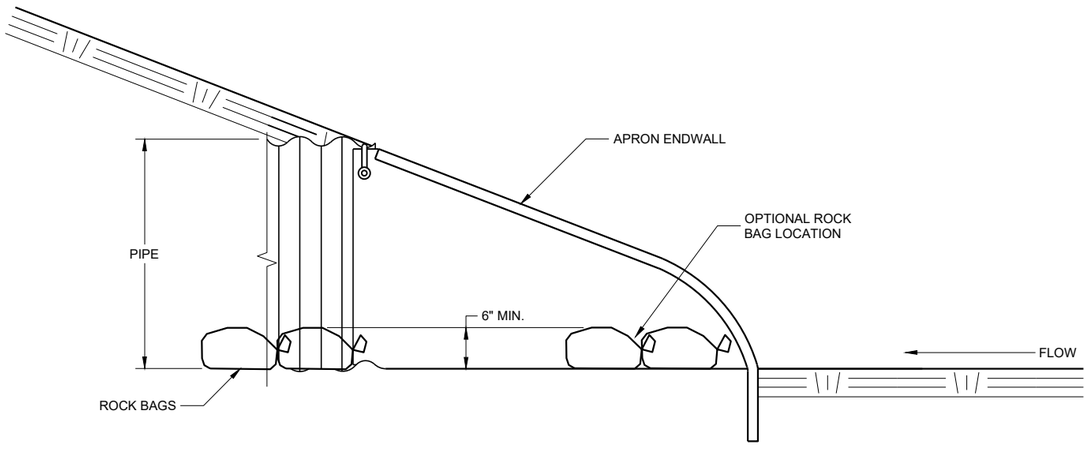
SDD 08E10 - 02



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 ENGINEER
FHWA	

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SDD 08E15 - 01

SDD 8F1 Apron Endwalls for Culvert Pipe

METAL APRON ENDWALLS

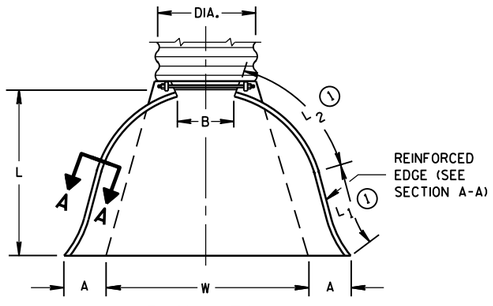
PIPE DIA. (IN.)	MIN. THICK. (inches)		DIMENSIONS (inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L_1 ①	L_2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 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

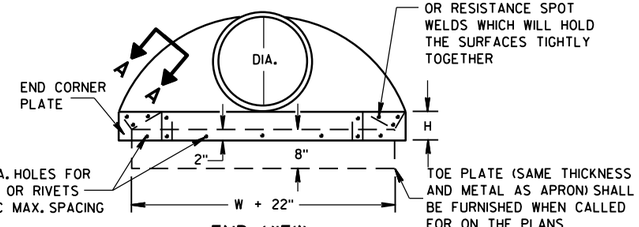
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 7/8	72 7/8	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

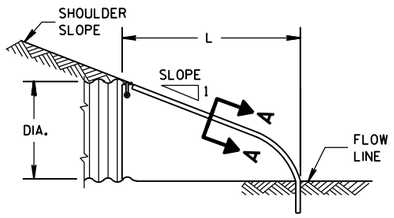
*MINIMUM
**MAXIMUM



PLAN VIEW

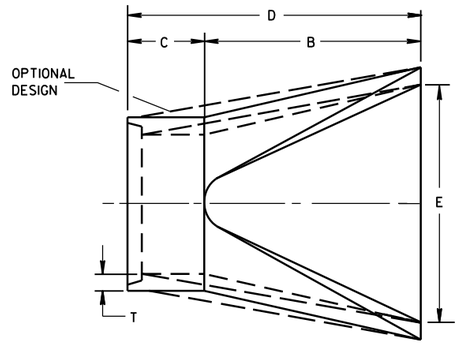


END VIEW

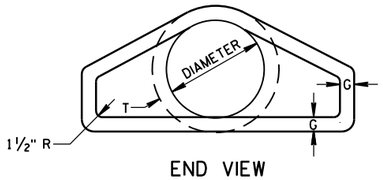


SIDE ELEVATION

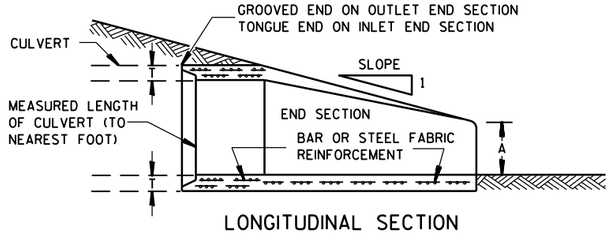
METAL ENDWALLS



PLAN

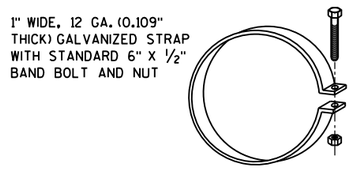


END VIEW



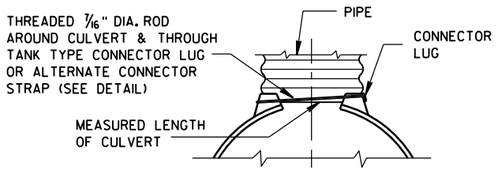
LONGITUDINAL SECTION

CONCRETE ENDWALLS

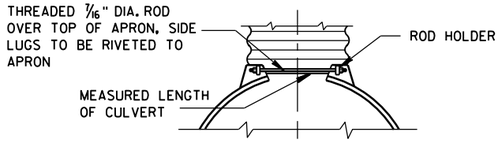


ALTERNATE FOR TYPE 1 CONNECTION

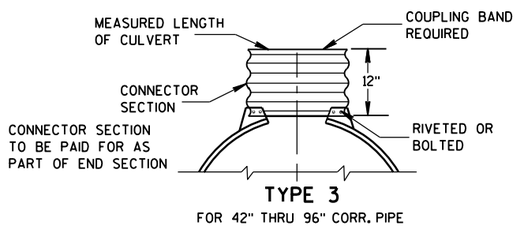
END SECTION CONNECTOR STRAP



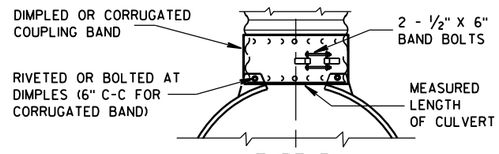
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

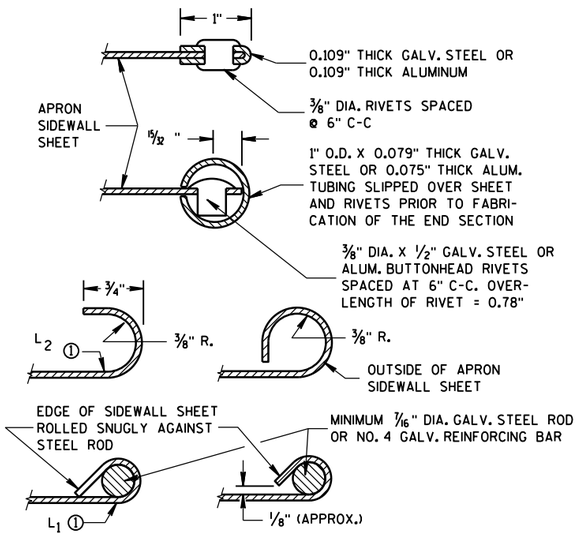
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

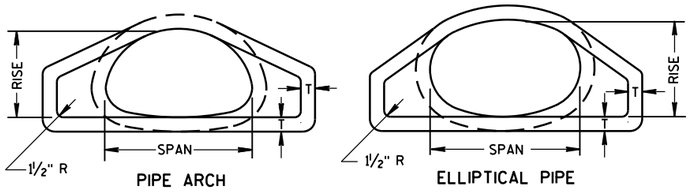
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

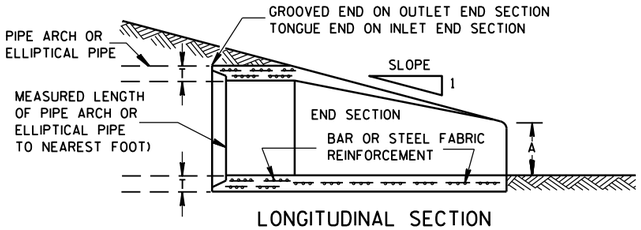
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-30-94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

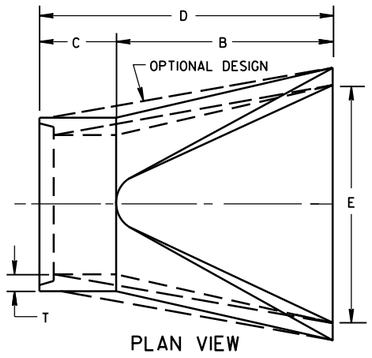
SDD 8F2 Apron Endwalls for Pipe Arch and Elliptical Pipe



END VIEW

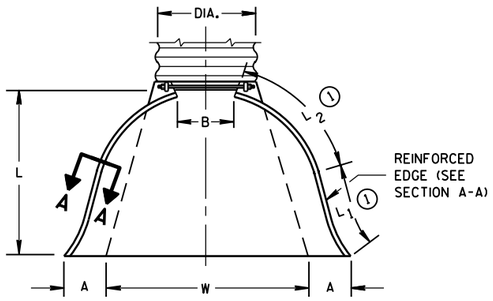


LONGITUDINAL SECTION

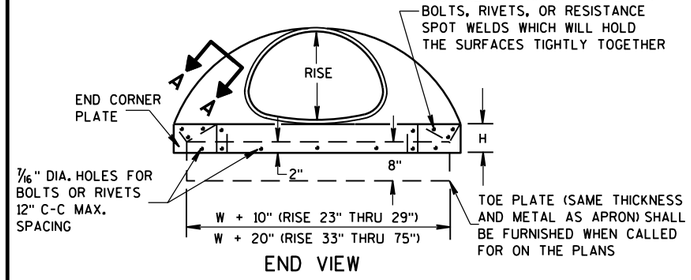


PLAN VIEW

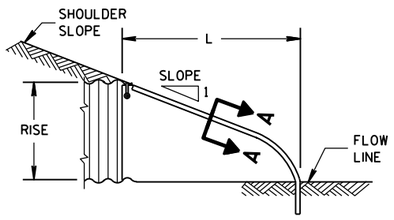
CONCRETE ENDWALLS



PLAN VIEW

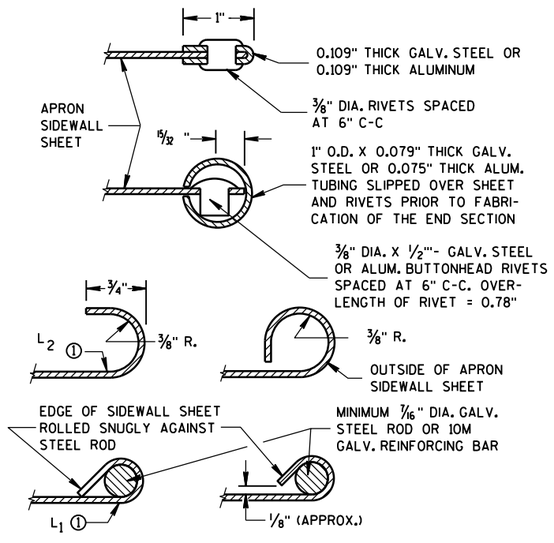


END VIEW



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	19 3/8	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	37 5/8	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	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

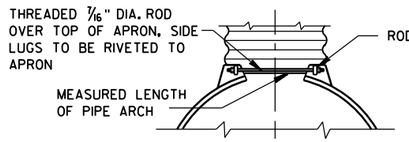
REINFORCED CONCRETE PIPE ARCH

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 1/16	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

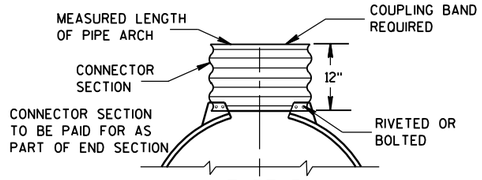
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



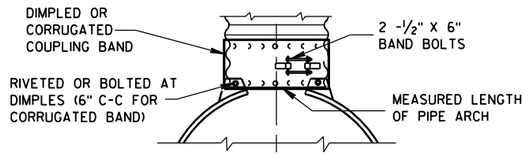
TYPE 2

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.

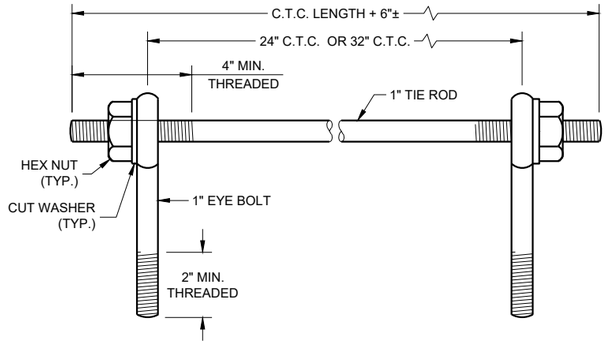
① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

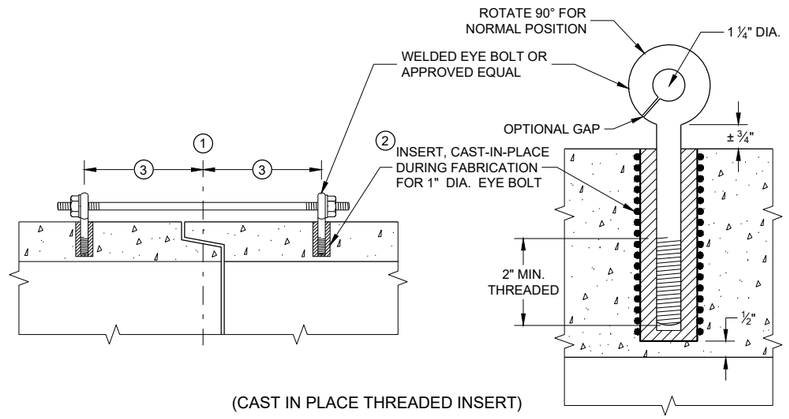
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

SDD 08F04 Joint Ties for Concrete Pipe and Concrete Collar Detail



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

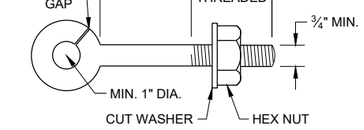
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

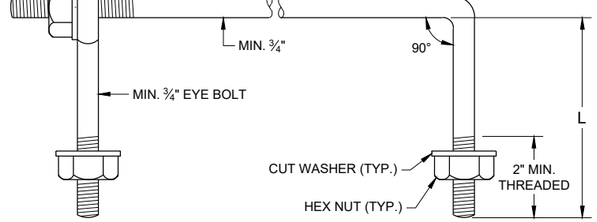
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

1. CENTER LINE 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 PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
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 ½ INCH OF THE INNER SURFACE OF THE PIPE.
7. EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

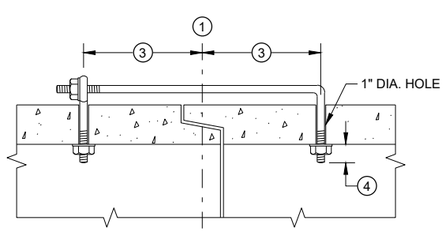


EYE BOLT 7

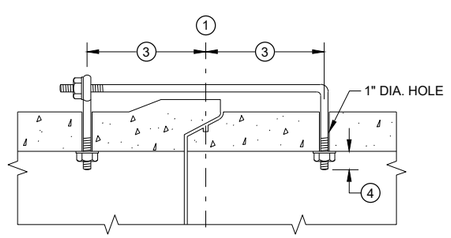
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

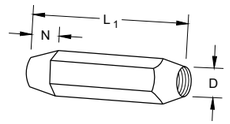
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



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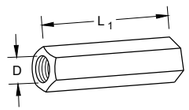
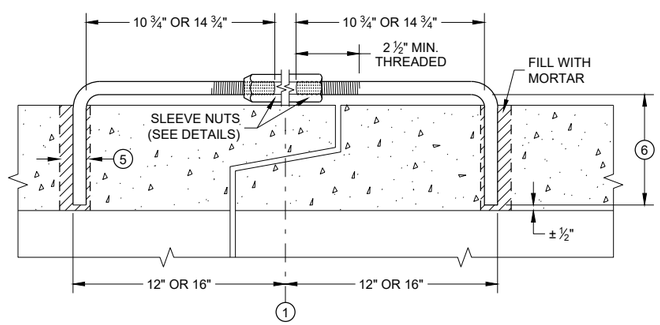


PLAIN

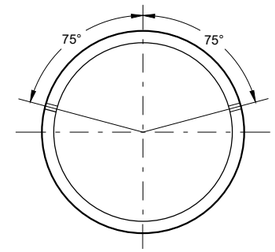
RIGHT AND LEFT THREADS

SLEEVE NUTS



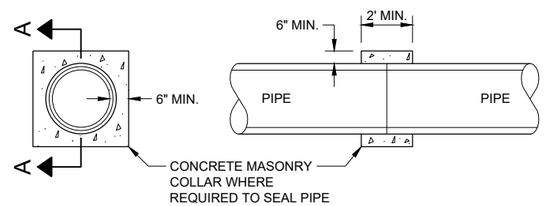
LONGITUDINAL SECTION

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

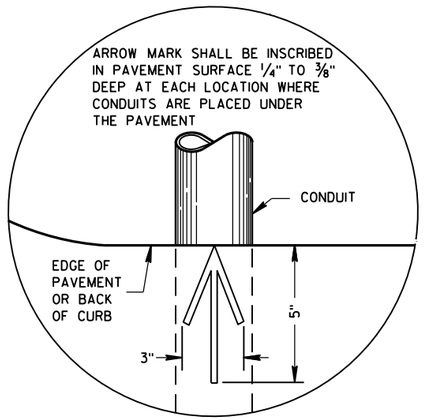
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

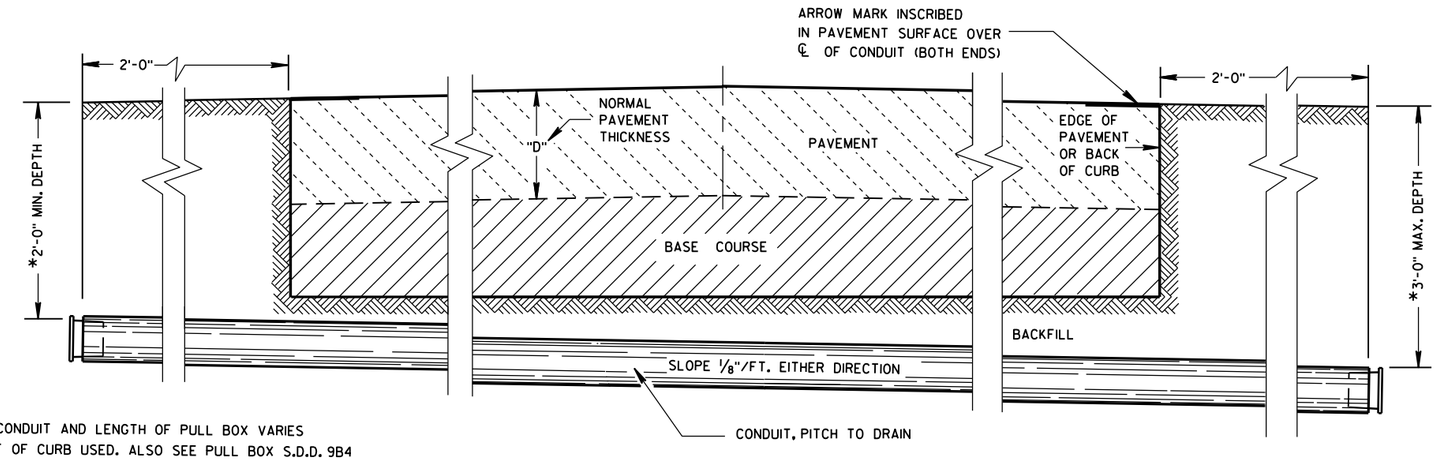
FHWA

6
SDD 08F04 - 08



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

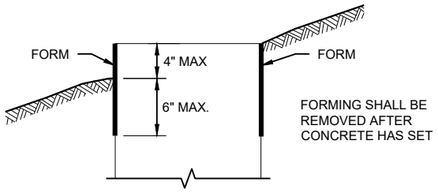
APPROVED
March, 2017
DATE
FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

6
S.D.D. 9 B 2-10

SDD 9C2 Concrete Bases, Types 1, 2, 5 & 6

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

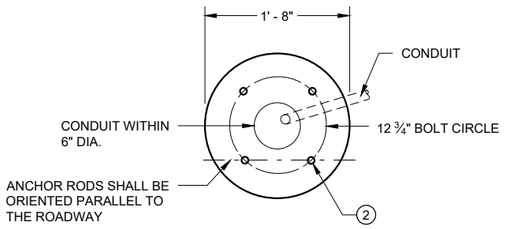
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

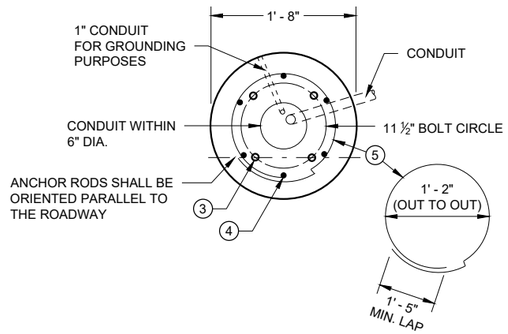
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

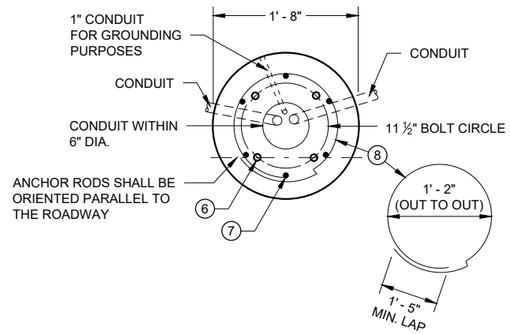
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

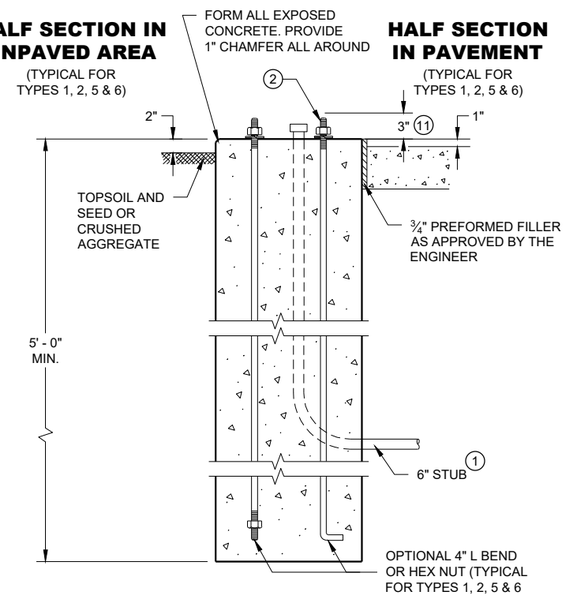
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

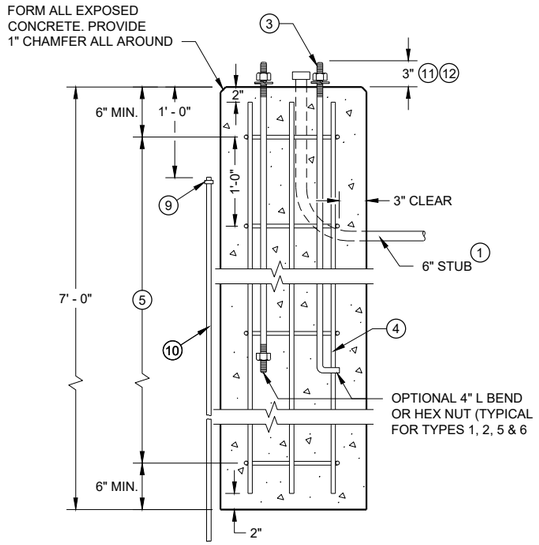
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

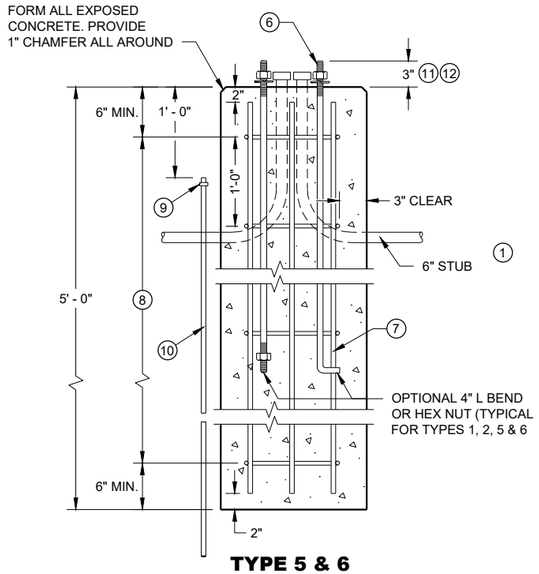
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

6
SDD 09C02 - 09

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

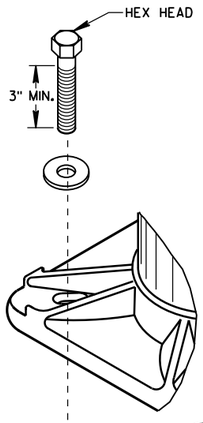
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

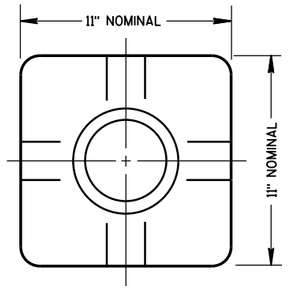
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

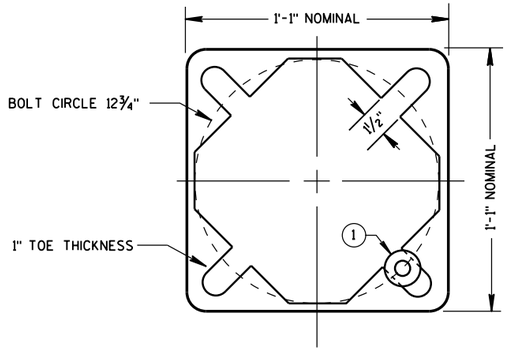
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

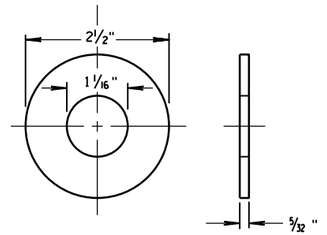




TOP VIEW
(PEDESTAL BASE)

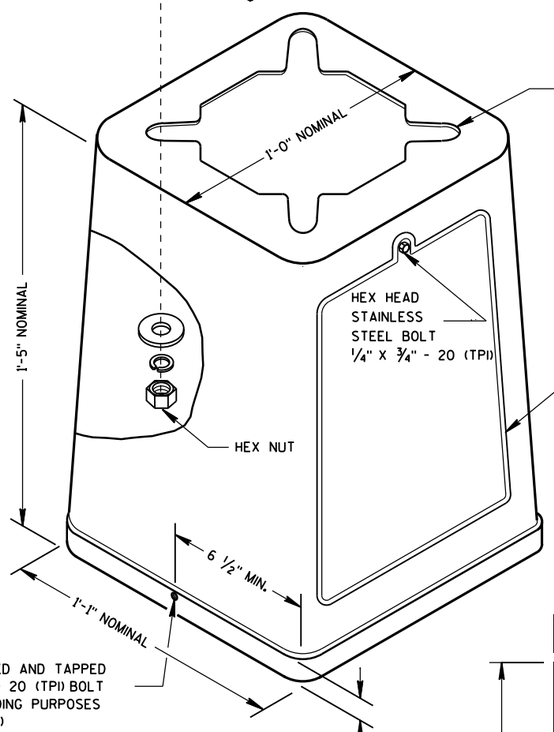


BOTTOM VIEW
(PEDESTAL BASE)

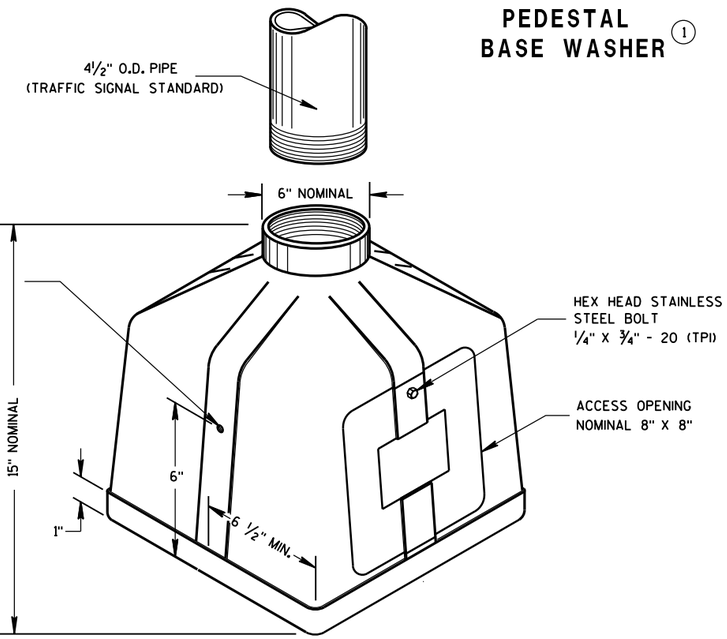


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

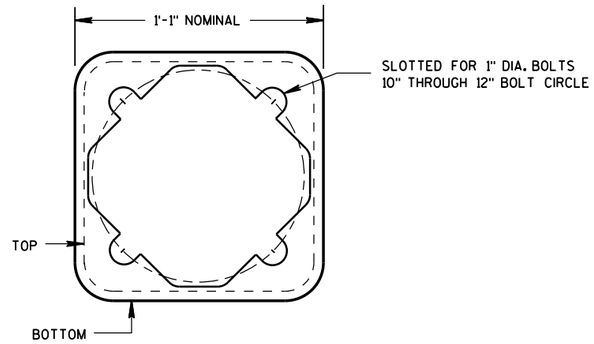
PEDESTAL BASE WASHER (1)



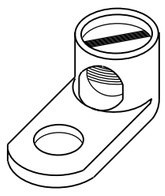
ISOMETRIC VIEW



ISOMETRIC VIEW
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

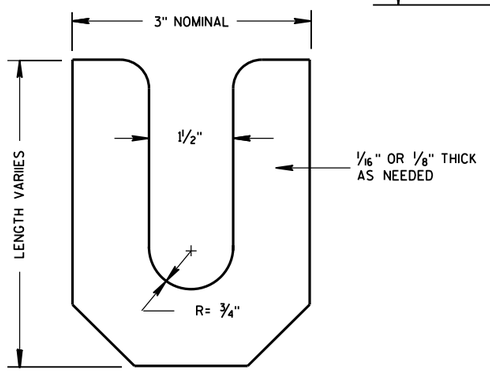


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

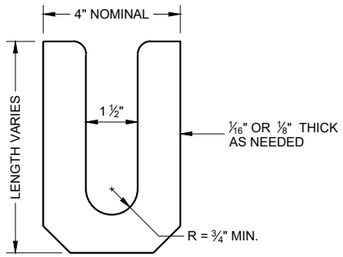
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



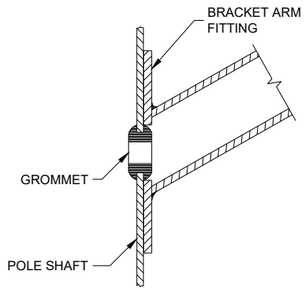
LEVELING SHIM

TRANSFORMER/PEDESTAL BASES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	124

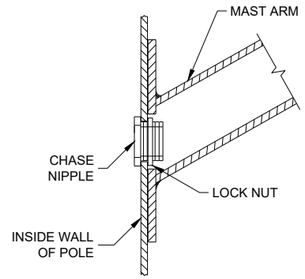
SDD 09E01-g Hardware Details for Pole Mounting



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

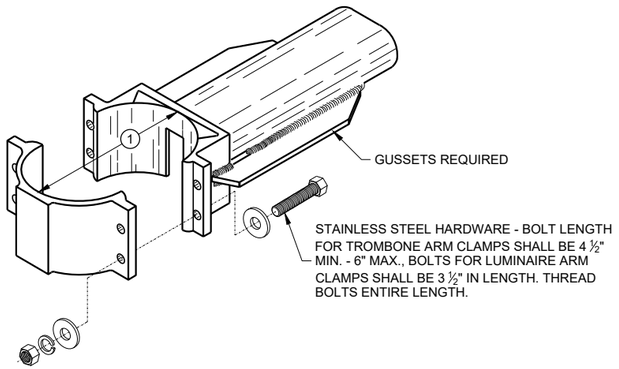
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

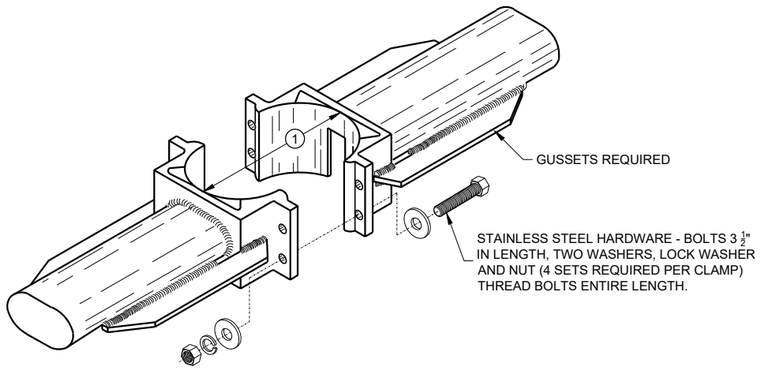
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

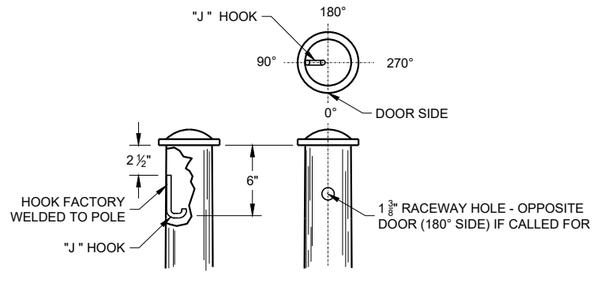
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



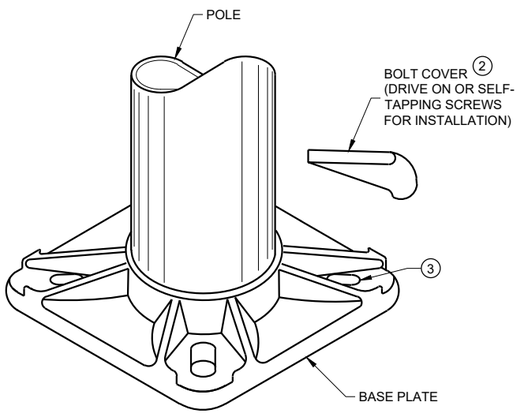
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



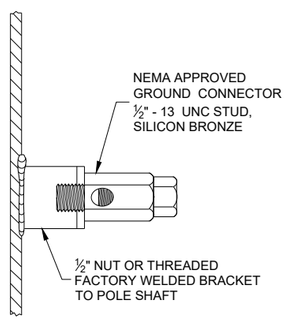
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

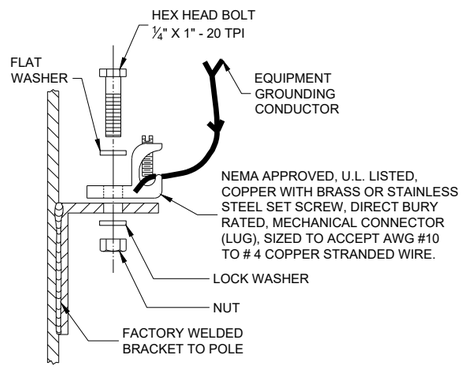


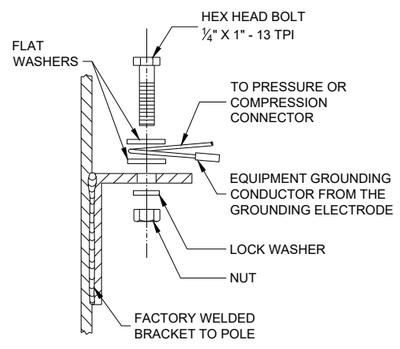
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

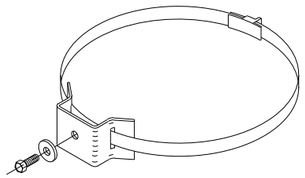
APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

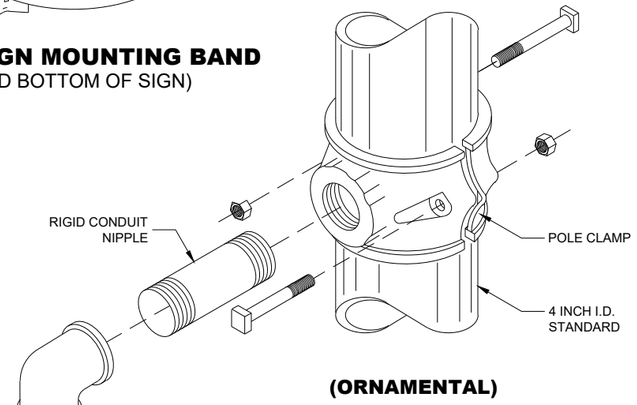
FHWA

6
SDD 09E01 - 15g

SDD 09E07 Traffic Signal Standard Pedestrian and Flasher Typical Mounting Details



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



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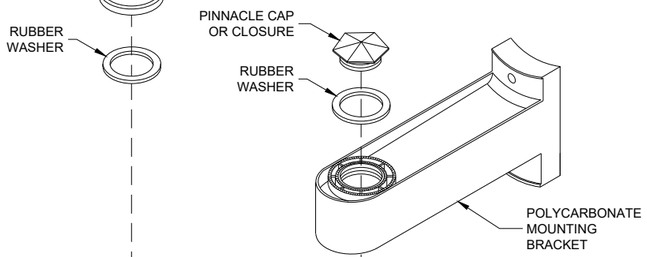

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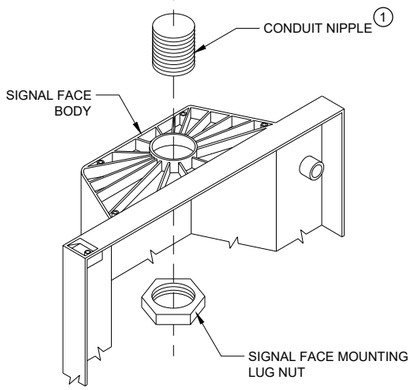
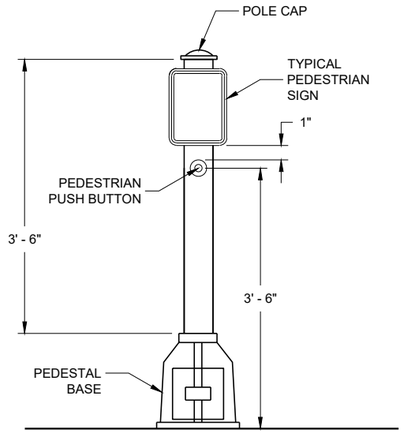


SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

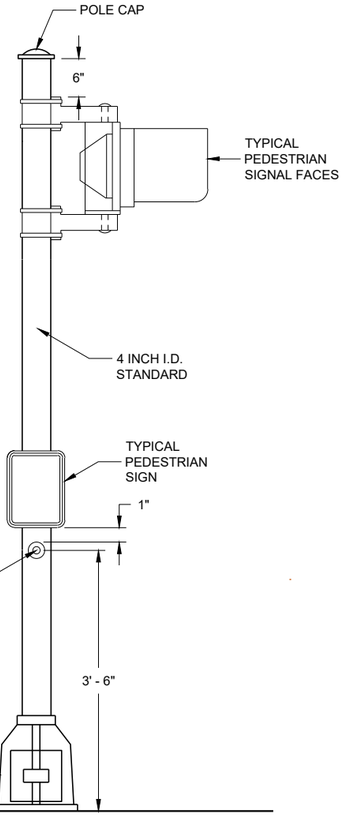
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

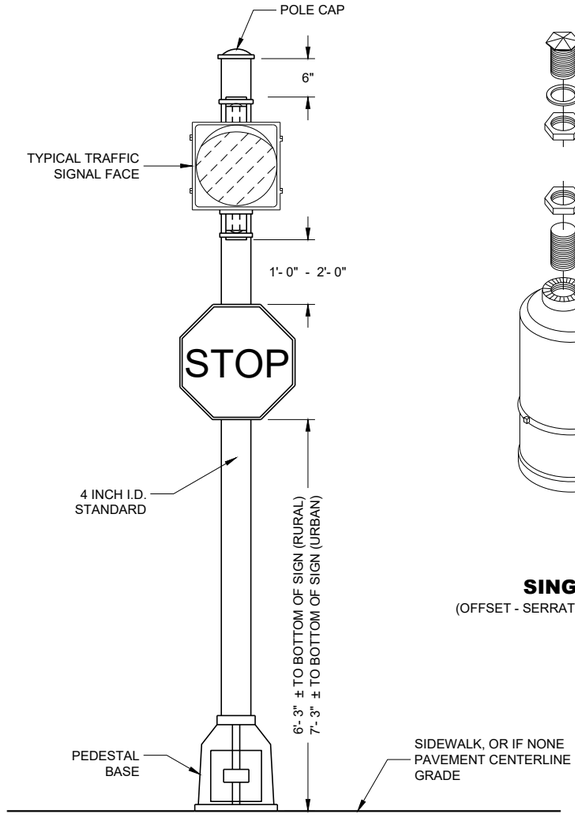
PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

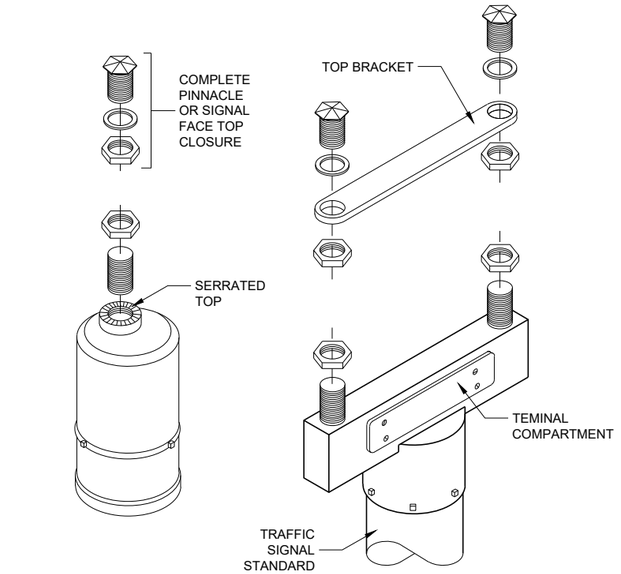
(1) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACESAND BRACKET ENDS.



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

6
SDD 09E07 - 06

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.

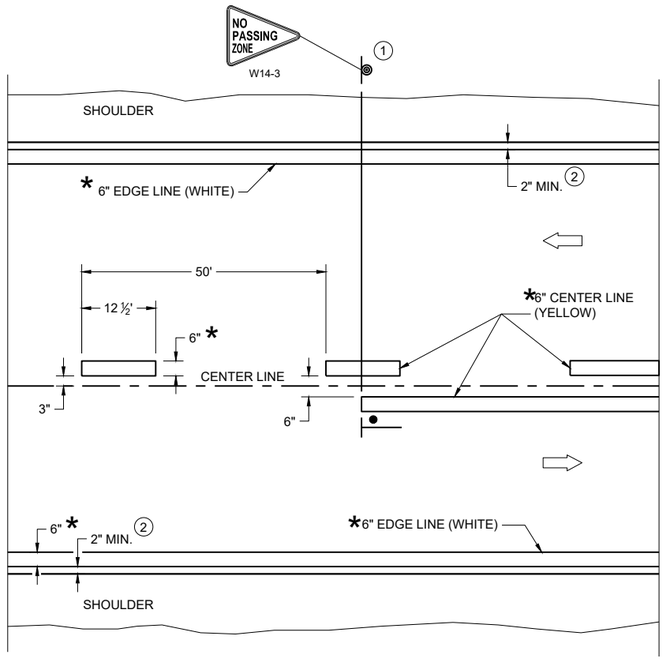
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

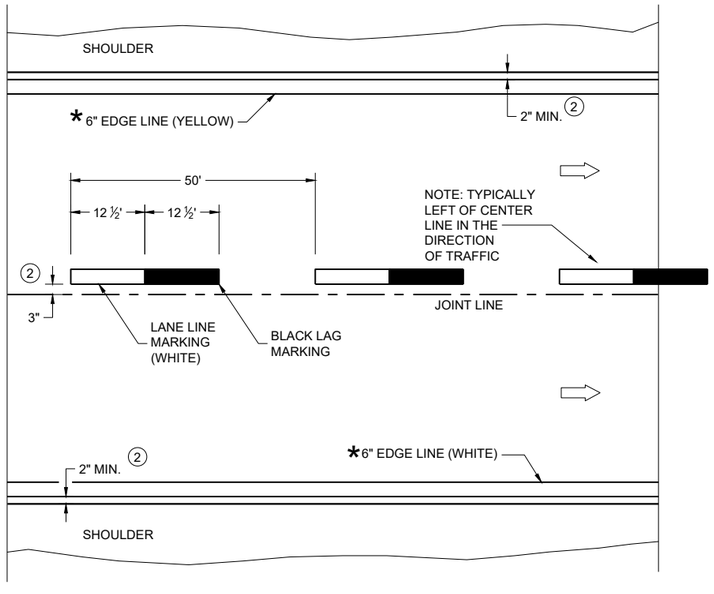
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

SDD 15C08-24a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

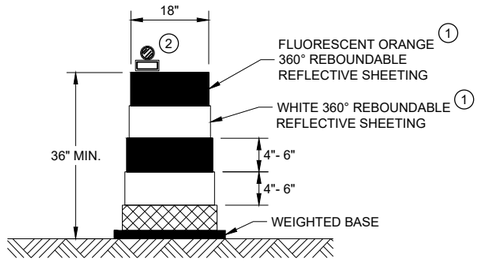
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

SDD 15C08-24a

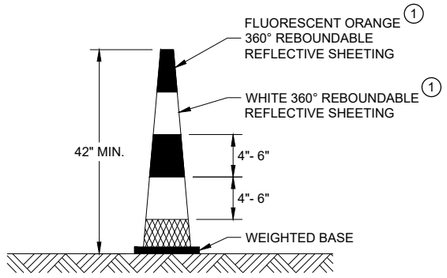
GENERAL NOTES

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

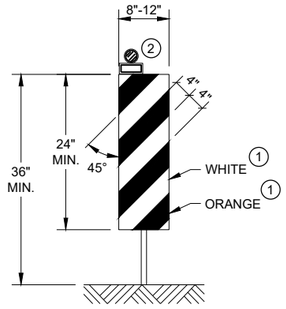
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

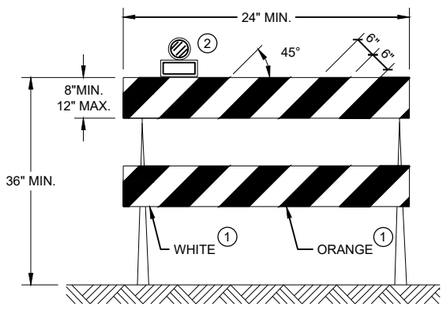
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



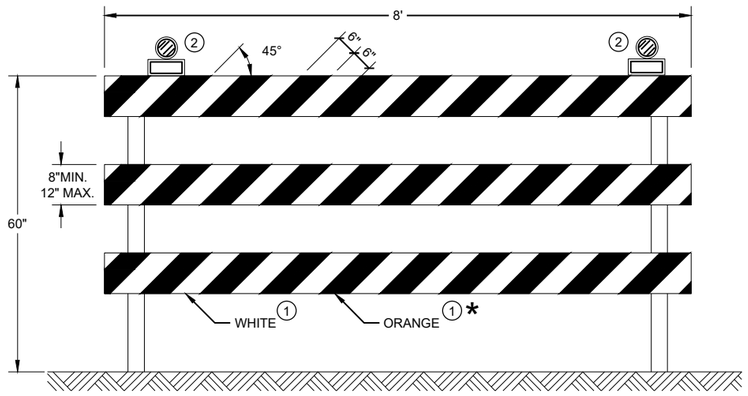
VERTICAL PANEL

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
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C11 - 10b

SDD 15C12-a Traffic Control for Lane Closure With Flagging Operation

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

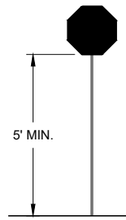
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



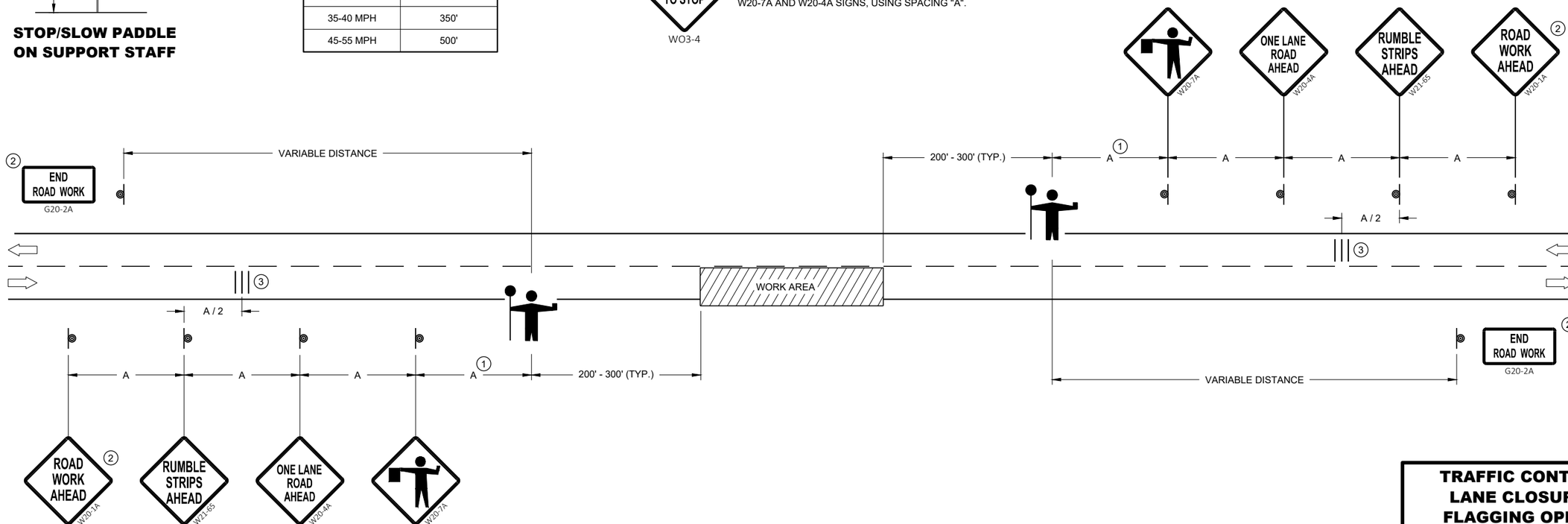
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15C12 - 09a

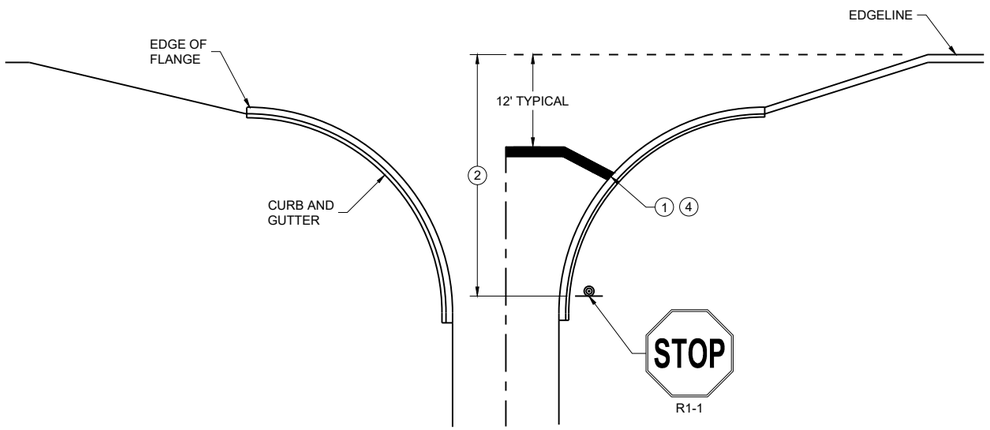
6

SDD 15C12 - 09a

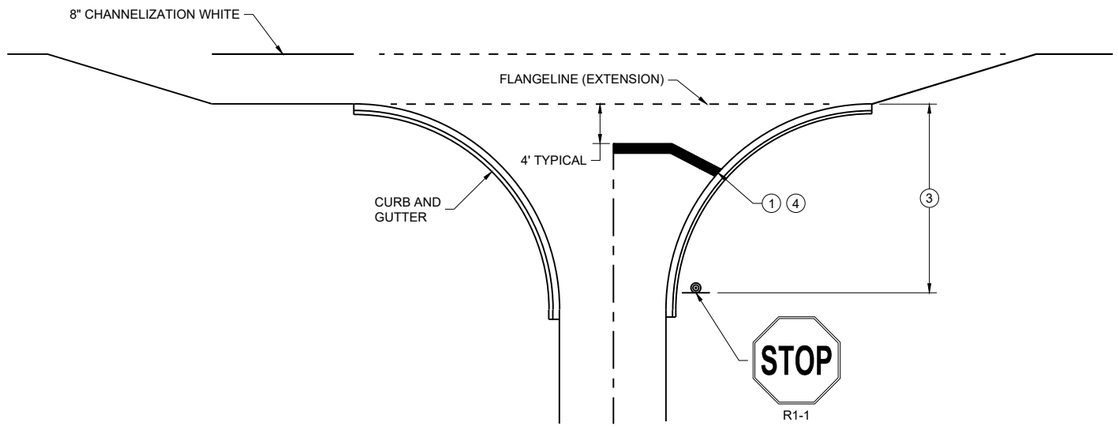
GENERAL NOTES

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

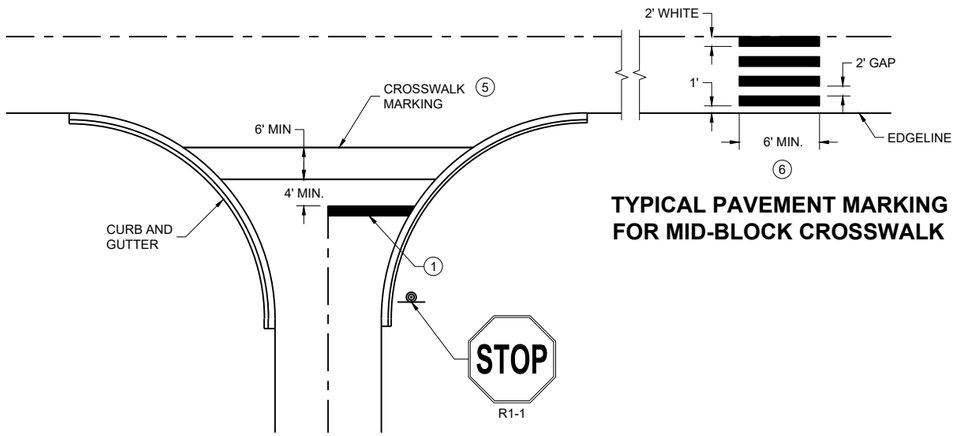
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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.
6. POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

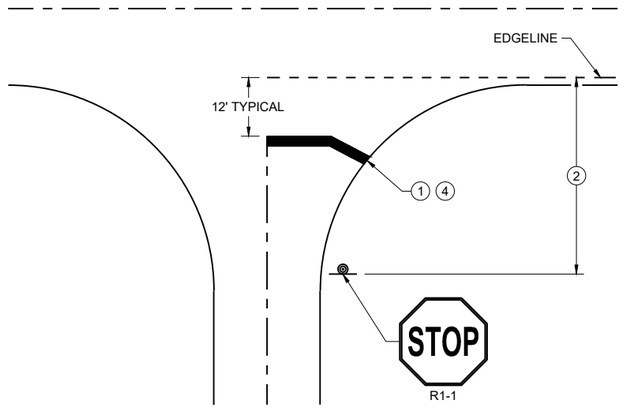


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK (5)

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS 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
March 2024 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

6

SDD 15C33-05

6

SDD 15C33-05

SDD 15D28 Traffic Control, Work on Shoulder or Parking Lane, Undivided Roadway

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.

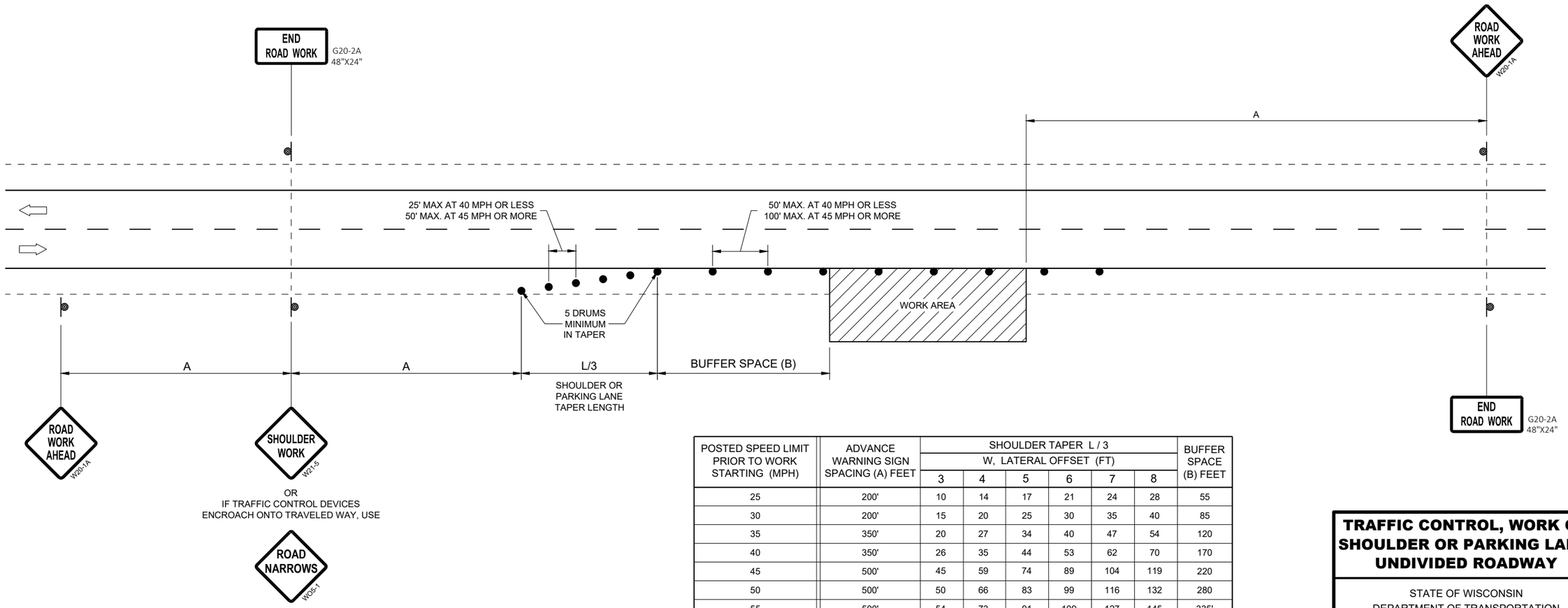
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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 TRAFFIC SAFETY ENGINEER

FHWA

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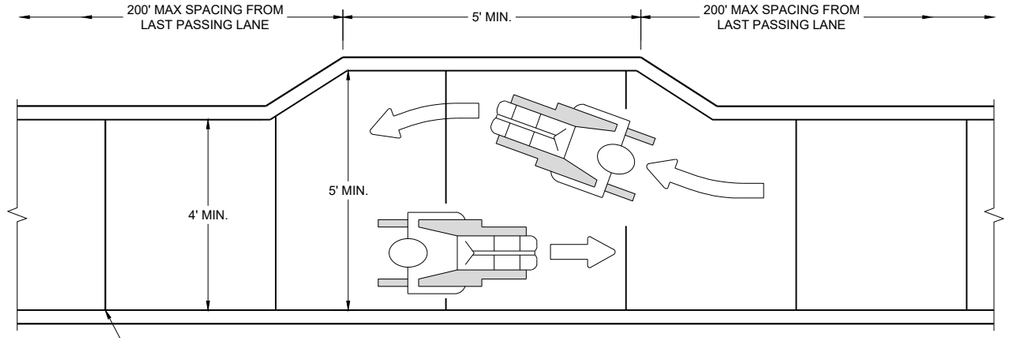
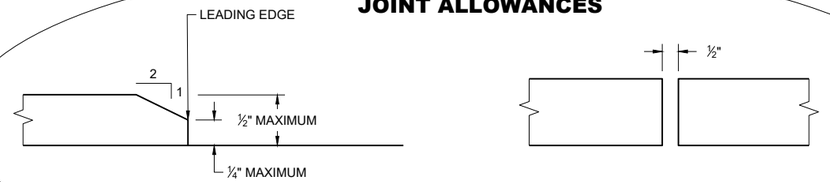
SDD 15D28 - 04



NARROW SIDEWALK PASSING DETAIL

JOINT ALLOWANCES



MAXIMUM VERTICAL GAP

MAXIMUM HORIZONTAL GAP

GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

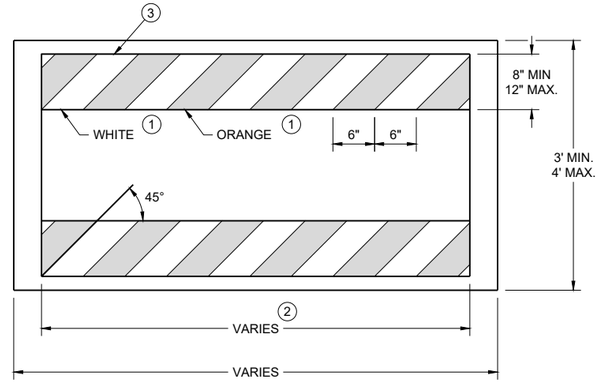
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

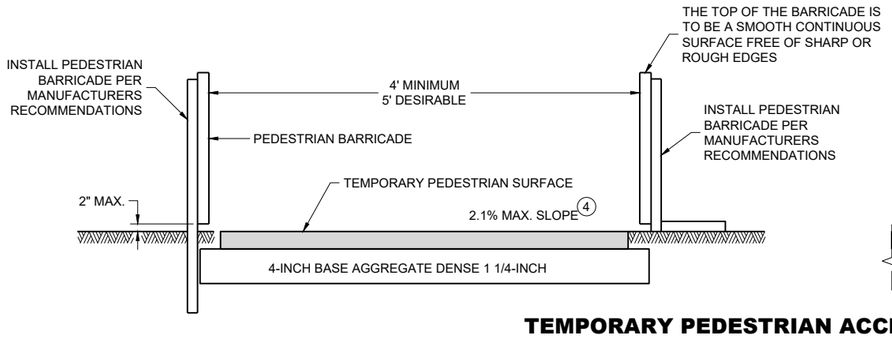
(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

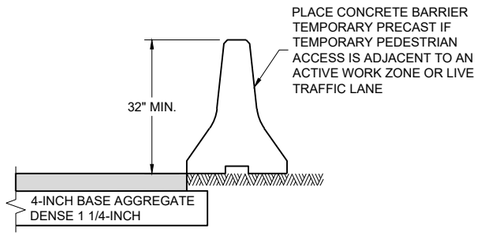
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

(4) WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

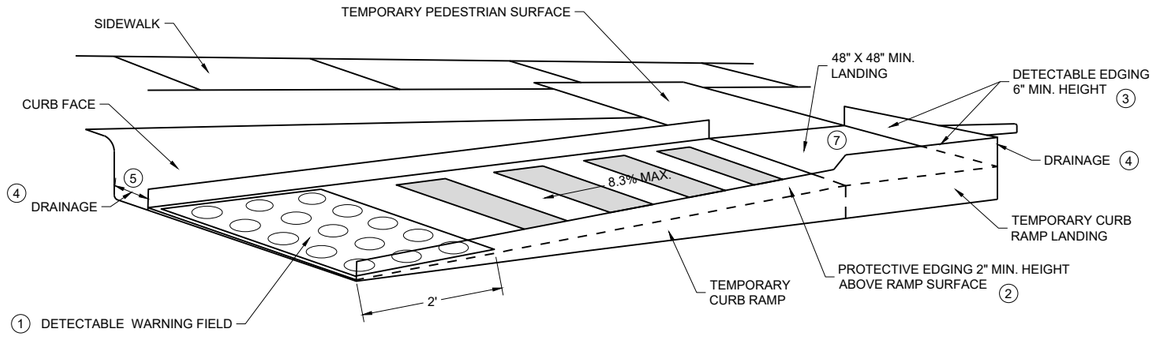


TEMPORARY PEDESTRIAN BARRICADE *





TEMPORARY PEDESTRIAN ACCESS



PERSPECTIVE VIEW

GENERAL NOTES

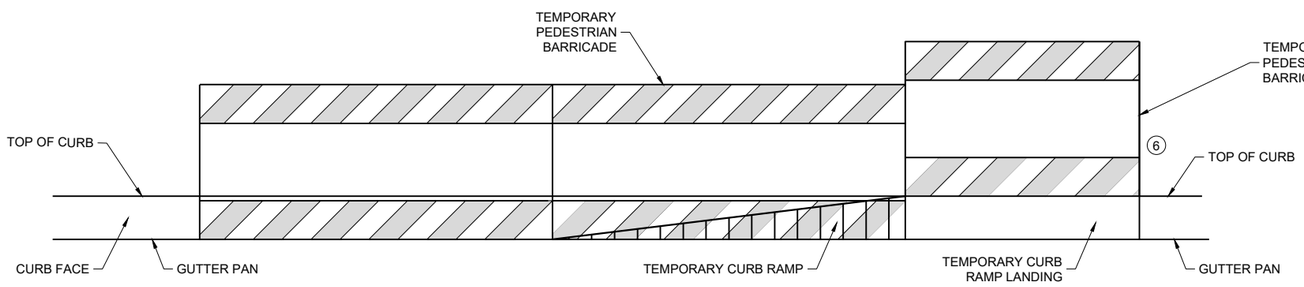
CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

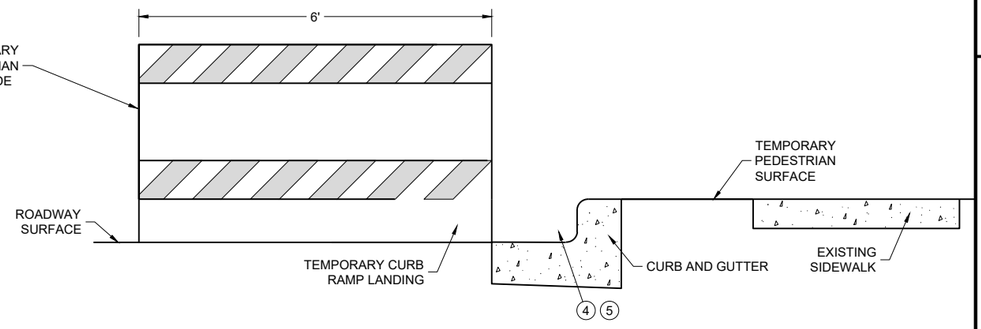
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

1. INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
2. PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
5. ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
6. IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
7. LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



FRONT VIEW



SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

6

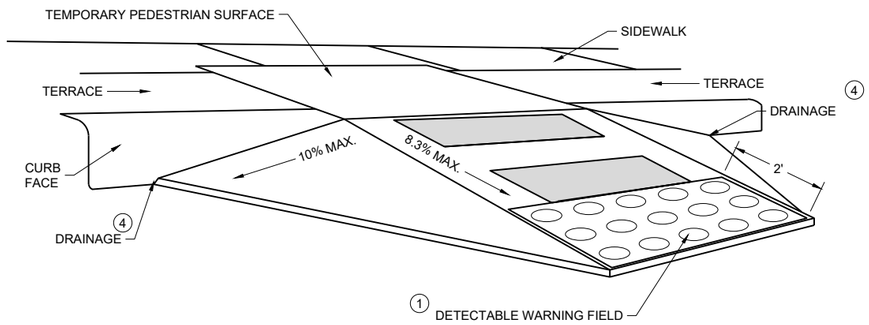
SDD 15D30-11b

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

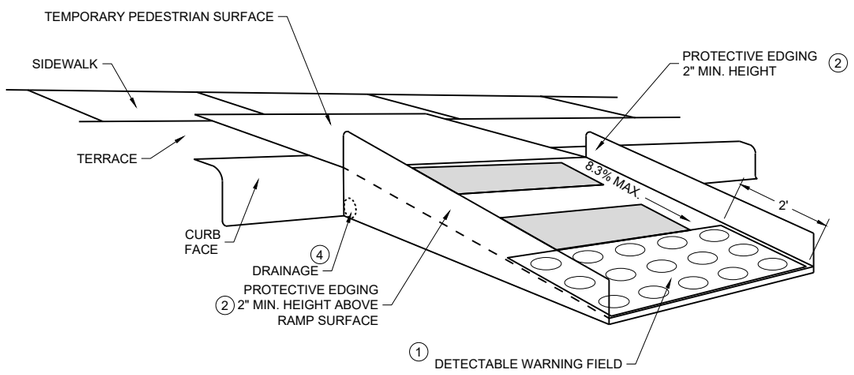
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30-11b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

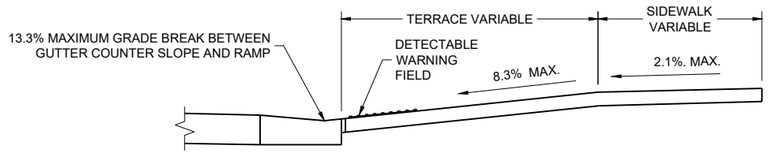
(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

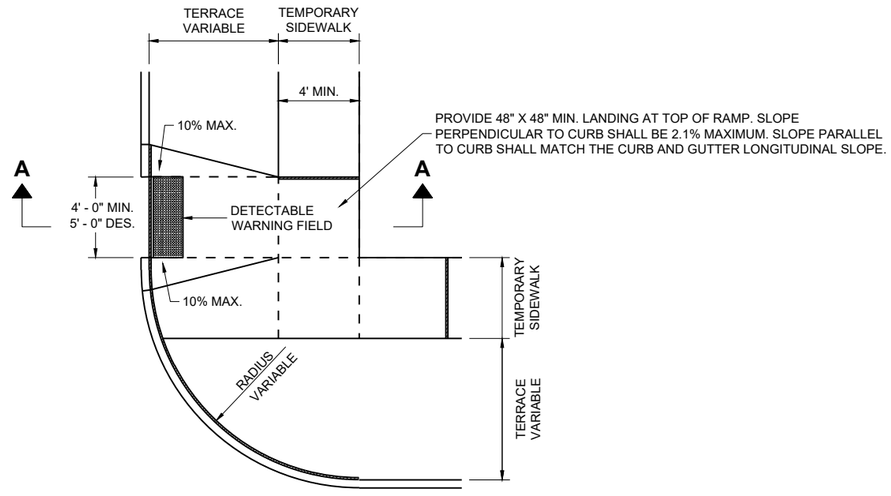
(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

6
SDD 15D30-11c

GENERAL NOTES



SECTION A - A



PLAN VIEW
TEMPORARY TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

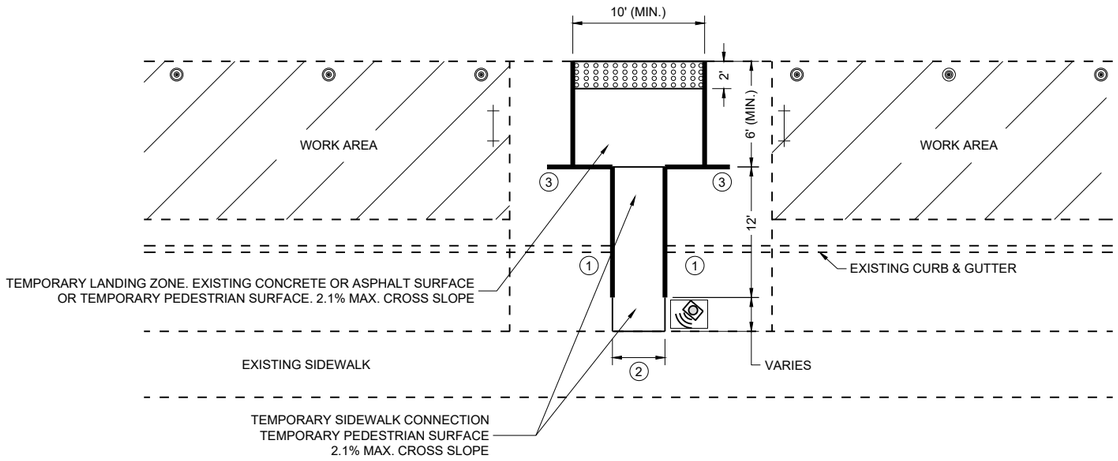
February 2025
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

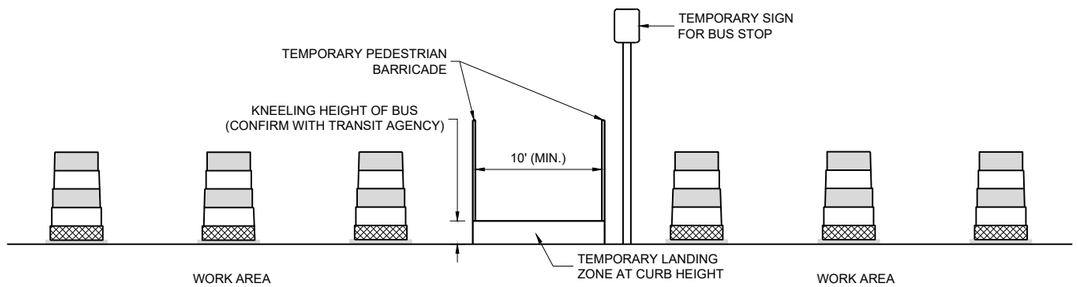
FHWA

6

SDD 15D30-11d



PLAN VIEW



PROFILE VIEW TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

(1) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(2) 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.

(3) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

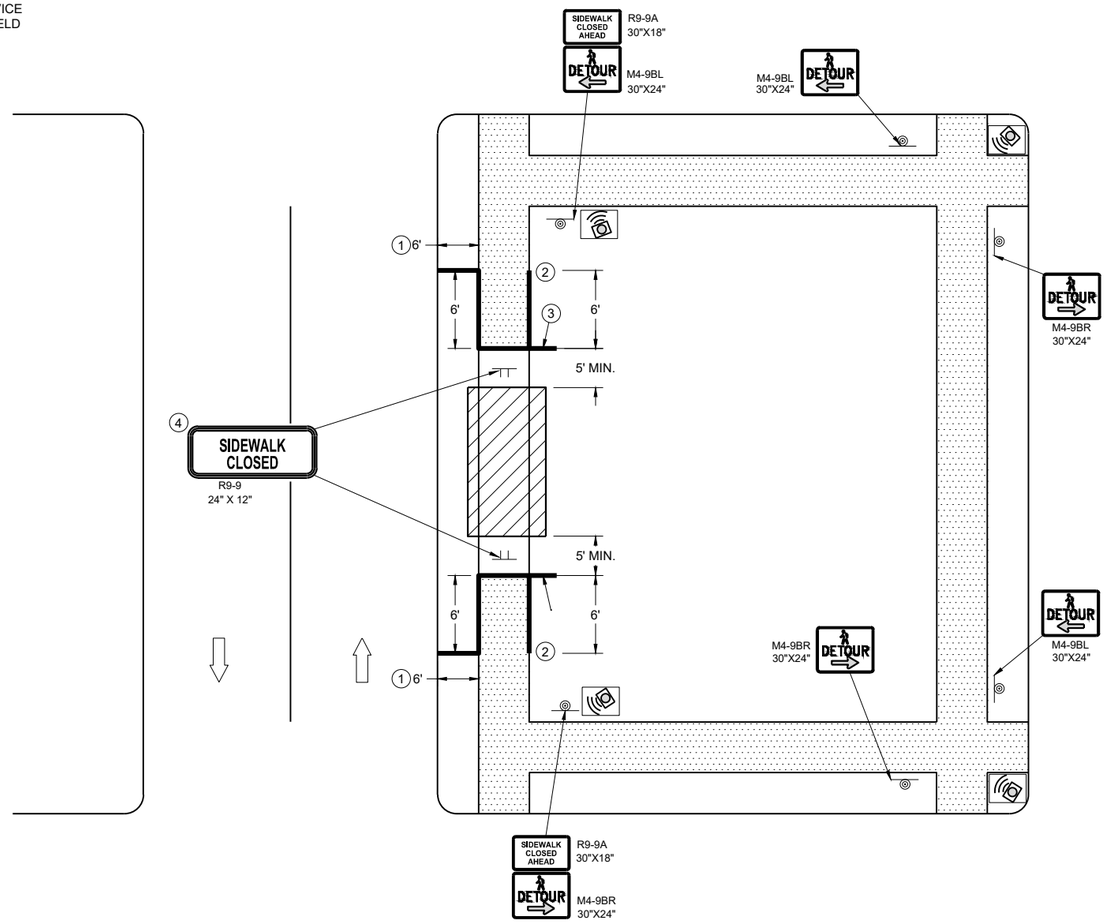
6

SDD 15D30-11e

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

6

SDD 15D30-11f

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

LEGEND

SIGN ON TEMPORARY SUPPORT

WORK AREA

UNDER PEDESTRIAN TRAFFIC

TEMPORARY PEDESTRIAN SURFACE

TEMPORARY PEDESTRIAN BARRICADE

OPTIONAL TEMPORARY PEDESTRIAN BARRICADE

DIRECTION OF TRAFFIC

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

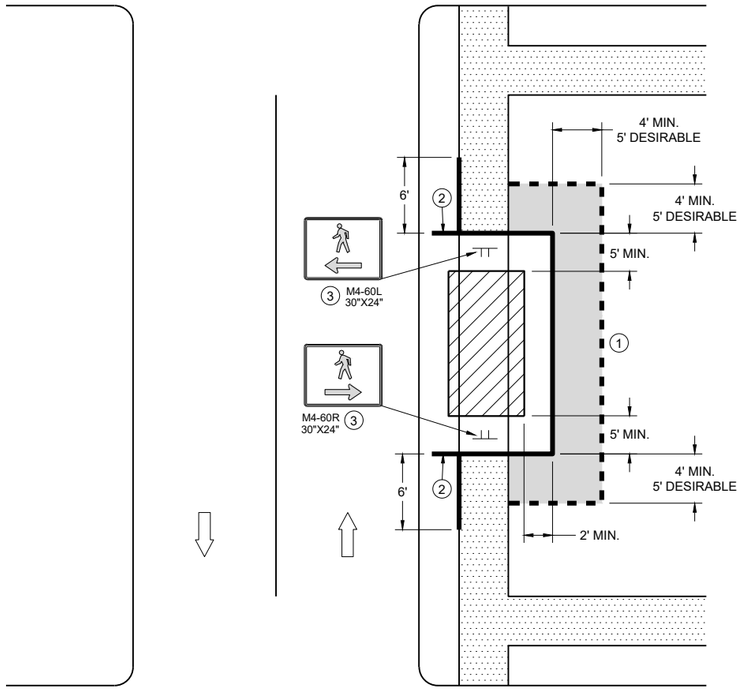
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

(1) USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.

(2) IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.

(3) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK BYPASS
SINGLE SIDE

6

SDD 15D30-11g

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

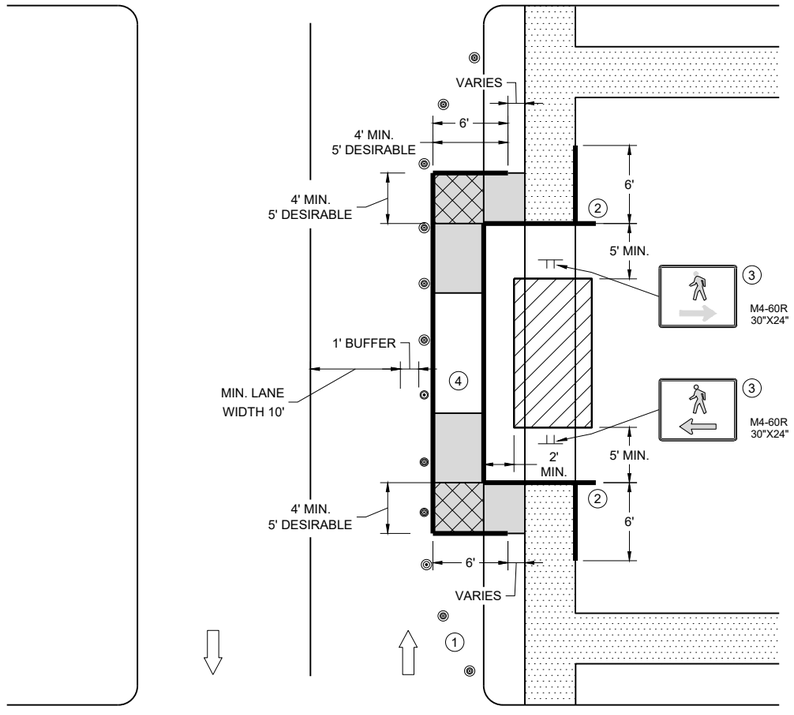
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

(1) SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.

(2) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.

(3) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

(4) USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

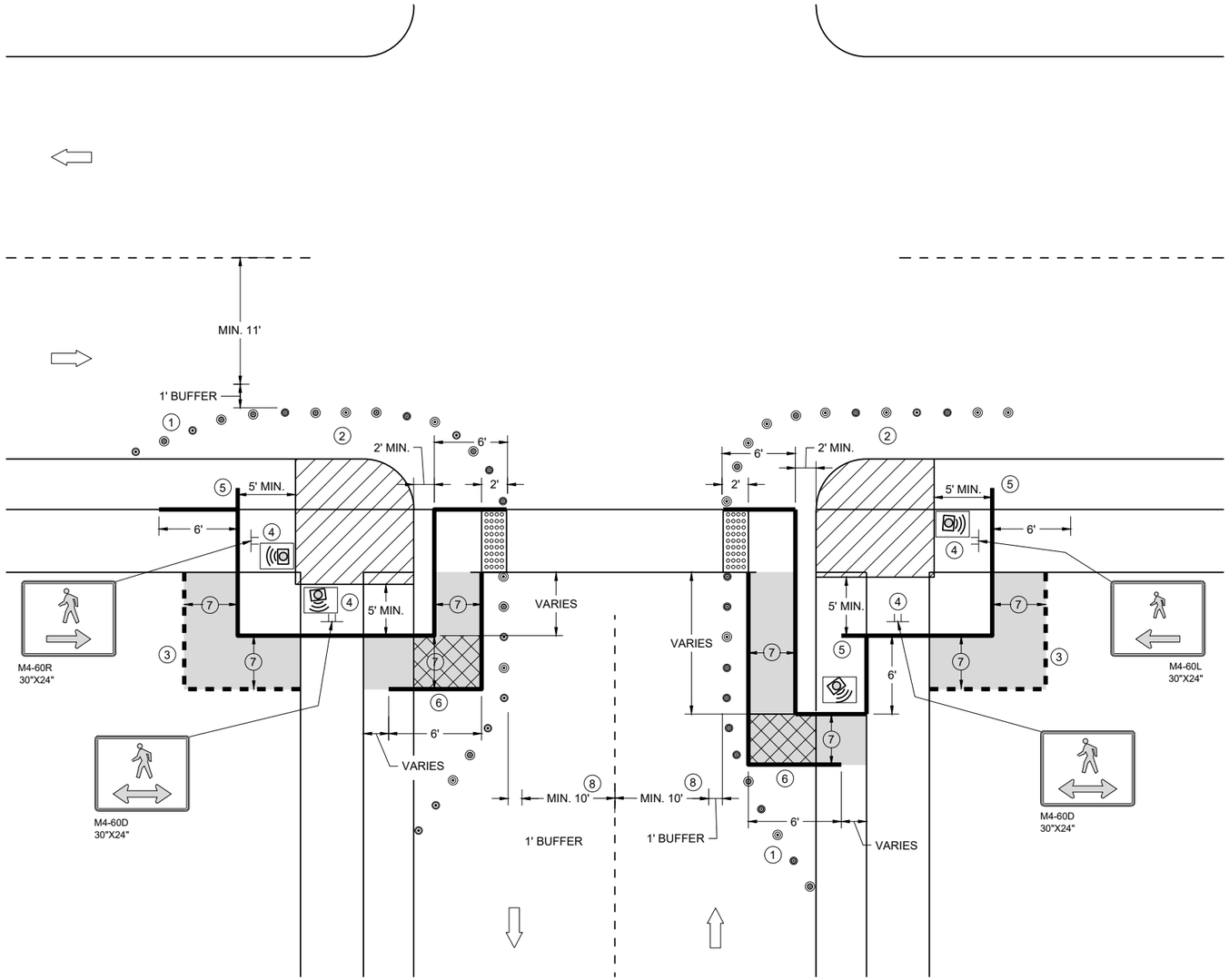


SIDEWALK BYPASS, SINGLE SIDE

6

SDD 15D30-11h

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

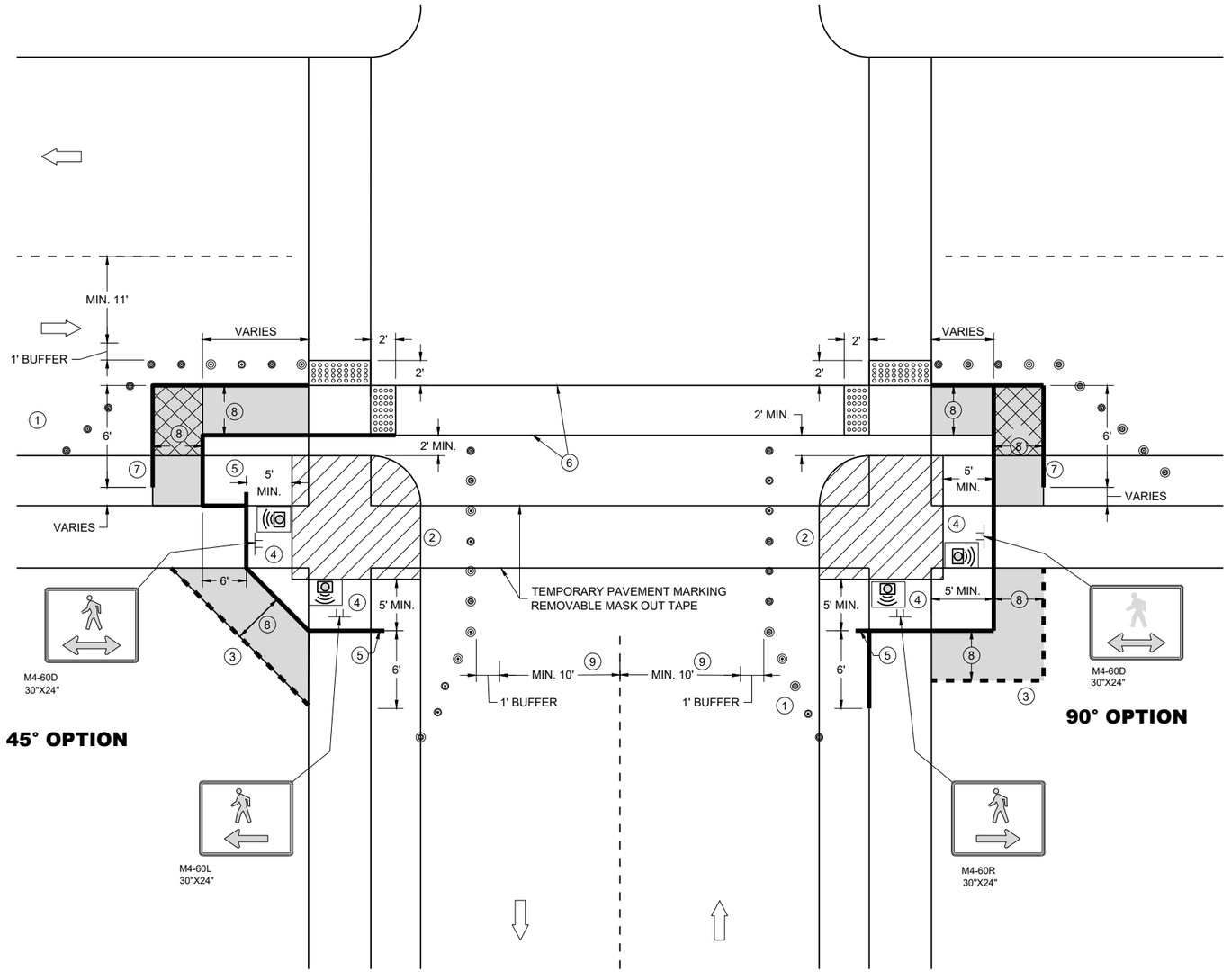
1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
7. 4 FEET MINIMUM, 5 FEET DESIRABLE
8. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6
SDD 15D30-11i



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

(1) SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.

(2) PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS

(3) USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.

(4) MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.

(5) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.

(6) WHITE 6" TEMPORARY PAVEMENT MARKING

(7) IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.

(8) 4 FEET MINIMUM, 5 FEET DESIRABLE

(9) IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

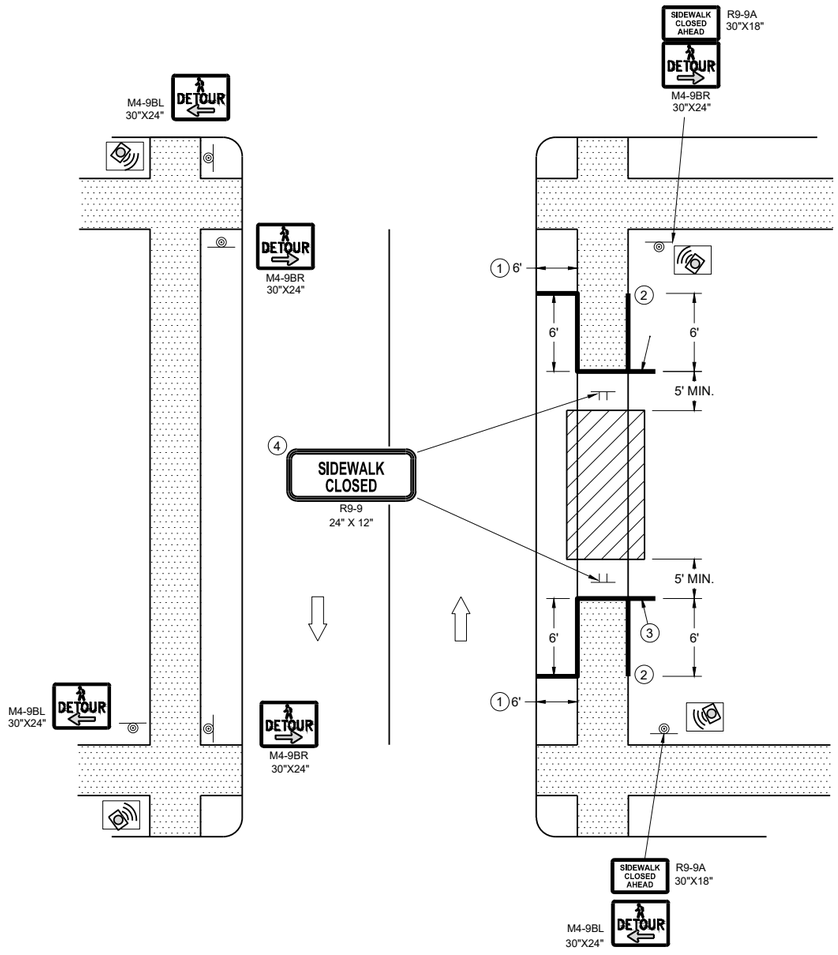
6

SDD 15D30-11j

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

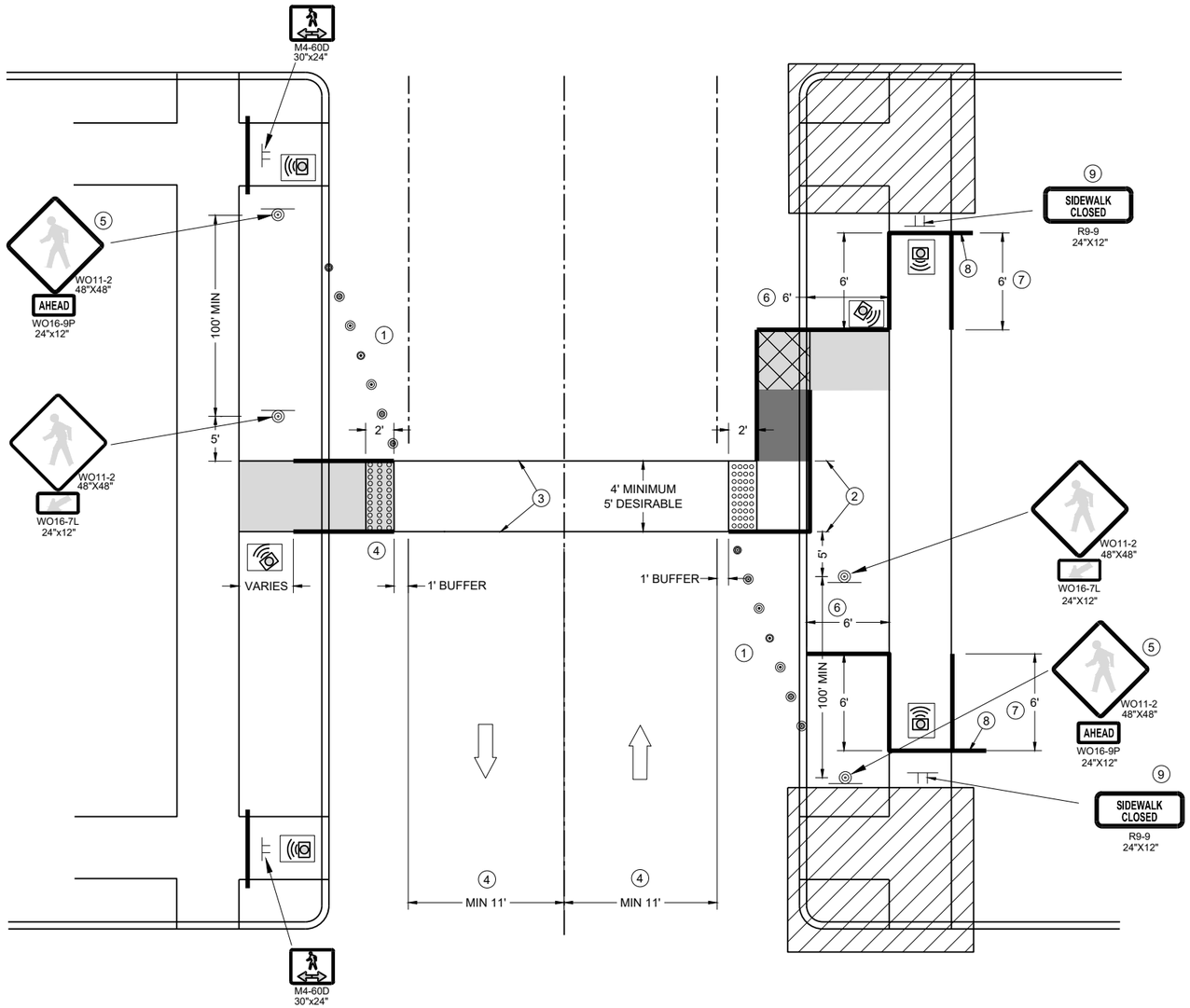
PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

6

SDD 15D30-11k

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

1. SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
2. 4 FEET MINIMUM, 5 FEET DESIRABLE.
3. WHITE 6" TEMPORARY PAVEMENT MARKING.
4. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMPS MAY NEED TO BE UTILIZED.
5. IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
6. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
7. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
8. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
9. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6
SDD 15D30-11I

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					
		3	4	5	6	7	8
25	200	10	14	17	21	24	28
30	200	15	20	25	30	35	40
35	350	20	27	34	40	47	54
40	350	26	35	44	53	62	70
45	500	45	59	74	89	104	119
50	500	50	66	83	99	116	132
55	500	54	73	91	109	127	145

GENERAL NOTES

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

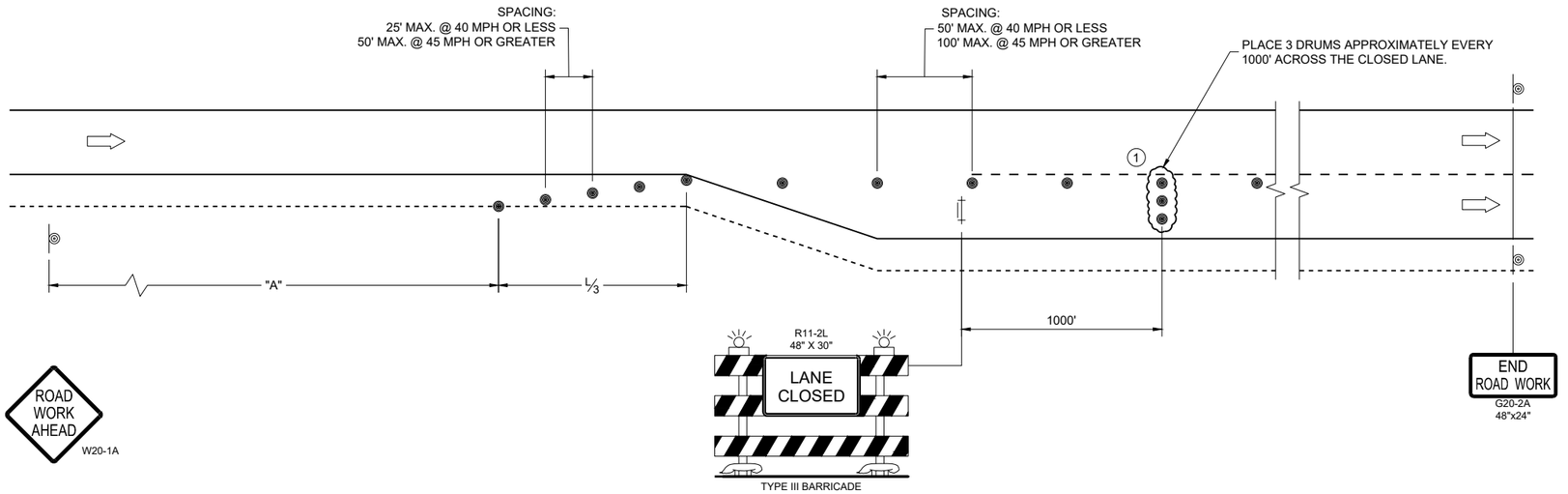
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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.

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

(1) DRUMS IN A CLOSED LANE 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.



TRAFFIC CONTROL ADDED LANE CLOSURE WITHOUT LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

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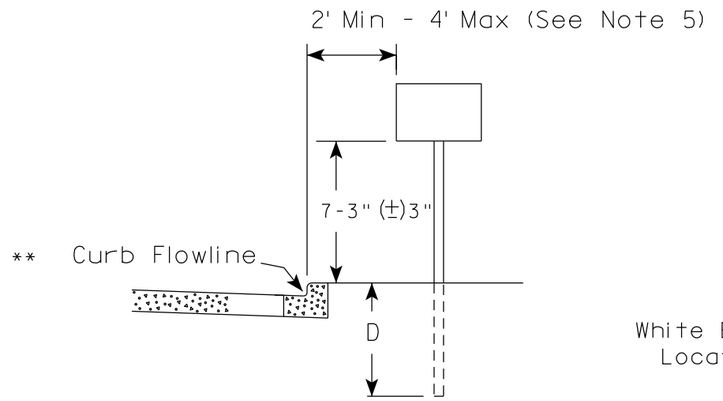
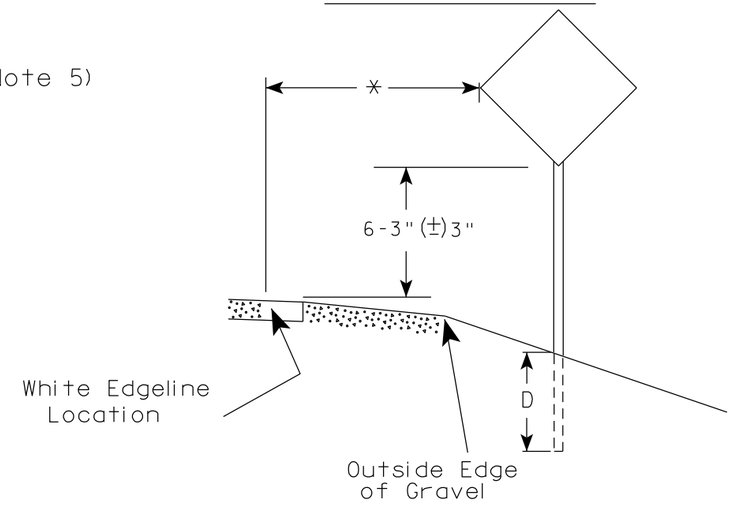
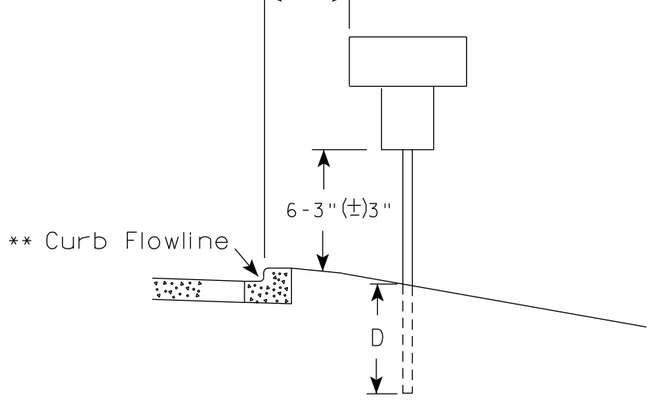
SDD 15D50-04a

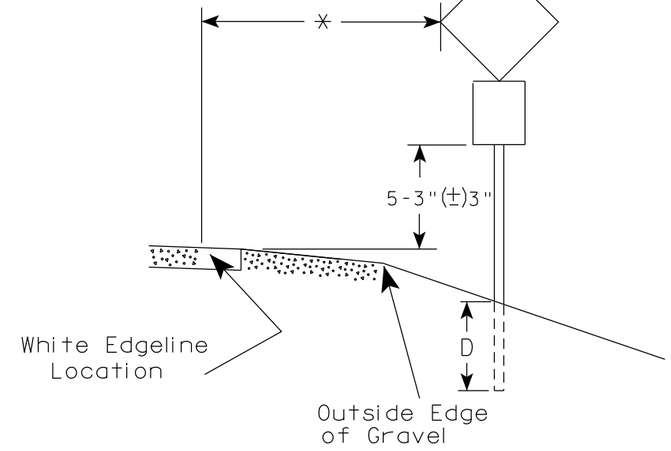
URBAN AREA



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.

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" (±) 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".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

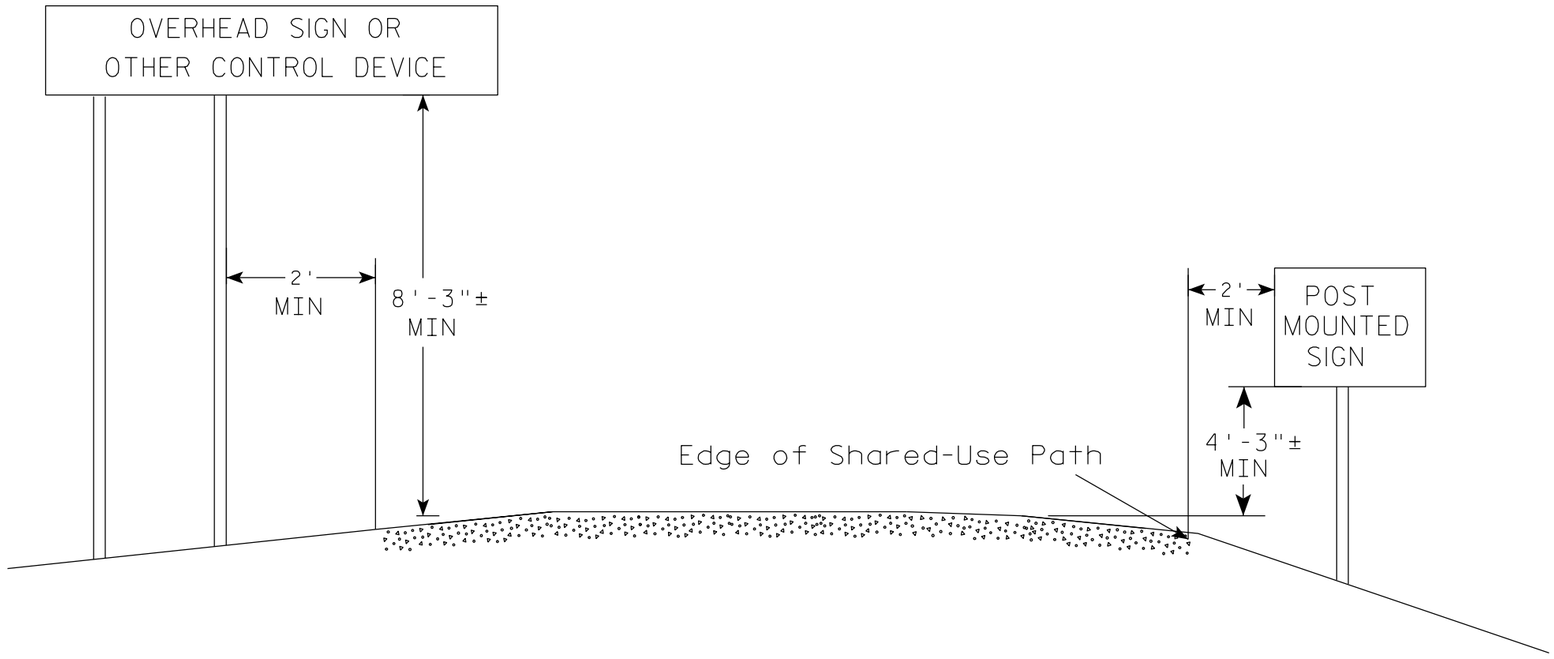
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

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

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. Offset distance shall be consistent with existing signs or consistent throughout length of project.
3. The height from ground level to the sign is 8'-3"± min. for the Overhead sign or other control device.
4. The height from ground level to the sign is 4'-3"± min. for the Post mounted sign.



POST EMBEDMENT DEPTH

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

7

7

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON MULTI USE PATHS

WISCONSIN DEPT OF TRANSPORTATION

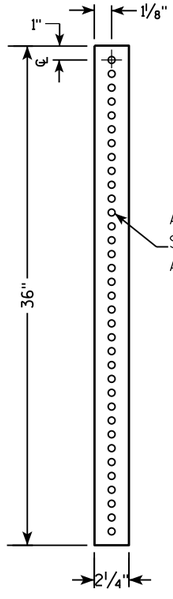
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/26/2020 PLATE NO. A4-3S.2

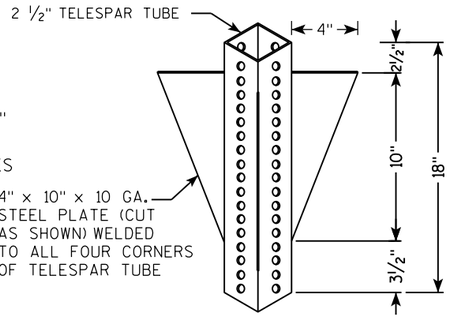
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 146 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

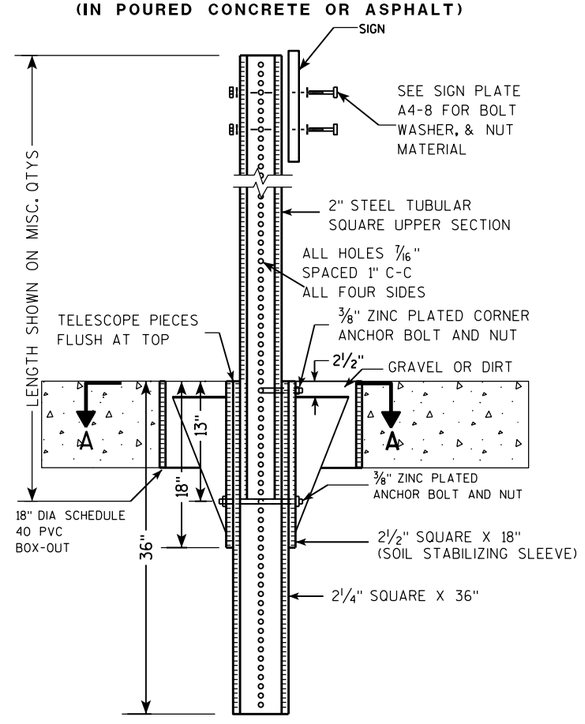
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



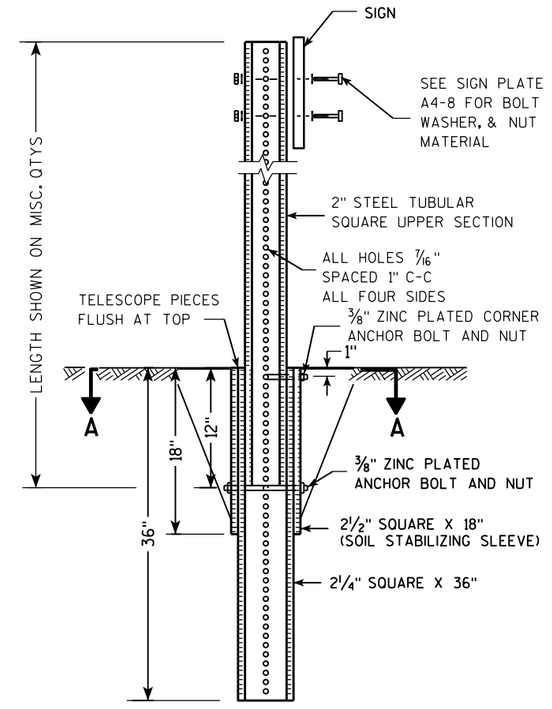
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

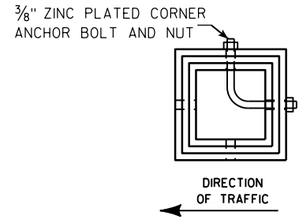


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

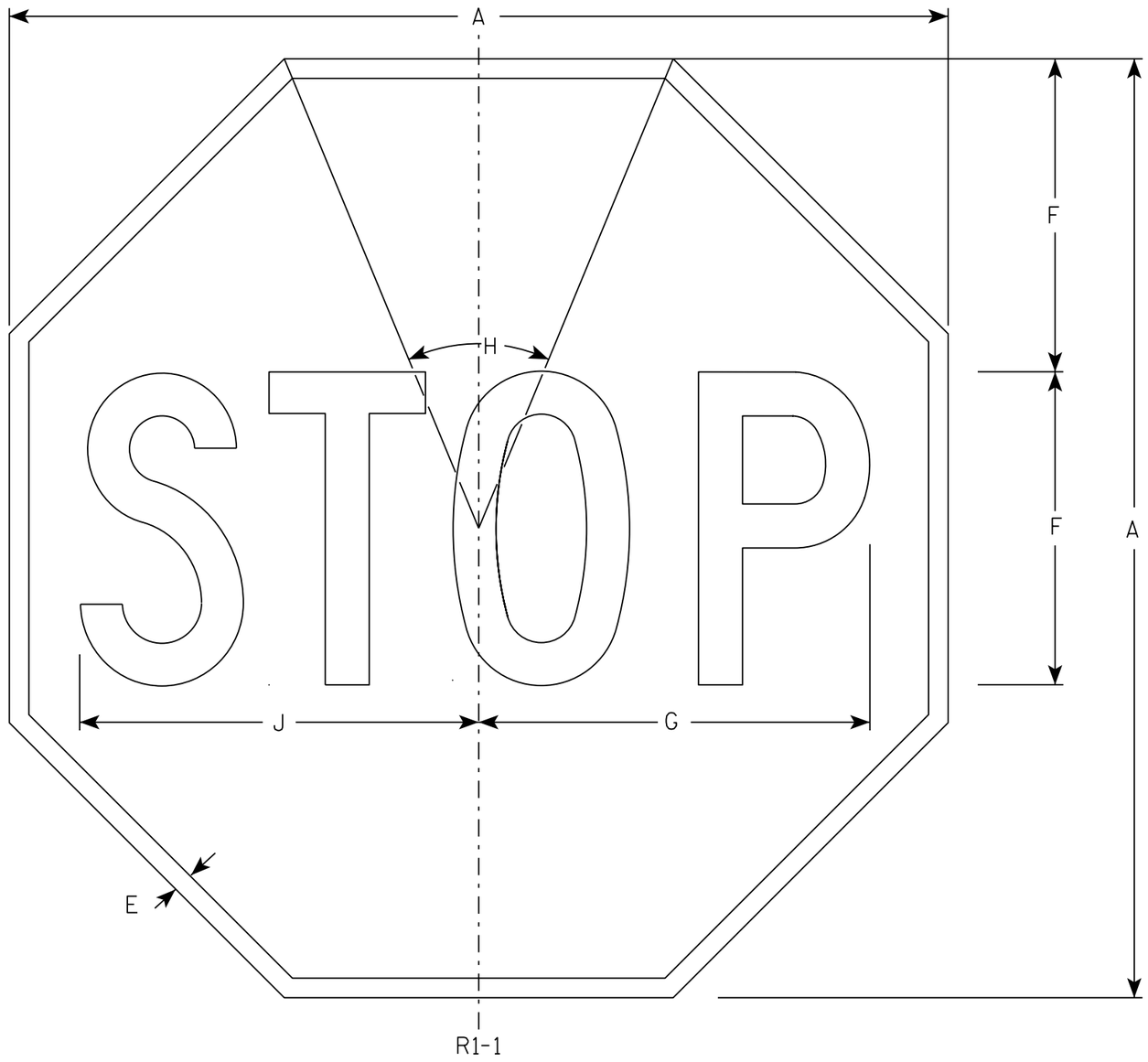
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

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



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

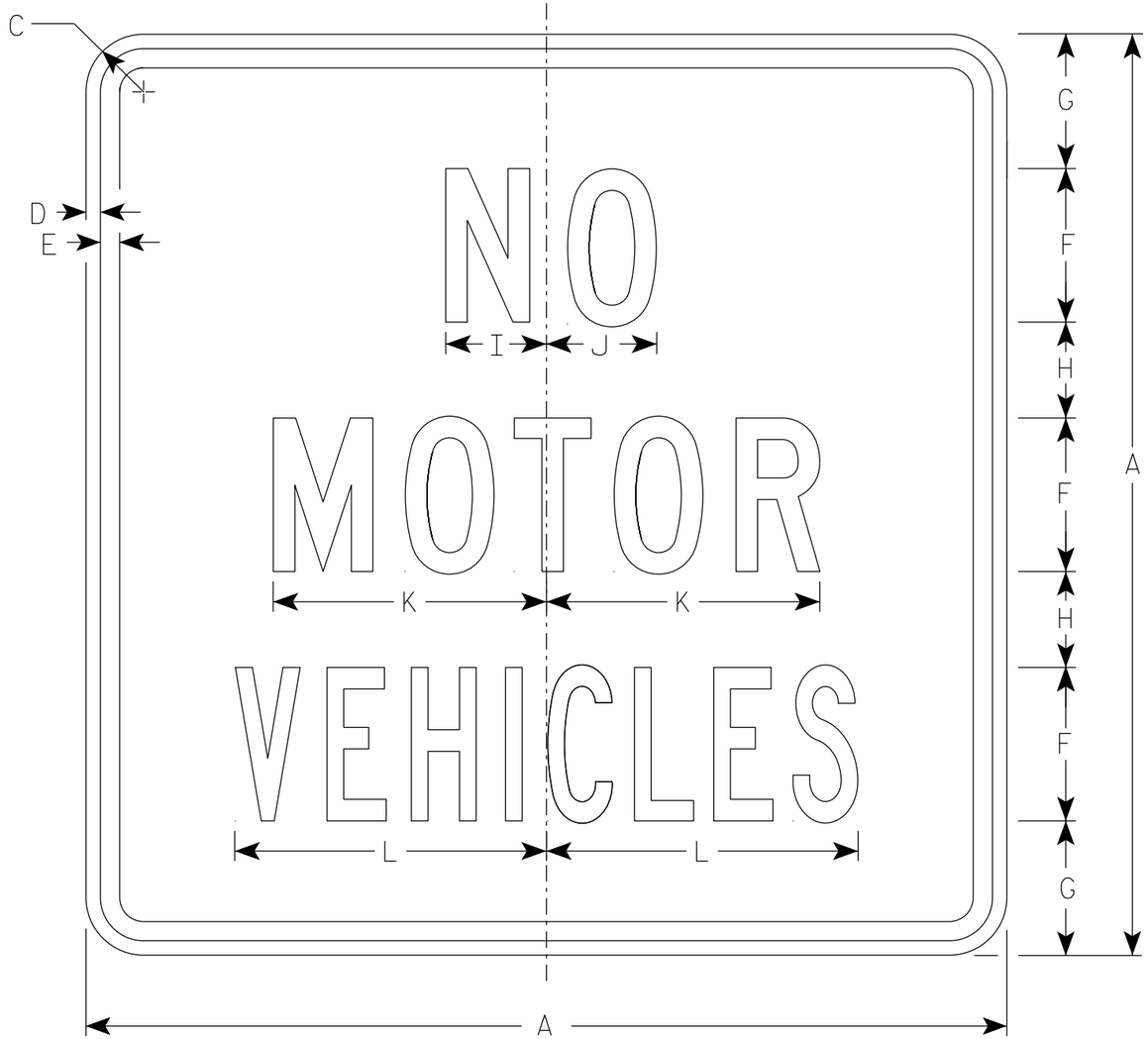
STANDARD SIGN
R1-1

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: 148	E



R5-3

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 4
4. Lines 1 & 2 are Series C.
   Line 3 is Series B.

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	24		1 ½	⅜	½	4	3 ½	2 ½	2 ⅝	2 ⅞	7 ⅛	8 ⅛															4.0
2M	24		1 ½	⅜	½	4	3 ½	2 ½	2 ⅝	2 ⅞	7 ⅛	8 ⅛															4.0
3																											
4																											
5																											

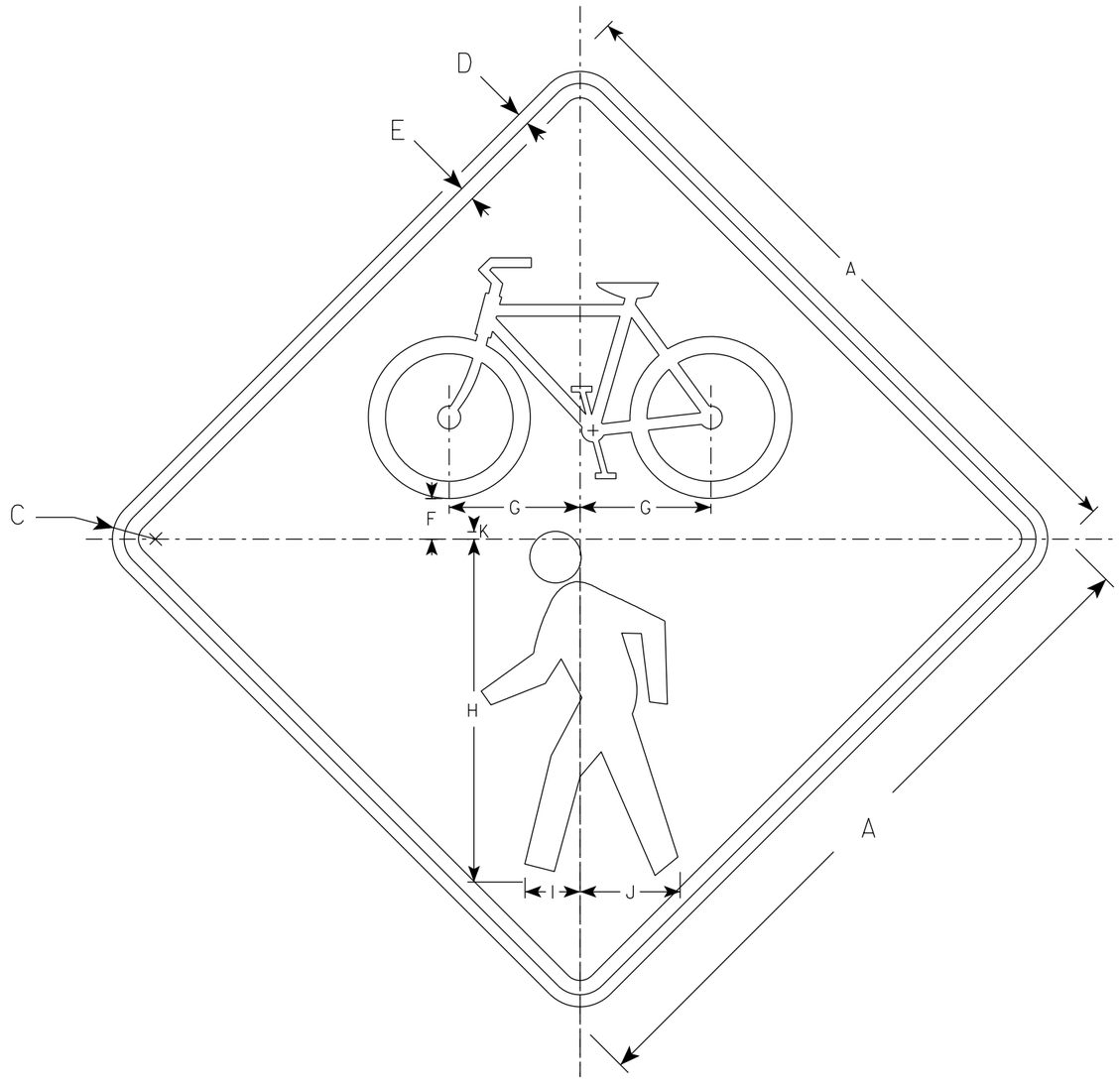
STANDARD SIGN
R5-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R5-3.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 149	E



W11-15

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   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	24		1 1/2	3/8	1/2	1 3/8	4 5/8	12	1 7/8	3 1/2	1/4																4.0
2S	30		1 7/8	1/2	5/8	1 3/4	5 3/4	15	2 3/8	4 3/8	3/8																6.25
2M	36		2 1/4	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																9.0
3	36		2 1/4	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																9.0
4	48		3	3/4	1	2 7/8	9 1/8	24	3 7/8	7	1/2																16.0
5																											

STANDARD SIGN
W11-15

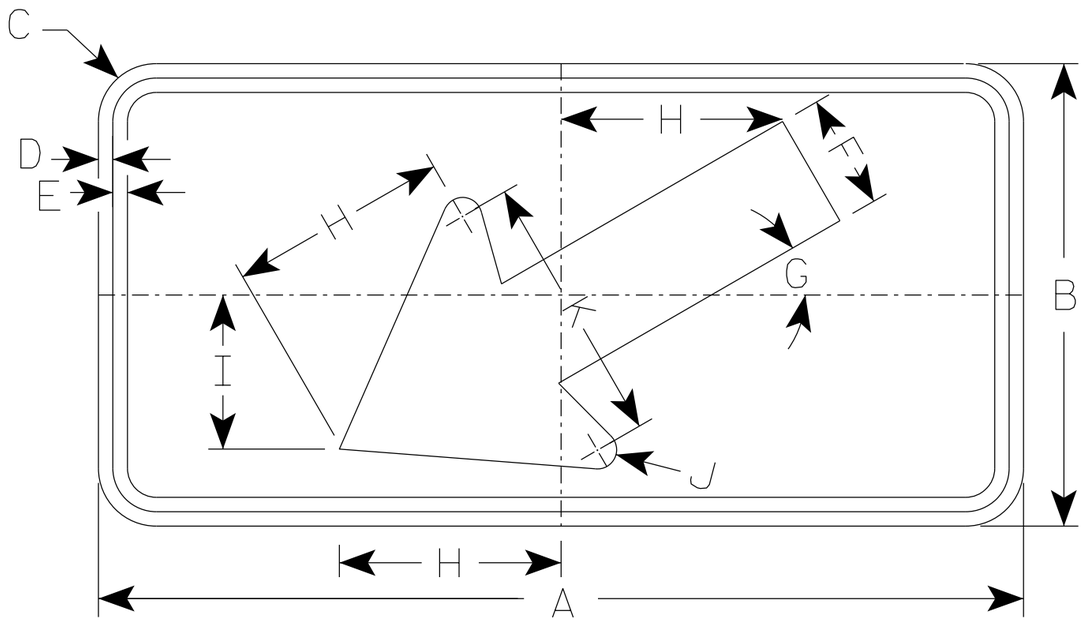
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/2023 PLATE NO. W11-15.5

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

7



W16-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W16-7R is the same as W16-7L except the arrow is reversed along the vertical centerline.

* For 36" x 36" Warning Signs, use 30" x 18" W16-7L signs.
* For 48" x 48" Warning Signs, use 48" x 24" W16-7L signs.

	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	24	12	1 ½	⅜	⅜	3	30°	5 ¾	4	½	7																2.0
*	2M	30	18	1 ½	⅜	½	4 ½	30°	8 ½	6	⅝	10 ¼																3.75
*	3	30	18	1 ½	⅜	½	4 ½	30°	8 ½	6	⅝	10 ¼																3.75
*	4	48	24	1 ⅞	½	⅝	6	30°	11 ½	8	1	14																8.0
	5																											

STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/9/2024 PLATE NO. W16-7.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 151 E

7

STATION			AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.00	MASS ORDINATE
100+90.37	10090.37	0.00	0.00	0.00	0	0	0	0	0
102+20	10220.00	129.63	22.43	0.00	54	0	54	0	54
CEDARBURG RD			0.00	0.00	0	0	54	0	54
103+20	10320.00	100.00	24.44	0.02	58	0	54	0	54
104+00	10400.00	80.00	2.61	16.90	40	25	94	25	69
104+29.766	10429.77	29.77	9.43	1.80	7	10	101	35	66
104+50	10450.00	20.23	2.65	14.16	5	6	106	41	65
105+00	10500.00	50.00	2.59	16.14	5	28	111	69	42
105+50	10550.00	50.00	2.52	20.74	5	34	116	103	13
106+00	10600.00	50.00	9.20	7.19	11	26	127	129	-2
106+50	10650.00	50.00	8.96	7.44	17	14	144	143	1
107+00	10700.00	50.00	4.18	11.33	12	17	156	160	-4
107+50	10750.00	50.00	3.14	18.94	7	28	163	188	-25
108+00	10800.00	50.00	2.48	23.76	5	40	168	228	-60
108+50	10850.00	50.00	1.86	24.30	4	44	172	272	-100
109+00	10900.00	50.00	4.88	16.82	6	38	178	310	-132
109+50	10950.00	50.00	4.60	15.70	9	30	187	340	-153
110+00	11000.00	50.00	3.19	14.75	7	28	194	368	-174
110+50	11050.00	50.00	3.88	9.31	7	22	201	390	-189
111+00	11100.00	50.00	5.52	4.57	9	13	210	403	-193
111+50	11150.00	50.00	11.48	2.29	16	6	226	409	-183
112+00	11200.00	50.00	14.37	0.70	24	3	250	412	-162
112+50	11250.00	50.00	10.95	2.99	23	3	273	415	-142
113+00	11300.00	50.00	33.95	0.00	42	3	315	418	-103
113+50	11350.00	50.00	7.74	1.70	39	2	354	420	-66
114+00	11400.00	50.00	7.58	1.58	14	3	368	423	-55
114+50	11450.00	50.00	9.46	0.57	16	2	384	425	-41
115+00	11500.00	50.00	11.55	0.49	19	1	403	426	-23
115+50	11550.00	50.00	10.52	0.80	20	1	423	427	-4
116+00	11600.00	50.00	11.96	0.35	21	1	444	428	16
116+50	11650.00	50.00	8.39	1.70	19	2	463	430	33
117+00	11700.00	50.00	12.69	0.00	20	2	483	432	51
117+26.12	11726.12	26.12	31.77	0.00	22	0	505	432	73
117+50	11750.00	23.88	32.06	0.00	28	0	533	432	101
118+00	11800.00	50.00	0.89	16.32	31	15	564	447	117
118+50	11850.00	50.00	10.04	4.40	10	19	574	466	108
119+00	11900.00	50.00	17.97	0.36	26	4	600	470	130
119+50	11950.00	50.00	9.04	0.16	25	0	625	470	155
120+00	12000.00	50.00	12.92	0.01	20	0	645	470	175
120+50	12050.00	50.00	13.33	0.23	24	0	669	470	199
121+40	12140.00	90.00	8.70	0.18	37	1	706	471	235
GREENBAY RD			0.00	0.00	0	0	706	471	235
121+95	12195.00	55.00	7.29	0.52	11	1	706	471	235
122+50	12250.00	55.00	8.82	1.60	16	2	722	473	249
123+00	12300.00	50.00	6.87	0.49	15	2	737	475	262
123+50	12350.00	50.00	2.33	5.74	9	6	746	481	265
124+00	12400.00	50.00	0.00	54.13	2	55	748	536	212
124+50	12450.00	50.00	0.00	25.92	0	74	748	610	138
125+00	12500.00	50.00	2.26	14.49	2	37	750	647	103
125+50	12550.00	50.00	4.01	8.42	6	21	756	668	88
126+00	12600.00	50.00	10.78	0.46	14	8	770	676	94
126+50	12650.00	50.00	12.58	0.21	22	1	792	677	115
127+00	12700.00	50.00	17.66	0.03	28	0	820	677	143
127+50	12750.00	50.00	17.20	0.00	32	0	852	677	175
128+00	12800.00	50.00	16.20	0.00	31	0	883	677	206
128+50	12850.00	50.00	11.04	0.07	25	0	908	677	231

STATION	REAL STATION		AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.00	MASS ORDINATE
129+00	12900.00	50.00	12.88	0.06	22	0	930	677	253
129+50	12950.00	50.00	11.39	0.79	22	1	952	678	274
130+00	13000.00	50.00	3.77	2.37	14	3	966	681	285
130+50	13050.00	50.00	3.45	0.56	7	3	973	684	289
131+00	13100.00	50.00	9.51	0.10	12	1	985	685	300
131+50	13150.00	50.00	14.05	0.03	22	0	1,007	685	322
132+00	13200.00	50.00	15.04	0.00	27	0	1,034	685	349
132+50	13250.00	50.00	0.05	1.06	14	1	1,048	686	362
133+00	13300.00	50.00	1.34	1.46	1	2	1,049	688	361
133+50	13350.00	50.00	6.34	0.00	7	1	1,056	689	367
134+00	13400.00	50.00	8.71	1.63	14	2	1,070	691	379
134+50	13450.00	50.00	13.61	2.43	21	4	1,091	695	396
135+00	13500.00	50.00	12.82	3.41	24	5	1,115	700	415
135+50	13550.00	50.00	11.54	2.89	23	6	1,138	706	432
136+00	13600.00	50.00	10.21	5.12	20	7	1,158	713	445
136+50	13650.00	50.00	8.70	10.73	18	15	1,176	728	448
137+00	13700.00	50.00	9.81	18.73	17	27	1,193	755	438
137+50	13750.00	50.00	0.99	22.06	10	38	1,203	793	410
138+00	13800.00	50.00	6.36	5.74	7	26	1,210	819	391
138+50	13850.00	50.00	5.50	10.33	11	15	1,221	834	387
139+00	13900.00	50.00	4.18	14.18	9	23	1,230	857	373
139+50	13950.00	50.00	2.19	12.19	6	24	1,236	881	355
140+00	14000.00	50.00	2.50	9.24	4	20	1,240	901	339
140+50	14050.00	50.00	6.62	4.63	8	13	1,248	914	334
141+00	14100.00	50.00	6.91	4.33	13	8	1,261	922	339
141+50	14150.00	50.00	8.16	3.18	14	7	1,275	929	346
142+00	14200.00	50.00	9.07	2.29	16	5	1,291	934	357
142+50	14250.00	50.00	8.19	1.35	16	3	1,307	937	370
143+00	14300.00	50.00	7.82	1.52	15	3	1,322	940	382
143+50	14350.00	50.00	0.22	18.85	7	19	1,329	959	370
144+00	14400.00	50.00	3.36	9.44	3	26	1,332	985	347
144+50	14450.00	50.00	7.44	5.08	10	13	1,342	998	344
145+00	14500.00	50.00	9.72	2.31	16	7	1,358	1,005	353
145+50	14550.00	50.00	11.80	0.00	20	2	1,378	1,007	371
146+00	14600.00	50.00	14.49	0.00	24	0	1,402	1,007	395
146+50	14650.00	50.00	13.39	0.00	26	0	1,428	1,007	421
147+00	14700.00	50.00	13.47	0.00	25	0	1,453	1,007	446
147+50	14750.00	50.00	10.55	0.00	22	0	1,475	1,007	468
148+00	14800.00	50.00	9.87	0.00	19	0	1,494	1,007	487
148+50	14850.00	50.00	7.17	0.57	16	1	1,510	1,008	502
149+00	14900.00	50.00	4.86	0.82	11	1	1,521	1,009	512
149+50	14950.00	50.00	1.53	1.17	6	2	1,527	1,011	516
150+00	15000.00	50.00	0.00	4.52	1	5	1,528	1,016	512
150+50	15050.00	50.00	0.00	4.11	0	8	1,528	1,024	504
151+00	15100.00	50.00	0.00	6.22	0	10	1,528	1,034	494
151+50	15150.00	50.00	0.00	8.25	0	13	1,528	1,047	481
152+00	15200.00	50.00	0.00	12.46	0	19	1,528	1,066	462
152+50	15250.00	50.00	0.00	8.45	0	19	1,528	1,085	443
152+89.106	15289.11	39.11	19.44	0.00	14	6	1,542	1,091	451
153+00	15300.00	10.89	16.36	0.00	7	0	1,549	1,091	458
153+50	15350.00	50.00	0.00	22.20	15	21	1,564	1,112	452
154+00	15400.00	50.00	0.00	10.23	0	30	1,564	1,142	422
154+50	15450.00	50.00	1.66	2.59	2	12	1,566	1,154	412
155+00	15500.00	50.00	0.21	5.16	2	7	1,568	1,161	407
155+50	15550.00	50.00	4.35	5.62	4	10	1,572	1,171	401
156+00	15600.00	50.00	6.73	5.82	10	11	1,582	1,182	400
156+50	15650.00	50.00	5.79	4.26	12	9	1,594	1,191	403
157+00	15700.00	50.00	1.61	2.98	7	7	1,601	1,198	403
157+50	15750.00	50.00	0.15	10.76	2	13	1,603	1,211	392
158+00	15800.00	50.00	0.31	8.87	0	18	1,603	1,229	374
158+50	15850.00	50.00	0.00	13.02	0	20	1,603	1,249	354

9

9

PROJECT NO: 2697-22-70 | HWY: HIGHLAND ROAD BIKE SPUR | COUNTY: OZAUKEE | EARTHWORK DATA | SHEET 153 | E

STATION	REAL STATION		AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.00	
159+00	15900.00	50.00	1.06	1.40	1	13	1,604	1,262	342
159+50	15950.00	50.00	6.24	0.55	7	2	1,611	1,264	347
160+00	16000.00	50.00	11.94	0.13	17	1	1,628	1,265	363
160+50	16050.00	50.00	13.52	0.30	24	0	1,652	1,265	387
160+74.198	16074.20	24.20	12.87	0.00	12	0	1,664	1,265	399
161+00	16100.00	25.80	17.30	0.20	14	0	1,678	1,265	413
161+50	16150.00	50.00	14.73	0.30	30	0	1,708	1,265	443
162+00	16200.00	50.00	15.84	0.00	28	0	1,736	1,265	471
162+50	16250.00	50.00	17.69	0.00	31	0	1,767	1,265	502
163+00	16300.00	50.00	15.76	0.00	31	0	1,798	1,265	533
163+50	16350.00	50.00	9.19	0.04	23	0	1,821	1,265	556
163+64.029	16364.03	14.03	17.58	0.00	7	0	1,828	1,265	563
164+00	16400.00	35.97	10.19	0.00	18	0	1,846	1,265	581
164+50	16450.00	50.00	13.27	0.00	22	0	1,868	1,265	603
165+00	16500.00	50.00	2.34	0.79	14	1	1,882	1,266	616
165+50	16550.00	50.00	17.87	0.00	19	1	1,901	1,267	634
166+00	16600.00	50.00	2.07	8.95	18	8	1,919	1,275	644
166+16.075	16616.08	16.08	29.51	0.00	9	3	1,928	1,278	650
166+50	16650.00	33.92	0.00	5.24	19	3	1,947	1,281	666
167+00	16700.00	50.00	8.88	0.04	8	5	1,955	1,286	669
167+50	16750.00	50.00	11.41	0.00	19	0	1,974	1,286	688
168+00	16800.00	50.00	10.58	0.00	20	0	1,994	1,286	708
168+50	16850.00	50.00	9.72	0.00	19	0	2,013	1,286	727
169+00	16900.00	50.00	7.88	0.00	16	0	2,029	1,286	743
169+50	16950.00	50.00	3.84	0.31	11	0	2,040	1,286	754
170+00	17000.00	50.00	0.11	11.75	4	11	2,044	1,297	747
170+50	17050.00	50.00	0.00	20.60	0	30	2,044	1,327	717
171+00	17100.00	50.00	0.83	12.90	1	31	2,045	1,358	687
171+25.199	17125.20	25.20	7.02	2.51	4	7	2,049	1,365	684
171+50	17150.00	24.80	10.44	0.53	8	1	2,057	1,366	691
172+00	17200.00	50.00	9.11	0.11	18	1	2,075	1,367	708
172+25	17225.00	25.00	11.09	0.65	9	0	2,084	1,367	717
172+50	17250.00	25.00	12.00	0.00	11	0	2,095	1,367	728
172+64	17264.00	14.00	18.04	0.00	8	0	2,103	1,367	736
173+00	17300.00	36.00	8.63	0.00	18	0	2,121	1,367	754
173+50	17350.00	50.00	5.57	0.24	13	0	2,134	1,367	767
174+00	17400.00	50.00	18.91	0.00	23	0	2,157	1,367	790
174+50	17450.00	50.00	14.60	0.00	31	0	2,188	1,367	821
174+77.5	17477.50	27.50	14.80	0.00	15	0	2,203	1,367	836
175+10.302	17510.30	32.80	16.04	0.00	19	0	2,222	1,367	855

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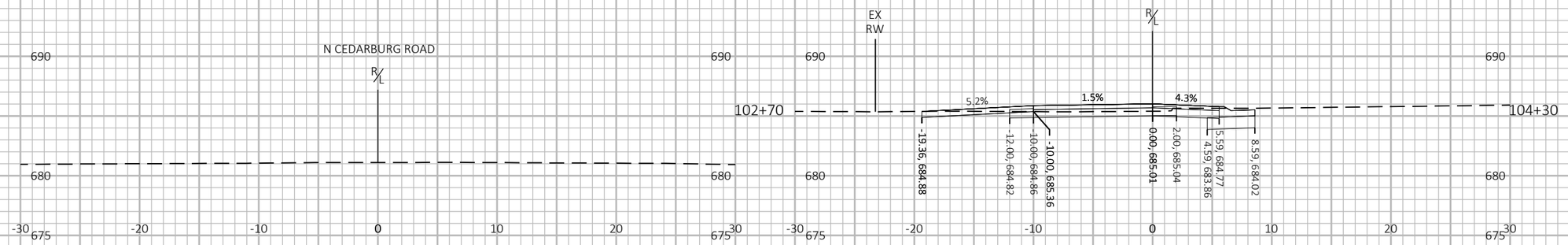
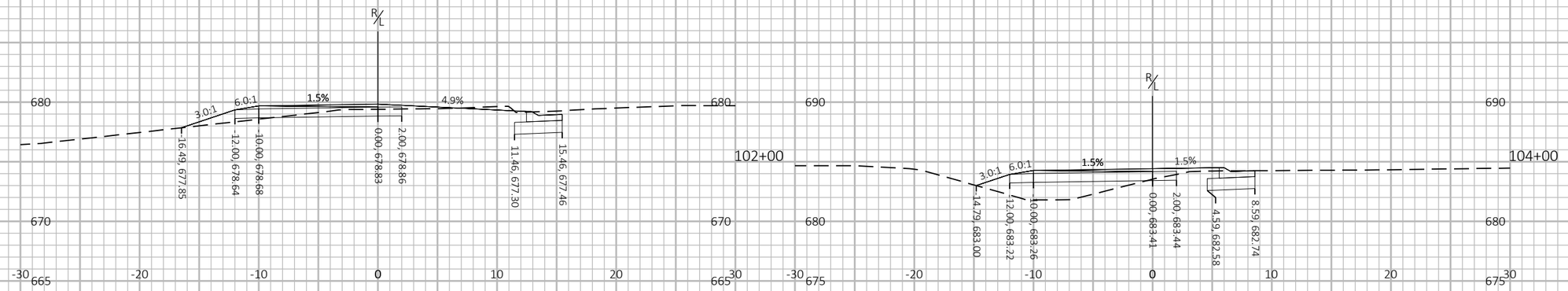
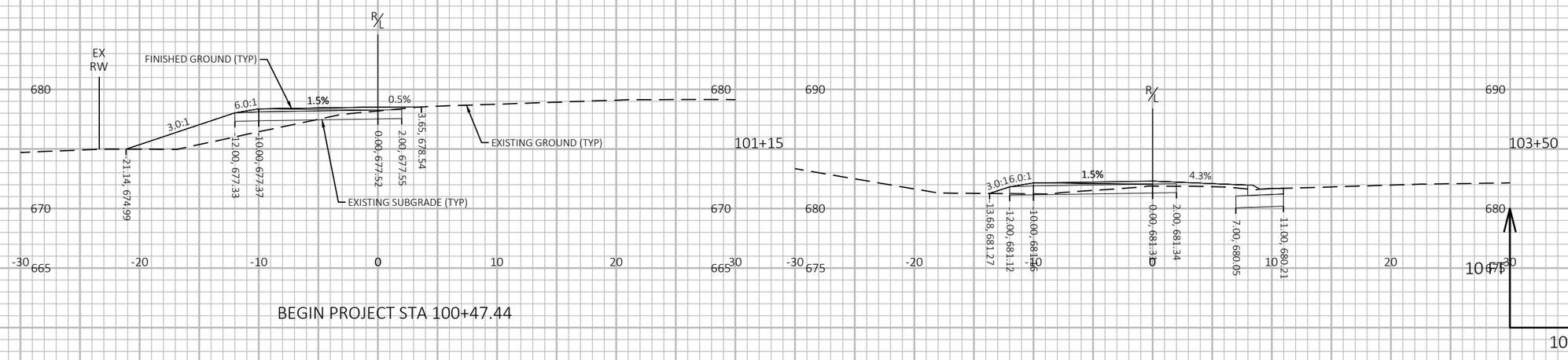
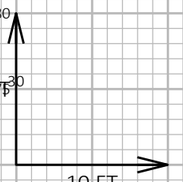
PROJECT NO: 2697-22-70 | HWY: HIGHLAND ROAD BIKE SPUR | COUNTY: OZAUKEE | EARTHWORK DATA | SHEET 154 | E







BEGIN PROJECT STA 100+47.44



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 155	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 01

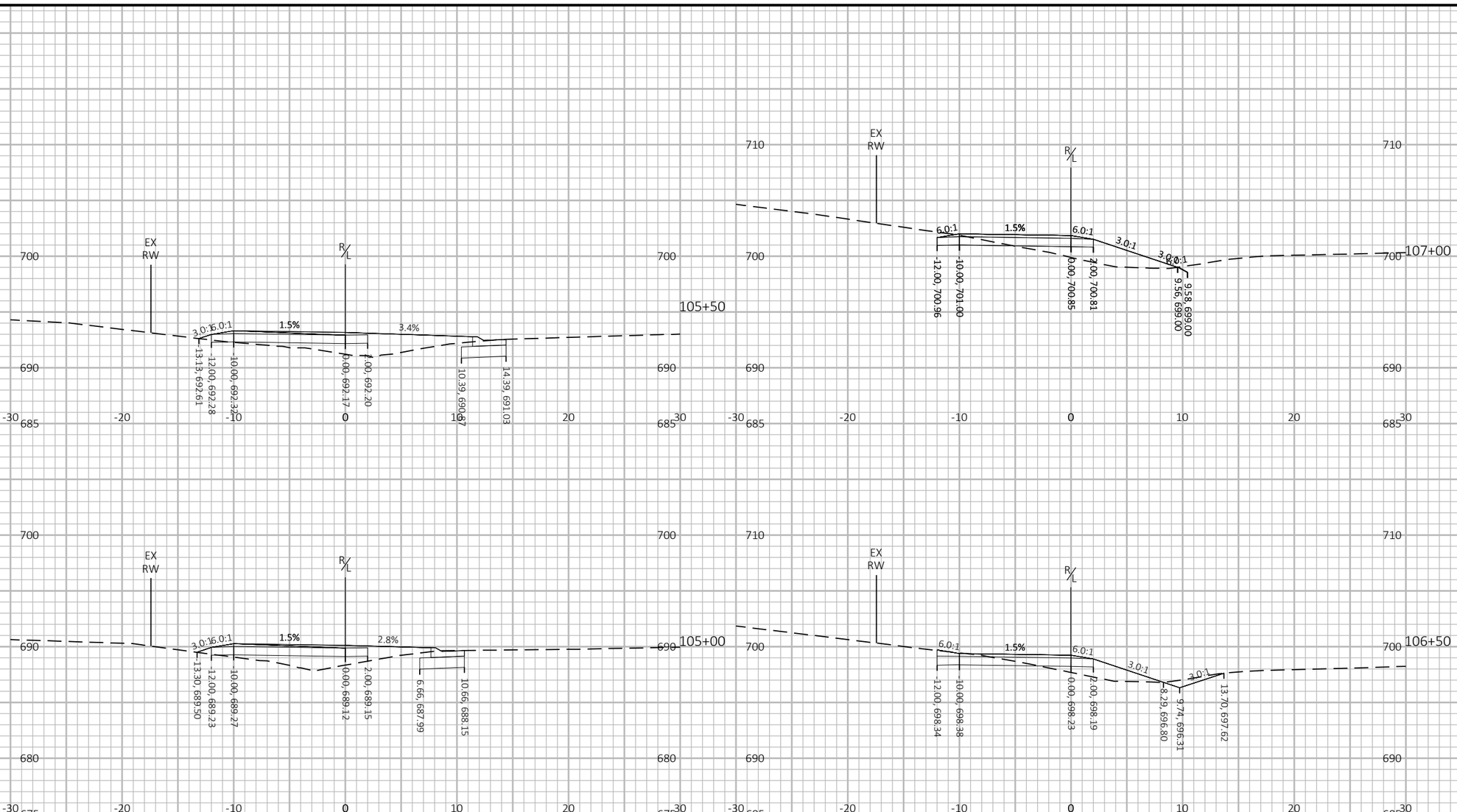
PLOT DATE : 8/8/2025 3:46 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 156	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 02

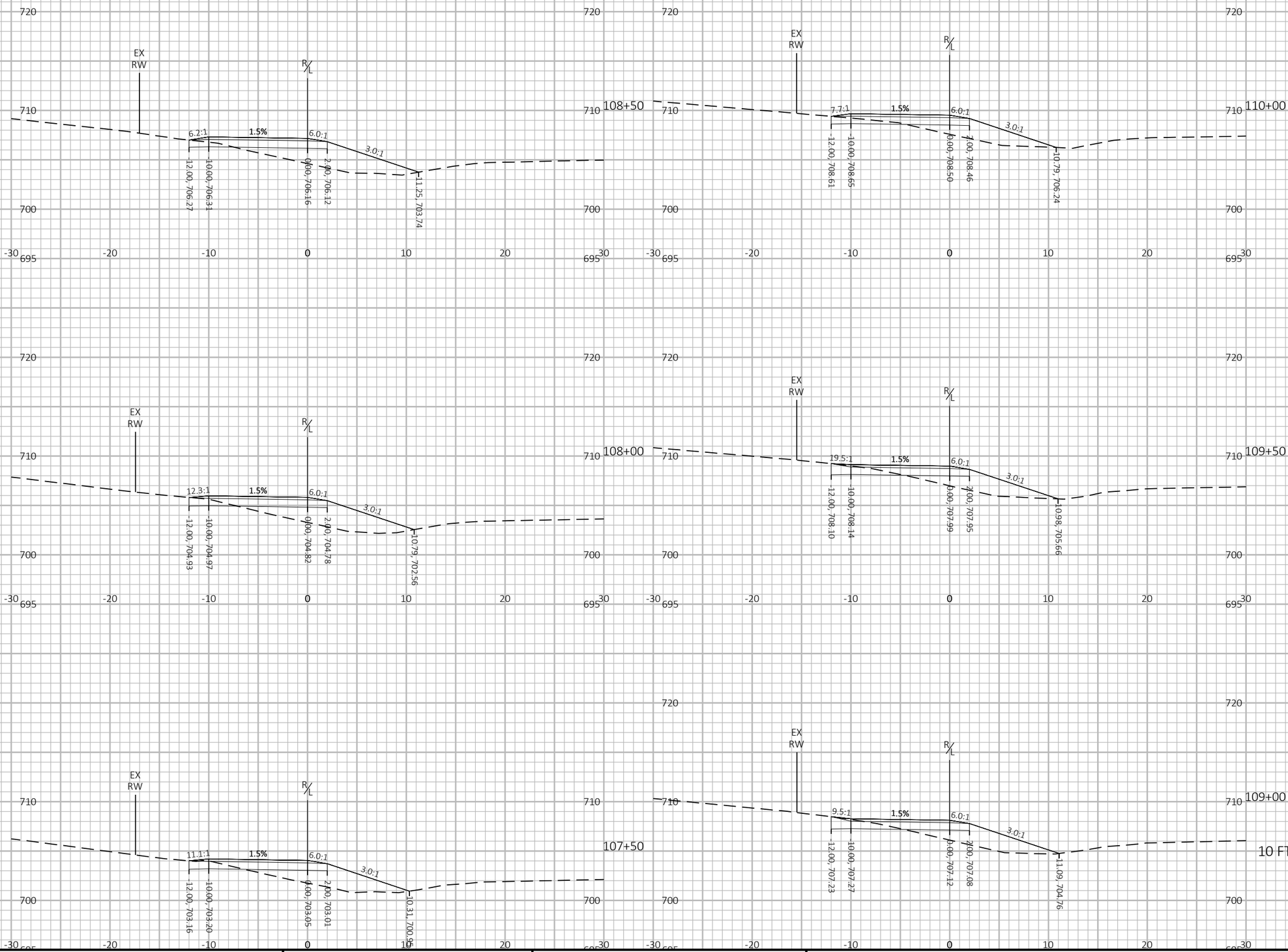
PLOT DATE : 8/8/2025 3:46 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 157	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 03

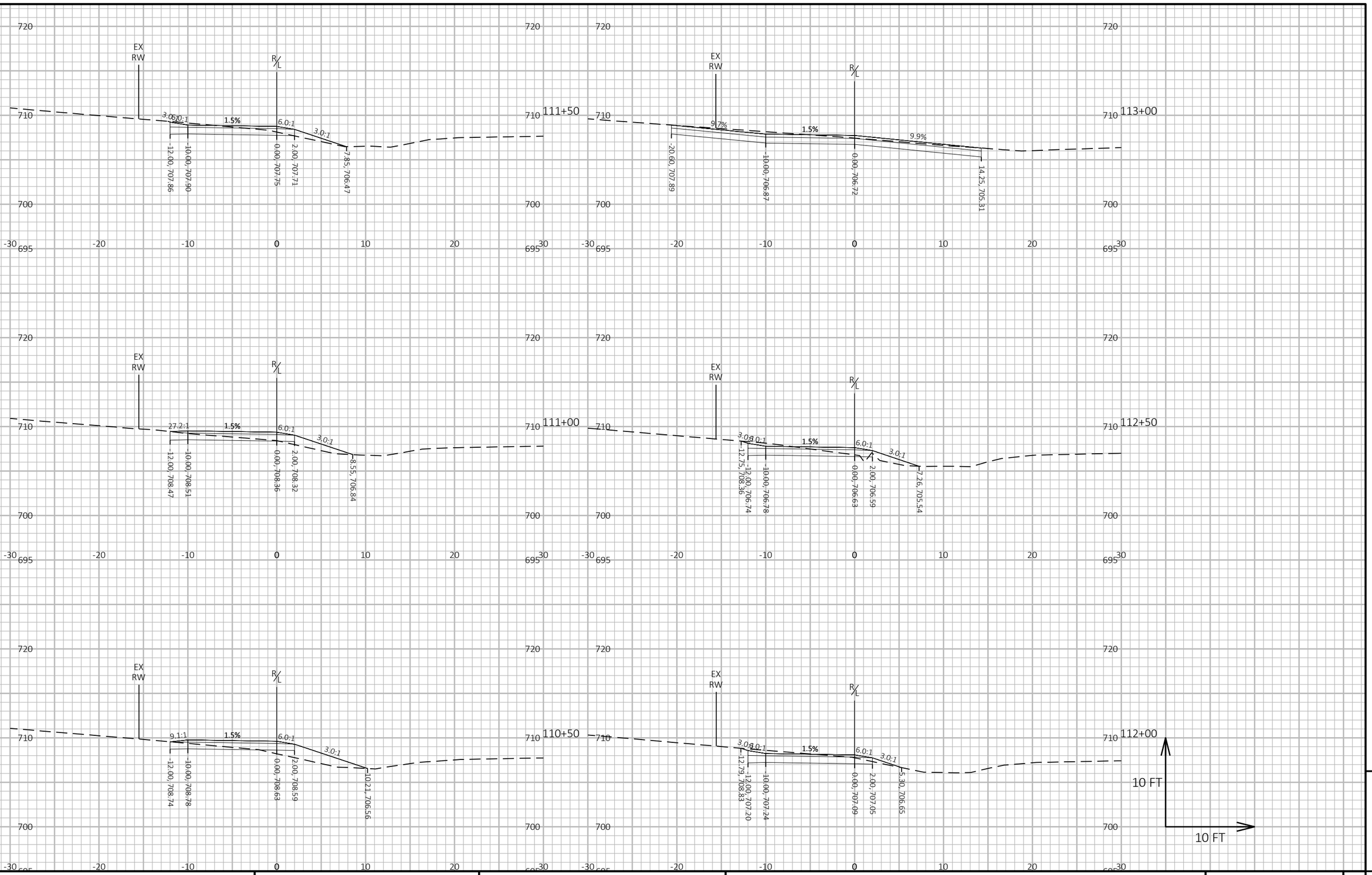
PLOT DATE : 8/8/2025 3:46 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 158	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 159	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 05

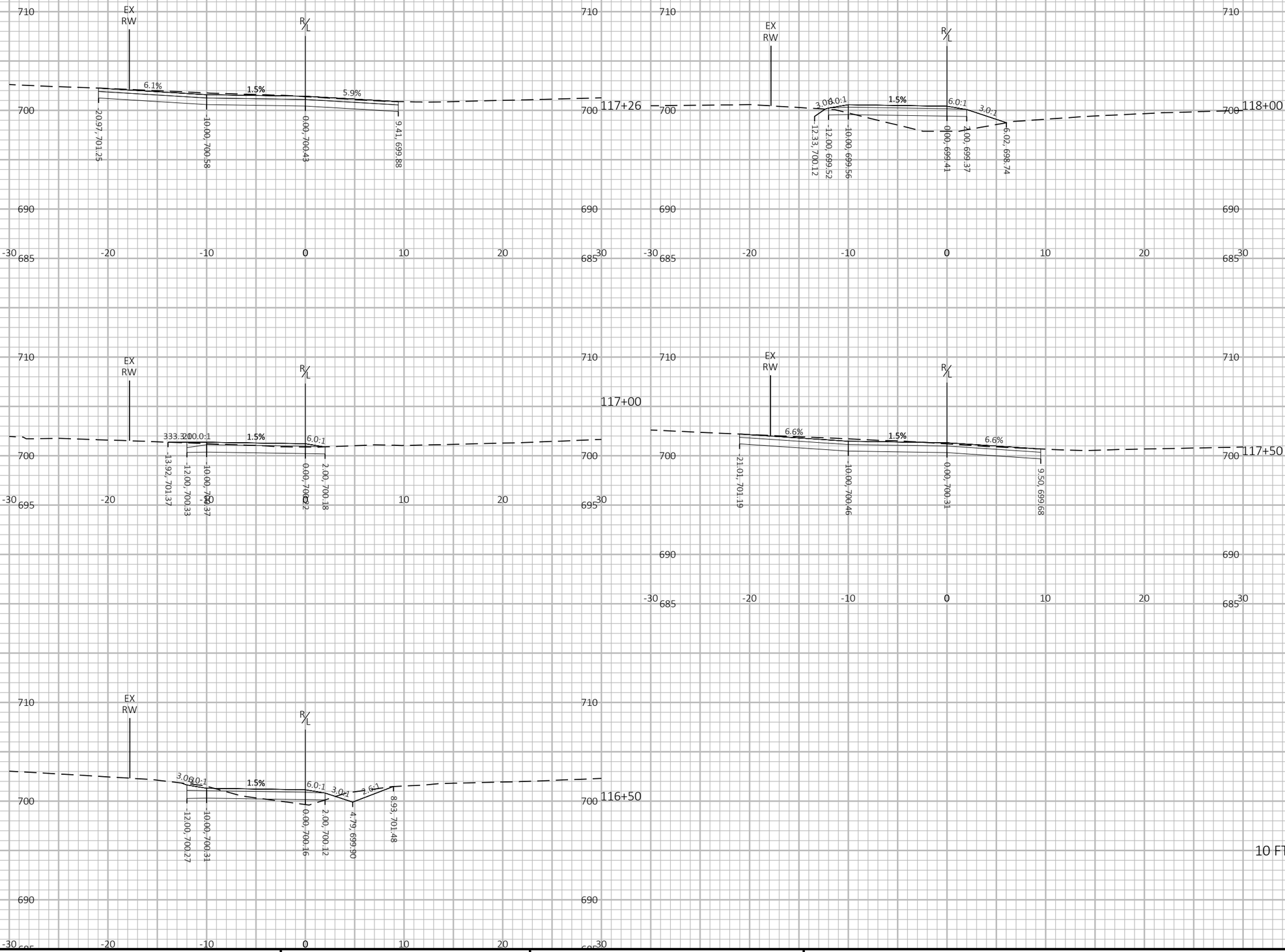
PLOT DATE : 8/8/2025 3:47 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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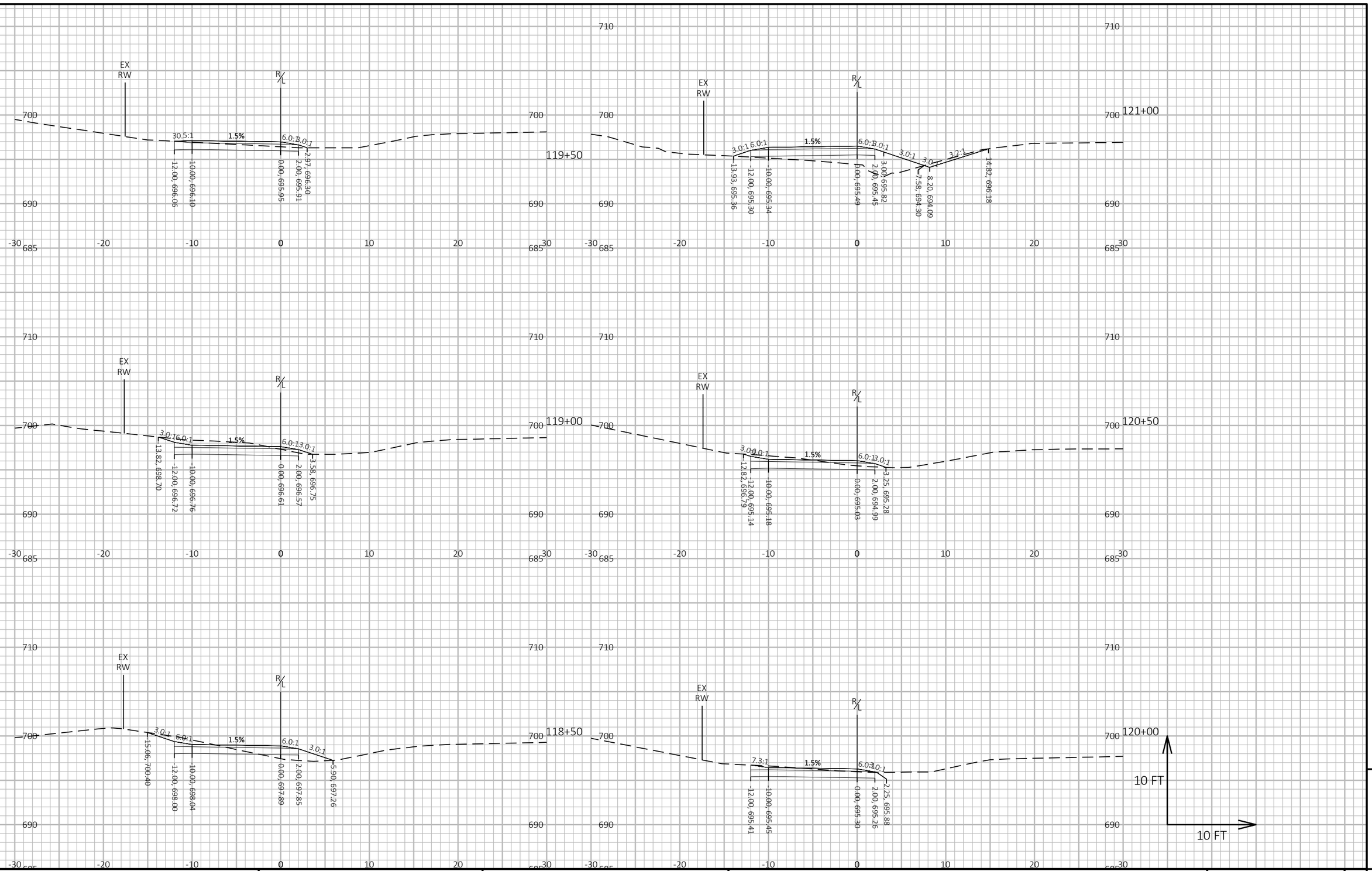
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 160	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 06

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



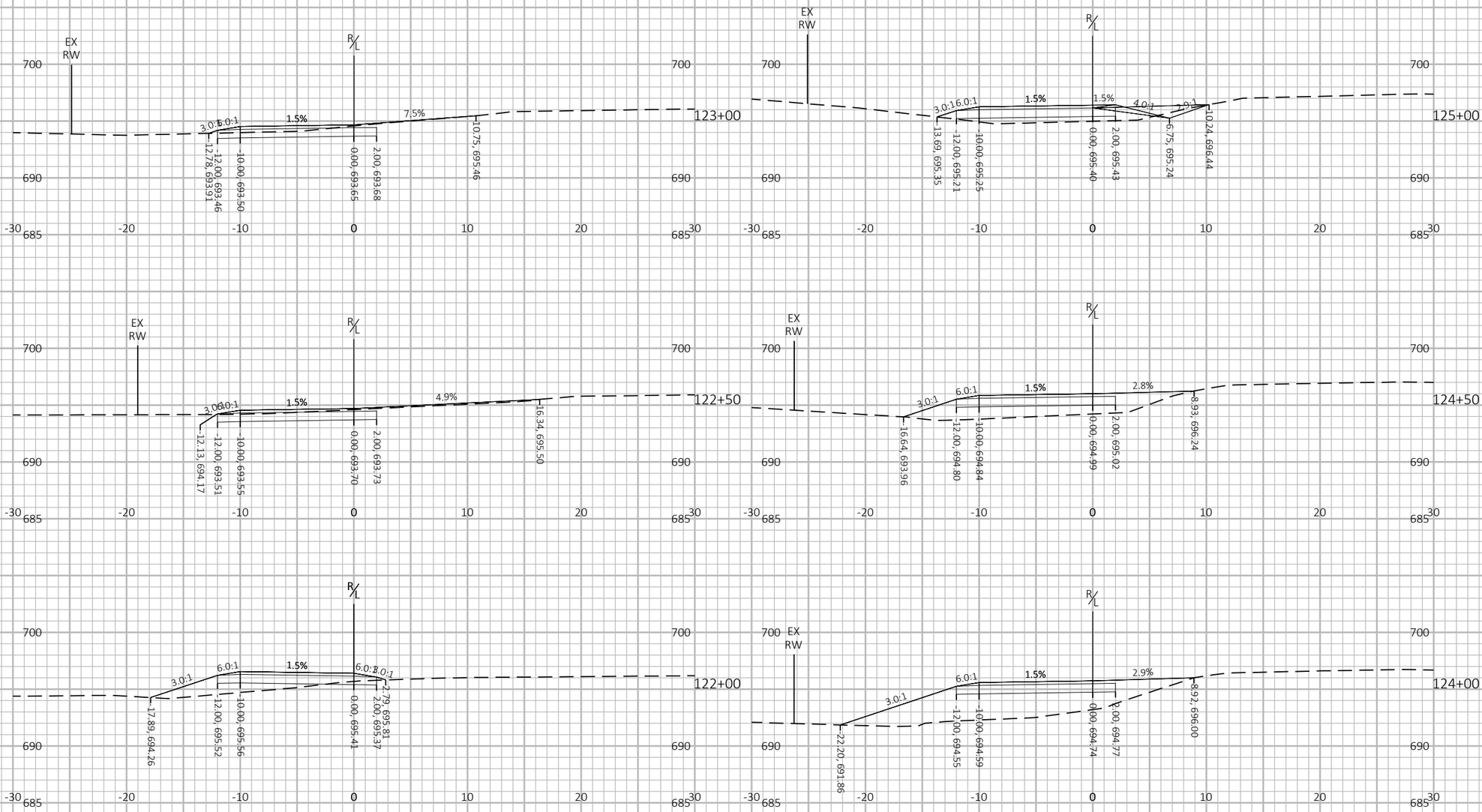
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 161	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 07

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

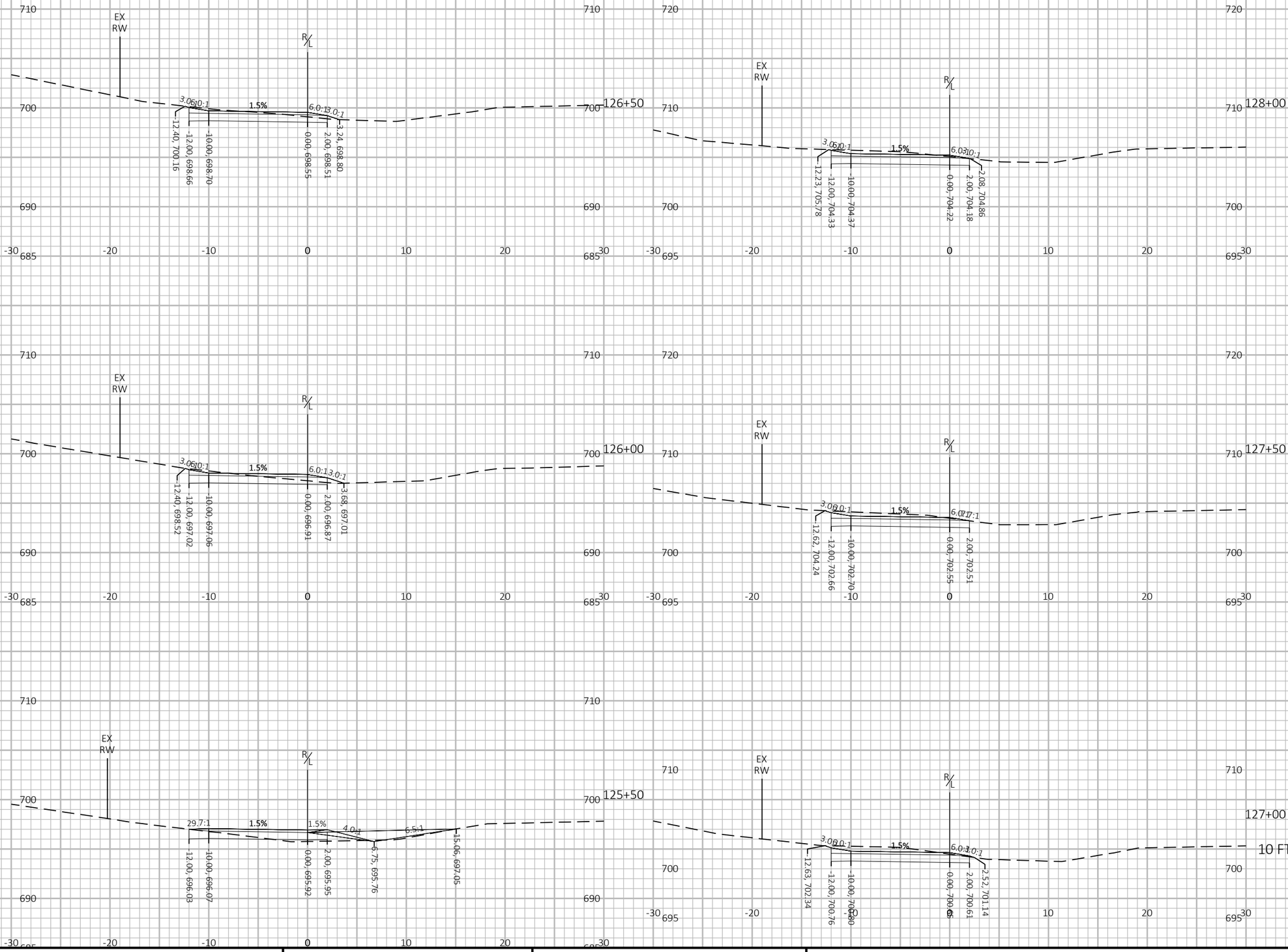


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 162	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 08

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

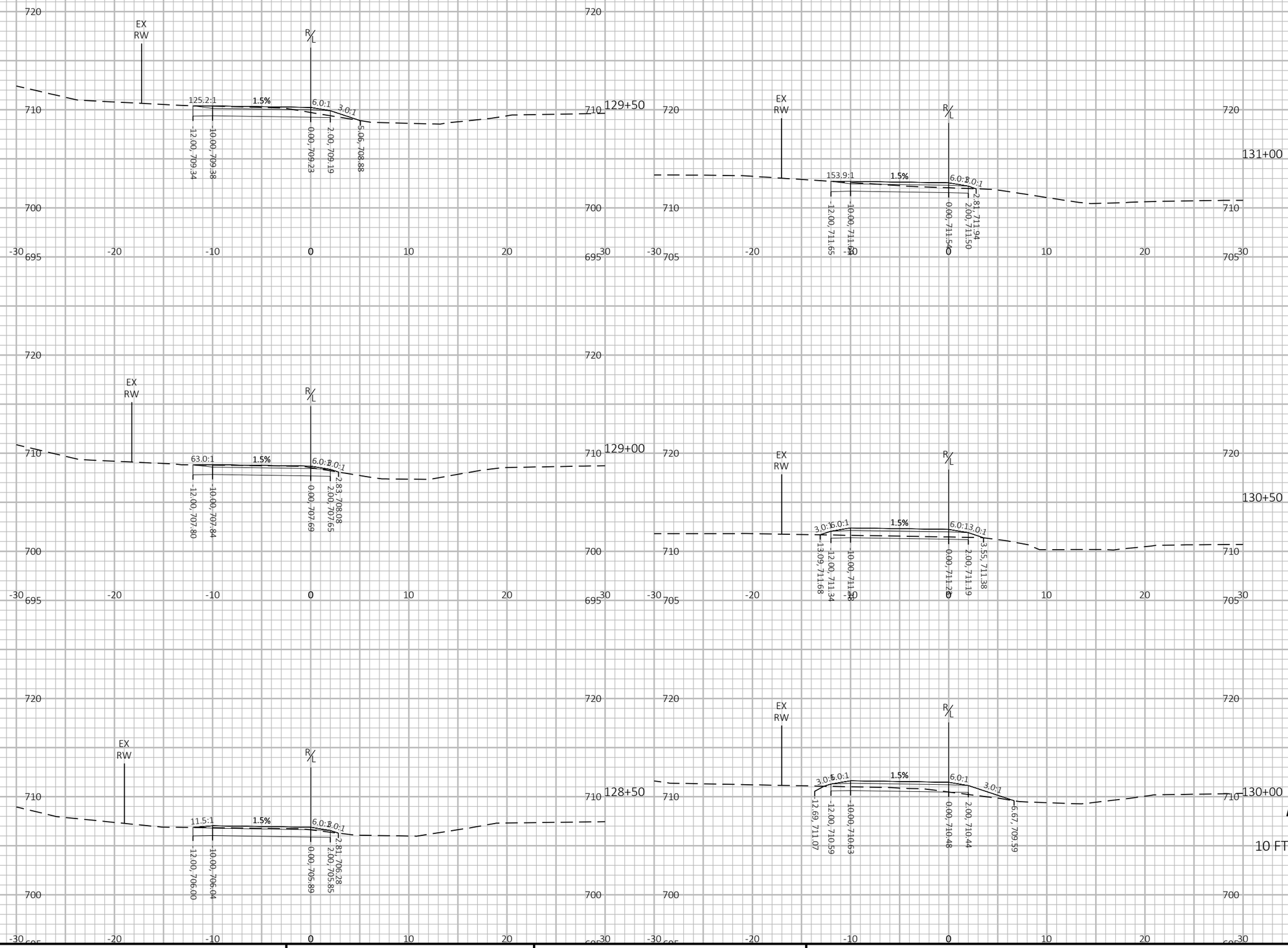


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 163	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 09

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



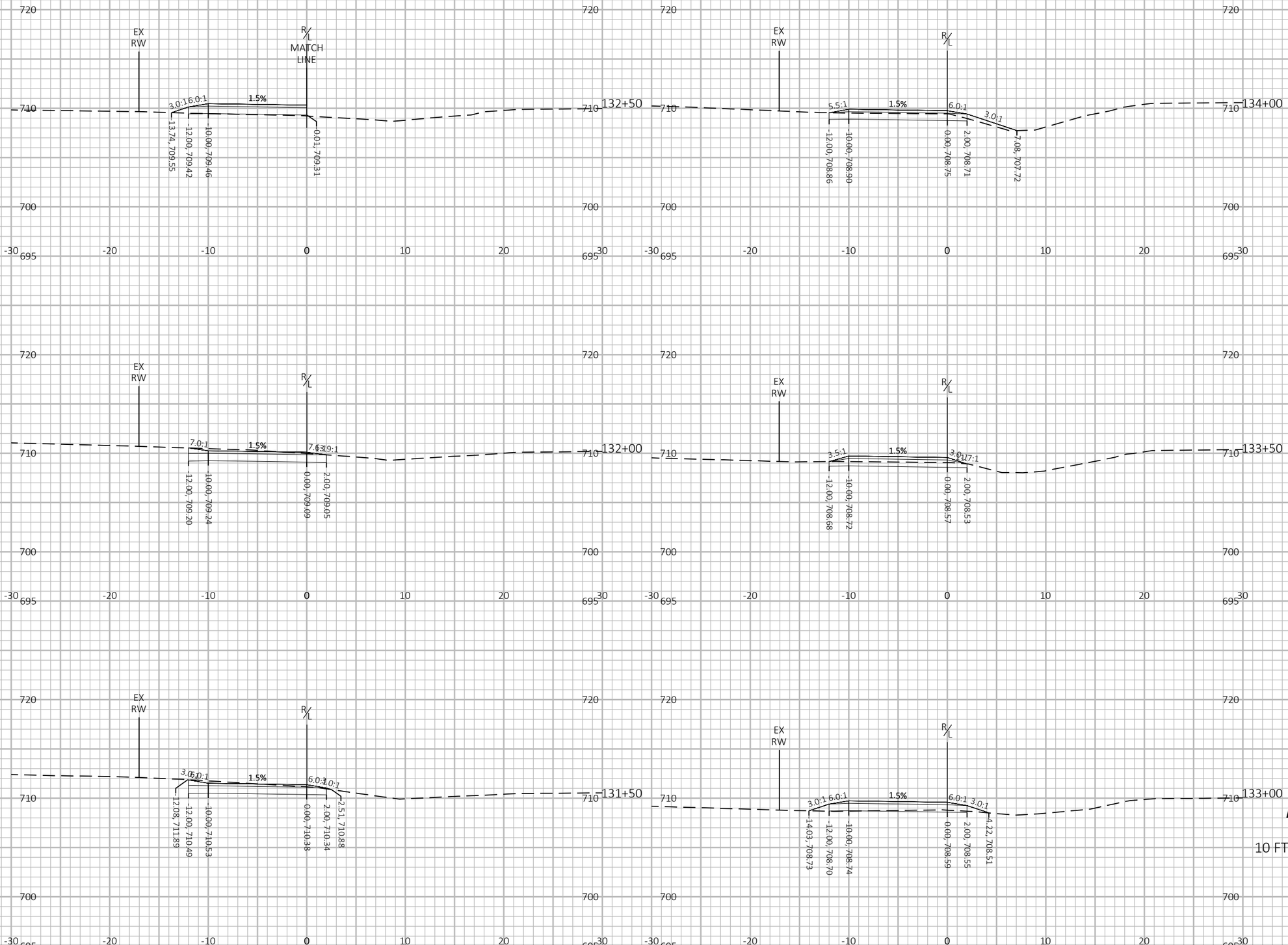
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 164	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 10

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

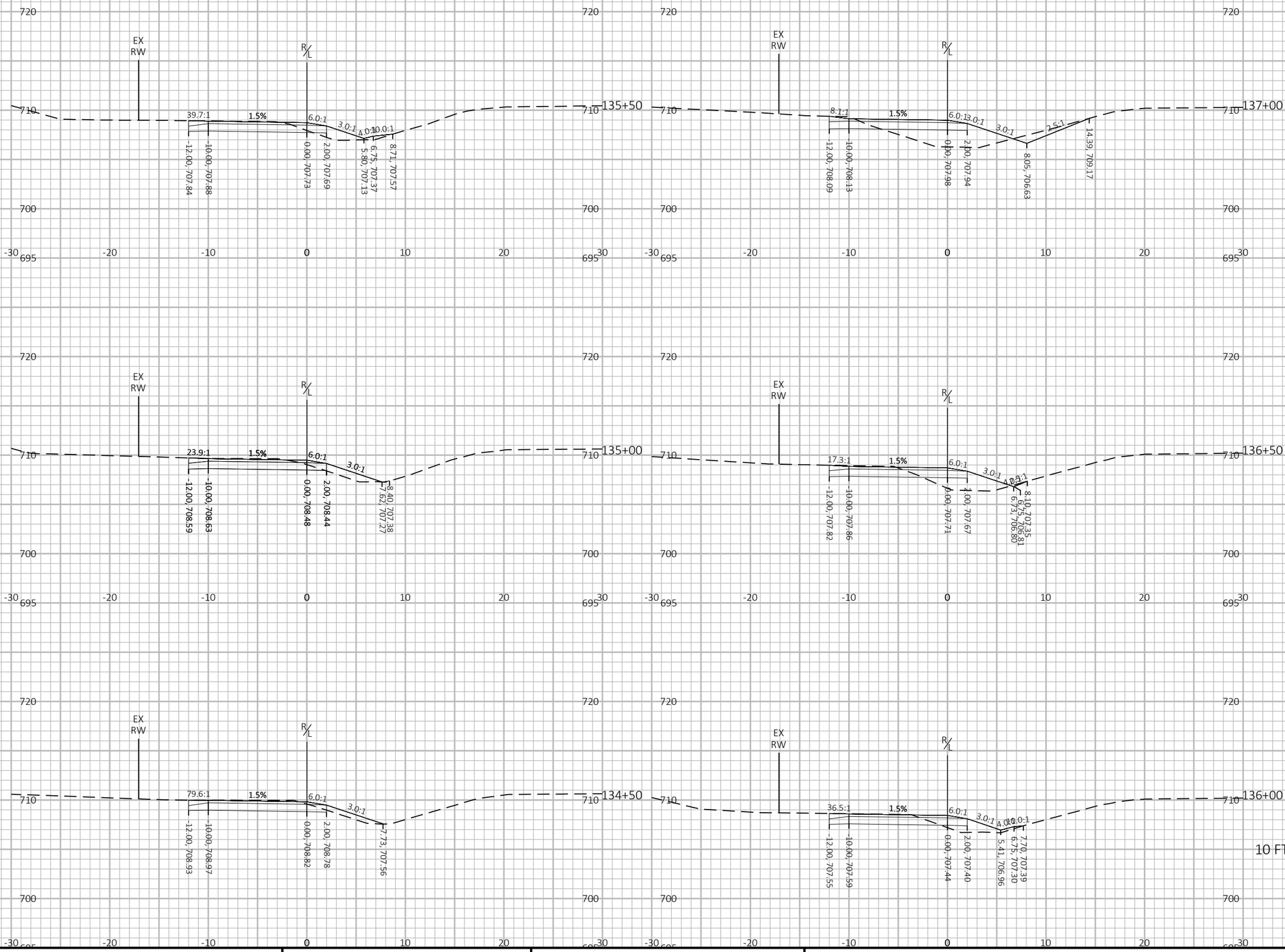


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 165	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 11

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 166	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 12

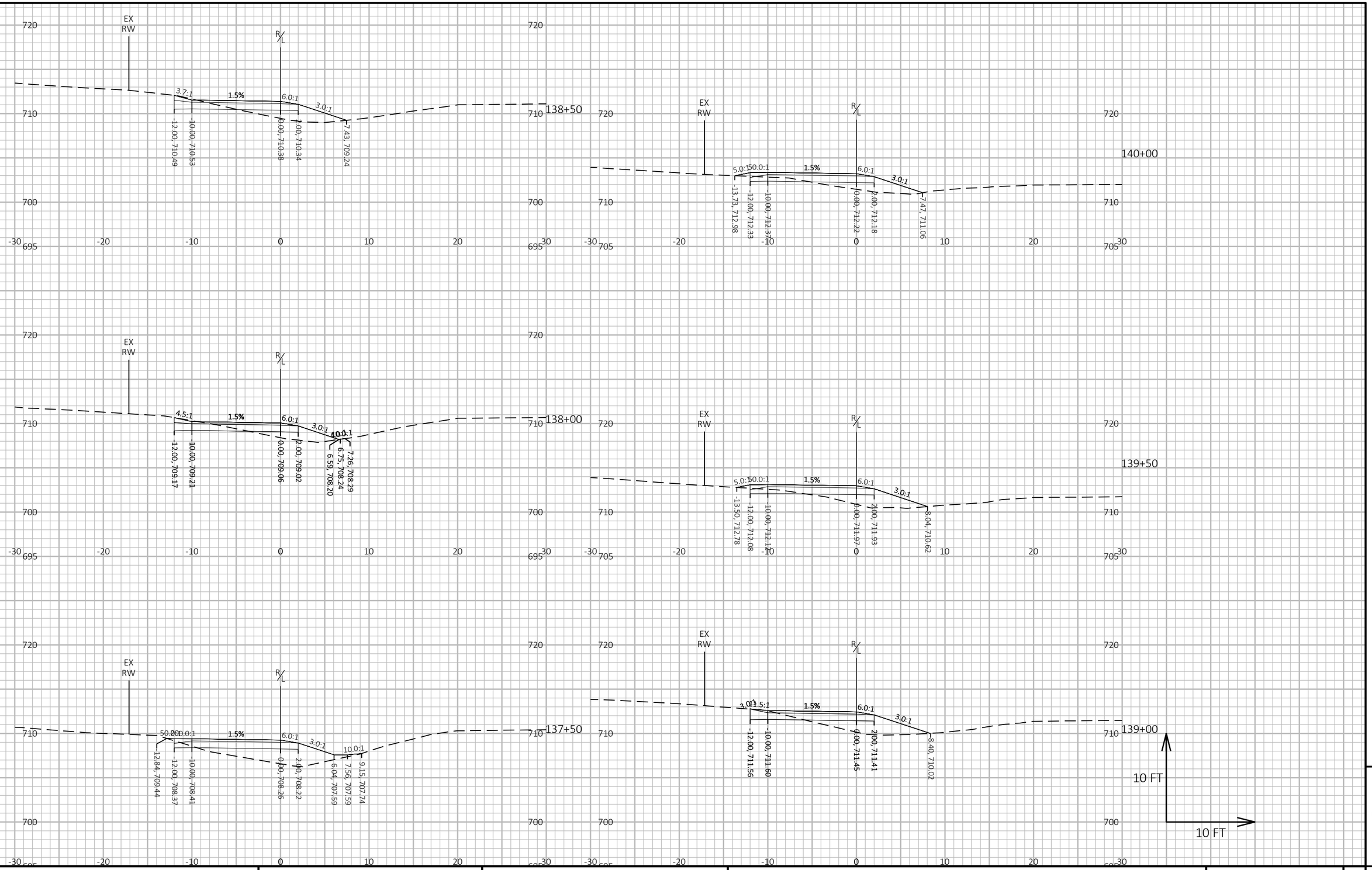
PLOT DATE : 8/8/2025 3:47 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

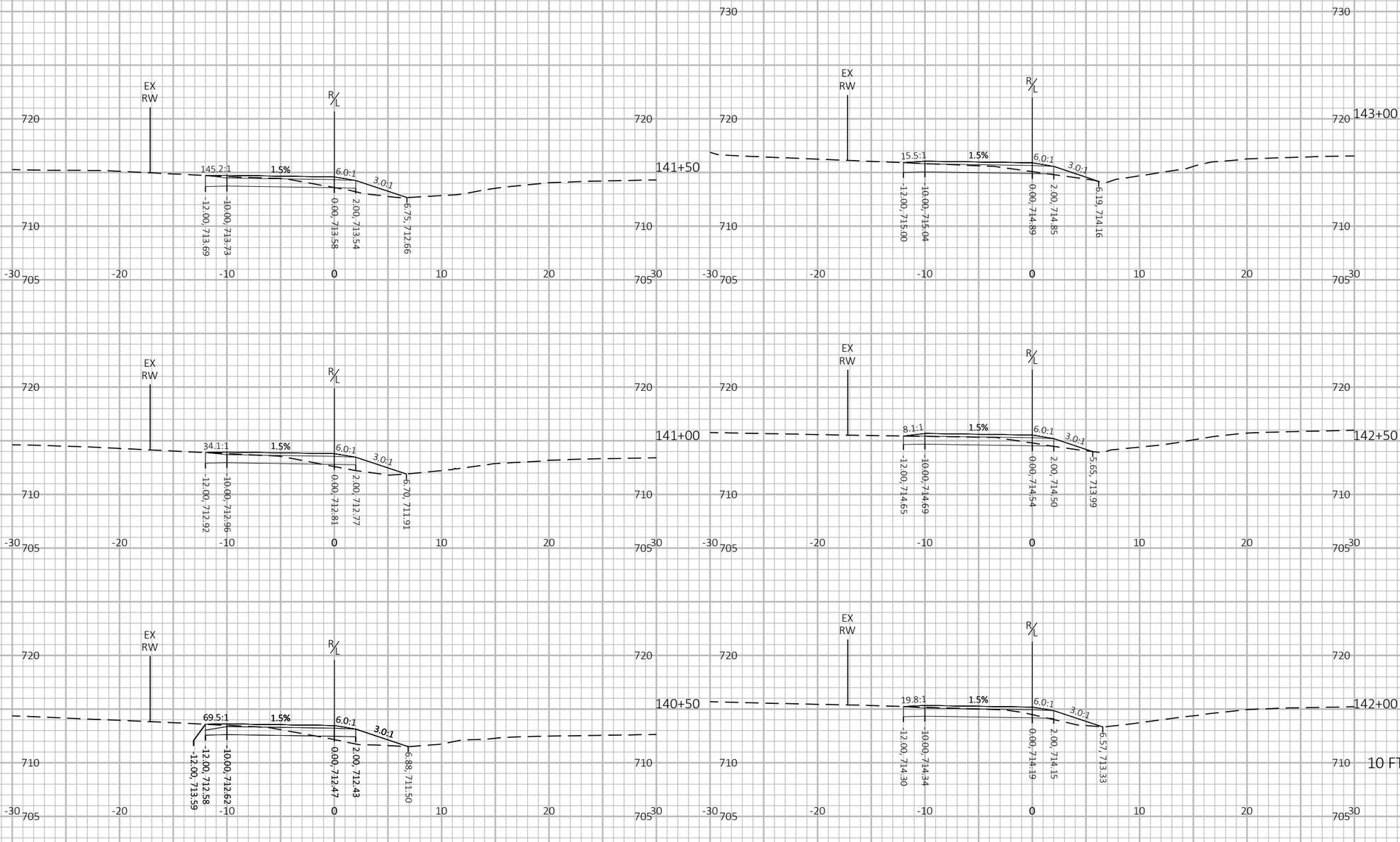


PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 167 E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 13

PLOT DATE : 8/8/2025 3:47 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 168	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 14

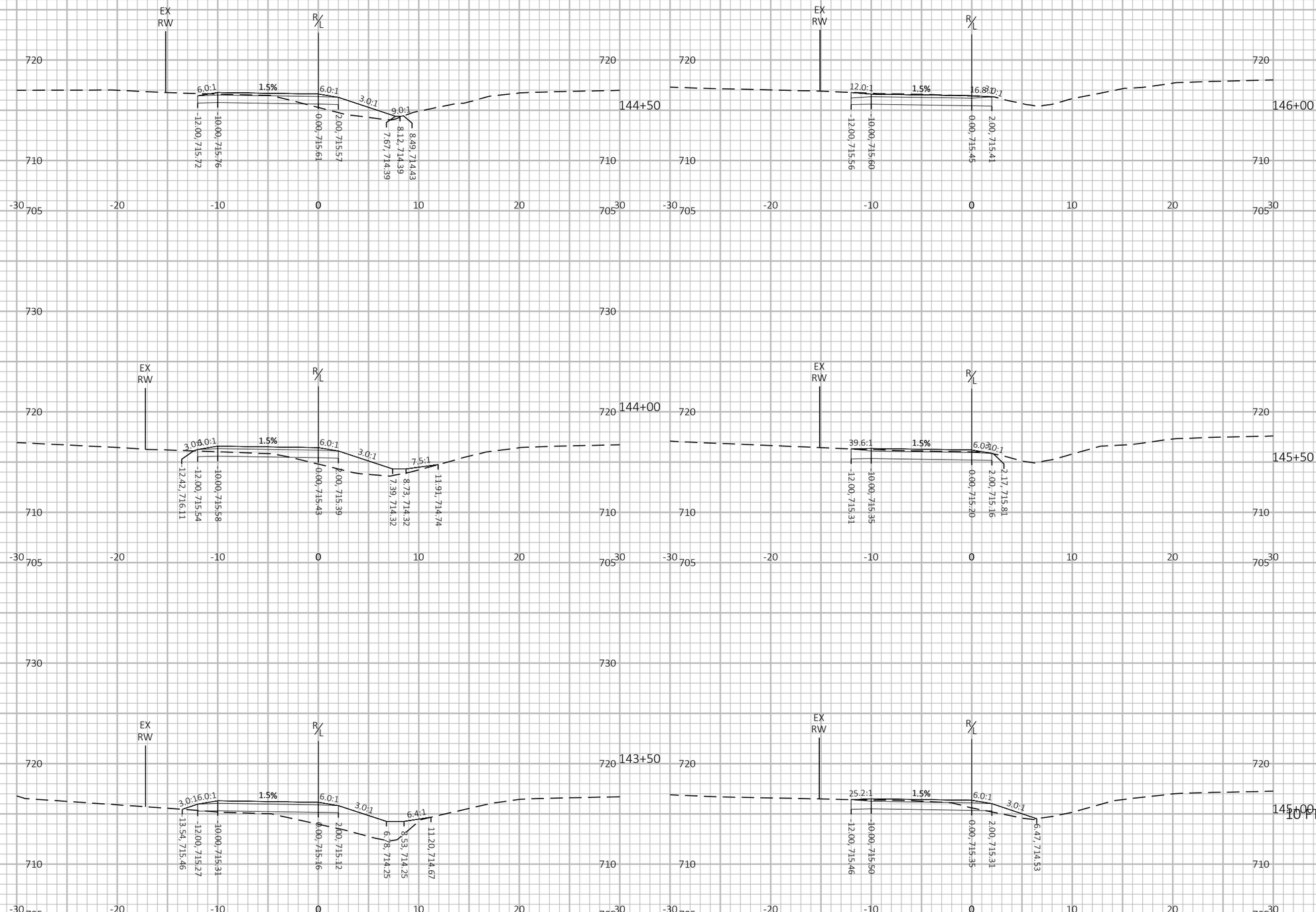
PLOT DATE : 8/8/2025 3:47 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

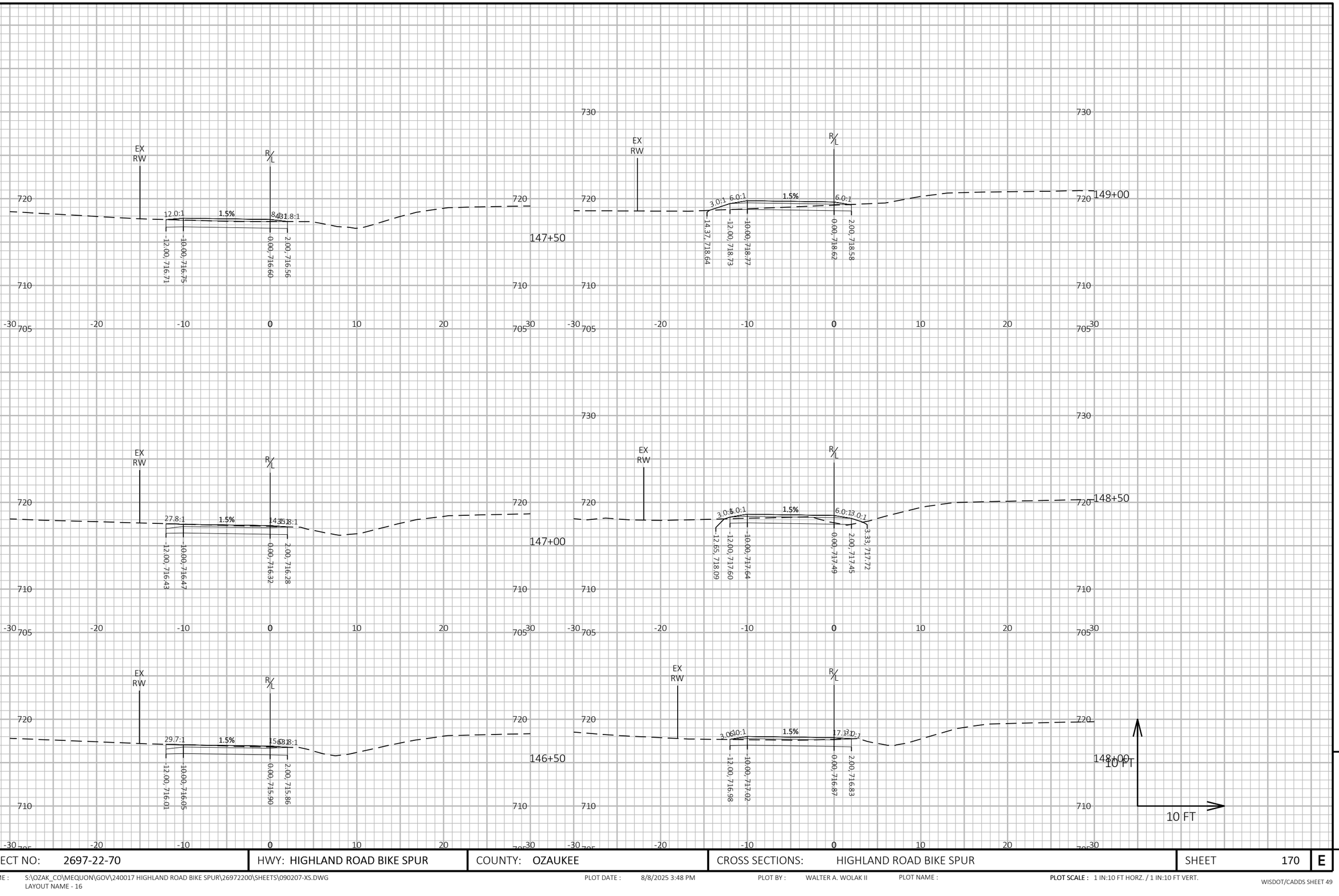
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 169	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 15
PLOT DATE : 8/8/2025 3:47 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 170	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 16

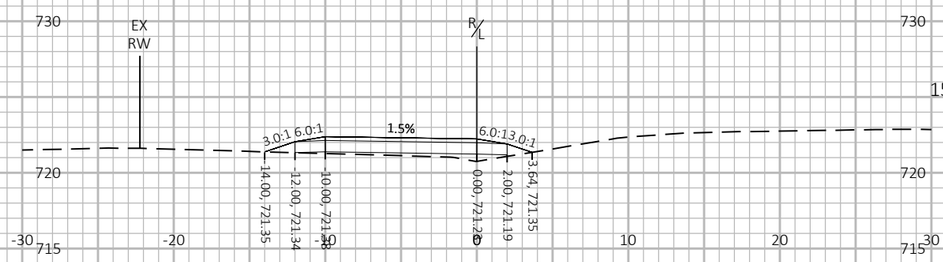
PLOT DATE : 8/8/2025 3:48 PM

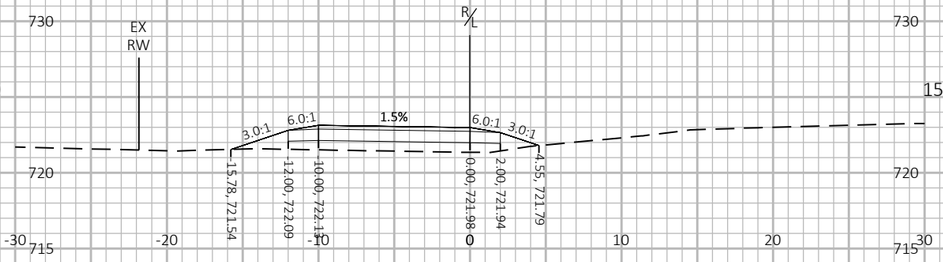
PLOT BY : WALTER A. WOLAK II

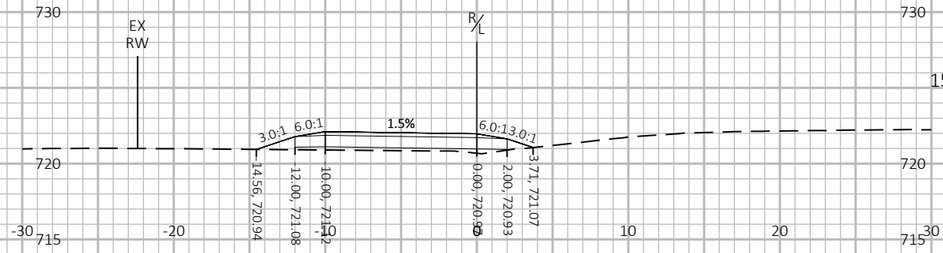
PLOT NAME :

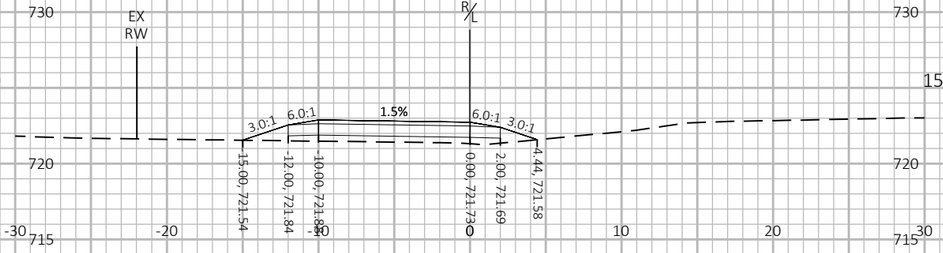
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

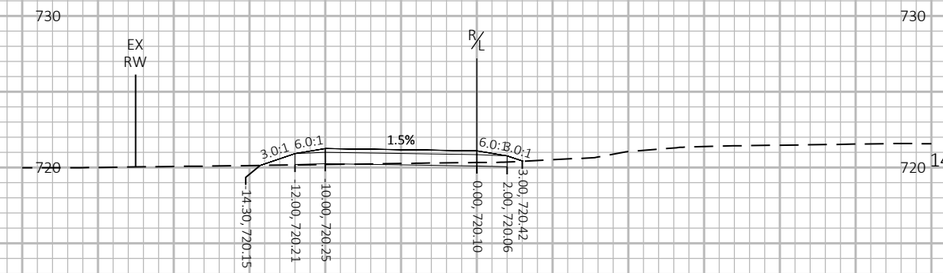
WISDOT/CADDS SHEET 49

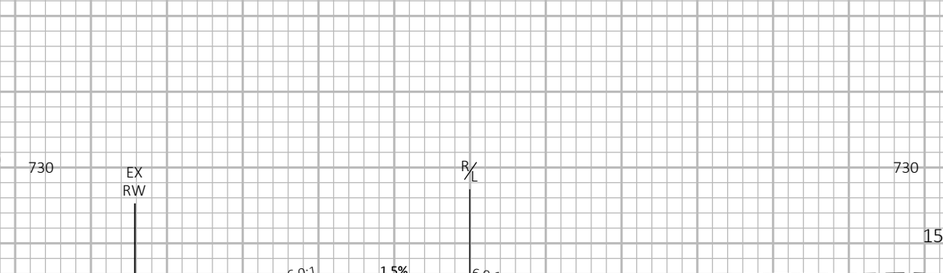


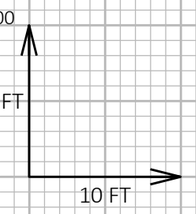












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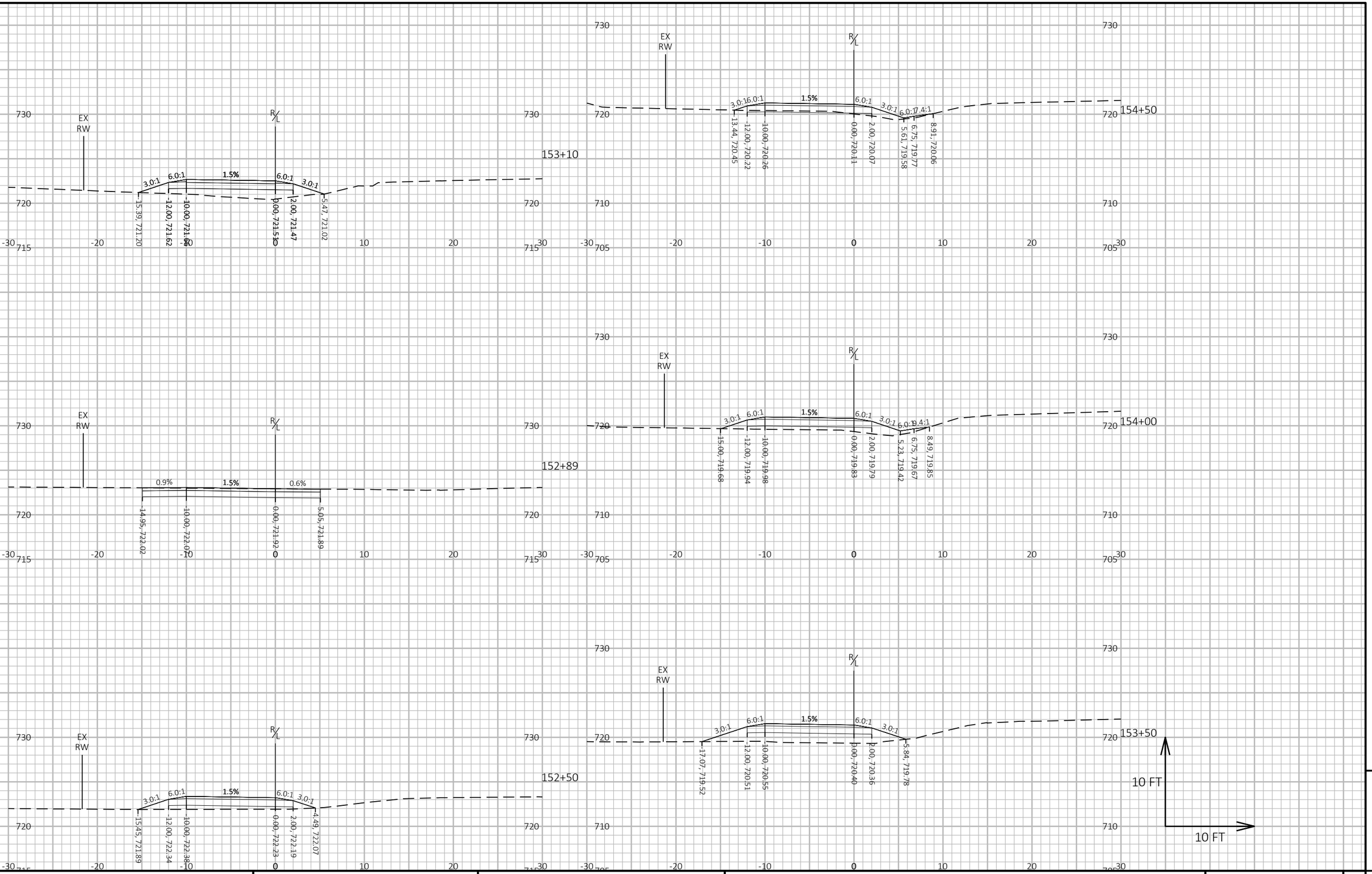
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 171	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 17

PLOT DATE : 8/8/2025 3:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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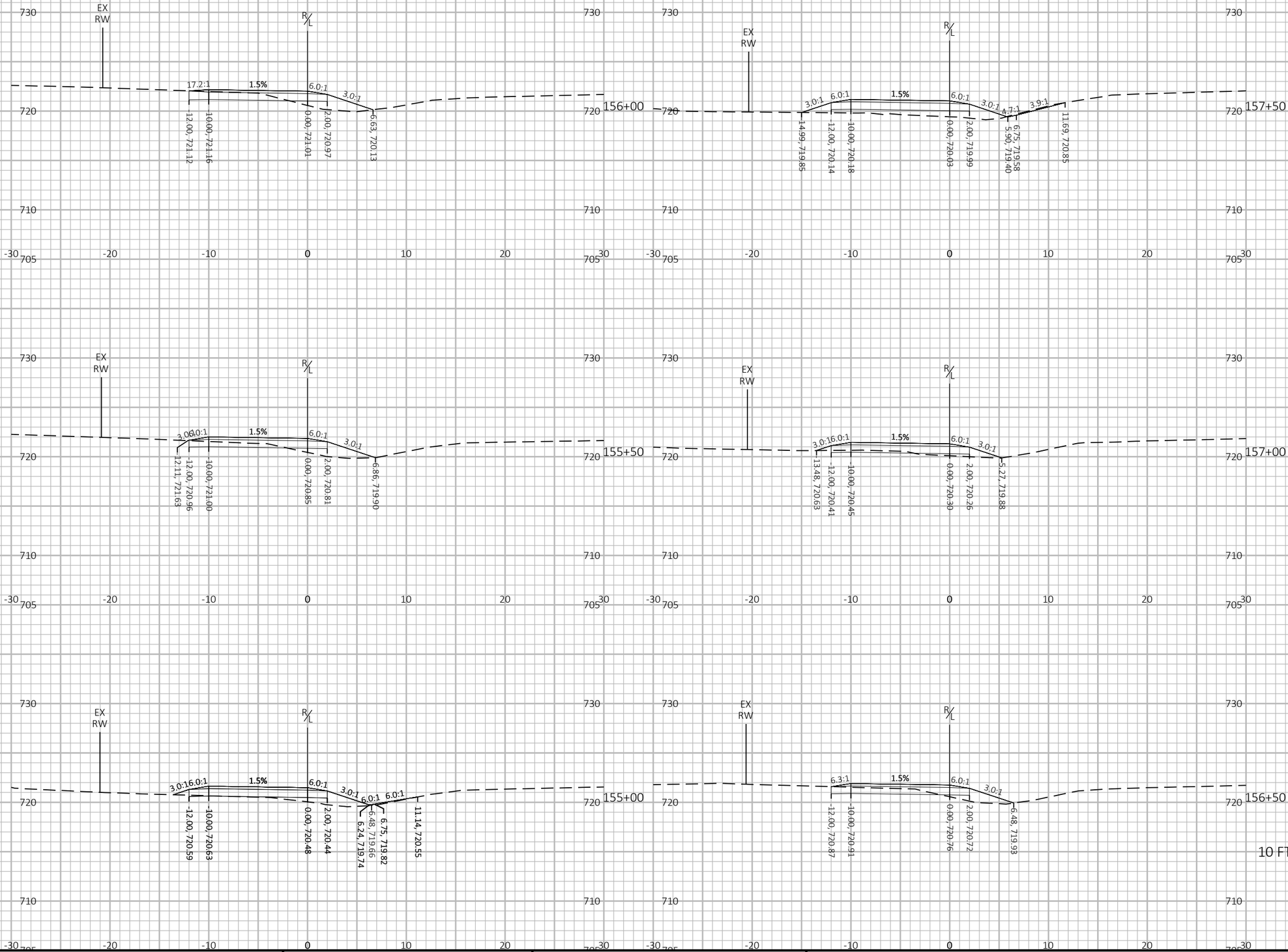
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 172	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 18

PLOT DATE : 8/8/2025 3:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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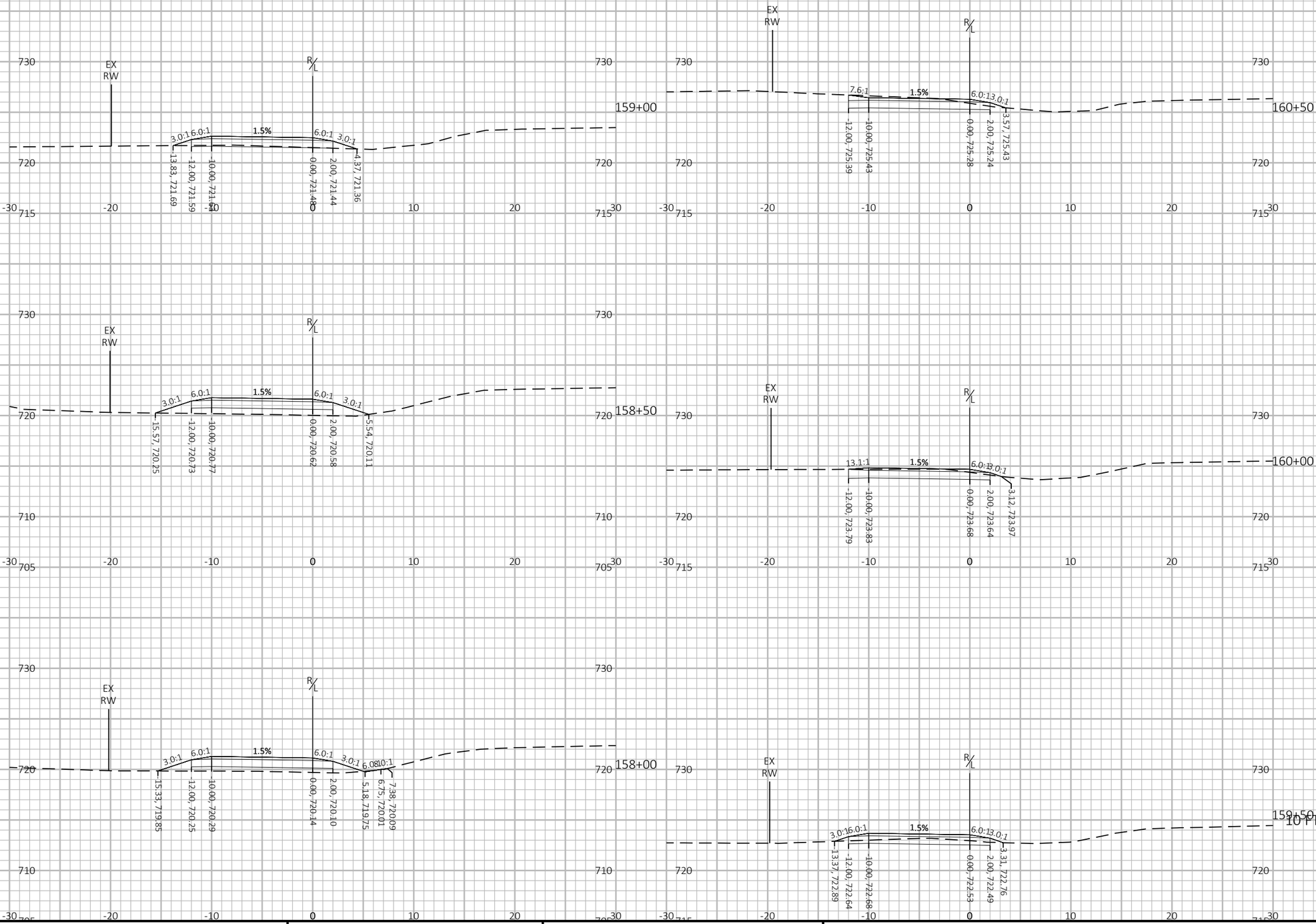
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 173	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 19

PLOT DATE : 8/8/2025 3:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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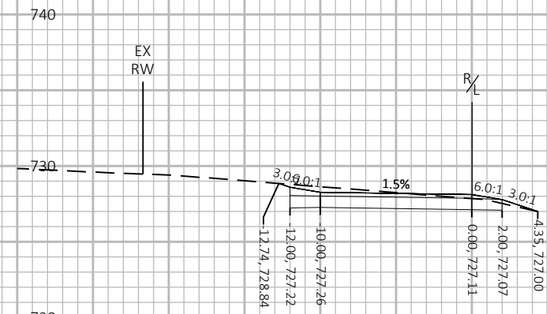
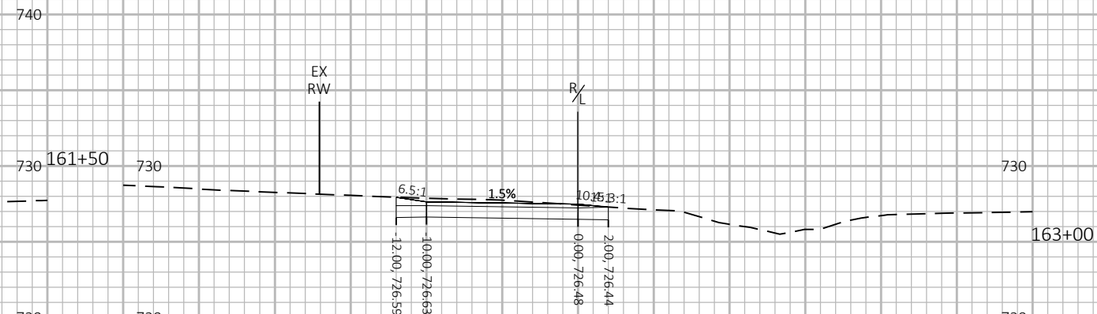
PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 174	E

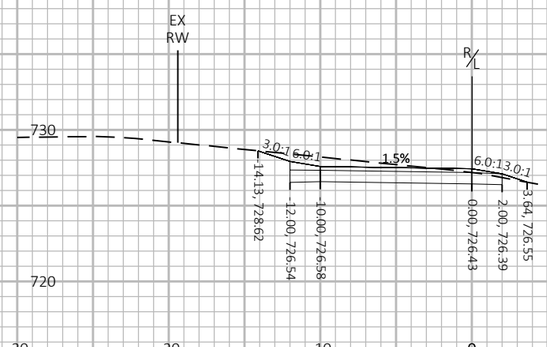
FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 20

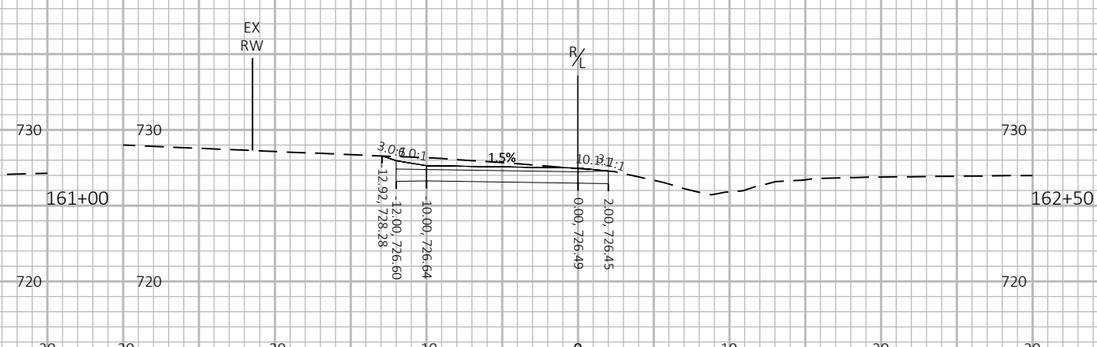
PLOT DATE : 8/8/2025 3:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

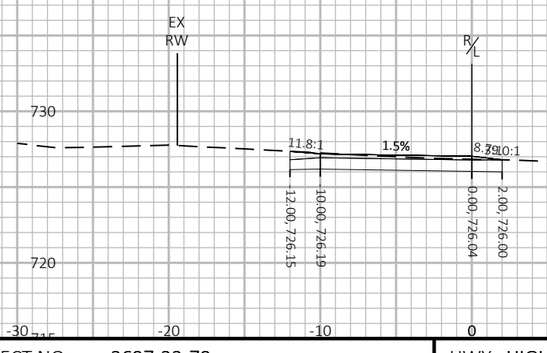
WISDOT/CADDS SHEET 49

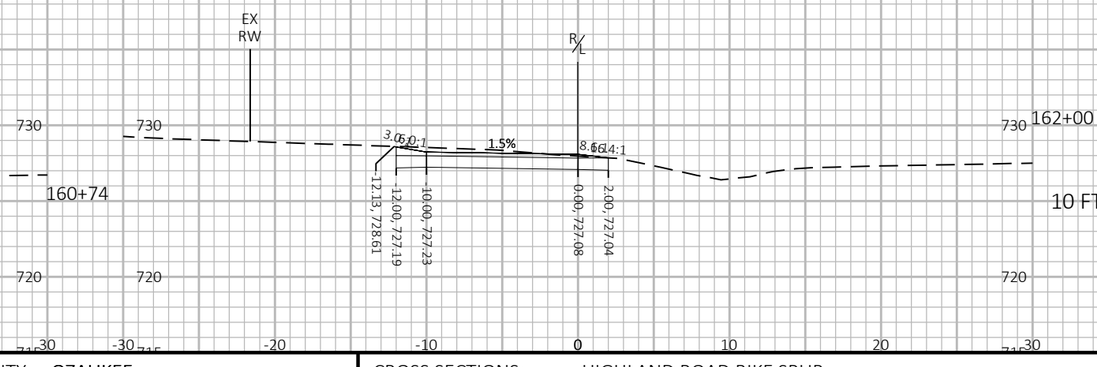


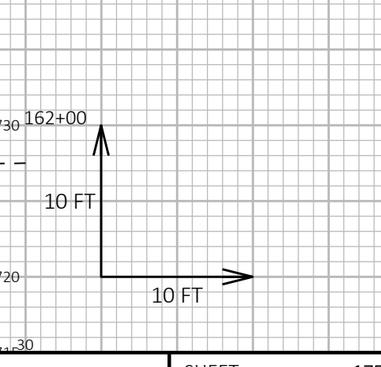












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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 175	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 21

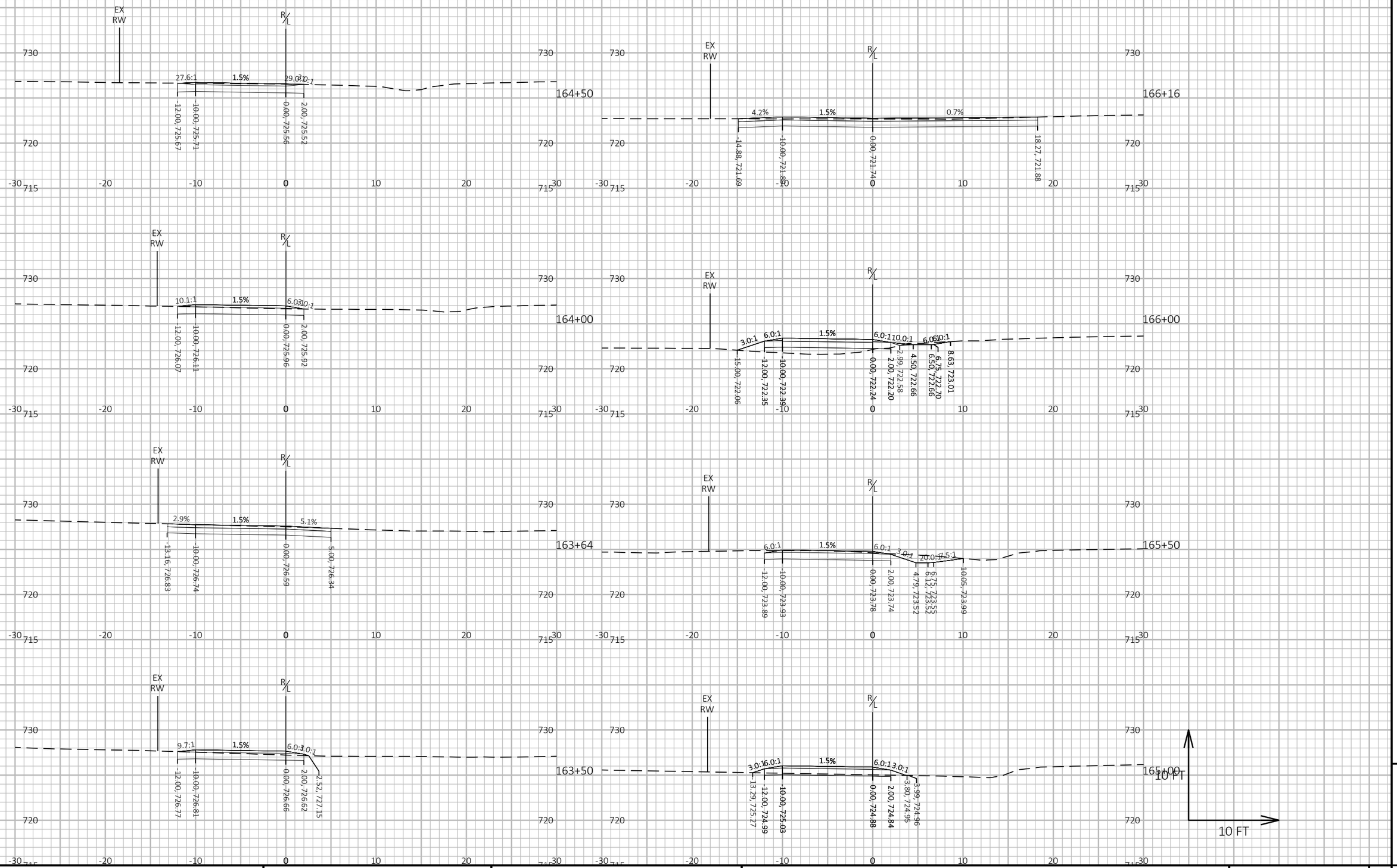
PLOT DATE : 8/8/2025 3:48 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 176	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 22

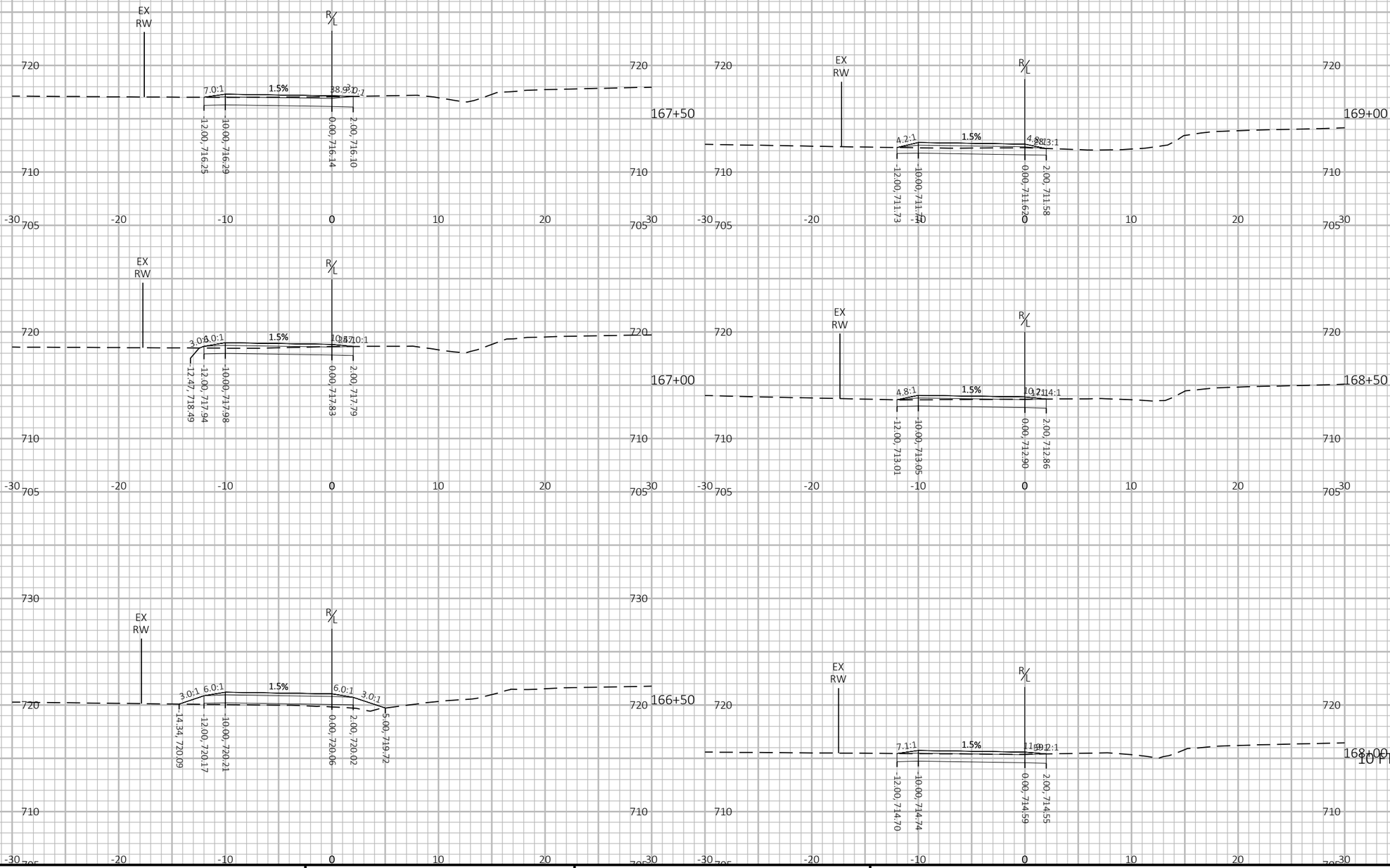
PLOT DATE : 8/8/2025 3:48 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 177	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 23

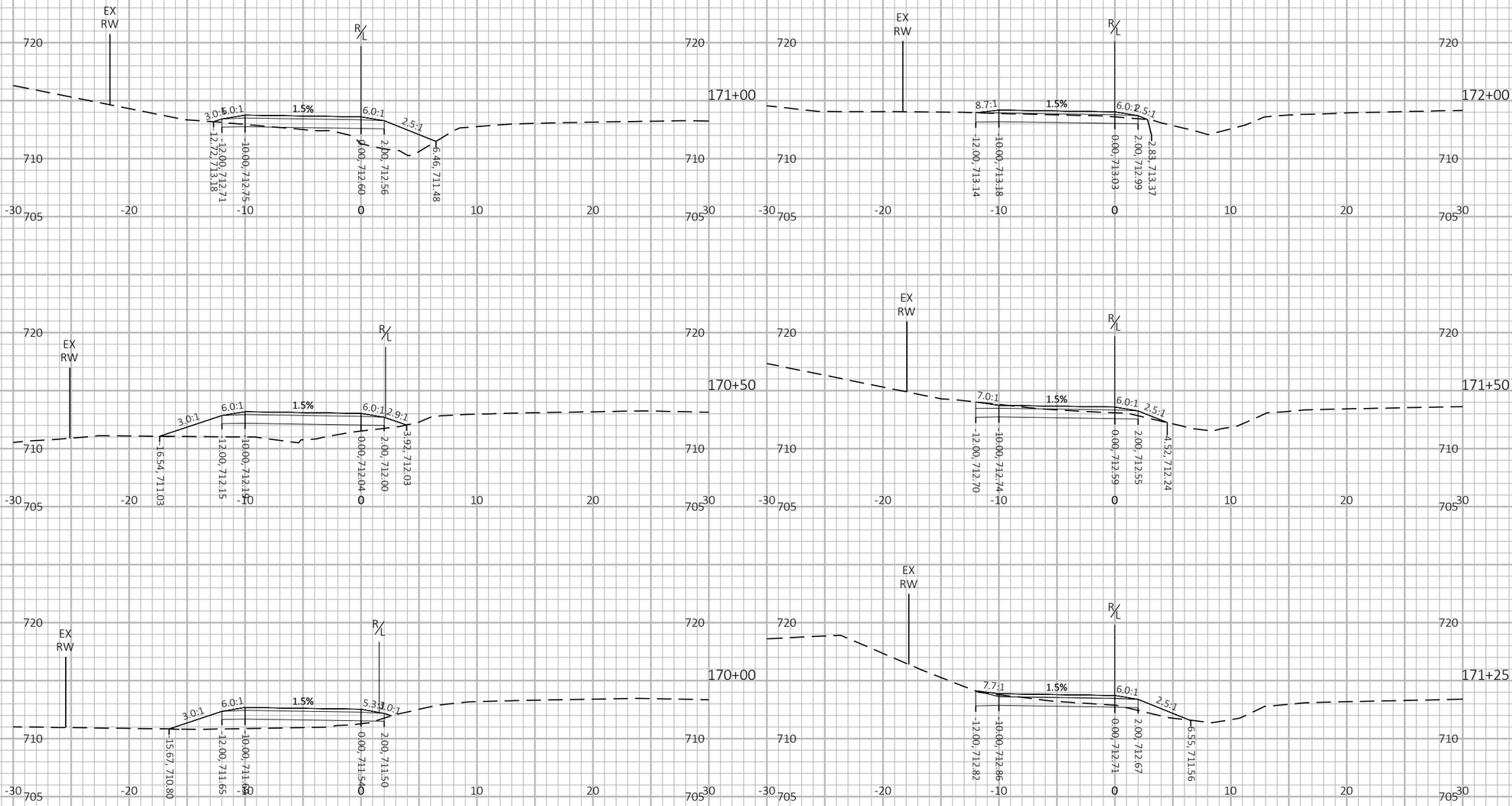
PLOT DATE : 8/8/2025 3:48 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 178	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 24

PLOT DATE : 8/8/2025 3:48 PM

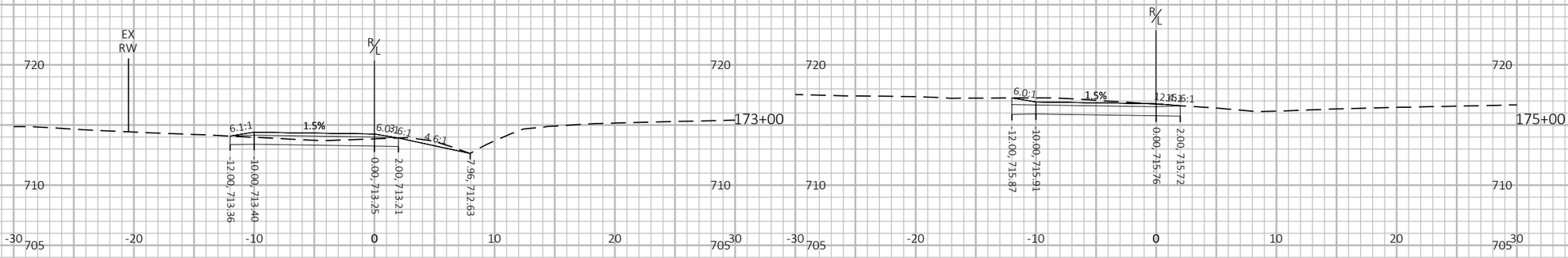
PLOT BY : WALTER A. WOLAK II

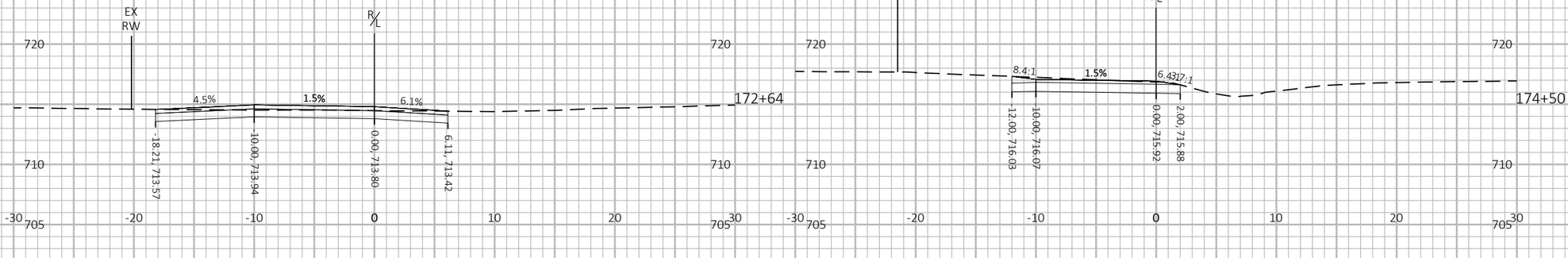
PLOT NAME :

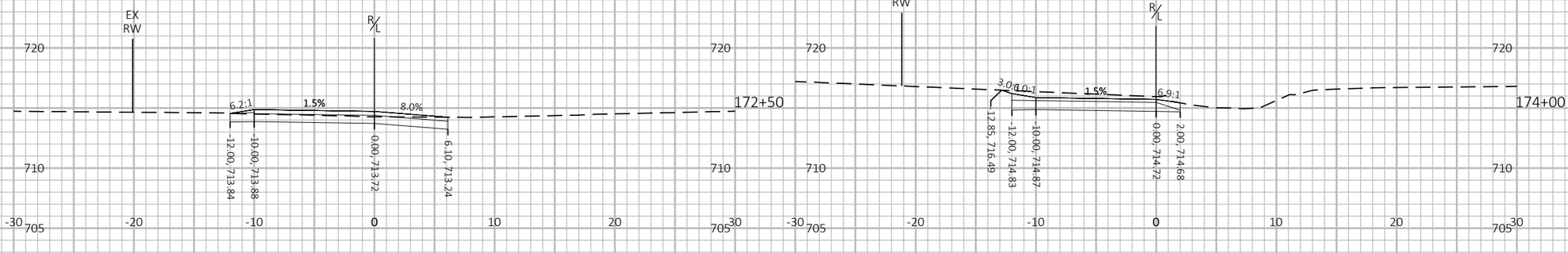
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

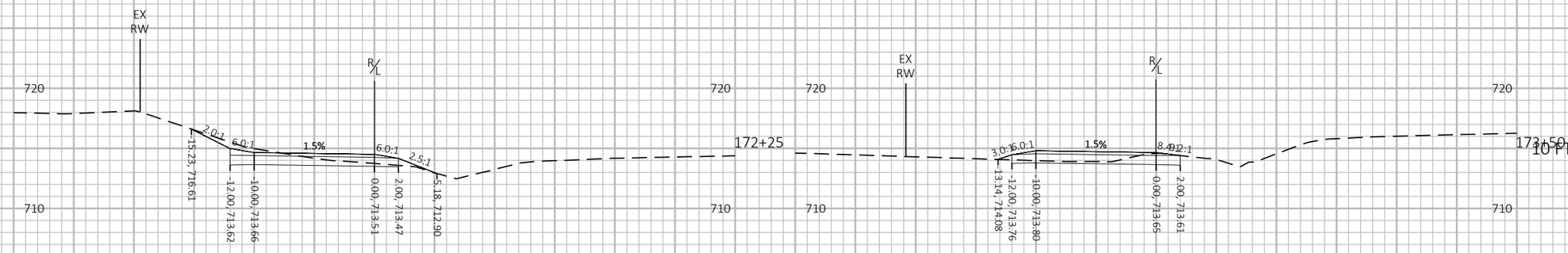
WISDOT/CADDS SHEET 49

END PROJECT STA 175+23.57









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PROJECT NO: 2697-22-70	HWY: HIGHLAND ROAD BIKE SPUR	COUNTY: OZAUKEE	CROSS SECTIONS: HIGHLAND ROAD BIKE SPUR	SHEET 179	E

FILE NAME : S:\OZAK_CO\MEQUON\GOV\240017 HIGHLAND ROAD BIKE SPUR\26972200\SHEETS\090207-XS.DWG
LAYOUT NAME - 25

PLOT DATE : 8/8/2025 3:48 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49