EAU

PROJECT ID: 1050-01-79

WITH: 8996-01-07

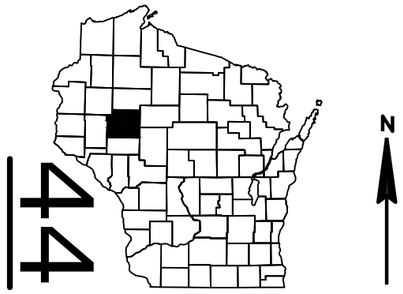
COUNTY: CHIPPEWA

NOVEMBER 2024

ORDER OF SHEETS


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


TOTAL SHEETS = 268



# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED IMPROVEMENT**

# CHIPPEWA FALLS - CADOTT

**50TH AVENUE BRIDGE B-09-0309**

## STH 29

## CHIPPEWA COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 1050-01-79 | WISC 2025063 | 1 |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER

**1050-01-79**

LAYOUT

SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.388 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CHIPPEWA COUNTY, NAD83 ( 2011 ), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 ( 2012 ). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

DESIGN DESIGNATION

| | | | |
|---|---|---|---|
| A.A.D.T. | (2025) | = | 1,700 |
| A.A.D.T. | (2045) | = | 2,200 |
| D.H.V. | | = | 260 |
| D.D. | | = | 50/50 |
| T. | | = | 10.0% |
| DESIGN SPEED | | = | 50 MPH |
| ESALS | | = | 360,000 |

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'ER')
- 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

JT ENGINEERING, INC

JT ENGINEERING

WISCONSIN JEDIDIAH J. MUNROE PE-39156 MADISON, WI PROFESSIONAL ENGINEER

DATE: 7-19-24 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | JT ENGINEERING INC. |
| Designer | JT ENGINEERING INC. |
| Project Manager | DAVID KOEPP |
| Regional Examiner | WISDOT NORTHWEST REGION |
| Regional Supervisor | DAVID KOEPP |

APPROVED FOR THE DEPARTMENT

DATE: Dave Koepp (Signature)

Digitally signed by Dave Koepp
DN: C=US, E=david.koepp@dot.wi.gov, O=WisDOT, OU=Chippewa
Date: 2024.07.22 09:04:41-05'00'

E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 7/19/2024 8:31 AM

PLOT BY : ERIC BENSON

PLOT NAME :

## RUNOFF COEFFICIENT TABLE

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

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

## STANDARD ABBREVIATIONS

| | | | |
|---|---|---|---|
| AP | ACCESS POINT | INTERS | INTERSECTION |
| AC | ACRE | INV | INVERT |
| AGG | AGGREGATE | JT | JOINT |
| ASPH | ASPHALTIC | LT | LEFT |
| BL | BASELINE | LF | LINEAR FOOT |
| BM | BENCH MARK | MH | MANHOLE |
| CB | CATCH BASIN | MP | MARKER POST |
| CL | CENTER LINE | MB | MESSAGE BOARD |
| CONC | CONCRETE | NOM | NOMINAL |
| CO | COUNTY | NB | NORTHBOUND |
| CABC | CRUSHED AGGREGATE BASE COURSE | PAVT | PAVEMENT |
| | | PERM | PERMENANT |
| CY | CUBIC YARD | PU | PIPE UNDERDRAIN |
| CULV | CULVERT | PCC | PORTLAND CEMENT CONCRETE |
| CP | CULVERT PIPE | PE | PRIVATE ENTRANCE |
| C&G | CURB AND GUTTER | PROJ | PROJECT |
| DIA | DIAMETER | PL | PROPERTY LINE |
| DWY | DRIVEWAY | RL | REFERENCE LINE |
| EB | EASTBOUND | RT | RIGHT |
| ELEV | ELEVATION | R/W | RIGHT OF WAY |
| EW | ENDWALL | RDWY | ROADWAY |
| ENT | ENTRANCE | SHLDR | SHOULDER |
| EXC | EXCAVATION | SB | SOUTHBOUND |
| FP | FENCE POST | SS | STORM SEWER |
| FERT | FERTILIZE | TEL | TELEPHONE |
| F | FILL | TEMP | TEMPORARY |
| FG | FINISHED GRADE | TER | TERRACE |
| FL | FLOW LINE | TV | TELEVISION |
| FO | FIBER OPTIC | UG | UNDERGROUND |
| FT | FOOT | VOL | VOLUME |
| HYD | HYDRANT | W | WATER |
| INL | INLET | WB | WESTBOUND |

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

APPLY TACK COAT AT A RATE OF 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

SAFETY EDGE TO BE CONSTRUCTED AT EDGE OF HMA PAVED SHOULDERS 3 FT WIDE OR LESS PER SDD SAFETY EDGE.

## SEQUENCE OF PLANS AND DETAILS IN SECTION 2

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
REMOVAL PLAN
CONSTRUCTION DETAILS
GUARDRAIL PLANS
EROSION CONTROL
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR PLAN
FENCING PLAN

## UTILITY CONTACTS

RICK PODOLAK
AT&T WISCONSIN - COMMUNICATION LINE
4TH FLOOR 304 S DEWEY STREET
EAU CLAIRE, WI 54701
(715) 839-5565
RP4514@ATT.COM

SUNNY RICHARDSON
SPECTRUM - COMMUNICATION LINE
1201 MCCANN DRIVE
ALTOONA, WI 54720
(715) 896-6503
CHTR_WI_CONST@CHARTER.COM

BECKY MARQUARDT
XCEL ENERGY - GAS/PETROLEUM
1400 WESTERN AVE
EAU CLAIRE, WI 54701
(715) 737-1590
REBECCA.K.MARQUARDT@XCELENEGRY.COM

TYSON KALIEN
XCEL ENERGY - ELECTRICITY
1400 WESTERN AVE
EAU CLAIRE, WI 54701
(715) 226-8936
TYSON.KALIEN@XCELENEGRY.COM

DAREN BAUER
CINC - COMMUNICATION LINE
105 GARFIELD AVENUE
EAU CLAIRE, WI 54701
(715) 836-5286
BAUERDP@UWEC.EDU

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

### WISDOT CONTACT

DAVID KOEPP
WISCONSIN DOT, NORTHWEST REGION
718 W. CLAIREMONT AVE
EAU CLAIRE, WI 54701
PHONE: (715) 563-8402
E-MAIL: DAVID.KOEPP@DOT.WI.GOV

### DESIGN CONTACT

JEDIDIAH MUNROE
JT ENGINEERING, INC.
281 W. NETHERWOOD ROAD SUITE 1
OREGON, WI 53575
PHONE: (608) 515-5331
E-MAIL: JEDM@JT-ENGINEERING.COM

### WISCONSIN DNR LIAISON

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

2

## LEGEND & NOTES

- PROJECT ID 8996-01-07
- PROJECT ID 8996-01-07
  PROJECT ID 1050-01-79 (SELECT QUANTITIES)

N

STH 29
STH 29 EB
STH 29 WB
510
120
515
145
520
150
525
NW EXIT RAMP
NE ON RAMP
IP
SIGN

END RECONSTRUCTION
STA 124+89.84 NW RAMP

END RECONSTRUCTION
STA 147+00.00 NE RAMP

EXISTING R/W
TLE
PROPOSED R/W
EXISTING R/W

171ST ST

CTH J

END CONSTRUCTION
PROJECT ID 1050-01-79
STA 129+50

PROJECT ID 8996-01-76

105
110
115
120
125
130
135

50TH AVE (STILLSON ROAD)

STA 122+96.75 50TH AVE
STA 151+03.87 NE RAMP

STRUCTURE B-09-309
RETAINING WALL R-9-18
RETAINING WALL R-9-17

BEGIN PROJECT
STA 106+50.00
Y=121840.779
X=187220.291

EXISTING R/W
STA 116+34.16 50TH AVE
STA 128+90.96 NW RAMP
EXISTING R/W

DELINEATED WETLAND
PROPOSED R/W
EXISTING R/W

END PROJECT
STA 127+00.00

DELINEATED WETLAND

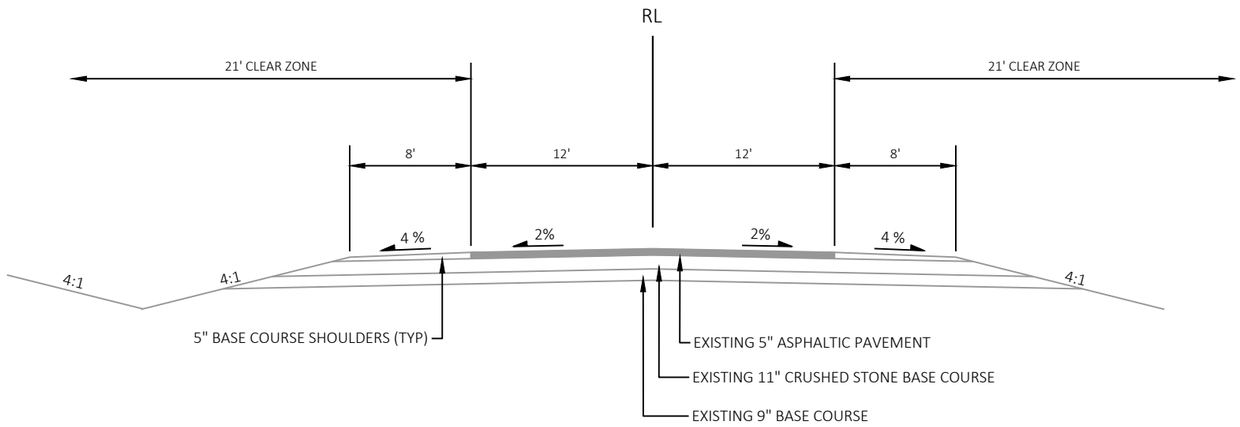
CINDY LAKE

STH 29 WB
STH 29 EB
STH 29
STH 29

CTH J

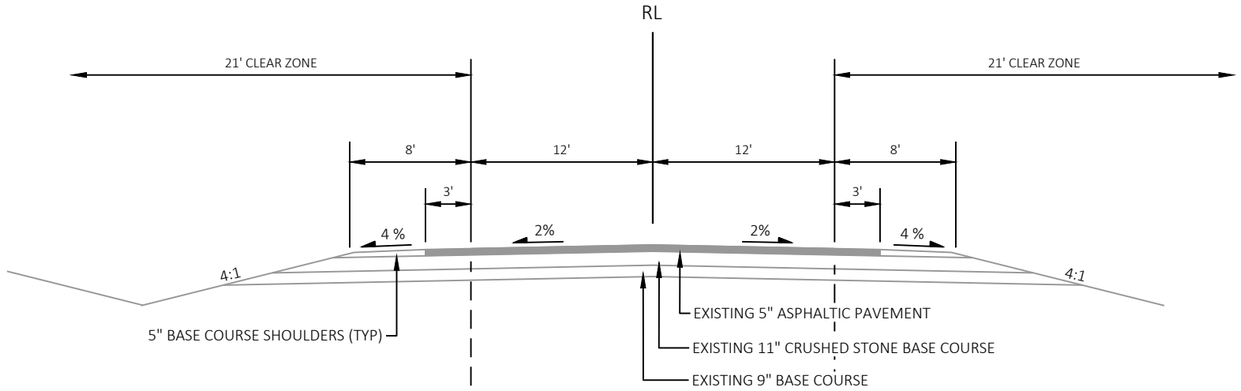
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PROJECT OVERVIEW | SHEET 3 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - Project Overview
PLOT DATE : 7/18/2024 5:08 PM
PLOT BY : ERIC BENSON
PLOT NAME :
PLOT SCALE : 1 IN:200 FT



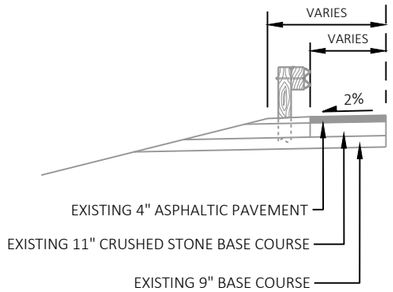

## EXISTING TYPICAL SECTION - 50TH AVE

STA 106+50 TO STA 115+39
STA 123+55 TO STA 127+00



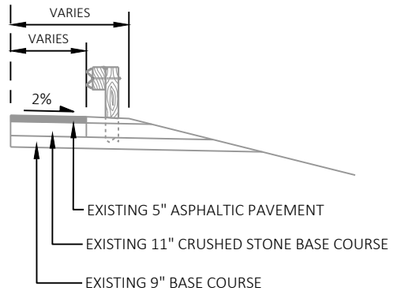

## EXISTING TYPICAL SECTION - 50TH AVE

STA 115+39 TO STA 118+15
STA 120+90 TO STA 123+55




## EXISTING GUARDRAIL

STA 116+91 TO STA 117+92
STA 120+84 TO STA 121+53

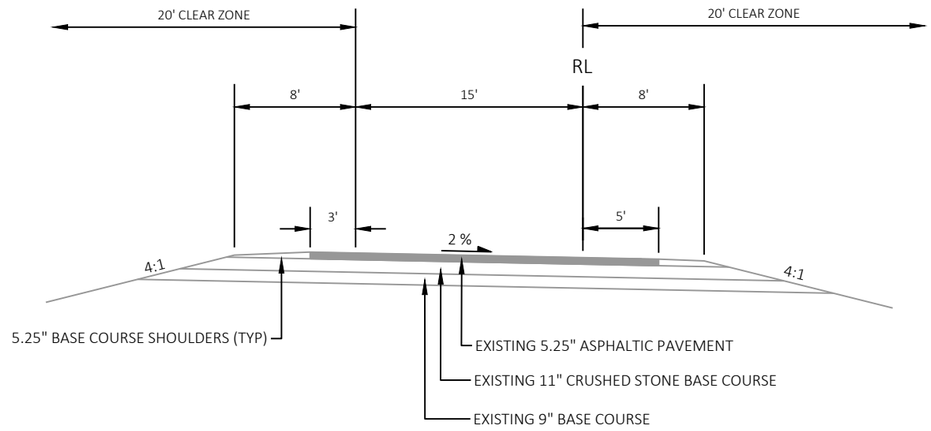



## EXISTING GUARDRAIL

STA 117+21 TO STA 118+20
STA 121+13 TO STA 122+12

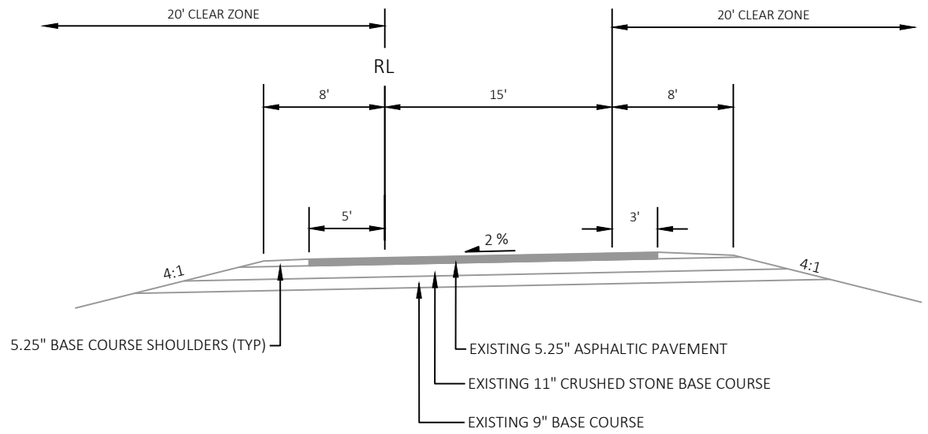
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TYPICAL SECTIONS | SHEET 4 | E |
|---|---|---|---|---|---|

2




EXISTING TYPICAL SECTION - STH 29 OFF RAMP

STA 121+00 TO STA 128+90




EXISTING TYPICAL SECTION - STH 29 ON RAMP

STA 141+00 TO STA 151+00

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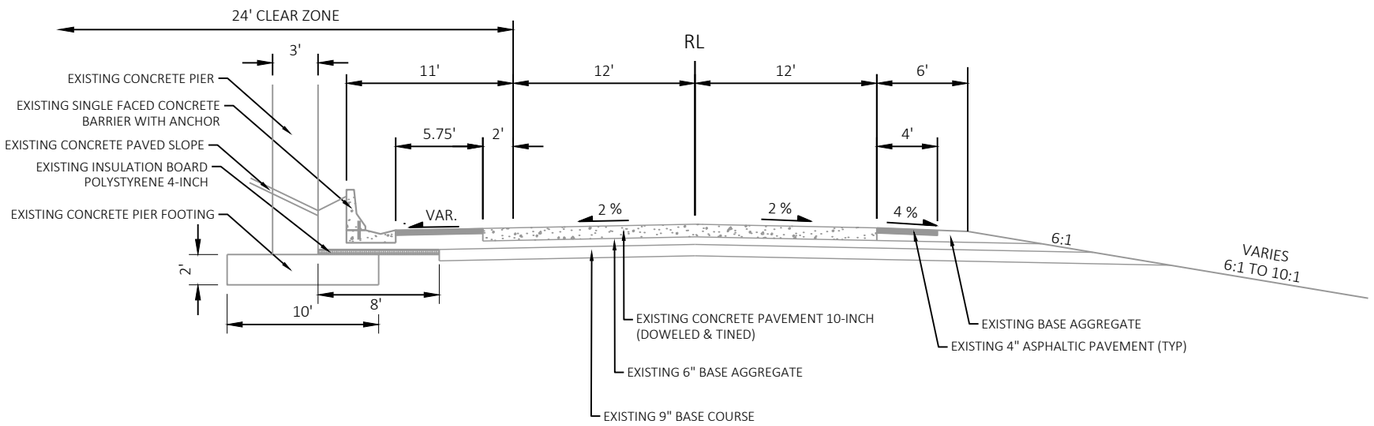
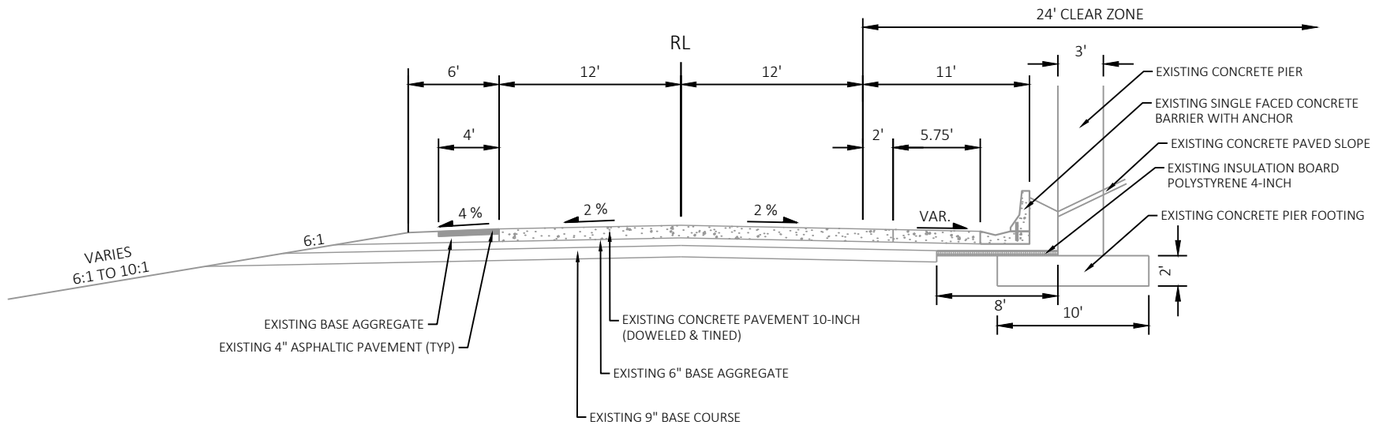



EXISTING TYPICAL SECTION - STH 29 WB

STA 521+91 TO STA 523+68




EXISTING TYPICAL SECTION - STH 29 EB

STA 519+48 TO STA 521+56

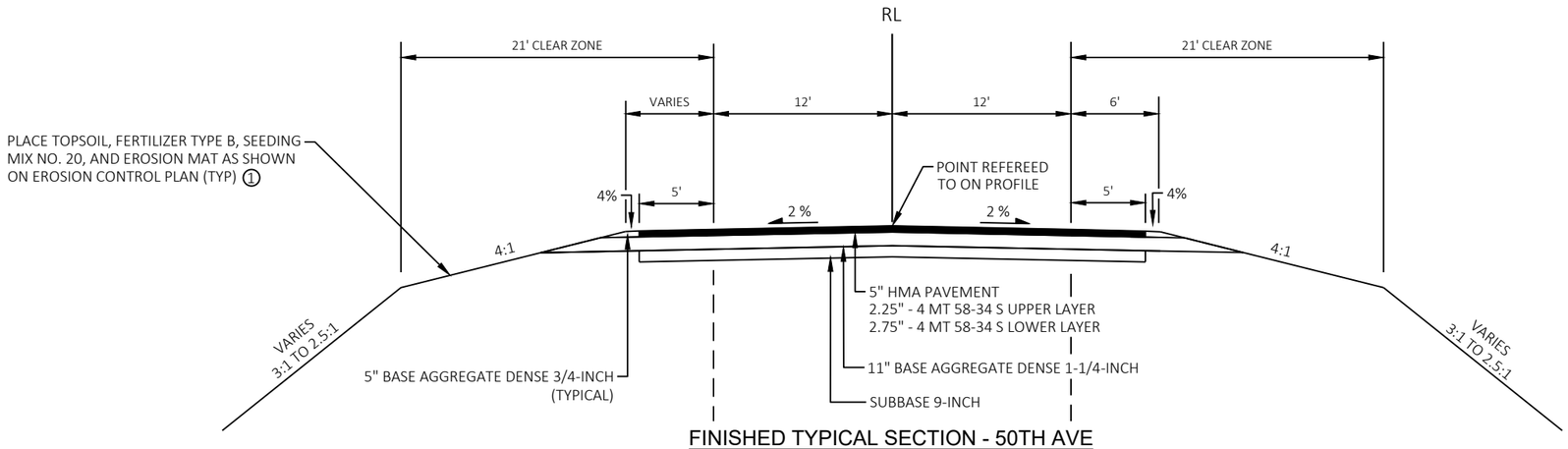
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TYPICAL SECTIONS | SHEET 6 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - Exisitng 03

PLOT DATE : 7/18/2024 5:08 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1:10

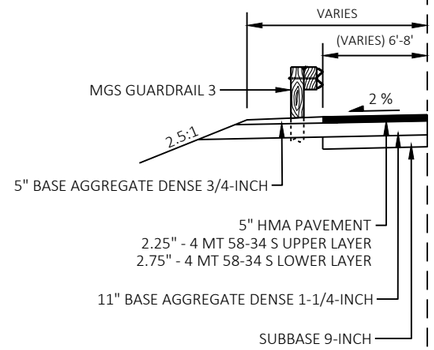
NOTES:

1. SEE DETAIL FOR FINISHING ITEMS



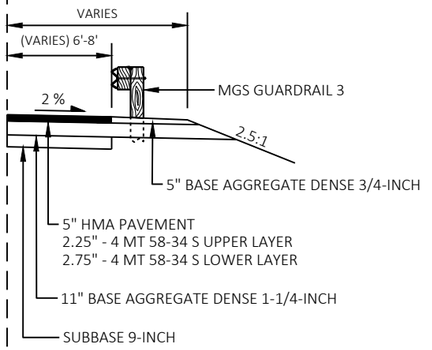

FINISHED TYPICAL SECTION - 50TH AVE

STA 106+50 TO STA 118+03
STA 121+04 TO STA 127+00



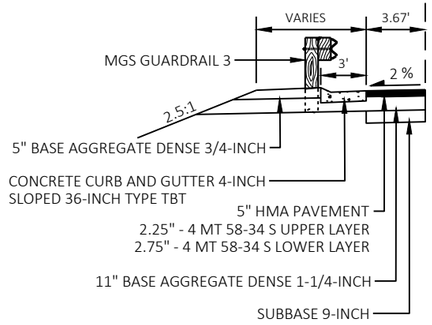

FINISHED GUARDRAIL

STA 117+06 TO STA 118+03
STA 121+18 TO STA 121+72



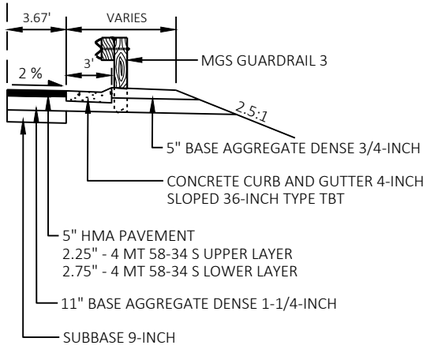

FINISHED GUARDRAIL

STA 117+05 TO STA 118+03
STA 121+97 TO STA 122+58




FINISHED GUARDRAIL

STA 121+04 TO STA 121+18




FINISHED GUARDRAIL

STA 121+04 TO STA 121+97

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TYPICAL SECTIONS | SHEET 7 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - Finished 01

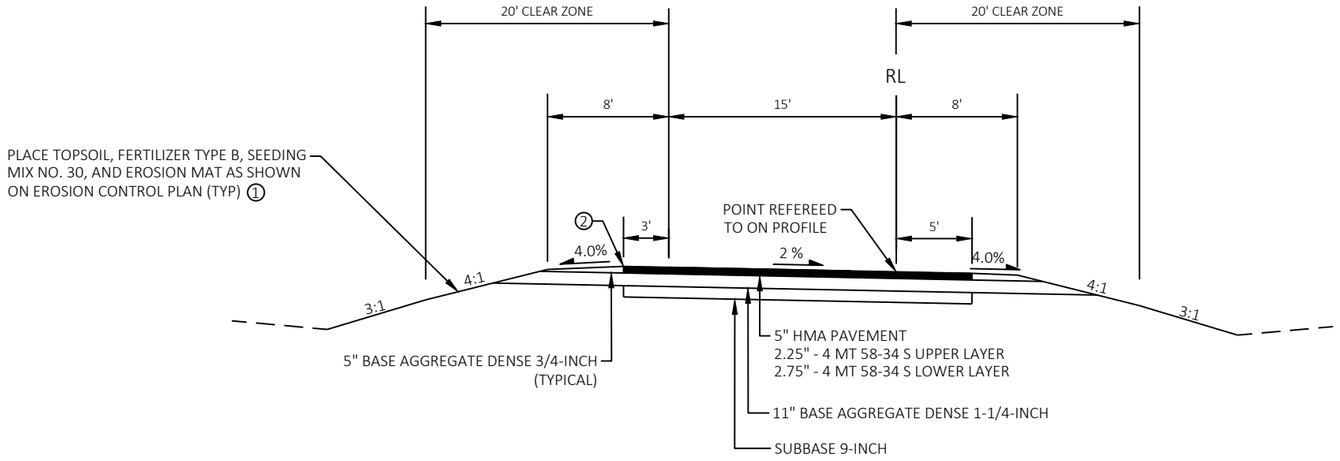
PLOT DATE : 7/18/2024 5:08 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42

2

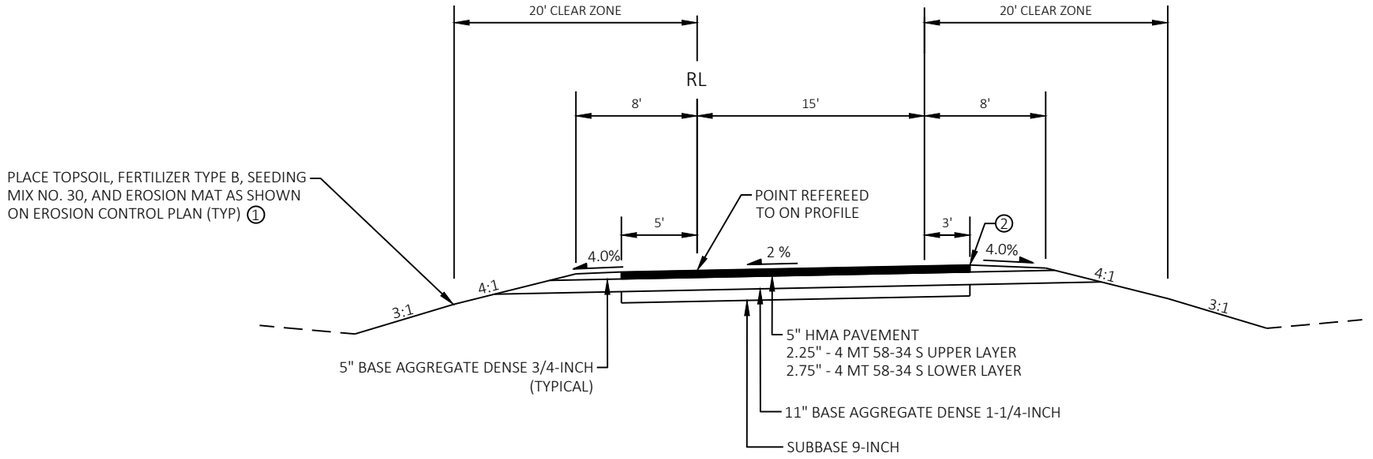
NOTES:

1. SEE DETAIL FOR FINISHING ITEMS
2. SAFETY EDGE TO BE CONSTRUCTED AT EDGE OF HMA PAVED SHOULDER PER SDD SAFETY EDGE




## FINISHED TYPICAL SECTION - STH 29 OFF RAMP

STA 121+00 TO STA 128+90

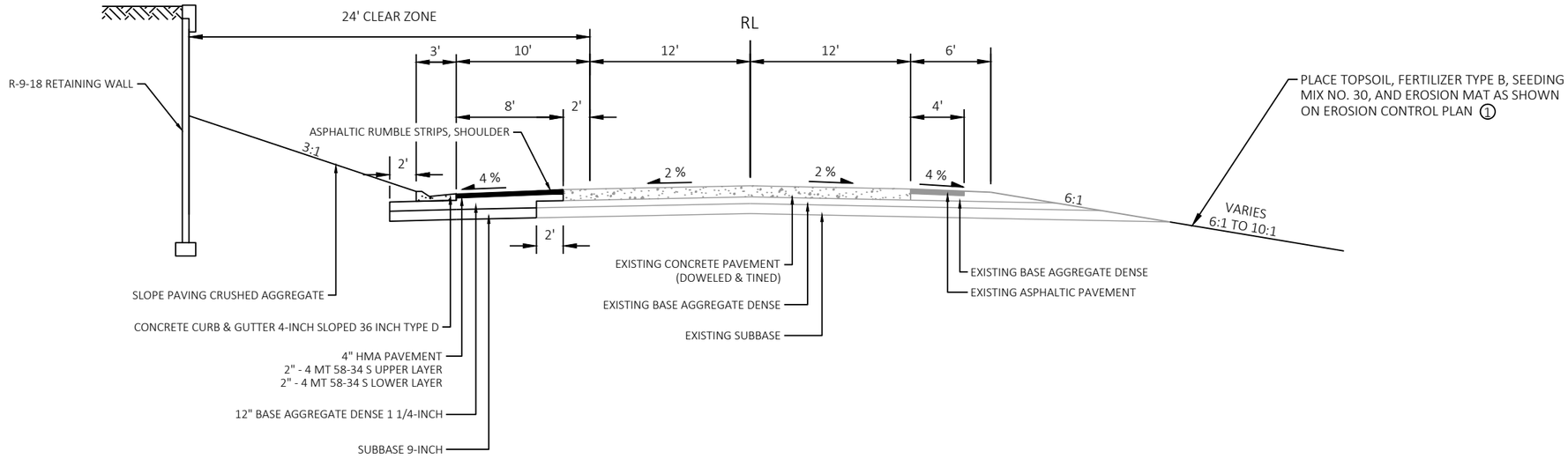



## FINISHED TYPICAL SECTION - STH 29 ON RAMP

STA 141+00 TO STA 151+00

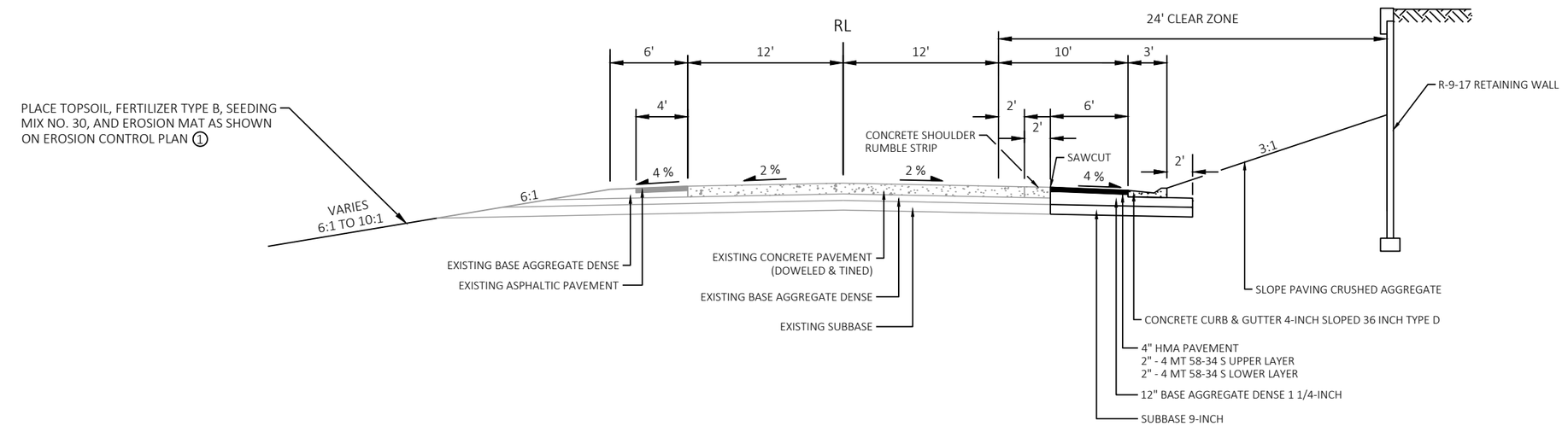
NOTES:

① SEE DETAIL FOR FINISHING ITEMS




PROPOSED TYPICAL SECTION - STH 29 WB

STA 521+91 TO STA 523+68




PROPOSED TYPICAL SECTION - STH 29 EB

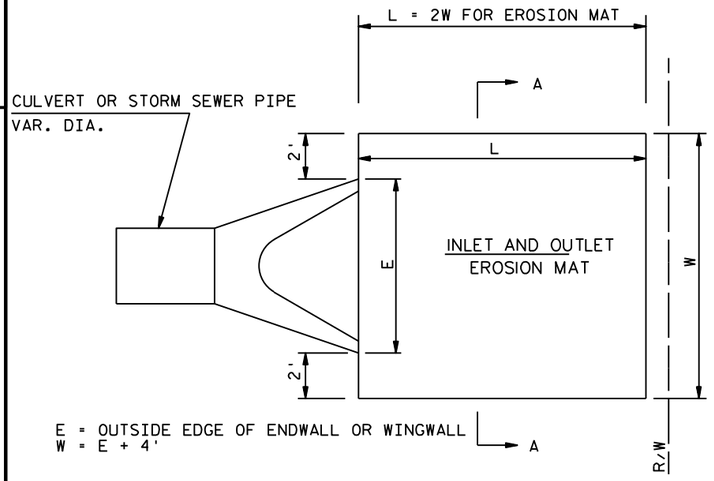
STA 519+48 TO STA 521+56

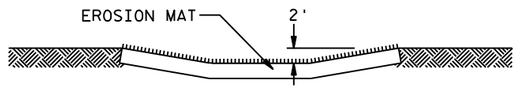
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TYPICAL SECTIONS | SHEET 9 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - Finished 04

PLOT DATE : 7/18/2024 5:08 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1:10

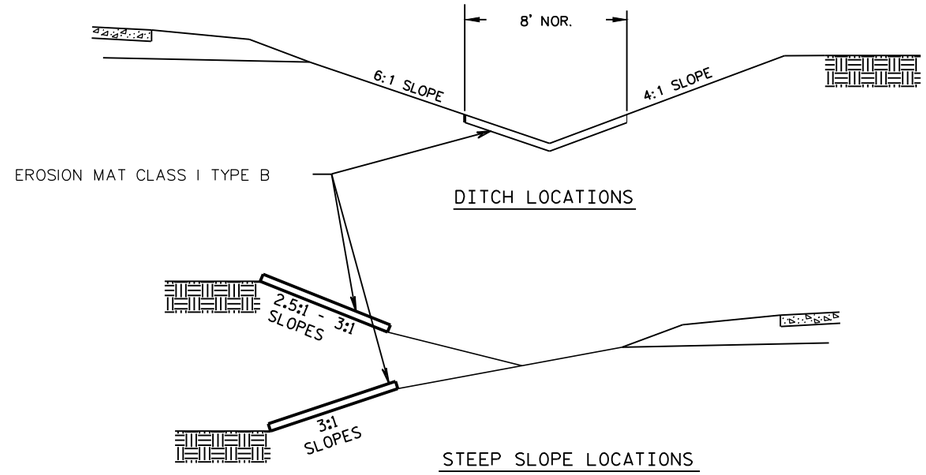
WISDOT/CADDS SHEET 42



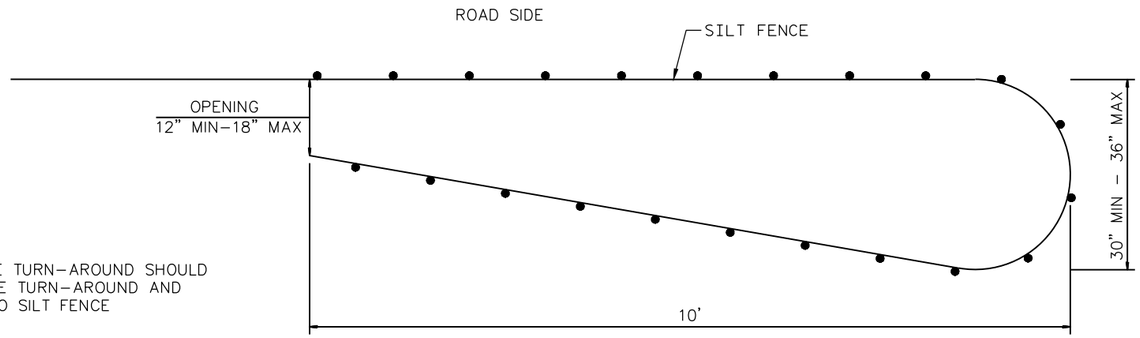




INLET AND OUTLET SECTION A-A
EROSION MAT

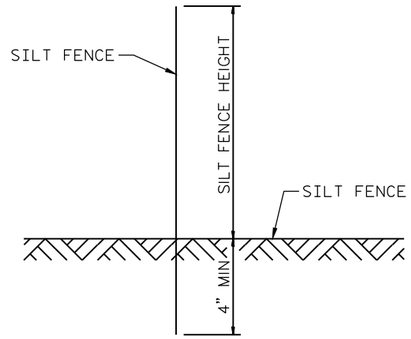
## DETAIL FOR EROSION CONTROL AT CULVERT OR STORMSEWER PIPE ENDS
SEE EROSION CONTROL PLAN SHEETS FOR LOCATIONS




## DETAIL FOR EROSION MAT PLACEMENT
LOCATIONS SHOWN ON EROSION CONTROL PLAN




PLAN VIEW

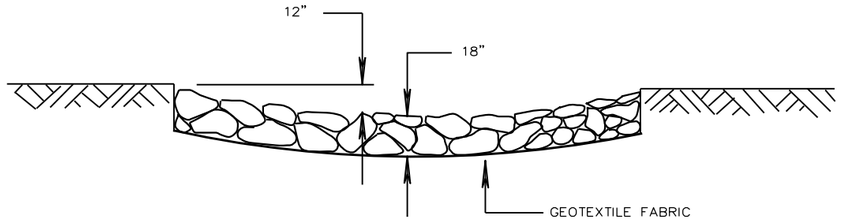



SIDE VIEW

NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

THE TEMPORARY SILT FENCE TURN-AROUND IS INCIDENTAL TO THE BID ITEM SILT FENCE.

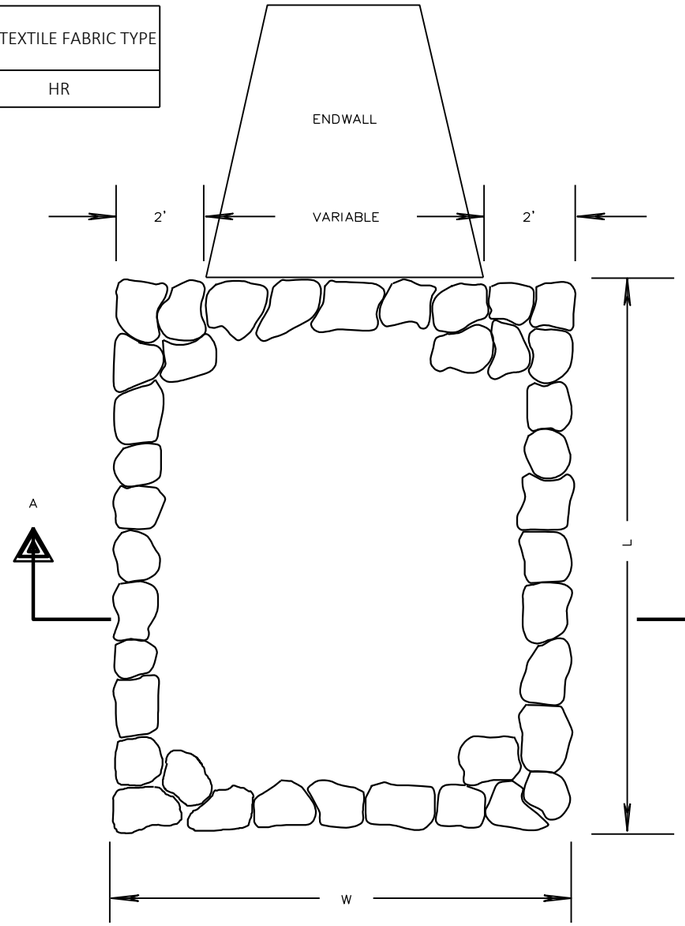
## TEMPORARY SILT FENCE TURN-AROUND DETAIL



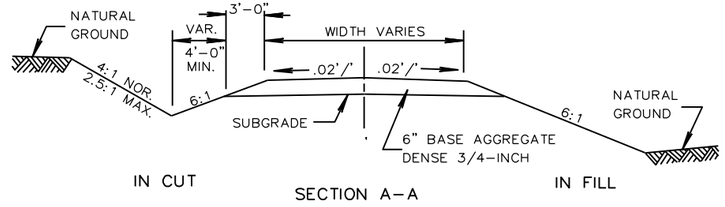

SECTION A–A

| RIPRAP TYPE | THICKNESS | GEOTEXTILE FABRIC TYPE |
|---|---|---|
| MEDIUM | 18 INCHES | HR |

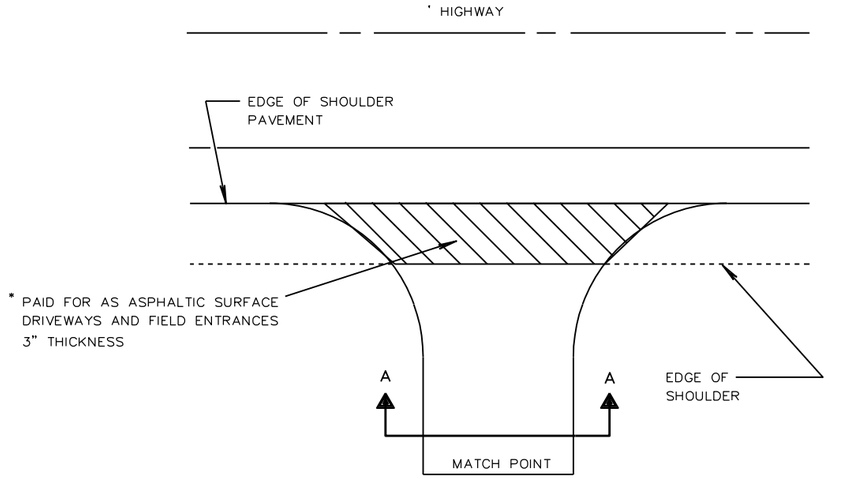
NOTE: L = 2W



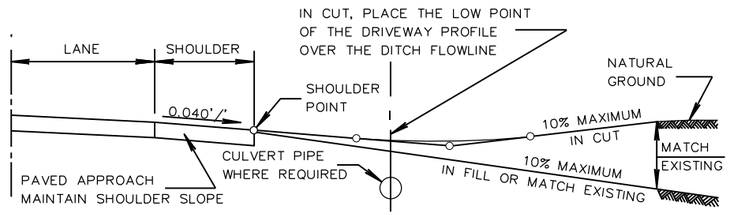

RIPRAP TREATMENT AT CULVERTS




SECTION A–A



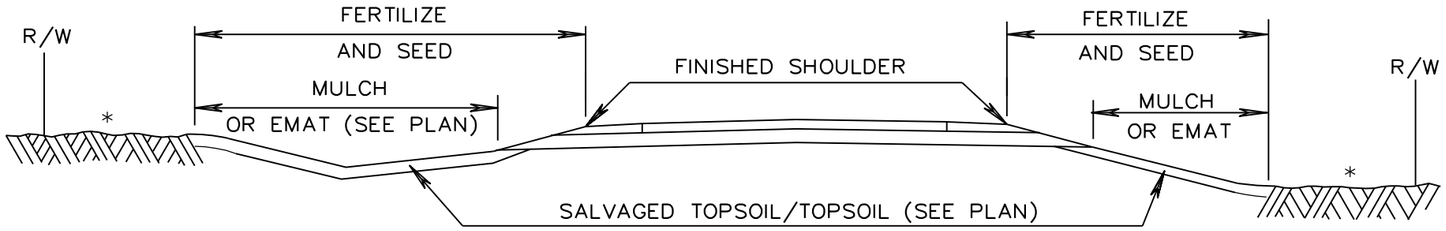

PLAN




PROFILE

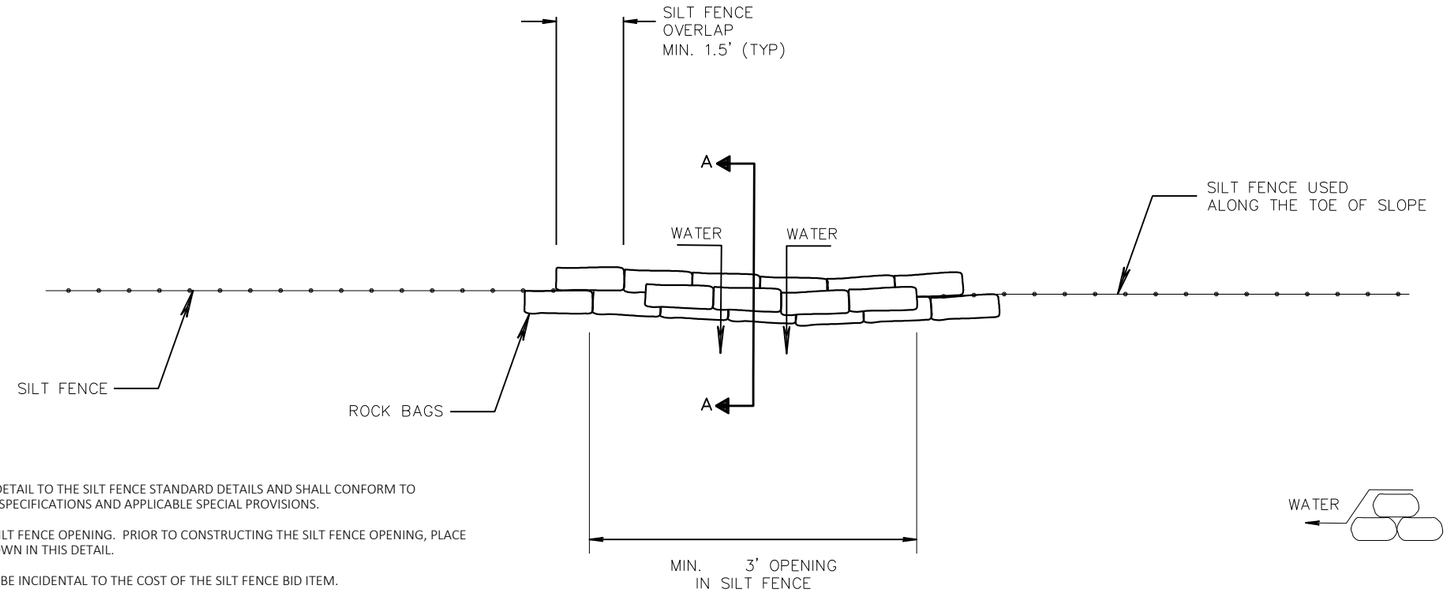
DETAIL FOR RURAL DRIVEWAY

2




* DISTURBED AREAS TO BE FERTILIZED & SEEDED

## DETAIL FOR FINISHING ITEMS




NOTES:
THE SILT FENCE RELIEF DETAIL IS A SUPPLEMENTAL DETAIL TO THE SILT FENCE STANDARD DETAILS AND SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

INSTALL SILT FENCE PRIOR TO CONSTRUCTING THE SILT FENCE OPENING. PRIOR TO CONSTRUCTING THE SILT FENCE OPENING, PLACE EROSION BALES AT THE SILT FENCE OPENING AS SHOWN IN THIS DETAIL.

CONSTRUCTION OF THE SILT FENCE OPENING SHALL BE INCIDENTAL TO THE COST OF THE SILT FENCE BID ITEM.

THE CONTRACTOR SHALL ADJUST THE SILT FENCE RELIEF OPENINGS WITHIN THE SILT FENCE AS NECESSARY TO PROVIDE RELIEF: AS SHOWN ON THE PLANS, TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE FIELD ENGINEER.

DO NOT CUT THE SUPPORT CORD OR TENSION TAPE WHEN CONSTRUCTING THE SILT FENCE OPENING. KEEP THE TOP OF THE SILT FENCE OPENING 1"± BELOW THE 3" FOLD AT THE SUPPORT CORD OR TENSION TAPE.

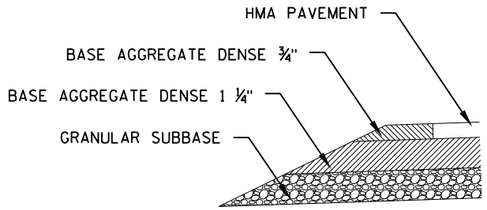
REFER TO THE SILT FENCE STANDARD DETAILS FOR ALLOWABLE ADJUSTMENTS TO POST SPACING.



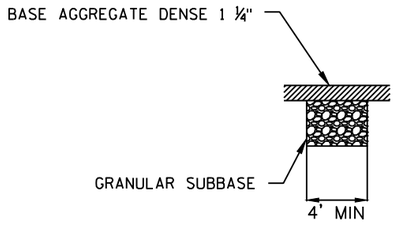

SECTION A–A

TOP VIEW

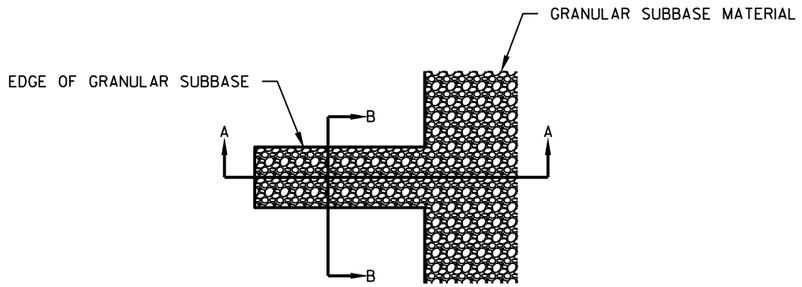
## ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL




SECTION A–A



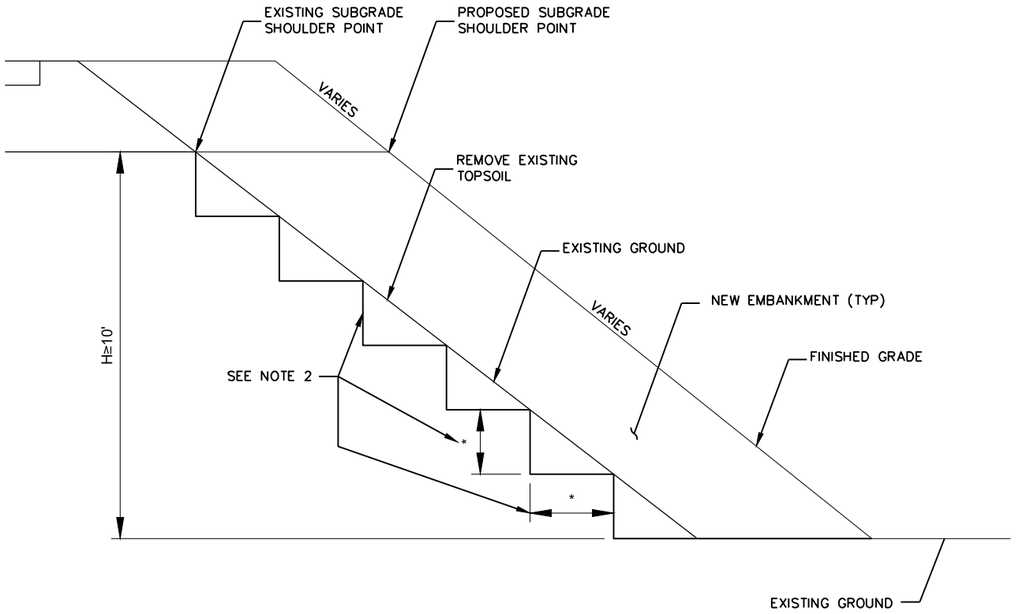

SECTION B–B




## DETAIL FOR FRENCH DRAINS

NOTES: PAID FOR AS SUBBASE 9-INCH

PLACE EVERY 250' AND AT LOW POINTS




## STEPPED EMBANKMENT

NOTES:

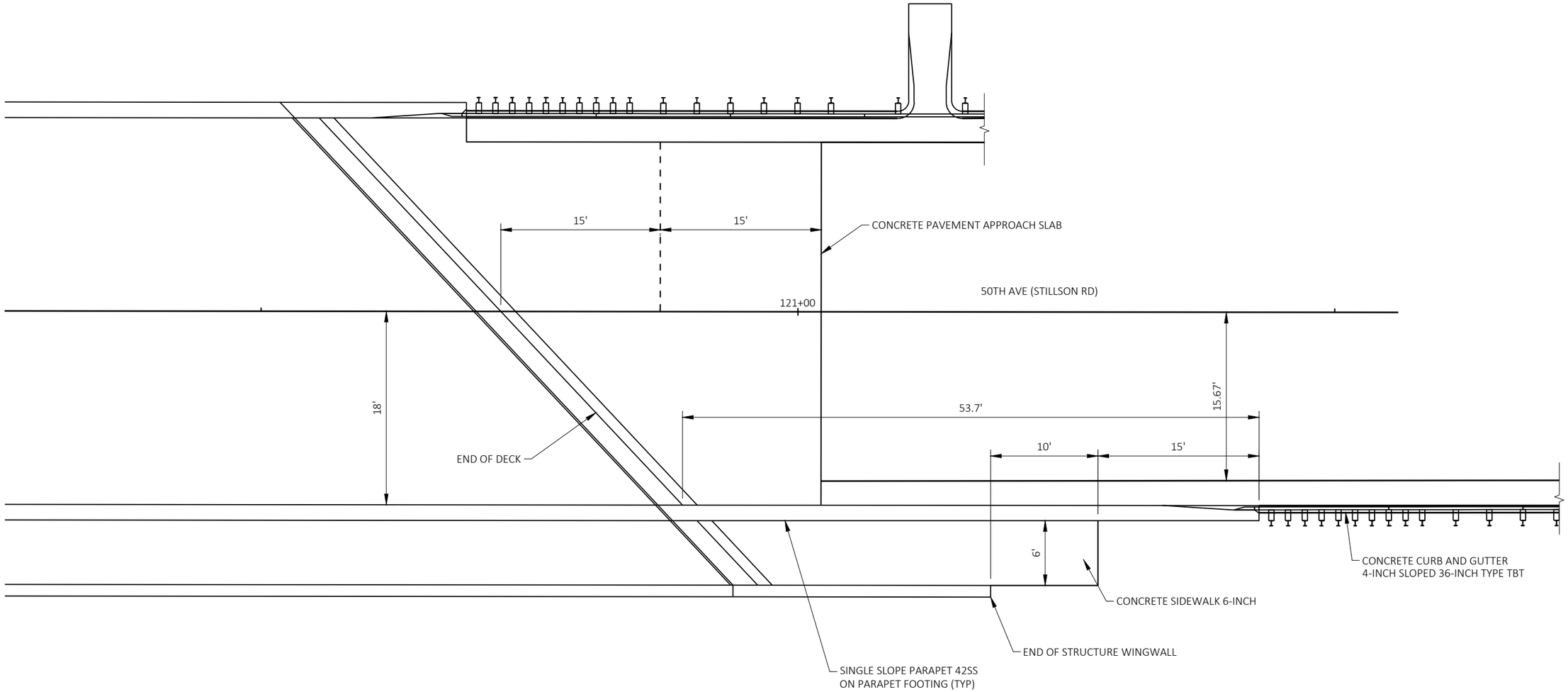
1) EMBANKMENT PLACED IN LAYERS AND COMPACTED PER SPECIFICATIONS

2) BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS. BENCH IS INCIDENTAL TO FILLING OPERATIONS. DIMENSIONS DETERMINED BY THE CONTRACTOR.

3) EBS AS REQUIRED IN THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE PAID UNDER THE ITEM "EXCAVATION COMMON".

2

N




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CONSTRUCTION DETAILS | SHEET 14 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\021001_CD.DWG
LAYOUT NAME - 021005
PLOT DATE : 7/29/2024 1:25 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

N

REMOVING GUARDRAIL
(125 LF)

STH 29 EB

STH 29 WB

ADD BASE AGGREGATE DENSE 3/4-INCH
AS NEEDED TO RESTORE SHOULDER

SAWING CONCRETE
(209 LF)

REMOVING CONCRETE PAVEMENT
(160 SY)

REMOVING CONCRETE BARRIER
(205 LF)

REMOVING CONCRETE BARRIER
(10 LF)

REMOVING SURFACE DRAINS
(1 EACH)

REMOVING GUARDRAIL
(100 LF)

50TH AVE

REMOVING GUARDRAIL
(100 LF)

REMOVING SURFACE DRAINS
(1 EACH)

REMOVING CONCRETE BARRIER
(10 LF)

REMOVING GUARDRAIL
(375 LF)

REMOVING CONCRETE BARRIER
(178 LF)

REMOVING SMALL PIPE CULVERTS
(42 LF)

REMOVING SURFACE DRAINS
(1 EACH)

REMOVING GUARDRAIL
(75 LF)

REMOVING CONCRETE BARRIER
(10 LF)

50TH AVE

REMOVING CONCRETE BARRIER
(10 LF)

REMOVING GUARDRAIL
(100 LF)

REMOVING SURFACE DRAINS
(1 EACH)

REMOVING SMALL PIPE CULVERTS
(45 LF)

REMOVING GUARDRAIL
(125 LF)

ADD BASE AGGREGATE DENSE 3/4-INCH
AS NEEDED TO RESTORE SHOULDER

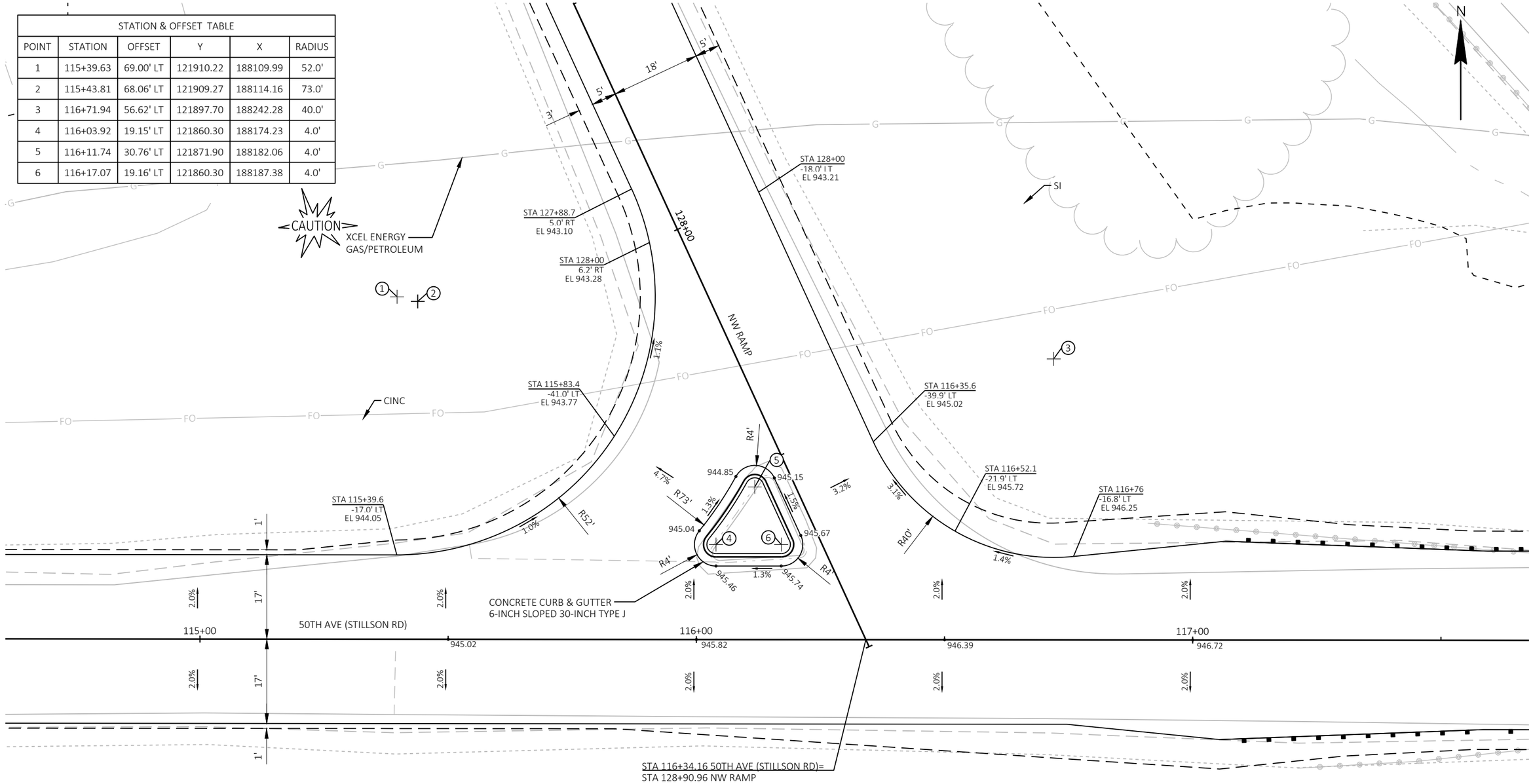
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | REMOVAL PLAN | SHEET 15 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\021101-REMOVALS.DWG
LAYOUT NAME - 020401

PLOT DATE : 7/19/2024 11:27 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

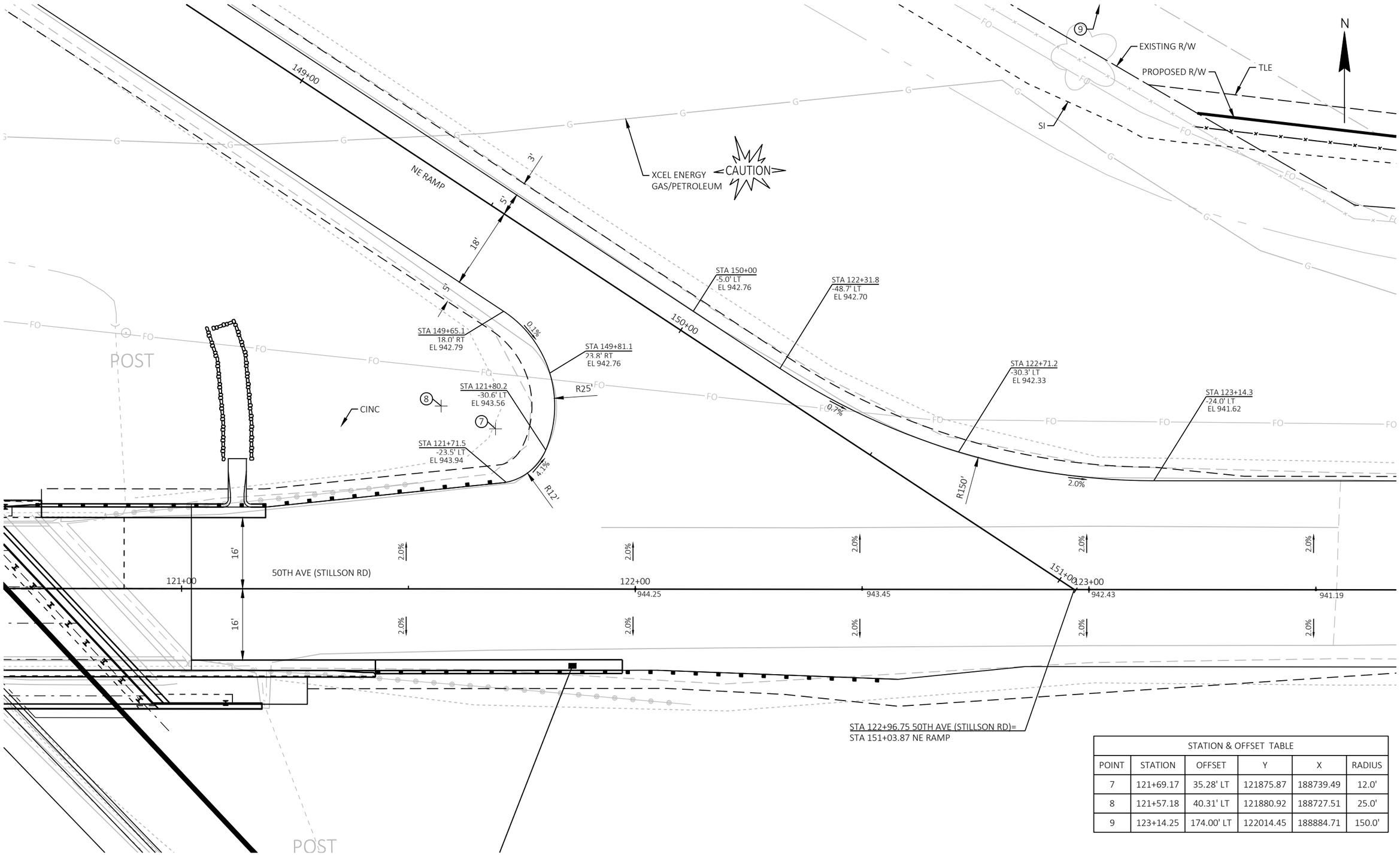
| STATION & OFFSET TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | Y | X | RADIUS |
| 1 | 115+39.63 | 69.00' LT | 121910.22 | 188109.99 | 52.0' |
| 2 | 115+43.81 | 68.06' LT | 121909.27 | 188114.16 | 73.0' |
| 3 | 116+71.94 | 56.62' LT | 121897.70 | 188242.28 | 40.0' |
| 4 | 116+03.92 | 19.15' LT | 121860.30 | 188174.23 | 4.0' |
| 5 | 116+11.74 | 30.76' LT | 121871.90 | 188182.06 | 4.0' |
| 6 | 116+17.07 | 19.16' LT | 121860.30 | 188187.38 | 4.0' |




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | INTERSECTION DETAILS - NW RAMP | SHEET 16 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 50 - 1
PLOT DATE : 7/18/2024 5:09 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : ##########

2

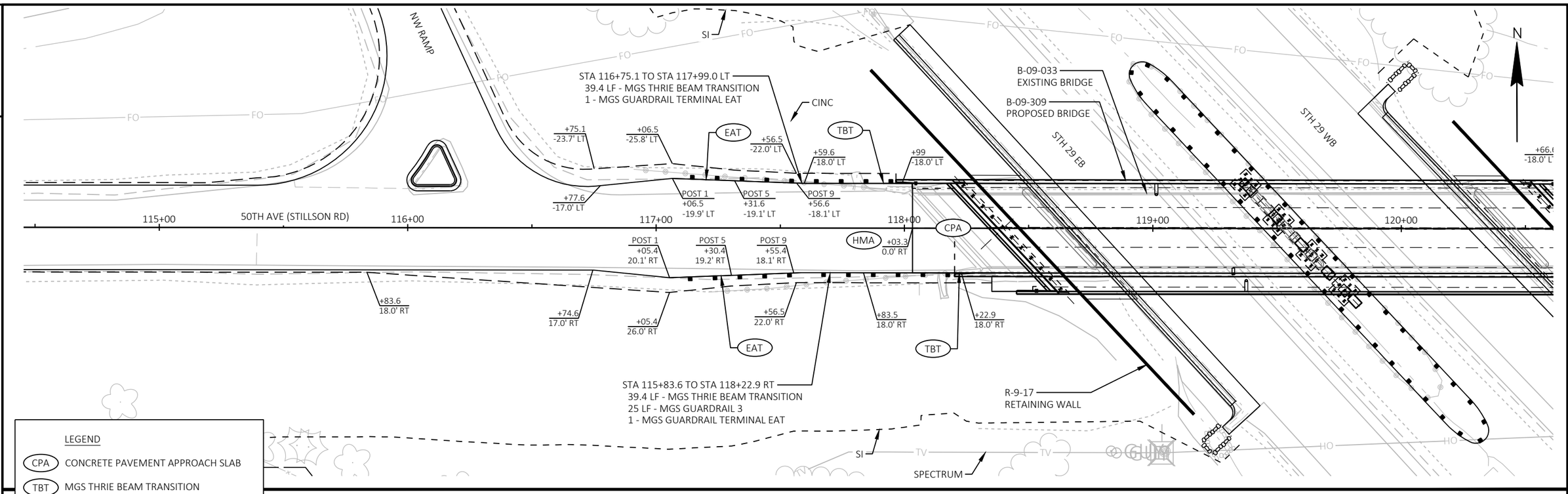



| STATION & OFFSET TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | Y | X | RADIUS |
| 7 | 121+69.17 | 35.28' LT | 121875.87 | 188739.49 | 12.0' |
| 8 | 121+57.18 | 40.31' LT | 121880.92 | 188727.51 | 25.0' |
| 9 | 123+14.25 | 174.00' LT | 122014.45 | 188884.71 | 150.0' |

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | INTERSECTION DETAILS - NW RAMP | SHEET 17 | E |
|---|---|---|---|---|---|

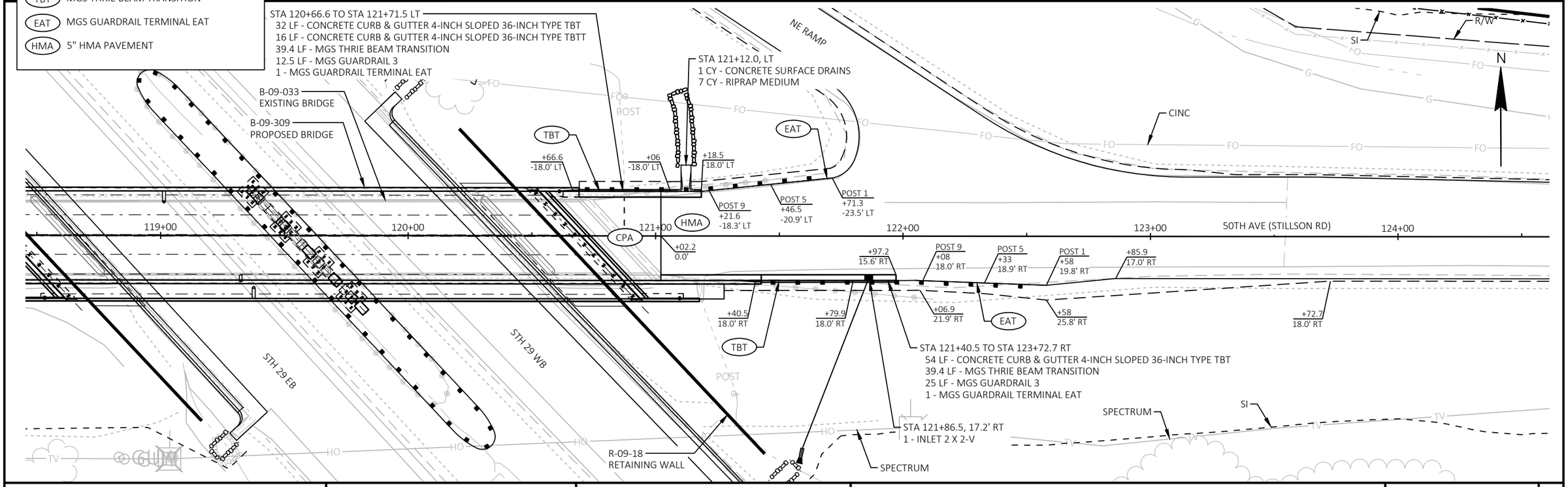
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 50 - 2
PLOT DATE : 7/18/2024 5:09 PM
PLOT BY : ERIC BENSON
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2




LEGEND

- CPA — CONCRETE PAVEMENT APPROACH SLAB
- TBT — MGS THRIE BEAM TRANSITION
- EAT — MGS GUARDRAIL TERMINAL EAT
- HMA — 5" HMA PAVEMENT




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PLAN DETAIL - GUARDRAIL | SHEET 18 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\021202-PD.DWG
LAYOUT NAME - 50 - 2
PLOT DATE : 7/19/2024 3:47 PM
PLOT BY : ERIC BENSON
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

146+00
147+00
148+00
NE RAMP
CINC
FO
POST
XCEL ENERGY
GAS/PETROLEUM
CAUTION
STA 521+92 'WB', LT
1 CY - CONCRETE SURFACE DRAINS
4 CY - RIPRAP MEDIUM
SI (TYP)
STA 521+96.04 'WB' TO STA 523+75.44 'WB'
207 LF - CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
R-9-18 RETAINING WALL
STA 524+92 'WB', LT
1 CY - CONCRETE SURFACE DRAINS
4 CY - RIPRAP MEDIUM
SEE REMOVAL PLAN
FOR MORE INFORMATION
SIGN
TV
+90.6 'WB'
-13.3' LT
+13.5 'WB'
-13.3' LT
520+00
521+00
STH 29 WB
522+00
523+00
524+00
525+00
POST 5
STA 521+29.85
STH 29 WB
31.6, RT
BULLNOSE TERMINAL
100' STEEL THRIE BEAM
BULLNOSE TERMINAL
POST 5
STA 523+04.84
STH 29 WB
33.7, RT
POST 1
POST 12
BRIDGE COLUMN
(TYP.)
POST 12
POST 1
62.1' FROM CENTER OF POST 1 TO FRONT FACE OF HAZARD
70.5'
PC: 524+00.84
15'-10"
4.2' FROM BACK OF POST
TO FACE OF PIER
POST 5
STA 520+36.63
STH 29 EB
32.6, LT
POST 12
POST 12
POST 5
STA 522+11.55
STH 29 EB
34.7, LT
REMOVE EXISTING GUARDRAIL
519+00
STH 29 EB
520+00
521+00
522+00
523+00
524+00
+47.9 'EB'
15.7' RT
+56.1 'EB'
15.6' RT
SEE REMOVAL PLAN
FOR MORE INFORMATION
PI: 520+56.30
PC: 522+10.16
R-9-17 RETAINING WALL
STA 519+47.88 'EB' TO STA 521+56.12 'EB'
208 LF - CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
SPECTRUM
50TH AVE
STA 524+11 'EB', RT
1 CY - CONCRETE SURFACE DRAINS
3 CY - RIPRAP MEDIUM
SIGN
SPECTRUM
2.50

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PLAN DETAILS - BULLNOSE TERMINAL | SHEET 19 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021201
PLOT DATE : 7/19/2024 3:48 PM
PLOT BY : ERIC BENSON
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

BEGIN PROJECT
STA 106+50.00

XCEL ENERGY
ELECTRICITY

R/W

SI

XCEL ENERGY
GAS/PETROLEUM

CAUTION

N

CINC

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

50TH AVE (STILLSON RD)

MATCHLINE STA 112+50

R/W

SI

XCEL ENERGY
ELECTRICITY

LEGEND

- SILT FENCE
- RIPRAP MEDIUM BOUNDARY
- EROSION MAT CLASS I TYPE B
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK
- SURFACE FLOW ARROW
- CULVERT PIPE CHECK
- INLET PROTECTION TYPE A
- TEMPORARY SILT FENCE TURN-AROUND

R/W

SI

128+00

NW RAMP

SI

XCEL ENERGY
GAS/PETROLEUM

CAUTION

SI

STH 29 'WB'

STH 29 'EB'

N

MATCHLINE STA 112+50

113+00 114+00 115+00 116+00 117+00 118+00 119+00 120

50TH AVE (STILLSON RD)

MATCHLINE STA 120+00

3 CY RIPRAP MEDIUM

R/W

SI

SPECTRUM

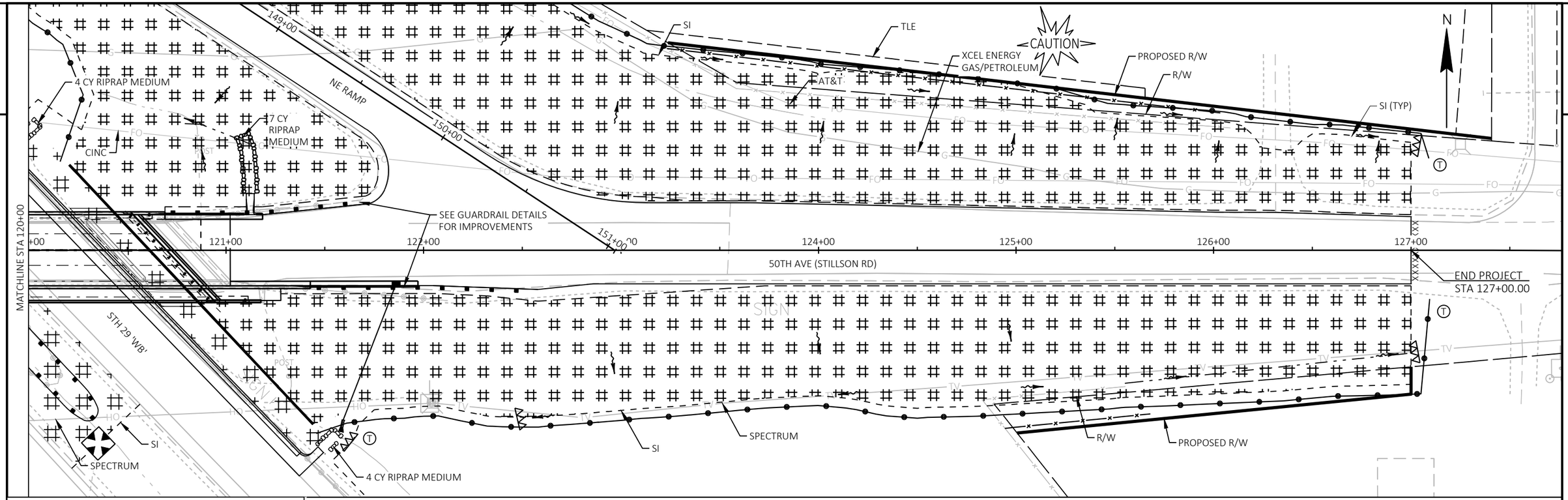
3 CY RIPRAP MEDIUM

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | EROSION CONTROL | SHEET 20 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 50 - 1

PLOT DATE : 7/29/2024 3:50 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

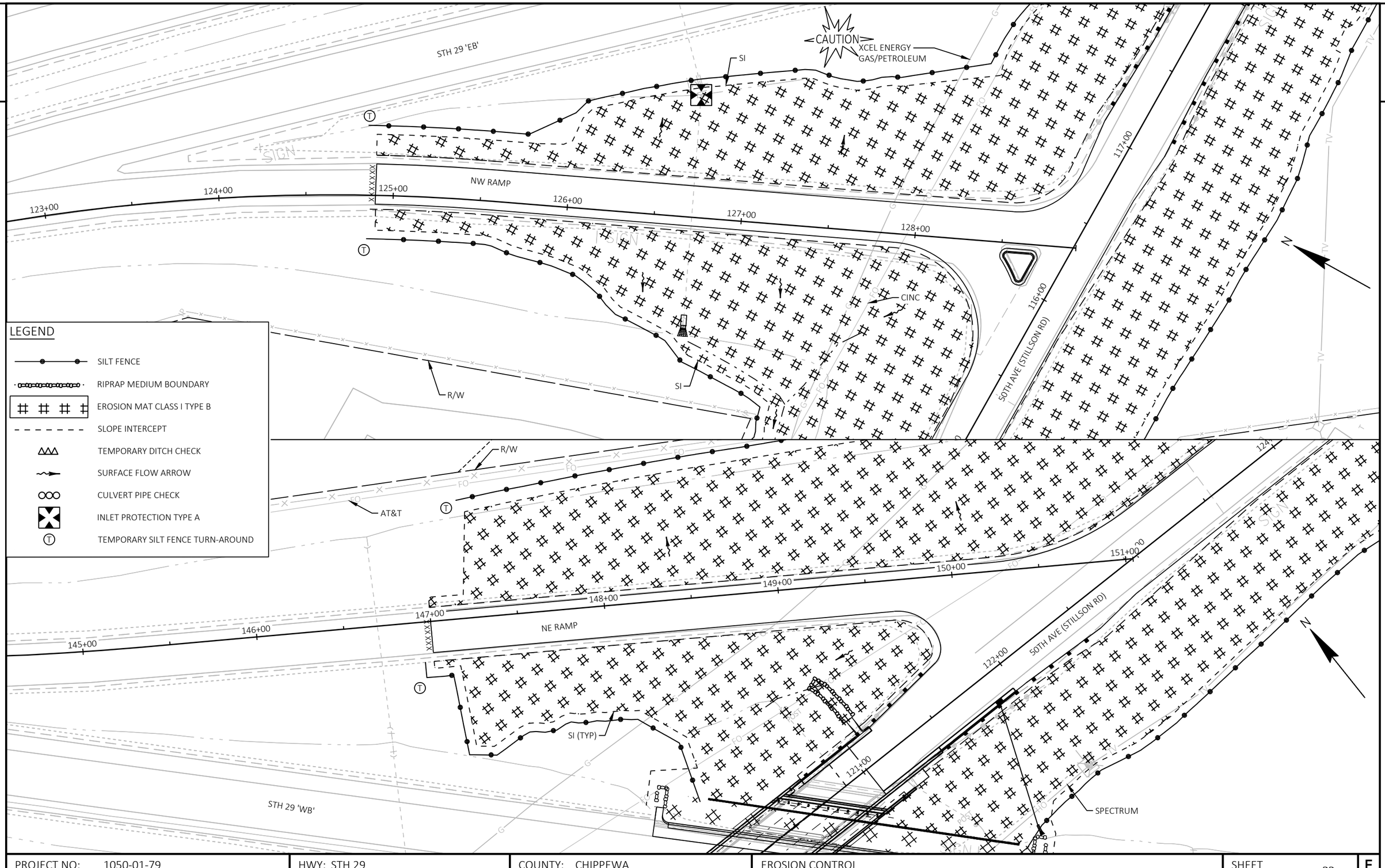



LEGEND

- SILT FENCE
- RIPRAP MEDIUM BOUNDARY
- EROSION MAT CLASS I TYPE B
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK
- SURFACE FLOW ARROW
- CULVERT PIPE CHECK
- INLET PROTECTION TYPE A
- TEMPORARY SILT FENCE TURN-AROUND

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | EROSION CONTROL | SHEET 21 | E |
|---|---|---|---|---|---|

2




LEGEND

- SILT FENCE
- RIPRAP MEDIUM BOUNDARY
- EROSION MAT CLASS I TYPE B
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK
- SURFACE FLOW ARROW
- CULVERT PIPE CHECK
- INLET PROTECTION TYPE A
- TEMPORARY SILT FENCE TURN-AROUND

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | EROSION CONTROL | SHEET 22 | E |
|---|---|---|---|---|---|

2

BEGIN PROJECT
STA 106+50.00

PI: 106+50.00

PI: 108+49.75

106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00

12'

12'

50TH AVE (STILLSON RD)

N

MOVE
SPEED LIMIT 45
1-16

MOVE
SPEED LIMIT 45
1-15

## SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- X-XX DENOTES SIGN NUMBER

## PAVEMENT MARKING LEGEND

1. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE EPOXY 4-INCH YELLOW SKIP (12.5' LINE, 27.5' GAP)
4. MARKING LINE EPOXY 4-INCH YELLOW
5. MARKING LINE EPOXY 4-INCH WHITE
6. MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH WHITE
7. MARKING STOP LINE EPOXY 18-INCH WHITE

NW RAMP 128+00

1-05 MOVE

MOVE DO NOT ENTER 1-06

STA 116+34.16 50TH AVE (STILLSON RD)=
STA 128+90.96 NW RAMP

1-04 STOP MOVE

1-02 DO NOT ENTER MOVE

1-07 MOVE

MOVE 1-08

114+00 115+00 116+00 117+00 118+00 119+00 120+00 121+00

+39.63
-12.00' LT

+77.17
-12.00' LT

12'

12'

50TH AVE (STILLSON RD)

STH 29 'EB'

STH 29 'WB'

B-09-033
EXISTING BRIDGE

B-09-309
PROPOSED BRIDGE

MOVE JCT 29 1-01

MOVE 1-03

MOVE STOP 1-09

WEST 29 1-10 MOVE

1-11 CHIPPEWA FALLS MOVE

1-12 MOVE

149+00 NE RAMP

MOVE 1-13

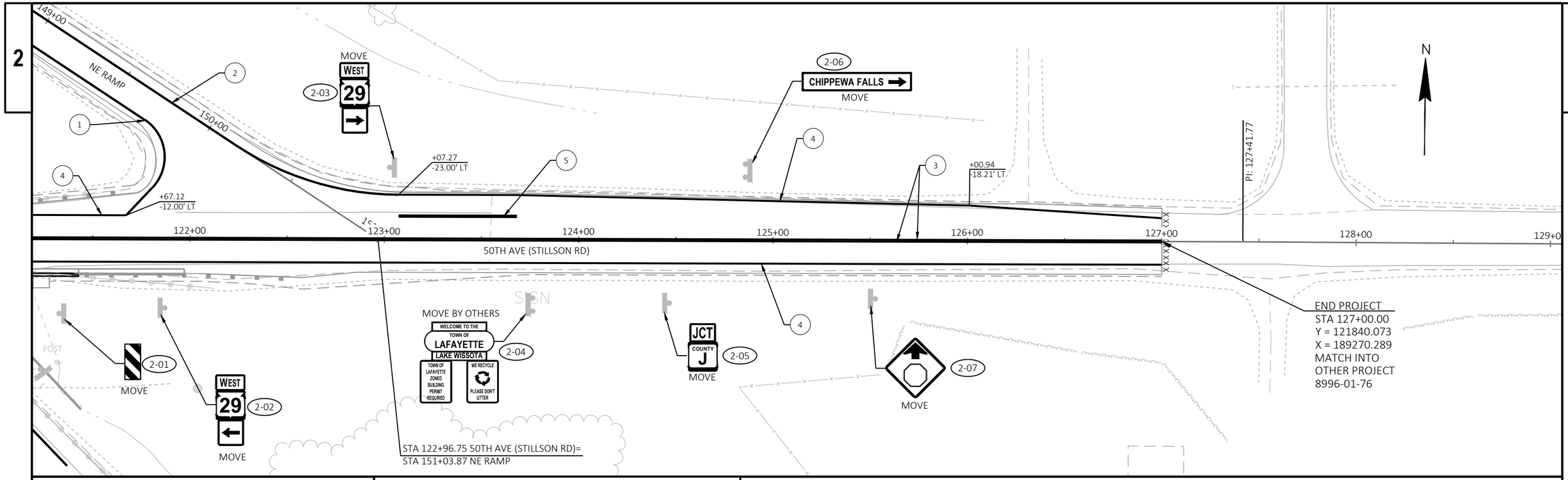
MOVE 1-14

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PAVEMENT MARKING & SIGNING - 50TH AVE | SHEET 23 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 01

PLOT DATE : 9/20/2024 11:21 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



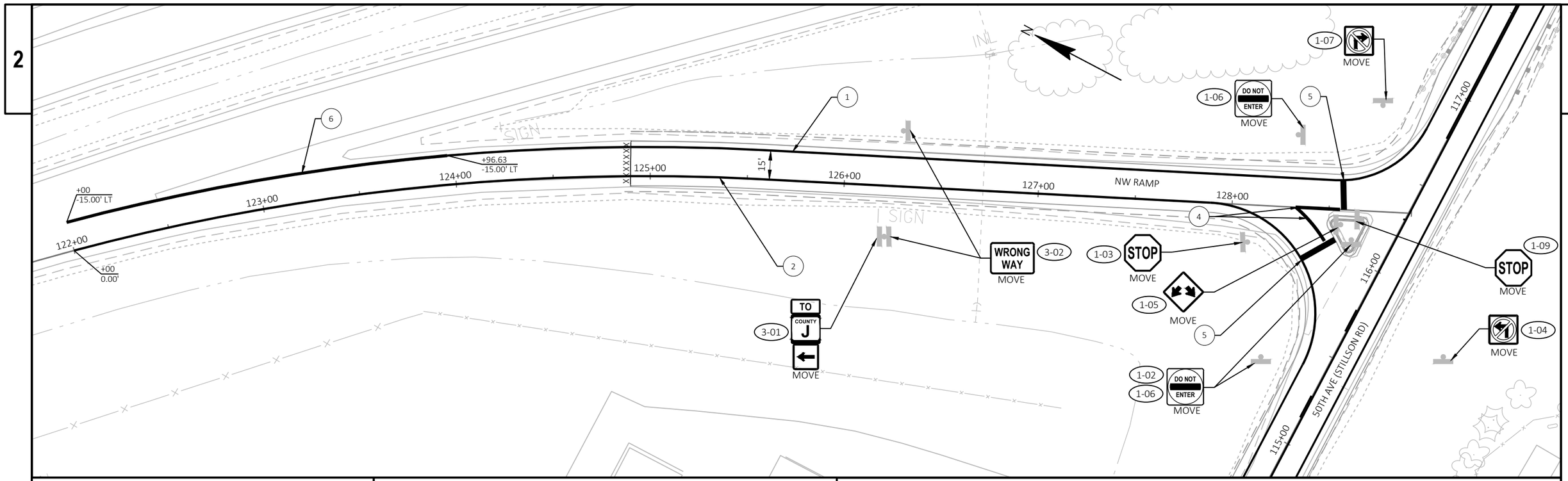

## SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (X-XX) DENOTES SIGN NUMBER

## PAVEMENT MARKING LEGEND

1. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE EPOXY 4-INCH YELLOW
4. MARKING LINE EPOXY 4-INCH WHITE
5. MARKING LINE EPOXY 8-INCH WHITE

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PAVEMENT MARKING & SIGNING - 50TH AVE | SHEET 24 | E |
|---|---|---|---|---|---|




## SIGNING LEGEND

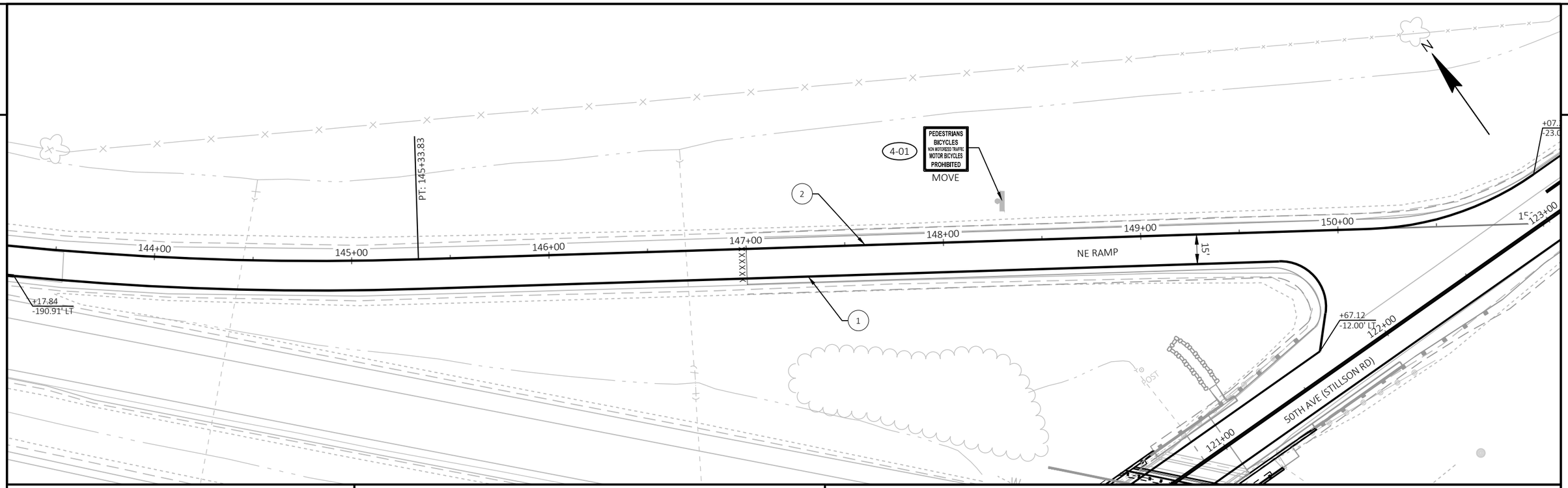
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (X-XX) DENOTES SIGN NUMBER

## PAVEMENT MARKING LEGEND

1. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW SKIP (12.5' LINE, 27.5' GAP)
4. MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH WHITE
5. MARKING STOP LINE EPOXY 18-INCH WHITE
6. MARKING LINE EPOXY 8-INCH WHITE

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PAVEMENT MARKING & SIGNING - NW RAMP - OFF RAMP | SHEET 25 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 03
PLOT DATE : 7/29/2024 11:32 AM
PLOT BY : ERIC BENSON
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

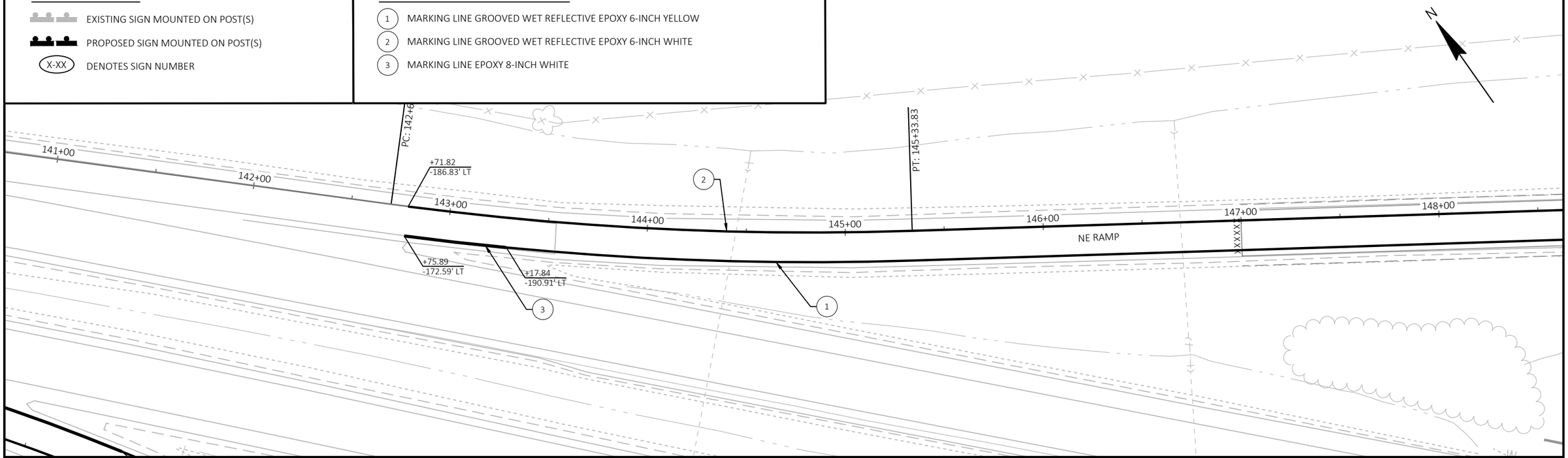



## SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- X-XX DENOTES SIGN NUMBER

## PAVEMENT MARKING LEGEND

1. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH YELLOW
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH WHITE
3. MARKING LINE EPOXY 8-INCH WHITE




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PAVEMENT MARKING & SIGNING - NE RAMP - ON RAMP | SHEET 26 | E |
|---|---|---|---|---|---|

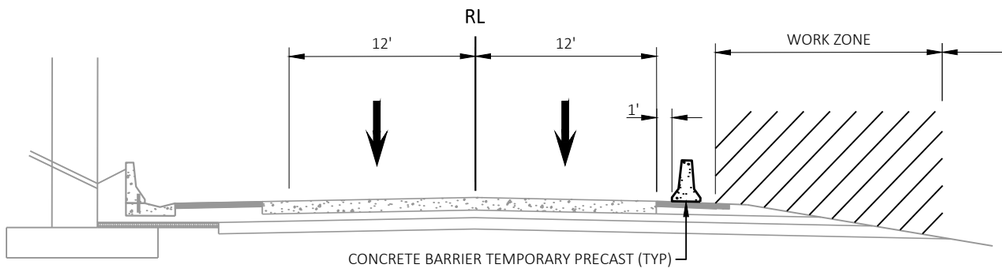
TRAFFIC CONTROL NARRATIVE:

STAGE 1 - FOUR OVERNIGHT CLOSURES OF STH 29 TO REMOVE THE 50TH AVENUE BRIDGE.

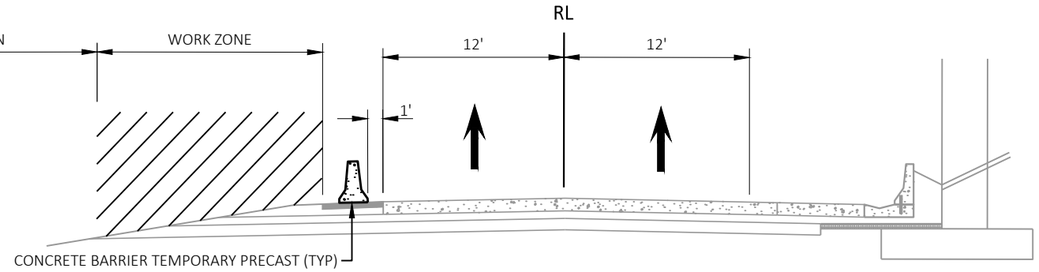
STAGE 2 - PIER DEMOLITION AND CONSTRUCTION; MEDIAN SHOULDER CLOSURES IN BOTH DIRECTIONS WITH BARRIER WALL. LIMITED TEMPORARY LANE CLOSURES.

STAGE 3 - DEMOLITION OF SHOULDER PIERS; REPLACEMENT SHOULDER WORK AND CONSTRUCTION OF MSE WALL AND BRIDGE ABUTMENTS. SINGLE LANE CLOSURES WITH BARRIER WALL AND TEMPORARY LANE CLOSURES.

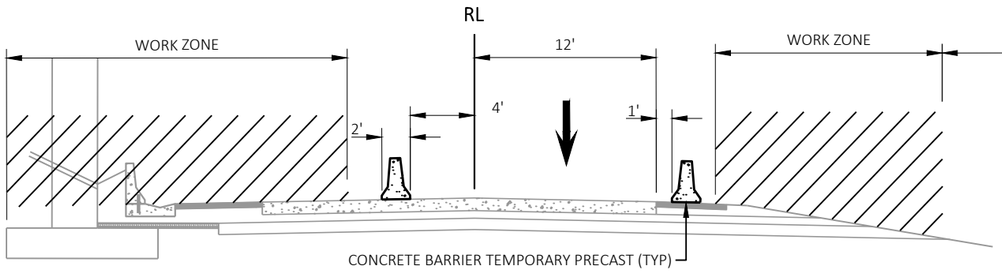
STAGE 4 - CONSTRUCT MSE WALL AND BRIDGE ABUTMENTS, SET GIRDERS, AND CONSTRUCT DECK. TEMPORARY LANE CLOSURES FOR DECK STRIPPING AND FOUR OVERNIGHT FULL CLOSURES FOR GIRDER SETTING. THE REST SHALL BE DONE WITH SHOULDER CLOSURES.



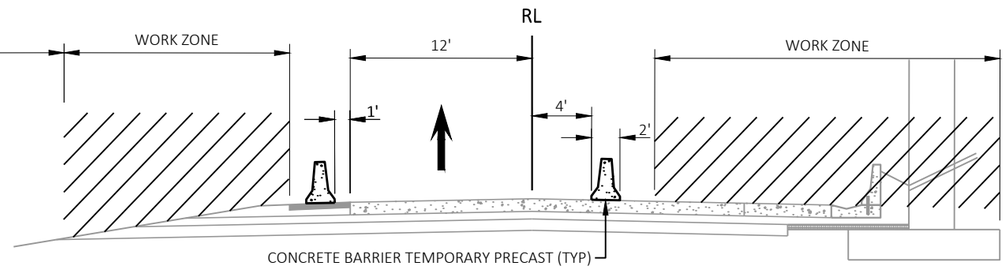

STAGE 2 - TRAFFIC CONTROL - STH 29 WB




STAGE 2 - TRAFFIC CONTROL - STH 29 EB




STAGE 3 - TRAFFIC CONTROL - STH 29 WB




STAGE 3 - TRAFFIC CONTROL - STH 29 EB

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TRAFFIC CONTROL - TYPICAL SECTIONS | SHEET 27 | E |
|---|---|---|---|---|---|

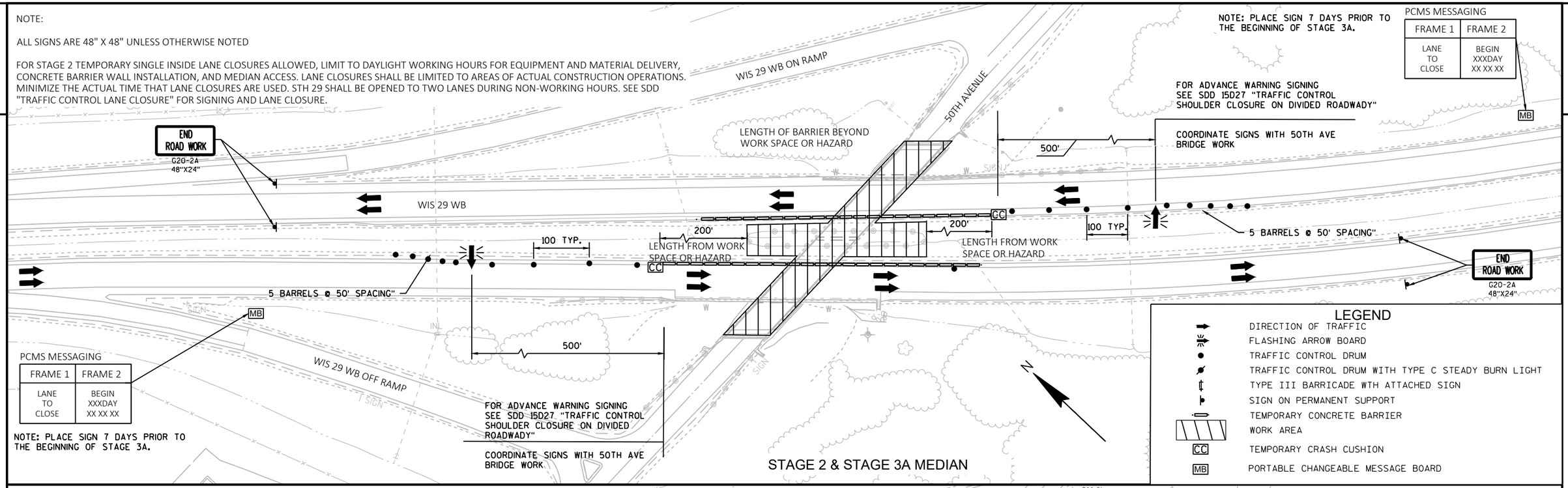
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\025100-TC.DWG
LAYOUT NAME - 025102
PLOT DATE : 7/31/2024 2:56 PM PLOT BY : MATT SOLIN PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

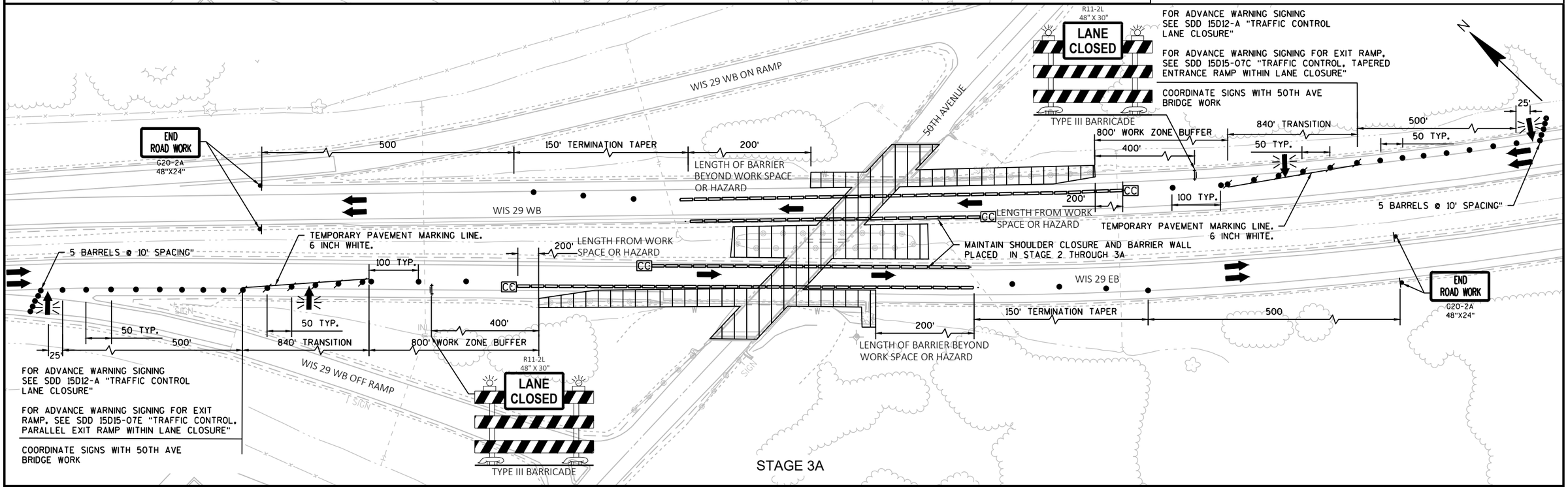
2

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

FOR STAGE 2 TEMPORARY SINGLE INSIDE LANE CLOSURES ALLOWED, LIMIT TO DAYLIGHT WORKING HOURS FOR EQUIPMENT AND MATERIAL DELIVERY, CONCRETE BARRIER WALL INSTALLATION, AND MEDIAN ACCESS. LANE CLOSURES SHALL BE LIMITED TO AREAS OF ACTUAL CONSTRUCTION OPERATIONS. MINIMIZE THE ACTUAL TIME THAT LANE CLOSURES ARE USED. STH 29 SHALL BE OPENED TO TWO LANES DURING NON-WORKING HOURS. SEE SDD "TRAFFIC CONTROL LANE CLOSURE" FOR SIGNING AND LANE CLOSURE.




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TRAFFIC CONTROL | SHEET 28 | E |
|---|---|---|---|---|---|

2

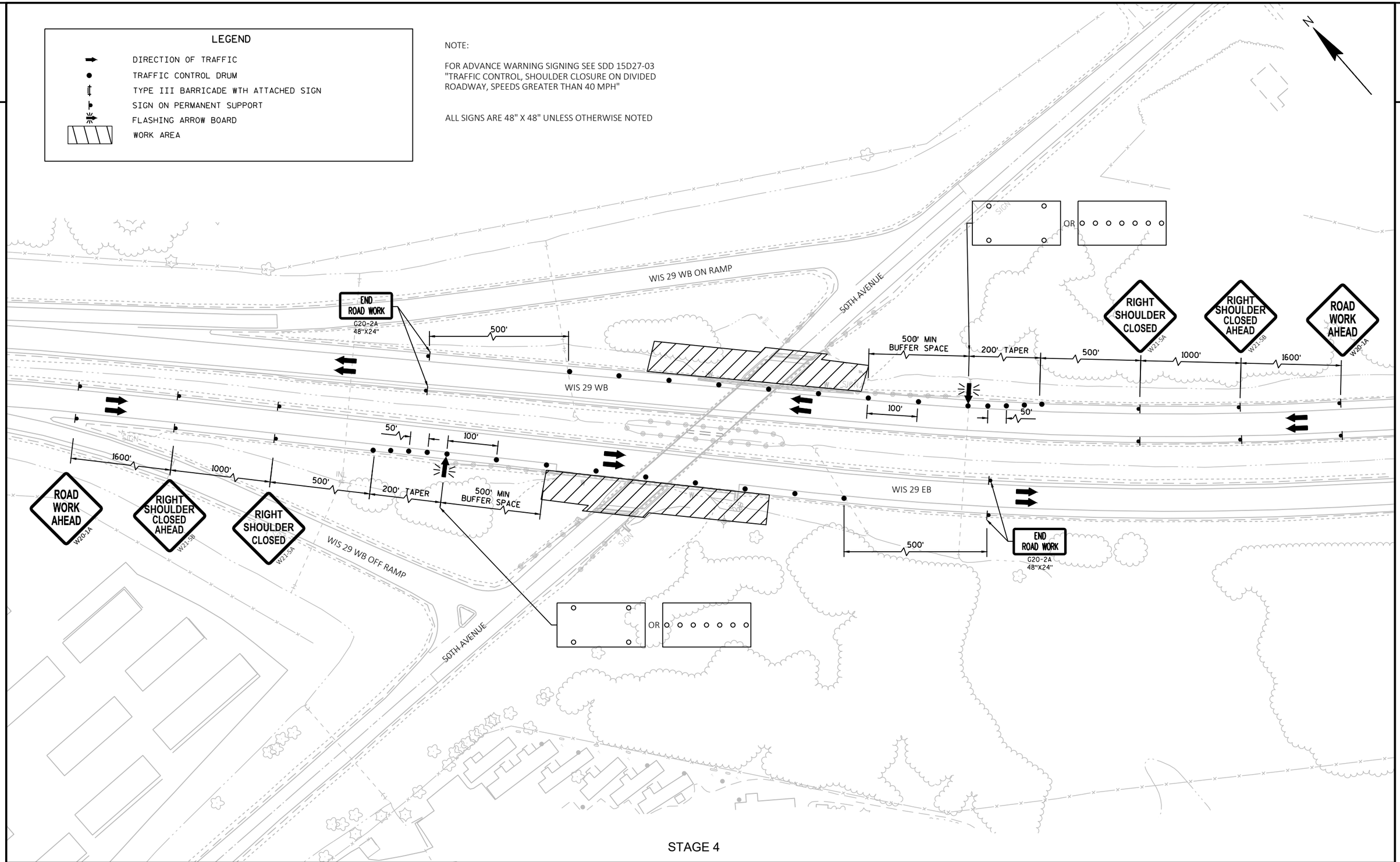
## LEGEND

- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- WORK AREA

NOTE:

FOR ADVANCE WARNING SIGNING SEE SDD 15D27-03 "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH"

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED




STAGE 4

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TRAFFIC CONTROL | SHEET 29 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\025100-TC.DWG
LAYOUT NAME - 0251001

PLOT DATE : 7/18/2024 5:12 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

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

N

EXIT 81
J
Lake Wissota
CLOSED

G20-60
108"X24"

PLACE SIGN G20-60 OVER MILEAGE
ON EXISTING E1-1A SIGN

EXIT 81
J
Lake Wissota
CLOSED

G20-61
120"X30"

COVER ARROW ON EXISTING E4-1
SIGN (COVERING SIGNS TYPE I)

WIS 29 WB

WIS 29 EB

PLACE SIGNS AFTER THE
PROPOSED 50TH AVE BRIDGE WORK

25'

100' MIN

1500'

1500'

200'

1000'

ROAD WORK AHEAD
W20-1A

RAMP CLOSED AHEAD
W20-53A

RAMP CLOSED 1000 FT
W20-53C

TEMPORARY PAVEMENT MARKING LINE.
6 INCH WHITE (ACROSS THE RAMP OPENING).

R11-2R
48" X 30"

RAMP CLOSED

TYPE III BARRICADE

COVER EXISTING
EXIT SIGN

END
ROAD WORK
G20-2A
48"X24"

RAMP CLOSED
BEGINNING
XXX-XX

G20-58
90"X48"

OR

PCMS MESSAGING

| FRAME 1 | FRAME 2 |
|---|---|
| RAMP TO CLOSE | XXXDAY XX XX XX |

NOTE: PLACE SIGN 7 DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION AND RAMP CLOSURE.

50TH AVE. (STILLSON RD)

NOTE:

FOR ADVANCE WARNING SIGNING SEE SDD 15D16
"TRAFFIC CONTROL, EXIT RAMP CLOSURE"

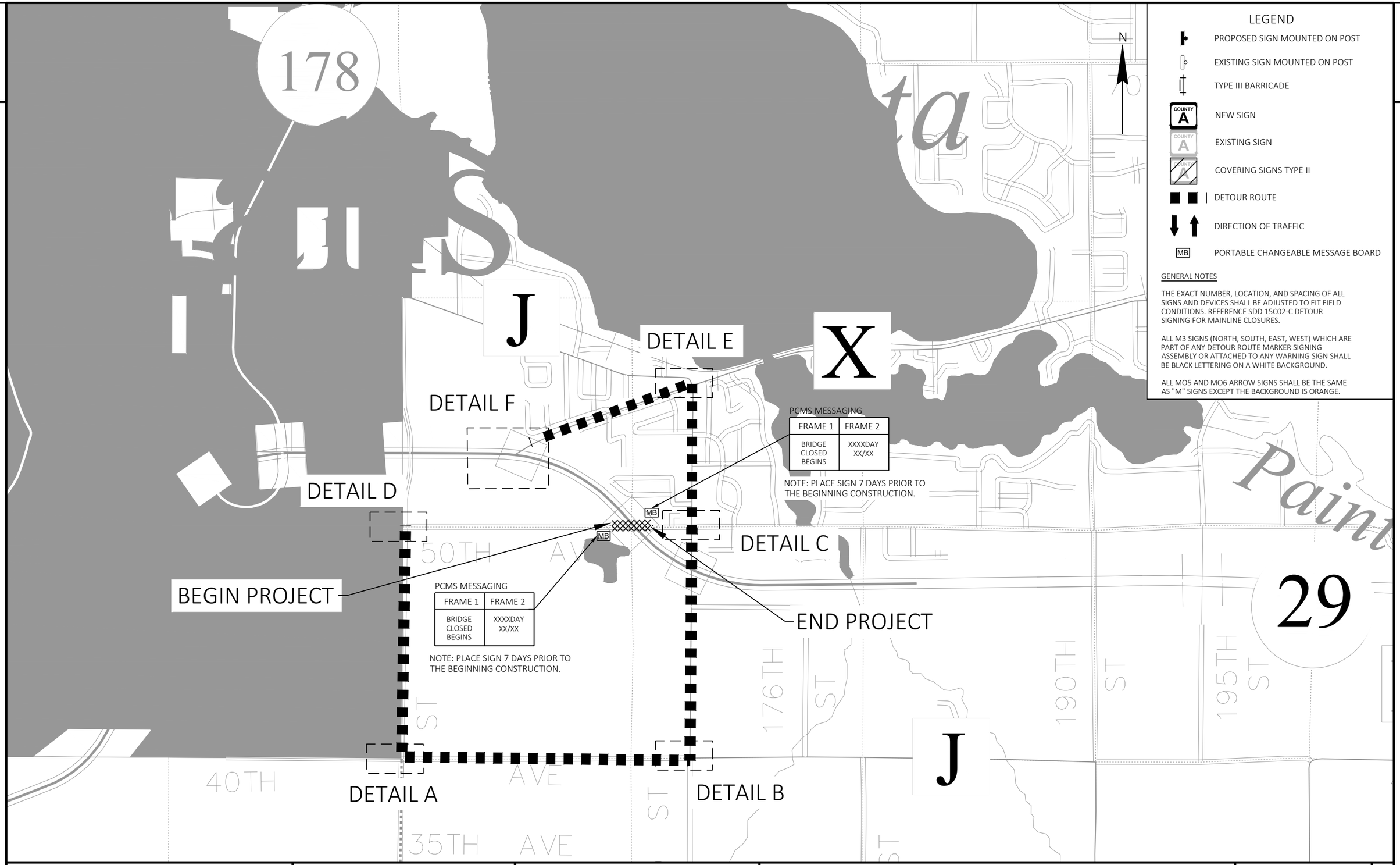
COORDINATE SIGNS WITH STILSON RD BRIDGE
WORK AND TRAFFIC CONTROL

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | TRAFFIC CONTROL | SHEET 30 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\025100-TC.DWG
LAYOUT NAME - 025101
PLOT DATE : 7/18/2024 5:12 PM
PLOT BY : ERIC BENSON
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2




## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II
- DETOUR ROUTE
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD (MB)

GENERAL NOTES

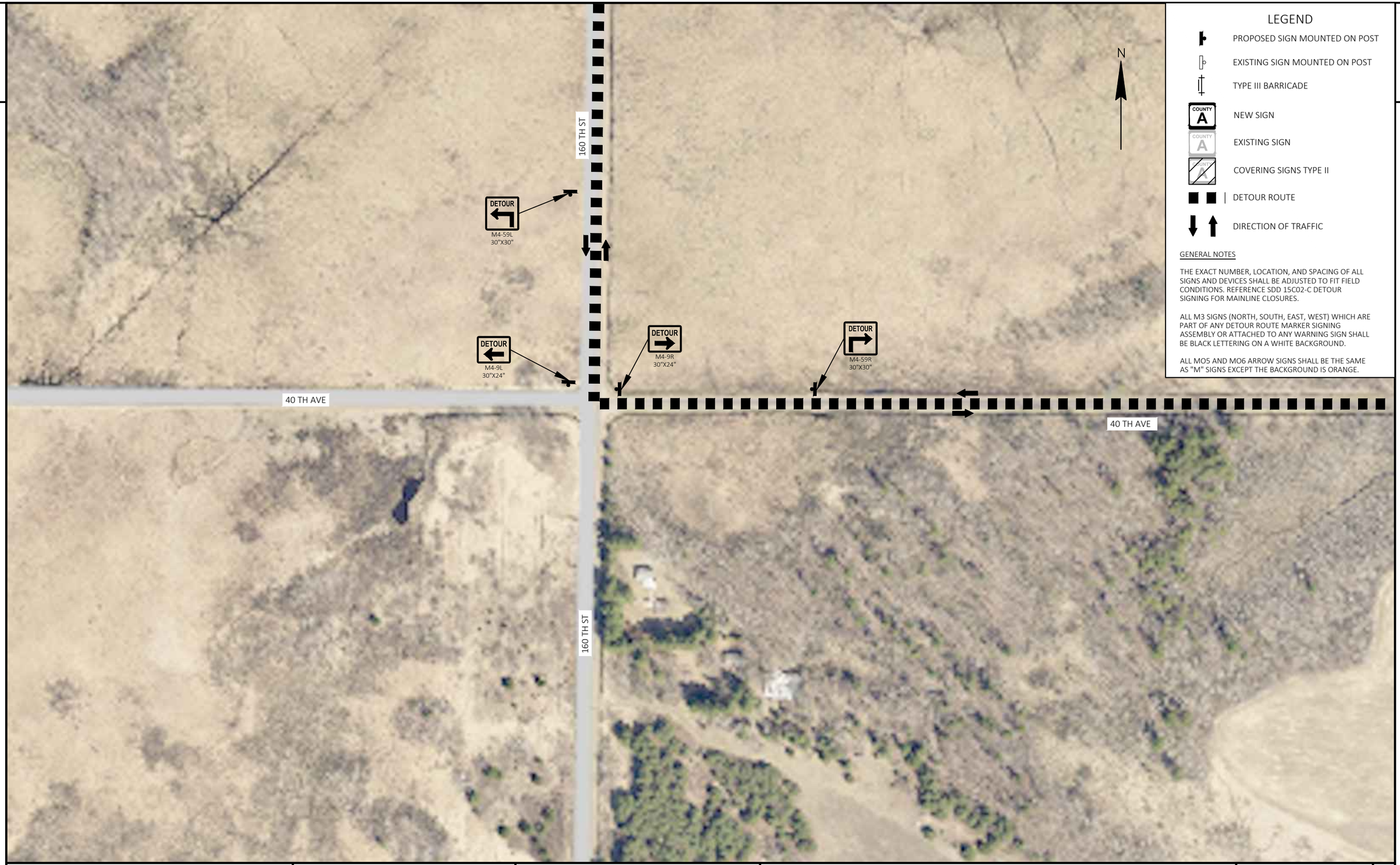
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | DETOUR | SHEET 31 | E |
|---|---|---|---|---|---|

2




## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II (COUNTY A)
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

2

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | DETOUR - DETAIL A | SHEET 32 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-DT.DWG
LAYOUT NAME - 027102

PLOT DATE : 7/18/2024 5:12 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

2

2

172ND ST

DETOUR
M4-59R
30"X30"

DETOUR
M4-9R
30"X24"

40TH AVE

DETOUR
M4-59L
30"X30"

DETOUR
M4-9L
30"X24"

172ND ST

40TH AVE

N

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN
- EXISTING SIGN
- COVERING SIGNS TYPE II
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | DETOUR - DETAIL B | SHEET 33 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-DT.DWG
LAYOUT NAME - 027103

PLOT DATE : 7/18/2024 5:12 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

2

N

CTH J

REFERENCE TRAFFIC CONTROL SHEET 3
FOR EXIT RAMP CLOSURE DETAILS.

50TH AVE

WORK ZONE

R11-3C
60"X24"
BRIDGE OUT
1/4 MILES AHEAD
TYPE III BARRICADE

EAST
J
29

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

R11-4
60" X 30"
ROAD CLOSED TO THRU TRAFFIC
TYPE III BARRICADE

DETOUR
M4-59R
30"X30"

DETOUR
M4-9R
30"X24"

MO4-5
24"X12"
TO
WEST
29
M3-4
24"X12"
M1-6
24"X24"
MO6-1
21"X21"

TO
EAST
29
J

MO4-5
24"X12"
TO
WEST
J
29
MO6-1
21"X21"

TO
WEST
EAST
J
29
29
DETOUR
M4-9L
30"X24"

DETOUR
M4-59L
30"X30"

50TH AVE

TO
WEST
WEST
29
J
MO4-5
24"X12"
MO6-1
21"X21"

END
DETOUR
M4-8A
24"X18"

DETOUR
M4-9R
30"X24"

DETOUR
M4-59R
30"X30"

NOTE:COORDINATE WITH ROUNDABOUT CONSTRUCTION AT THE INTERSECTION OF 50TH AVE AND CTH J FOR SIGN AND BARRICADE PLACEMENT.

STH 29

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II (COUNTY A)
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

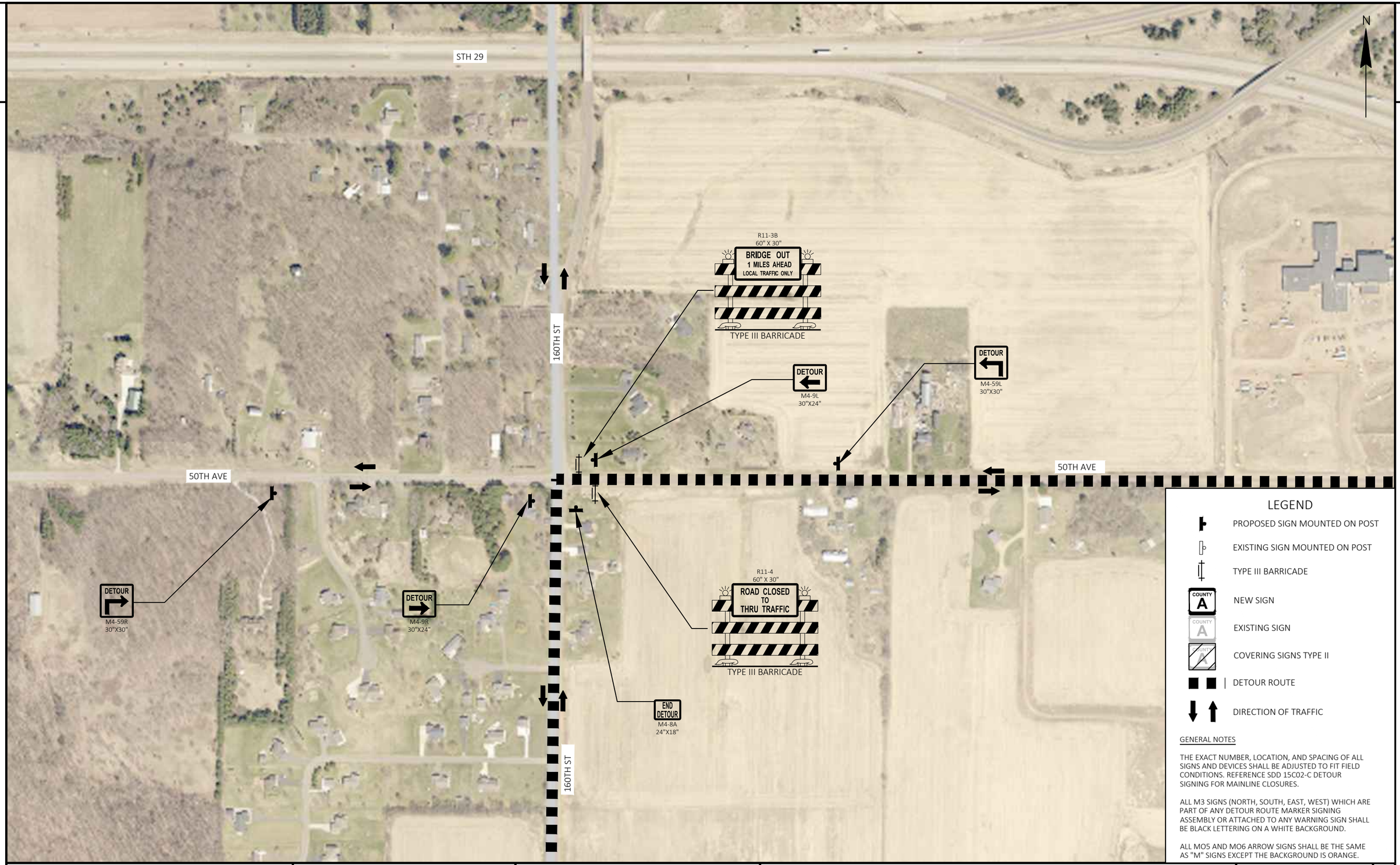
ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | DETOUR - DETAIL C | SHEET 34 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-DT.DWG
LAYOUT NAME - 027104

PLOT DATE : 7/18/2024 5:12 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | DETOUR - DETAIL D | SHEET 35 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-DT.DWG
LAYOUT NAME - 027105
PLOT DATE : 7/18/2024 5:12 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom
WISDOT/CADDS SHEET 42

2

CTH J

CTH X

CTH X

CTH J

N

TO WEST 29 — MO4-5 24"X12" / M3-4 24"X12" / M1-6 24"X24" / MO6-1 21"X21"

TO WEST 29 — MO4-5 24"X12" / M3-4 24"X12" / M1-6 24"X24" / MO6-1 21"X21"

TO WEST 29 — MO4-5 24"X12" / M3-4 24"X12" / M1-6 24"X24" / MO6-2 21"X21"

TO WEST 29 — MO4-5 24"X12" / M3-4 24"X12" / M1-6 24"X24" / MO5-1L 21"X21"

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II (COUNTY A)
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | DETOUR - DETAIL E | SHEET 36 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-DT.DWG
LAYOUT NAME - 027106
PLOT DATE : 7/18/2024 5:12 PM
PLOT BY : ERIC BENSON
PLOT NAME :
PLOT SCALE : Custom
WISDOT/CADDS SHEET 42

2

2

N

CTH X

MO4-5 36"X18" TO
M1-5A 36"X36" COUNTY J
M5-2R 30"X30"

500'

¼ mile

HWY J
RAMP CLOSED
USE EXIT 80

G20-56
120"X54"

STH 29

MO4-5 36"X18" TO
M1-5A 36"X36" COUNTY J
MO6-2 30"X30"

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II (COUNTY A)
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | DETOUR - DETAIL F | SHEET 37 | E |
|---|---|---|---|---|---|

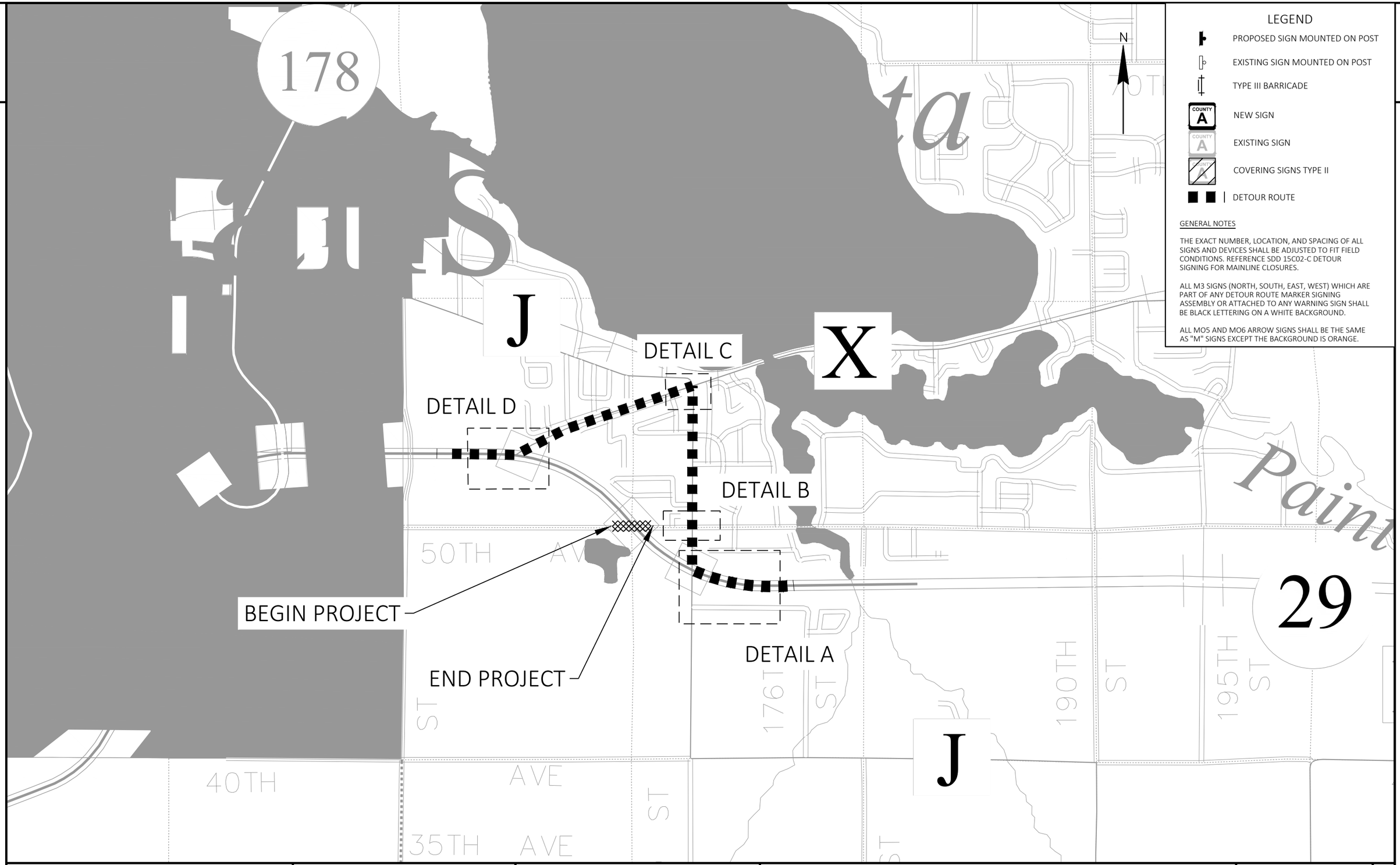
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-DT.DWG
LAYOUT NAME - 027107

PLOT DATE : 7/18/2024 5:13 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

2




LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN
- EXISTING SIGN
- COVERING SIGNS TYPE II
- DETOUR ROUTE

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| | | | | |
|---|---|---|---|---|
| **PROJECT NO:** 1050-01-79 | **HWY:** STH 29 | **COUNTY:** CHIPPEWA | DETOUR - BRIDGE CONSTRUCTION (STH 29 CLOSURE) | SHEET 38 E |

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027102-DT.DWG
LAYOUT NAME - 027101

PLOT DATE : 9/20/2024 9:04 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

2

N

50TH AVE

CTH J

STH 29 WB

STH 29 EB

CTH J

M4-8
36"X18"
M3-4
36"X18"
M1-6
36"X36"
MO6-2
21"X21"

M4-8
36"X18"
M3-4
36"X18"
M1-6
36"X36"
MO5-2R
21"X21"

M3-4
36"X18"
M1-6
36"X36"
W20.2A

500'

1000'

SEE SDD "TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE" FOR CLOSURE OF STH 29 WB

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN
- EXISTING SIGN
- COVERING SIGNS TYPE II
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | STH 29 CLOSURE DETOUR - DETAIL A | SHEET 39 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027102-DT.DWG
LAYOUT NAME - 027102

PLOT DATE : 9/20/2024 9:04 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

REFERENCE TRAFFIC CONTROL SHEET 3
FOR EXIT RAMP CLOSURE DETAILS.

50TH AVE

WORK ZONE

CTH J

R11-3B
60" X 30"
BRIDGE OUT
1/4 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

J
EAST
29

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

R11-4
60" X 30"
ROAD CLOSED
TO
THRU TRAFFIC
TYPE III BARRICADE

M4-8
24"X12"
DETOUR
WEST
29
M3-4
24"X12"
M1-6
24"X24"
MO6-1
21"X21"
TO
EAST
29
J

M4-8
24"X12"
DETOUR
TO
WEST
EAST
J
29
29
DETOUR
M4-9R
30"X24"
MO6-1
21"X21"

50TH AVE

DETOUR
M4-8
24"X12"
WEST
WEST
29
J
M6-1
21"X21"

CTH J

NOTE:COORDINATE WITH ROUNDABOUT CONSTRUCTION AT THE INTERSECTION OF 50TH AVE AND CTH J FOR SIGN AND BARRICADE PLACEMENT.

END
DETOUR
M4-8A
24"X18"

N

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

2

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | STH 29 CLOSURE DETOUR - DETAIL B | SHEET 40 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027102-DT.DWG
LAYOUT NAME - 027103

PLOT DATE : 9/20/2024 9:04 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

2

CTH J

CTH X

CTH X

CTH J

DETOUR WEST 29 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO6-1 21"X21"

DETOUR WEST 29 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO6-2 21"X21"

DETOUR WEST 29 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO6-1 21"X21"

DETOUR EAST 29 — M4-8 36"X18", M3-2 36"X18", M1-6 36"X36", MO6-2 30"X30"

DETOUR EAST 29 — M4-8 24"X12", M3-2 24"X12", M1-6 24"X24", MO6-1 21"X21"

DETOUR EAST 29 — M4-8 24"X12", M3-2 24"X12", M1-6 24"X24", MO6-1 21"X21"

DETOUR WEST 29 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO5-1L 21"X21"

N

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II (COUNTY A)
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | STH 29 CLOSURE DETOUR - DETAIL C | SHEET 41 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027102-DT.DWG
LAYOUT NAME - 027104

PLOT DATE : 9/20/2024 9:04 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : ######

WISDOT/CADDS SHEET 42

2

2

N

SEE SDD "TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE" FOR CLOSURE OF STH 29 EB

STH 29 WB

STH 29 EB

5280'

1000'

500'

END DETOUR
M4-8A
24"X18"

CTH X

STH 29 WB
STH 29 EB

HWY J
RAMP CLOSED
USE EXIT 80
G20-56
120"X54"

M3-2 36"X18"
M1-6 36"X36"
EAST 29
DETOUR AHEAD
W20-2A

M4-8 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO5-2R 30"X30"
DETOUR EAST 29
TO COUNTY J
MO4-5 36"X18"
M1-5A 36"X36"
MO5-2R 30"X30"

M4-8 36"X18"
M3-2 36"X18"
M1-6 36"X36"
MO6-2 30"X30"
DETOUR EAST 29
TO COUNTY J
MO4-5 36"X18"
M1-5A 36"X36"
MO6-2 30"X30"

## LEGEND

- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST
- TYPE III BARRICADE
- NEW SIGN (COUNTY A)
- EXISTING SIGN (COUNTY A)
- COVERING SIGNS TYPE II (COUNTY A)
- DETOUR ROUTE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. REFERENCE SDD 15C02-C DETOUR SIGNING FOR MAINLINE CLOSURES.

ALL M3 SIGNS (NORTH, SOUTH, EAST, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | STH 29 CLOSURE DETOUR - DETAIL D | SHEET 42 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027102-DT.DWG
LAYOUT NAME - 027105

PLOT DATE : 9/20/2024 9:04 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

CINC

XCEL ENERGY GAS/PETROLEUM

124+00

125+00

50TH AVE (STILLSON RD)

126+00

127+00

END PROJECT
STA 127+00.00
Y = 121840.073
X = 189270.289
MATCH INTO
OTHER PROJECT
8996-01-76

N

SPECTRUM

REMOVING FENCE (92 LF)

EXISTING R/W

SI (TYP)

STA 125 +68.02
82.83' RT

SEE SDD "FENCE WOVEN WIRE"

STA 124 +94.38
90.10' RT

74 LF - FENCE WOVEN WIRE (4 FT)

PROPOSED R/W

TIE INTO EXISTING FENCE

NOTE:

FENCE SHALL BE LOCATED 3' INSIDE THE RIGHT OF WAY.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | FENCING PLAN | SHEET 43 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-FN.DWG
LAYOUT NAME - 01

PLOT DATE : 7/18/2024 5:13 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

N

GUY

HO

HO

TIE INTO EXISTING FENCE

TLE

STA 123 +23.31
-102.03' LT

PROPOSED R/W

UTILITY TLE

STA 126 +03.43
-69.50' LT

EXISTING R/W (TYP)

REMOVING FENCE (292 LF)

282 LF - FENCE WOVEN WIRE (4 FT)

SEE SDD "FENCE WOVEN WIRE"

AT&T

CINC

XCEL ENERGY
GAS/PETROLEUM

SI (TYP)

PI: 127+41.77

123+00

124+00

125+00

126+00

127+00

50TH AVE (STILLSON RD)

END PROJECT
STA 127+00.00
Y = 121840.073
X = 189270.289
MATCH INTO
OTHER PROJECT
8996-01-76

NOTE:

FENCE SHALL BE LOCATED 3' INSIDE THE RIGHT OF WAY.

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | FENCING PLAN | SHEET 44 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027101-FN.DWG
LAYOUT NAME - 02

PLOT DATE : 7/18/2024 5:13 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:30 FT

WISDOT/CADDS SHEET 42

2

N

PI: 106+50.00

PI: 108+49.75

END PROJECT
STA 127+00.00

PI: 127+41.77

PC: 129+31.78

PT: 130+50.80
PC: 130+71.15

PC: 131+35.28
64°31'49"
PI: 132+66.49

PT: 133+91.84

105 | 110 | 115 | 120 | 125 | 130 | 13

S89°53'21"E | N89°40'46"E | S89°56'37"E | S89°42'30"E

50TH AVE (STILSON ROAD)

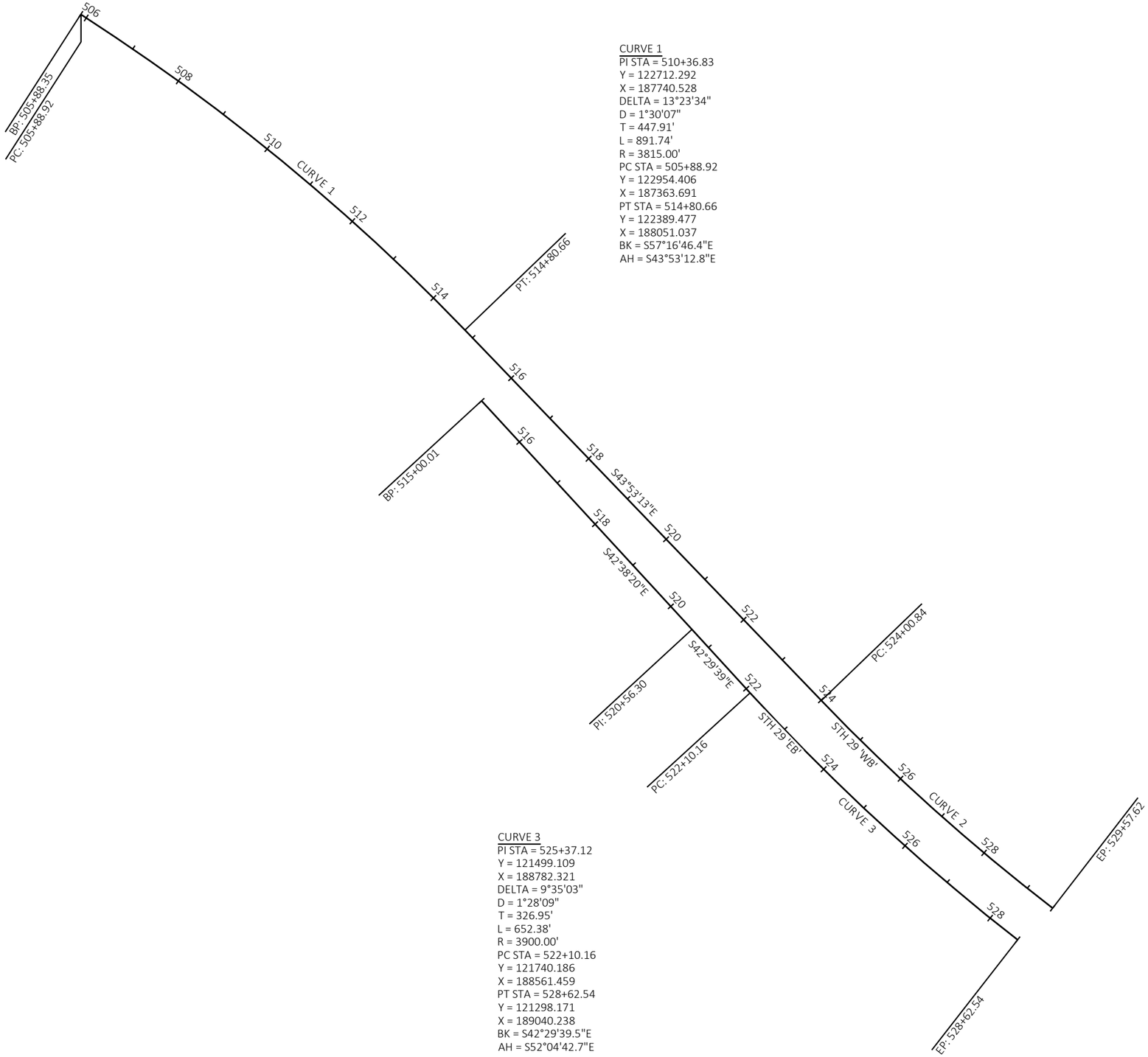
BEGIN PROJECT
STA 106+50.00
Y=121840.779
X=187220.291

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | ALIGNMENT DIAGRAM | SHEET 45 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 50th Ave

PLOT DATE : 7/18/2024 5:25 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:200 FT

2




CURVE 1
PI STA = 510+36.83
Y = 122712.292
X = 187740.528
DELTA = 13°23'34"
D = 1°30'07"
T = 447.91'
L = 891.74'
R = 3815.00'
PC STA = 505+88.92
Y = 122954.406
X = 187363.691
PT STA = 514+80.66
Y = 122389.477
X = 188051.037
BK = S57°16'46.4"E
AH = S43°53'12.8"E

CURVE 2
PI STA = 526+79.74
Y = 121525.293
X = 188882.279
DELTA = 8°24'54"
D = 1°30'41"
T = 278.89'
L = 556.78'
R = 3791.00'
PC STA = 524+00.84
Y = 121726.292
X = 188688.942
PT STA = 529+57.62
Y = 121354.751
X = 189102.950
BK = S43°53'12.8"E
AH = S52°18'06.7"E

CURVE 3
PI STA = 525+37.12
Y = 121499.109
X = 188782.321
DELTA = 9°35'03"
D = 1°28'09"
T = 326.95'
L = 652.38'
R = 3900.00'
PC STA = 522+10.16
Y = 121740.186
X = 188561.459
PT STA = 528+62.54
Y = 121298.171
X = 189040.238
BK = S42°29'39.5"E
AH = S52°04'42.7"E

N

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | ALIGNMENT DIAGRAM | SHEET 46 | E |
|---|---|---|---|---|---|

1050-01-79

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 201.0105 | Clearing | STA | 9.000 | 9.000 |
| 0004 | 201.0205 | Grubbing | STA | 9.000 | 9.000 |
| 0006 | 203.0100 | Removing Small Pipe Culverts | EACH | 5.000 | 5.000 |
| 0008 | 203.0211.S | Abatement of Asbestos Containing Material (structure) 01. B-9-33 | EACH | 1.000 | 1.000 |
| 0010 | 203.0220 | Removing Structure (structure) 01. B-9-33 | EACH | 1.000 | 1.000 |
| 0012 | 203.0330 | Debris Containment (structure) 01. B-9-33 | EACH | 1.000 | 1.000 |
| 0014 | 204.0100 | Removing Concrete Pavement | SY | 370.000 | 370.000 |
| 0016 | 204.0150 | Removing Curb & Gutter | LF | 56.000 | 56.000 |
| 0018 | 204.0157 | Removing Concrete Barrier | LF | 423.000 | 423.000 |
| 0020 | 204.0165 | Removing Guardrail | LF | 1,000.000 | 1,000.000 |
| 0022 | 204.0170 | Removing Fence | LF | 384.000 | 384.000 |
| 0024 | 204.0190 | Removing Surface Drains | EACH | 2.000 | 2.000 |
| 0026 | 205.0100 | Excavation Common | CY | 2,241.000 | 2,241.000 |
| 0028 | 206.1001 | Excavation for Structures Bridges (structure) 01. B-9-33 | EACH | 1.000 | 1.000 |
| 0030 | 206.3001 | Excavation for Structures Retaining Walls (structure) 01. R-9-17 | EACH | 1.000 | 1.000 |
| 0032 | 206.3001 | Excavation for Structures Retaining Walls (structure) 02. R-9-18 | EACH | 1.000 | 1.000 |
| 0034 | 208.0100 | Borrow | CY | 46,128.000 | 46,128.000 |
| 0036 | 210.1500 | Backfill Structure Type A | TON | 270.000 | 270.000 |
| 0038 | 213.0100 | Finishing Roadway (project) 01. 1050-01-79 | EACH | 1.000 | 1.000 |
| 0042 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 688.000 | 688.000 |
| 0044 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 8,605.000 | 8,605.000 |
| 0046 | 350.0130 | Subbase 9-Inch | SY | 10,205.000 | 10,205.000 |
| 0050 | 415.0080 | Concrete Pavement 8-Inch | SY | 70.000 | 70.000 |
| 0052 | 415.0410 | Concrete Pavement Approach Slab | SY | 180.000 | 180.000 |
| 0056 | 455.0605 | Tack Coat | GAL | 1,241.000 | 1,241.000 |
| 0058 | 460.2000 | Incentive Density HMA Pavement | DOL | 2,390.000 | 2,390.000 |
| 0060 | 460.6244 | HMA Pavement 4 MT 58-34 S | TON | 2,665.000 | 2,665.000 |
| 0062 | 460.7423 | HMA Pavement 3 HT 58-28 H | TON | 377.000 | 377.000 |
| 0064 | 460.7444 | HMA Pavement 4 HT 58-34 H | TON | 302.000 | 302.000 |
| 0066 | 465.0120 | Asphaltic Surface Driveways and Field Entrances | TON | 40.000 | 40.000 |
| 0070 | 465.0520 | Asphaltic Rumble Strips, Shoulder | LF | 178.000 | 178.000 |
| 0072 | 502.0100 | Concrete Masonry Bridges | CY | 814.000 | 814.000 |
| 0074 | 502.3101 | Expansion Device | LF | 126.000 | 126.000 |
| 0076 | 502.3200 | Protective Surface Treatment | SY | 1,145.000 | 1,145.000 |
| 0078 | 502.3210 | Pigmented Surface Sealer | SY | 530.000 | 530.000 |
| 0080 | 502.4206 | Adhesive Anchors No. 6 Bar | EACH | 8.000 | 8.000 |
| 0082 | 503.0155 | Prestressed Girder Type I 54W-Inch | LF | 1,375.000 | 1,375.000 |
| 0084 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 19,810.000 | 19,810.000 |
| 0086 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 132,480.000 | 132,480.000 |
| 0088 | 506.2605 | Bearing Pads Elastomeric Non-Laminated | EACH | 12.000 | 12.000 |
| 0090 | 506.2610 | Bearing Pads Elastomeric Laminated | EACH | 12.000 | 12.000 |
| 0092 | 506.4000 | Steel Diaphragms (structure) 01. B-9-309 | EACH | 20.000 | 20.000 |
| 0094 | 511.1200 | Temporary Shoring (structure) 01. B-9-309 | SF | 2,240.000 | 2,240.000 |
| 0096 | 513.4091 | Railing Tubular Screening | LF | 326.000 | 326.000 |
| 0098 | 514.0450 | Floor Drains Type WF | EACH | 2.000 | 2.000 |
| 0100 | 514.0460 | Floor Drains Type H | EACH | 1.000 | 1.000 |
| 0102 | 514.2608 | Downspout 8-Inch | LF | 165.000 | 165.000 |
| 0104 | 514.2625 | Downspout 6-Inch | LF | 13.000 | 13.000 |
| 0106 | 516.0500 | Rubberized Membrane Waterproofing | SY | 300.000 | 300.000 |

1050-01-79

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0108 | 520.1012 | Apron Endwalls for Culvert Pipe 12-Inch | EACH | 1.000 | 1.000 |
| 0110 | 520.1036 | Apron Endwalls for Culvert Pipe 36-Inch | EACH | 2.000 | 2.000 |
| 0114 | 520.4136 | Culvert Pipe Class IV 36-Inch | LF | 156.000 | 156.000 |
| 0116 | 520.8000 | Concrete Collars for Pipe | EACH | 1.000 | 1.000 |
| 0118 | 520.8700 | Cleaning Culvert Pipes | EACH | 1.000 | 1.000 |
| 0120 | 521.1012 | Apron Endwalls for Culvert Pipe Steel 12-Inch | EACH | 6.000 | 6.000 |
| 0122 | 521.3112 | Culvert Pipe Corrugated Steel 12-Inch | LF | 100.000 | 100.000 |
| 0126 | 522.0418 | Culvert Pipe Reinforced Concrete Class IV 18-Inch | LF | 36.000 | 36.000 |
| 0128 | 522.0430 | Culvert Pipe Reinforced Concrete Class IV 30-Inch | LF | 6.000 | 6.000 |
| 0132 | 522.1018 | Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch | EACH | 2.000 | 2.000 |
| 0134 | 522.1030 | Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch | EACH | 2.000 | 2.000 |
| 0136 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 3,420.000 | 3,420.000 |
| 0138 | 550.1120 | Piling Steel HP 12-Inch X 53 Lb | LF | 2,535.000 | 2,535.000 |
| 0144 | 601.0415 | Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J | LF | 507.000 | 507.000 |
| 0146 | 601.0553 | Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D | LF | 407.000 | 407.000 |
| 0150 | 601.0588 | Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT | LF | 86.000 | 86.000 |
| 0152 | 601.0590 | Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT | LF | 16.000 | 16.000 |
| 0156 | 602.0415 | Concrete Sidewalk 6-Inch | SF | 60.000 | 60.000 |
| 0160 | 602.0815 | Concrete Driveway 7-Inch | SY | 60.000 | 60.000 |
| 0162 | 602.3010 | Concrete Surface Drains | CY | 4.000 | 4.000 |
| 0164 | 602.3220 | Concrete Rumble Strips, Shoulder | LF | 156.000 | 156.000 |
| 0166 | 603.8000 | Concrete Barrier Temporary Precast Delivered | LF | 2,650.000 | 2,650.000 |
| 0168 | 603.8125 | Concrete Barrier Temporary Precast Installed | LF | 2,650.000 | 2,650.000 |
| 0170 | 604.0400 | Slope Paving Concrete | SY | 90.000 | 90.000 |
| 0172 | 604.0500 | Slope Paving Crushed Aggregate | SY | 241.000 | 241.000 |
| 0174 | 606.0200 | Riprap Medium | CY | 33.000 | 33.000 |
| 0182 | 608.0430 | Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch | LF | 238.000 | 238.000 |
| 0184 | 608.3012 | Storm Sewer Pipe Class III-A 12-Inch | LF | 76.000 | 76.000 |
| 0190 | 611.0633 | Inlet Covers Type HM-GJ-S | EACH | 1.000 | 1.000 |
| 0194 | 611.0642 | Inlet Covers Type MS | EACH | 2.000 | 2.000 |
| 0198 | 611.0654 | Inlet Covers Type V | EACH | 1.000 | 1.000 |
| 0202 | 611.3220 | Inlets 2x2-FT | EACH | 1.000 | 1.000 |
| 0204 | 611.3230 | Inlets 2x3-FT | EACH | 1.000 | 1.000 |
| 0206 | 611.3902 | Inlets Median 2 Grate | EACH | 1.000 | 1.000 |
| 0208 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 360.000 | 360.000 |
| 0210 | 614.0010 | Barrier System Grading Shaping Finishing | EACH | 1.000 | 1.000 |
| 0212 | 614.0150 | Anchor Assemblies for Steel Plate Beam Guard | EACH | 6.000 | 6.000 |
| 0214 | 614.0220 | Steel Thrie Beam Bullnose Terminal | EACH | 2.000 | 2.000 |
| 0216 | 614.0230 | Steel Thrie Beam | LF | 200.000 | 200.000 |
| 0218 | 614.0905 | Crash Cushions Temporary | EACH | 4.000 | 4.000 |
| 0220 | 614.2300 | MGS Guardrail 3 | LF | 63.000 | 63.000 |
| 0222 | 614.2500 | MGS Thrie Beam Transition | LF | 158.000 | 158.000 |
| 0224 | 614.2610 | MGS Guardrail Terminal EAT | EACH | 4.000 | 4.000 |
| 0226 | 616.0100 | Fence Woven Wire (height) 01. 4-FT | LF | 356.000 | 356.000 |
| 0230 | 619.1000 | Mobilization | EACH | 0.850 | 0.850 |
| 0234 | 621.0100 | Landmark Reference Monuments | EACH | 1.000 | 1.000 |
| 0236 | 624.0100 | Water | MGAL | 150.000 | 150.000 |
| 0238 | 625.0100 | Topsoil | SY | 28,700.000 | 28,700.000 |
| 0240 | 625.0500 | Salvaged Topsoil | SY | 12,654.000 | 12,654.000 |

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| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0242 | 627.0200 | Mulching | SY | 6,000.000 | 6,000.000 |
| 0244 | 628.1504 | Silt Fence | LF | 8,000.000 | 8,000.000 |
| 0246 | 628.1520 | Silt Fence Maintenance | LF | 8,000.000 | 8,000.000 |
| 0248 | 628.1905 | Mobilizations Erosion Control | EACH | 8.000 | 8.000 |
| 0250 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 4.000 | 4.000 |
| 0252 | 628.2004 | Erosion Mat Class I Type B | SY | 30,330.000 | 30,330.000 |
| 0254 | 628.7005 | Inlet Protection Type A | EACH | 3.000 | 3.000 |
| 0258 | 628.7504 | Temporary Ditch Checks | LF | 135.000 | 135.000 |
| 0260 | 628.7555 | Culvert Pipe Checks | EACH | 10.000 | 10.000 |
| 0262 | 628.7570 | Rock Bags | EACH | 18.000 | 18.000 |
| 0264 | 629.0205 | Fertilizer Type A | CWT | 3.000 | 3.000 |
| 0266 | 629.0210 | Fertilizer Type B | CWT | 19.000 | 19.000 |
| 0268 | 630.0120 | Seeding Mixture No. 20 | LB | 990.000 | 990.000 |
| 0270 | 630.0130 | Seeding Mixture No. 30 | LB | 416.000 | 416.000 |
| 0272 | 630.0200 | Seeding Temporary | LB | 884.000 | 884.000 |
| 0274 | 630.0500 | Seed Water | MGAL | 727.000 | 727.000 |
| 0276 | 633.5100 | Markers ROW | EACH | 4.000 | 4.000 |
| 0280 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 2.000 | 2.000 |
| 0282 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 8.000 | 8.000 |
| 0284 | 634.0616 | Posts Wood 4x6-Inch X 16-FT | EACH | 16.000 | 16.000 |
| 0286 | 634.0618 | Posts Wood 4x6-Inch X 18-FT | EACH | 7.000 | 7.000 |
| 0294 | 638.2102 | Moving Signs Type II | EACH | 25.000 | 25.000 |
| 0298 | 638.3000 | Removing Small Sign Supports | EACH | 27.000 | 27.000 |
| 0300 | 642.5401 | Field Office Type D | EACH | 0.850 | 0.850 |
| 0302 | 643.0300 | Traffic Control Drums | DAY | 13,864.000 | 13,864.000 |
| 0304 | 643.0420 | Traffic Control Barricades Type III | DAY | 5,556.000 | 5,556.000 |
| 0306 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 6,792.000 | 6,792.000 |
| 0308 | 643.0715 | Traffic Control Warning Lights Type C | DAY | 1,660.000 | 1,660.000 |
| 0310 | 643.0800 | Traffic Control Arrow Boards | DAY | 332.000 | 332.000 |
| 0312 | 643.0900 | Traffic Control Signs | DAY | 16,372.000 | 16,372.000 |
| 0314 | 643.0910 | Traffic Control Covering Signs Type I | EACH | 1.000 | 1.000 |
| 0316 | 643.0920 | Traffic Control Covering Signs Type II | EACH | 1.000 | 1.000 |
| 0318 | 643.1000 | Traffic Control Signs Fixed Message | SF | 45.000 | 45.000 |
| 0320 | 643.1050 | Traffic Control Signs PCMS | DAY | 67.000 | 67.000 |
| 0326 | 643.3180 | Temporary Marking Line Removable Tape 6-Inch | LF | 1,920.000 | 1,920.000 |
| 0332 | 643.5000 | Traffic Control | EACH | 0.500 | 0.500 |
| 0334 | 645.0120 | Geotextile Type HR | SY | 65.000 | 65.000 |
| 0336 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 8,225.000 | 8,225.000 |
| 0338 | 646.2040 | Marking Line Grooved Wet Ref Epoxy 6-Inch | LF | 3,175.000 | 3,175.000 |
| 0340 | 646.3020 | Marking Line Epoxy 8-Inch | LF | 313.000 | 313.000 |
| 0342 | 646.4040 | Marking Line Grooved Wet Ref Epoxy 10-Inch | LF | 46.000 | 46.000 |
| 0346 | 646.6120 | Marking Stop Line Epoxy 18-Inch | LF | 40.000 | 40.000 |
| 0358 | 650.4000 | Construction Staking Storm Sewer | EACH | 3.000 | 3.000 |
| 0360 | 650.4500 | Construction Staking Subgrade | LF | 3,670.000 | 3,670.000 |
| 0362 | 650.5000 | Construction Staking Base | LF | 3,670.000 | 3,670.000 |
| 0364 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter | LF | 960.000 | 960.000 |
| 0366 | 650.6000 | Construction Staking Pipe Culverts | EACH | 1.000 | 1.000 |
| 0368 | 650.6501 | Construction Staking Structure Layout (structure) 01. B-9-309 | EACH | 1.000 | 1.000 |
| 0374 | 650.9911 | Construction Staking Supplemental Control (project) 01. 1050-01-79 | EACH | 1.000 | 1.000 |

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| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0378 | 650.9920 | Construction Staking Slope Stakes | LF | 3,602.000 | 3,602.000 |
| 0406 | 690.0150 | Sawing Asphalt | LF | 324.000 | 324.000 |
| 0408 | 690.0250 | Sawing Concrete | LF | 230.000 | 230.000 |
| 0410 | 715.0502 | Incentive Strength Concrete Structures | DOL | 4,500.000 | 4,500.000 |
| 0412 | 715.0720 | Incentive Compressive Strength Concrete Pavement | DOL | 500.000 | 500.000 |
| 0414 | ASP.1T0A | On-the-Job Training Apprentice at $5.00/HR | HRS | 2,500.000 | 2,500.000 |
| 0416 | ASP.1T0G | On-the-Job Training Graduate at $5.00/HR | HRS | 2,000.000 | 2,000.000 |
| 0420 | SPV.0090 | Special 01. Fence Chain Link Polymer - Coated 5-ft B-9-309 | LF | 279.000 | 279.000 |
| 0422 | SPV.0090 | Special 02. Removing Existing Timber Piling | LF | 1,200.000 | 1,200.000 |
| 0424 | SPV.0090 | Special 03. Abutment Anchorage | LF | 120.000 | 120.000 |
| 0426 | SPV.0165 | Special 01. Wall Concrete Panel Mechanically Stabilized Earth R-9-17 | SF | 1,285.000 | 1,285.000 |
| 0428 | SPV.0165 | Special 02. Wall Concrete Panel Mechanically Stabilized Earth R-9-18 | SF | 1,320.000 | 1,320.000 |

## CLEARING & GRUBBING

| CATEGORY | STATION | | STATION | LOCATION | 201.0105 CLEARING STA | 201.0205 GRUBBING STA | REMARKS |
|---|---|---|---|---|---|---|---|
| 0010 | 112+15 | - | 115+68 | 50TH AVE RT & LT | 4 | 4 | - |
| 0010 | 127+00 | - | 128+50 | STH 29 - OFF RAMP LT | 2 | 2 | - |
| 0010 | 147+00 | - | 148+00 | STH 29 - ON RAMP RT | 1 | 1 | - |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | 2 | 2 | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 9 | 9 | |

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## REMOVAL SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 203.0100 REMOVING SMALL PIPE CULVERTS EACH | 204.0100 REMOVING CONCRETE PAVEMENT SY | 204.0150 REMOVING CURB & GUTTER LF | 204.0157 REMOVING CONCRETE BARRIER LF | 204.0165 REMOVING GUARDRAIL LF | 204.0170 REMOVING FENCE LF | 204.0190 REMOVING SURFACE DRAINS EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 108+05 | - | 108+05 | DRIVEWAY | 1 | - | - | - | - | - | - |
| 0010 | 109+50 | - | 109+50 | DRIVEWAY | 1 | - | - | - | - | - | - |
| 0010 | 114+09 | - | 114+09 | 50TH AVE RT & LT | 1 | - | - | - | - | - | - |
| 0010 | 123+23 | - | 126+09 | 50TH AVE LT | - | - | - | - | - | 292 | - |
| 0010 | 124+94 | - | 125+55 | 50TH AVE RT | - | - | - | - | - | 92 | - |
| 0010 | 116+00 | - | 116+25 | STH 29 OFF RAMP INTERSECTION | - | - | 56 | - | - | - | - |
| 0010 | 116+90 | - | 117+90 | LT WEST APPROACH | - | - | - | - | 100 | - | - |
| 0010 | 117+20 | - | 118+20 | RT WEST APPROACH | - | - | - | - | 100 | - | - |
| 0010 | 117+90 | - | 118+31 | WEST APPROACH | - | 100 | - | - | - | - | - |
| 0010 | 120+68 | - | 121+13 | EAST APPROACH | - | 110 | - | - | - | - | - |
| 0010 | 120+75 | - | 120+85 | LT EAST APPROACH | - | - | - | 20 | - | - | 1 |
| 0010 | 120+88 | - | 120+88 | LT EAST APPROACH | 1 | - | - | - | - | - | - |
| 0010 | 121+00 | - | 121+10 | RT EAST APPROACH | - | - | - | 20 | - | - | 1 |
| 0010 | 121+18 | - | 121+18 | RT EAST APPROACH | 1 | - | - | - | - | - | - |
| 0010 | 120+80 | - | 121+55 | LT EAST APPROACH | - | - | - | - | 75 | - | - |
| 0010 | 121+10 | - | 122+10 | RT EAST APPROACH | - | - | - | - | 100 | - | - |
| 0010 | 519+48 | - | 521+56 | EASTBOUND STH 29 | - | 160 | - | 205 | 125 | - | - |
| 0010 | 521+91 | - | 524+13 | WESTBOUND STH 29 | - | - | - | 178 | 125 | - | - |
| 0010 | - | - | - | MEDIAN STH 29 | - | - | - | - | 375 | - | - |
| | | | | TOTAL | 5 | 370 | 56 | 423 | 1,000 | 384 | 2 |

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## EARTHWORK SUMMARY

| DIVISION | FROM/TO STATION | LOCATION | 205.0100 COMMON EXCAVATION (1) CUT (2) | SALVAGED/UNUSABLE PAVEMENT MATERIAL (4) | AVAILABLE MATERIAL (5) | UNEXPANDED FILL | EXPANDED FILL (13) FACTOR 1.25 | MASS ORDINATE +/- (14) | WASTE | 208.0100 BORROW | COMMENT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIVISION 1 | | | | | | | | | | | |
| 50TH MAINLINE | 106+50.19/127+00.00 | 50TH AVE | 983 | 855 | 128 | 28,832 | 36,040 | -35,912 | 0 | 35,912 | |
| NW RAMP | 125+00.00/128+75.00 | NW RAMP | 372 | 157 | 215 | 2,499 | 3,124 | -2,909 | 0 | 2,909 | |
| NE RAMP | 147+00.00/150+80.00 | NE RAMP | 243 | 161 | 82 | 3,666 | 4,583 | -4,501 | 0 | 4,501 | |
| DIVISION 1 SUBTOTAL | | | 1,598 | 1,173 | 425 | 34,997 | 43,746 | -43,321 | 0 | 43,321 | |
| DIVISION 2 | | | | | | | | | | | |
| | 127+00'EB' - 129+40'EB' | 50TH AVE | 78 | 210 | -132 | 763 | 954 | -1,086 | 0 | 1,086 | SEE 8996-01-07 PLAN |
| | 10+60'R' - 11+75'R' | 171ST ST | 105 | 71 | 34 | 432 | 540 | -506 | 0 | 506 | SEE 8996-01-07 PLAN |
| | 10+57'D1' - 12+70'D1' | FRONTAGE RD | 340 | 0 | 340 | 1,244 | 1,555 | -1,215 | 0 | 1,215 | SEE 8996-01-07 PLAN |
| DIVISION 2 SUBTOTAL | | | 523 | 281 | 242 | 2,439 | 3,049 | -2,807 | 0 | 2,807 | |
| GRAND TOTAL | | | 2,121 | 1,454 | 667 | 37,436 | 46,795 | -46,128 | 0 | 46,128 | |
| TOTAL COMMON EXC | | | 2,121 | | | | | | | | |

NOTES:

(1) COMMON EXCAVATION IS THE CUT. ITEM NUMBER 205.0100

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

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

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

(13) EXPANDED FILL FACTOR = UNEXPANDEDFILL

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

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

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

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

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

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

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## BASE AGGREGATE SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON | 350.0130 SUBBASE 9-INCH SY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - | 118+00 | 50TH AVE - WEST OF STRUCTURE | 120 | 2,915 | 4,400 | - |
| 0010 | 106+50 | - | 106+50 | DRIVEWAY | 10 | - | - | - |
| 0010 | 121+00 | - | 127+00 | 50TH AVE - EAST OF STRUCTURE | 80 | 1,685 | 2,515 | - |
| 0010 | 124+90 | - | 129+00 | STH 29 - OFF RAMP | 110 | 950 | 1,185 | - |
| 0010 | 147+00 | - | 151+00 | STH 29 - ON RAMP | 100 | 845 | 1,040 | - |
| 0010 | 519+48 | - | 521+56 | STH 29 EB SHOULDER | 40 | 170 | 255 | - |
| 0010 | 521+91 | - | 524+13 | STH 29 WB SHOULDER | 60 | 215 | 320 | - |
| 0010 | - | - | - | STH 29 SHOULDERS | 20 | - | - | RESTORATION |
| 0010 | - | - | - | UNDISTRIBUTED | - | - | 490 | FRENCH DRAINS |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | 148 | 1,825 | - | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 688 | 8,605 | 10,205 | |

## FINISHING ROADWAY

| CATEGORY | PROJECT ID | 213.0100 FINISHING ROADWAY (PROJECT) (01.1050-01-79) EACH |
|---|---|---|
| 0010 | 1050-01-79 | 1 |
| | TOTAL | 1 |

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## EXCAVATION COMMON

| CATEGORY | LOCATION | 205.0100 EXCAVATION COMMON CY | REMARKS |
|---|---|---|---|
| 0010 | 50TH AVE | 120 | FRENCH DRAINS |
| | TOTAL | 120* | |

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

## CONCRETE SUMMARY

| CATEGORY | STATION | LOCATION | 415.0410 CONCRETE PAVEMENT APPROACH SLAB SY | 415.0080 CONCRETE PAVEMENT 8-INCH SY | 602.0815 CONCRETE DRIVEWAY 7-INCH SY | 602.3010 CONCRETE SURFACE DRAINS CY | 602.0415 CONCRETE SIDEWALK 6-INCH SF |
|---|---|---|---|---|---|---|---|
| 0010 | 108+05 | DRIVEWAY | - | - | 60 | - | - |
| 0010 | 118+00 | WEST APPROACH | 90 | 44 | - | - | - |
| 0010 | 121+00 | EAST APPROACH | 90 | 26 | - | - | 60 |
| 0010 | 121+12, LT | 50TH AVE | - | - | - | 1 | - |
| 0010 | 521+54, RT | STH 29 EB SHOULDER | - | - | - | 1 | - |
| 0010 | 521+92, LT | STH 29 WB SHOULDER | - | - | - | 1 | - |
| 0010 | 524+11, LT | STH 29 WB SHOULDER | - | - | - | 1 | - |
| | | TOTAL | 180 | 70 | 60 | 4 | 60 |

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## ASPHALT PAVEMENT SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | LOWER LAYER DEPTH IN | UPPER LAYER DEPTH IN | 455.0605 TACK COAT GAL | 460.6244 HMA PAVEMENT 4 MT 58-34 S TON | 460.7423 HMA PAVEMENT 3 HT 58-28 H TON | 460.7444 HMA PAVEMENT 4 HT 58-34 H TON | 465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - | 118+00 | 50TH AVE - WEST OF STRUCTURE | 2.75 | 2.25 | 528 | 1,230 | - | - | 26 | - |
| 0010 | 121+10 | - | 127+00 | 50TH AVE - EAST OF STRUCTURE | 2.75 | 2.25 | 302 | 710 | - | - | - | - |
| 0010 | 124+90 | - | 129+00 | STH 29 - OFF RAMP | 2.75 | 2.25 | 142 | 330 | - | - | - | - |
| 0010 | 147+00 | - | 151+00 | STH 29 - ON RAMP | 2.75 | 2.25 | 125 | 290 | - | - | - | - |
| 0010 | 519+48 | - | 521+56 | STH 29 EB SHOULDER | - | 4 | - | 30 | - | - | - | - |
| 0010 | 521+91 | - | 524+13 | STH 29 WB SHOULDER | - | 4 | - | 50 | - | - | - | - |
| 0010 | UNDISTRIBUTED | | | STH 29 | - | - | - | 25 | 0 | | | SAFETY EDGE |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | - | - | 144 | - | 377 | 302 | 14 | SEE 8996-01-07 PLAN |
| | | | | TOTAL | | | 1,241 | 2,665 | 377 | 302 | 40 | |

## RUMBLE STRIP SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 465.0520 ASPHALTIC RUMBLE STRIPS, SHOULDER LF | 602.3220 CONCRETE RUMBLE STRIPS, SHOULDER LF |
|---|---|---|---|---|---|---|
| 0010 | 519+48 | - | 521+56 | STH 29 EB SHOULDER | - | 156 |
| 0010 | 521+91 | - | 524+13 | STH 29 WB SHOULDER | 178 | - |
| | | | | TOTAL | 178 | 156 |

## CULVERT SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 520.1036 APRON ENDWALLS FOR CULVERT PIPE 36-INCH EACH | 520.4136 CULVERT PIPE CLASS IV 36-INCH LF | 520.8000 CONCRETE COLLARS FOR PIPE EACH | 520.8700 CLEANING CULVERT PIPES EACH | 521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH | 521.3112 CULVERT PIPE CORRUGATED STEEL 12-INCH LF | 522.0418 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF | 522.0430 CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF | 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH 18-INCH EACH | 522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH 30-INCH EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - 106+50 | | DRIVEWAY | - | - | - | - | 2 | 20 | - | - | - | - | WALL THICKNESS = 0.064" |
| 0010 | 108+05 | - 108+05 | | DRIVEWAY | - | - | - | - | 2 | 38 | - | - | - | - | WALL THICKNESS = 0.064" |
| 0010 | 109+50 | - 109+50 | | DRIVEWAY | - | - | - | - | 2 | 42 | - | - | - | - | WALL THICKNESS = 0.064" |
| 0010 | 114+09 | - 114+09 | | 50TH AVE | 2 | 156 | - | - | - | - | - | - | - | - | TIE ALL JOINTS |
| 0010 | 126+72 | - 126+72 | | STH 29 - OFF RAMP | - | - | 1 | 1 | - | - | - | 6 | - | 1 | - |
| 0010 | 127+00 | - 129+50 | | 50TH AVE (8996-01-07) | - | - | - | - | - | - | 36 | - | 2 | - | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 2 | 156 | 1 | 1 | 6 | 100 | 36 | 6 | 2 | 1* | |

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | MISCELLANEOUS QUANTITIES | SHEET: 54 | E |
|---|---|---|---|---|---|

## CURB AND GUTTER SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF | 601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF | 601.059 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF | 601.0415 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J LF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | 116+00 | - | 128+69 | ISLAND | - | - | - | 56 | - |
| 0010 | 120+70 | - | 121+18 | LT EAST APPROACH | - | 32 | 16 | - | - |
| 0010 | 121+43 | - | 121+97 | RT EAST APPROACH | - | 54 | - | - | - |
| 0010 | 519+48 | - | 521+48 | STH 29 EB SHOULDER | 200 | - | - | - | - |
| 0010 | 521+98 | - | 524+05 | STH 29 WB SHOULDER | 207 | - | - | - | - |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | - | - | - | 451 | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 407 | 86 | 16 | 507 | |

## RIPRAP SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 606.0200 RIPRAP MEDIUM CY | 645.0120 GEOTEXTILE TYPE HR SY | REMARKS |
|---|---|---|---|---|---|---|---|
| 0010 | 114+09, RT | - | 114+09, RT | 50TH AVE | 3 | 6 | - |
| 0010 | 121+12, LT | - | 121+12, LT | 50TH AVE | 7 | 13 | - |
| 0010 | 521+54, RT | - | 521+54, RT | STH 29 EB SHOULDER | 3 | 7 | - |
| 0010 | 521+92, LT | - | 521+92, LT | STH 29 WB SHOULDER | 4 | 8 | - |
| 0010 | 524+11, LT | - | 524+11, LT | STH 29 WB SHOULDER | 4 | 8 | - |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | 12 | 23 | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 33 | 65 | |

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## STORM SEWER STRUCTURES

| | | | | 520.1012 | 522.1030 | 611.0633 | 611.0642 | 611.0654 | 611.3220 | 611.3230 | 611.3902 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | APRON ENDWALLS FOR CULVERT PIPE 12-INCH | APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH | INLET COVERS TYPE HM-GJ-S | INLET COVERS TYPE MS | INLET COVERS TYPE V | INLETS 2X2-FT | INLETS 2X3-FT | INLETS MEDIAN 2 GRATE | RIM ELEVATION | INVERT ELEVATION | DEPTH | |
| CATEGORY | STATION | OFFSET | LOCATION | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | FT | FT | FT | REMARKS |
| 0010 | 524+09 | 49.0' LT | STH 29 WB SHOULDER | 1 | - | - | - | - | - | - | - | - | 920.040 | - | - |
| 0010 | 121+87 | 17.2' RT | 50TH AVE | - | - | - | - | 1 | 1 | - | - | 944.272 | 940.349 | 3.92 | - |
| 0010 | - | - | 50TH AVE (8996-01-07) | - | 1 | - | - | - | - | - | - | - | 916.420 | - | SEE 8996-01-07 PLAN |
| 0010 | - | - | 50TH AVE (8996-01-07) | - | - | - | 2 | - | - | - | 1 | 921.100 | 917.140 | 3.96 | SEE 8996-01-07 PLAN |
| 0010 | - | - | 50TH AVE (8996-01-07) | - | - | 1 | - | - | - | 1 | - | 920.790 | 918.340 | 1.45 | SEE 8996-01-07 PLAN |
| | | | TOTAL | 1 | 1* | 1 | 2 | 1 | 1 | 1 | 1 | | | | |

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

## STORM SEWER PIPE

| | | | | | 608.3012 | 608.0430 | |
|---|---|---|---|---|---|---|---|
| | | | | | STORM SEWER PIPE CLASS III-A 12-INCH | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH | |
| CATEGORY | STATION | | STATION | LOCATION | LF | LF | REMARKS |
| 0010 | 121+50, RT | - | 121+50, RT | 50TH AVE | 76 | - | - |
| 0010 | - | - | - | 50TH AVE (8996-01-07) | - | 238 | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 76 | 238 | |

## WATER SUMMARY

| | | 624.0100 |
|---|---|---|
| | | WATER |
| CATEGORY | LOCATION | MGAL |
| 0010 | UNDISTRIBUTED | 150 |
| | TOTAL | 150 |

3

## BARRIER SYSTEM GRADING SHAPING FINISHING

| CATEGORY | LOCATION | 614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH | 625.0100 TOPSOIL* SY | 628.2002 EROSION MAT CLASS I TYPE B* SY | 629.0210 FERTILIZER TYPE B* CWT | 630.0130 SEEDING MIXTURE NO. 30* LB | 630.0200 SEEDING TEMPORARY* LB | 630.0500 SEED WATER* MGAL |
|---|---|---|---|---|---|---|---|---|
| 0010 | STH 29 MEDIAN | 1 | 1,340 | 1,340 | 1 | 24 | 36 | 30 |
| | TOTAL | 1 | 1,340 | 1,340 | 1 | 24 | 36 | 30 |

*ITEMS SHOWN FOR REFERENCE ONLY. ITEMS INCIDENTAL TO THE ITEM BARRIER SYSTEM GRADING SHAPING FINISHING.

3

## GUARDRAIL SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 614.0230 STEEL THRIE BEAM LF | 614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH | 614.2300 MGS GUARDRAIL 3 LF | 614.2500 MGS THRIE BEAM TRANSITION LF | 614.2610 MGS GUARDRAIL TERMINAL EAT EACH |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | 116+75 | - | 117+99 | 50TH AVE - NW BRIDGE APPROACH | - | - | - | 39.5 | 1 |
| 0010 | 115+84 | - | 118+23 | 50TH AVE - SW BRIDGE APPROACH | - | - | 25 | 39.5 | 1 |
| 0010 | 120+67 | - | 121+72 | 50TH AVE - NE BRIDGE APPROACH | - | - | 12.5 | 39.5 | 1 |
| 0010 | 121+41 | - | 123+73 | 50TH AVE - SE BRIDGE APPROACH | - | - | 25 | 39.5 | 1 |
| 0010 | - | - | - | STH 29 MEDIAN | 200 | 2 | - | - | - |
| | | | | TOTAL | 200 | 2 | 63 | 158 | 4 |

## FENCE SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 616.0100 FENCE WOVEN WIRE (HEIGHT) (01. 4-FT) LF |
|---|---|---|---|---|---|
| 0010 | 123+23, 102' LT | - | 126+03, 70' LT | 50TH AVE | 282 |
| 0010 | 124+94, 90.1' RT | - | 125+68, 82.8' RT | 50TH AVE | 74 |
| | | | | TOTAL | 356 |

## EROSION CONTROL SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH | 628.7005 INLET PROTECTION TYPE A EACH | 628.7504 TEMPORARY DITCH CHECKS LF | 628.7555 CULVERT PIPE CHECKS EACH | 628.7570 ROCK BAGS EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - | 118+00 | 50TH AVE - WEST OF STRUCTURE | 3,650 | 3,650 | - | - | - | 30 | - | - |
| 0010 | 121+00 | - | 127+00 | 50TH AVE - EAST OF STRUCTURE | 1,250 | 1,250 | - | - | - | 45 | - | - |
| 0010 | 124+90 | - | 129+00 | STH 29 - OFF RAMP | 810 | 810 | - | - | 1 | - | - | - |
| 0010 | 147+00 | - | 151+00 | STH 29 - ON RAMP | 630 | 630 | - | - | - | - | - | - |
| 0010 | 519+48 | - | 521+56 | STH 29 EB SHOULDER | - | - | - | - | - | 15 | - | - |
| 0010 | - | - | - | STH 29 MEDIAN | | | | | 2 | | | |
| 0010 | 521+91 | - | 524+13 | STH 29 WB SHOULDER | - | - | - | - | - | 30 | - | - |
| 0010 | 114+09, LT | - | 114+09, LT | 50TH AVE | - | - | - | - | - | - | 7 | 6 |
| 0010 | 114+09, RT | - | 114+09, RT | 50TH AVE | - | - | - | - | - | - | - | - |
| 0010 | - | - | - | PROJECT | - | - | 8 | 4 | - | - | - | - |
| 0010 | - | - | - | UNDISTRIBUTED | 1,660 | 1,660 | - | - | - | 15 | 3 | 12 |
| | | | | TOTAL | 8,000 | 8,000 | 8 | 4 | 3 | 135 | 10 | 18 |

## FINISHING ITEMS SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 625.0100 TOPSOIL SY | 627.0200 MULCHING SY | 625.0500 SALVAGED TOPSOIL SY | 628.2004 EROSION MAT CLASS I TYPE B SY | 629.0205 FERTILIZER TYPE A CWT | 629.0210 FERTILIZER TYPE B CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0130 SEEDING MIXTURE NO. 30 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - | 118+00 | 50TH AVE - WEST OF STRUCTURE | 12,040 | - | - | 12,040 | - | 8 | 542 | - | 325 | 270 | - |
| 0010 | 121+00 | - | 127+00 | 50TH AVE - EAST OF STRUCTURE | 6,060 | - | - | 6,060 | - | 4 | 275 | - | 164 | 136 | - |
| 0010 | 124+90 | - | 129+00 | STH 29 - OFF RAMP | 2,680 | - | - | 2,680 | - | 2 | - | 121 | 72 | 60 | - |
| 0010 | 147+00 | - | 151+00 | STH 29 - ON RAMP | 4,560 | - | - | 4,560 | - | 3 | - | 205 | 123 | 102 | - |
| 0010 | 519+48 | - | 521+56 | STH 29 EB SHOULDER | 300 | - | - | 300 | - | 0 | - | 14 | 8 | 7 | - |
| 0010 | - | - | - | STH 29 MEDIAN | 1,340 | - | - | 1,340 | - | 1 | - | 60 | 36 | 30 | - |
| 0010 | 521+91 | - | 524+13 | STH 29 WB SHOULDER | 350 | - | - | 350 | - | 0 | - | 16 | 9 | 8 | - |
| 0010 | - | - | - | UNDISTRIBUTED | 1,370 | 6,000 | 9,000 | 3,000 | - | 1 | 64 | - | 37 | 31 | BORROW SITE RESTORATION |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | - | - | 3,654 | - | 3 | - | 109 | - | 109 | 83 | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 28,700 | 6,000 | 12,654 | 30,330 | 3 | 19 | 990 | 416 | 884 | 727 | |

3

## TRAFFIC CONTROL

| CATEGORY | LOCATION | 603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF | 603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF | DRUMS DEVICES | 643.0300 TRAFFIC CONTROL DRUMS DAY | BARRICADES TYPE III DEVICES | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | WARNING LIGHTS TYPE A DEVICES | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | WARNING LIGHTS TYPE C DEVICES | 643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY | ARROW BOARDS DEVICES | 643.0800 TRAFFIC CONTROL ARROW BOARDS DAY | SIGNS DEVICES | 643.0900 TRAFFIC CONTROL SIGNS DAY | 643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH | 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH | 643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF | 643.1050 TRAFFIC CONTROL SIGNS PCMS DAY | 643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF | 643.5000 TRAFFIC CONTROL EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | DETOUR - DETAIL A | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 720 | - | - | - | - | - | - |
| 0010 | DETOUR - DETAIL B | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 720 | - | - | - | - | - | - |
| 0010 | DETOUR - DETAIL C | - | - | - | - | 7 | 1,260 | 6 | 1,080 | - | - | - | - | 18 | 3,240 | - | 1 | - | - | - | - |
| 0010 | DETOUR - DETAIL D | - | - | - | - | 9 | 1,620 | 6 | 1,080 | - | - | - | - | 7 | 1,260 | - | - | - | - | - | - |
| 0010 | DETOUR - DETAIL E | - | - | - | - | - | - | - | - | - | - | - | - | 20 | 3,600 | - | - | - | - | - | - |
| 0010 | DETOUR - DETAIL F | - | - | - | - | - | - | - | - | - | - | - | - | 12 | 2,160 | - | - | 45 | - | - | - |
| 0010 | 50TH AVENUE | - | - | - | - | 10 | 1,800 | 20 | 3,600 | - | - | - | - | 2 | 360 | - | - | - | - | - | - |
| 0010 | STH 29 EB MEDIAN | 600 | 600 | 25 | 2,250 | - | - | - | - | - | - | 1 | 90 | 10 | 900 | - | - | - | - | - | - |
| 0010 | STH 29 EB OUTSIDE | 725 | 725 | 50 | 1,500 | 1 | 30 | 2 | 60 | 17 | 510 | 2 | 60 | 10 | 300 | - | - | - | - | 840 | - |
| 0010 | STH 29 WB MEDIAN | 600 | 600 | 25 | 2,250 | - | - | - | - | - | - | 1 | 90 | 10 | 300 | - | - | - | - | - | - |
| 0010 | STH 29 WB OUTSIDE | 725 | 725 | 50 | 1,500 | 1 | 30 | 2 | 60 | 17 | 510 | 2 | 60 | 10 | 300 | - | - | - | - | 840 | - |
| 0010 | STH 29 EB RAMP | | | 27 | 4,860 | 4 | 720 | 4 | 720 | - | - | - | - | 10 | 1,800 | 1 | - | - | - | 240 | - |
| 0010 | STH 29 CLOSURE | - | - | 188 | 1,504 | 12 | 96 | 24 | 192 | 80 | 640 | 4 | 32 | 89 | 712 | - | - | - | 32 | - | - |
| 0010 | PROJECT | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 35 | - | 0.5 |
| | TOTAL | 2,650 | 2,650 | | 13,864 | | 5,556 | | 6,792 | | 1,660 | | 332 | | 16,372 | 1 | 1 | 45 | 67 | 1,920 | 0.5 |

3

## CRASH CUSHIONS TEMPORARY

| CATEGORY | LOCATION | 614.0905 CRASH CUSHIONS TEMPORARY EACH | BACK WIDTH LF | OBJECT MARKING PATTERN | CRASH LEVEL TEST | TRAFFIC DIRECTION | TRAFFIC LOCATION | CRASH CUSHION SHIELDS |
|---|---|---|---|---|---|---|---|---|
| 0010 | STH 29 EB MEDIAN | 1 | 4 | W5-58L | TL-3 | UNIDIRECTIONAL | RT | WORK SPACE |
| 0010 | STH 29 EB OUTSIDE | 1 | 4 | W5-58R | TL-3 | UNIDIRECTIONAL | LT | WORK SPACE |
| 0010 | STH 29 WB MEDIAN | 1 | 4 | W5-58L | TL-3 | UNIDIRECTIONAL | RT | WORK SPACE |
| 0010 | STH 29 WB OUTSIDE | 1 | 4 | W5-58R | TL-3 | UNIDIRECTIONAL | LT | WORK SPACE |
| | TOTAL | 4 | | | | | | |

3

## SIGN SUMMARY

| CATEGORY | SIGN NO. | STATION | OFFSET | SIGN WORDING AND PICTORIALS | 634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH | 634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH | 634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH | 634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH | 638.2102 MOVING SIGNS TYPE II EACH | 638.3 REMOVING SMALL SIGN SUPPORTS EACH |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 01-01 | 113+85 | RT | JCT/29 | - | - | 1 | - | 1 | 1 |
| 0010 | 01-02 | 115+78 | LT | DO NOT ENTER | - | - | 1 | - | 1 | 1 |
| 0010 | 01-03 | 115+46 | RT | NO LEFT TURN | - | - | 1 | - | 1 | 1 |
| 0010 | 01-04 | 115+78 | LT | STOP | - | - | 4 | - | 1 | 1 |
| 0010 | 01-05 | 128+55 NW RAMP | LT | SPLIT ARROW | 1 | - | - | - | 1 | 1 |
| 0010 | 01-06 | 116+04 | LT | DO NOT ENTER | - | 1 | - | - | 1 | 1 |
| 0010 | 01-06A | 116+50 | LT | DO NOT ENTER | - | - | 1 | - | 1 | 1 |
| 0010 | 01-07 | 116+71 | LT | NO RIGHT TURN | 1 | - | - | - | 1 | 1 |
| 0010 | 01-08 | 117+86 | LT | CLEARANCE STRIPER DOWN RIGHT | - | 1 | - | - | - | 1 |
| 0010 | 01-09 | 116+17 | LT | STOP | - | 1 | - | - | 1 | 1 |
| 0010 | 01-10 | 117+00 | RT | WEST/29/LEFT TURN AHEAD ARROW | - | - | 1 | - | 1 | 1 |
| 0010 | 01-11 | 117+90 | RT | ARROW CHIPPEWA FALLS | - | 1 | 1 | 1 | 1 | 1 |
| 0010 | 01-12 | 118+06 | RT | CLEARANCE STRIPER DOWN LEFT | - | 1 | - | - | 1 | 1 |
| 0010 | 01-13 | 121+03 | LT | CLEARANCE STRIPER DOWN RIGHT | - | 1 | - | - | 1 | 1 |
| 0010 | 01-14 | 523+75 STH 29 EB | RT | MERGING TRAFFIC SYMBOL (LEFT) | - | - | - | 2 | 1 | 1 |
| 0010 | 01-15 | 112+25 | RT | SPEED LIMIT 45 | - | - | 1 | - | 1 | 1 |
| 0010 | 01-16 | 113+00 | LT | SPEED LIMIT 45 | - | - | 1 | - | 1 | 1 |
| 0010 | 02-01 | 121+35 | RT | CLEARANCE STRIPER DOWN LEFT | - | 1 | - | - | 1 | 1 |
| 0010 | 02-02 | 121+85 | RT | WEST/29/LEFT TURN ARROW | - | - | - | 1 | 1 | 1 |
| 0010 | 02-03 | 123+05 | LT | WEST/29/RIGHT TURN ARROW | - | - | - | 1 | 1 | 1 |
| 0010 | 02-04 | 123+74 | RT | WELCOME TO THE TOWN OF LAFAYETTE LAKE WISSOTA | - | - | - | - | - | - |
| 0010 | 02-05 | 123+44 | RT | JCT/COUNTY J | - | - | 1 | - | 1 | 1 |
| 0010 | 02-06 | 124+85 | LT | CHIPPEWA FALLS ARROW | - | - | 1 | 1 | 1 | 2 |
| 0010 | 02-07 | 125+44 | RT | STOP AHEAD | - | - | 1 | - | 1 | 1 |
| 0010 | 03-01 | 126+22 NW RAMP | RT | TO/J/LEFT TURN ARROW | - | - | - | 1 | 1 | 1 |
| 0010 | 03-01A | 126+22 NW RAMP | RT | WRONG WAY - MOVE BEHIND SIGN 03-01 | - | - | - | - | - | - |
| 0010 | 03-02 | 126+22 NW RAMP | LT | WRONG WAY | - | 1 | - | - | 1 | 1 |
| 0010 | 04-01 | 148+30 | LT | PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED | - | - | 1 | - | 1 | 1 |
| | | | | TOTAL | 2 | 8 | 16 | 7 | 25 | 27 |

3

## PAVEMENT MARKING

| CATEGORY | STATION | | STATION | LOCATION | 646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF | 646.1020 MARKING LINE EPOXY 4-INCH (WHITE) LF | 646.2040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (YELLOW) LF | 646.2040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE) LF | 646.3020 MARKING LINE EPOXY 8-INCH LF | 646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH LF | 646.6120 MARKING STOP LINE EPOXY 18-INCH LF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - | 118+30 | 50TH AVE - WEST OF STRUCTURE | 1590 | 2235 | - | - | - | - | - | - |
| 0010 | 118+30 | - | 120+75 | 50TH AVE - STRUCTURE | 465 | 465 | - | - | - | - | - | - |
| 0010 | 128+50 | - | 128+50 | STH 29 - OFF RAMP | - | - | - | - | - | - | 40 | - |
| 0010 | 120+75 | - | 127+00 | 50TH AVE - EAST OF STRUCTURE | 1,260 | 1,120 | - | - | 61 | - | - | - |
| 0010 | 124+90 | - | 128+50 | STH 29 - OFF RAMP | - | - | 515 | 705 | 200 | 46 | - | - |
| 0010 | 147+00 | - | 151+00 | STH 29 - ON RAMP | - | - | 700 | 825 | 52 | - | - | - |
| 0010 | 519+48 | - | 521+56 | STH 29 EB SHOULDER | - | - | - | 210 | - | - | - | - |
| 0010 | 521+91 | - | 524+13 | STH 29 WB SHOULDER | - | - | - | 220 | - | - | - | - |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | 740 | 350 | - | - | - | - | - | SEE 8996-01-07 PLAN |
| | | | | SUBTOTAL | 4055 | 4170 | 1215 | 1960 | 313 | 46 | 40 | |
| | | | | TOTAL | 8225 | | 3175 | | 313 | 46 | 40 | |

3

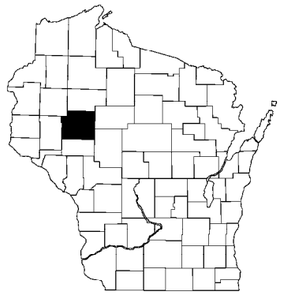
## CONSTRUCTION STAKING SUMMARY

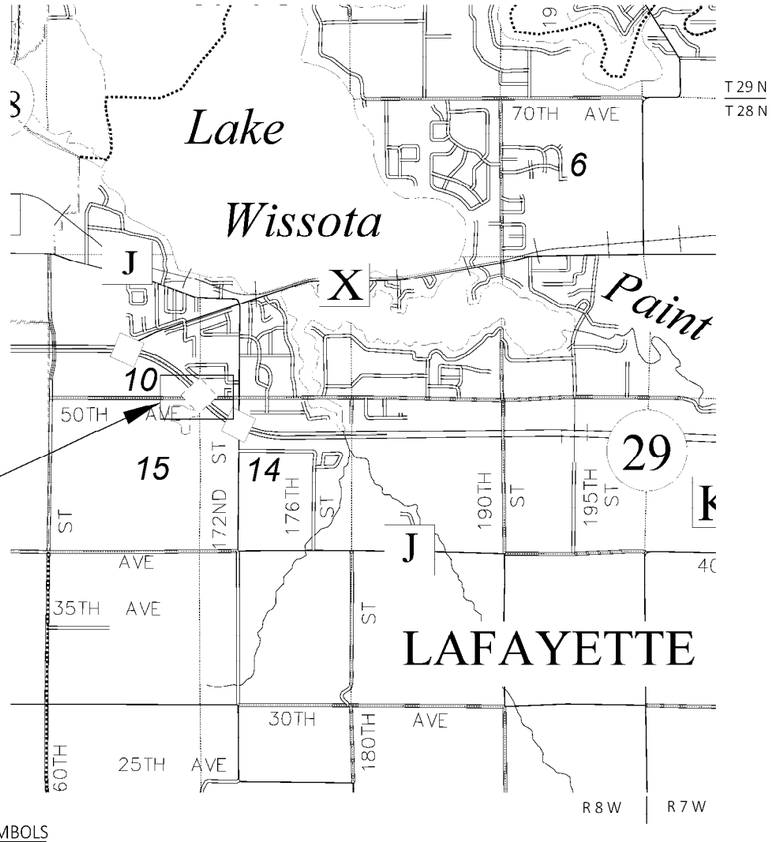
| CATEGORY | STATION | | STATION | LOCATION | 650.4000 CONSTRUCTION STAKING STORM SEWER EACH | 650.4500 CONSTRUCTION STAKING SUBGRADE LF | 650.5000 CONSTRUCTION STAKING BASE LF | 650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF | 650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH | 650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - | 118+40 | 50TH AVE - WEST OF STRUCTURE | - | 1,190 | 1,190 | - | 1 | - | 1,190 | - |
| 0010 | 120+70 | - | 127+00 | 50TH AVE - EAST OF STRUCTURE | 2 | 630 | 630 | 102 | - | - | 630 | - |
| 0010 | 124+86 | - | 128+50 | STH 29 - OFF RAMP | - | 364 | 364 | - | - | - | 364 | - |
| 0010 | 147+00 | - | 151+00 | STH 29 - ON RAMP | - | 400 | 400 | - | - | - | 400 | - |
| 0010 | 519+48 | - | 521+48 | STH 29 EB SHOULDER | - | 200 | 200 | 200 | - | - | 28 | - |
| 0010 | 521+98 | - | 524+05 | STH 29 WB SHOULDER | - | 207 | 207 | 207 | - | - | 36 | - |
| 0010 | - | - | - | STH 29 MEDIAN | - | - | - | - | - | - | 275 | - |
| 0010 | - | - | - | UNDISTRIBUTED | - | - | - | - | - | 1 | - | - |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | 1 | 679 | 679 | 451 | - | - | 679 | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 3 | 3,670 | 3,670 | 960 | 1 | 1 | 3,602 | |

## SAWING SUMMARY

| CATEGORY | STATION | | STATION | LOCATION | 690.0150 SAWING ASPHALT LF | 690.0250 SAWING CONCRETE LF | REMARKS |
|---|---|---|---|---|---|---|---|
| 0010 | 106+50 | - | 106+50 | 50TH AVE | 80 | - | - |
| 0010 | 108+05 | - | 108+05 | 50TH AVE | - | 21 | - |
| 0010 | 109+48 | - | 109+48 | 50TH AVE | 18 | - | - |
| 0010 | 127+00 | - | 127+00 | 50TH AVE | 34 | - | - |
| 0010 | 124+90 | - | 124+90 | STH 29 - OFF RAMP | 23 | - | - |
| 0010 | 147+00 | - | 147+00 | STH 29 - ON RAMP | 23 | - | - |
| 0010 | 519+48 | - | 521+56 | EASTBOUND STH 29 | - | 209 | - |
| 0010 | 127+00 | - | 129+50 | 50TH AVE (8996-01-07) | 146 | - | SEE 8996-01-07 PLAN |
| | | | | TOTAL | 324 | 230 | |

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION
# TRANSPORTATION PROJECT PLAT TITLE SHEET
# 1050-01-20
## CHIPPEWA FALLS - CADOTT
### 50TH AVENUE BRIDGE B-09-0033
## STH 29
## CHIPPEWA






LAYOUT
SCALE 0 0.5 MI.

## CONVENTIONAL SYMBOLS

| | | | |
|---|---|---|---|
| SECTION LINE | | SECTION CORNER SYMBOL | |
| QUARTER LINE | | SECTION CORNER MONUMENT | |
| SIXTEENTH LINE | | GEODETIC SURVEY MONUMENT | |
| NEW REFERENCE LINE | | SIXTEENTH CORNER MONUMENT | |
| NEW R/W LINE | | SIGN | |
| EXISTING R/W OR HE LINE | | ELECTRIC POLE | |
| PROPERTY LINE | P.L. | TELEPHONE POLE | |
| LOT, TIE & OTHER MINOR LINES | | PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.) | |
| SLOPE INTERCEPT | | ACCESS RESTRICTED BY ACQUISITION | |
| CORPORATE LIMITS | | NO ACCESS (BY STATUTORY AUTHORITY) | |
| UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) | W (TYPE) | ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL) | |
| NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER) | | NO ACCESS (NEW HIGHWAY) | |
| TEMPORARY LIMITED EASEMENT AREA | | PARCEL NUMBER 25 | UTILITY NUMBER 40 |
| EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT) | | PARALLEL OFFSETS | |
| TRANSMISSION STRUCTURES | | | |
| BUILDING | TO BE REMOVED | | |
| BRIDGE | CULVERT | | |

R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-1/4 INCH UNLESS NOTED) IP
OFF-PREMISE SIGN

| | COMPENSABLE | NON-COMPENSABLE |
|---|---|---|
| ELECTRIC POLE | | |
| TELEPHONE POLE | | |
| PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.) | | |

## CONVENTIONAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| ACCESS RIGHTS | AR | POINT OF COMPOUND CURVE | PCC |
| ACRES | AC | POINT OF INTERSECTION | PI |
| AHEAD | AH | PROPERTY LINE | PL |
| ALUMINUM | ALUM | RECORDED AS | (100') |
| AND OTHERS | ET AL | REEL / IMAGE | R/I |
| BACK | BK | REFERENCE LINE | R/L |
| BLOCK | BLK | REMAINING | REM |
| CENTERLINE | C/L | RESTRICTIVE DEVELOPMENT EASEMENT | RDE |
| CERTIFIED SURVEY MAP | CSM | RIGHT | RT |
| CONCRETE | CONC | RIGHT OF WAY | R/W |
| COUNTY | CO | SECTION | SEC |
| COUNTY TRUNK HIGHWAY | CTH | SEPTIC VENT | SEPV |
| DISTANCE | DIST | SQUARE FEET | SF |
| CORNER | COR | STATE TRUNK HIGHWAY | STH |
| DOCUMENT NUMBER | DOC | STATION | STA |
| EASEMENT | EASE | TELEPHONE PEDESTAL | TP |
| EXISTING | EX | TEMPORARY LIMITED EASEMENT | TLE |
| GAS VALVE | GV | TRANSPORTATION PROJECT PLAT | TPP |
| GRID NORTH | GN | UNITED STATES HIGHWAY | USH |
| HIGHWAY EASEMENT | HE | VOLUME | V |
| IDENTIFICATION | ID | | |
| LAND CONTRACT | LC | | |
| LEFT | LT | | |
| MONUMENT | MON | | |
| NATIONAL GEODETIC SURVEY | NGS | | |
| NUMBER | NO | | |
| OUTLOT | OL | | |
| PAGE | P | | |
| POINT OF TANGENCY | PT | | |
| PERMANENT LIMITED EASEMENT | PLE | | |
| POINT OF BEGINNING | POB | | |
| POINT OF CURVATURE | PC | | |

## CURVE DATA ABBREVIATIONS

| | |
|---|---|
| LONG CHORD | LCH |
| LONG CHORD BEARING | LCB |
| RADIUS | R |
| DEGREE OF CURVE | D |
| CENTRAL ANGLE | Δ/DELTA |
| LENGTH OF CURVE | L |
| TANGENT | T |
| DIRECTION AHEAD | DA |
| DIRECTION BACK | DB |

## CONVENTIONAL UTILITY SYMBOLS

| | |
|---|---|
| WATER | W |
| GAS | G |
| TELEPHONE | T |
| OVERHEAD TRANSMISSION LINES | OH |
| ELECTRIC | E |
| CABLE TELEVISION | TV |
| FIBER OPTIC | FO |
| SANITARY SEWER | SAN |
| STORM SEWER | SS |
| ELECTRIC TOWER | |

THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1050-01-20

## NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), CHIPPEWACOUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS, AND/OR EXISTING OCCUPATIONAL LINES.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

| | |
|---|---|
| PROJECT NUMBER | 1050-01-20 -4. 01 |
| SHEET | 2 OF 2 |
| AMENDMENT NO: | 63 |

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\RW\RP40100.DWG
LAYOUT NAME: TPP Title 34x22
PLOT DATE : 9/16/2015 3:04 PM PLOT BY : JAMES CAPPEART PLOT NAME : _____

# TRANSPORTATION PROJECT PLAT NO: 1050-01-20 - 4.01 AMENDMENT NO. 1

ADDS PARCEL 2 AND AMENDS PARCEL 1 OF TRANSPORTATION PROJECT PLAT 1050-01-20 - 4.01 RECORDED AS DOCUMENT 941292.

THAT PART OF LOT 1 OF CERTIFIED SURVEY MAP 5704 RECORDED AS DOCUMENT 939228, BEING IN THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4, SECTION 11, AND THAT PART OF LOT 1 OF CERTIFIED SURVEY MAP 2979 RECORDED AS DOCUMENT 709216, BEING IN THE NORTHWEST 1/4 OF THE NORTHWEST 1/4, SECTION 14, ALL IN TOWNSHIP 28 NORTH, RANGE 8 WEST, TOWN OF LAFAYETTE, CHIPPEWA COUNTY, WISCONSIN

RELOCATION ORDER STH 29 CHIPPEWA FALLS - CADOTT (50TH AVENUE BRIDGE B-09-0033), CHIPPEWA COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

**947787**
**RECORDED ON**
**01/23/2024 12:12 PM**
**MELANIE K. MCMANUS**
**REGISTER OF DEEDS**
**REC FEE:**
**TRANSFER FEE:**
**FEE EXEMPT:**
**CHIPPEWA COUNTY, WI**
**PAGES: 1**
****The above recording information verifies that this document has been electronically recorded and returned to the submitter.****

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER: 1050-01-20 - 4.01
AMENDMENT NO: 1
SHEET 1 OF 1

## NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), CHIPPEWA COUNTY, NAD83 (2011)IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:

EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 29 ESTABLISHED FROM PREVIOUS PROJECT F020-1(33), CSM 2979, CSM 2116, CSM 4315, PLAT OF SURVEY 1430C, PLAT OF SURVEY 1827C, PLAT OF SURVEY 2791C, AND PLAT OF SURVEY 5879B.

EXISTING HIGHWAY RIGHT-OF-WAY FOR 50TH AVENUE ESTABLISHED FROM PREVIOUS PROJECT F020-1(33), CSM 2979, CSM 3376, CSM 4315, PLAT OF SURVEY 1430C, PLAT OF SURVEY 1779B, PLAT OF SURVEY 2791C, AND PLAT OF SURVEY 5879B.

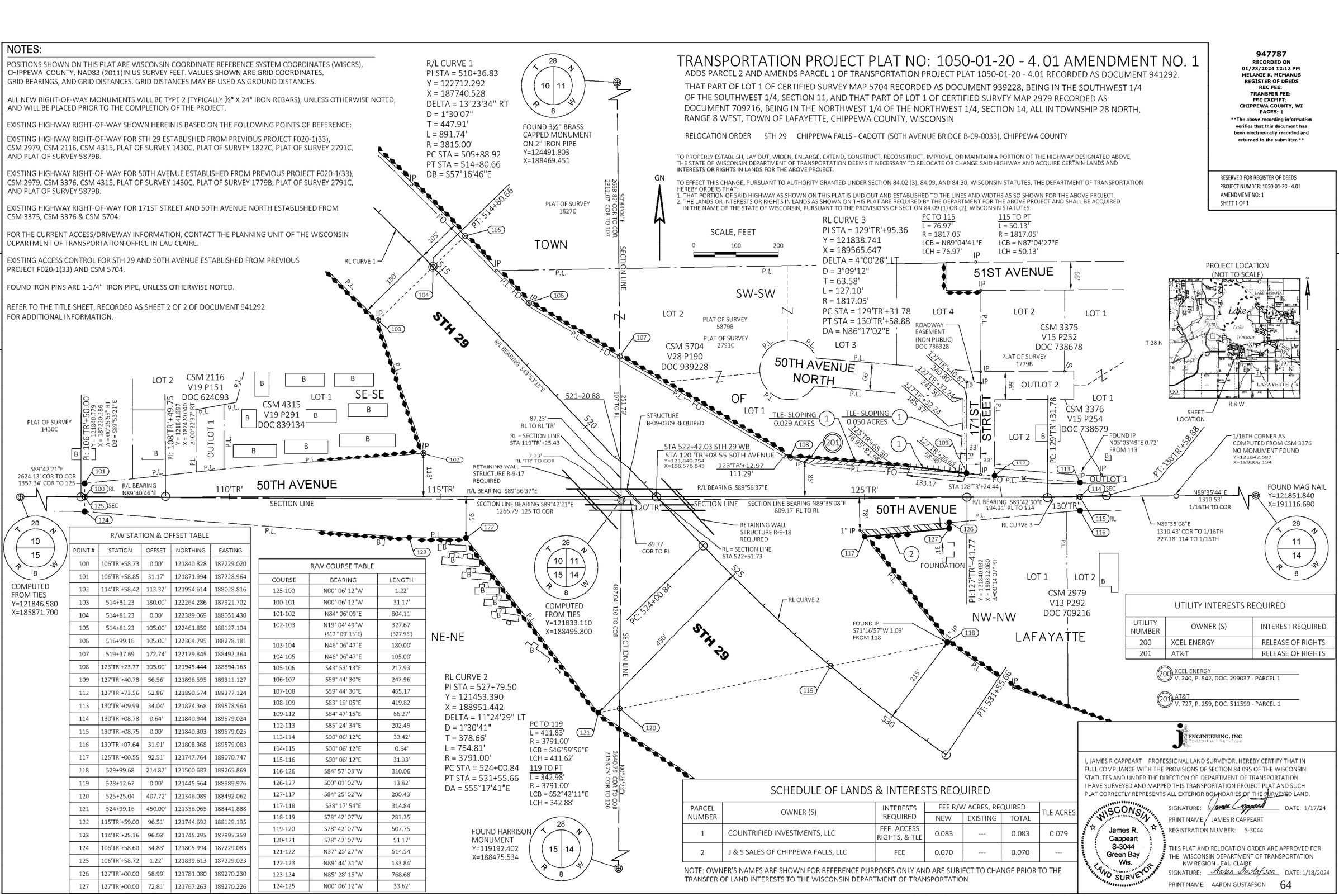
EXISTING HIGHWAY RIGHT-OF-WAY FOR 171ST STREET AND 50TH AVENUE NORTH ESTABLISHED FROM CSM 3375, CSM 3376 & CSM 5704.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE.

EXISTING ACCESS CONTROL FOR STH 29 AND 50TH AVENUE ESTABLISHED FROM PREVIOUS PROJECT F020-1(33) AND CSM 5704.

FOUND IRON PINS ARE 1-1/4" IRON PIPE, UNLESS OTHERWISE NOTED.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF DOCUMENT 941292 FOR ADDITIONAL INFORMATION.




## R/W STATION & OFFSET TABLE

| POINT # | STATION | OFFSET | NORTHING | EASTING |
|---|---|---|---|---|
| 100 | 106'TR'+58.73 | 0.00' | 121840.828 | 187229.020 |
| 101 | 106'TR'+58.85 | 31.17' | 121871.994 | 187228.964 |
| 102 | 114'TR'+58.42 | 113.32' | 121954.614 | 188028.816 |
| 103 | 514+81.23 | 180.00' | 122264.286 | 187921.702 |
| 104 | 514+81.23 | 0.00' | 122389.069 | 188051.430 |
| 105 | 514+81.23 | 105.00' | 122461.859 | 188127.104 |
| 106 | 516+99.16 | 105.00' | 122304.795 | 188278.181 |
| 107 | 519+37.69 | 172.74' | 122179.845 | 188492.364 |
| 108 | 123'TR'+23.77 | 105.00' | 121945.444 | 188894.163 |
| 109 | 127'TR'+40.78 | 56.56' | 121896.595 | 189311.127 |
| 112 | 127'TR'+73.56 | 52.86' | 121890.574 | 189377.124 |
| 113 | 130'TR'+09.99 | 34.04' | 121874.368 | 189578.964 |
| 114 | 130'TR'+08.78 | 0.64' | 121840.944 | 189579.024 |
| 115 | 130'TR'+08.75 | 0.00' | 121840.303 | 189579.025 |
| 116 | 130'TR'+07.64 | 31.91' | 121808.368 | 189579.083 |
| 117 | 125'TR'+00.55 | 92.51' | 121747.764 | 189070.747 |
| 118 | 529+99.68 | 214.87' | 121500.683 | 189265.869 |
| 119 | 528+12.67 | 0.00' | 121445.564 | 188989.976 |
| 120 | 525+25.04 | 407.72' | 121346.089 | 188492.062 |
| 121 | 524+99.16 | 450.00' | 121336.065 | 188441.888 |
| 122 | 115'TR'+59.00 | 96.51' | 121744.692 | 188129.195 |
| 123 | 114'TR'+25.16 | 96.03' | 121745.295 | 187995.359 |
| 124 | 106'TR'+58.60 | 34.83' | 121805.994 | 187229.083 |
| 125 | 106'TR'+58.72 | 1.22' | 121839.613 | 187229.023 |
| 126 | 127'TR'+00.00 | 58.99' | 121781.080 | 189270.230 |
| 127 | 127'TR'+00.00 | 72.81' | 121767.263 | 189270.226 |

## R/W COURSE TABLE

| COURSE | BEARING | LENGTH |
|---|---|---|
| 125-100 | N00° 06' 12"W | 1.22' |
| 100-101 | N00° 06' 12"W | 31.17' |
| 101-102 | N84° 06' 09"E | 804.11' |
| 102-103 | N19° 04' 49"W (S17° 09' 15"E) | 327.67' (327.95') |
| 103-104 | N46° 06' 47"E | 180.00' |
| 104-105 | N46° 06' 47"E | 105.00' |
| 105-106 | S43° 53' 13"E | 217.93' |
| 106-107 | S59° 44' 30"E | 247.96' |
| 107-108 | S59° 44' 30"E | 465.17' |
| 108-109 | S83° 19' 05"E | 419.82' |
| 109-112 | S84° 47' 15"E | 66.27' |
| 112-113 | S85° 24' 34"E | 202.49' |
| 113-114 | S00° 06' 12"E | 33.42' |
| 114-115 | S00° 06' 12"E | 0.64' |
| 115-116 | S00° 06' 12"E | 31.93' |
| 116-126 | S84° 57' 03"W | 310.06' |
| 126-127 | S00° 01' 02"W | 13.82' |
| 127-117 | S84° 25' 02"W | 200.43' |
| 117-118 | S38° 17' 54"E | 314.84' |
| 118-119 | S78° 42' 07"W | 281.35' |
| 119-120 | S78° 42' 07"W | 507.75' |
| 120-121 | S78° 42' 07"W | 51.17' |
| 121-122 | N37° 25' 27"W | 514.54' |
| 122-123 | N89° 44' 31"W | 133.84' |
| 123-124 | N85° 28' 15"W | 768.68' |
| 124-125 | N00° 06' 12"W | 33.62' |

## UTILITY INTERESTS REQUIRED

| UTILITY NUMBER | OWNER (S) | INTEREST REQUIRED |
|---|---|---|
| 200 | XCEL ENERGY | RELEASE OF RIGHTS |
| 201 | AT&T | RELEASE OF RIGHTS |

200 XCEL ENERGY
V. 240, P. 542, DOC. 299037 - PARCEL 1

201 AT&T
V. 727, P. 259, DOC. 511599 - PARCEL 1

## SCHEDULE OF LANDS & INTERESTS REQUIRED

| PARCEL NUMBER | OWNER (S) | INTERESTS REQUIRED | FEE R/W ACRES, REQUIRED | | | TLE ACRES |
|---|---|---|---|---|---|---|
| | | | NEW | EXISTING | TOTAL | |
| 1 | COUNTRIFIED INVESTMENTS, LLC | FEE, ACCESS RIGHTS, & TLE | 0.083 | --- | 0.083 | 0.079 |
| 2 | J & S SALES OF CHIPPEWA FALLS, LLC | FEE | 0.070 | --- | 0.070 | --- |

NOTE: OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION

JJR ENGINEERING, INC

I, JAMES R CAPPEART PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN James R. Cappeart S-3044 Green Bay Wis. LAND SURVEYOR

SIGNATURE: James Cappeart DATE: 1/17/24
PRINT NAME: JAMES R CAPPEART
REGISTRATION NUMBER: S-3044

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION
NW REGION - EAU CLAIRE
SIGNATURE: Aaron Gustafson DATE: 1/18/2024
PRINT NAME: AARON GUSTAFSON

64

# TRANSPORTATION PROJECT PLAT NO: 1050-01-20 - 4.01

THAT PART OF LOT 1 OF CERTIFIED SURVEY MAP 5704 RECORDED AS DOCUMENT 939228, BEING IN THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4, SECTION 11, TOWNSHIP 28 NORTH, RANGE 8 WEST, TOWN OF LAFAYETTE, CHIPPEWA COUNTY, WISCONSIN

RELOCATION ORDER STH 29 CHIPPEWA FALLS - CADOTT (50TH AVENUE BRIDGE B-09-0033), CHIPPEWA COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

**941292**
**RECORDED ON**
**05/16/2023 11:13 AM**
**MELANIE K. MCMANUS**
**REGISTER OF DEEDS**
**REC FEE:**
**TRANSFER FEE:**
**FEE EXEMPT:**
**CHIPPEWA COUNTY, WI**
**PAGES: 2**
****The above recording information verifies that this document has been electronically recorded and returned to the submitter.****

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER: 1050-01-20 - 4.01
AMENDMENT NO:
SHEET 1 OF 2

## NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), CHIPPEWA COUNTY, NAD83 (2011)IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:

EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 29 ESTABLISHED FROM PREVIOUS PROJECT F020-1(33), CSM 2979, CSM 2116, CSM 4315, PLAT OF SURVEY 1430C, PLAT OF SURVEY 1827C, PLAT OF SURVEY 2791C, AND PLAT OF SURVEY 5879B.

EXISTING HIGHWAY RIGHT-OF-WAY FOR 50TH AVENUE ESTABLISHED FROM PREVIOUS PROJECT F020-1(33), CSM 2979, CSM 3376, CSM 4315, PLAT OF SURVEY 1430C, PLAT OF SURVEY 1779B, PLAT OF SURVEY 2791C, AND PLAT OF SURVEY 5879B.

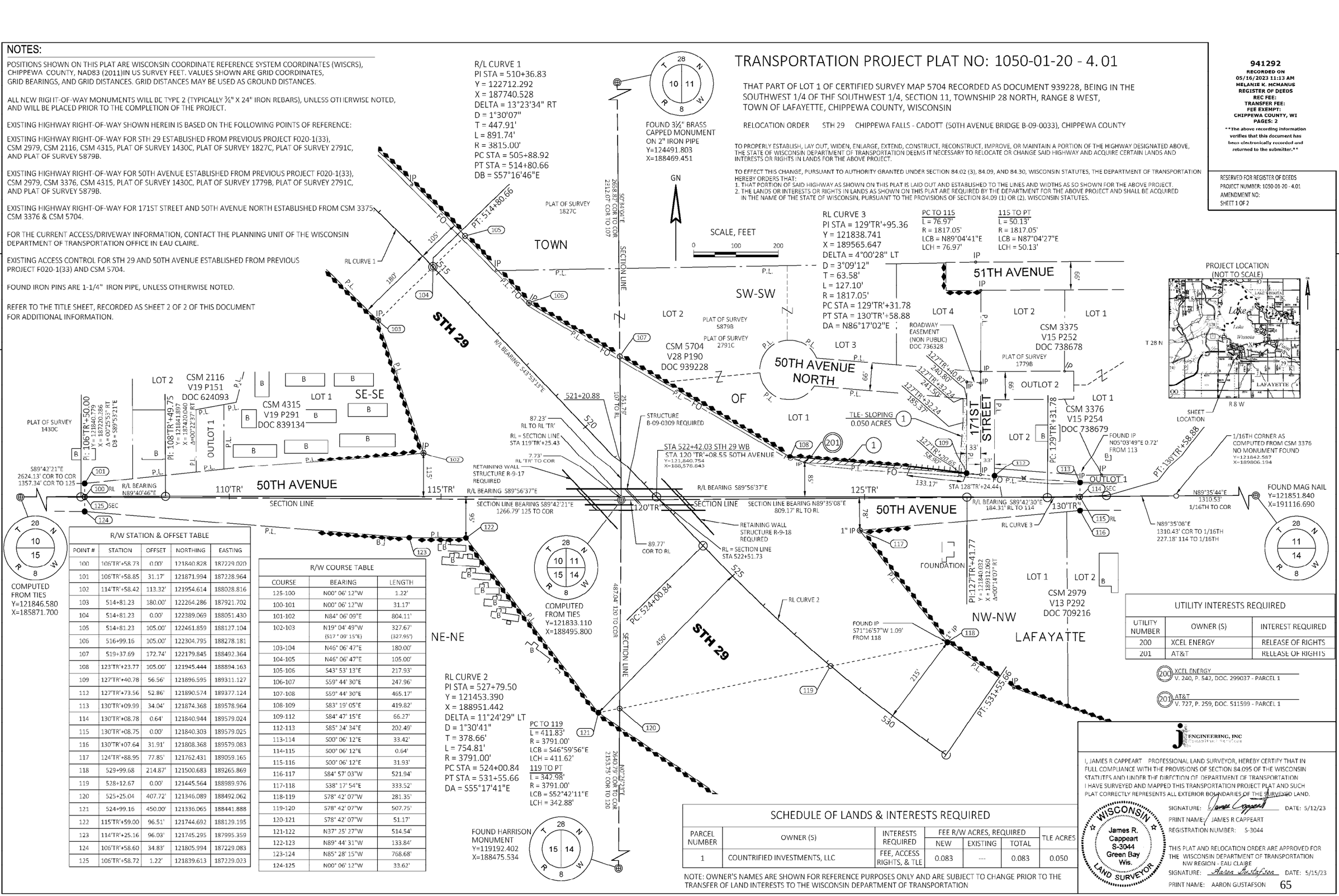
EXISTING HIGHWAY RIGHT-OF-WAY FOR 171ST STREET AND 50TH AVENUE NORTH ESTABLISHED FROM CSM 3375, CSM 3376 & CSM 5704.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE.

EXISTING ACCESS CONTROL FOR STH 29 AND 50TH AVENUE ESTABLISHED FROM PREVIOUS PROJECT F020-1(33) AND CSM 5704.

FOUND IRON PINS ARE 1-1/4" IRON PIPE, UNLESS OTHERWISE NOTED.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF THIS DOCUMENT FOR ADDITIONAL INFORMATION.




RL CURVE 3
PI STA = 129'TR'+95.36
Y = 121838.741
X = 189565.647
DELTA = 4°00'28" LT
D = 3°09'12"
T = 63.58'
L = 127.10'
R = 1817.05'
PC STA = 129'TR'+31.78
PT STA = 130'TR'+58.88
DA = N86°17'02"E

PC TO 115
L = 76.97'
R = 1817.05'
LCB = N89°04'41"E
LCH = 76.97'

115 TO PT
L = 50.13'
R = 1817.05'
LCB = N87°04'27"E
LCH = 50.13'

RL CURVE 2
PI STA = 527+79.50
Y = 121453.390
X = 188951.442
DELTA = 11°24'29" LT
D = 1°30'41"
T = 378.66'
L = 754.81'
R = 3791.00'
PC STA = 524+00.84
PT STA = 531+55.66
DA = S55°17'41"E

PC TO 119
L = 411.83'
R = 3791.00'
LCB = S46°59'56"E
LCH = 411.62'

119 TO PT
L = 342.98'
R = 3791.00'
LCB = S52°42'11"E
LCH = 342.88'

## R/W STATION & OFFSET TABLE

| POINT # | STATION | OFFSET | NORTHING | EASTING |
|---|---|---|---|---|
| 100 | 106'TR'+58.73 | 0.00' | 121840.828 | 187229.020 |
| 101 | 106'TR'+58.85 | 31.17' | 121871.994 | 187228.964 |
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| 114 | 130'TR'+08.78 | 0.64' | 121840.944 | 189579.024 |
| 115 | 130'TR'+08.75 | 0.00' | 121840.303 | 189579.025 |
| 116 | 130'TR'+07.64 | 31.91' | 121808.368 | 189579.083 |
| 117 | 124'TR'+88.95 | 77.85' | 121762.431 | 189059.165 |
| 118 | 529+99.68 | 214.87' | 121500.683 | 189265.869 |
| 119 | 528+12.67 | 0.00' | 121445.564 | 188989.976 |
| 120 | 525+25.04 | 407.72' | 121346.089 | 188492.062 |
| 121 | 524+99.16 | 450.00' | 121336.065 | 188441.888 |
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| 123 | 114'TR'+25.16 | 96.03' | 121745.295 | 187995.359 |
| 124 | 106'TR'+58.60 | 34.83' | 121805.994 | 187229.083 |
| 125 | 106'TR'+58.72 | 1.22' | 121839.613 | 187229.023 |

## R/W COURSE TABLE

| COURSE | BEARING | LENGTH |
|---|---|---|
| 125-100 | N00° 06' 12"W | 1.22' |
| 100-101 | N00° 06' 12"W | 31.17' |
| 101-102 | N84° 06' 09"E | 804.11' |
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| 109-112 | S84° 47' 15"E | 66.27' |
| 112-113 | S85° 24' 34"E | 202.49' |
| 113-114 | S00° 06' 12"E | 33.42' |
| 114-115 | S00° 06' 12"E | 0.64' |
| 115-116 | S00° 06' 12"E | 31.93' |
| 116-117 | S84° 57' 03"W | 521.94' |
| 117-118 | S38° 17' 54"E | 333.52' |
| 118-119 | S78° 42' 07"W | 281.35' |
| 119-120 | S78° 42' 07"W | 507.75' |
| 120-121 | S78° 42' 07"W | 51.17' |
| 121-122 | N37° 25' 27"W | 514.54' |
| 122-123 | N89° 44' 31"W | 133.84' |
| 123-124 | N85° 28' 15"W | 768.68' |
| 124-125 | N00° 06' 12"W | 33.62' |

## UTILITY INTERESTS REQUIRED

| UTILITY NUMBER | OWNER (S) | INTEREST REQUIRED |
|---|---|---|
| 200 | XCEL ENERGY | RELEASE OF RIGHTS |
| 201 | AT&T | RELEASE OF RIGHTS |

200 XCEL ENERGY
V. 240, P. 542, DOC. 299037 - PARCEL 1

201 AT&T
V. 727, P. 259, DOC. 511599 - PARCEL 1

## SCHEDULE OF LANDS & INTERESTS REQUIRED

| PARCEL NUMBER | OWNER (S) | INTERESTS REQUIRED | FEE R/W ACRES, REQUIRED | | | TLE ACRES |
|---|---|---|---|---|---|---|
| | | | NEW | EXISTING | TOTAL | |
| 1 | COUNTRIFIED INVESTMENTS, LLC | FEE, ACCESS RIGHTS, & TLE | 0.083 | --- | 0.083 | 0.050 |

NOTE: OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION

JJR ENGINEERING, INC

I, JAMES R CAPPEART PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN James R. Cappeart S-3044 Green Bay Wis. LAND SURVEYOR

SIGNATURE: James Cappeart DATE: 5/12/23
PRINT NAME: JAMES R CAPPEART
REGISTRATION NUMBER: S-3044

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NW REGION - EAU CLAIRE
SIGNATURE: Aaron Gustafson DATE: 5/15/23
PRINT NAME: AARON GUSTAFSON

65

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\RW\RP40101.DWG
APPRAISAL PLAT DATE : 5/12/2023
PLOT DATE : 5/12/2023 11:08 AM PLOT BY : JAMES CAPPEART PLOT NAME : PLOT SCALE :

1050-01-20 - 4.01

STA 108+05
RECONSTRUCT CONC PE
1 - REMOVING SMALL CULVERT PIPES
2 EACH - APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH
20 LF - CULVERT PIPE CORRUGATED STEEL 12-INCH

STA 109+50
RECONSTRUCT ASPH PE
1 - REMOVING SMALL CULVERT PIPES
2 EACH - APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH
42 LF - CULVERT PIPE CORRUGATED STEEL 12-INCH

STA 106+50
RECONSTRUCT CABC PE
2 EACH - APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH
20 LF - CULVERT PIPE CORRUGATED STEEL 12-INCH

XCEL ENERGY
ELECTRICITY

EXISTING R/W

SI (TYP)

XCEL ENERGY
GAS/PETROLEUM

CINC

CAUTION

N

PI: 106+50.00

PI: 108+49.75

GUY

105+00 106+00 107+00 N89°40'46"E 108+00 109+00 110+00 111+00 112+00

50TH AVE (STILLSON RD)

MATCHLINE STA 112+50

EXISTING R/W

XCEL ENERGY
ELECTRICITY

BEGIN PROJECT
STA 106+50.00
Y = 121840.779
X = 187220.291
MATCH EXISTING
SAWCUT REQ'D

LEGEND

X CLEARING AND GRUBBING

VCL = 550.00

K = 98.18

STA 106+50.00
EL 923.73

LP STA 107+60.44
LP EL 923.14

VPC STA 112+40.00
VPC EL 934.84

-0.87%

4.73%

FINISHED 50TH R/L PROFILE

EXISTING 50TH R/L PROFILE

VPC STA 106+75.00
VPC EL 923.51

VPI STA 109+50.00
VPI EL 921.12

VPT STA 112+25.00
VPT EL 934.13

EXISTING 50TH R/L ELEVATIONS

FINISHED 50TH R/L ELEVATIONS

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 923.73 | 923.73 | 923.11 | 923.33 | 922.67 | 923.15 | 922.39 | 923.22 | 922.34 | 923.55 | 922.32 | 924.13 | 922.49 | 924.97 | 922.88 | 926.06 | 923.52 | 927.41 | 924.46 | 929.01 | 925.79 | 930.87 | 927.39 | 932.98 | 929.36 | 935.31 |

105 106 107 108 109 110 111 112 112

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PLAN AND PROFILE: 50TH AVENUE | SHEET 66 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 50 - 1

PLOT DATE : 7/19/2024 3:57 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

MATCHLINE STA 112+50

MATCHLINE STA 120+00

5

5

SI (TYP)

EXISTING R/W

IN = 916.02

XCEL ENERGY
GAS/PETROLEUM

CAUTION

128+00

NW RAMP

STA 116+34.16 50TH AVE (STILLSON RD)=
STA 128+90.96 NW RAMP

XCEL ENERGY
GAS/PETROLEUM

CAUTION

CINC

B-09-033
EXISTING BRIDGE

B-09-309
PROPOSED BRIDGE

N

113+00 114+00 115+00 116+00 117+00 S89°56'37"E 118+00 119+00 120

50TH AVE (STILLSON RD)

STA 114+09
1 - REMOVING SMALL PIPE CULVERTS (36" X 129' CPCS)
1 - CPRC CLASS IV 36-INCH (156')
2 - AEWS FOR CPRC 36-INCH
3.5 CY RIPRAP MEDIUM (RT)
(SEE DETAIL FOR RIPRAP AND EROSION MAT
TREATMENT AT CULVERT ENDWALLS)

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| BM #1 | 118+21.57, 17.08'RT | 944.22 | END OF SW WING |
| CP #2 | 117+54.18, 19.39'RT | 943.09 | 0.75IN REBAR |

CP #2

SIGN

BM #1

SEE GUARDRAIL DETAILS FOR IMPROVEMENTS

R-9-17
RETAINING WALL

OUT = 915.00

GUY

SPECTRUM

TV

GUY

STH 29 'EB'

SI (TYP)

XCEL ENERGY
ELECTRICITY

HO

HO

EXISTING R/W

LEGEND

X CLEARING AND GRUBBING

VPI STA 115+20.00
VPI EL 948.09

VPT STA 118+00.00
VPT EL 946.69

FINISHED 50TH R/L PROFILE

-0.50%

EXISTING 50TH R/L PROFILE

HP STA 117+46.48
HP EL 946.82

VCL = 560.00

K = 107.04

EXISTING 50TH R/L ELEVATIONS

FINISHED 50TH R/L ELEVATIONS

980 975 970 965 960 955 950 945 940 935 930 925 920 915 910 905

929.36 935.31 931.48 937.51 933.47 939.48 935.35 941.22 937.31 942.72 938.97 943.99 940.51 945.02 941.63 945.82 942.55 946.39 943.17 946.72 943.48 946.82 943.62 946.69 943.58 946.44 943.33 946.19 943.09 945.94 942.89 945.69

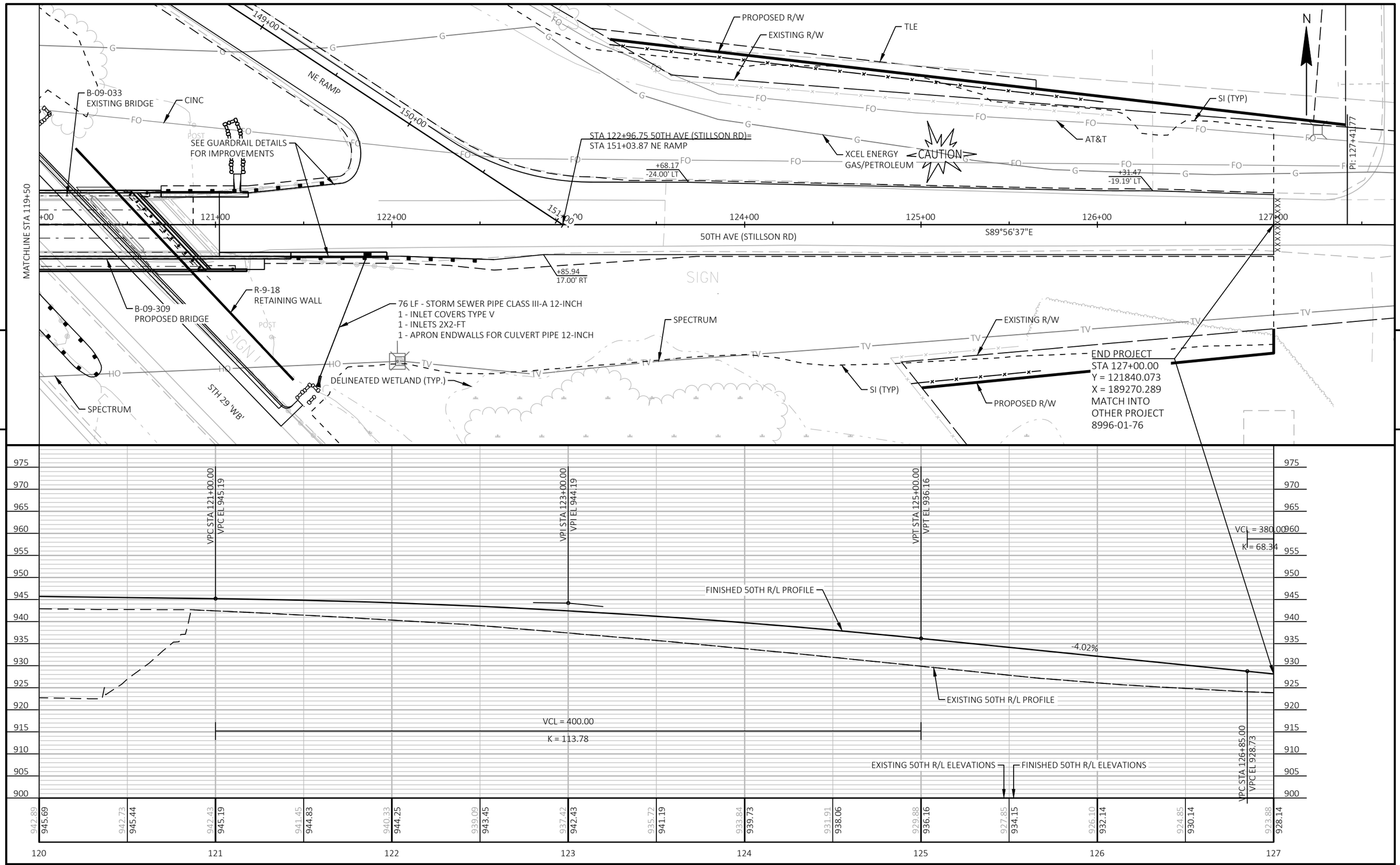
112 113 114 115 116 117 118 119 120

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PLAN AND PROFILE: 50TH AVENUE | SHEET 67 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 50 - 2

PLOT DATE : 7/19/2024 3:57 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PLAN AND PROFILE: 50TH AVENUE | SHEET 68 | E |
|---|---|---|---|---|---|

LEGEND

X CLEARING AND GRUBBING

STH 29 EB

SIGN

SI

X X X X X X

S89°56'37"E

STA 128+90.96 NW RAMP=
STA 116+34.16 50TH AVE (STILLSON RD)

123+00 124+00 125+00 126+00 127+00 128+00

NW RAMP

S24°40'06"E

117+00 116+00

PI STA = 123+41.77
Y = 122345.049
X = 187973.002
DELTA = 21°48'27" RT
D = 4°59'54"
T = 220.82'
L = 436.29'
R = 1146.28'
PC STA = 121+20.95
Y = 122497.117
X = 187812.890
PT STA = 125+57.24
Y = 122144.384
X = 188065.164
DB = S46°28'34"E
DA = S24°40'06"E

BEGIN CONSTRUCTION
STA 124+89.56
MATCH EXISTING
SAWCUT REQ'D

STA 126+72
1 EACH - CONCRETE COLLARS FOR PIPE
1 EACH - CLEANING CULVERT PIPES
1 EACH - APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH
6 LF - CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH

XCEL ENERGY
GAS/PETROLEUM
CAUTION

CINC

EXISTING R/W

50TH AVE (STILLSON RD)

5 5

970 965 960 955 950 945 940 935 930 925 920 915 910 905 900 895

VCL = 120.00
K = 60.64

VPC STA 126+65.00
VPC EL 936.38

VPI STA 127+60.00
VPI EL 942.62

VPT STA 128+55.00
VPT EL 945.25

STA 128+72.45
EL 945.73

STA 124+89.56
EL 926.84

4.59%

6.57%

2.76%

FINISHED NW RAMP
R/L PROFILE

EXISTING NW RAMP
R/L PROFILE

VPC STA 125+30.00
VPC EL 928.70

VPI STA 125+90.00
VPI EL 931.45

VPT STA 126+50.00
VPT EL 935.40

VCL = 190.00
K = 49.88

EXISTING NW RAMP R/L ELEVATIONS

FINISHED NW RAMP R/L ELEVATIONS

925.63 925.24 924.91 925.08 925.98 927.21 927.32 929.47 929.65 931.90 932.32 934.31 935.40 936.46 938.56 938.46 941.24 940.20 943.43 941.45 945.11

122 123 124 125 126 127 128 129 129

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PLAN AND PROFILE: NW RAMP | SHEET 69 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - NW Ramp

PLOT DATE : 7/19/2024 3:57 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:50 FT

PI STA = 144+02.21
Y = 122226.890
X = 188280.640
DELTA = 9°31'11" LT
D = 3°36'29"
T = 132.22'
L = 263.84'
R = 1587.95'
PC STA = 142+69.99
Y = 122316.903
X = 188183.785
PT STA = 145+33.83
Y = 122154.135
X = 188391.048
DB = S47°05'48"E
DA = S56°36'59"E

EXISTING R/W
AT&T
PT: 145+33.83
SI
XCEL ENERGY
GAS/PETROLEUM
CAUTION
STA 151+03.87 NE RAMP=
STA 122+96.75 50TH AVE (STILLSON RD)
+68.17
-24.00' LT
+85.94
17.00' RT
124+00
151+00
150+00
149+00
148+00
147+00
146+00
145+00
S56°36'59"E
NE RAMP
CINC
122+00
50TH AVE (STILLSON RD)
DELINEATED WETLAND
(TYP.)
121+00
SPECTRUM
SIGN
POST
BEGIN CONSTRUCTION
STA 147+00.00
MATCH EXISTING
SAWCUT REQ'D
STH 29 WB
N

LEGEND
X CLEARING AND GRUBBING

5

5

STA 147+00.00
EL 934.40
VPI STA 149+00.00
VPI EL 942.94
VPT STA 150+50.00
VPT EL 942.96
STA 150+60.19
EL 942.96
FINISHED NE RAMP
R/L PROFILE
EXISTING NE RAMP
R/L PROFILE
4.27%
0.02%
VCL = 300.00
K = 70.56
EXISTING NE RAMP R/L ELEVATIONS
FINISHED NE RAMP R/L ELEVATIONS

970 965 960 955 950 945 940 935 930 925 920 915 910 905 900 895

| 926.77 | 927.73 | 929.16 | 930.83 | 932.67 | 934.40 | 934.40 | 936.10 | 936.53 | 937.44 | 938.49 | 938.47 | 940.09 | 938.96 | 941.34 | 939.30 | 942.23 | 939.11 | 942.77 | 938.43 | 942.96 | 937.64 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 144 | 145 | | 146 | | 147 | | 148 | | 149 | | 150 | | 151 | | 151 | | | | | | |

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | PLAN AND PROFILE: NE RAMP | SHEET 70 | E |
|---|---|---|---|---|---|

# Standard Detail Drawing List

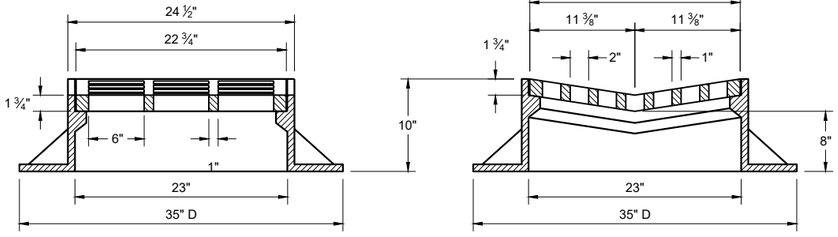
| | |
|---|---|
| 08A05-21B | INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM |
| 08A05-21C | INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S |
| 08C07-03 | INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT |
| 08C08-03 | INLETS MEDIAN 1 AND 2 GRATE |
| 08D01-23A | CONCRETE CURB & GUTTER |
| 08D01-23B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D03-09A | CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES |
| 08D03-09B | CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES |
| 08D04-07 | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES |
| 08D16-11 | CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES |
| 08D21-01 | DRIVEWAYS WITHOUT CURB & GUTTER |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E10-02 | INLET PROTECTION TYPE A, B, C AND D |
| 08E15-01 | CULVERT PIPE CHECK |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 09A01-14A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND  D AND TEE INTERSECTION BYPASS LANE |
| 09A01-14B | AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2" |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13A05-06A | SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY |
| 13A05-06B | SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY |
| 13B02-09A | CONCRETE PAVEMENT APPROACH SLAB |
| 13C18-08C | CONCRETE PAVEMENT JOINT TYPES |
| 14B07-16A | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-16B | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-16C | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-16D | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-16M | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B07-16N | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" |
| 14B26-05A | STEEL THRIE BEAM BULLNOSE TERMINAL |
| 14B26-05C | STEEL THRIE BEAM BULLNOSE TERMINAL |
| 14B26-05D | STEEL THRIE BEAM BULLNOSE TERMINAL |
| 14B26-05E | STEEL THRIE BEAM BULLNOSE TERMINAL |
| 14B26-05F | STEEL THRIE BEAM BULLNOSE TERMINAL |
| 14B26-05G | STEEL THRIE BEAM BULLNOSE TERMINAL |
| 14B26-05H | STEEL THRIE BEAM BULLNOSE TERMINAL |
| 14B29-01 | SAFETY EDGE |
| 14B42-07A | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07B | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07C | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07D | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B44-04A | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04B | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04C | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B45-05A | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05B | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05C | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05D | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05E | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 15A01-13A | MARKER POST FOR RIGHT-OF-WAY |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END |
| 15A03-02B | FLEXIBLE MARKER POST FOR CULVERT END |
| 15B01-08A | FENCE WOVEN WIRE |
| 15B01-08B | FENCE WOVEN WIRE |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C02-09C | DETOUR SIGNING FOR MAINLINE CLOSURES |
| 15C02-09E | OFF RAMP LANE CLOSURE |
| 15C03-05 | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES |
| 15C06-12 | SIGNING & MARKING FOR TWO LANE BRIDGES |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |
| 15C08-23B | TEMPORARY LONGITUDINAL PAVEMENT MARKING |
| 15C11-10B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS |
| 15C12-09A | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION |
| 15C18-08C | MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT |
| 15C19-08C | MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY |

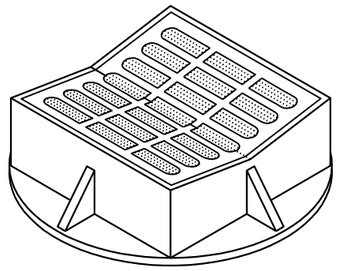
6

# Standard Detail Drawing List

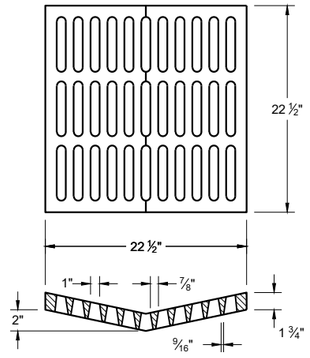
| | |
|---|---|
| 15C33-04 | STOP LINE AND CROSSWALK PAVEMENT MARKING |
| 15C35-06A | PAVEMENT MARKING (INTERSECTIONS) |
| 15D12-13A | TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE |
| 15D15-07C | TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE |
| 15D15-07E | TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE |
| 15D16-06 | TRAFFIC CONTROL, EXIT RAMP CLOSURE |
| 15D20-08A | TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY |
| 15D27-03 | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY,  SPEEDS GREATER THAN 40 MPH |
| 15D39-02 | TRAFFIC CONTROL, DROP-OFF SIGNING |
| 15D42-02 | TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE |
| 16A01-07 | LANDMARK REFERENCE MONUMENTS AND COVERS |


6



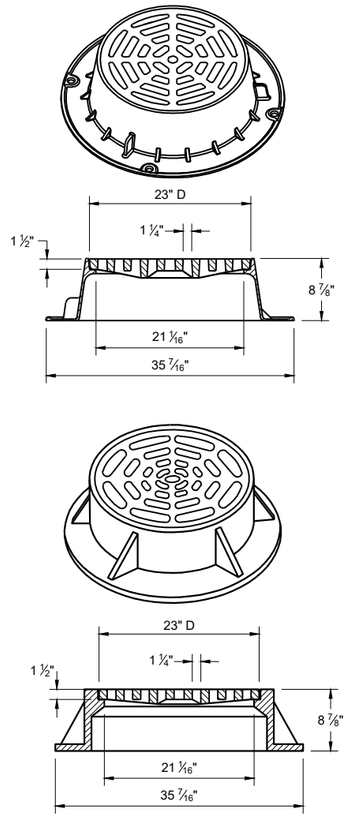
**TYPE "B"**




## 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"**

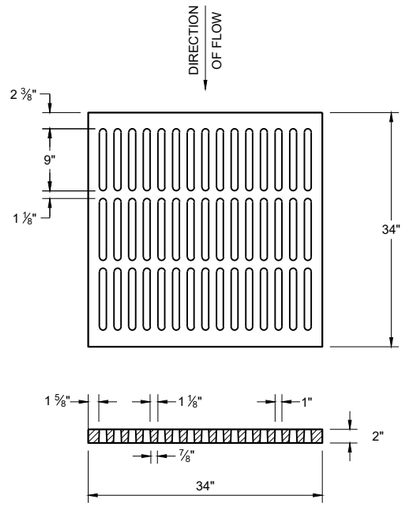
NOTE: EITHER CASTING IS ACCEPTABLE

## 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.

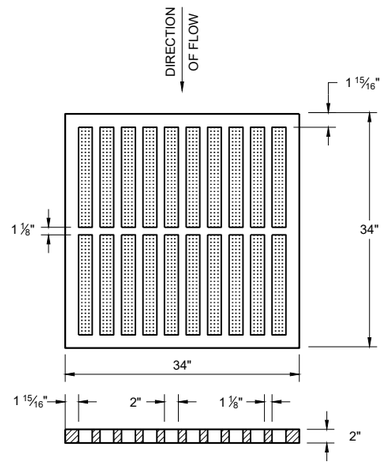
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.




**ALTERNATIVE TYPE "MS"**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

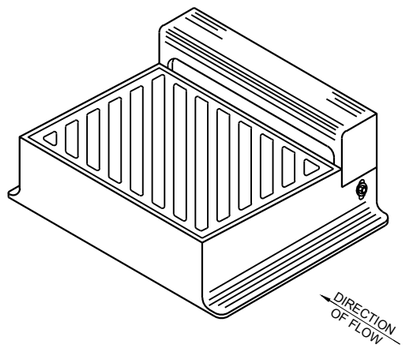
**NOTED AS TYPE MS-A ON THE DRAINAGE TABLE**



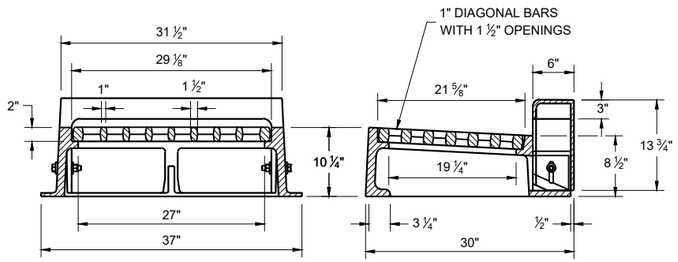

**TYPE "MS"**

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"

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

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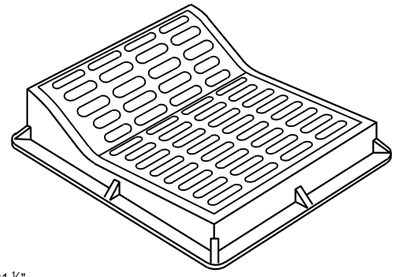
SDD 08A05-21b

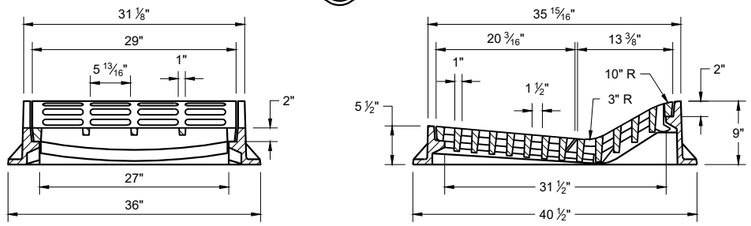
SDD 08A05-21b

## GENERAL NOTES

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

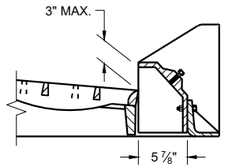
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.






### TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

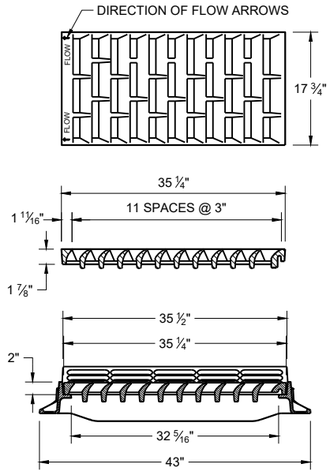



### ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
**NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE**

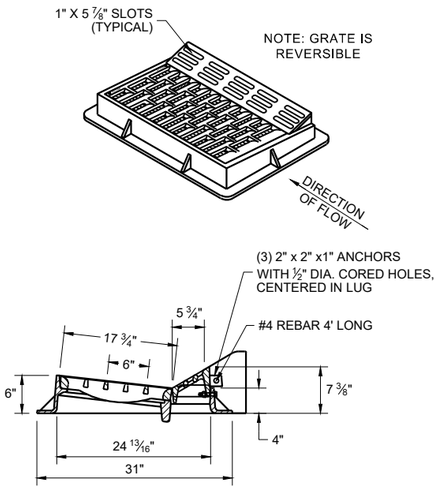
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

**NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.**



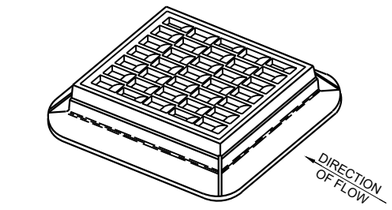

### TYPE "HM"

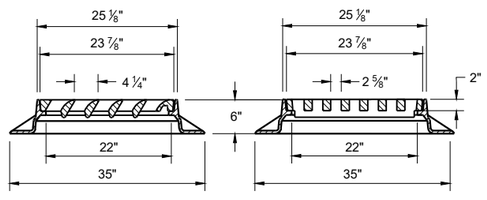
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



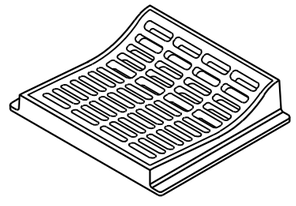

NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

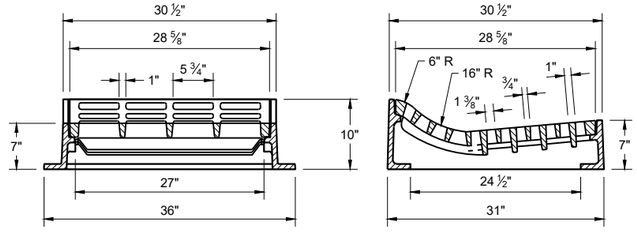
**NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.**




### TYPE "S"






### TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

**INLET COVERS**
**TYPES F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S**

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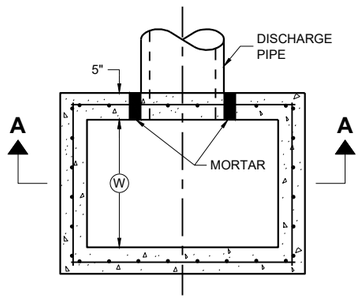
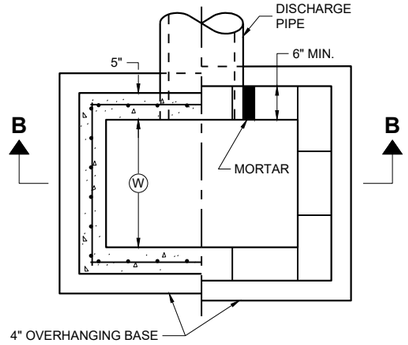
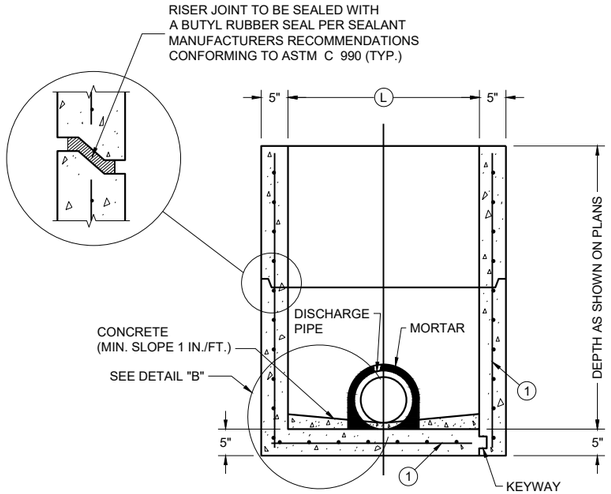



**PLAN VIEW**



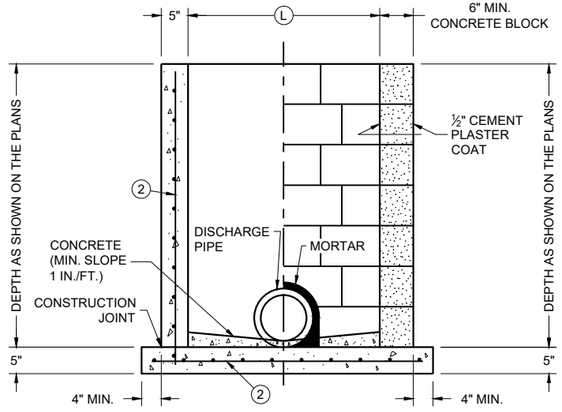

**PLAN VIEW**




**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE**

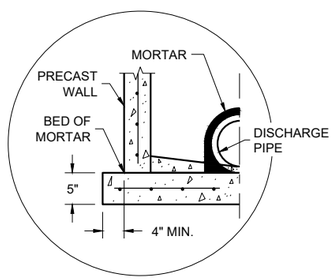
**SECTION A - A**




**CAST IN PLACE REINFORCED CONCRETE**

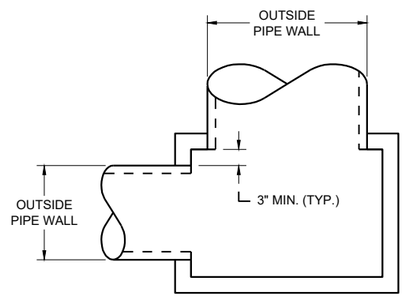
**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** (1)

**SECTION B - B**




**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

**DETAIL "B"**




**DETAIL "A"**

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

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

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

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

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

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

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

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" 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.

## CATCH BASIN COVER MATRIX

| INLET SIZE | WIDTH (W) (FT.) | LENGTH (L) (FT.) | INLET COVER TYPE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ALL A'S | ALL B'S | BW | F | ALL H'S | S | T | V | WM | V V-B |
| 2 X 2-FT | 2 | 2 | X | X | | | | X | | | | |
| 2 X 2.5-FT | 2 | 2.5 | | | X | | | X | X | X | X | |
| 2 X 3-FT | 2 | 3 | | | | | X | | | | | |
| 2.5 X 3-FT | 2.5 | 3 | | | | X | | | | | | |
| 2 X 3.5-FT | 2 | 3.5 | | | | | | | | | | X |

## PIPE MATRIX

| CATCH BASIN SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | WIDTH (IN) | LENGTH (IN) |
| 2 X 2-FT | 12 | 12 |
| 2 X 2.5-FT | 12 | 18 |
| 2 X 3-FT | 12 | 24 |
| 2.5 X 3-FT | 18 | 24 |
| 2 X 3.5-FT | 12 | 30 |

**INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT**

**INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT**

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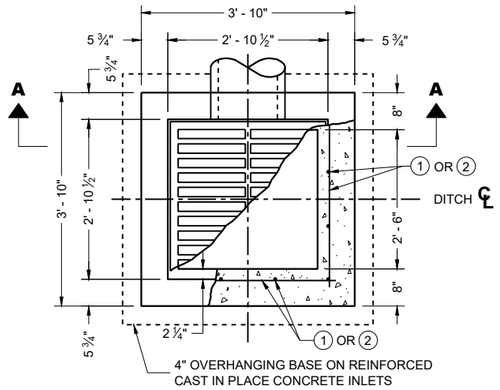
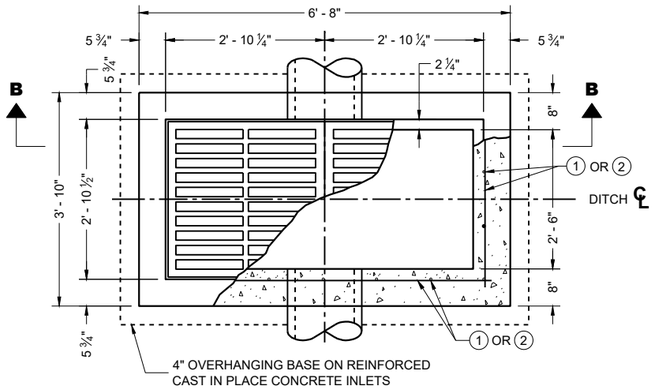
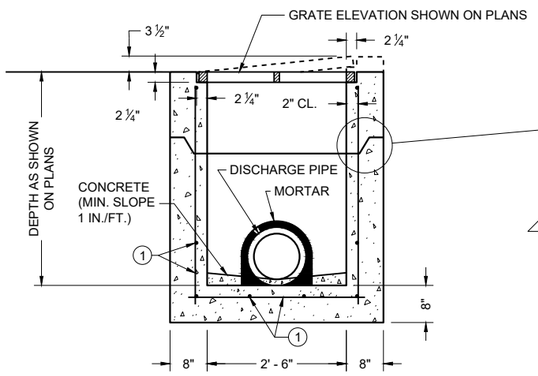
SDD 08C07-03



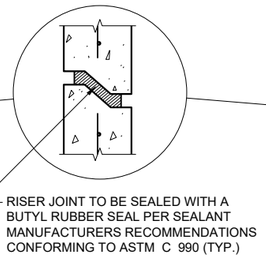

**PLAN VIEW**

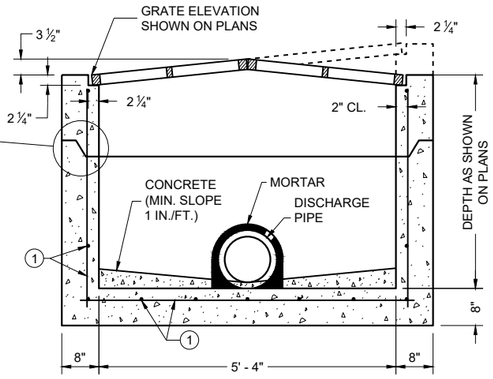



**PLAN VIEW**

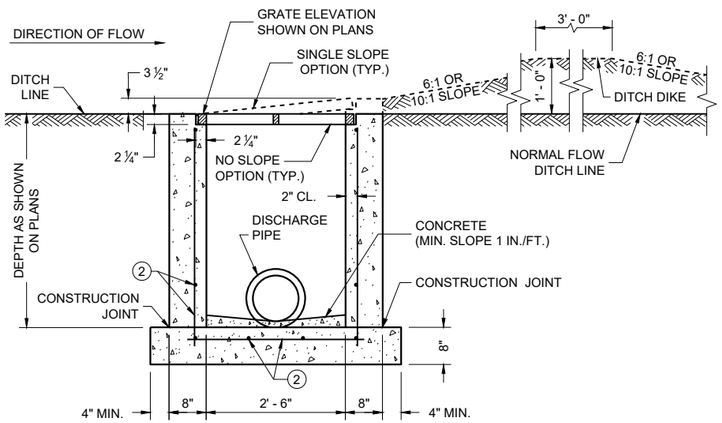



**PRECAST REINFORCED CONCRETE SECTION A - A**



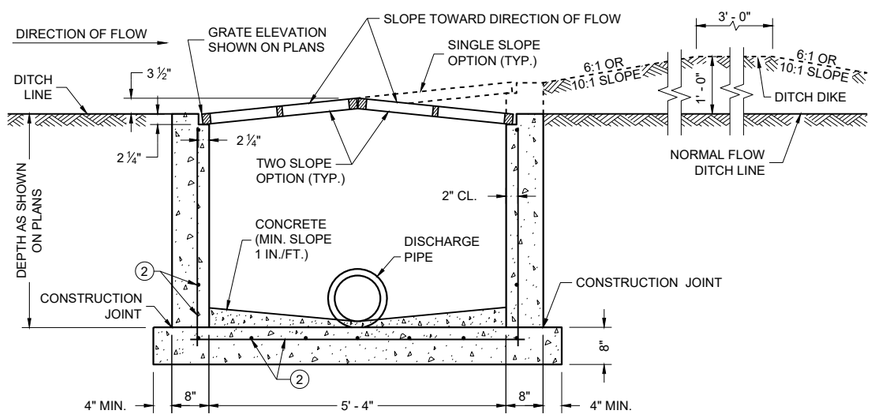




**PRECAST REINFORCED CONCRETE SECTION B - B**




**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

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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.

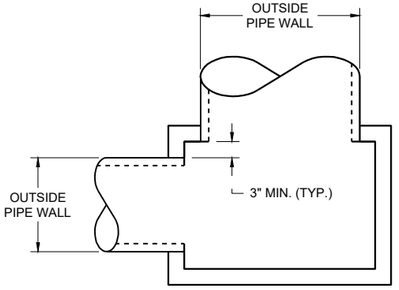
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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**

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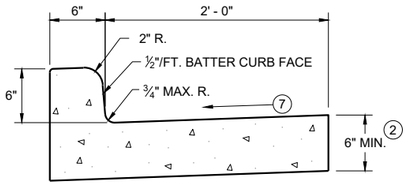
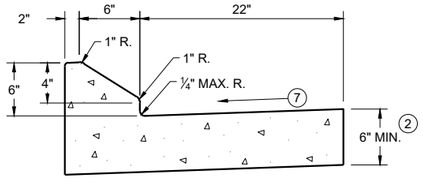
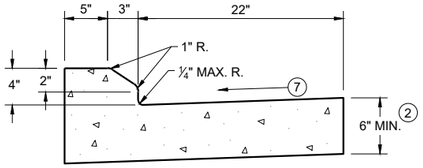
SDD 08C08-03



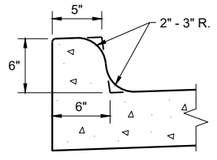

**TYPES A (1) & D**



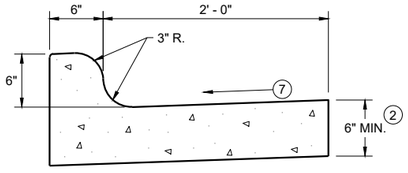

**6" SLOPED CURB TYPES G (1) & J**




**4" SLOPED CURB TYPES G (1) & J**

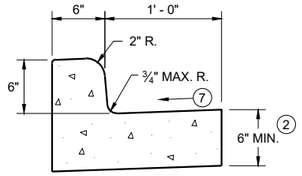



**TYPES K (1) & L**
(OPTIONAL CURB SHAPE)



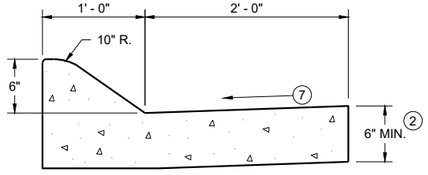

**TYPES K (1) & L**

**CONCRETE CURB AND GUTTER 30"**

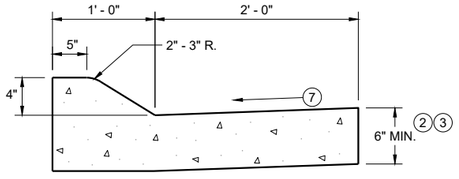



**TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 18"**

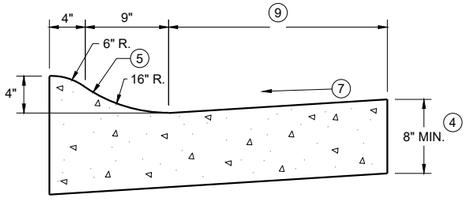



**6" SLOPED CURB TYPES A (1) & D**



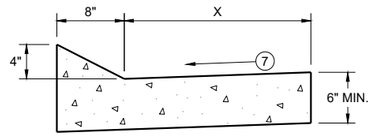

**4" SLOPED CURB TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 36"**




**4" SLOPED CURB TYPES R (1) & T**

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

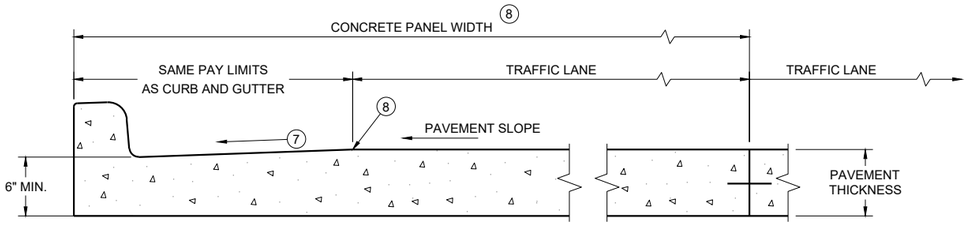



**TYPES TBT & TBTT (1)**

**CONCRETE CURB AND GUTTER**

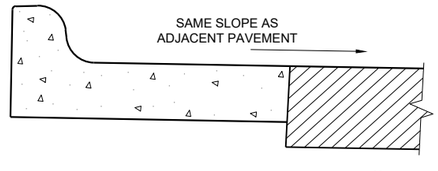
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

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




**PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER**

* BIKE LANE IS NOT SHOWN




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

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

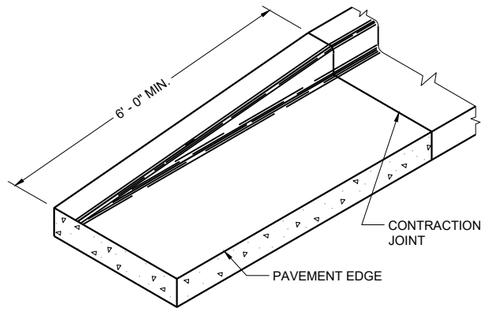
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

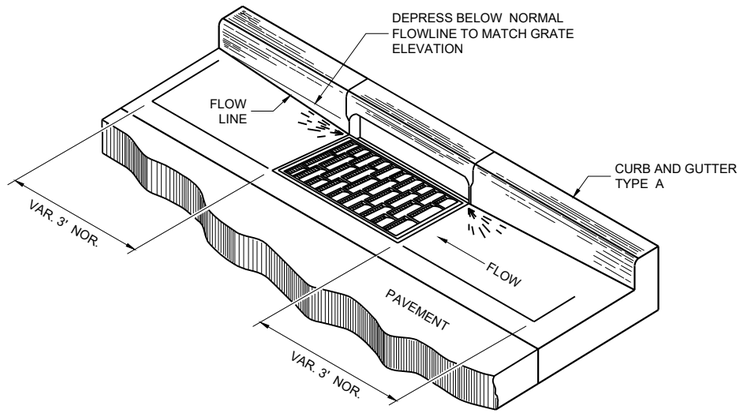
**CONCRETE CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a




## 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.

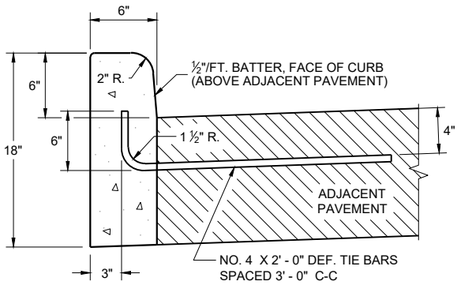
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

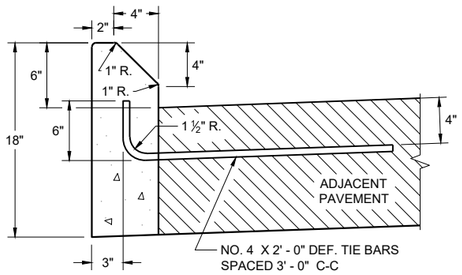
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.

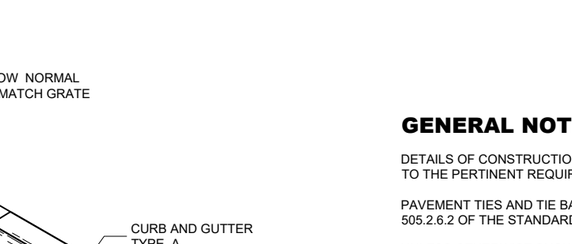



TYPES A (1) & D

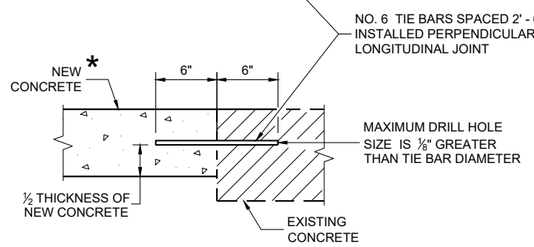



TYPES G (1) & J

## CONCRETE CURB

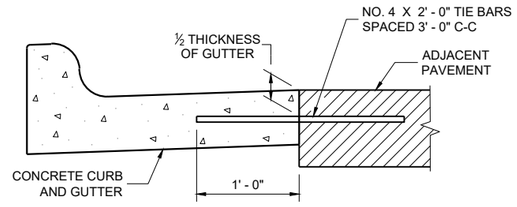



PLAN VIEW

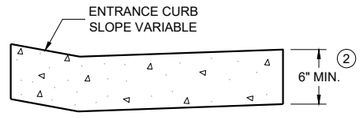



SECTION A - A

## TIE BARS DRILLED INTO EXISTING PAVEMENT

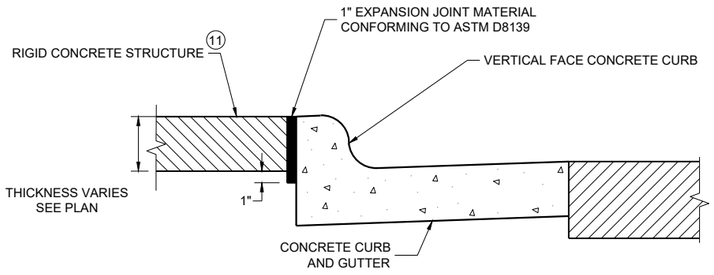



## TYPICAL TIE BAR LOCATION (1)




## DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)



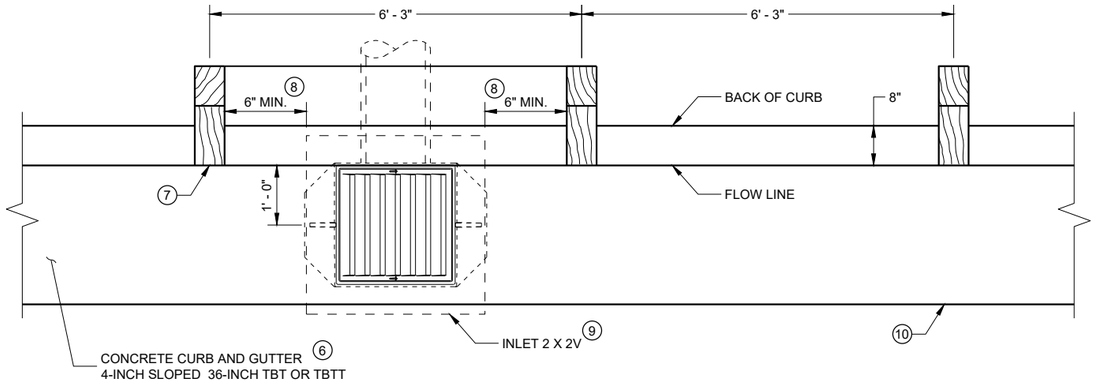

## EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)

## CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

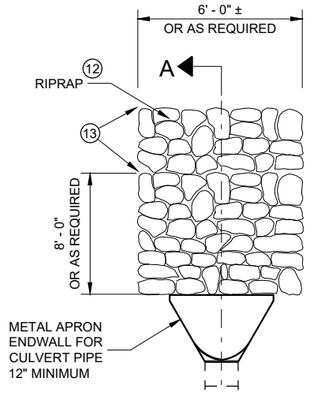
APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA




## INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)

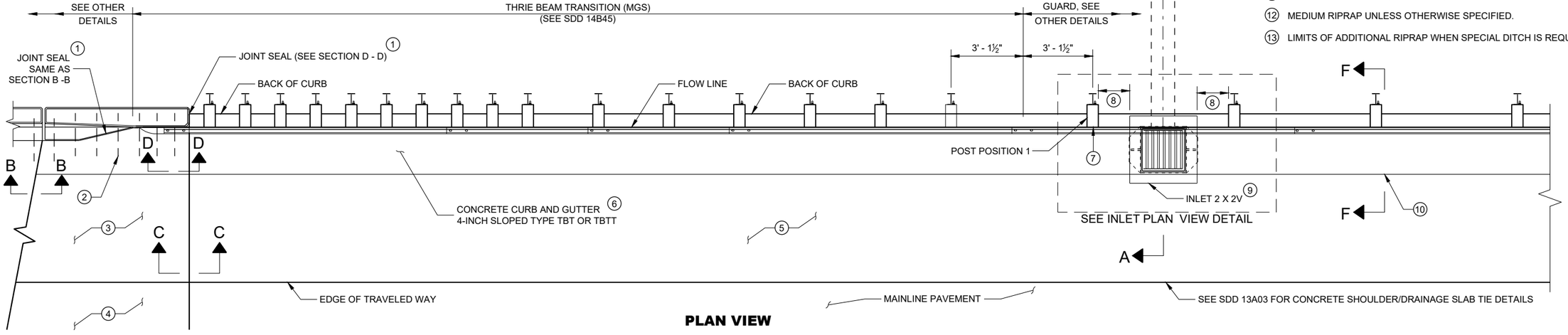



## GENERAL NOTES

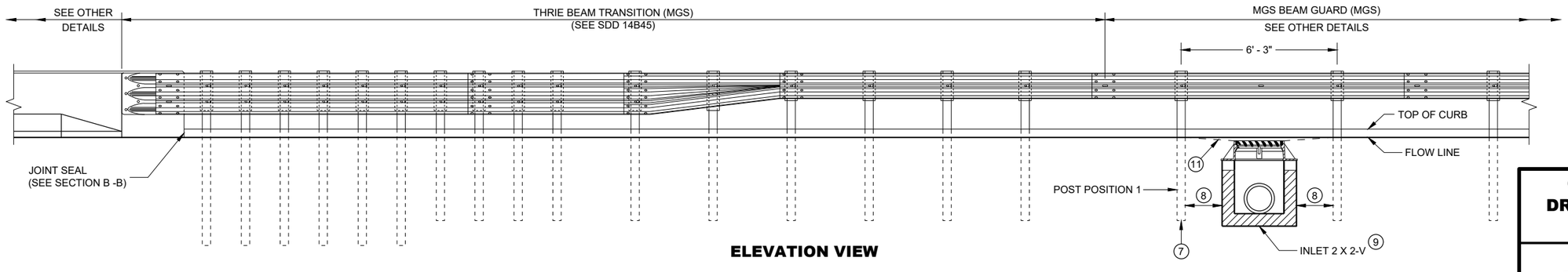
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.
9. SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.
10. START CURB AND GUTTER TRANSITION OR END SECTION.
11. DEPRESS FLOW LINE (SEE DETAIL)
12. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
13. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.




## PLAN VIEW




## ELEVATION VIEW

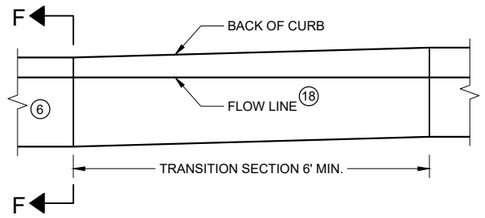
**CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

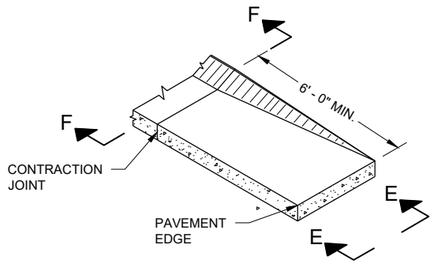


SDD 08D03 - 09a

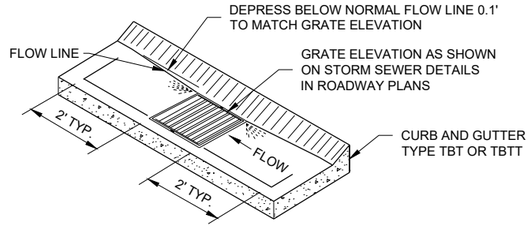
SDD 08D03 - 09a




**CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**




**CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**




**CURB AND GUTTER FLOW LINE DEPRESSION AT INLETS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**

## GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

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

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

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

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

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(14) GEOTEXTILE TYPE HR.

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

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

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

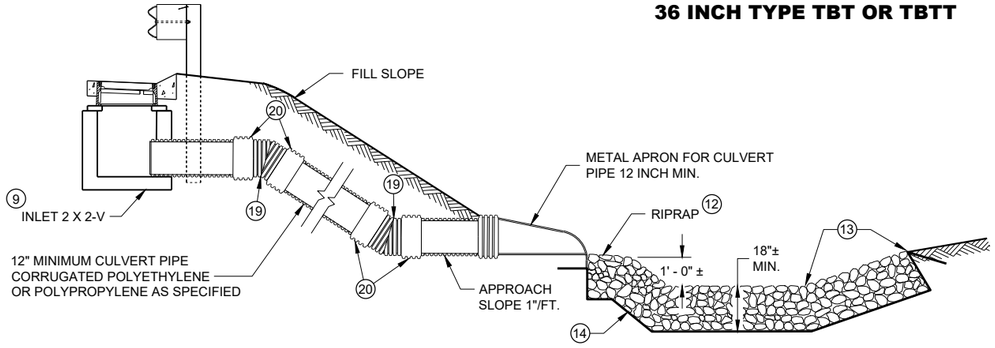
(18) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

(19) MANUFACTURER SUPPLIED BEND.

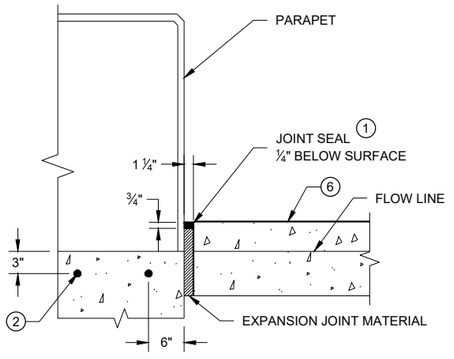
(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

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

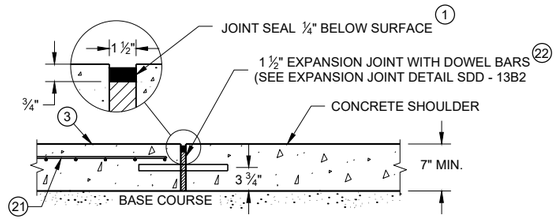
(22) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.




**SECTION A - A**

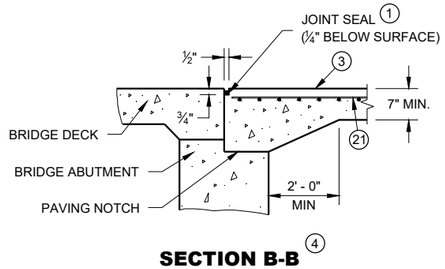



**SECTION D - D**

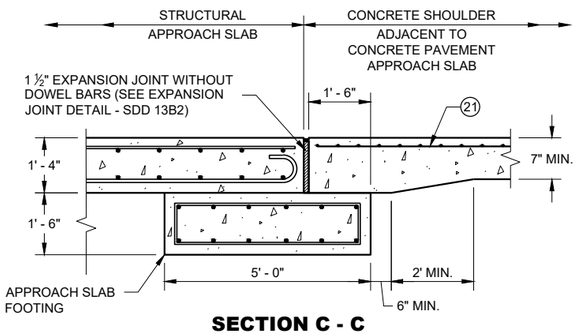



**SECTION C - C**

**JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS**

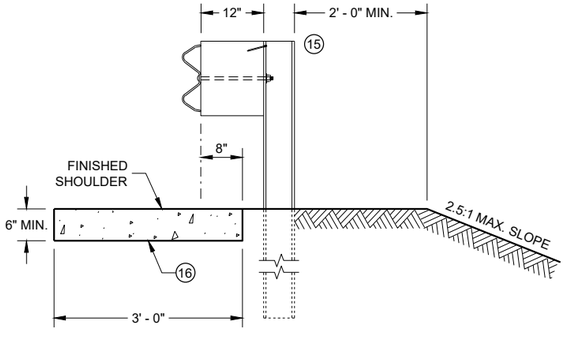



**SECTION B-B** 4

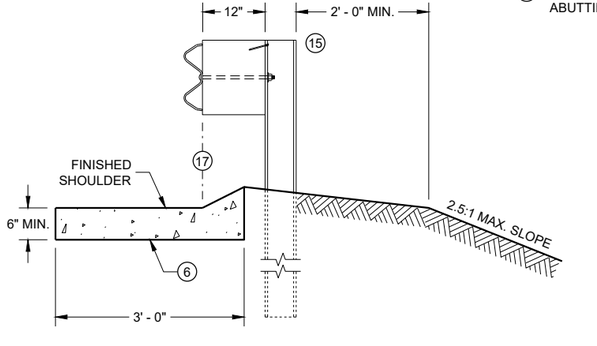



**SECTION C - C**

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




**SECTION E - E**




**SECTION F - F**

# CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



6

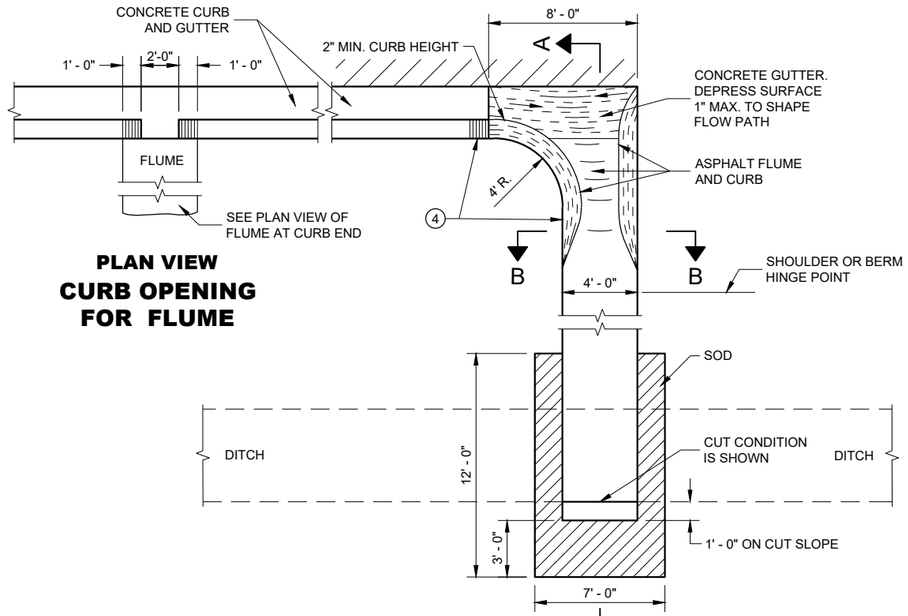
SDD 08D03 - 09b

6

SDD 08D03 - 09b

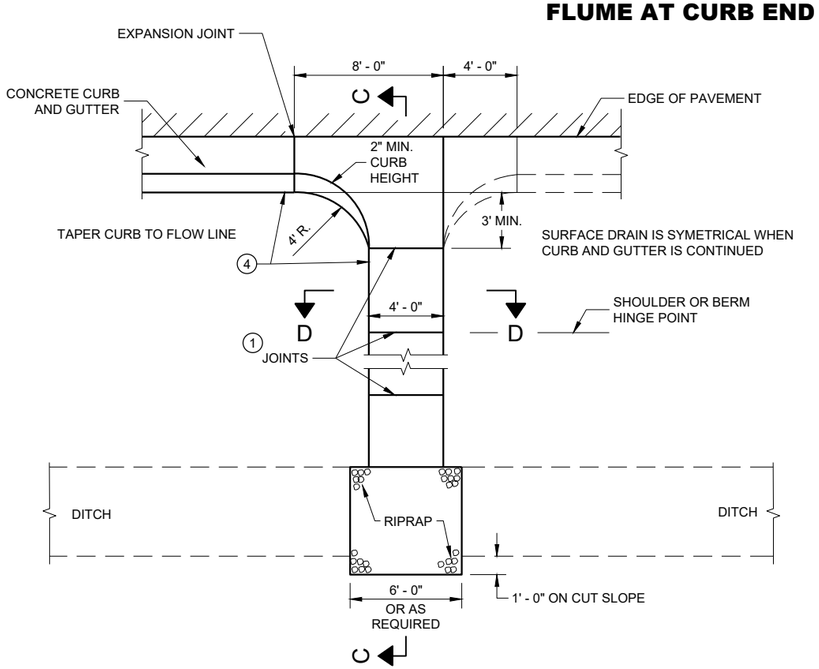
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

## ASPHALTIC FLUME




**PLAN VIEW**
**CURB OPENING FOR FLUME**

**PLAN VIEW**
**FLUME AT CURB END**



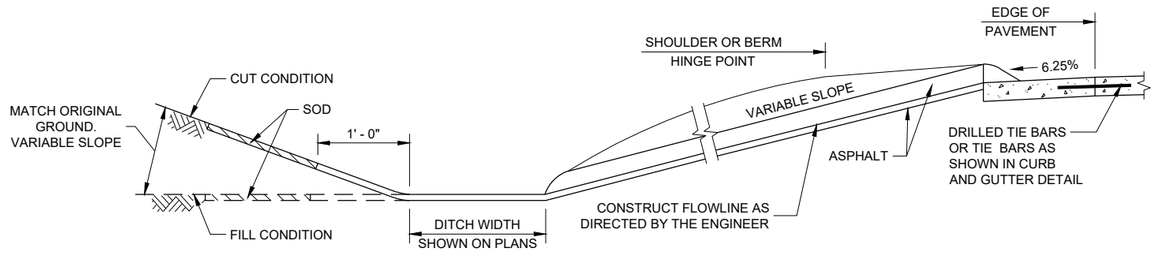

**PLAN VIEW**
**CONCRETE SURFACE DRAIN**

## GENERAL NOTES

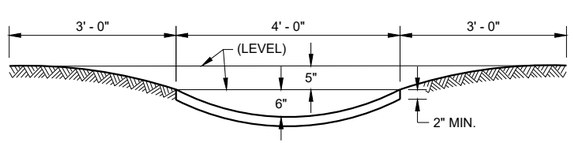
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

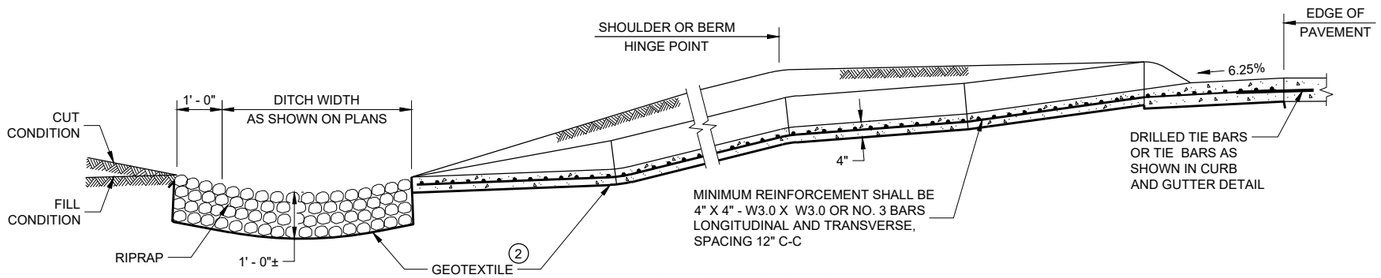
1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



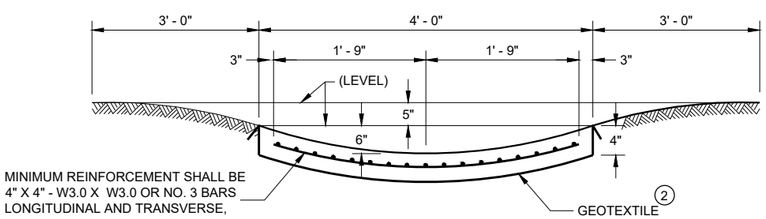

**SECTION A - A**




**SECTION B - B**




**SECTION C - C**




**SECTION D - D**

**CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

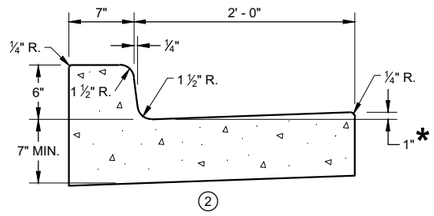
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



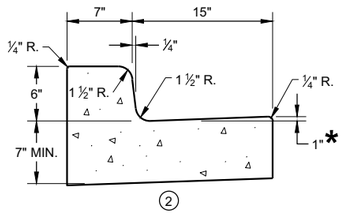

6


SDD 08D04 - 07

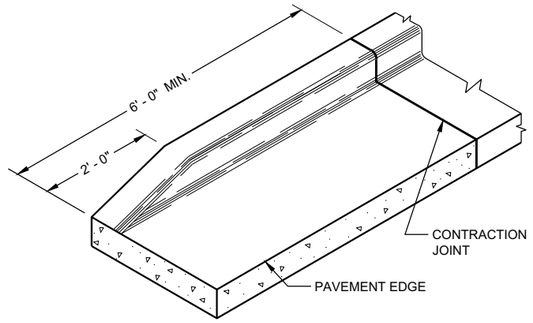



## CONCRETE CURB AND GUTTER 31" ①

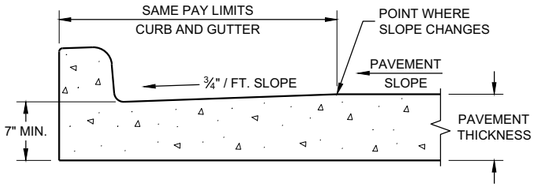
*TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



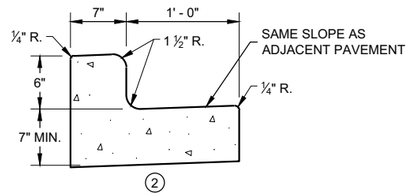

## CONCRETE CURB AND GUTTER 22" ①



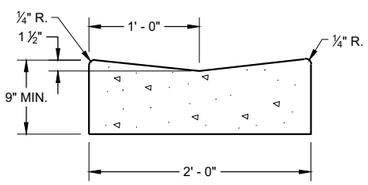

## END SECTIONCURB AND GUTTER



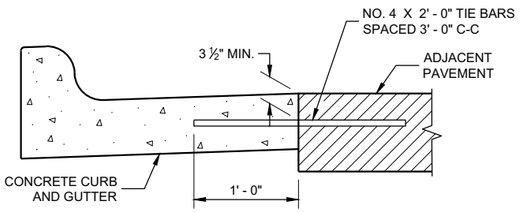

## PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



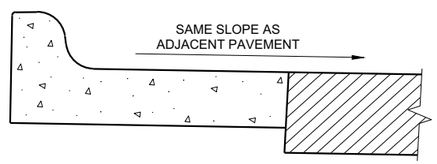

## CONCRETE CURB AND GUTTER 19" ①




## CONCRETE GUTTER 24" ①




## TYPICAL TIE BAR LOCATION ①




## HIGH SIDE SECTION ③

(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.

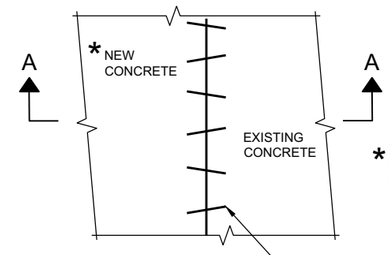
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUITED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

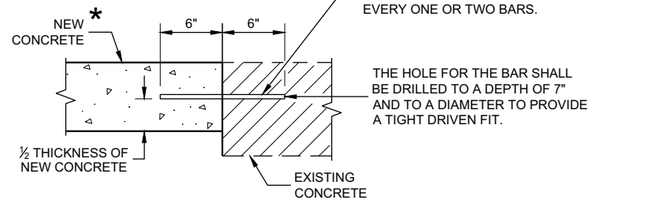
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS




*EXISTING AND NEW CONCRETE MAY BE CURB AND GUTTER, SURFACE DRAINS, PAVEMENT OR OTHER CONCRETE STRUCTURE.

## PLAN VIEW




## SECTION A - A

## PAVEMENT TIES

**CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES**

**(For Optional use in Milwaukee Co. Only)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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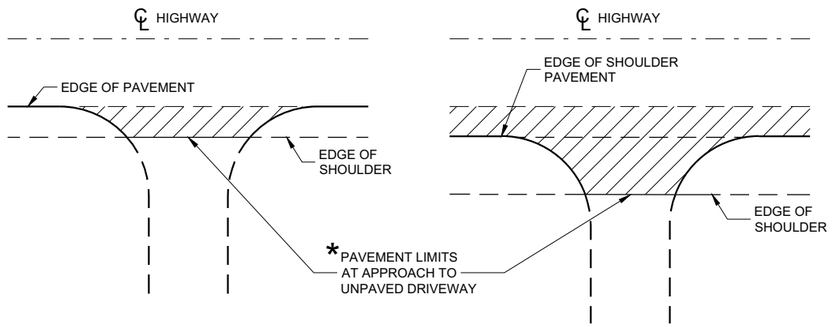
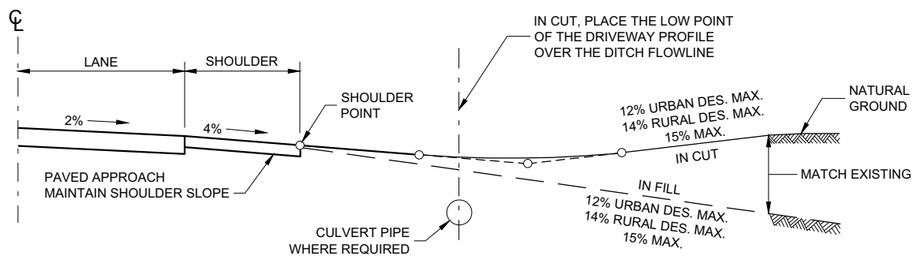
SDD 08D16 - 11



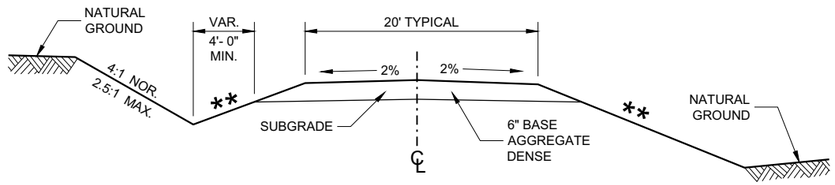

**PLAN VIEW**
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**
(PAVED SHOULDER ON HIGHWAY)

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




## TYPICAL DRIVEWAY PROFILES

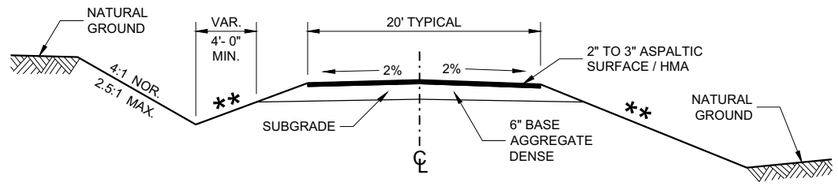



**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

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

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




**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

SDD 08D21 - 01

6

SDD 08D21 - 01

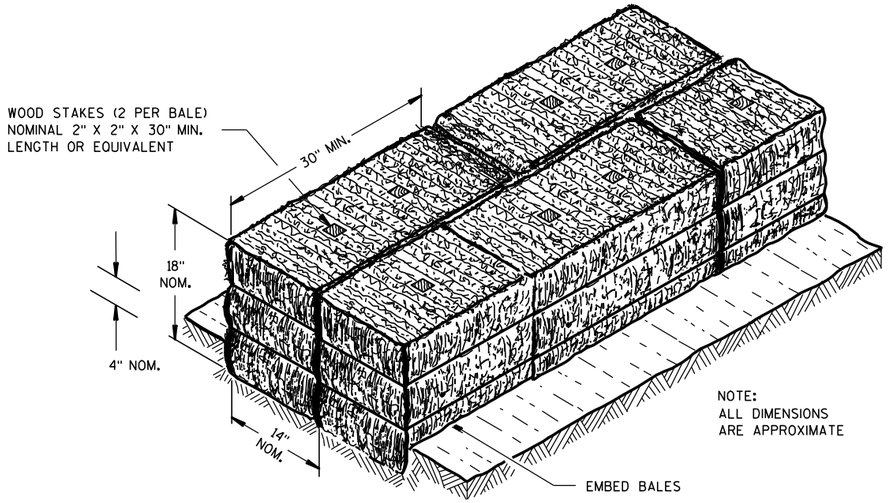
## DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

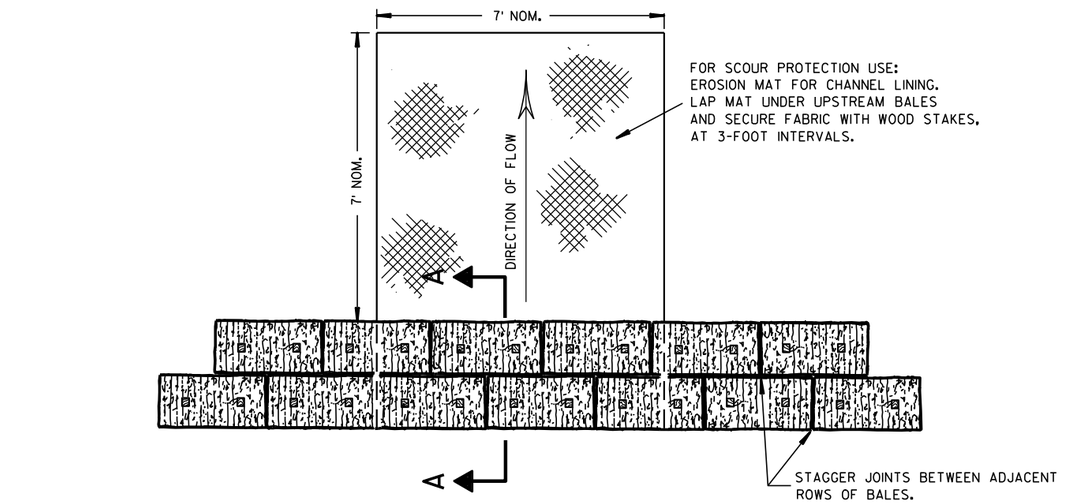
APPROVED
December 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

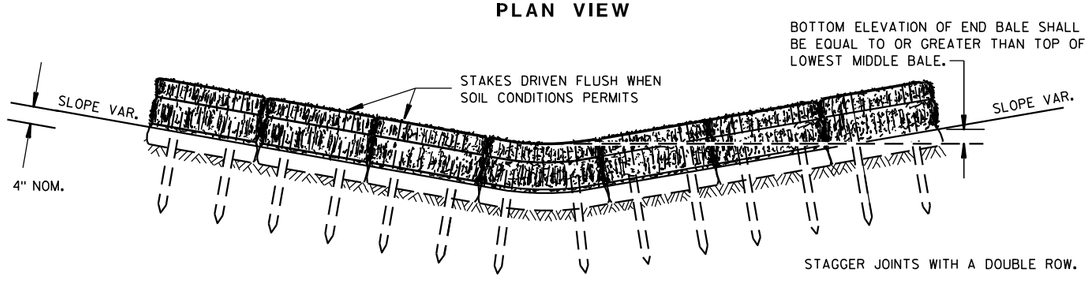
FHWA




**SECTION A-A**




**PLAN VIEW**



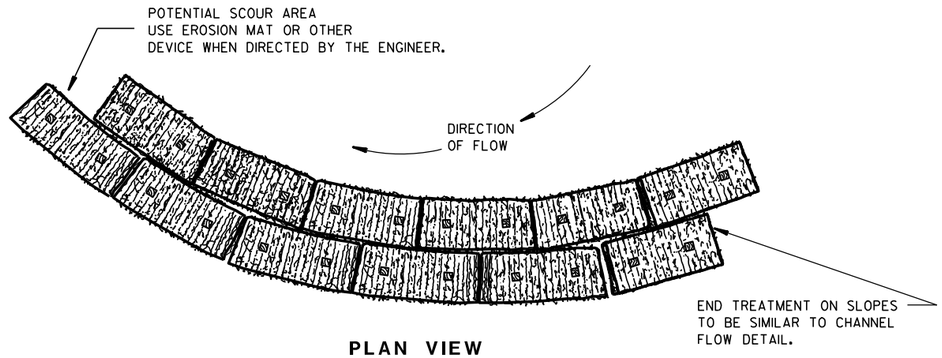

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

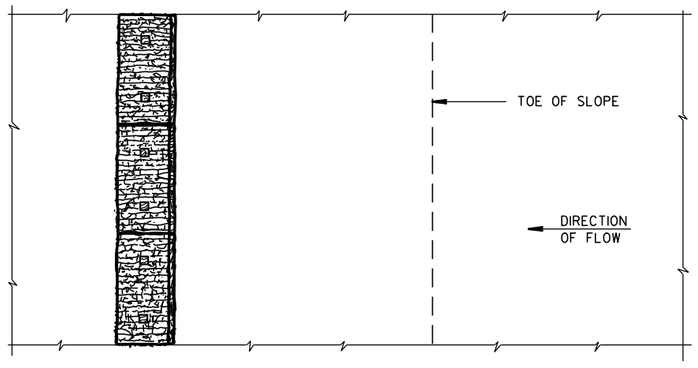
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

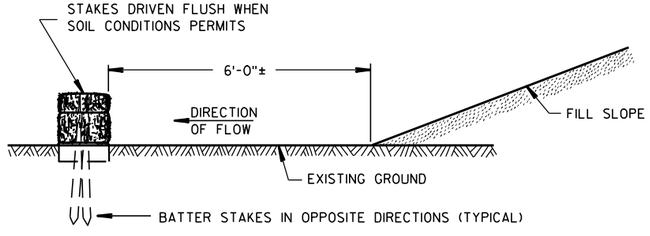



**PLAN VIEW**

WHEN ALTERING THE DIRECTION OF FLOW




**PLAN VIEW**




**FRONT ELEVATION**

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

## EROSION BALES FOR SHEET FLOW

**TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

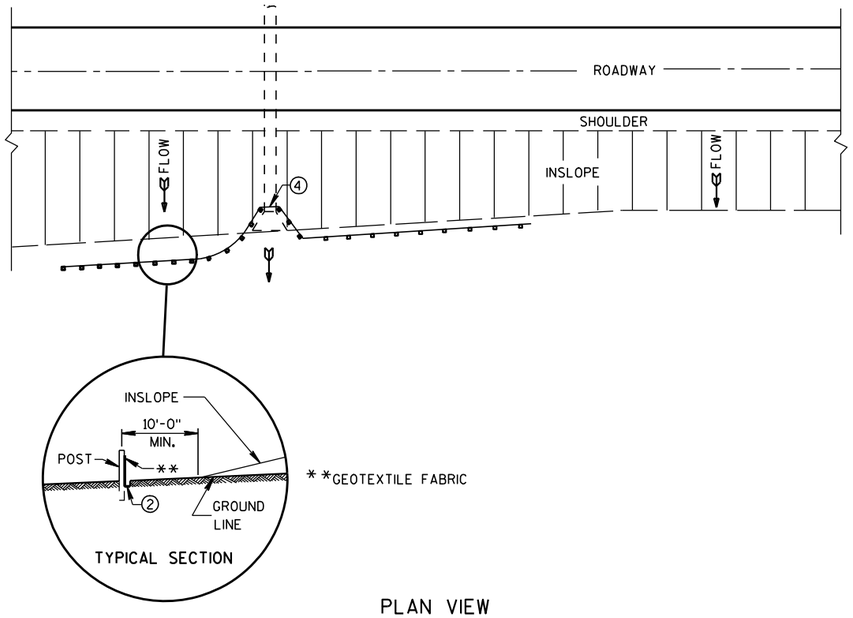
FHWA





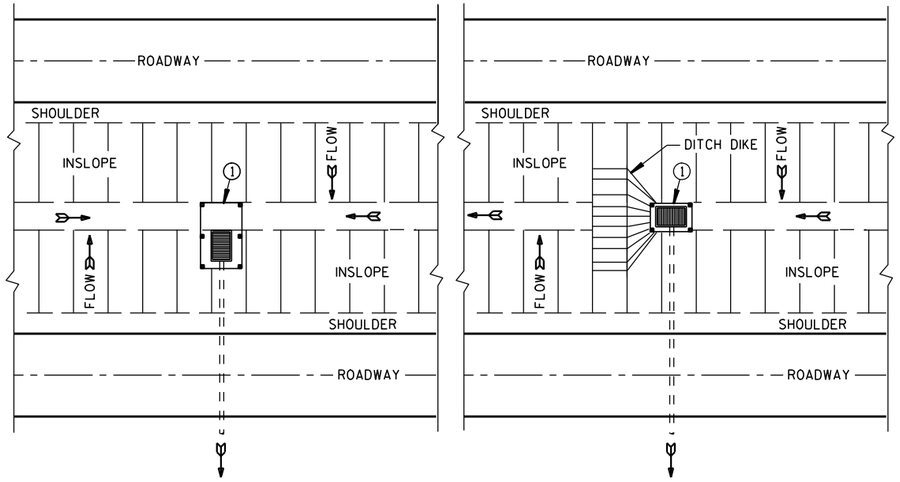
6

S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



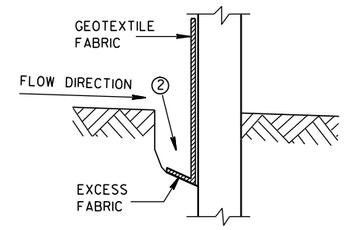

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

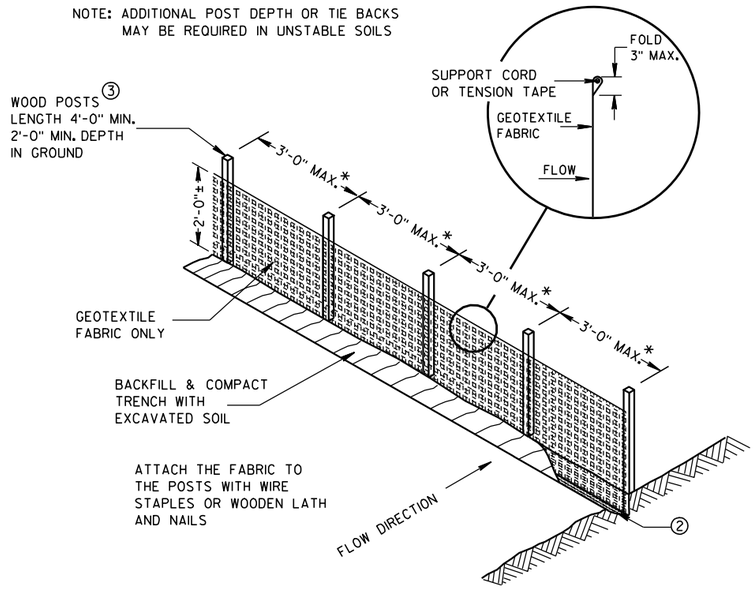
## GENERAL NOTES

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

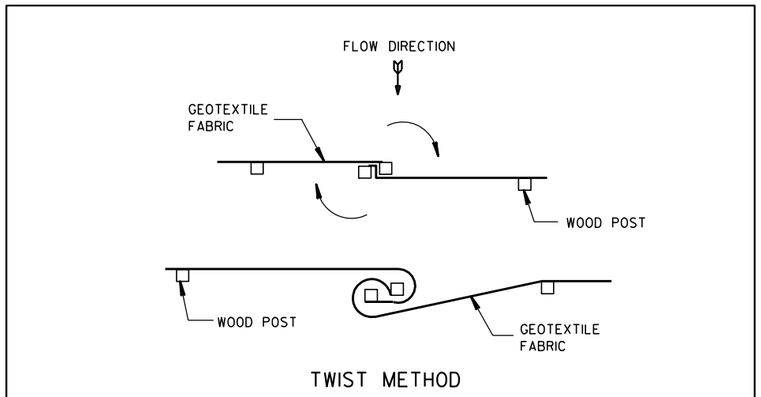
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



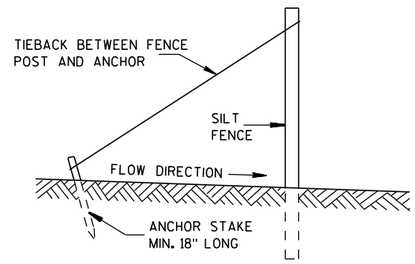

## TRENCH DETAIL




## SILT FENCE




## JOINING TWO LENGTHS OF SILT FENCE 5




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

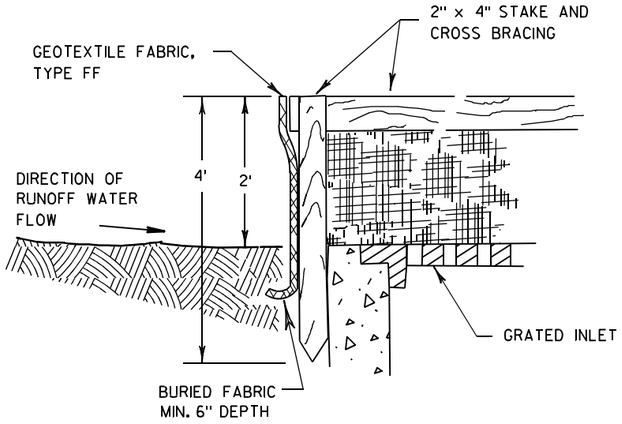


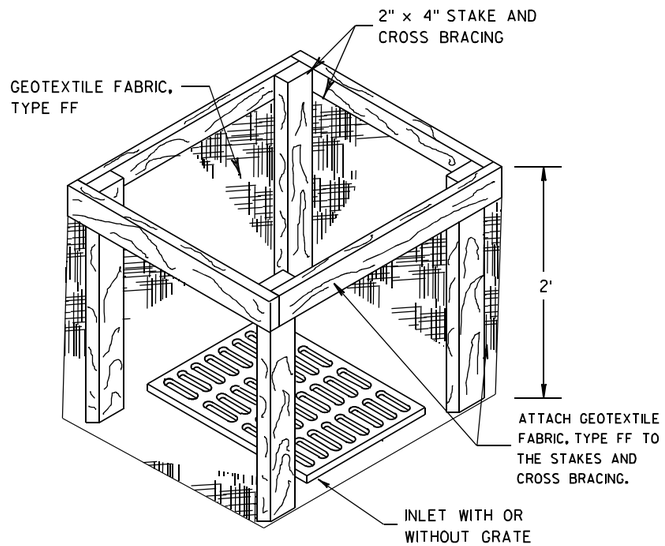
6

S.D.D. 8 E 9-6

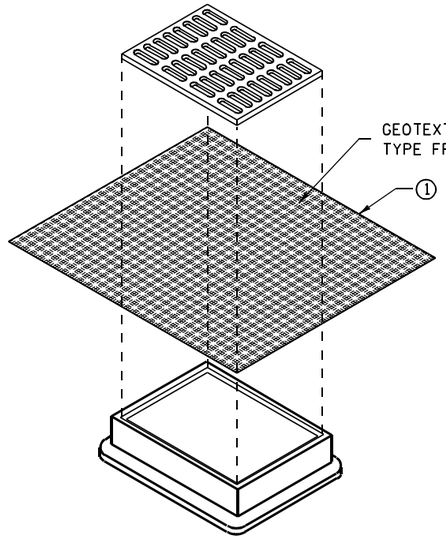
6

S.D.D. 8 E 9-6



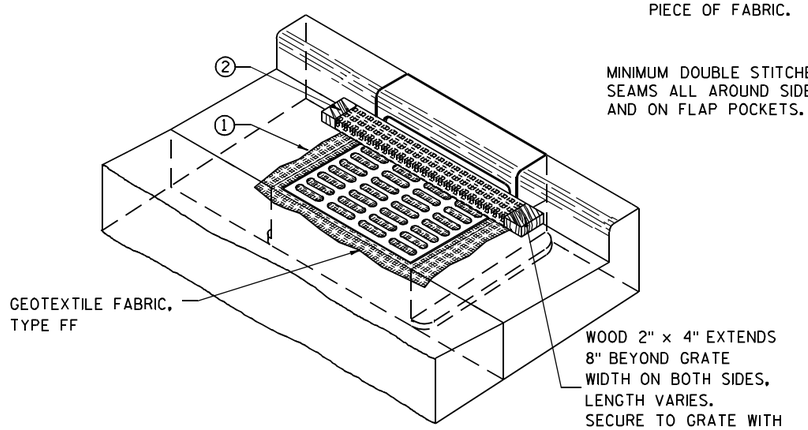




## INLET PROTECTION, TYPE A

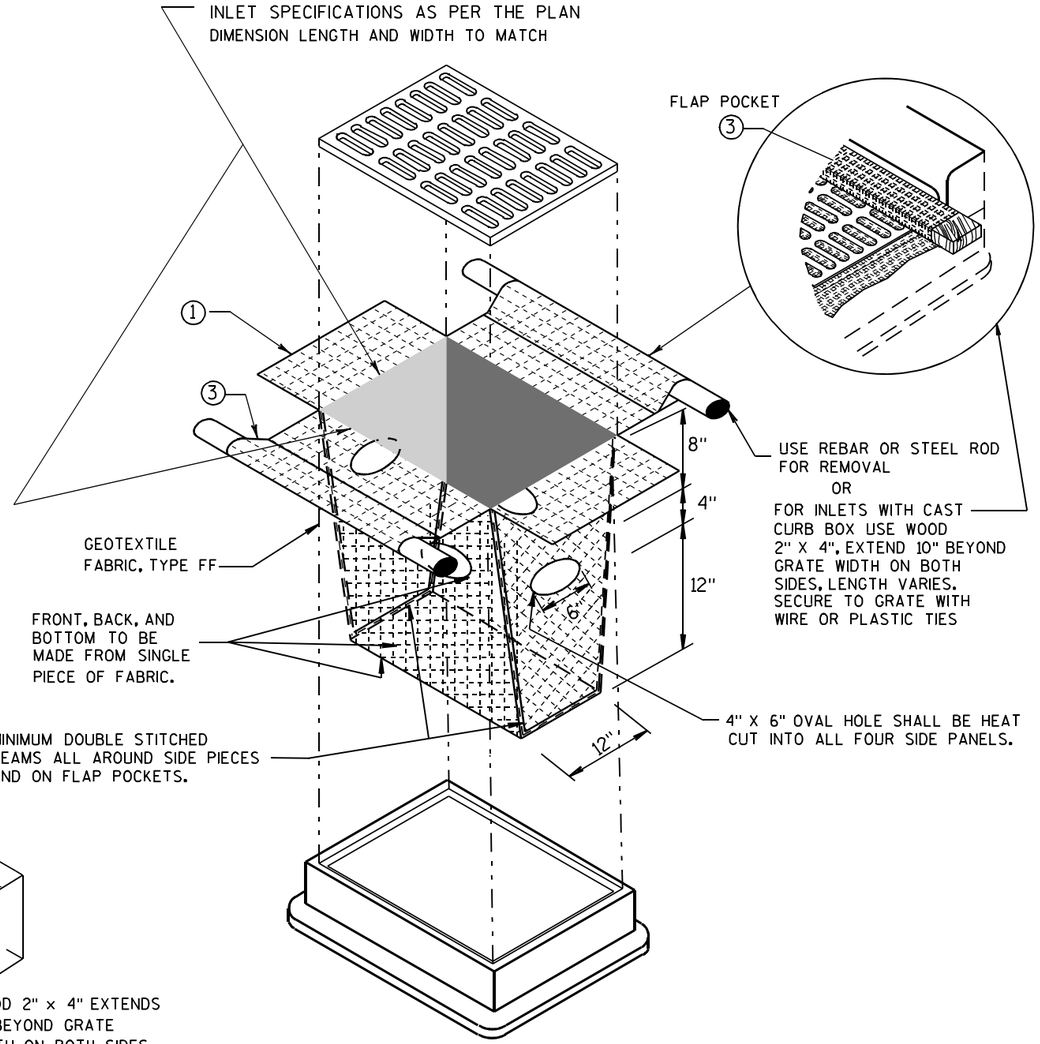



## INLET PROTECTION, TYPE B
## (WITHOUT CURB BOX)

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




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




## INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A 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

### TYPE B & C

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

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

### TYPE D

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

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

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

**INLET PROTECTION**
**TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

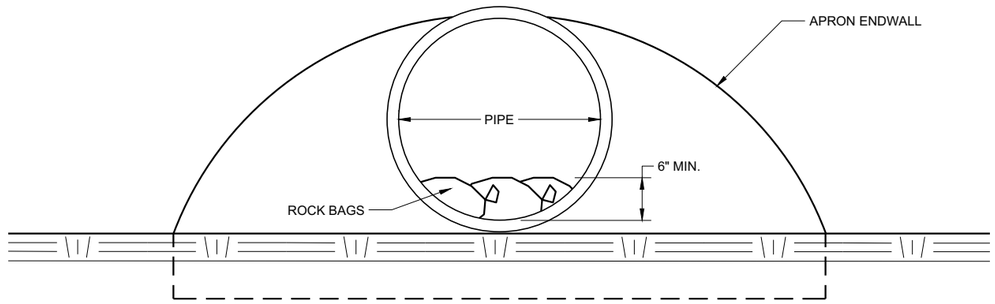
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

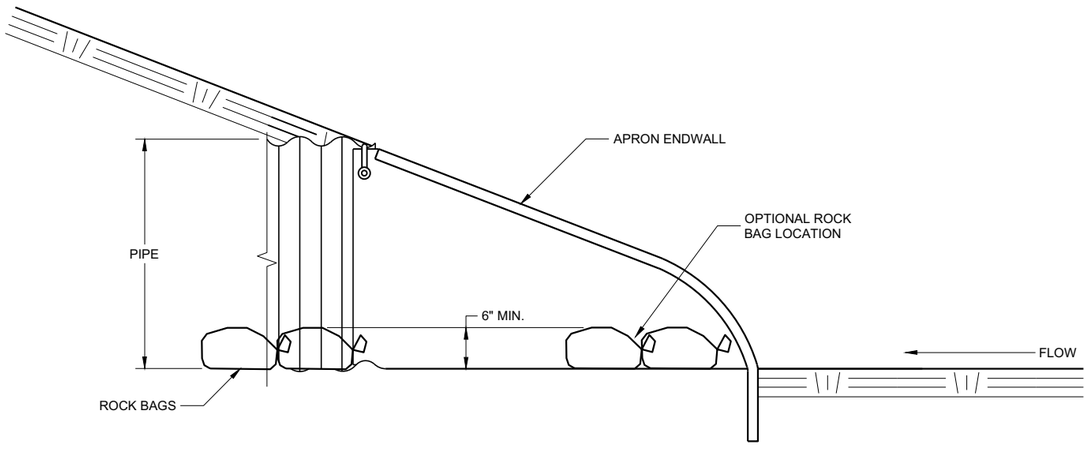



6

S.D.D. 8 E 10-2




**END VIEW**




**SIDE VIEW**

## CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Daniel Schave — EROSION CONTROL ENGI
FHWA



6

SDD 08E15 - 01

6

SDD 08E15 - 01

## METAL APRON ENDWALLS

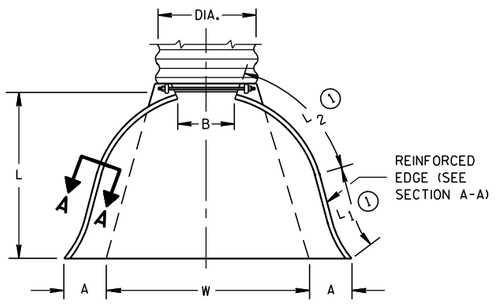
| PIPE DIA. (IN.) | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | .064 | .060 | 6 | 6 | 6 | 21 | 12 | 17 1/2 | 24 | 2 1/2 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

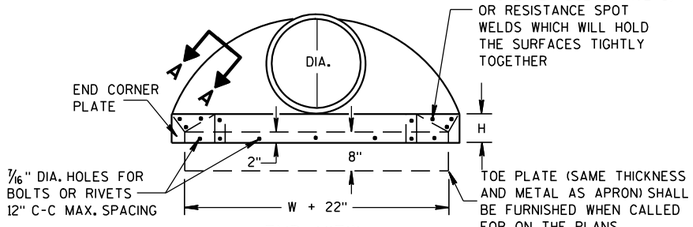
## REINFORCED CONCRETE APRON ENDWALLS

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

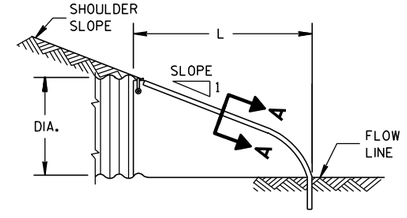
*MINIMUM
**MAXIMUM




PLAN VIEW

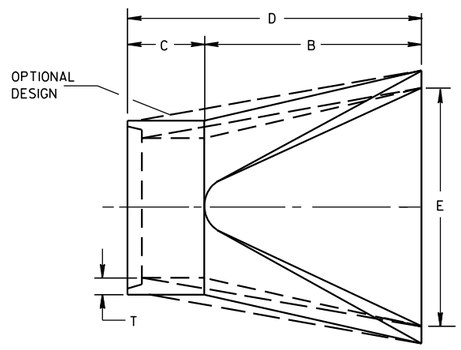



END VIEW

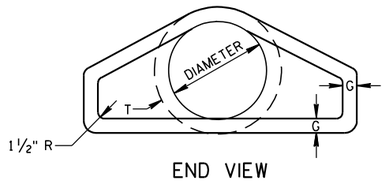



SIDE ELEVATION

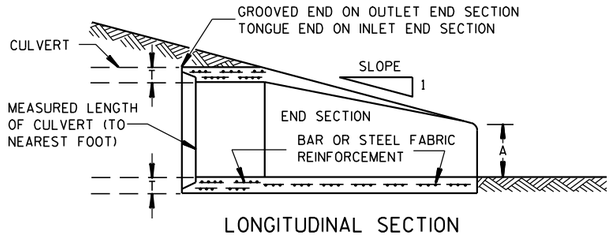
## METAL ENDWALLS




PLAN

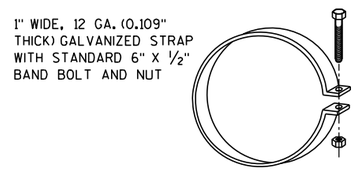



END VIEW



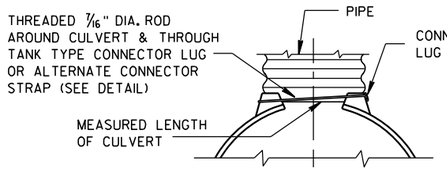

LONGITUDINAL SECTION

## CONCRETE ENDWALLS

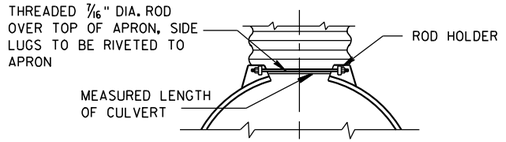



ALTERNATE FOR TYPE 1 CONNECTION

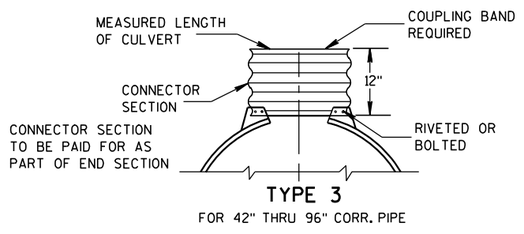
## END SECTION CONNECTOR STRAP



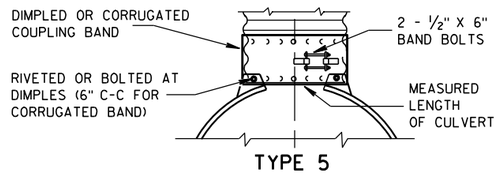

TYPE 1
FOR 12" THRU 24" CORR. PIPE




TYPE 2
FOR 30" THRU 96" CORR. PIPE




TYPE 3
FOR 42" THRU 96" CORR. PIPE




TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

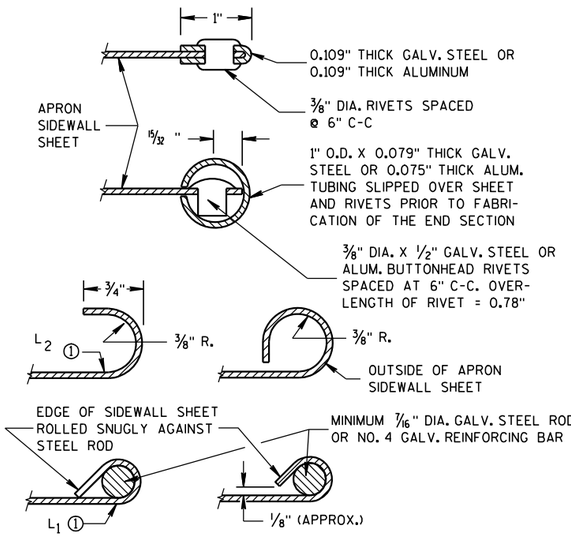
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

## CONNECTION DETAILS




## SECTION A-A

## GENERAL NOTES

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

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

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

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

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

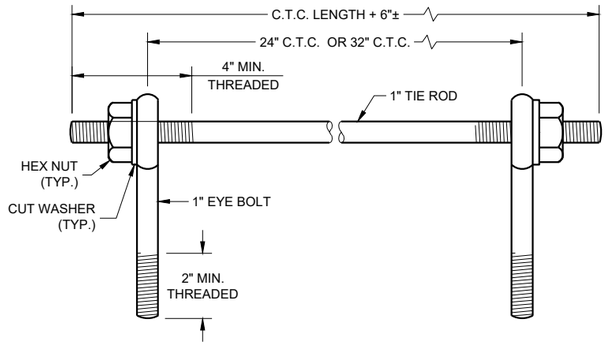
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

# APRON ENDWALLS FOR CULVERT PIPE

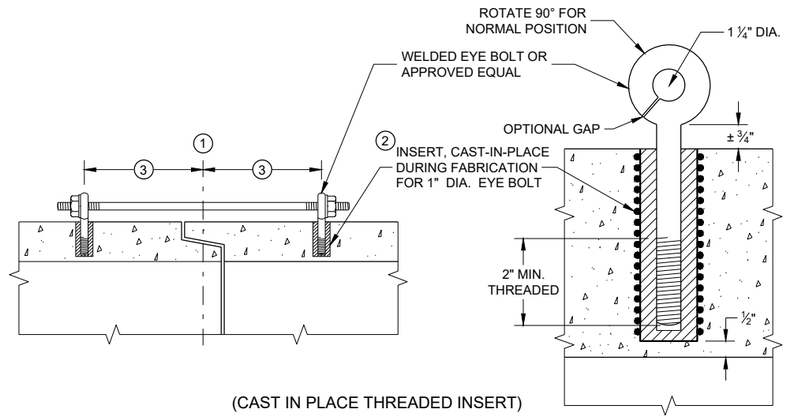
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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


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




**EYE BOLTS AND TIE ROD**




(CAST IN PLACE THREADED INSERT)

**LONGITUDINAL SECTIONS**

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

## GENERAL NOTES

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

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

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

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

(1) 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.

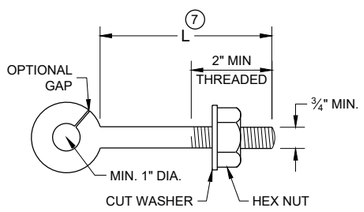
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

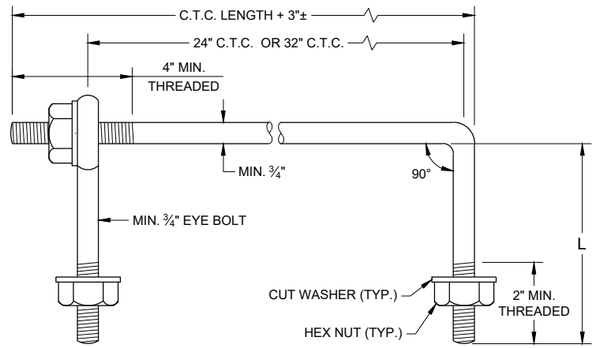
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

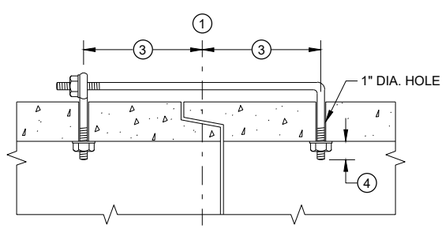



**EYE BOLT** (7)

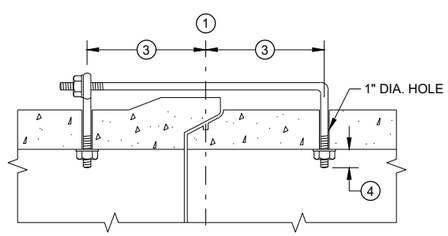
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.




**EYE BOLT AND TIE ROD**




(TONGUE AND GROOVE PIPE)




(MODIFIED BELL PIPE)

**LONGITUDINAL SECTION**

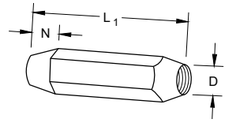
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

# 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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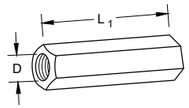
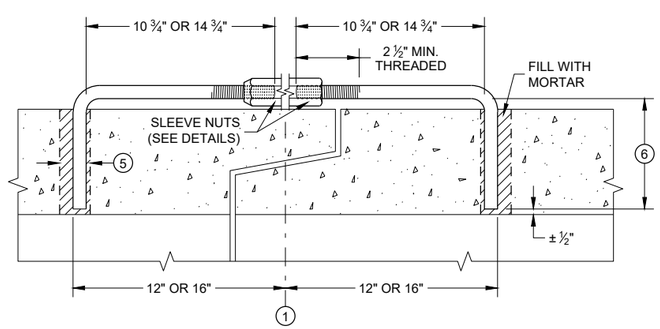



PLAIN

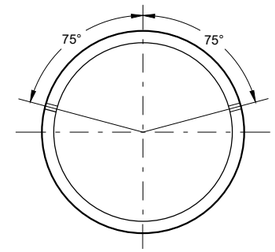
RIGHT AND LEFT THREADS

**SLEEVE NUTS**



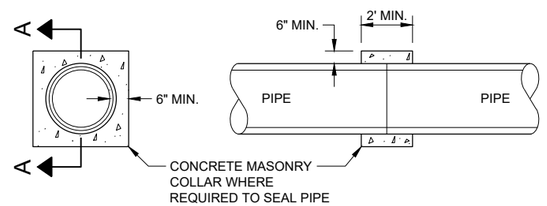

**LONGITUDINAL SECTION**

# 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**

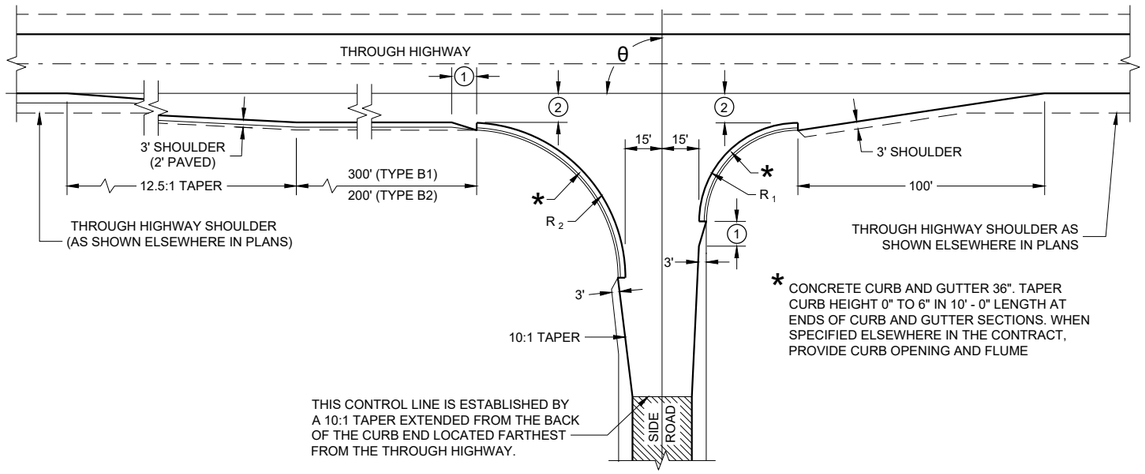
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA



SDD 08F04 - 08

SDD 08F04 - 08




* CONCRETE CURB AND GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10' - 0" LENGTH AT ENDS OF CURB AND GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME

## TYPE "B1" AND "B2"

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

| θ | $R_1$ | $R_2$ |
|---|---|---|
| 65 - 70 | 35 | 70 |
| 71 - 80 | 40 | 70 |
| 81 - 90 | 40 | 60 |
| 91 - 100 | 50 | 55 |
| 101 - 110 | 60 | 45 |

## GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

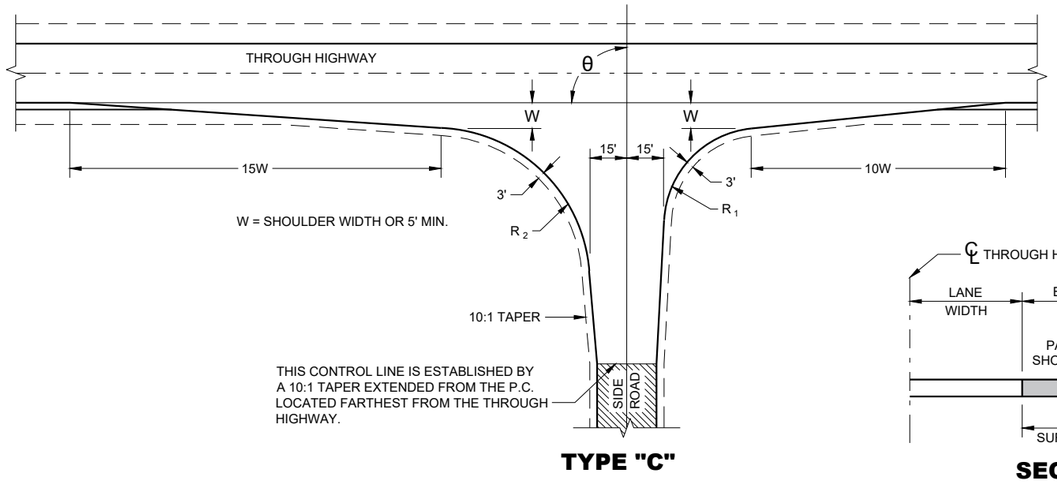
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

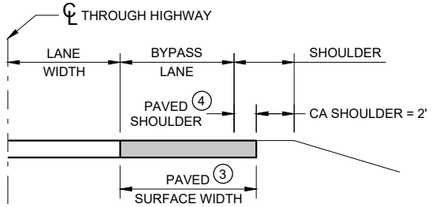
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
- ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH
- PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH

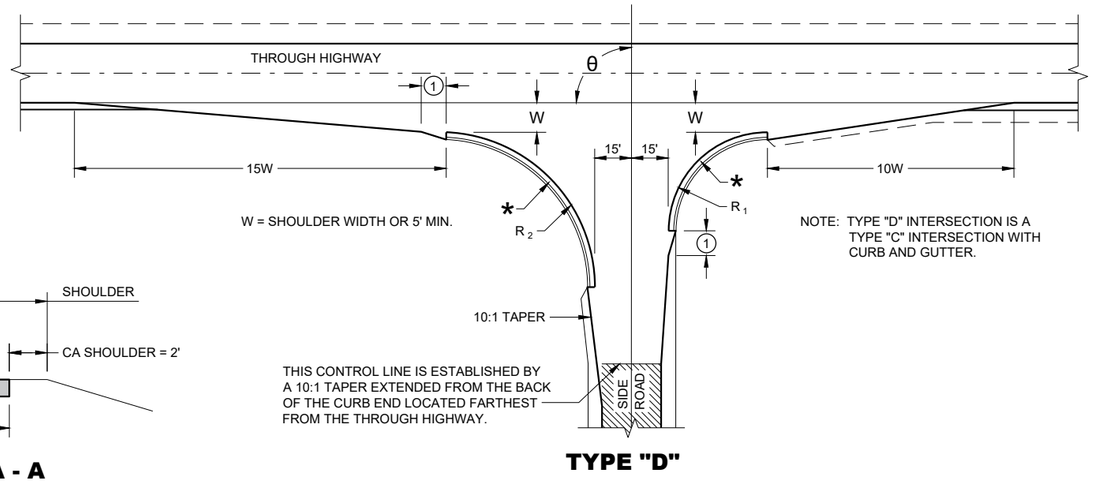
(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.




## TYPE "C"

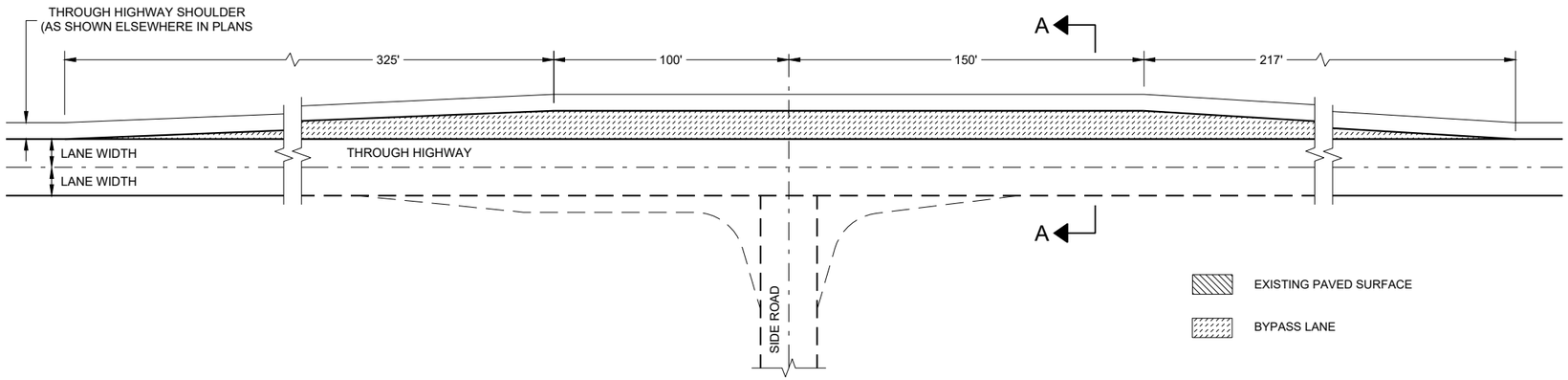



## SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)




NOTE: TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB AND GUTTER.

## TYPE "D"




## TEE INTERSECTION BYPASS LANE DETAIL

**AT GRADE SIDE ROAD INTERSECTION TYPES "B1", "B2", "C", "D" AND TEE INTERSECTION BYPASS LANE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6

SDD 09A01 - 14a

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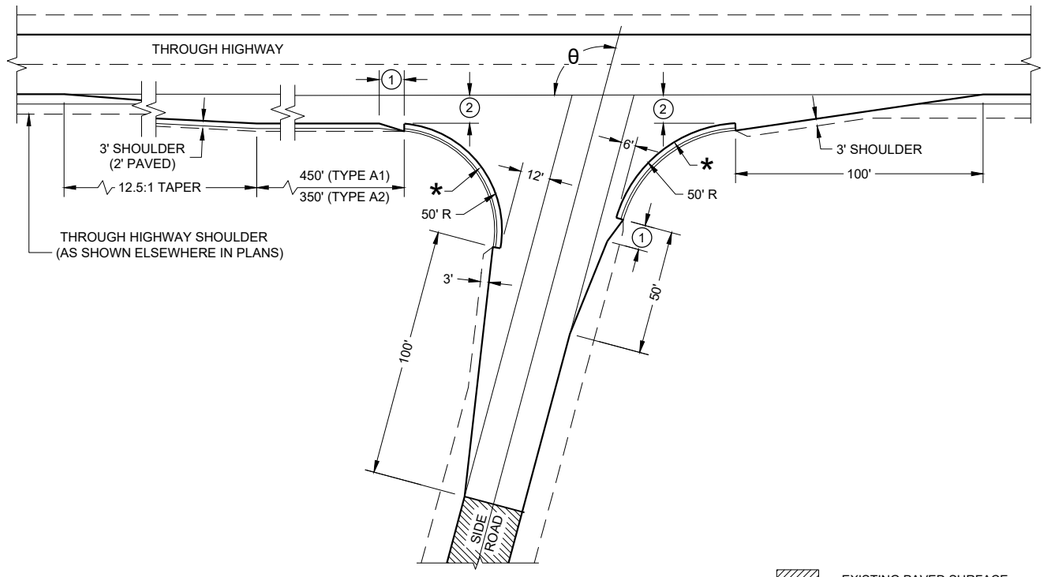
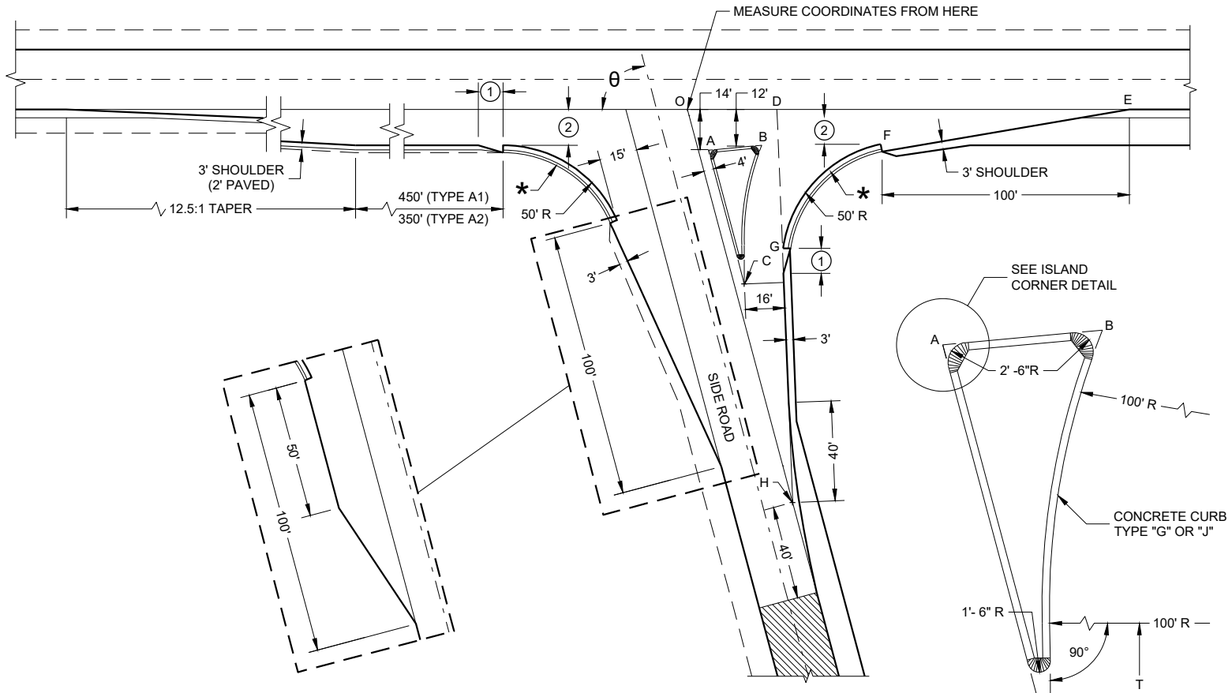
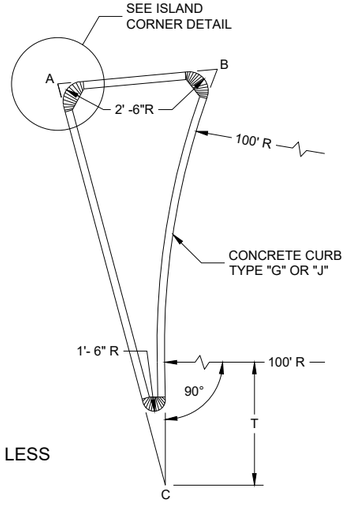
SDD 09A01 - 14a



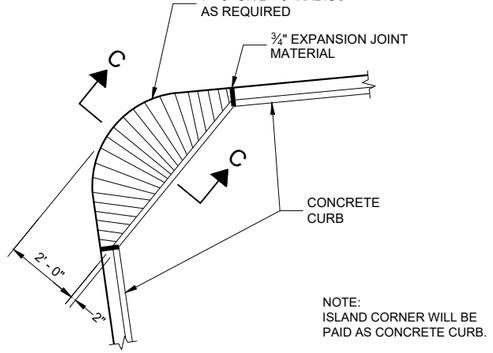

θ = MORE THAN 80°



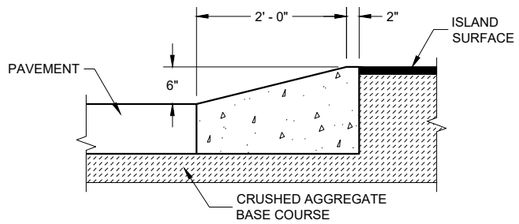

SIDE ROAD WIDENING AND TAPER REQUIRED WHERE
THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
θ = ACUTE ANGLES 70° OR LESS




θ = ACUTE ANGLES 80° OR LESS




**PLAN VIEW**




**SECTION C - C**

## ISLAND CORNER DETAIL

(TO BE CONSTUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES

(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

| ANGLE θ DEGREES | COORDINATES IN FEET (MEASURED FROM POINT 'O') X / Y | | | | | | | | LENGTH IN FEET | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | AB | AC | T | OJ | OH |
| 60 | 12.7 / -14.0 | 44.9 / -12.0 | 46.4 / -72.4 | 41.9 / 0.0 | 205.0 / 0.0 | 104.6 / -12.0 | 64.0 / -75.5 | 85.0 / -147.1 | 32.3 | 67.4 | 4.9 | 85.9 | 169.9 |
| 65 | 10.9 / -14.0 | 39.0 / -12.0 | 37.8 / -71.6 | 39.4 / 0.0 | 196.1 / 0.0 | 95.7 / -12.0 | 54.1 / -71.5 | 70.5 / -151.3 | 28.2 | 63.6 | 8.5 | 80.9 | 166.9 |
| 70 | 9.4 / -14.0 | 33.9 / -12.0 | 29.8 / -70.1 | 37.4 / 0.0 | 188.3 / 0.0 | 87.8 / -12.0 | 45.6 / -67.5 | 56.1 / -154.2 | 24.6 | 59.7 | 11.5 | 76.1 | 164.1 |
| 75 | 7.9 / -14.0 | 29.3 / -12.0 | 22.3 / -67.9 | 35.7 / 0.0 | 181.2 / 0.0 | 80.7 / -12.0 | 38.2 / -63.4 | 41.8 / -155.9 | 21.5 | 55.8 | 13.8 | 71.4 | 161.4 |
| 80 | 6.5 / -14.0 | 25.4 / -12.0 | 15.6 / -65.2 | 34.4 / 0.0 | 174.8 / 0.0 | 74.4 / -12.0 | 31.8 / -59.3 | 27.6 / -156.5 | 18.9 | 52.0 | 15.6 | 66.9 | 158.9 |

## TYPE 'A1" AND "A2" SIDE ROAD INTERSECTION DETAILS

**AT GRADE SIDE ROAD INTERSECTIONS**
**TYPES "A1" AND "A2"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER
FHWA



SDD 09A01 - 14b

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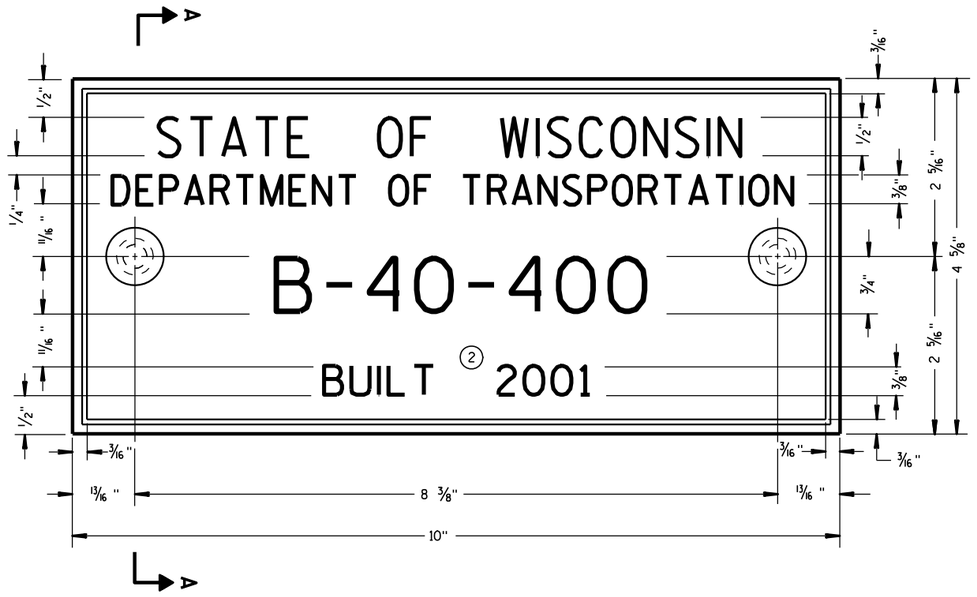
SDD 09A01 - 14b




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




**NUMBERING DESIGNATION**
**MULTI-UNIT STRUCTURES**

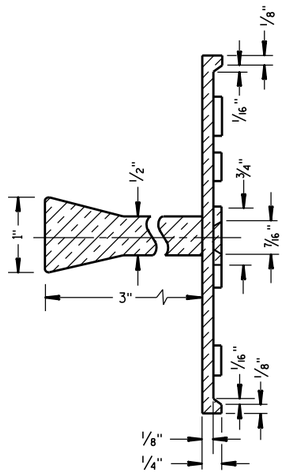
## GENERAL NOTES

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

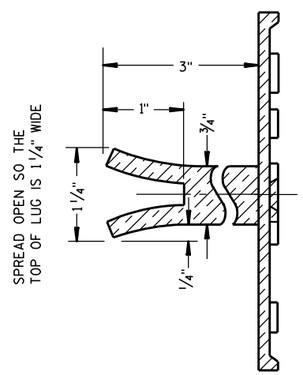
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

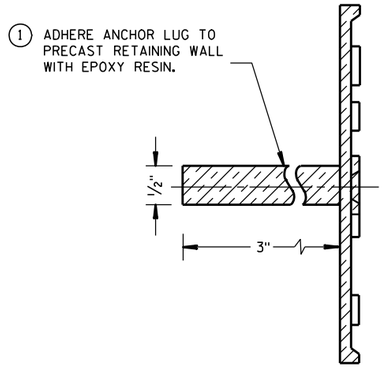
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.




**SECTION A-A**




**ALTERNATE LUG**




**ALTERNATE LUG**
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE (STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE — /S/ Scot Beck — CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA



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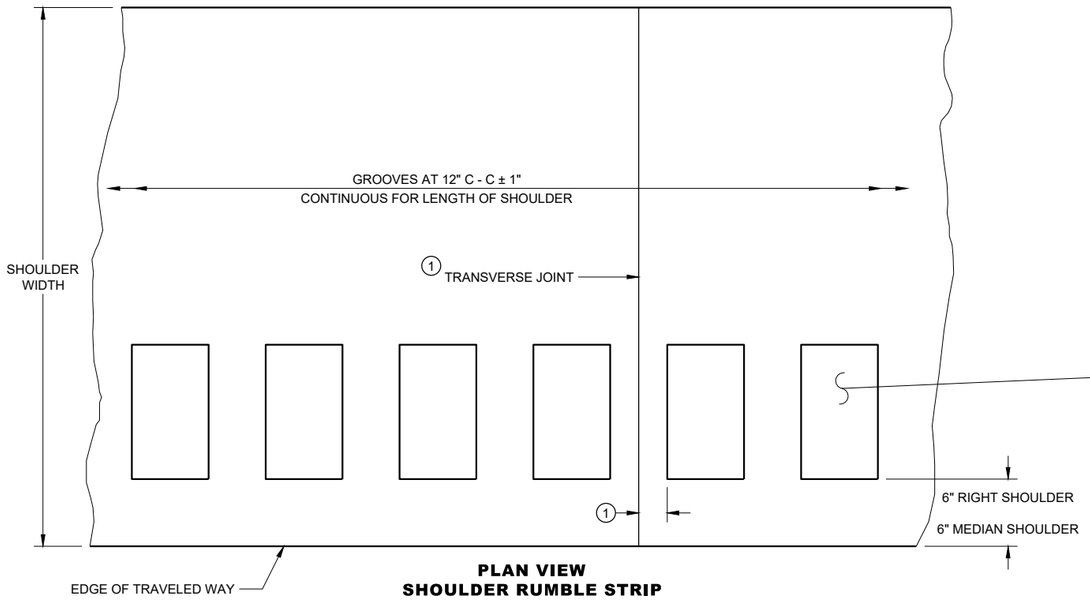
S.D.D. 12 A 3-10

## GENERAL NOTES

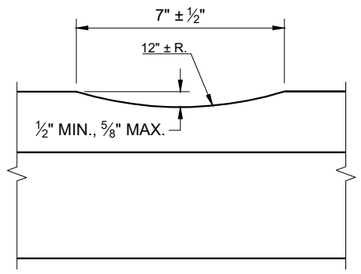
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

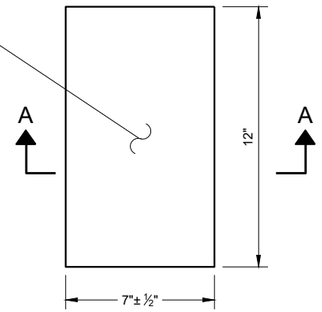
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



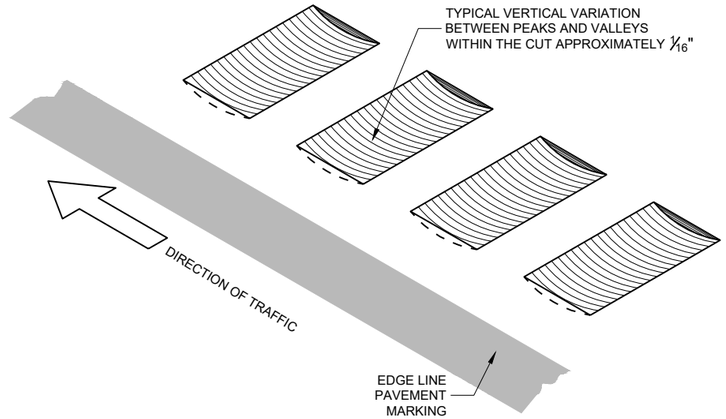

**PLAN VIEW**
**SHOULDER RUMBLE STRIP**




**SECTION A - A**

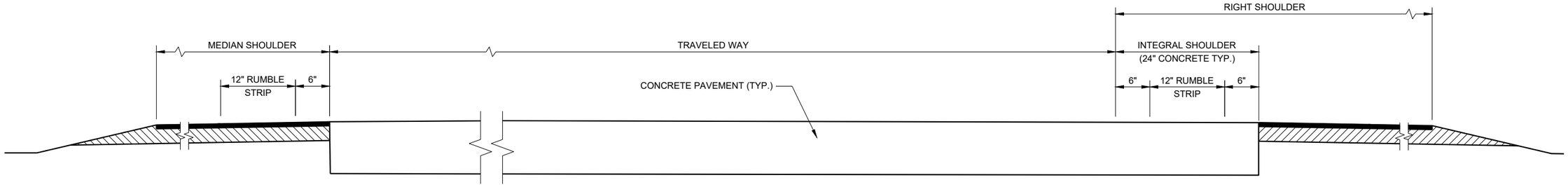



**PLAN VIEW**
**(SINGLE GROOVE)**




**ISOMETRIC**

**PLACEMENT DETAIL FOR RUMBLE STRIP**




**SECTION VIEW**

## TYPICAL SHOULDER RUMBLE STRIPS
**(ONE ROADWAY IS SHOWN)**

**SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





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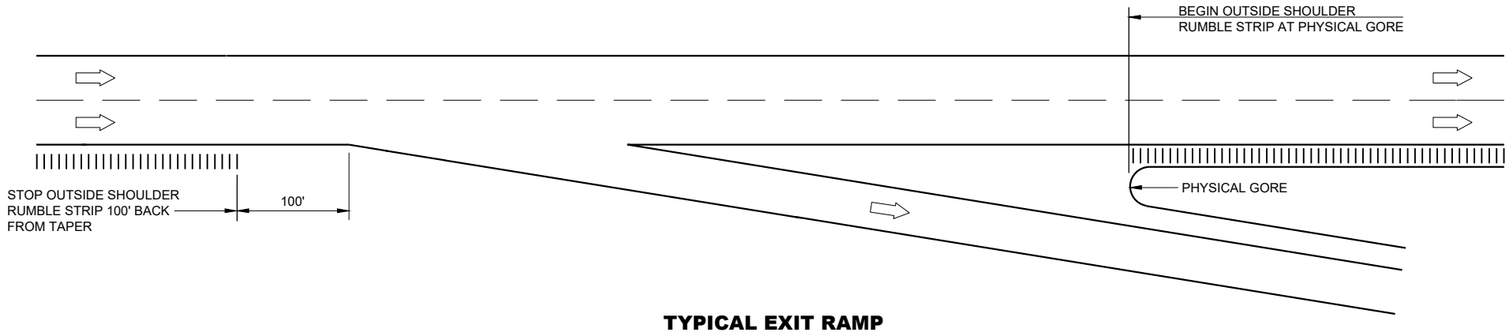
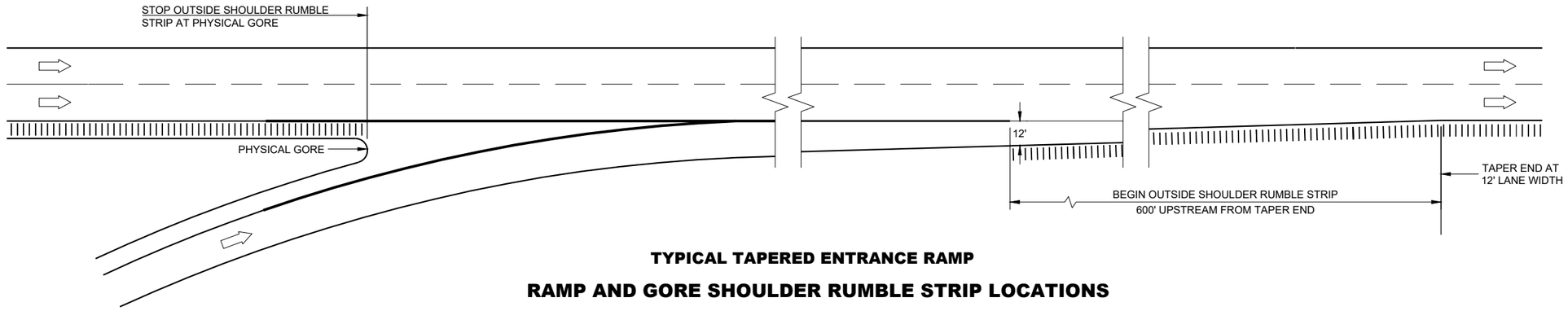
SDD 13A05-06a

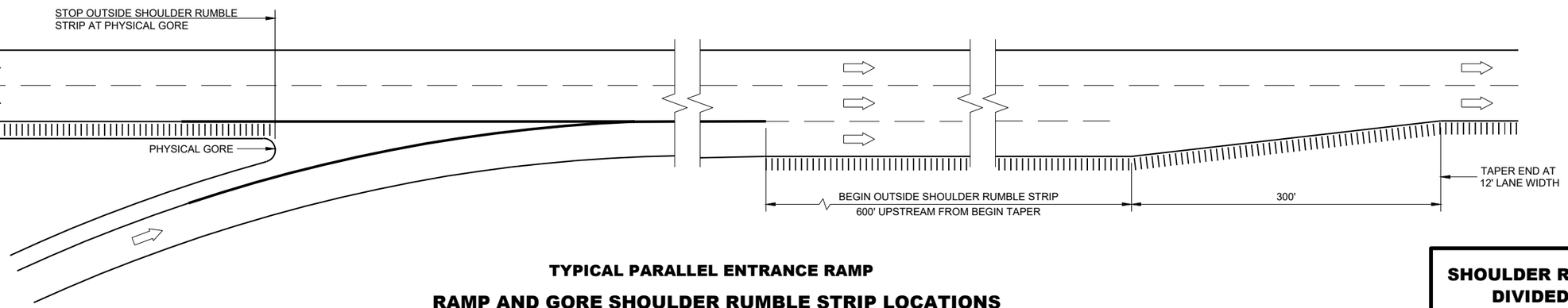



**TYPICAL EXIT RAMP**




**TYPICAL TAPERED ENTRANCE RAMP**

## RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS




**TYPICAL PARALLEL ENTRANCE RAMP**

## RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

## GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIALAND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

## LEGEND

DIRECTION OF TRAFFIC

**SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY DESIGN STANDARDS UNIT SUPERVISOR

FHWA



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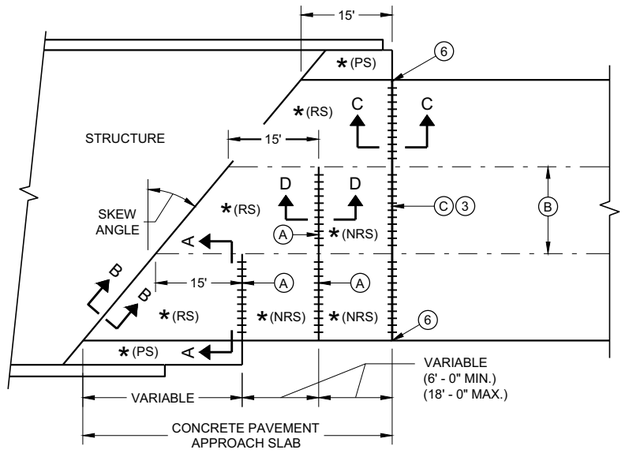
SDD 13A05-06b

SDD 13A05-06b



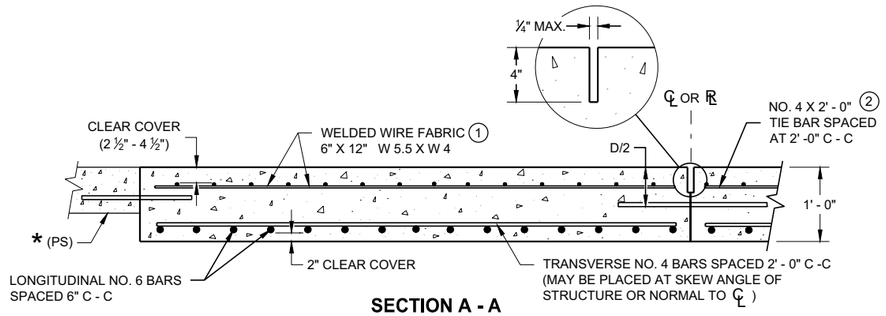

**SKEWED APPROACH**
**(PAVEMENT MORE THAN TWO LANES)**

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

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




**SECTION A - A**
**REINFORCEMENT POSITIONING DETAIL**

## GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

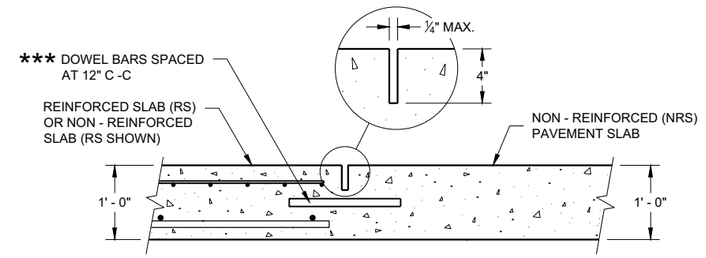
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

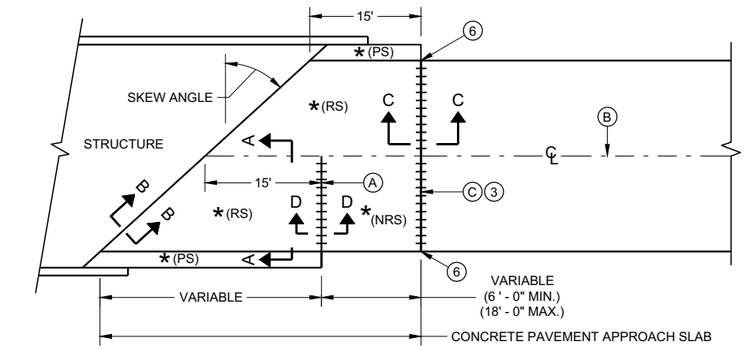
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



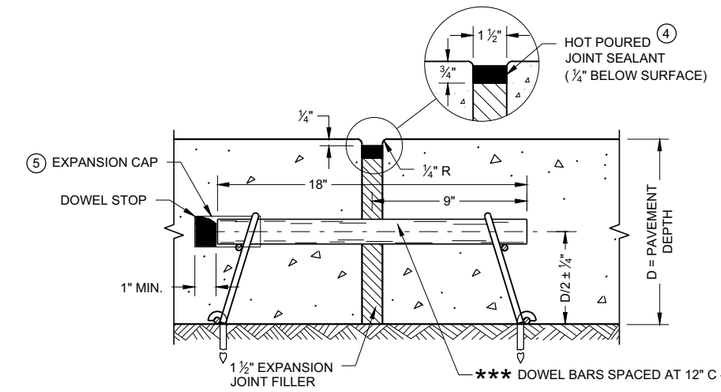

**SECTION D - D**
**CONTRACTION JOINT**



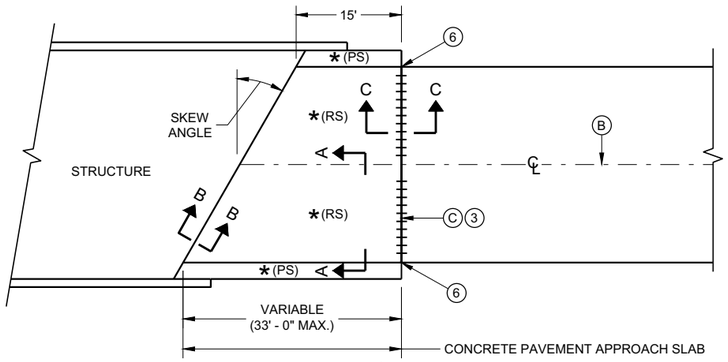

**SKEWS > 20°**
**(PAVEMENT WIDTH ≤ 30')**




**SECTION B - B**
**BEND DETAIL**
**BOTTOM REINFORCEMENT**

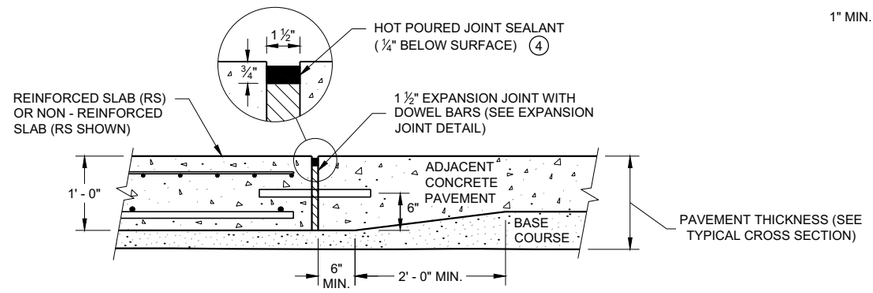



**EXPANSION JOINT DETAIL**




**SKEWS ≤ 20°**
**(PAVEMENT WIDTH ≤ 30')**

**APPROACH SLAB AND ADJACENT PAVEMENT**




**SECTION C - C**
**TRANSITION DETAIL**
**APPROACH SLAB TO ADJACENT PAVEMENT**

**CONCRETE PAVEMENT APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

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

FHWA





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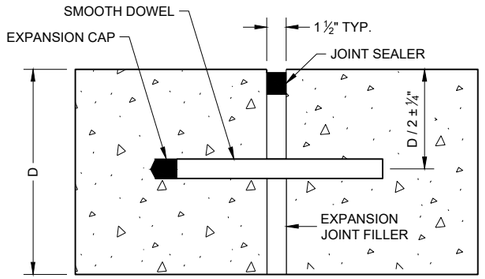
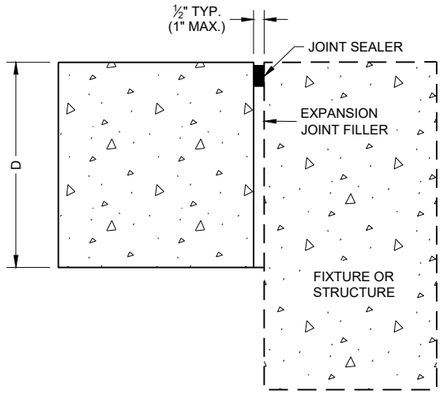



**DOWELED TRANSVERSE** (1)




**UNTIED - LONGITUDINAL**

## EXPANSION JOINTS

### TIE BAR TABLE

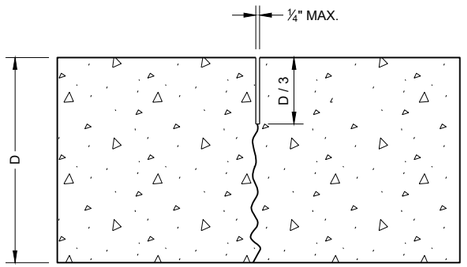
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|---|---|---|---|
| < 10 ½" | NO. 4 | 30" | 36" |
| ≥ 10 ½" | NO. 5 | 36" | 36" |
| | NO. 4 * | 30" | 24" ** |

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

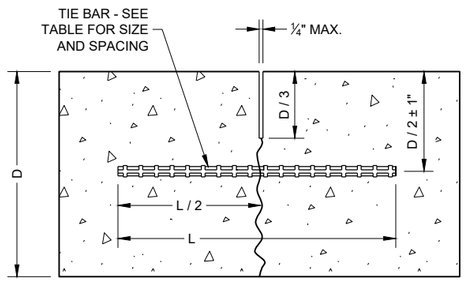
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

### GENERAL NOTES

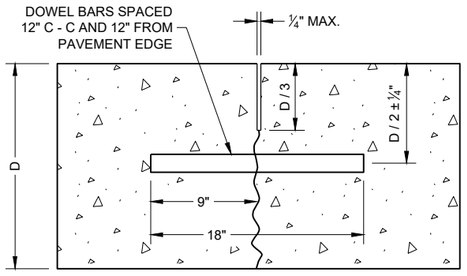
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.




**UNDOWELED TRANSVERSE**

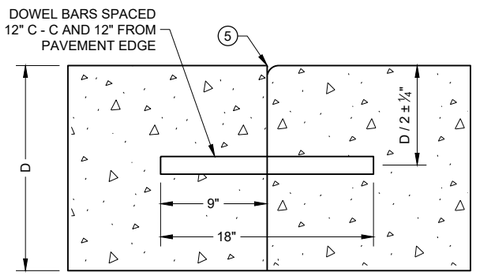



**TIED LONGITUDINAL**

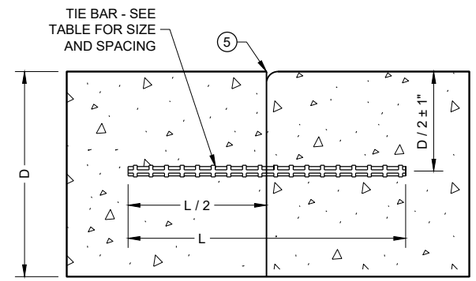



**DOWELED TRANSVERSE**

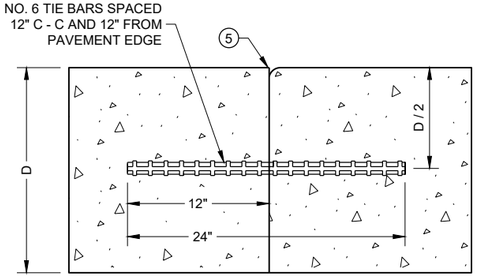
## CONTRACTION JOINTS (2)



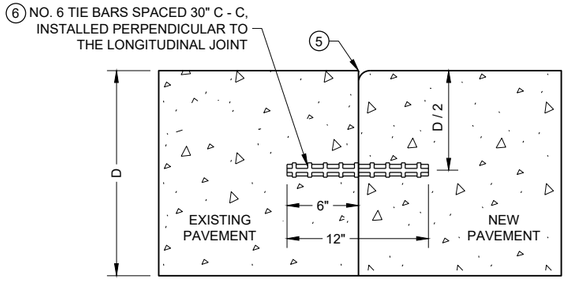

**DOWELED TRANSVERSE** (3)




**TIED LONGITUDINAL**




**TIED TRANSVERSE** (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)




**TIED LONGITUDINAL TO EXISTING**

## CONSTRUCTION JOINTS (4)

# CONCRETE PAVEMENT JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION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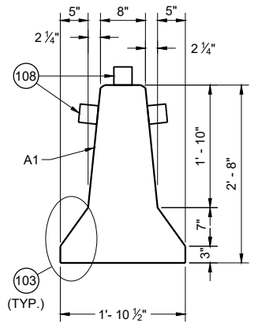
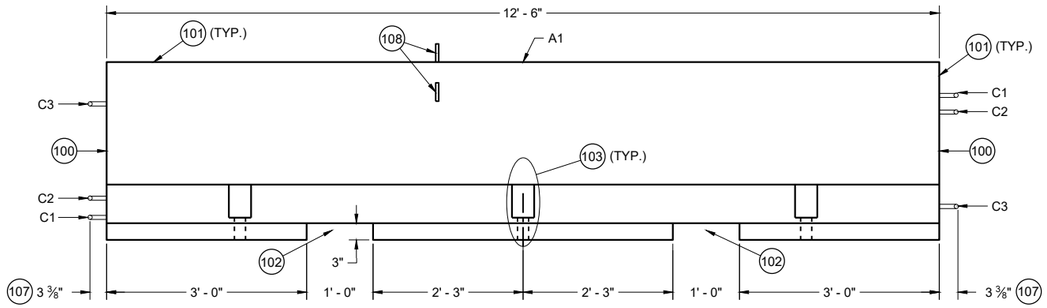
SDD 13C18 - 08c




**CROSS SECTION**




**PROFILE VIEW**

## GENERAL NOTES

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

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

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

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

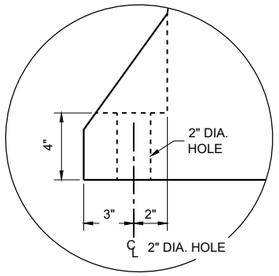
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

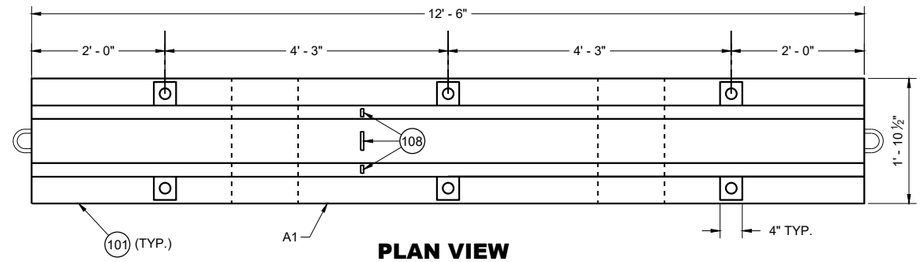
(106) 1" MIN. CLEAR COVER

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

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

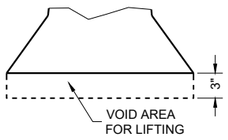



**ANCHOR BLOCK DETAIL**

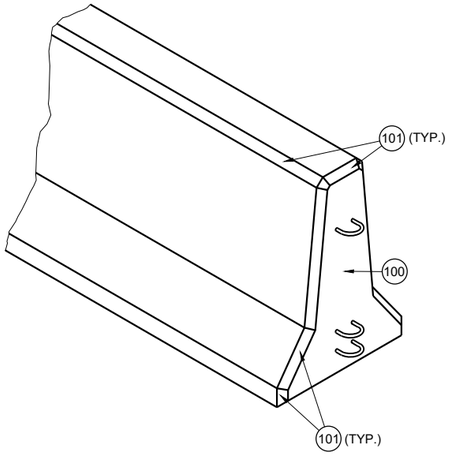


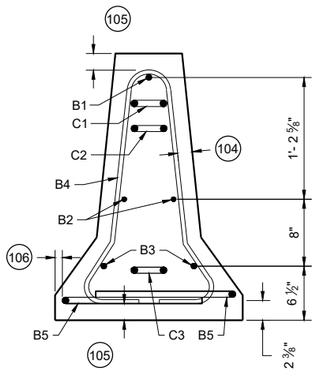

**PLAN VIEW**

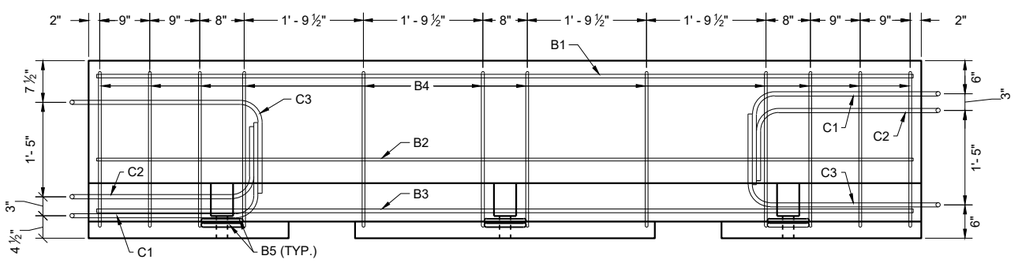
**TEMPORARY BARRIER**




**LIFTING SLOT DETAIL (TYP.)**




**PROFILE VIEW**

**TEMPORARY BARRIER REINFORCEMENT**

**CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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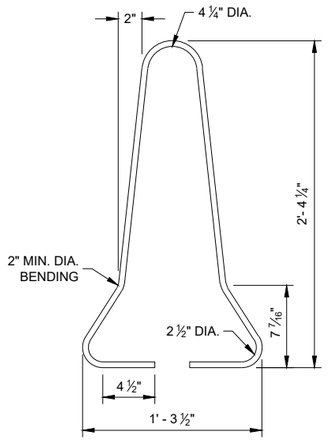
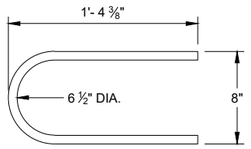
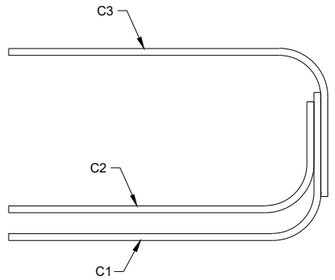



**B4 BAR DETAIL**

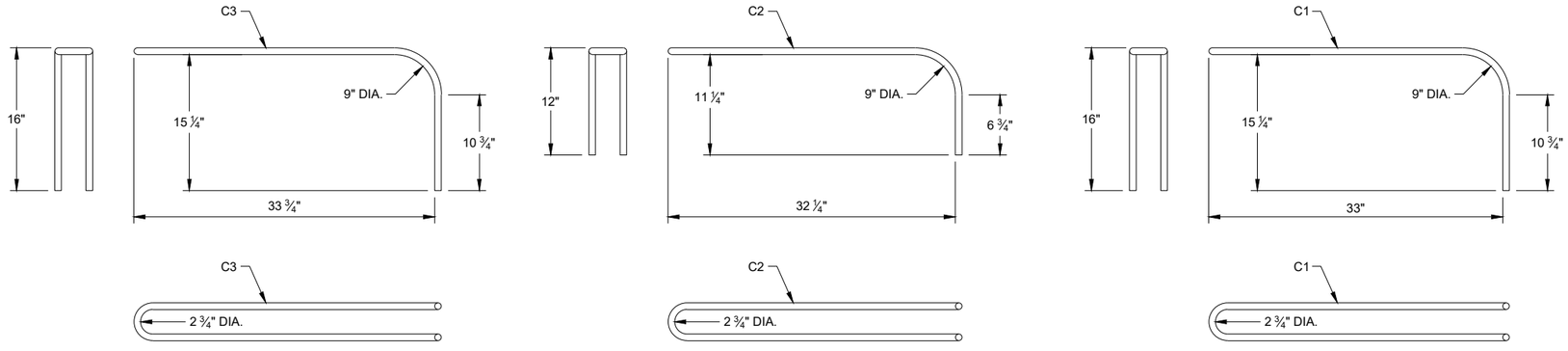



**B5 BAR DETAIL**




**PROFILE VIEW**

**LOOP BAR ASSEMBLY**




**C BAR DETAILS**

**CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





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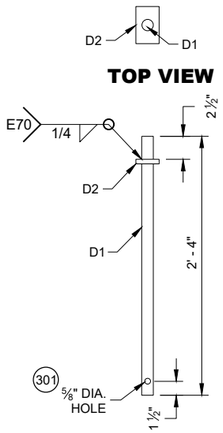
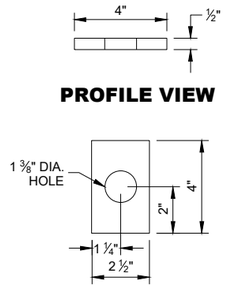
SDD 14B07-16b




**TOP VIEW**

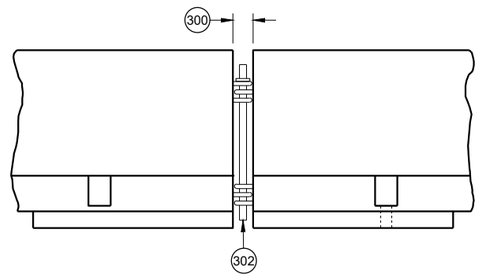
**PROFILE VIEW**

**CONNECTOR PIN ASSEMBLY**




**PROFILE VIEW**

**TOP VIEW D2**




**CONNECTING TEMPORARY BARRIER SECTIONS**

## GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

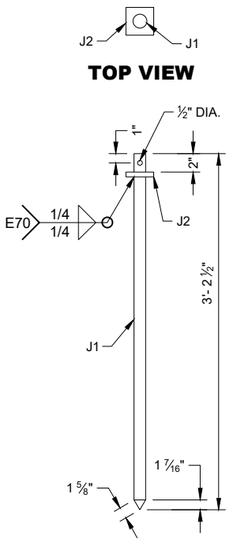
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

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

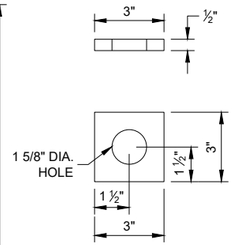
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



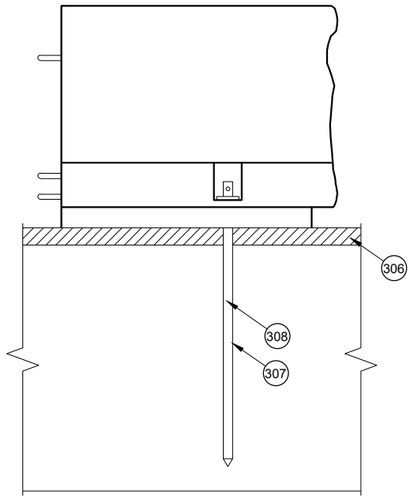

**TOP VIEW**

**PROFILE VIEW**

**ASPHALT ANCHOR PIN ASSEMBLY**

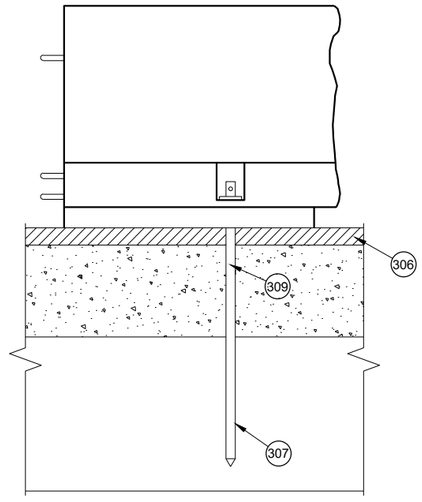



**TOP VIEW J2**



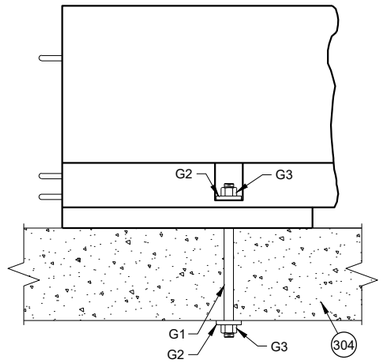

**SIDE VIEW**

**ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT**



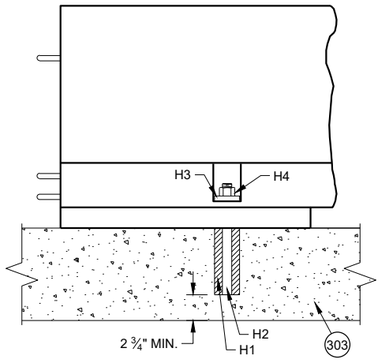

**SIDE VIEW**

**ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT**




**SIDE VIEW**

**THROUGH BOLT ANCHOR INSTALLATION** (305)




**SIDE VIEW**

**ADHESIVE ANCHOR INSTALLATION** (305)

**CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"**

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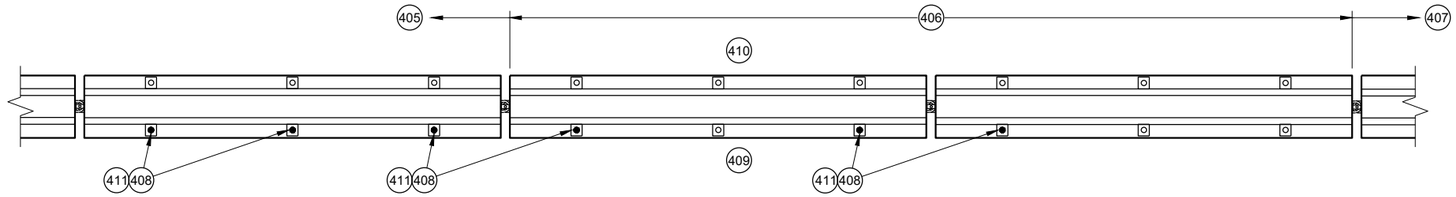
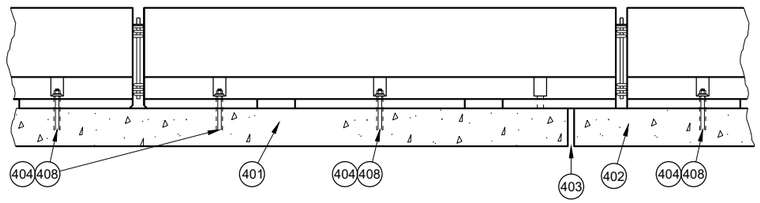


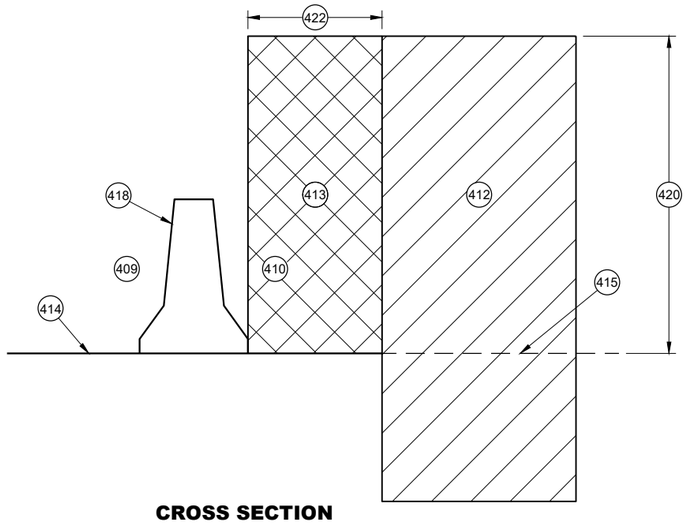

PLAN VIEW

## TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



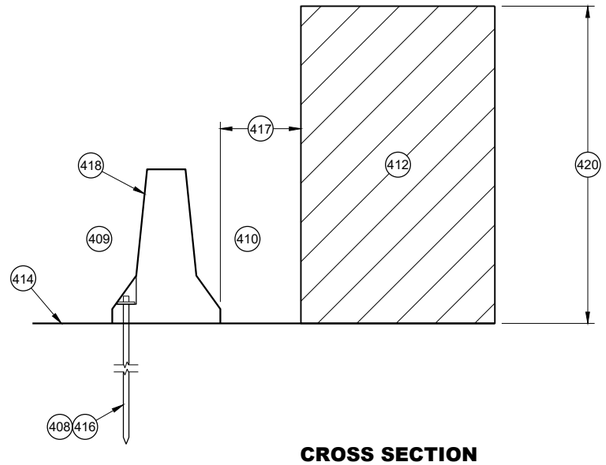

PROFILE VIEW

## ANCHORED BARRIER NEAR EXPANSION JOINT (400)



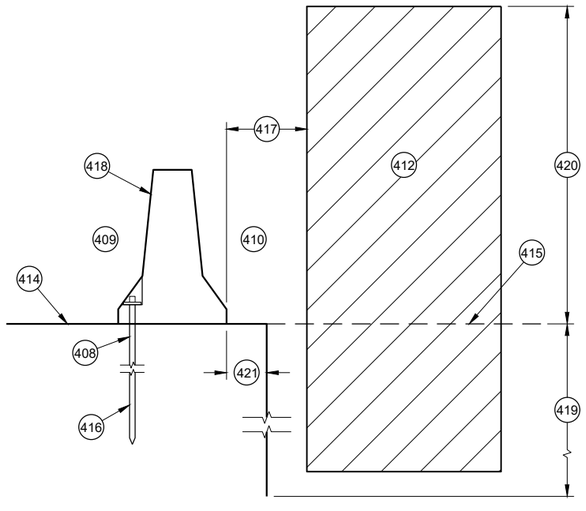

CROSS SECTION

## FREE STANDING BARRIER



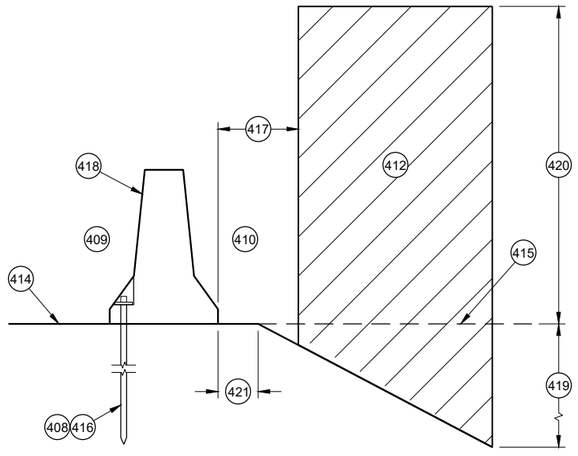

CROSS SECTION

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




CROSS SECTION

## ANCHORED BARRIER NEAR VERTICAL DROP OFF




CROSS SECTION

## ANCHORED BARRIER NEAR A SLOPE

## GENERAL NOTES

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

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

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

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

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

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

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

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

| | |
|---|---|
| CONCRETE PAVEMENT | 0.5' |
| ASPHALT | 0.5' |

(422) POSTED SPEED (MPH):

| | |
|---|---|
| 45 OR GREATER | 4.0' |
| 40 OR LOWER | 2.0' |

**CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





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SDD 14B07-16d

# BILL OF MATERIALS - CONCRETE BARRIER PRECAST

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

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





**CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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SDD 14B07-16m

## BILL OF MATERIALS - CONCRETE BARRIER PRECAST

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

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

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SDD 14B07-16n

**CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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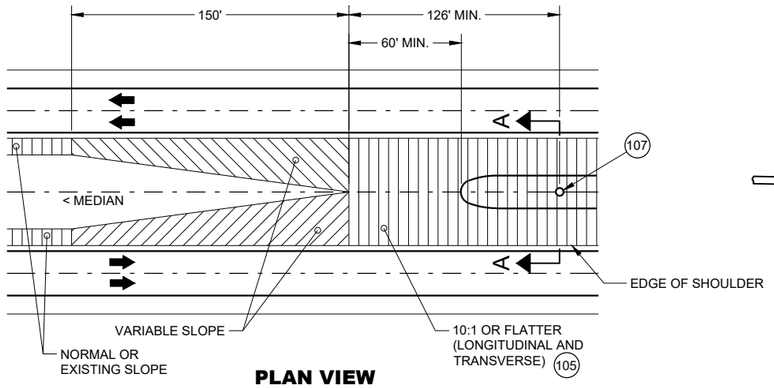
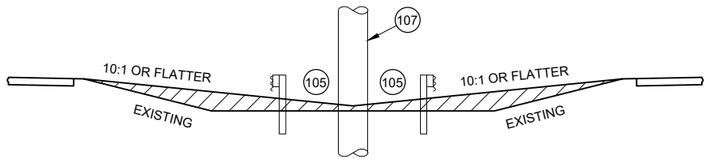
SDD 14B07-16n




**PLAN VIEW**
**GRADING AT BULLNOSE**
(ALL INSTALLATIONS)




**SECTION A -A**
**MEDIAN GRADING**
(ALL INSTALLATIONS)

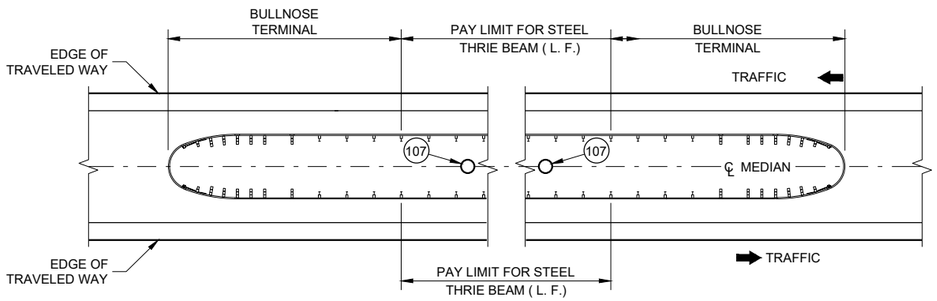
## GENERAL NOTES

THRIE BEAM RAILS MAY NEED TO BE FIELD BENT TO FIT THE LOCATION.

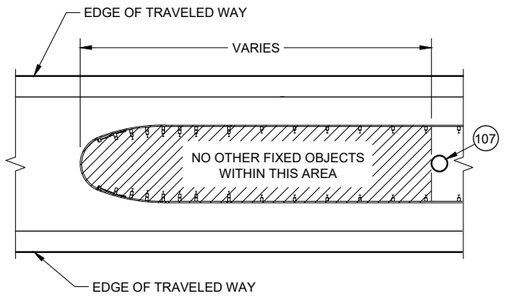
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½". MINIMUM DIAMETER OF THE ROCK REMOVAL IS 12" DIAMETER

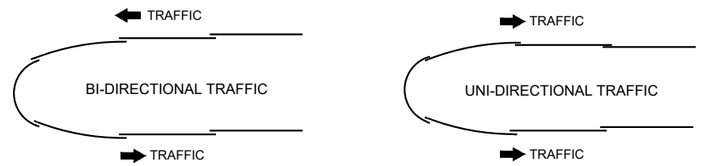
- E1 UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- E2 SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- E3 SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- E4 SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.
- (100) DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- (101) U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- (102) NOSE CABLE WITH SWAGGED END BUTTONS.
- (103) NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- (104) THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- (105) MINIMUM WORKING WIDTH 4' - 2".
- (106) MAX. WIDTH OF SYSTEM IS 14' - 2 ½" MEASURED FROM THE BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.
- (107) FIXED OBJECT OR OTHER HAZARD.
- (108) PLAN IS TO PROVIDE STATION OFFSET TO CENTER OF POST 5 IN PLANS.



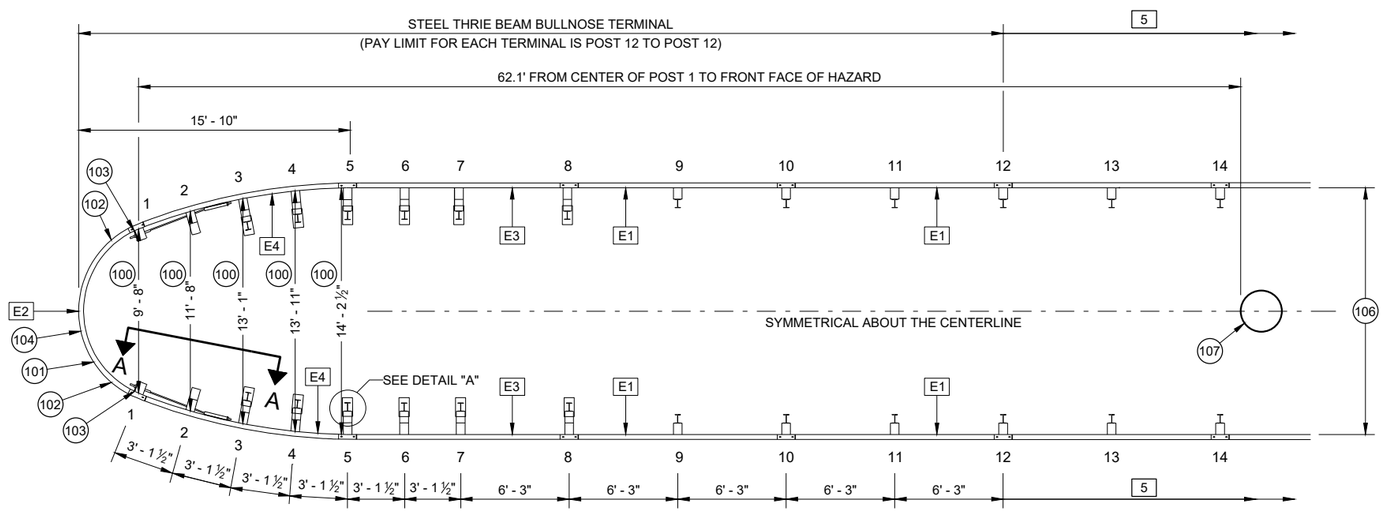

**MEDIAN HAZARD PROTECTION PAY LIMITS**



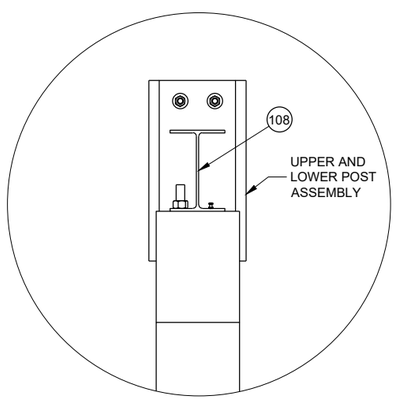

**HAZARD FREE AREA**
**INSIDE BULLNOSE**




**LAPPING DETAIL**




**PLAN VIEW**
**TYPICAL BULLNOSE LAYOUT**




**DETAIL "A"**

**STEEL THRIE BEAM**
**BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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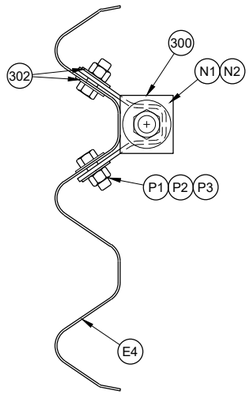
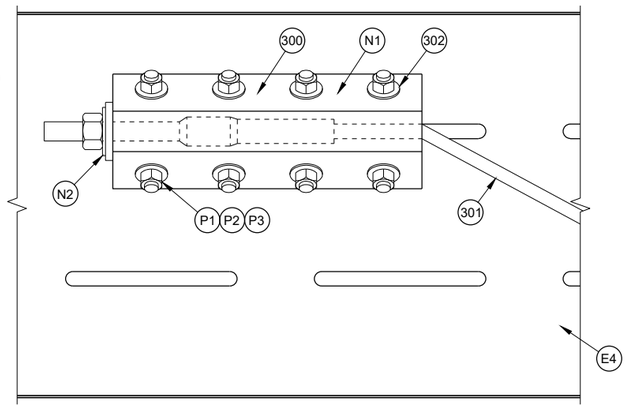
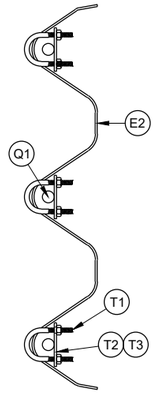



PROFILE VIEW

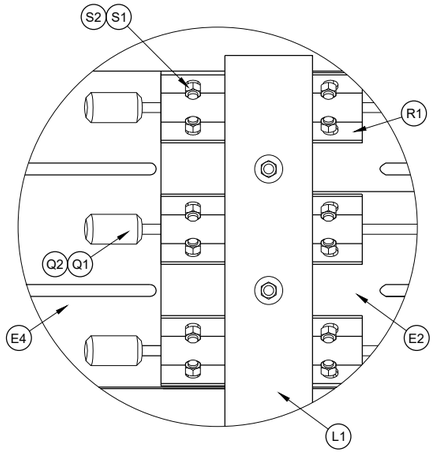
## CABLE ANCHOR ASSEMBLY CONNECTION



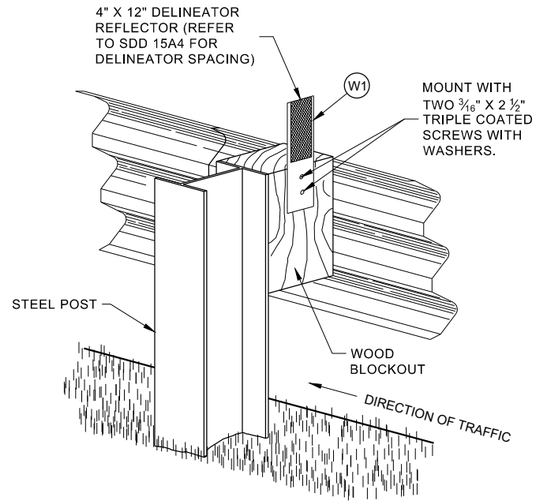

## CABLE ANCHOR ASSEMBLY



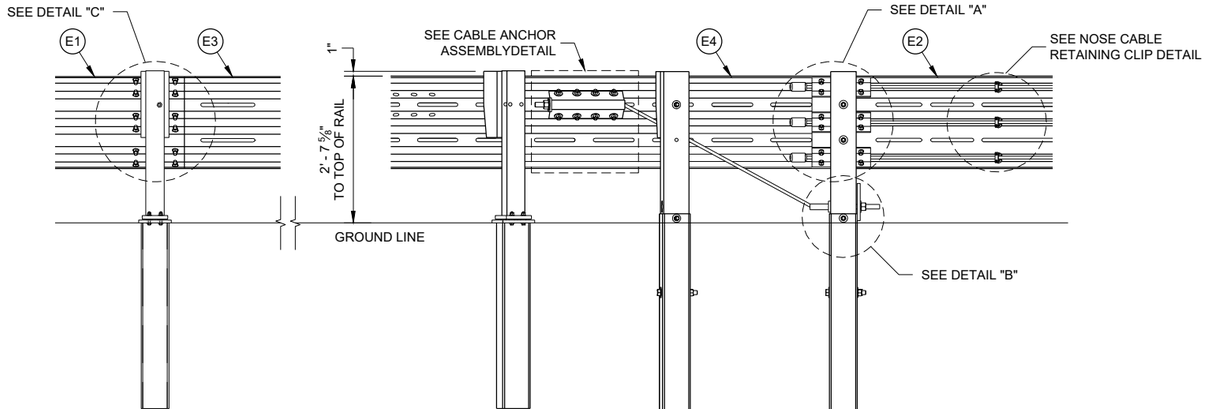

## NOSE CABLE RETAINING CLIP




## DETAIL "A"

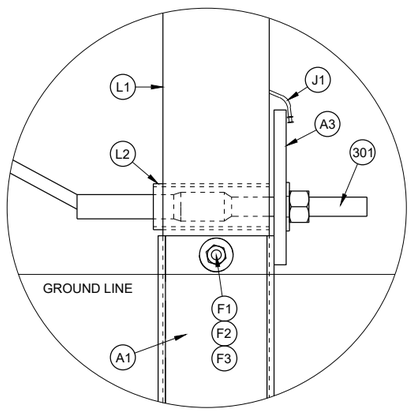



## ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

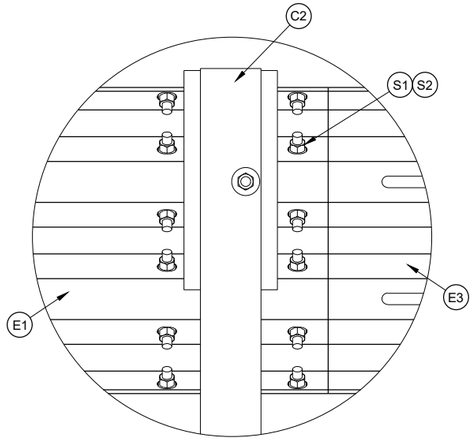



POST 8 POST 3 POST 2 POST 1

## CROSS SECTION A - A




## DETAIL "B"




## DETAIL "C" THRIE BEAM SPLICE

## GENERAL NOTES

(300) SEE ANCHOR BRACKET ASSEMBLY DETAIL.

(301) SEE ANCHOR CABLE ASSEMBLY DETAIL

(302) ONE WASHER BETWEEN BOLT HEAD AND RAIL AND BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

(303) ONE WASHER BETWEEN BOLD HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

**STEEL THRIE BEAM BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





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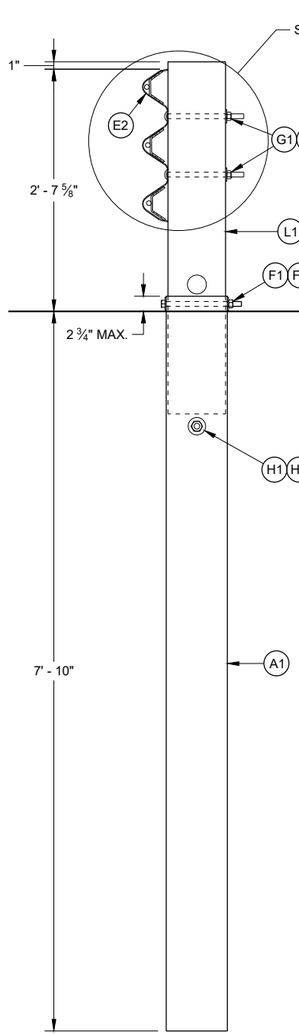
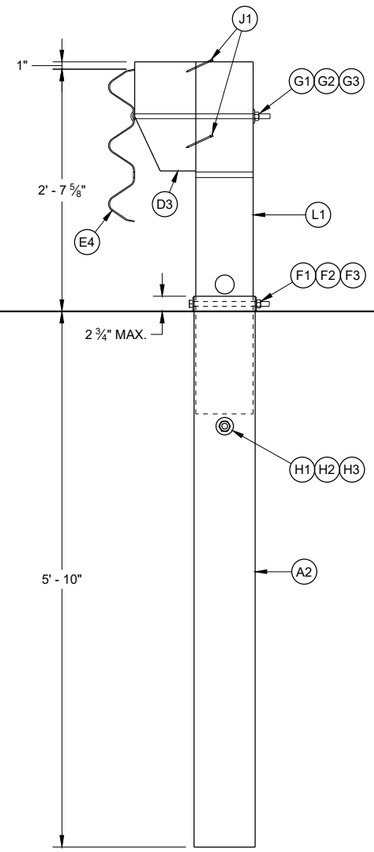
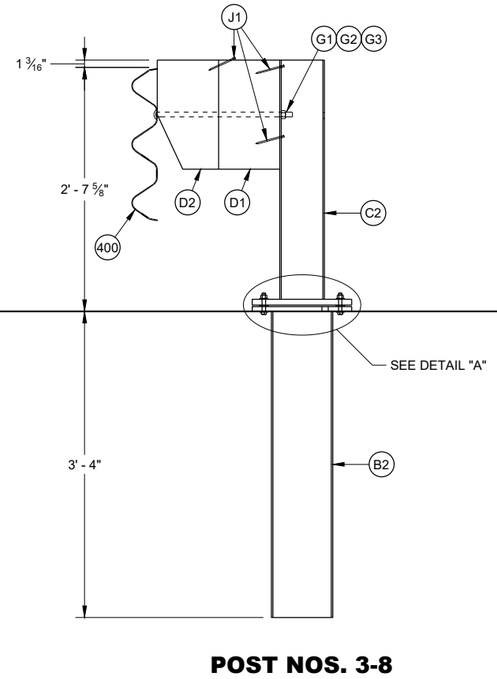
SDD 14B26 - 05c



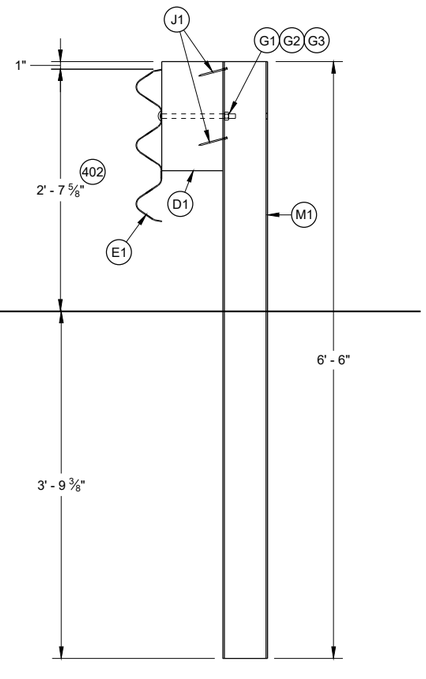

**POST NO. 1**




**POST NO. 2**




**POST NOS. 3-8**



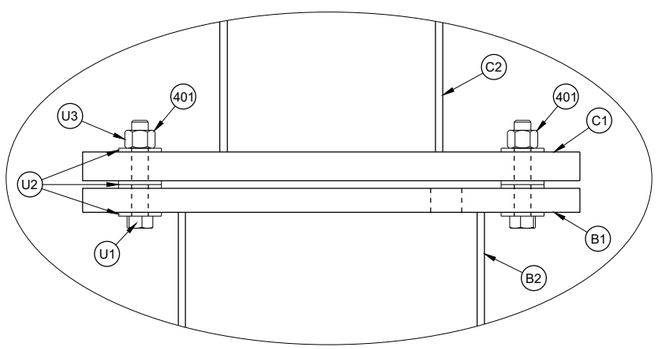

**POST NOS. 9 AND ALL STEEL THRIE BEAM POSTS BEYOND**

## GENERAL NOTES

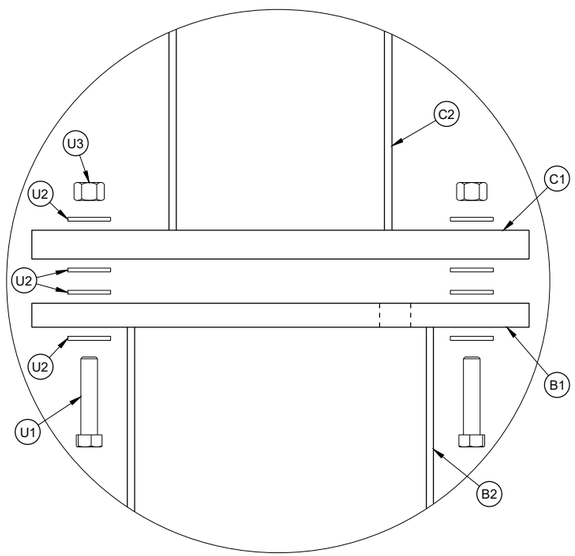
(400) RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.

(401) TORQUE BOLD BETWEEN 60-75 FT-LB

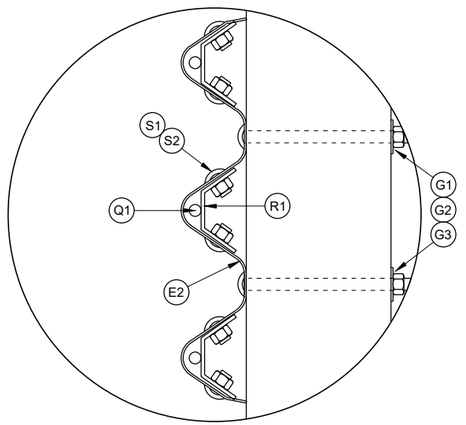
(402) HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".




**DETAIL "A"**




**EXPLODED VIEW**
**DETAIL "A"**




**DETAIL "B"**

**STEEL THRIE BEAM BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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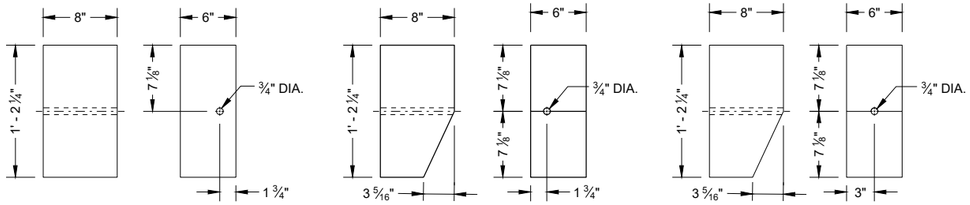
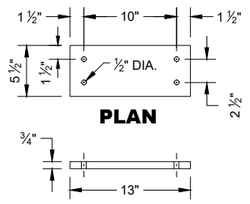



ELEVATION PROFILE
**BLOCKOUT (D1)**

ELEVATION PROFILE
**BLOCKOUT (D2)**

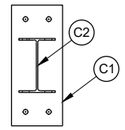
ELEVATION PROFILE
**BLOCKOUT (D3)**



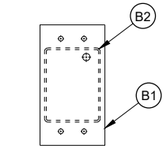

PLAN

PROFILE

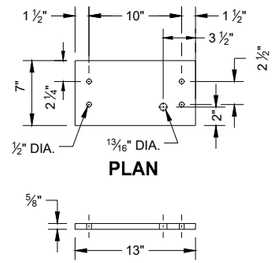
**UPPER SHEAR PLATE (C1)**




PLAN



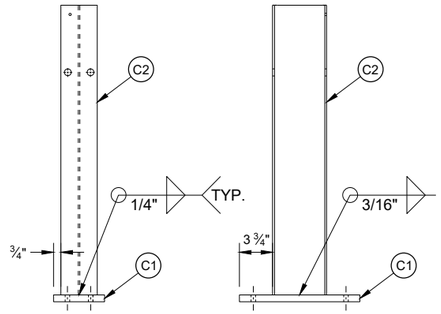

PLAN



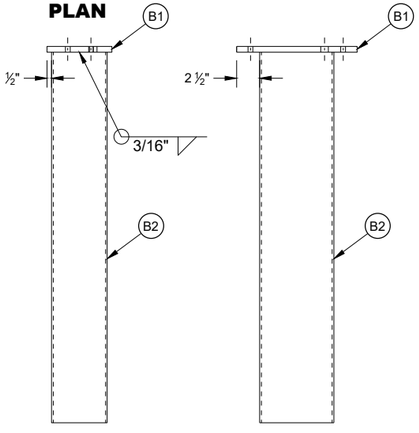

PLAN

PROFILE

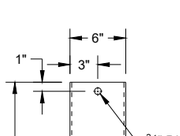
**LOWER SHEAR PLATE (B1)**




ELEVATION PROFILE
**UPPER POST ASSEMBLY**

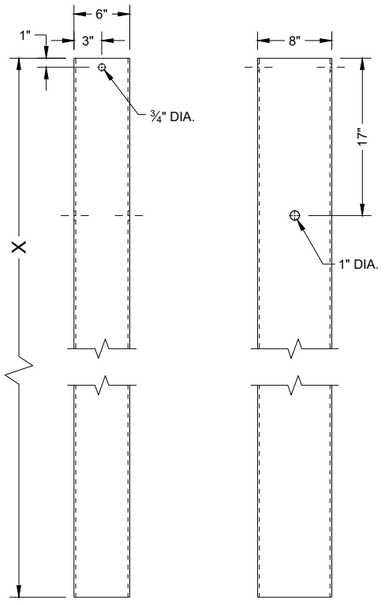



ELEVATION PROFILE
**LOWER POST ASSEMBLY**

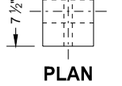



PLAN

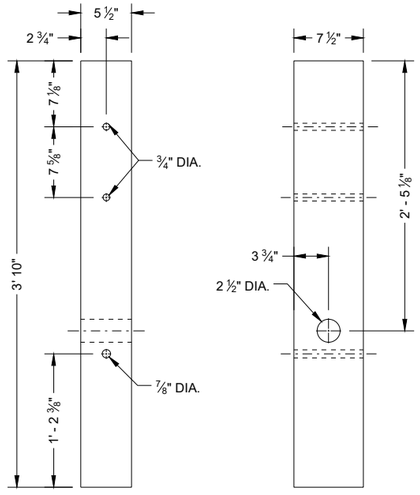
| PART | LENGTH "X" |
|---|---|
| A1 | 8' - 0" |
| A2 | 6' - 0" |
| B2 | 3' - 4" |



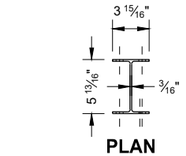

ELEVATION PROFILE
**FOUNDATION TUBE**



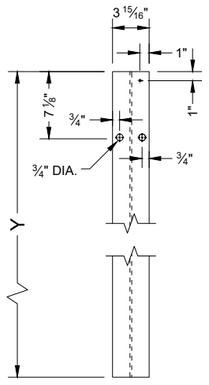

PLAN




ELEVATION PROFILE
**BCT POST (L1)**




PLAN




ELEVATION
**POST**

| PART | LENGTH "Y" |
|---|---|
| M1 | 6' - 6" |
| M2 | 5' - 8 5/8" |
| C2 | 2' - 7 5/8" |

**STEEL THRIE BEAM BULLNOSE TERMINAL**

STATE OF WISCONSIN
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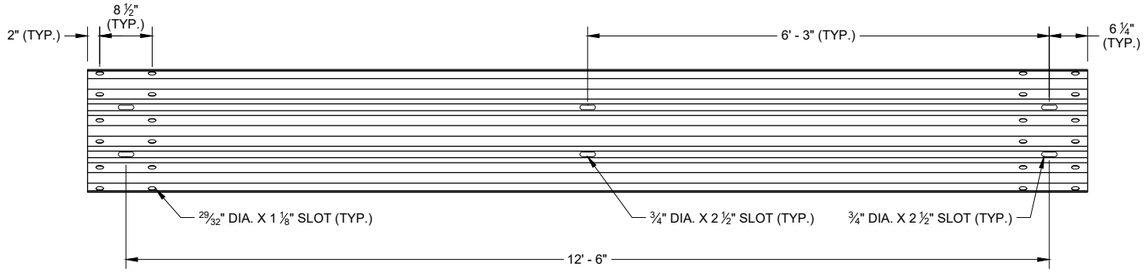
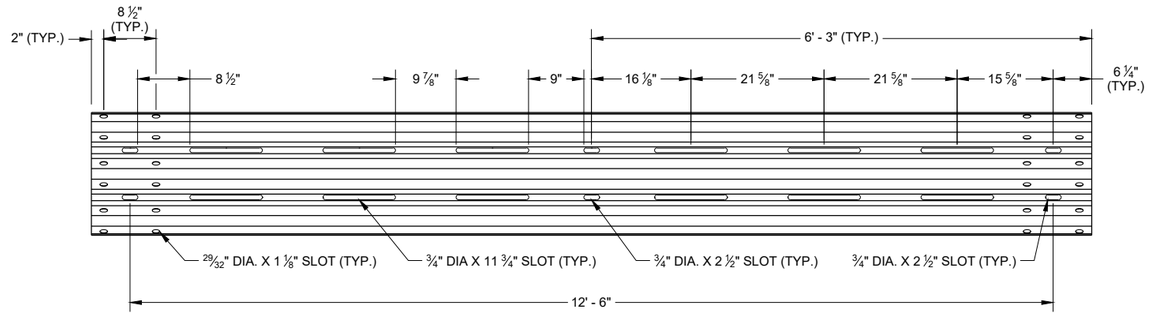
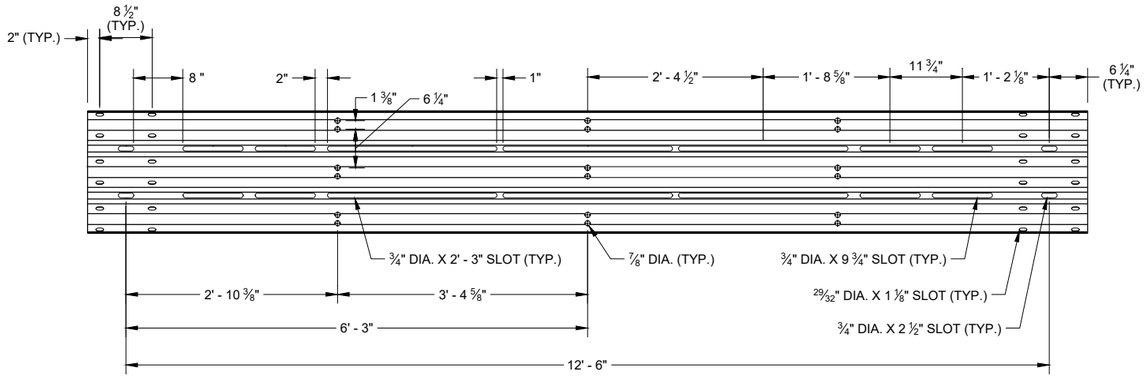


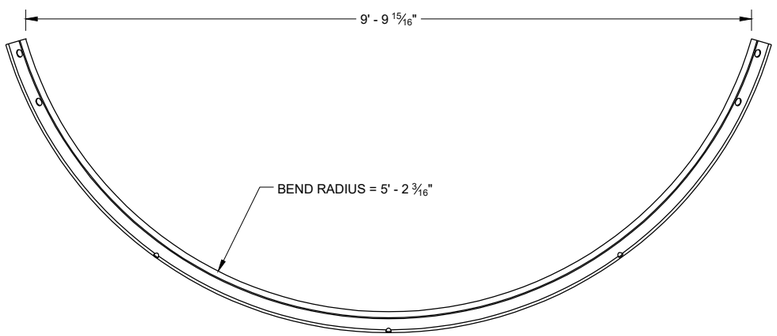

**SLOTTED THRIE BEAM RAIL E1**



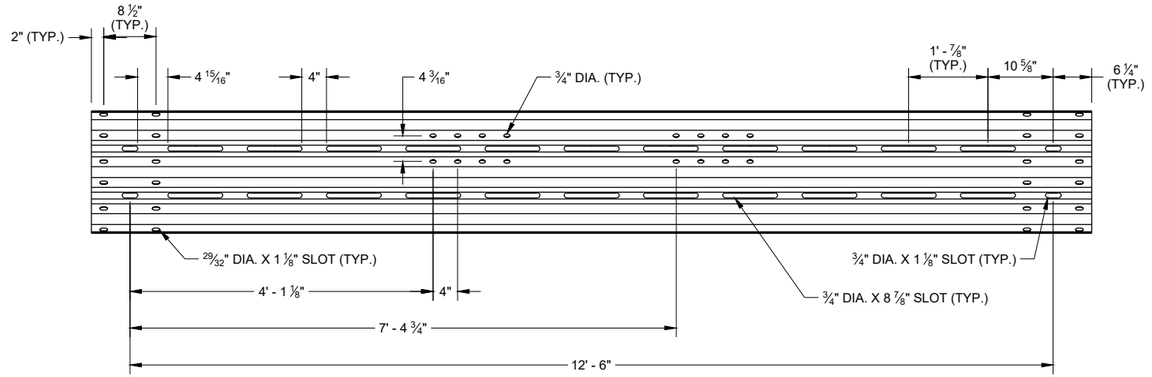

**SLOTTED THRIE BEAM RAIL E3**



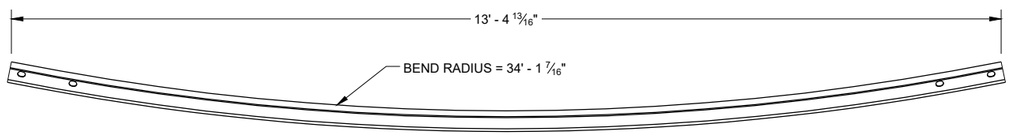

**ELEVATION VIEW NON - RADIUSED**
**SLOTTED THRIE BEAM RAIL E2**




**PLAN VIEW**
**SLOTTED THRIE BEAM RAIL E2**




**ELEVATION VIEW NON - RADIUSED**
**SLOTTED THRIE BEAM RAIL E4**




**PLAN VIEW**
**SLOTTED THRIE BEAM RAIL E4**

**STEEL THRIE BEAM BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





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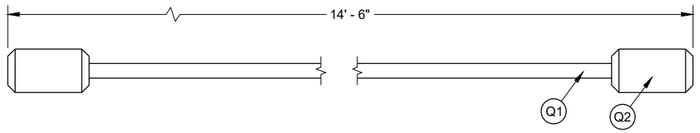
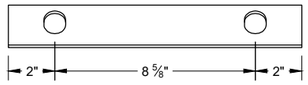
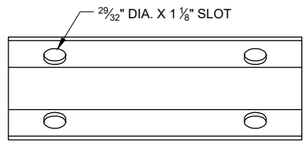


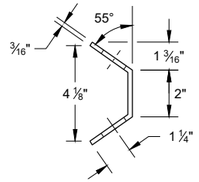

**NOSE CABLE AND SWAGE BUTTON**




**PLAN VIEW**

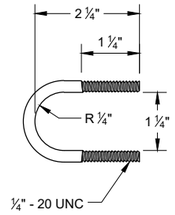



**ELEVATION VIEW**

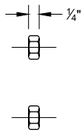



**PROFILE VIEW**

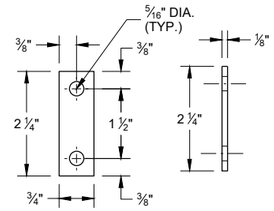
**NOSE CABLE ANCHOR (R1)**




**U - BOLT (T1)**

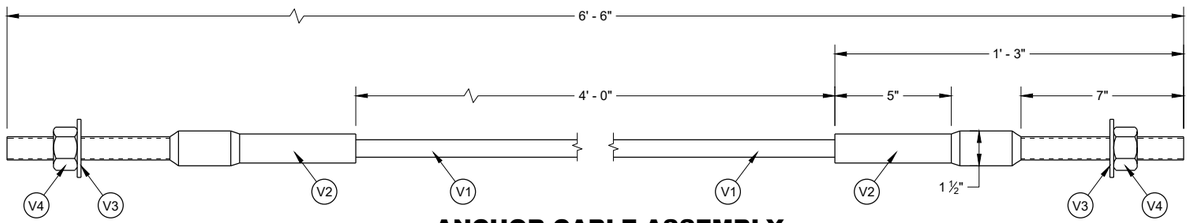



**U - BOLT NUT (T3)**

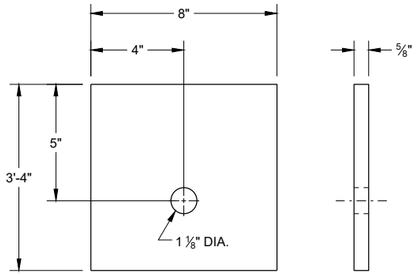



**ELEVATION VIEW** **PROFILE VIEW**

**U - BOLT PLATE WASHER (T2)**

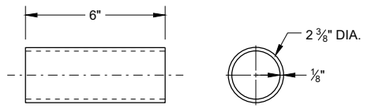



**ANCHOR CABLE ASSEMBLY**



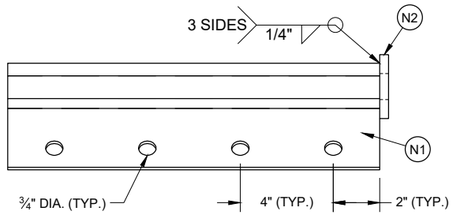

**ELEVATION VIEW** **PROFILE VIEW**

**BCT BEARING PLATE (A3)**

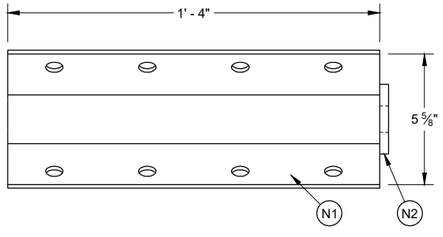



**ELEVATION VIEW** **PROFILE VIEW**

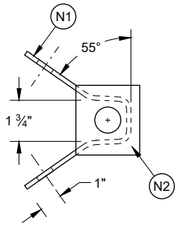
**BCT POST SLEEVE (L2)**




**PLAN VIEW**

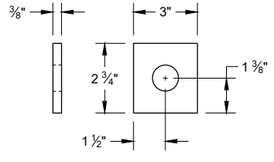



**ELEVATION VIEW**




**PROFILE VIEW**

**ANCHOR BRACKET ASSEMBLY (N1)**




**ANCHOR BRACKET END PLATE (N2)**

**STEEL THRIE BEAM BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA





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# BILL OF MATERIALS LIST

| PART NUMBER | DESCRIPTION | MATERIAL SPECIFICATION |
|---|---|---|
| A1 | LONG FOUNDATION TUBE | AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501 |
| A2 | FOUNDATION TUBE | AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501 |
| A3 | BEARING PLATE AT POST | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| B1 | LOWER SLIP POST ASSEMBLY - PLATE | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| B2 | LOWER SLIP POST ASSEMBLY - TUBE | AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501 |
| C1 | UPPER SLIP POST ASSEMBLY - PLATE | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| C2 | UPPER SLIP POST ASSEMBLY - POST | AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| D1 | BLOCK FOR STEEL POST - WOOD | WISDOT SPEC. 614 |
| D2 | TAPERED BLOCK FOR STEEL POST - WOOD | WISDOT SPEC. 614 |
| D3 | TAPERED BLOCK FOR BCT POST - WOOD | WISDOT SPEC. 614 |
| E1 | THRIE BEAM RAIL | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER |
| E2 | THRIE BEAM RAIL - SHOP BENT AND PUNCHED | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS. |
| E3 | THRIE BEAM RAIL - PUNCHED | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER |
| E4 | THRIE BEAM RAIL - SHOP BENT AND PUNCHED | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS. |
| F1 | 5/8" DIA. HEX HEAD GROUND STRUT AND YOKE BOLT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36 |
| F2 | 5/8" DIA. GROUND STRUT AND YOKE BOLT - WASHER | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY) |
| F3 | GROUND STRUT AND YOKE BOLT - NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |
| G1 | 5/8 " DIA. POST BOLT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD) |
| G2 | POST BOLT - WASHER | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD) |
| G3 | POST BOLT - NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |
| H1 | 7/8" DIA. SOIL TUBE BOLT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5 |
| H2 | SOIL TUBE BOLT - WASHER | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDEN WASHER ONLY) |
| H3 | SOIL TUBE BOLT - NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5 |
| J1 | 16D DOUBLE HEAD NAIL | ASTM A153 HOT DIPPED CLASS D DOUBLE HEAD ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED) |
| L1 | BCT TIMBER POST | WISDOT SPEC. 614 S4S FINISH ON 4 SIDE |
| L2 | BCT POST SLEEVE | AASHTO M111/ASTM A123 2 3/8" OD ASTM 53 GRADE B |
| M1 | W6X8.5 OR W6X9 STEEL POST | AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| M2 | W6X8.5 OR W6X9 STEEL POST | AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| N1 | ANCHOR BRACKET | AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| N2 | ANCHOR BRACKET - BEARING PLATE | AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |

| PART NUMBER | DESCRIPTION | MATERIAL SPECIFICATION |
|---|---|---|
| P1 | 5/8" DIA. ANCHOR BRACKET BOLT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36 |
| P2 | ANCHOR BRACKET BOLT - WASHER | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY) |
| P3 | SOIL TUBE BOLT - NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |
| Q1 | 5/8" DIA. NOSE CABLE | 6X19 AASTHO M30 / ASTM A741 XIPS INDEPENDENT WIRE CORE (IWRC) PR 6X25 XIPS, IWRC NOMINAL BREAKING STRENGTH OF 41.2 KIPS. |
| Q2 | NOSE CABLE-SWAGE BUTTON | COLD TUFF BUTTON, S-409 SIZE NO. 12 STOCK NUMBER 1040395 OR ANY OTHER SIMILAR SIZED WAGED-GRIP-BUTTON FERRULES. ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FIELD SWAGED PER MANUFACTURERS RECOMMENDATION. NOMINAL BREAKING STRENGTH OF 41.2 KIPS. |
| R1 | NOSE CABLE ANCHOR BRACKET | AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |
| S1 | 5/8" DIA. SPLICE BOLT - BOLT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36 |
| S2 | SPLICE - BOLT NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD 5/8" ASTM A563DH OR SAE J995 GRADE 5 |
| T1 | 1/4" DIA. NOSE CABLE - U BOLT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36 |
| T2 | U-BOLT - PLATE WASHER | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY) |
| T3 | U-BOLT NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |
| U1 | 7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT | ASTM A153 OR B695 CLASS 55 OR F2329 UNC FULLY THREADED HEX HEAD TAP BOLT ASTM A449 OR SAE J429 GRADE 5 |
| U2 | 7/16" DIA. SLIP POST ASSEBLY - BREAKAWAY BOLT - WASHER | ASTM F436 TYPE I (HARDEN TYPICALLY USED WITH STEEL) GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO POST BOLT CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 55, F2329 |
| U3 | SLIP POST ASSEBLY - BREAKAWAY BOLT - NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / STM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |
| V1 | ¾" DIA. BCT CABLE | AASHTO M30 / ASTM A741 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN BREAKING STRENGTH OF 42.7 KIPS |
| V2 | ANCHOR CABLE-SWAGE FITTING | UNC ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FACTORY SWAGED. MIN. BREAKING STRENGTH OF 42.7 KIPS. ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS." |
| V3 | 1" DIA. ANCHOR CABLE-WASHER | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY) |
| V4 | 1" DIA. ANCHOR CABLE-NUT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |
| W1 | REFLECTOR | SEE SDD 15A4 |

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SDD 14B26 - 05h

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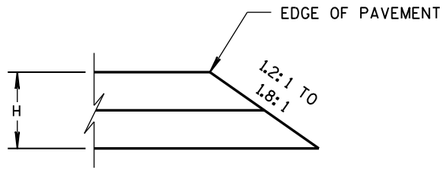
SDD 14B26 - 05h

**STEEL THRIE BEAM BULLNOSE TERMINAL**

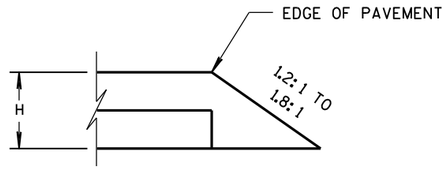
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



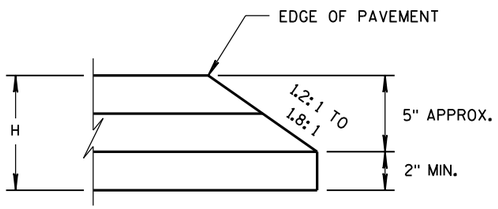

CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS




CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS

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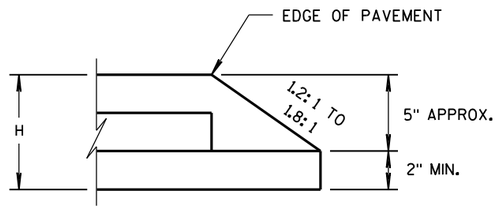
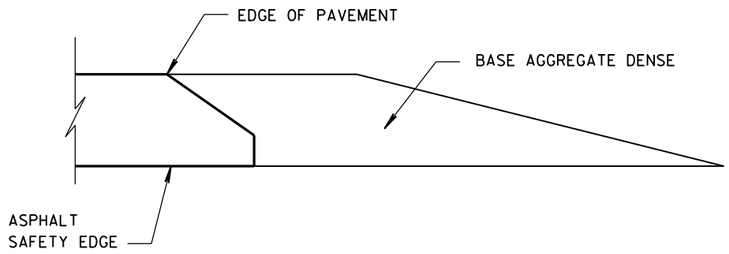
FOR H GREATER THAN 5"




CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

## HMA PAVEMENT AND HMA OVERLAYS




## FINISHED SHOULDER AGGREGATE PLACEMENT

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

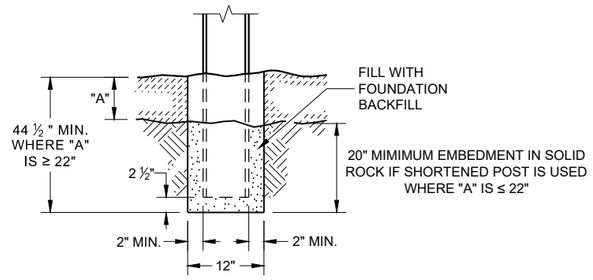
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS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

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

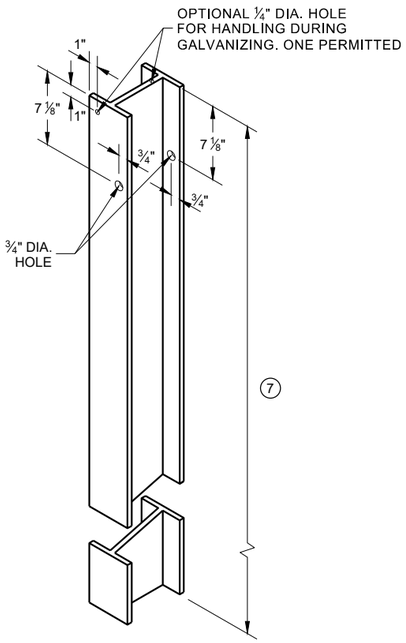
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

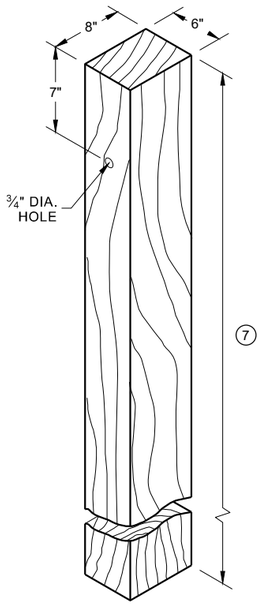
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



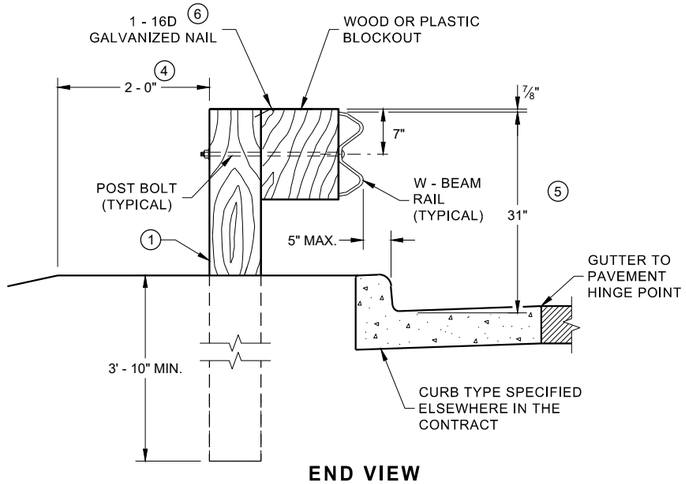

END VIEW
**SETTING STEEL OR WOOD POST IN ROCK** (3)



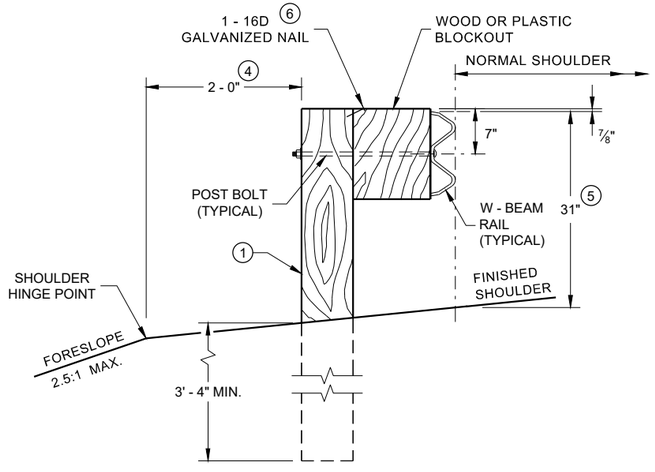

**STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9)** (1)



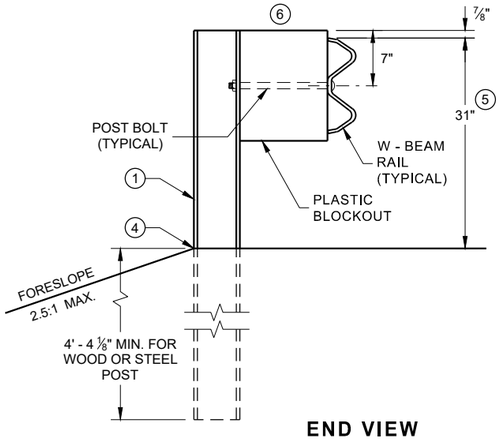

**WOOD POST (6" X 8") NOMINAL** (1)



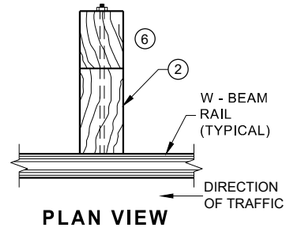

END VIEW
**LOCATED ALONG A CURBED ROADWAY**



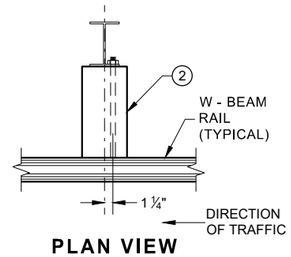

END VIEW
**LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION**



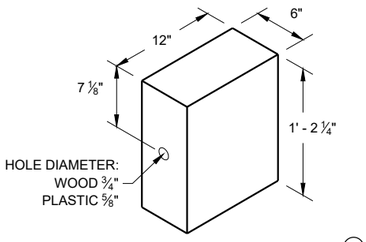

END VIEW
**MGS LONGER POST AT HALFPOST SPACING W BEAM (K)**




PLAN VIEW
**WOOD POST, BLOCKOUT & BEAM**




PLAN VIEW
**STEEL POST, PLASTIC BLOCKOUT & BEAM**




**WOOD OR PLASTIC BLOCKOUT** (2)

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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SDD 14B42 - 07a

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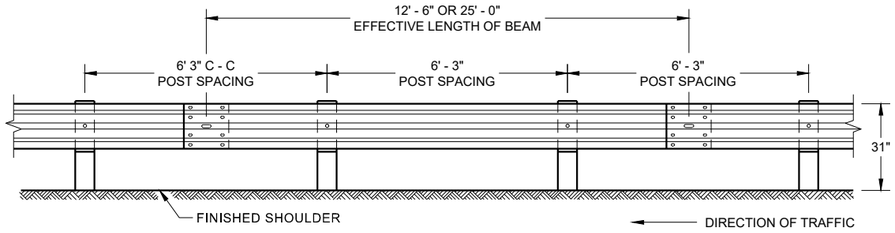
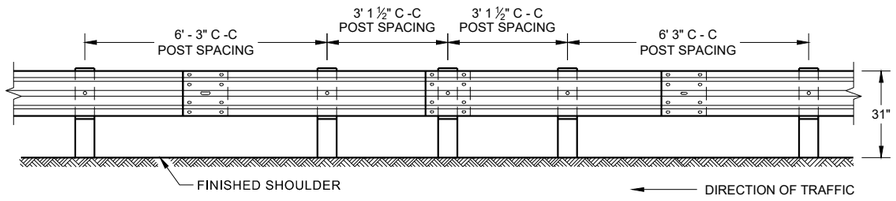
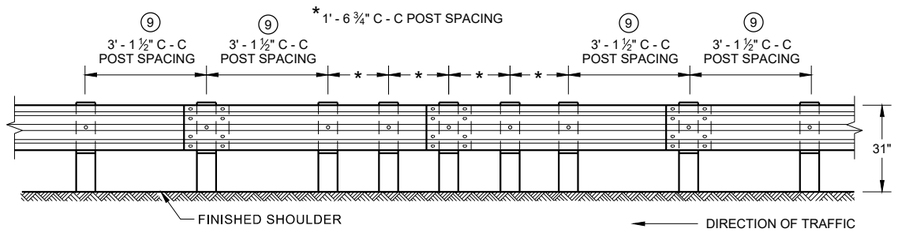
SDD 14B42 - 07a



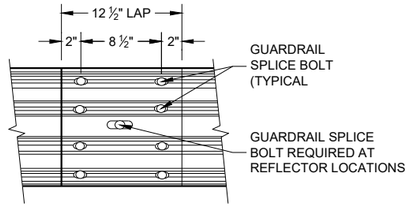

**FRONT VIEW**
**POST SPACING STANDARD INSTALLATION**



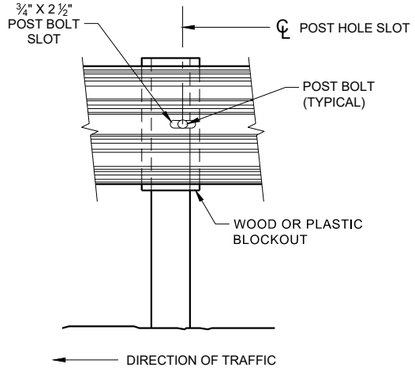

**FRONT VIEW**
**HALF POST SPACING (HS) AND**
**HALF POST SPACING WITH LONGER POSTS (K)**



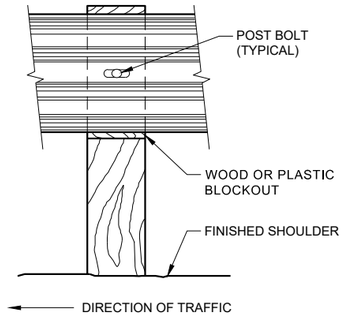

**FRONT VIEW**
**QUARTER POST SPACING (QS)**



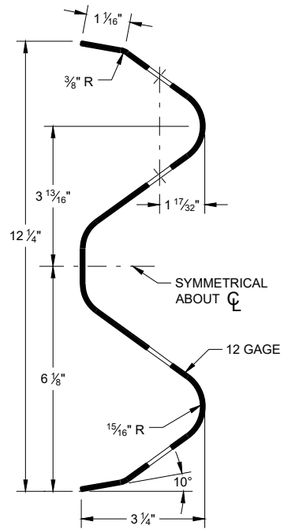

**FRONT VIEW**
**MID-SPAN BEAM SPLICE**



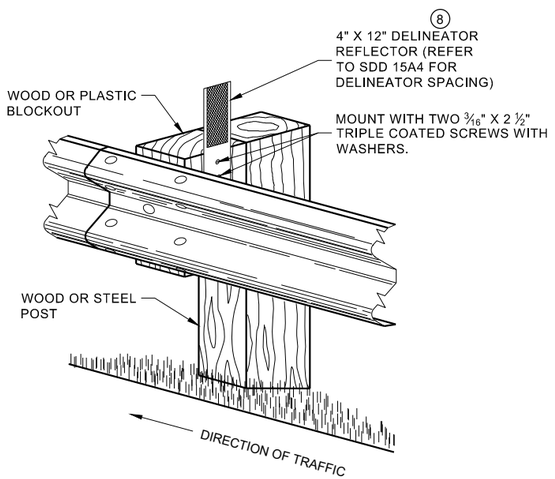

**FRONT VIEW AT STEEL POST**




**FRONT VIEW AT WOOD POST**




**SECTION THRU W-BEAM RAIL**




**ONE SIDED REFLECTOR DETAIL**
**AND TYPICAL INSTALLATION**

## GENERAL NOTES

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

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

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

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

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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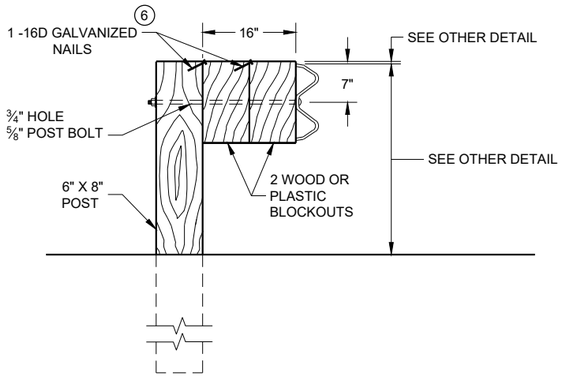
SDD 14B42 - 07b

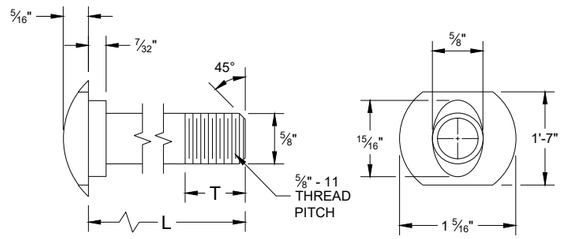



## DETAIL FOR 16" BLOCKOUT DEPTH

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

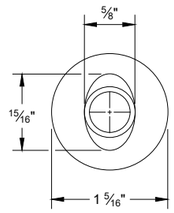
NOTE:

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

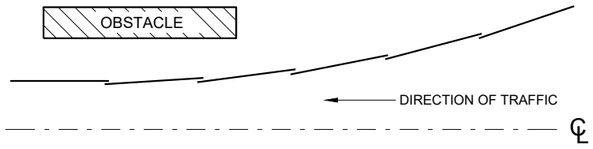



## POST BOLT TABLE

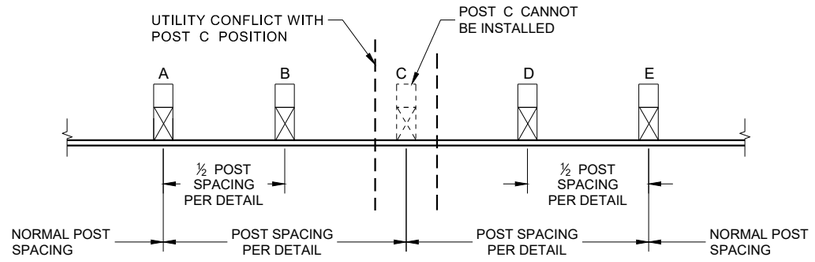
| L | T (MIN.) |
|---|---|
| 1 ¼" | 1 ⅛" |
| 2" | 1 ¾" |
| 10" | 4" |
| 14" | 4 1⁄16" |
| 18" | 4" |
| 21" | 4 1⁄16" |
| 25" | 4" |



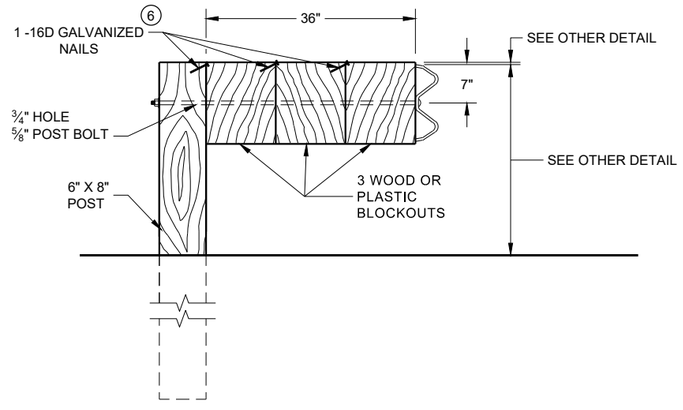

## ALTERNATE BOLT HEAD



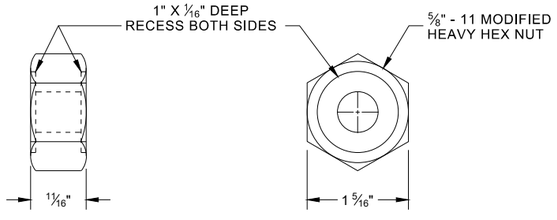

## PLAN VIEW
## BEAM LAPPING DETAIL



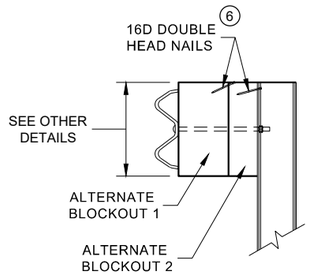

## POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



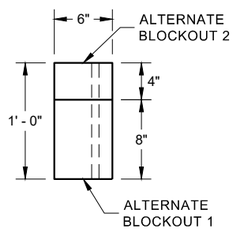

## DETAIL FOR 36" BLOCKOUT DEPTH




## POST BOLT, SPLICE BOLT AND RECESS NUT




## SIDE VIEW




## PLAN VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL

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

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

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

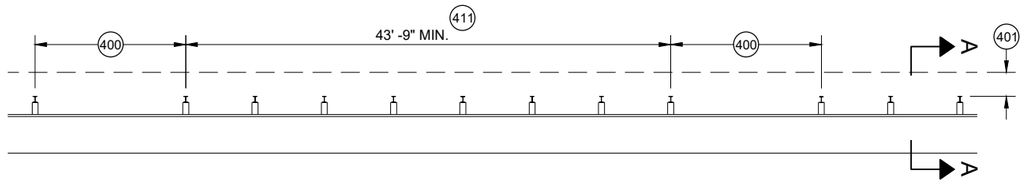
**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

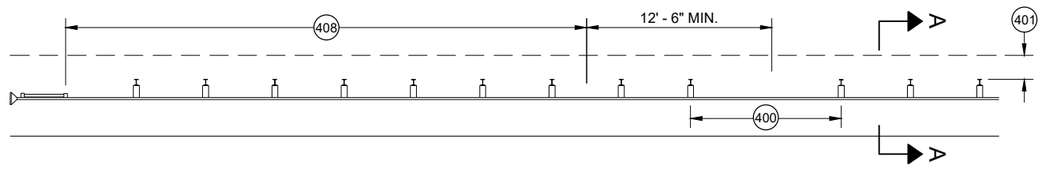



6

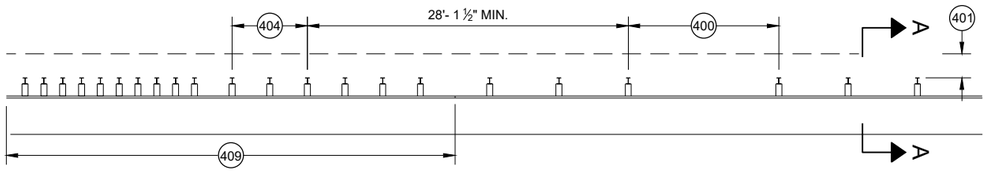

SDD 14B42 - 07c



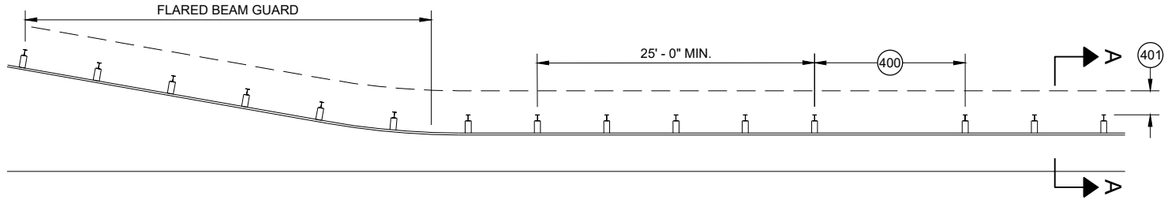

**MISSING POST IN MGS GUARDRAIL**



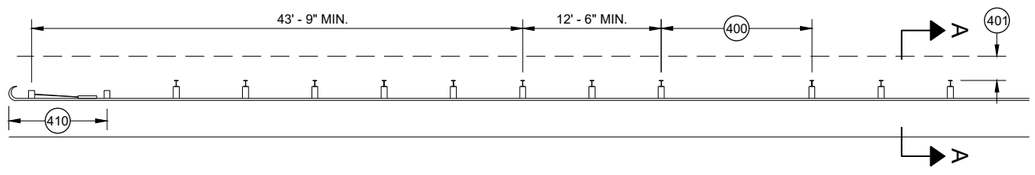

**MISSING POST IN MGS GUARDRAIL NEAR EAT**



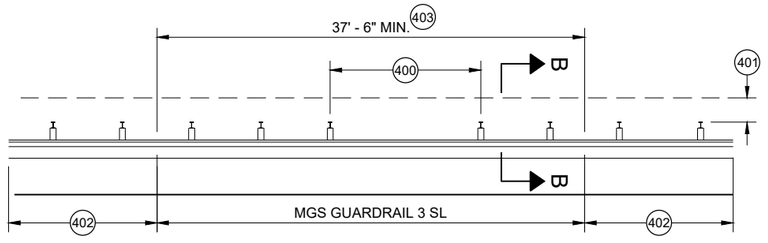

**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**




**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

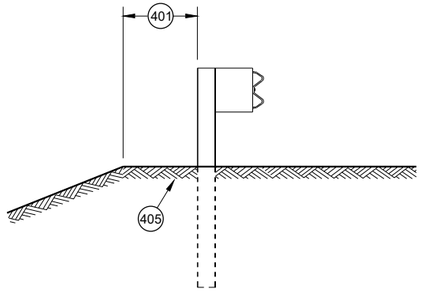



**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

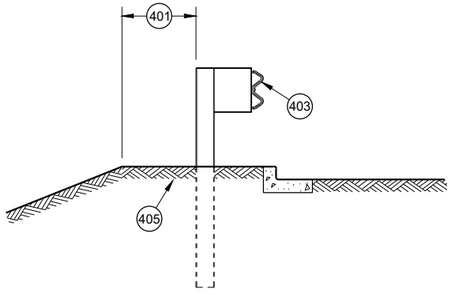



**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)** 407

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




**SECTION A - A** 406




**SECTION B - B** 406

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 14B42 - 07d

## GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

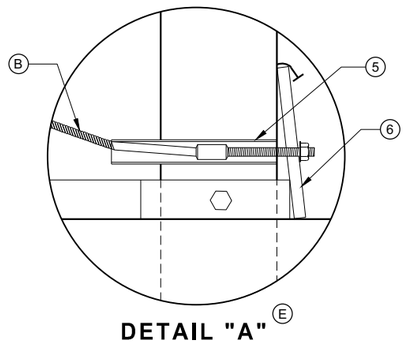
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

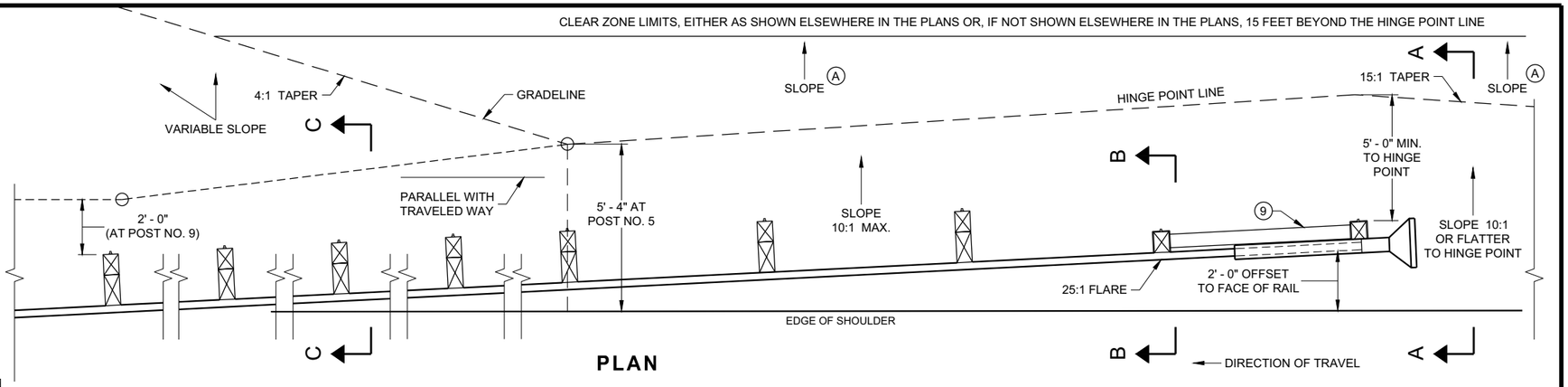
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

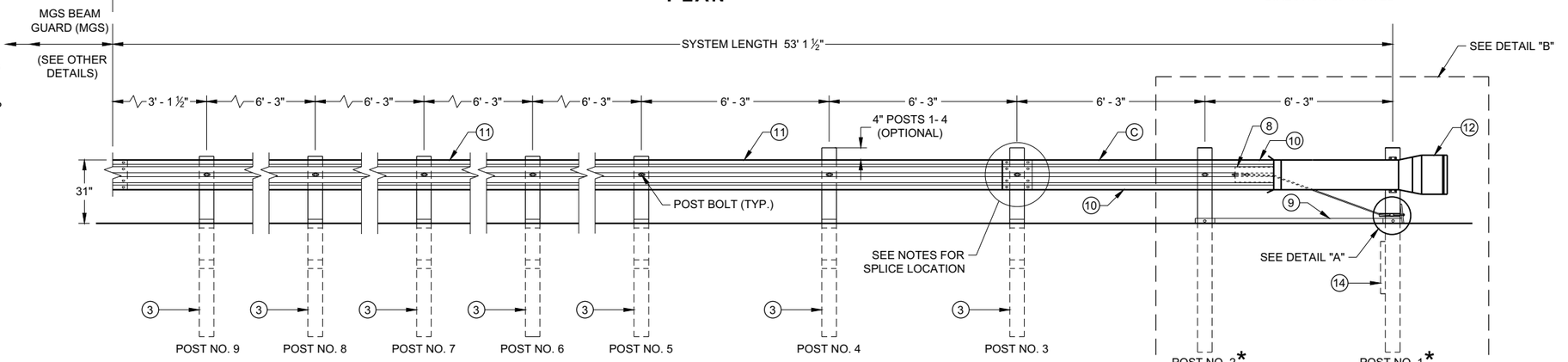
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



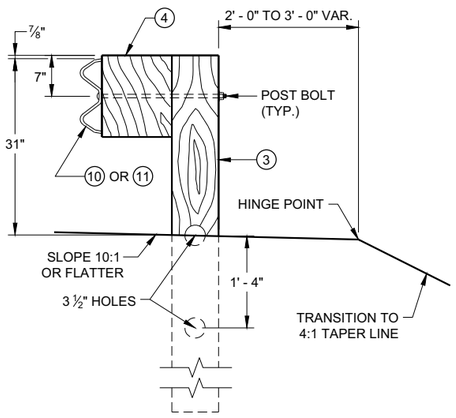

DETAIL "A" (E)



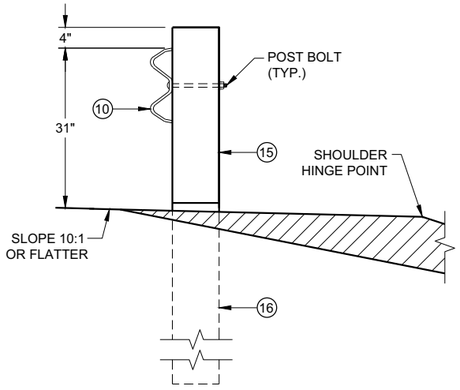

PLAN



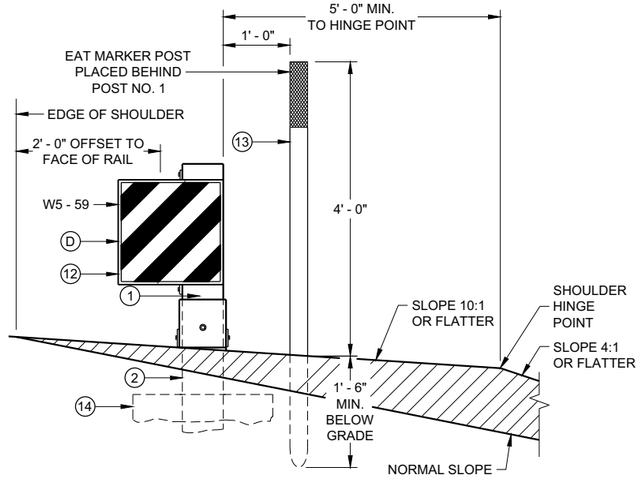

ELEVATION



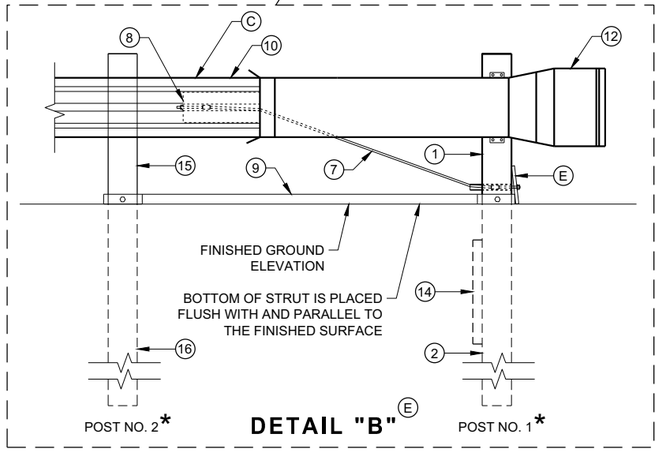

SECTION C - C
TYPICAL AT POST NOS. 3 - 9




SECTION B - B
TYPICAL AT POST NO. 2*




SECTION A - A
TYPICAL AT POST NO. 1*




DETAIL "B" (E)

**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SDD 14B44 - 04a

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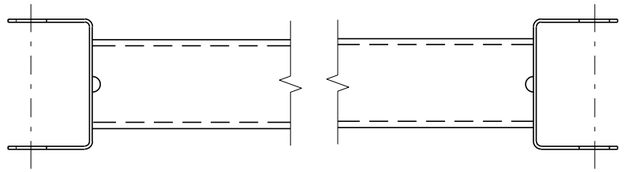
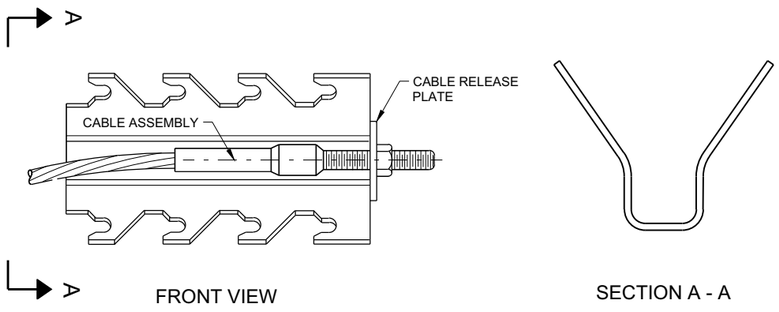


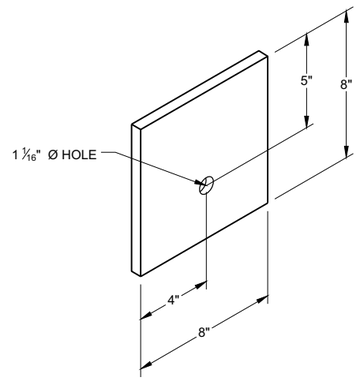
GENERIC GROUND STRUT ⑨ Ⓔ

## BILL OF MATERIALS

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




GENERIC ANCHOR CABLE BOX ⑧ Ⓔ




BEARING PLATE ⑥ Ⓔ

6

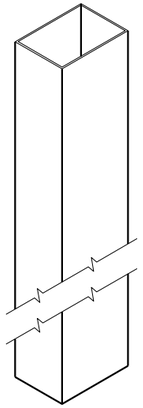
6

SDD 14B44 - 04b

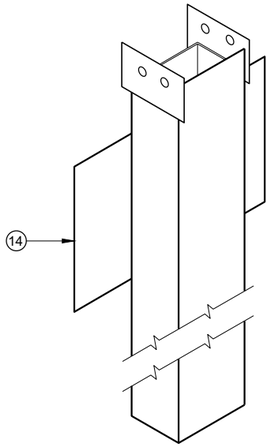
SDD 14B44 - 04b

**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL**
**(MGS)**

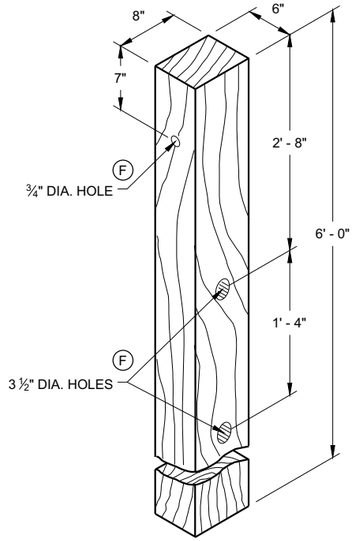
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



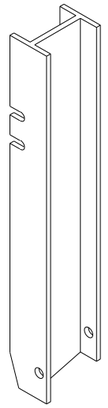
**UPPER POST NO. 1** (1) (E)



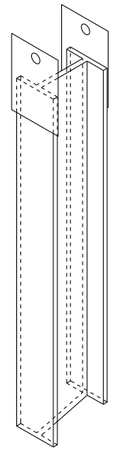

**LOWER POST NO. 1** (2) (E)



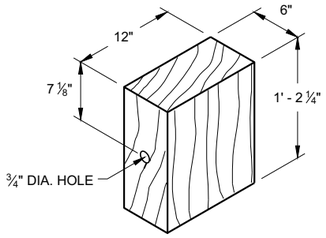

**WOOD CRT POST** (3) (E)
POSTS NUMBER 3-9



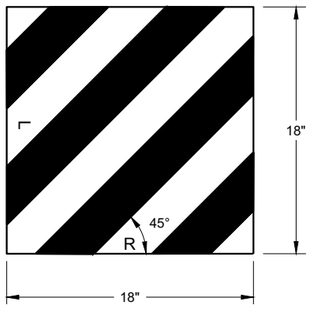
**UPPER POST NO. 2** (15) (E)



**LOWER POST NO. 2** (16) (E)

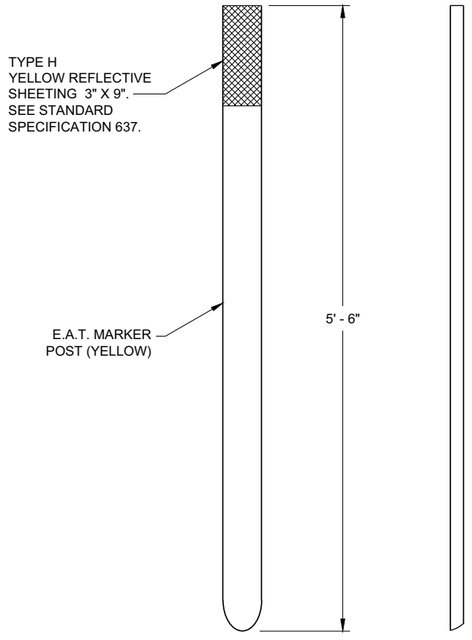



**WOOD BLOCKOUT** (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



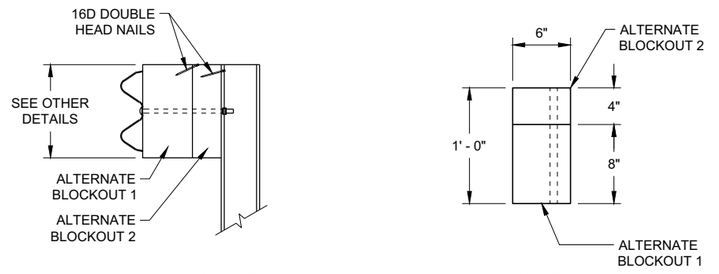

W5 - 59

**REFLECTIVE SHEETING DETAIL** (E)




FRONT VIEW SIDE VIEW

**E.A.T. MARKER POST** (13)




SIDE VIEW TOP VIEW

**ALTERNATE WOOD BLOCKOUT DETAIL**

**MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

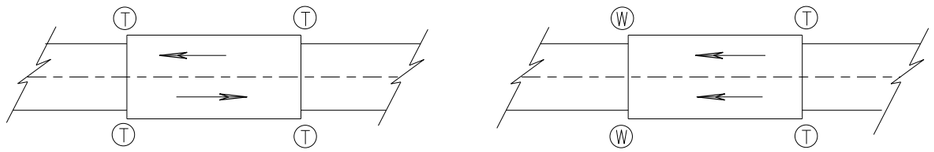
APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA




6


SDD 14B44 - 04c




**TWO WAY TRAFFIC**




**ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

## GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

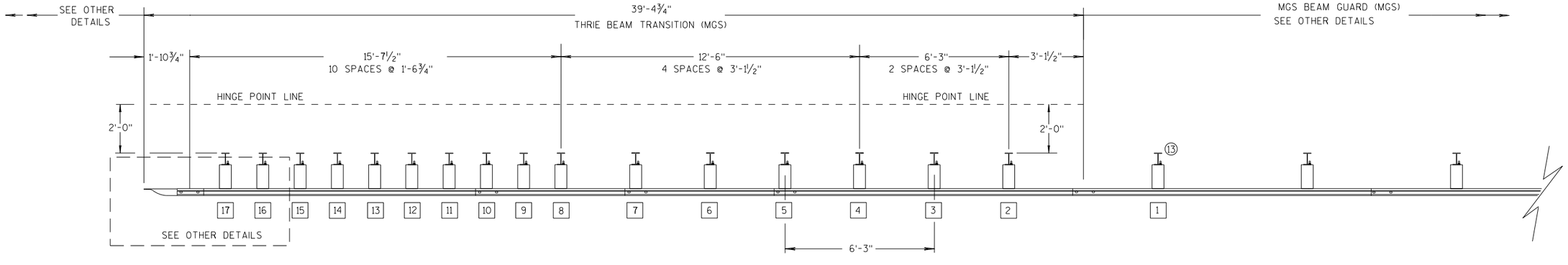
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

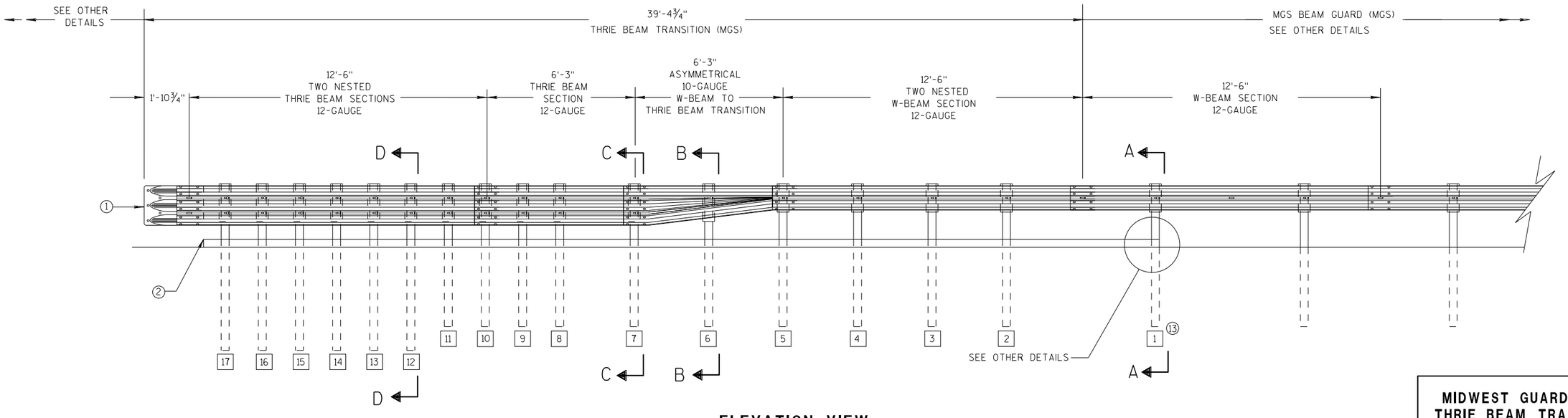
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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




**PLAN VIEW**




**ELEVATION VIEW**

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR







6

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

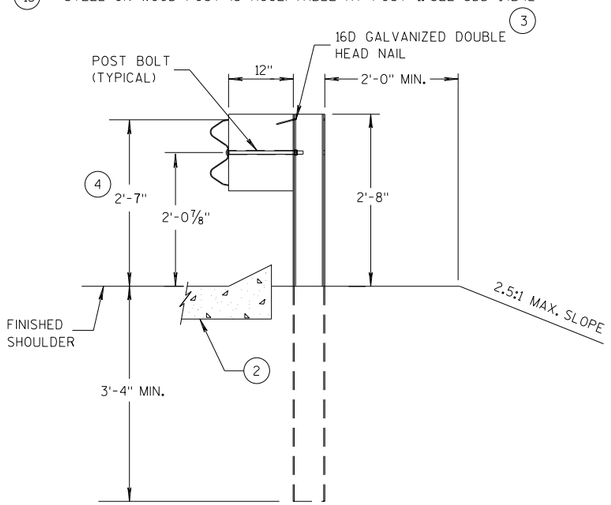
## GENERAL NOTES

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

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

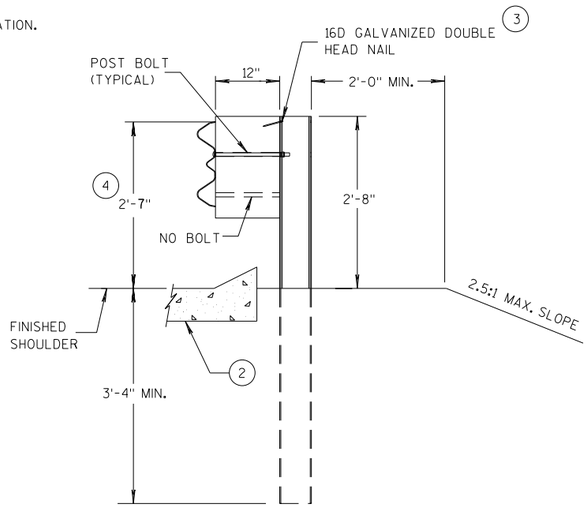
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



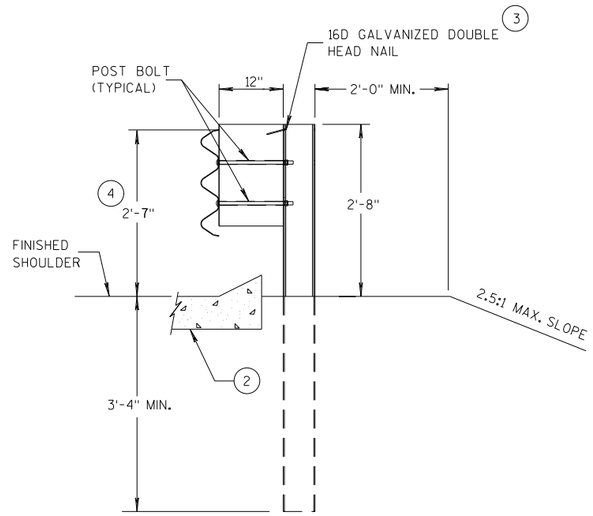

SECTION A-A (13)

**POSTS 1-5**



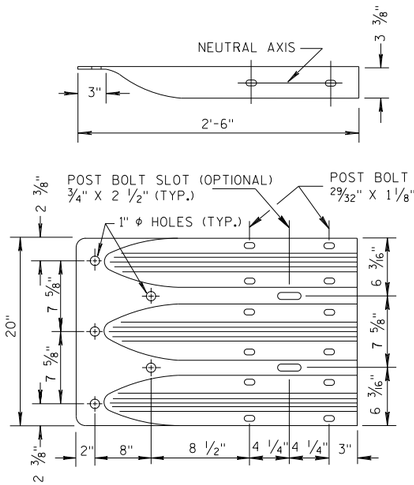

SECTION B-B

**POST 6**

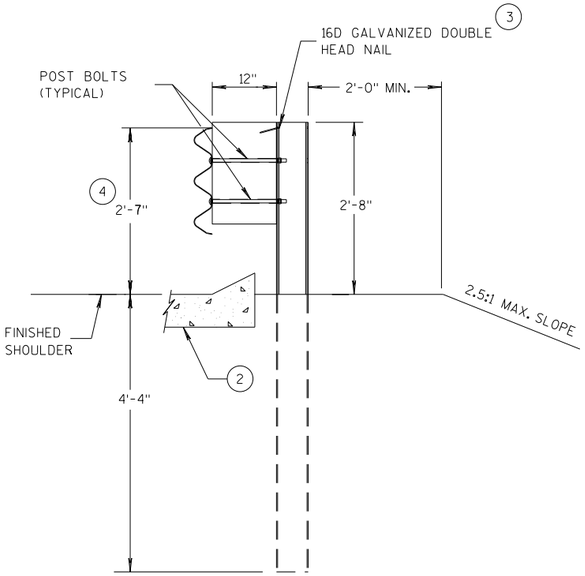



SECTION C-C

**POSTS 7-11**

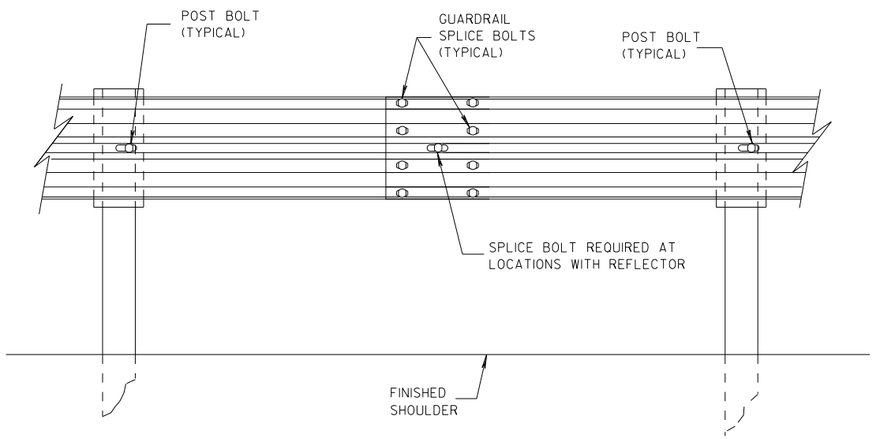



**THRIE BEAM TERMINAL CONNECTOR**




SECTION D-D

**POSTS 12-17**




**SPLICE DETAIL**

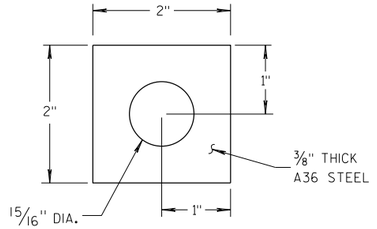
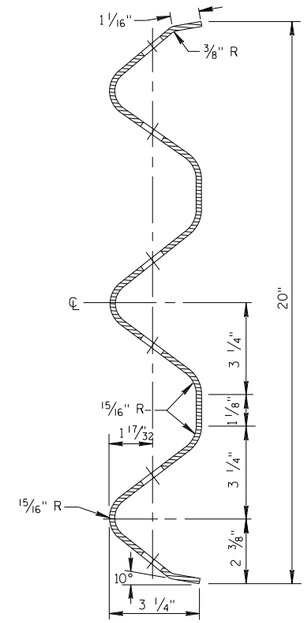



**PLATE WASHER DETAIL**




**SECTION THRU THRIE BEAM RAIL ELEMENT**

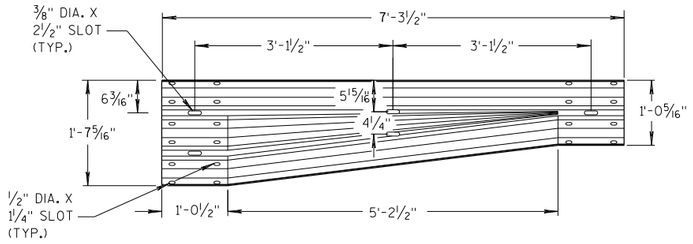
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

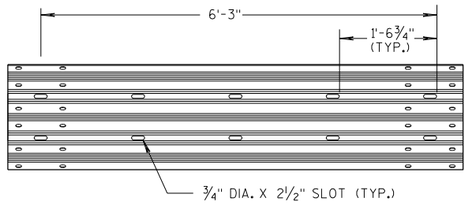



6

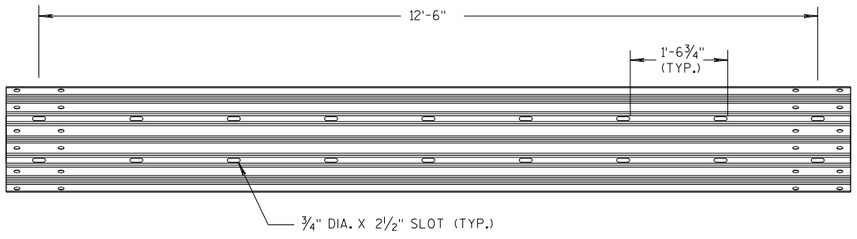
S.D.D. 14 B 45-5b



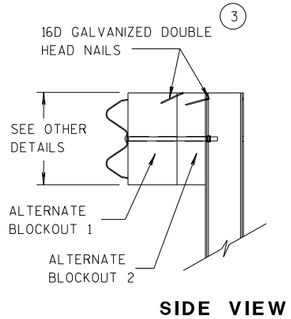

## W-BEAM TO THRIE BEAM TRANSITION SECTION



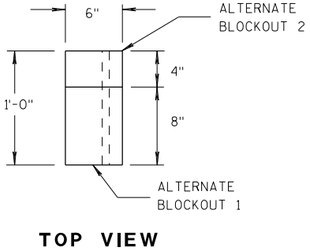

## 6'-3" THRIE BEAM SECTION




## 12'-6" THRIE BEAM SECTION

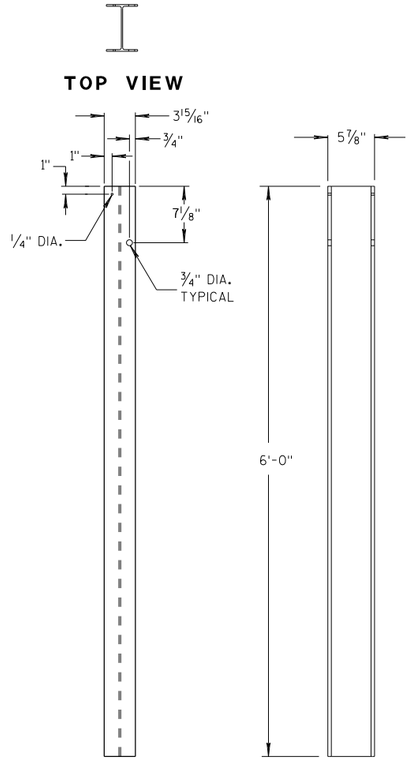



SIDE VIEW



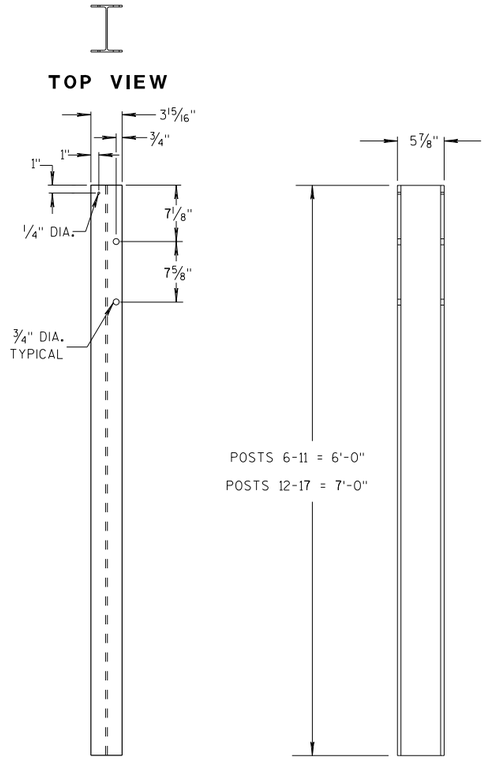

TOP VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL



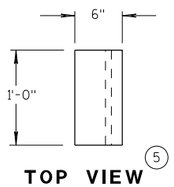

FRONT VIEW SIDE VIEW

## STEEL POSTS 1-5 (13)

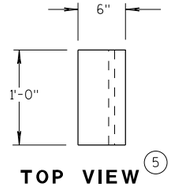



FRONT VIEW SIDE VIEW

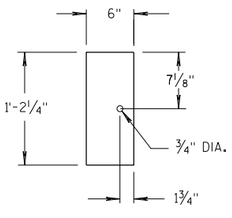
## STEEL POSTS 6-17




TOP VIEW (5)

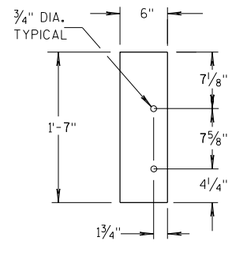



TOP VIEW (5)




FRONT VIEW

## BLOCKOUT POSTS 1-5




FRONT VIEW

## BLOCKOUT POSTS 6-17

## GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

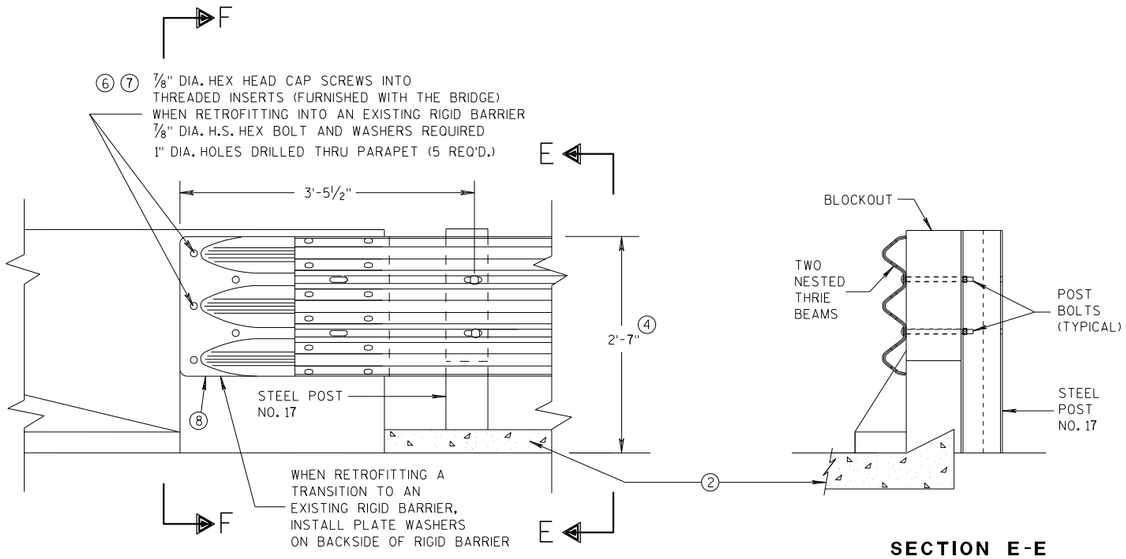
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

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

**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 120


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




FRONT VIEW

SECTION E-E

# THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

## GENERAL NOTES

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

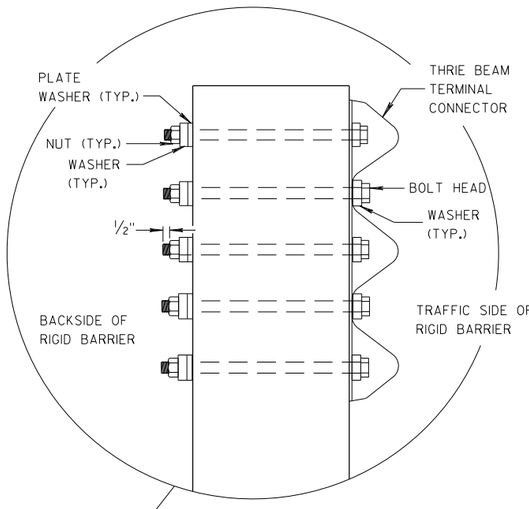
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

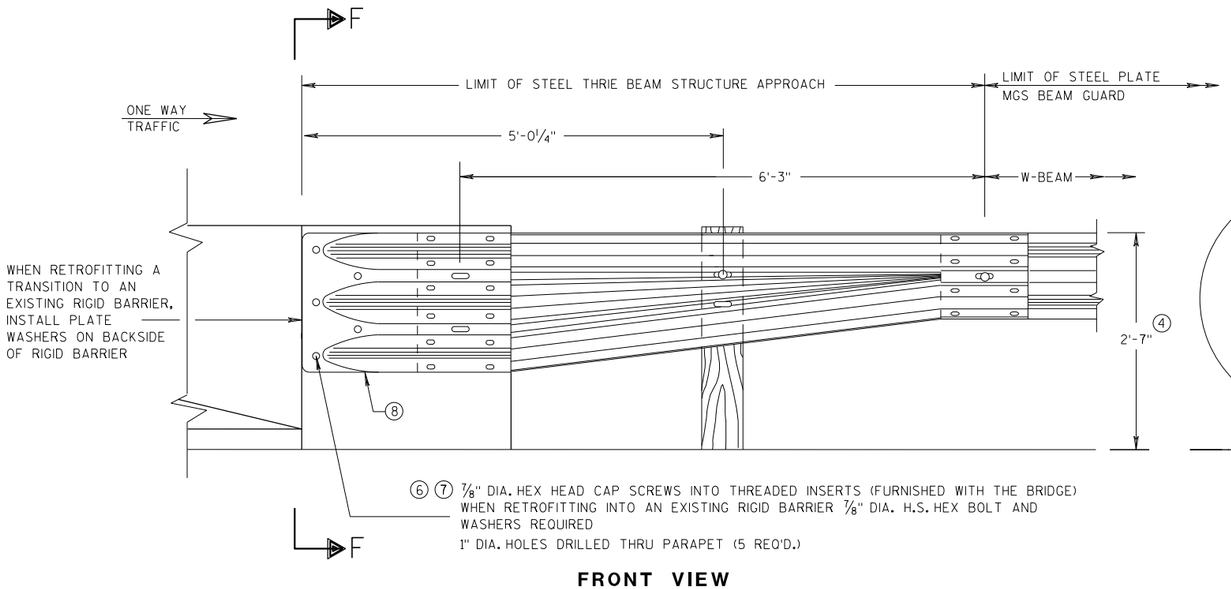
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

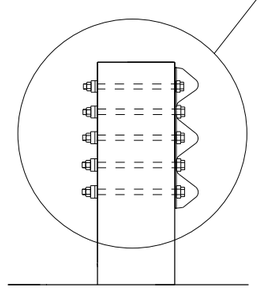
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

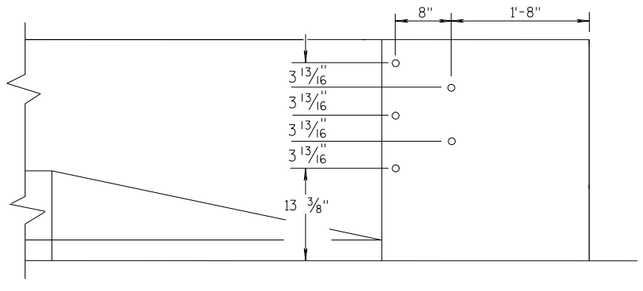



FRONT VIEW



SECTION F-F




DRILL HOLE LOCATION

# W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



6

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

6

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

# GENERAL NOTES

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

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

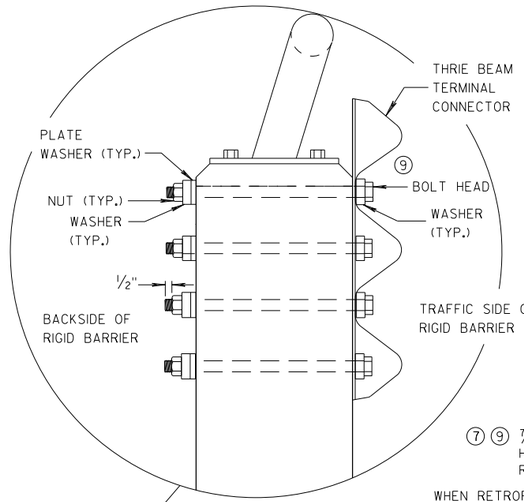
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

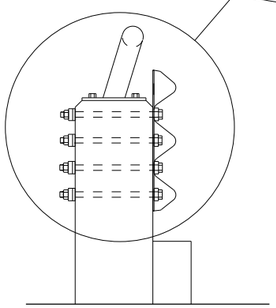
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

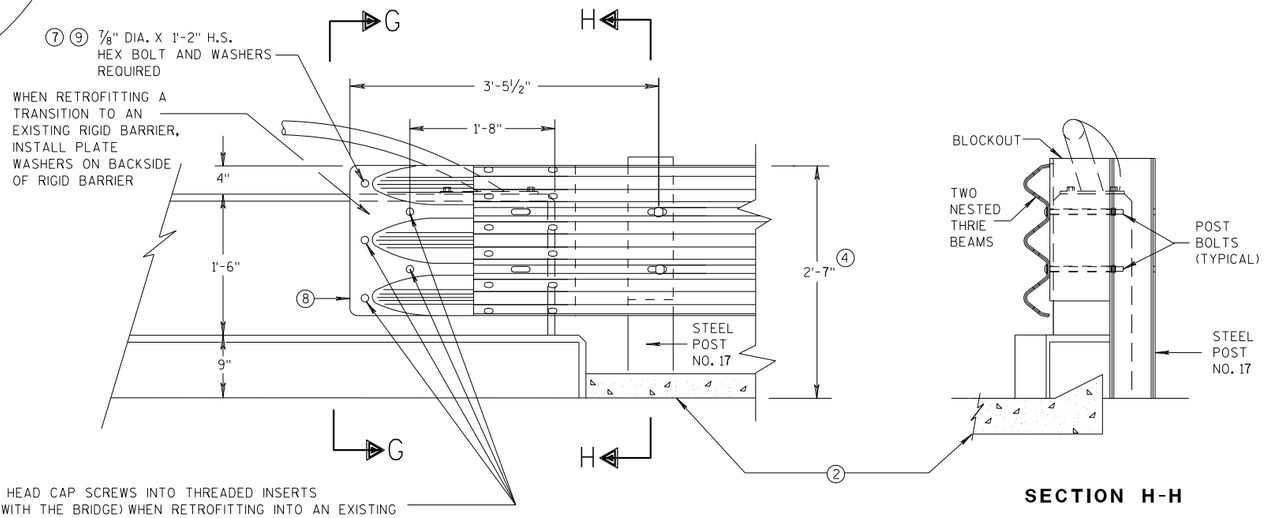
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

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



SECTION G-G

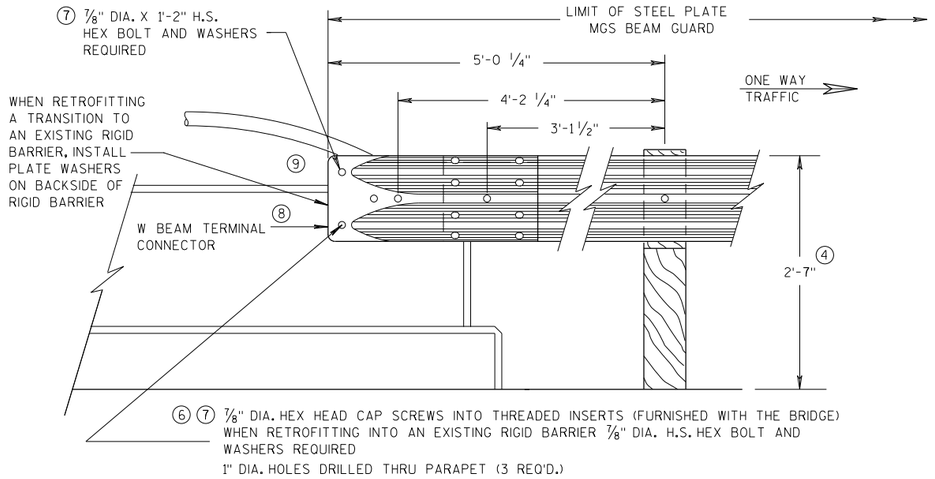



FRONT VIEW




SECTION H-H

## THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS




FRONT VIEW

## W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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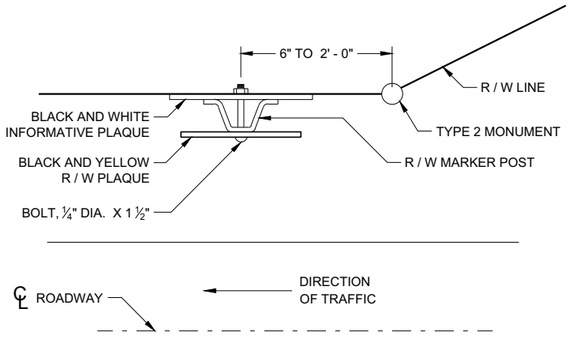
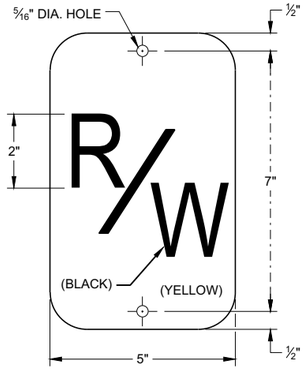
S.D.D. 14 B 45-5e




**PLAN VIEW**
**STEEL MARKER POST**




**R / W PLAQUE**

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

**INFORMATIVE PLAQUE**

## GENERAL NOTES

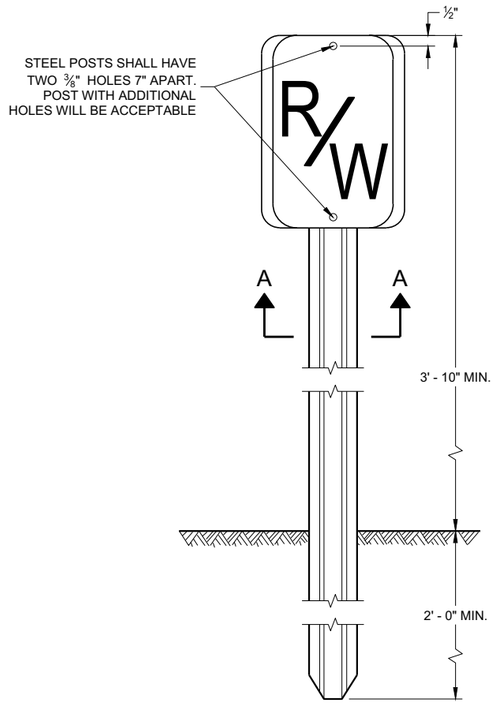
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT -OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

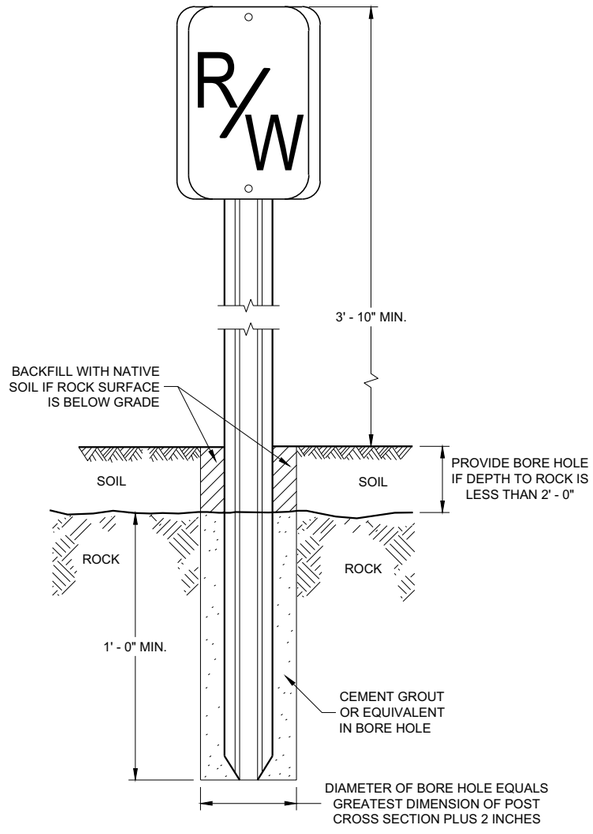
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFROMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

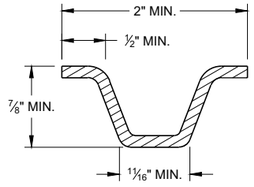
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



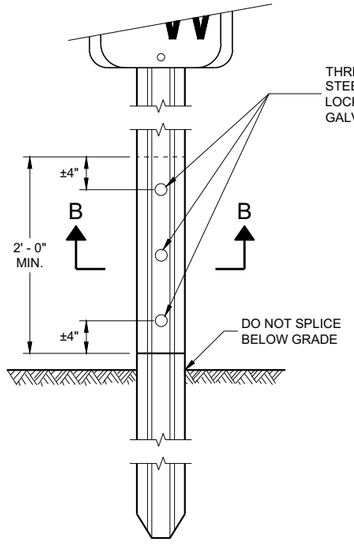

**FRONT VIEW**
**STEEL MARKER POST**



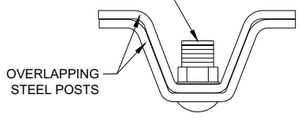

**FRONT VIEW**
**ROCK INSTALLATION** (1)




MIN. WEIGHT 1.12 LB./FT.
**SECTION A - A**




**FRONT VIEW**
**SPLICE DETAIL**




**SECTION B - B**

**MARKER POST FOR RIGHT - OF - WAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016
DATE
/S/ Ray Kumapayi
CHIEF SURVEYING AND MA
ENGINEER

FHWA



6

SDD 15A01 - 13a

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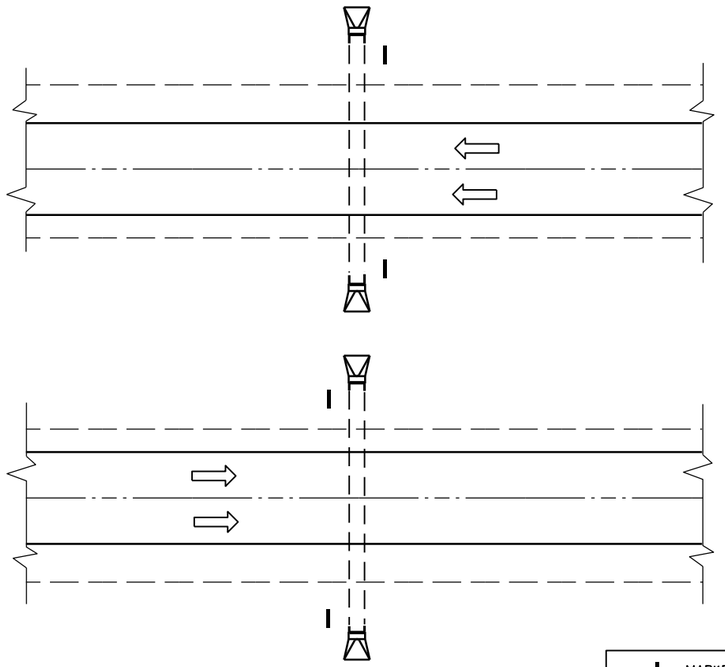
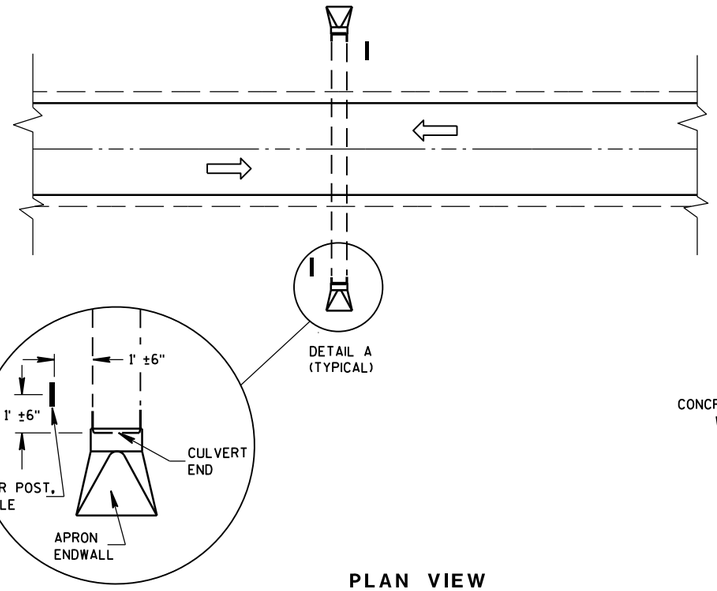
SDD15A01 - 13a



PLAN VIEW

## DIVIDED HIGHWAY




DETAIL A
(TYPICAL)

PLAN VIEW

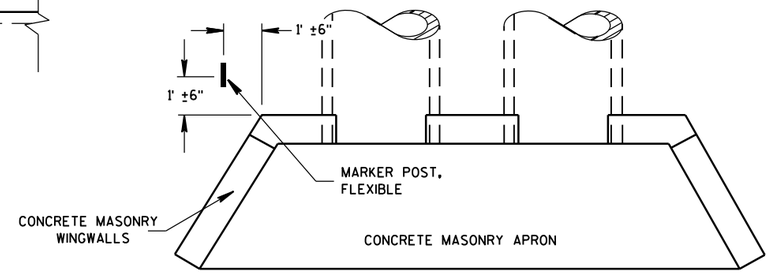
## UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

## GENERAL NOTES

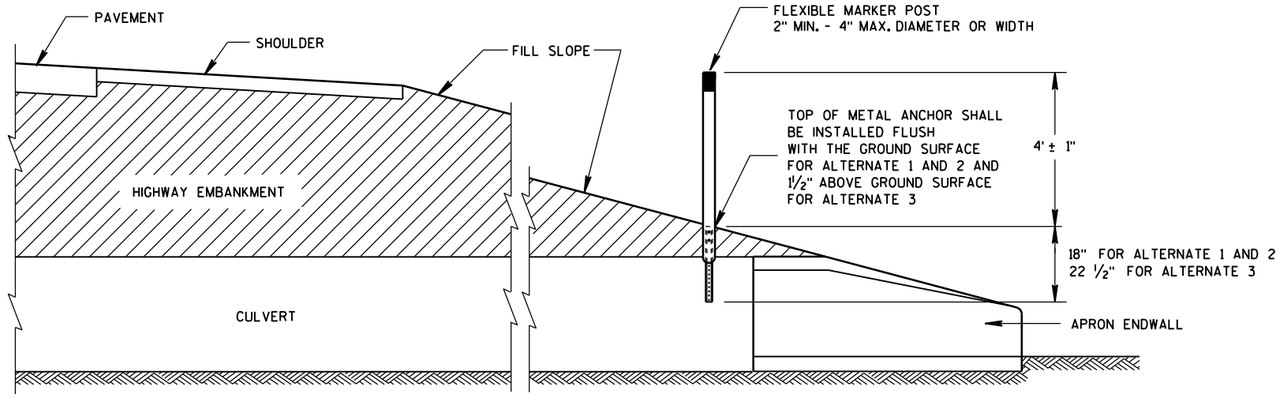
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.




PLAN VIEW

## CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

## FLEXIBLE MARKER POST LOCATION




CROSS SECTION

## FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

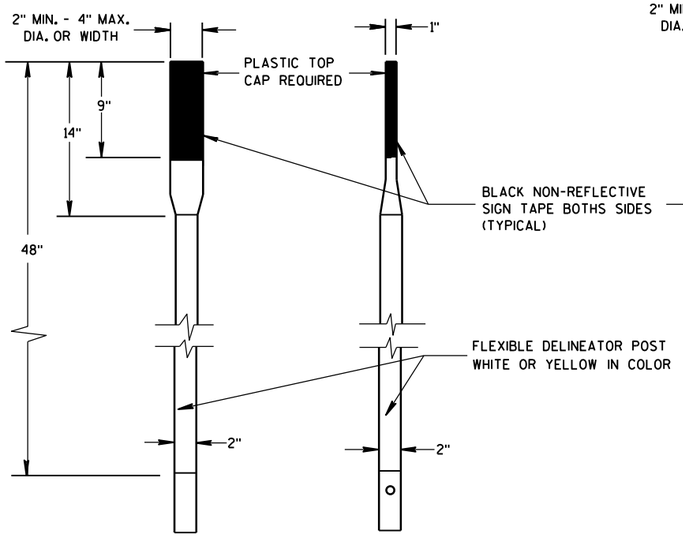


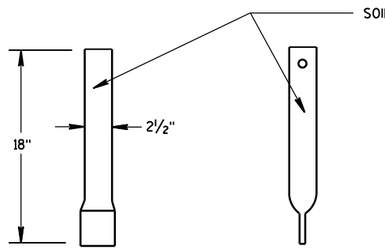
6

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

6

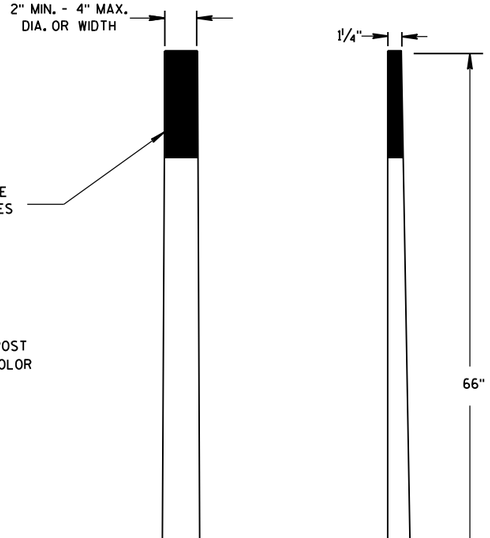
S.D.D. 15 A 3-2a



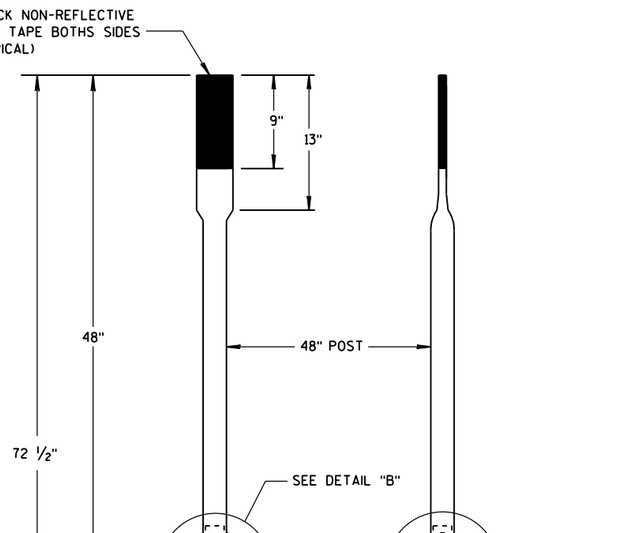

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

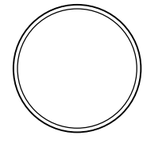
ALTERNATE 2



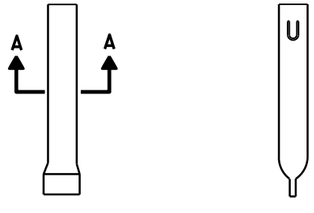

FRONT VIEW SIDE VIEW

ALTERNATE 3

## FLEXIBLE MARKER POSTS

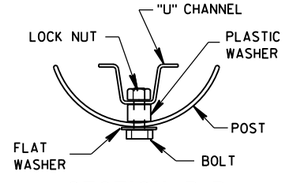


SECTION A-A

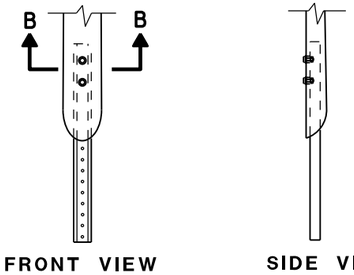



FRONT VIEW SIDE VIEW

ALTERNATE 1

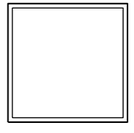



SECTION B-B

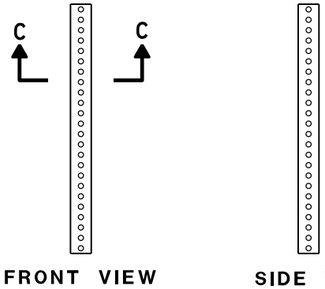



FRONT VIEW SIDE VIEW

ALTERNATE 2



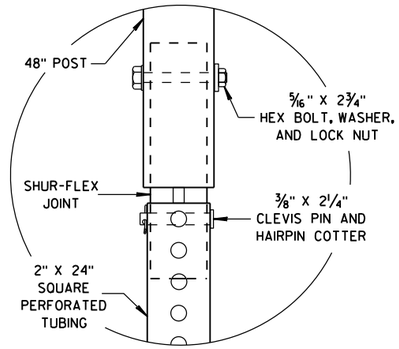
SECTION C-C



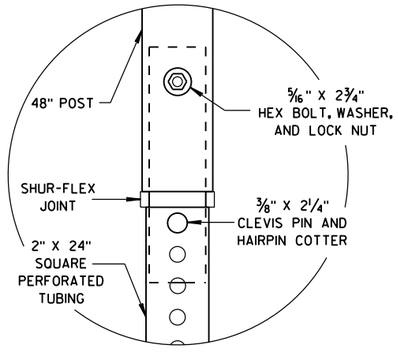

FRONT VIEW SIDE VIEW

ALTERNATE 3

## FLEXIBLE MARKER POST ANCHORS




DETAIL B




DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



6

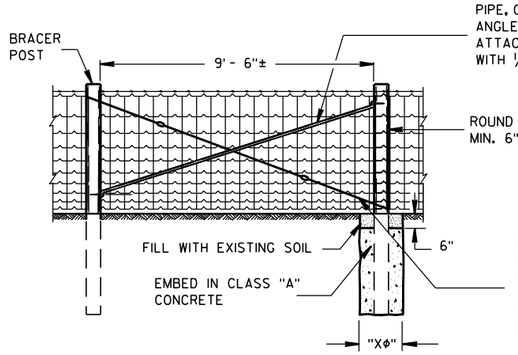
S.D.D. 15 A 3-2b

6

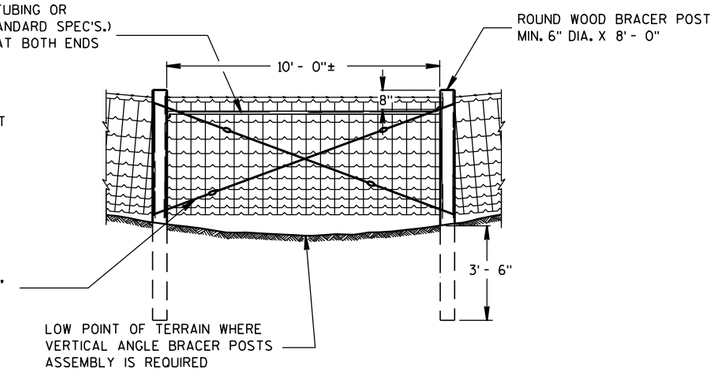
S.D.D. 15 A 3-2b

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.




PULL OR STRETCHER POSTS ASSEMBLY




VERTICAL ANGLE BRACER POSTS ASSEMBLY

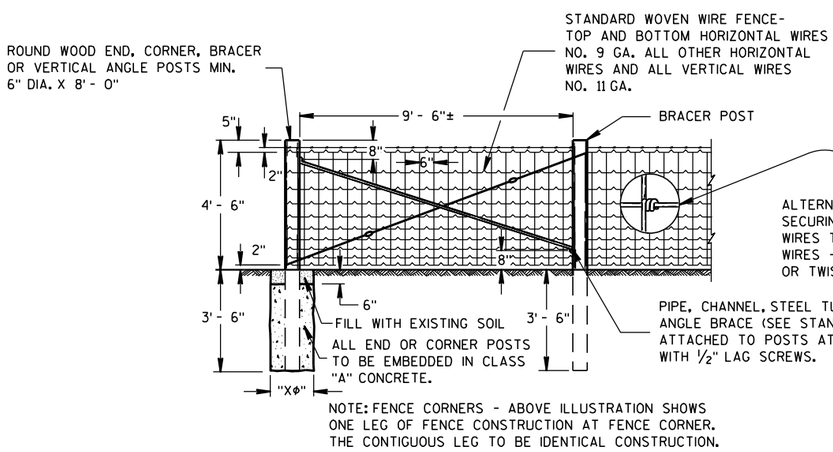
## GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

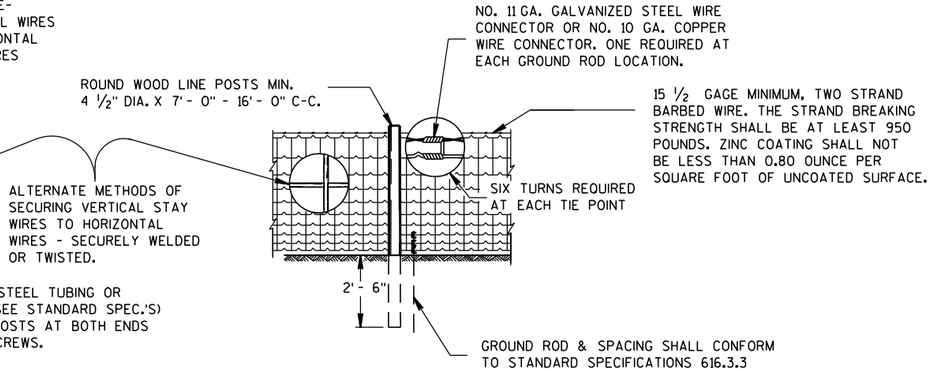
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



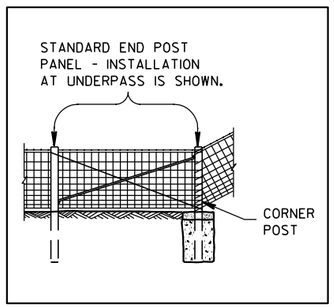

NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

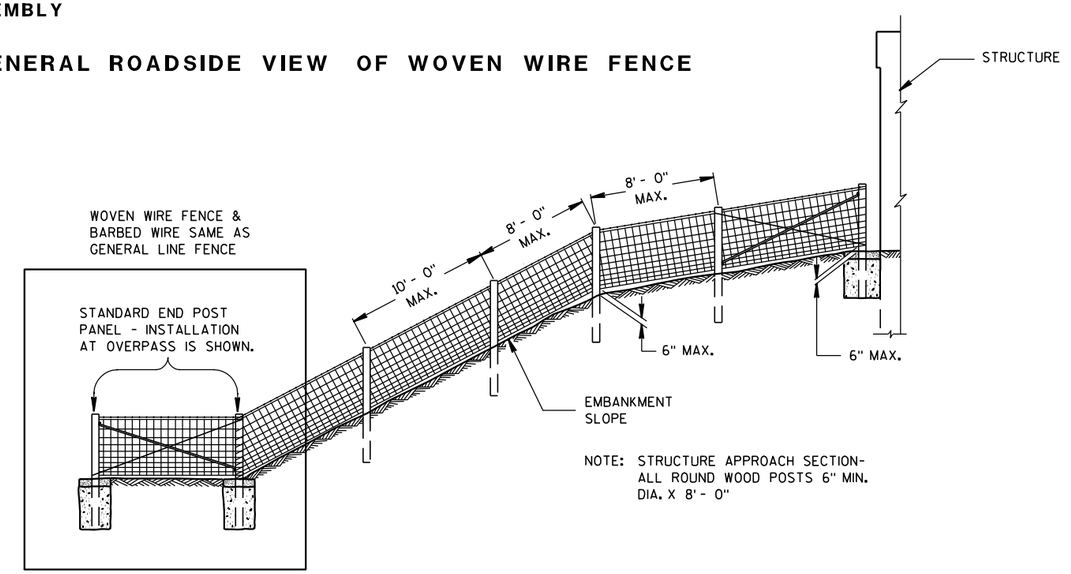



LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE




ALTERNATE FENCE DESIGN AT STRUCTURE




NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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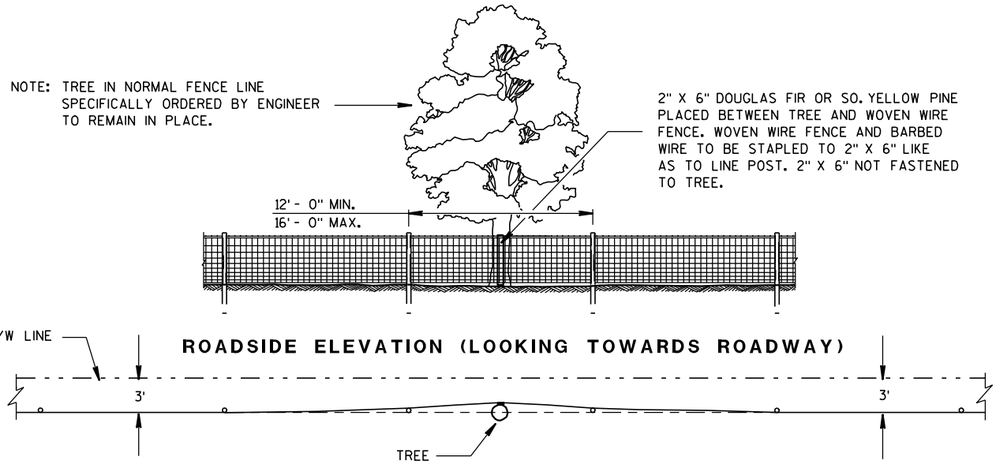
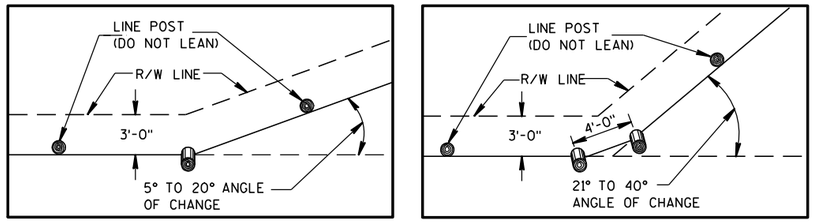
S.D.D. 15 B 1-8a




**PLAN VIEW**

**FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE**



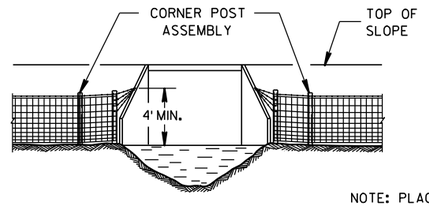

**PLAN VIEW SINGLE POST CORNER**

**PLAN VIEW DOUBLE POST CORNER**

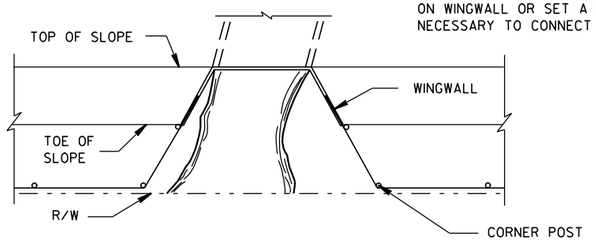
## RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

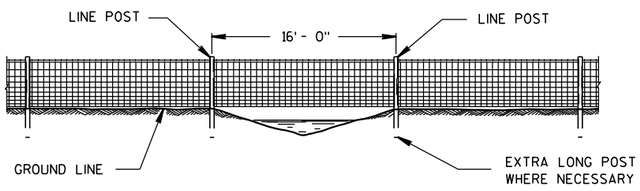
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



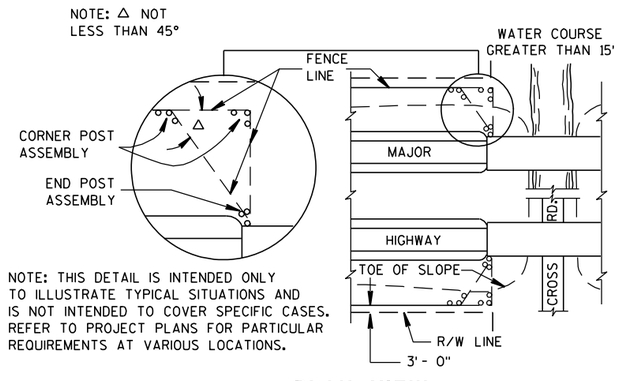

NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.




**FENCE INSTALLATION TO WINGWALLS**

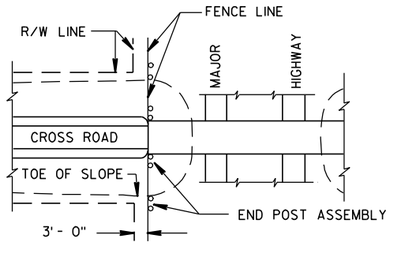



**FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH**




**PLAN VIEW**

**MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH**

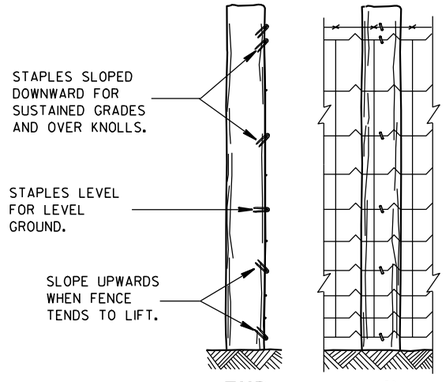



**PLAN VIEW**

**MAJOR HIGHWAY UNDERPASS**

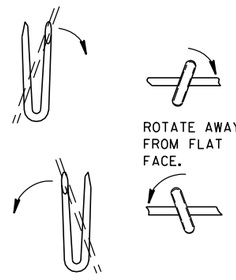
**FENCE LOCATION AT STRUCTURES**

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.




**END ELEVATION** **FARM SIDE ELEVATION**

**FENCE MOUNTING DETAIL**




**LINE POST**

**FENCE WOVEN WIRE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

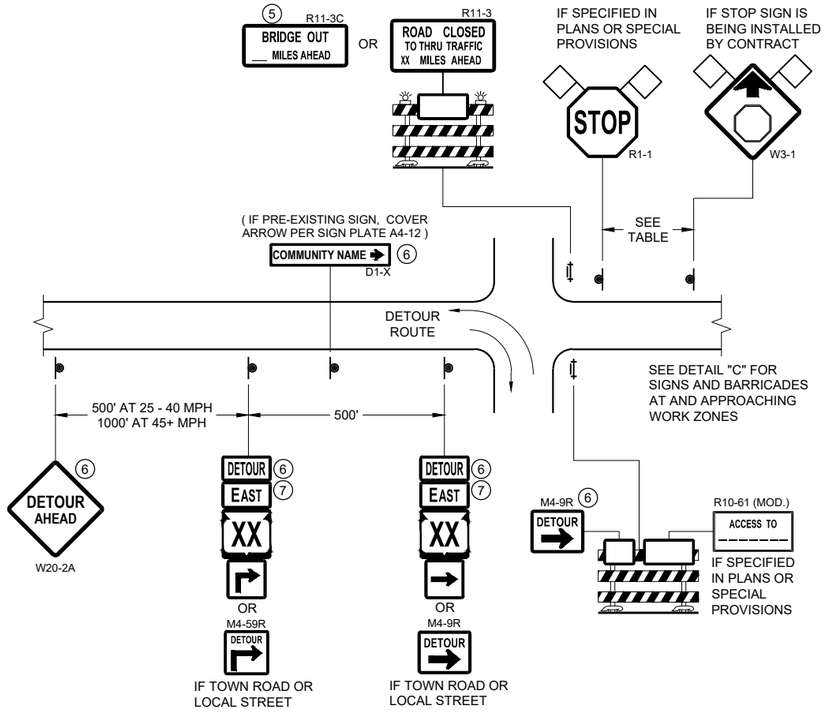
APPROVED
4/4/2008 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA





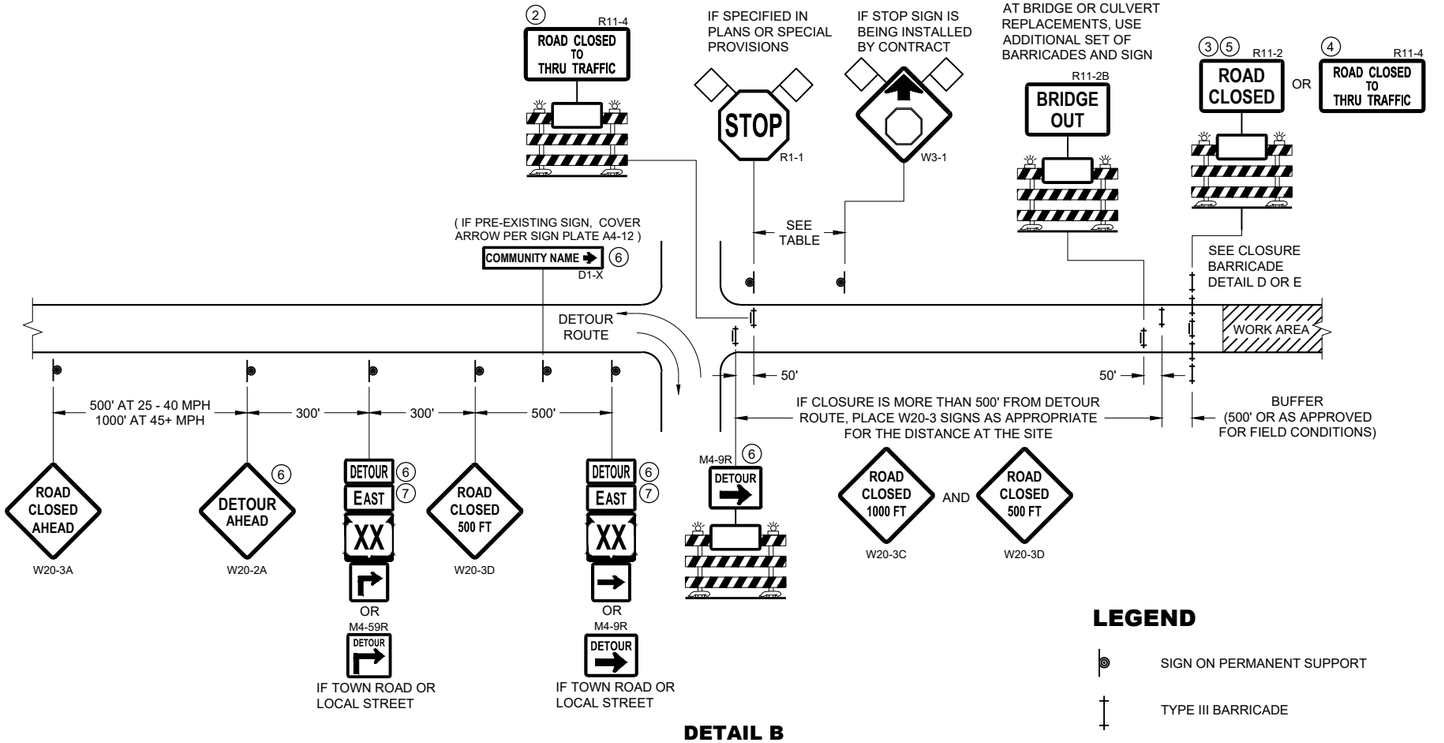
6

S.D.D. 15 B 1-8b



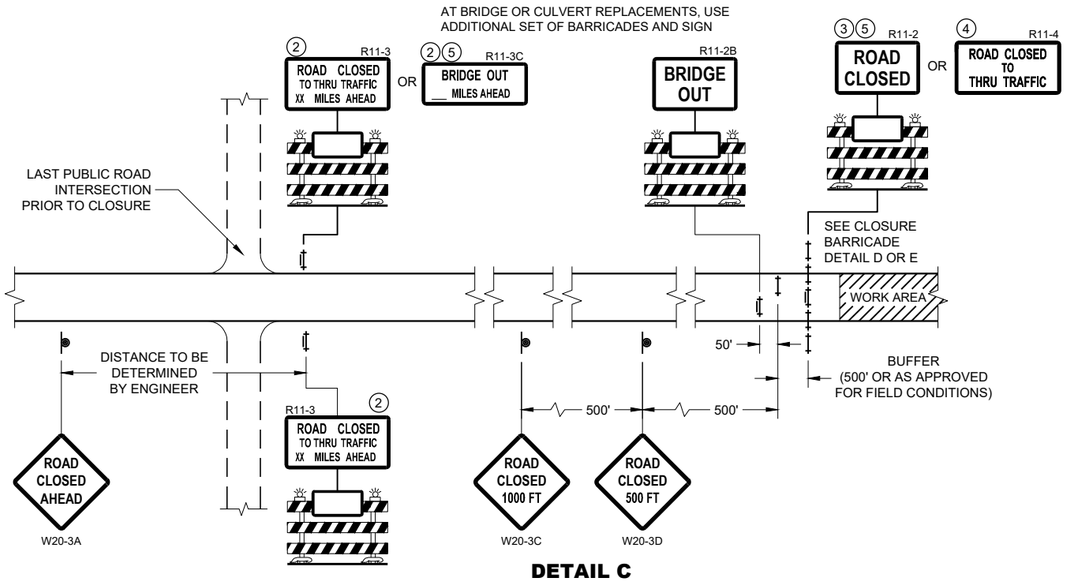

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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




## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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




## DETAIL C
## MAINLINE CLOSURE, NO POSTED DETOUR

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

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

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

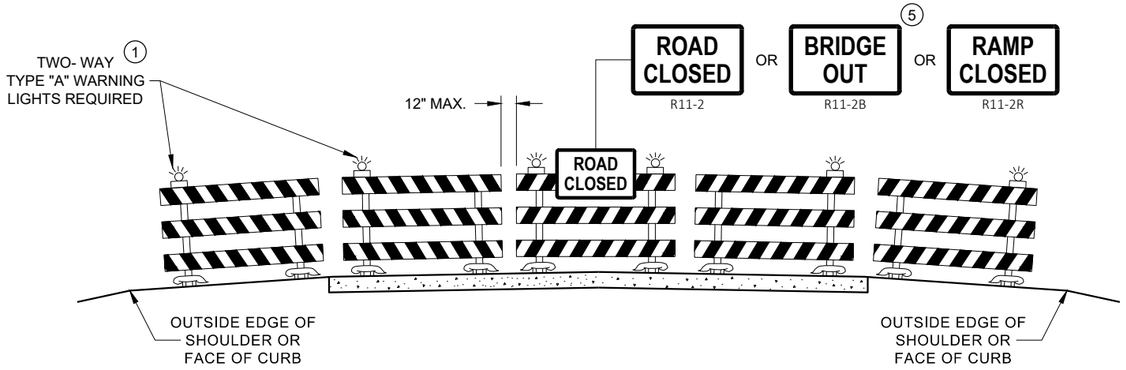
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

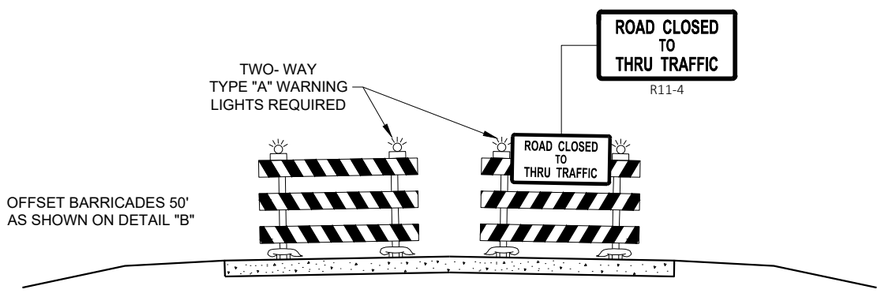
FHWA



6
SDD 15C02 - 09a




**DETAIL D**
**ROAD CLOSURE BARRICADE DETAIL**
**APPROACH VIEW**




**DETAIL E**
**LANE CLOSURE BARRICADE DETAIL**
**APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**BARRICADES AND SIGNS FOR VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA



6

SDD 15C02 - 09b

6

SDD 15C02 - 09b

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

## LEGEND

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

## GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

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

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

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

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

DETOUR EAST XX *

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-8a END DETOUR WEST XX *

DETOUR EAST XX / WEST XX

DETOUR ROUTE

WORK AREA

DETOUR EAST XX

WEST XX OR M4-9L DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR NEXT X MILES * G20-51

DETOUR WEST XX * OR M4-59L DETOUR ** IF TOWN ROAD OR LOCAL STREET

MATCH POINT

** M4-59L DETOUR OR DETOUR EAST XX * IF TOWN ROAD OR LOCAL STREET

D1-X COMMUNITY NAME * (IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

500'

** M4-9L DETOUR OR DETOUR EAST XX IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX

DETOUR WEST XX OR M4-9R DETOUR ** IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX * OR M4-59R * DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR ROUTE

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETOUR EAST XX *

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX

500'

DETOUR EAST XX

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX *

PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

500' AT 25 - 40 MPH
1000' AT 45+ MPH

DETOUR EAST XX *

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

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

**DETAIL F**
**DETOUR SIGNING**

**DETOUR SIGNING FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA





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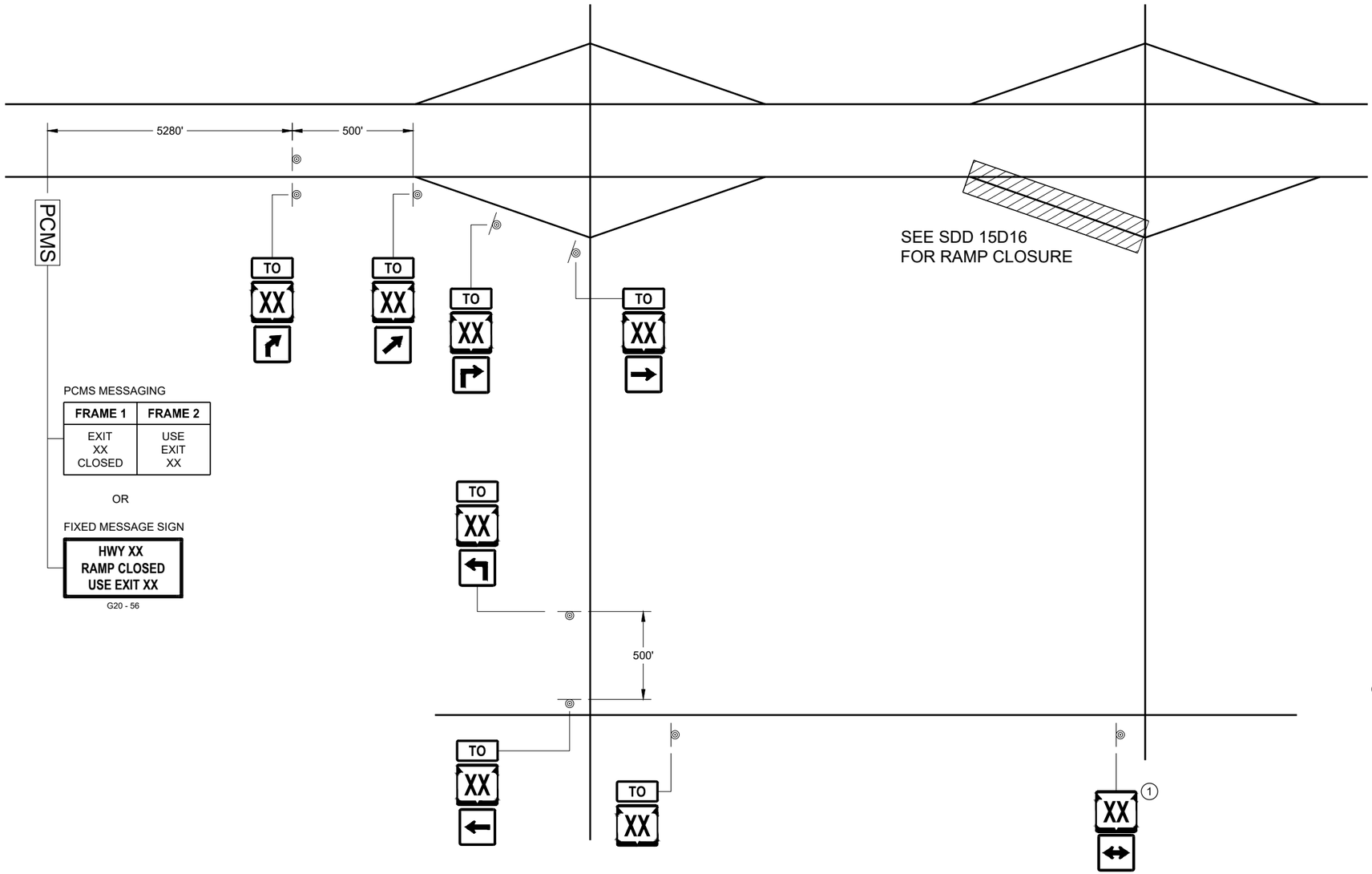
SDD 15C02 - 09c

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.




PCMS MESSAGING

| FRAME 1 | FRAME 2 |
|---|---|
| EXIT XX CLOSED | USE EXIT XX |

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

## LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

## GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

**OFF RAMP**
**LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



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SDD 15C02 - 09e

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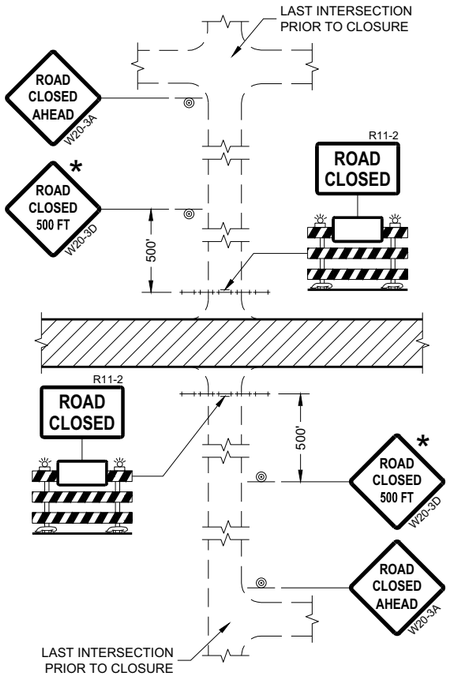
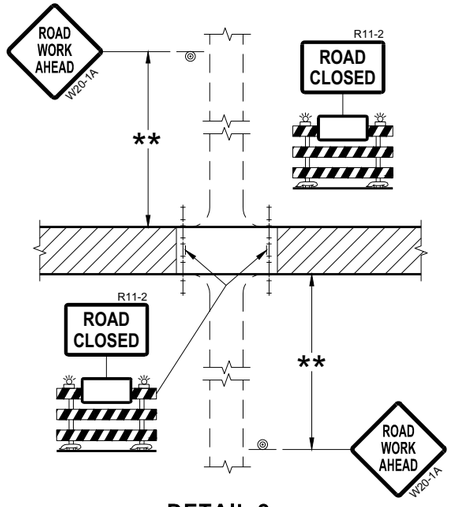
SDD 15C02 - 09e




**DETAIL 1**
(NO ACCESS TO PROJECT)




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

## GENERAL NOTES

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

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

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

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

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

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

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

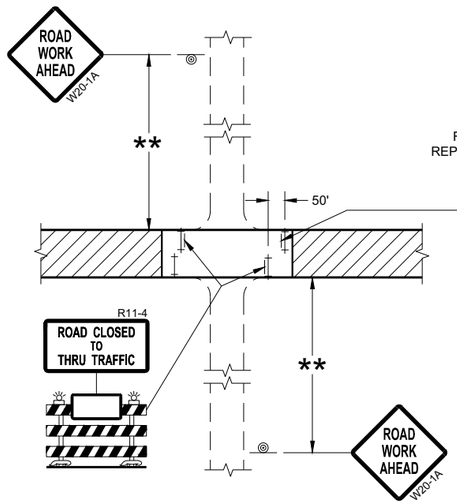
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

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

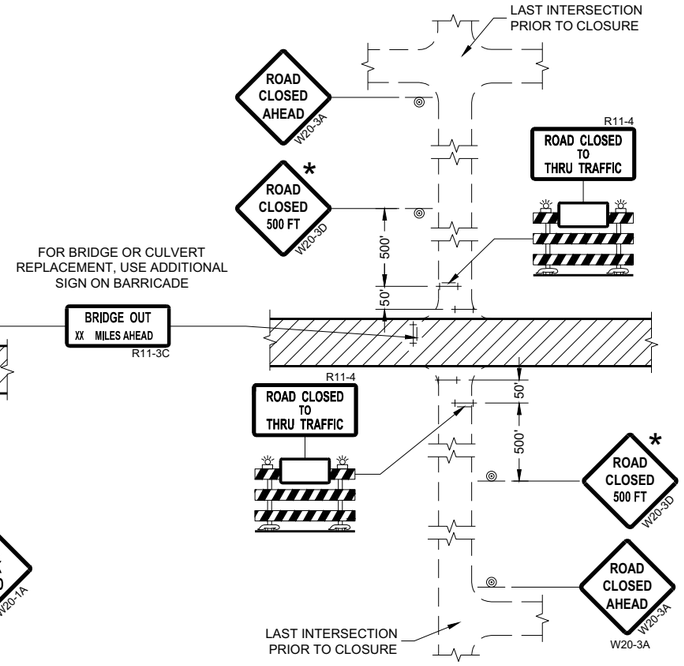
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

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

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




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




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

## LEGEND

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

**BARRICADES AND SIGNS FOR SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



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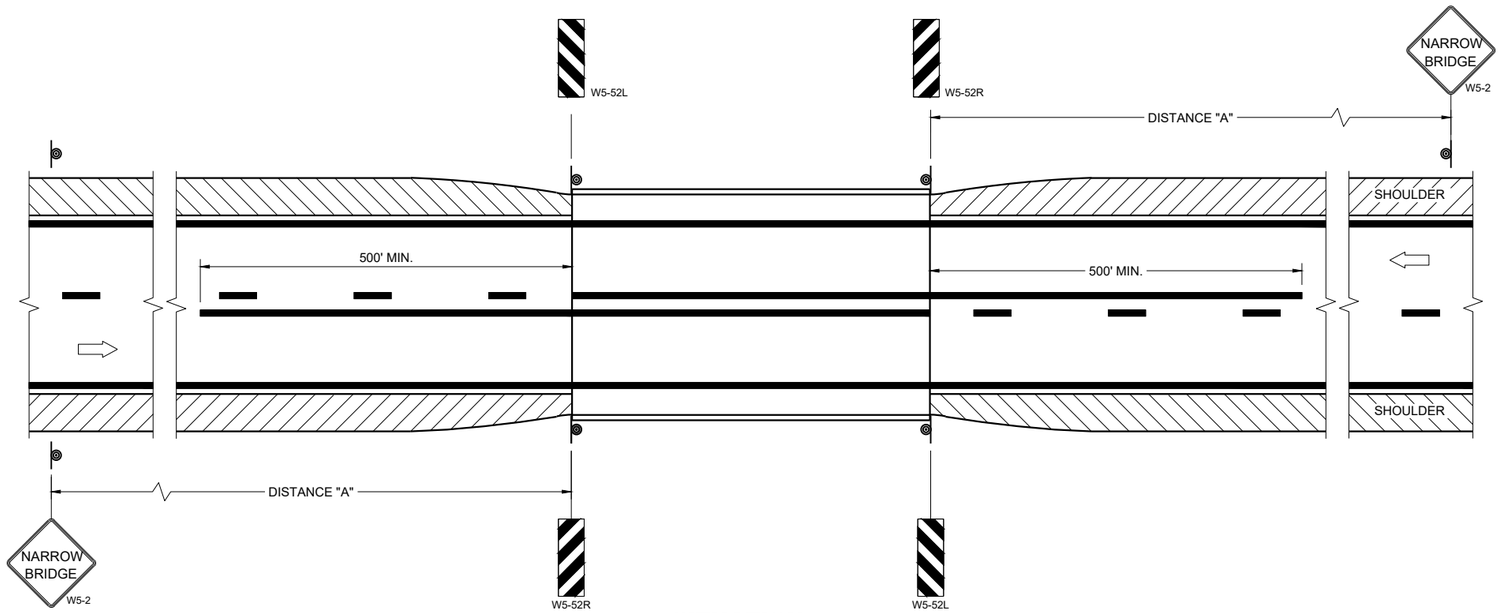
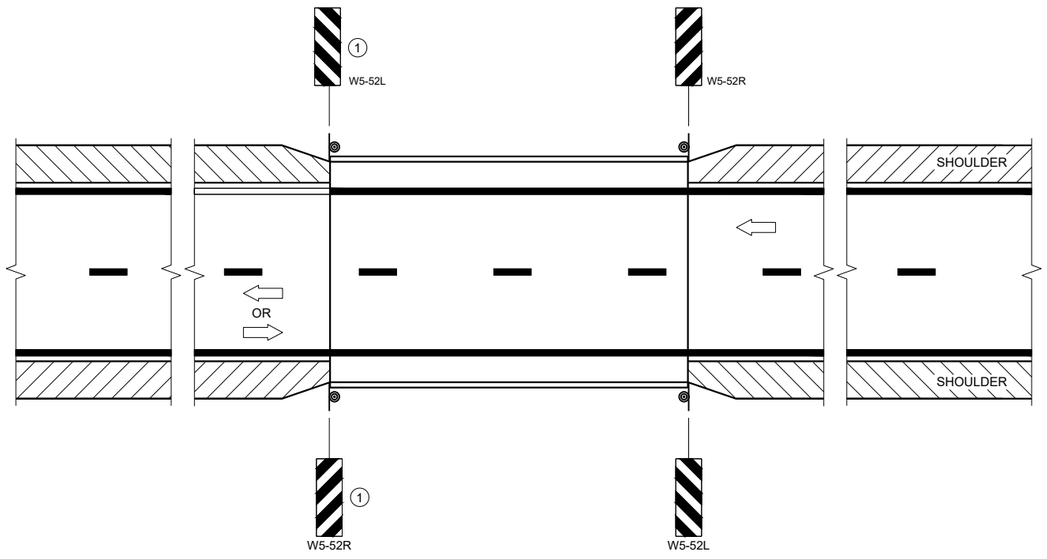
SDD 15C03 - 05

SDD 15C03 - 05




## SITUATION 1

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




## SITUATION 2

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

## GENERAL NOTES

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

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

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

## LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

### DISTANCE TABLE

| POSTED OR 85TH PERCENTILE SPEED | DISTANCE "A" |
|---|---|
| 25 | 150' |
| 30 | 200' |
| 35 | 250' |
| 40 | 300' |
| 45 | 400' |
| 50 | 550' |
| 55 | 700' |

**SIGNING AND MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA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SDD 15C06-12

## 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.

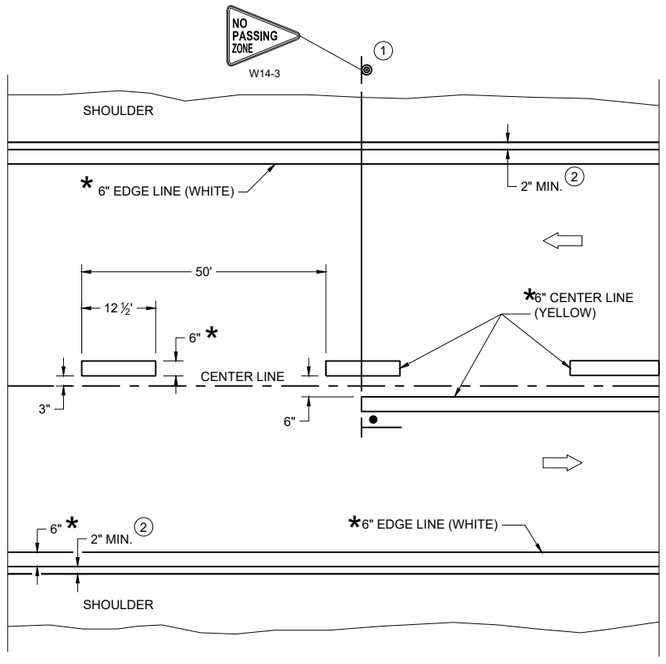
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

## LEGEND

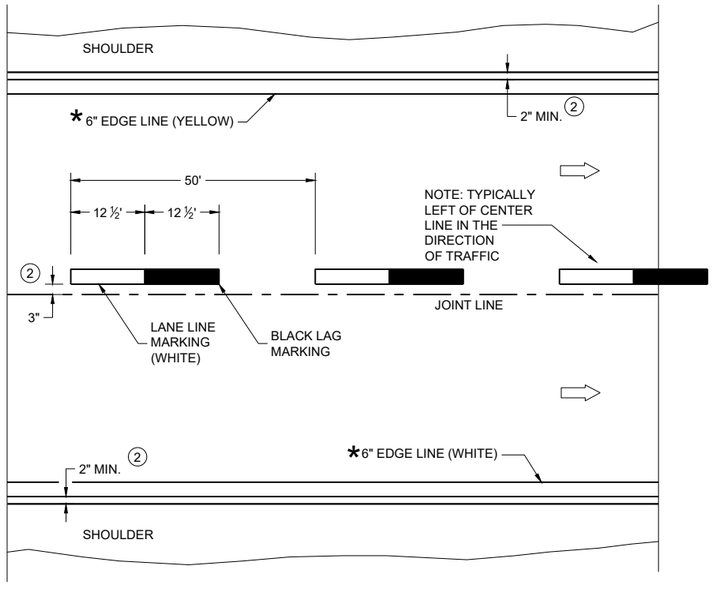
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC




TWO WAY TRAFFIC




ONE WAY TRAFFIC

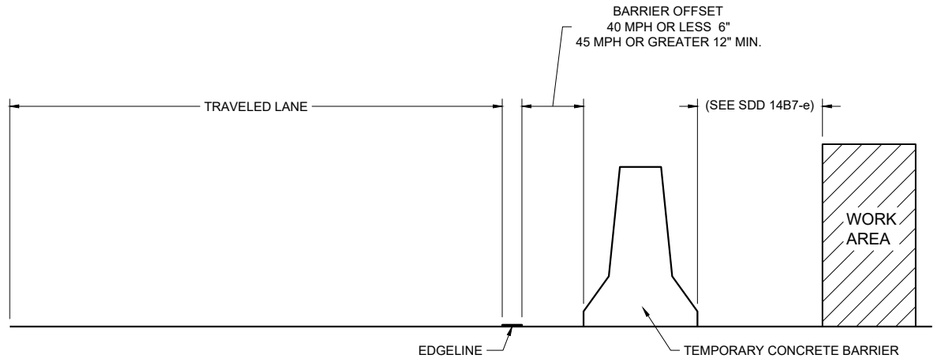
**PERMANENT PAVEMENT MARKING**

6

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer
FHWA




**TEMPORARY BARRIER OFFSET FROM EDGELINE**

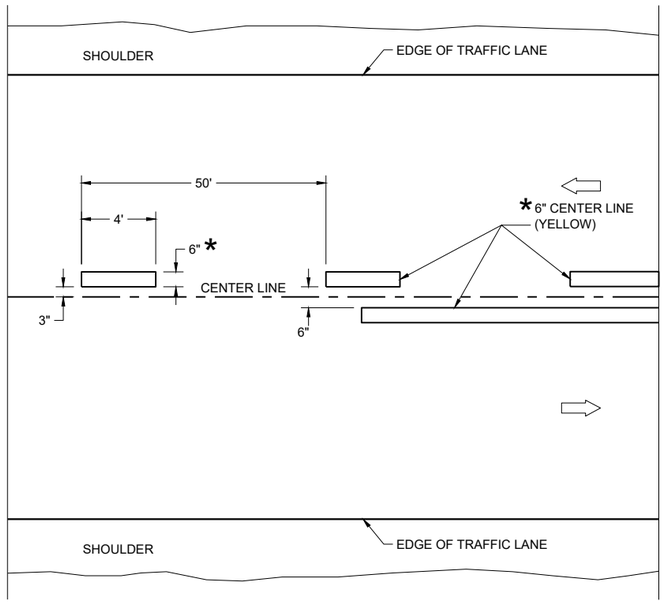
## GENERAL NOTES

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

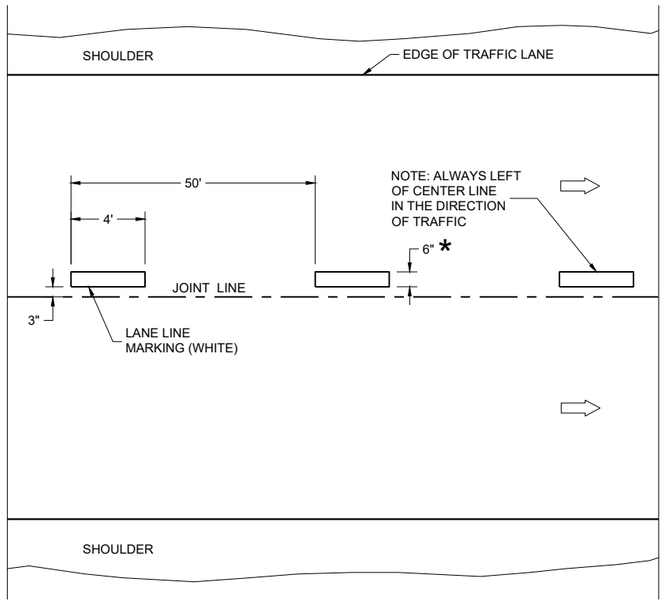
## LEGEND

DIRECTION OF TRAFFIC

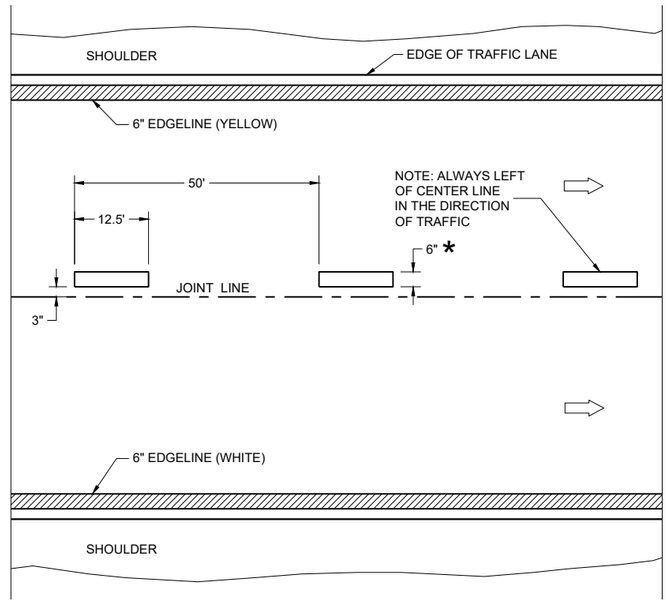
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES




**TWO WAY TRAFFIC**




**ONE WAY TRAFFIC**




**FREEWAYS AND EXPRESSWAYS**

**TEMPORARY PAVEMENT MARKING**

**TEMPORARY LONGITUDINAL PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer

FHWA



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SDD 15C08-23b

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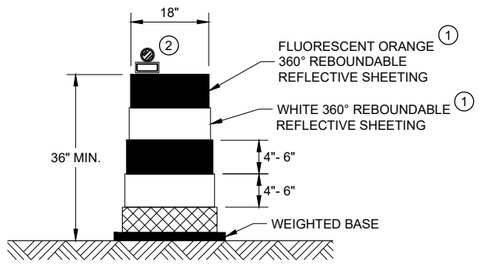
SDD 15C08-23b

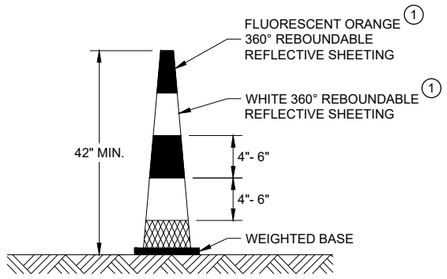
## GENERAL NOTES

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

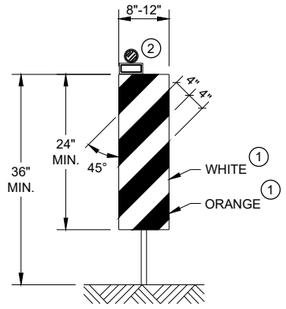
BALLAST WIDTHS
RANGE FROM 24"-36"




### 42" CONE

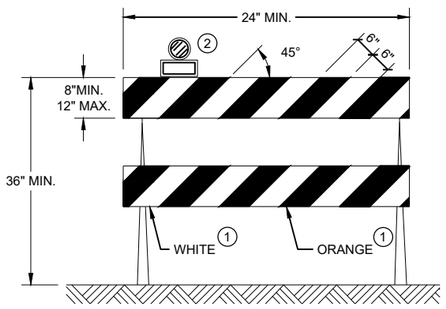
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



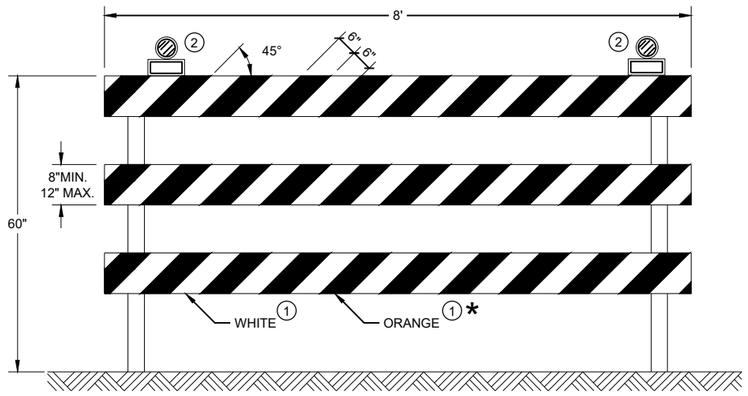

### VERTICAL PANEL

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 ENGINEE

FHWA



6

SDD 15C11 - 10b

6

SDD 15C11 - 10b

## LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

## GENERAL NOTES

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

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

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

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

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

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

## FLAGGING

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

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

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

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

## TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

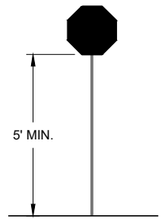
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



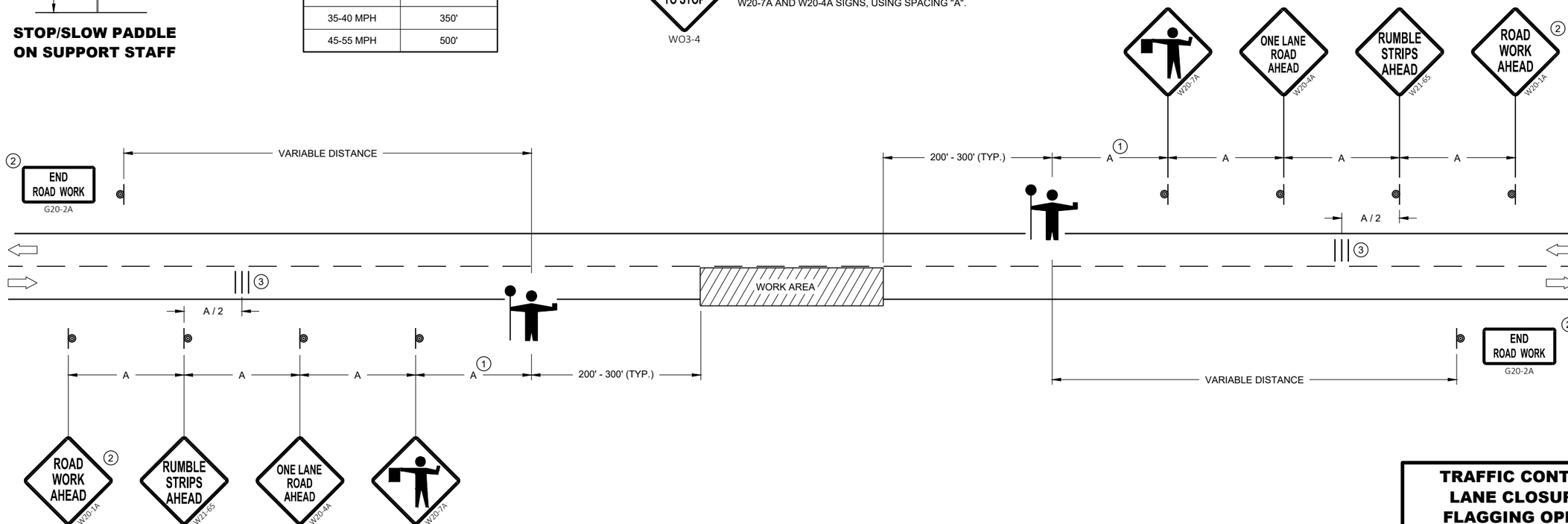

**STOP/SLOW PADDLE ON SUPPORT STAFF**

## SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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




# TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



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SDD 15C12 - 09a

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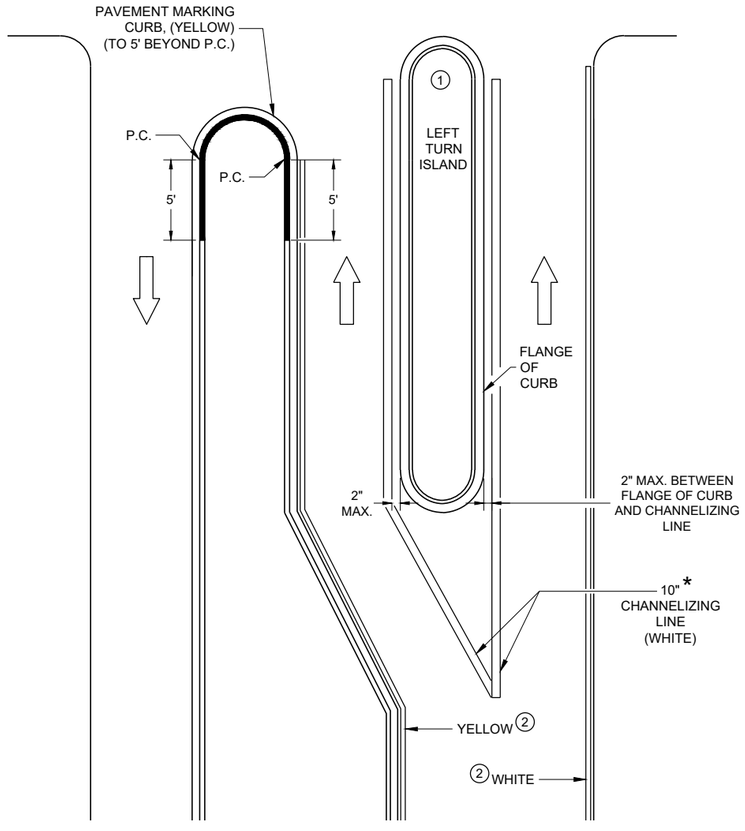
SDD 15C12 - 09a

| REQUIREMENTS FOR EDGE LINES | | |
|---|---|---|
| POSTED SPEED | IS THERE CONTINUOUS LIGHTING? | |
| | YES | NO |
| ≤ 30 MPH | NO | OPTIONAL |
| 35 OR 40 MPH | OPTIONAL | RECOMMENDED |
| ≥ 45 MPH | RECOMMENDED | REQUIRED |




**LEFT TURN & MEDIAN ISLAND**

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

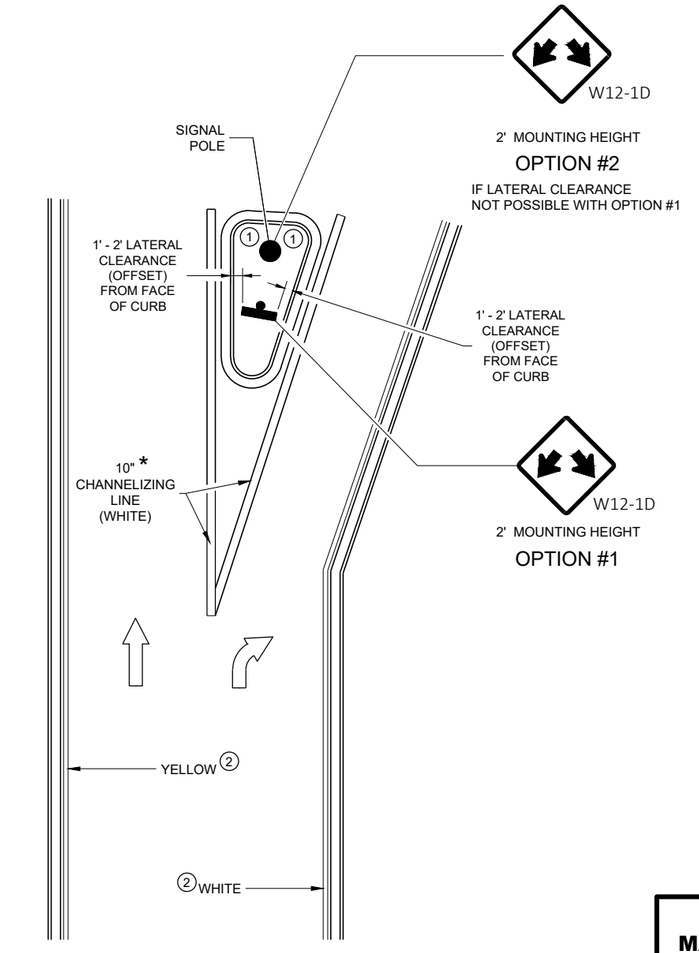
## GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

1. MARK CURB NOSES YELLOW.
2. MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL




**RIGHT TURN ISLAND**

**MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA



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SDD 15C18-08c

## LEGEND

V1 MARKING VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE

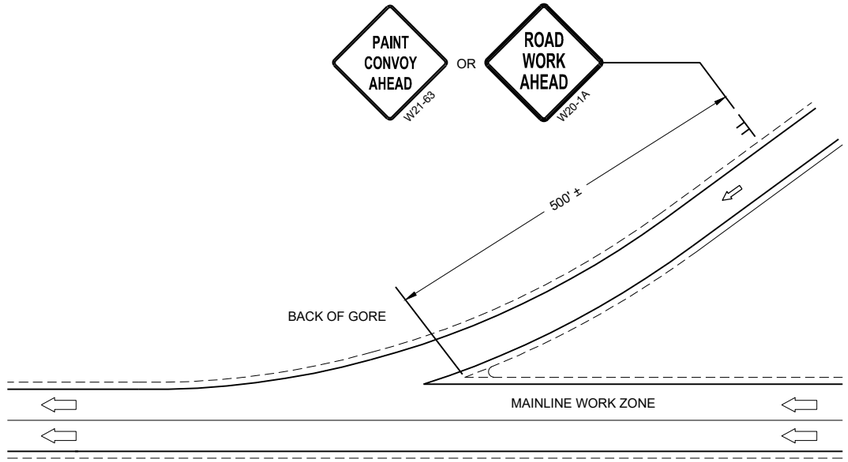
TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (MERGE)

FLASHING ARROW PANEL (CAUTION)




## GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

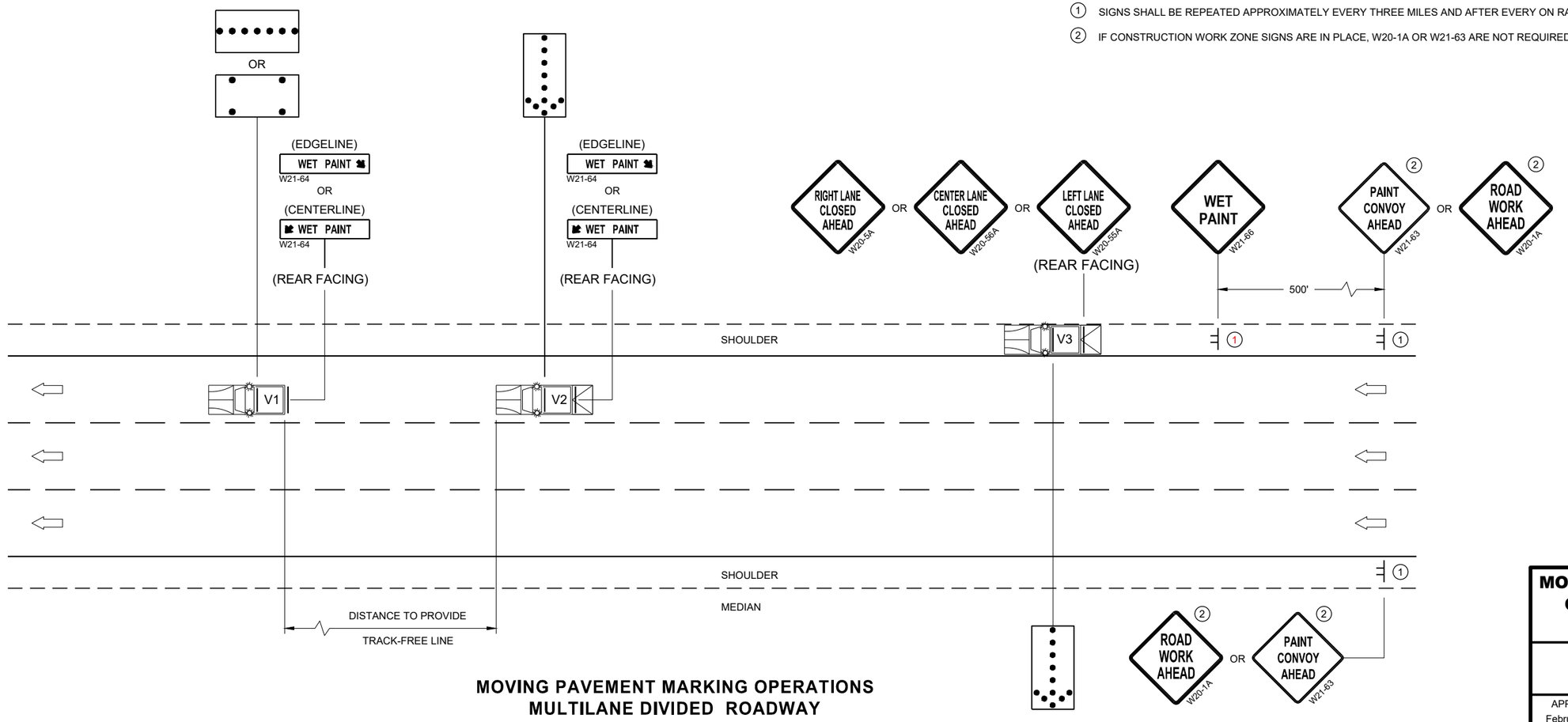
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.




**MOVING PAVEMENT MARKING OPERATIONS**
**MULTILANE DIVIDED ROADWAY**

**MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE

/S/ Andrew [illegible]
WORK ZONE EN

FHWA



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SDD 15C19-08c

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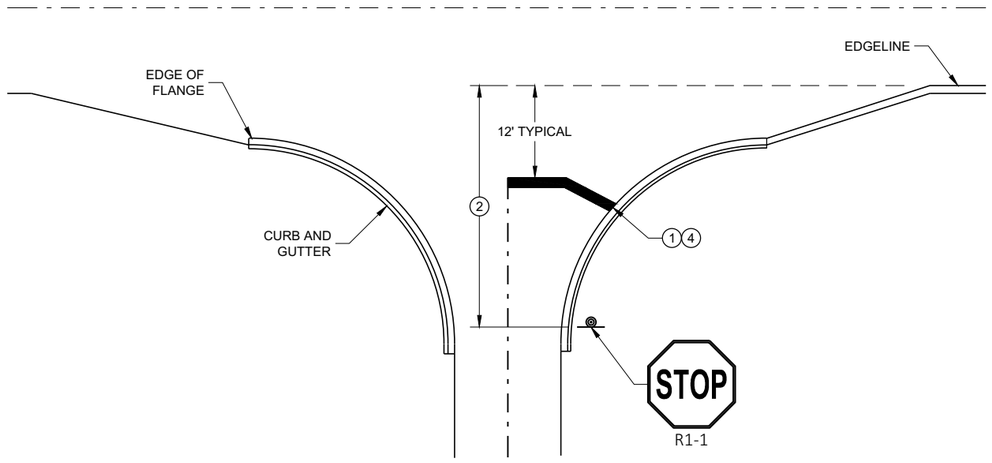
SDD 15C19-08c

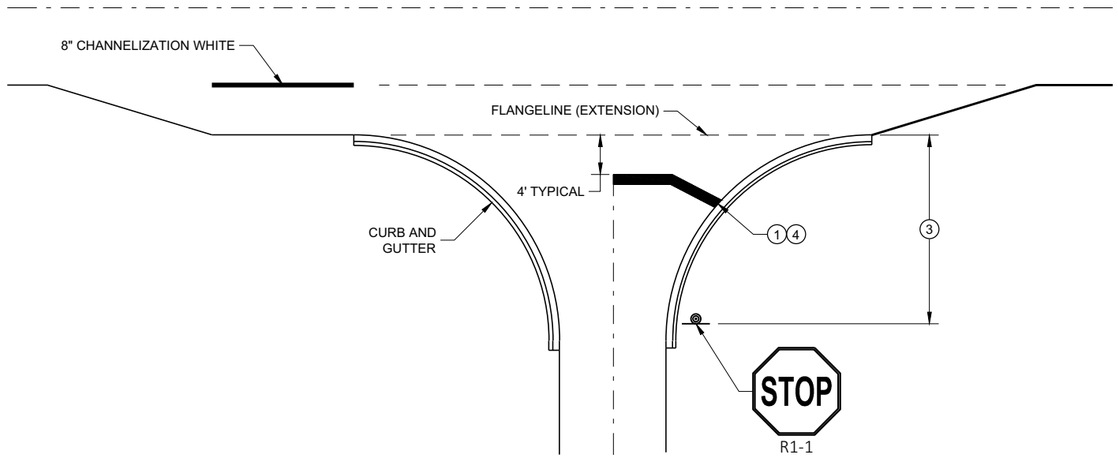
## GENERAL NOTES

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

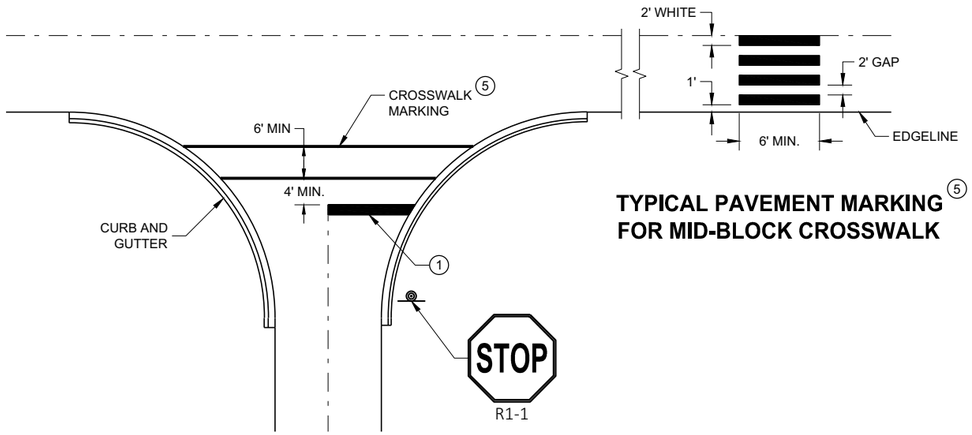
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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




**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

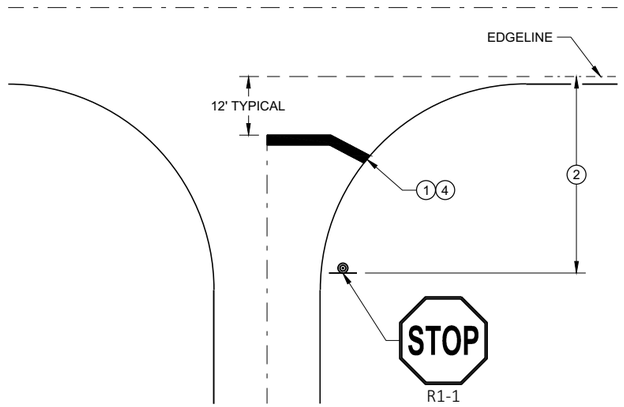



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**




**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5**

**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**




**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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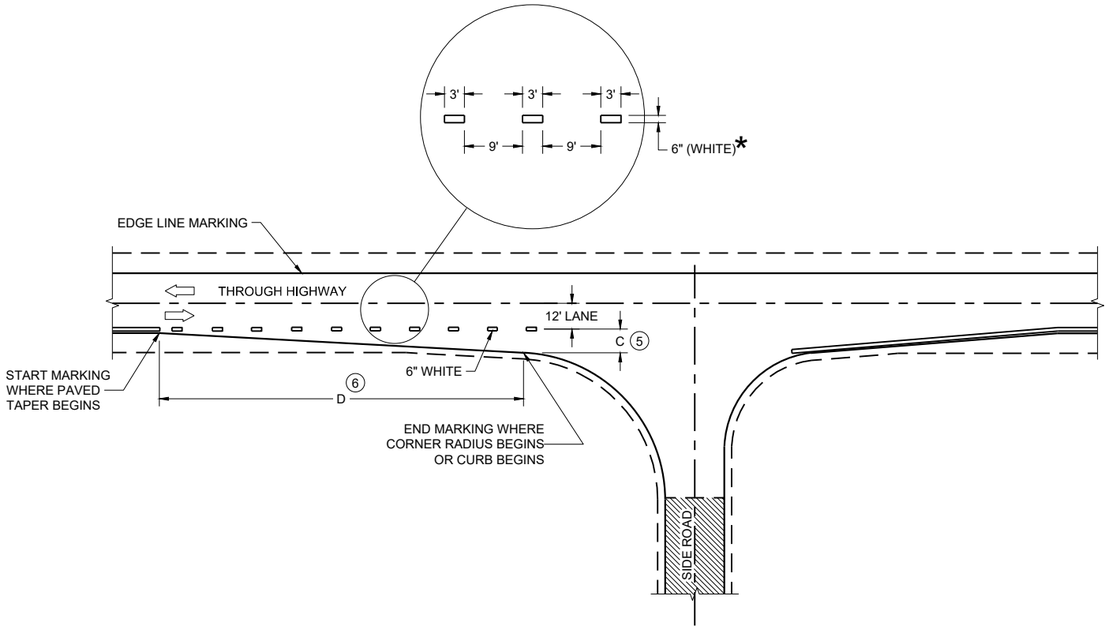
SDD 15C33 - 04




**MINOR INTERSECTION**

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

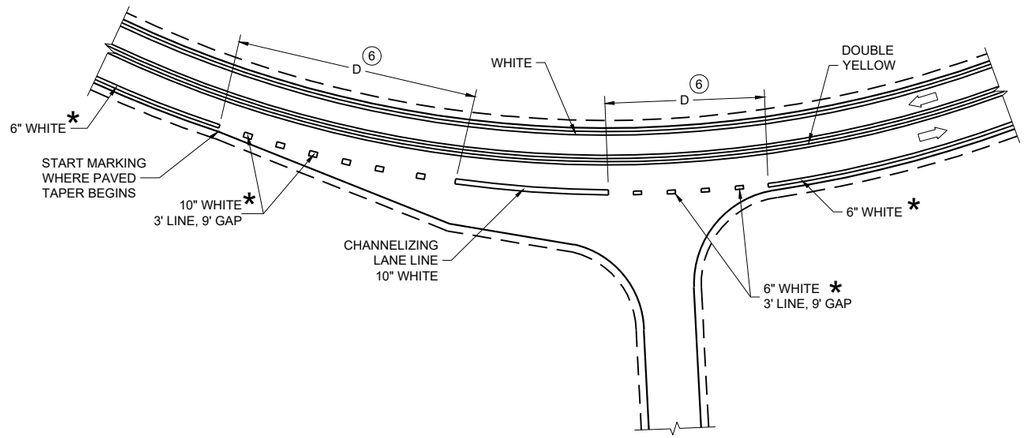
## GENERAL NOTES

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

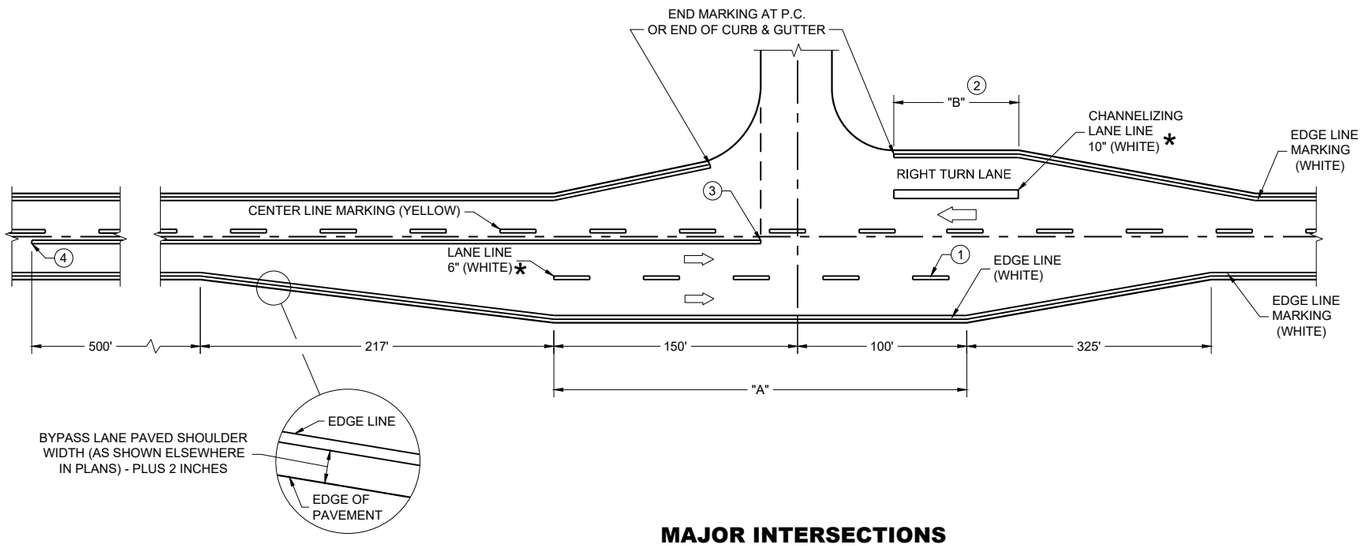
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET,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

## LEGEND

DIRECTION OF TRAVEL




**INTERSECTION ON OUTSIDE OF CURVE**




**MAJOR INTERSECTIONS**

**(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**

**PAVEMENT MARKING (INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

## GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

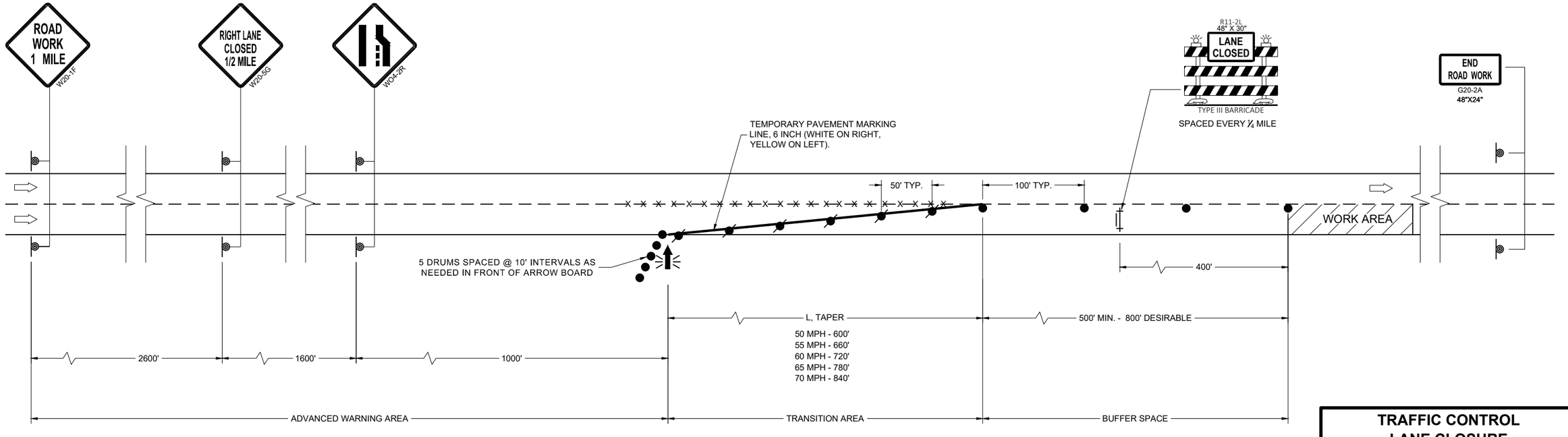
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD




**TRAFFIC CONTROL LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

/S/ Andrew Heidtke
Work Zone Engineer

FHWA



6

SDD 15D12-13a

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SDD 15D12-13a

## LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

## GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

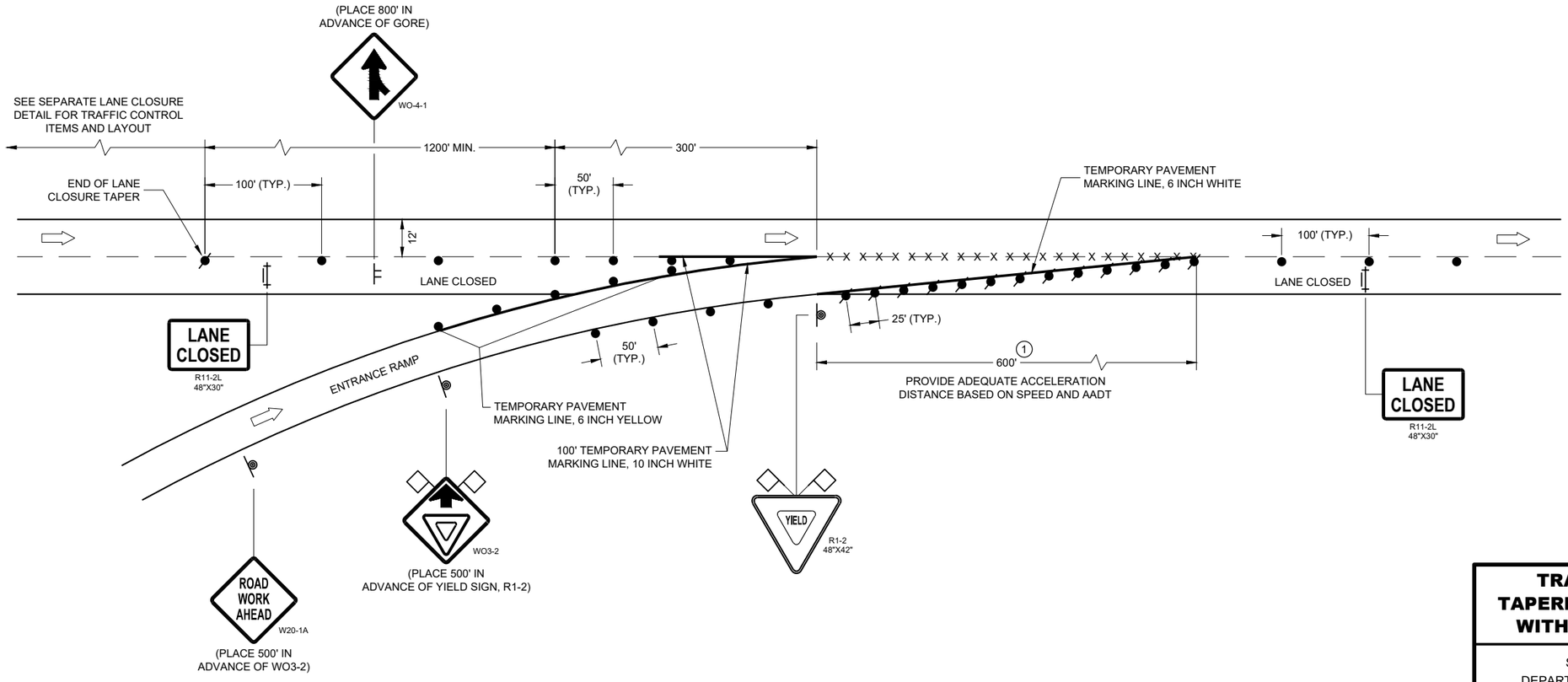
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

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

(1) CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.




# TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



6

SDD 15D15-07c

6

SDD 15D15-07c

## LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

## GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

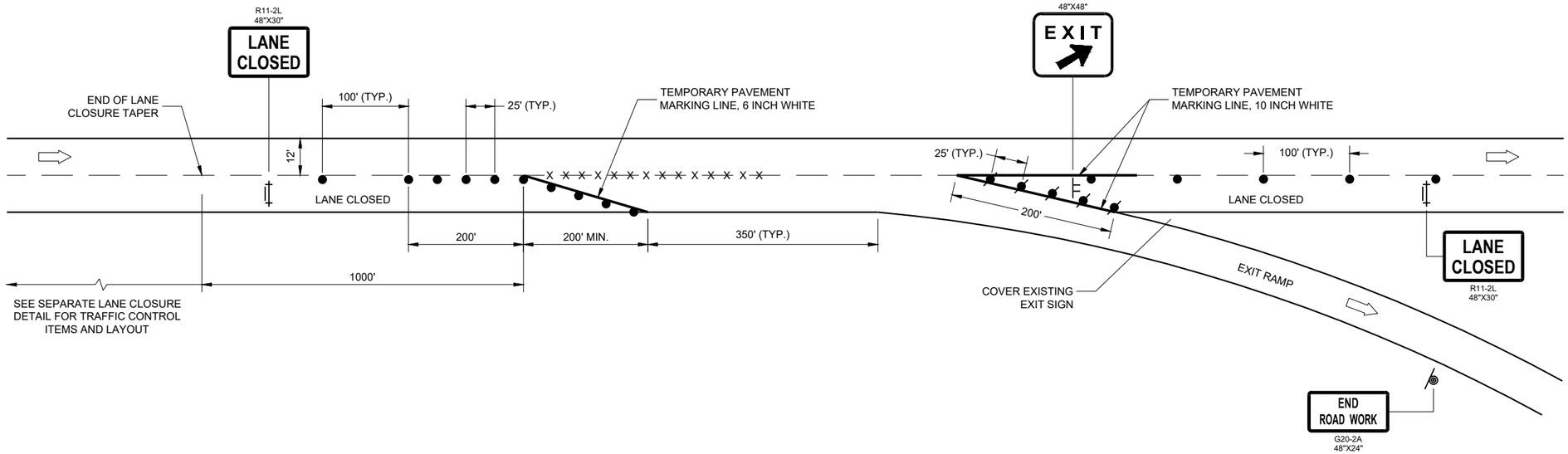
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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.

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

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




# TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15D15-07e

## LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

## GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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

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

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

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.

PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

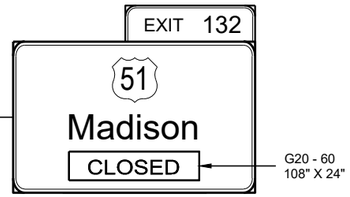
WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

OR




PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN

COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)

G20 - 61
120 ' X 30"




OR

PCMS MESSAGING

| FRAME 1 | FRAME 2 |
|---|---|
| RAMP TO CLOSE | XXXDAY XX XX XX |

# TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA





6

SDD 15D16-06

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

## GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 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. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

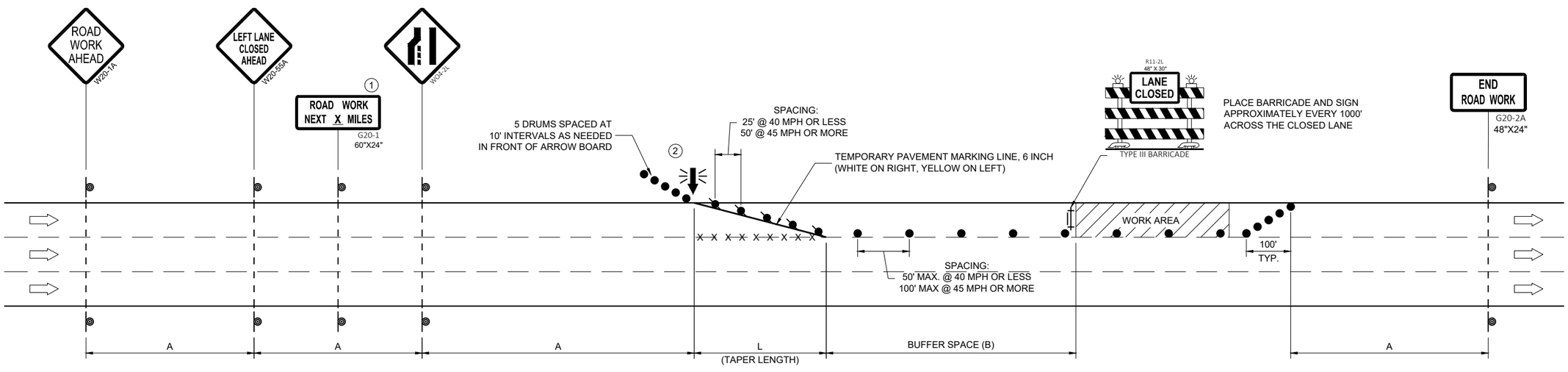
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.




| POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH) | ADVANCE WARNING SIGN SPACING (A) FEET | TAPER LENGTH (12 FT. LANE) (L) FEET | BUFFER SPACE (B) FEET |
|---|---|---|---|
| 25 | 200' | 125' | 55' |
| 30 | 200' | 180' | 85' |
| 35 | 350' | 245' | 120' |
| 40 | 350' | 320' | 170' |
| 45 | 500' | 540' | 220' |

# TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



6
SDD 15D20-08a

## LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

## GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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" X 48" UNLESS OTHERWISE NOTED.

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

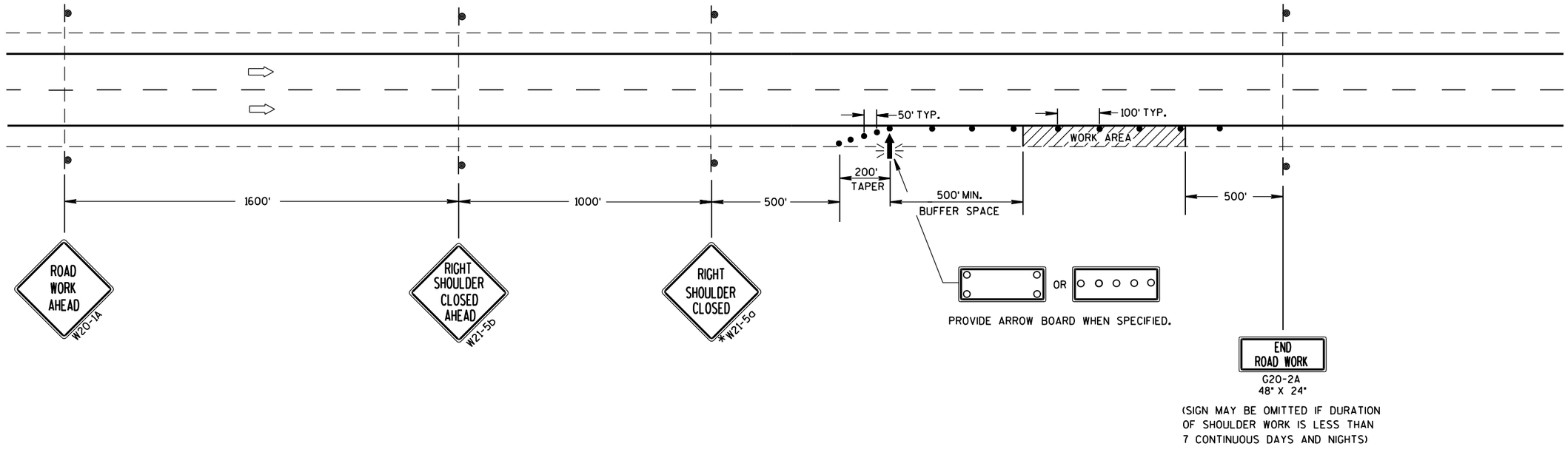
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.




# TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

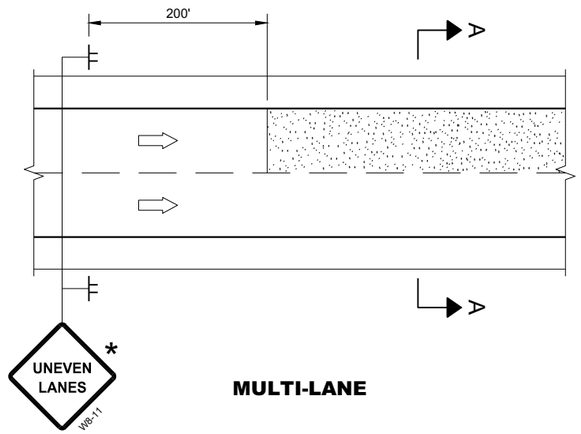
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

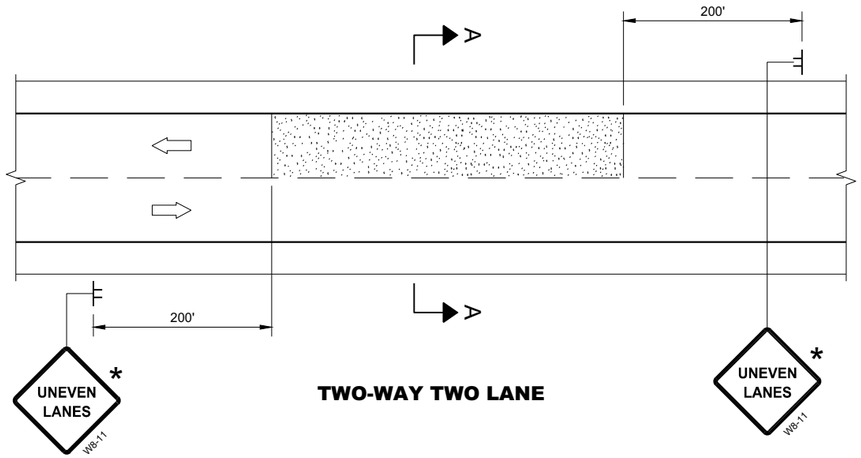



6


S.D.D. 15 D 27-3




**MULTI-LANE**




**TWO-WAY TWO LANE**

## GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

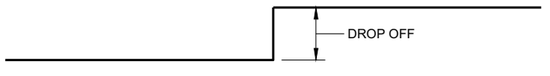
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

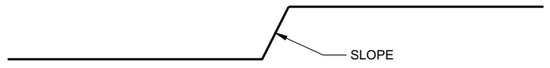
## LEGEND

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

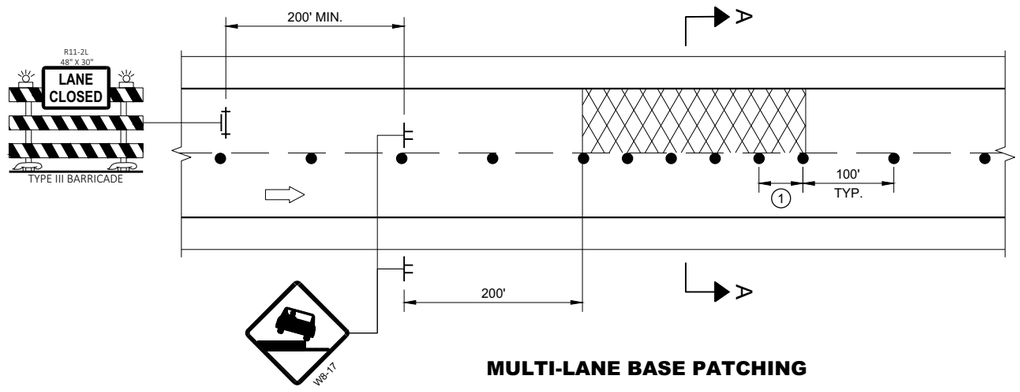



**SECTION A - A**

**OR**

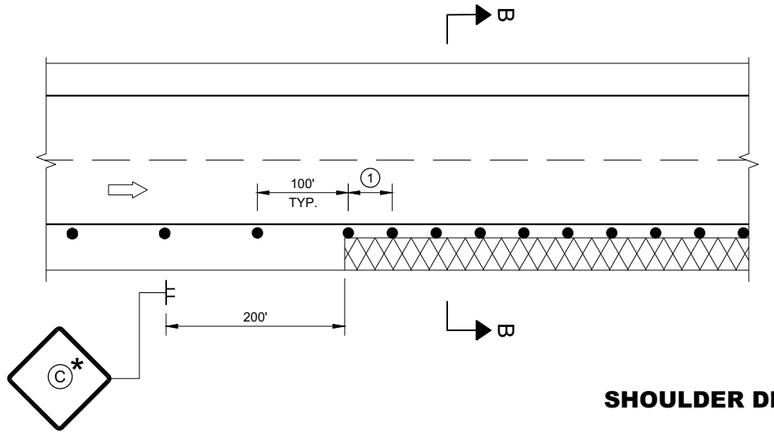



**SECTION A - A**

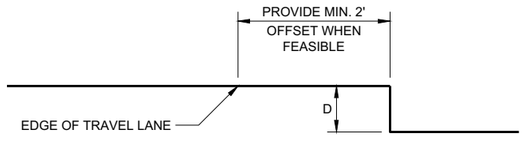



**MULTI-LANE BASE PATCHING**

**ADJACENT LANE DROP-OFFS**




**SHOULDER DROP-OFFS**




**SECTION B - B**

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

**TRAFFIC CONTROL, DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



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SDD 15D39 - 02

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SDD 15D39 - 02

## LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

## GENERAL NOTES

RIGHT CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR)

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

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

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

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

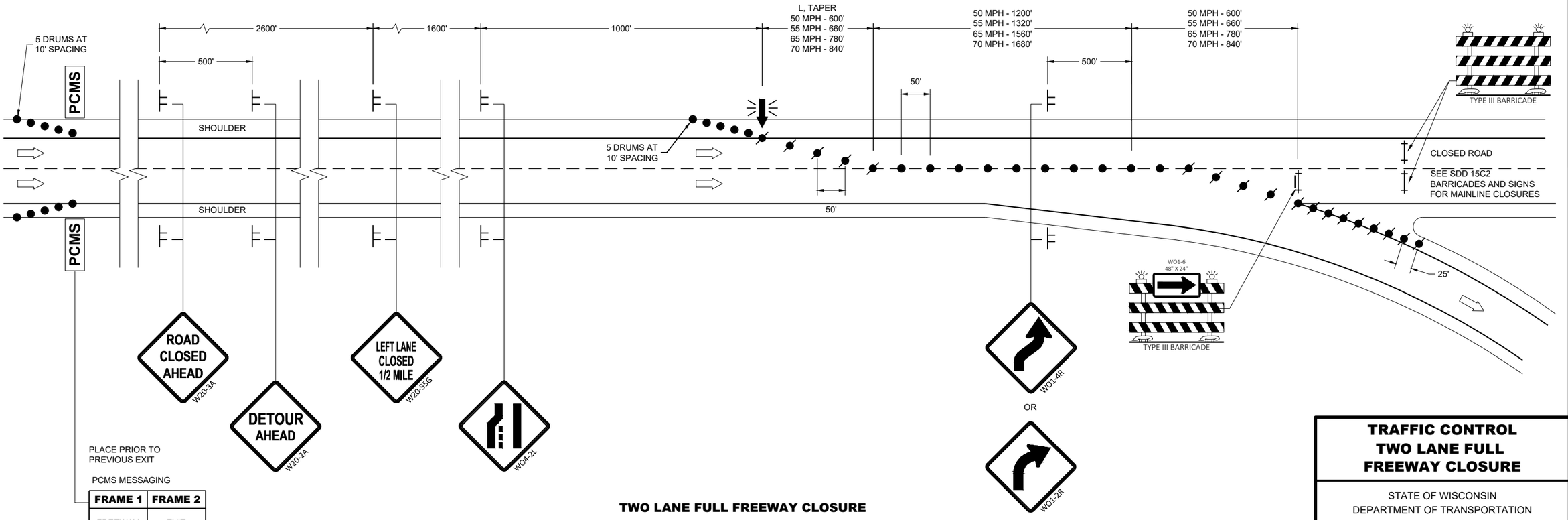
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS EACH CLOSED LANE TO HELP REINFORCE THE DRUM LINE.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

REFER TO DETOUR ROUTES FOR TRAFFIC GUIDANCE SIGNING.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.




PLACE PRIOR TO PREVIOUS EXIT

PCMS MESSAGING

| FRAME 1 | FRAME 2 |
|---|---|
| FREEWAY CLOSED | EXIT AHEAD |

**TWO LANE FULL FREEWAY CLOSURE**

**TRAFFIC CONTROL**
**TWO LANE FULL**
**FREEWAY CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



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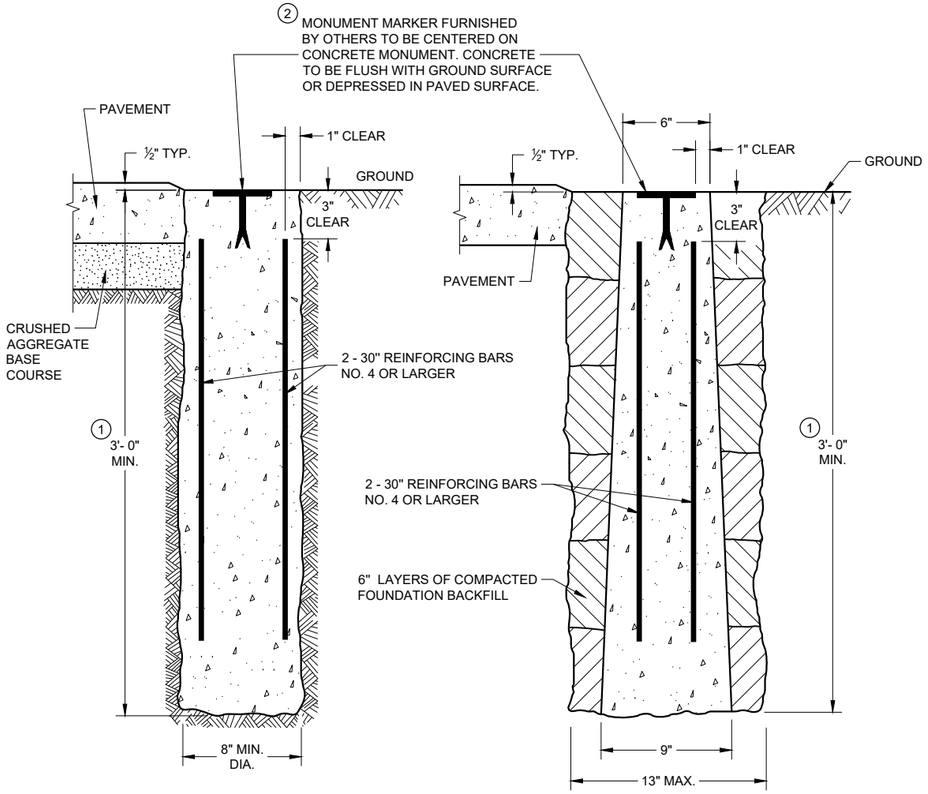
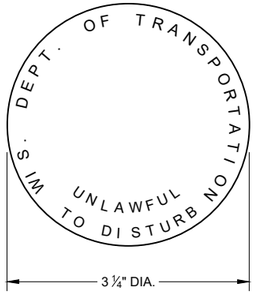
SDD 15D42-02



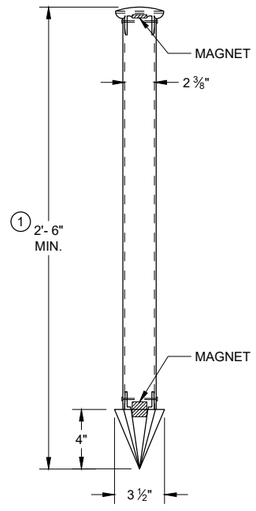

**CAST-IN-PLACE** **PRECAST**

## CONCRETE MONUMENTS
### TYPE A

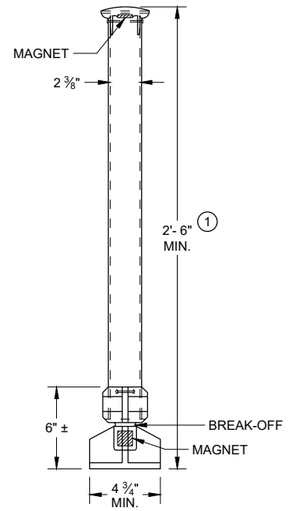



② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C" & "D"

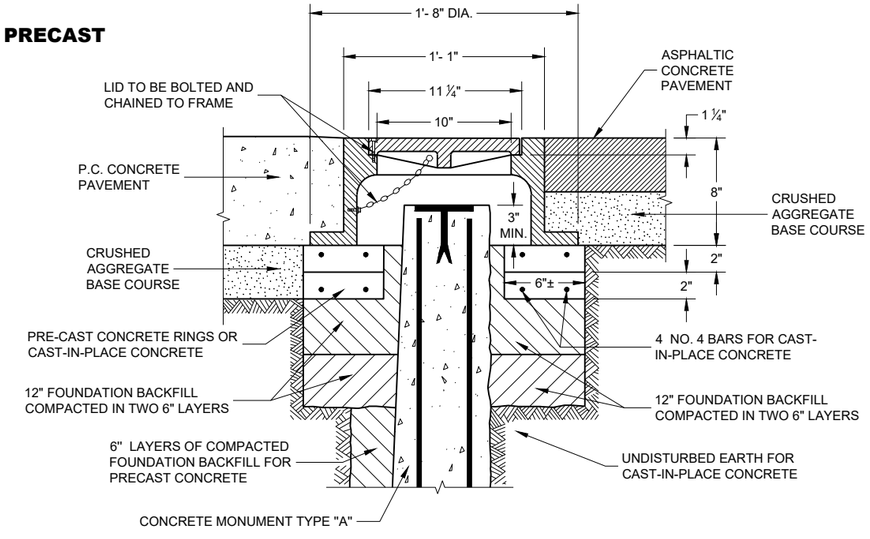



**TYPE C DRIVEN MONUMENT**




**TYPE D NON-DRIVEN BREAK-OFF MONUMENT**

## ALUMINUM MONUMENTS
(INCLUDES MARKER)




## CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT 95 LBS)

## 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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

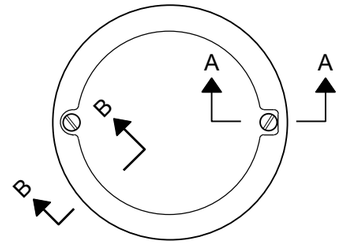
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

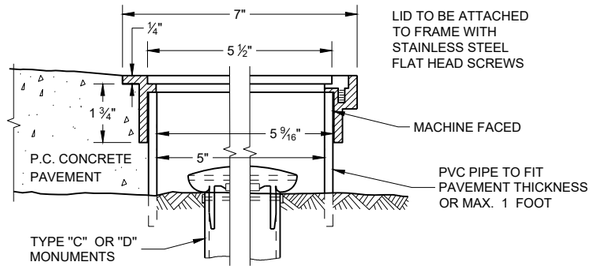
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WISDOT MARKER.




**TOP VIEW**




**SECTION B-B** **SECTION A-A**

## ALUMINUM MONUMENT COVER
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

## LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Raymond A. Kumapayii
CHIEF SURVEYING AND MA
ENGINEER

FHWA





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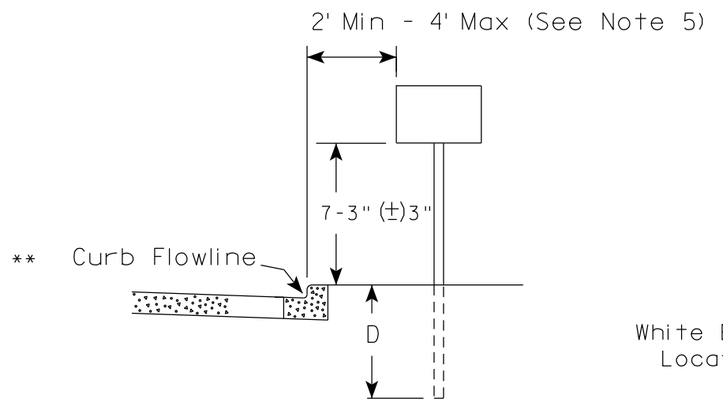
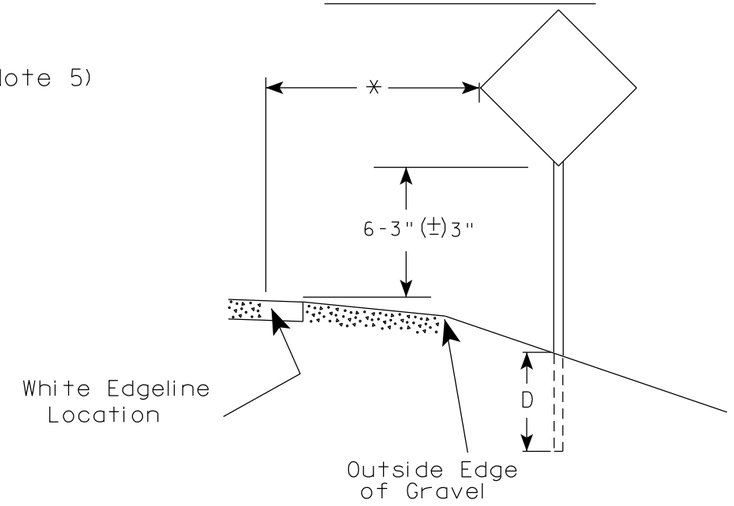
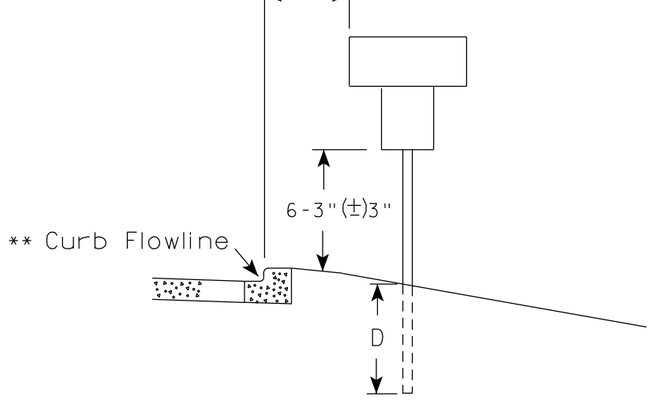
SDD 16A01 - 07

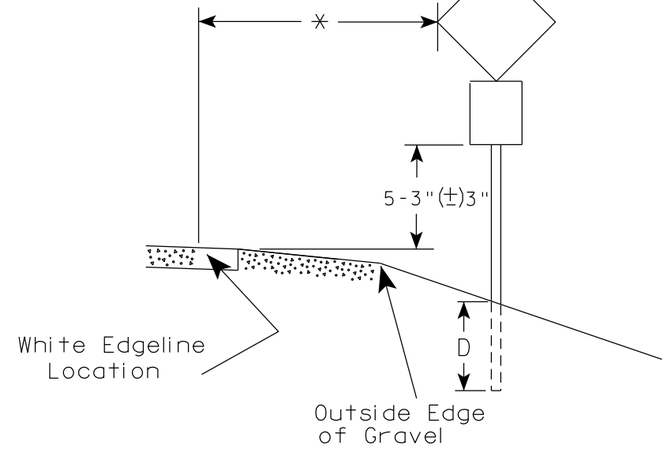
## URBAN AREA




## 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' |

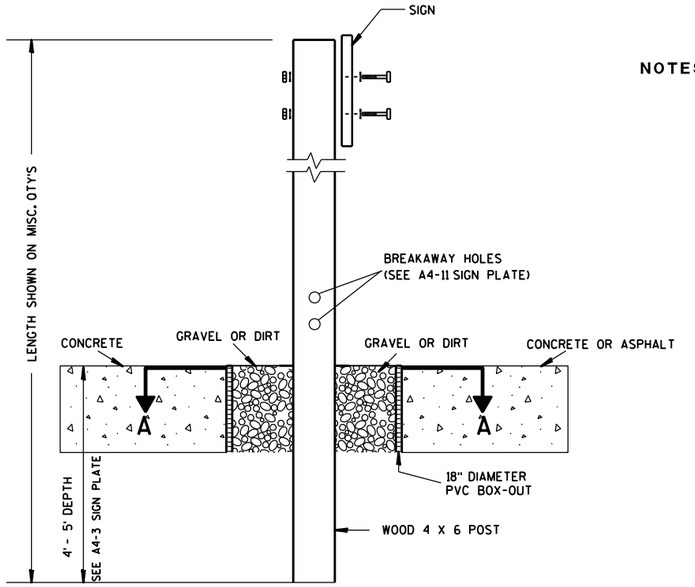
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

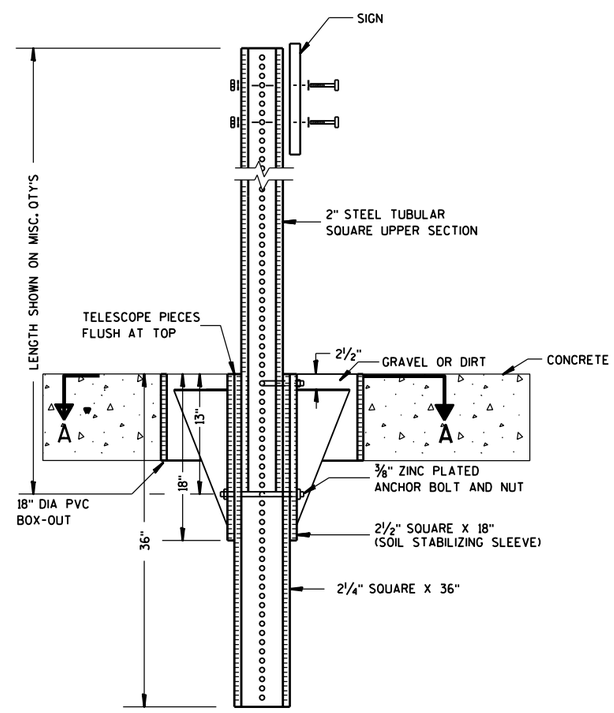
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 151 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

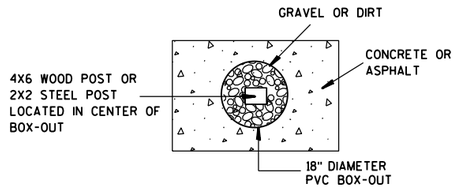
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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




**ELEVATION VIEW**

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




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

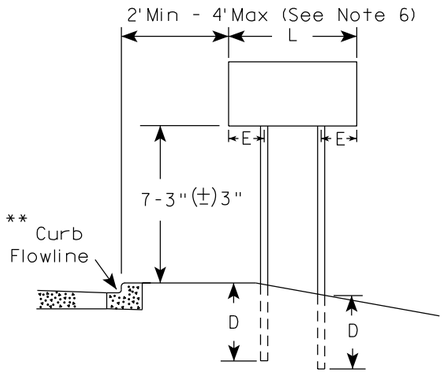
DATE 1/27/14 PLATE NO. A4-3B.1

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

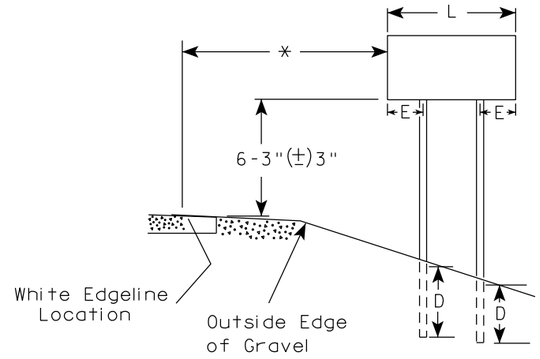


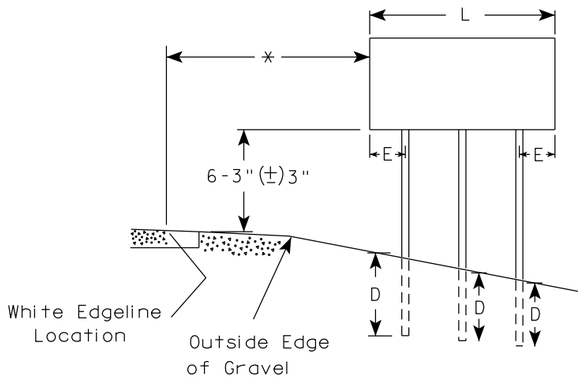
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

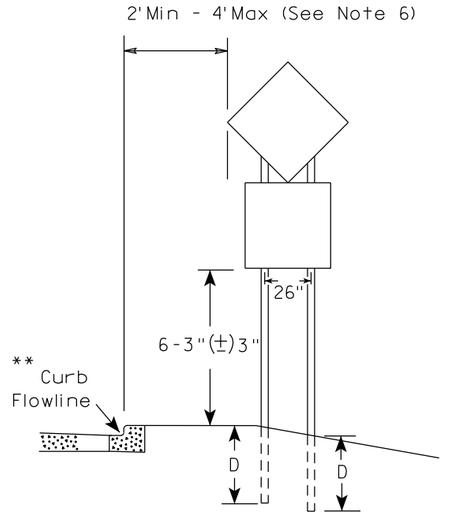
## URBAN AREA



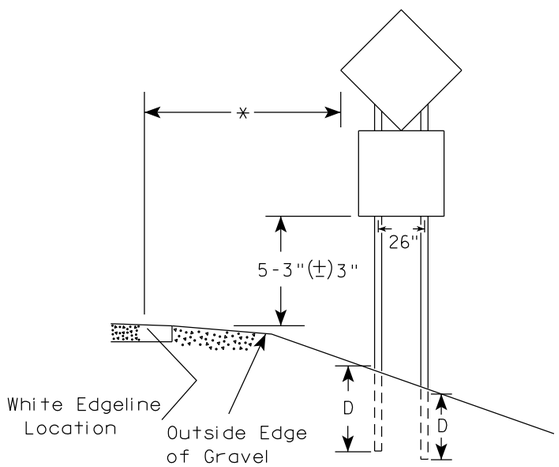

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN




48" DIAMOND WARNING SIGN

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

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

## GENERAL NOTES

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

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

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

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

## POST EMBEDMENT DEPTH

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

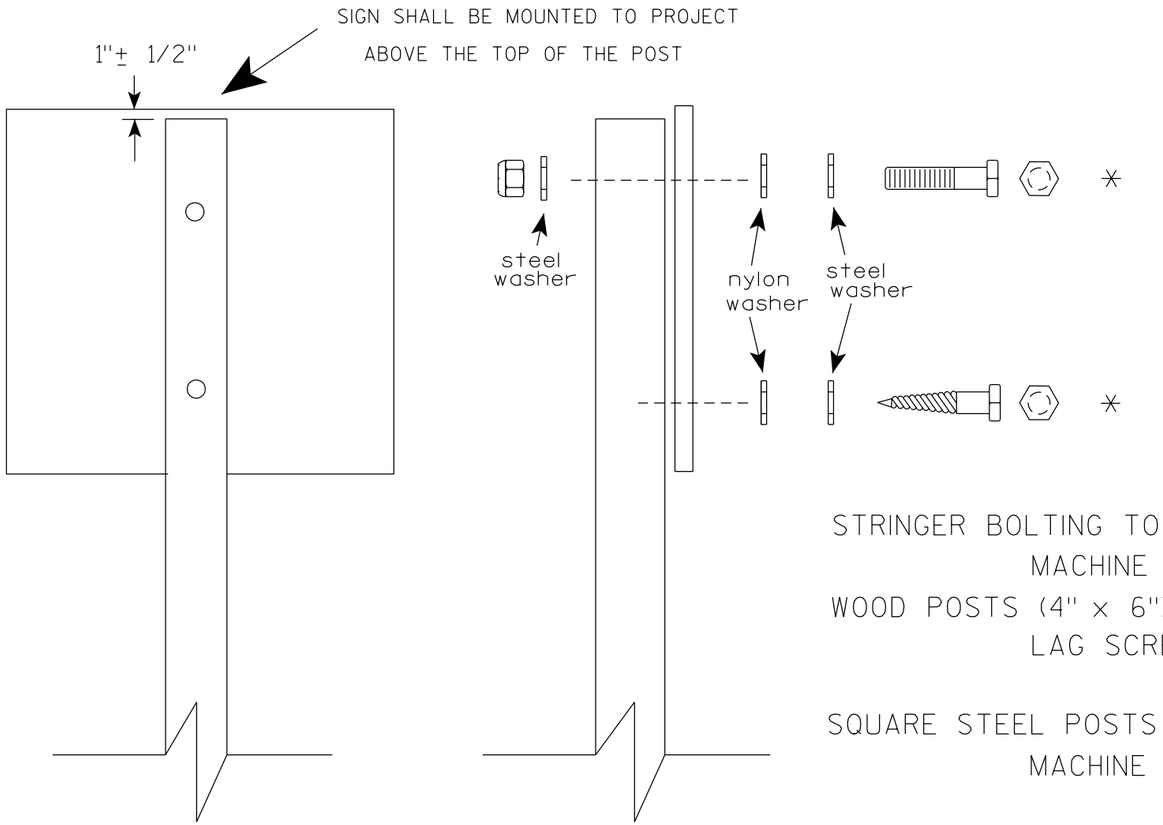
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 153 | E |
|---|---|---|---|---|---|




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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

# ATTACHMENT OF SIGNS TO POSTS

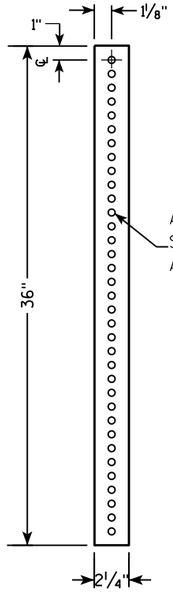
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

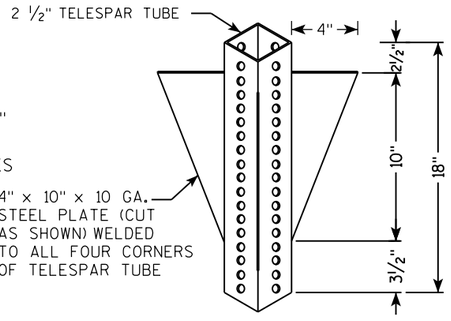
DATE 4/1/2020 PLATE NO. A4-8.9

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

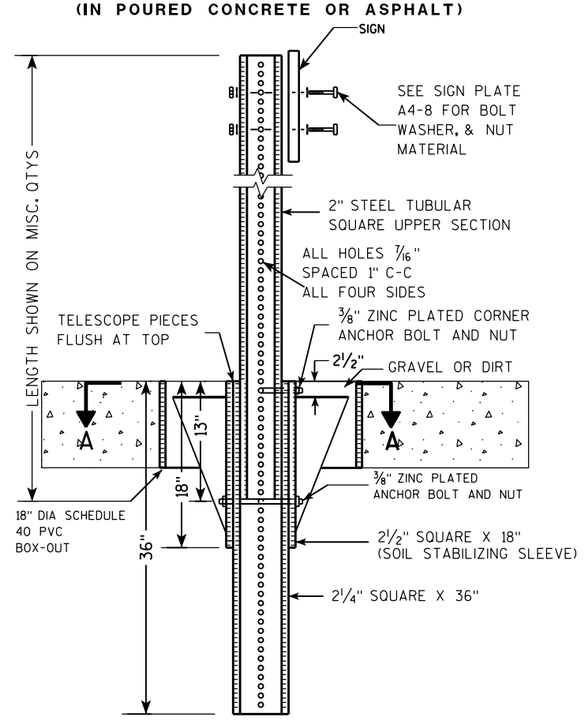
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



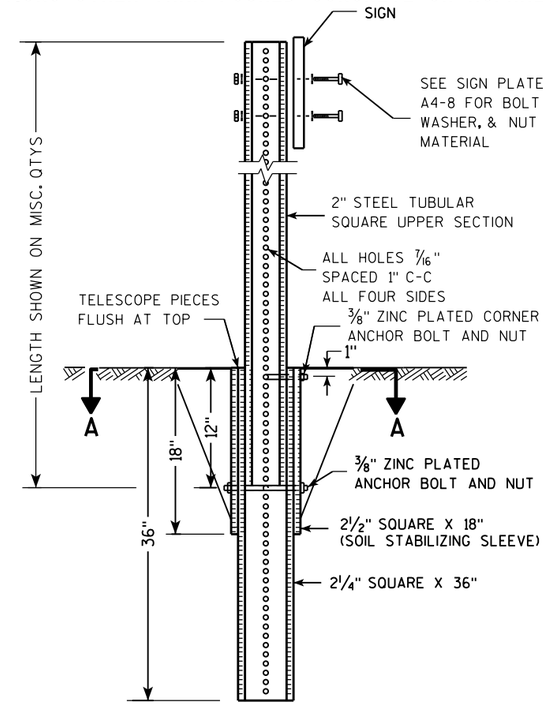

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

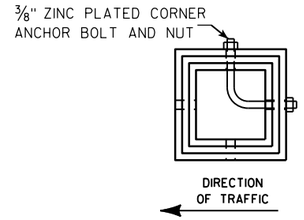



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




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




**SECTION A-A**

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

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

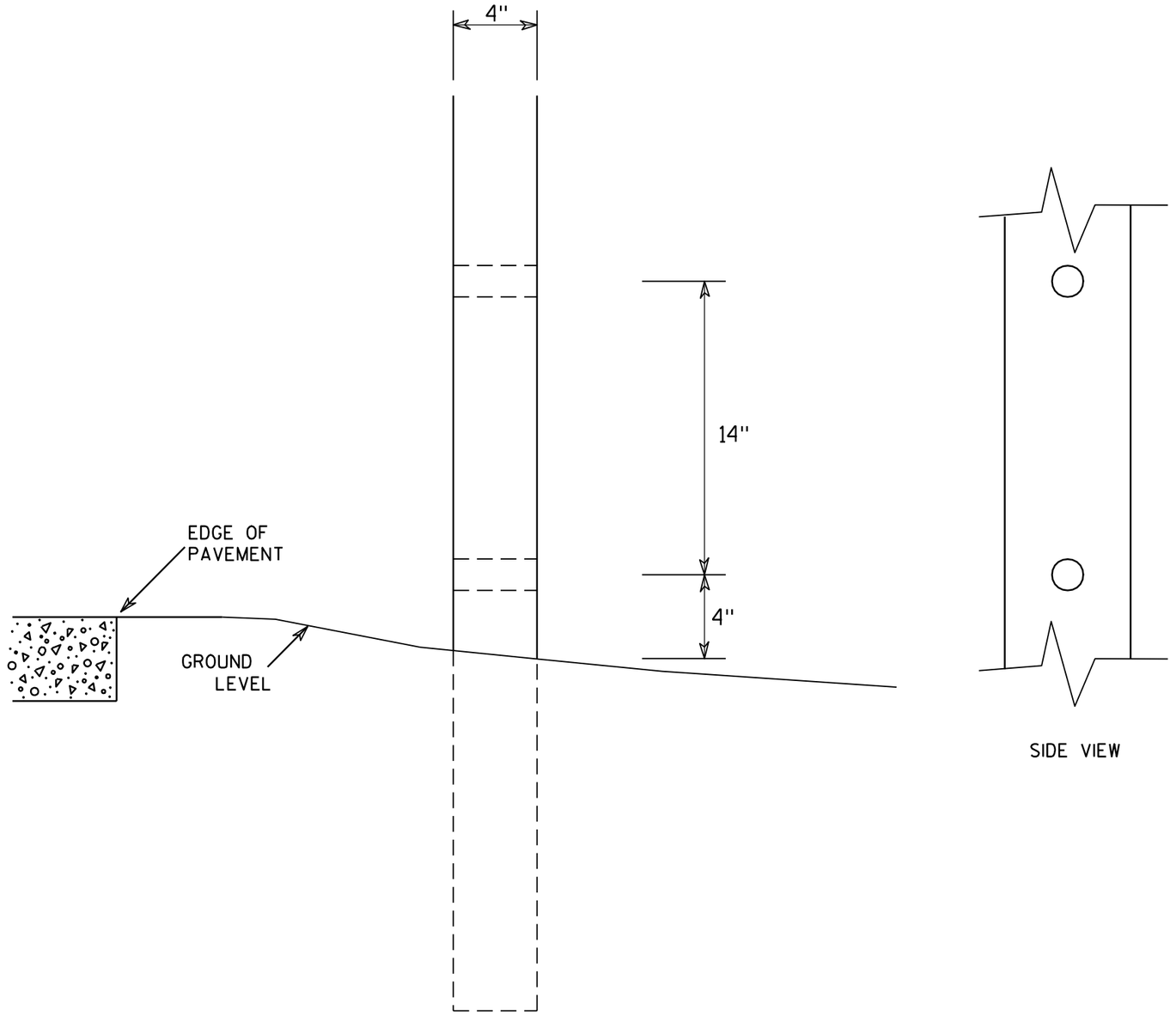
TUBULAR STEEL
SIGN POST
A4-9

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE 155 A4-9.9

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






SIDE VIEW

GENERAL NOTES

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

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# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

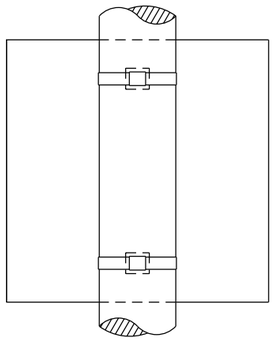
APPROVED Chester J Spang
for State Traffic Engineer

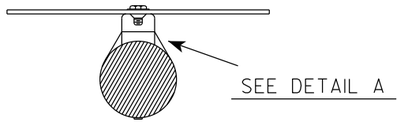
DATE 3/27/97 PLATE NO. A4-11.2

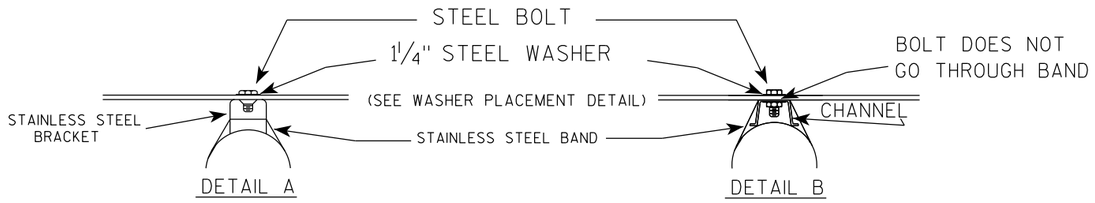
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 156 | E |
|---|---|---|---|---|---|

# BANDING

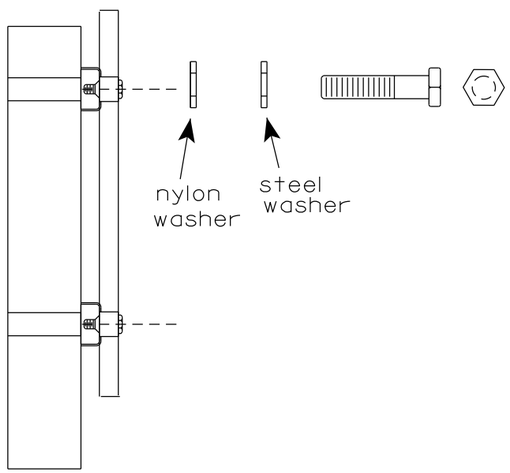
SINGLE SIGN






WASHER PLACEMENT

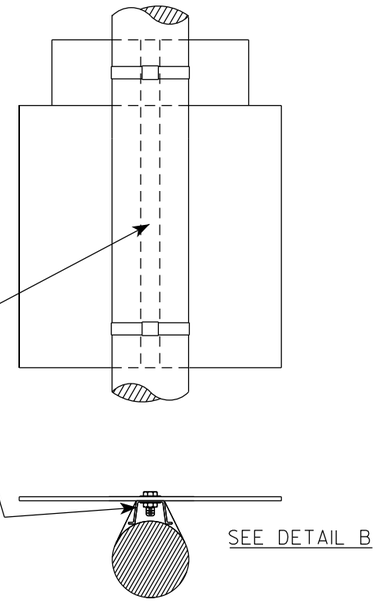



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY




STANDARD SIGN
SIGN BANDING DETAILS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

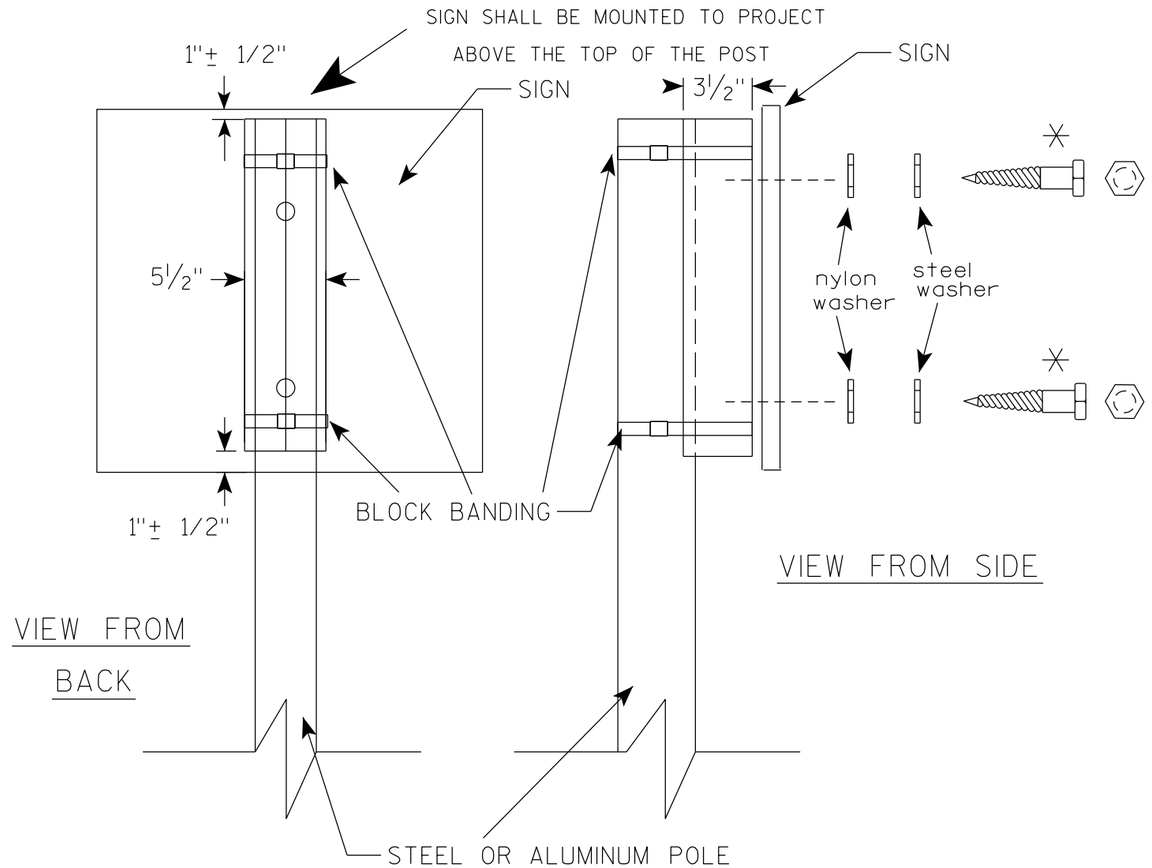
DATE 6/10/19 PLATE NO. A5-9.4

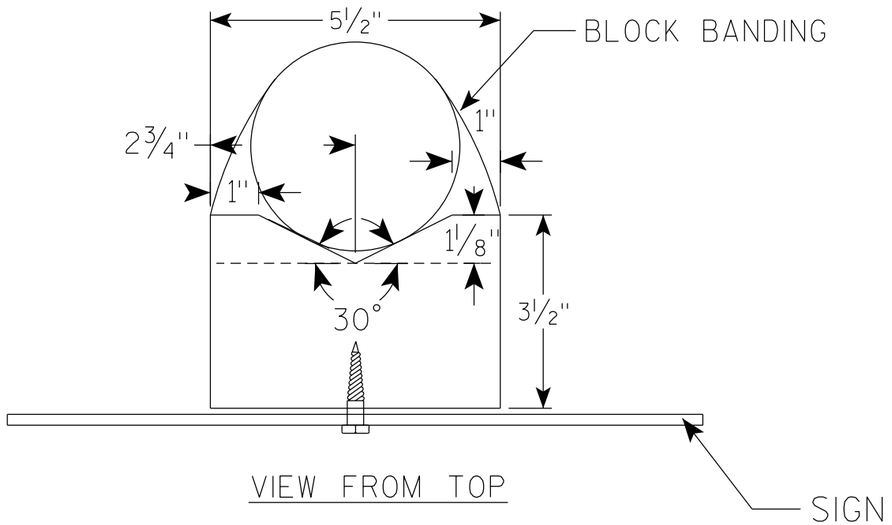
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 157 | E |
|---|---|---|---|---|---|

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

7

7




## GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

# BLOCK BANDING DETAIL ( V-BLOCK OPTION )

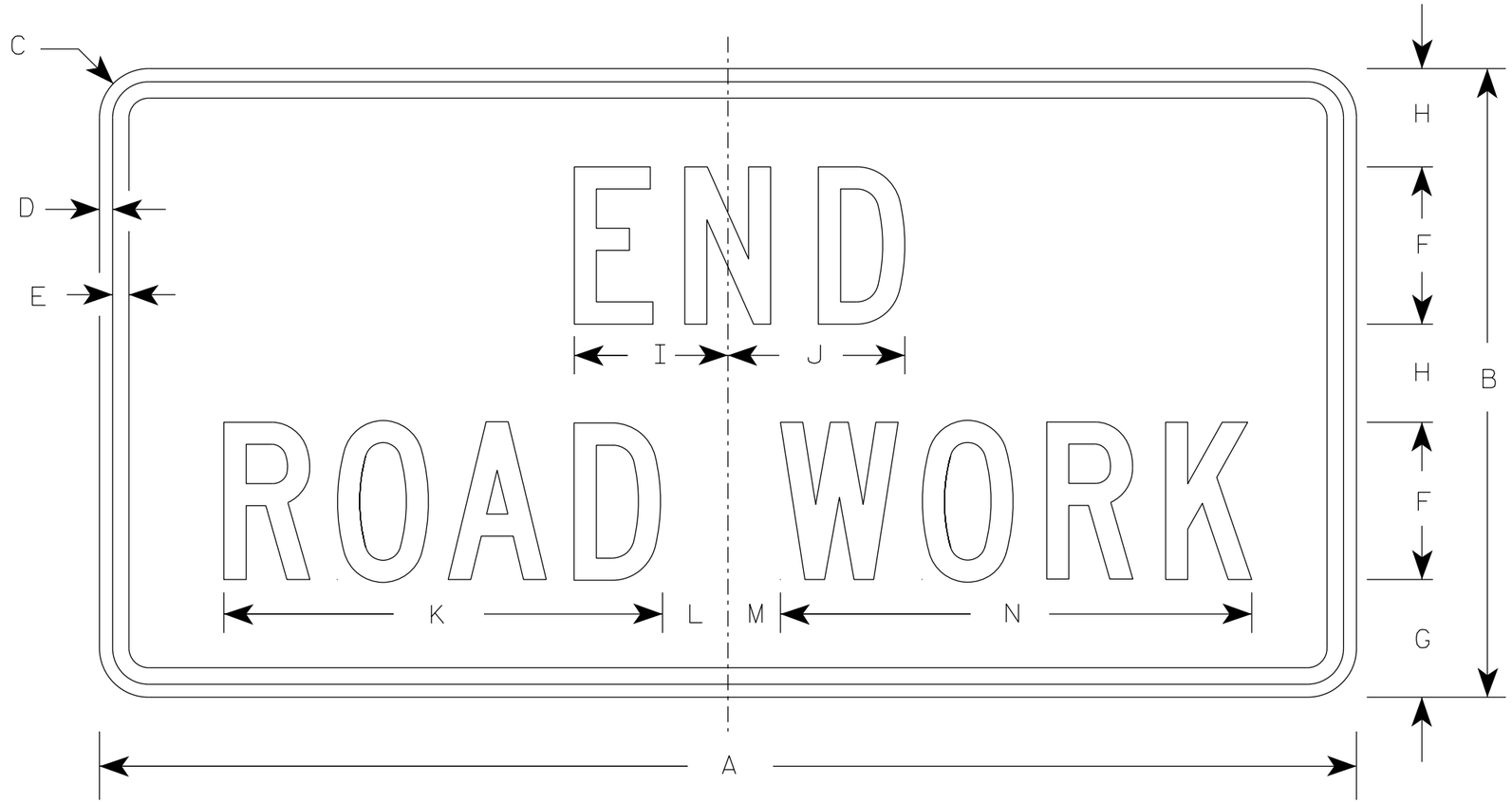
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 158 E




G20-2A

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 4 | 3 3/4 | 2 1/2 | 4 1/8 | 4 1/8 | 11 1/8 | 2 | 1 | 12 1/8 | | | | | | | | | | | | | 4.5 |
| 2 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 2M | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 3 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 4 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |
| 5 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 | | | | | | | | | | | | | 8.0 |

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

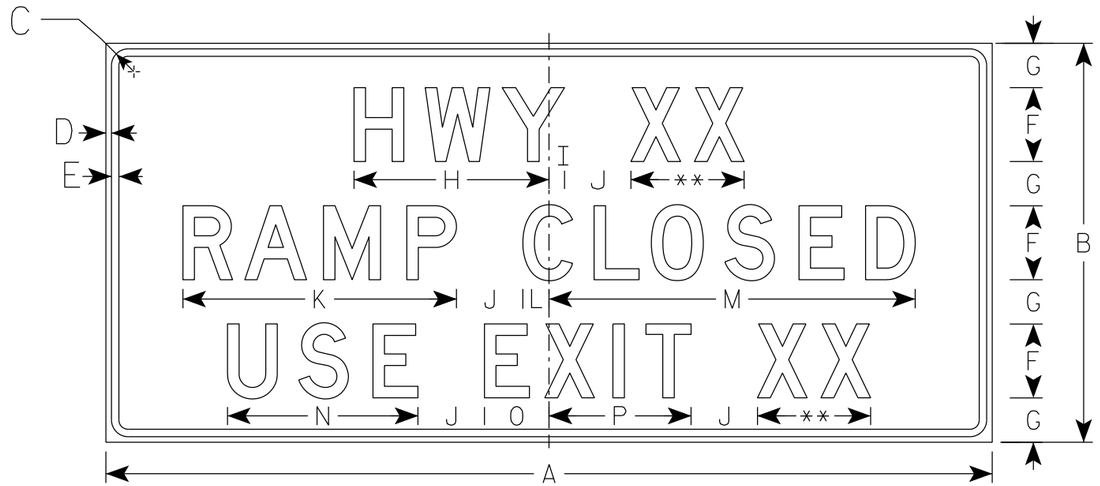
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G202A.dgn PLOT DATE : 26-JAN 2023 8:27 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate Highway Number and Exit Number and optically center message




G20-56

** See Note 4

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 120 | 54 | 3 | 3/4 | 1 | 10 | 6 | 26 3/8 | 2 1/8 | 9 | 37 | 3 1/2 | 49 5/8 | 25 3/4 | 8 3/4 | 19 1/4 | | | | | | | | | | | 45.0 |
| 5 | 120 | 54 | 3 | 3/4 | 1 | 10 | 6 | 26 3/8 | 2 1/8 | 9 | 37 | 3 1/2 | 49 5/8 | 25 3/4 | 8 3/4 | 19 1/4 | | | | | | | | | | | 45.0 |

STANDARD SIGN
G20-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/19/18 PLATE NO. G20-56.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 160 | E

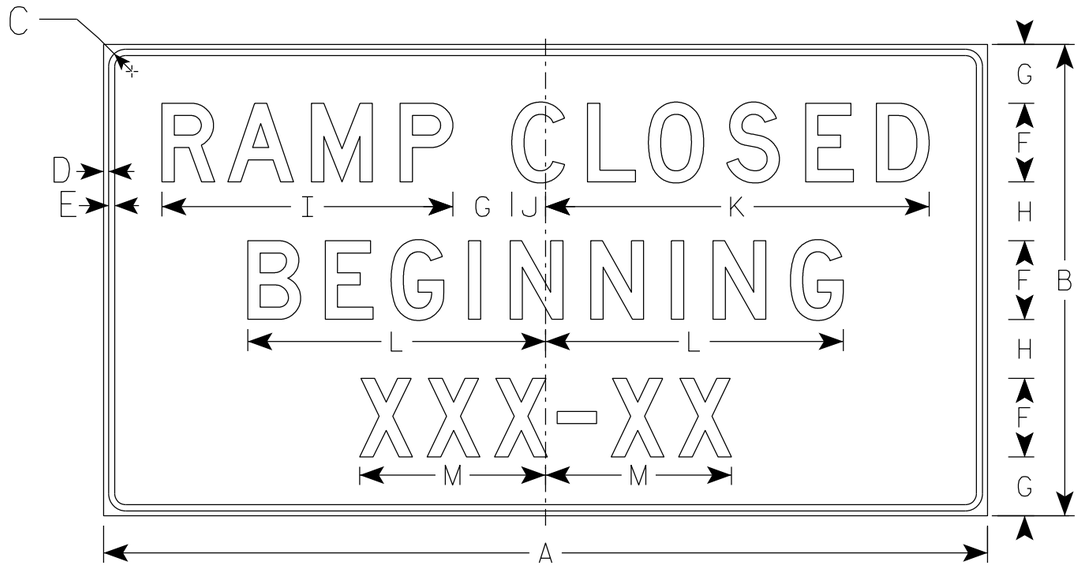
FILE NAME : STDPLATE_G2056.dgn PLOT DATE : 19-JUN-2018 2:28 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7

NOTES

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




G20-58

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 72 | 36 | 1 5/8 | 5/8 | 3/4 | 6 | 5 | 4 | 22 1/4 | 2 3/8 | 29 1/2 | 22 3/4 | 14 1/4 | | | | | | | | | | | | | | 18.0 |
| 3 | 90 | 48 | 1 5/8 | 5/8 | 3/4 | 8 | 6 | 6 | 29 5/8 | 3 3/8 | 39 | 30 3/8 | 19 | | | | | | | | | | | | | | 30.0 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
G20-58

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/19/2020 PLATE NO. G20-58.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 161 | E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - E
4. Material shall be .040 aluminmum

G20-60

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 108 | 24 | | | | 12 | 6 | 14 7/8 | 78 1/4 | | | | | | | | | | | | | | | | | | 18.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
G20-60

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/15 PLATE NO G20-60.1



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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G2060.DGN PLOT DATE : 13-MAY-2015 08:46 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 20.431338:1.000000
WISDOT/CADDS SHEET 42

7

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NOTES

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

G20-61

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 120 | 30 | 6 | | 2 | 12 | 9 | 21 | 78 1/4 | 20 3/4 | | | | | | | | | | | | | | | | | 25.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
G20-61

WISCONSIN DEPT OF TRANSPORTATION

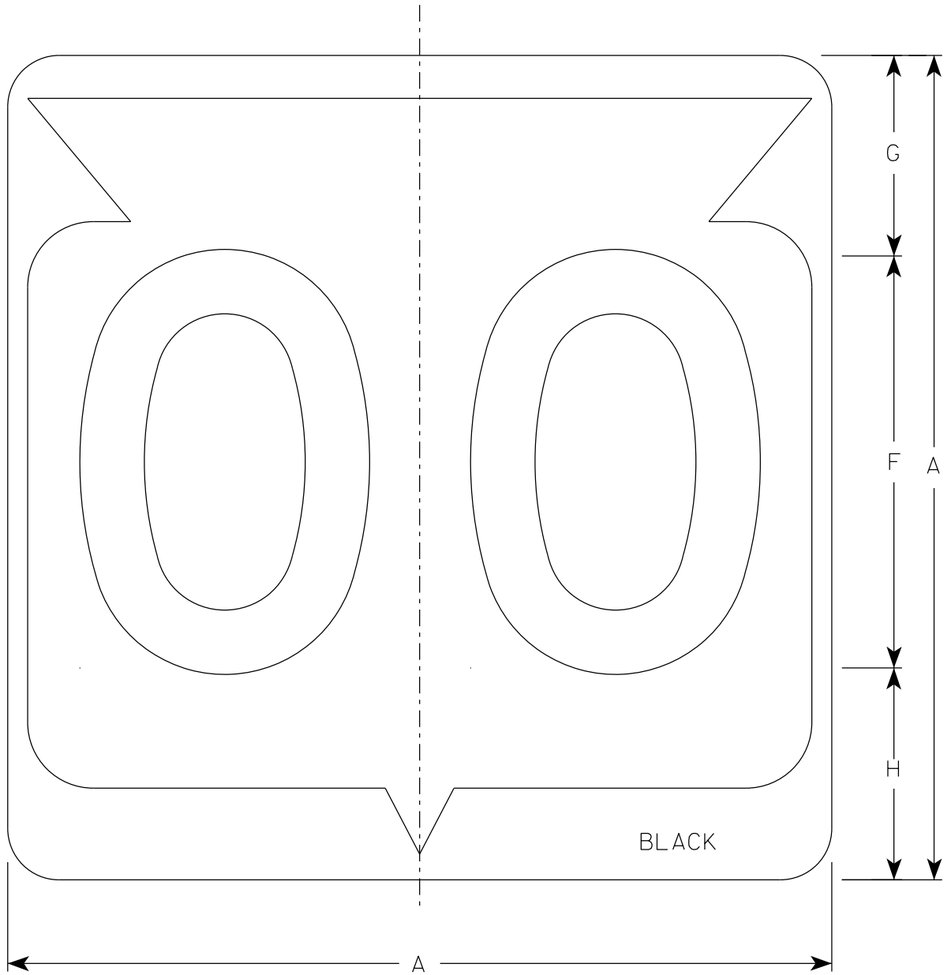
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO G20-61.1

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



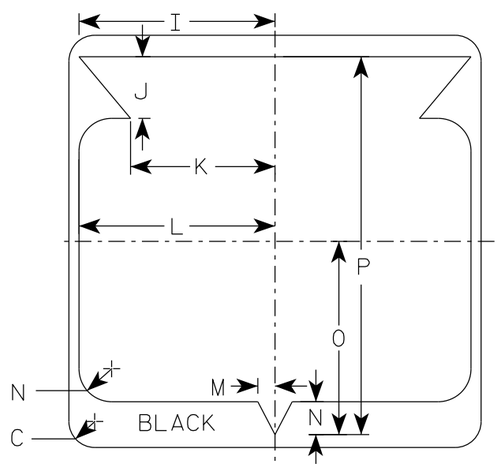
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\G2061.DGN PLOT DATE : 07-MAY-2015 13:47 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 20.431338:1.000000 WISDOT/CADDS SHEET 42




M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs Series C




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

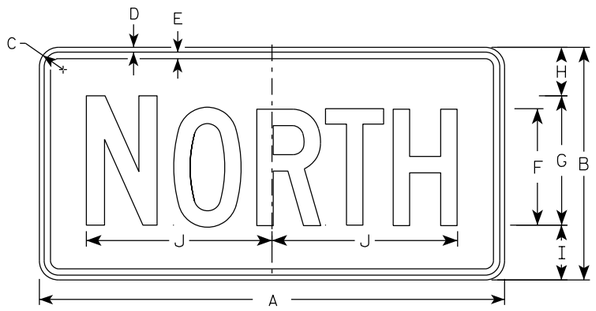
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

*WISCONSIN DEPT OF TRANSPORTATION*

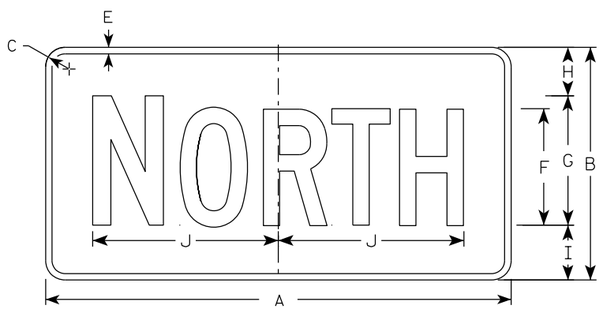
APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11

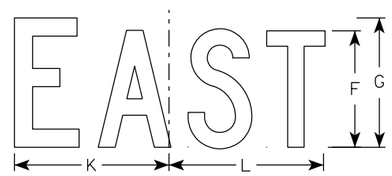
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 164 | E |
|---|---|---|---|---|---|




M3-1
MM3-1
MP3-1

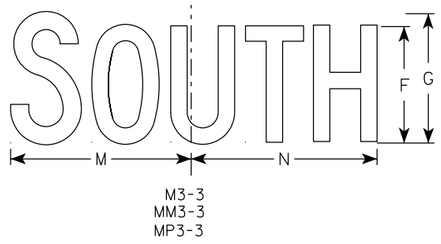



MB3-1
MK3-1
MN3-1

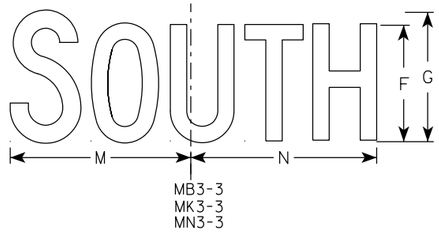



M3-2
MM3-2
MP3-2

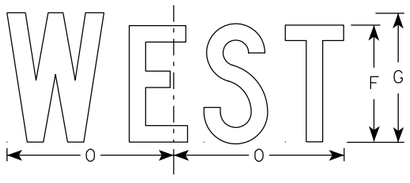
MB3-2
MK3-2
MN3-2



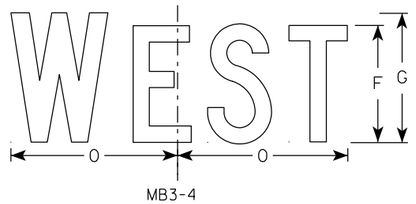

M3-3
MM3-3
MP3-3




MB3-3
MK3-3
MN3-3




M3-4
MM3-4
MP3-4




MB3-4
MK3-4
MN3-4

## NOTES

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

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

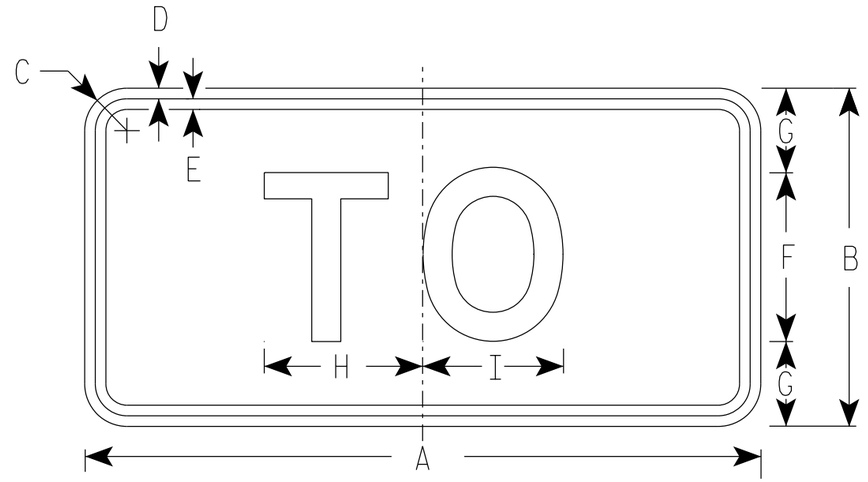
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

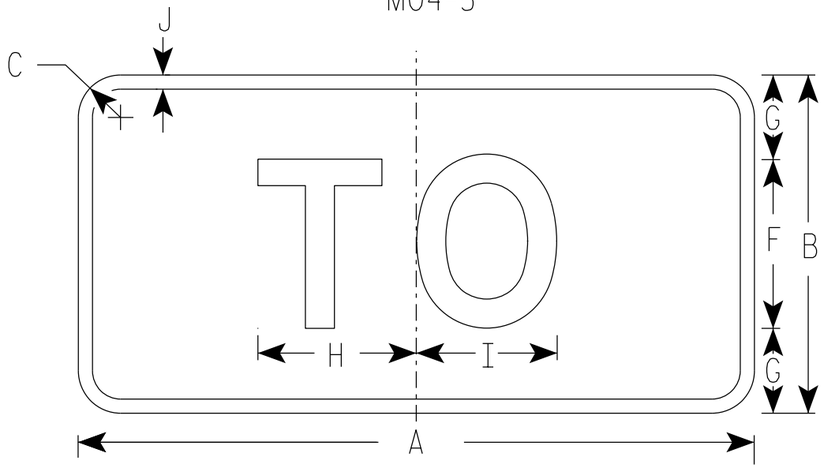
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

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




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




MB4-5
MK4-5
MN4-5

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | 12 | 1 ½ | ⅜ | ⅜ | 6 | 3 | 5 ⅜ | 5 ¼ | ½ | | | | | | | | | | | | | | | | | 2.00 |
| 2M | 24 | 12 | 1 ½ | ⅜ | ⅜ | 6 | 3 | 5 ⅜ | 5 ¼ | ½ | | | | | | | | | | | | | | | | | 2.00 |
| 3 | 36 | 18 | 1 ½ | ⅜ | ½ | 9 | 4 ½ | 8 ¼ | 8 ⅜ | ½ | | | | | | | | | | | | | | | | | 4.5 |
| 4 | 36 | 18 | 1 ½ | ⅜ | ½ | 9 | 4 ½ | 8 ¼ | 8 ⅜ | ½ | | | | | | | | | | | | | | | | | 4.5 |
| 5 | 36 | 18 | 1 ½ | ⅜ | ½ | 9 | 4 ½ | 8 ¼ | 8 ⅜ | ½ | | | | | | | | | | | | | | | | | 4.5 |

STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M4-5.11

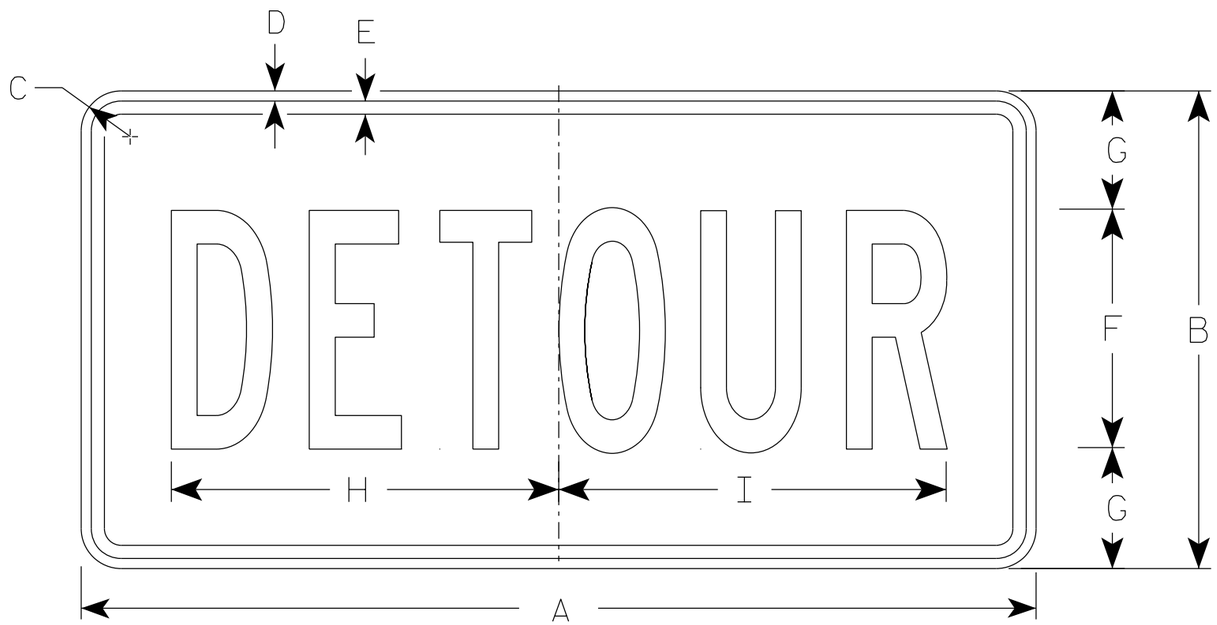
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 166 E




7

NOTES

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




M4-8

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

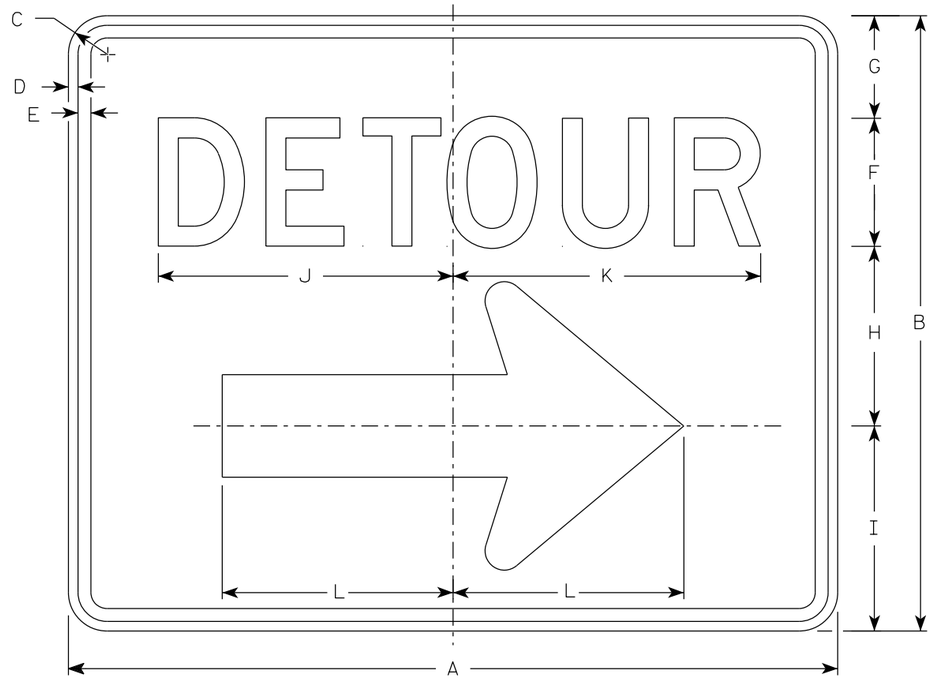
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

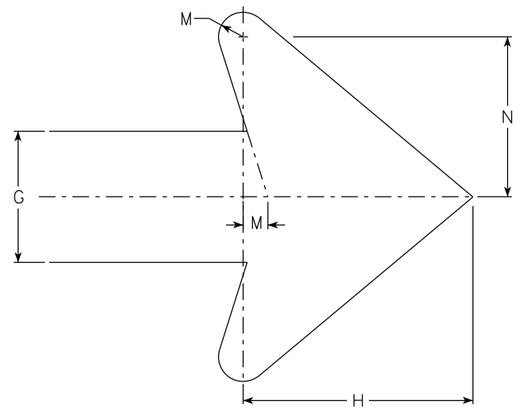
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|




M4-9R

NOTES

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




Arrow Detail

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

STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

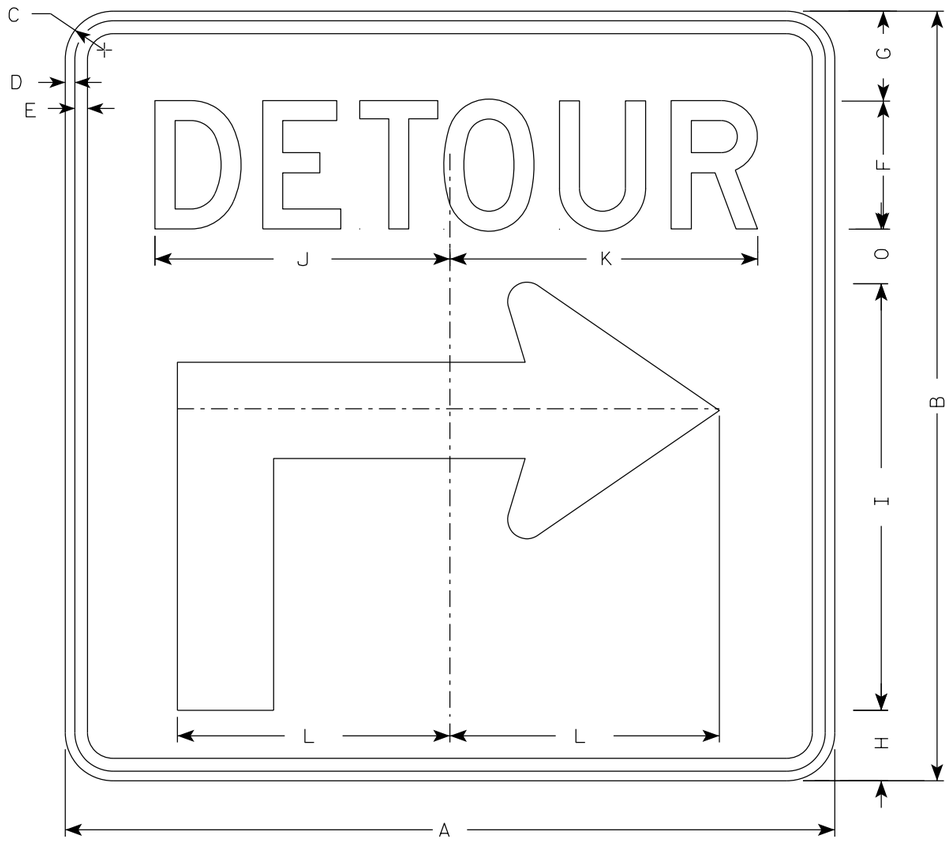
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9R.6

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



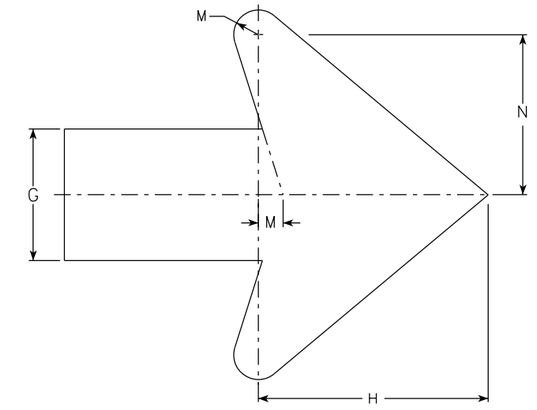
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49R.dgn PLOT DATE : 21-MARCH 2023 1:40 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42




M4-59R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown when base material is metal.
5. M4-59L is the same as M4-59R except the arrow is reversed.




Arrow Detail

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 30 | 1 7/8 | 3/8 | 1/2 | 5 | 3 1/2 | 2 3/4 | 16 5/8 | 11 1/2 | 12 | 10 1/2 | 3/4 | 4 7/8 | 2 1/8 | | | | | | | | | | | | 6.25 |
| 2M | 30 | 30 | 1 7/8 | 3/8 | 1/2 | 5 | 3 1/2 | 2 3/4 | 16 5/8 | 11 1/2 | 12 | 10 1/2 | 3/4 | 4 7/8 | 2 1/8 | | | | | | | | | | | | 6.25 |
| 3 | 30 | 30 | 1 7/8 | 3/8 | 1/2 | 5 | 3 1/2 | 2 3/4 | 16 5/8 | 11 1/2 | 12 | 10 1/2 | 3/4 | 4 7/8 | 2 1/8 | | | | | | | | | | | | 6.25 |
| 4 | 48 | 48 | 2 1/4 | 1/2 | 5/8 | 8 | 5 5/8 | 4 3/8 | 26 5/8 | 20 5/8 | 20 1/2 | 17 | 1 1/8 | 6 7/8 | 3 3/8 | | | | | | | | | | | | 16.0 |
| 5 | 48 | 48 | 2 1/4 | 1/2 | 5/8 | 8 | 5 5/8 | 4 3/8 | 26 5/8 | 20 5/8 | 20 1/2 | 17 | 1 1/8 | 6 7/8 | 3 3/8 | | | | | | | | | | | | 16.0 |

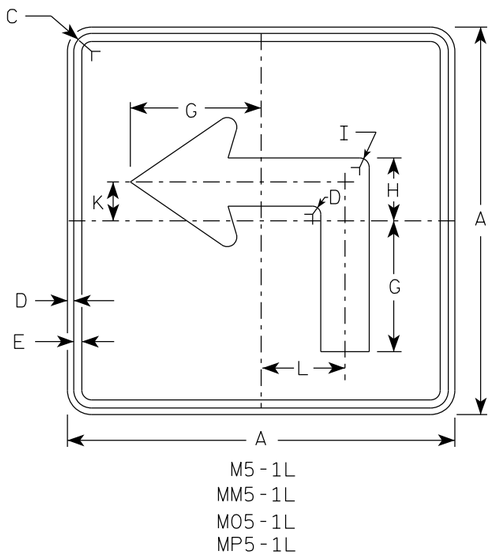
STANDARD SIGN
M4-59 L&R

WISCONSIN DEPT OF TRANSPORTATION

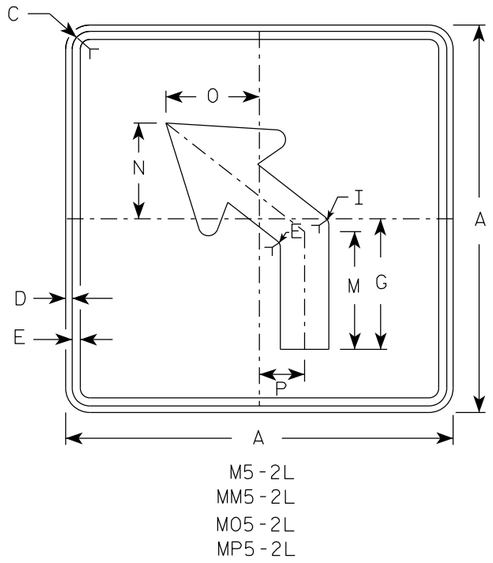
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M4-59.2

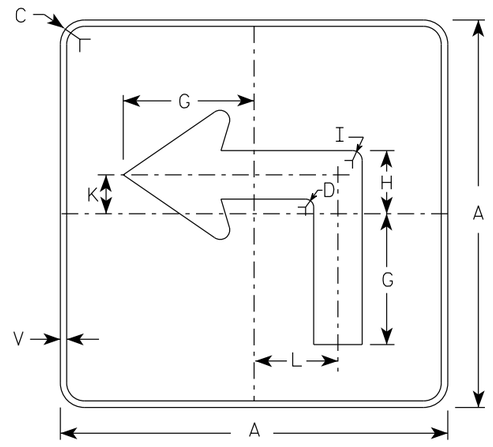
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



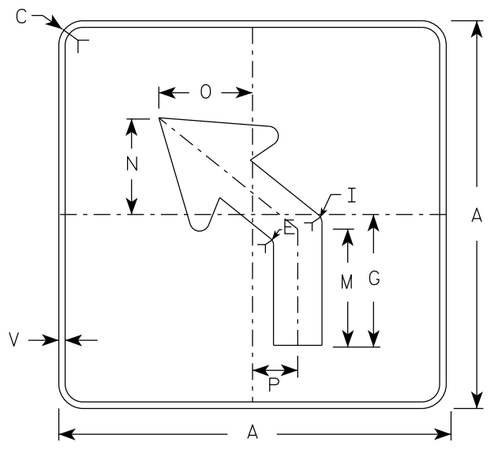

M5-1L
MM5-1L
MO5-1L
MP5-1L




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




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

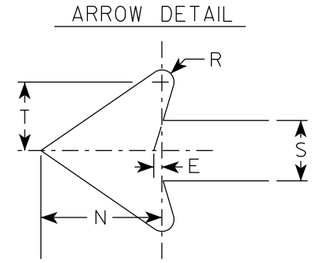



MB5-2L
MK5-2L
MN5-2L
MR5-2L

## NOTES

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

ARROW DETAIL




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

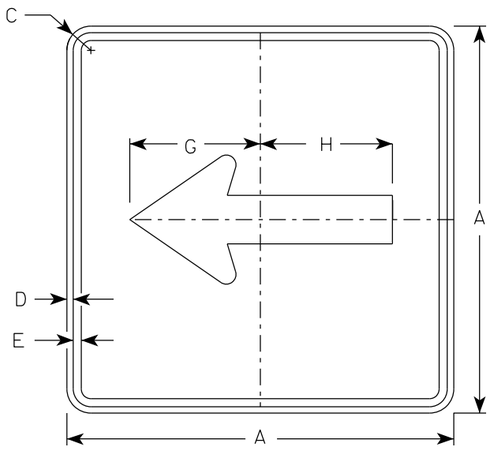
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

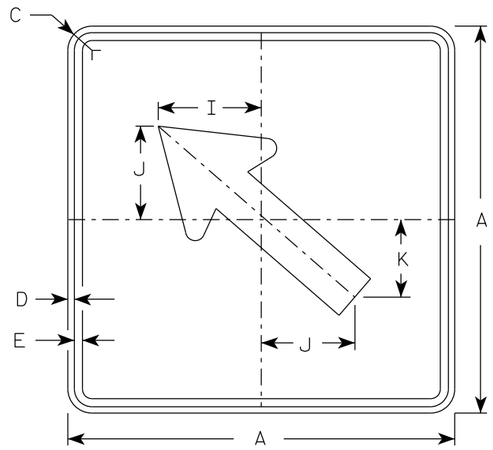
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

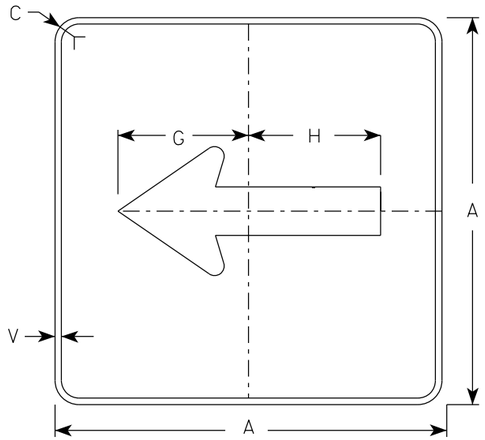
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 170 | E



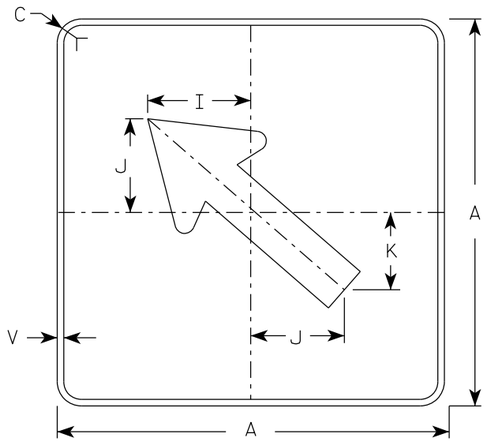

M6-1
MM6-1
MO6-1
MP6-1




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




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

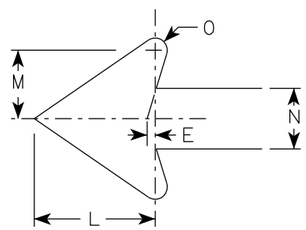



MB6-2
MK6-2
MN6-2
MR6-2

NOTES

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

ARROW DETAIL




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

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

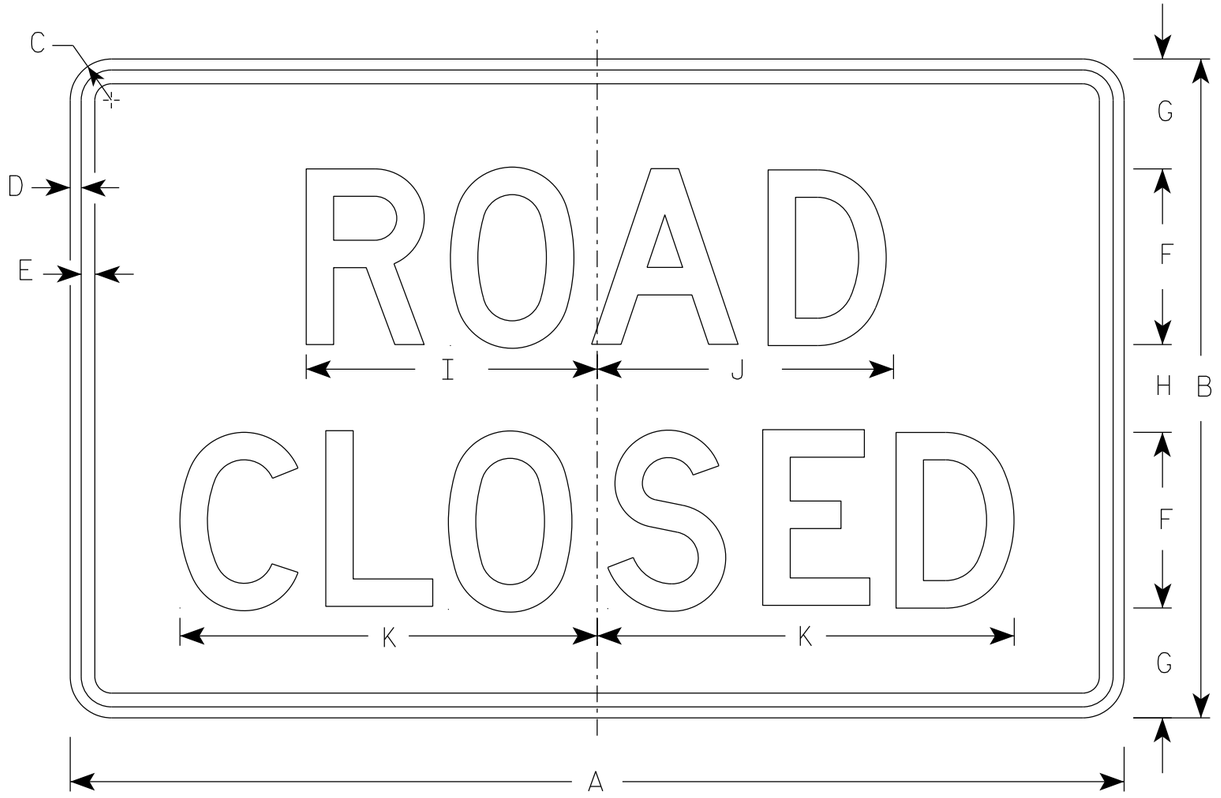
DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 171 | E



7

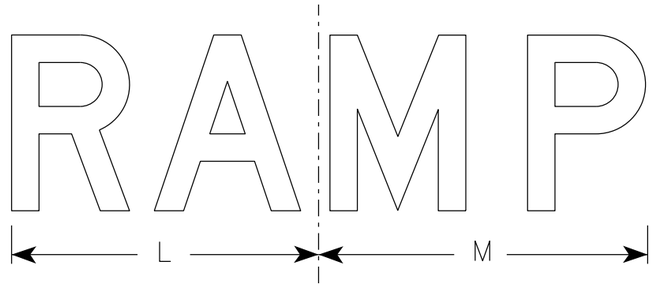
7



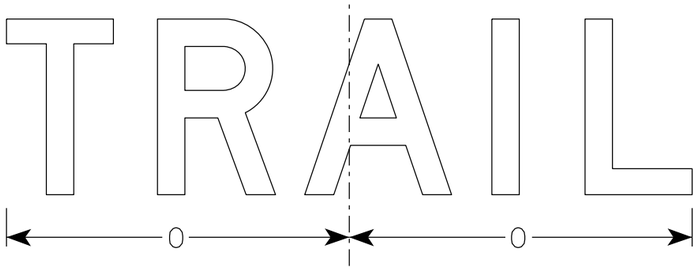

R11-2

NOTES

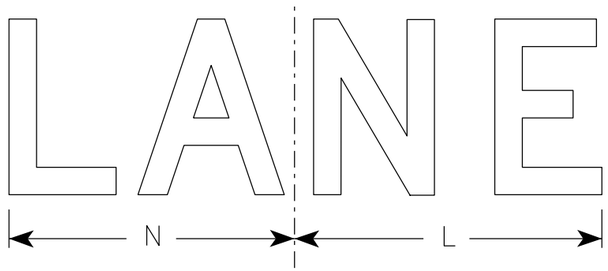
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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




R11-2R




R11-2T




R11-2L

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 2M | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 3 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 4 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 5 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

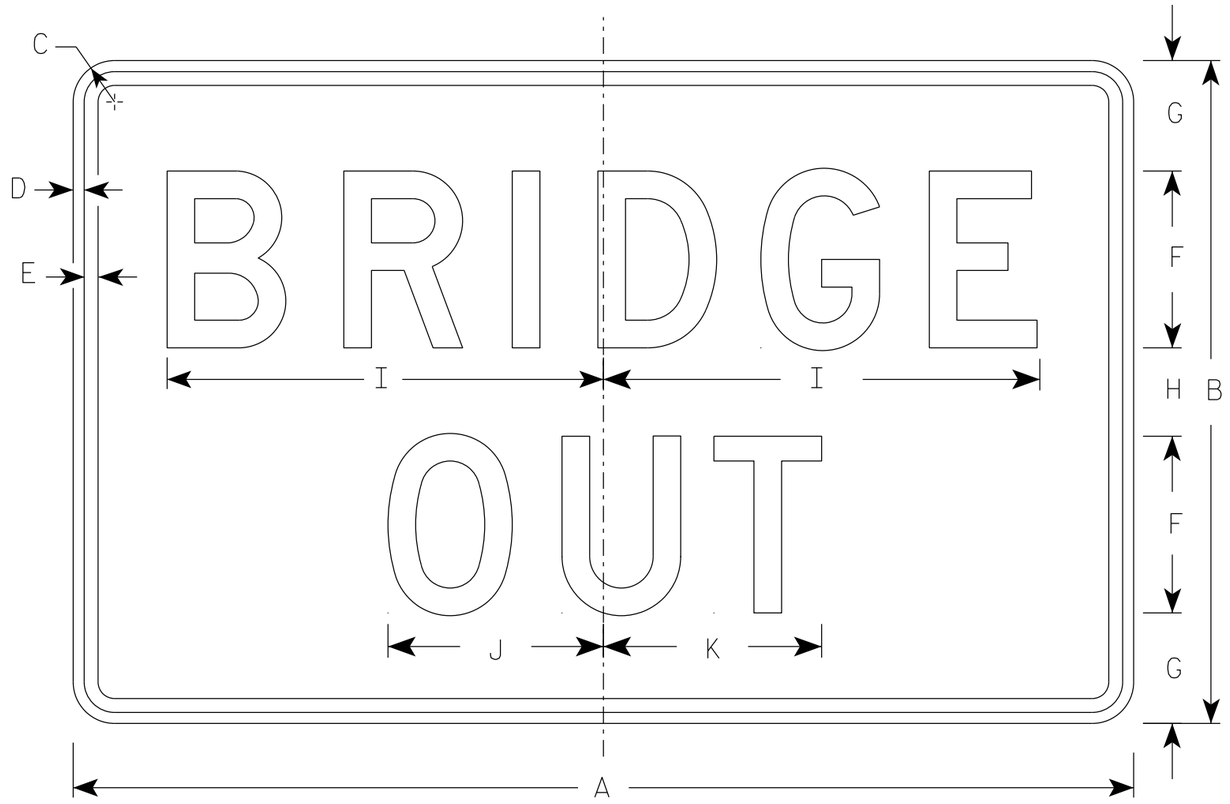
DATE 2/5/24 PLATE NO. R11-2.12

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



FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42


7




R11-2B

NOTES

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

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

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

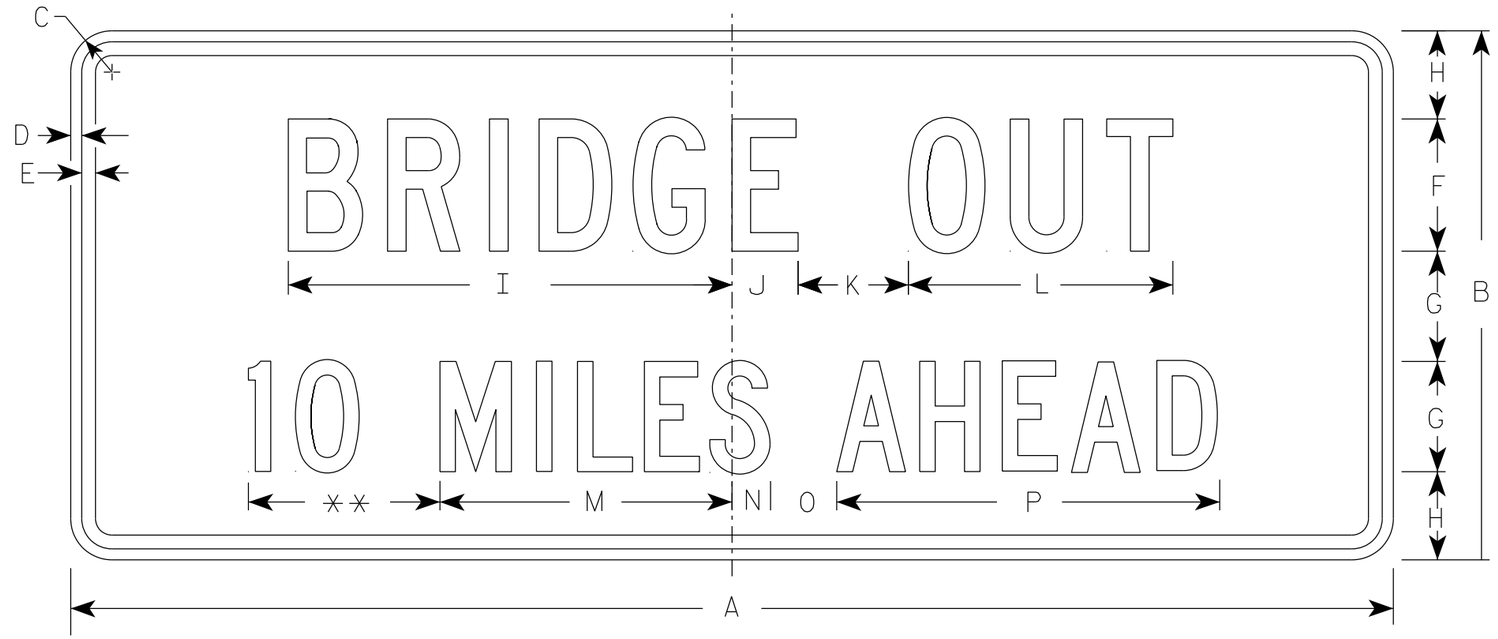
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 173 E

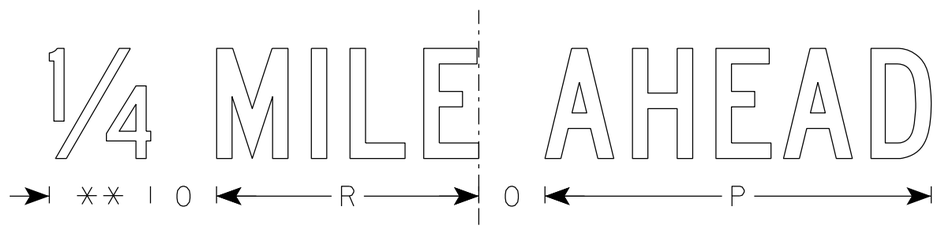
NOTES

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




R11-3C

** See Note 5




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

STANDARD SIGN
R11-3C

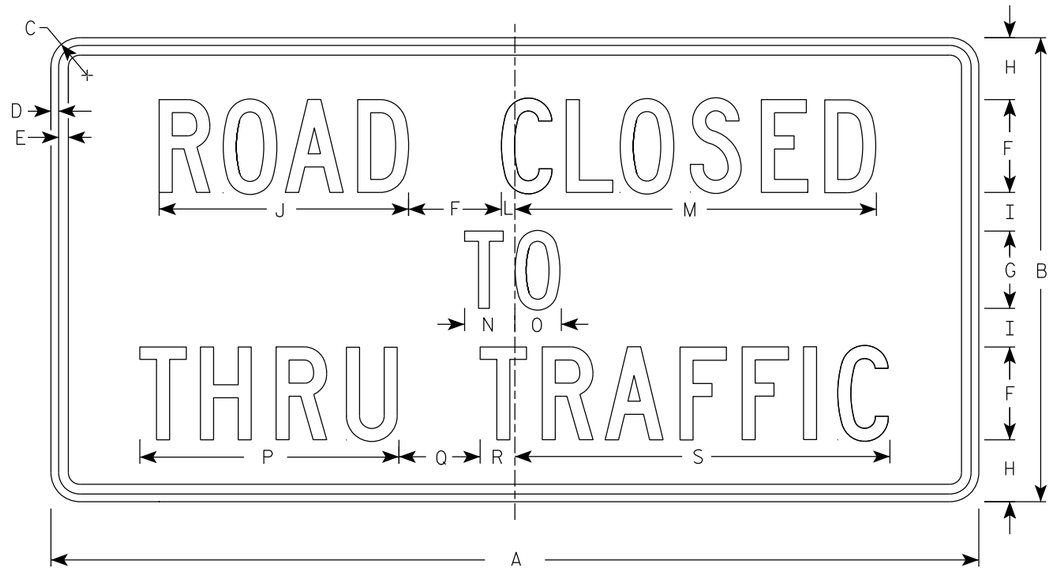
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3C.4

PROJECT NO:

SHEET NO: 174 E




R11-4

NOTES

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

| 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 | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 2M | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

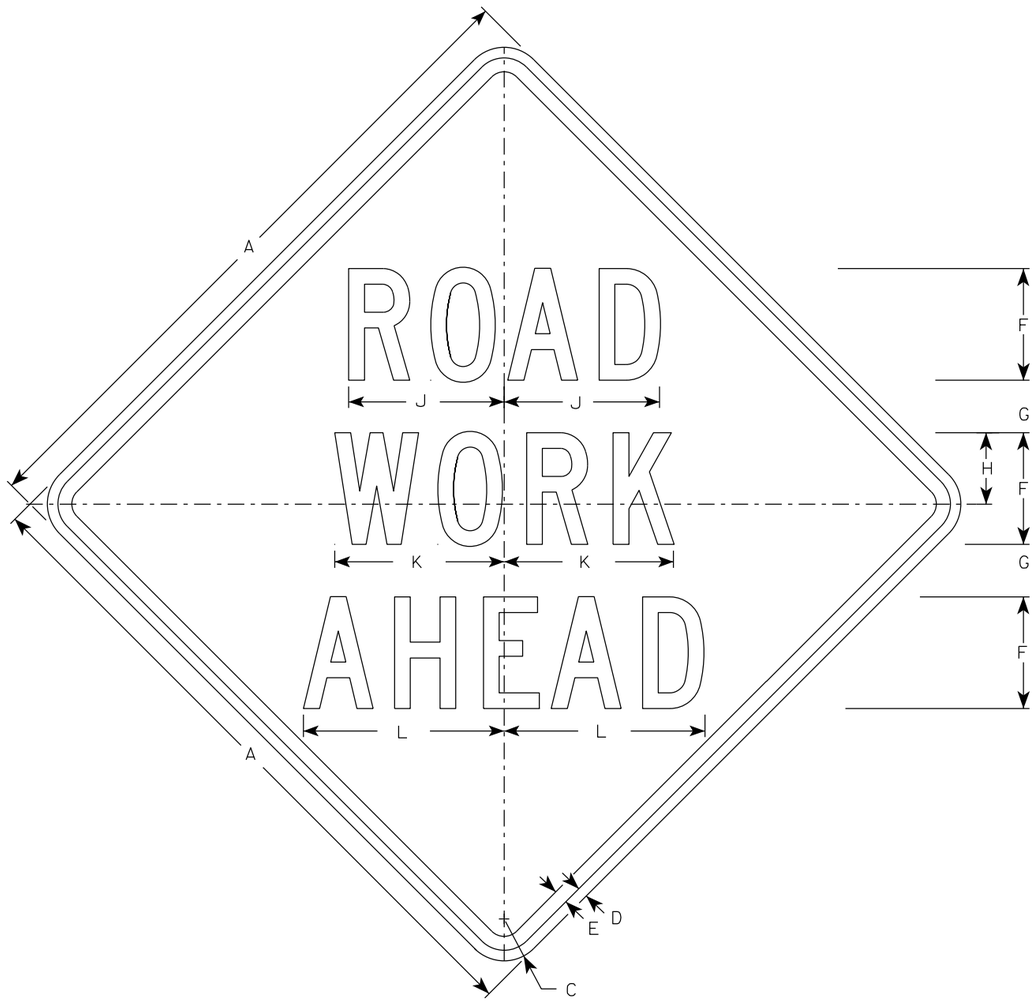
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

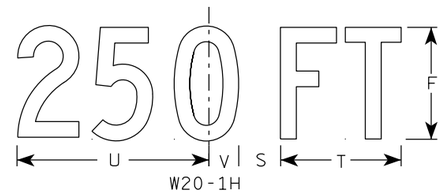
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-4.4

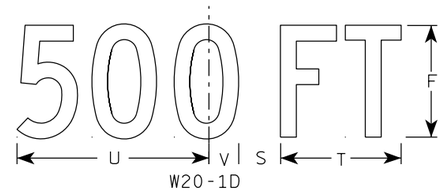
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 175 | E




W20-1A



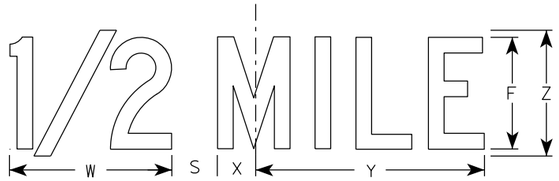

W20-1H



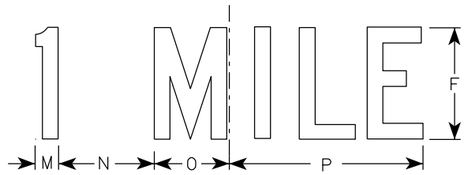

W20-1D

W20-1C

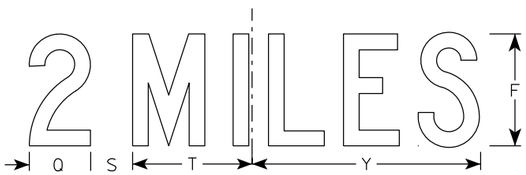
W20-1B




W20-1G




W20-1F




W20-1E

NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

SHEET NO: E

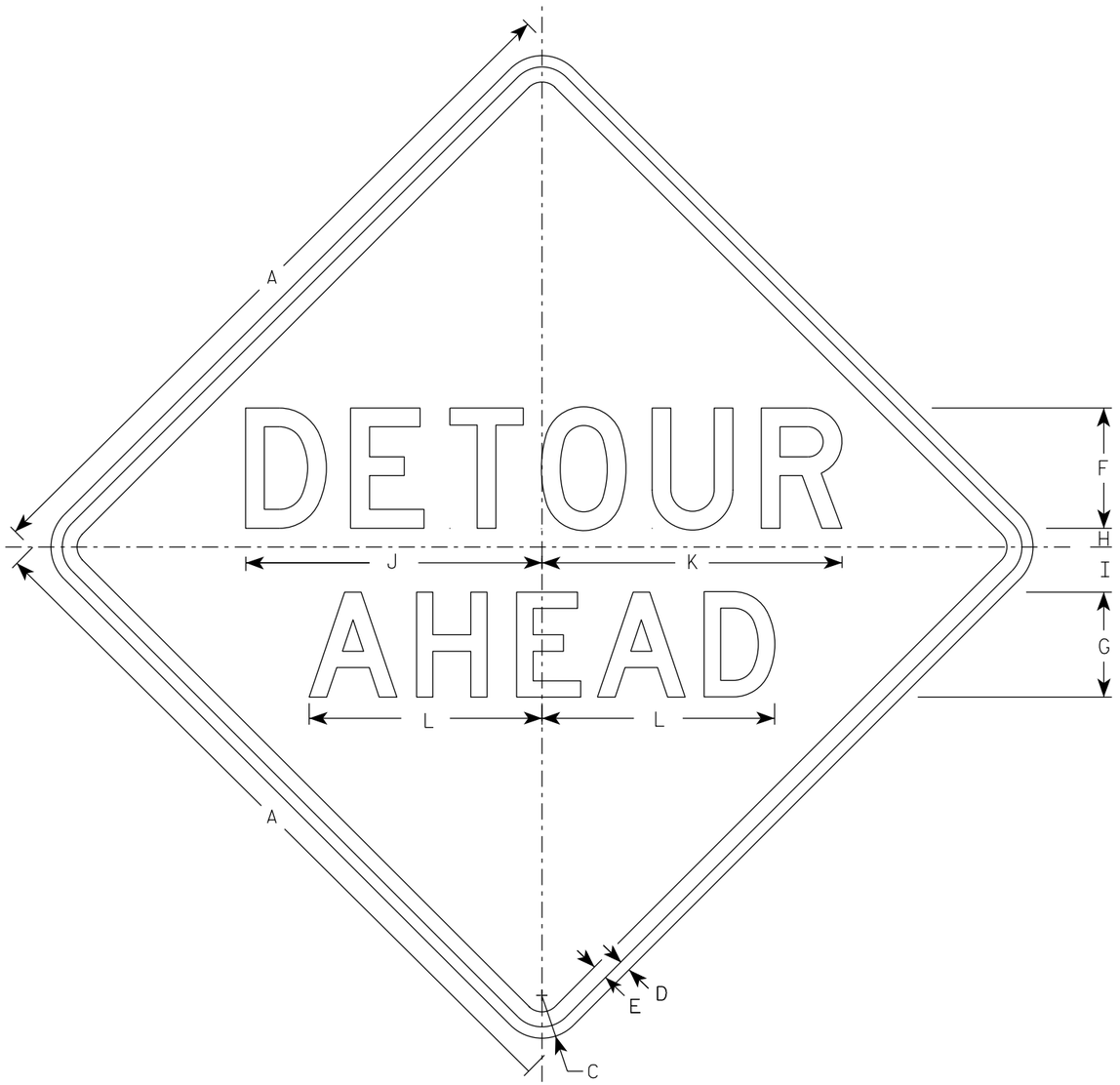


FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

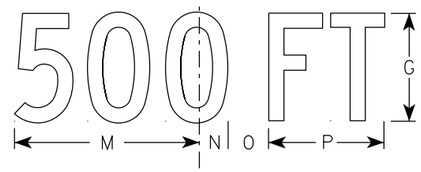
WISDOT/CADDS SHEET 42

7

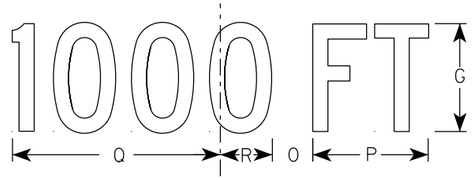
7



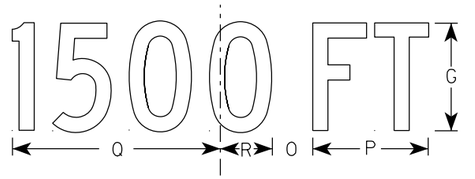

W20-2A



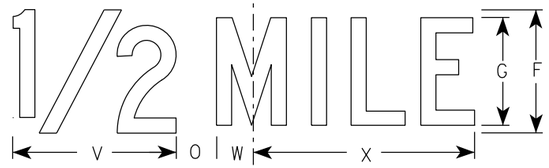

W20-2D



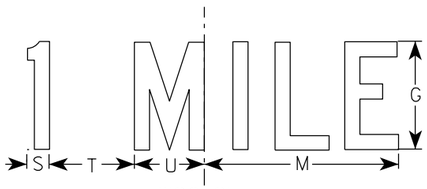

W20-2C




W20-2B




W20-2G




W20-2F

NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

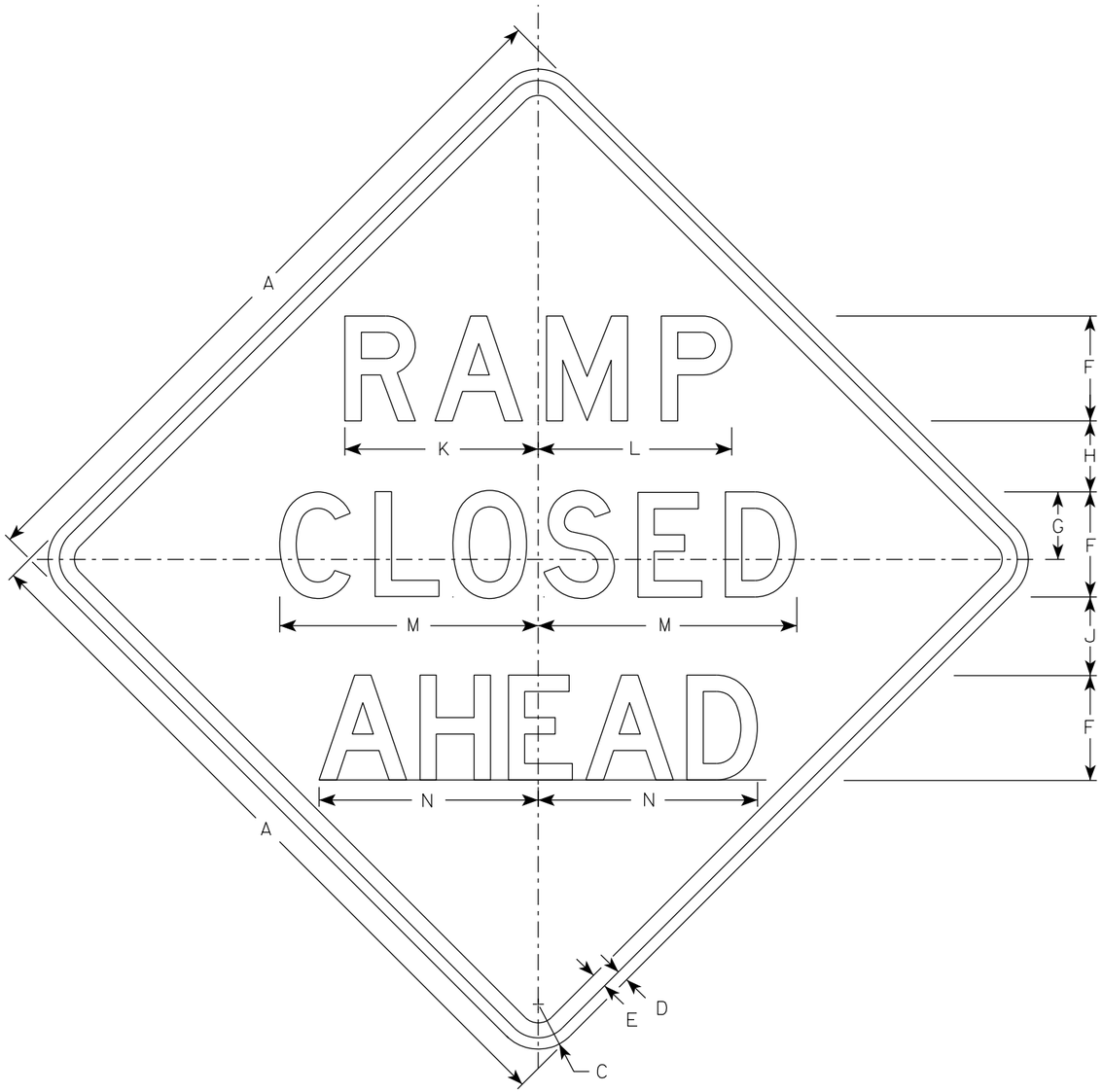
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-2.7

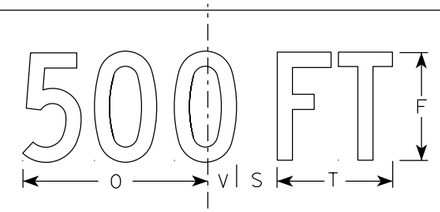
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



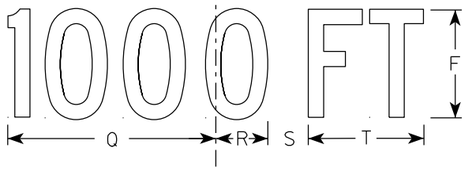
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN PLOT DATE : 10-JAN 2024 11:36 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



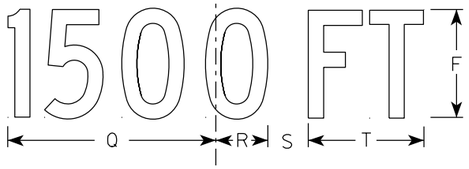

W20-53A



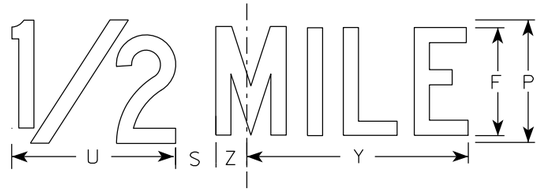

W20-53D



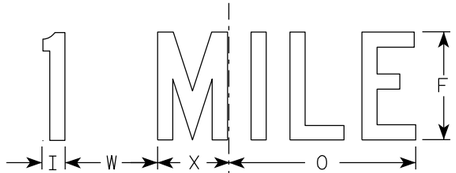

W20-53C




W20-53B




W20-53G




W20-53F

NOTES

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

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

STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2

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

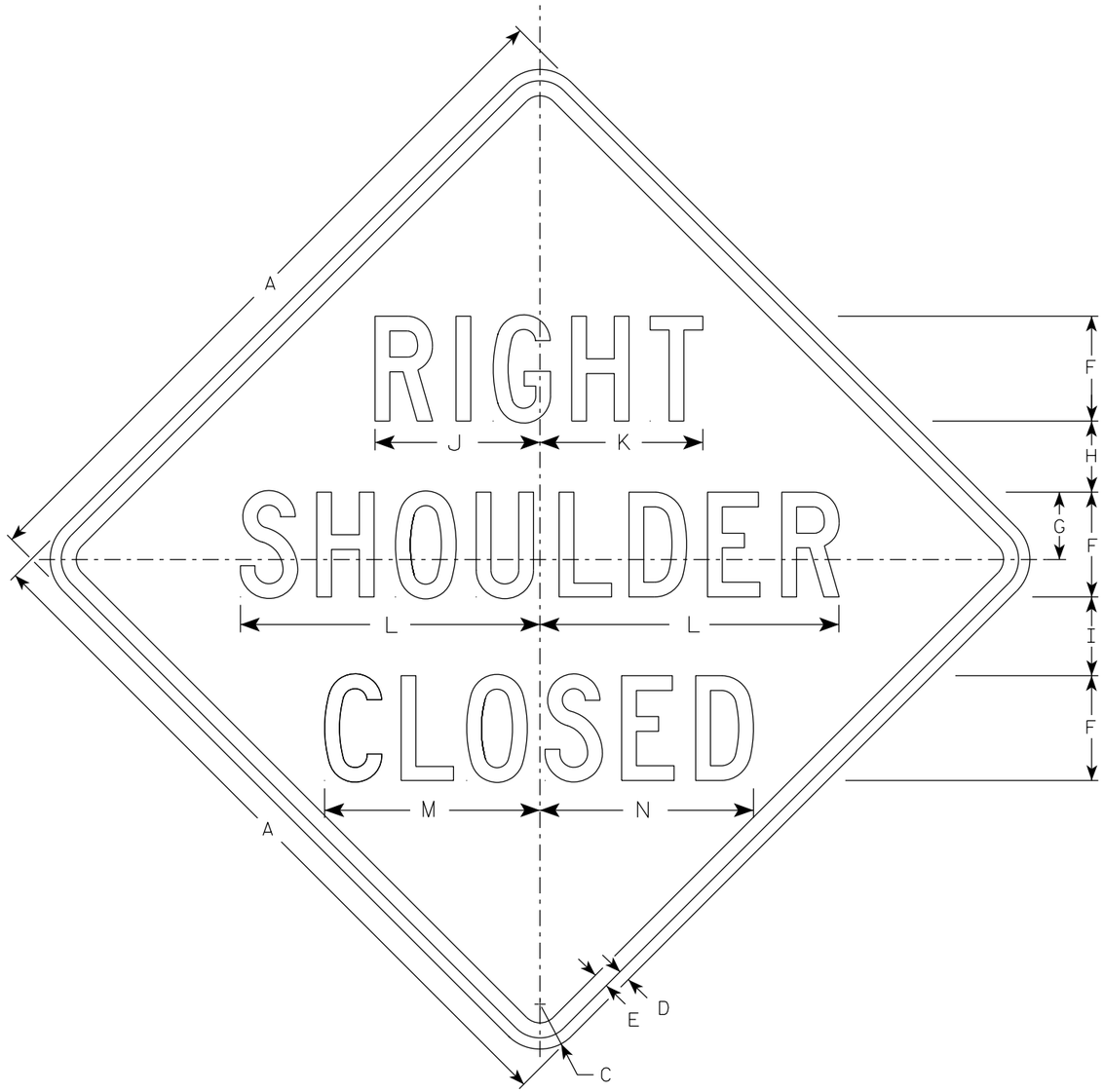


FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 10-JAN 2024 2:38 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

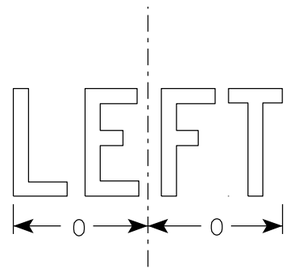




7




W21-5A




W21-5AL

NOTES

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

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

STANDARD SIGN
W21-5A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

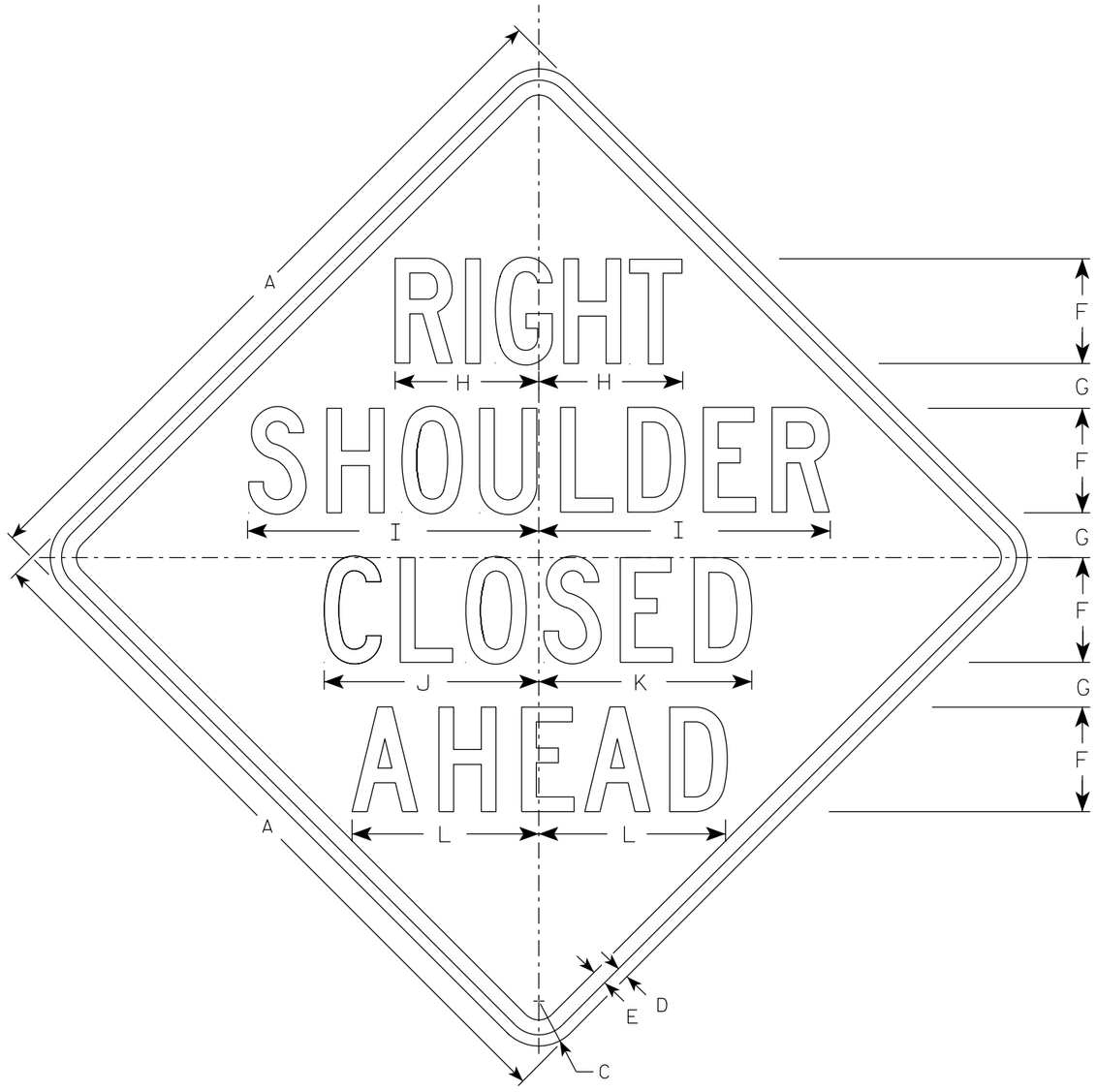
DATE 1/11/2024 PLATE NO. W21-5A.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 179 | E

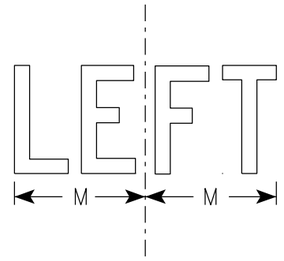


7

7




W21-5B




W21-5BL

NOTES

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

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

STANDARD SIGN
W21-5B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 1/16/2024 PLATE NO. W21-5B.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E



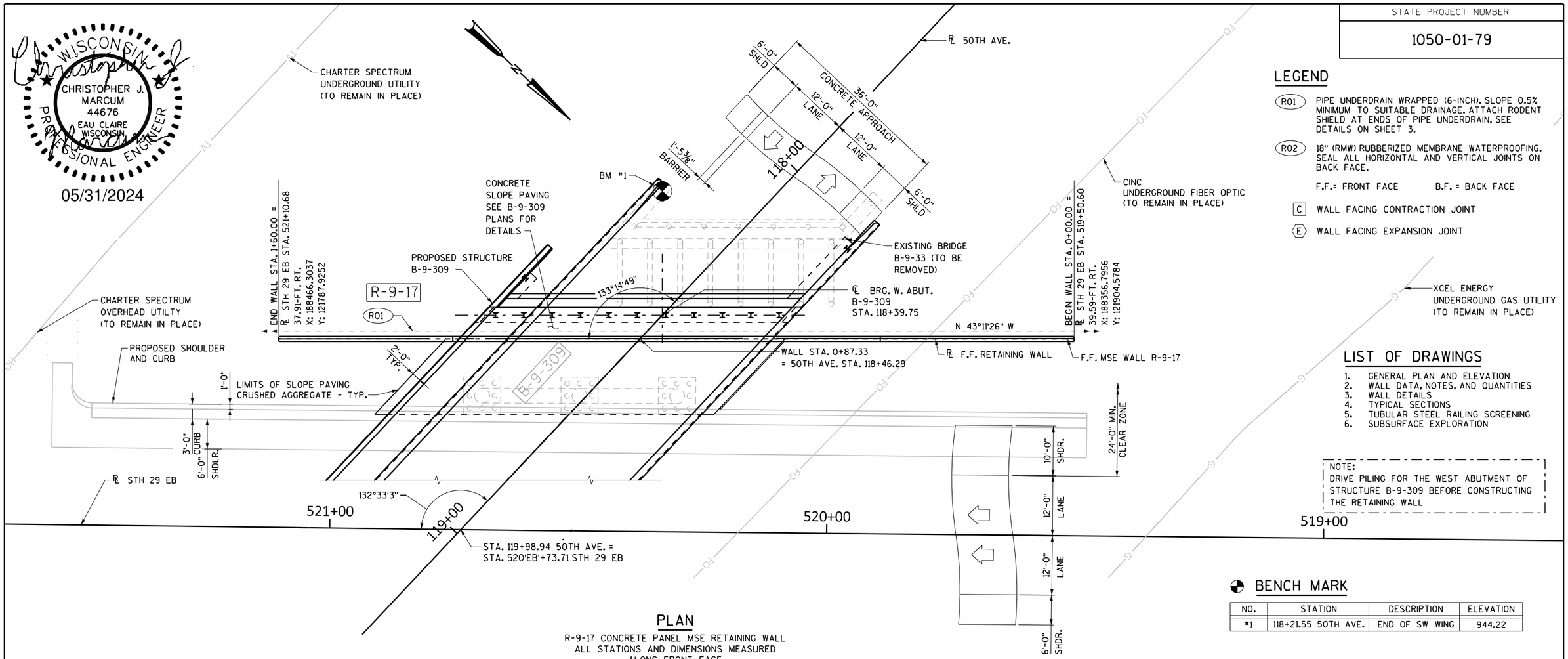



7

WISCONSIN
CHRISTOPHER J. MARCUM
44676
EAU CLAIRE WISCONSIN
PROFESSIONAL ENGINEER
05/31/2024

STATE PROJECT NUMBER

1050-01-79




## LEGEND

- (R01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 3.
- (R02) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

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

- [C] WALL FACING CONTRACTION JOINT
- ⟨E⟩ WALL FACING EXPANSION JOINT

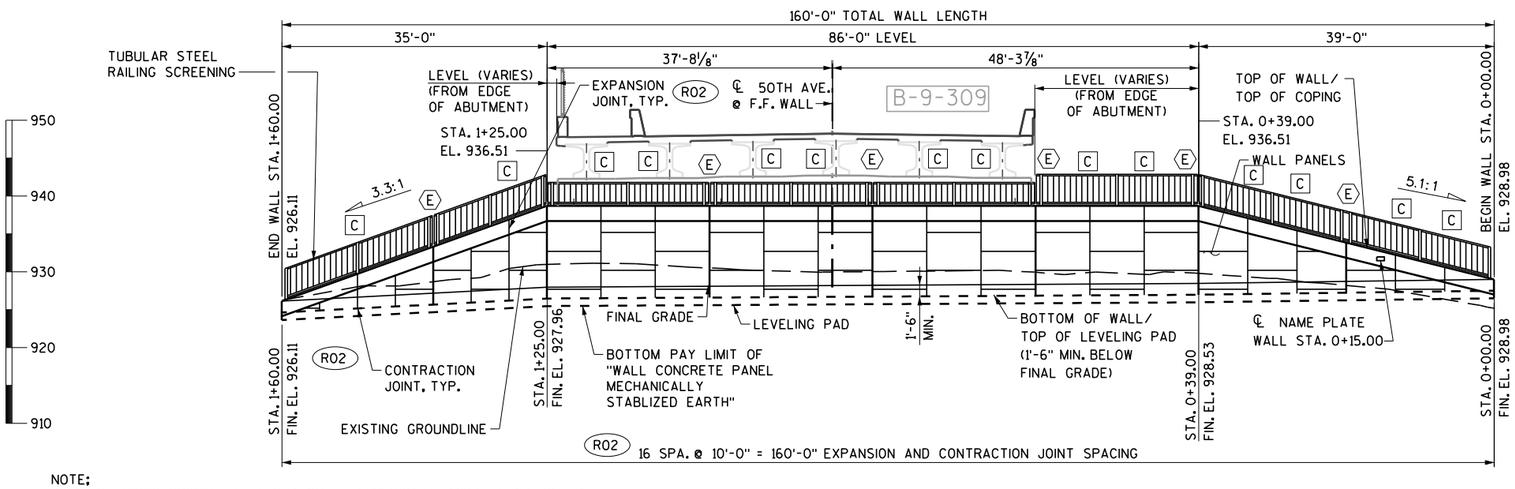
## LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. WALL DATA, NOTES, AND QUANTITIES
3. WALL DETAILS
4. TYPICAL SECTIONS
5. TUBULAR STEEL RAILING SCREENING
6. SUBSURFACE EXPLORATION

NOTE:
DRIVE PILING FOR THE WEST ABUTMENT OF STRUCTURE B-9-309 BEFORE CONSTRUCTING THE RETAINING WALL

## PLAN

R-9-17 CONCRETE PANEL MSE RETAINING WALL
ALL STATIONS AND DIMENSIONS MEASURED ALONG FRONT FACE




NOTE:
JOINT SPACINGS SHOWN ARE BASED ON A 5'-0" SQUARE WALL PANEL SIZE. IF A DIFFERENT WALL PANEL SIZE IS CHOSEN BY THE CONTRACTOR, THEN COPING JOINT SPACING WHALL BE MODIFIED SO THAT THE COPING JOINTS COINCIDE WITH WALL PANEL JOINTS.

## ELEVATION

LOOKING WEST AT F.F. OF WALL
NORMAL TO MSE WALL

## BENCH MARK

| NO. | STATION | DESCRIPTION | ELEVATION |
|---|---|---|---|
| #1 | 118+21.55 50TH AVE. | END OF SW WING | 944.22 |

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

CONSULTANT:
CHRISTOPHER MARCUM, P.E. (920) 468-4771

| NO. | DATE | REVISION | BY |
|---|---|---|---|

JT ENGINEERING, INC Consultant Services

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

# STRUCTURE R-9-17

MSE RETAINING WALL STH 29 EB

| COUNTY | TOWN |
|---|---|
| CHIPPEWA | LAFAYETTE |

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

| DESIGNED BY | DESIGN CK'D. | DRAWN BY | PLANS CK'D. |
|---|---|---|---|
| CJM | VJD | CJM | VJD |

GENERAL PLAN AND ELEVATION

SHEET 1 OF 6
181

8

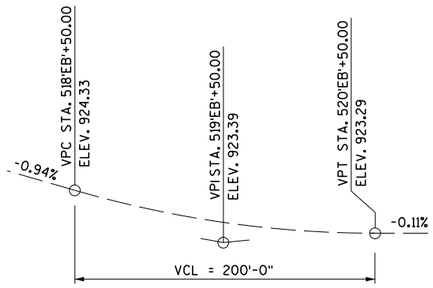
8

STATE PROJECT NUMBER

1050-01-79

## TOTAL ESTIMATED QUANTITIES

| BID ITEM NO. | BID ITEMS | UNIT | TOTAL |
|---|---|---|---|
| 206.3000.01 | EXCAVATION FOR STRUCTURES RETAINING WALL R-9-17 | LS | 1 |
| 513.4091 | RAILING TUBULAR SCREENING | LF | 163 |
| 604.0500 | SLOPE PAVING CRUSHED AGGREGATE | SY | 116 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 180 |
| SPV.0165.01 | WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-17 | SF | 1,285 |
| | NON-BID ITEMS | | |
| | NAME PLATE | EACH | 1 |
| | PREFORMED JOINT FILLER | SIZE | ½" & ¾" |
| | NON-BITUMINOUS JOINT SEALER | SIZE | ½" & ¾" |
| | EXPANDED POLYSTYRENE | SIZE | 1" |




## PROFILE GRADE LINE - STH 29 EB

(BASED ON 2005 AS-BUILT PLANS)

## SOIL PARAMETERS

| SOIL DESCRIPTION | FRICTION ANGLE (DEGREES) | COHESION (PSF) | UNIT WEIGHT (PCF) |
|---|---|---|---|
| GRANULAR BACKFILL WITHIN THE WALL REINFORCING ZONE | 30 | 0 | 120 |
| FILL, GRANULAR BEHIND AND BELOW THE REINFORCING ZONE | 30 | 0 | 120 |
| BORING #2 - STA. 117+59.70, 15-FT. LT. | | | |
| SAND EL. 932.0 TO EL. 942.0 | 36 | 0 | 131 |
| SILTY SAND EL. 917.0 TO EL. 932.0 | 36 | 0 | 131 |
| SAND EL. 912.0 TO EL. 917.0 | 36 | 0 | 131 |
| SAND EL. 892.0 TO EL 912.0 | 32 | 0 | 128 |
| SAND W/ GRAVEL EL. 872.0 TO EL.982.0 | 32 | 0 | 128 |
| SAND EL. 857.0 TO 872.0 | 32 | 0 | 128 |
| SAND TRACE GRAVEL EL. 852.0 TO EL. 857.0 | 32 | 0 | 128 |
| SAND EL. 842.0 TO EL. 852.0 | 32 | 0 | 128 |
| WEATHERED BEDROCK EL. 837.0 TO EL. 842.0 | 41 | 0 | 41 |

## GEOMETRY TABLE

| WALL STA. | ℄ STH 29 EB STA. | OFFSET TO F.F. OF WALL | TOP OF WALL EL. | FINISHED GRADE EL. |
|---|---|---|---|---|
| 0+00.00 | 519+50.60 | 39.59-FT. | 928.98 | 928.98 |
| 0+05.00 | 519+55.60 | 39.54-FT. | 929.95 | 928.92 |
| 0+10.00 | 519+60.59 | 39.50-FT. | 930.91 | 928.87 |
| 0+15.00 | 519+65.59 | 39.45-FT. | 931.88 | 928.81 |
| 0+20.00 | 519+70.59 | 39.40-FT. | 932.84 | 928.75 |
| 0+25.00 | 519+75.59 | 39.35-FT. | 933.81 | 928.69 |
| 0+30.00 | 519+80.59 | 39.30-FT. | 934.77 | 928.64 |
| 0+35.00 | 519+85.59 | 39.25-FT. | 935.74 | 928.58 |
| 0+39.00 | 519+89.60 | 39.22-FT. | 936.51 | 928.53 |
| 0+45.00 | 519+95.59 | 39.16-FT. | 936.51 | 928.48 |
| 0+50.00 | 520+00.59 | 39.11-FT. | 936.51 | 928.44 |
| 0+55.00 | 520+05.59 | 39.06-FT. | 936.51 | 928.40 |
| 0+60.00 | 520+10.59 | 39.01-FT. | 936.51 | 928.36 |
| 0+60.63 | 520+11.21 | 39.00-FT. | 936.51 | 928.36 |
| 0+65.00 | 520+15.59 | 38.97-FT. | 936.51 | 928.32 |
| 0+70.00 | 520+20.59 | 38.92-FT. | 936.51 | 928.28 |
| 0+75.00 | 520+25.59 | 38.87-FT. | 936.51 | 928.24 |
| 0+80.00 | 520+30.59 | 38.82-FT. | 936.51 | 928.20 |
| 0+85.00 | 520+35.59 | 38.77-FT. | 936.51 | 928.16 |
| 0+90.00 | 520+40.59 | 38.73-FT. | 936.51 | 928.11 |
| 0+95.00 | 520+45.59 | 38.68-FT. | 936.51 | 928.07 |
| 1+00.00 | 520+50.59 | 38.63-FT. | 936.51 | 928.06 |
| 1+05.00 | 520+55.59 | 38.58-FT. | 936.51 | 928.04 |
| 1+10.00 | 520+60.69 | 38.52-FT. | 936.51 | 928.02 |
| 1+15.00 | 520+65.69 | 38.46-FT. | 936.51 | 928.00 |
| 1+20.00 | 520+70.69 | 38.40-FT. | 936.51 | 927.98 |
| 1+23.75 | 520+74.43 | 38.35-FT. | 936.51 | 927.96 |
| 1+25.00 | 520+75.69 | 38.34-FT. | 936.51 | 927.96 |
| 1+30.00 | 520+80.69 | 38.28-FT. | 935.02 | 927.70 |
| 1+35.00 | 520+85.69 | 38.22-FT. | 933.54 | 927.43 |
| 1+40.00 | 520+90.69 | 38.16-FT. | 932.05 | 927.17 |
| 1+45.00 | 520+95.68 | 38.10-FT. | 930.57 | 926.90 |
| 1+50.00 | 521+00.68 | 38.04-FT. | 929.08 | 926.64 |
| 1+55.00 | 521+05.68 | 37.97-FT. | 927.60 | 926.37 |
| 1+60.00 | 521+10.68 | 37.91-FT. | 926.11 | 926.11 |

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF JOINT FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP & HOLD ⅛" BELOW THE SURFACE OF CONCRETE).

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF WALL R-9-17.

THE EXISTING GROUNDLINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

THE PLAN QUANTITY FOR THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

COORDINATE CONSTRUCTION OF R-9-17 WITH RETAINING WALL R-9-18 AND WEST ABUTMENT OF BRIDGE B-9-309.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DEGISNATION M153 TYPE I, II, OR III OR AASHTO DEGISNATION M213.

OVER EXCAVATION BEYOND THE BOTTOM OF THE WALL IS PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-9-17".

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

EXTENT OF BELOW GRADE SUBSTRUCTURES ARE BASED ON AS-BUILT PLANS. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE B-9-33" BID ITEM WITH THE BRIDGE PLANS.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE TO THE TOP OF WALL COPING IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-17".

THE COST OF FURNISHING AND PLACING UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-17".

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR CAST-IN-PLACE WALL COPING ARE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-17".

## DESIGN DATA

CONCRETE MASONRY:
COPING..... f'c = 3,500 PSI

BAR STEEL REINFORCEMENT:
GRADE 60..... fy = 60,000 PSI

## ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-17

DRAWN BY CJM | PLANS CK'D. VJD

WALL DATA, NOTES, AND QUANTITIES

SHEET 2 OF 6
182

8

8

FILE NAME :

PLOT DATE : 5/30/2024 8:34:04 PM PLOT BY : cmarcum

PLOT SCALE : 20:0 sf:in / in.

STATE PROJECT NUMBER

1050-01-79

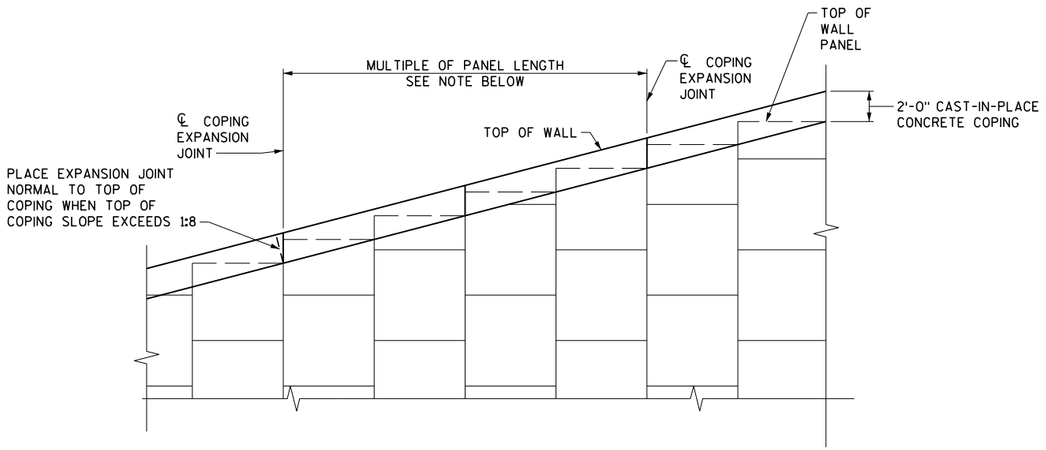
## WALL EXTERNAL & OVERALL STABILITY EVALUATION

| | DIMENSIONS | EVALUATED LOCATIONS |
|---|---|---|
| | WALL HEIGHT (FEET) | 11.5 |
| | EXPOSED WALL HEIGHT (FEET) | 10.0 |
| R03 | MINIMUM LENGTH OF REINFORCEMENT (FEET) | 13 |
| | LENGTH OF REINFOREMENT TO HEIGHT RATIO | 1.13 |
| | BORING LOCATION USED | B-2 |
| | APPROXIMATE WALL STATION | 1+25 |
| | CAPACITY TO DEMAND RATIO (CDR) | |
| | SLIDING (CDR > 1.0) | 1.6 |
| | ECCENTRICITY (CDR > 1.0) | 1.65 |
| R04 | OVERALL STABILITY (CDR > 1.0) | 4.78 |
| | BEARING RESISTANCE (CDR > 1.0) | 3.7 |
| | FACTORED BEARING RESISTANCE (PSF) | 6,900 |

## NOTES

R03 THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

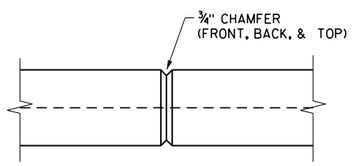
R04 THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.




### CAST-IN -PLACE COPING PARTIAL ELEVATION

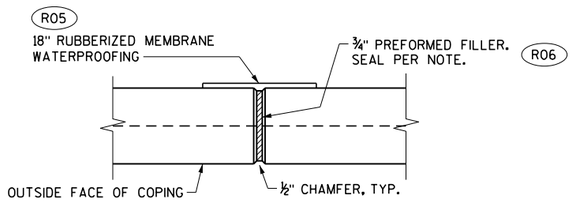
LOOKING AT F.F. OF WALL

NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINT ON FRONT FACE.



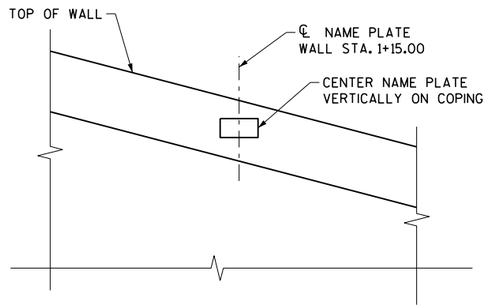

### COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT.
MAX SPACING OF JOINT = 12'-0"

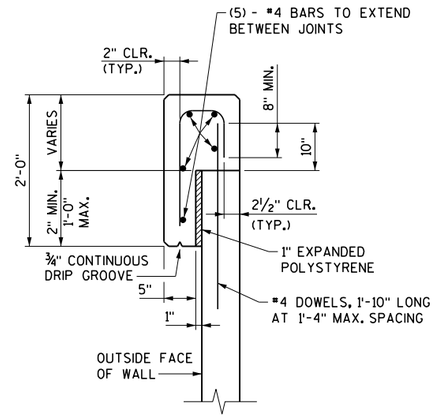



### COPING EXPANSION JOINT

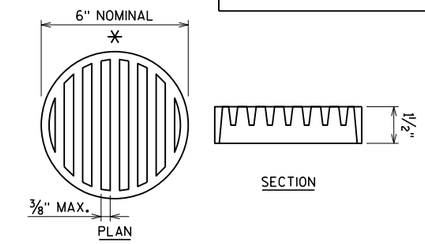
DO NOT RUN BAR STEEL THRU JOINT.
MAX SPACING OF JOINT = 50'-0"




### NAME PLATE DETAIL




### CAST-IN-PLACE CONCRETE COPING DETAIL




### RODENT SHIELD DETAIL

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

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

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

## DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 240 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

## LEGEND

R05 MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

R06 SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-17

DRAWN BY CJM | PLANS CK'D. VJD

WALL DETAILS

SHEET 3 OF 6
183

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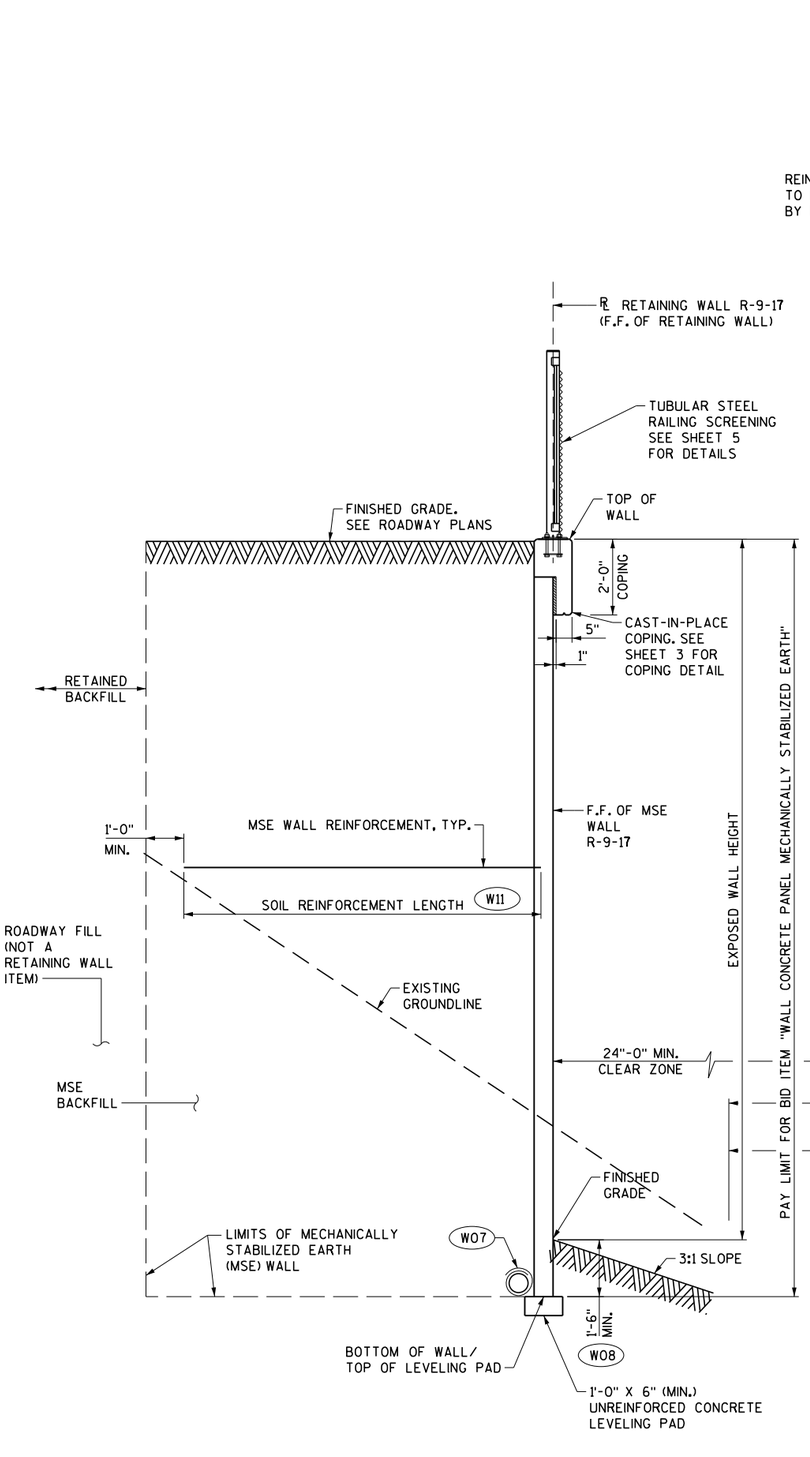
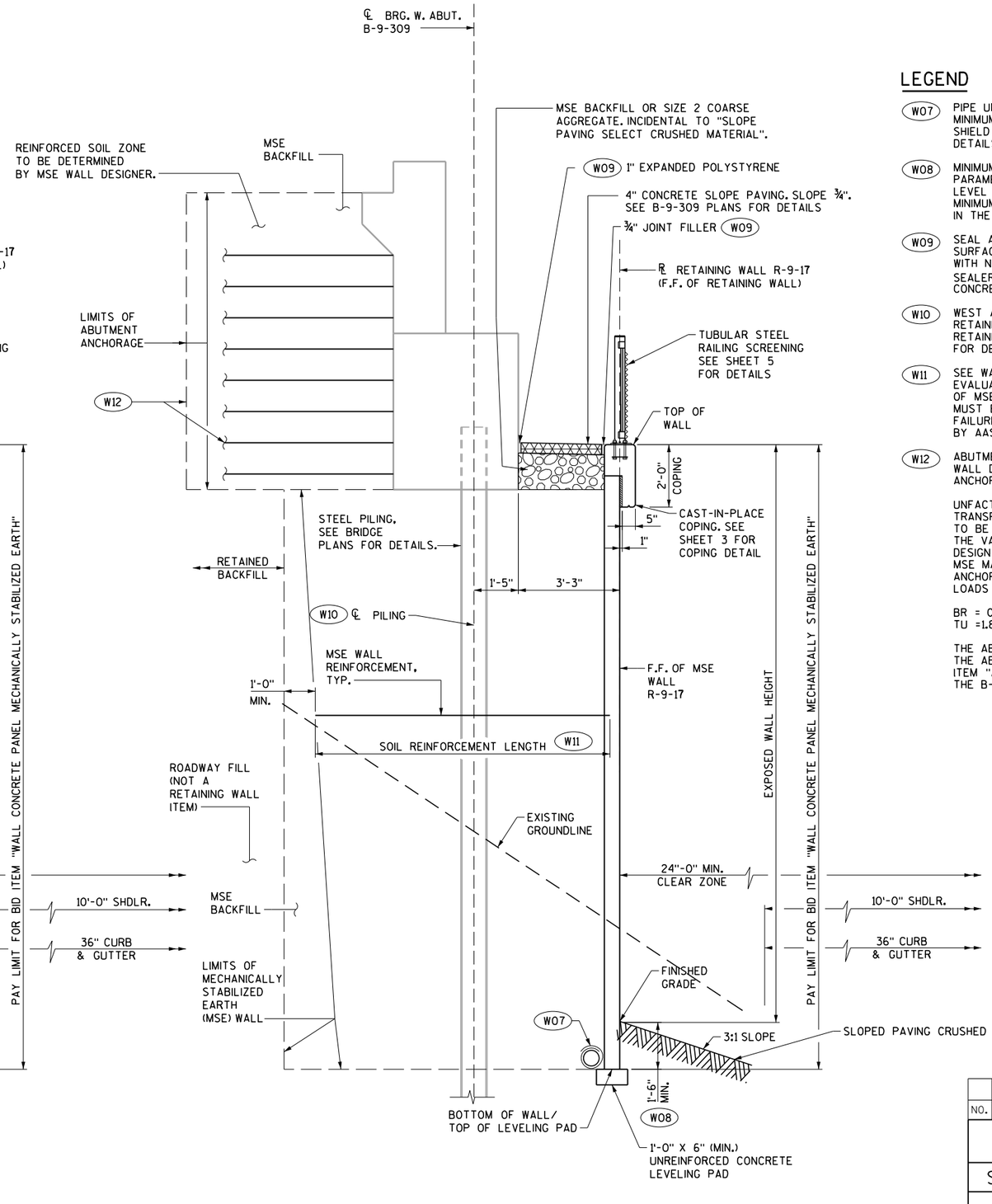
| STATE PROJECT NUMBER |
|---|
| 1050-01-79 |




## TYPICAL SECTION THRU WALL

LOOKING NORTH
STA. 0+00.00 TO STA. 0+60.63
STA. 1+23.75 TO STA. 1+60.00




## TYPICAL SECTION AT ABUTMENT

LOOKING NORTH
STA. 0+60.63 TO STA. 1+23.75

## LEGEND

(W07) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 3.

(W08) MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

(W09) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

(W10) WEST ABUTMENT PILES SHALL BE INSTALLED AFTER RETAINING WALL EXCAVATION AND PRIOR TO RETAINING WALL INSTALLATION. SEE B-09-309 PLANS FOR DETAILS.

(W11) SEE WALL EXTERNAL AND OVERALL STABILITY EVALUATION TABLE ON SHEEET 3 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0-FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

(W12) ABUTMENT ANCHORAGE TO BE DETERMINED BY THE MSE WALL DESIGNER AND TO BE PAID AS "ABUTMENT ANCHORAGE".

UNFACTORED SUPERSTRUCTURE LATERAL LOADS TRANSFERRED TO THE ABUTMENT ARE TAKEN TO BE KIPS PER FOOT OF ABUTMENT LENGTH. THE VALUES ARE TO BE USED FOR THE LRFD DESIGN OF THE ABUTMENT ANCHORAGE BY THE MSE MANUFACTURER (MSE SYSTEM, DEAD MAN ANCHOR, OTHER). THE FOLLOWING AASHTO LINE LOADS SHALL BE NOTED ON PLAN:

BR = 0.859 KLF WS = 0.089 KLF
TU =1.877 KLF WL = 0.062 KLF

THE ABUTMENT ANCHORAGE AND CONNECTION TO THE ABUTMENT ARE INCLUDED WITH THE BID ITEM "ABUTMENT ANCHORAGE" AS SHOWN ON THE B-9-309 BRIDGE PLANS.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-17

DRAWN BY CJM | PLANS CK'D. VJD

TYPICAL SECTIONS

SHEET 4 OF 6
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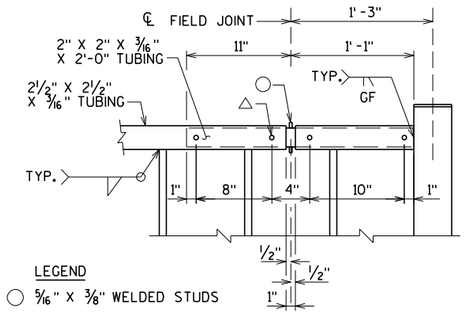
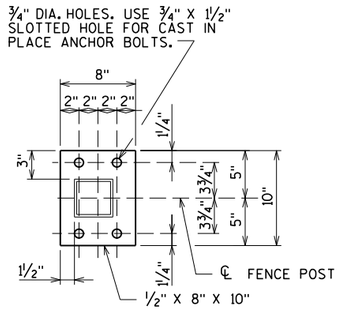
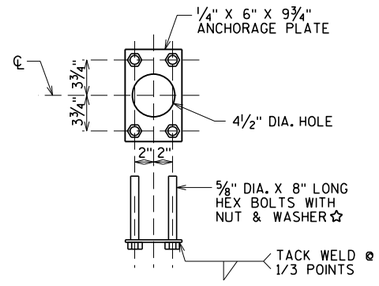



## RAILING EXPANSION JOINT DETAIL



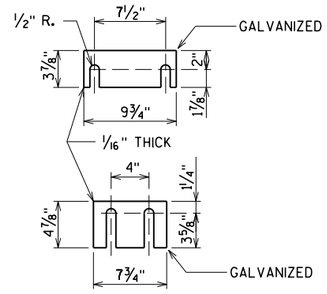

## BASE PLATE




## ANCHORAGE DETAIL

☆ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

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




## SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST

## NOTES

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

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36. FENCE FABRIC SHALL CONFORM TO F668, CLASS 2B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

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

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE ☆ DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

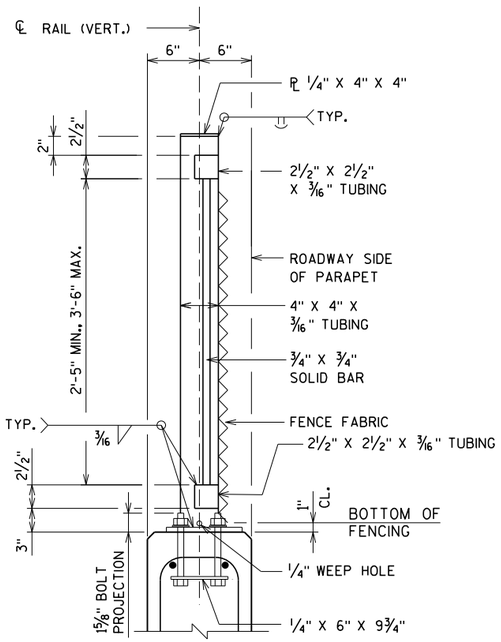
THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING R-09-17" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

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

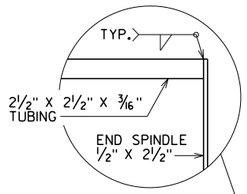
ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK. FENCE FABRIC AND TIES TO BE VINYL-COATED. COLOR SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

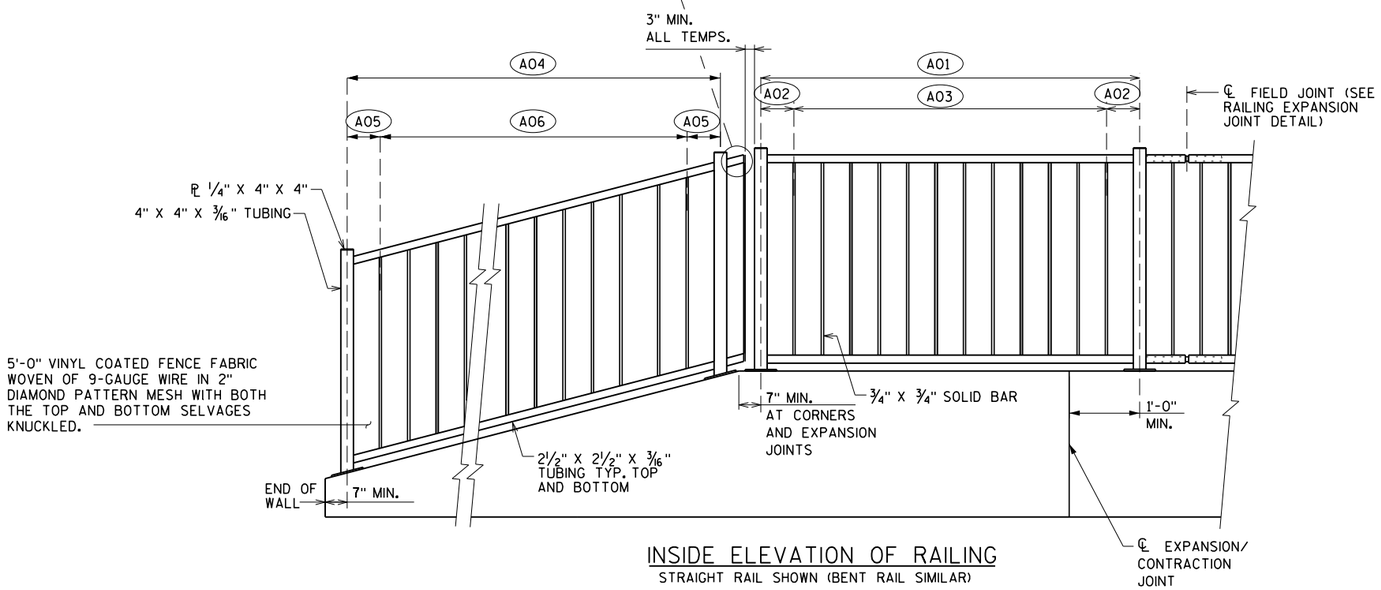
THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.




## SECTION THRU RAILING

| WALL STATIONING | | | A01 | A02 | A03 | A04 | A05 | A06 | HEIGHT |
|---|---|---|---|---|---|---|---|---|---|
| 0+00.00 | TO | 0+35.00 | | | | 9'-5" | 7" | 11 SPA. @ 9" | 3'-6" |
| 0+35.00 | TO | 0+99.50 | 10'-0" | 10.5" | 11 SPA. @ 9" | | | | 2'-5" |
| 0+99.50 | TO | 1+21.00 | 10'-0" | 10.5" | 11 SPA. @ 9" | | | | 3'-6" |
| 1+21.00 | TO | 1+60.00 | | | | 9'-2" | 10" | 10 SPA. @ 9" | 3'-6" |




## INSIDE ELEVATION OF RAILING

STRAIGHT RAIL SHOWN (BENT RAIL SIMILAR)

STATE PROJECT NUMBER

1050-01-79

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-17

DRAWN BY CJM | PLANS CK'D. VJD

TUBULAR STEEL RAILING SCREENING

SHEET 5 OF 6

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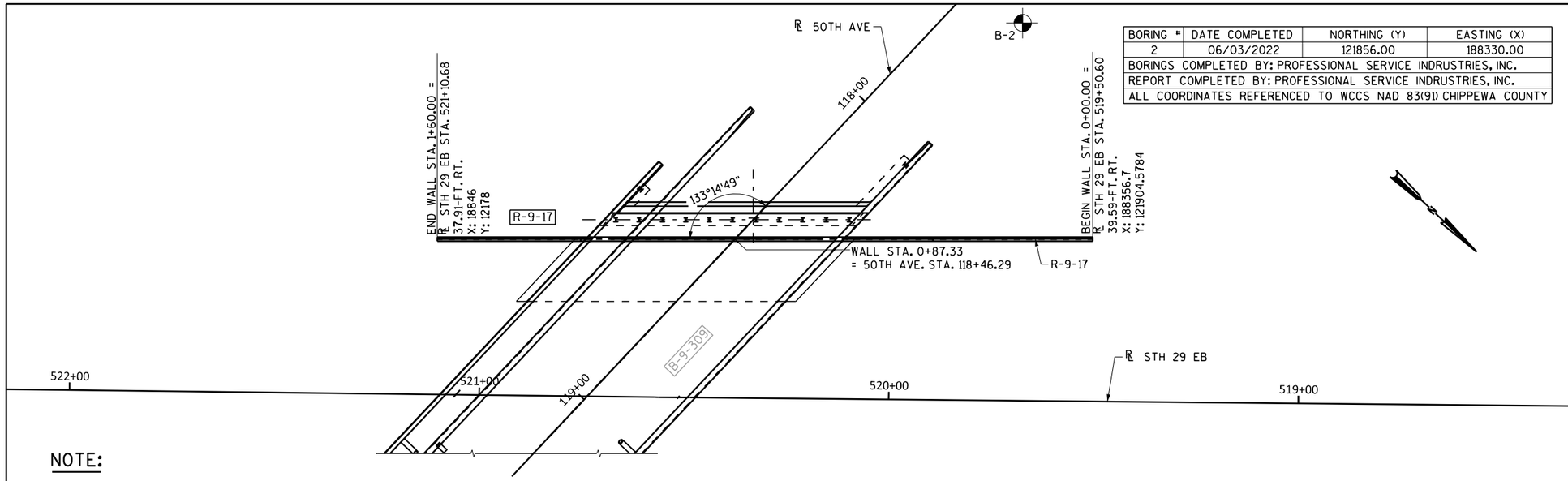
| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| 2 | 06/03/2022 | 121856.00 | 188330.00 |
| BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDRUSTRIES, INC. | | | |
| REPORT COMPLETED BY: PROFESSIONAL SERVICE INDRUSTRIES, INC. | | | |
| ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY | | | |

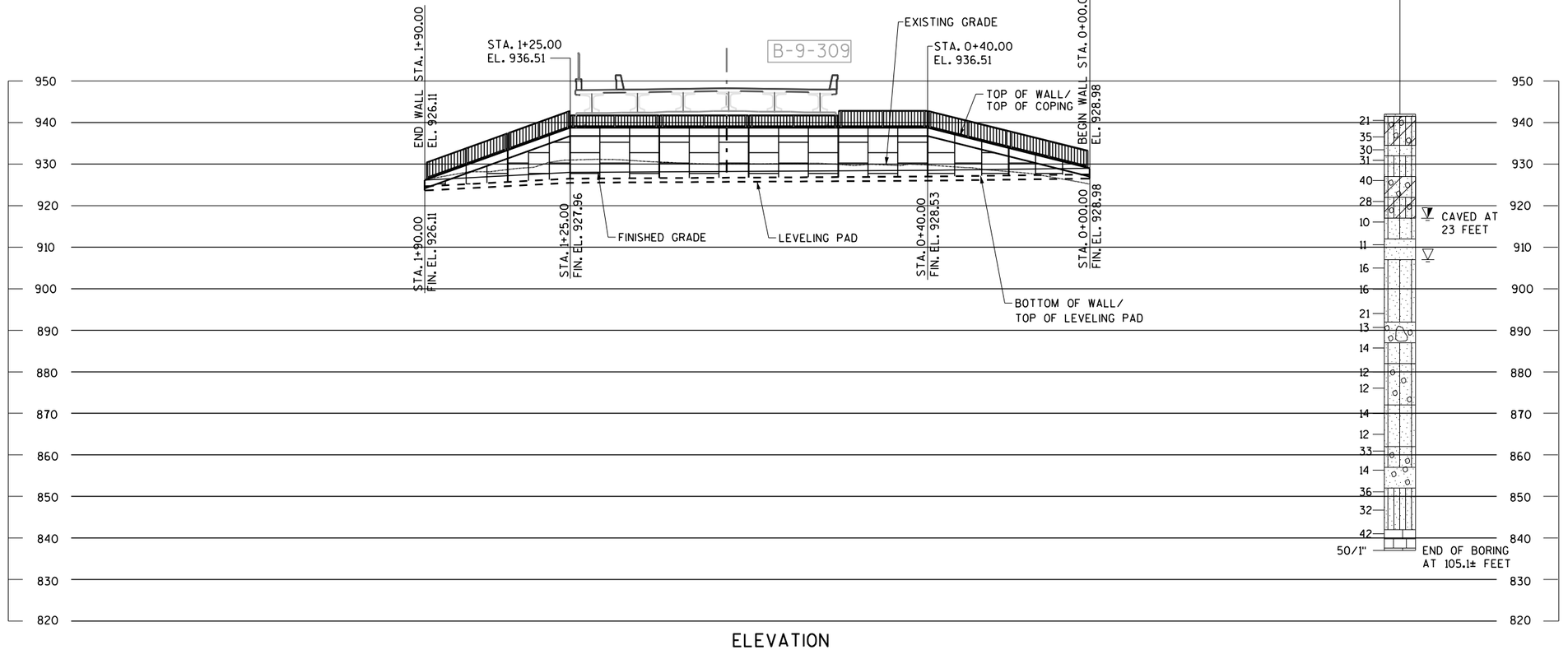



PLAN

## NOTE:

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

BORING STATIONS AND OFFSETS ARE BASED ON ℄ STH 29 EB.




ELEVATION

LOOKING WEST AT F.F. OF WALL

BORING B-2/EL. 942.0
STA. 117+59.70, 15.0' LT.



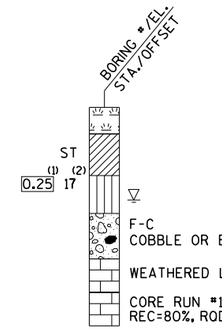

STATE PROJECT NUMBER

1050-01-79

MATERIAL SYMBOLS

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

LEGEND OF BORING




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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-17

DRAWN BY CJM | PLANS CK'D. VJD

SUBSURFACE EXPLORATION

SHEET 6 OF 6

186

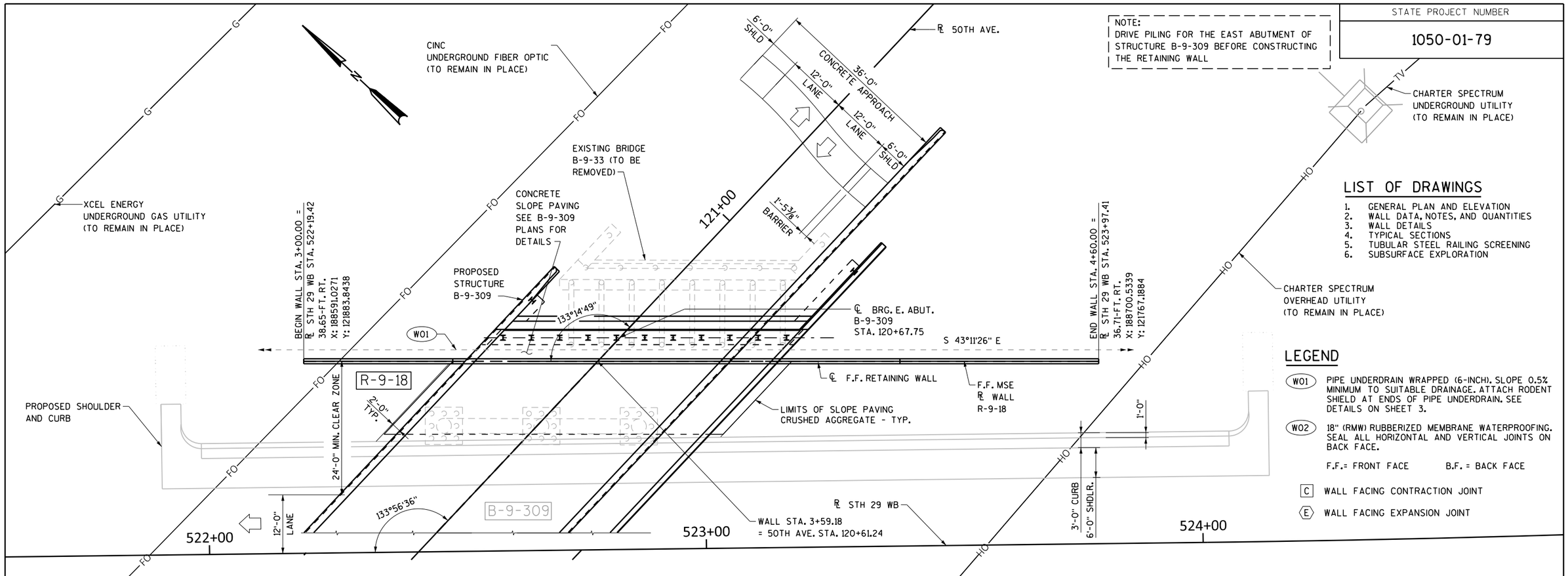
8

8

STATE PROJECT NUMBER

1050-01-79

NOTE:
DRIVE PILING FOR THE EAST ABUTMENT OF STRUCTURE B-9-309 BEFORE CONSTRUCTING THE RETAINING WALL




## LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. WALL DATA, NOTES, AND QUANTITIES
3. WALL DETAILS
4. TYPICAL SECTIONS
5. TUBULAR STEEL RAILING SCREENING
6. SUBSURFACE EXPLORATION

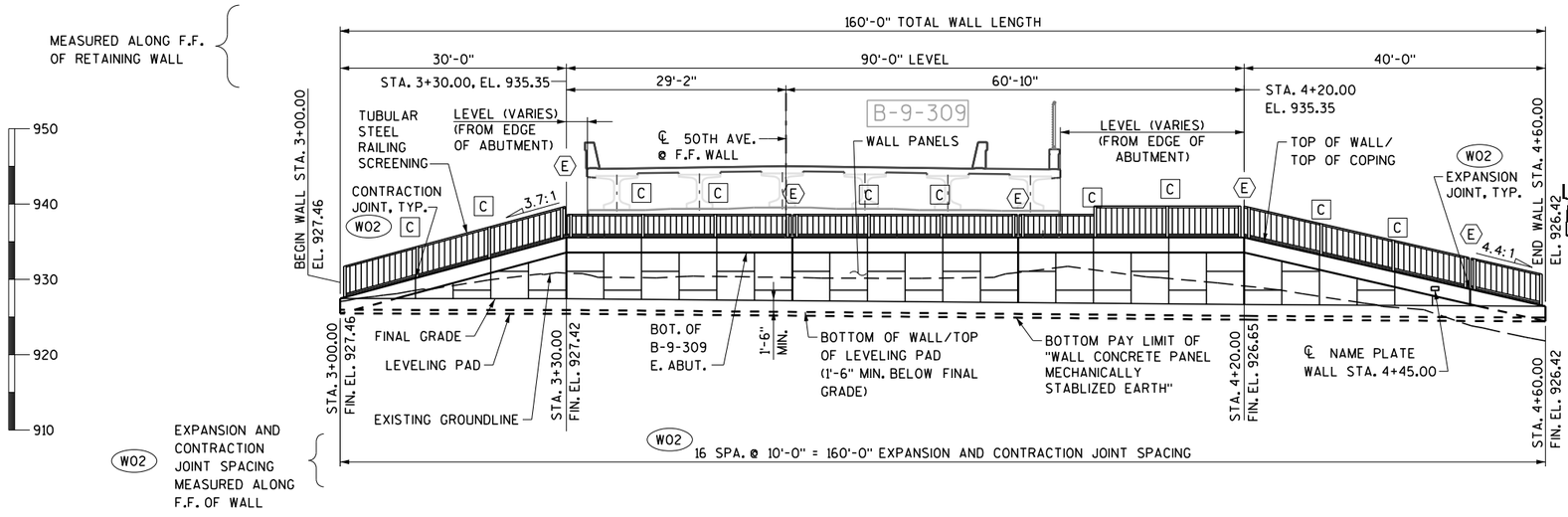
## LEGEND

- W01 — PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 3.
- W02 — 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- F.F.= FRONT FACE  B.F. = BACK FACE
- C — WALL FACING CONTRACTION JOINT
- E — WALL FACING EXPANSION JOINT

## PLAN

R-9-18 CONCRETE PANEL MSE RETAINING WALL
ALL STATIONS AND DIMENSIONS MEASURED ALONG FRONT FACE

NOTE:
JOINT SPACINGS SHOWN ARE BASED ON A 5'-0" SQUARE WALL PANEL SIZE. IF A DIFFERENT WALL PANEL SIZE IS CHOSEN BY THE CONTRACTOR, THEN COPING JOINT SPACING WHALL BE MODIFIED SO THAT THE COPING JOINTS COINCIDE WITH WALL PANEL JOINTS.




## ELEVATION

LOOKING EAST AT F.F. OF WALL
NORMAL TO MSE WALL ALONG STH 29

## BENCH MARK

| NO. | STATION | DESCRIPTION | ELEVATION |
|---|---|---|---|
| #1 | 118+21.55 50TH AVE. | END OF SW WING | 944.22 |

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK (608) 261-0261

CONSULTANT:
CHRISTOPHER MARCUM, P.E. (920) 468-4771

WISCONSIN
CHRISTOPHER J. MARCUM
44676
EAU CLAIRE
WISCONSIN
PROFESSIONAL ENGINEER
05/31/2024

| NO. | DATE | REVISION | BY |
|---|---|---|---|

jt ENGINEERING
REAL. TRUSTED. PROVEN.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-9-18

MSE RETAINING WALL STH 29 WB

| COUNTY | TOWN |
|---|---|
| CHIPPEWA | LAFAYETTE |

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

| DESIGNED BY | CJM | DESIGN CK'D. | VJD | DRAWN BY | CJM | PLANS CK'D. | VJD |
|---|---|---|---|---|---|---|---|

GENERAL PLAN AND ELEVATION

SHEET 1 OF 6
187

STATE PROJECT NUMBER

1050-01-79

## TOTAL ESTIMATED QUANTITIES

| BID ITEM NO. | BID ITEMS | UNIT | TOTAL |
|---|---|---|---|
| 206.3000.02 | EXCAVATION FOR STRUCTURES RETAINING WALL R-9-18 | LS | 1 |
| 513.4091 | RAILING TUBULAR SCREENING | LF | 163 |
| 604.0500 | SLOPE PAVING CRUSHED AGGREGATE | SY | 125 |
| 612.0406 | PIPE UNDERDRAIN WRAPPED 6-INCH | LF | 180 |
| SPV.0165.02 | WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-18 | SF | 1,320 |
| | NON-BID ITEMS | | |
| | NAME PLATE | EACH | 1 |
| | PREFORMED JOINT FILLER | SIZE | ½" & ¾" |
| | NON-BITUMINOUS JOINT SEALER | SIZE | ½" & ¾" |
| | EXPANDED POLYSTYRENE | SIZE | 1" |

## SOIL PARAMETERS

| SOIL DESCRIPTION | FRICTION ANGLE (DEGREES) | COHESION (PSF) | UNIT WEIGHT (PCF) |
|---|---|---|---|
| GRANULAR BACKFILL WITHIN THE WALL REINFORCING ZONE | 30 | 0 | 120 |
| FILL, GRANULAR BEHIND AND BELOW THE REINFORCING ZONE | 30 | 0 | 120 |
| BORING B-1 - STA. 121+35.29, 15-FT. RT. | | | |
| SILTY SAND EL. 938.0 TO EL. 943.0 | 36 | 0 | 125 |
| SAND EL. 928.0 TO EL. 938.0 | 36 | 0 | 131 |
| SILTY SAND EL. 913.0 TO EL. 928.0 | 36 | 0 | 137 |
| SAND EL. 888.0 TO EL. 913.0 | 32 | 0 | 133 |
| SANDY SILT EL. 878.00 TO EL. 888.0 | 32 | 0 | 129 |
| SAND EL. 868.0 TO EL. 878.0 | 32 | 0 | 127 |
| SILTY SAND EL. 863.0 TO EL. 868.0 | 32 | 0 | 132 |
| SAND EL. 843.0 TO EL. 863.0 | 34 | 0 | 124 |
| WEATHERED BEDROCK EL. 835.0 TO EL. 843.0 | 41 | 0 | 145 |

## GEOMETRY TABLE

| WALL STA. | ℄ STH 29 EB STA. | OFFSET TO F.F. OF WALL | TOP OF WALL EL. | FINISHED GRADE EL. |
|---|---|---|---|---|
| 3+00.00 | 522+19.42 | 38.65-FT. | 927.46 | 927.46 |
| 3+05.00 | 522+24.42 | 38.59-FT. | 928.67 | 927.46 |
| 3+10.00 | 522+29.42 | 38.53-FT. | 929.87 | 927.46 |
| 3+15.00 | 522+34.42 | 38.47-FT. | 931.08 | 927.45 |
| 3+20.00 | 522+39.42 | 38.41-FT. | 932.28 | 927.45 |
| 3+25.00 | 522+44.42 | 38.35-FT. | 933.49 | 927.45 |
| 3+30.00 | 522+49.42 | 38.29-FT. | 935.35 | 927.44 |
| 3+32.74 | 522+52.16 | 38.25-FT. | 935.35 | 927.42 |
| 3+40.00 | 522+54.42 | 38.22-FT. | 935.35 | 927.35 |
| 3+40.00 | 522+59.41 | 38.16-FT. | 935.35 | 927.35 |
| 3+45.00 | 522+64.41 | 38.10-FT. | 935.35 | 927.31 |
| 3+50.00 | 522+69.41 | 38.04-FT. | 935.35 | 927.27 |
| 3+55.00 | 522+74.41 | 37.98-FT. | 935.35 | 927.22 |
| 3+60.00 | 522+79.41 | 37.92-FT. | 935.35 | 927.18 |
| 3+65.00 | 522+84.41 | 37.86-FT. | 935.35 | 927.13 |
| 3+70.00 | 522+89.41 | 37.80-FT. | 935.35 | 927.09 |
| 3+75.00 | 522+94.41 | 37.74-FT. | 935.35 | 927.05 |
| 3+80.00 | 522+99.41 | 37.68-FT. | 935.35 | 927.00 |
| 3+85.00 | 523+04.41 | 37.62-FT. | 935.35 | 926.96 |
| 3+90.00 | 523+09.41 | 37.55-FT. | 935.35 | 926.91 |
| 3+95.00 | 523+14.41 | 37.50-FT. | 935.35 | 926.87 |
| 3+95.48 | 523+14.89 | 37.49-FT. | 935.35 | 926.86 |
| 4+00.00 | 523+19.41 | 37.43-FT. | 935.35 | 926.82 |
| 4+05.00 | 523+24.41 | 37.37-FT. | 935.35 | 926.78 |
| 4+10.00 | 523+29.41 | 37.31-FT. | 935.35 | 926.74 |
| 4+15.00 | 523+34.41 | 37.25-FT. | 935.35 | 926.69 |
| 4+20.00 | 523+39.41 | 37.19-FT. | 935.35 | 926.65 |
| 4+25.00 | 523+44.41 | 37.13-FT. | 934.23 | 926.60 |
| 4+30.00 | 523+49.41 | 37.07-FT. | 933.12 | 926.56 |
| 4+35.00 | 523+54.41 | 37.01-FT. | 932.00 | 926.51 |
| 4+40.00 | 523+59.41 | 36.95-FT. | 930.89 | 926.47 |
| 4+45.00 | 523+64.41 | 36.89-FT. | 929.77 | 926.42 |
| 4+50.00 | 523+69.41 | 36.83-FT. | 928.65 | 926.38 |
| 4+55.00 | 523+74.41 | 36.77-FT. | 927.54 | 926.40 |
| 4+60.00 | 523+79.41 | 36.71-FT. | 926.42 | 926.42 |

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF JOINT FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP & HOLD ⅛" BELOW THE SURFACE OF CONCRETE).

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF WALL R-9-18.

THE EXISTING GROUNDLINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

THE PLAN QUANTITY FOR THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

COORDINATE CONSTRUCTION OF R-9-18 WITH RETAINING WALL R-9-17 AND EAST ABUTMENT OF BRIDGE B-9-309.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DEGISNATION M153 TYPE I, II, OR III OR AASHTO DEGISNATION M213.

OVER EXCAVATION BEYOND THE BOTTOM OF THE WALL IS PAID FOR UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-9-18".

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

EXTENT OF BELOW GRADE SUBSTRUCTURES ARE BASED ON AS-BUILT PLANS. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE B-9-33" BID ITEM WITH THE BRIDGE PLANS.

THE COST OF FURNISHING AND PLACING MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE TO THE TOP OF WALL COPING IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-18".

THE COST OF FURNISHING AND PLACING UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-18".

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR CAST-IN-PLACE WALL COPING ARE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-9-18".

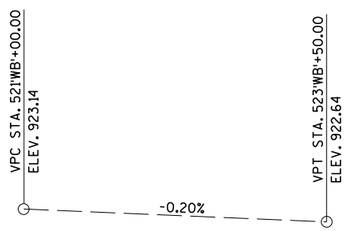
## DESIGN DATA

CONCRETE MASONRY:
COPING..... f'c = 3,500 PSI

BAR STEEL REINFORCEMENT:
GRADE 60..... fy = 60,000 PSI

## ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH




PROFILE GRADE LINE - STH 29 WB

BASED ON 2005 AS-BUILT PLANS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-18

DRAWN BY CJM | PLANS CK'D. VJD

WALL DATA, NOTES, AND QUANTITIES

SHEET 2 OF 6

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8

8

FILE NAME :

PLOT DATE : 5/30/2024 9:46:08 PM PLOT BY : cmarcum

PLOT SCALE : 20:0 sf:in / in.

STATE PROJECT NUMBER

1050-01-79

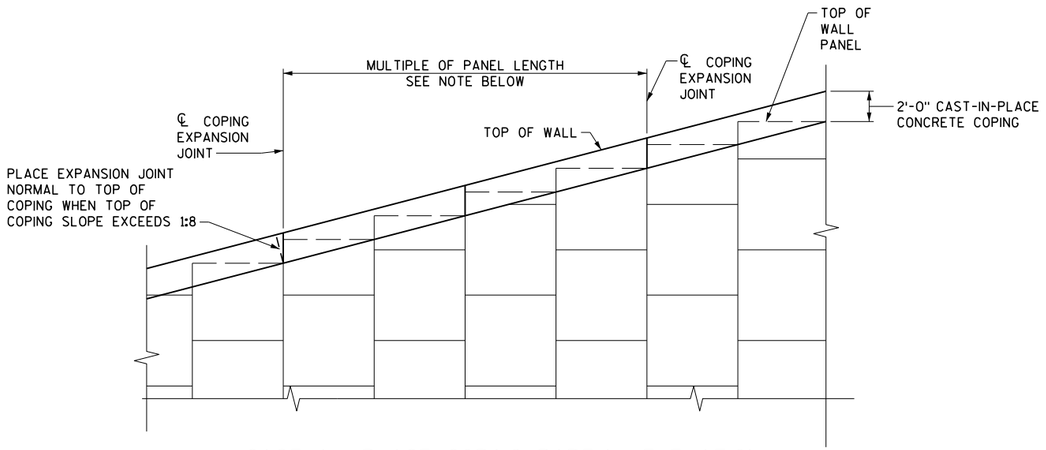
## WALL EXTERNAL & OVERALL STABILITY EVALUATION

| | DIMENSIONS | EVALUATED LOCATIONS |
|---|---|---|
| | WALL HEIGHT (FEET) | 10.5 |
| | EXPOSED WALL HEIGHT (FEET) | 9.0 |
| W03 | MINIMUM LENGTH OF REINFORCEMENT (FEET) | 12 |
| | LENGTH OF REINFOREMENT TO HEIGHT RATIO | 1.14 |
| | BORING LOCATION USED | B-1 |
| | APPROXIMATE WALL STATION | 4+00 |
| | CAPACITY TO DEMAND RATIO (CDR) | |
| | SLIDING (CDR > 1.0) | 1.35 |
| | ECCENTRICITY (CDR > 1.0) | 1.22 |
| W04 | OVERALL STABILITY (CDR > 1.0) | 3.85 |
| | BEARING RESISTANCE (CDR > 1.0) | 3.9 |
| | FACTORED BEARING RESISTANCE (PSF) | 6,800 |

## NOTES

W03 THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

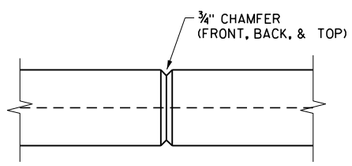
W04 THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.




### CAST-IN -PLACE COPING PARTIAL ELEVATION

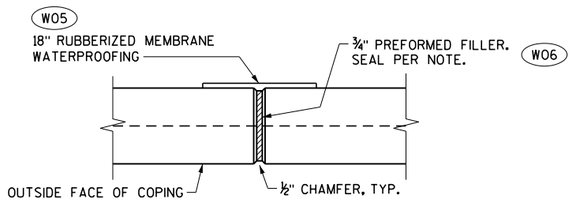
LOOKING AT F.F. OF WALL

NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINT ON FRONT FACE.



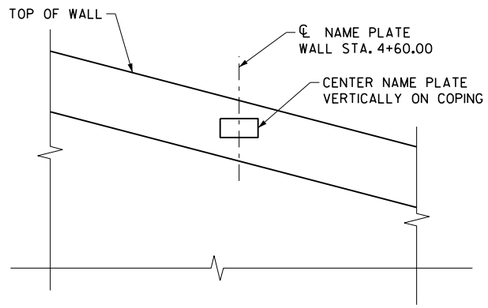

### COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT.
MAX SPACING OF JOINT = 12'-0"

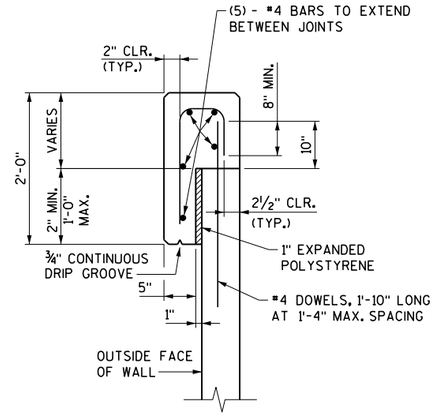



### COPING EXPANSION JOINT

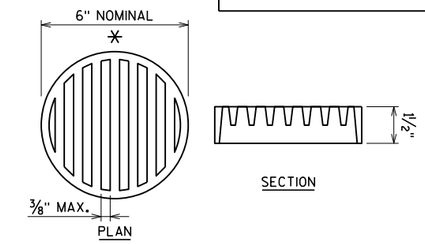
DO NOT RUN BAR STEEL THRU JOINT.
MAX SPACING OF JOINT = 50'-0"




### NAME PLATE DETAIL




### CAST-IN-PLACE CONCRETE COPING DETAIL




### RODENT SHIELD DETAIL

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

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

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

## DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 240 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

## LEGEND

W05 MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

W06 SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GREY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-18

DRAWN BY CJM | PLANS CK'D. VJD

WALL DETAILS

SHEET 3 OF 6
189

8

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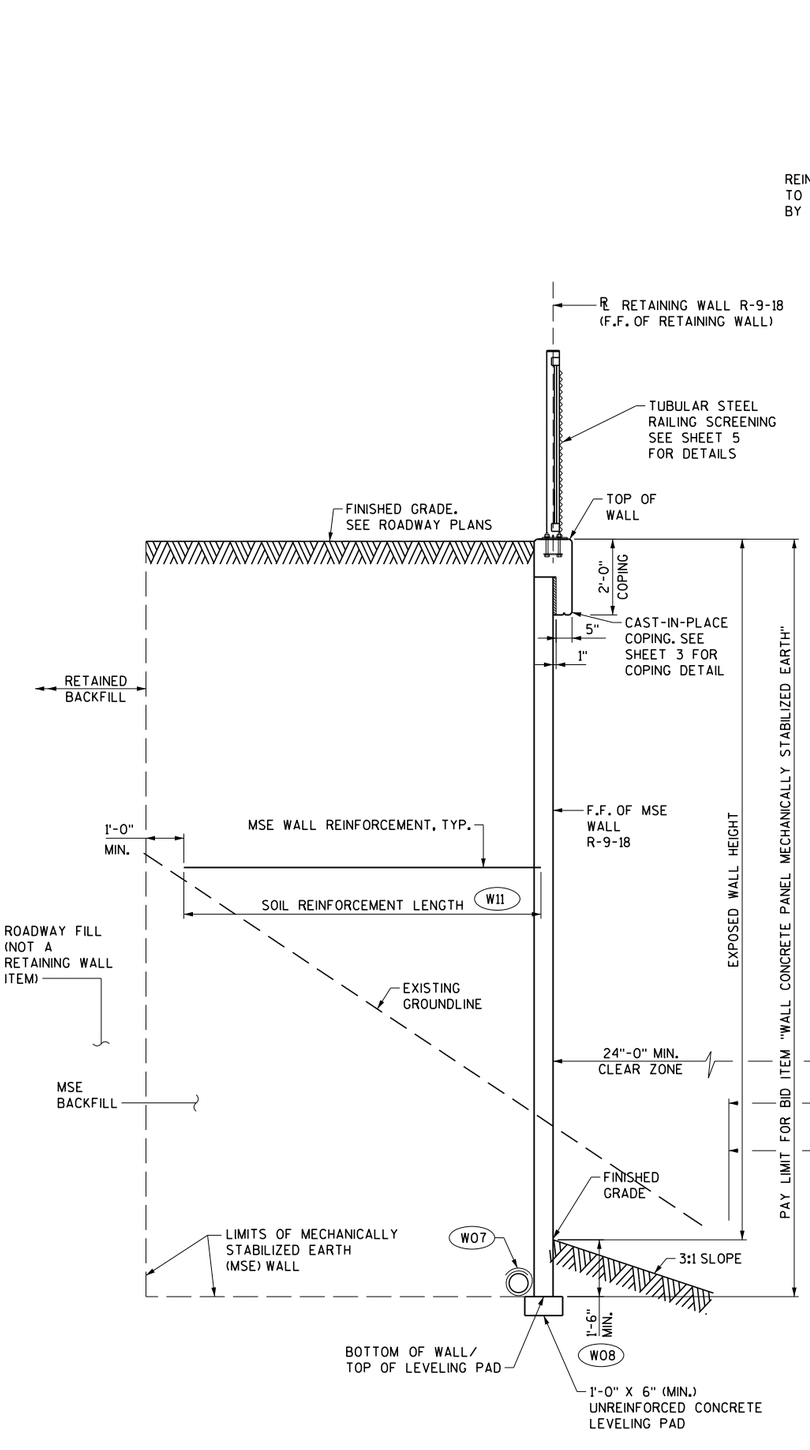
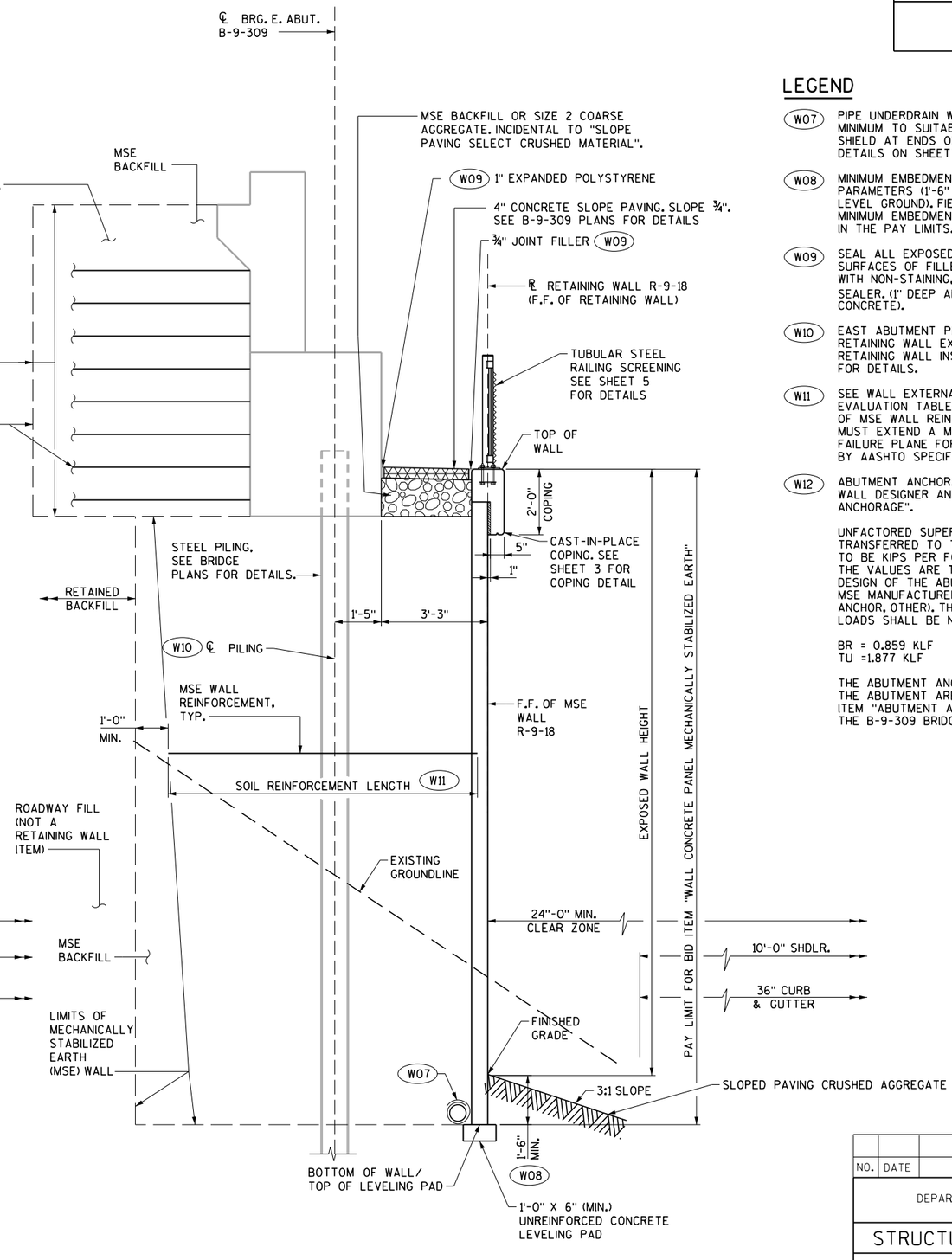
| STATE PROJECT NUMBER |
|---|
| 1050-01-79 |




## TYPICAL SECTION THRU WALL

LOOKING SOUTH
STA. 3+00.00 TO STA. 3+32.74
STA. 3+95.48 TO STA. 4+60.00




## TYPICAL SECTION AT ABUTMENT

LOOKING SOUTH
STA. 3+32.74 TO STA. 3+95.48

## LEGEND

(W07) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 3.

(W08) MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

(W09) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

(W10) EAST ABUTMENT PILES SHALL BE INSTALLED AFTER RETAINING WALL EXCAVATION AND PRIOR TO RETAINING WALL INSTALLATION. SEE B-09-309 PLANS FOR DETAILS.

(W11) SEE WALL EXTERNAL AND OVERALL STABILITY EVALUATION TABLE ON SHEEET 3 FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0-FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

(W12) ABUTMENT ANCHORAGE TO BE DETERMINED BY THE MSE WALL DESIGNER AND TO BE PAID AS "ABUTMENT ANCHORAGE".

UNFACTORED SUPERSTRUCTURE LATERAL LOADS TRANSFERRED TO THE ABUTMENT ARE TAKEN TO BE KIPS PER FOOT OF ABUTMENT LENGTH. THE VALUES ARE TO BE USED FOR THE LRFD DESIGN OF THE ABUTMENT ANCHORAGE BY THE MSE MANUFACTURER (MSE SYSTEM, DEAD MAN ANCHOR, OTHER). THE FOLLOWING AASHTO LINE LOADS SHALL BE NOTED ON PLAN:

BR = 0.859 KLF WS = 0.089 KLF
TU =1.877 KLF WL = 0.062 KLF

THE ABUTMENT ANCHORAGE AND CONNECTION TO THE ABUTMENT ARE INCLUDED WITH THE BID ITEM "ABUTMENT ANCHORAGE" AS SHOWN ON THE B-9-309 BRIDGE PLANS.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-18

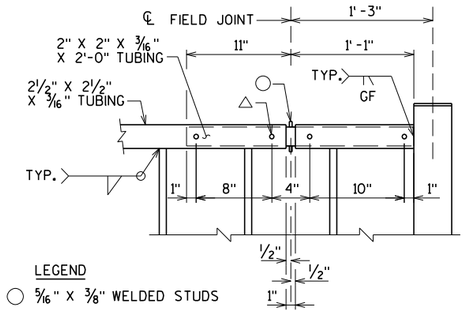
DRAWN BY CJM | PLANS CK'D. VJD

TYPICAL SECTIONS

SHEET 4 OF 6
190

8

8

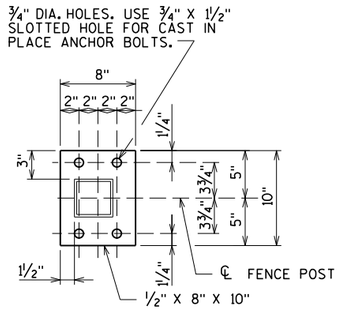



LEGEND

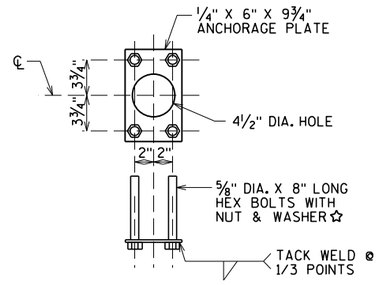
○ 5/16" X 3/8" WELDED STUDS

△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2½" X 2½" TUBE.

## RAILING EXPANSION JOINT DETAIL



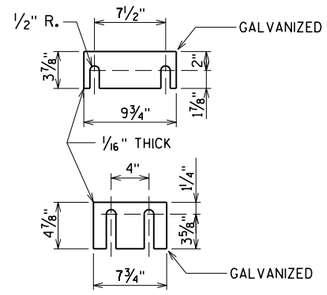

## BASE PLATE




## ANCHORAGE DETAIL

☆ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

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




## SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST

| WALL STATIONING | | | A01 | A02 | A03 | A04 | A05 | A06 | HEIGHT |
|---|---|---|---|---|---|---|---|---|---|
| 3+00.00 | TO | 3+30.00 | | | | 9'-7" | 8" | 11 SPA. @ 9" | 3'-6" |
| 3+30.00 | TO | 4+00.13 | 9'-7" | 8" | 11 SPA. @ 9" | | | | 2'-5" |
| 4+00.13 | TO | 4+20.00 | 9'-7" | 8" | 11 SPA. @ 9" | | | | 3'-6" |
| 4+20.00 | TO | 4+50.00 | | | | 9'-7" | 8" | 11 SPA. @ 9" | 3'-6" |
| 4+50.00 | TO | 4+60.00 | | | | 8'-10" | 8" | 10 SPA. @ 9" | 3'-6" |

## NOTES

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

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36. FENCE FABRIC SHALL CONFORM TO F668, CLASS 2B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

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

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ☆

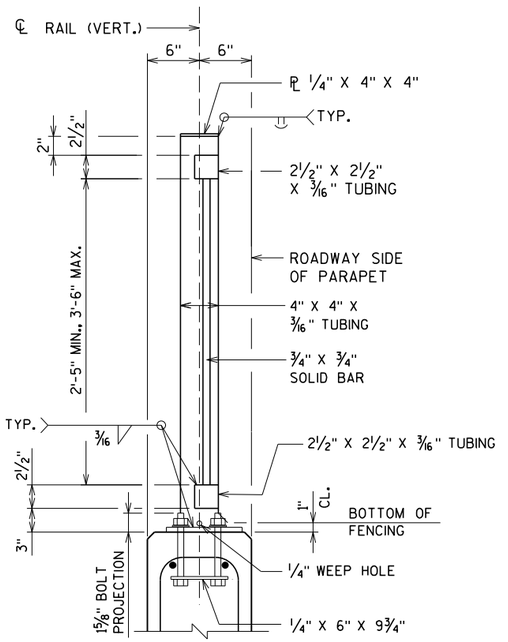
THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING R-9-18" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

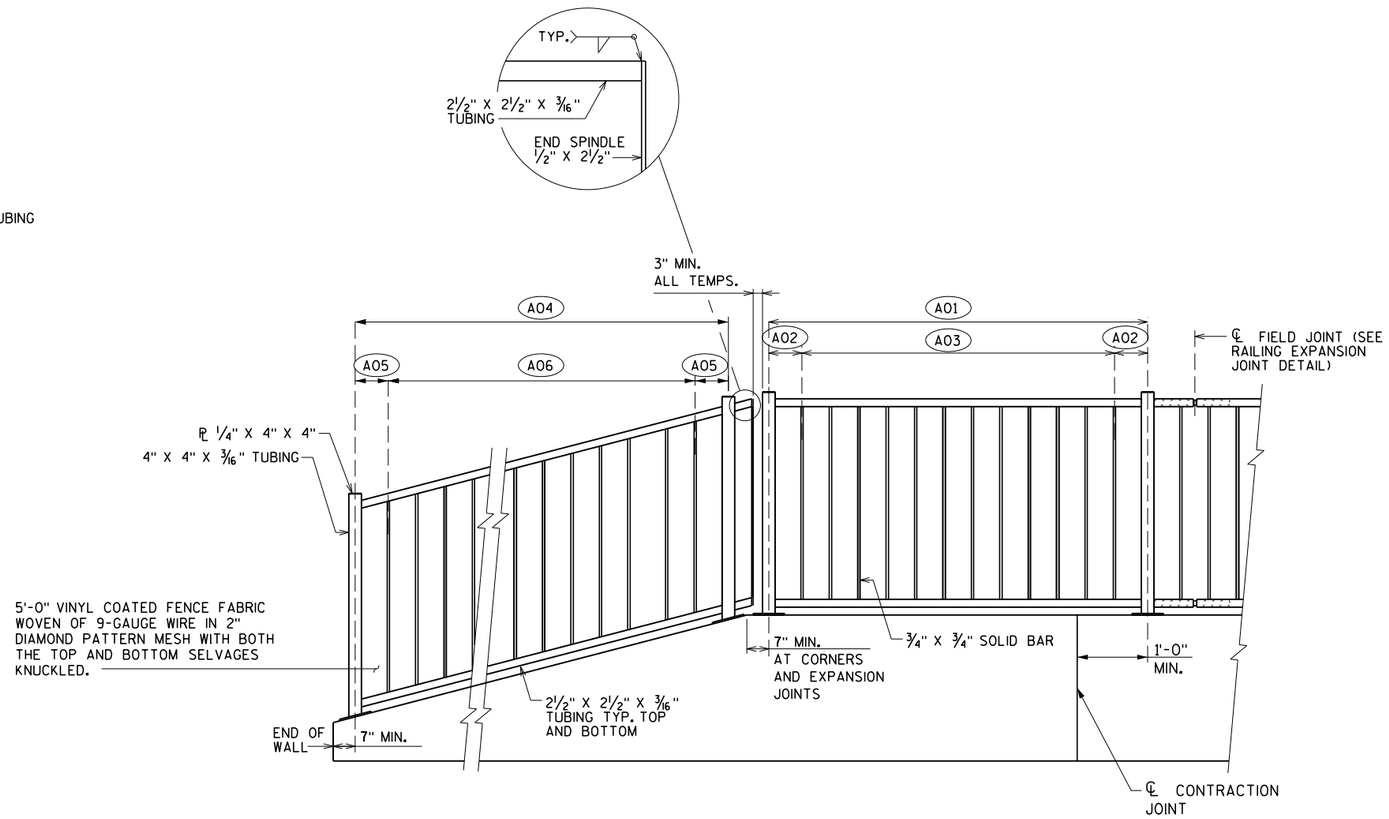
VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK. FENCE FABRIC AND TIES TO BE VINYL-COATED. COLOR SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.




## SECTION THRU RAILING




## INSIDE ELEVATION OF RAILING

STRAIGHT RAIL SHOWN (BENT RAIL SIMILAR)

STATE PROJECT NUMBER

1050-01-79

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-18

DRAWN BY CJM | PLANS CK'D. VJD

TUBULAR STEEL RAILING SCREENING

SHEET 5 OF 6

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8

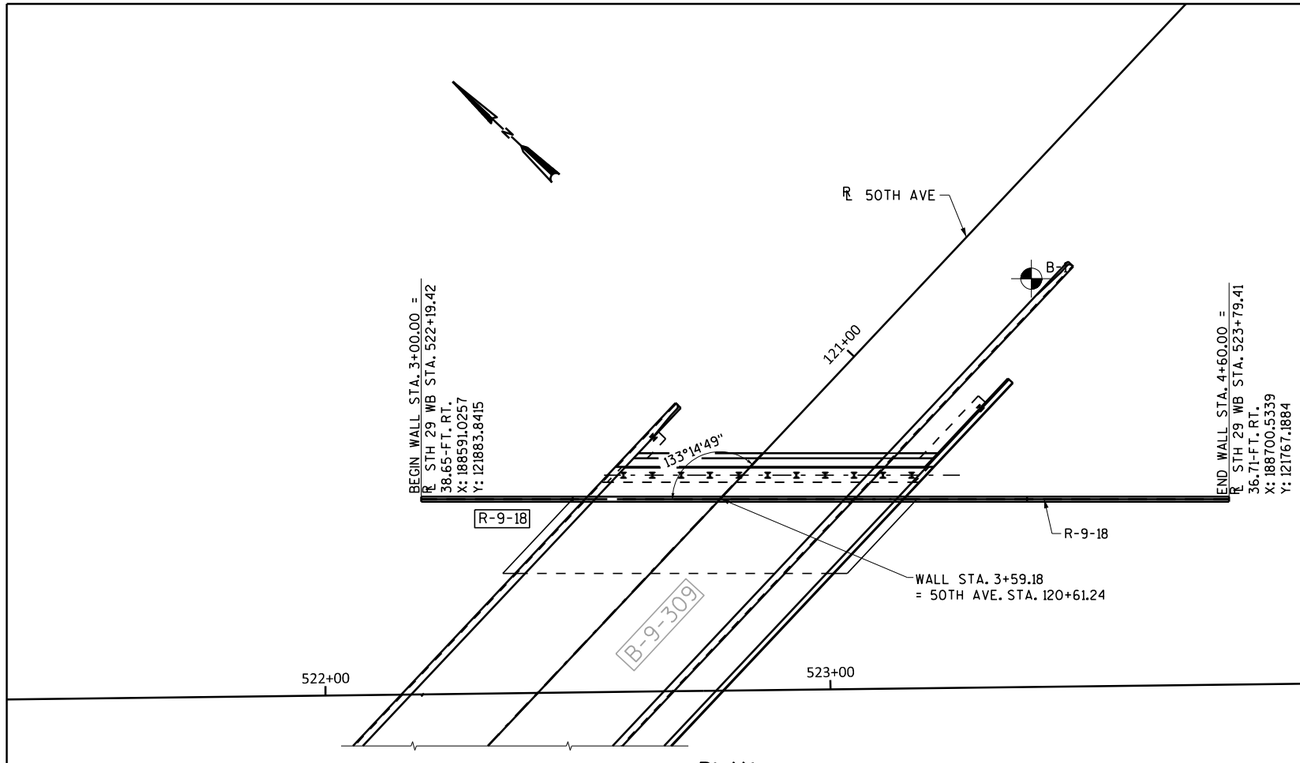
8

| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| 1 | 06/06/2022 | 121825.62 | 188705.56 |
| BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDRUSTRIES, INC. | | | |
| REPORT COMPLETED BY: PROFESSIONAL SERVICE INDRUSTRIES, INC. | | | |
| ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY | | | |

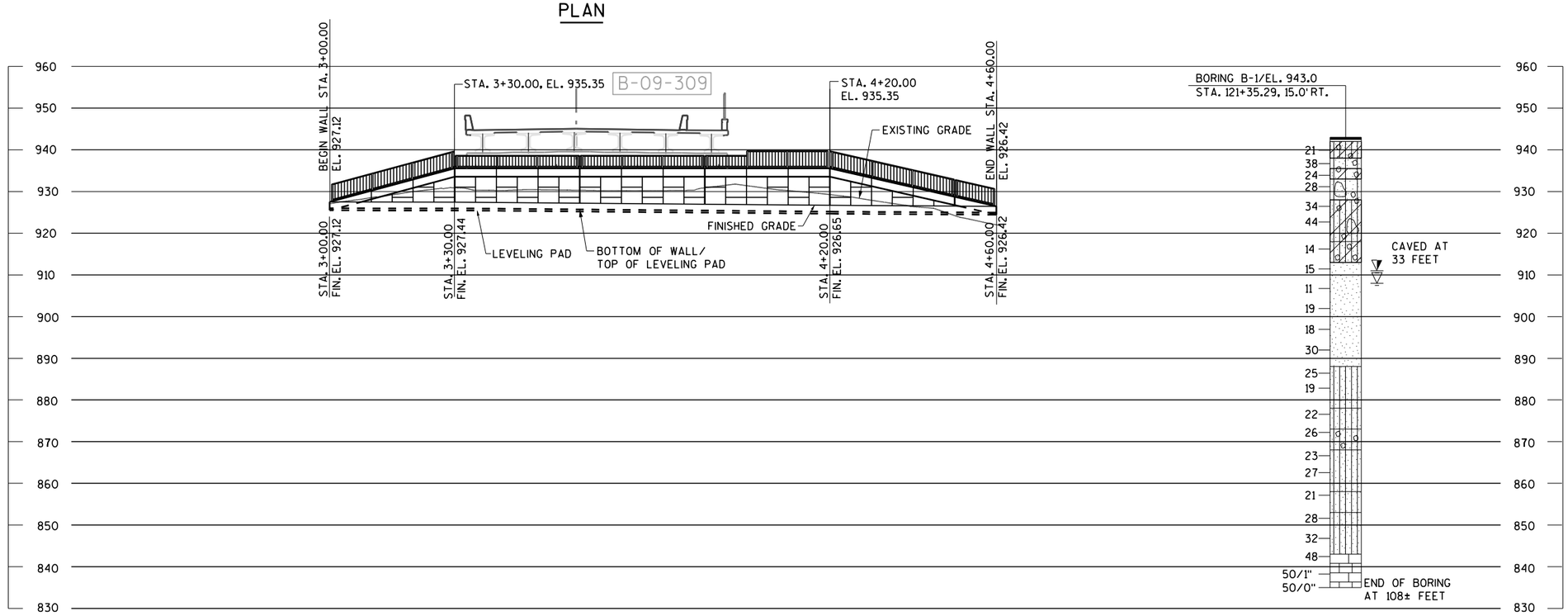
## NOTE:

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

BORING STATIONS AND OFFSETS ARE BASED ON ℄ STH 29 WB.




PLAN




ELEVATION

LOOKING EAST AT F.F. OF WALL

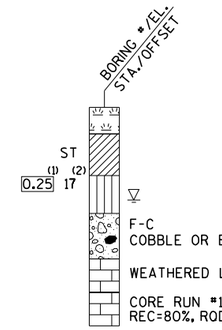
STATE PROJECT NUMBER

1050-01-79

MATERIAL SYMBOLS

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

LEGEND OF BORING




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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-9-18

DRAWN BY CJM | PLANS CK'D. VJD

SUBSURFACE EXPLORATION

SHEET 6 OF 6

192

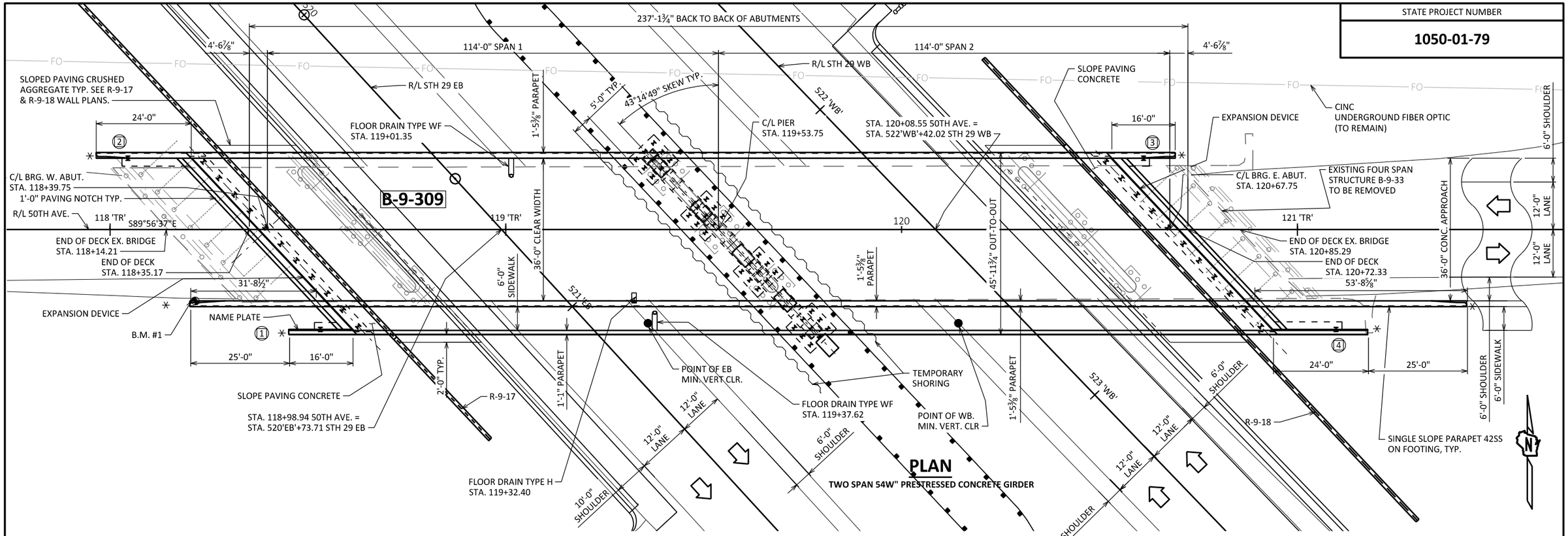
8

8

X:\Projects\Chippewa\1050-01-09_STH 29 & 50th Ave\Structure\CAD\Walls\R-9-18\Revised Concept\Sheets\Final\R090018_08106.DGN PLOT DATE : 5/30/2024 10:10:47 PM PLOT BY : cmarcum PLOT SCALE : 30:0 sf:in / in.

STATE PROJECT NUMBER

**1050-01-79**




## PLAN

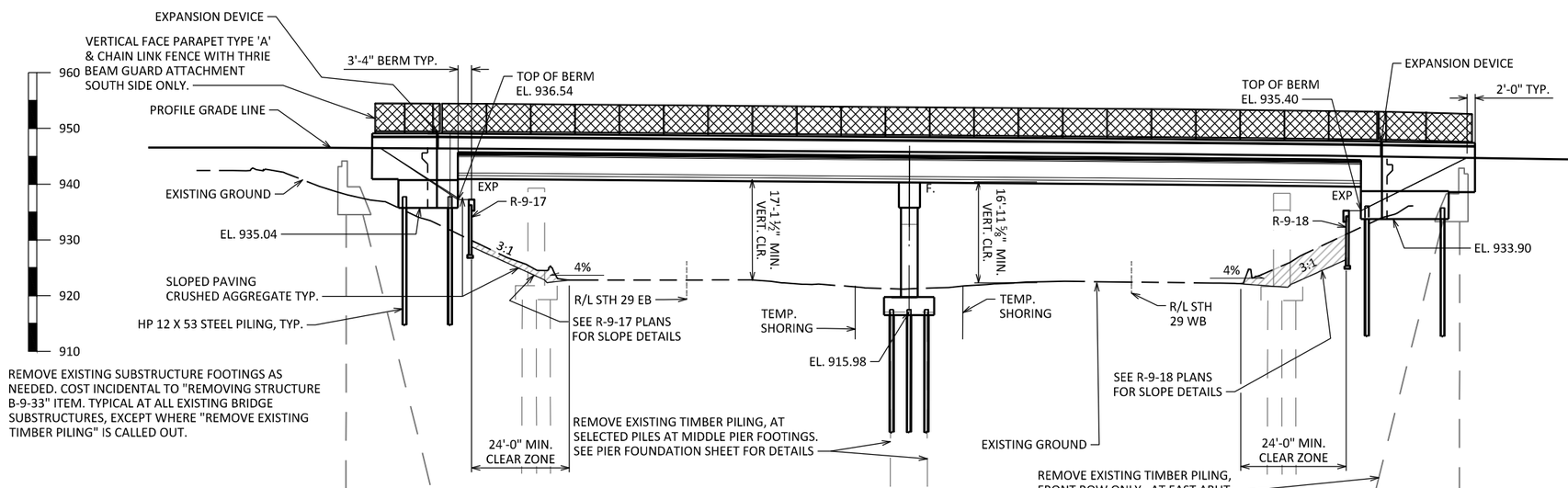
**TWO SPAN 54W" PRESTRESSED CONCRETE GIRDER**

## LIST OF DRAWINGS:


1. GENERAL PLAN AND ELEVATION
2. DESIGN DATA, NOTES, AND QUANTITIES
3. CROSS SECTION AND DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WING 1 DETAILS
7. WING 2 DETAILS
8. WEST ABUTMENT DETAILS
9. EAST ABUTMENT
10. WING 3 DETAILS
11. WING 4 DETAILS
12. EAST ABUTMENT DETAILS
13. PIER
14. PIER COLUMNS
15. PIER DETAILS
16. ALTERNATE CONSTRUCTION JOINT
17. ABUTMENT ELASTOMERIC BEARINGS
18. 54W PRESTRESSED GIRDER DETAILS 1
19. 54W PRESTRESSED GIRDER DETAILS 2
20. STEEL DIAPHRAGM
21 SUPERSTRUCTURE
22. SUPERSTRUCTURE DETAILS
23. SUPERSTRUCTURE PLAN
24. SUPERSTRUCTURE GIRDER LAYOUT
25 SUPERSTRUCTURE BILL OF BARS
26. FLOOR DRAIN TYPE WF
27. FLOOR DRAIN TYPE H
28. EXPANSION DEVICE
29. COVER PLATES AT SIDEWALK
30. PARAPET 'A' COVER PLATE DETAILS
31. SHOULDER 42SS PARAPET COVER PLATE DETAILS
32. VERTICAL FACE PARAPET 'A'
33. SINGLE SLOPE PARAPET 42SS
34. FENCING DETAILS
35 W. ABUT. PARAPET FOOTING
36 W. ABUT. FOOTING PARAPET
37. E. ABUT. PARAPET FOOTING
38 E. ABUT. FOOTING PARAPET
39. NORTH DOWNSPOUT DETAILS
40. SOUTH DOWNSPOUT DETAILS
41. DOWNSPOUT PLAN
42. DOWNSPOUT ELEVATION
43. DOWNSPOUT DETAILS


## LEGEND

- COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-9-309".
- ✳ ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD REQUIRED.
- (X) INDICATES WING WALL NUMBER
- F. FIXED BEARING
- EXP EXPANSION BEARING




REMOVE EXISTING SUBSTRUCTURE FOOTINGS AS NEEDED. COST INCIDENTAL TO "REMOVING STRUCTURE B-9-33" ITEM. TYPICAL AT ALL EXISTING BRIDGE SUBSTRUCTURES, EXCEPT WHERE "REMOVE EXISTING TIMBER PILING" IS CALLED OUT.

## ELEVATION

**LOOKING NORTH NORMAL TO STH 29**

## BENCH MARK

| NO. | STATION | DESCRIPTION | ELEV. |
|---|---|---|---|
| #1 | 118+21.55 50TH AVE., 18.00-FT. RT. | END OF SW WING | 944.22 |

WISCONSIN
CHRISTOPHER J. MARCUM
44676
EAU CLAIRE
WISCONSIN
PROFESSIONAL ENGINEER

05/31/2024

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

JT ENGINEERING
REAL. TRUSTED. PROVEN.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED SDR 08/13/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

**STRUCTURE B-9-309**

50TH AVE. OVER STH 29

| COUNTY | TOWN |
|---|---|
| CHIPPEWA | LAFAYETTE |

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

| DESIGNED BY | DESIGNED CK'D | DRAWN BY | PLANS CK'D |
|---|---|---|---|
| CJM | VJD | CJM | VJD |

**GENERAL PLAN AND ELEVATION**

SHEET 1 OF 43
193

SCALE = 25

**STRUCTURE DESIGN CONTACTS:**

| | |
|---|---|
| CHRISTOPHER MARCUM, PE | 920-468-4771 |
| AARON BONK | 608-261-0261 |

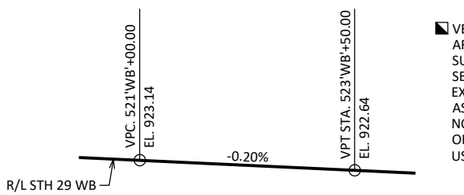
I.D. 1050-01-79

DATE: 08-15-2023

# TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS | UNIT | SUPER | W.ABUT. | PIER | E. ABUT. | TOTALS |
|---|---|---|---|---|---|---|---|
| 203.0211.S | ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-9-33 | EACH | -- | -- | -- | -- | 1 |
| 203.0220 | REMOVING STRUCTURE B-9-33 | EACH | -- | -- | -- | -- | 1 |
| 203.0330 | DEBRIS CONTAINMENT B-9-33 | EACH | -- | -- | -- | -- | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES B-9-309 | EACH | -- | -- | -- | -- | 1 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | -- | 135 | -- | 135 | 270 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 449 | 125 | 110 | 130 | 814 |
| 502.3101 | EXPANSION DEVICE | LF | 126 | -- | -- | -- | 126 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 1,145 | -- | -- | -- | 1,145 |
| 502.3210 | PIGMENTED SURFACE SEALER | SY | 530 | -- | -- | -- | 530 |
| 502.4206 | ADHESIVE ANCHORS NO. 6 BAR | EACH | -- | 4 | -- | 4 | 8 |
| 503.0155 | PRESTRESSED GIRDER TYPE I 54W-INCH | LF | 1,375 | -- | -- | -- | 1,375 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | -- | 5,680 | 8,490 | 5,640 | 19,810 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 94,780 | 7,510 | 21,840 | 8,350 | 132,480 |
| 506.2605 | BEARING PADS ELASTOMERIC NON-LAMINATED | EACH | -- | -- | 12 | -- | 12 |
| 506.2610 | BEARING PADS ELASTOMERIC LAMINATED | EACH | -- | 6 | -- | 6 | 12 |
| 506.4000 | STEEL DIAPHRAGMS B-9-309 | EACH | 20 | -- | -- | -- | 20 |
| 511.1200 | TEMPORARY SHORING B-9-309 | SF | -- | -- | 2,240 | -- | 2,240 |
| 514.0450 | FLOOR DRAINS TYPE WF | EACH | 2 | -- | -- | -- | 2 |
| 514.0460 | FLOOR DRAINS TYPE H | EACH | 1 | -- | -- | -- | 1 |
| 514.2608 | DOWNSPOUT 8-INCH | LF | 81 | -- | 84 | -- | 165 |
| 514.2625 | DOWNSPOUT 6-INCH | LF | 13 | -- | -- | -- | 13 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | -- | 150 | -- | 150 | 300 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | -- | -- | 3,420 | -- | 3,420 |
| 550.1120 | PILING STEEL HP 12-INCH X 53 LB | LF | -- | 1,300 | -- | 1,235 | 2,535 |
| 604.0400 | SLOPE PAVING CONCRETE | SY | -- | 45 | -- | 45 | 90 |
| 614.0150 | ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD | EACH | 6 | -- | -- | -- | 6 |
| SPV.0090.01 | FENCE CHAIN LINK POLYMER-COATED 5-FT B-9-309 | LF | 233 | 19 | -- | 27 | 279 |
| ☆ SPV.0090.02 | REMOVE EXISTING TIMBER PILING | LF | -- | -- | 640 | 560 | 1,200 |
| SPV.0090.03 | ABUTMENT ANCHORAGE | LF | -- | 60 | -- | 60 | 120 |
| | | | | | | | |
| | NON-BID ITEMS | | | | | | |
| | FILLER | SIZE | --- | --- | --- | --- | ½", ¾" |
| | NAME PLATE | EACH | --- | --- | --- | --- | 1 |
| | NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER | SIZE | --- | --- | --- | --- | ½", ¾" |
| | | | | | | | |

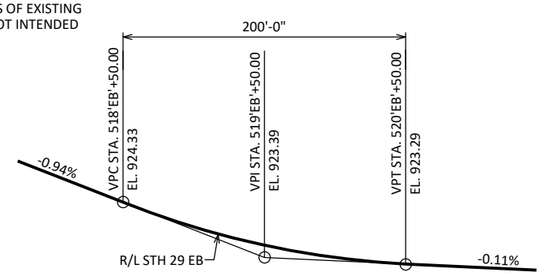
☆ ONLY REMOVE FRONT (BATTERED) ROW OF EAST ABUTMENT PILES AND SELECT FOOTING PILES OF EXISTING MIDDLE PIER, SEE PIER FOOTING SHEET FOR DETAILS. "REMOVE EXISTING TIMBER PILING" IS NOT INTENDED FOR USE AT THE WEST ABUTMENT.




◥ VERTICAL CLEARANCES ARE BASED ON SURVEYED CROSS SECTIONS BENEATH EXTERIOR GIRDER LINES. AS-BUILT PROFILES MAY NOT BE REPRESENTATIVE OF ACTUAL ELEVATIONS USED IN DESIGN.

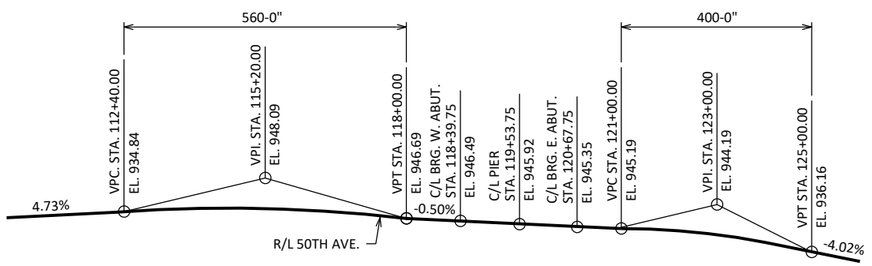
## PROFILE GRADE LINE - STH 29 WB

◥ BASED ON 2005 AS-BUILT PLANS




## PROFILE GRADE LINE - STH 29 EB

◥ BASED ON 2005 AS-BUILT PLANS




## PROFILE GRADE LINE - 50TH AVE.

# GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-9-309" SHALL BE THE EXISTING GROUNDLINE.

MSE BACKFILL AT THE ABUTMENTS, MSE REINFORCEMENT STRIPS, AND THE CONNECTION OF THE STRIPS TO THE ABUTMENT ARE INCLUDED IN THE BID ITEM "ABUTMENT ANCHORAGE".

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

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

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

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, AND BACK OF THE MEDIAN PARAPET, INCLUDING PARAPETS ON WING WALLS AND FOOTINGS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS TO THE TOP OF EACH RETAINING WALL SHALL BE COVERED WITH SLOPE PAVING CONCRETE TO THE EXTENT SHOWN ON "WEST ABUTMENT DETAILS" AND "EAST ABUTMENT DETAILS" SHEETS. THE SLOPE OF THE FILL IN FRONT OF THE R-9-17 & R-9-18 RETAINING WALLS SHALL BE COVERED WITH SLOPE PAVING CRUSHED AGGREGATE TO THE EXTENTS SHOWN ON THE R-9-17 AND R-9-18 PLAN SET DETAILS. "SLOPE PAVING CRUSHED AGGREGATE" IS A RETAINING WALL BID ITEM.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ABUTMENTS BELOW EXPANSION DEVICES.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W PRESTRESSED GIRDER DETAILS 2" SHEET, WHICH IS THE MAXIMUM QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DEGISNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DEGISNATION M 213.

BACKFILL PAY LIMITS ARE SHOWN IN DETAIL ON SHEET 3. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

MSE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. BACKFILL PLACED BEYOND MSE BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

THE EXISTING STRUCTURE, B-9-33, TO BE REMOVED, IS A FOUR SPAN STEEL DECK GIRDER BRIDGE, APPROX. 275.4 FEET LONG WITH A 35 FEET OVERALL WIDTH . STRUCTURE HAS THREE PIERS AND TWO ABUTMENTS SUPPORTED ON TIMBER PILING.

COORDINATE CONSTRUCTION OF B-9-309 WITH RETAINING WALLS R-9-17 AND R-9-18, IN ACCORDANCE WITH THE STAGING SPECIFIED IN THE ROADWAY PLANS.

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

EXTENT OF BELOW GRADE SUBSTRUCTURES ARE BASED ON AS-BUILT PLANS. REMOVE EXISTING SUBSTRUCTURES, INCLUDING EXISTING MEDIAN PIER PILE CAPS, AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE B-9-33" BID ITEM. TYPICAL AT ALL EXISTING BRIDGE SUBSTRUCTURES, EXCEPT WHERE "REMOVE EXISTING TIMBER PILING" IS CALLED OUT ON PLANS.

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

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

# DESIGN DATA

STATE PROJECT NUMBER

**1050-01-79**

**LIVE LOAD:**

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.09
OPERATING RATING: RF = 1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

**MATERIAL PROPERTIES:**

CONCRETE MASONRY:
SUPERSTRUCTURE ——— $f'_c$ = 4,000 PSI
ALL OTHER ——— $f'_c$ = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 ——— $f_y$ = 60,000 PSI

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

# FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 95-'0" LONG AT EAST ABUTMENT.
ESTIMATED 100-'0" LONG AT WEST ABUTMENT.

PIER TO BE SUPPORTED ON HP 10 X 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 95-'0" LONG.

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

# TRAFFIC DATA

**FEATURE ON: 50TH AVE**
ADT = 1,700 (2025)
ADT = 2,200 (2045)
R.D.S. = 50 MPH

**FEATURE UNDER: STH 29**
ADT = 17,800 (2025)
ADT = 19,800 (2045)
R.D.S. = 70 MPH

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**DESIGN DATA, NOTES, AND QUANTITIES**

SHEET 2 OF 43
194

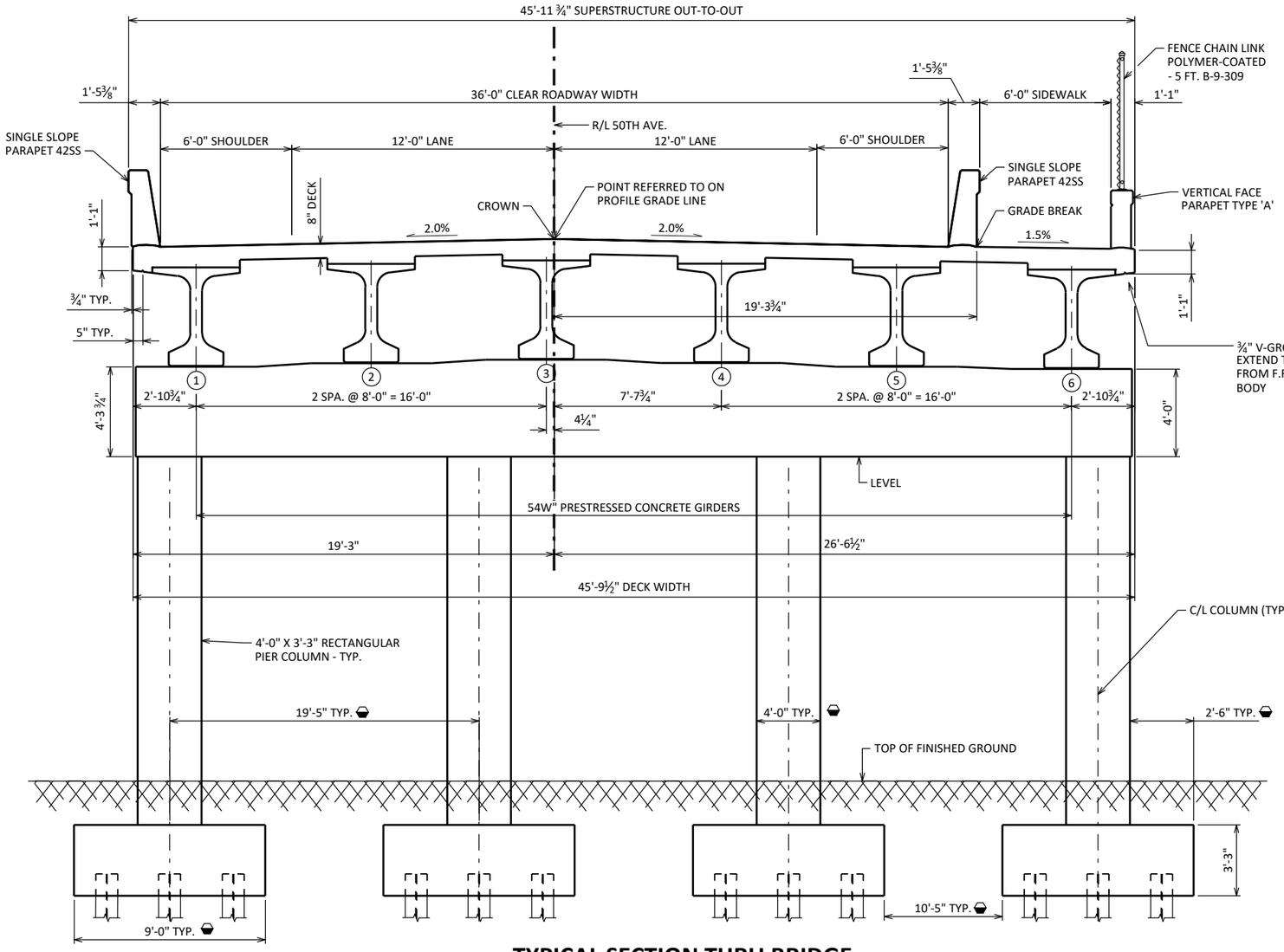
SCALE =

8

8

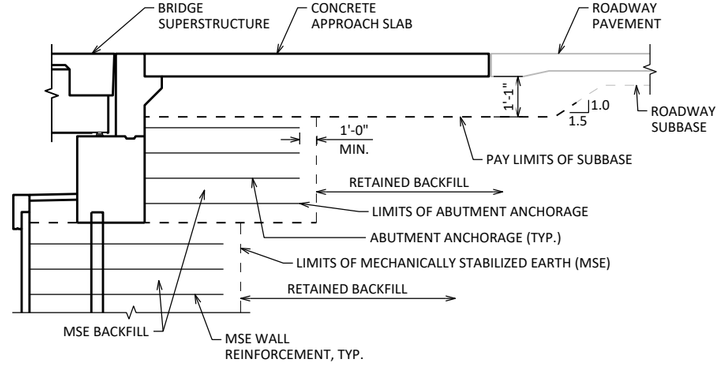
STATE PROJECT NUMBER

**1050-01-79**

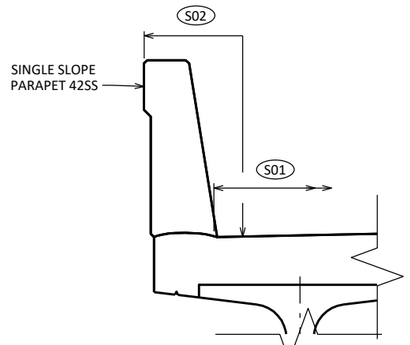



## TYPICAL SECTION THRU BRIDGE

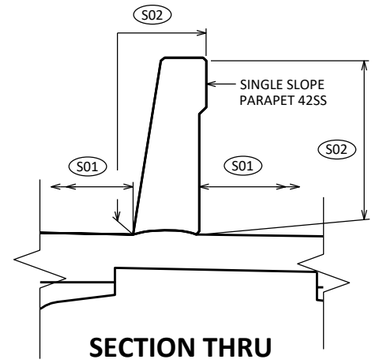
LOOKING EAST AT PIER
DIMENSIONS ARE NORMAL TO R/L 50TH AVE UNLESS NOTED OTHERWISE



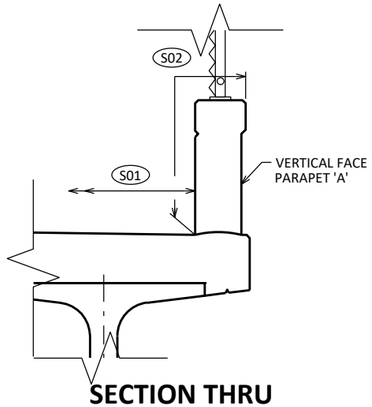

## TYPICAL SECTION THRU ABUTMENT




## SECTION THRU NORTH PARAPET




## SECTION THRU MEDIAN PARAPET



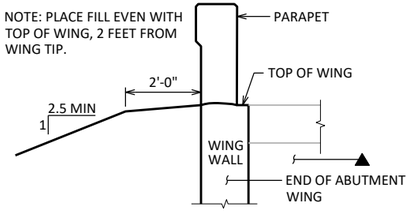

## SECTION THRU SOUTH PARAPET

## LEGEND

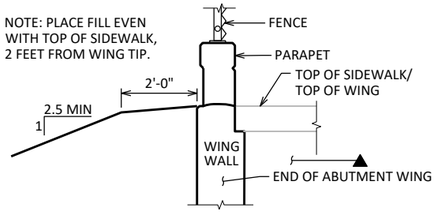
(S01) COAT WITH "PROTECTIVE SURFACE TREATMENT " AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP SURFACE OF THE DECK.

(S02) COAT WITH "PIGMENTED SURFACE SEALER " AS PER THE STANDARD SPECIFICATIONS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE AND TOP FACES OF ALL PARAPETS. ALSO TO BE APPLIED TO THE BACK FACE OF THE 42SS MEDIAN PARAPET. THIS INCLUDES PARAPETS ON WINGS AND FOOTINGS.

DIMENSION MEASURED ALONG C/L OF PIER




## TYPICAL FILL SECTION AT NORTH WING TIPS




## TYPICAL FILL SECTION AT SOUTH WING TIPS

▲ BACKFILL STRUCTURE TYPE A IS PRESENT BEHIND WINGWALLS IN VOLUME NOT OCCUPIED BY MSE BACKFILL, ROADWAY PAVEMENT, AND ROADWAY SUBBASE, FOR A SECTION 3-FT BEHIND WINGWALL, THAN CONTINUING AT A 1:1 SLOPE UP TO THE INTERFACE WITH ROADWAY SUBBASE. ASSUMED FOR HALF OF EACH WINGWALL LENGTH.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**CROSS SECTION AND DETAILS**

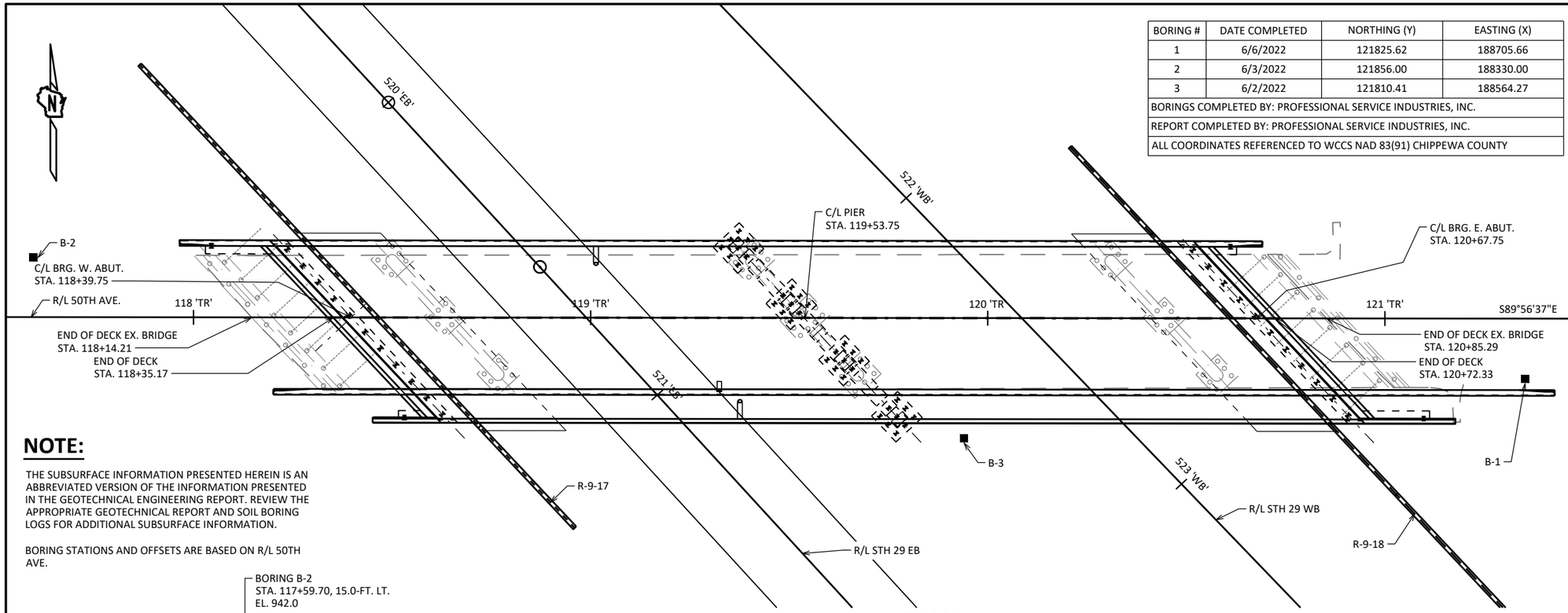
SHEET 3 OF 43
195

SCALE = 6

8

8

| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| 1 | 6/6/2022 | 121825.62 | 188705.66 |
| 2 | 6/3/2022 | 121856.00 | 188330.00 |
| 3 | 6/2/2022 | 121810.41 | 188564.27 |
| BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| REPORT COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC. | | | |
| ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY | | | |

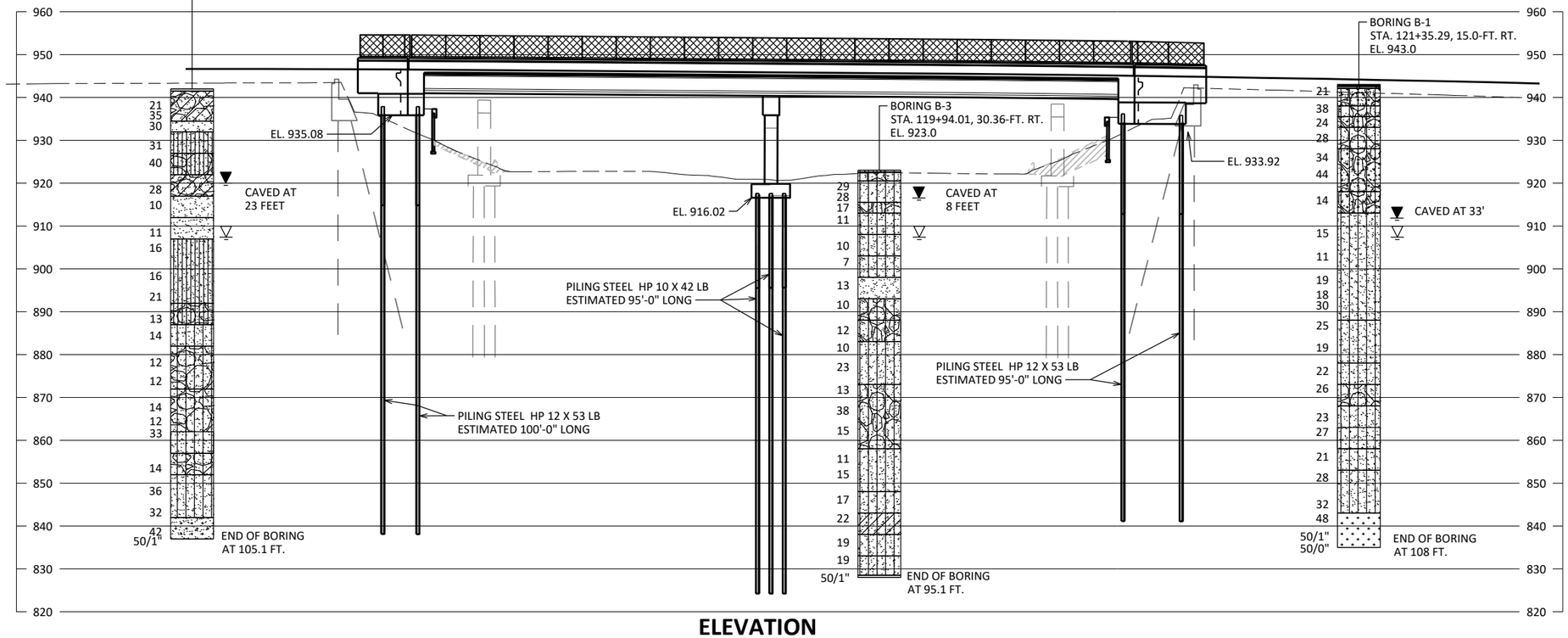



## PLAN

## NOTE:

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

BORING STATIONS AND OFFSETS ARE BASED ON R/L 50TH AVE.




## ELEVATION

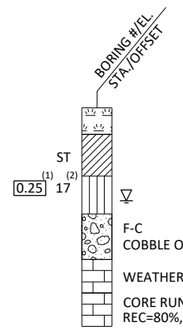
STATE PROJECT NUMBER

**1050-01-79**

**MATERIAL SYMBOLS**

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

**LEGEND OF BORING**




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

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

**GROUND WATER ELEVATION**

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

**ABBREVIATIONS**

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

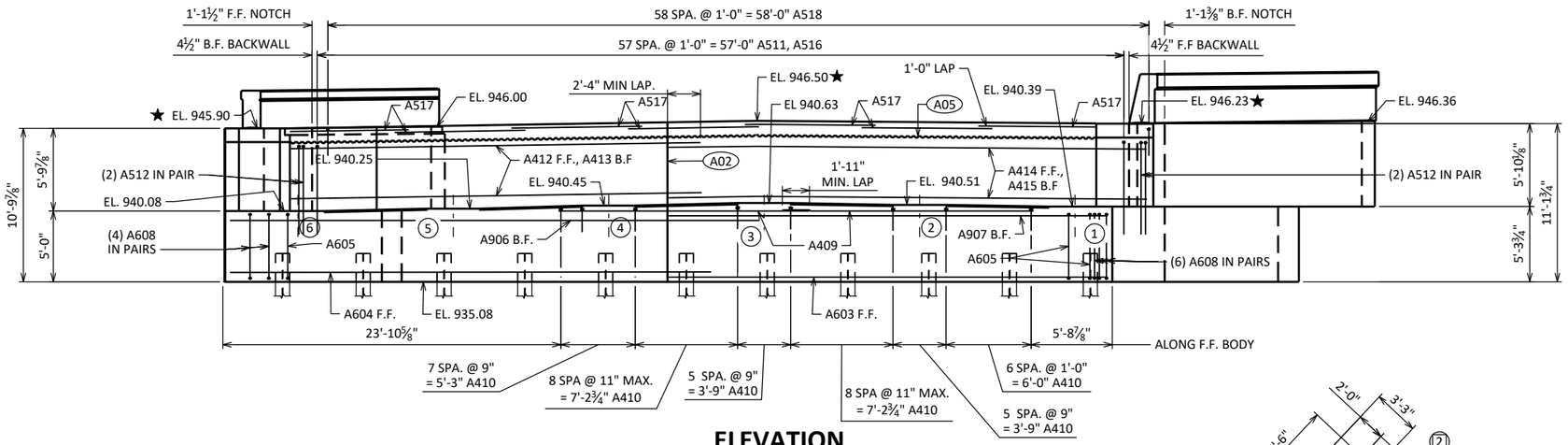
**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SUBSURFACE EXPLORATION**

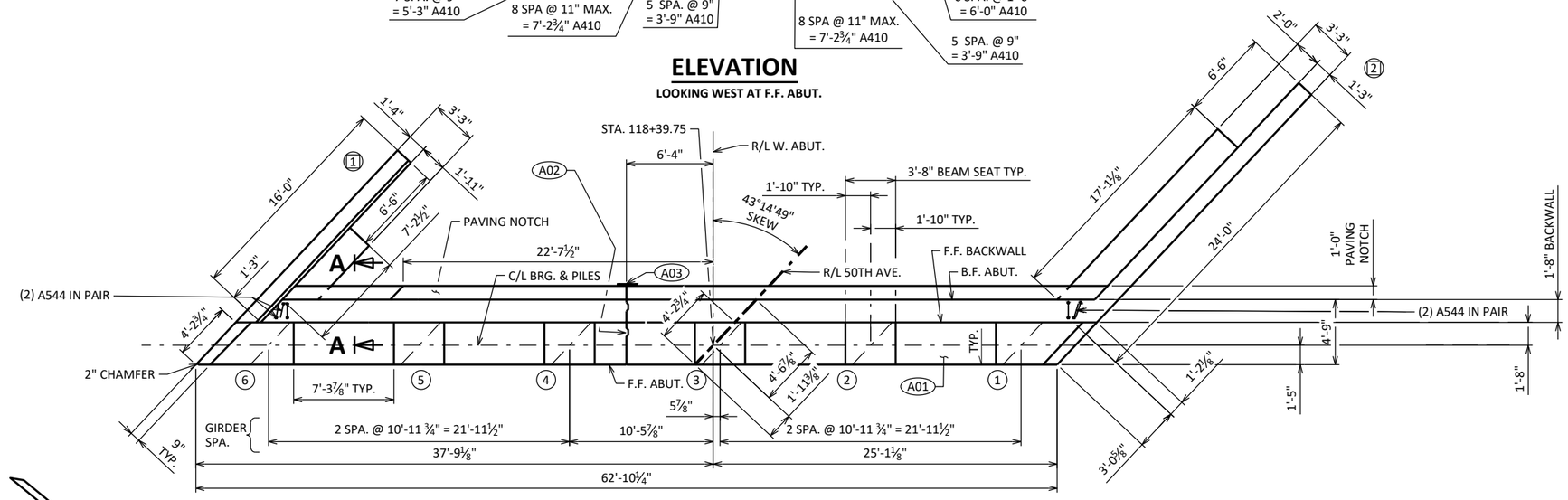
SHEET 4 OF 43
196

SCALE = 30

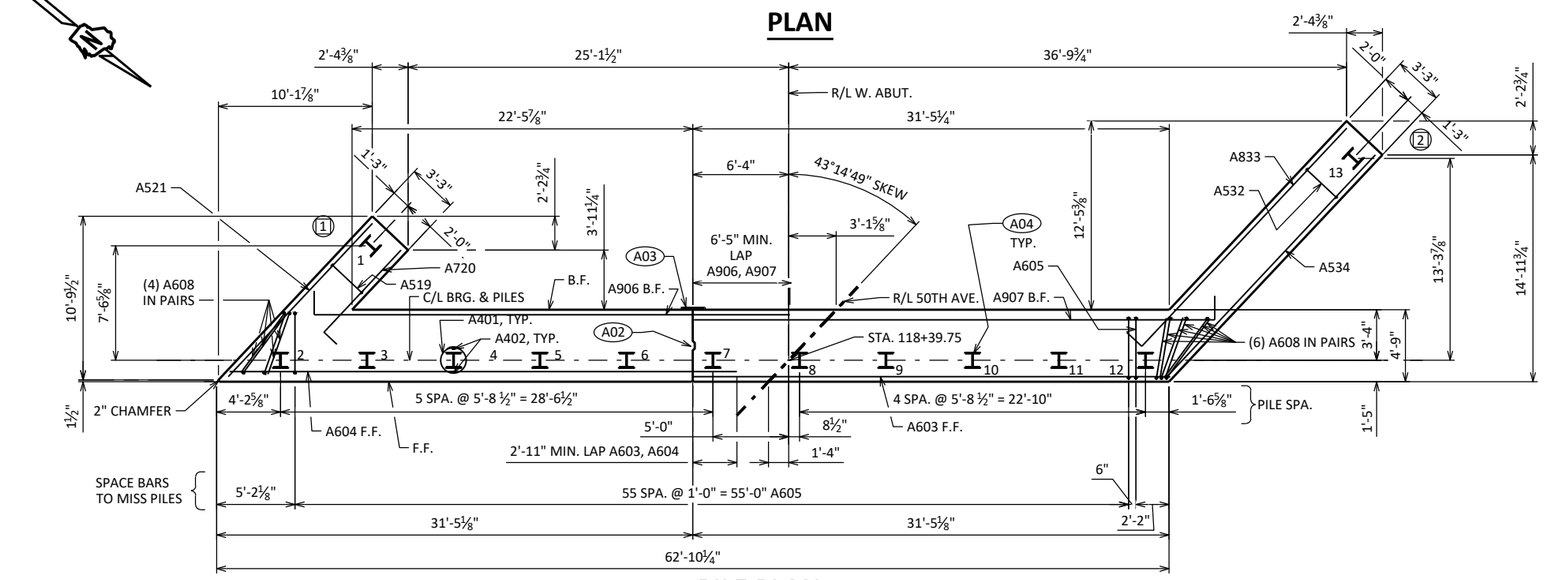



## ELEVATION

**LOOKING WEST AT F.F. ABUT.**




## PLAN



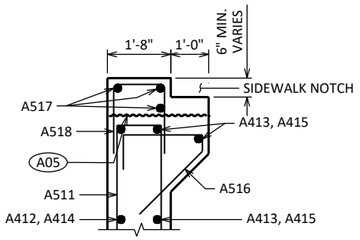

## PILE PLAN

**ABUTMENT BACKWALL, SIDEWALLS, AND WING STEMS NOT SHOWN FOR CLARITY**

## LEGEND

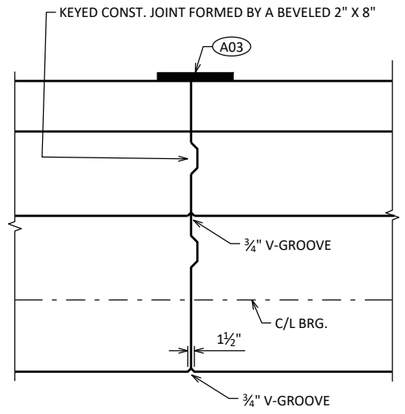
| | |
|---|---|
| (A01) | SLOPE 1" BETWEEN BEAM SEATS, TYP. |
| (A02) | VERT. CONST. JOINT - KEYWAY FORMED BY BEVELED 2" X 8". ¾" V-GROOVE REQUIRED AT FRONT FACE OF BODY AND BACKWALL, AND 18" RUBBERIZED MEMBRANE WATERPROOFING REQUIRED AT BACK FACE. |
| (A03) | 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE. |
| (A04) | ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 STEEL PILING, ESTIMATED 100'-0" LONG, WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE. |
| (A05) | POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH. |
| (X) | WING NUMBER |
| (X) | GIRDER NUMBER |
| ★ | TOP OF PAVING BLOCK ELEVATIONS ARE GIVEN AT F.F. BACKWALL. |

FOR PILE SPLICE DETAIL, SEE 'WING 1 DETAILS' SHEET.




## SECTION A-A

**THE BOTTOM OF SIDEWALK PAVING NOTCH IS THE TOP OF PAVING NOTCH EXTENDED**




## VERT. CONST. JOINT

| STATE PROJECT NUMBER |
|---|
| 1050-01-79 |

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**WEST ABUTMENT**

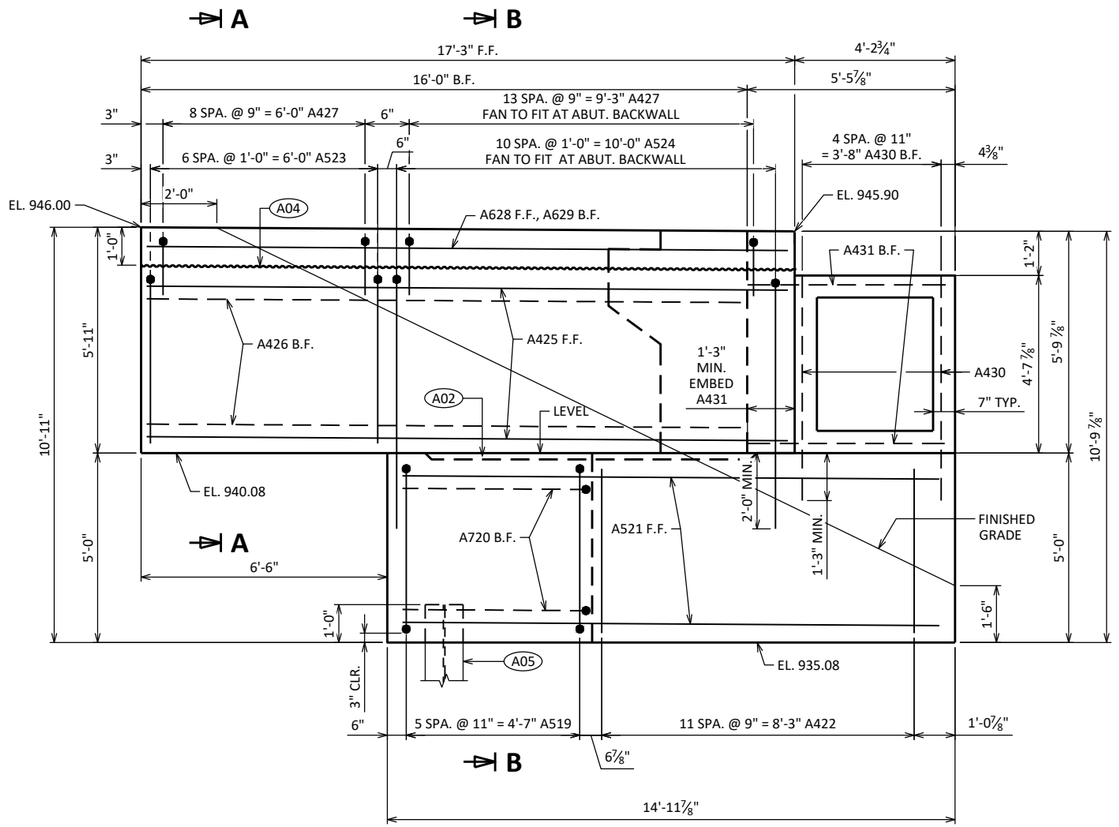
SHEET 5 OF 43
197

8

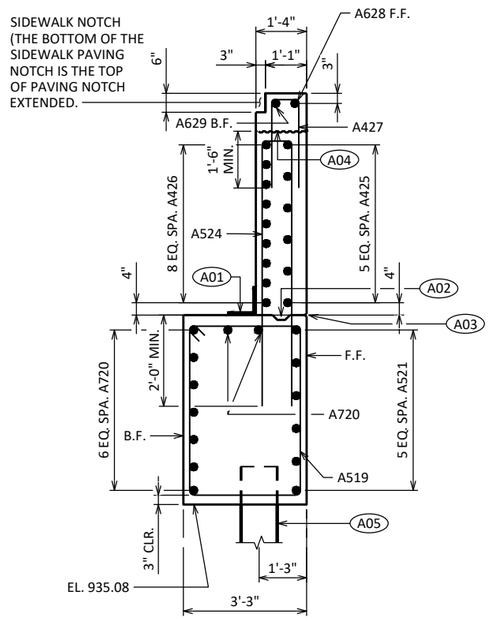
8

STATE PROJECT NUMBER

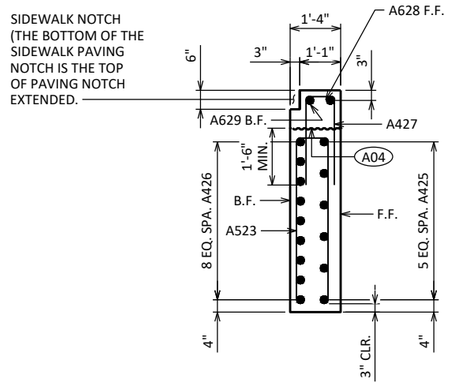
**1050-01-79**




## WING 1 ELEVATION




## SECTION B-B

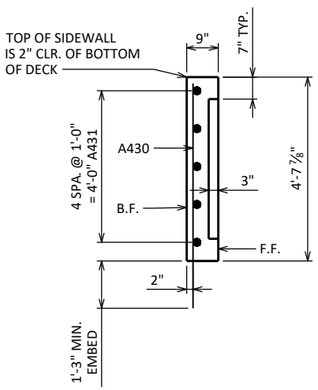



## SECTION A-A

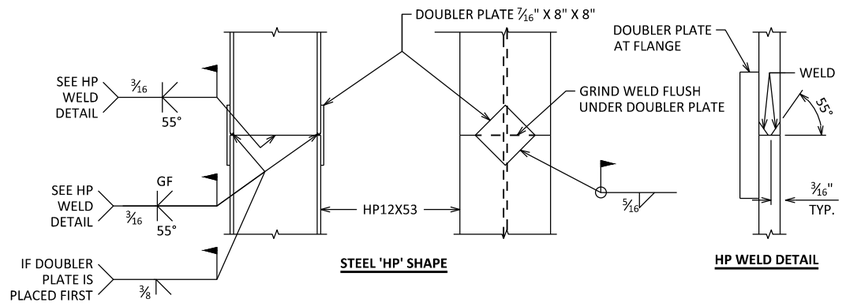
## LEGEND

- (A01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- (A02) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- (A03) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- (A04) REQUIRED CONSTRUCTION JOINT, LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE. UTILIZE RUBBERIZED MEMBRANE WATERPROOFING (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").
- (A05) SUPPORT WING ON HP 12 X 53 STEEL PILING, ESTIMATED 100'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

NOTE: PARAPET DETAILS OMITTED FOR CLARITY.




## SECTION THRU SIDEWALL AT WING 1




## 'HP' PILE DETAILS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**WING 1 DETAILS**

SHEET 6 OF 43

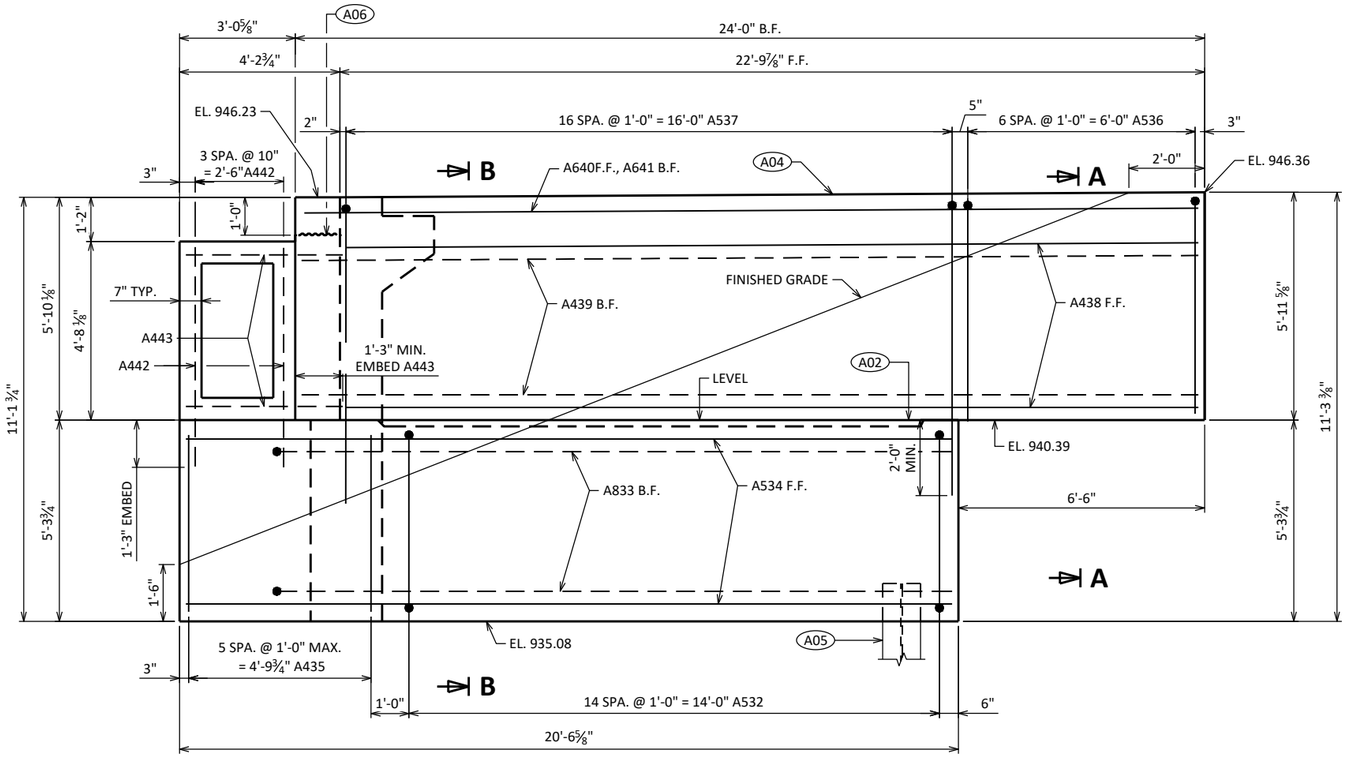
198

8

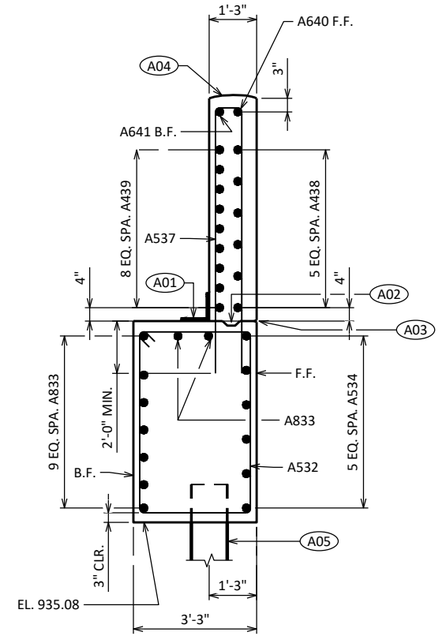
8

STATE PROJECT NUMBER

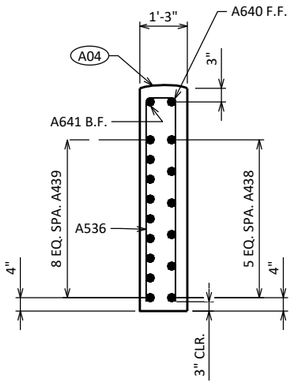
**1050-01-79**



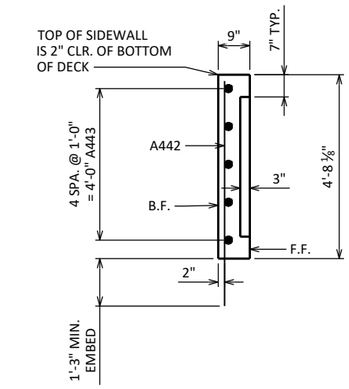

## WING 2 ELEVATION




## SECTION B-B




## SECTION A-A




## SECTION THRU SIDEWALL AT WING 2

## LEGEND

- A01 — 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- A02 — OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- A03 — ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- A04 — STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- A05 — SUPPORT WING ON HP 12 X 53 STEEL PILING, ESTIMATED 100'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.
- A06 — POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

NOTE: PARAPET DETAILS OMITTED FOR CLARITY.

FOR PILE SPLICE DETAIL, SEE 'WING 1 DETAILS' SHEET.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**WING 2 DETAILS**

SHEET 7 OF 43



8

8

STATE PROJECT NUMBER

**1050-01-79**

## BILL OF BARS

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

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION 4,970# COATED 5,680# UNCOATED |
|---|---|---|---|---|---|---|
| A401 | | 11 | 28'-10" | X | | ABUT. PILES |
| A402 | | 22 | 2'-3" | | | ABUT. PILES VERT. |
| A603 | | 12 | 31'-6" | | | ABUT. BODY HORIZ. |
| A604 | | 12 | 33'-6" | | | ABUT. BODY HORIZ. |
| A605 | | 57 | 18'-0" | X | | ABUT. BODY VERT. |
| A906 | | 9 | 32'-9" | X | | ABUT. BODY HORIZ. B.F. |
| A907 | | 9 | 35'-8" | X | | ABUT. BODY HORIZ. B.F. |
| A608 | | 20 | 12'-9" | X | | ABUT. BODY VERT. ENDS |
| A409 | | 3 | 33'-3" | | | BEAM SEAT HORIZ. |
| A410 | | 40 | 6'-3" | X | | BEAM SEAT VERT. |
| A511 | X | 58 | 13'-5" | X | | BACKWALL VERT. |
| A412 | X | 6 | 28'-9" | | | BACKWALL HORIZ. F.F. |
| A413 | X | 8 | 27'-4" | | | BACKWALL HORIZ. B.F. |
| A414 | X | 6 | 33'-4" | | | BACKWALL HORIZ. F.F. |
| A415 | X | 8 | 34'-2" | | | BACKWALL HORIZ. B.F |
| A516 | X | 58 | 6'-4" | X | | CORBEL VERT. |
| A517 | X | 21 | 9'-3" | | | PAVING BLOCK HORIZ. |
| A518 | X | 59 | 5'-1" | | | PAVING BLOCK VERT. |
| A519 | X | 6 | 15'-1" | X | | WING 1 LOWER VERT. |
| A720 | X | 9 | 8'-3" | X | | WING 1 LOWER HORIZ. B.F. |
| A521 | X | 6 | 14'-4" | | | WING 1 LOWER HORIZ. F.F. |
| A422 | X | 12 | 4'-7" | | | WING 1 LOWER VERT. F.F. |
| A523 | X | 7 | 9'-7" | X | | WING 1 UPPER VERT. |
| A524 | X | 11 | 14'-3" | X | | WING 1 UPPER VERT. |
| A425 | X | 6 | 16'-8" | | | WING 1 UPPER HORIZ. F.F. |
| A426 | X | 9 | 15'-7" | | | WING 1 UPPER HORIZ. B.F. |
| A427 | X | 23 | 5'-3" | X | | WING 1 VERT. NOTCH |
| A628 | X | 1 | 16'-8" | | | WING 1 HORIZ. NOTCH F.F. |
| A629 | X | 1 | 15'-7" | | | WING 1 HORIZ. NOTCH B.F. |
| A430 | X | 5 | 5'-9" | | | WING 1 SIDEWALL VERT. |
| A431 | X | 5 | 5'-3" | | | WING 1 SIDEWALL HORIZ. |
| A532 | X | 15 | 15'-4" | X | | WING 2 LOWER VERT. |
| A833 | X | 12 | 19'-6" | X | | WING 2 LOWER HORIZ. B.F. |
| A534 | X | 6 | 20'-1" | | | WING 2 LOWER HORIZ. F.F. |
| A435 | X | 6 | 4'-10" | | | WING 2 LOWER VERT. F.F. |
| A536 | X | 7 | 11'-8" | X | | WING 2 UPPER VERT. |
| A537 | X | 17 | 15'-8" | X | | WING 2 UPPER VERT. |
| A438 | X | 6 | 22'-5" | | | WING 2 UPPER HORIZ. F.F. |
| A439 | X | 9 | 23'-6" | | | WING 2 UPPER HORIZ. B.F. |
| A640 | X | 1 | 22'-5" | | | WING 2 HORIZ. TOP F.F. |
| A641 | X | 1 | 23'-6" | | | WING 2 HORIZ. TOP B.F. |
| A442 | X | 4 | 5'-10" | | | WING 2 SIDEWALL VERT. |
| A443 | X | 5 | 4'-3" | | | WING 2 SIDEWALL HORIZ. |
| A544 | X | 4 | 7'-5" | X | | BACKWALL ENDS VERT. |

## LEGEND

(A01) ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 STEEL PILING, ESTIMATED 100'-0" LONG, WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

(A02) ¾" PREFORMED FILLER. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

(A03) 4" CONCRETE SLOPE PAVING. PAID UNDER BID ITEM SLOPE PAVING CONCRETE.

(A04) 1" EXPANDED POLYSTYRENE. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

(A05) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE.

(A06) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".

(A07) SLOPE 1" DOWN BETWEEN BEAM SEATS.

(A08) TOP OF PAVING BLOCK ELEVATIONS ARE GIVEN AT F.F. OF BACKWALL.

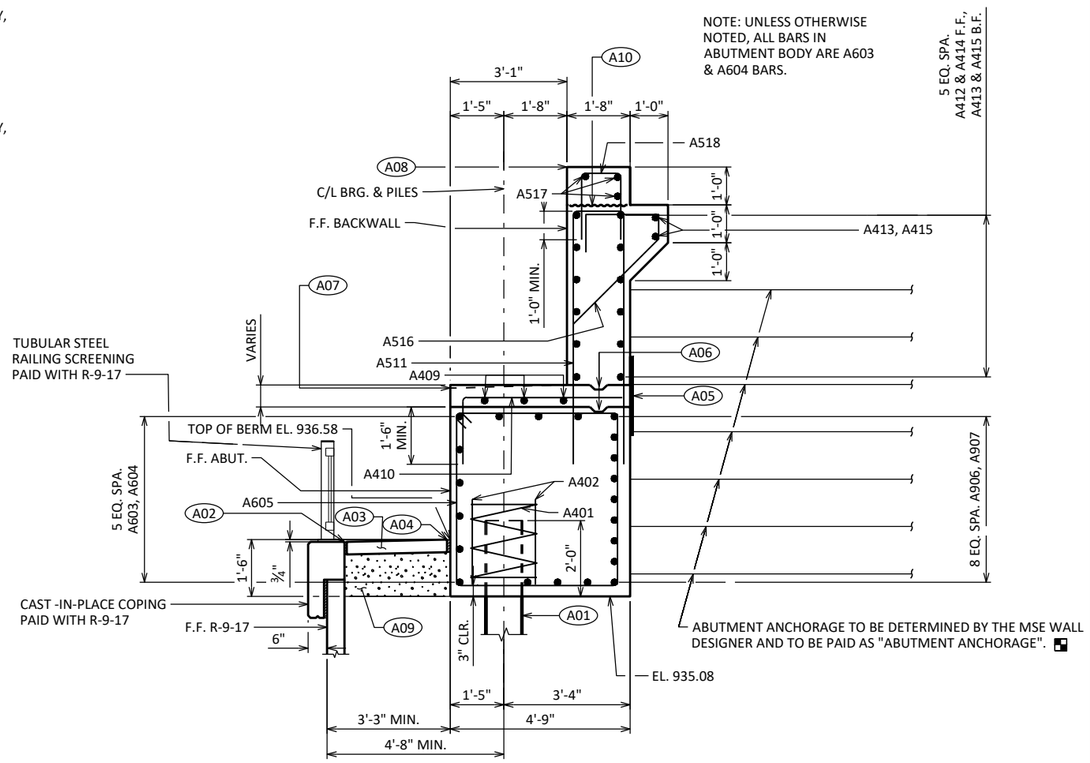
(A09) SIZE 2 COARSE AGGREGATE. COST INCIDENTAL TO "SLOPE PAVING CONCRETE" ON R-9-17 MSE WALL PLANS.

(A10) POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

## ABUTMENT ANCHORAGE

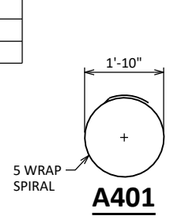
UNFACTORED SUPERSTRUCTURE LATERAL LOADS TRANSFERRED TO THE ABUTMENTARE TAKEN TO BE KIPS PER FOOT OF ABUTMENT LENGTH. THE VALUES ARE TO BE USED FOR THE LRFD DESIGN OF THE ABUTMENT ANCHORAGE BY THE MSE MANUFACTURER (MSE SYSTEM, DEAD MAN ANCHOR, OTHER). THE FOLLOWING AASHTO LINE LOADS SHALL BE NOTED ON THE PLAN:

BR = 0.730 KLF (INCLUDES MPF FOR 3 DESIGN LANES)
TU = 1.877 KLF
WS = 0.089 KLF
WL = 0.062 KLF

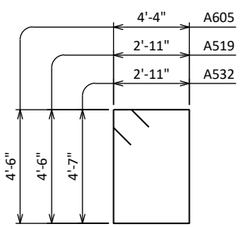


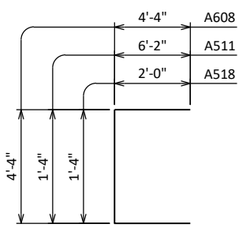

## SECTION THRU BODY

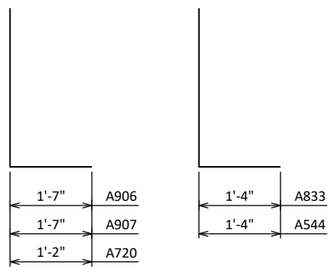
DIMENSIONS ARE NORMAL TO C/L OF BRG.

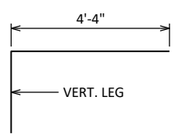



**A401**

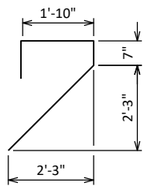


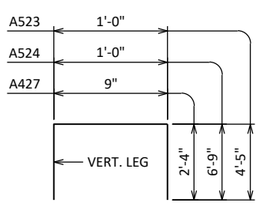



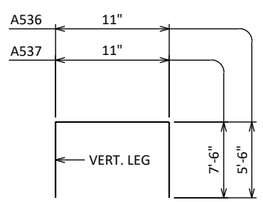




**A410**




**A516**

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**WEST ABUTMENT DETAILS**

SHEET 8 OF 43

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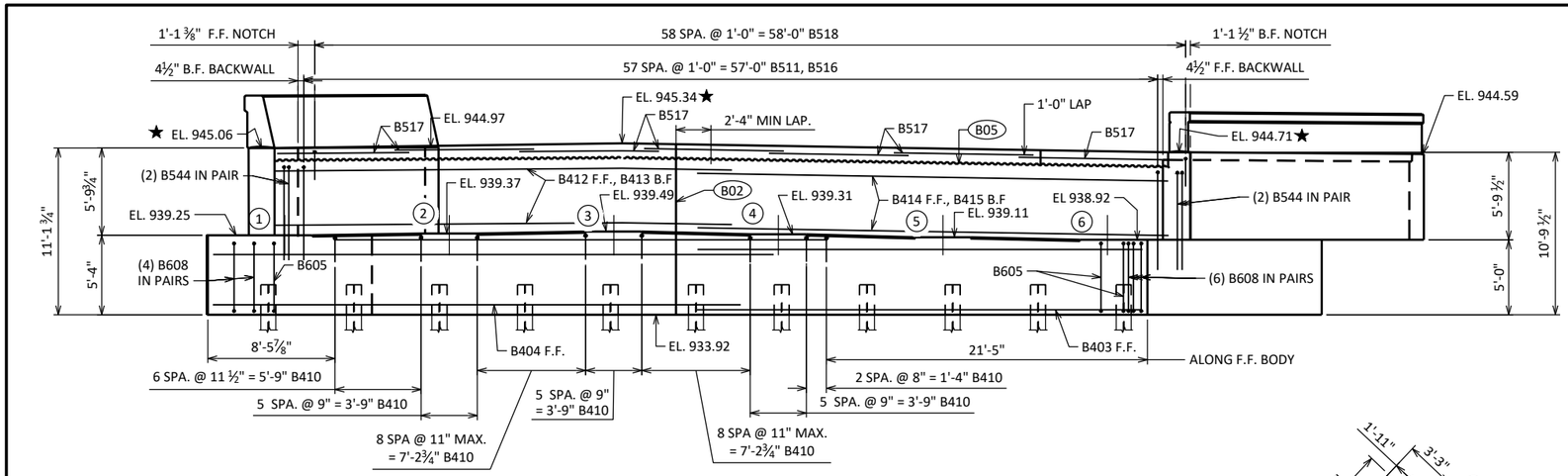
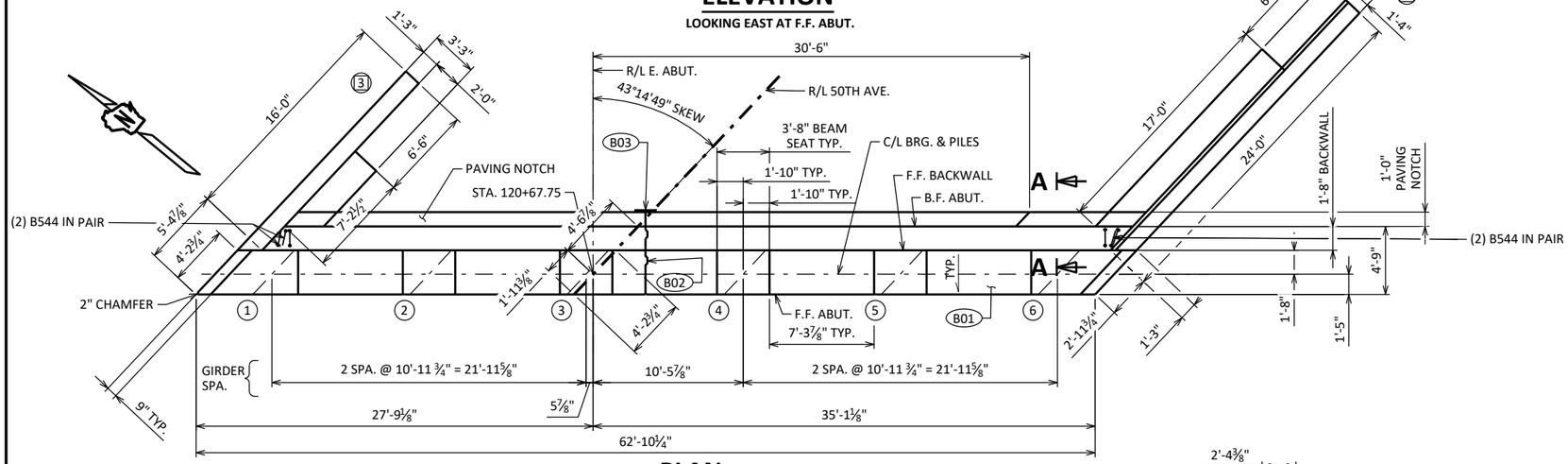
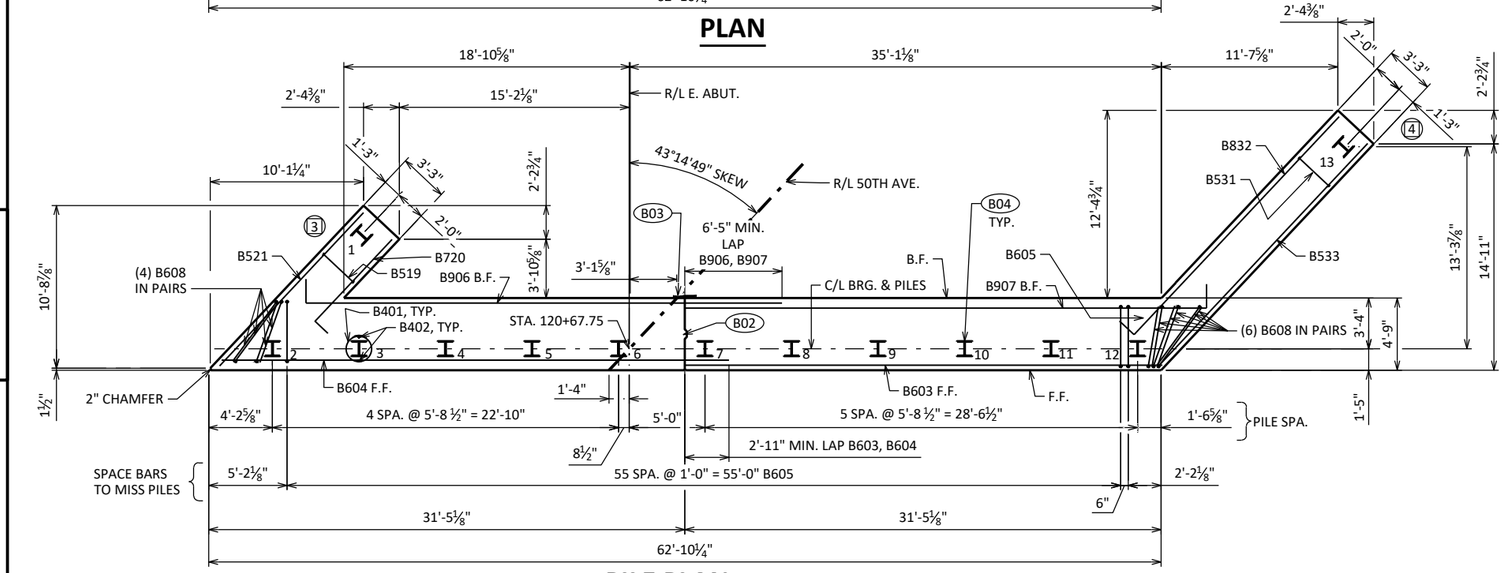



## ELEVATION

**LOOKING EAST AT F.F. ABUT.**




## PLAN



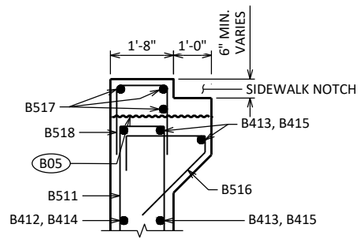

## PILE PLAN

**ABUTMENT BACKWALL, SIDEWALLS, AND WING STEMS NOT SHOWN FOR CLARITY**

## LEGEND

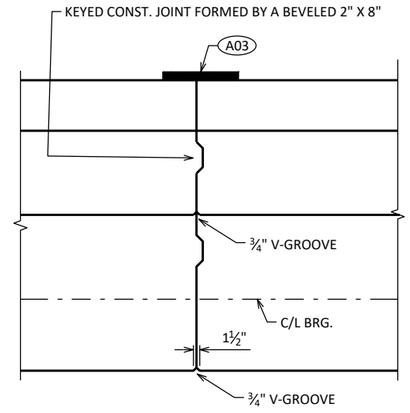
- (B01) SLOPE 1" BETWEEN BEAM SEATS, TYP.
- (B02) VERT. CONST. JOINT - KEYWAY FORMED BY BEVELED 2" X 8". ¾" V-GROOVE REQUIRED AT FRONT FACE OF BODY AND BACKWALL, AND 18" RUBBERIZED MEMBRANE WATERPROOFING REQUIRED AT BACK FACE.
- (B03) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.
- (B04) ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 STEEL PILING, ESTIMATED 95'-0" LONG, WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.
- (B05) POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.
- (X) WING NUMBER
- (X) GIRDER NUMBER
- ★ TOP OF PAVING BLOCK ELEVATIONS ARE GIVEN AT F.F. BACKWALL.

FOR PILE SPLICE DETAIL, SEE 'WING 1 DETAILS' SHEET.




## SECTION A-A

**THE BOTTOM OF SIDEWALK PAVING NOTCH IS THE TOP OF PAVING NOTCH EXTENDED**




## VERT. CONST. JOINT

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**EAST ABUTMENT**

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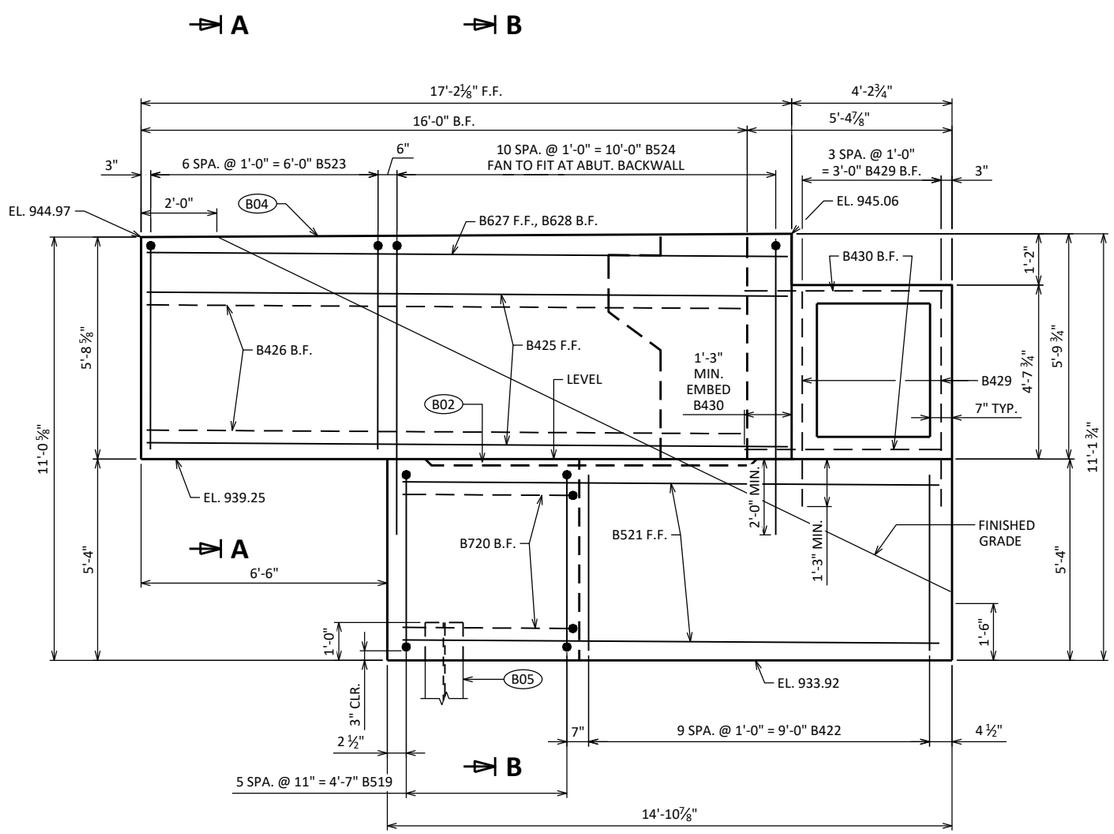
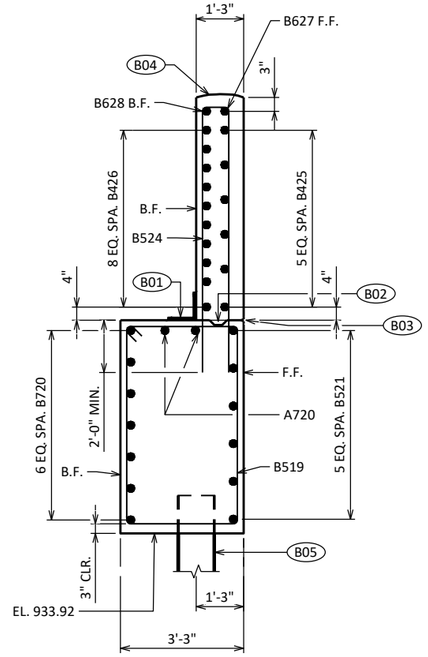
STATE PROJECT NUMBER

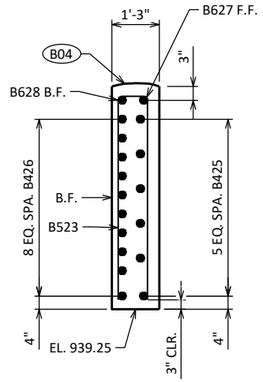
**1050-01-79**



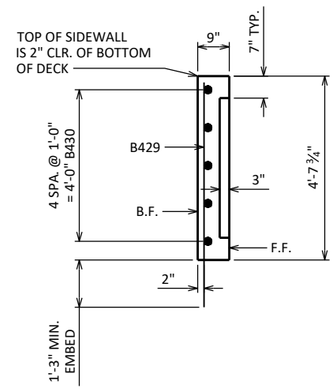

## WING 3 ELEVATION




## SECTION B-B




## SECTION A-A




## SECTION THRU SIDEWALL AT WING 3

## LEGEND

- (B01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- (B02) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- (B03) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- (B04) STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- (B05) SUPPORT WING ON HP 12 X 53 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

NOTE: PARAPET DETAILS OMITTED FOR CLARITY.

FOR PILE SPLICE DETAIL, SEE 'WING 1 DETAILS' SHEET.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**WING 3 DETAILS**

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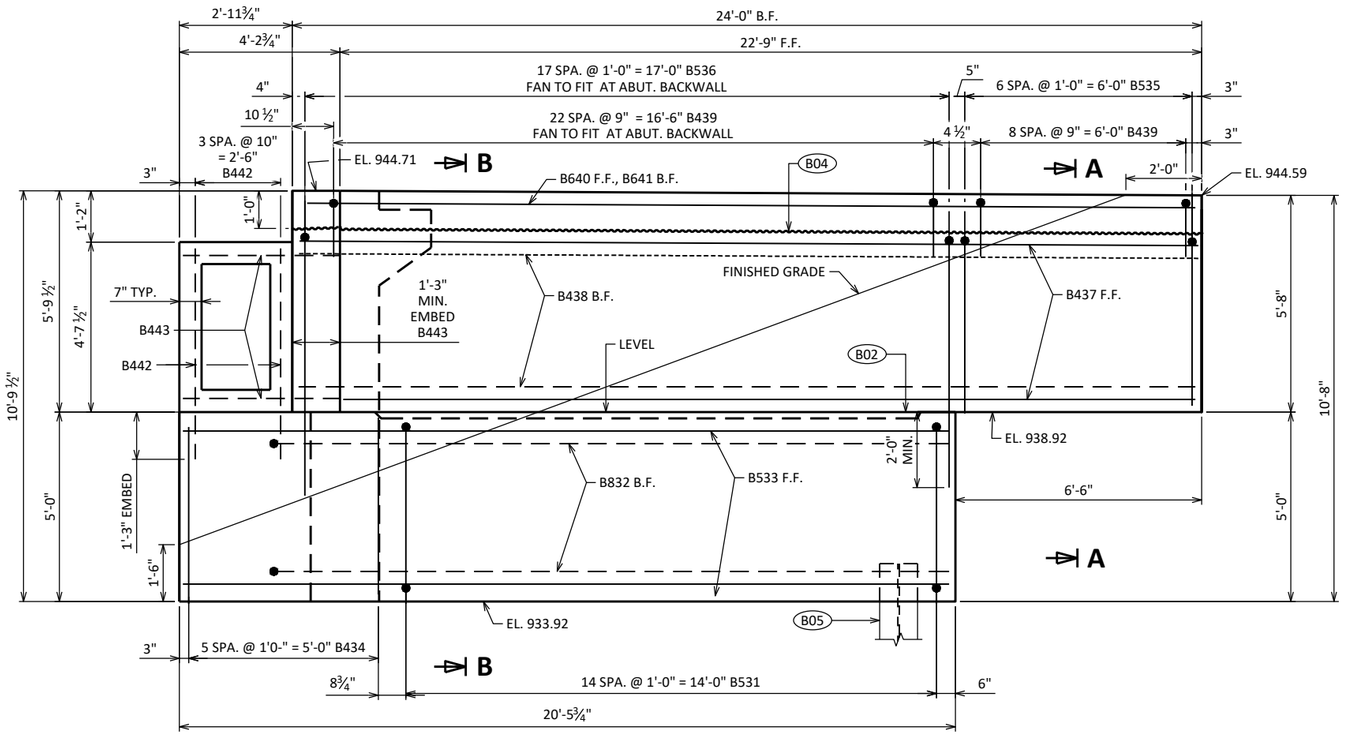
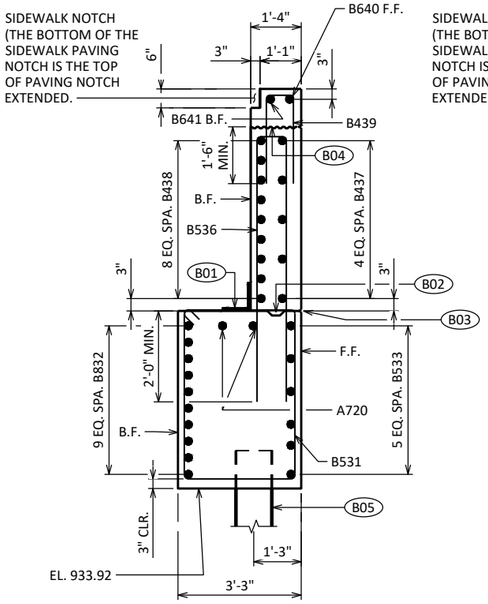
STATE PROJECT NUMBER

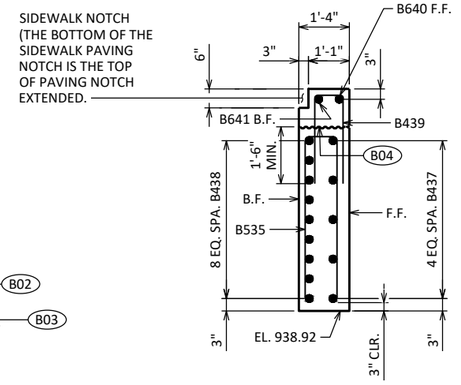
**1050-01-79**



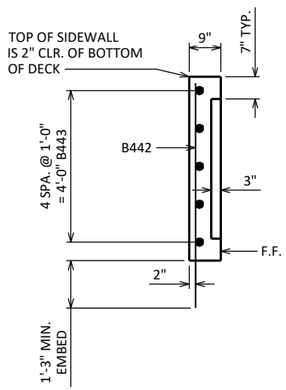

## WING 4 ELEVATION




## SECTION B-B




## SECTION A-A




## SECTION THRU SIDEWALL AT WING 4

## LEGEND

- (B01) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- (B02) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- (B03) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- (B04) REQUIRED CONSTRUCTION JOINT, LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE. UTILIZE RUBBERIZED MEMBRANE WATERPROOFING (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").
- (B05) SUPPORT WING ON HP 12 X 53 STEEL PILING, ESTIMATED 95'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

NOTE: PARAPET DETAILS OMITTED FOR CLARITY.

FOR PILE SPLICE DETAIL, SEE 'WING 1 DETAILS' SHEET.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**WING 4 DETAILS**

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## BILL OF BARS

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

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION 5,060# COATED 5,640# UNCOATED |
|---|---|---|---|---|---|---|
| B401 | | 12 | 28'-10" | X | | ABUT. PILES |
| B402 | | 24 | 2'-3" | | | ABUT. PILES VERT. |
| B603 | | 12 | 31'-6" | | | ABUT. BODY HORIZ. |
| B604 | | 12 | 33'-6" | | | ABUT. BODY HORIZ. |
| B605 | | 57 | 17'-6" | X | | ABUT. BODY VERT. |
| B906 | | 9 | 32'-9" | X | | ABUT. BODY HORIZ. B.F. WING 1 |
| B907 | | 9 | 35'-8" | X | | ABUT. BODY HORIZ. B.F. WING 2 |
| B608 | | 20 | 12'-8" | X | | ABUT. BODY VERT. ENDS |
| B409 | | 3 | 27'-9" | | | BEAM SEAT HORIZ. |
| B410 | | 40 | 6'-2" | X | | BEAM SEAT VERT. |
| B511 | X | 58 | 14'-9" | | | BACKWALL VERT. |
| B412 | X | 6 | 28'-9" | | | BACKWALL HORIZ. F.F. |
| B413 | X | 8 | 27'-4" | | | BACKWALL HORIZ. B.F. |
| B414 | X | 6 | 33'-4" | | | BACKWALL HORIZ. F.F. |
| B415 | X | 8 | 34'-2" | | | BACKWALL HORIZ. B.F |
| B516 | X | 58 | 6'-4" | X | | CORBEL VERT. |
| B517 | X | 21 | 8'-3" | | | PAVING BLOCK HORIZ. |
| B518 | X | 59 | 5'-2" | | | PAVING BLOCK VERT. |
| B519 | X | 6 | 15'-4" | X | | WING 3 LOWER VERT. |
| B720 | X | 9 | 8'-3" | X | | WING 3 LOWER HORIZ. B.F. |
| B521 | X | 6 | 14'-4" | | | WING 3 LOWER HORIZ. F.F. |
| B422 | X | 10 | 4'-10" | | | WING 3 LOWER VERT. F.F. |
| B523 | X | 7 | 11'-1" | X | | WING 3 UPPER VERT. |
| B524 | X | 11 | 16'-1" | X | | WING 3 UPPER VERT. |
| B425 | X | 6 | 16'-9" | | | WING 3 UPPER HORIZ. F.F. |
| B426 | X | 9 | 15'-8" | | | WING 3 UPPER HORIZ. B.F. |
| B627 | X | 1 | 16'-9" | | | WING 3 HORIZ. TOP F.F. |
| B628 | X | 1 | 15'-8" | | | WING 3 HORIZ. TOP B.F. |
| B429 | X | 4 | 5'-8" | | | WING 3 SIDEWALL VERT. |
| B430 | X | 5 | 5'-3" | | | WING 3 SIDEWALL HORIZ. |
| B531 | X | 15 | 15'-1" | X | | WING 4 LOWER VERT. |
| B832 | X | 12 | 19'-6" | X | | WING 4 LOWER HORIZ. B.F. |
| B533 | X | 6 | 22'-5" | | | WING 4 LOWER HORIZ. F.F. |
| B434 | X | 6 | 4'-7" | | | WING 4 LOWER VERT. F.F. |
| B535 | X | 7 | 9'-3" | X | | WING 4 UPPER VERT. |
| B536 | X | 18 | 13'-5" | X | | WING 4 UPPER VERT. |
| B437 | X | 6 | 22'-5" | | | WING 4 UPPER HORIZ. F.F. |
| B438 | X | 9 | 23'-6" | | | WING 4 UPPER HORIZ. B.F. |
| B439 | X | 32 | 5'-3" | X | | WING 4 VERT. NOTCH |
| B640 | X | 1 | 22'-5" | | | WING 4 HORIZ. NOTCH F.F. |
| B641 | X | 1 | 23'-3" | | | WING 4 HORIZ. NOTCH B.F. |
| B442 | X | 4 | 5'-7" | | | WING 4 SIDEWALL VERT. |
| B443 | X | 5 | 5'-4" | | | WING 4 SIDEWALL HORIZ. |
| B544 | X | 4 | 7'-6" | X | | BACKWALL ENDS VERT. |

## LEGEND

(B01) ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 STEEL PILING, ESTIMATED 95'-0" LONG, WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.

(B02) ¾" PREFORMED FILLER. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

(B03) 4" CONCRETE SLOPE PAVING.

(B04) 1" EXPANDED POLYSTYRENE. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

(B05) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE.

(B06) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".

(B07) SLOPE 1" DOWN BETWEEN BEAM SEATS.

(B08) TOP OF PAVING BLOCK ELEVATIONS ARE GIVEN AT F.F. OF BACKWALL.

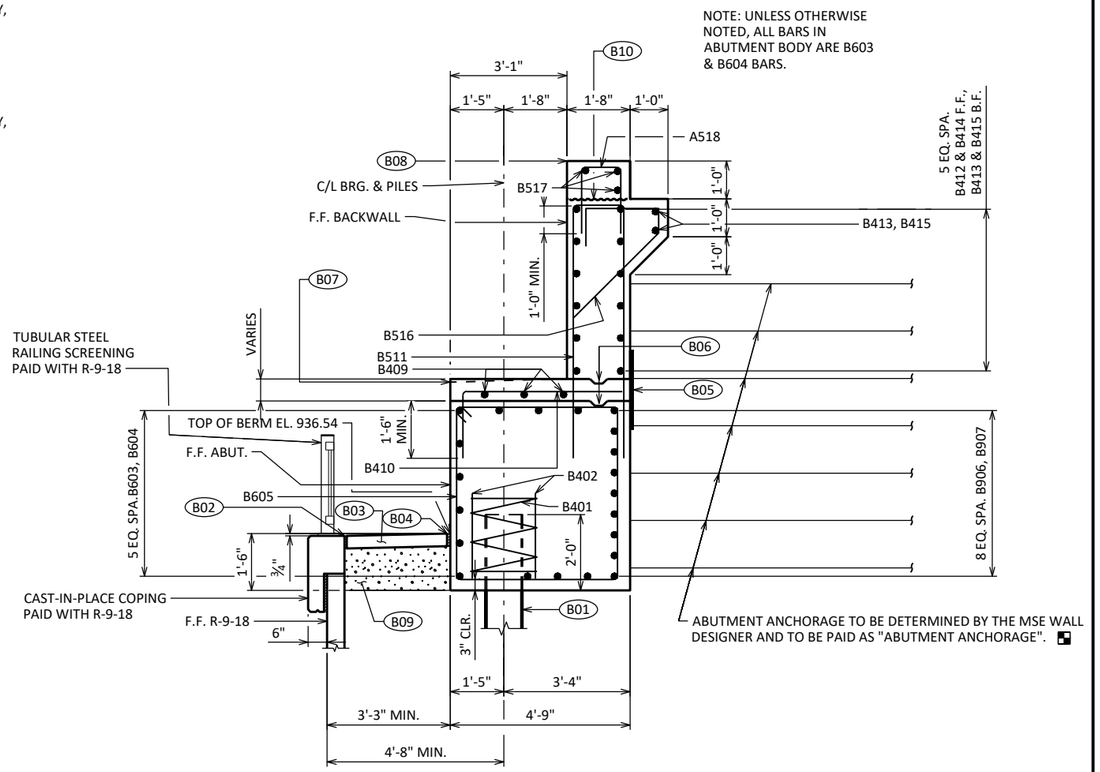
(B09) SIZE 2 COARSE AGGREGATE. COST INCEDENTAL TO "SLOPE PAVING CONCRETE" ON R-9-17 MSE WALL PLANS.

(B10) POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

## ABUTMENT ANCHORAGE

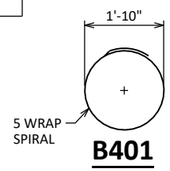
UNFACTORED SUPERSTRUCTURE LATERAL LOADS TRANSFERRED TO THE ABUTMENTARE TAKEN TO BE KIPS PER FOOT OF ABUTMENT LENGTH. THE VALUES ARE TO BE USED FOR THE LRFD DESIGN OF THE ABUTMENT ANCHORAGE BY THE MSE MANUFACTURER (MSE SYSTEM, DEAD MAN ANCHOR, OTHER). THE FOLLOWING AASHTO LINE LOADS SHALL BE NOTED ON THE PLAN:

BR = 0.859 KLF (INCLUDES MPF FOR 3 DESIGN LANES)
TU = 1.877 KLF
WS = 0.089 KLF
WL = 0.062 KLF




## SECTION THRU BODY

DIMENSIONS ARE NORMAL TO C/L OF BRG.

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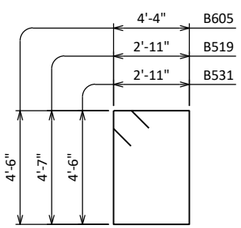


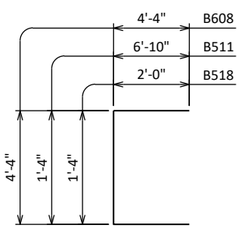


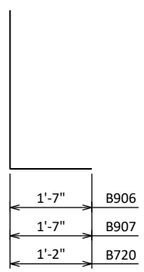


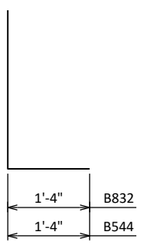


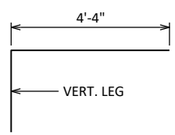


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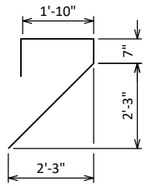


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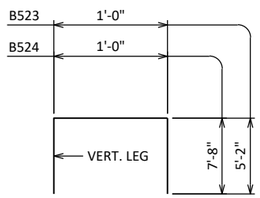


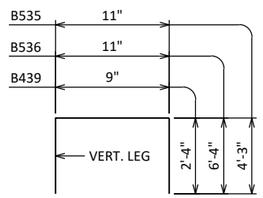


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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**EAST ABUTMENT DETAILS**

SHEET 12 OF 43

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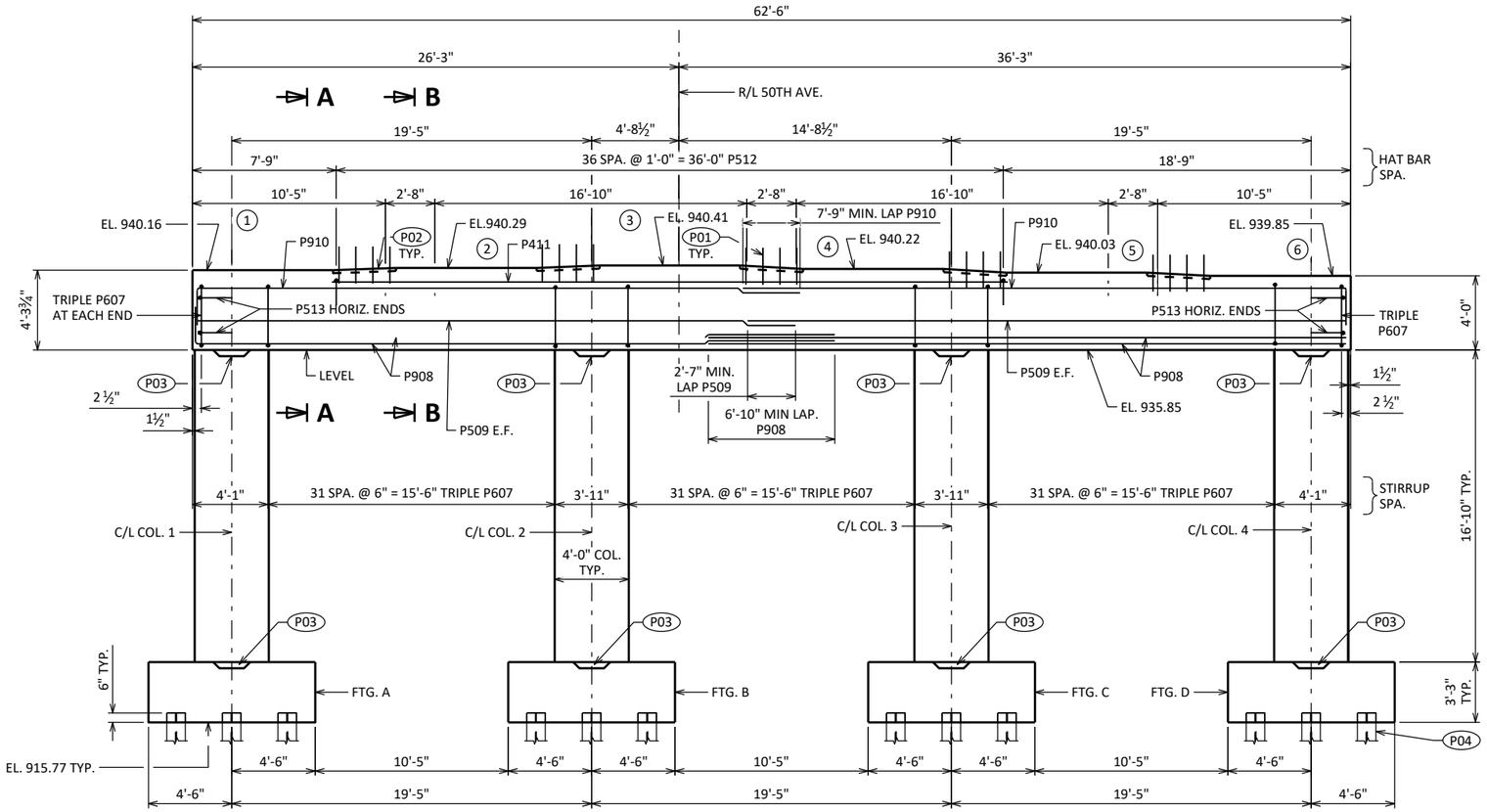
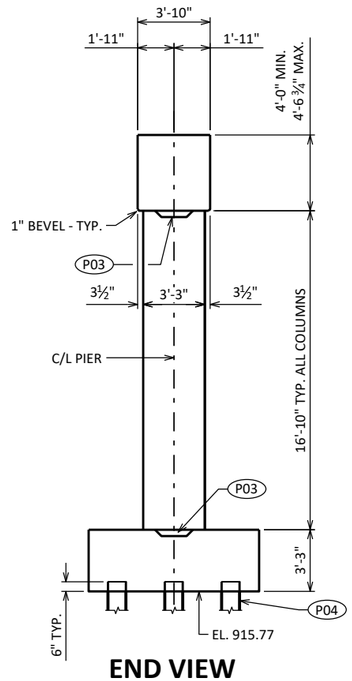
STATE PROJECT NUMBER

**1050-01-79**

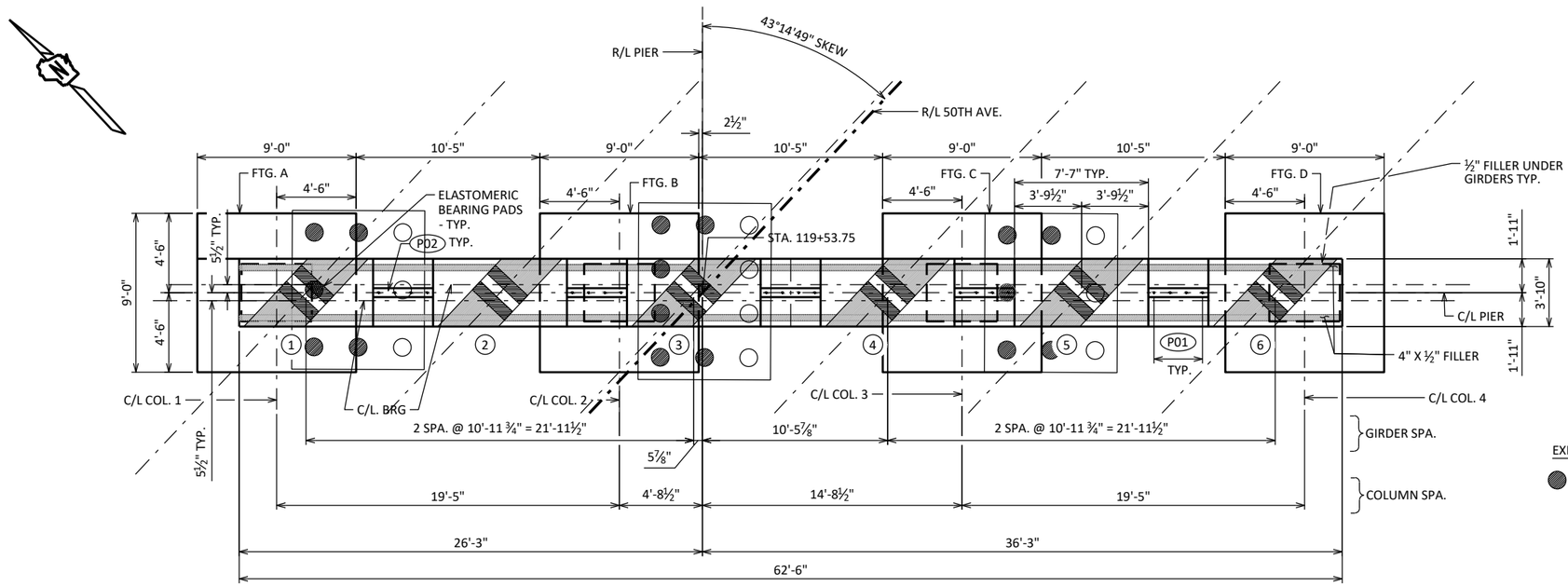



## ELEVATION




## END VIEW

(LOOKING EAST)




## PLAN

## LEGEND

- (P01) 3 SPA. @ 1'-0" = 3'-0" P514 TYP. BETW. GIRDERS. P516 BARS MAY BE PLACED AFTER PIER CAP IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED 1'-0".
- (P02) 2" X 6" BEVELED KEYWAY BETWEEN GIRDERS
- (P03) 1'-3" X 2'-0" X 4" CONSTRUCTION JOINT FORMED BY A BEVELED KEYWAY. TYPICAL ALL COLUMNS & FOOTINGS.
- (P04) PIER TO BE SUPPORTED ON HP 10 X 42 STEEL PILING. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH 95'-0".

FOR PILE SPLICE DETAILS SEE "PIER DETAILS" SHEET.

SEE "PIER COLUMNS" SHEET FOR BAR STEEL DETAILS.

FOR SECTIONS A, B, & C SEE "PIER DETAILS" SHEET.

EXISTING PILE REMOVAL

INDICATES EXISTING TIMBER PILING TO BE REMOVED UNDER BID ITEM "REMOVE EXISTING TIMBER PILING". REFER TO THE PROJECT SPECIAL PROVISIONS FOR FURTHER DETAILS.

PER AS-BUILT PLANS, PIER PILES ARE ESTIMATED 40 FT. LONG EACH PILE.

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**PIER**

SHEET 13 OF 43

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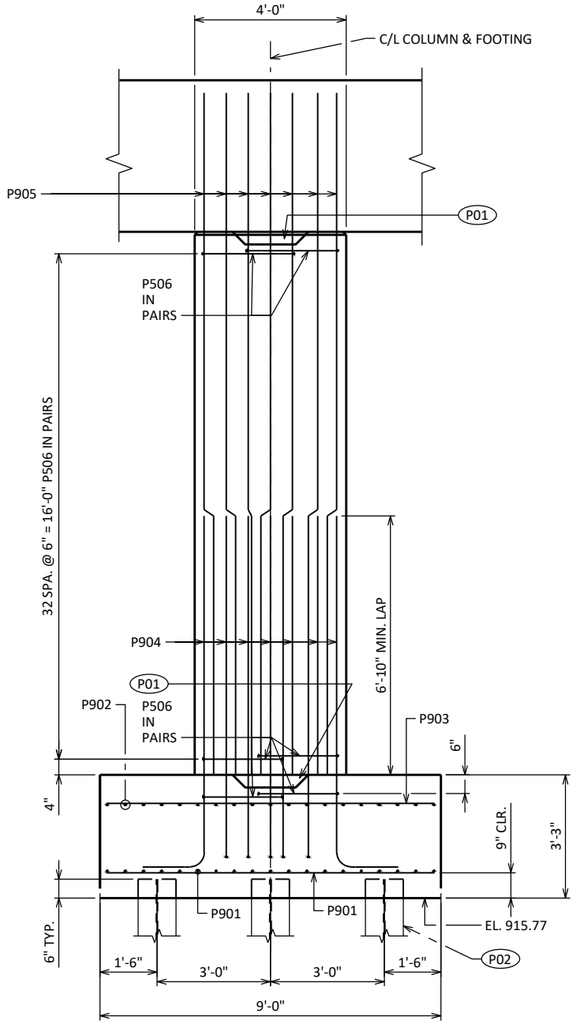
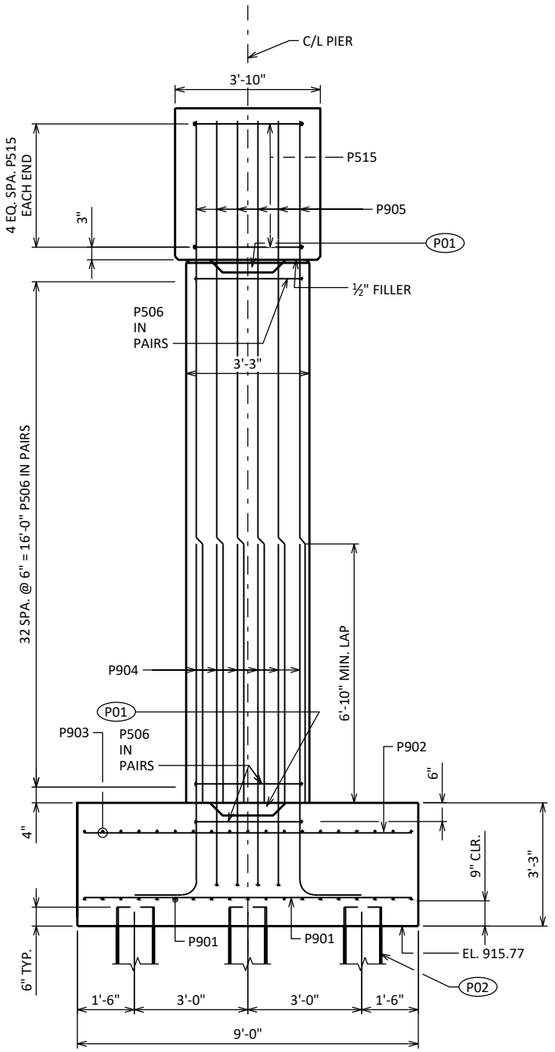


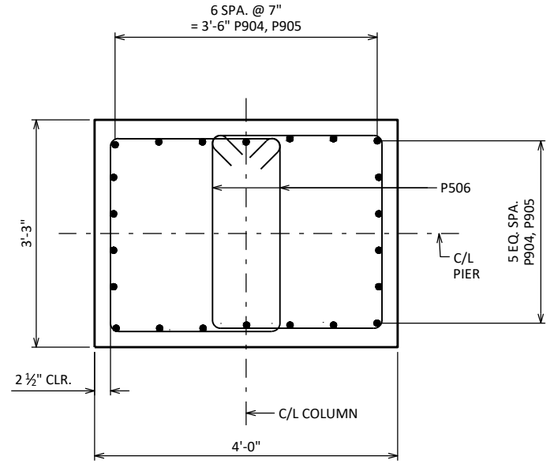

## COLUMN ELEVATION VIEW

**TYPICAL ALL COLUMNS**

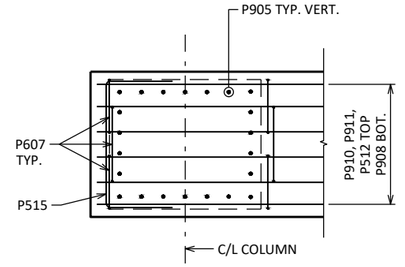



## COLUMN END VIEW

**TYPICAL ALL COLUMNS**




## SECTION THRU COLUMN




## END CAP REINFORCEMENT PLAN

## LEGEND

P01 1'-3" X 2'-0" X 4" CONSTRUCTION JOINT FORMED BY A BEVELED KEYWAY. TYPICAL ALL COLUMNS & FOOTINGS.

P02 PIER TO BE SUPPORTED ON HP 10 X 42 STEEL PILING. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH 95'-0".

FOR PILE SPLICE DETAILS SEE "PIER DETAILS" SHEET.

SEE "PIER DETAILS" SHEET FOR FOOTING BAR STEEL DETAILS.

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**PIER COLUMNS**

SHEET 14 OF 43

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SCALE =

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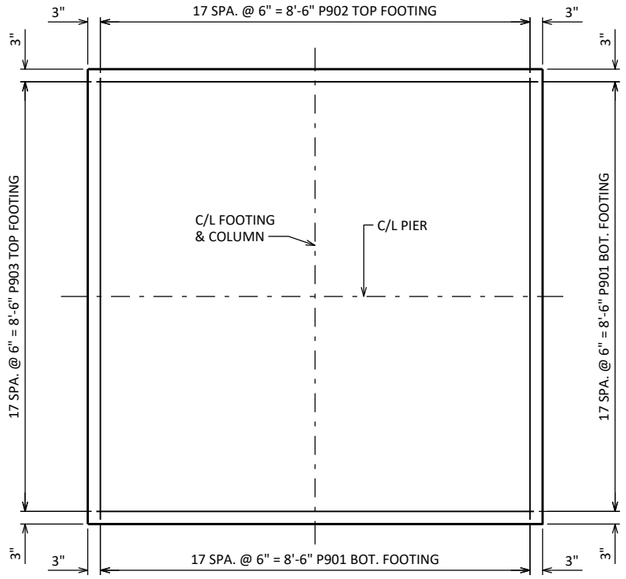
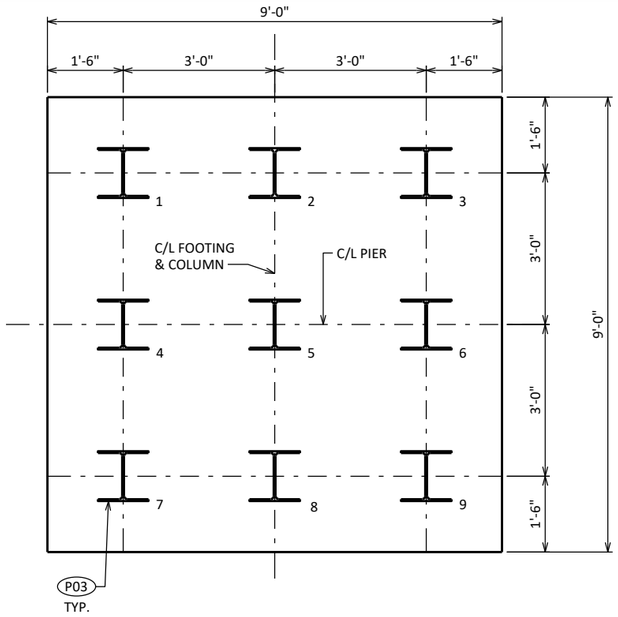



## FOOTING REINFORCEMENT PLAN

**TYPICAL ALL FOOTINGS**




## PILE LAYOUT PLAN

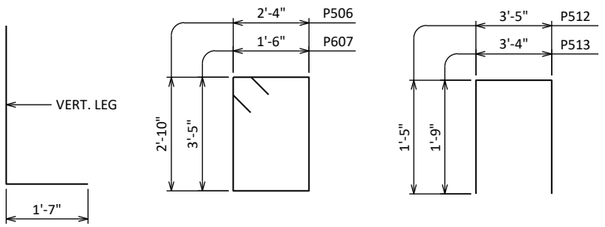
**TYPICAL ALL FOOTINGS** ▲



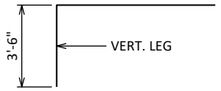
## BILL OF BARS

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

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION (21,840# COATED 8,490# UNCOATED) |
|---|---|---|---|---|---|---|
| P901 | | 144 | 8'-8" | | | FOOTING BOTTOM |
| P902 | | 72 | 8'-8" | | | FOOTING TOP |
| P903 | | 72 | 8'-8" | | | FOOTING TOP |
| P904 | X | 88 | 10'-8" | X | | FOOTING DOWELS |
| P905 | X | 88 | 20'-1" | | | COLUMN VERT. |
| P506 | X | 272 | 10'-8" | X | | FOOTING & COLUMN HORIZ. STIRRUPS |
| P607 | X | 294 | 10'-2" | X | | CAP VERT. STIRRUPS |
| P908 | X | 24 | 34'-6" | | | CAP HORIZ. BOT. |
| P509 | X | 8 | 32'-4" | | | CAP HORIZ. E.F. |
| P910 | X | 12 | 38'-5" | | | CAP HORIZ. TOP |
| P411 | X | 5 | 36'-4" | | | CAP TOP HORIZ. |
| P512 | X | 37 | 6'-0" | X | | CAP TOP VERT. |
| P513 | X | 10 | 6'-7" | X | | CAP END HORIZ. |
| P514 | X | 20 | 2'-0" | | | CAP VERT. DOWELS |
| | | | | | | |




**P904**




**P910**




## SECTION A-A




## SECTION B-B

## LEGEND

(P01) 3 SPA. @ 1'-0" = 3'-0" P516 TYP. BETW. GIRDERS. P516 BARS MAY BE PLACED AFTER PIER CAP IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED 1'-0".

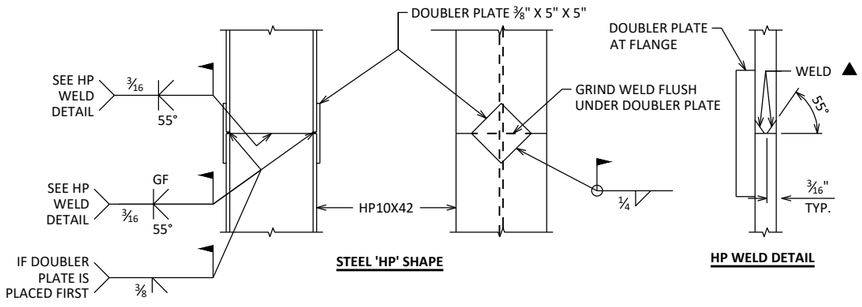
(P02) 2" X 6" BEVELED KEYWAY BETWEEN GIRDERS

(P03) PIER TO BE SUPPORTED ON HP 10 X 42 STEEL PILING. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH 95'-0".

FOR PILE SPLICE DETAILS SEE THIS SHEET.

SEE "PIER" SHEET FOR SECTION A, B, & C LOCATIONS.

ASSOCIATE PILE NUMBERS WITH EACH RESPECTIVE FOOTING (A, B, C, D) FOR PILE TESTING AND TRACKING PURPOSES.




**STEEL 'HP' SHAPE**

**HP WELD DETAIL**

## 'HP' PILE DETAILS

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**PIER DETAILS**

SHEET 15 OF 43

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STATE PROJECT NUMBER

**1050-01-79**

SCALE =

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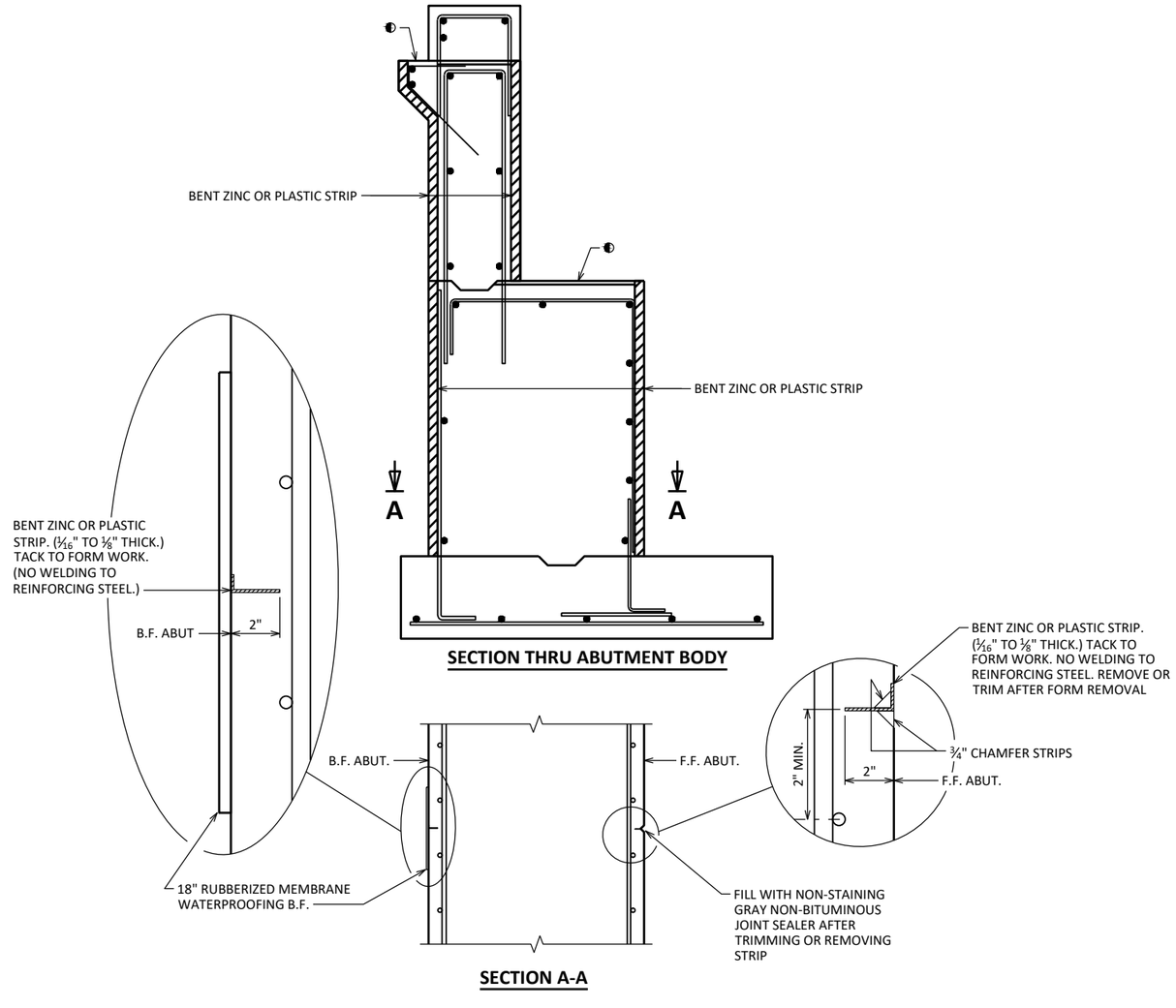
STATE PROJECT NUMBER

**1050-01-79**




**SECTION THRU ABUTMENT BODY**

**SECTION A-A**

# ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

## NOTES

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

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

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

SAW CUTTING JOINT IS NOT ALLOWED.

◐ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY ½" DEEP.

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STATE OF WISCONSIN
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**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**ALTERNATE CONSTRUCTION JOINT**

SHEET 16 OF 43

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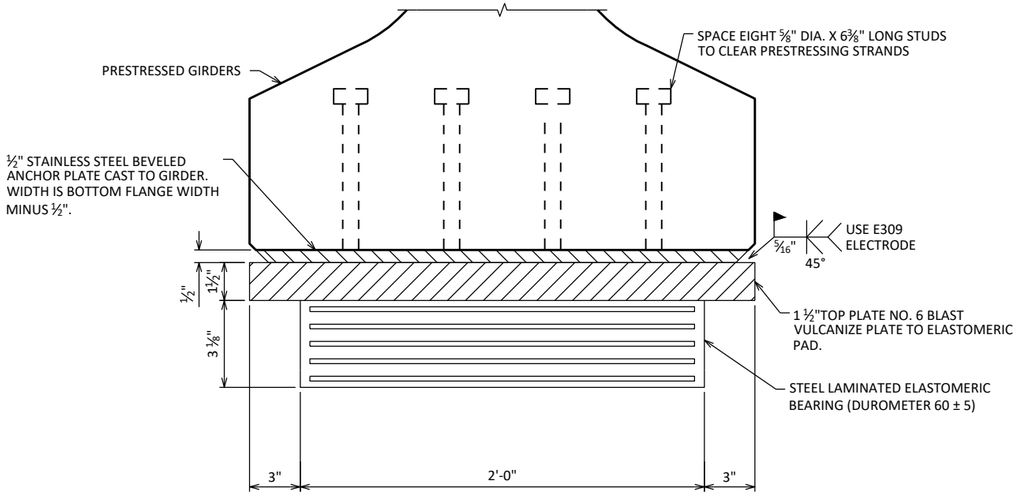
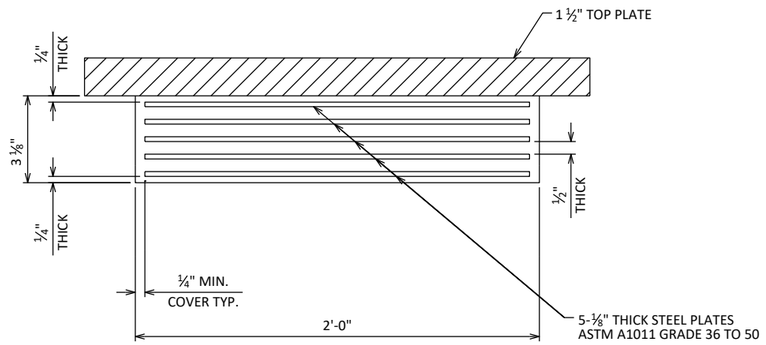
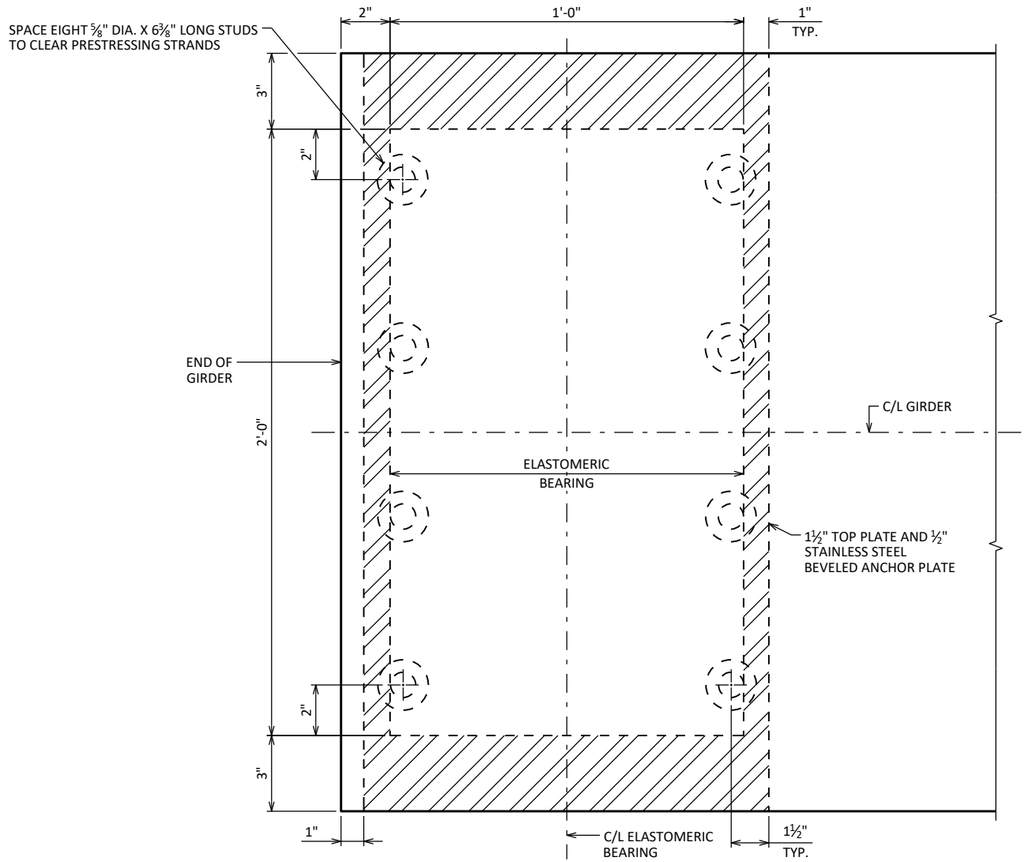



## END VIEW




## SECTION THRU ELASTOMERIC BEARING




## PLAN VIEW

## NOTES

BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ANCHOR PLATE SHALL CONFORM TO ASTM A240 TYPE 304.

TOP PLATE SHALL CONFORM TO ASTM A709 GRADE 50W OR A588 AND SHALL BE PAINTED IN ACCORDANCE WITH SECTION 506.2.8.1 OF THE STANDARD SPECIFICATION.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

REMOVE THE PAINT FROM TOP PLATE SURFACES THAT REQUIRE FIELD WELDING. AFTER WELDING, PROVIDE ONE COAT OF ORGANIC ZINC-RICH PRIMER AND ONE COAT OF HIGH-BUILD BROWN EPOXY PAINT IN ACCORDANCE WITH SECTION 517.3.1.8.2 OF THE STANDARD SPECIFICATIONS. FIELD APPLIED PAINT SHALL EXTEND BEYOND THE DAMAGED PAINTED SURFACES.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED" EACH.

BEARINGS DESIGNED PER METHOD A IN THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

WORK THIS SHEET WITH THE 'SUPERSTRUCTURE DETAILS' SHEET.

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| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**ABUTMENT ELASTOMERIC BEARINGS**

SHEET 17 OF 43

STATE PROJECT NUMBER

**1050-01-79**

## LEGEND

G01 DISTANCE FROM END OF GIRDER TO C/L FLOOR DRAIN BRACKET ANCHORAGE HOLES IN GIRDER:

FLOOR DRAIN TYPE WF, NORTH 42SS PARAPET:
77'-7 ⅞" FROM WEST END OF SPAN 1 GIRDER 1 ONLY.

FLOOR DRAIN TYPE H, MEDIAN 42SS PARAPET:
78'-7 ¼" FROM WEST END OF SPAN 1 GIRDER 5 ONLY.

FLOOR DRAIN TYPE WF, SOUTH VERTICAL PARAPET 'A':
76'-3 ⅝" FROM WEST END OF SPAN 1 GIRDER 6 ONLY.

G02 DISTANCE FROM BOTTOM OF GIRDER TO C/L FLOOR DRAIN BRACKET ANCHORAGE HOLES IN GIRDER:

FLOOR DRAIN TYPE WF, NORTH 42SS PARAPET:
2'-0 ½" AND 3'-0 ½" SPAN 1 GIRDER 1 ONLY.

FLOOR DRAIN TYPE H, MEDIAN 42SS PARAPET:
3'-0 ½" SPAN 1 GIRDER 5 ONLY.

FLOOR DRAIN TYPE WF, SOUTH VERTICAL PARAPET 'A':
2'-0 ½" AND 3'-0 ½" SPAN 1 GIRDER 6 ONLY.

## NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.4 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

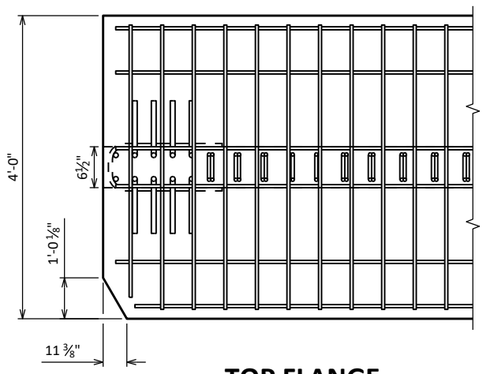
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

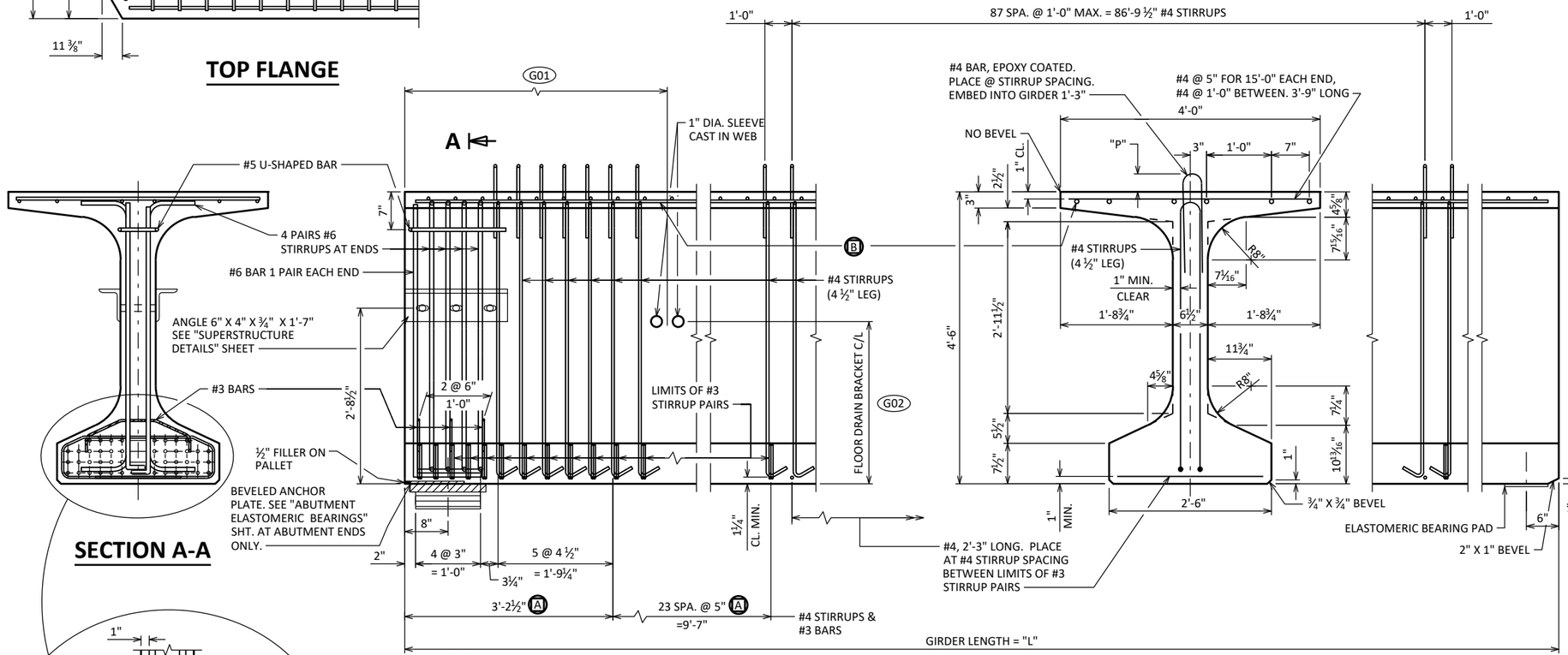
AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DESIGN SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.




## TOP FLANGE

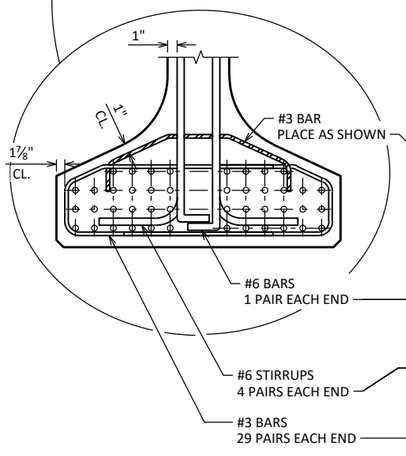



## SIDE VIEW & TYP. SECTION IN SPAN

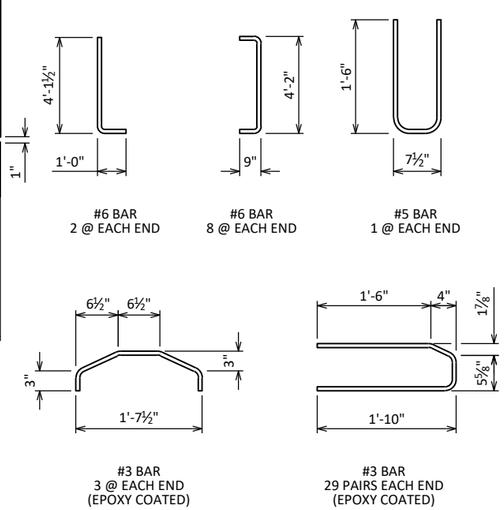
Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 4'-2"

## SECTION A-A




## BOTTOM FLANGE




⚹ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

## GIRDER DATA

| SPAN | GIRDER | GIRDER LENGTH "L" (FEET) | DEAD LOAD DEFL. (IN.) 1/10 | 2/10 | 3/10 | 4/10 | 5/10 | 6/10 | 7/10 | 8/10 | 9/10 | CONC. STRGTH. f'c (P.S.I.) | "P" (IN.) 1ST ⅓ OF GIRDER | MID ⅓ OF GIRDER | END ⅓ OF GIRDER | DIA. OF STRAND (IN.) | DRAPED PATTERN TOTAL NO. OF STRANDS | f'ci (P.S.I.) ⚹ | ( IN.) "A" | "B" MIN. | "B" MAX. | "C" | UNDRAPED PATTERN TOTAL NO. OF STRANDS | f'ci (P.S.I.) ⚹ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2-5 | 114'-6 ½" | 0.6 | 1.2 | 1.6 | 1.8 | 1.9 | 1.8 | 1.6 | 1.2 | 0.6 | 8,000 | 8 | 6 | 8 | 0.6 | 32 | 6,400 | 49 | 16 | 19 | 5 | | |
| 2 | 2-5 | 114'-6 ½" | 0.6 | 1.1 | 1.5 | 1.8 | 1.9 | 1.8 | 1.5 | 1.1 | 0.6 | 8,000 | 8 | 6 | 8 | 0.6 | 32 | 6,400 | 49 | 16 | 19 | 5 | | |
| 1 | 1 & 6 | 114'-6 ½" | 0.6 | 1.1 | 1.4 | 1.7 | 1.8 | 1.7 | 1.4 | 1.1 | 0.6 | 8,000 | 8 | 6 | 8 | 0.6 | 32 | 6,400 | 49 | 16 | 19 | 5 | | |
| 2 | 1 & 6 | 114'-6 ½" | 0.5 | 1.0 | 1.4 | 1.7 | 1.8 | 1.7 | 1.4 | 1.0 | 0.5 | 8,000 | 8 | 6 | 8 | 0.6 | 32 | 6,400 | 49 | 16 | 19 | 5 | | |

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**54W PRESTRESSED GIRDER DETAILS 1**

SHEET 18 OF 43

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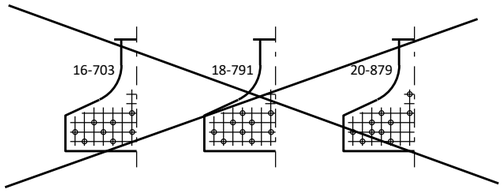
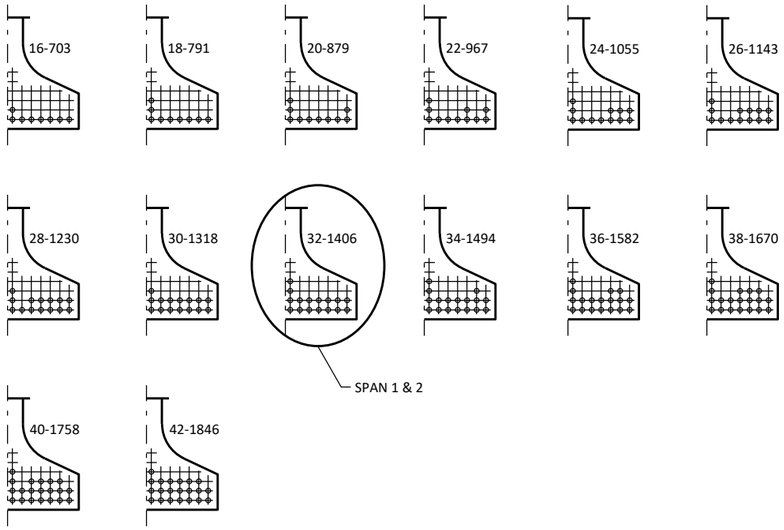
8

8



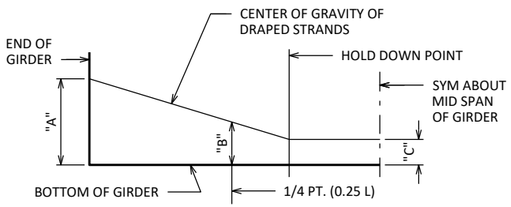

## STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS




## ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



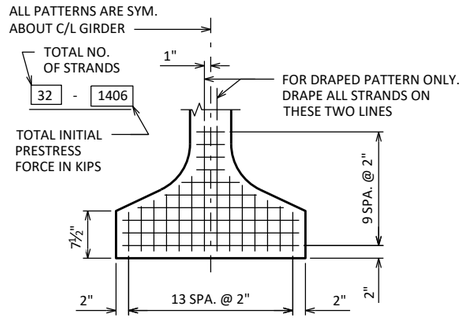

## DRAPED STRAND PROFILE

⚹ THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

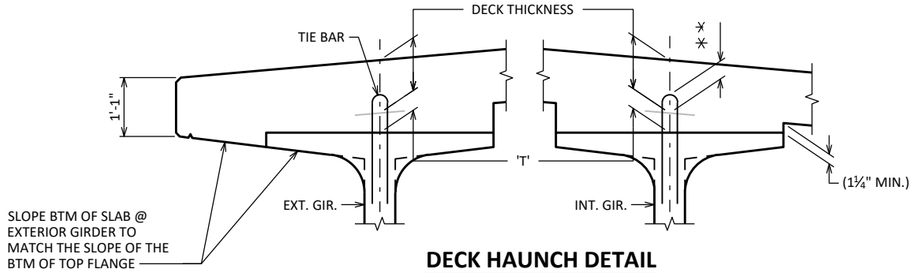
| SPAN | CAMBER (IN.) ⚹ |
|---|---|
| 1 | 2.9 |
| 2 | 2.9 |

**THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.**

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.




## TYP. STRAND PATTERN




## DECK HAUNCH DETAIL

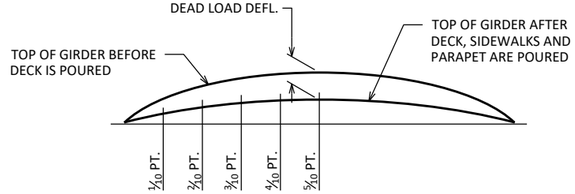
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

⚹⚹ IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

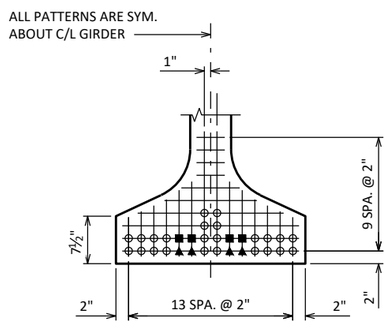
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

| | |
|---|---|
| | TOP OF DECK ELEV. AT FINAL GRADE |
| - | TOP OF GIRDER ELEVATION |
| + | DEAD LOAD DEFLECTION |
| - | DECK THICKNESS |
| = | HAUNCH HEIGHT 'T' |

NOTE: AN AVERAGE HAUNCH ('T') OF 3.2" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

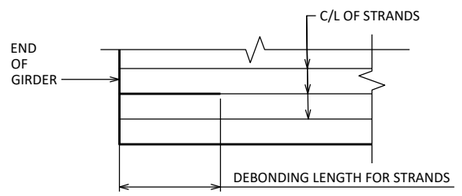



## DEAD LOAD DEFLECTION DIAGRAM




## STRAND DEBONDING DETAIL

FOR ALL GIRDERS IN BOTH SPANS. AT BOTH ENDS.




## BOND BREAKER DETAIL

SHOWING LENGTHS OF DEBONDING FROM END OF GIRDER.

## STRAND DEBONDING LEGEND

| SYMBOL | HEIGHT (INCHES) | NO. OF STRANDS | HORIZ. POS. FROM C/L GIRDER | DEBOND LENGTH |
|---|---|---|---|---|
| ■ SQUARE | 4 | 4 | 4" & 6" | 1'-0" |
| ▲ TRIANGLE | 2 | 4 | 4" & 6" | 2'-0" |

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**54W PRESTRESSED GIRDER DETAILS 2**

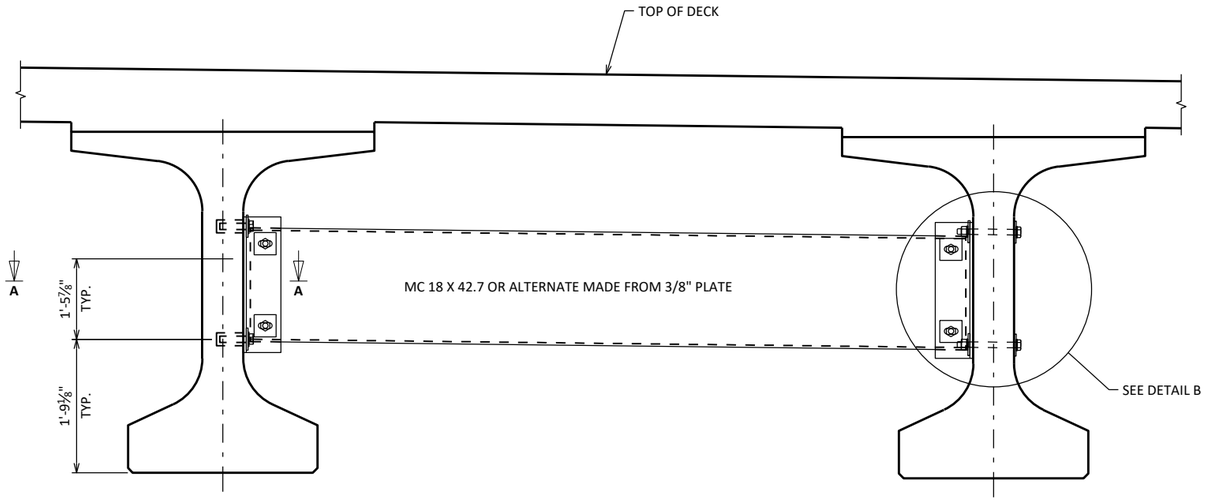


8

8

STATE PROJECT NUMBER

**1050-01-79**




**EXTERIOR GIRDER** **INTERIOR GIRDER**

## PART TRANSVERSE SECTION AT DIAPHRAGM

## NOTES

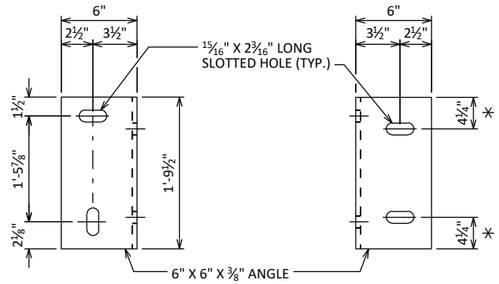
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-9-309", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

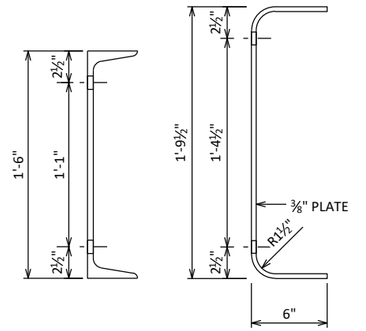
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

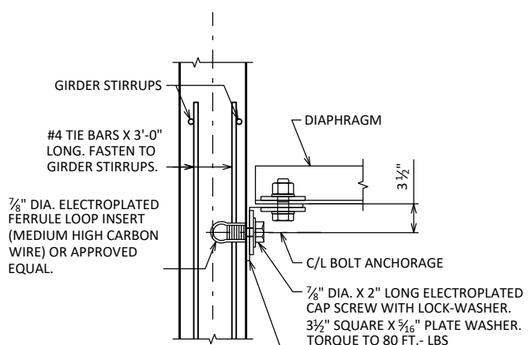



## DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

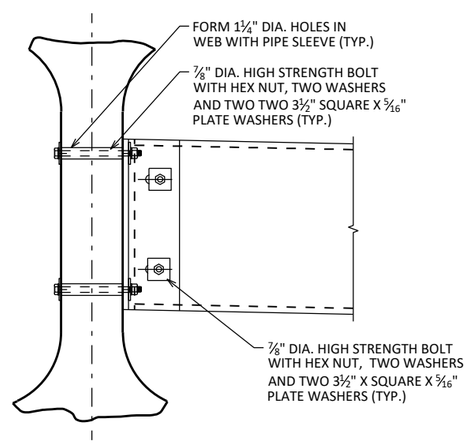



## SECTION THRU DIAPHRAGM




## SECTION A-A

(FOR EXTERIOR ATTACHMENT)




(FOR STAGGERED DIAPHRAGM)

## DETAIL B

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**STEEL DIAPHRAGM**

SHEET 20 OF 43

212

SCALE =

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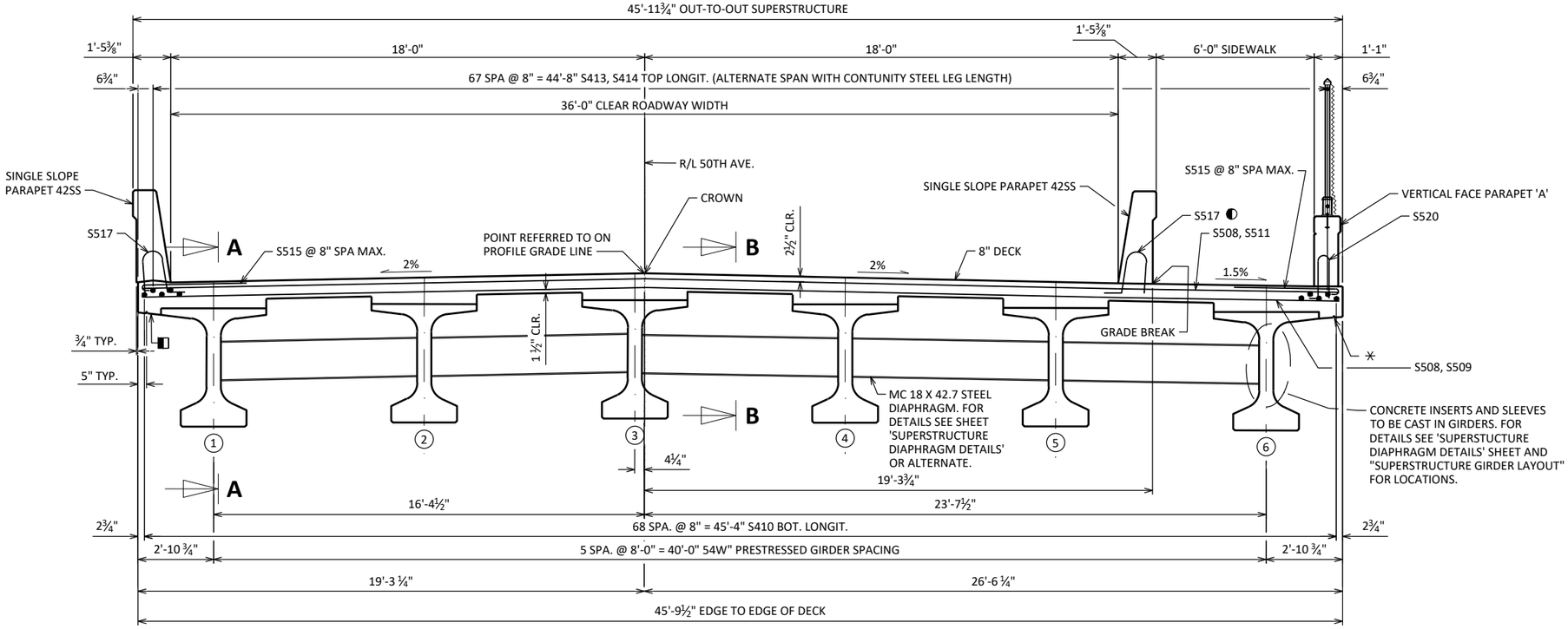
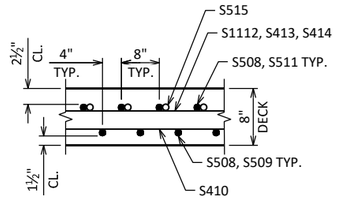
STATE PROJECT NUMBER

**1050-01-79**

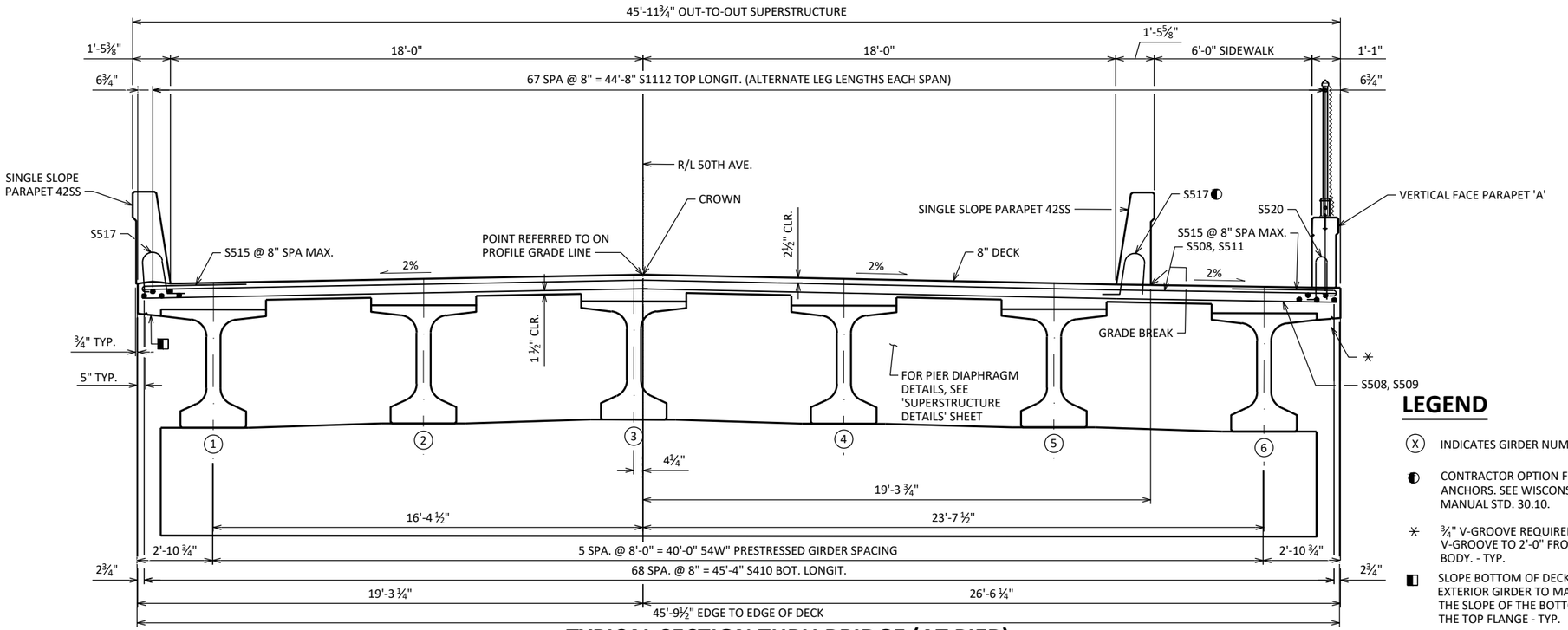



## TYPICAL SECTION THRU BRIDGE (IN-SPAN)

(LOOKING EAST)

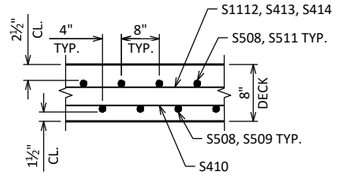



## SECTION A-A




## TYPICAL SECTION THRU BRIDGE (AT PIER)

(LOOKING EAST)




## SECTION B-B

## LEGEND

- (X) INDICATES GIRDER NUMBER
- ◐ CONTRACTOR OPTION FOR ADHESIVE ANCHORS. SEE WISCONSIN BRIDGE MANUAL STD. 30.10.
- ⁎ ¾" V-GROOVE REQUIRED. EXTEND V-GROOVE TO 2'-0" FROM F.F. OF ABUT. BODY. - TYP.
- ◧ SLOPE BOTTOM OF DECK AT EXTERIOR GIRDER TO MATCH THE SLOPE OF THE BOTTOM OF THE TOP FLANGE - TYP.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SUPERSTRUCTURE**

SHEET 21 OF 43

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SCALE =

8

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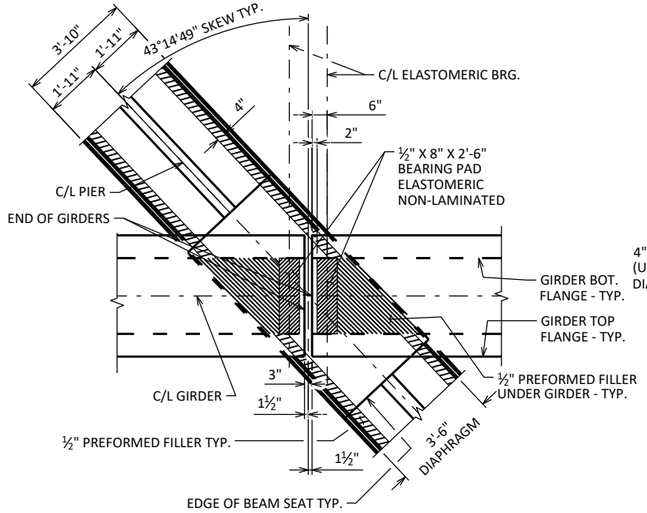
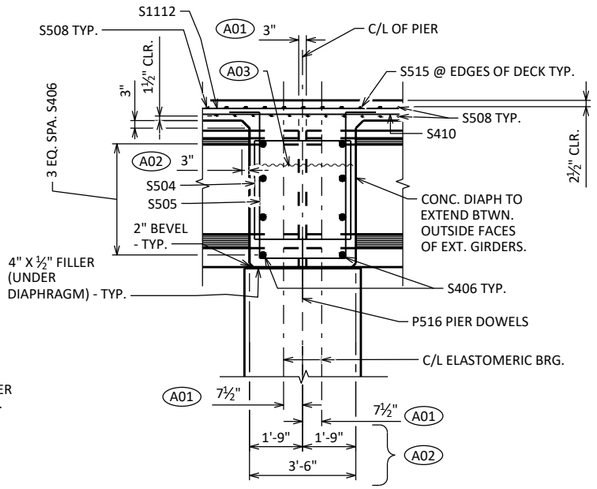
STATE PROJECT NUMBER

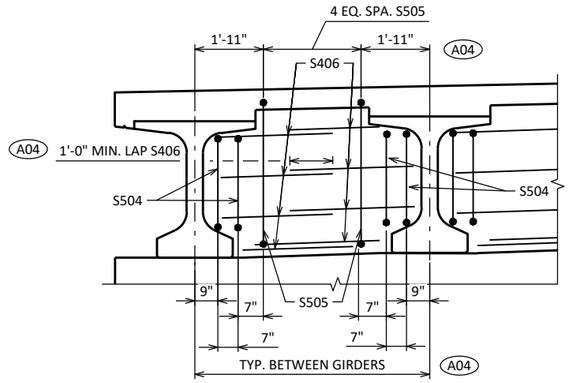
**1050-01-79**




## PIER BEARING PAD DETAILS




## PART LONG. SECTION PIER DIAPHRAGM

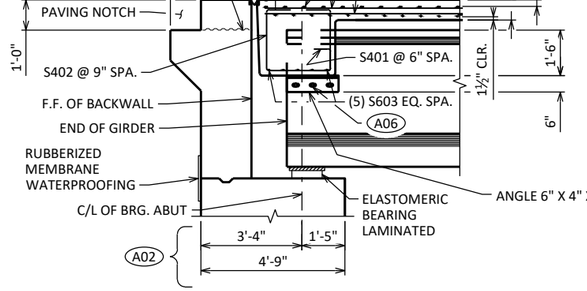



## PART TRANSVERSE SECTION AT PIER DIAPHRAGM

TYPICAL BETWEEN GIRDERS
DECK STEEL NOT SHOWN FOR CLARITY

## LEGEND

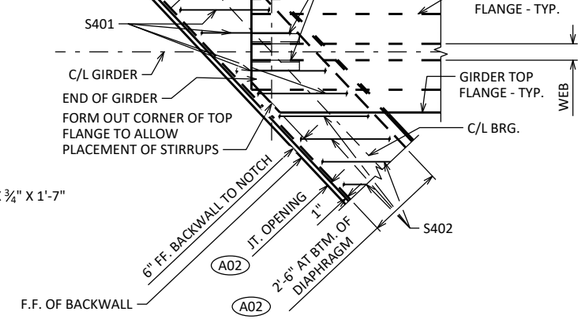
- (A01) DIMENSIONS MEASURED ALONG C/L OF GIRDER.
- (A02) DIMENSIONS MEASURED NORMAL TO C/L OF SUBSTRUCTURE UNIT.
- (A03) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
- (A04) BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO C/L GIRDERS.
- (A05) CONST. JOINT . POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. (STRIKE OFF AND LEAVE ROUGH).
- (A06) FORM HOLES IN WEB WITH 1 ¼" SCHEDULE 40 GALVANIZED PIPE. 15/16" X 2 3/16" LONG SLOTTED HOLE (TYP.) IN ANGLE FOR ⅞" DIA. HIGH STRENGTH BOLTS.



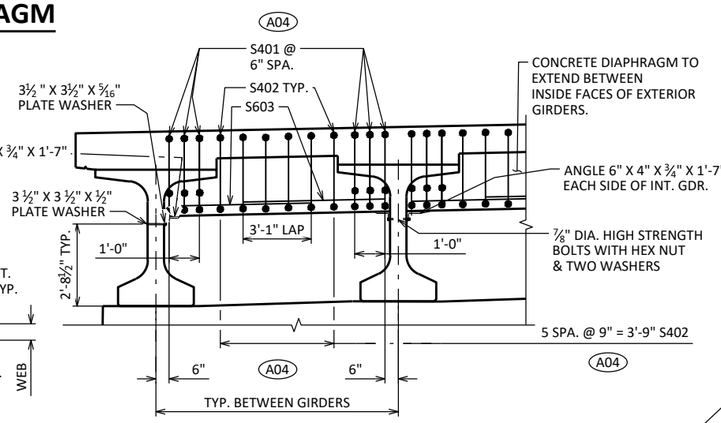

## PART LONG. SECTION ABUTMENT DIAPHRAGM

NO OPTIONAL CONSTRUCTION JOINT IN DIAPHRAGM ALLOWED. PLACE DIAPHRAGM CONCRETE WITH DECK SLAB.

CONCRETE DIAPHRAGM TO EXTEND BETWEEN INSIDE FACES OF EXTERIOR GIRDERS.

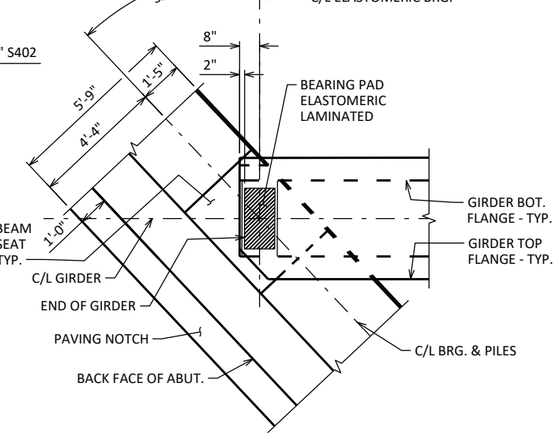



## TOP VIEW OF ABUT. DIAPHRAGM

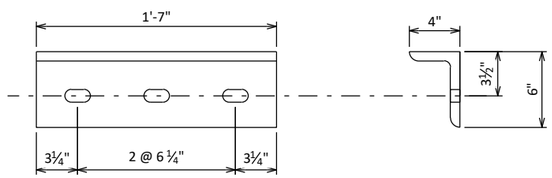



## PART TRANSVERSE SECTION AT ABUTMENT DIAPHRAGM

TYPICAL BETWEEN GIRDERS
DECK STEEL NOT SHOWN FOR CLARITY




## ABUTMENT BEARING PAD DETAILS




## ANGLE

PROVIDE 3 ½" X 3 ½" X 5/16" PLATE WASHERS AT ALL LOCATIONS EXCEPT AT EXTERIOR FACE OF EXTERIOR GIRDERS WHERE 3 ½" X 3 ½" X ½" PLATE WASHERS SHALL BE PROVIDED.

## NOTES

ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO 'CONCRETE MASONRY BRIDGES'.

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM SUPPORT HARDWARE INCLUDING BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM SUPPORT ANGLE TO CONCRETE WEB CONNECTION SHALL BE SNUG TIGHT PLUS ¼ TURN. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SUPERSTRUCTURE DETAILS**

SHEET 22 OF 43

214

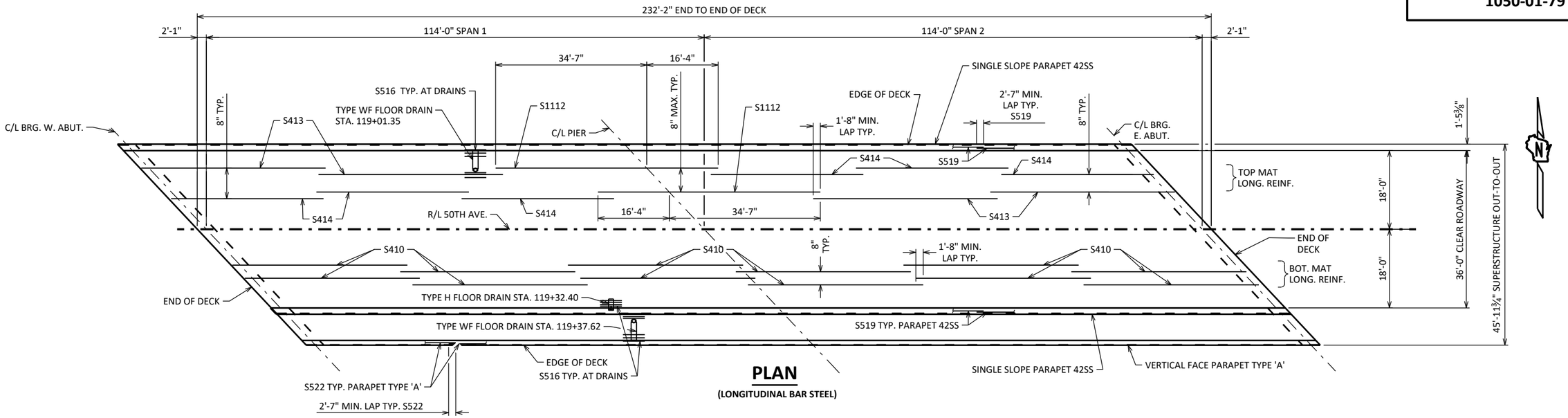
SCALE =

8

8

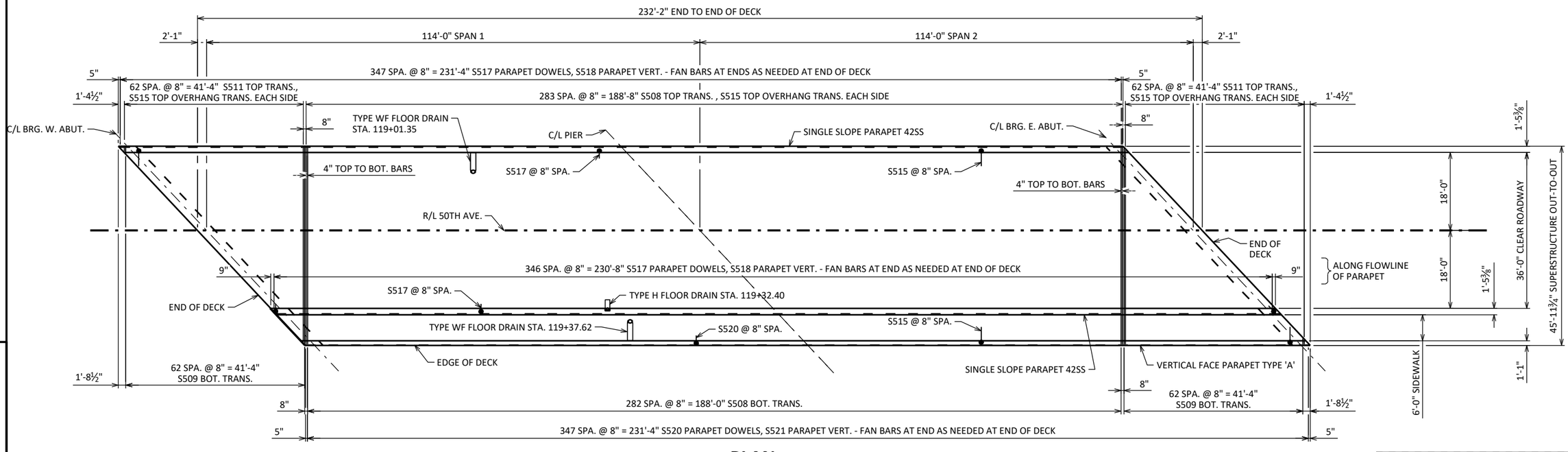
STATE PROJECT NUMBER

**1050-01-79**




## PLAN

**(LONGITUDINAL BAR STEEL)**




## PLAN

**(TRANSVERSE BAR STEEL)**

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| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SUPERSTRUCTURE PLAN**

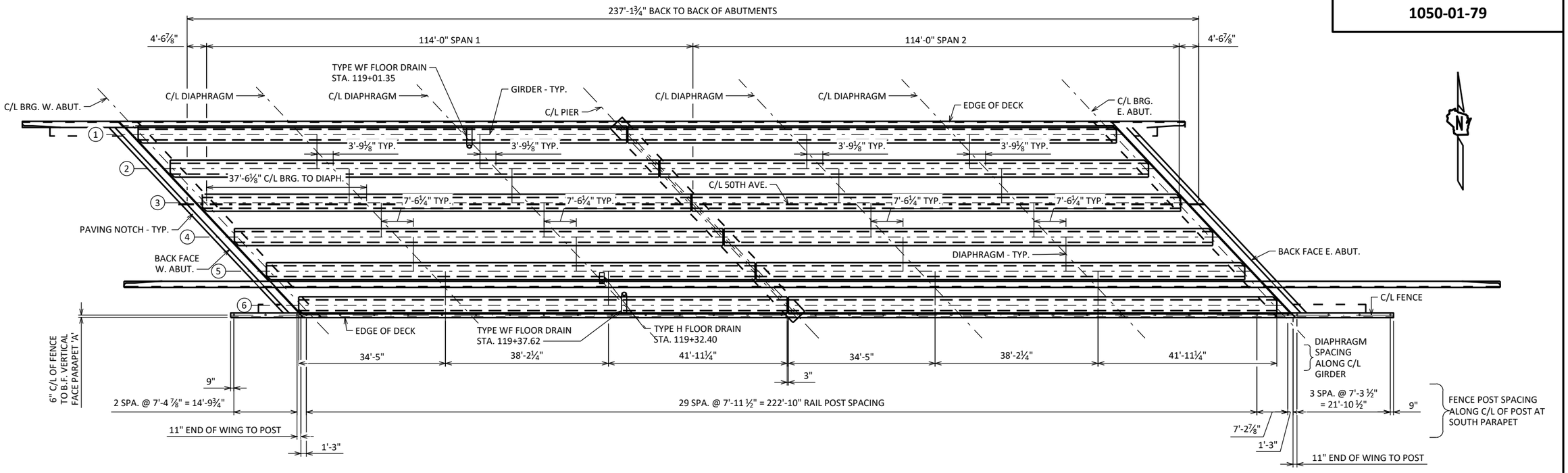
SHEET 23 OF 43

215

SCALE =

STATE PROJECT NUMBER

**1050-01-79**




## PLAN

## TOP OF DECK ELEVATIONS

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

### SPAN 1

| LOCATION | C/L BRG. W. ABUT. | 1/10 PT. | 2/10 PT. | 3/10 PT. | 4/10 PT. | 5/10 PT. | 6/10 PT. | 7/10 PT. | 8/10 PT. | 9/10 PT. | C/L BRG. PIER 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH PARAPET FLOWLINE | 946.22 | 946.16 | 946.10 | 946.04 | 945.99 | 945.93 | 945.87 | 945.82 | 945.76 | 945.70 | 945.65 |
| GIRDER 1 | 946.24 | 946.18 | 946.13 | 946.07 | 946.01 | 945.96 | 945.90 | 945.84 | 945.79 | 945.73 | 945.67 |
| GIRDER 2 | 946.36 | 946.31 | 946.25 | 946.19 | 946.14 | 946.08 | 946.02 | 945.96 | 945.91 | 945.85 | 945.79 |
| GIRDER 3 | 946.49 | 946.43 | 946.37 | 946.31 | 946.26 | 946.20 | 946.14 | 946.09 | 946.03 | 945.97 | 945.92 |
| R/L 50TH AVE | 946.49 | 946.43 | 946.38 | 946.32 | 946.26 | 946.21 | 946.15 | 946.09 | 946.04 | 945.98 | 945.92 |
| GIRDER 4 | 946.30 | 946.25 | 946.19 | 946.13 | 946.07 | 946.02 | 945.96 | 945.90 | 945.85 | 945.79 | 945.73 |
| GIRDER 5 | 946.10 | 946.05 | 945.99 | 945.93 | 945.88 | 945.82 | 945.76 | 945.71 | 945.65 | 945.59 | 945.53 |
| MEDIAN PARAPET FLOWLINE | 946.05 | 945.99 | 945.93 | 945.88 | 945.82 | 945.76 | 945.70 | 945.65 | 945.59 | 945.53 | 945.48 |
| PATH GRADE BREAK | 946.01 | 945.96 | 945.90 | 945.84 | 945.79 | 945.73 | 945.67 | 945.62 | 945.56 | 945.50 | 945.44 |
| GIRDER 6 | 945.93 | 945.87 | 945.81 | 945.76 | 945.70 | 945.64 | 945.59 | 945.53 | 945.47 | 945.42 | 945.36 |
| PARAPET SOUTH FLOWLINE | 945.89 | 945.84 | 945.78 | 945.72 | 945.67 | 945.61 | 945.55 | 945.49 | 945.44 | 945.38 | 945.32 |

### SPAN 2

| LOCATION | C/L BRG. PIER 1 | 1/10 PT. | 2/10 PT. | 3/10 PT. | 4/10 PT. | 5/10 PT. | 6/10 PT. | 7/10 PT. | 8/10 PT. | 9/10 PT. | C/L BRG. E. ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH PARAPET FLOWLINE | 945.65 | 945.59 | 945.53 | 945.47 | 945.42 | 945.36 | 945.30 | 945.25 | 945.19 | 945.13 | 945.08 |
| GIRDER 1 | 945.67 | 945.61 | 945.56 | 945.50 | 945.44 | 945.39 | 945.33 | 945.27 | 945.22 | 945.16 | 945.10 |
| GIRDER 2 | 945.79 | 945.74 | 945.68 | 945.62 | 945.57 | 945.51 | 945.45 | 945.39 | 945.34 | 945.28 | 945.22 |
| GIRDER 3 | 945.92 | 945.86 | 945.80 | 945.74 | 945.69 | 945.63 | 945.57 | 945.52 | 945.46 | 945.40 | 945.35 |
| R/L 50TH AVE | 945.92 | 945.86 | 945.81 | 945.75 | 945.69 | 945.64 | 945.58 | 945.52 | 945.47 | 945.41 | 945.35 |
| GIRDER 4 | 945.73 | 945.68 | 945.62 | 945.56 | 945.50 | 945.45 | 945.39 | 945.33 | 945.28 | 945.22 | 945.16 |
| GIRDER 5 | 945.53 | 945.48 | 945.42 | 945.36 | 945.31 | 945.25 | 945.19 | 945.14 | 945.08 | 945.02 | 944.96 |
| MEDIAN PARAPET FLOWLINE | 945.48 | 945.42 | 945.36 | 945.31 | 945.25 | 945.19 | 945.13 | 945.08 | 945.02 | 944.96 | 944.91 |
| PATH GRADE BREAK | 945.44 | 945.39 | 945.33 | 945.27 | 945.22 | 945.16 | 945.10 | 945.05 | 944.99 | 944.93 | 944.87 |
| GIRDER 6 | 945.36 | 945.30 | 945.24 | 945.19 | 945.13 | 945.07 | 945.02 | 944.96 | 944.90 | 944.85 | 944.77 |
| PARAPET SOUTH FLOWLINE | 945.32 | 945.27 | 945.21 | 945.15 | 945.10 | 945.04 | 944.98 | 944.92 | 944.87 | 944.81 | 944.72 |

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SUPERSTRUCTURE GIRDER LAYOUT**

SHEET 24 OF 43

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SCALE =

STATE PROJECT NUMBER

**1050-01-79**

# BILL OF BARS

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

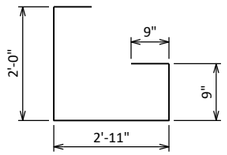
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION 94,780 # COATED |
|---|---|---|---|---|---|---|
| S401 | X | 60 | 6'-10" | X | | DIAPH. @ ABUT. VERT. UNDER FLANGE |
| S402 | X | 60 | 8'-1" | X | | DIAPH. @ ABUT. VERT. |
| S603 | X | 100 | 6'-7" | | | DIAPH. @ ABUT. HORIZ. |
| S504 | X | 20 | 14'-2" | X | | DIAPH. @ PIER VERT. |
| S505 | X | 25 | 15'-4" | X | | DIAPH. @ PIER VERT. |
| S406 | X | 80 | 5'-7" | | | DIAPH. @ PIER HORIZ. |
| S407 | X | 8 | 28'-1" | | | JOINT DECK HORIZ. |
| S508 | X | 567 | 45'-5" | | | DECK TRANS. |
| S509 | X | 126 | 23'-2" | | ◐ | DECK BOT. TRANS. ENDS |
| S410 | X | 414 | 40'-1" | | | DECK BOT. LONG |
| S511 | X | 126 | 22'-10" | | ◐ | DECK TOP TRANS. ENDS |
| S1112 | X | 68 | 50'-11" | | | DECK TOP LONG. AT PIER |
| S413 | X | 136 | 42'-4" | | | DECK TOP LONG IN SPAN |
| S414 | X | 204 | 34'-11" | | | DECK TOP LONG IN SPAN |
| S515 | X | 694 | 5'-0" | X | | DECK TRANS. TOP @ EDGES OF DECK |
| S516 | X | 18 | 5'-0" | | | DECK DRAIN LONG. |
| S517 | X | 695 | 4'-5" | X | | 42SS PARAPET VERT. DOWEL BARS |
| S518 | X | 695 | 6'-8" | X | | 42SS PARAPET VERT. BARS |
| S519 | X | 64 | 59'-11" | | | 42SS PARAPET HORIZ. BARS |
| S520 | X | 348 | 4'-4" | X | | 'A' PARAPET VERT. DOWEL BARS |
| S521 | X | 348 | 4'-9" | X | | 'A' PARAPET VERT. BARS |
| S522 | X | 32 | 59'-11" | | | 'A' PARAPET HORIZ. BARS |
| | | | | | | |
| | | | | | | |

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

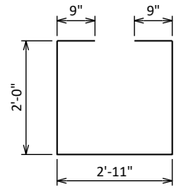
# BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

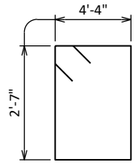
| BAR MARK | NO. REQUIRED | LENGTH |
|---|---|---|
| S509 | 2 SERIES OF 63 | 1'-3" TO 45'-1" |
| S511 | 2 SERIES OF 63 | 0'-11" TO 44'-9" |



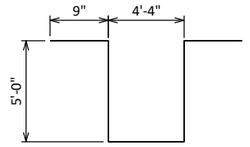

S401



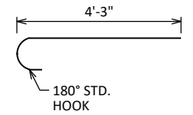

S402



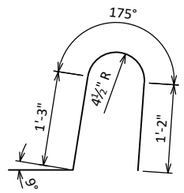

S504



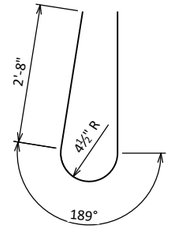

S505




S515




S517

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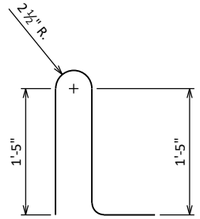
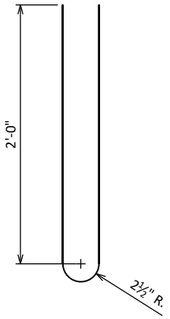



S520




S521

## NOTES

SEE "VERTICAL FACE PARAPET 'A'" SHEET FOR BAR STEEL PLAN DETAILS AND BAR BENDING DETAILS FOR VERTICAL FACE PARAPET 'A' BARS S520, S521, & S522.

SEE "SINGLE SLOPE PARAPET 42SS" SHEET FOR BAR STEEL PLAN DETAILS AND BAR BENDING DETAILS FOR SINGLE SLOPE PARAPET 42SS BARS S517, S518, & S519.

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| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SUPERSTRUCTURE BILL OF BARS**

SHEET 25 OF 43

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SCALE =

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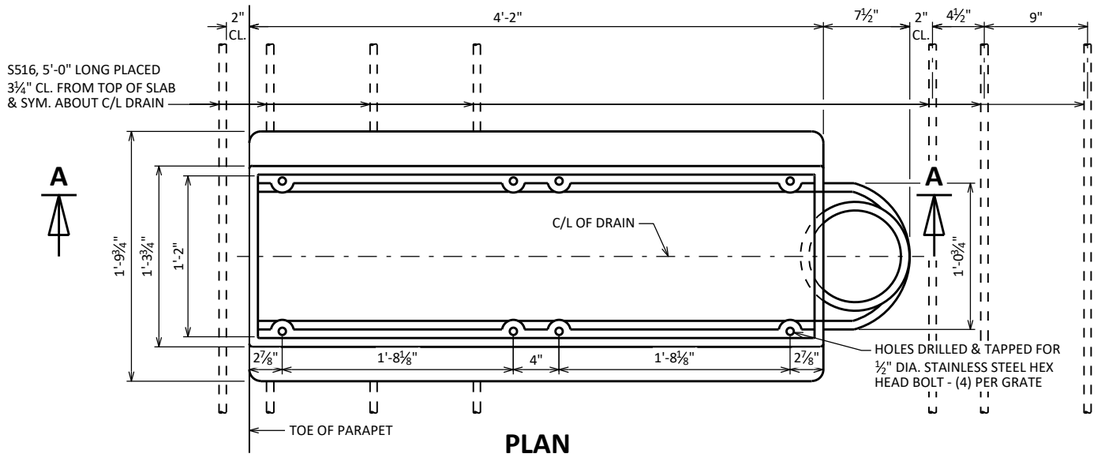
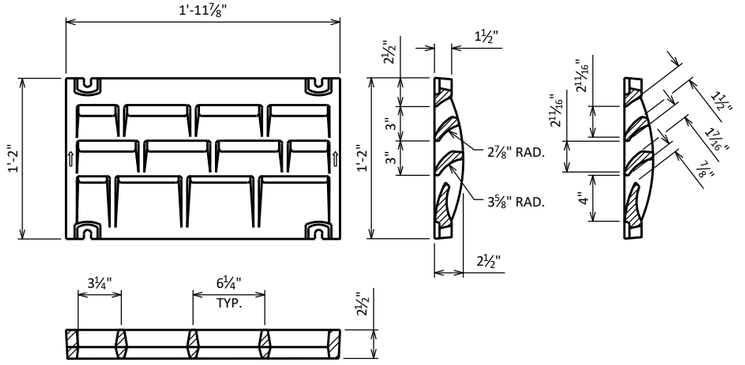
**1050-01-79**




## PLAN




## GRATE CASTING DETAILS

ATTACH GRATES TO FRAME FOR SHIPMENT

## NOTES

ALL MATERIAL FOR TYPE "WF" CASTING AND 8" DIA. CONNECTION PIPE, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 30.

MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36.

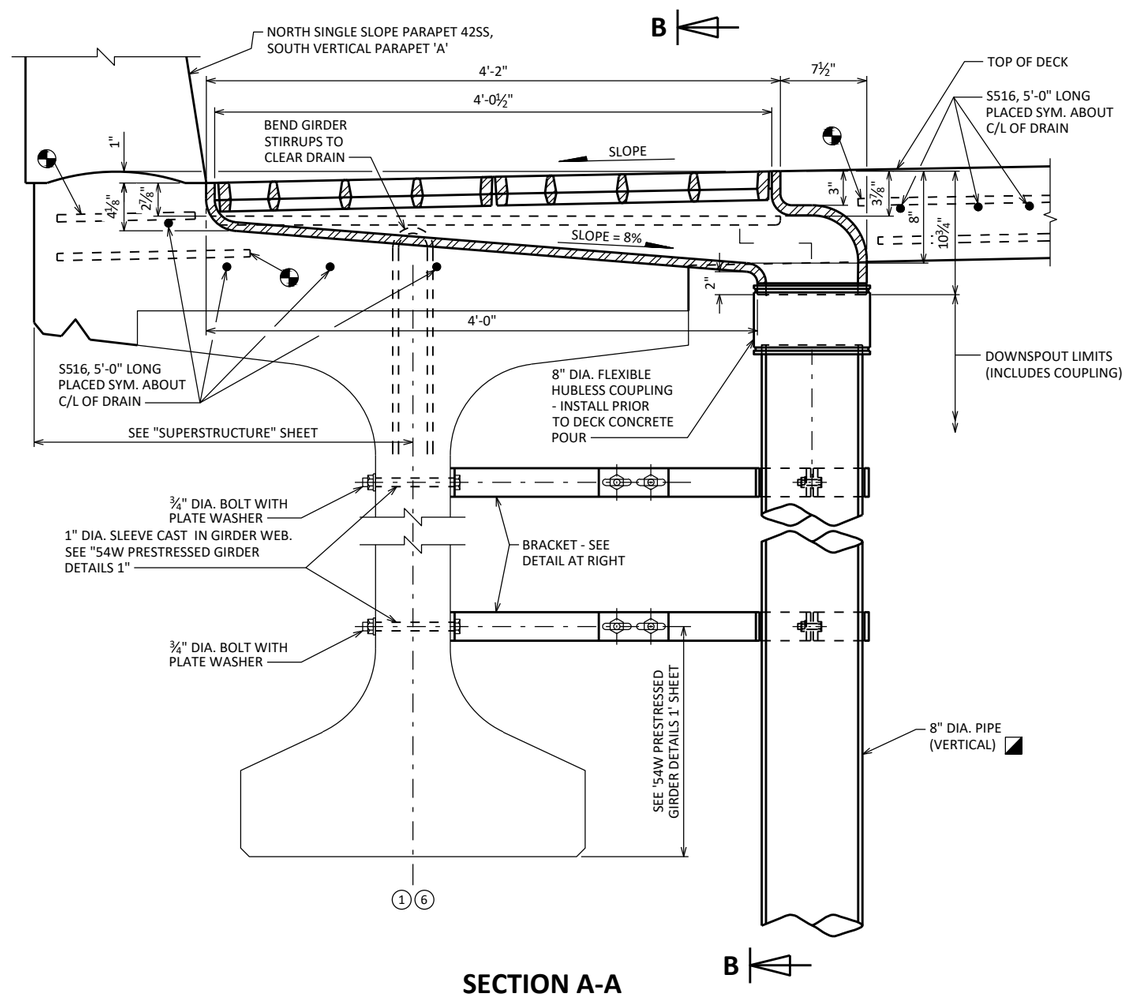
ALTERNATE BRACKETS ARE NOT ALLOWED.

ALL MATERIAL FOR FLOOR DRAINS TO BE INCLUDED IN THE BID ITEM "FLOOR DRAINS TYPE WF".

ALL MATERIAL FOR DOWNSPOUTS, DOWNSPOUT CONNECTIONS, AND BRACKETS TO BE INCLUDED IN THE BID ITEM "DOWNSPOUT 8-INCH".

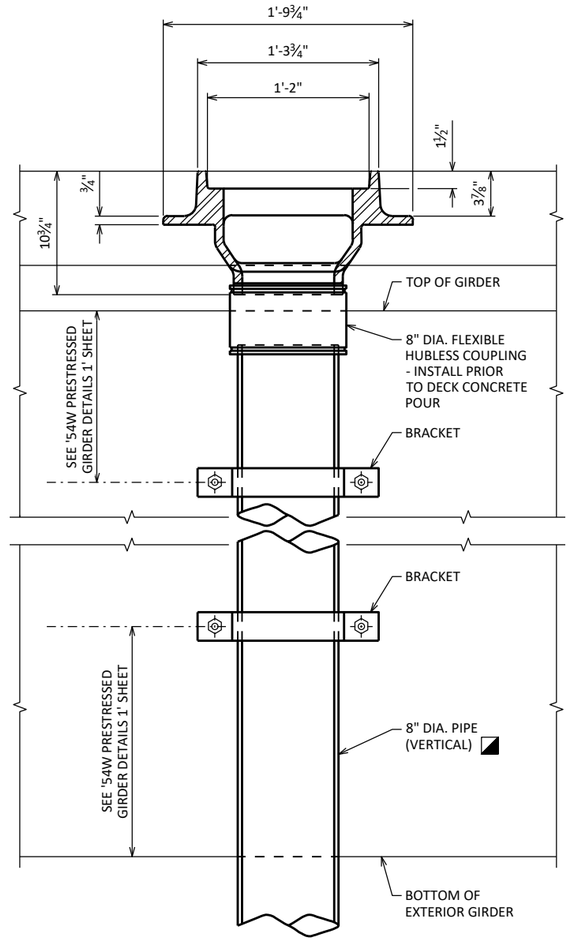
◪ 8" DIA. DOWNSPOUTS SHALL BE REINFORCED THERMOSETTING RESIN PIPE (RTRP).

◔ TRANSVERSE & LONGITUDINAL SLAB BAR REINFORCEMENT TO BE CUT A MAXIMUM OF 1" CLEAR FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE.

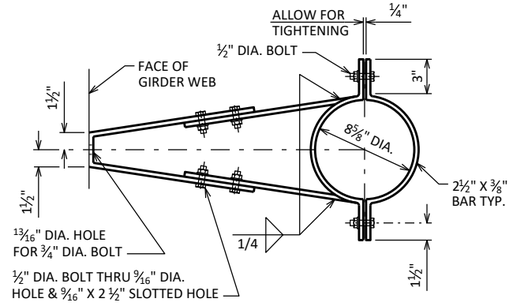



## SECTION A-A

GIRDER 1 SHOWN, GIRDER 6 SIMILAR, OPPOSITE HAND




## SECTION B-B




## BRACKET DETAIL

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**FLOOR DRAIN TYPE WF**

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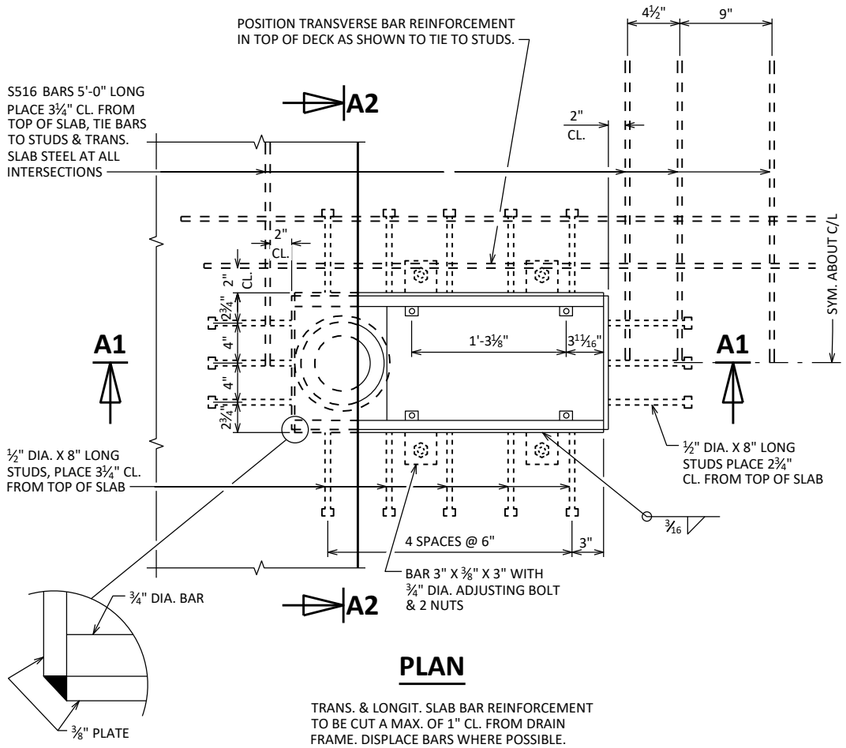
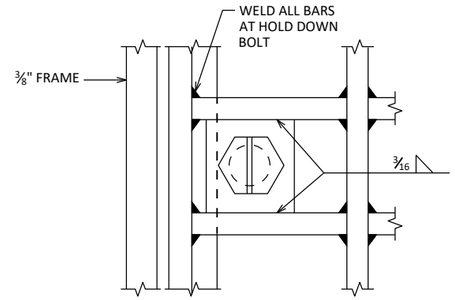
STATE PROJECT NUMBER

**1050-01-79**

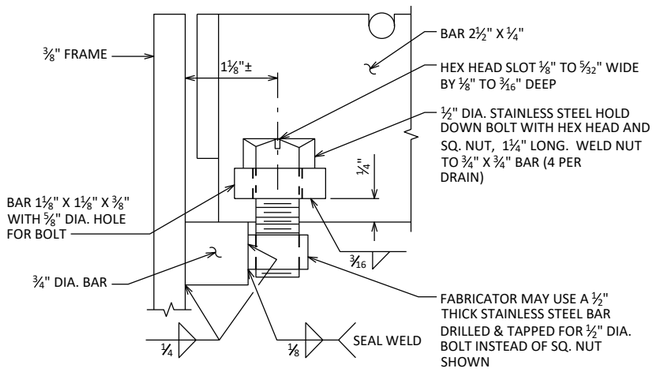



## PLAN

TRANS. & LONGIT. SLAB BAR REINFORCEMENT TO BE CUT A MAX. OF 1" CL. FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE.




## PART PLAN




## SECTION AT HOLD DOWN BOLT

## NOTES

ALL DRAIN MATERIAL INCLUDING GRATE, EXCLUDING PIPE & GRATE HOLD DOWN BOLTS, SHALL BE ASTM A36 STEEL.

MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36.

ALTERNATE BRACKETS ARE NOT ALLOWED.

ALL STEEL SHALL BE GALVANIZED. WELDS SHALL BE MADE WITH LOW HYDROGEN ELECTRODES.

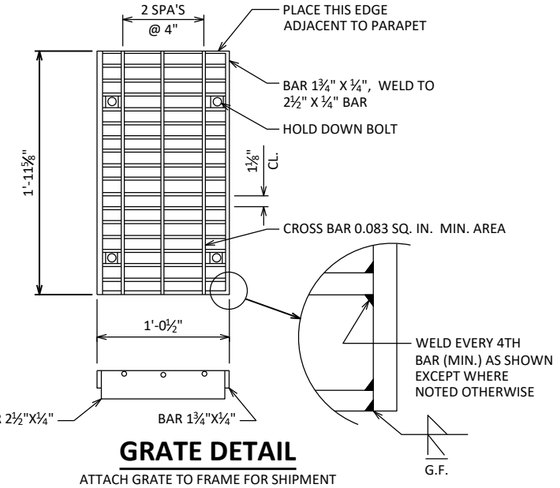
ALL MATERIAL FOR FLOOR DRAINS TO BE INCLUDED IN THE BID ITEM "FLOOR DRAINS TYPE H".

ALL MATERIAL FOR DOWNSPOUTS, DOWNSPOUT CONNECTIONS, AND BRACKETS TO BE INCLUDED IN THE BID ITEM "DOWNSPOUT 6-INCH".

SEAL WELD INSIDE OF DRAIN.

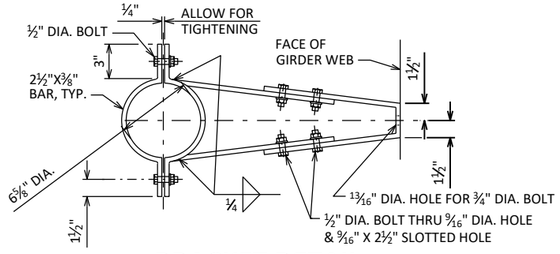
PRIOR TO GALVANIZING A NO. 6 BLAST CLEANING IS REQ'D.

◪ FLANGED 6" DIA. DOWNSPOUTS SHALL BE REINFORCED THERMOSETTING RESIN PIPE (RTRP) OR GALVANIZED STANDARD PIPE CONFORMING TO ASTM A53.

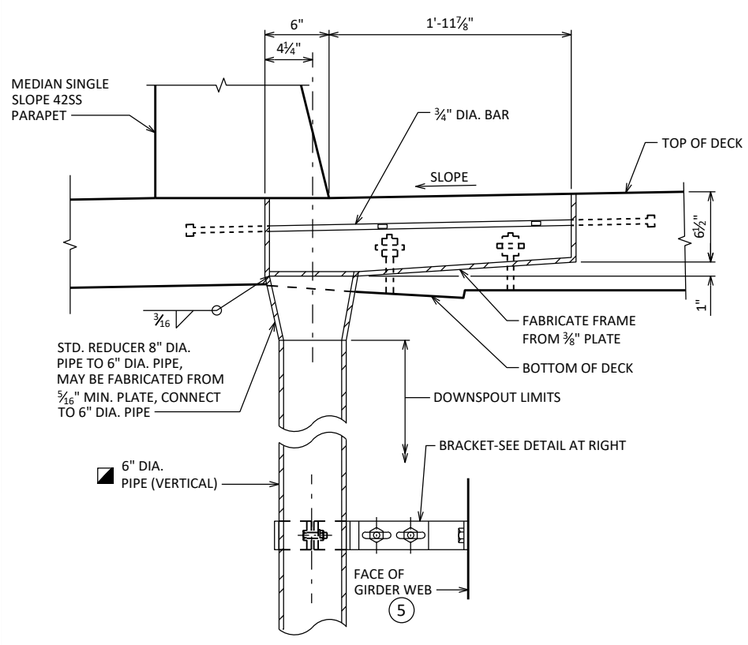



## GRATE DETAIL

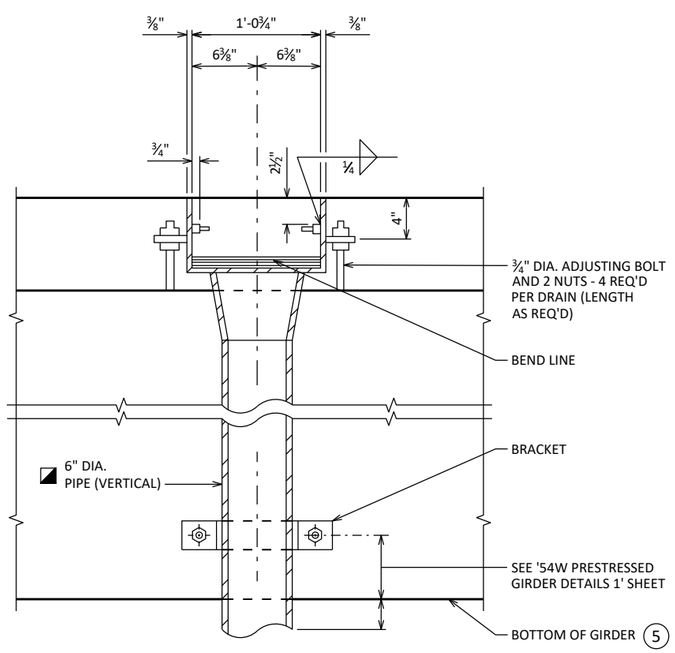
ATTACH GRATE TO FRAME FOR SHIPMENT




## BRACKET DETAIL




## SECTION A1




## SECTION A2

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**FLOOR DRAIN TYPE H**

SHEET 27 OF 43

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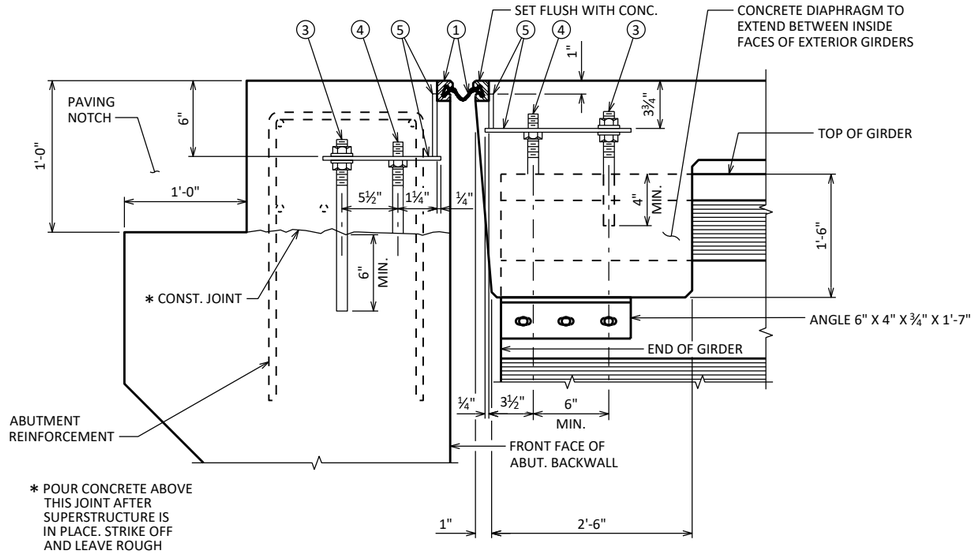
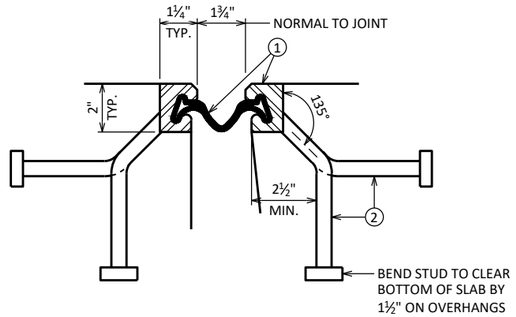


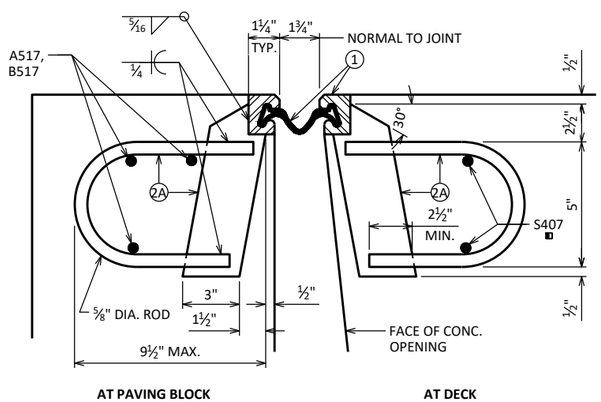

## SECTION THRU JOINT AT ABUTMENT

NORMAL TO C/L SUBSTRUCTURE



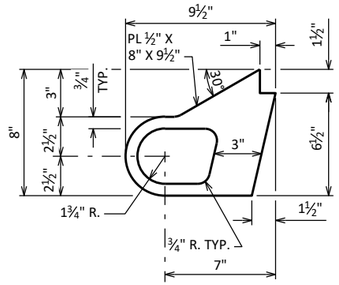

## SECTION THRU JOINT

EXTERIOR GIRDER TO NORTH EDGE OF DECK AND NORTH PARAPET, AND BTWN. MEDIAN PARAPET AND SOUTH EDGE OF DECK

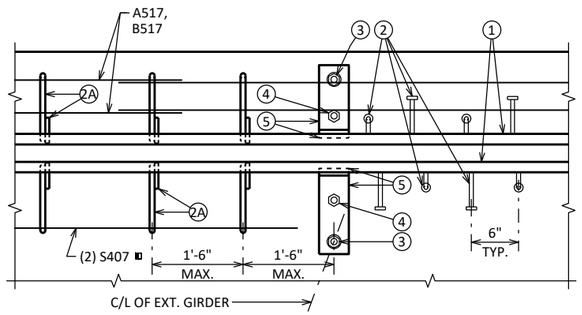



## SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS




## ALTERNATE STRIP SEAL ANCHOR




## PART PLAN

## LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON C/L OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
11. SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

◘ LAP S407 BAR 1'-8" MIN. BAR LAP TO BE CENTERED BETWEEN GIRDERS 3 AND 4.

## NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE B-9-309", LF.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**EXPANSION DEVICE**

SHEET 28 OF 43

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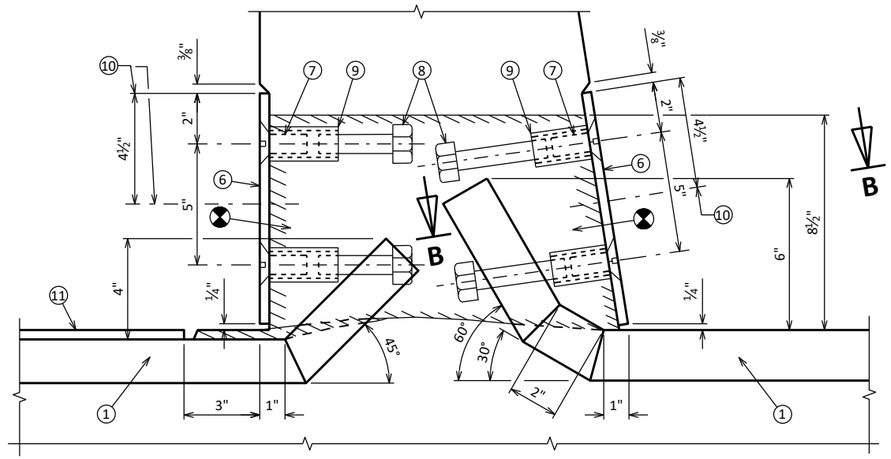
8

8

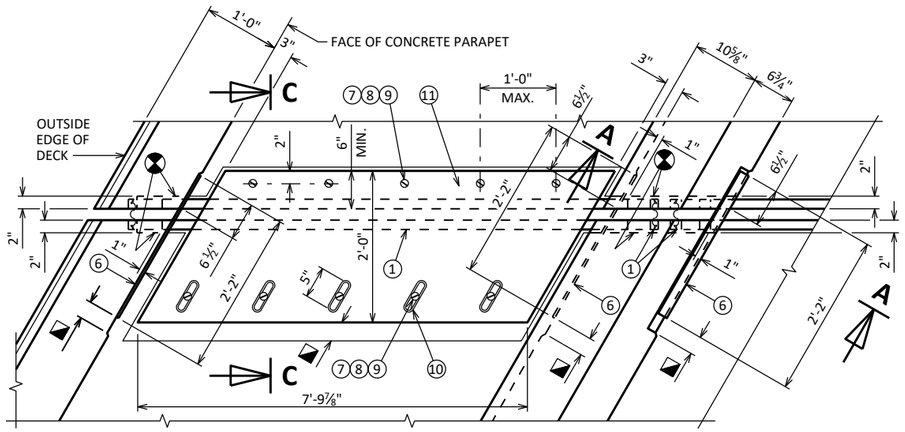
STATE PROJECT NUMBER

**1050-01-79**

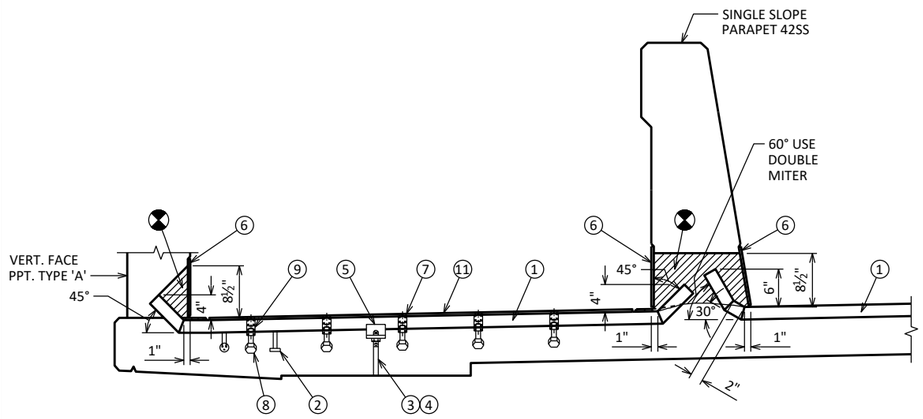



## SECTION A-A

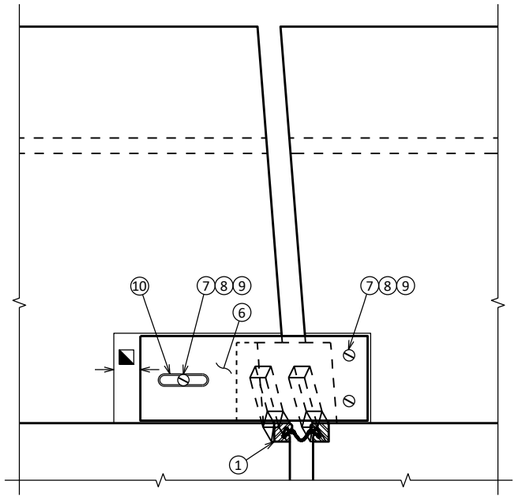
MEDIAN SINGLE SLOPE PARAPET
42SS




## PLAN AT SIDEWALK

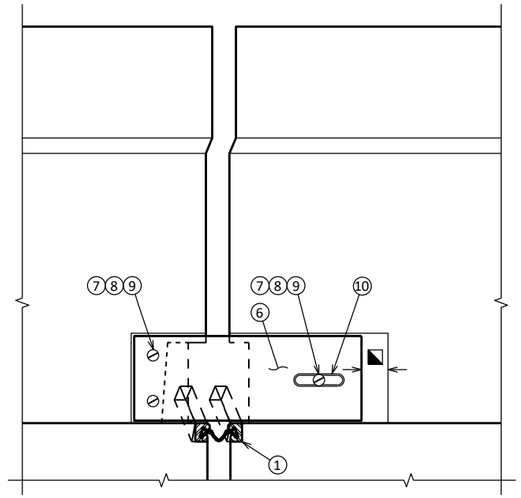



## SECTION AT SIDEWALK



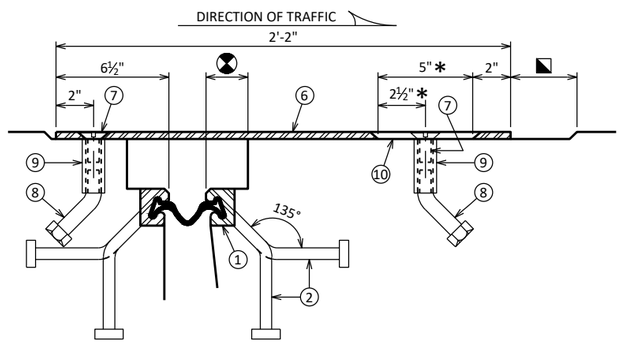

## VIEW OF PARAPET PLATE FROM ROADWAY

FOR SINGLE SLOPE PARAPET 42SS
ROADWAY FACE



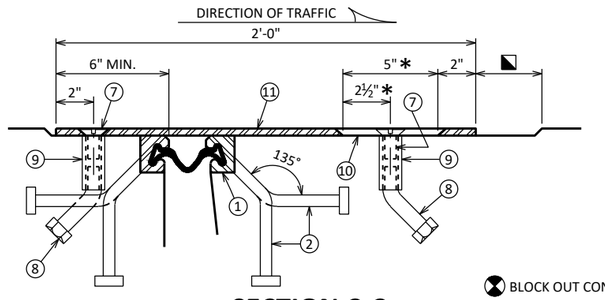

## VIEW OF PARAPET PLATE FROM SIDEWALK

FOR SINGLE SLOPE PARAPET 42SS
SIDEWALK FACE

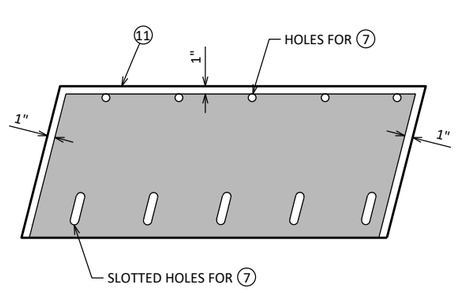



## SECTION B-B

* DIMENSION ALONG DIRECTION OF MOVEMENT




## SECTION C-C




## PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP
WALKING SURFACE IN SHADED AREA ONLY.

| APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES | | |
|---|---|---|
| PRODUCT | MANUFACTURER | CONTACT AT |
| SLIPNOT GRADE 2, STEEL | W. S. MOLNAR COMPANY | 1-800-SLIPNOT |
| ALGRIP, STEEL | ROSS TECHNOLOGY CORP. | 1-800-345-8170 |

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

REFERENCE LEGEND ON "EXPANSION DEVICE" SHEET FOR KEY NOTES.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**COVER PLATES AT SIDEWALK**

SHEET 29 OF 43

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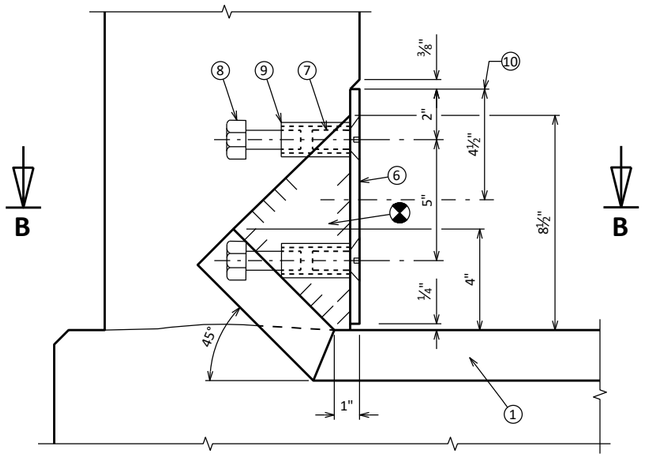
8

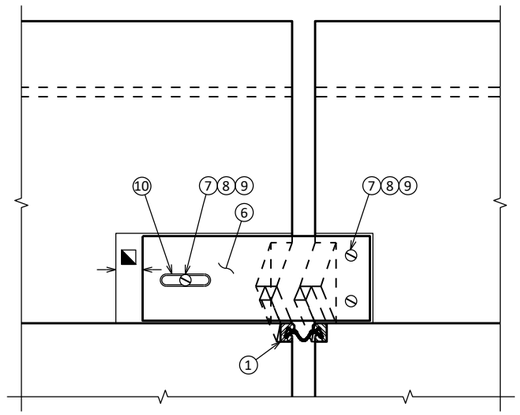
8

STATE PROJECT NUMBER

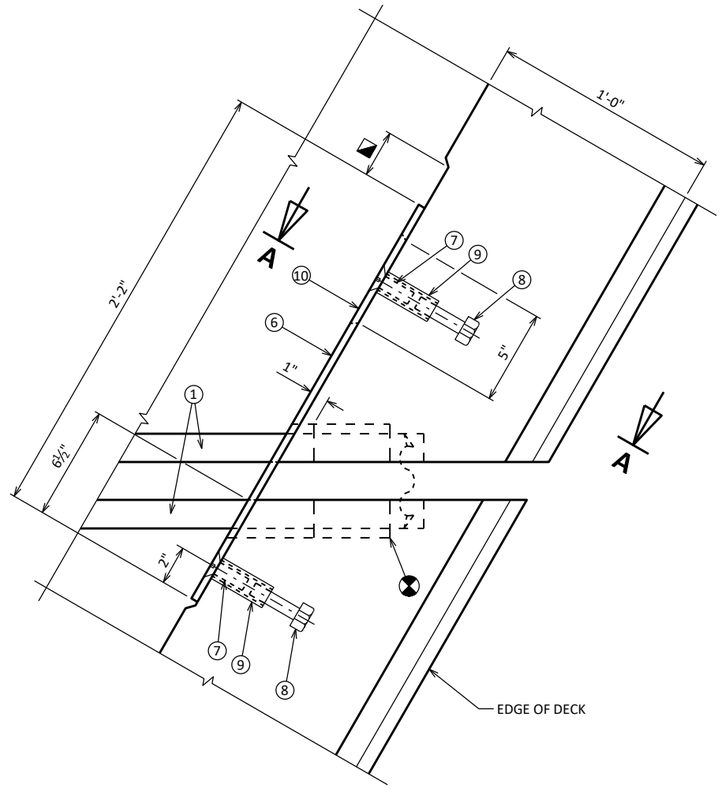
**1050-01-79**



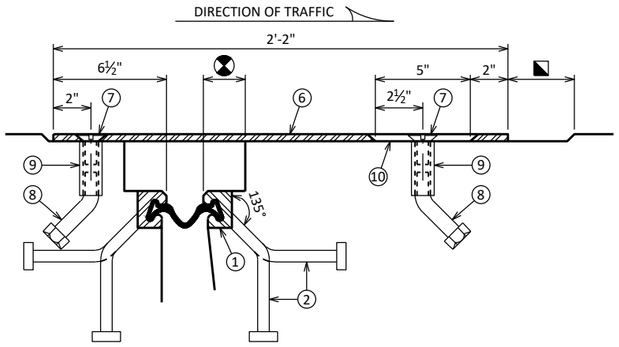

**SECTION A-A**




**VIEW OF PARAPET PLATE FROM INSIDE FACE**




**PLAN**




**SECTION B-B**

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

REFERENCE LEGEND ON "EXPANSION DEVICE" SHEET FOR KEY NOTES.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**PARAPET 'A' COVER PLATE DETAILS**

SHEET 30 OF 43

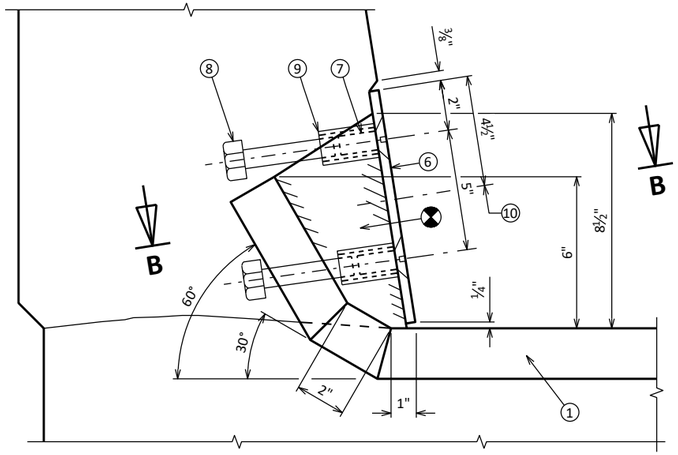
222

8

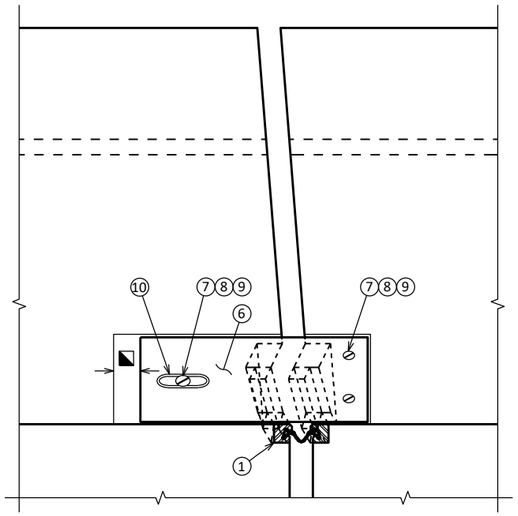
8

STATE PROJECT NUMBER

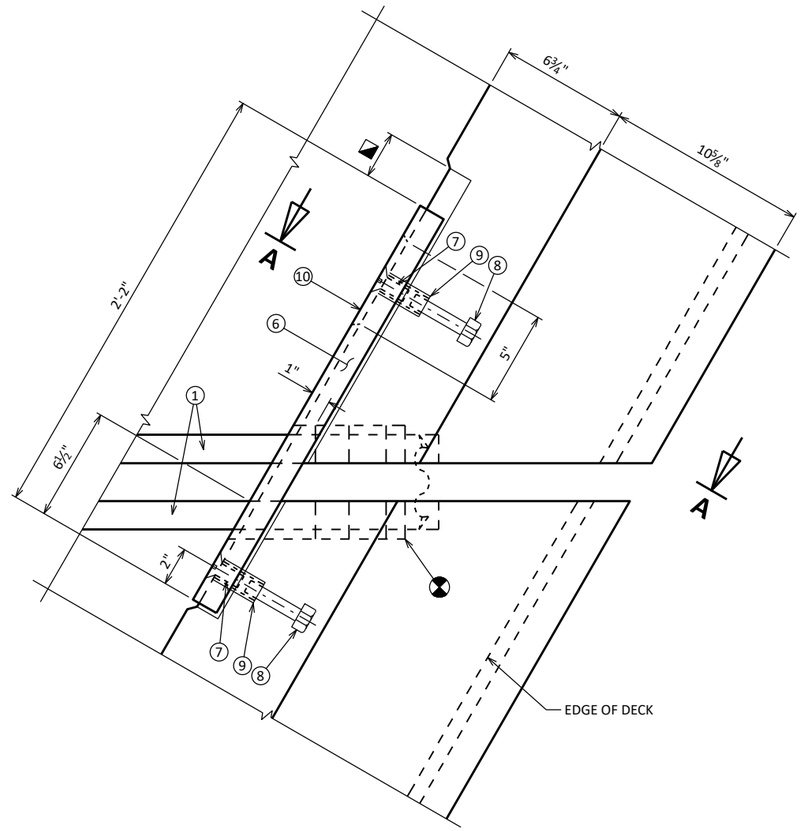
**1050-01-79**



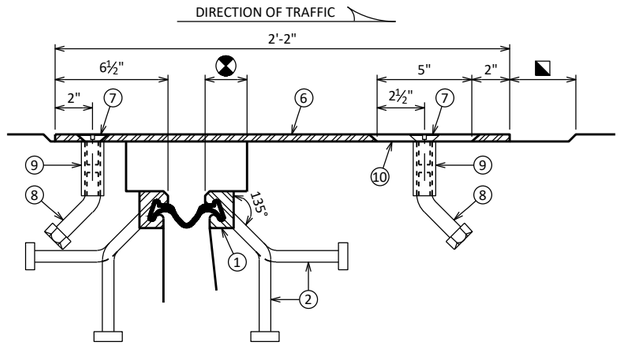

**SECTION A-A**




**VIEW OF PARAPET PLATE FROM ROADWAY**




**PLAN**




**SECTION B-B**

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

REFERENCE LEGEND ON "EXPANSION DEVICE" SHEET FOR KEY NOTES.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SHOULDER 42SS PARAPET COVER PLATE DETAILS**

SHEET 31 OF 43

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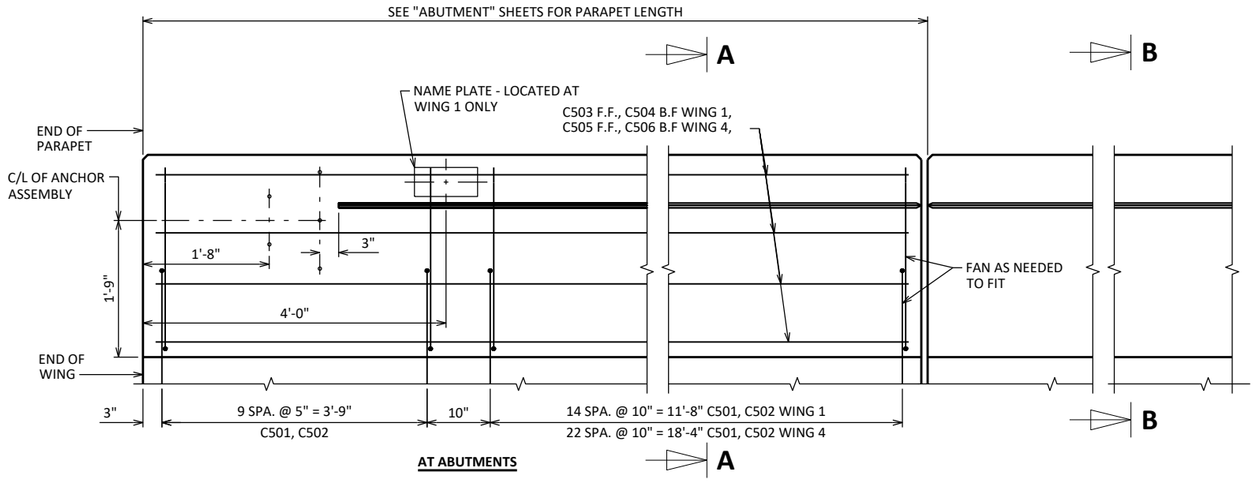
8

8

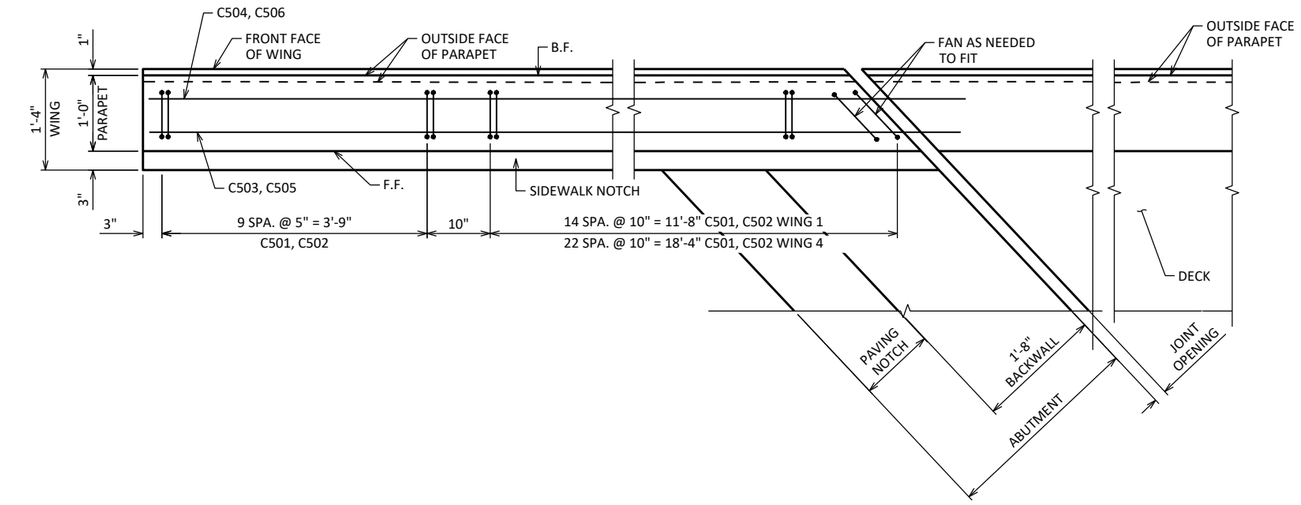
STATE PROJECT NUMBER

**1050-01-79**

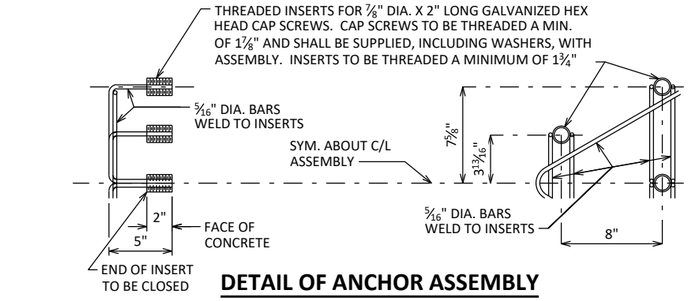



**AT ABUTMENTS**

## INSIDE ELEVATION OF PARAPET



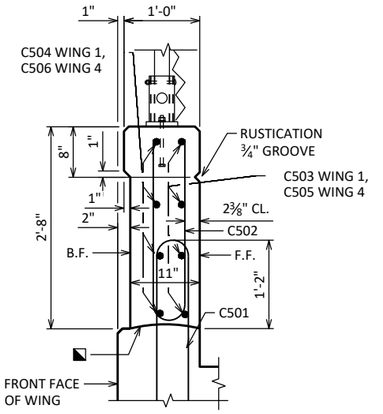

## PLAN OF PARAPET



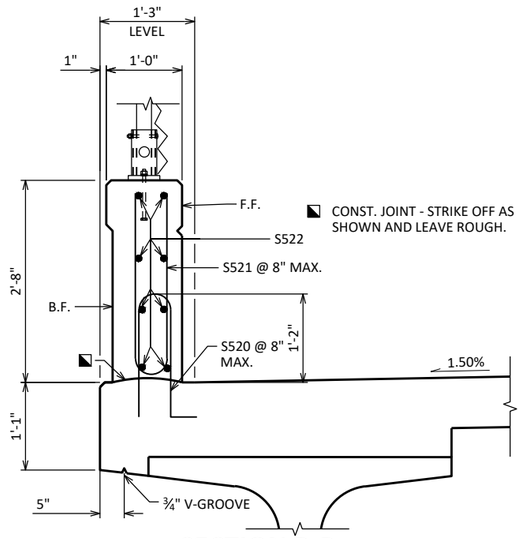

## DETAIL OF ANCHOR ASSEMBLY

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

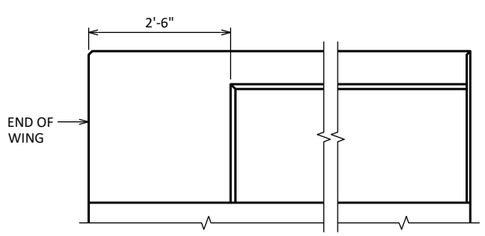
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



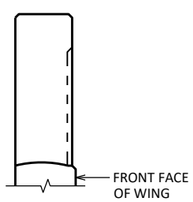

## SECTION A-A



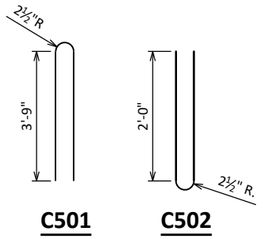

## SECTION B-B




## OUTSIDE FACE OF PARAPET




## END VIEW




**C501** **C502**

## BILL OF BARS

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

| BAR MARK | COAT | W. ABUT. | E. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|---|
| C501 | X | 25 | 33 | 6'-0" | X | | PARAPET VERT. |
| C502 | X | 25 | 33 | 4'-9" | X | | PARAPET VERT. |
| C503 | X | 4 | 0 | 15'-9" | | | PARAPET HORIZ. WING 1 F.F. |
| C504 | X | 4 | 0 | 16'-8" | | | PARAPET HORIZ. WING 1 B.F. |
| C505 | X | 0 | 4 | 23'-5" | | | PARAPET HORIZ. WING 4 F.F. |
| C506 | X | 0 | 4 | 22'-4" | | | PARAPET HORIZ. WING 4 B.F. |

420# COATED W. ABUT.
570# COATED E. ABUT.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**VERTICAL FACE PARAPET "A"**

SHEET 32 OF 43

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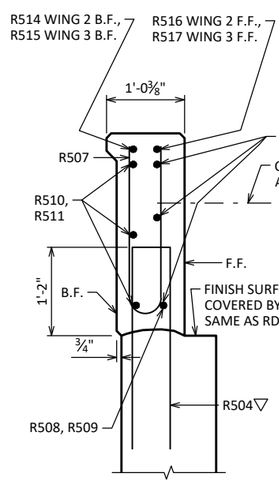
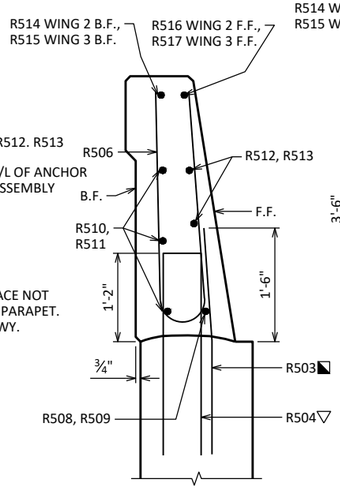
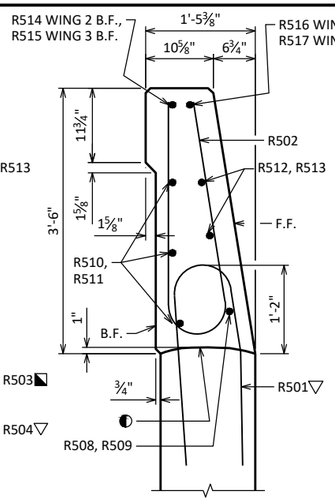
SCALE =



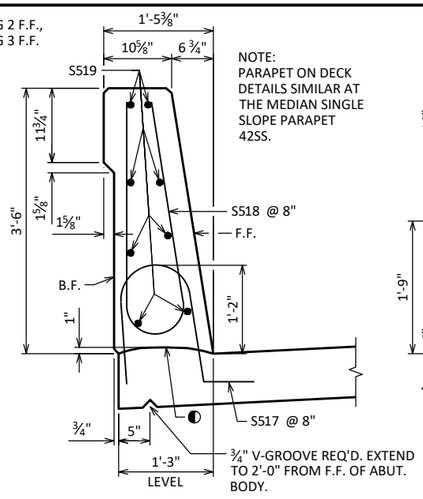

## SECTION A-A




## SECTION B-B

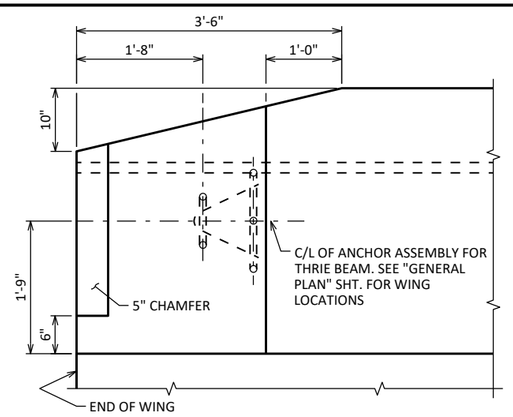



## SECTION C-C




NOTE:
PARAPET ON DECK DETAILS SIMILAR AT THE MEDIAN SINGLE SLOPE PARAPET 42SS.

## SECTION THRU PARAPET ON DECK




## PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

## BILL OF BARS

FOR WING PARAPETS

| BAR MARK | COAT | W. ABUT. | E. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|---|
| R501 | X | 23 | 13 | 5'-10" | X | | PARAPET VERT. |
| R502 | X | 23 | 13 | 6'-8" | X | | PARAPET VERT. |
| R503 | X | 11 | 11 | 3'-0" | X | | PARAPET VERT. |
| R504 | X | 17 | 17 | 5'-7" | X | | PARAPET VERT. |
| R505 | X | 5 | 5 | 6'-5" | X | | PARAPET VERT. |
| R506 | X | 6 | 6 | 6'-6" | X | | PARAPET VERT. |
| R507 | X | 6 | 6 | 5'-5" | X | ⚠ | PARAPET VERT. |
| R508 | X | 1 | 0 | 23'-4" | X | | PARAPET HORIZ. W. 2 F.F. |
| R509 | X | 0 | 1 | 15'-6" | X | | PARAPET HORIZ. W. 3 F.F. |
| R510 | X | 3 | 0 | 22'-2" | | | HORIZ. WING 2 B.F. |
| R511 | X | 0 | 3 | 16'-8" | | | HORIZ. WING 3 B.F. |
| R512 | X | 2 | 0 | 22'-5" | | | HORIZ. WING 2 F.F. |
| R513 | X | 0 | 2 | 16'-6" | | | HORIZ. WING 3 F.F. |
| R514 | X | 1 | 0 | 23'-5" | X | | HORIZ. WING 2 B.F. TOP |
| R515 | X | 0 | 1 | 15'-7" | X | | HORIZ. WING 3 B.F. TOP |
| R516 | X | 1 | 0 | 22'-4" | X | | HORIZ. WING 2 F.F. TOP |
| R517 | X | 0 | 1 | 16'-5" | X | | HORIZ. WING 3 F.F. TOP |

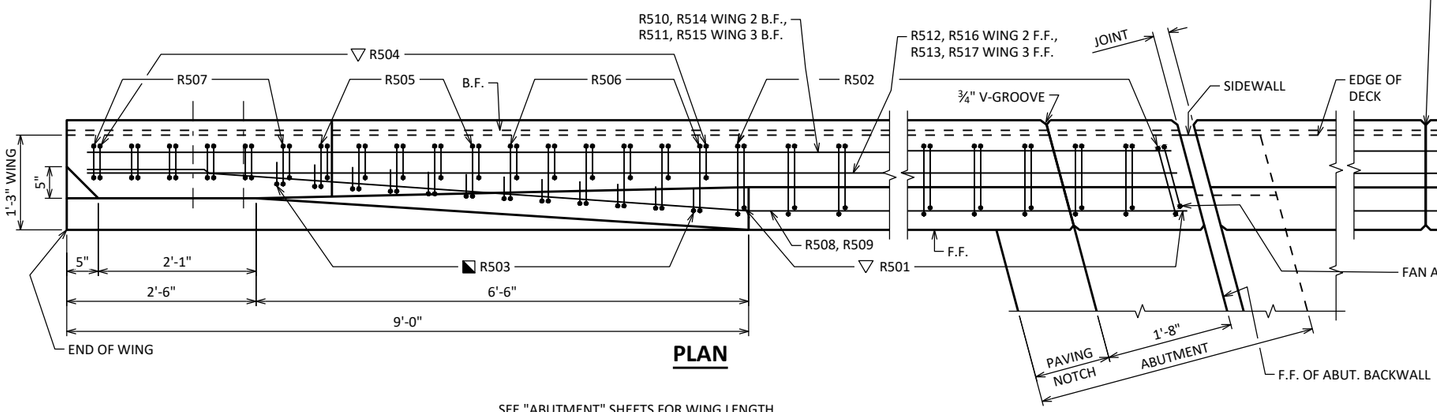
740# COATED W. ABUT.
560# COATED E. ABUT.

## BAR SERIES TABLE

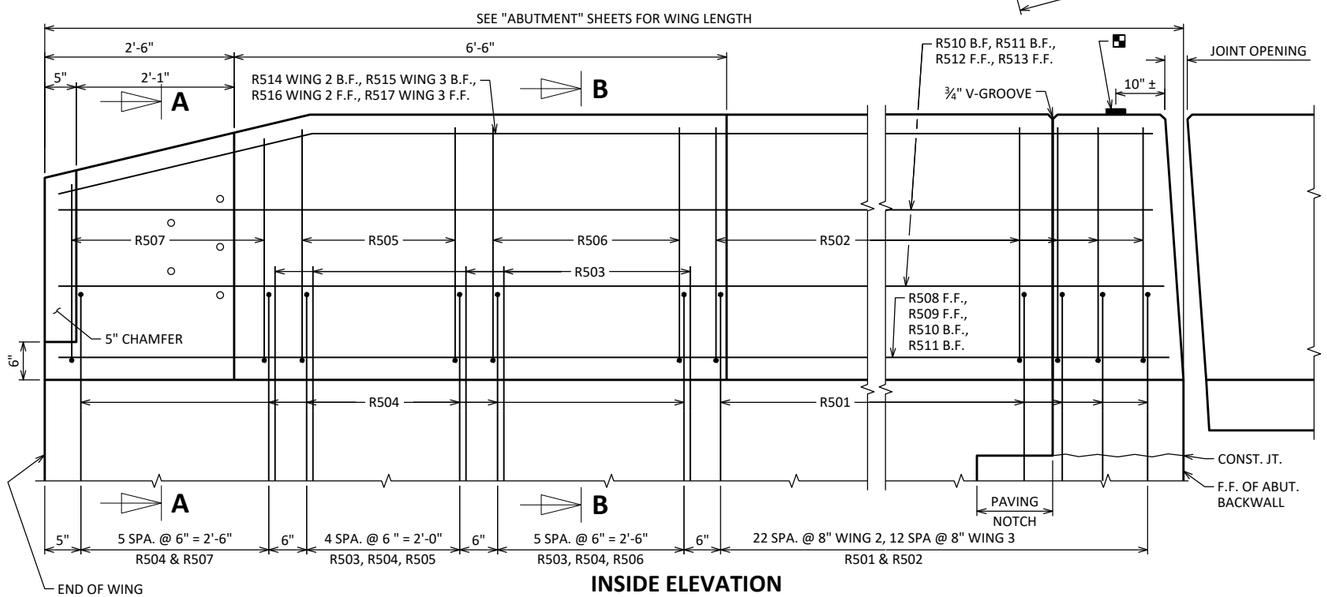
BUNDLE AND TAG EACH SERIES SEPARATELY.

| BAR MARK | NO. REQ'D. | LENGTH |
|---|---|---|
| R507 | 2 SERIES OF 6 | 4'-9" TO 6'-1" |

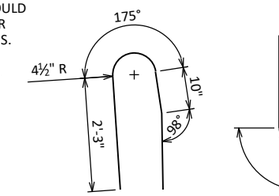
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



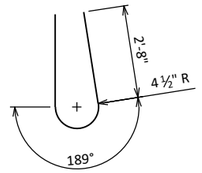

## PLAN



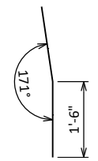

## INSIDE ELEVATION



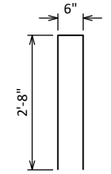

## R501



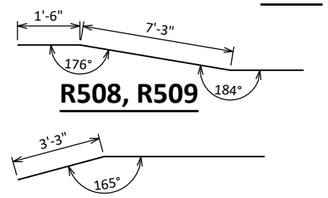

## R502




## R503



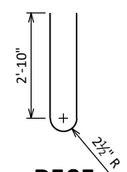

## R504



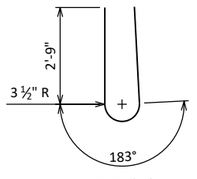

## R508, R509



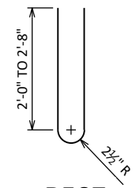

## R514, R515, R516, R517




## R505

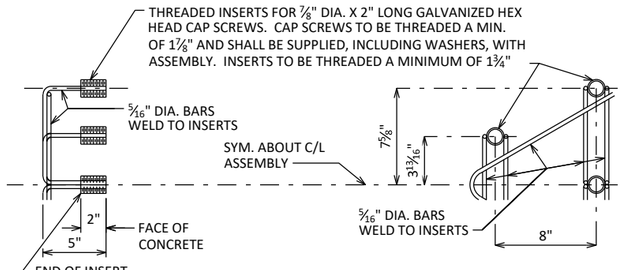



## R506




## R507

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




## DETAIL OF ANCHOR ASSEMBLY

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

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

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER

**1050-01-79**

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SINGLE SLOPE PARAPET 42SS**

SHEET 33 OF 43

225

SCALE =

8

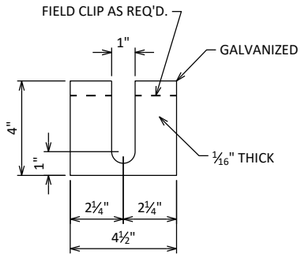
8

STATE PROJECT NUMBER

**1050-01-79**

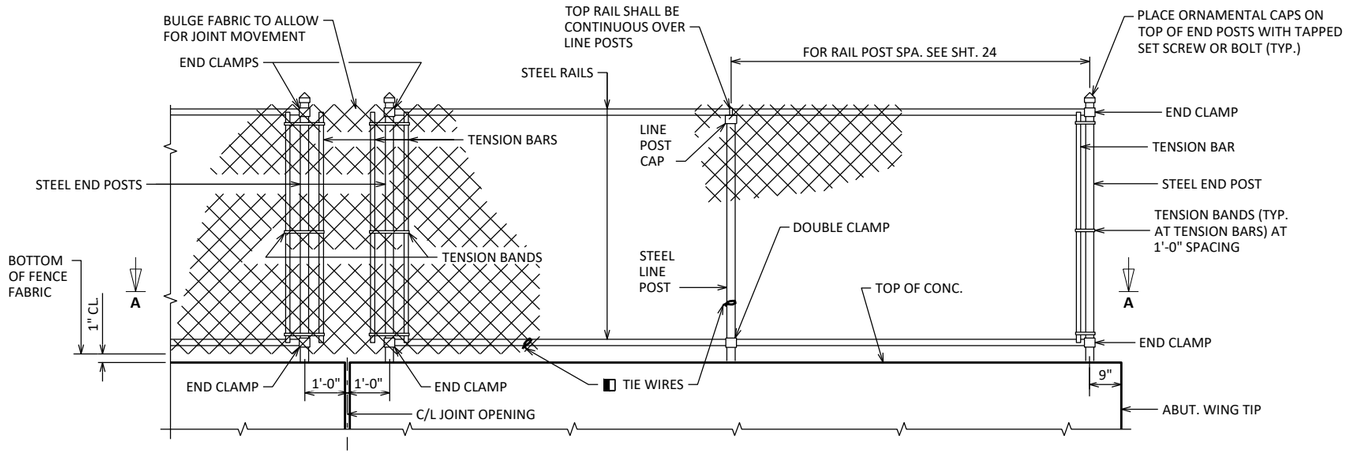
## FENCE MEMBER SIZE & WEIGHT

| STEEL FENCE MEMBER | OUTSIDE DIAMETER (INCHES) | WEIGHT (LB/FT) |
|---|---|---|
| RAILS | 1.660 | 2.27 |
| END POST | 2.875 | 5.80 |
| OVERHANG POST | 2.875 | 5.80 |
| LINE POST | 2.375 | 3.65 |
| POST SLEEVE | 4.000 | 9.12 |

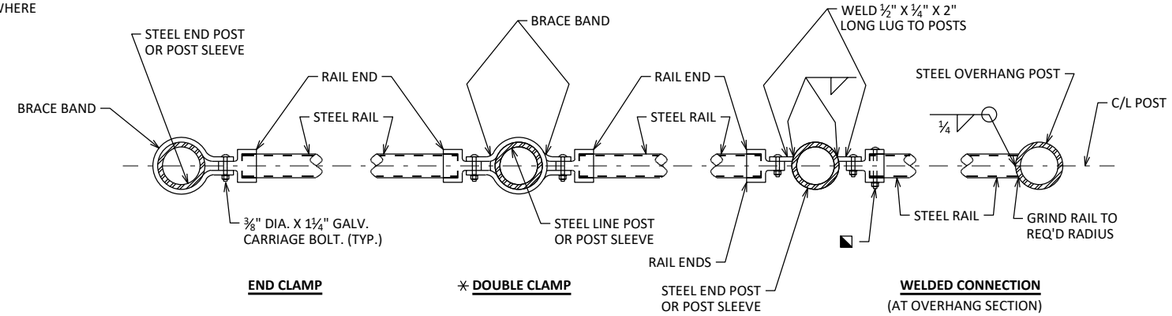



## POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.

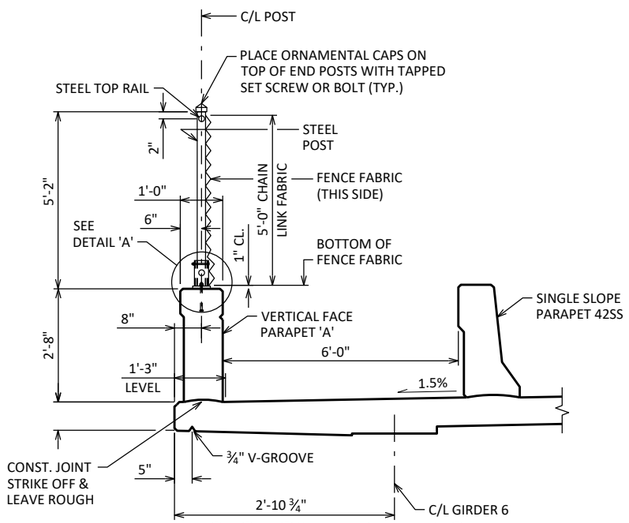



## FENCE PART ELEVATION

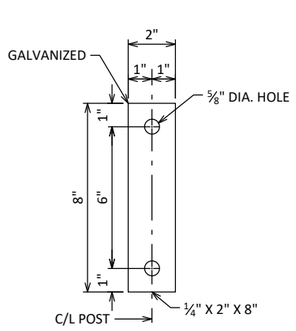



## SECTION A-A

NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS

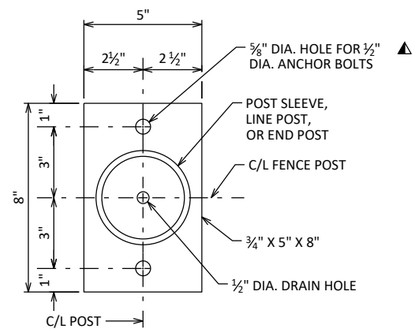



## SECTION THRU FENCE

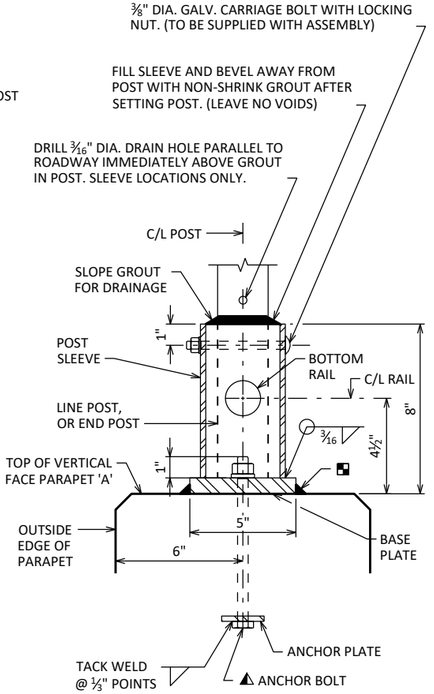



## ANCHOR PLATE

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




## BASE PLATE




## DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

## NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER- COATED 5- FT. B-9-309".

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

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

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

▪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

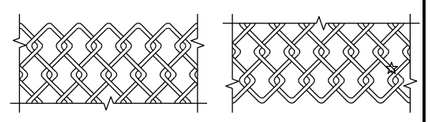
✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

◭ ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

☆ ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ½-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

◧ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR ¼ POINT OF POST SPACING.



**TOP DETAIL** **BOTTOM DETAIL**

## FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**FENCING DETAILS**

SHEET 34 OF 43

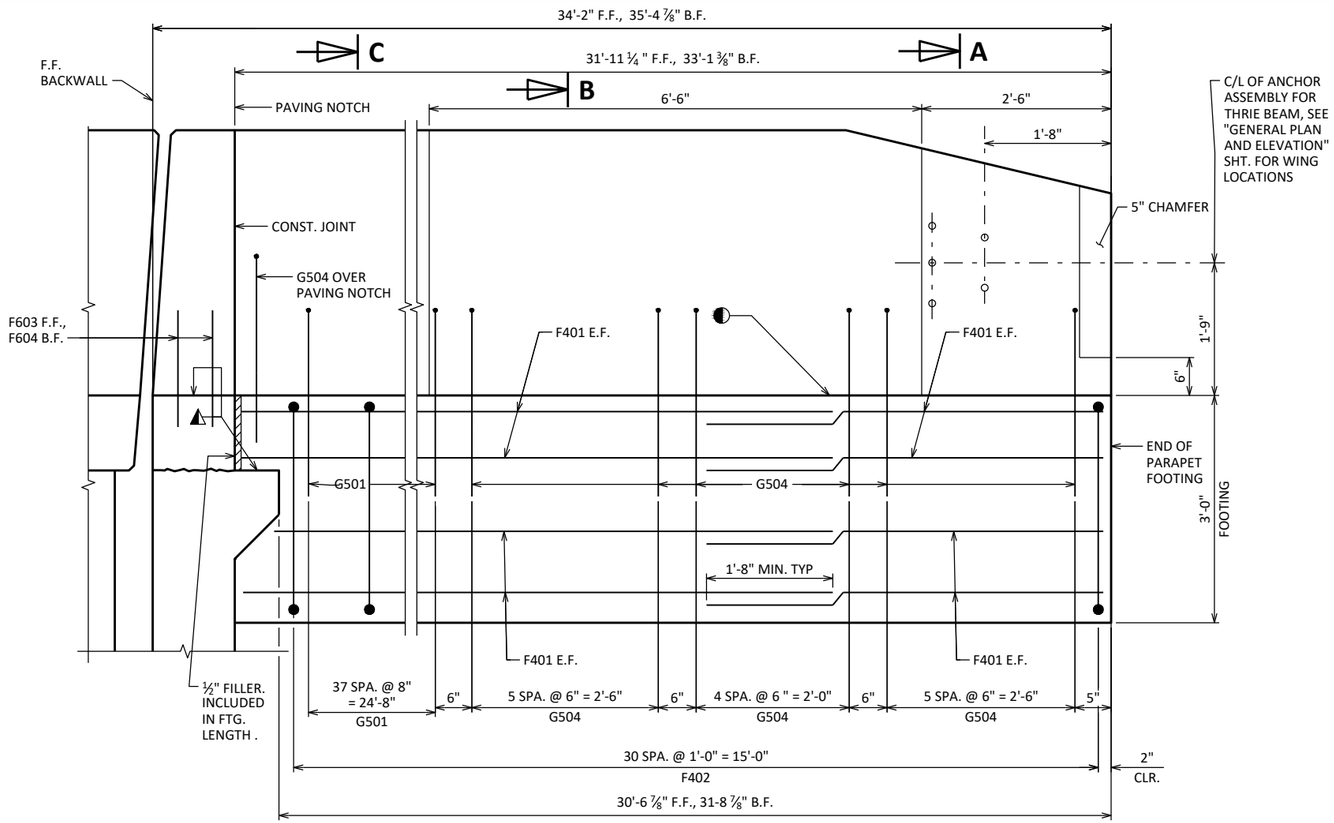
226

8

8

STATE PROJECT NUMBER

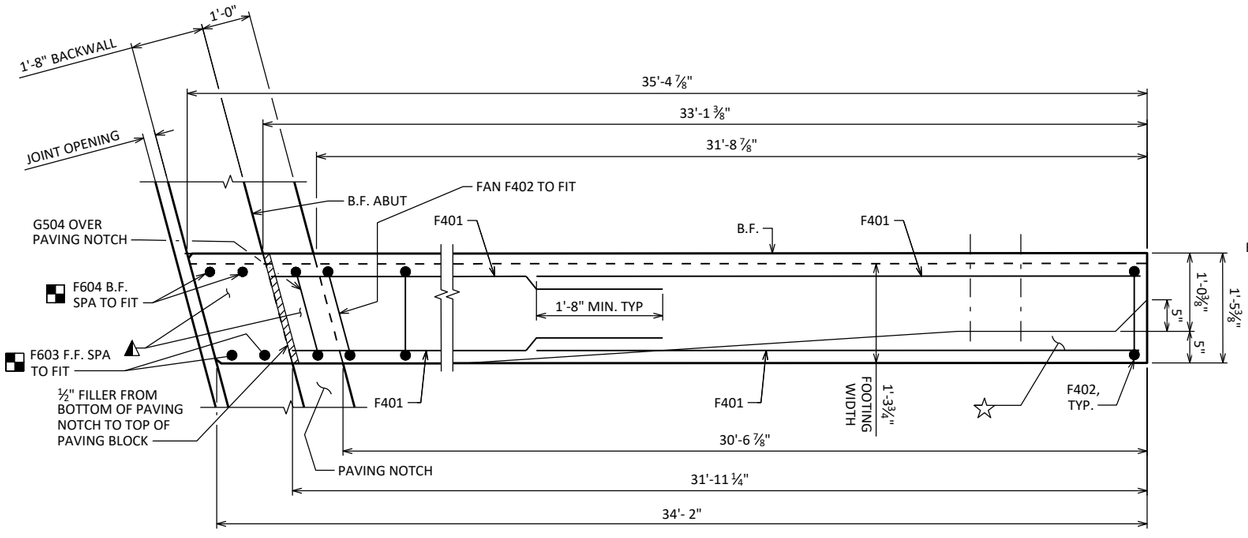
**1050-01-79**



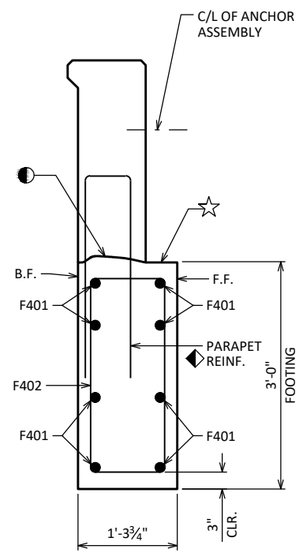

## INSIDE ELEVATION

LOOKING SOUTH AT F.F.

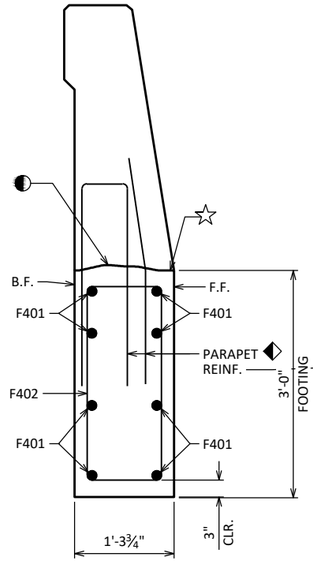
NOTE: SEE G501 AND G504 DETAILS ON "W. ABUT. FOOTING PARAPET" SHEET



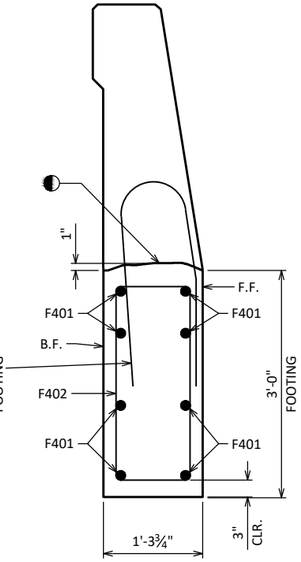

## PLAN



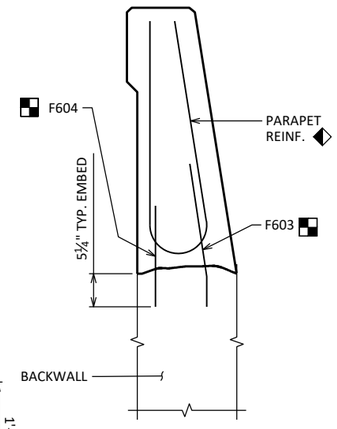

## SECTION A-A



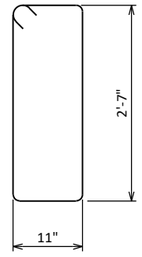

## SECTION B-B




## SECTION C-C




## ADHESIVE ANCHOR CONNECTION AT BACKWALL

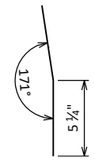



## F402

## BILL OF BARS

FOR W. PARAPET FOOTING — 350# COATED

| BAR MARK | COAT | WEST ABUT. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| F401 | X | 16 | 17'-4" | | | W. PARAPET FOOTING E.F. |
| F402 | X | 31 | 7'-6" | X | | W. PARAPET FOOTING |
| F603 | X | 2 | 2'-0" | X | | W. PARAPET ANCHOR F.F. |
| F404 | X | 2 | 1'-4" | | | W. PARAPET ANCHOR B.F. |




## F603

## NOTE

PARAPET SHOWN FOR INFORMATION ONLY. SEE "W. ABUT. FOOTING PARAPET" SHEET FOR PARAPET DETAILS AND REINFORCEMENT.

- STEEL TROWEL HORIZ. SURFACE OF ABUTMENT PAVING NOTCH. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS BETWEEN PARAPET FOOTING AND HORIZ. SURFACE OF PAVING NOTCH. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".
- CONSTR. JOINT - STRIKE OFF AS SHOWN
- SEE "W. ABUT. FOOTING PARAPET" SHEET.
- FINISH SURFACE NOT COVERED BY PARAPET SAME AS ROADWAY
- ADHESIVE ANCHOR #6 BAR, EXTEND 5 1/4" INTO BACKWALL CONCRETE. MAINTAIN A MINIMUM 2" EDGE DISTANCE. SPACE ANCHORS TO MISS EXISTING BACKWALL REINFORCEMENT.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**W. ABUT. PARAPET FOOTING**

SHEET 35 OF 43

227

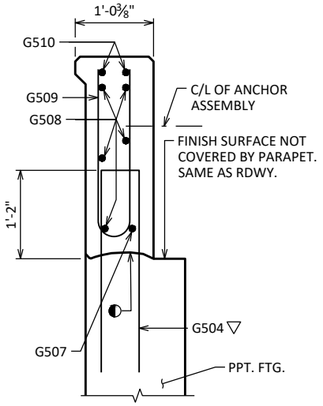
SCALE = 2

8

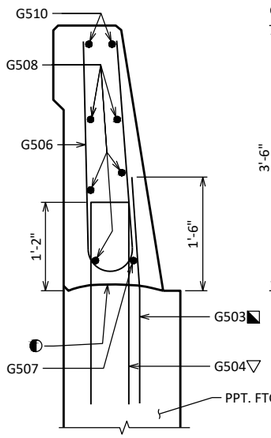
8

STATE PROJECT NUMBER

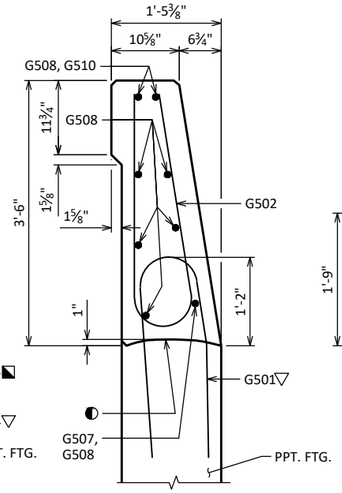
**1050-01-79**



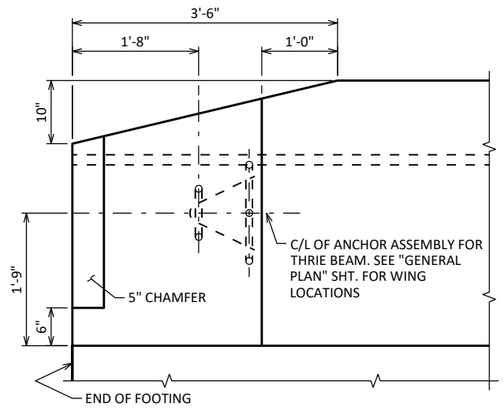

**SECTION A-A**




**SECTION B-B**

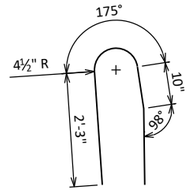



**SECTION C-C**

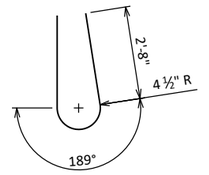



**PARAPET END TREATMENT DETAIL**

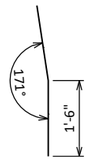
LOOKING AT INSIDE FACE OF PARAPET



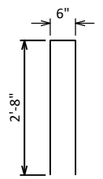

**G501**



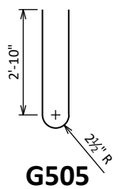

**G502**




**G503**




**G504**




**G505**

## BILL OF BARS

FOR W. ABUT. FTG. PARAPET

1,030# COATED

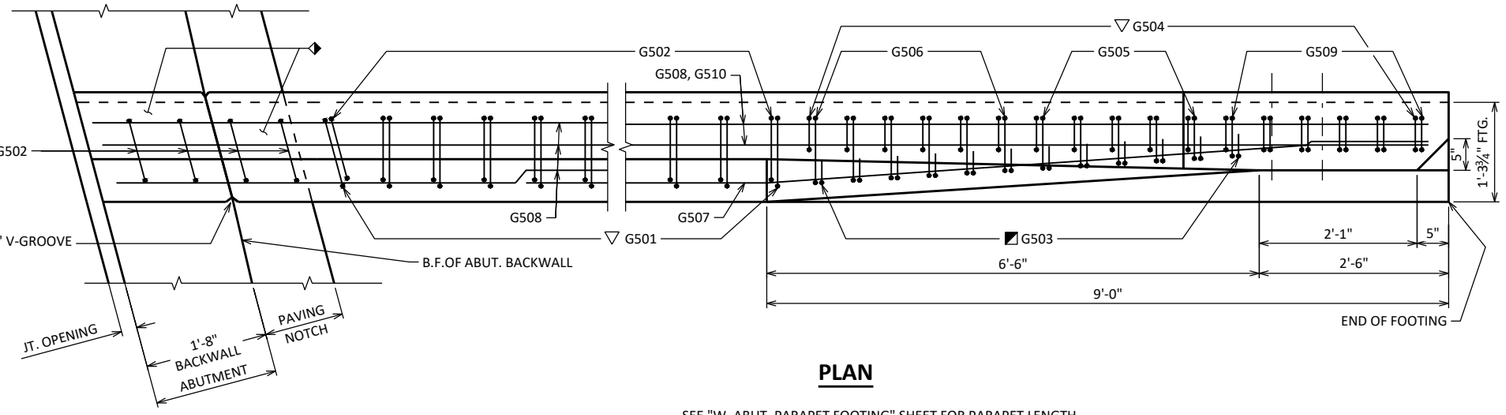
| BAR MARK | COAT | W. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| G501 | X | 38 | 5'-10" | X | | W. PARAPET VERT. |
| G502 | X | 33 | 6'-8" | X | | W. PARAPET VERT. |
| G503 | X | 11 | 3'-0" | X | | W. PARAPET VERT. |
| G504 | X | 18 | 5'-7" | X | | W. PARAPET VERT. |
| G505 | X | 5 | 6'-5" | X | | W. PARAPET VERT. |
| G506 | X | 6 | 6'-6" | X | | W. PARAPET VERT. |
| G507 | X | 1 | 18'-8" | X | | W. PARAPET HORIZ. |
| G508 | X | 13 | 18'-11" | | | W. PARAPET HORIZ. |
| G509 | X | 6 | 5'-5" | X | ⚠ | W. PARAPET VERT. |
| G510 | X | 2 | 18'-8" | X | | W. PARAPET HORIZ. |

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

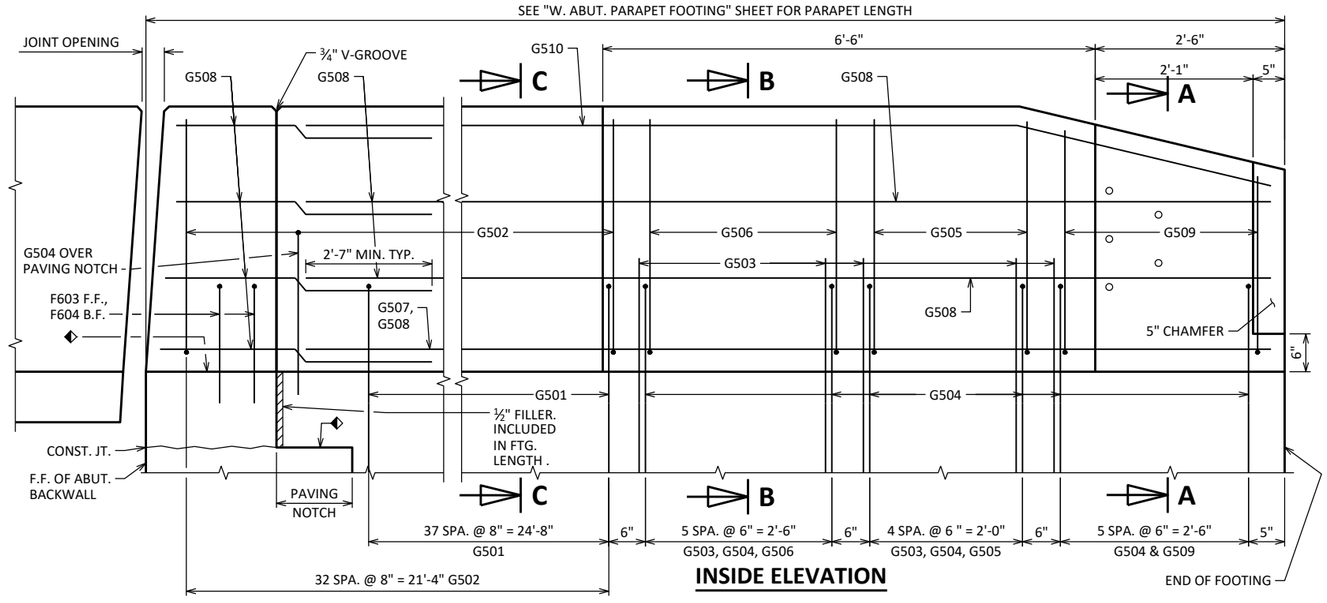
## BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

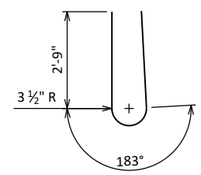
| BAR MARK | NO. REQ'D. | LENGTH |
|---|---|---|
| G509 | 1 SERIES OF 6 | 4'-9" TO 6'-1" |



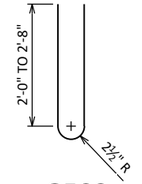

**PLAN**



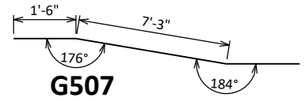

**INSIDE ELEVATION**



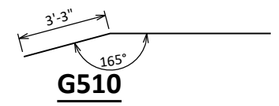

**G506**



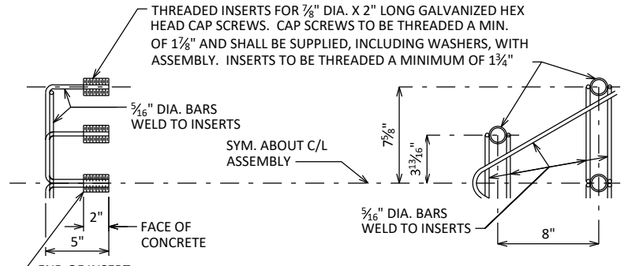

**G509**




**G507**




**G510**




**DETAIL OF ANCHOR ASSEMBLY**

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

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

## LEGEND

- ◆ STEEL TROWEL HORIZ. SURFACE OF ABUTMENT PAVING NOTCH. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS BETWEEN PARAPET FOOTING AND HORIZ. SURFACE OF PAVING NOTCH. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".
- ◐ CONST. JOINT - STRIKE OFF AS SHOWN
- ◪ G503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE G503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ G501 AND G504 BARS TO BE TIED TO FOOTING STEEL BEFORE FOOTING IS POURED.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**W. ABUT. FOOTING PARAPET**

SHEET 36 OF 43

228

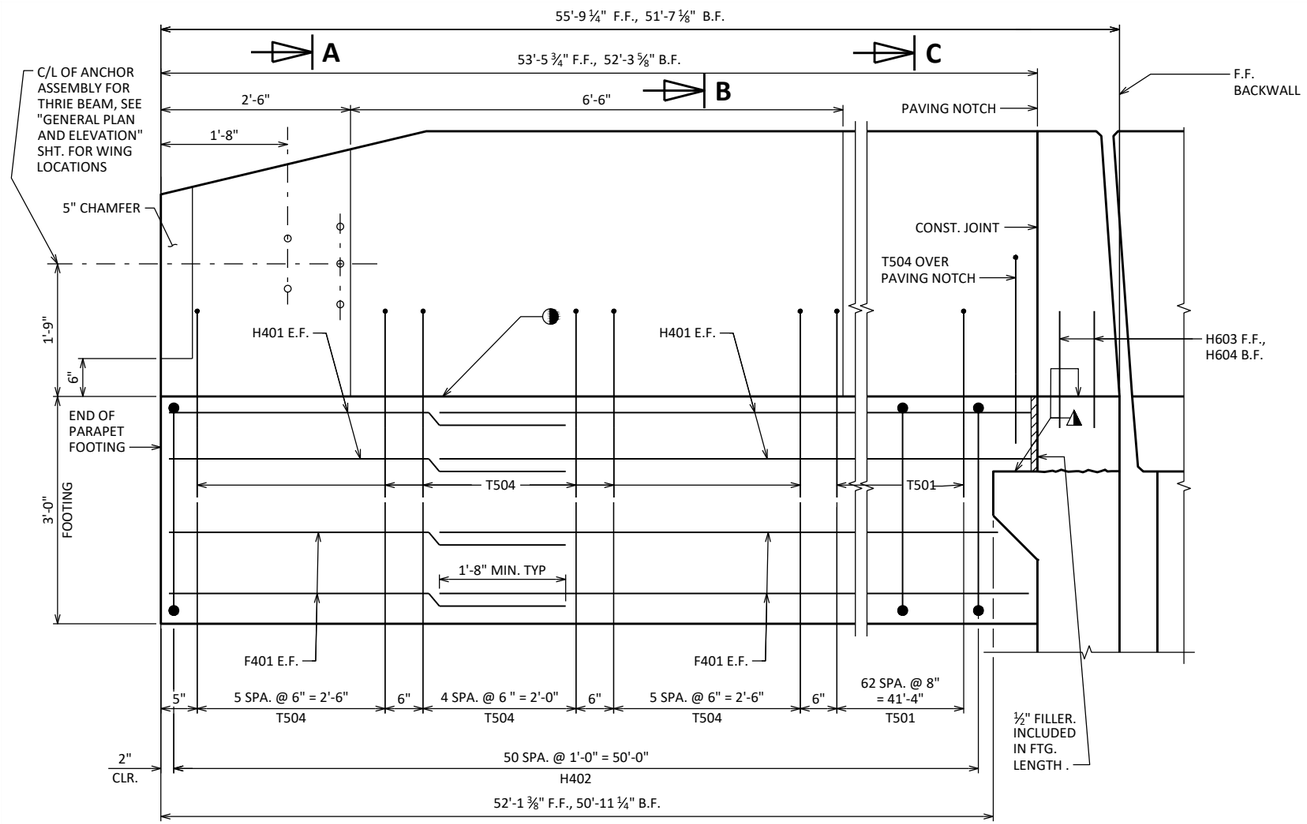
SCALE = 2

8

8

STATE PROJECT NUMBER

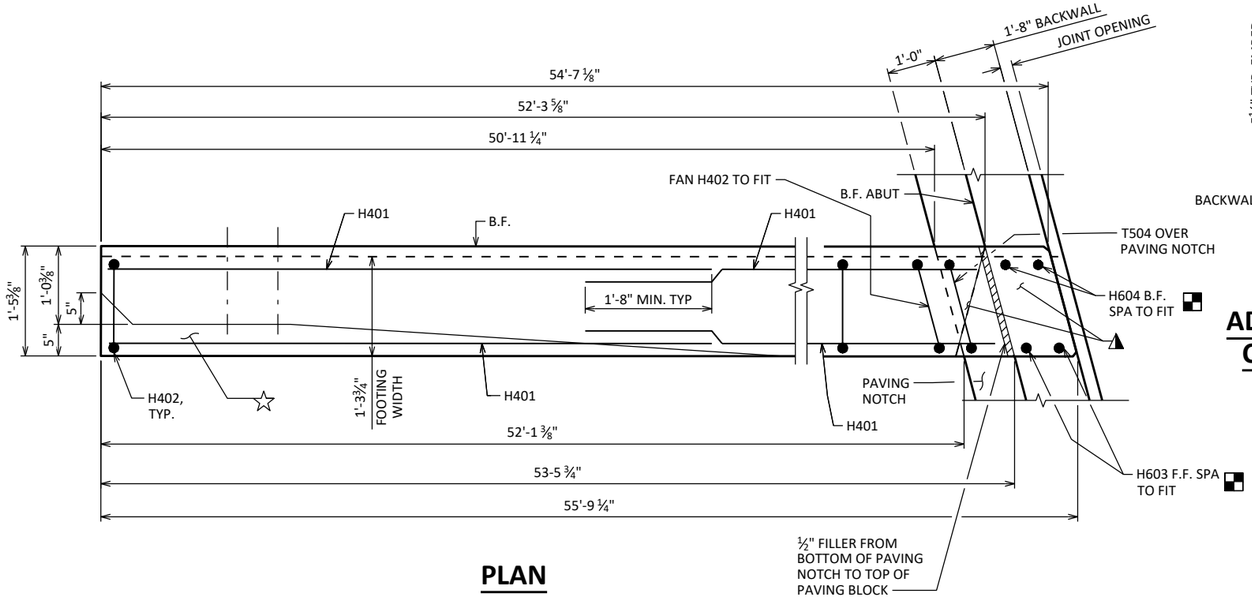
**1050-01-79**



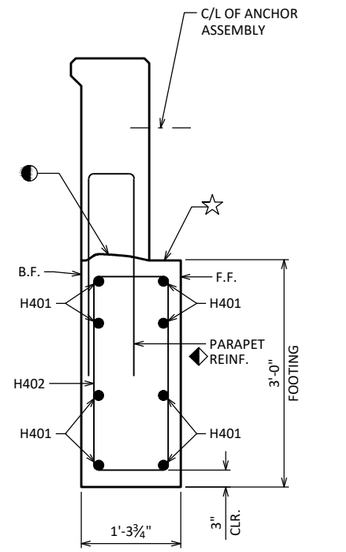

## INSIDE ELEVATION

LOOKING SOUTH AT F.F.

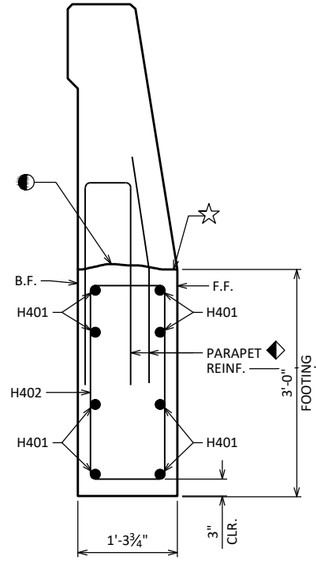
NOTE: SEE T501 AND T504 DETAILS ON "E. ABUT. FOOTING PARAPET" SHEET



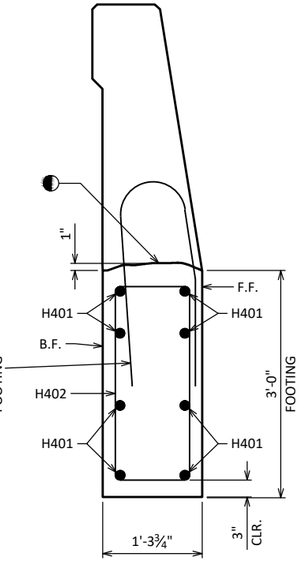

## PLAN



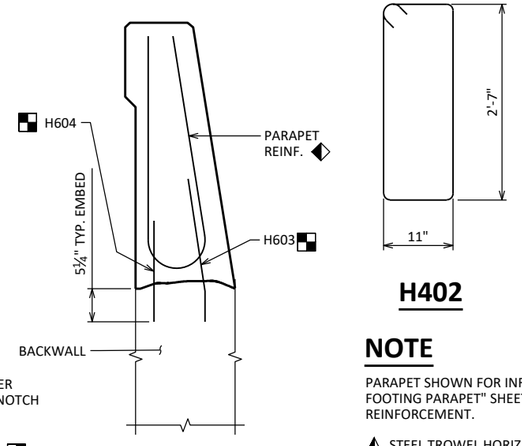

## SECTION A-A




## SECTION B-B




## SECTION C-C




## ADHESIVE ANCHOR CONNECTION AT BACKWALL



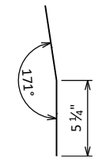

## H402

## BILL OF BARS

FOR E. PARAPET FOOTING

560# COATED

| BAR MARK | COAT | EAST ABUT. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| H401 | X | 16 | 27'-6" | | | E. PARAPET FOOTING E.F. |
| H402 | X | 51 | 7'-6" | X | | E. PARAPET FOOTING |
| H603 | X | 2 | 2'-0" | X | | E. PARAPET ANCHOR F.F. |
| H404 | X | 2 | 1'-4" | | | E. PARAPET ANCHOR B.F. |




## H603

## NOTE

PARAPET SHOWN FOR INFORMATION ONLY. SEE "W. ABUT. FOOTING PARAPET" SHEET FOR PARAPET DETAILS AND REINFORCEMENT.

▲ STEEL TROWEL HORIZ. SURFACE OF ABUTMENT PAVING NOTCH. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS BETWEEN PARAPET FOOTING AND HORIZ. SURFACE OF PAVING NOTCH. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

◐ CONSTR. JOINT - STRIKE OFF AS SHOWN

◆ SEE "W. ABUT. FOOTING PARAPET" SHEET.

☆ FINISH SURFACE NOT COVERED BY PARAPET SAME AS ROADWAY

■ ADHESIVE ANCHOR #6 BAR, EXTEND 5 ¼" INTO BACKWALL CONCRETE. MAINTAIN A MINIMUM 2" EDGE DISTANCE. SPACE ANCHORS TO MISS EXISTING BACKWALL REINFORCEMENT.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**E. ABUT. PARAPET FOOTING**

SHEET 37 OF 43

229

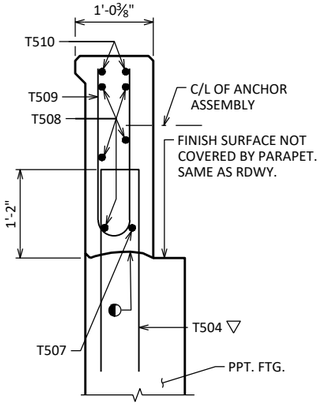
SCALE = 2

8

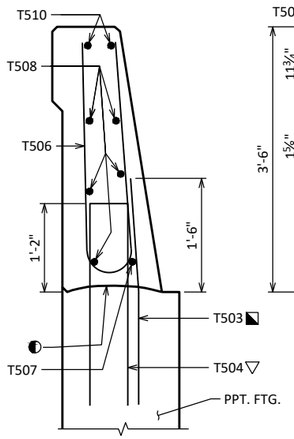
8

STATE PROJECT NUMBER

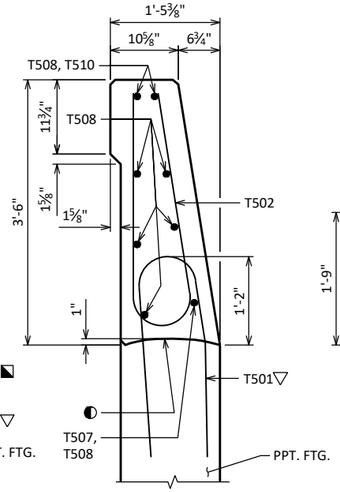
**1050-01-79**



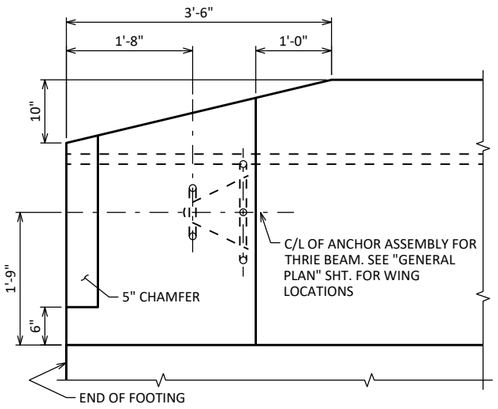

## SECTION A-A




## SECTION B-B

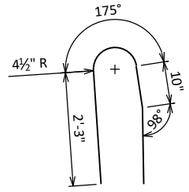



## SECTION C-C

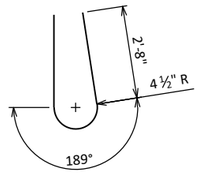



## PARAPET END TREATMENT DETAIL

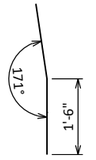
LOOKING AT INSIDE FACE OF PARAPET



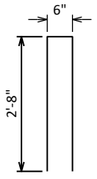

## T501



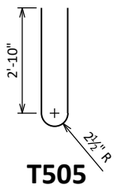

## T502




## T503




## T504




## T505

## BILL OF BARS

FOR E. ABUT. FTG. PARAPET

1,600# COATED

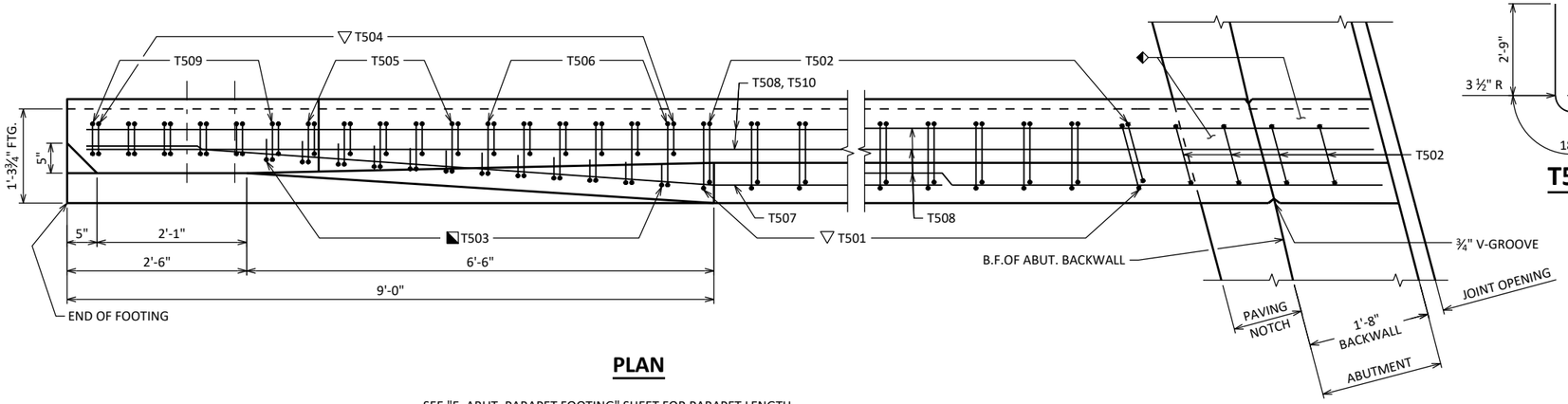
| BAR MARK | COAT | W. ABUT. | LENGTH | BENT | BAR SERIES | LOCATION |
|---|---|---|---|---|---|---|
| T501 | X | 62 | 5'-10" | X | | E. PARAPET VERT. |
| T502 | X | 69 | 6'-8" | X | | E. PARAPET VERT. |
| T503 | X | 11 | 3'-0" | X | | E. PARAPET VERT. |
| T504 | X | 18 | 5'-7" | X | | E. PARAPET VERT. |
| T505 | X | 5 | 6'-5" | X | | E. PARAPET VERT. |
| T506 | X | 6 | 6'-6" | X | | E. PARAPET VERT. |
| T507 | X | 1 | 28'-10" | X | | E. PARAPET HORIZ. |
| T508 | X | 13 | 29'-1" | | | E. PARAPET HORIZ. |
| T509 | X | 6 | 5'-5" | X | ⚠ | E. PARAPET VERT. |
| T510 | X | 2 | 28'-10" | X | | E. PARAPET HORIZ. |

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

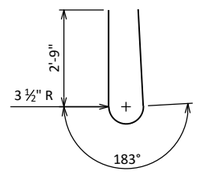
## BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

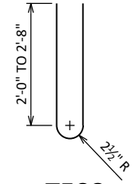
| BAR MARK | NO. REQ'D. | LENGTH |
|---|---|---|
| T509 | 1 SERIES OF 6 | 4'-9" TO 6'-1" |



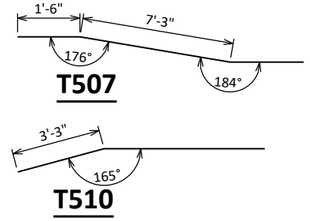

## PLAN




## T506



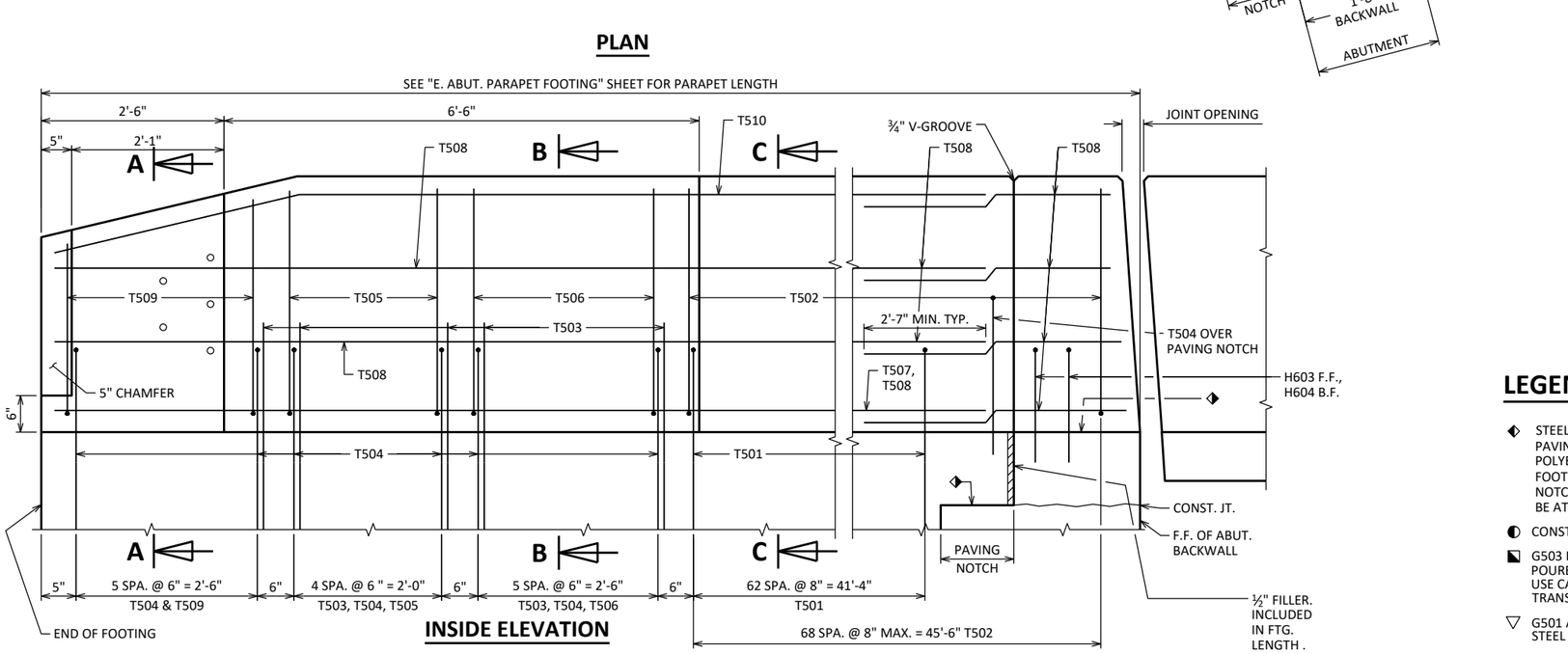

## T509



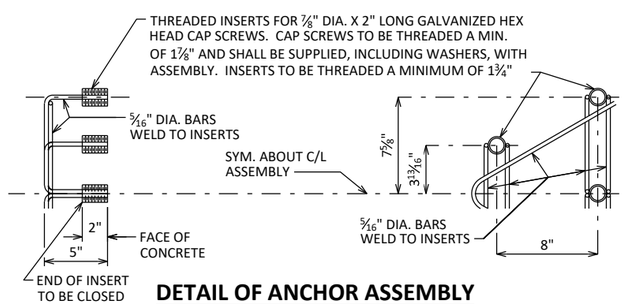

## T507




## T510




## INSIDE ELEVATION




## DETAIL OF ANCHOR ASSEMBLY

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

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

## LEGEND

- ◆ STEEL TROWEL HORIZ. SURFACE OF ABUTMENT PAVING NOTCH. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS BETWEEN PARAPET FOOTING AND HORIZ. SURFACE OF PAVING NOTCH. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".
- ◐ CONST. JOINT - STRIKE OFF AS SHOWN
- ◪ G503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE G503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ G501 AND G504 BARS TO BE TIED TO FOOTING STEEL BEFORE FOOTING IS POURED.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**E. ABUT. FOOTING PARAPET**

SHEET 38 OF 43

230

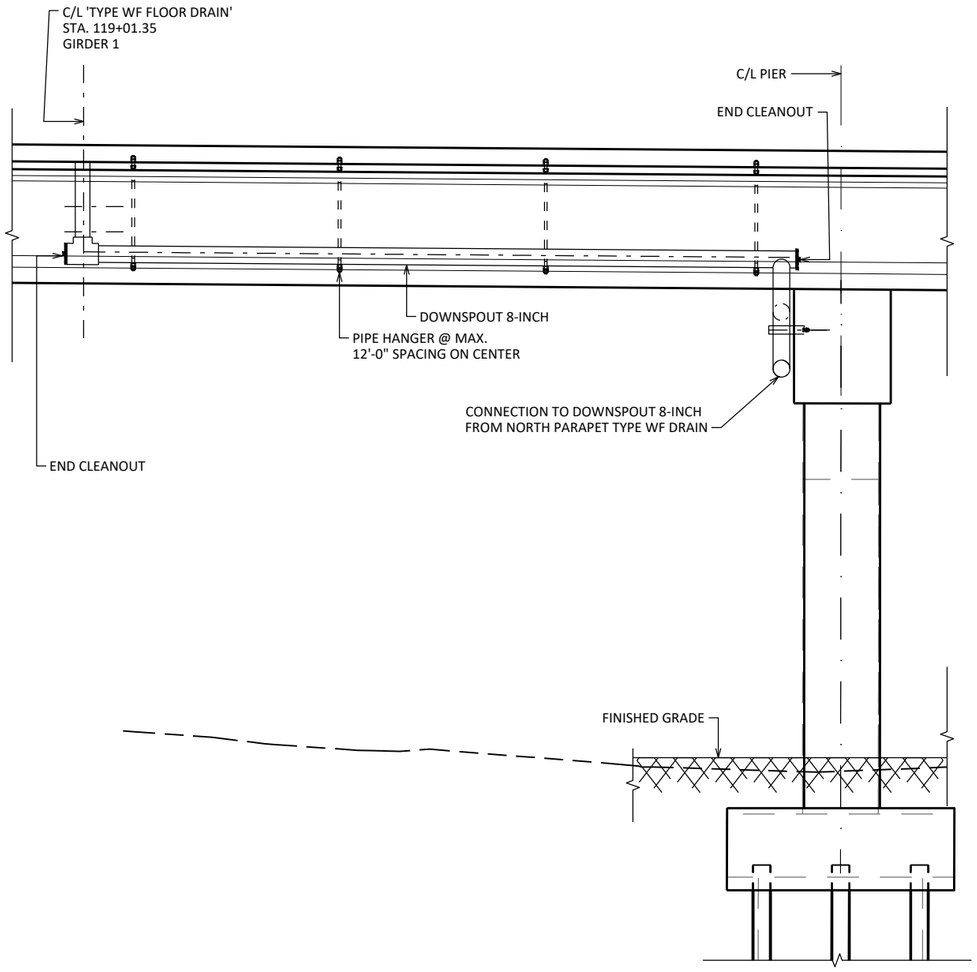
SCALE = 2

8

8

STATE PROJECT NUMBER

**1050-01-79**




## GIRDER 1 INSIDE ELEVATION

**LOOKING NORTH AT SPAN 1 GIRDER 1 SOUTH FACE**
**FENCE AND PARAPET NOT SHOWN FOR CLARITY**

## NOTES

THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER DIAPHRAGMS. MAINTAIN 0.5% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

ALL FITTINGS, ELBOWS, CLEANOUTS, HANGERS, MASONRY ANCHORS, BOLTS AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT IS CONSIDERED INCIDENTAL TO PAY ITEMS 'DOWNSPOUT 6-INCH' AND DOWNSPOUT 8-INCH'.

END CLEANOUTS SHALL CONSIST OF A REMOVABLE COVER SEALING THE PIPE END INDICATED.

CUT HOLES AND INSTALL INTERMEDIATE CLEANOUTS IN THE FIELD AFTER DOWNSPOUT HAS BEEN INSTALLED.

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

| DRAWN BY | CJM | PLANS CK'D | VJD |
|---|---|---|---|

**NORTH DOWNSPOUT DETAILS**

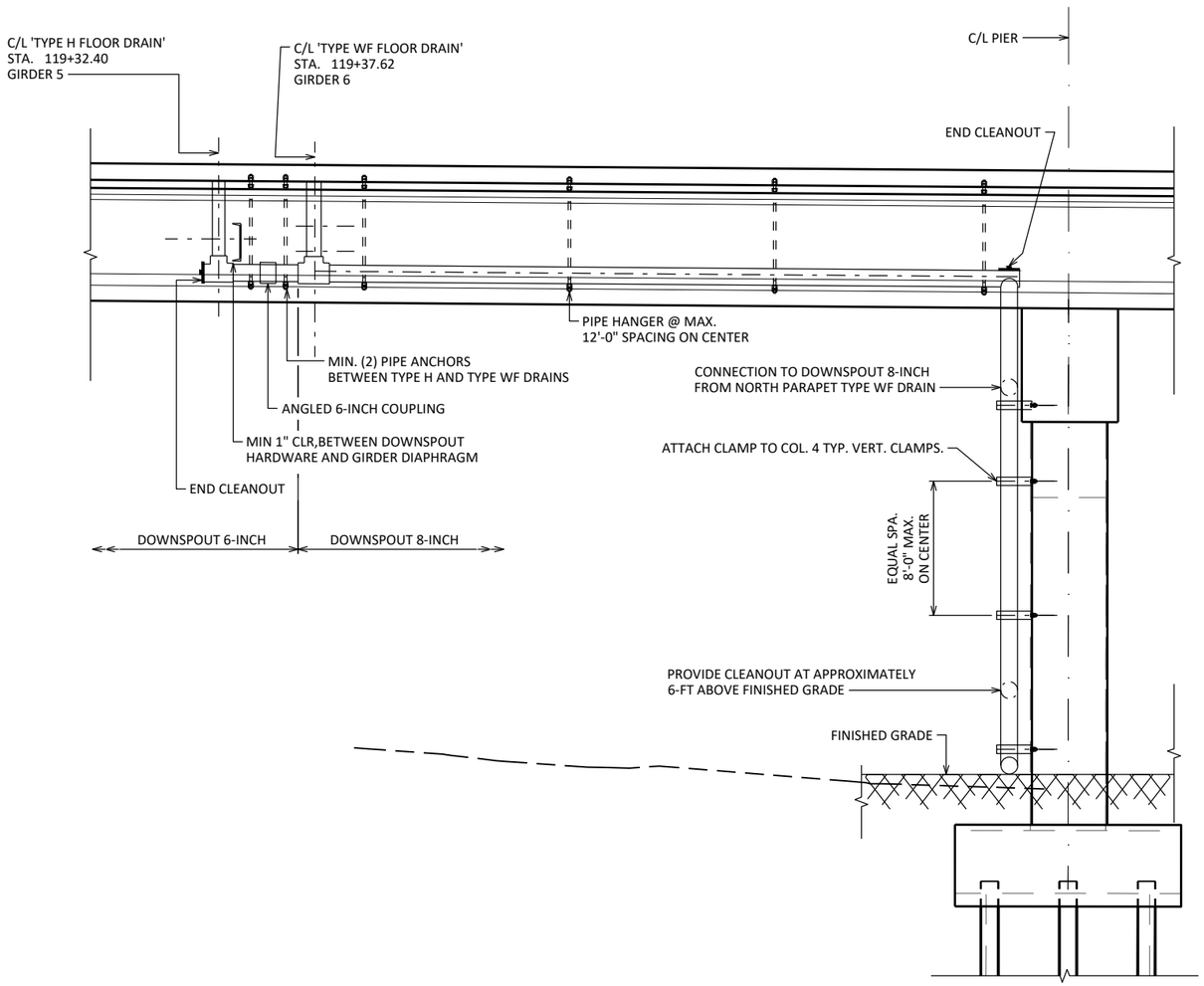
SHEET 39 OF 43

231

SCALE =

STATE PROJECT NUMBER

**1050-01-79**




## GIRDERS 5 & 6 INSIDE ELEVATION

**LOOKING NORTH AT SPAN 1 GIRDER 5 SOUTH FACE**
**FENCE AND PARAPET NOT SHOWN FOR CLARITY**

## NOTES

THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER DIAPHRAGMS. MAINTAIN 0.5% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

ALL FITTINGS, ELBOWS, CLEANOUTS, HANGERS, MASONRY ANCHORS, BOLTS AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT IS CONSIDERED INCIDENTAL TO PAY ITEMS 'DOWNSPOUT 6-INCH' AND DOWNSPOUT 8-INCH'.

END CLEANOUTS SHALL CONSIST OF A REMOVABLE COVER SEALING THE PIPE END INDICATED.

CUT HOLES AND INSTALL INTERMEDIATE CLEANOUTS IN THE FIELD AFTER DOWNSPOUT HAS BEEN INSTALLED.

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**SOUTH DOWNSPOUT DETAILS**

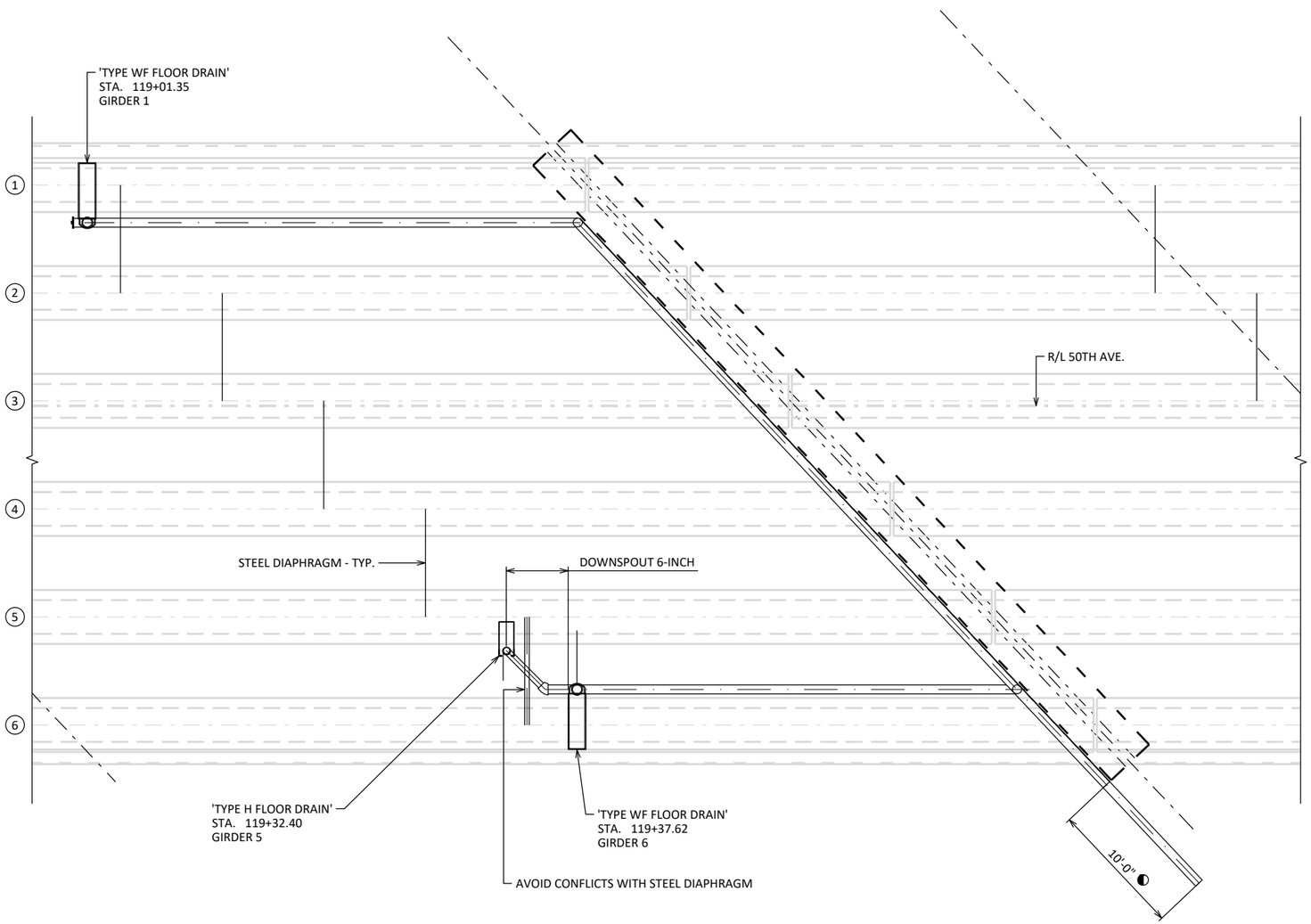
SHEET 40 OF 43

232

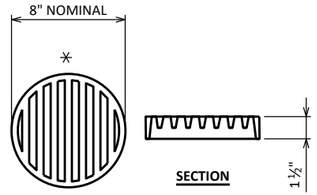
SCALE =

STATE PROJECT NUMBER

**1050-01-79**




**PLAN**




**PLAN**

## RODENT SHIELD DETAIL

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

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "DOWNSPOUT 8-INCH".

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

◐ EXTEND 'DOWNSPOUT 8-INCH' THE SHOWN DISTANCE AWAY FROM PIER AT FINISHED GRADE. PLACE A RODENT SHIELD AT THE END OF THE 'DOWNSPOUT 8-INCH'. SEE THIS SHEET FOR DETAILS.

## NOTE

ALL DOWNSPOUTS ARE TO BE 'DOWNSPOUT 8-INCH', EXCEPT FOR DOWNSPOUT AT THE TYPE H FLOOR DRAIN TO THE CONNECTION WITH THE TYPE WF FLOOR DRAIN LOCATED AT STA. 119+37.62 OVER GIRDER 6.

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**DOWNSPOUT PLAN**

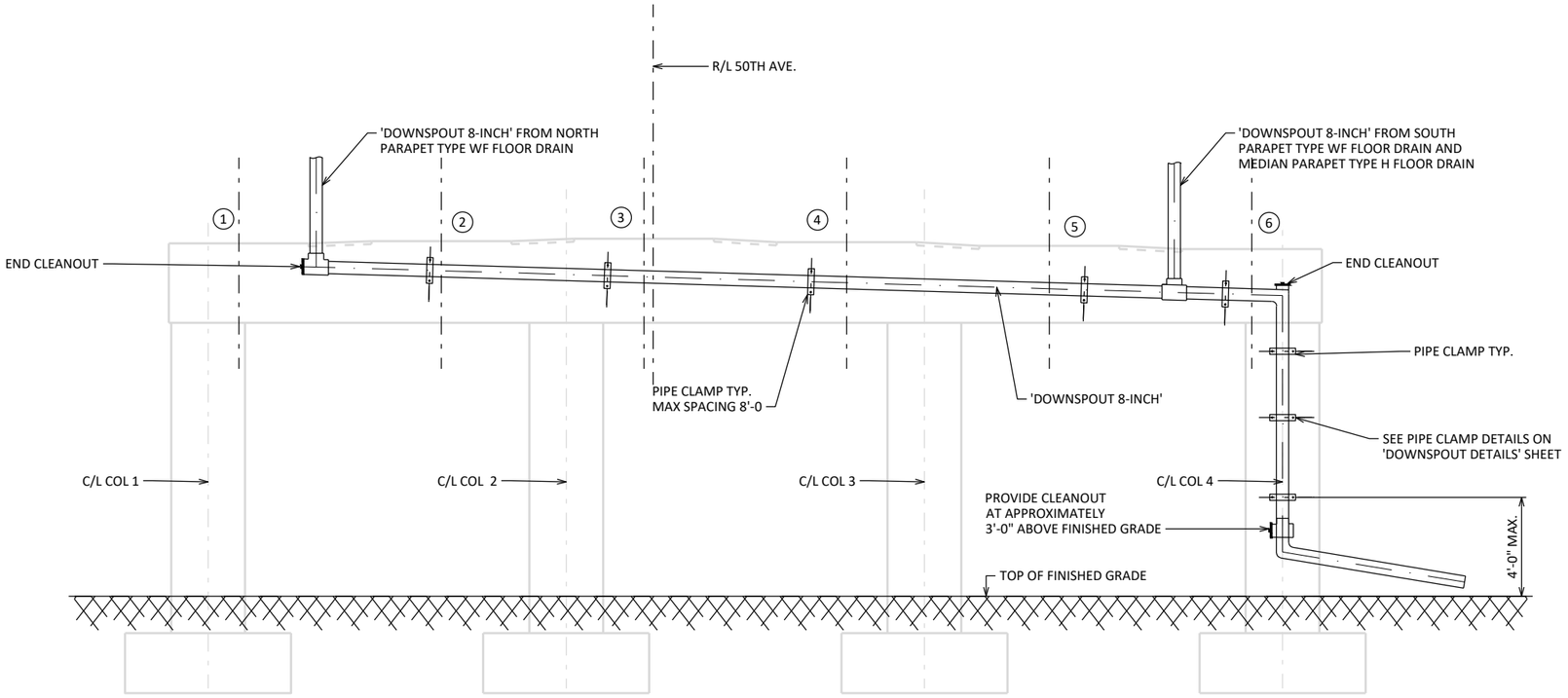
SHEET 41 OF 43

233

SCALE =

STATE PROJECT NUMBER

**1050-01-79**




## ELEVATION

**(LOOKING EAST)**

## NOTES

THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER DIAPHRAGMS. MAINTAIN 0.5% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

ALL FITTINGS, ELBOWS, CLEANOUTS, HANGERS, MASONRY ANCHORS, BOLTS AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT IS CONSIDERED INCIDENTAL TO PAY ITEMS 'DOWNSPOUT 6-INCH' AND DOWNSPOUT 8-INCH'.

END CLEANOUTS SHALL CONSIST OF A REMOVABLE COVER SEALING THE PIPE END INDICATED.

CUT HOLES AND INSTALL INTERMEDIATE CLEANOUTS IN THE FIELD AFTER DOWNSPOUT HAS BEEN INSTALLED.

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**DOWNSPOUT ELEVATION**

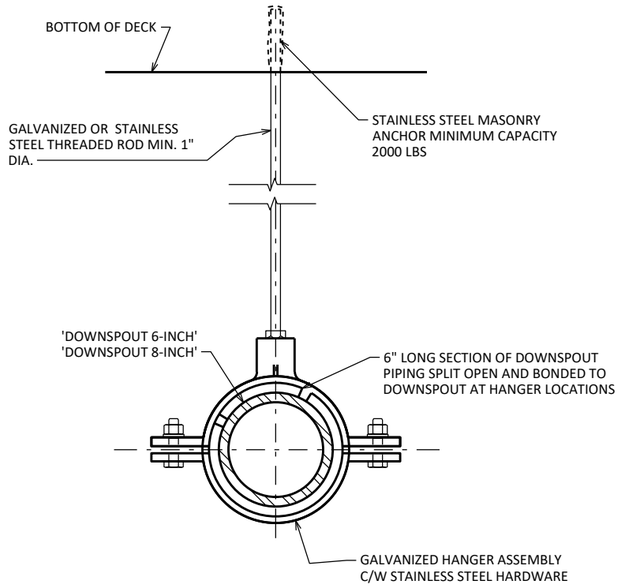
SHEET 42 OF 43

234

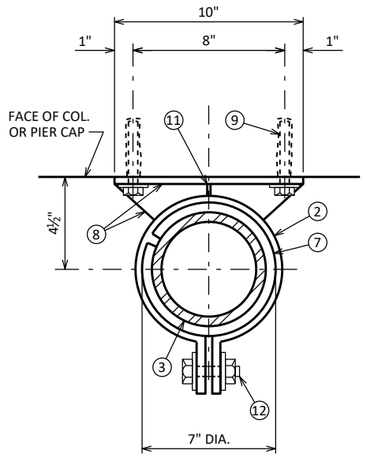
SCALE =

STATE PROJECT NUMBER

**1050-01-79**




## PIPE HANGER DETAIL




## PIPE CLAMP DETAILS

## LEGEND

(2) 10 GAGE STAINLESS STEEL CLAMP GRADE 304.

(3) NEW 6" DIA. DOWNSPOUT PIPING SHALL BE REINFORCED THERMOSETTING RESIN PIPING (RTRP) CONFORMING TO ASTM D2996 & 2310.

(7) 6" LONG SPLIT RTRP STRIP. BOND TO #3, PLACE AT ALL CLAMP LOCATIONS.

(8) BENT ANCHOR PLATE-7 GAGE STAINLESS STEEL GRADE 304.

(9) ½" DIA. ADHESIVE ANCHOR BOLTS. (STAINLESS STEEL BOLT & WASHER, TYP.).

(11) 7 GAGE STAINLESS STEEL GUSSET PLATE. WELD TO #2 & 8.

(12) ⅜" X 1" LG. STAINLESS STEEL HEX HEAD BOLT WITH NUT & LOCK WASHER.

## NOTES

TIGHTEN CLAMPS TO A TIGHT SLIP FIT (FOR TEMP. EXPANSION).

ALL ELBOWS TO BE LONG RADIUS TYPE.

A CLAMP OF EQUAL STRENGTH MAY BE USED AS AN ALTERNATE.

DRAIN WORK TO BE COMPLETED AS DIRECTED BY PLANS AND THE ENGINEER.

THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER DIAPHRAGMS. MAINTAIN 2% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

ALL FITTINGS, ELBOWS, CLEANOUTS, HANGERS, MASONRY ANCHORS, BOLTS AND OTHER HARDWARE REQUIRED FOR MOUNTING THE DOWNSPOUT IS CONSIDERED INCIDENTAL TO PAY ITEMS 'DOWNSPOUT 6-INCH' AND DOWNSPOUT 8-INCH'.

END CLEANOUTS SHALL CONSIST OF A REMOVABLE COVER SEALING THE PIPE END INDICATED.

CUT HOLES AND INSTALL INTERMEDIATE CLEANOUTS IN THE FIELD AFTER DOWNSPOUT HAS BEEN INSTALLED.

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-9-309**

DRAWN BY CJM | PLANS CK'D VJD

**DOWNSPOUT DETAILS**

SHEET 43 OF 43

DIVISION 1 - ALIPROF-50TH AVE

| STATION | REAL STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | | | | 1.00 | 1.25 | |
| | | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 8 |
| 106+50.19 | 10650.19 | 0.00 | 78.51 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107+00.00 | 10700.00 | 49.81 | 77.73 | 11.43 | 2.53 | 144 | 11 | 2 | 144 | 3 | 131 |
| 107+50.00 | 10750.00 | 50.00 | 74.02 | 11.05 | 5.73 | 141 | 21 | 8 | 285 | 13 | 241 |
| 108+00.00 | 10800.00 | 50.00 | 63.36 | 11.11 | 4.30 | 127 | 21 | 9 | 412 | 24 | 335 |
| 108+50.00 | 10850.00 | 50.00 | 33.37 | 11.27 | 27.87 | 90 | 21 | 30 | 502 | 61 | 367 |
| 109+00.00 | 10900.00 | 50.00 | 14.86 | 11.60 | 42.27 | 45 | 21 | 65 | 547 | 143 | 310 |
| 109+50.00 | 10950.00 | 50.00 | 16.38 | 31.15 | 56.73 | 29 | 40 | 92 | 576 | 258 | 184 |
| 110+00.00 | 11000.00 | 50.00 | 1.36 | 11.33 | 149.21 | 16 | 39 | 191 | 592 | 496 | -78 |
| 110+50.00 | 11050.00 | 50.00 | 4.72 | 11.45 | 226.06 | 6 | 21 | 347 | 598 | 930 | -527 |
| 111+00.00 | 11100.00 | 50.00 | 7.05 | 11.20 | 307.95 | 11 | 21 | 494 | 609 | 1,548 | -1,155 |
| 111+50.00 | 11150.00 | 50.00 | 10.93 | 10.96 | 396.56 | 17 | 21 | 652 | 626 | 2,363 | -1,974 |
| 112+00.00 | 11200.00 | 50.00 | 13.00 | 11.18 | 511.41 | 22 | 20 | 841 | 648 | 3,414 | -3,023 |
| 112+50.00 | 11250.00 | 50.00 | 17.51 | 10.78 | 660.71 | 28 | 20 | 1,085 | 676 | 4,770 | -4,371 |
| 113+00.00 | 11300.00 | 50.00 | 20.47 | 10.31 | 806.96 | 35 | 20 | 1,359 | 711 | 6,469 | -6,055 |
| 113+50.00 | 11350.00 | 50.00 | 19.55 | 10.50 | 783.52 | 37 | 19 | 1,473 | 748 | 8,310 | -7,878 |
| 114+00.00 | 11400.00 | 50.00 | 24.31 | 11.17 | 845.84 | 41 | 20 | 1,509 | 789 | 10,196 | -9,743 |
| 114+08.50 | 11408.50 | 8.50 | 25.15 | 11.16 | 871.53 | 8 | 4 | 270 | 797 | 10,534 | -10,077 |
| 114+50.00 | 11450.00 | 41.50 | 8.44 | 10.93 | 813.02 | 26 | 17 | 1,295 | 823 | 12,153 | -11,687 |
| 115+00.00 | 11500.00 | 50.00 | 0.00 | 11.49 | 720.65 | 8 | 21 | 1,420 | 831 | 13,928 | -13,475 |
| 115+50.00 | 11550.00 | 50.00 | 0.00 | 14.01 | 514.72 | 0 | 24 | 1,144 | 831 | 15,358 | -14,929 |
| 115+55.00 | 11555.00 | 5.00 | 0.00 | 14.42 | 490.86 | 0 | 3 | 93 | 831 | 15,474 | -15,048 |
| 115+60.00 | 11560.00 | 5.00 | 0.00 | 15.19 | 471.22 | 0 | 3 | 89 | 831 | 15,585 | -15,162 |
| 115+65.00 | 11565.00 | 5.00 | 0.00 | 15.97 | 450.21 | 0 | 3 | 85 | 831 | 15,691 | -15,271 |
| 115+70.00 | 11570.00 | 5.00 | 0.00 | 16.75 | 428.10 | 0 | 3 | 81 | 831 | 15,793 | -15,376 |
| 115+75.00 | 11575.00 | 5.00 | 0.00 | 18.50 | 382.22 | 0 | 3 | 75 | 831 | 15,886 | -15,472 |
| 115+80.00 | 11580.00 | 5.00 | 0.00 | 20.45 | 338.46 | 0 | 4 | 67 | 831 | 15,970 | -15,560 |
| 115+85.00 | 11585.00 | 5.00 | 0.04 | 22.47 | 306.63 | 0 | 4 | 60 | 831 | 16,045 | -15,639 |
| 115+90.00 | 11590.00 | 5.00 | 0.93 | 24.09 | 295.77 | 0 | 4 | 56 | 831 | 16,115 | -15,713 |
| 115+95.00 | 11595.00 | 5.00 | 2.96 | 22.47 | 285.67 | 0 | 4 | 54 | 831 | 16,183 | -15,785 |
| 116+00.00 | 11600.00 | 5.00 | 6.15 | 20.85 | 275.87 | 1 | 4 | 52 | 832 | 16,248 | -15,853 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 8 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)] |

9

9

DIVISION 1 - ALIPROF-50TH AVE

| STATION | REAL STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | | | | 1.00 | 1.25 | |
| | | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 8 |
| 116+05.00 | 11605.00 | 5.00 | 10.15 | 14.31 | 268.16 | 2 | 3 | 50 | 834 | 16,310 | -15,916 |
| 116+10.00 | 11610.00 | 5.00 | 14.35 | 12.19 | 263.26 | 2 | 2 | 49 | 836 | 16,371 | -15,977 |
| 116+15.00 | 11615.00 | 5.00 | 18.25 | 12.34 | 266.38 | 3 | 2 | 49 | 839 | 16,433 | -16,038 |
| 116+20.00 | 11620.00 | 5.00 | 18.24 | 12.48 | 273.42 | 3 | 2 | 50 | 842 | 16,495 | -16,099 |
| 116+25.00 | 11625.00 | 5.00 | 12.84 | 12.71 | 280.44 | 3 | 2 | 51 | 845 | 16,559 | -16,162 |
| 116+30.00 | 11630.00 | 5.00 | 4.00 | 12.59 | 287.46 | 2 | 2 | 53 | 847 | 16,625 | -16,228 |
| 116+35.00 | 11635.00 | 5.00 | 0.03 | 16.45 | 294.35 | 0 | 3 | 54 | 847 | 16,693 | -16,299 |
| 116+40.00 | 11640.00 | 5.00 | 0.00 | 20.32 | 308.41 | 0 | 3 | 56 | 847 | 16,763 | -16,372 |
| 116+45.00 | 11645.00 | 5.00 | 0.00 | 20.13 | 325.84 | 0 | 4 | 59 | 847 | 16,836 | -16,449 |
| 116+50.00 | 11650.00 | 5.00 | 0.00 | 17.76 | 362.42 | 0 | 4 | 64 | 847 | 16,916 | -16,533 |
| 116+55.00 | 11655.00 | 5.00 | 0.00 | 16.44 | 405.65 | 0 | 3 | 71 | 847 | 17,005 | -16,625 |
| 116+60.00 | 11660.00 | 5.00 | 0.00 | 15.11 | 441.59 | 0 | 3 | 78 | 847 | 17,103 | -16,726 |
| 116+65.00 | 11665.00 | 5.00 | 0.00 | 13.78 | 462.88 | 0 | 3 | 84 | 847 | 17,208 | -16,834 |
| 116+70.00 | 11670.00 | 5.00 | 0.00 | 13.28 | 465.99 | 0 | 3 | 86 | 847 | 17,315 | -16,944 |
| 116+75.00 | 11675.00 | 5.00 | 0.00 | 12.94 | 447.73 | 0 | 2 | 85 | 847 | 17,421 | -17,052 |
| 116+80.00 | 11680.00 | 5.00 | 0.00 | 12.59 | 480.13 | 0 | 2 | 86 | 847 | 17,529 | -17,162 |
| 116+85.00 | 11685.00 | 5.00 | 0.00 | 12.25 | 505.73 | 0 | 2 | 91 | 847 | 17,643 | -17,278 |
| 116+90.00 | 11690.00 | 5.00 | 0.00 | 12.26 | 530.15 | 0 | 2 | 96 | 847 | 17,763 | -17,400 |
| 116+95.00 | 11695.00 | 5.00 | 0.00 | 12.33 | 549.05 | 0 | 2 | 100 | 847 | 17,888 | -17,527 |
| 116+99.09 | 11699.09 | 4.09 | 0.00 | 12.38 | 563.57 | 0 | 2 | 84 | 847 | 17,993 | -17,634 |
| 117+24.09 | 11724.09 | 25.00 | 0.00 | 12.69 | 551.42 | 0 | 12 | 516 | 847 | 18,638 | -18,291 |
| 117+33.28 | 11733.28 | 9.19 | 0.00 | 12.82 | 503.51 | 0 | 4 | 180 | 847 | 18,863 | -18,520 |
| 117+49.09 | 11749.09 | 15.81 | 0.00 | 13.01 | 329.23 | 0 | 8 | 244 | 847 | 19,168 | -18,833 |
| 117+58.27 | 11758.27 | 9.18 | 0.00 | 13.10 | 258.59 | 0 | 4 | 100 | 847 | 19,293 | -18,962 |
| 117+83.26 | 11783.26 | 24.99 | 0.00 | 13.33 | 203.96 | 0 | 12 | 214 | 847 | 19,560 | -19,241 |
| 118+00.00 | 11800.00 | 16.74 | 1.12 | 13.26 | 203.23 | 0 | 8 | 126 | 847 | 19,718 | -19,407 |
| 118+50.00 | 11850.00 | 50.00 | 0.00 | 0.00 | 0.00 | 1 | 12 | 188 | 848 | 19,953 | -19,653 |
| 119+00.00 | 11900.00 | 50.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 848 | 19,953 | -19,653 |
| 119+50.00 | 11950.00 | 50.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 848 | 19,953 | -19,653 |
| 120+00.00 | 12000.00 | 50.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 848 | 19,953 | -19,653 |
| 120+50.00 | 12050.00 | 50.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 848 | 19,953 | -19,653 |
| 121+00.00 | 12100.00 | 50.00 | 0.00 | 12.57 | 488.00 | 0 | 12 | 452 | 848 | 20,518 | -20,230 |
| 121+50.00 | 12150.00 | 50.00 | 5.78 | 14.43 | 158.78 | 5 | 25 | 599 | 853 | 21,266 | -20,998 |
| 121+55.00 | 12155.00 | 5.00 | 1.74 | 14.37 | 152.61 | 1 | 3 | 29 | 854 | 21,303 | -21,037 |
| 121+60.00 | 12160.00 | 5.00 | 0.00 | 14.18 | 154.08 | 0 | 3 | 28 | 854 | 21,338 | -21,075 |
| 121+65.00 | 12165.00 | 5.00 | 0.00 | 13.99 | 154.19 | 0 | 3 | 29 | 854 | 21,374 | -21,114 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 8 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)] |

9

9

PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 237 | E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 02

PLOT DATE : 9/20/2024 8:52 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 1 - ALIPROF-50TH AVE

| STATION | REAL STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | | | | 1.00 | 1.25 | |
| | | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 8 |
| 121+70.00 | 12170.00 | 5.00 | 0.00 | 13.80 | 162.28 | 0 | 3 | 29 | 854 | 21,410 | -21,153 |
| 121+75.00 | 12175.00 | 5.00 | 0.00 | 13.63 | 173.81 | 0 | 3 | 31 | 854 | 21,449 | -21,195 |
| 121+80.00 | 12180.00 | 5.00 | 0.00 | 13.46 | 185.91 | 0 | 3 | 33 | 854 | 21,490 | -21,239 |
| 121+85.00 | 12185.00 | 5.00 | 0.00 | 13.29 | 193.47 | 0 | 2 | 35 | 854 | 21,534 | -21,285 |
| 121+90.00 | 12190.00 | 5.00 | 2.13 | 13.12 | 195.13 | 0 | 2 | 36 | 854 | 21,579 | -21,332 |
| 121+95.00 | 12195.00 | 5.00 | 5.57 | 12.95 | 192.06 | 1 | 2 | 36 | 855 | 21,624 | -21,378 |
| 122+00.00 | 12200.00 | 5.00 | 6.13 | 12.79 | 186.57 | 1 | 2 | 35 | 856 | 21,668 | -21,423 |
| 122+05.00 | 12205.00 | 5.00 | 3.80 | 12.62 | 183.68 | 1 | 2 | 34 | 857 | 21,710 | -21,466 |
| 122+10.00 | 12210.00 | 5.00 | 1.17 | 12.45 | 191.96 | 0 | 2 | 35 | 857 | 21,754 | -21,512 |
| 122+15.00 | 12215.00 | 5.00 | 0.00 | 12.28 | 217.13 | 0 | 2 | 38 | 857 | 21,801 | -21,561 |
| 122+20.00 | 12220.00 | 5.00 | 0.00 | 12.11 | 246.18 | 0 | 2 | 43 | 857 | 21,855 | -21,617 |
| 122+25.00 | 12225.00 | 5.00 | 0.00 | 11.95 | 277.84 | 0 | 2 | 49 | 857 | 21,916 | -21,680 |
| 122+30.00 | 12230.00 | 5.00 | 0.00 | 11.78 | 309.16 | 0 | 2 | 54 | 857 | 21,984 | -21,750 |
| 122+35.00 | 12235.00 | 5.00 | 0.00 | 11.62 | 333.77 | 0 | 2 | 60 | 857 | 22,059 | -21,827 |
| 122+40.00 | 12240.00 | 5.00 | 0.00 | 11.46 | 349.19 | 0 | 2 | 63 | 857 | 22,138 | -21,908 |
| 122+45.00 | 12245.00 | 5.00 | 0.00 | 11.30 | 363.98 | 0 | 2 | 66 | 857 | 22,220 | -21,992 |
| 122+50.00 | 12250.00 | 5.00 | 0.00 | 11.14 | 377.62 | 0 | 2 | 69 | 857 | 22,306 | -22,080 |
| 122+55.00 | 12255.00 | 5.00 | 0.00 | 10.98 | 389.33 | 0 | 2 | 71 | 857 | 22,395 | -22,171 |
| 122+60.00 | 12260.00 | 5.00 | 0.00 | 10.81 | 395.18 | 0 | 2 | 73 | 857 | 22,486 | -22,264 |
| 122+65.00 | 12265.00 | 5.00 | 0.00 | 10.65 | 394.10 | 0 | 2 | 73 | 857 | 22,578 | -22,358 |
| 122+70.00 | 12270.00 | 5.00 | 0.00 | 10.49 | 392.98 | 0 | 2 | 73 | 857 | 22,669 | -22,451 |
| 122+75.00 | 12275.00 | 5.00 | 0.00 | 10.33 | 391.14 | 0 | 2 | 73 | 857 | 22,760 | -22,544 |
| 122+80.00 | 12280.00 | 5.00 | 0.00 | 17.09 | 388.23 | 0 | 3 | 72 | 857 | 22,850 | -22,637 |
| 122+85.00 | 12285.00 | 5.00 | 0.00 | 16.75 | 673.62 | 0 | 3 | 98 | 857 | 22,973 | -22,763 |
| 122+90.00 | 12290.00 | 5.00 | 0.01 | 16.37 | 746.30 | 0 | 3 | 131 | 857 | 23,136 | -22,929 |
| 122+95.00 | 12295.00 | 5.00 | 0.02 | 16.00 | 773.21 | 0 | 3 | 141 | 857 | 23,313 | -23,109 |
| 123+00.00 | 12300.00 | 5.00 | 0.04 | 15.62 | 786.06 | 0 | 3 | 144 | 857 | 23,493 | -23,292 |
| 123+50.00 | 12350.00 | 50.00 | 0.00 | 15.24 | 824.55 | 0 | 29 | 1,491 | 857 | 25,356 | -25,184 |
| 124+00.00 | 12400.00 | 50.00 | 0.00 | 14.66 | 807.18 | 0 | 28 | 1,511 | 857 | 27,245 | -27,101 |
| 124+50.00 | 12450.00 | 50.00 | 7.15 | 13.98 | 830.14 | 7 | 27 | 1,516 | 864 | 29,140 | -29,016 |
| 125+00.00 | 12500.00 | 50.00 | 8.91 | 13.35 | 773.55 | 15 | 25 | 1,485 | 879 | 30,996 | -30,882 |
| 125+50.00 | 12550.00 | 50.00 | 0.00 | 12.76 | 721.11 | 8 | 24 | 1,384 | 887 | 32,726 | -32,628 |
| 126+00.00 | 12600.00 | 50.00 | 5.20 | 12.11 | 588.38 | 5 | 23 | 1,212 | 892 | 34,241 | -34,161 |
| 126+32.36 | 12632.36 | 32.36 | 15.81 | 11.67 | 386.46 | 13 | 14 | 584 | 905 | 34,971 | -34,892 |
| 126+50.00 | 12650.00 | 17.64 | 19.87 | 11.50 | 387.98 | 12 | 8 | 253 | 917 | 35,288 | -35,205 |
| 127+00.00 | 12700.00 | 50.00 | 51.65 | 10.99 | 261.67 | 66 | 21 | 602 | 983 | 36,040 | -35,912 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 8 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)] |

9

9

PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 238 | E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 03

PLOT DATE : 9/20/2024 8:52 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 1 - ALIPROF-NW RAMP

| STATION | REAL STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | | | | 1.00 | 1.25 | |
| | | | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | | NOTE 8 |
| 125+00.00 | 12500.00 | 0.00 | 83.52 | 9.95 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125+50.00 | 12550.00 | 50.00 | 75.97 | 10.17 | 0.00 | 148 | 19 | 0 | 148 | 0 | 129 |
| 126+00.00 | 12600.00 | 50.00 | 55.02 | 10.11 | 7.49 | 121 | 19 | 7 | 269 | 9 | 222 |
| 126+50.00 | 12650.00 | 50.00 | 28.03 | 10.27 | 133.42 | 77 | 19 | 130 | 346 | 171 | 118 |
| 127+00.00 | 12700.00 | 50.00 | 0.28 | 10.79 | 339.78 | 26 | 19 | 438 | 372 | 719 | -423 |
| 127+50.00 | 12750.00 | 50.00 | 0.00 | 11.82 | 461.17 | 0 | 21 | 742 | 372 | 1,646 | -1,371 |
| 127+80.00 | 12780.00 | 30.00 | 0.00 | 12.64 | 418.37 | 0 | 14 | 489 | 372 | 2,258 | -1,997 |
| 127+90.00 | 12790.00 | 10.00 | 0.00 | 12.91 | 344.14 | 0 | 5 | 141 | 372 | 2,434 | -2,178 |
| 127+95.00 | 12795.00 | 5.00 | 0.00 | 13.05 | 283.43 | 0 | 2 | 58 | 372 | 2,506 | -2,252 |
| 128+00.00 | 12800.00 | 5.00 | 0.00 | 13.31 | 309.99 | 0 | 2 | 55 | 372 | 2,575 | -2,323 |
| 128+05.00 | 12805.00 | 5.00 | 0.00 | 13.59 | 301.10 | 0 | 2 | 57 | 372 | 2,646 | -2,396 |
| 128+10.00 | 12810.00 | 5.00 | 0.00 | 13.87 | 302.14 | 0 | 3 | 56 | 372 | 2,716 | -2,469 |
| 128+15.00 | 12815.00 | 5.00 | 0.00 | 14.16 | 285.76 | 0 | 3 | 54 | 372 | 2,784 | -2,540 |
| 128+20.00 | 12820.00 | 5.00 | 0.00 | 14.44 | 262.88 | 0 | 3 | 51 | 372 | 2,848 | -2,607 |
| 128+25.00 | 12825.00 | 5.00 | 0.00 | 15.64 | 239.45 | 0 | 3 | 47 | 372 | 2,906 | -2,668 |
| 128+30.00 | 12830.00 | 5.00 | 0.00 | 18.02 | 210.61 | 0 | 3 | 42 | 372 | 2,959 | -2,724 |
| 128+35.00 | 12835.00 | 5.00 | 0.00 | 17.82 | 173.17 | 0 | 3 | 36 | 372 | 3,004 | -2,772 |
| 128+40.00 | 12840.00 | 5.00 | 0.00 | 16.82 | 139.52 | 0 | 3 | 29 | 372 | 3,040 | -2,811 |
| 128+45.00 | 12845.00 | 5.00 | 0.00 | 15.81 | 105.94 | 0 | 3 | 23 | 372 | 3,069 | -2,843 |
| 128+50.00 | 12850.00 | 5.00 | 0.00 | 14.81 | 77.96 | 0 | 3 | 17 | 372 | 3,090 | -2,867 |
| 128+55.00 | 12855.00 | 5.00 | 0.00 | 9.36 | 53.23 | 0 | 2 | 12 | 372 | 3,105 | -2,884 |
| 128+60.00 | 12860.00 | 5.00 | 0.00 | 9.62 | 36.48 | 0 | 2 | 8 | 372 | 3,115 | -2,896 |
| 128+65.00 | 12865.00 | 5.00 | 0.00 | 7.49 | 16.77 | 0 | 2 | 5 | 372 | 3,121 | -2,904 |
| 128+70.00 | 12870.00 | 5.00 | 0.00 | 4.84 | 0.00 | 0 | 1 | 2 | 372 | 3,124 | -2,908 |
| 128+75.00 | 12875.00 | 5.00 | 0.00 | 2.11 | 0.00 | 0 | 1 | 0 | 372 | 3,124 | -2,909 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 8 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)] |

9

9

DIVISION 1 - ALIPROF-NE RAMP

| STATION | REAL STATION | DISTANCE | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | NOTE 1 | NOTE 2 | NOTE 3 | 1.00<br>NOTE 1 | 1.25 | NOTE 8 |
| 147+00.00 | 14700.00 | 0.00 | 70.61 | 10.04 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147+50.00 | 14750.00 | 50.00 | 52.83 | 9.98 | 105.79 | 114 | 19 | 98 | 114 | 123 | -28 |
| 148+00.00 | 14800.00 | 50.00 | 30.71 | 10.00 | 163.75 | 77 | 19 | 250 | 191 | 435 | -282 |
| 148+50.00 | 14850.00 | 50.00 | 12.45 | 10.10 | 281.83 | 40 | 19 | 413 | 231 | 951 | -777 |
| 149+00.00 | 14900.00 | 50.00 | 0.00 | 10.25 | 379.79 | 12 | 19 | 613 | 243 | 1,718 | -1,551 |
| 149+50.00 | 14950.00 | 50.00 | 0.00 | 10.73 | 354.73 | 0 | 19 | 680 | 243 | 2,568 | -2,420 |
| 149+70.00 | 14970.00 | 20.00 | 0.00 | 10.94 | 415.63 | 0 | 8 | 285 | 243 | 2,924 | -2,784 |
| 149+75.00 | 14975.00 | 5.00 | 0.00 | 11.51 | 356.34 | 0 | 2 | 71 | 243 | 3,013 | -2,875 |
| 149+80.00 | 14980.00 | 5.00 | 0.00 | 13.32 | 447.02 | 0 | 2 | 74 | 243 | 3,105 | -2,969 |
| 149+85.00 | 14985.00 | 5.00 | 0.00 | 15.13 | 441.19 | 0 | 3 | 82 | 243 | 3,208 | -3,075 |
| 149+90.00 | 14990.00 | 5.00 | 0.00 | 23.67 | 440.51 | 0 | 4 | 82 | 243 | 3,310 | -3,181 |
| 149+95.00 | 14995.00 | 5.00 | 0.00 | 22.49 | 439.78 | 0 | 4 | 82 | 243 | 3,413 | -3,288 |
| 150+00.00 | 15000.00 | 5.00 | 0.00 | 21.31 | 438.80 | 0 | 4 | 81 | 243 | 3,514 | -3,393 |
| 150+05.00 | 15005.00 | 5.00 | 0.00 | 20.12 | 437.09 | 0 | 4 | 81 | 243 | 3,615 | -3,498 |
| 150+10.00 | 15010.00 | 5.00 | 0.00 | 19.01 | 434.35 | 0 | 4 | 81 | 243 | 3,716 | -3,603 |
| 150+15.00 | 15015.00 | 5.00 | 0.00 | 17.95 | 430.14 | 0 | 3 | 80 | 243 | 3,816 | -3,706 |
| 150+20.00 | 15020.00 | 5.00 | 0.00 | 16.89 | 424.12 | 0 | 3 | 79 | 243 | 3,915 | -3,808 |
| 150+25.00 | 15025.00 | 5.00 | 0.00 | 15.84 | 417.32 | 0 | 3 | 78 | 243 | 4,013 | -3,909 |
| 150+30.00 | 15030.00 | 5.00 | 0.00 | 14.78 | 411.41 | 0 | 3 | 77 | 243 | 4,109 | -4,008 |
| 150+35.00 | 15035.00 | 5.00 | 0.00 | 13.67 | 406.38 | 0 | 3 | 76 | 243 | 4,204 | -4,106 |
| 150+40.00 | 15040.00 | 5.00 | 0.00 | 12.81 | 387.13 | 0 | 2 | 73 | 243 | 4,295 | -4,199 |
| 150+45.00 | 15045.00 | 5.00 | 0.00 | 11.97 | 316.83 | 0 | 2 | 65 | 243 | 4,376 | -4,282 |
| 150+50.00 | 15050.00 | 5.00 | 0.00 | 11.13 | 269.21 | 0 | 2 | 54 | 243 | 4,444 | -4,352 |
| 150+55.00 | 15055.00 | 5.00 | 0.00 | 10.28 | 210.27 | 0 | 2 | 44 | 243 | 4,499 | -4,409 |
| 150+60.00 | 15060.00 | 5.00 | 0.00 | 9.44 | 146.83 | 0 | 2 | 33 | 243 | 4,540 | -4,452 |
| 150+65.00 | 15065.00 | 5.00 | 0.00 | 8.60 | 84.30 | 0 | 2 | 21 | 243 | 4,566 | -4,480 |
| 150+70.00 | 15070.00 | 5.00 | 0.00 | 8.18 | 28.17 | 0 | 2 | 10 | 243 | 4,579 | -4,495 |
| 150+75.00 | 15075.00 | 5.00 | 0.00 | 7.12 | 0.00 | 0 | 1 | 3 | 243 | 4,583 | -4,500 |
| 150+80.00 | 15080.00 | 5.00 | 0.00 | 2.06 | 0.00 | 0 | 1 | 0 | 243 | 4,583 | -4,501 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS |
| 3 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 8 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)] |

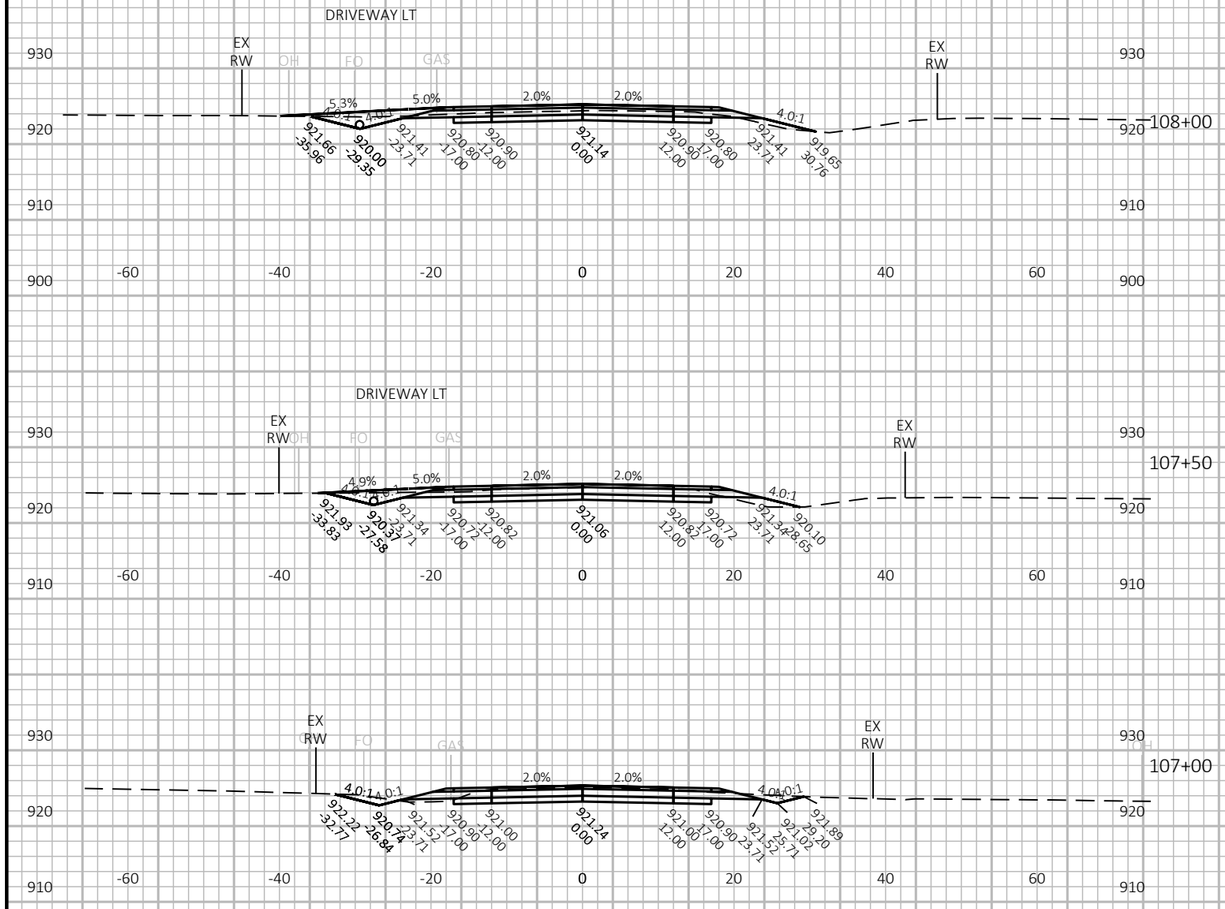
9

9

PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 240 | E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 05

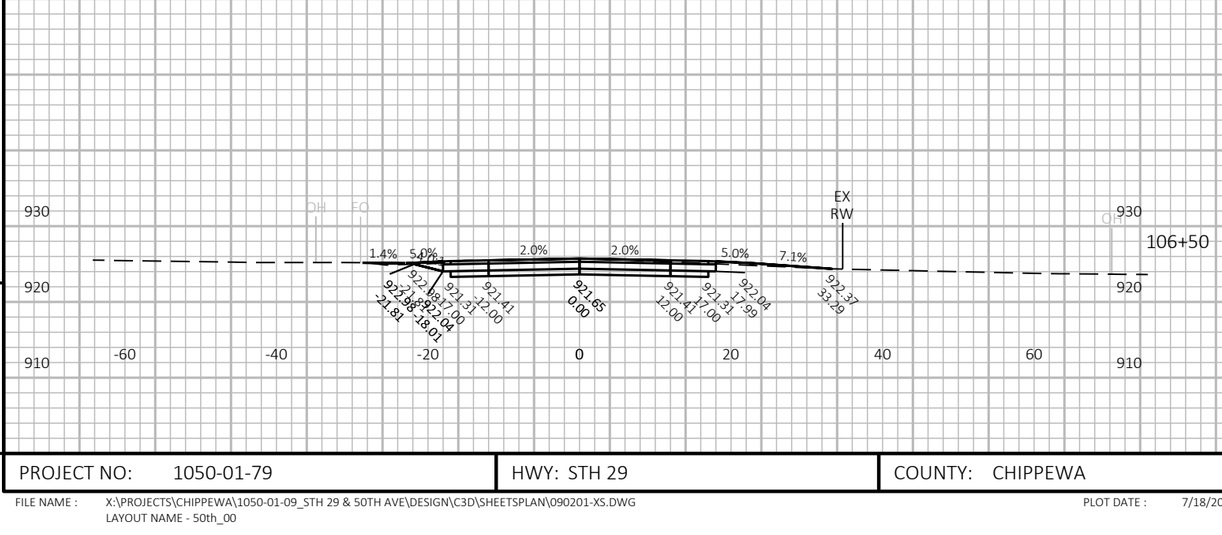
PLOT DATE : 9/20/2024 8:52 AM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1" = 1'

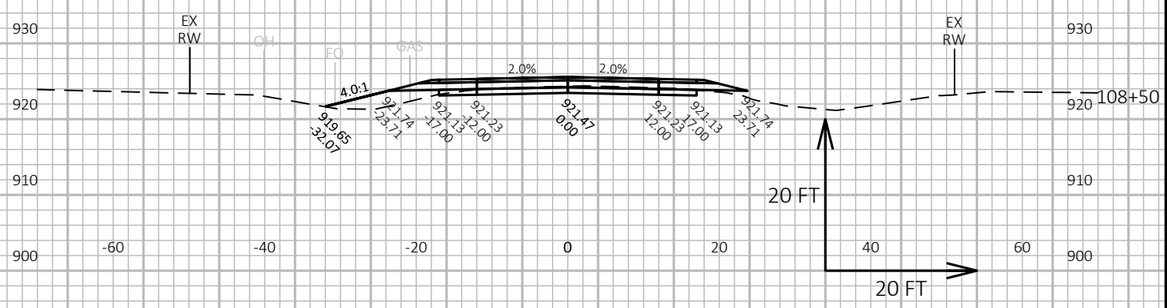









9

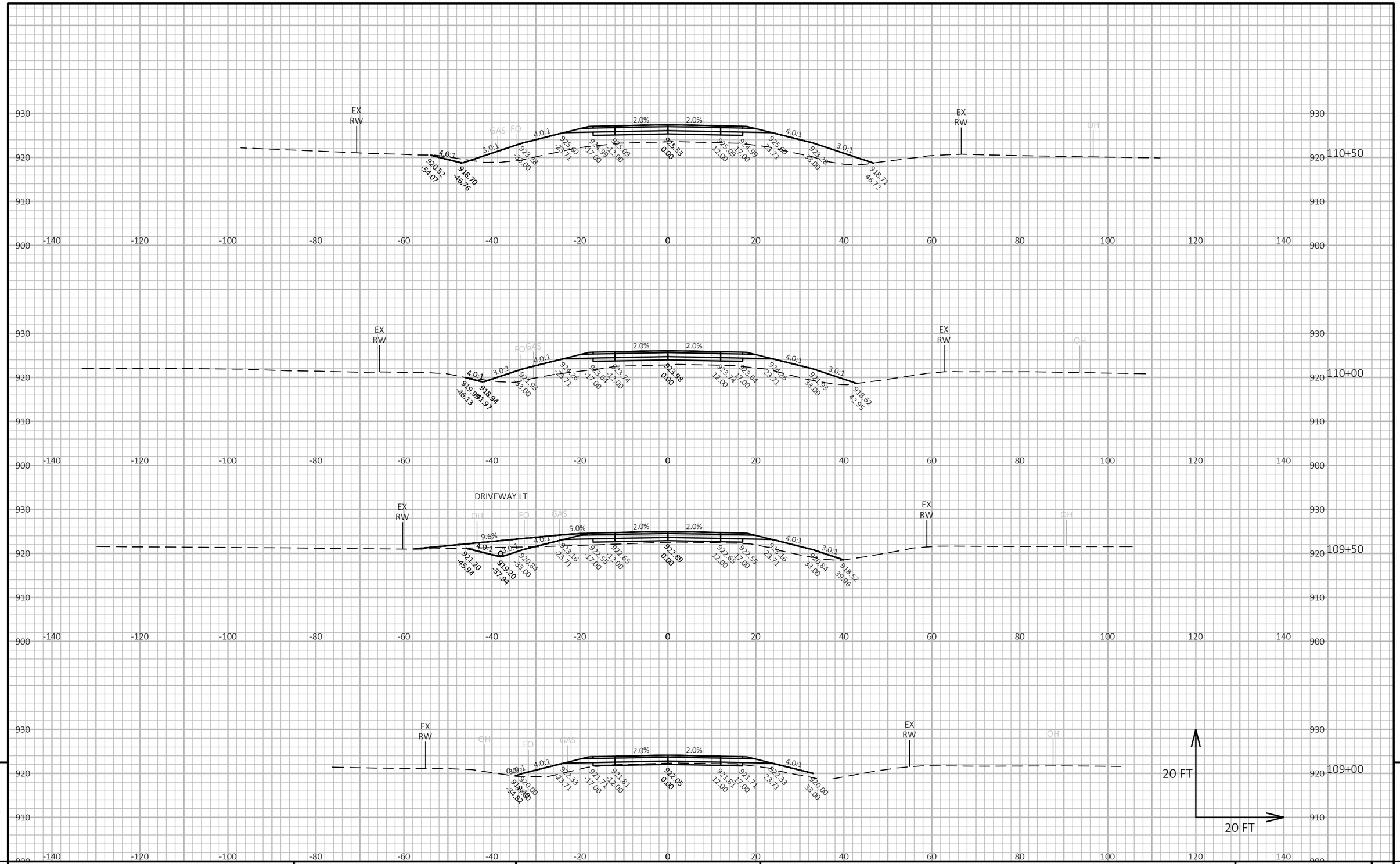
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 241 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_00

PLOT DATE : 7/18/2024 5:14 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

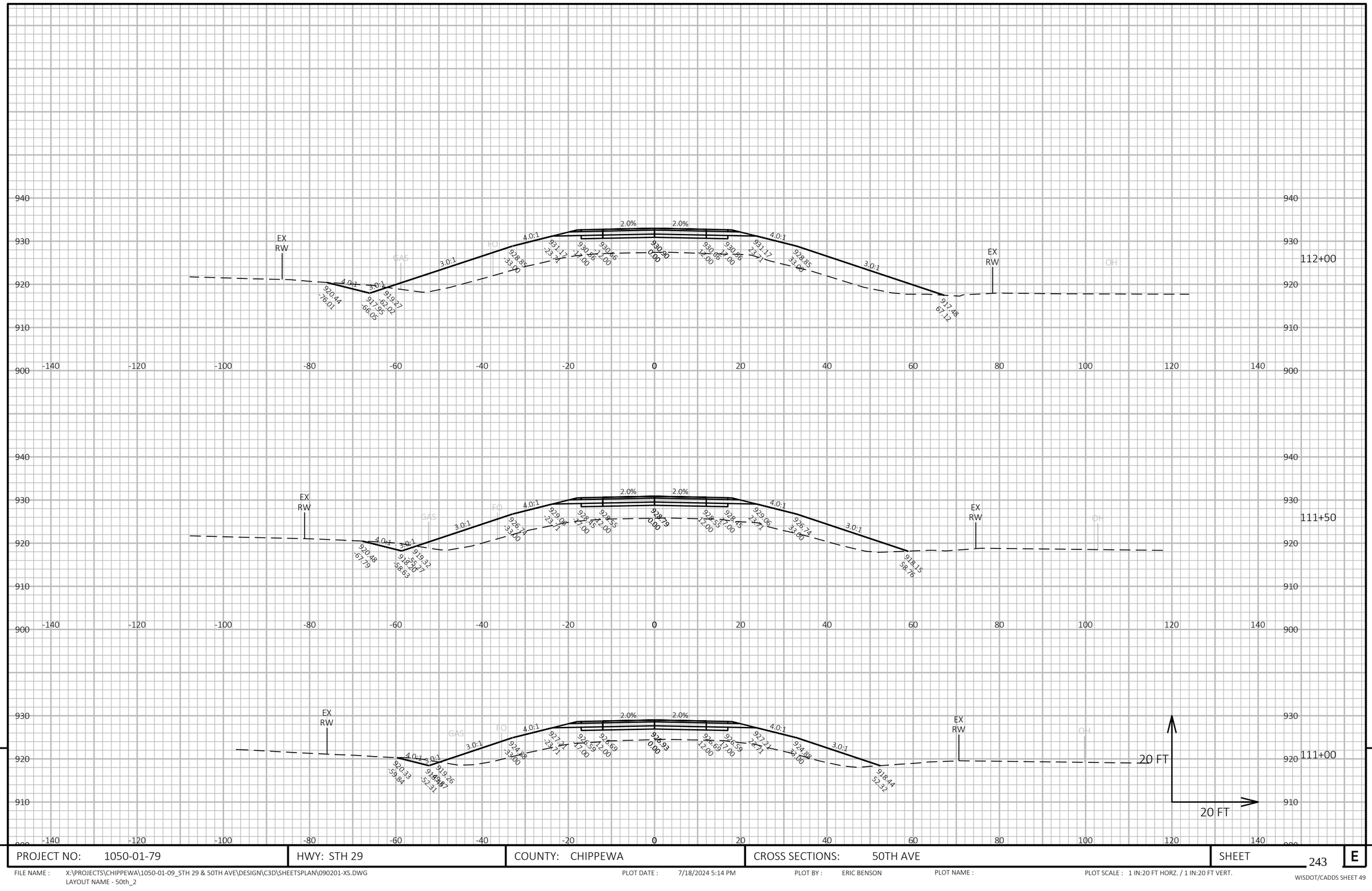
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 242 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_1

PLOT DATE : 7/18/2024 5:14 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 243 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_2

PLOT DATE : 7/18/2024 5:14 PM

PLOT BY : ERIC BENSON

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 244 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_3

PLOT DATE : 7/18/2024 5:14 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

STA 114+09
156 LF - CPRC CLASS IV 36-INCH
2 - AEWS FOR CPRC 36-INCH

INV = 916.02

INV = 915.00

114+50

114+09

114+00

20 FT

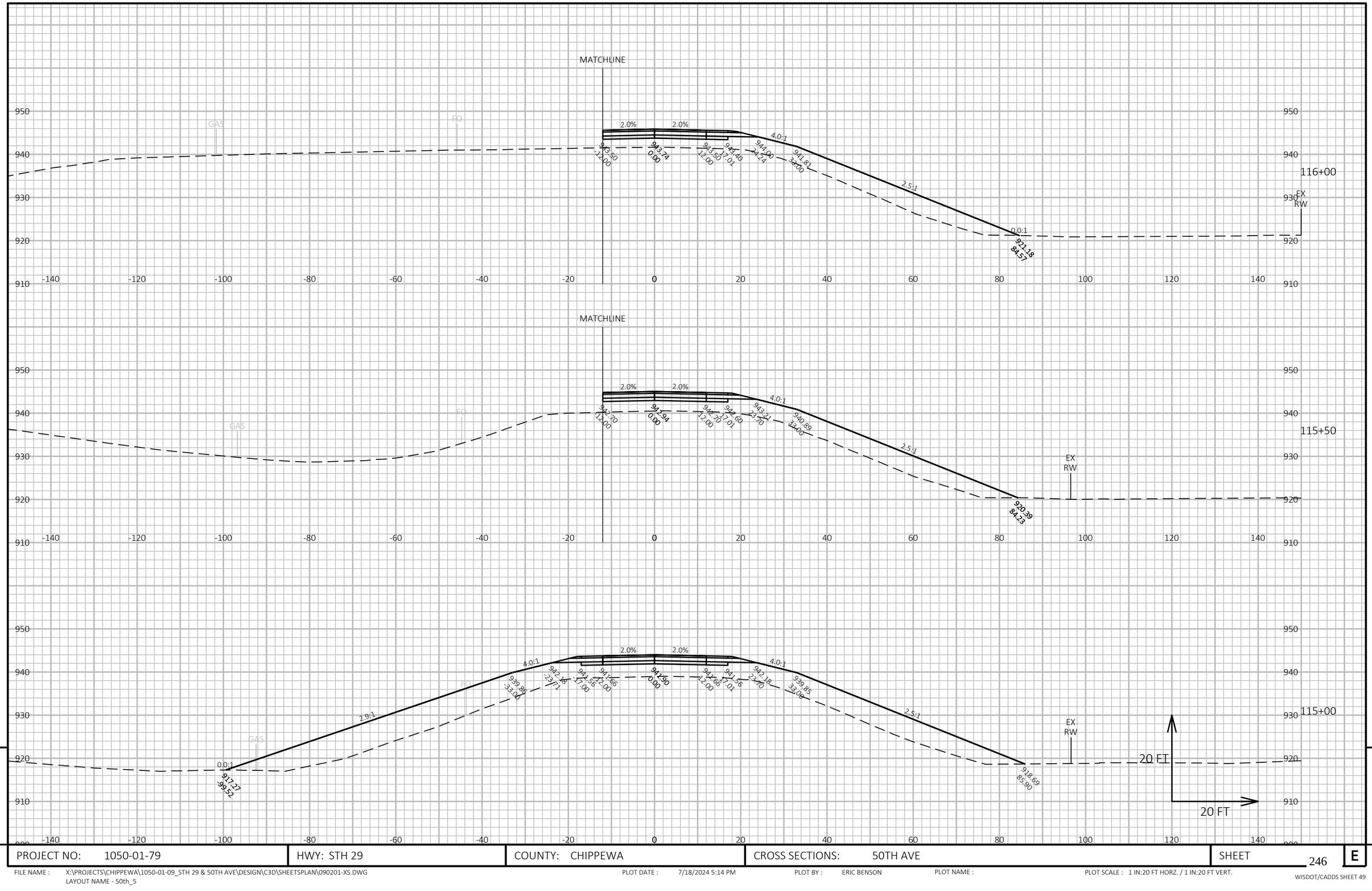
20 FT

| | | | | |
|---|---|---|---|---|
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 245 E |

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_4

PLOT DATE : 7/18/2024 5:14 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 246 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_5

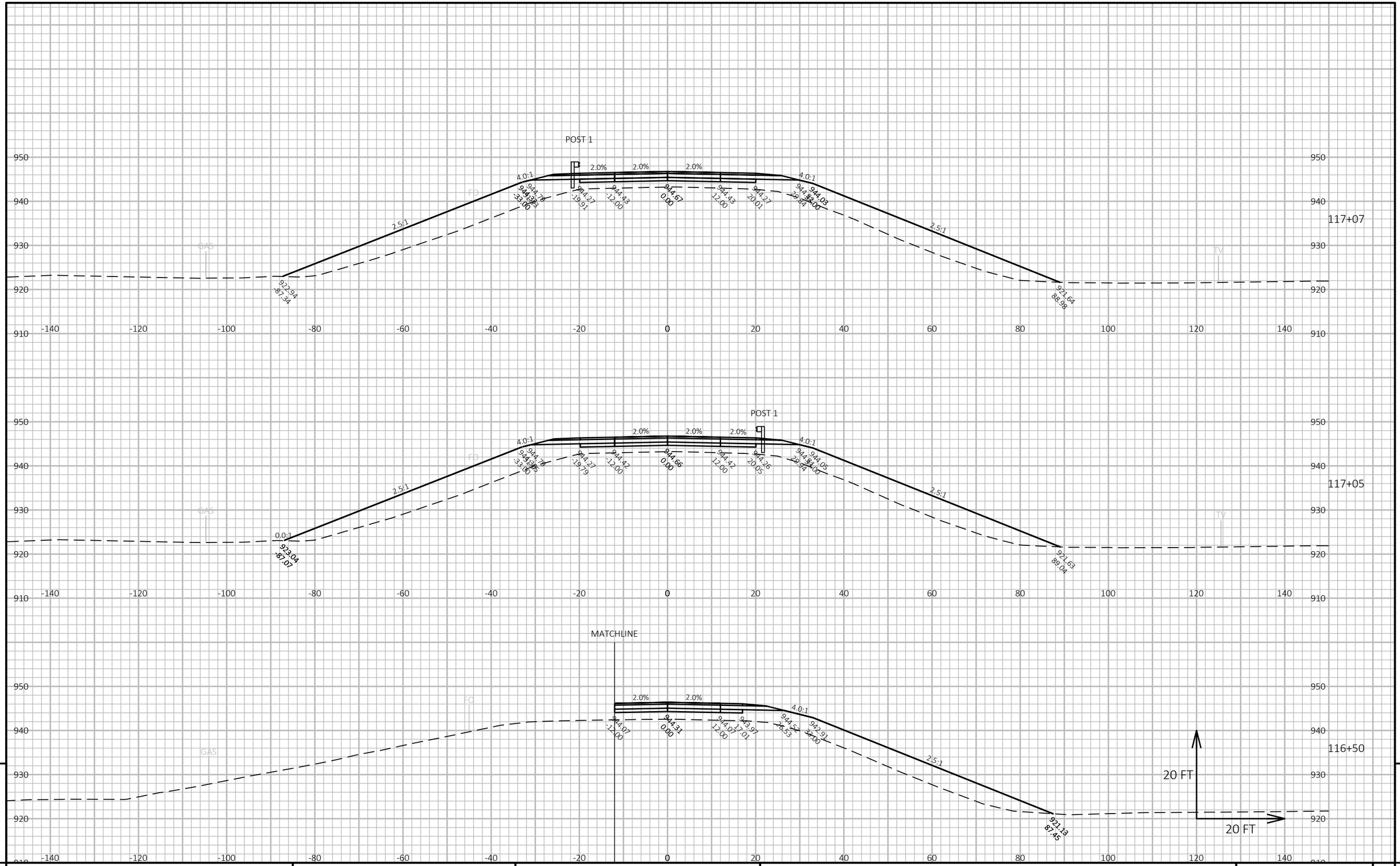
PLOT DATE : 7/18/2024 5:14 PM

PLOT BY : ERIC BENSON

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

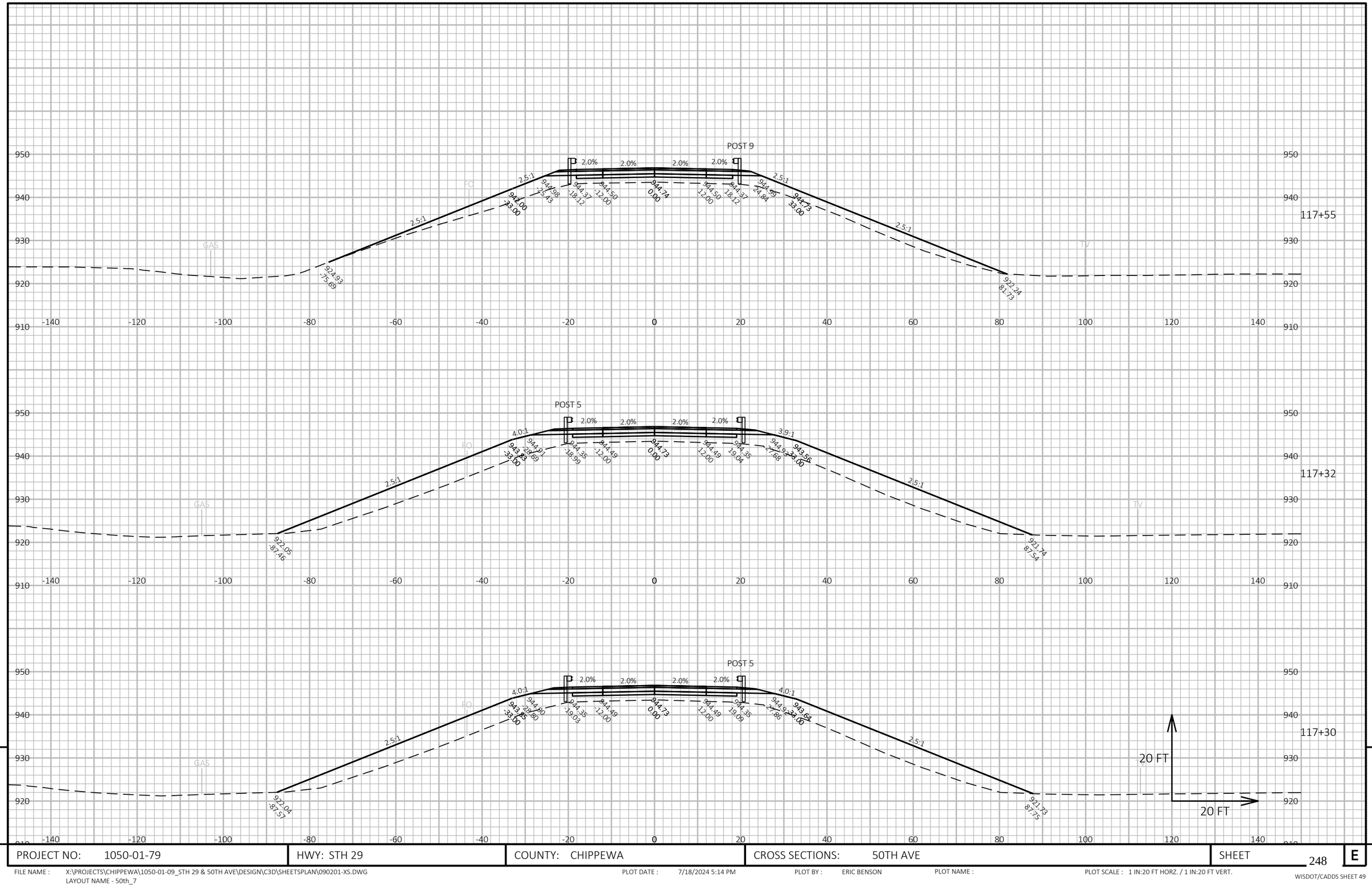



| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 247 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_6

PLOT DATE : 7/18/2024 5:14 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 248 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_7

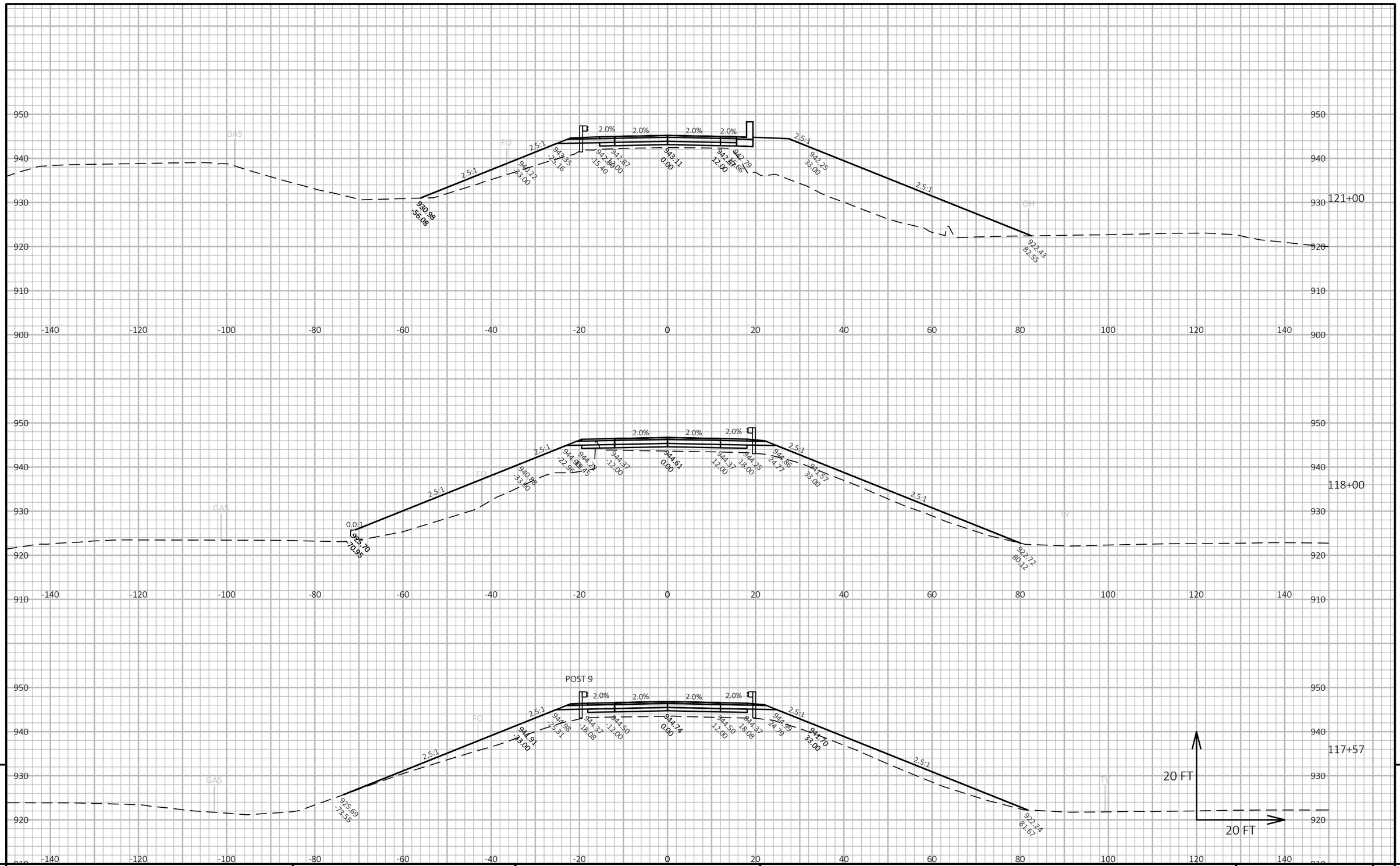
PLOT DATE : 7/18/2024 5:14 PM

PLOT BY : ERIC BENSON

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 249 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_8

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

MATCHLINE

POST 5

122+33

POST 9

122+08

121+50

20 FT

20 FT

9

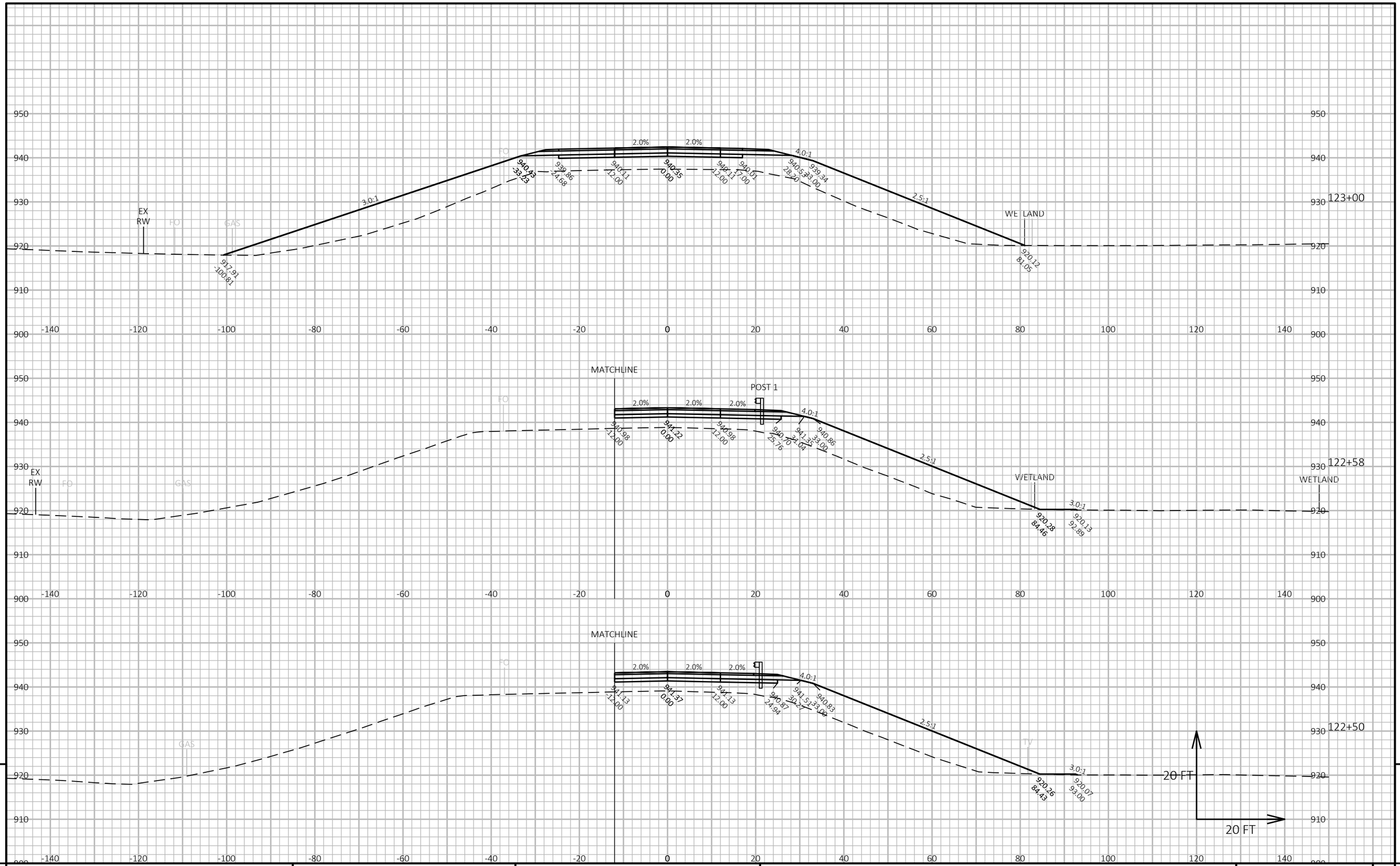
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 250 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_9

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

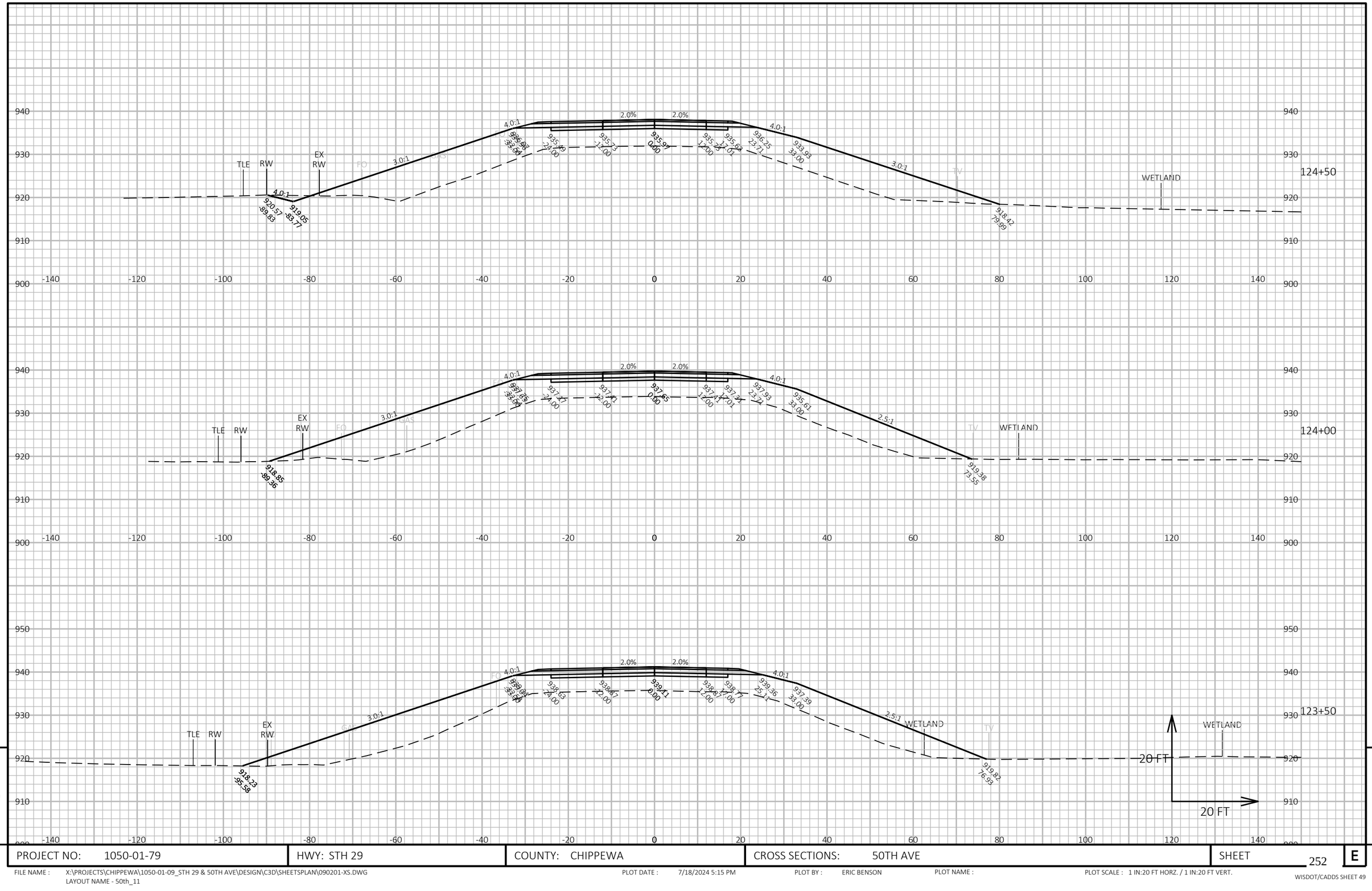



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 251 E |

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_10

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 252 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_11

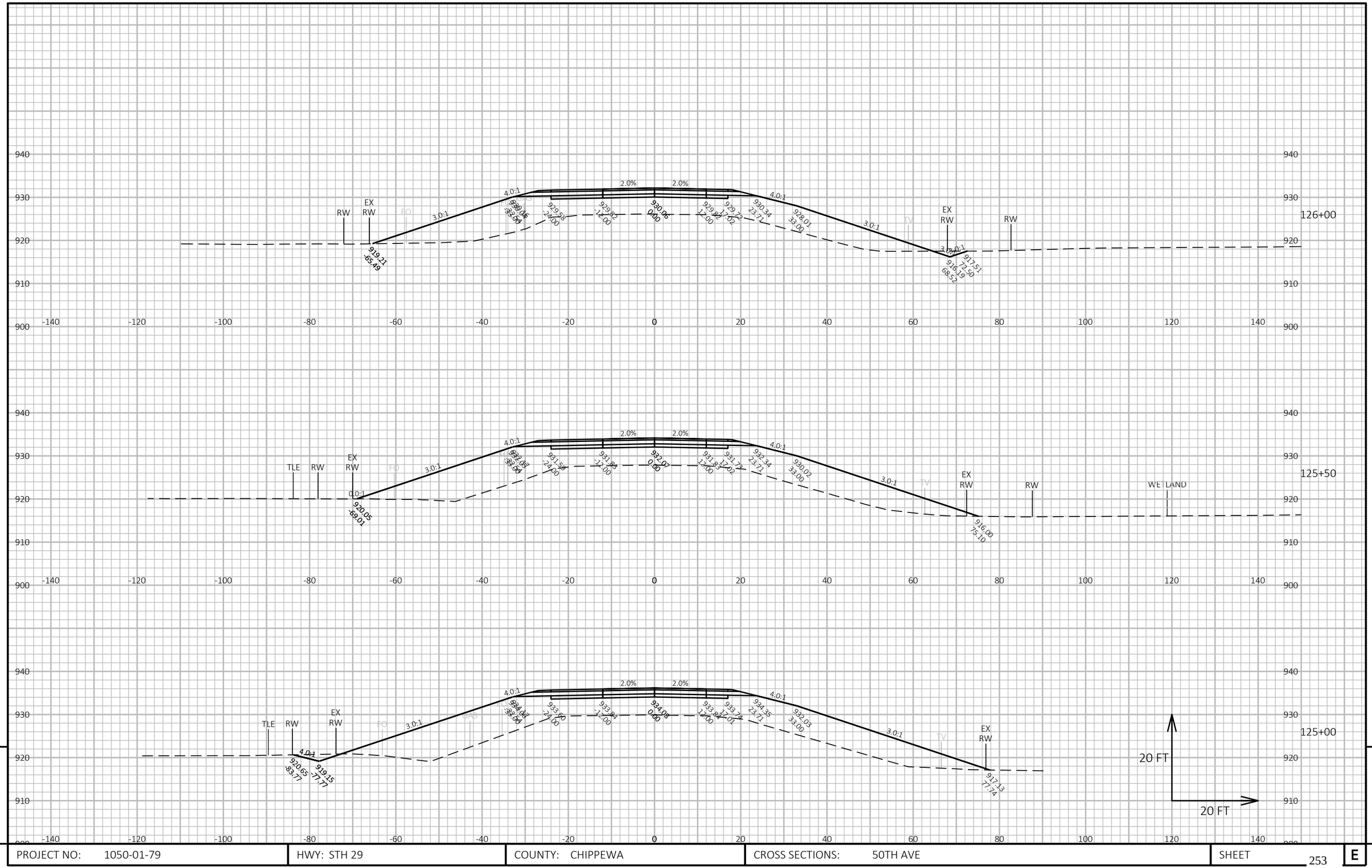
PLOT DATE : 7/18/2024 5:15 PM

PLOT BY : ERIC BENSON

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

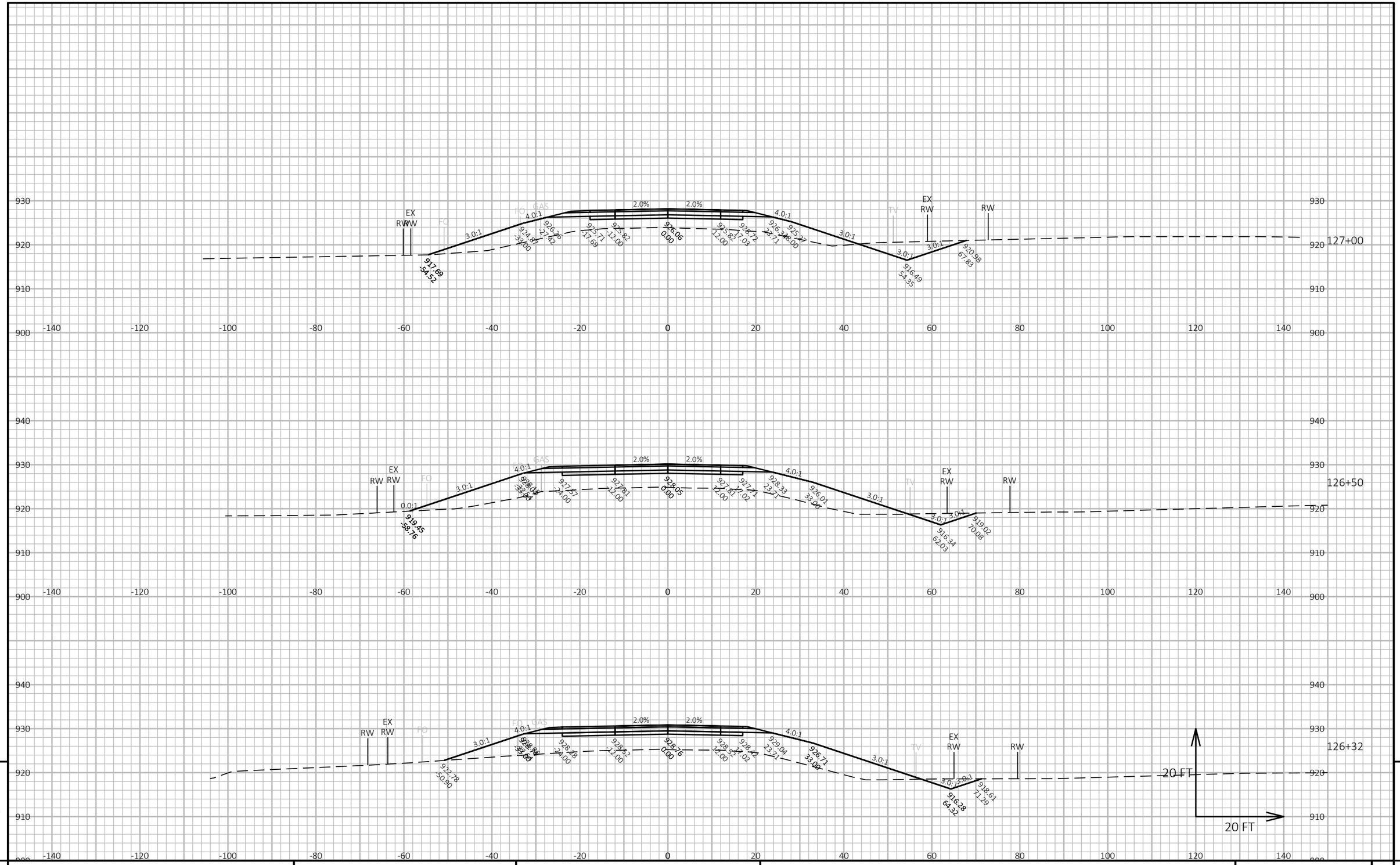



| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 253 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_12

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

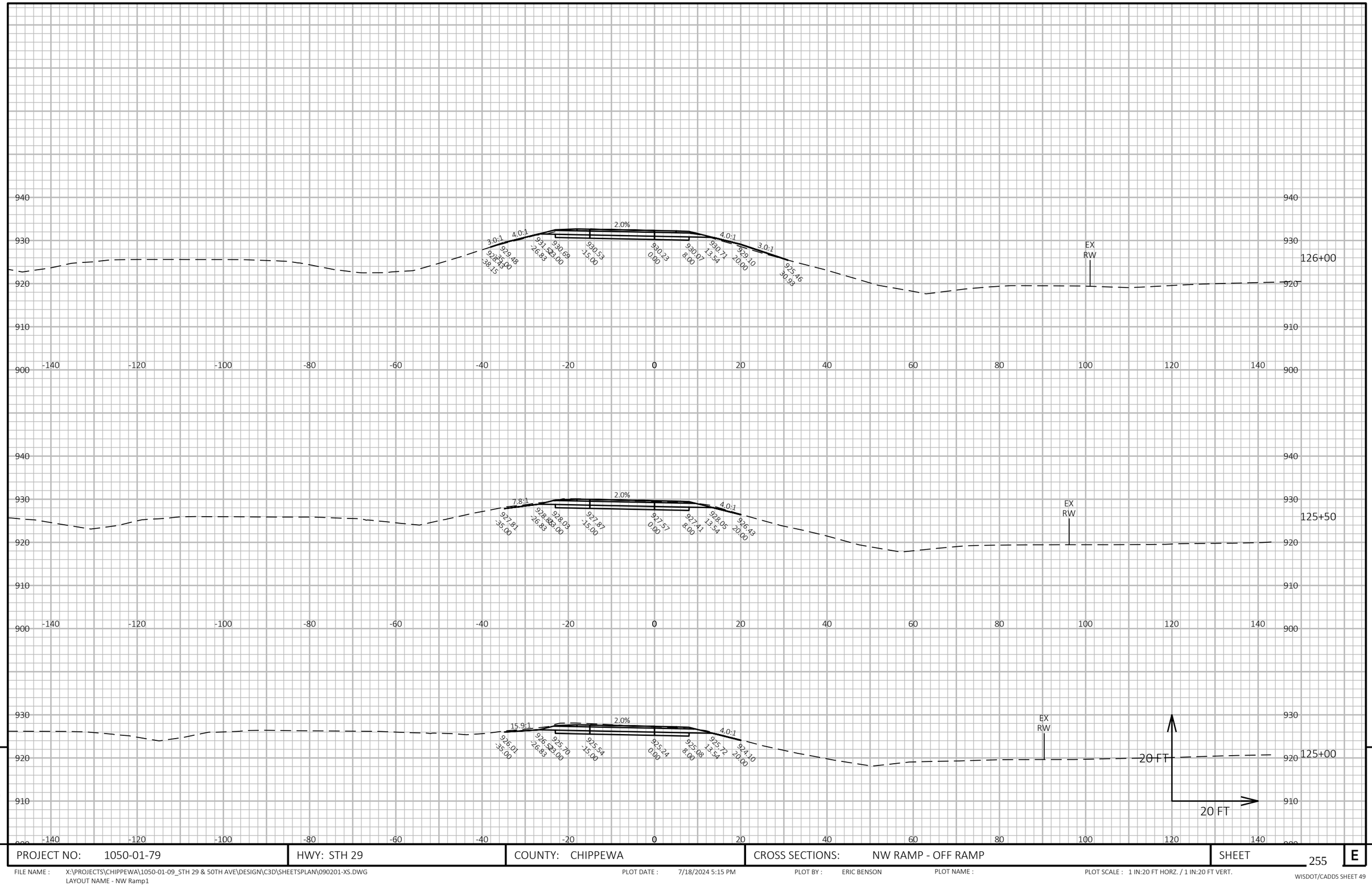



| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE | SHEET 254 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50th_13

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

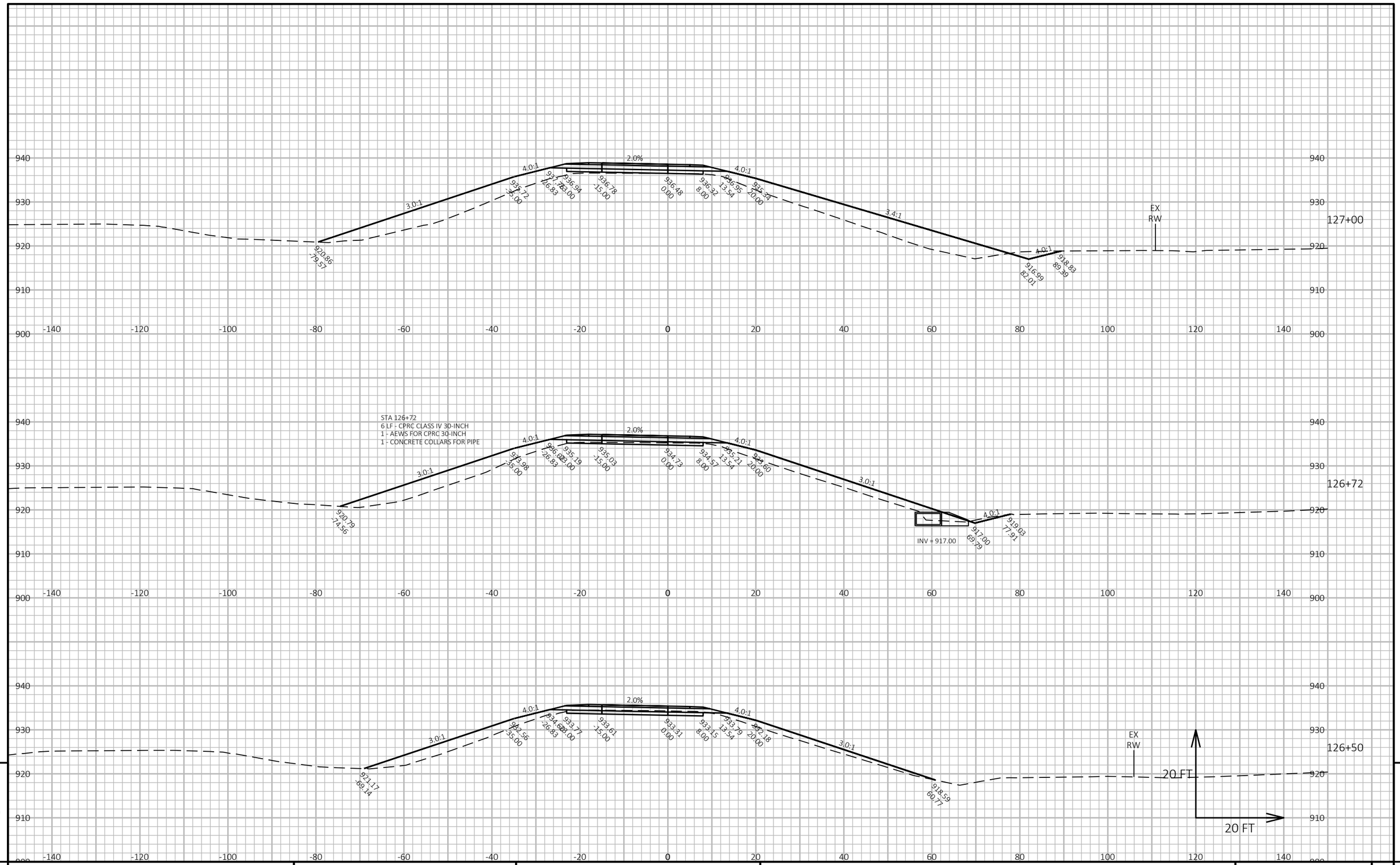



| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: NW RAMP - OFF RAMP | SHEET 255 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - NW Ramp1

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

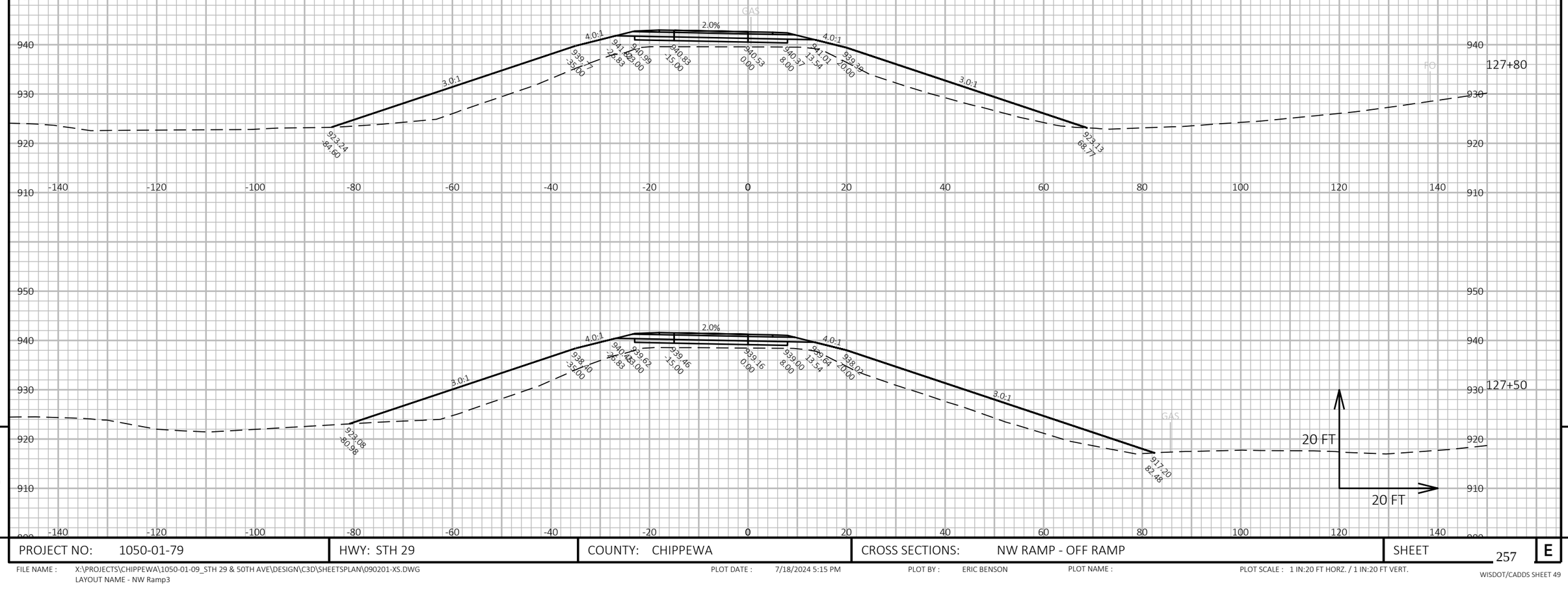
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: NW RAMP - OFF RAMP | SHEET 256 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - NW Ramp2

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

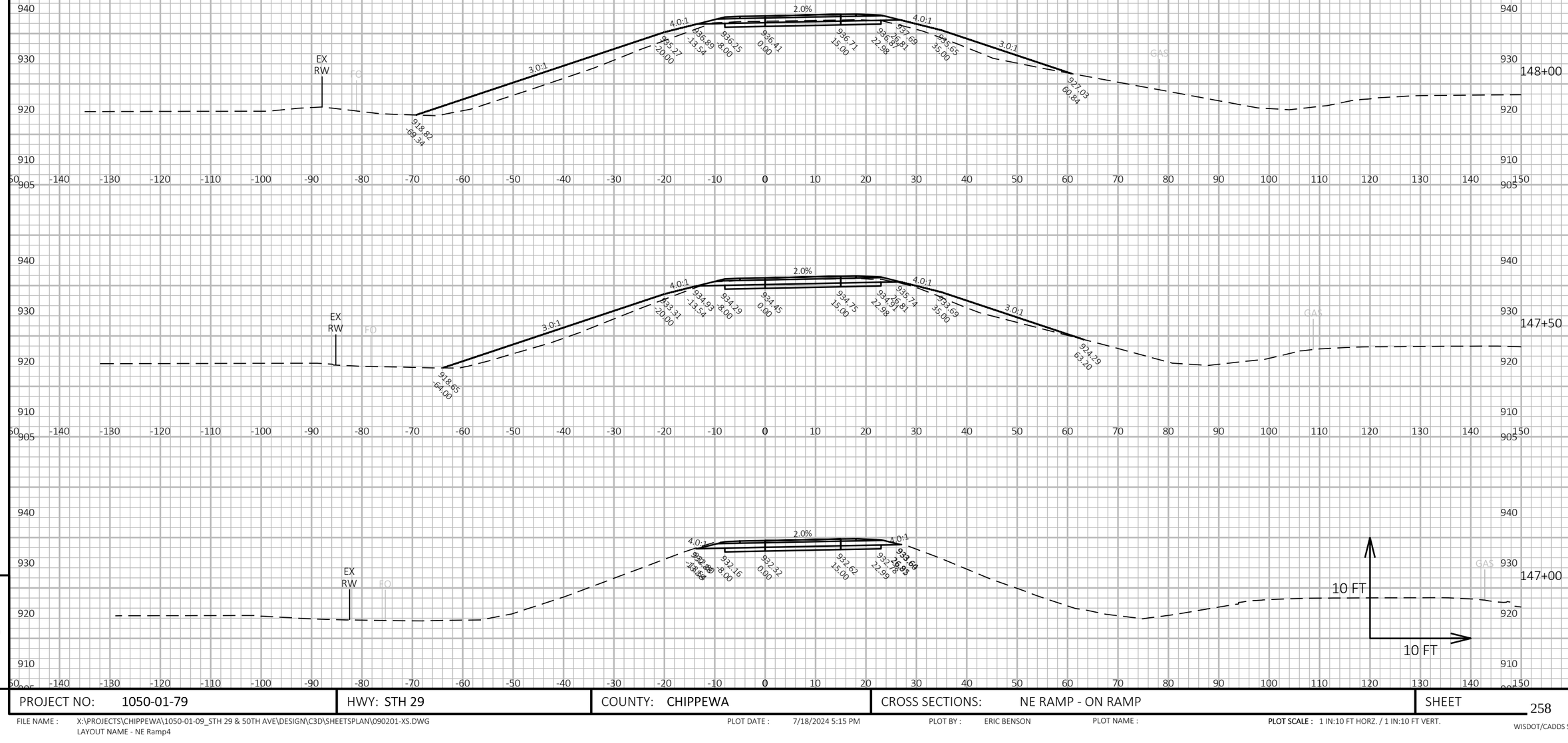
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: NW RAMP - OFF RAMP | SHEET 257 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - NW Ramp3

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

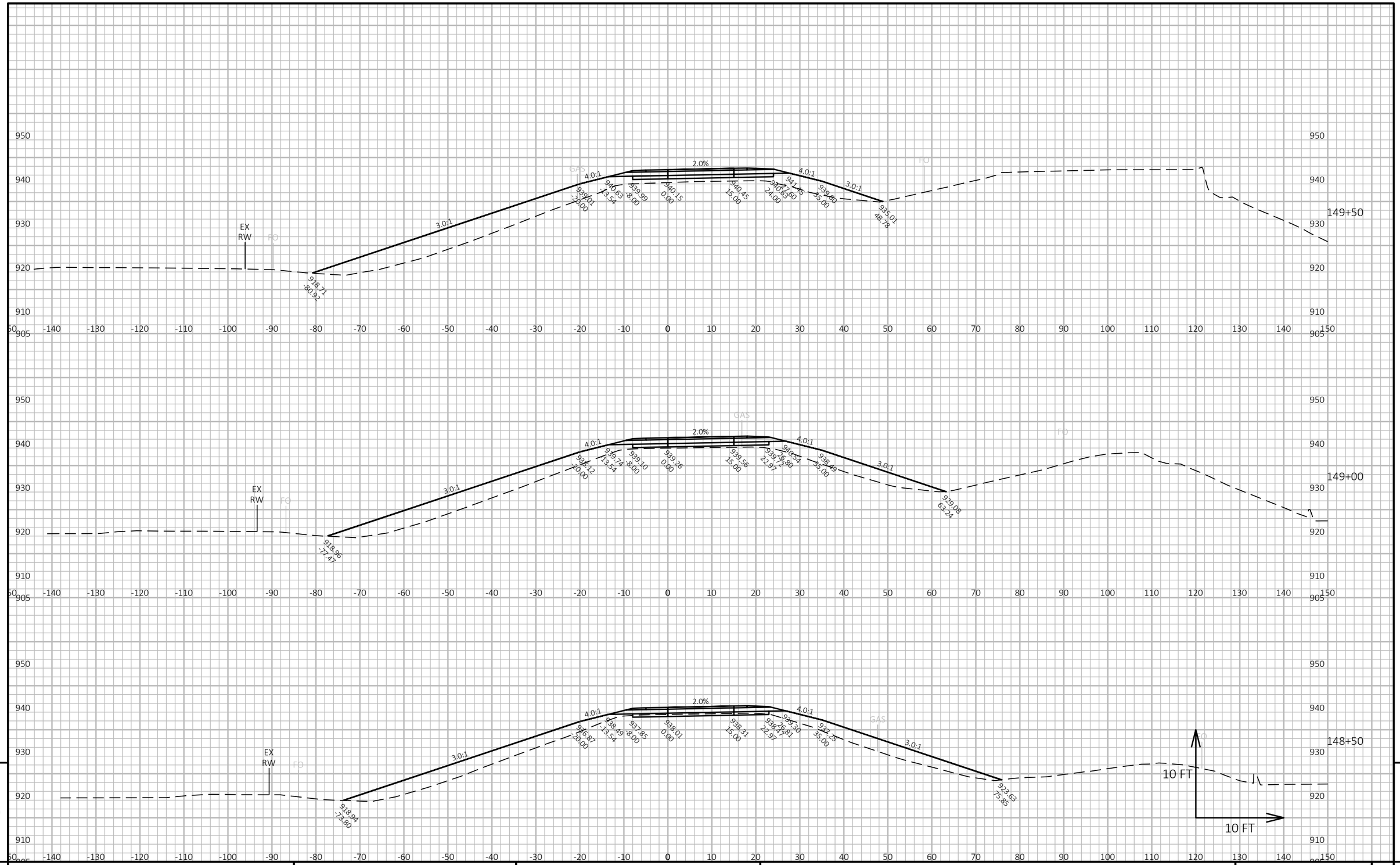
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: NE RAMP - ON RAMP | SHEET 258 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - NE Ramp4

PLOT DATE : 7/18/2024 5:15 PM PLOT BY : ERIC BENSON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: NE RAMP - ON RAMP | SHEET 259 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - NE Ramp5

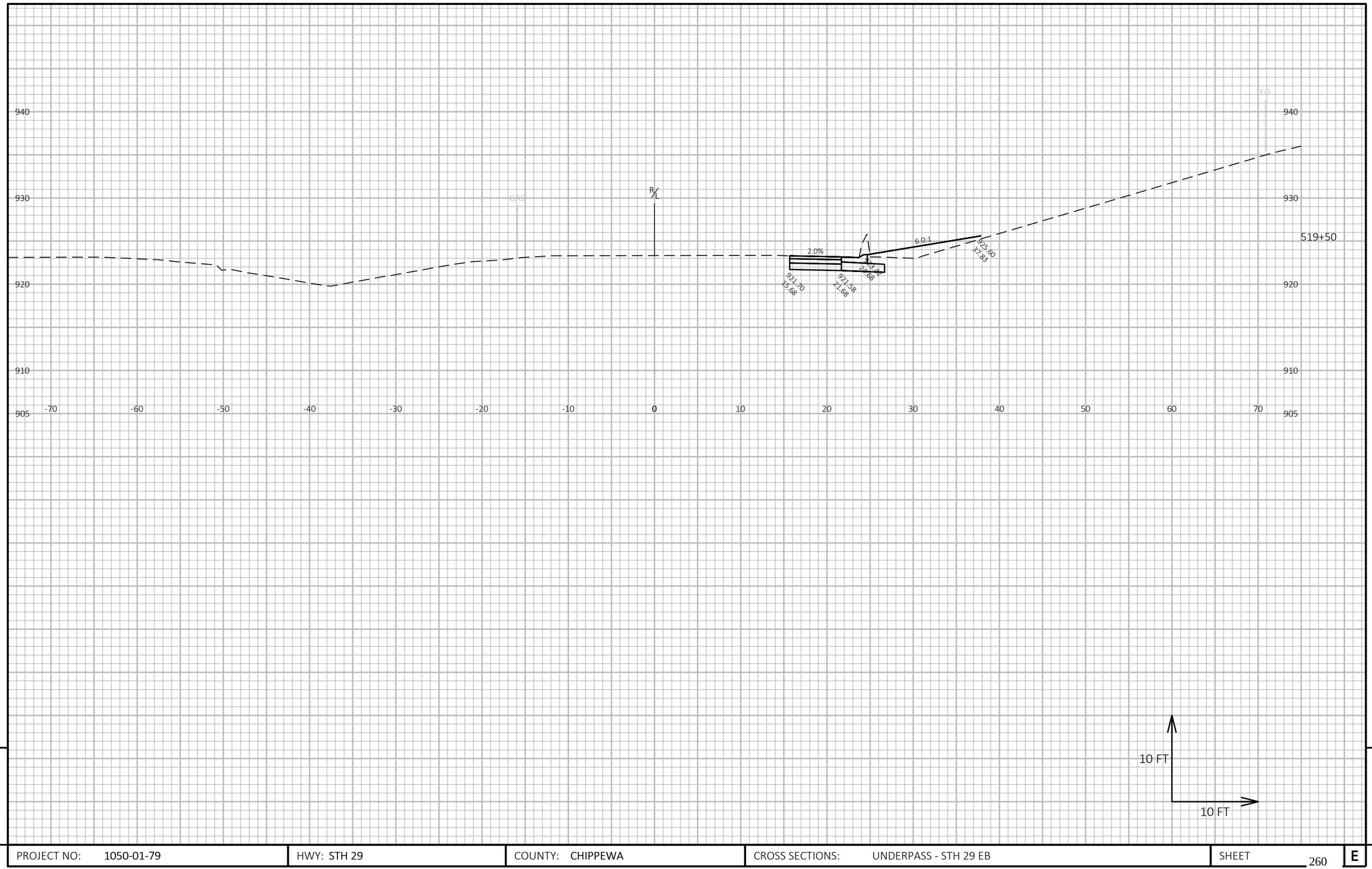
PLOT DATE : 7/18/2024 5:15 PM

PLOT BY : ERIC BENSON

PLOT NAME :

**PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

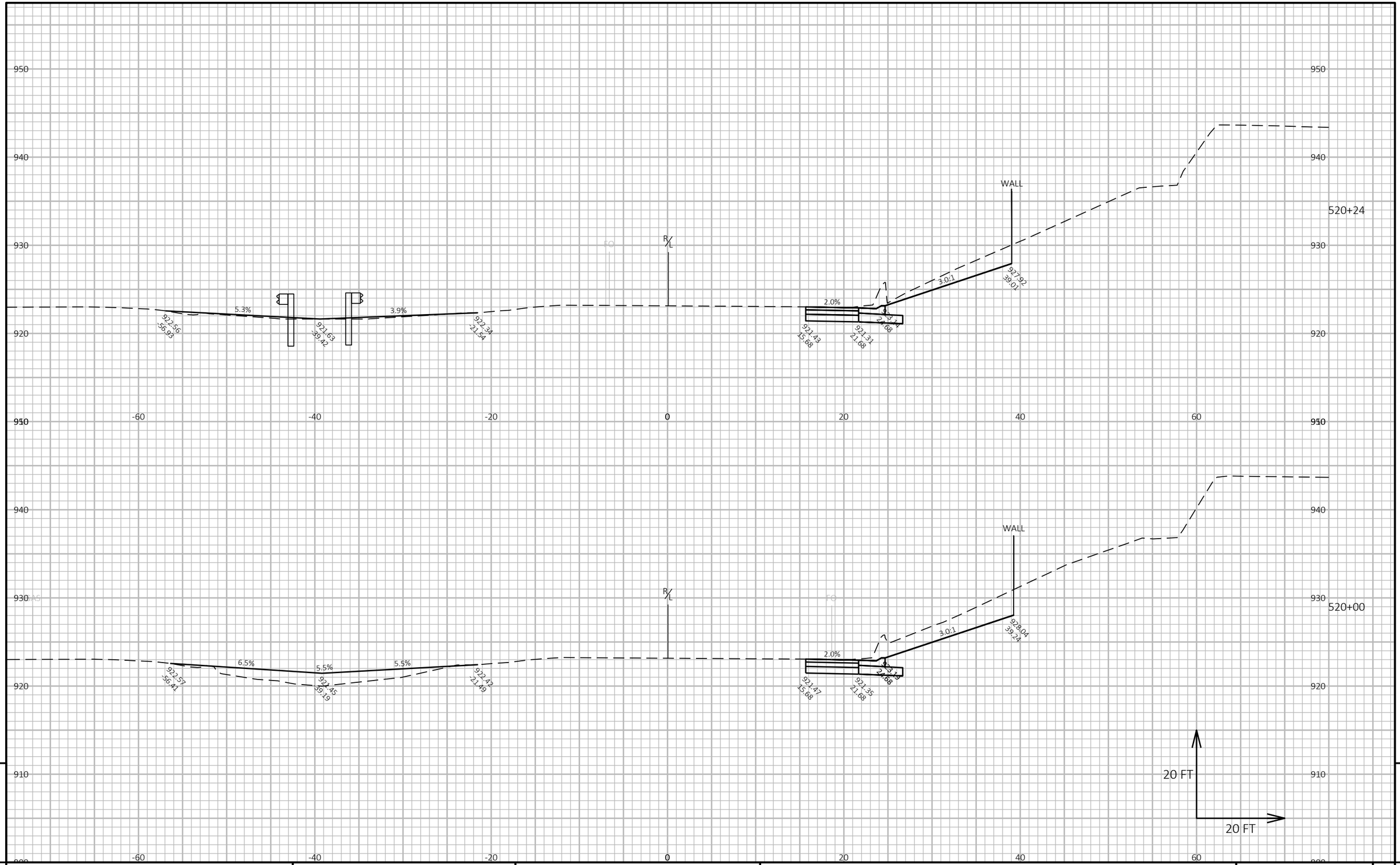
| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 EB | SHEET 260 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 1

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9




9

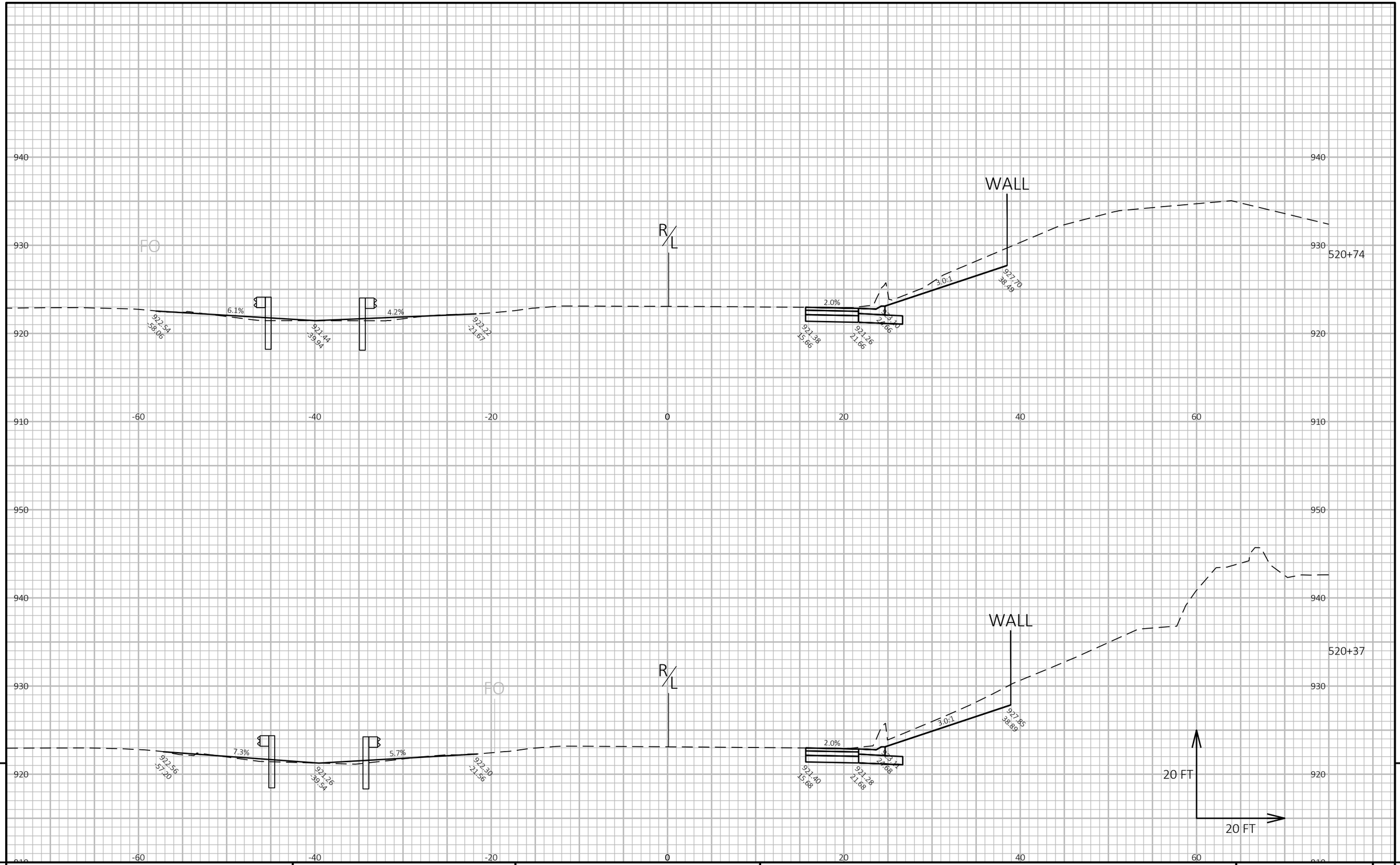
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 EB | SHEET 261 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 01

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

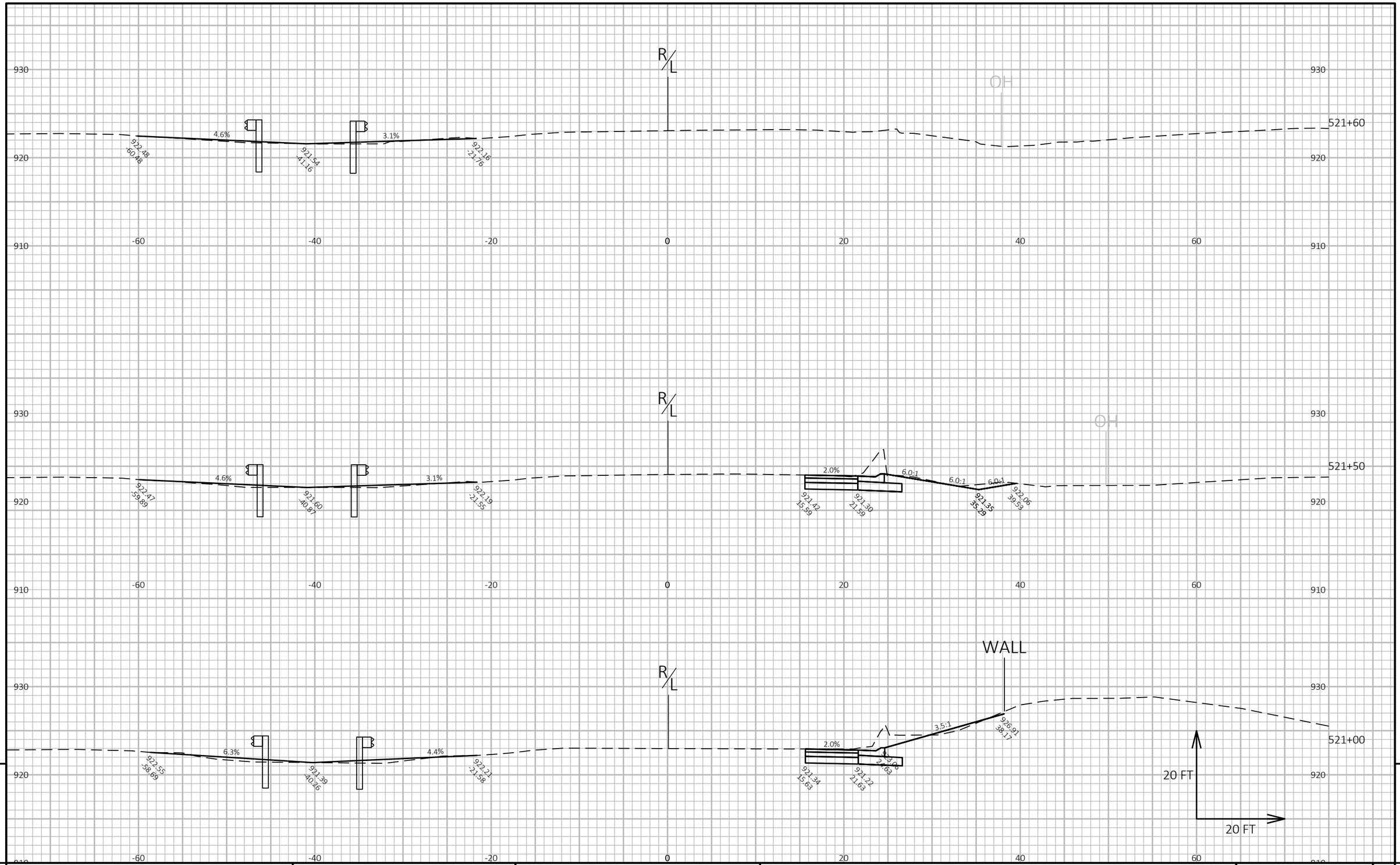
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 EB | SHEET 262 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 02

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

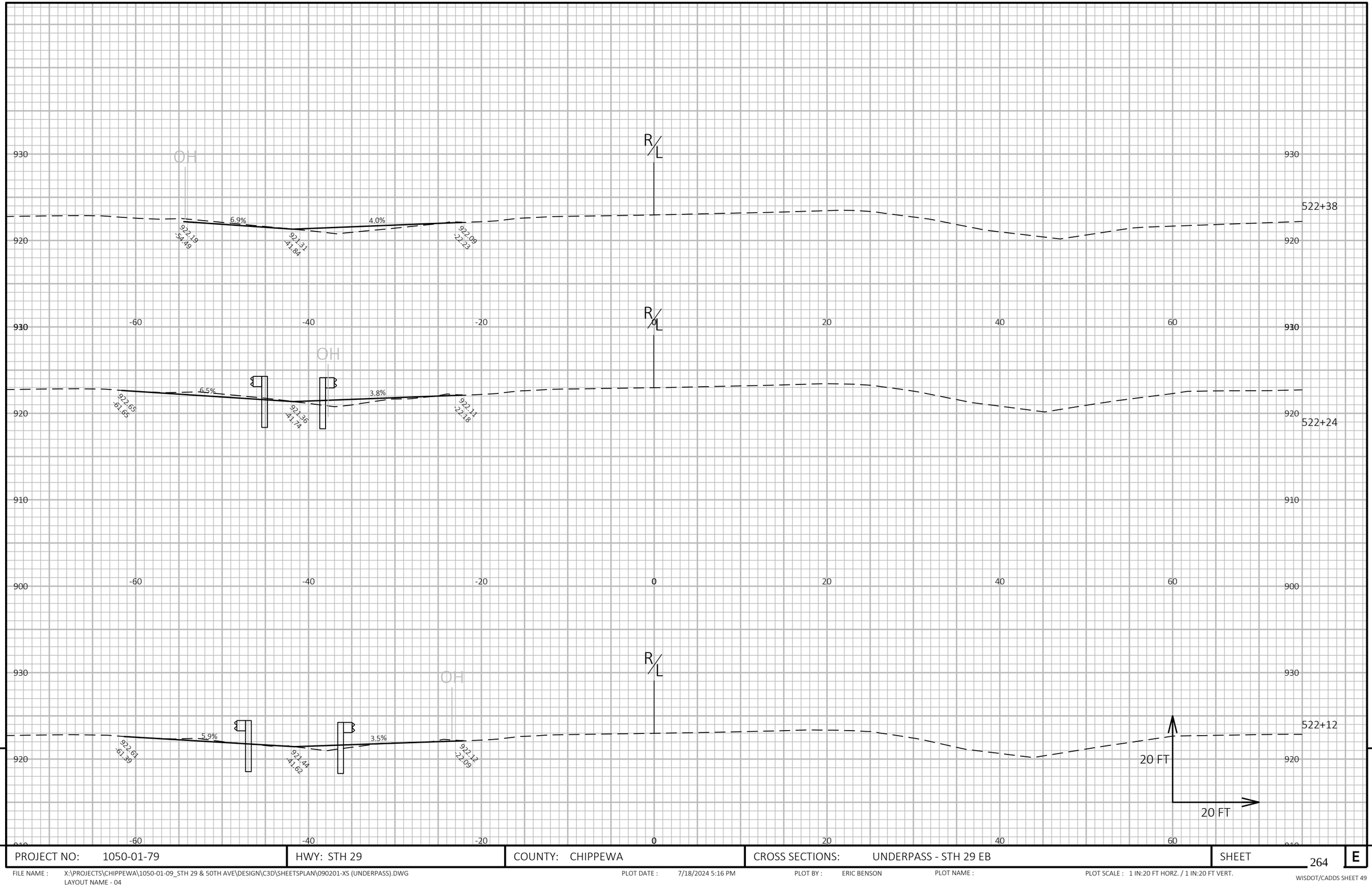
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 EB | SHEET 263 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 03

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 EB | SHEET 264 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 04

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

930

920

915

-90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50

9.9:1

2.0%

923.86
-32.57

922.82
-22.32

920.94
-19.32

921.06
-13.32

522+01

10 FT

10 FT

9

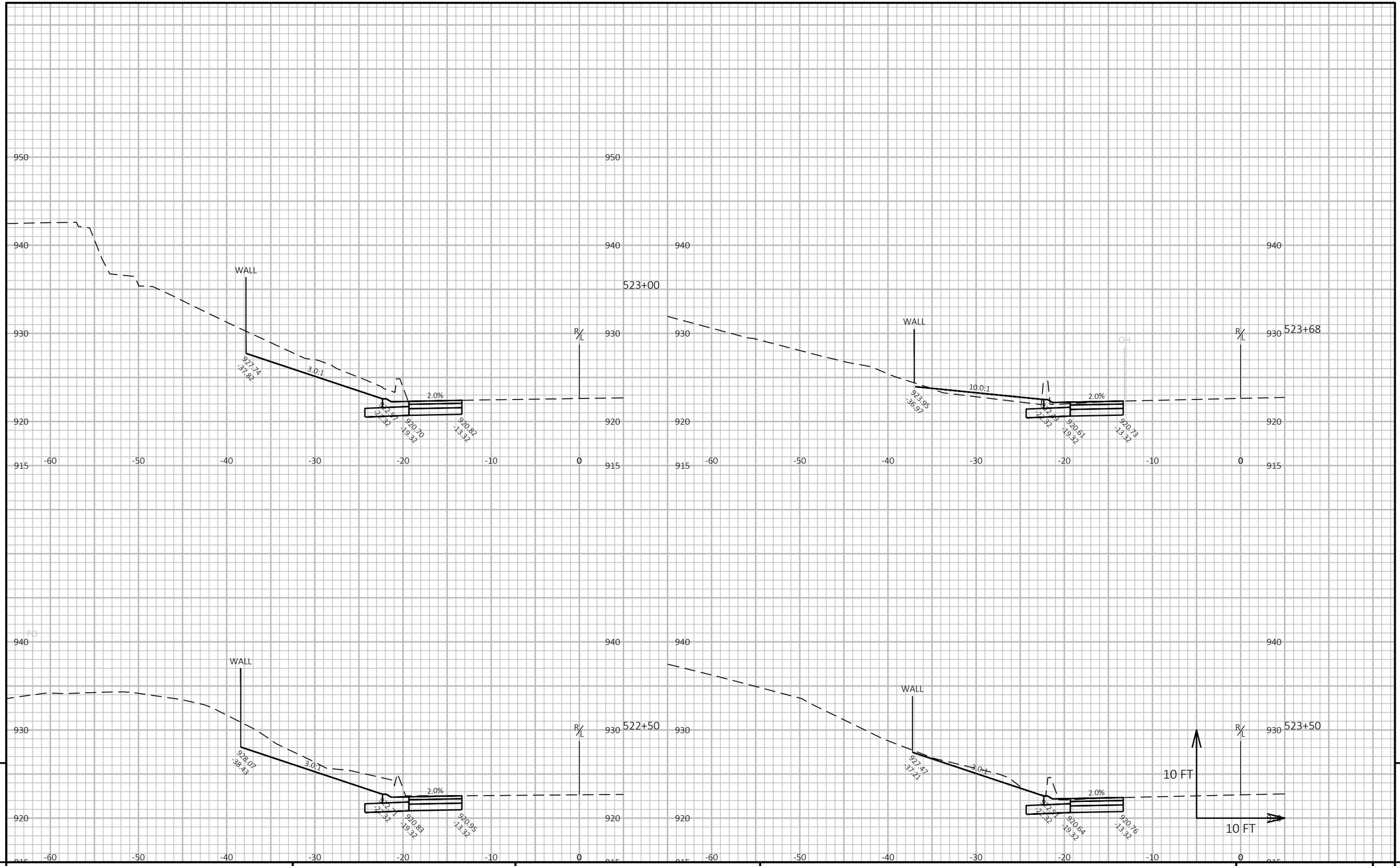
9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 WB | SHEET 265 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 6

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

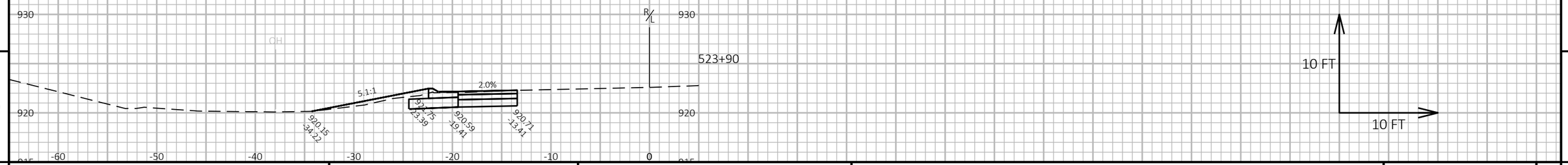



| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 WB | SHEET 266 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 7

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 1050-01-79 | HWY: STH 29 | COUNTY: CHIPPEWA | CROSS SECTIONS: UNDERPASS - STH 29 WB | SHEET 267 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-01-09_STH 29 & 50TH AVE\DESIGN\C3D\SHEETSPLAN\090201-XS (UNDERPASS).DWG
LAYOUT NAME - 8

PLOT DATE : 7/18/2024 5:16 PM PLOT BY : ERIC BENSON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

**Wisconsin Department of Transportation**

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

EAU

PROJECT ID: 8996-01-07

WITH: 1050-01-79

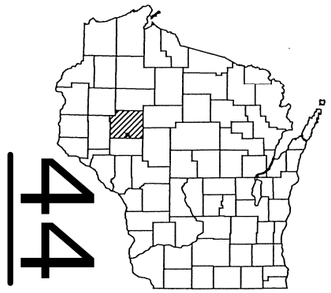
COUNTY: CHIPPEWA

NOVEMBER 2024

ORDER OF SHEETS

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

TOTAL SHEETS = 234



N

DESIGN DESIGNATION 8996-01-06

| | | | CTH J (S) | CTH J (N) | 50TH AVE (W) |
|---|---|---|---|---|---|
| A.A.D.T. | 2024 | = | 1860 | 2900 | 1450 |
| A.A.D.T. | 2044 | = | 5770 | 3930 | 5270 |
| D.H.V. | 2044 | = | 577 | 393 | 527 |
| D.D. | 2044 | = | 50/50 | 50/50 | 50/50 |
| T. | | = | 4.8% | 4.8% | 4.8% |
| DESIGN SPEED | | = | 45 MPH | 40 MPH | 40 MPH |
| ESALS | | = | 490,000 | 490,000 | 490,000 |

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

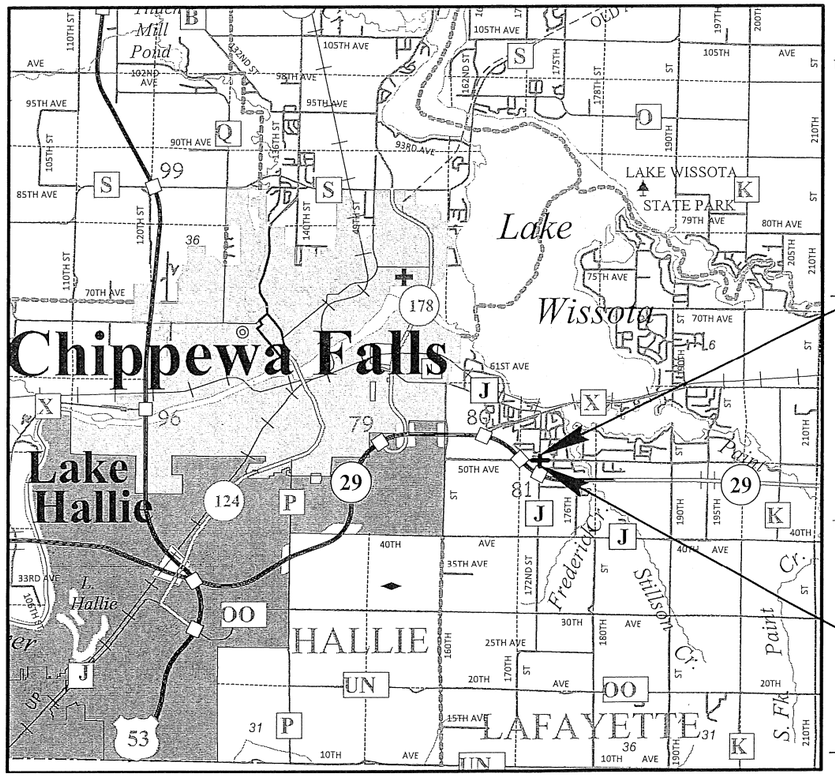
# CHIPPEWA FALLS - CTH K

CTH J & 50TH AVE INTERSECTION

## CTH J

## CHIPPEWA COUNTY

| STATE PROJECT NUMBER |
|---|
| 8996-01-07 |




LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.133 MI

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

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

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 8996-01-07 | WISC 2025068 | 1 |
| | | |
| | | |
| | | |

ACCEPTED FOR

COUNTY of CHIPPEWA

7-25-24 DATE: HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY:


SEH Building a Better World for All of Us

Short Elliott Hendrickson Inc.
10 North Bridge Street
Chippewa Falls, WI 54729-2550
715.720.6200 main | 888.908.8166 fax
800.472.5881 toll free | www.sehinc.com


WISCONSIN
TARA L. KRISTA
37975
CHIPPEWA FALLS, WI
PROFESSIONAL ENGINEER

7-25-2024 DATE: Tara L. Krista PROFESSIONAL ENGINEER SIGNATURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | SEH |
| Designer | SEH |
| Project Manager | MATTHEW BERG |
| Regional Examiner | WISDOT NORTHWEST REGION |
| Regional Supervisor | TOU YANG |

APPROVED FOR THE DEPARTMENT

DATE: 7/29/2024 (Signature)

E

## GENERAL NOTES

1. WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.
2. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
3. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
4. THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.
5. DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOILED, FERTILIZED, AND SEEDED AND MULCHED. FINISHED AND/SEEDED SURFACE SHALL BE 1-INCH BELOW THE TOP OF ADJACENT CONCRETE.
6. THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.
7. ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
8. ALL SIDE ROAD EARTHWORK QUANTITIES ARE INCLUDED IN MAINLINE EARTHWORK QUANTITIES.
9. CONSTRUCT INSIDE EDGE OF SIDEWALK ¼ INCH HIGHER THAN THE TOP OF CURB, WHEN THEY ARE ADJACENT TO EACH OTHER.
10. A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.
11. TOP OF CASTING ELEVATIONS SHOWN FOR INLETS REFER TO THE CASTING ELEVATION AT THE FRONT EDGE OF CASTING/FLOWLINE OF GRATE/TOP OF CURB BOX.
12. ALL STORM SEWER INVERTS, ELEVATIONS, PIPE LENGTHS, AND GRADES ARE COMPUTED CENTER-TO-CENTER OF STRUCTURES.
13. CURB RAMP TYPES ARE SHOWN ON PLAN/INTERSECTION DETAIL SHEETS.

## UTILITY CONTACT LIST

### ELECTRIC

TYSON KALIEN
XCEL ENERGY - DISTRIBUTION
1400 WESTERN AVENUE
EAU CLAIRE, WI 54701
PHONE: 715.226.8936 (OFFICE)
EMAIL: TYSON.KALIEN@XCELENERGY.COM

### GAS

BECKY MARQUARDT
XCEL ENERGY - GAS/PETROLEUM
1400 WESTERN AVENUE
EAU CLAIRE, WI 54701
PHONE: 715.737.1590 (OFFICE)
EMAIL: REBECCA.K.MARQUARDT@XCELENERGY.COM

### FIBER OPTIC

SUNNY RICHARDSON
CHARTER COMMUNICATION
1201 MCCANN DRIVE
ALTOONA, WI 54720
PHONE: 715.955.4546 (OFFICE) 715.896.6503 (CELL)
EMAIL: SUNNY.RICHARDSON@CHARTER.COM

### FIBER OPTIC

DAREN BAUER
UW EAU CLAIRE
CINC
105 GARFIELD AVE
EAU CLAIRE, WI 54701
PHONE: 715.836.5286
EMAIL: BAUERDP@UWEC.EDU

### FIBER OPTIC

RICK PODOLAK
AT&T WISCONSIN
304 S DEWEY STREET
EAU CLAIRE, WI 54701
715.839.5929 (OFFICE) 715.410.0656 (CELL)
EMAIL: RP4514@ATT.COM

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

DESIGN CONTACT
10 NORTH BRIDGE STREET
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.720.6291
ATTENTION: TARA KRISTA
EMAIL: TKRISTA@SEHINC.COM

WISDOT CONTACT
718 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
TELEPHONE: 920.492.4147
ATTENTION: MATTHEW BERG
EMAIL: MATTHEW.BERG@DOT.WI.GOV

MUNICIPAL CONTACT
801 EAST GRAND AVENUE
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.726.7914
ATTENTION: BRIAN KELLEY
EMAIL: BKELLEY@CO.CHIPPEWA.WI.US

WDNR CONTACT
DNR WEST CENTRAL REGION HQ
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54702
TELEPHONE:715.934.9014
ATTENETION: LEAH NICOL
EMAIL: LEAH.NICOL@WISCONSIN.GOV

2

N

LEGEND NOTES

PROJECT ID 1050-01-79

PROJECT ID 8996-01-07
PROJECT ID 1050-01-79 (SELECT QUANTITIES)

51ST AVE

306NB

CTH J

304NB

END PROJECT
STA 303+73.00'NB'

BLDG

171ST ST

12'SR'

EXISTING ROW (TYP)

BLDG

TLE (TYP)

402'SB'

302NB

HSE

END PROJECT ID
1050-01-79
STA 127+00.00'EB'

SHED

END CONSTRUCTION
PROJECT ID 1050-01-79
STA 129+40.11'EB'

18" CP

END ROAD CONSTRUCTION
PROJECT 8996-01-07
STA 138+17'EB'

200'WB'

126'EB'

50TH AVE

196'WB'

198'WB'

128'EB'

130'EB'

132'EB'

202'WB'

204'WB'

206'WB'

138'EB'

140'EB'

134'EB'

136'EB' 50TH AVE (AKA STILSON RD)

400'SB'

300NB

12'D1'

FRONTAGE RD

PROPOSED ROW (TYP)

BEGIN PROJECT ID
8996-01-07
STA 127+00.00'EB'

BLDG

SHED

PLE
(DRAINAGE)

SEE PROJECT ID 1050-01-79
FOR QUANTITIES

398'SB'

298NB

CTH J

BEGIN PROJECT
STA 296+70.00'NB'

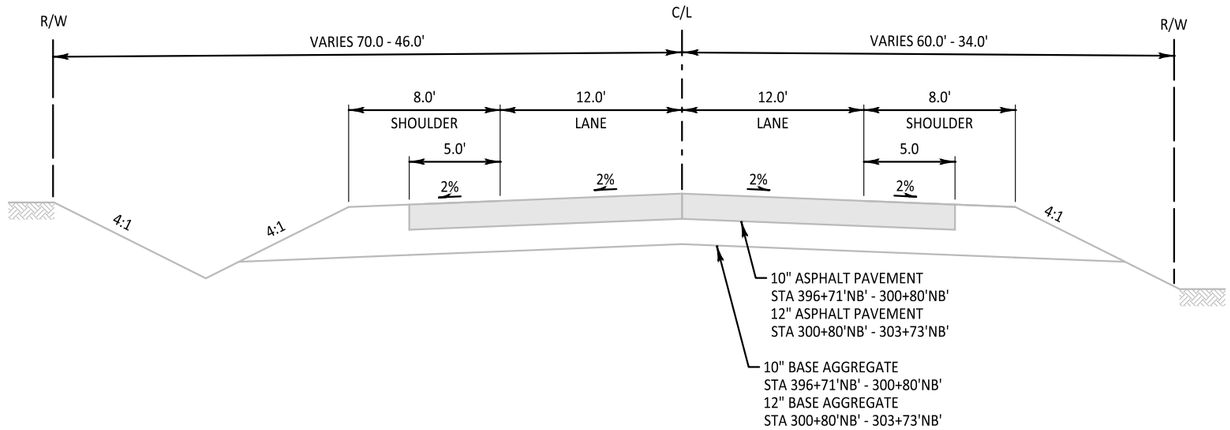
397'SB'

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PROJECT OVERVIEW | SHEET 3 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\020201_PO.DWG
LAYOUT NAME - 01

PLOT DATE : 7/26/2024 8:07 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:100 FT

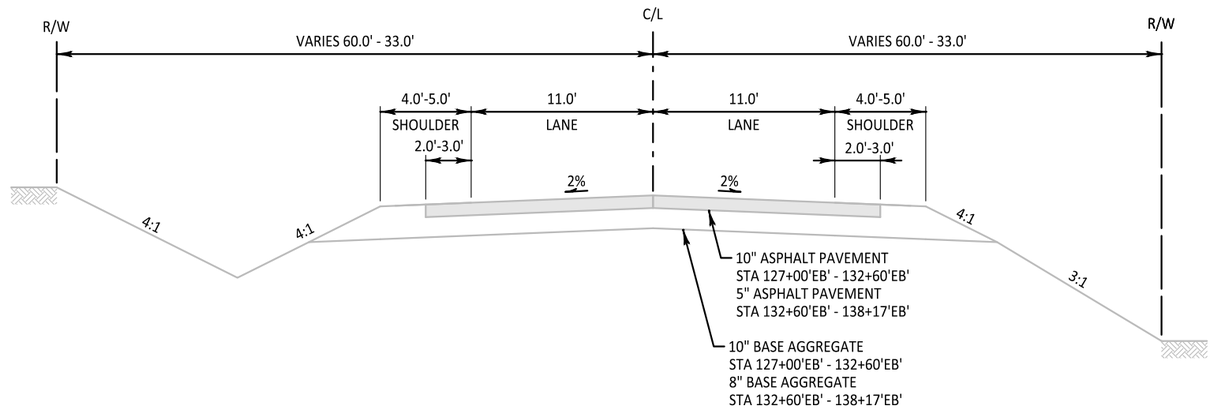
2




## TYPICAL EXISTING SECTION

CTH J

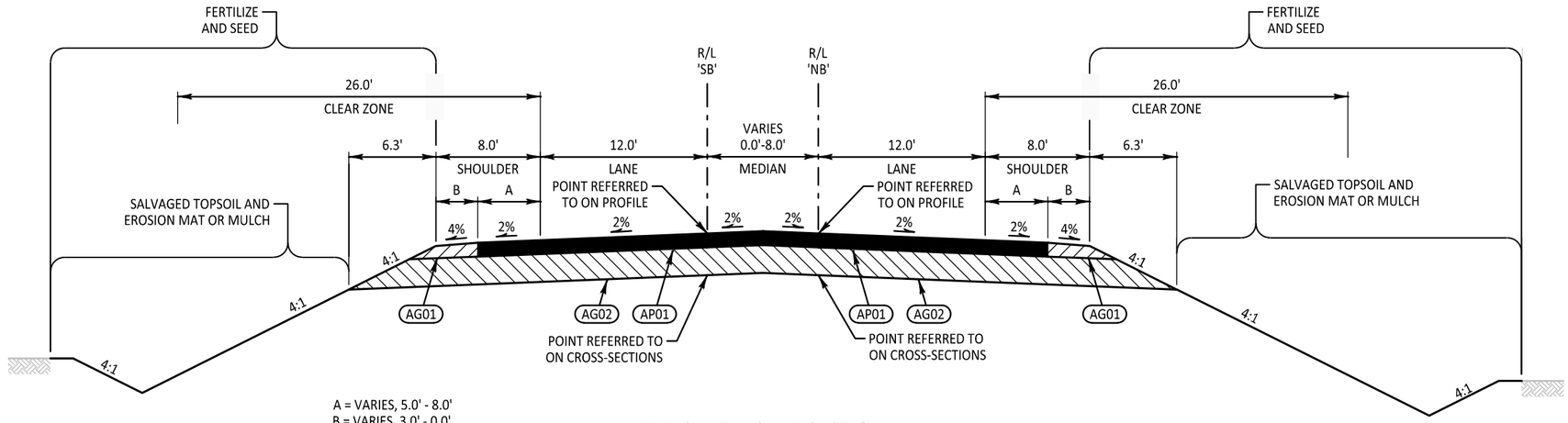
STA 296+70'NB' TO STA 303+73'NB'




## TYPICAL EXISTING SECTION

50TH AVENUE

STA 127+00'EB' TO STA 138+17'EB'

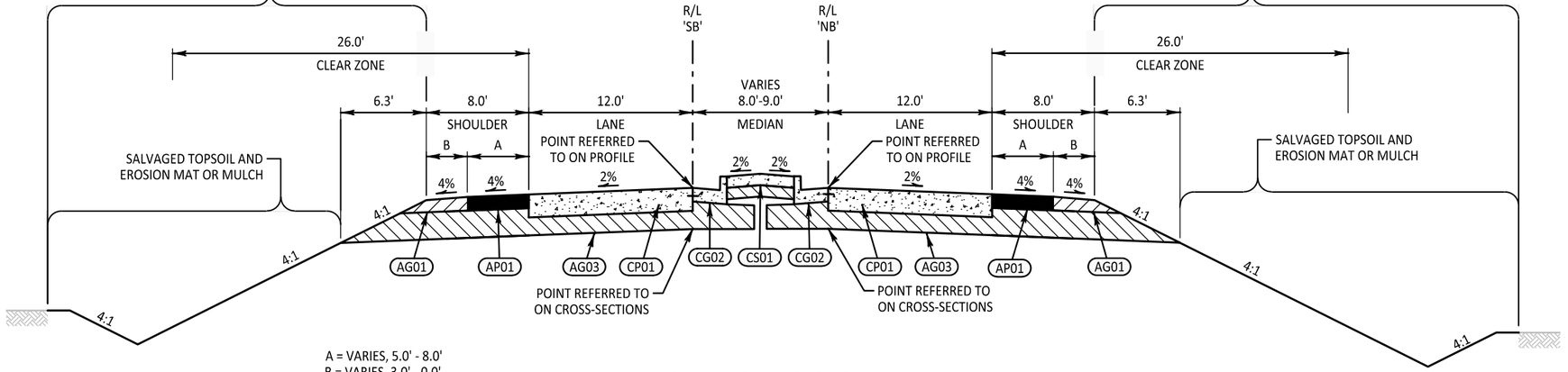



A = VARIES, 5.0' - 8.0'
B = VARIES, 3.0' - 0.0'

## TYPICAL FINISHED SECTION

CTH J

STA 296+70'NB' TO STA 298+37'NB'




A = VARIES, 5.0' - 8.0'
B = VARIES, 3.0' - 0.0'

## TYPICAL FINISHED SECTION

CTH J

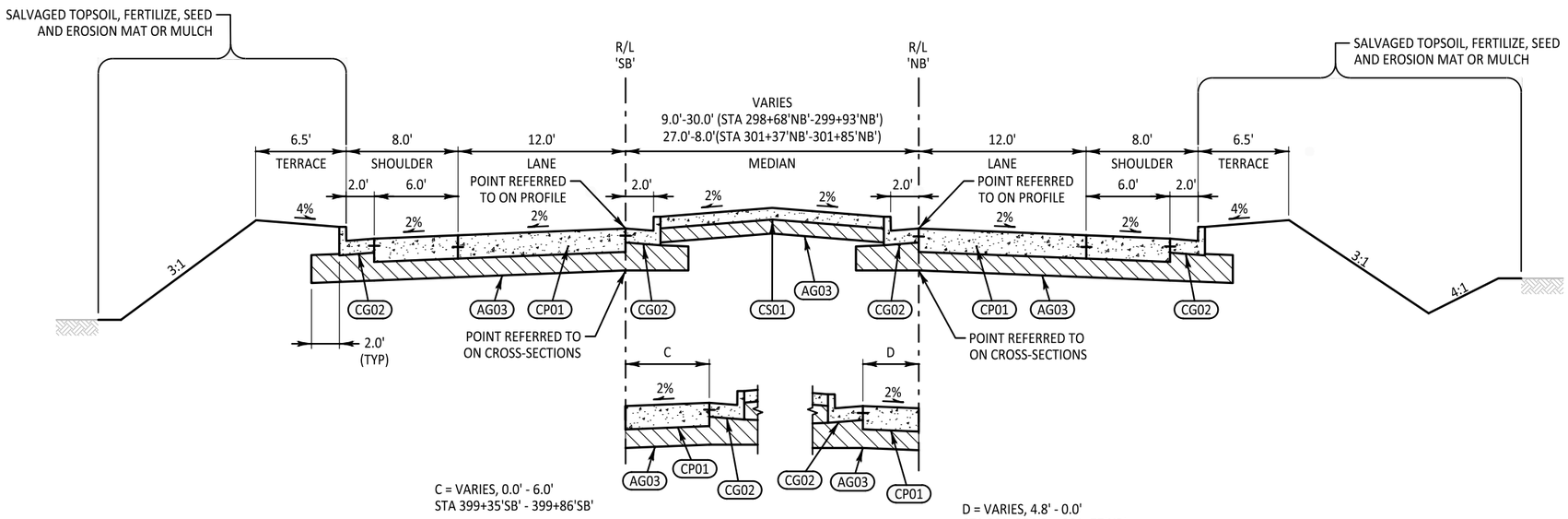
STA 298+37'NB' TO STA 298+68'NB'

### KEYNOTE LEGEND

| | |
|---|---|
| AG01 | 5.5" BASE AGGREGATE DENSE 3/4-INCH |
| AG02 | 12" BASE AGGREGATE DENSE 1 1/4-INCH |
| AG03 | 6.0" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP01 | 5.5-INCH HMA PAVEMENT<br>UPPER: 2.5" - 4 HT 58-34 H<br>LOWER: 3.0" - 3 HT 58-28 H |
| CG02 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G |
| CS01 | CONCRETE SIDEWALK 4-INCH (INCL. COLORING CONCRETE WISDOT RED) |
| CP01 | CONCRETE PAVEMENT 8-INCH |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TYPICAL SECTIONS | SHEET 5 | E |
|---|---|---|---|---|---|

2




C = VARIES, 0.0' - 6.0'
STA 399+35'SB' - 399+86'SB'

D = VARIES, 4.8' - 0.0'
STA 301+37'NB' - 301+77'NB'

## TYPICAL FINISHED SECTION

CTH J

STA 298+37'NB' TO STA 299+93'NB'
STA 301+35'NB' TO STA 301+85'NB'

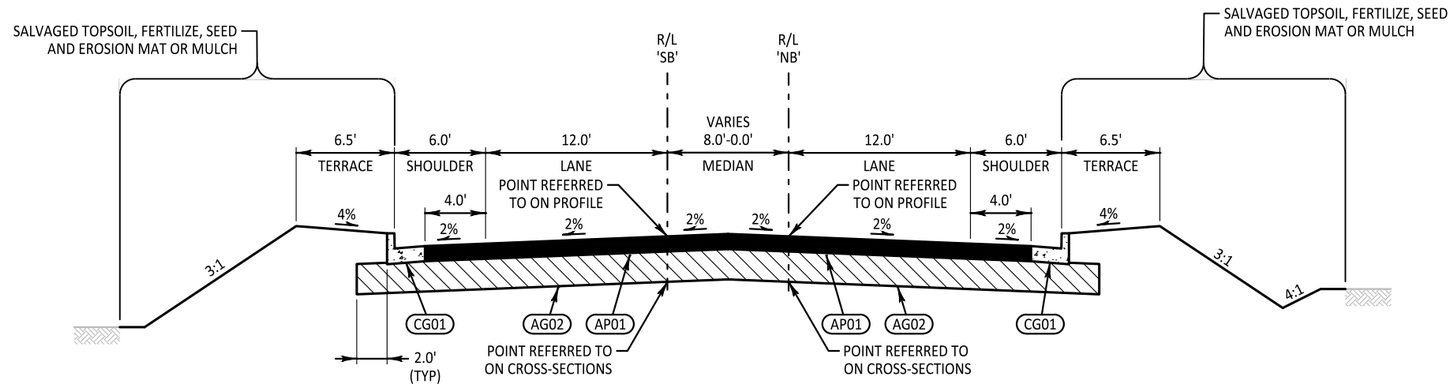
### KEYNOTE LEGEND

| | |
|---|---|
| AG03 | 6.0" BASE AGGREGATE DENSE 1 1/4-INCH |
| CP01 | CONCRETE PAVEMENT 8-INCH |
| CS01 | CONCRETE SIDEWALK 4-INCH (INCL. COLORING CONCRETE WISDOT RED) |
| CG02 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TYPICAL SECTIONS | SHEET 6 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 02A
PLOT DATE : 7/26/2024 8:07 AM
PLOT BY : DEAN STODOLA
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2




## TYPICAL FINISHED SECTION

CTH J

STA 301+85'NB' TO STA 302+56'NB'

### KEYNOTE LEGEND

| | |
|---|---|
| AG01 | 5.5" BASE AGGREGATE DENSE 3/4-INCH |
| AG02 | 12" BASE AGGREGATE DENSE 1 1/4-INCH |
| AG03 | 6.0" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP01 | 5.5-INCH HMA PAVEMENT<br>UPPER: 2.5" - 4 HT 58-34 H<br>LOWER: 3.0" - 3 HT 58-28 H |
| CG01 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J |

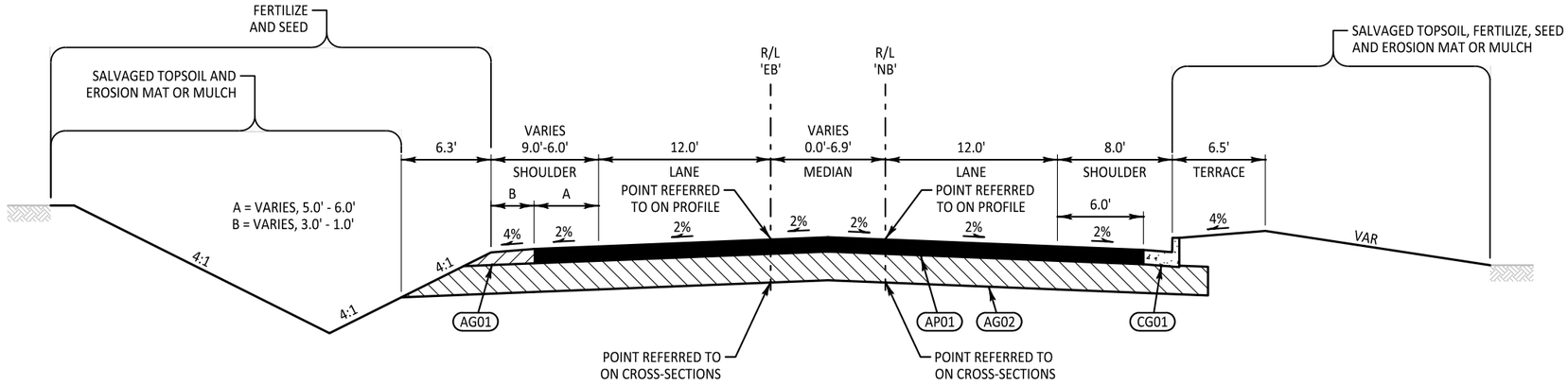



## TYPICAL FINISHED SECTION

CTH J

STA 302+56'NB' TO STA 303+73'NB'

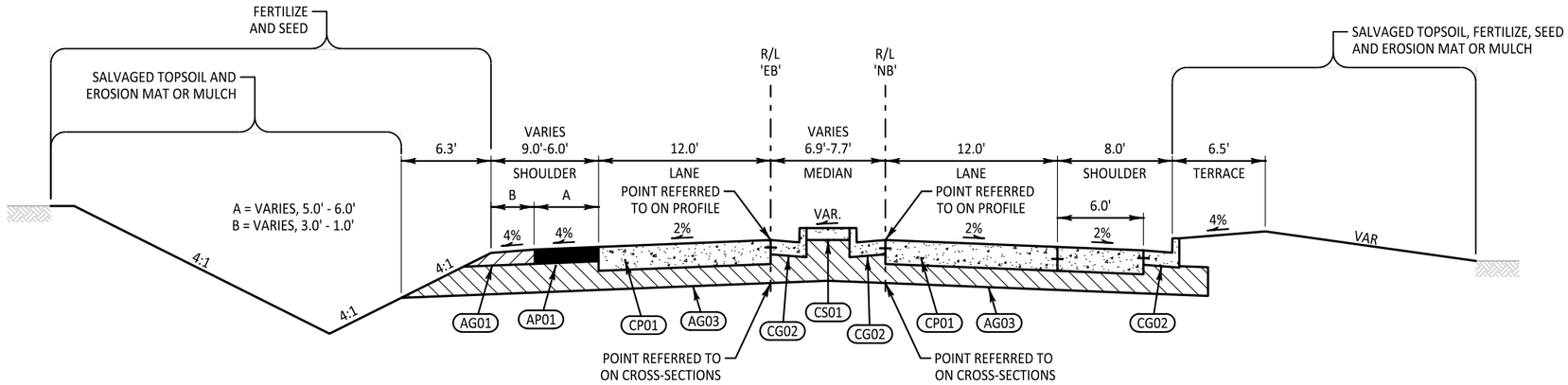
2




## TYPICAL FINISHED SECTION

50TH AVENUE

STA 127+00'EB' TO STA 129+40'EB'




## TYPICAL FINISHED SECTION

50TH AVENUE

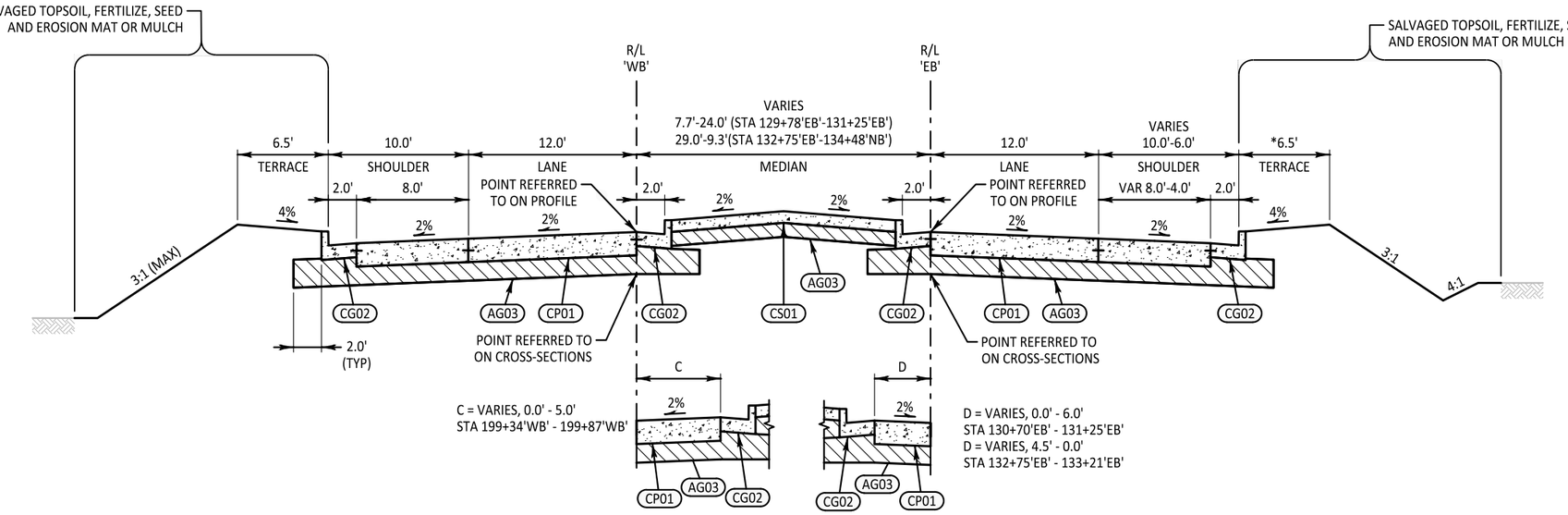
STA 127+33'EB' TO STA 129+78'EB'

### KEYNOTE LEGEND

| | |
|---|---|
| AG01 | 5.5" BASE AGGREGATE DENSE 3/4-INCH |
| AG02 | 12" BASE AGGREGATE DENSE 1 1/4-INCH |
| AG03 | 6.0" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP01 | 5.5-INCH HMA PAVEMENT<br>UPPER: 2.5" - 4 HT 58-34 H<br>LOWER: 3.0" - 3 HT 58-28 H |
| CP01 | CONCRETE PAVEMENT 8-INCH |
| CS01 | CONCRETE SIDEWALK 4-INCH (INCL. COLORING CONCRETE WISDOT RED) |
| CG01 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J |
| CG02 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TYPICAL SECTIONS | SHEET 8 | E |
|---|---|---|---|---|---|

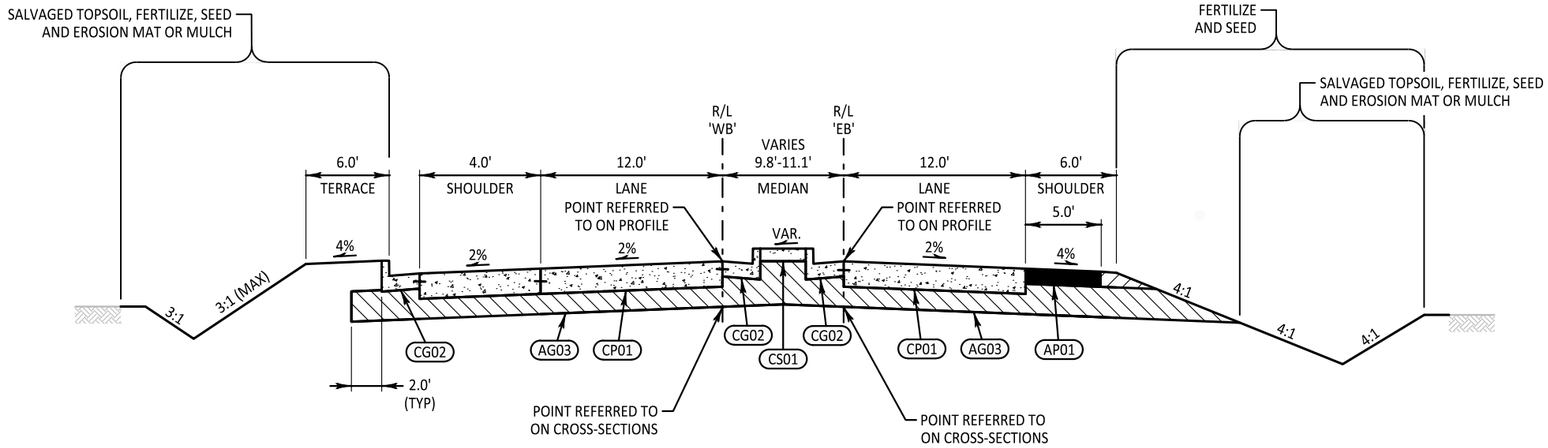
FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 04
PLOT DATE : 7/26/2024 8:07 AM
PLOT BY : DEAN STODOLA
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42




## TYPICAL FINISHED SECTION

50TH AVENUE

STA 129+78'EB' TO STA 131+25'EB'
STA 132+75'EB' TO STA 133+92'EB'



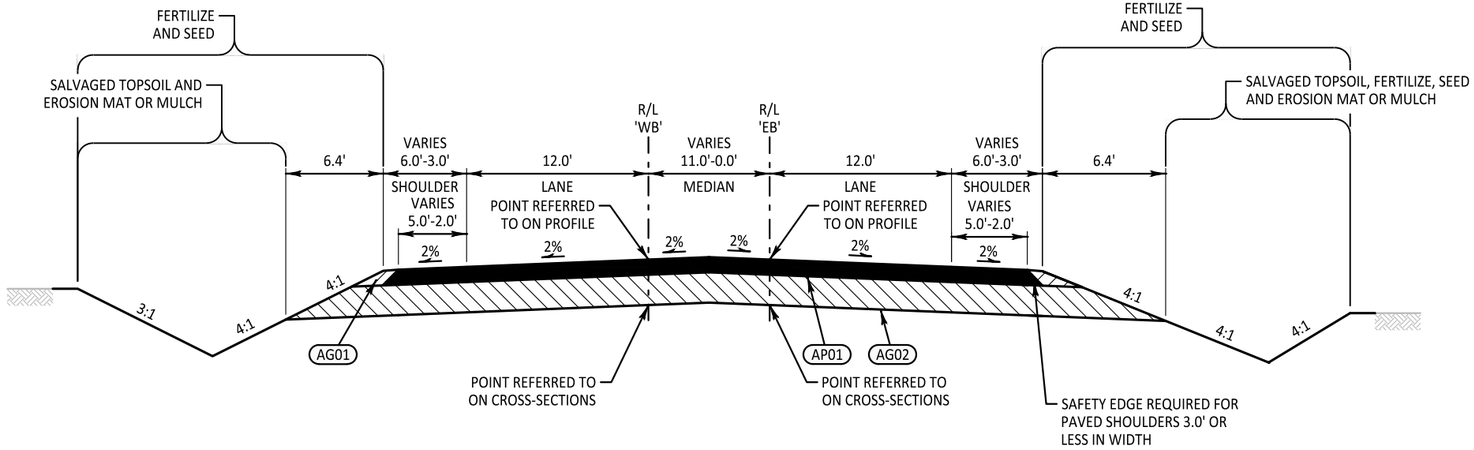

## TYPICAL FINISHED SECTION

50TH AVENUE

STA 133+92'EB' TO STA 134+49'EB'

### KEYNOTE LEGEND

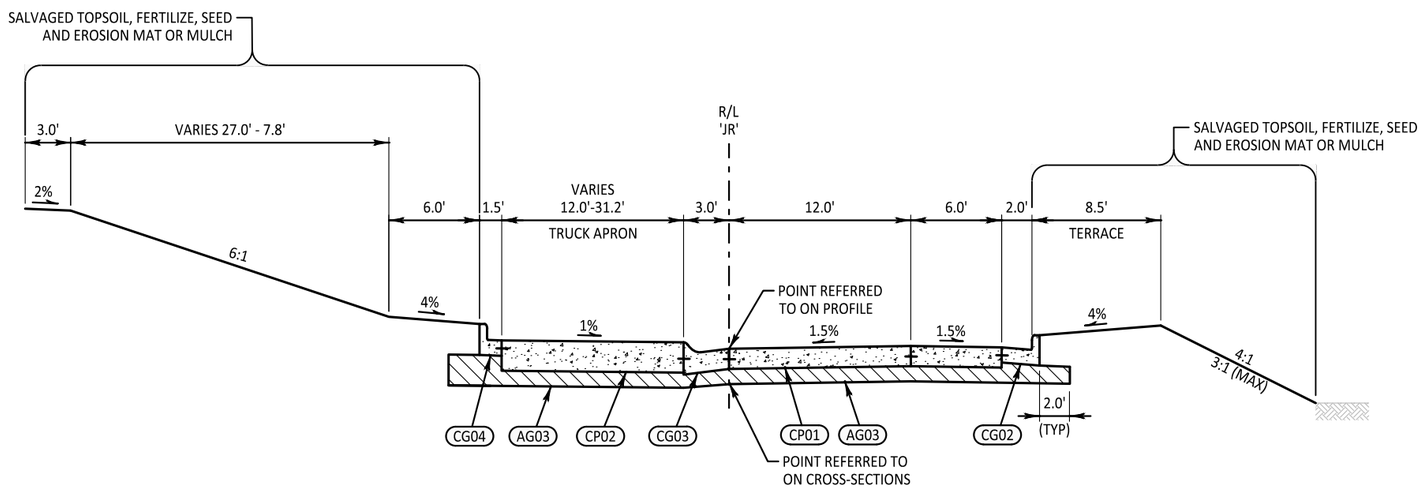
| | |
|---|---|
| AG03 | 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP01 | 5.5-INCH HMA PAVEMENT<br>UPPER: 2.5" - 4 HT 58-34 H<br>LOWER: 3.0" - 3 HT 58-28 H |
| CP01 | CONCRETE PAVEMENT 8-INCH |
| CG02 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G |
| CS01 | CONCRETE SIDEWALK 4-INCH (INCL. COLORING CONCRETE WISDOT RED) |




## TYPICAL FINISHED SECTION

50TH AVENUE

STA 134+49'EB' TO STA 138+17'EB'



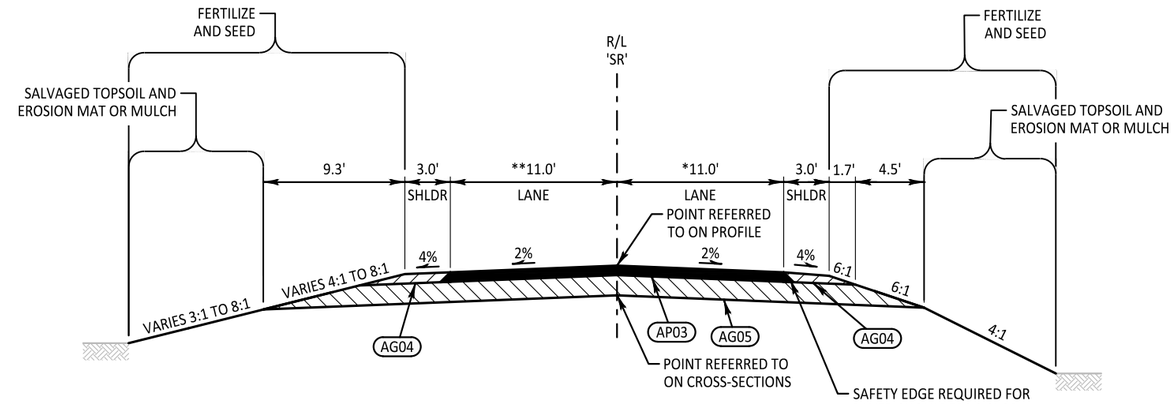

## TYPICAL FINISHED SECTION

ROUNDABOUT

STA 10+00'JR' TO STA 13+14'JR'

### KEYNOTE LEGEND

| | |
|---|---|
| AG01 | 5.5" BASE AGGREGATE DENSE 3/4-INCH |
| AG02 | 12" BASE AGGREGATE DENSE 1 1/4-INCH |
| AG03 | 6.0" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP01 | 5.5-INCH HMA PAVEMENT<br>UPPER: 2.5" - 4 HT 58-34 H<br>LOWER: 3.0" - 3 HT 58-28 H |
| CG02 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G |
| CG03 | CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R |
| CG04 | CONCRETE CURB & GUTTER 18-INCH TYPE A, REVERSE SLOPE |
| CP01 | CONCRETE PAVEMENT 8-INCH |
| CP02 | CONCRETE TRUCK APRON 12-INCH (INCL. COLORING CONCRETE WISDOT RED) |




** = VARIES 15.0' - 11.0'
STA 10+57'SR' - 10+97'SR'

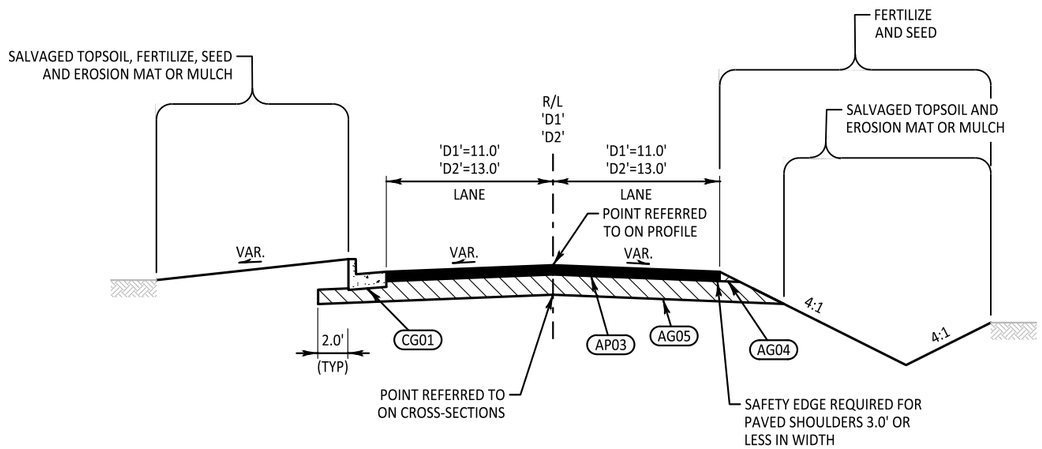
## TYPICAL FINISHED SECTION

171ST STREET
STA 10+50'SR' TO STA 11+75'SR'

* = VARIES 15.0' - 11.0'
STA 10+60'SR' - 11+00'SR'

### KEYNOTE LEGEND

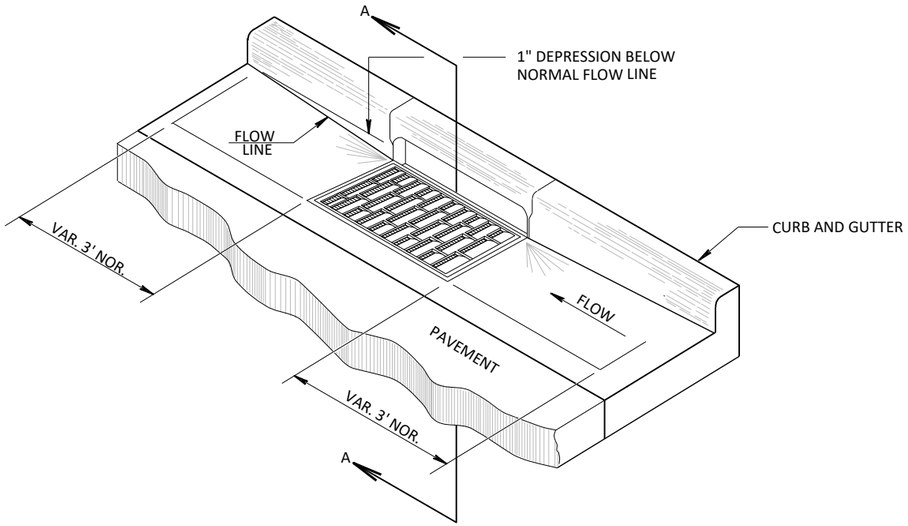
| | |
|---|---|
| AG04 | 4.0" BASE AGGREGATE DENSE 3/4-INCH |
| AG05 | 8" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP03 | 4.0-INCH HMA PAVEMENT<br>UPPER: 1.75" - 4 HT 58-34 H<br>LOWER: 2.25" - 3 HT 58-28 H |
| CG01 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J |
| SE | SAFETY EDGE REQ'D (INCIDENTAL) |



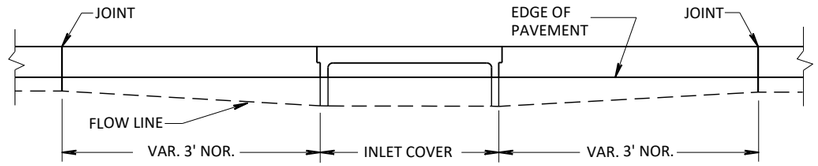

## TYPICAL FINISHED SECTION

FRONTAGE ROAD
STA 10+50'D1' TO STA 12+75'D1'
STA 9+41'D2' TO STA 5+56'D2'

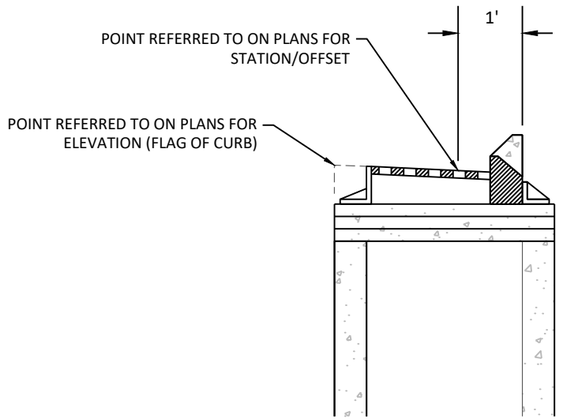
2



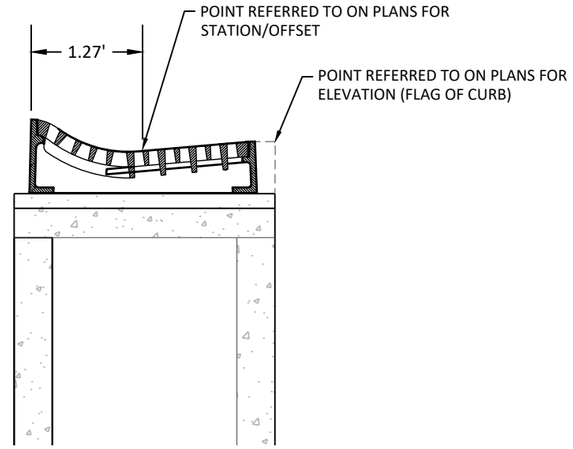

INLET




ELEVATION

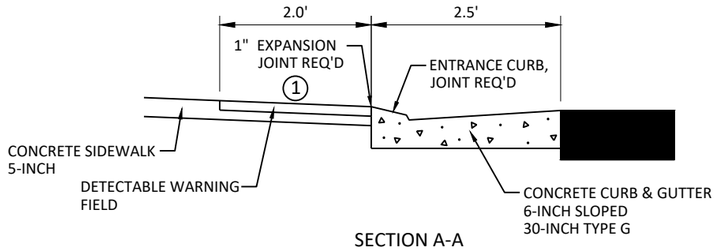



SECTION A - A
TYPE "HM-GJ"

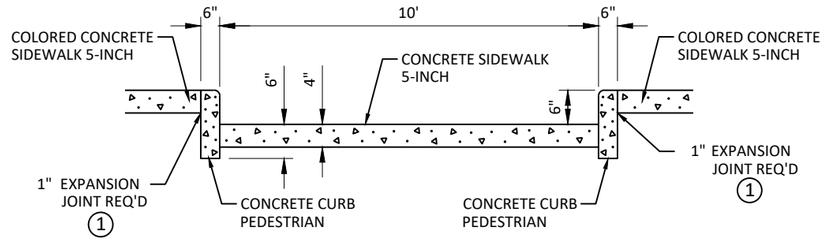



SECTION A - A
TYPE "T"

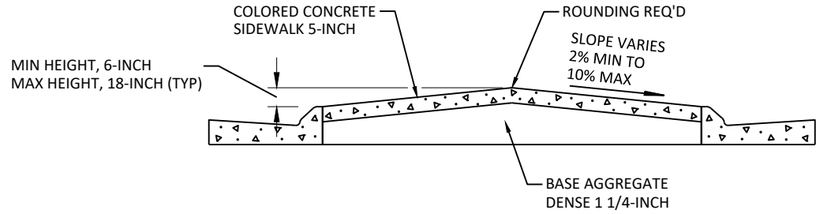
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CONSTRUCTION DETAILS | SHEET 12 | E |
|---|---|---|---|---|---|




SECTION A-A

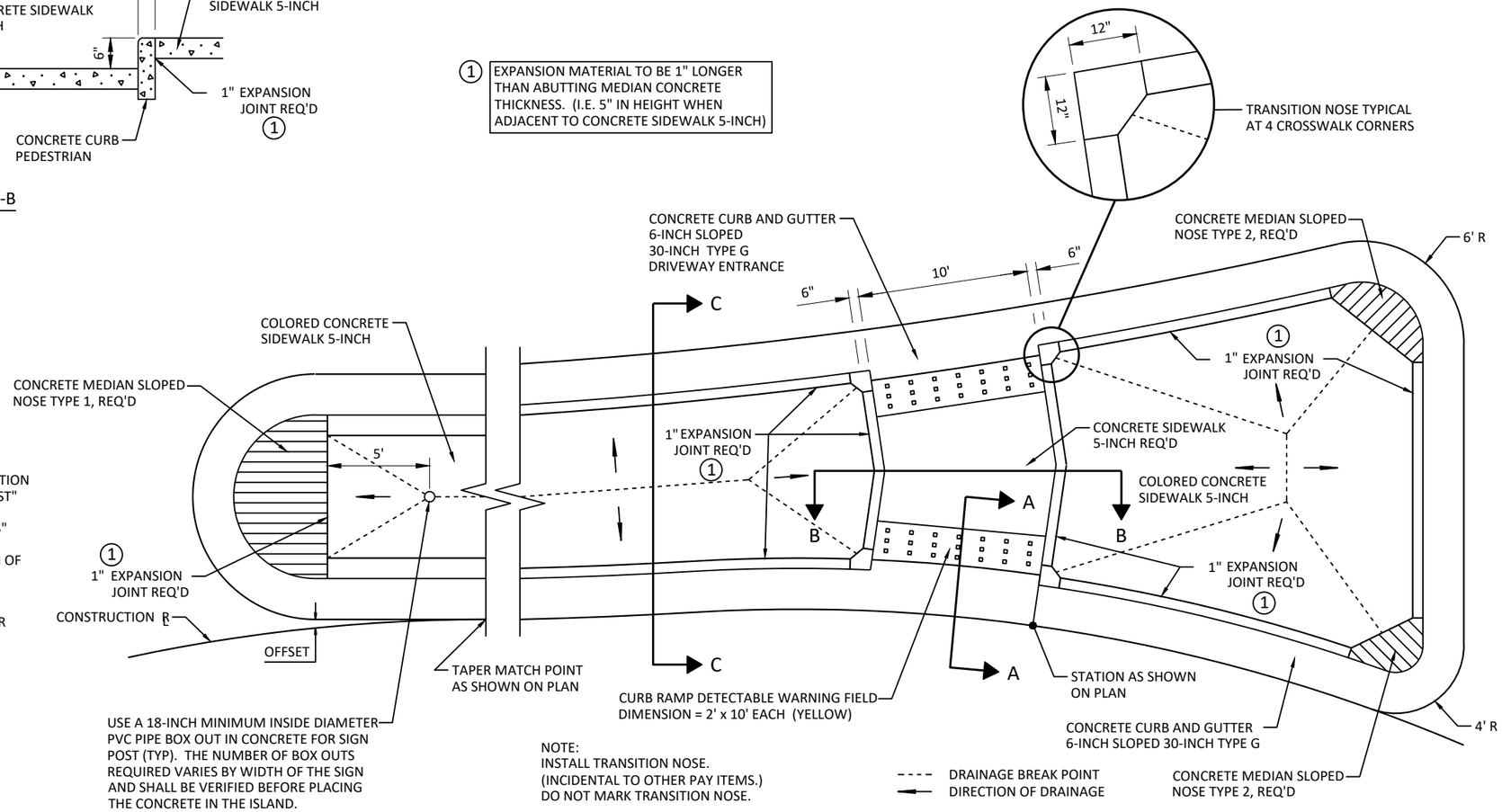



SECTION B-B



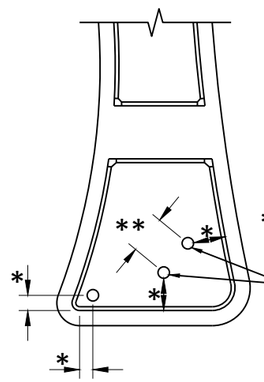

SECTION C-C

1 EXPANSION MATERIAL TO BE 1" LONGER THAN ABUTTING MEDIAN CONCRETE THICKNESS. (I.E. 5" IN HEIGHT WHEN ADJACENT TO CONCRETE SIDEWALK 5-INCH)




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

CONCRETE SPLITTER ISLAND DETAIL WITH CROSSWALK




* DISTANCE TO LAID OUT IN THE FIELD BASED ON SIGN SIZE. TWO FOOT MINIMUM CLEARANCE BETWEEN THE EDGE OF SIGN AND THE FACE OF CURB.

SEE A4-3 SIGN PLATE FOR "TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POST"

SEE A4-3B SIGN PLATE "SIGN POST BOX-OUTS"

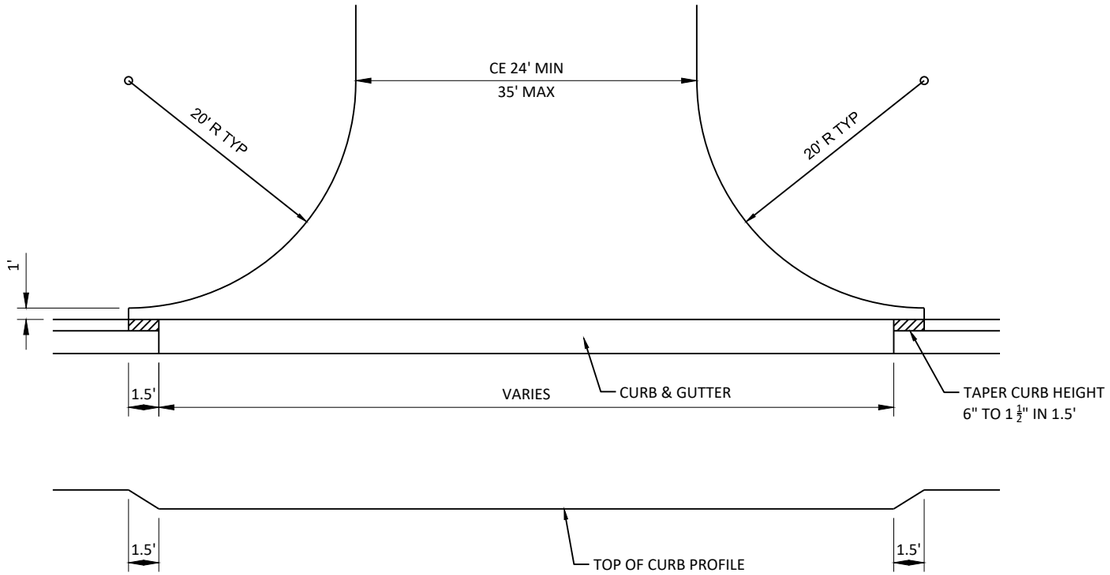
** SEE A4-4 SIGN PLATE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE SUPPORTS"

USE A 18-INCH MINIMUM INSIDE DIAMETER PVC PIPE BOX OUT IN CONCRETE FOR SIGN POST (TYP). THE NUMBER OF BOX OUTS REQUIRED VARIES BY WIDTH OF THE SIGN AND SHALL BE VERIFIED BEFORE PLACING THE CONCRETE IN THE ISLAND.

ISLAND SIGN LOCATION DETAIL (TYP)

USE A 18-INCH MINIMUM INSIDE DIAMETER PVC PIPE BOX OUT IN CONCRETE FOR SIGN POST (TYP). THE NUMBER OF BOX OUTS REQUIRED VARIES BY WIDTH OF THE SIGN AND SHALL BE VERIFIED BEFORE PLACING THE CONCRETE IN THE ISLAND.

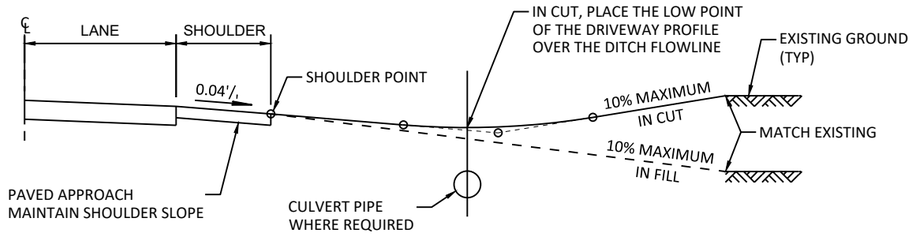
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CONSTRUCTION DETAILS | SHEET 13 | E |
|---|---|---|---|---|---|



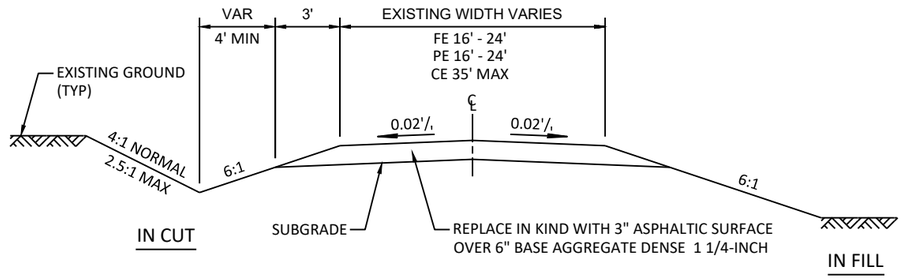

COMMERCIAL ENTRANCES

NOTES:
NON-PAVED DRIVEWAYS SHALL CONSIST OF
6" OF BASE AGGREGATE DENSE.

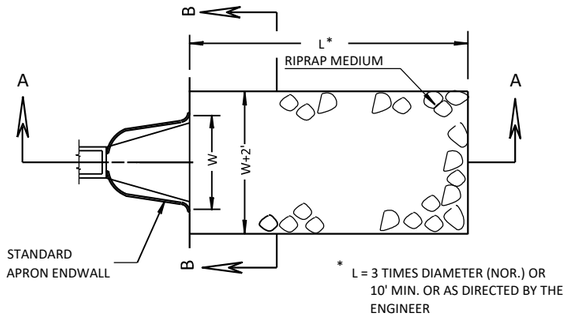
COMMERCIAL ENTRANCE ASPHALTIC DRIVEWAYS
SHALL CONSIST OF 12" BASE AGGREGATE DENSE
AND 4" OF ASPHALTIC PAVEMENT

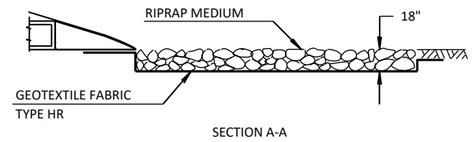



TYPICAL DRIVEWAY PROFILES

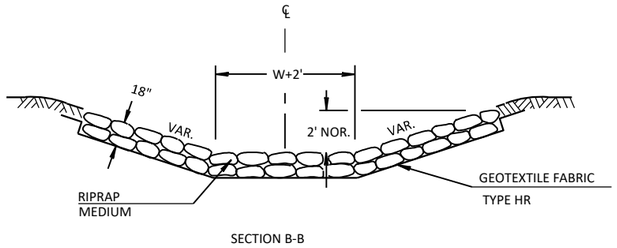



TYPICAL CROSS SECTION FOR DRIVEWAYS



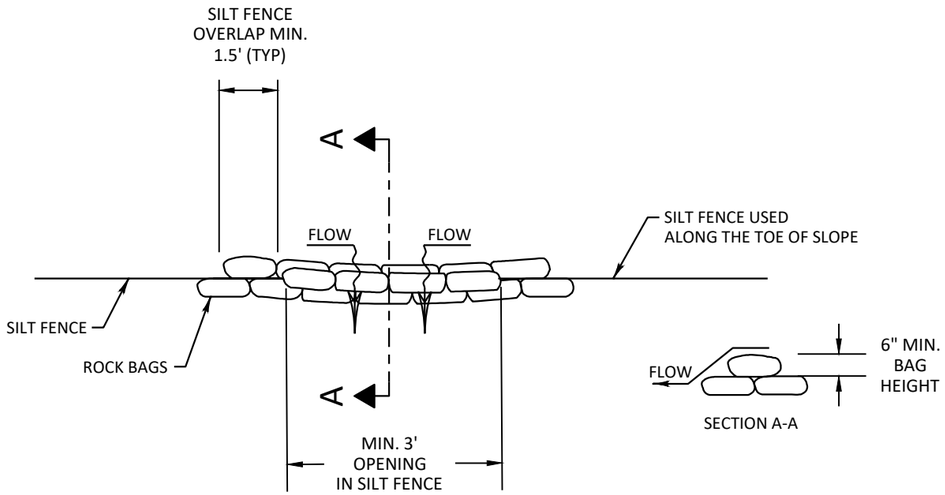




SECTION A-A




SECTION B-B

RIPRAP MEDIUM AND GEOTEXTILE FABRIC DETAIL
AT APRON ENDWALL




SILT FENCE RELIEF

PAID AS ROCK BAGS

## RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = __6.775__ ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = __5.343__ACRES

2

2

N

51ST AVE

304'NB'

CTH J

BLDG

SPECIAL DITCH 0.40%

SPECIAL DITCH 1.25%

SPECIAL DITCH 0.50%

SPECIAL DITCH 0.50%

SPECIAL DITCH 0.10%

SPECIAL DITCH 0.30%

SPECIAL DITCH 0.50%

SPECIAL DITCH 0.20%

SPECIAL DITCH 1.50%

SPECIAL DITCH 1.20%

SPECIAL DITCH 1.10%

302'NB'

298'NB'

171ST ST

R/W

126'EB'

128'EB'

130'EB'

132'EB'

134'EB'

136'EB'

138'EB'

140'EB'

50TH AVE / STILSON RD

50TH AVE / STILSON RD

SHED

HSE

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PROPOSED DRAINAGE | SHEET 16 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\021701_CM.DWG
LAYOUT NAME - 01

PLOT DATE : 7/26/2024 8:09 AM PLOT BY : SEH PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 130+50'EB'
(SEE NEXT SHEET)

9+30.38'D2'
112.14'RT

9+40.45'D2'
112.45'RT

50TH AVE

BLDG

SHED

© WELL

FL

ALIGNMENT - RAB WEST APPR MEDIAN

ALIGNMENT - RAB CR SW

ALIGNMENT - RAB SOUTH APPR MEDIAN

ALIGNMENT - RAB CR CTR

ALIGNMENT - RAB CR NW

ALIGNMENT - RAB CR SE

ALIGNMENT - RAB NORTH APPR MEDIAN

ALIGNMENT - RAB CR NE

CTH J

296+70.00'NB'
20.50'LT

296+70.00'NB'
16.50'LT

296+70.00'NB'
16.50'RT

297+27.17'NB'
21.50'RT

298+01.11'NB'
20.00'RT

298+41.24'NB'
4.00'LT

298+67.80'NB'
18.00'RT

397+32.74'SB'
16.50'LT

398+57.27'SB'
18.00'LT

398+47.04'SB'
20.00'LT

398+12.88'SB'
20.00'LT

133+89.61'EB'
16.00'RT

134+18.93'EB'
23.00'RT

202+63.84'WB'
0.00'

202+63.73'WB'
60.00'LT

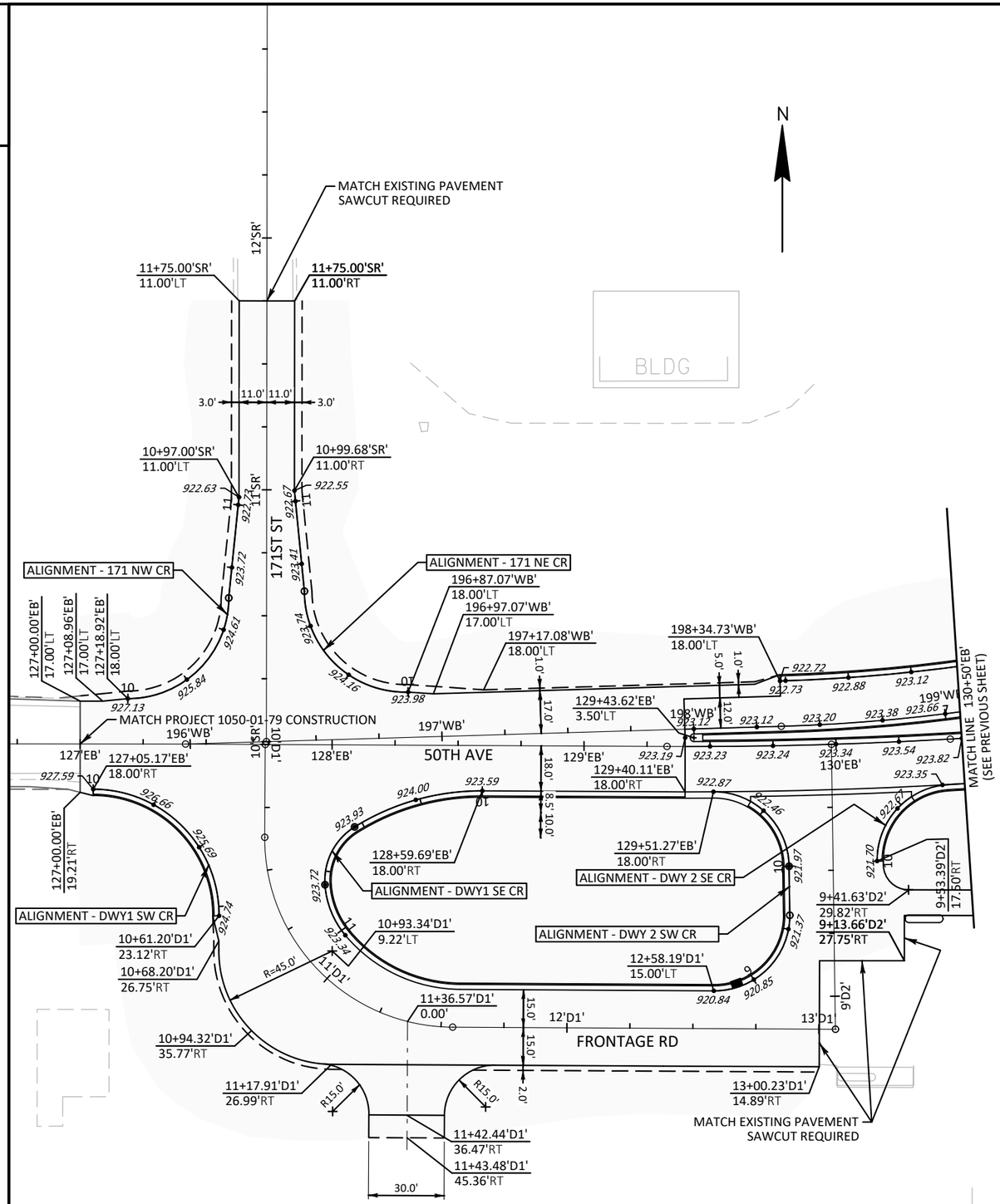
202+63.86'WB'
38.66'LT

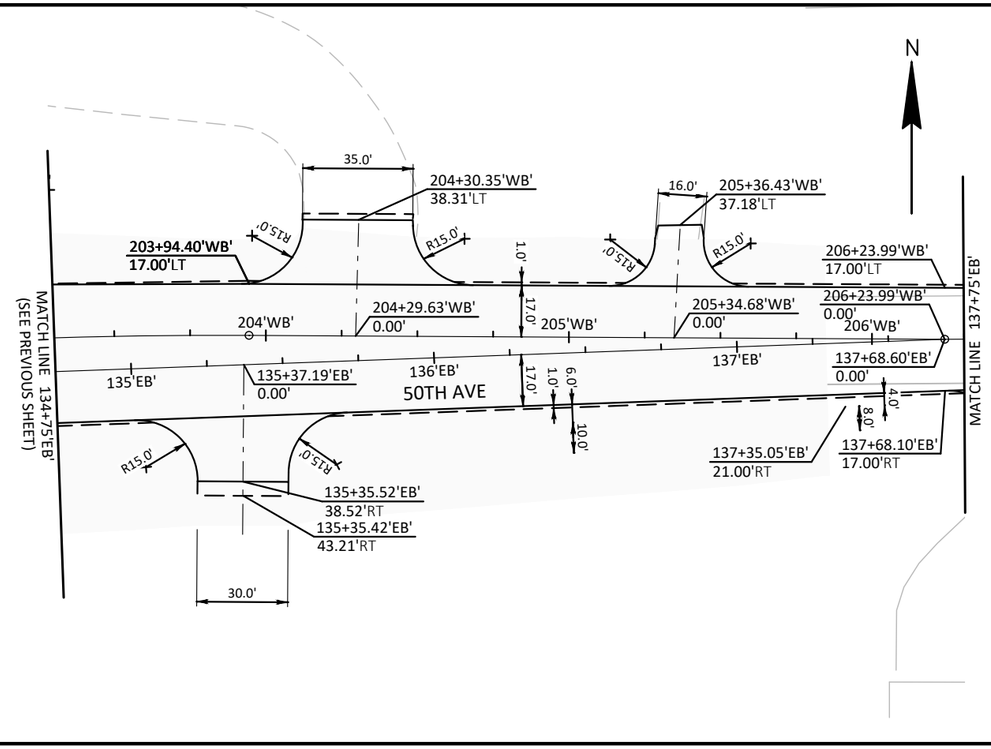
MATCH LINE 134+75'EB'
(SEE NEXT SHEET)

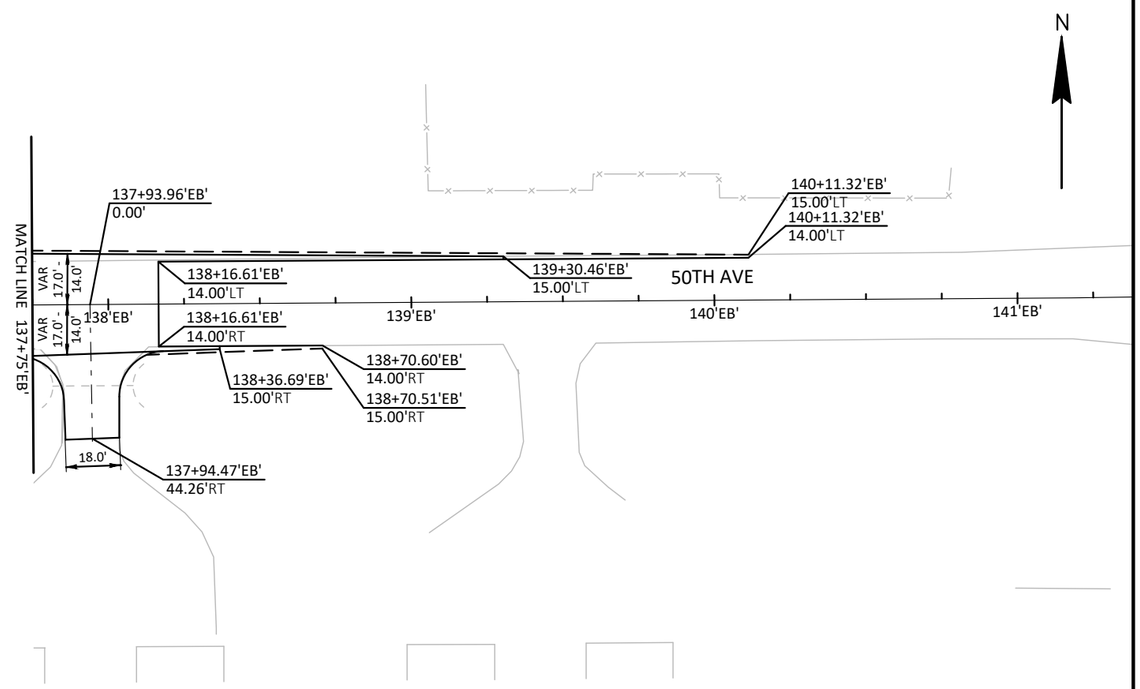
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PAVING DETAILS | SHEET 17 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\021200-PD (PAVING DETAILS).DWG
PLOT DATE : 7/26/2024 10:54 AM
PLOT BY : SEH
LAYOUT NAME : 01
PLOT SCALE : 1.0 IN = 50.0 FT

WISDOT/CADDS SHEET 42

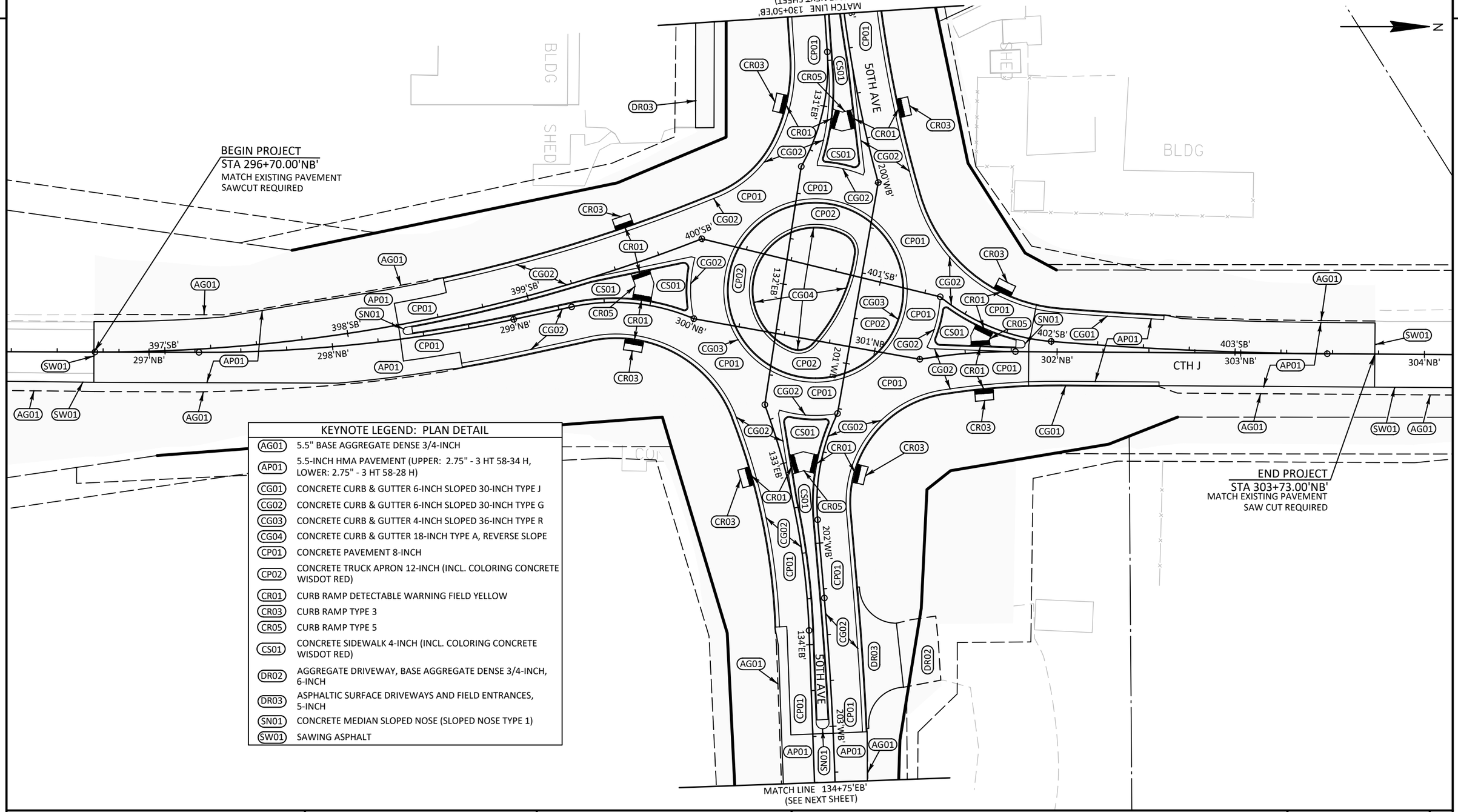



| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PAVING DETAILS | SHEET 18 | E |
|---|---|---|---|---|---|

2




## KEYNOTE LEGEND: PLAN DETAIL

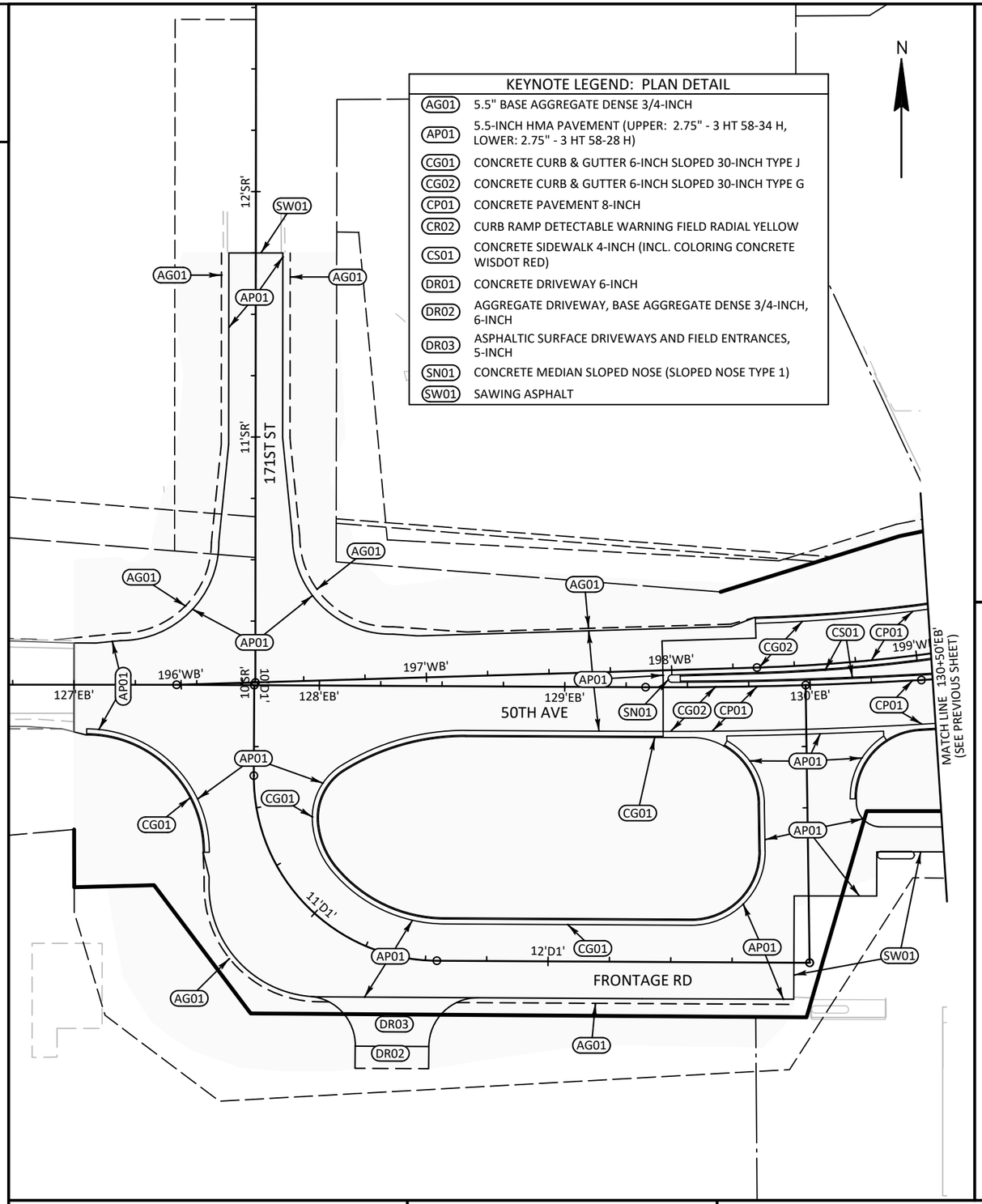
| | |
|---|---|
| AG01 | 5.5" BASE AGGREGATE DENSE 3/4-INCH |
| AP01 | 5.5-INCH HMA PAVEMENT (UPPER: 2.75" - 3 HT 58-34 H, LOWER: 2.75" - 3 HT 58-28 H) |
| CG01 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J |
| CG02 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G |
| CG03 | CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R |
| CG04 | CONCRETE CURB & GUTTER 18-INCH TYPE A, REVERSE SLOPE |
| CP01 | CONCRETE PAVEMENT 8-INCH |
| CP02 | CONCRETE TRUCK APRON 12-INCH (INCL. COLORING CONCRETE WISDOT RED) |
| CR01 | CURB RAMP DETECTABLE WARNING FIELD YELLOW |
| CR03 | CURB RAMP TYPE 3 |
| CR05 | CURB RAMP TYPE 5 |
| CS01 | CONCRETE SIDEWALK 4-INCH (INCL. COLORING CONCRETE WISDOT RED) |
| DR02 | AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH |
| DR03 | ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 5-INCH |
| SN01 | CONCRETE MEDIAN SLOPED NOSE (SLOPED NOSE TYPE 1) |
| SW01 | SAWING ASPHALT |

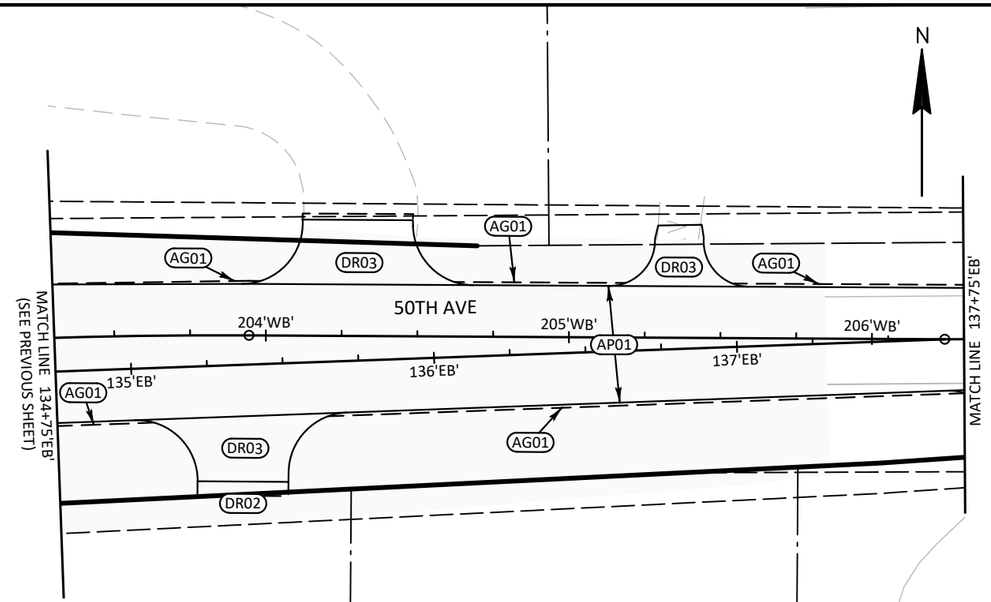
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN DETAILS | SHEET 19 | E |
|---|---|---|---|---|---|

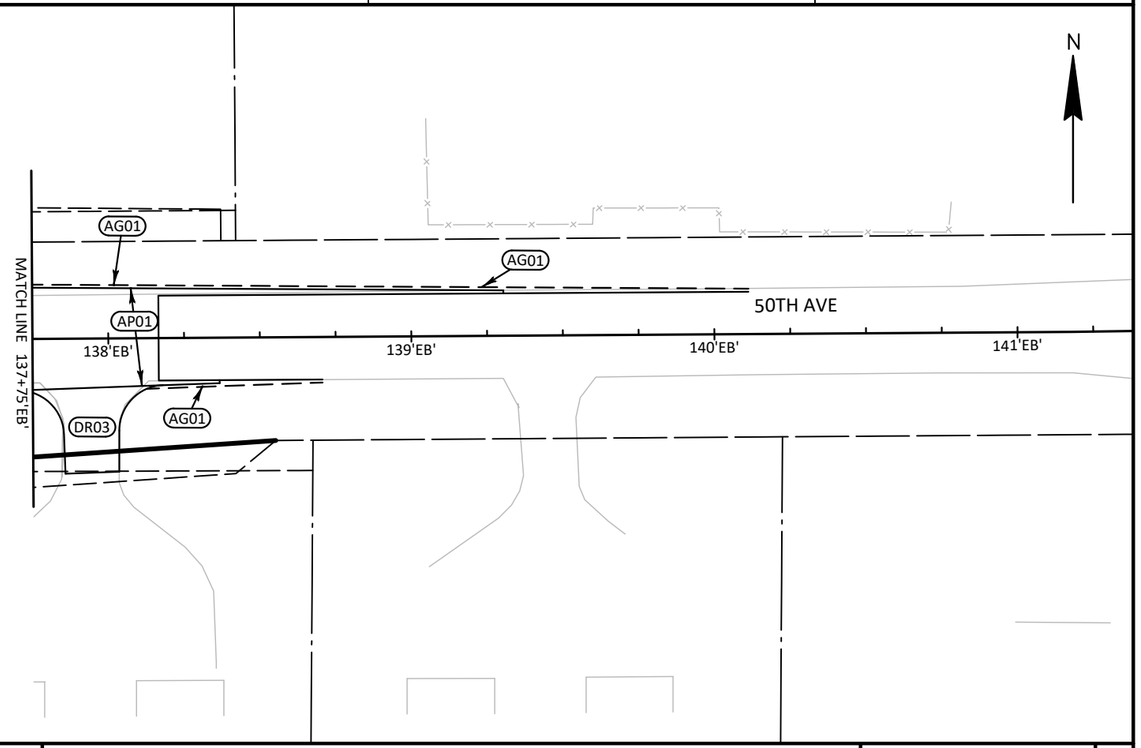
2

## KEYNOTE LEGEND: PLAN DETAIL

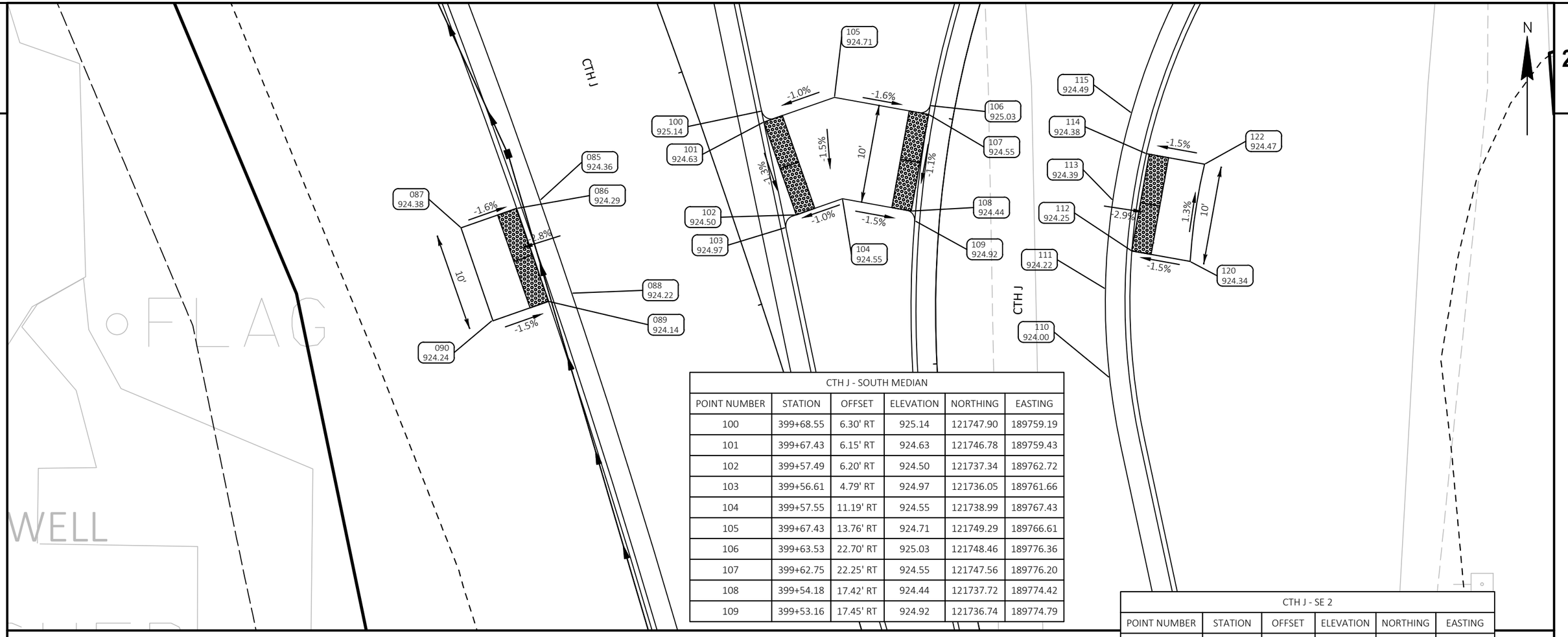
| | |
|---|---|
| AG01 | 5.5" BASE AGGREGATE DENSE 3/4-INCH |
| AP01 | 5.5-INCH HMA PAVEMENT (UPPER: 2.75" - 3 HT 58-34 H, LOWER: 2.75" - 3 HT 58-28 H) |
| CG01 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J |
| CG02 | CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G |
| CP01 | CONCRETE PAVEMENT 8-INCH |
| CR02 | CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW |
| CS01 | CONCRETE SIDEWALK 4-INCH (INCL. COLORING CONCRETE WISDOT RED) |
| DR01 | CONCRETE DRIVEWAY 6-INCH |
| DR02 | AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH |
| DR03 | ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 5-INCH |
| SN01 | CONCRETE MEDIAN SLOPED NOSE (SLOPED NOSE TYPE 1) |
| SW01 | SAWING ASPHALT |




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN DETAILS | SHEET 20 | E |
|---|---|---|---|---|---|




| CTH J - SOUTH MEDIAN | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 100 | 399+68.55 | 6.30' RT | 925.14 | 121747.90 | 189759.19 |
| 101 | 399+67.43 | 6.15' RT | 924.63 | 121746.78 | 189759.43 |
| 102 | 399+57.49 | 6.20' RT | 924.50 | 121737.34 | 189762.72 |
| 103 | 399+56.61 | 4.79' RT | 924.97 | 121736.05 | 189761.66 |
| 104 | 399+57.55 | 11.19' RT | 924.55 | 121738.99 | 189767.43 |
| 105 | 399+67.43 | 13.76' RT | 924.71 | 121749.29 | 189766.61 |
| 106 | 399+63.53 | 22.70' RT | 925.03 | 121748.46 | 189776.36 |
| 107 | 399+62.75 | 22.25' RT | 924.55 | 121747.56 | 189776.20 |
| 108 | 399+54.18 | 17.42' RT | 924.44 | 121737.72 | 189774.42 |
| 109 | 399+53.16 | 17.45' RT | 924.92 | 121736.74 | 189774.79 |

| CTH J - SW 2 | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 085 | 131+82.27 | 84.49' RT | 924.36 | 121738.82 | 189736.63 |
| 086 | 131+80.06 | 85.66' RT | 924.29 | 121738.00 | 189734.27 |
| 087 | 131+74.76 | 88.47' RT | 924.38 | 121736.02 | 189728.60 |
| 088 | 131+86.90 | 93.35' RT | 924.22 | 121729.36 | 189739.87 |
| 089 | 131+84.69 | 94.52' RT | 924.14 | 121728.54 | 189737.51 |
| 090 | 131+79.33 | 97.30' RT | 924.24 | 121726.60 | 189731.79 |

| CTH J - SE 2 | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 110 | 299+47.29 | 17.47' RT | 924.00 | 121720.76 | 189794.63 |
| 111 | 299+58.05 | 17.27' RT | 924.22 | 121729.81 | 189794.21 |
| 112 | 299+62.83 | 19.77' RT | 924.25 | 121733.67 | 189796.88 |
| 113 | 299+68.80 | 17.36' RT | 924.39 | 121738.83 | 189794.95 |
| 114 | 299+75.05 | 20.04' RT | 924.38 | 121743.56 | 189798.38 |
| 115 | 299+79.58 | 17.73' RT | 924.49 | 121747.70 | 189796.86 |
| 120 | 299+61.96 | 25.76' RT | 924.34 | 121732.60 | 189802.82 |
| 122 | 299+75.05 | 26.04' RT | 924.47 | 121742.50 | 189804.29 |

NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND LENGTHS AND MATCH POINTS TO PRIOR RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
3. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
4. ALL STATION AND OFFSET INFORMATION REFERENCE CTH J SB R/L

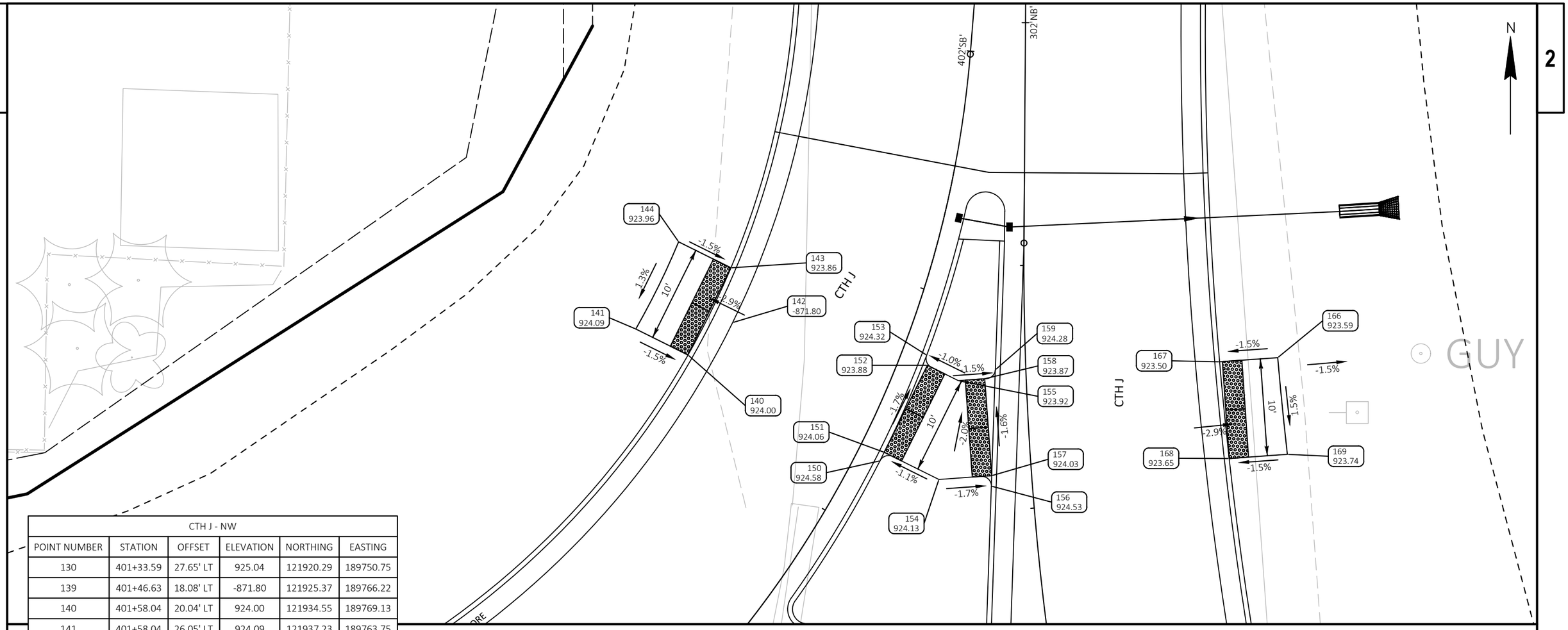
LEGEND

- (X) CURB RAMP TYPE
- (SWX) CONCRETE SIDEWALK X-INCH
- (PED) CONCRETE PEDESTRIAN CURB
- (X) PONT NUMBER

N

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CURB RAMP DETAILS CTH J - SW, SE & MEDIAN | SHEET 21 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\021301_CR (CURB RAMP DETAILS).DWG
LAYOUT NAME - 03
PLOT DATE : 9/19/2024 7:45 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : ##########




| CTH J - NW | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 130 | 401+33.59 | 27.65' LT | 925.04 | 121920.29 | 189750.75 |
| 139 | 401+46.63 | 18.08' LT | -871.80 | 121925.37 | 189766.22 |
| 140 | 401+58.04 | 20.04' LT | 924.00 | 121934.55 | 189769.13 |
| 141 | 401+58.04 | 26.05' LT | 924.09 | 121937.23 | 189763.75 |
| 142 | 401+64.02 | 17.28' LT | -871.80 | 121937.89 | 189773.72 |
| 143 | 401+70.23 | 19.52' LT | 923.86 | 121943.53 | 189773.54 |
| 144 | 401+71.09 | 25.50' LT | 923.96 | 121946.20 | 189768.16 |

| CTH J - N MEDIAN | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 150 | 401+57.09 | 2.50' RT | 924.58 | 121923.65 | 189788.88 |
| 151 | 401+58.04 | 2.50' RT | 924.06 | 121924.53 | 189789.32 |
| 152 | 401+67.80 | 2.94' RT | 923.88 | 121933.49 | 189793.77 |
| 153 | 401+68.72 | 2.50' RT | 924.32 | 121934.53 | 189793.70 |
| 154 | 401+58.04 | 8.79' RT | 924.13 | 121921.74 | 189794.95 |
| 155 | 401+67.50 | 6.49' RT | 923.92 | 121931.91 | 189796.96 |
| 156 | 401+59.63 | 13.94' RT | 924.53 | 121921.05 | 189800.35 |
| 157 | 401+60.51 | 13.51' RT | 924.03 | 121922.13 | 189800.39 |
| 158 | 401+68.59 | 8.95' RT | 923.87 | 121932.10 | 189799.67 |
| 159 | 401+69.74 | 9.64' RT | 924.28 | 121933.02 | 189800.76 |

| CTH J - NE | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 166 | 301+64.59 | 25.96' RT | 923.59 | 121934.28 | 189829.83 |
| 167 | 301+64.36 | 19.96' RT | 923.50 | 121933.85 | 189823.85 |
| 168 | 301+53.64 | 20.41' RT | 923.65 | 121923.89 | 189824.83 |
| 169 | 301+53.64 | 26.41' RT | 923.74 | 121924.32 | 189830.82 |

NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND LENGTHS AND MATCH POINTS TO PRIOR RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
3. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
4. ALL STATION AND OFFSET INFORMATION REFERENCE CTH J NB R/L

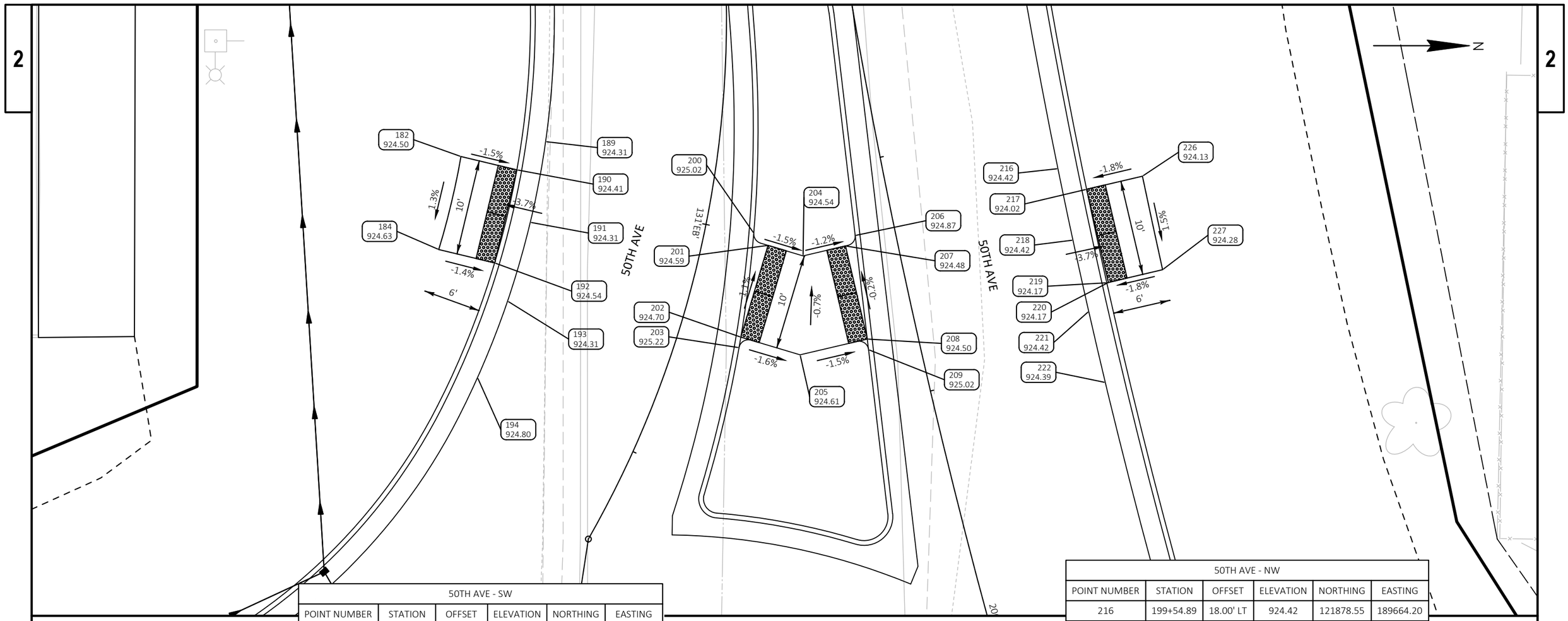
LEGEND

- (X) CURB RAMP TYPE
- (SWX) CONCRETE SIDEWALK X-INCH
- (PED) CONCRETE PEDESTRIAN CURB
- (X) PONT NUMBER

N

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CURB RAMP DETAILS CTH J - NW, NE & MEDIAN | SHEET 22 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\021301_CR (CURB RAMP DETAILS).DWG
LAYOUT NAME - 04
PLOT DATE : 7/26/2024 8:14 AM
PLOT BY : DEAN STODOLA
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42




NOTES:

1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND LENGTHS AND MATCH POINTS TO PRIOR RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
3. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
4. ALL STATION AND OFFSET INFORMATION REFERENCE CTH J NB R/L

LEGEND

| | |
|---|---|
| X | CURB RAMP TYPE |
| SWX | CONCRETE SIDEWALK X-INCH |
| PED | CONCRETE PEDESTRIAN CURB |
| X | PONT NUMBER |

N

50TH AVE - SW

| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
|---|---|---|---|---|---|
| 182 | 130+97.46 | 26.50' RT | 924.50 | 121816.12 | 189662.93 |
| 184 | 131+10.64 | 26.50' RT | 924.63 | 121813.79 | 189672.65 |
| 189 | 130+93.78 | 18.00' RT | 924.31 | 121824.97 | 189661.37 |
| 190 | 130+97.90 | 20.50' RT | 924.41 | 121821.96 | 189664.32 |
| 191 | 131+04.05 | 18.00' RT | 924.31 | 121823.37 | 189669.80 |
| 192 | 131+10.20 | 20.50' RT | 924.54 | 121819.64 | 189674.05 |
| 193 | 131+14.31 | 18.00' RT | 924.31 | 121820.99 | 189678.04 |
| 194 | 131+24.58 | 18.00' RT | 924.80 | 121817.85 | 189686.03 |

50TH AVE WEST - MEDIAN

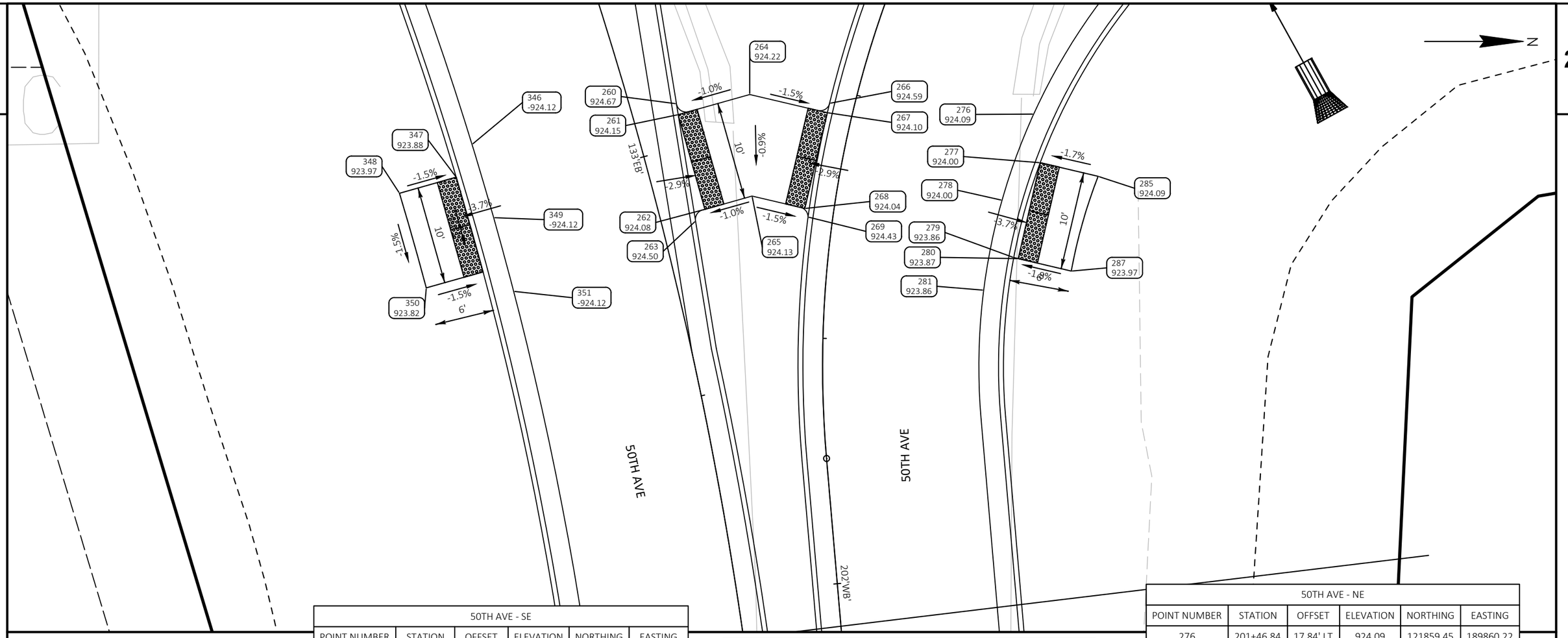
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
|---|---|---|---|---|---|
| 200 | 130+99.92 | 5.08' LT | 925.02 | 121846.74 | 189670.94 |
| 201 | 131+00.82 | 6.80' LT | 924.59 | 121848.23 | 189672.22 |
| 202 | 131+10.25 | 6.39' LT | 924.70 | 121845.39 | 189681.81 |
| 203 | 131+11.30 | 6.53' LT | 925.22 | 121845.20 | 189682.91 |
| 204 | 131+01.12 | 10.60' LT | 924.54 | 121851.90 | 189673.32 |
| 205 | 131+10.25 | 12.86' LT | 924.61 | 121851.58 | 189683.66 |
| 206 | 130+98.31 | 15.54' LT | 924.87 | 121857.34 | 189671.18 |
| 207 | 130+99.41 | 14.74' LT | 924.48 | 121856.33 | 189672.28 |
| 208 | 131+07.19 | 19.17' LT | 924.50 | 121858.61 | 189682.01 |
| 209 | 131+08.07 | 19.59' LT | 925.02 | 121858.74 | 189683.12 |

50TH AVE - NW

| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
|---|---|---|---|---|---|
| 216 | 199+54.89 | 18.00' LT | 924.42 | 121878.55 | 189664.20 |
| 217 | 199+57.69 | 20.50' LT | 924.02 | 121881.54 | 189666.35 |
| 218 | 199+62.73 | 18.00' LT | 924.42 | 121880.12 | 189671.67 |
| 219 | 199+67.99 | 20.50' LT | 924.17 | 121883.66 | 189676.13 |
| 220 | 199+67.99 | 20.68' LT | 924.17 | 121883.83 | 189676.09 |
| 221 | 199+70.56 | 18.00' LT | 924.42 | 121881.77 | 189679.12 |
| 222 | 199+78.40 | 18.00' LT | 924.39 | 121883.50 | 189686.55 |
| 226 | 199+57.53 | 26.50' LT | 924.13 | 121887.39 | 189664.98 |
| 227 | 199+67.93 | 26.50' LT | 924.28 | 121889.50 | 189674.76 |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CURB RAMP DETAILS 50TH AVE - SW, NW & MEDIAN | SHEET 23 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\021301_CR (CURB RAMP DETAILS).DWG
LAYOUT NAME - 05
PLOT DATE : 7/26/2024 8:14 AM
PLOT BY : DEAN STODOLA
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42




NOTES:

1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND LENGTHS AND MATCH POINTS TO PRIOR RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
3. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
4. ALL STATION AND OFFSET INFORMATION REFERENCE CTH J NB R/L

LEGEND

- (X) CURB RAMP TYPE
- (SWX) CONCRETE SIDEWALK X-INCH
- (PED) CONCRETE PEDESTRIAN CURB
- (X) PONT NUMBER

N

50TH AVE - SE

| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
|---|---|---|---|---|---|
| 346 | 132+93.94 | 16.48' RT | -924.12 | 121802.34 | 189863.31 |
| 347 | 132+96.83 | 18.94' RT | 923.88 | 121800.74 | 189866.64 |
| 348 | 132+96.83 | 24.94' RT | 923.97 | 121794.96 | 189868.27 |
| 349 | 133+02.03 | 16.36' RT | -924.12 | 121804.54 | 189870.75 |
| 350 | 133+07.50 | 24.79' RT | 923.82 | 121797.69 | 189877.89 |
| 351 | 133+10.12 | 16.26' RT | -924.12 | 121806.57 | 189878.24 |

50TH AVE - EAST MEDIAN

| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
|---|---|---|---|---|---|
| 260 | 132+95.73 | 4.64' LT | 924.67 | 121823.12 | 189859.17 |
| 261 | 132+96.83 | 4.51' LT | 924.15 | 121823.30 | 189860.28 |
| 262 | 133+06.72 | 4.63' LT | 924.08 | 121826.02 | 189869.91 |
| 263 | 133+07.63 | 3.42' LT | 924.50 | 121825.06 | 189871.09 |
| 264 | 132+96.83 | 12.07' LT | 924.22 | 121830.58 | 189858.23 |
| 265 | 133+06.60 | 9.61' LT | 924.13 | 121830.81 | 189868.55 |
| 266 | 132+99.76 | 19.64' LT | 924.59 | 121838.68 | 189859.13 |
| 267 | 133+00.58 | 19.17' LT | 924.10 | 121838.46 | 189860.08 |
| 268 | 133+09.06 | 14.51' LT | 924.04 | 121836.18 | 189869.82 |
| 269 | 133+09.95 | 14.60' LT | 924.43 | 121836.49 | 189870.68 |

50TH AVE - NE

| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
|---|---|---|---|---|---|
| 276 | 201+46.84 | 17.84' LT | 924.09 | 121859.45 | 189860.22 |
| 277 | 201+52.41 | 19.73' LT | 924.00 | 121860.11 | 189865.16 |
| 278 | 201+57.84 | 16.72' LT | 924.00 | 121856.23 | 189868.98 |
| 279 | 201+64.49 | 18.77' LT | 923.86 | 121857.42 | 189874.81 |
| 280 | 201+64.55 | 19.24' LT | 923.87 | 121857.88 | 189874.91 |
| 281 | 201+68.78 | 16.07' LT | 923.86 | 121854.37 | 189878.13 |
| 285 | 201+52.41 | 25.78' LT | 924.09 | 121866.00 | 189866.55 |
| 287 | 201+65.34 | 24.74' LT | 923.97 | 121863.26 | 189876.18 |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CURB RAMP DETAILS 50TH AVE - SE, NE & MEDIAN | SHEET 24 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\021301_CR (CURB RAMP DETAILS).DWG
LAYOUT NAME - 06
PLOT DATE : 7/26/2024 8:15 AM
PLOT BY : DEAN STODOLA
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

## EROSION CONTROL LEGEND

- EROSION MAT CLASS I TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

## EROSION CONTROL NOTES:

PLACE SALVAGED TOPSOIL, SEED, FERTILIZER AND MULCH WITHIN ANY SURFACE SLOPE INTERCEPT AREAS THAT DO NOT USE EROSION MAT.

DO NOT DRIVE EQUIPMENT OR STORE EQUIPMENT OR MATERIALS IN WETLANDS OR WATERWAYS.

WHEN INLET PROTECTION TYPE A, B OR A,C ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND USE TYPE B OR C AFTER THE INLET CASTINGS ARE IN PLACE.

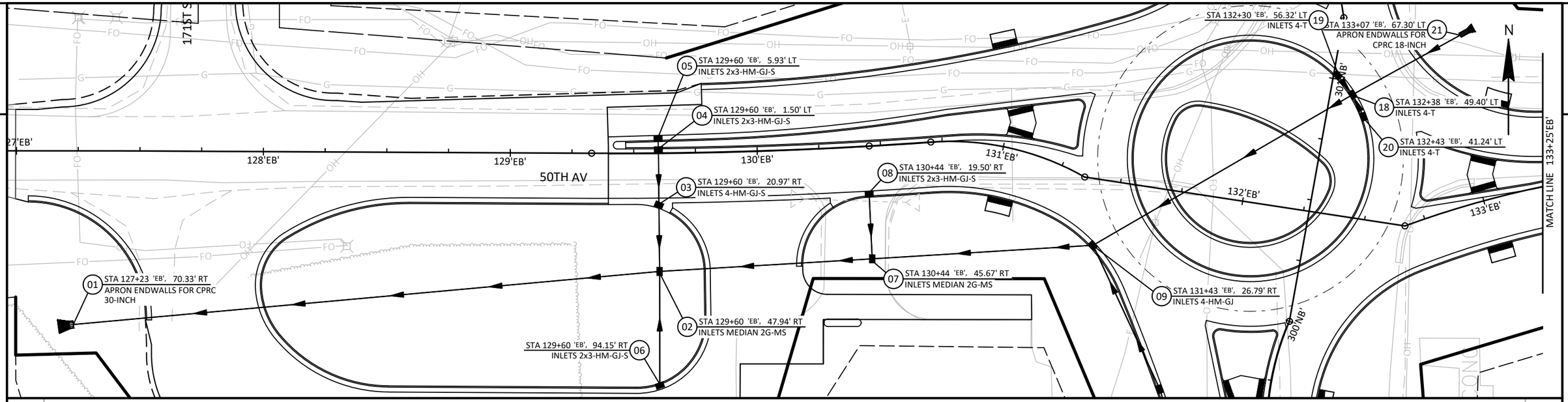
PLACE SILT FENCE TWO FEET FROM THE SLOPE INTERCEPT WHERE APPROPRIATE.

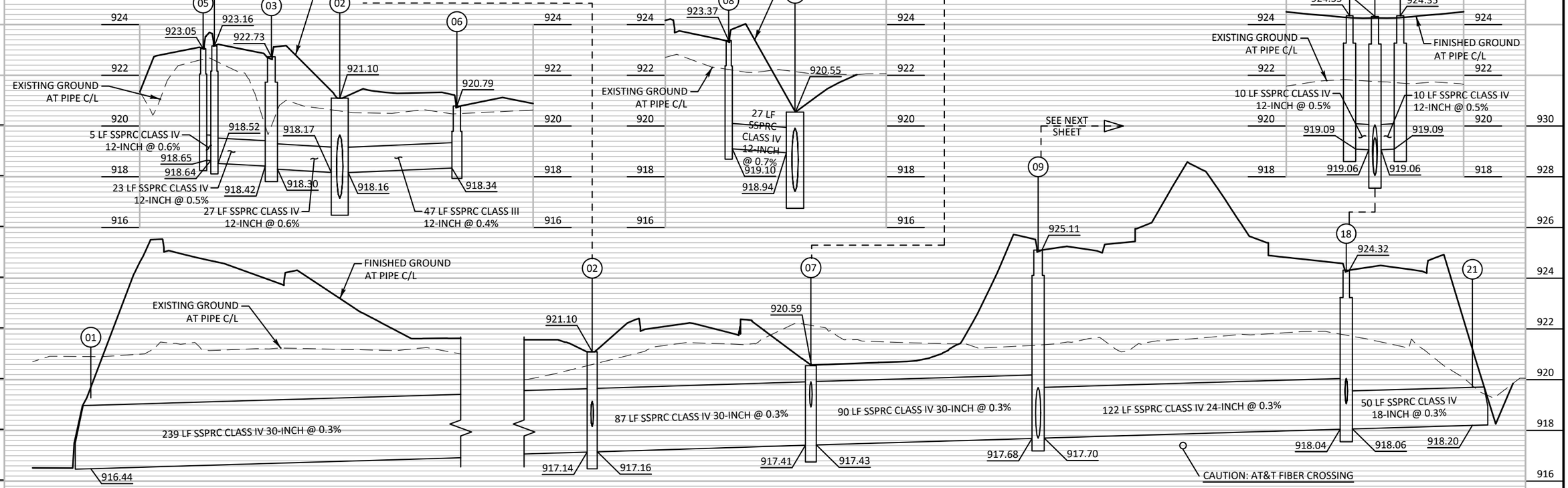
N

51ST AVE
306'NB'
CTH J
304'NB'
END PROJECT
STA 303+73.00'NB'
TLE (TYP)
171ST ST
12'SR'
BLDG
EXISTING ROW (TYP)
302'SB'
302'NB'
RIPRAP MEDIUM
L = 12 FT
W = 6 FT
RIPRAP MEDIUM
L = 10 FT
W = 4 FT
HSE
END CONSTRUCTION
STA 138+16.61'EB'
200'WB'
202'WB'
204'WB'
206'WB'
138'EB'
140'EB'
126'EB'
196'WB'
198'WB'
128'EB'
130'EB'
132'EB'
134'EB'
136'EB'
50TH AVE
50TH AVE (AKA STILSON RD)
BEGIN CONSTRUCTION
STA 127+00.00'EB'
RIPRAP MEDIUM
L = 16 FT
W = 8 FT
9'D2'
12'D1'
FRONTAGE RD
400'SB'
300'NB'
SLOPE INTERCEPT (TYP)
PROPOSED ROW (TYP)
RIPRAP MEDIUM
L = 12 FT
W = 6 FT
RIPRAP MEDIUM
L = 10 FT
W = 4 FT
RIPRAP MEDIUM
L = 10 FT
W = 4 FT
SHED
398'SB'
298'NB'
CTH J
397'SB'
BEGIN PROJECT
STA 296+70.00'NB'

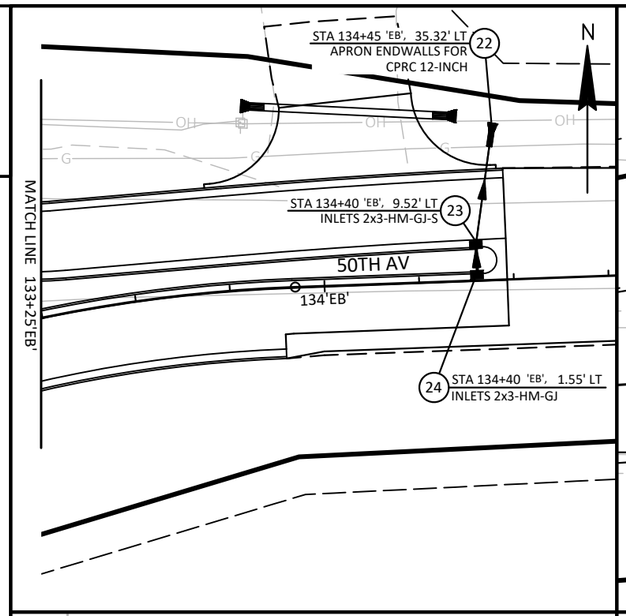
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | EROSION CONTROL | SHEET 25 E |
|---|---|---|---|---|

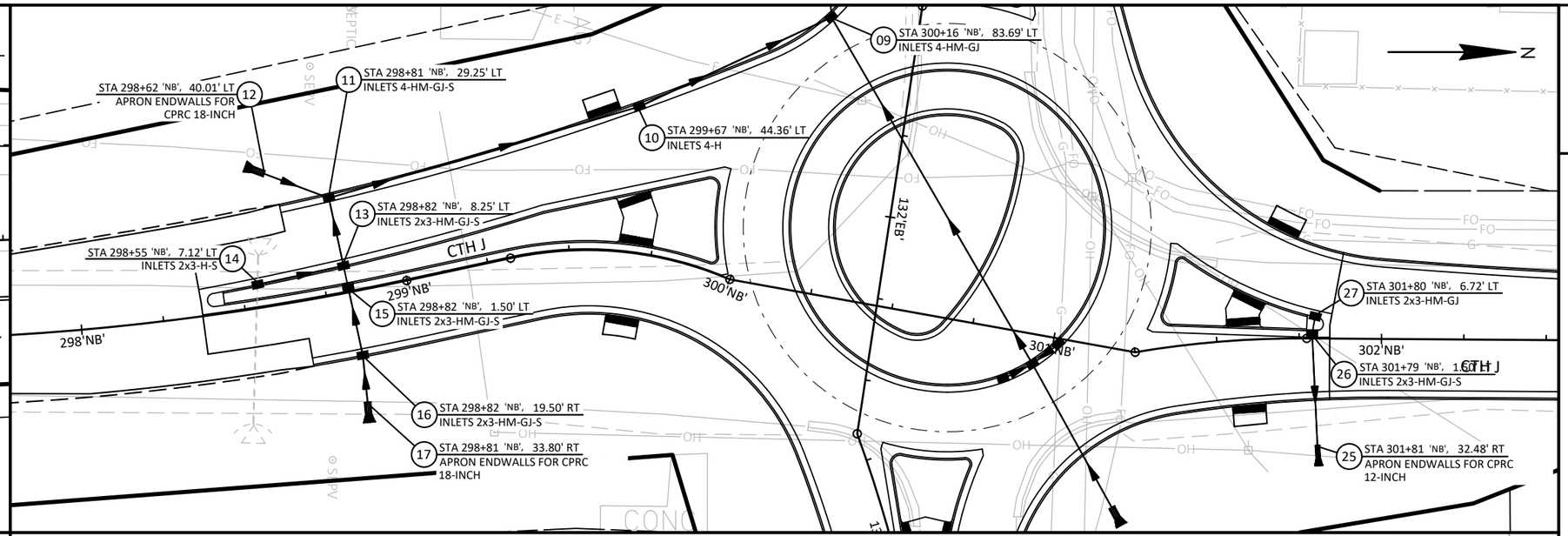
FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\022000-EC (EROSION CNTRL).DWG
LAYOUT NAME - 01
PLOT DATE : 9/19/2024 7:57 AM
PLOT BY : DEAN STODOLA
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

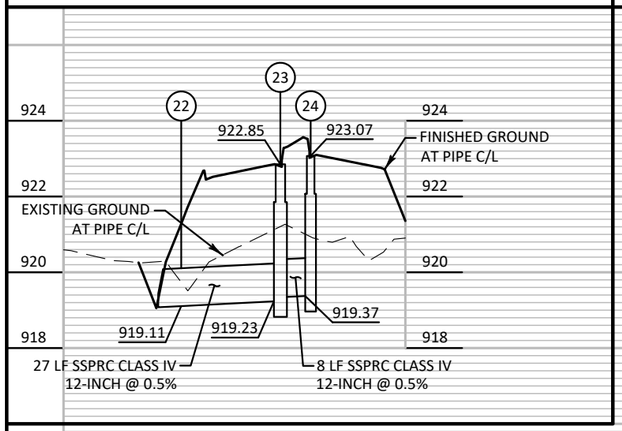


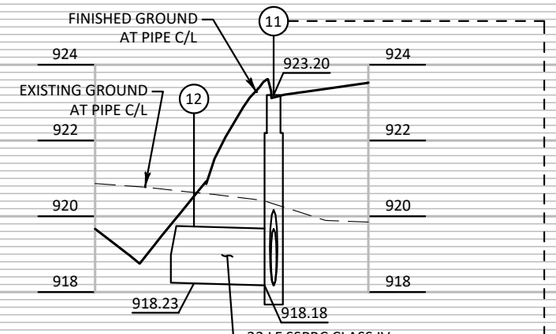



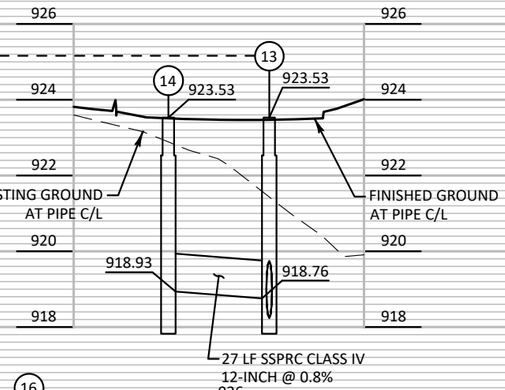

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | STORM SEWER DETAILS | SHEET 26 | E |
|---|---|---|---|---|---|

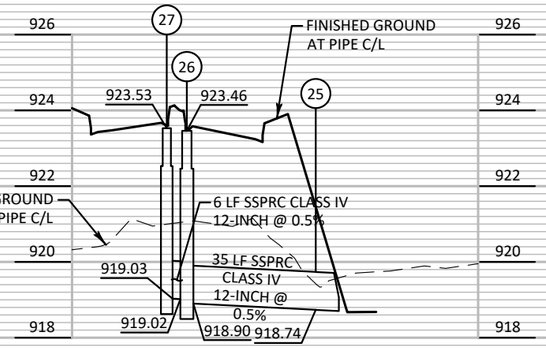


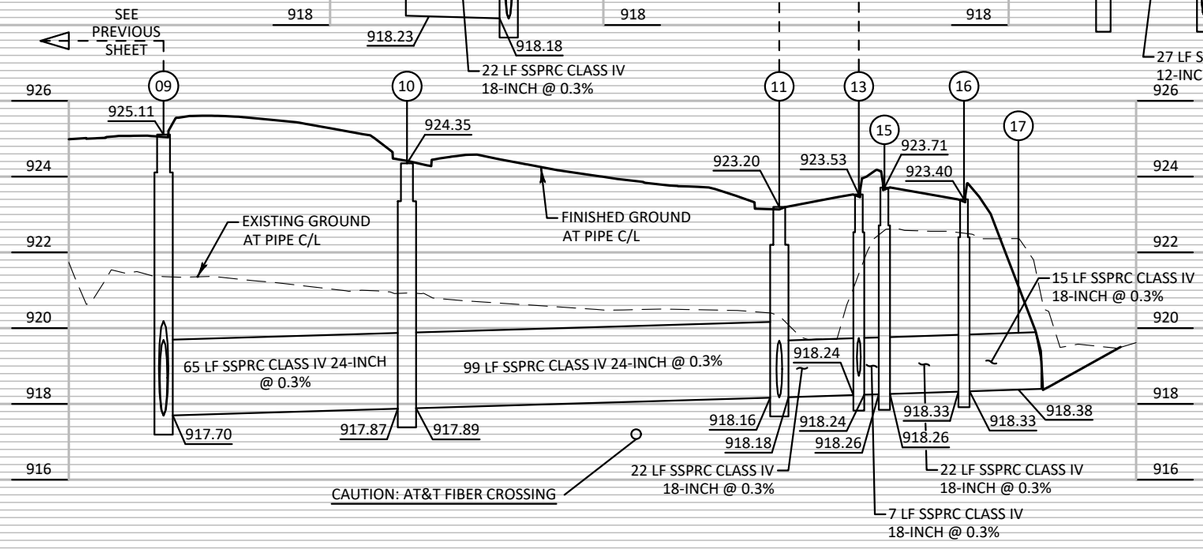




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | STORM SEWER DETAILS | SHEET 27 | E |
|---|---|---|---|---|---|

2

2

N

51ST AVE

306'NB'

304'NB'

302'NB'

300'NB'

298'NB'

CTH J

AT&T - TELEPHONE

END PROJECT
STA 303+65.51'NB'

XCEL - GAS

CHARTER - FIBER OPTIC

CINC - FIBER OPTIC

XCEL - ELECTRIC
AT&T - TELEPHONE

SLOPE INTERCEPT (TYP)

171ST ST

12'SR'

EXISTING EASEMENT (TYP)

AT&T - FIBER OPTIC

CINC - FIBER OPTIC

CHARTER - FIBER OPTIC

AT&T - FIBER OPTIC

XCEL - ELECTRIC
AT&T - TELEPHONE

CHARTER - FIBER OPTIC

XCEL - ELECTRIC
CHARTER - FIBER OPTIC
AT&T - TELEPHONE

XCEL - GAS

END CONSTRUCTION
STA 138+16.61'EB'

126'EB'

50TH AVE

128'EB'

130'EB'

132'EB'

134'EB'

136'EB' 50TH AVE (AKA STILSON RD)

138'EB'

140'EB'

BEGIN CONSTRUCTION
STA 127+00.00'EB'

XCEL - GAS

XCEL - ELECTRIC

EXISTING ROW (TYP)

CHARTER - FIBER OPTIC

XCEL - ELECTRIC

XCEL - ELECTRIC

PROPERTY OWNER
IRRIGATION SYSTEM

AT&T - TELEPHONE

AT&T - TELEPHONE (ABANDONED)

AT&T - FIBER OPTIC

BEGIN PROJECT
STA 296+64.60'NB'

BLDG

SHED

HSE

2_115_16
920.40

1_123_14
916.05

1_122_14
921.25

1_123_4
920.41

1_122_4
921.41

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | EXISTING UTILITY OVERVIEW | SHEET 28 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\023000_UP (EX UTILITY MAP).DWG
LAYOUT NAME - 02

PLOT DATE : 7/26/2024 8:19 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 130+50'EB'
(SEE NEXT SHEET)

REMOVE
R01-18
EAST
COUNTY J

REMOVE
R01-17
SPEED LIMIT 40

REMOVE
R01-15
R01-16
STOP
4-WAY

REMOVE
R01-14
TO EAST
COUNTY J 29

131'EB'

50TH AVE

REMOVE
R01-12
R01-13
STOP
4-WAY

REMOVE
R01-11
COUNTY J

REMOVE
R01-10
TO EAST
TO WEST
29
29

BLDG

SHED

297'NB'

298'NB'

299'NB'

300'NB'

W01-02

50th Ave

County Hwy J

MOVED BY
OTHERS

302'NB'

303'NB'

304'NB'

CTH J

CTH J

R01-01
R01-02
REMOVE
STOP
4-WAY

R01-03
REMOVE
WEST
WEST
29
COUNTY J

133'EB'

R01-05
R01-06
REMOVE
STOP
4-WAY

R01-07
REMOVE
COUNTY J

R01-08
REMOVE
TO EAST
TO WEST
29
29

R01-09
REMOVE
SPEED LIMIT 35

W01-01
MOVED BY
OTHERS

134'EB'

50TH AVE

R01-04
REMOVE EXISTING SIGN
POST S & CROSS RAIL

MATCH LINE 134+75'EB'
(SEE NEXT SHEET)

## PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON TUBULAR POST(S)
  (NOTE, BOX OUTS REQ'D FOR CONCRETE AREAS)
- SIGN FLAGS 18" X 18" ORANGE FLAGS FOR 6 MONTHS
  (SEE, GENERAL NOTE: PERMANENT SIGNING)
- xx00-00 DENOTES SIGN NUMBER
  - SIGN COUNT SEQUENCE PER PAGE
  - PAGE NUMBER
  - WORK CODE: M=MOVE, W=WORK BY OTHERS

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PERMANENT SIGNING REMOVAL PLAN | PAGE 01 OF 02 | SHEET 29 |
|---|---|---|---|---|---|

## PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON TUBULAR POST(S) (NOTE, BOX OUTS REQ'D FOR CONCRETE AREAS)
- SIGN FLAGS 18" X 18" ORANGE FLAGS FOR 6 MONTHS (SEE, GENERAL NOTE: PERMANENT SIGNING)
- xx00-00 DENOTES SIGN NUMBER
  - SIGN COUNT SEQUENCE PER PAGE
  - PAGE NUMBER
  - WORK CODE: M=MOVE, W=WORK BY OTHERS

N

12'SR'

11'SR'

10'SR'

171ST ST

18" CPP

REMOVE R02-22

REMOVE R02-21

REMOVE R02-20

W02-03

17st St

50TH AVE

127'EB' 128'EB' 129'EB' 130'EB'

MATCH LINE 130+50'EB' (SEE PREVIOUS SHEET)

50th Ave

MOVED BY OTHERS

R02-19 REMOVE

REMOVE

GUY

N

MATCH LINE 134+75'EB' (SEE PREVIOUS SHEET)

50TH AVE

135'EB' 136'EB' 137'EB'

MATCH LINE 137+75'EB'

N

REMOVE R02-23

MATCH LINE 137+75'EB'

50TH AVE

138'EB' 139'EB' 140'EB' 141'EB'

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PERMANENT SIGNING REMOVAL PLAN | PAGE 02 OF 02 | SHEET 30 |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\023200-PS (SIGN REMOVALS).DWG
PLOT DATE : 7/26/2024 8:21 AM
PLOT BY : SEH
LAYOUT NAME : 02
PLOT SCALE : 1.0 IN = 50.0 FT
WISDOT/CADDS SHEET 42

2

N

MATCH LINE 130+50'EB' (SEE NEXT SHEET)

DO NOT ENTER
R5-1
30"X30"
01-29

M1-5A
24"X24"
COUNTY J
01-28

R5-1A
36"X24"
WRONG WAY
01-27

SPEED LIMIT 40
R2-1
24"X30"
01-26

D1-1
36"x18"
J
01-25

YIELD
R1-2
36"X31"
01-23
01-24

50th Ave
D1-1
66"x15"
01-37

ONE WAY
R6-1R
36"X12"

R6-4B
60"X24"
01-19
01-20
01-21
01-22

YIELD
R1-2
36"X31"
01-17
01-18

R4-7
24"X30"
01-16

POSTED SPEED LIMIT 35 MPH

397'SB'
297'NB'
CTH J
398'SB'
298'NB'
399'SB'
299'NB'
400'SB'
300'NB'
11'JR'
12'JR'
13'JR'
10'JR'
200'WB'
402'SB'
302'NB'
403'SB'
303'NB'
CTH J
304'NB'

50TH AVE
131'EB'

POSTED SPEED LIMIT 40 MPH

01-01
01-02
W2-6
30"X30"
15 MPH
W13-1
18"X18"

01-03
01-36
R4-7
24"X30"
W5-54
18"X18"

01-04
01-05
YIELD
R1-2
36"X31"

01-36
50th Ave
D1-1
66"x15"

01-06
01-07
01-08
01-09
R6-1R
36"X12"
ONE WAY
R6-4B
60"X24"

133'EB'
202'WB'
134'EB'
50TH AVE
203'WB'

01-13
J
D1-1
36"x18"

01-14
SPEED LIMIT 35
R2-1
24"X30"

01-15
COUNTY J
M1-5A
24"X24"

W01-01
NO PARKING SCHOOL DAYS 7:30am to 3:30pm
MOVED BY OTHERS

01-11
01-12
YIELD
R1-2
36"X31"

01-10
R4-7
24"X30"
POSTED SPEED LIMIT 35 MPH

MATCH LINE 134+75'EB' (SEE NEXT SHEET)

## PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON TUBULAR POST(S) (NOTE, BOX OUTS REQ'D FOR CONCRETE AREAS)
- SIGN FLAGS 18" X 18" ORANGE FLAGS FOR 6 MONTHS (SEE, GENERAL NOTE: PERMANENT SIGNING)
- xx00-00 DENOTES SIGN NUMBER
  - SIGN COUNT SEQUENCE PER PAGE
  - PAGE NUMBER
  - WORK CODE: M=MOVE, W=WORK BY OTHERS

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PERMANENT SIGNING | PAGE 01 OF 02 | SHEET 31 |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\023200-PS (PERM SIGNING).DWG
PLOT DATE : 9/19/2024 8:22 AM
PLOT BY : SEH
LAYOUT NAME : 01
PLOT SCALE : 1.0 IN = 50.0 FT
WISDOT/CADDS SHEET 42

2

## PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON TUBULAR POST(S) (NOTE, BOX OUTS REQ'D FOR CONCRETE AREAS)
- SIGN FLAGS 18" X 18" ORANGE FLAGS FOR 6 MONTHS (SEE, GENERAL NOTE: PERMANENT SIGNING)
- xx00-00 DENOTES SIGN NUMBER
  - SIGN COUNT SEQUENCE PER PAGE
  - PAGE NUMBER
  - WORK CODE: M=MOVE, W=WORK BY OTHERS

N

12'SR'

11'SR'

171ST ST

BLDG

STOP
R1-1
30"X30"
02-35

OH

SEPV

SEPTIC

FO

G

50TH AVE

196'WB'
197'WB'
198'WB'
199'WB'
127'EB'
128'EB'
129'EB'
130'EB'

10'D1'

MATCH LINE 130+50'EB'
(SEE PREVIOUS SHEET)

11'D1'

12'D1'

FRONTAGE RD

POSTED SPEED
LIMIT 35 MPH

02-30
02-31
W2-6
30"X30"
15 M.P.H.
W13-1
18"X18"

02-32
02-33
M1-85
24"X24"
M1-85-C
24"x12"
SIGNS BANDED
TO LIGHT POLE

02-34
R4-7
24"X30"

24"X30"

N

MATCH LINE 134+75'EB'
(SEE PREVIOUS SHEET)

204'WB'
205'WB'
206'WB'
135'EB'
136'EB'
137'EB'

MATCH LINE 137+75'EB'

2

N

MATCH LINE 137+75'EB'

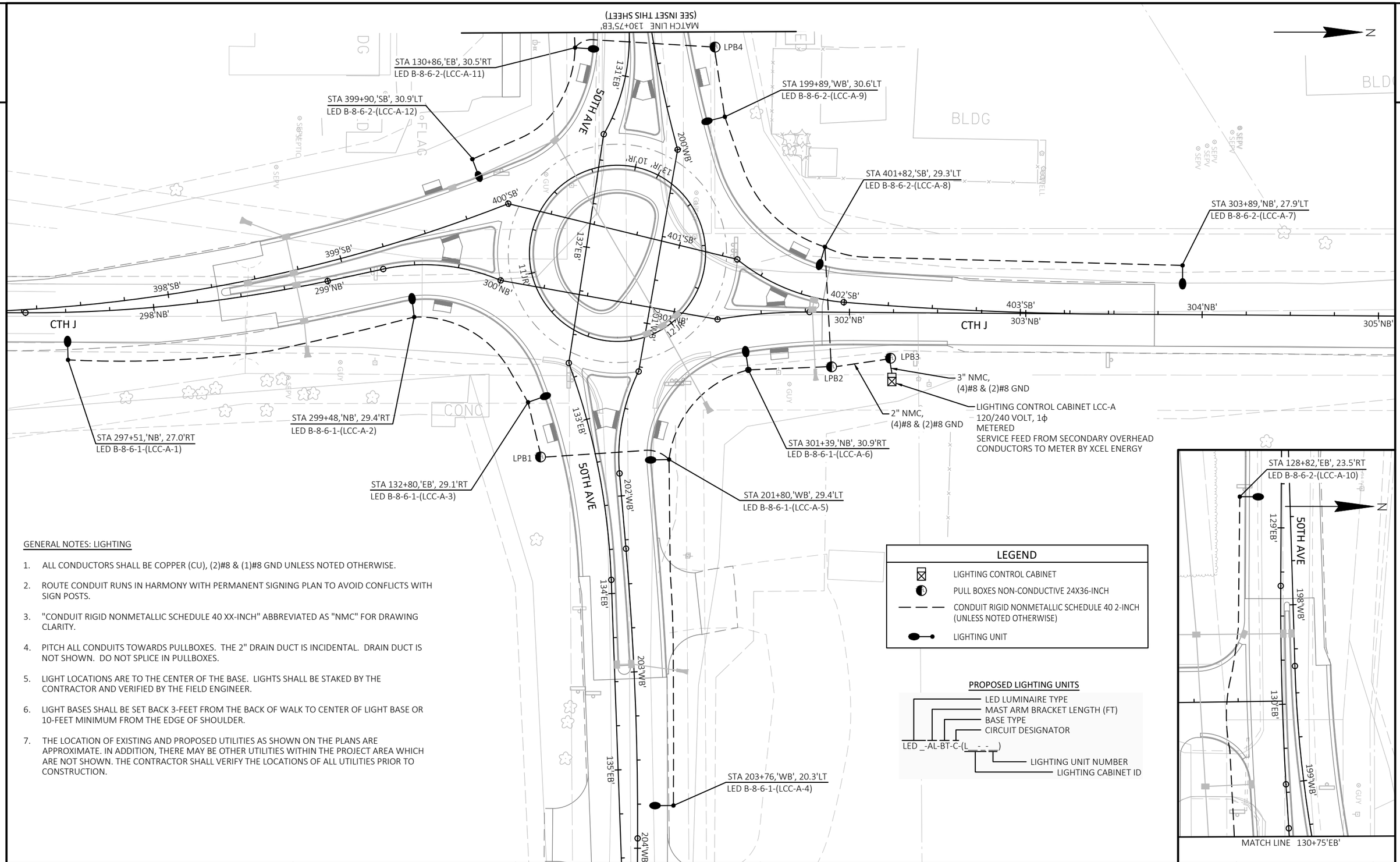
50TH AVE

138'EB'
139'EB'
140'EB'
141'EB'

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PERMANENT SIGNING | PAGE 02 OF 02 | SHEET 32 |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\023200-PS (PERM SIGNING).DWG
PLOT DATE : 7/26/2024 8:23 AM
PLOT BY : SEH
LAYOUT NAME : 02
PLOT SCALE : 1.0 IN = 50.0 FT

2




GENERAL NOTES: LIGHTING

1. ALL CONDUCTORS SHALL BE COPPER (CU), (2)#8 & (1)#8 GND UNLESS NOTED OTHERWISE.
2. ROUTE CONDUIT RUNS IN HARMONY WITH PERMANENT SIGNING PLAN TO AVOID CONFLICTS WITH SIGN POSTS.
3. "CONDUIT RIGID NONMETALLIC SCHEDULE 40 XX-INCH" ABBREVIATED AS "NMC" FOR DRAWING CLARITY.
4. PITCH ALL CONDUITS TOWARDS PULLBOXES. THE 2" DRAIN DUCT IS INCIDENTAL. DRAIN DUCT IS NOT SHOWN. DO NOT SPLICE IN PULLBOXES.
5. LIGHT LOCATIONS ARE TO THE CENTER OF THE BASE. LIGHTS SHALL BE STAKED BY THE CONTRACTOR AND VERIFIED BY THE FIELD ENGINEER.
6. LIGHT BASES SHALL BE SET BACK 3-FEET FROM THE BACK OF WALK TO CENTER OF LIGHT BASE OR 10-FEET MINIMUM FROM THE EDGE OF SHOULDER.
7. THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

**LEGEND**

- LIGHTING CONTROL CABINET
- PULL BOXES NON-CONDUCTIVE 24X36-INCH
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH (UNLESS NOTED OTHERWISE)
- LIGHTING UNIT

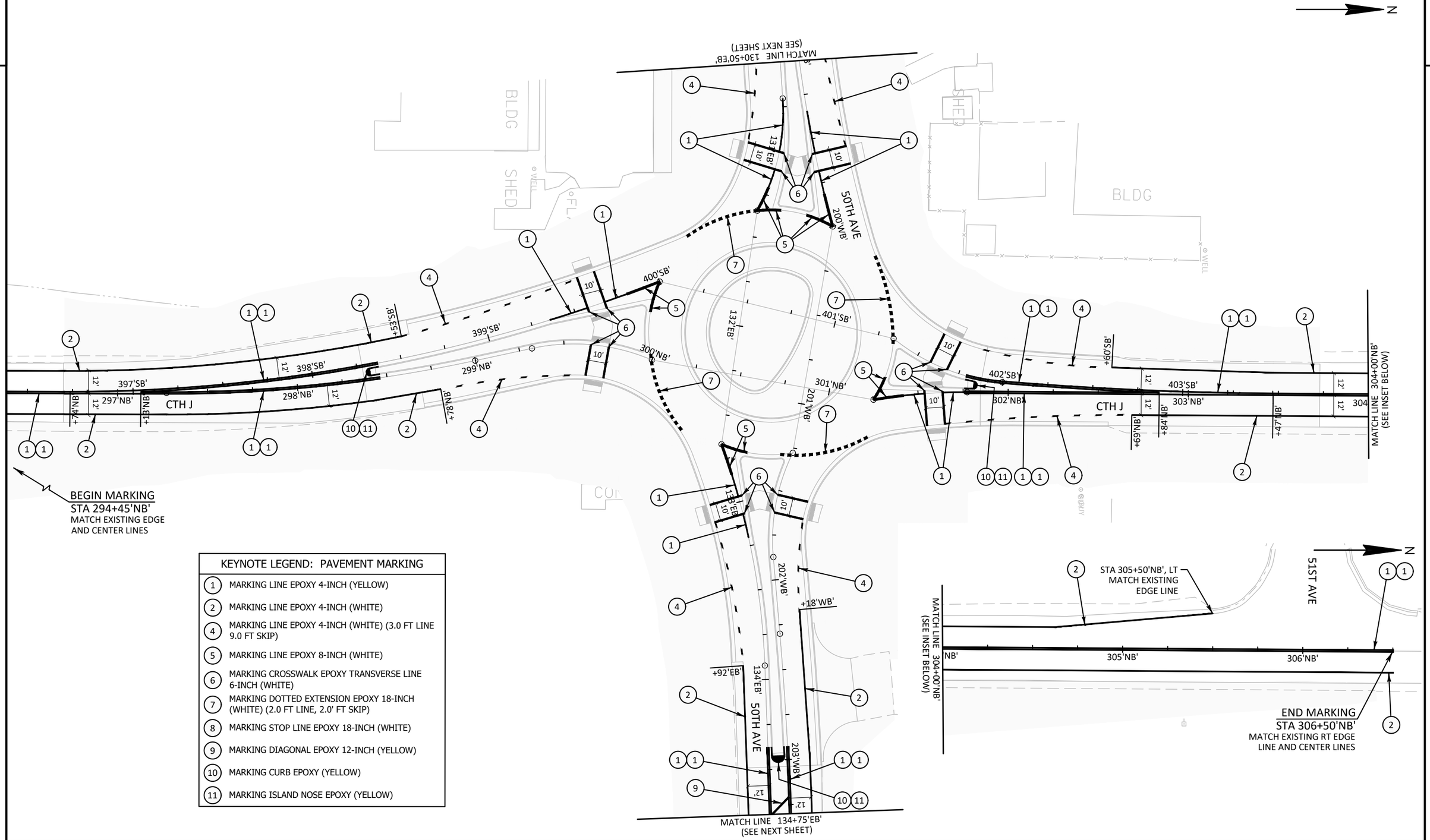
PROPOSED LIGHTING UNITS

LED _-AL-BT-C-(L_ _-_ _)

- LED LUMINAIRE TYPE
- MAST ARM BRACKET LENGTH (FT)
- BASE TYPE
- CIRCUIT DESIGNATOR
- LIGHTING UNIT NUMBER
- LIGHTING CABINET ID

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | LIGHTING PLAN | SHEET 33 E |
|---|---|---|---|---|

2

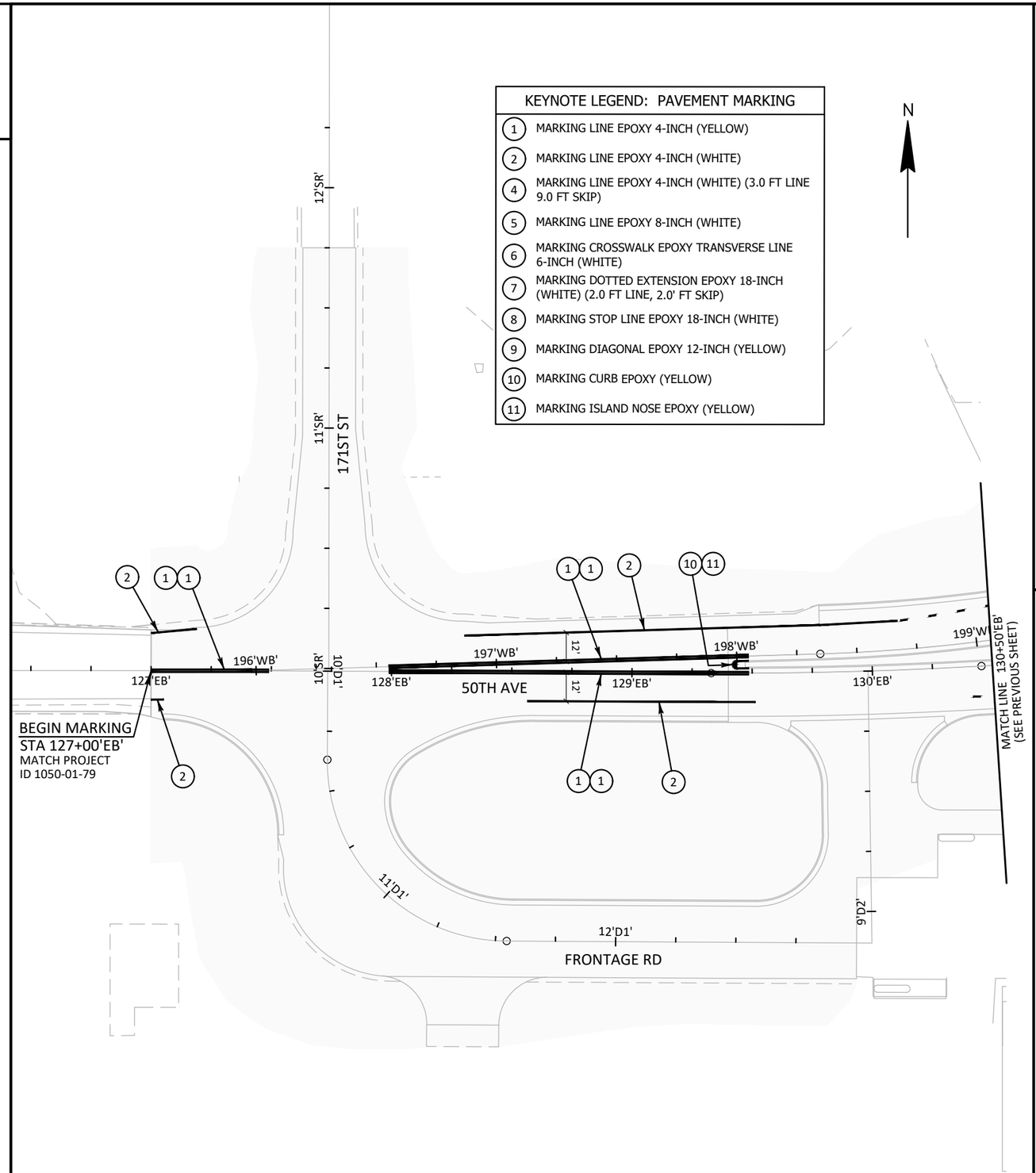


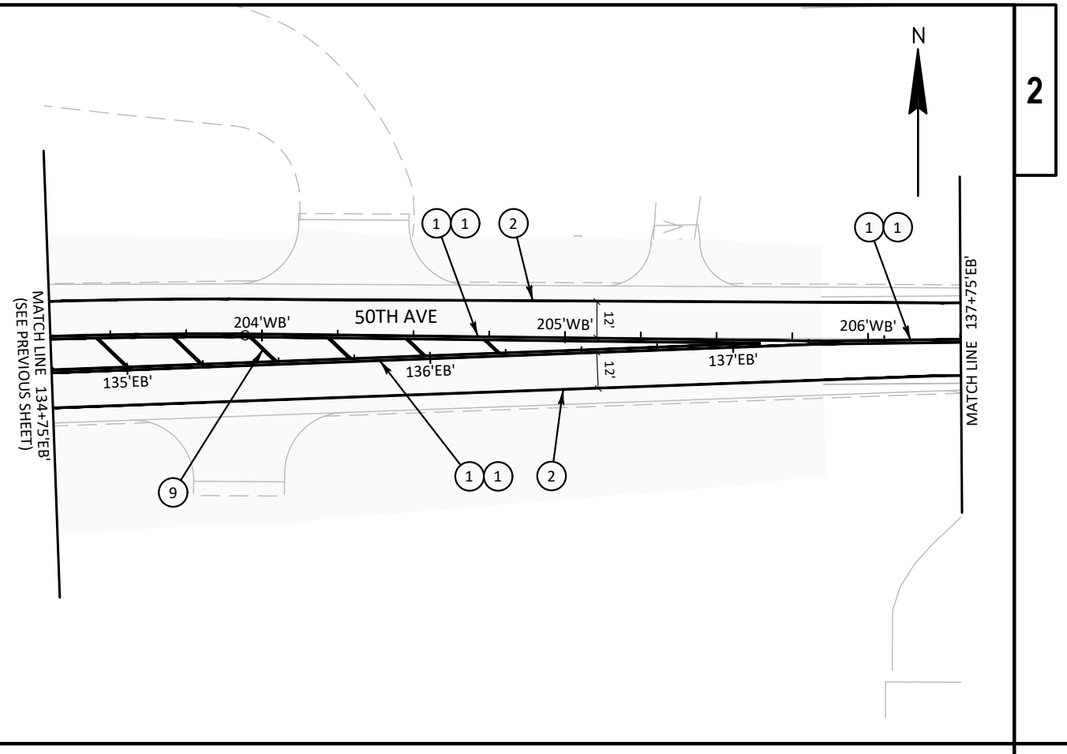

| KEYNOTE LEGEND: PAVEMENT MARKING | |
|---|---|
| 1 | MARKING LINE EPOXY 4-INCH (YELLOW) |
| 2 | MARKING LINE EPOXY 4-INCH (WHITE) |
| 4 | MARKING LINE EPOXY 4-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP) |
| 5 | MARKING LINE EPOXY 8-INCH (WHITE) |
| 6 | MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) |
| 7 | MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE) (2.0 FT LINE, 2.0' FT SKIP) |
| 8 | MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| 9 | MARKING DIAGONAL EPOXY 12-INCH (YELLOW) |
| 10 | MARKING CURB EPOXY (YELLOW) |
| 11 | MARKING ISLAND NOSE EPOXY (YELLOW) |

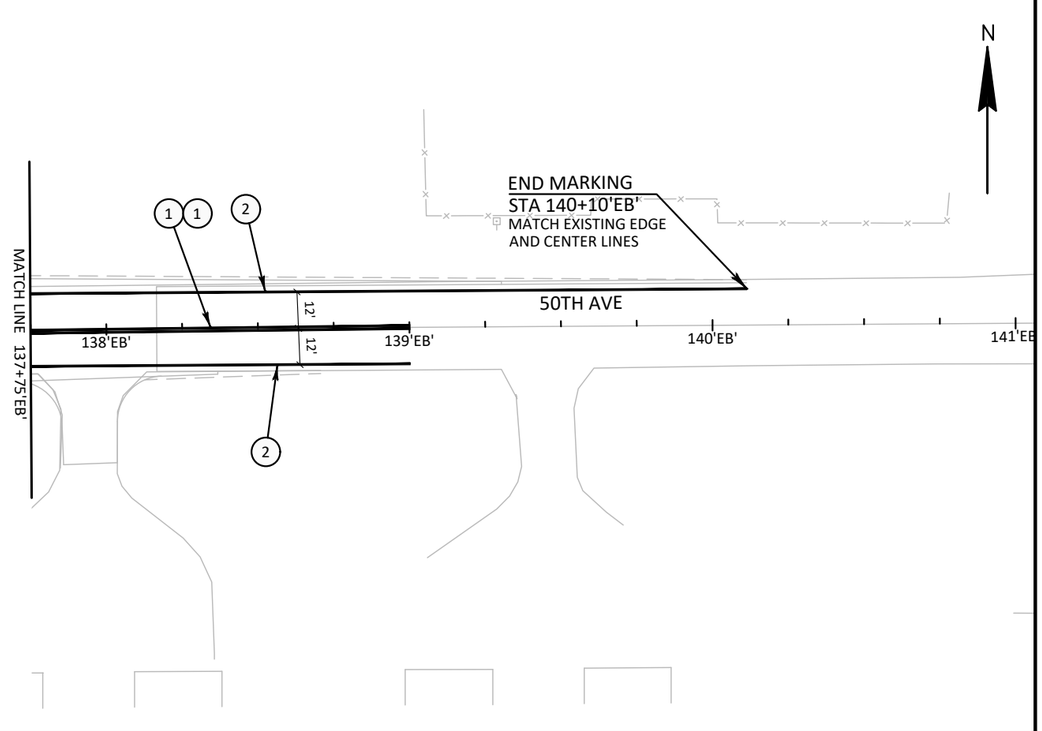
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PAVEMENT MARKING | SHEET 34 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\024500-PM (PAVEMENT MARKING).DWG
PLOT DATE : 7/26/2024 8:26 AM
PLOT BY : SEH
LAYOUT NAME : 01
PLOT SCALE : 1.0 IN = #### FT
WISDOT/CADDS SHEET 42

| KEYNOTE LEGEND: PAVEMENT MARKING | |
|---|---|
| 1 | MARKING LINE EPOXY 4-INCH (YELLOW) |
| 2 | MARKING LINE EPOXY 4-INCH (WHITE) |
| 4 | MARKING LINE EPOXY 4-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP) |
| 5 | MARKING LINE EPOXY 8-INCH (WHITE) |
| 6 | MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) |
| 7 | MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE) (2.0 FT LINE, 2.0' FT SKIP) |
| 8 | MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| 9 | MARKING DIAGONAL EPOXY 12-INCH (YELLOW) |
| 10 | MARKING CURB EPOXY (YELLOW) |
| 11 | MARKING ISLAND NOSE EPOXY (YELLOW) |



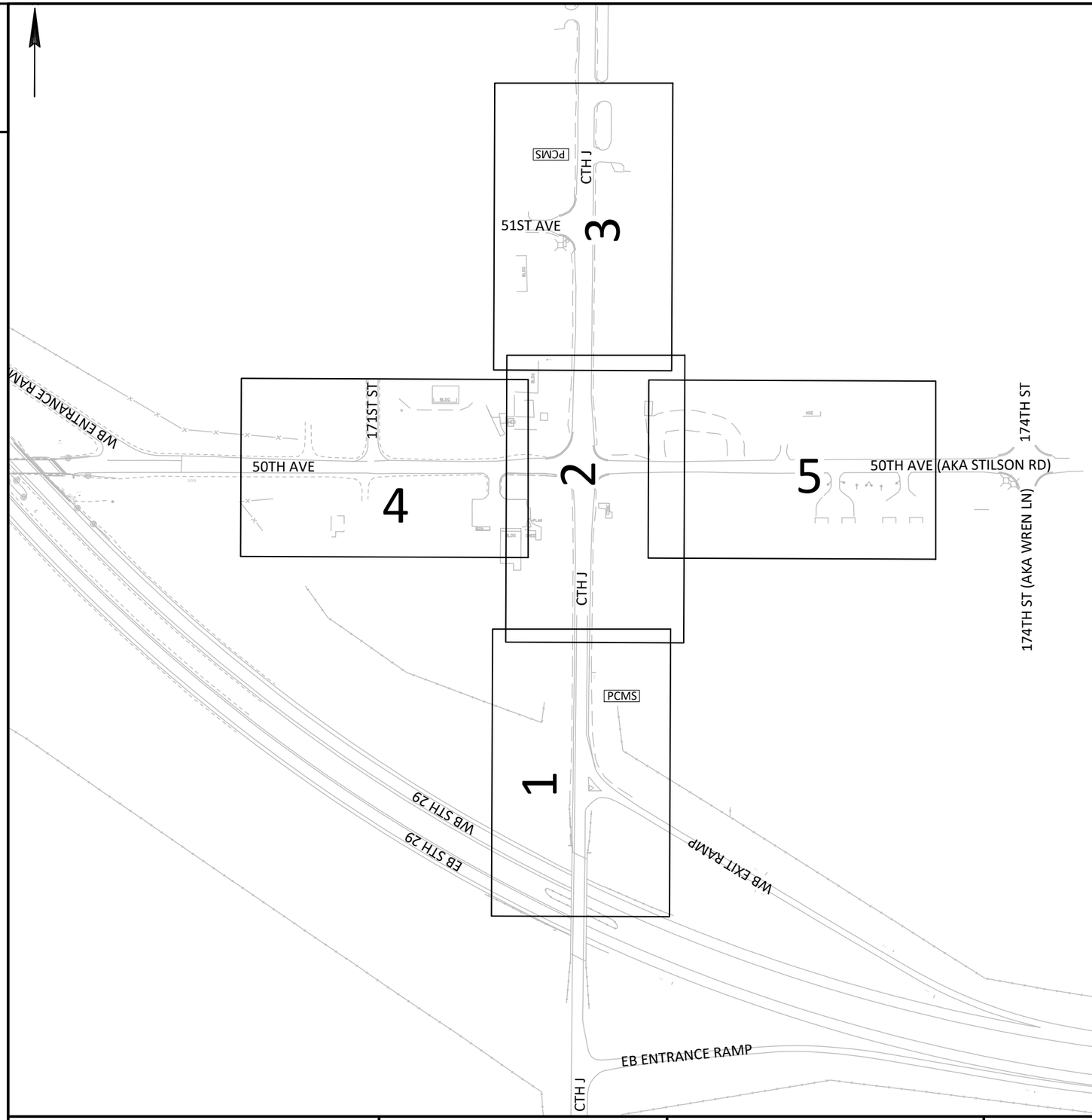




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PAVEMENT MARKING | SHEET 35 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\024500-PM (PAVEMENT MARKING).DWG
PLOT DATE : 7/26/2024 8:26 AM
PLOT BY : SEH
LAYOUT NAME : 02
PLOT SCALE : 1.0 IN = 50.0 FT
WISDOT/CADDS SHEET 42

2




## GENERAL NOTES: TRAFFIC CONTROL

1. THE FOLLOWING NOTES ARE APPLICABLE TO ALL STAGES. SEE THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL AND CONSTRUCTION STAGING REQUIREMENTS.
2. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
3. ALL "WO" OR "W" DIAMOND SHAPED WARNING SIGNS, SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.
4. ALL DRUMS IN TAPERS SHALL HAVE A TRAFFIC CONTROL WARNING LIGHTS TYPE C, (STEADY BURN).
5. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
6. THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.
7. SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
8. SEE PROJECT ID 1050-01-79 FOR ADDITIONAL PREWARNING PCMS FOR ROAD CLOSURES.

PCMS MESSAGE:

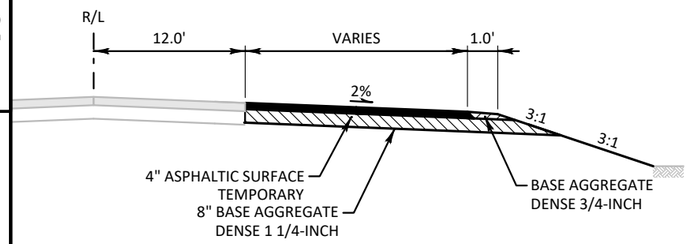
| ROAD WORK BEGINS | DATE & TIME |
|---|---|
| FRAME A | FRAME B |

(IN PLACE A MINIMUM OF 7 CALENDAR DAYS PRIOR TO BEGINNING ROAD WORK)

### TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- WORK SPACE, OPEN TO TRAFFIC
- WORK SPACE, CLOSED TO TRAFFIC
- TEMPORARY PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL - GENERAL NOTES & SHEET INDEX | SHEET 36 | E |
|---|---|---|---|---|---|




TYPICAL FINISHED SECTION
(TEMPORARY WIDENING)

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

CTH J

171ST ST

174TH ST

50TH AVE (CLOSED)

50TH AVE (CLOSED)

TEMPORARY COMMERCIAL ACCESS REQ'D

MAINTAIN ACCESSES AT ALL TIMES

CONSTRUCT AND MAINTAIN ACCESS AT ALL TIMES

PIPE EXTENSION REQ'D

174TH ST (AKA WREN AV)

STH 29 WB

STH 29 EB

CTH J

BLDG

BLDG

BLDG

SHED

FLAG

HSE

SIGN

CONC

## SUMMARY OF WORK FOR THIS STAGE:

CONSTRUCTION

1) CONSTRUCT TEMPORARY ROADWAYS ALONG CTH J AND 50TH AVE.
2) CONSTRUCT GRADING FOR SOUTH FRONTAGE ROAD.
3) EXTEND CULVERT AT 298+00'NB', RT. MAINTAIN DRAINAGE.
4) CONSTRUCT TEMPORARY COMMERCIAL ACCESSES.

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CONSTRUCTION STAGING - STAGE 1 | SHEET 37 |
|---|---|---|---|---|

2

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

EB STH 29

WB STH 29

CTH J

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

WB EXIT RAMP

10'TJ'

50'
(TYP)

11'TJ'

12'TJ'

10'
(TYP)

MOVE EX STOP AHEAD SIGN

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

MATCH LINE 297+00'NB'

2

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 1 | SHEET 38 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 1).dwg | PLOT DATE : 9/19/2024 10:09 AM | PLOT BY : SEH | LAYOUT NAME : 01 | PLOT SCALE : 1.0 IN = 40.0 FT

2

MATCH LINE 130+80'EB'

50TH AVE

EX STOP SIGN TO REMAIN, INSTALL "ALL WAY" PANEL (ADJACENT DIRECTIONAL SIGNING TO REMAIN IN PLACE)

STOP
ALL WAY
R1-3P
18"X6"

10' (TYP)

14'TJ'

REMOVE EX WEST HWY 29 DIRECTIONAL (OTHER DIRECTIONAL SIGNS TO REMAIN IN PLACE)

STOP
ALL WAY
R1-3P
18"X6"

COUNTY J

TO EAST WEST 29

EX STOP SIGN TO REMAIN, INSTALL "ALL WAY" PANEL

ROAD CLOSED
R11-2
48"X30"

STA 14+09'TJ', RT
TEMPORAY PIPE
EXTENSION REQ'D

R3-2
24"X24"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

MATCH LINE 297+00'NB'

50'
(TYP)

CTH J

10'
(TYP)

25'
(TYP)

25'
(TYP)

CTH J

MATCH LINE 303+00'NB'

13'TJ'

14'TJ'

15'TJ'

16'TJ'

17'TJ'

18'TJ'

R3-1
24"X24"

R1-1
STOP
ALL WAY
R1-3P
18"X6"
MOVE EX STOP SIGN TO TEMP SUPPORT, INSTALL "ALL WAY" PANEL

WEST
COUNTY
J
REMOVE EX HWY 29 DIRECTIONAL, MOVE HWY J DIRECTIONAL TO TEMP SUPPORT

50TH AVE (CLOSED)

STA 17+15'TJ', RT
CONSTRUCT TEMPORARY AGG CE

R11-2
48"X30"

ROAD CLOSED

50TH AVE

MATCH LINE 134+40'EB'

TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 1 | SHEET 39 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 1).dwg PLOT DATE : 9/19/2024 10:09 AM PLOT BY : SEH LAYOUT NAME : 02 PLOT SCALE : 1.0 IN = 40.0 FT

2

2

N

BLDG

51ST AVE

WELL

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

MATCH LINE 303+00'NB'

25'
(TYP)

CTH J

19'TJ'

20'TJ'

21'TJ'

22'TJ'

SPEED LIMIT 35

MOVE EX SPEED LIMIT SIGN TO TEMP SUPPORT

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

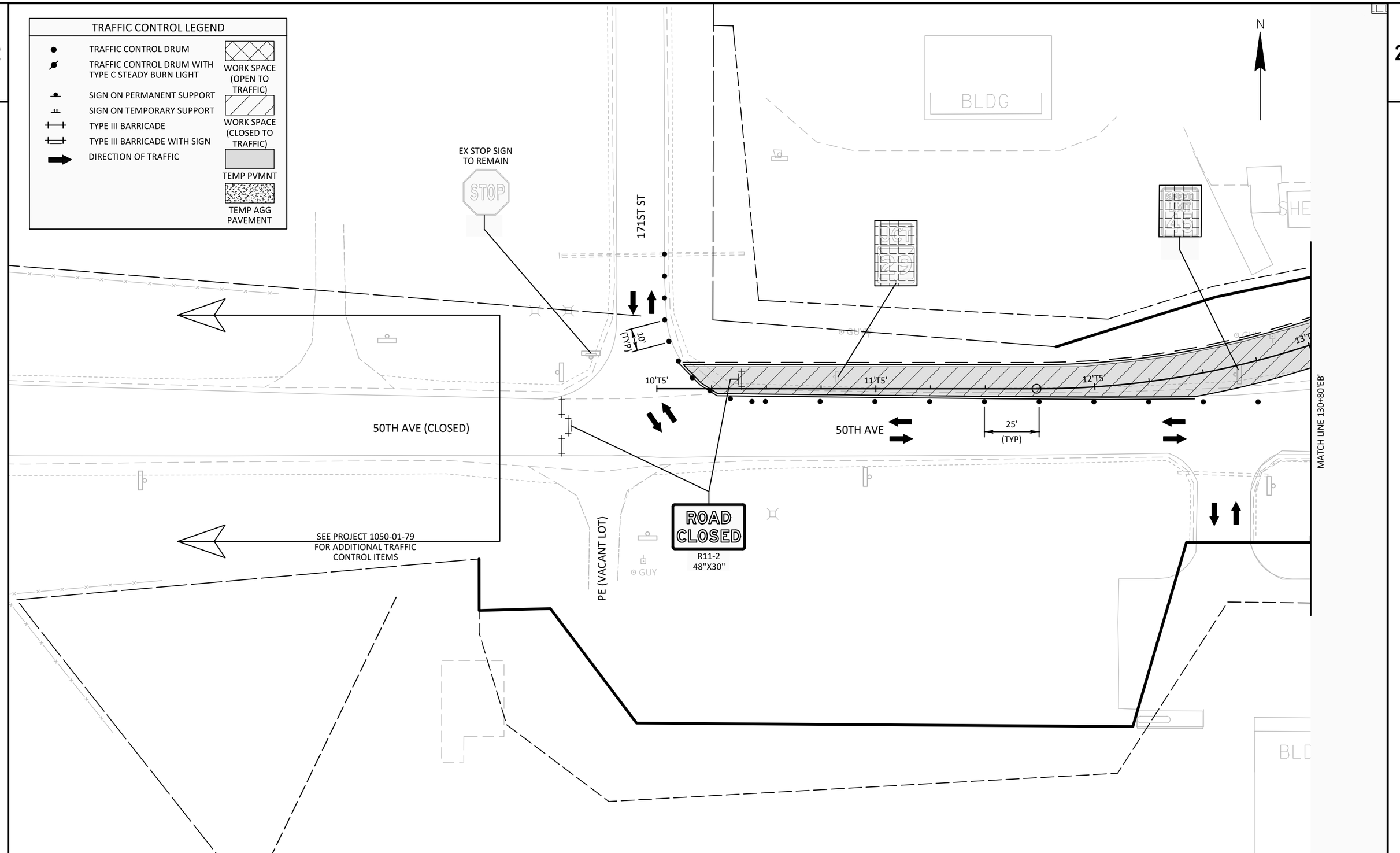
## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 1 | SHEET 40 E |
|---|---|---|---|---|

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT




2

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 1 | SHEET 41 E |
|---|---|---|---|---|

2

REMOVE STOP AHEAD SIGN,
REPLACE WITH W20--3D

ROAD CLOSED 500 FT
W20-3D

N

MATCH LINE 134+40'EB'

25'
(TYP)

50TH AVE

MATCH LINE 140+00'EB'

STA 135+40'EB', RT
CONSTRUCT AGG PORTION OF CE
AND INSTALL CULVERT PIPE

ROAD CLOSED AHEAD
W20-3A

N

500'

MATCH LINE 140+00'EB'

50'
(TYP)

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 1 | SHEET 42 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 1).dwg PLOT DATE : 9/19/2024 10:09 AM PLOT BY : SEH LAYOUT NAME : 05 PLOT SCALE : 1.0 IN = 40.0 FT

WISDOT/CADDS SHEET 42

2

2

CTH J

51ST AVE

171ST ST

FLAGGING OPERATION REQ'D
FOR CONSTRUCTION OF 171ST ST

MAINTAIN ACCESSES
AT ALL TIMES

174TH ST

50TH AVE (CLOSED)

50TH AVE (CLOSED)

50TH AVE

MAINTAIN ACCESS TO BUSINESS
AT ALL TIMES

MAINTAIN ACCESSES
AT ALL TIMES

STH 29 WB

STH 29 EB

CTH J

TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

## SUMMARY OF WORK FOR THIS STAGE:

CONSTRUCTION

1) COMPLETE GRADING FOR THE CTH J AND 50TH AVE ROUNDABOUT.
2) CONSTRUCT 30-INCH STORM SEWER TRUNKLINE AND STRUCTURES TO STATION 129+60'EB'.
3) INSTALL DRIVEWAY CULVERTS. MAINTAIN DRAINAGE.
4) CONSTRUCT WEST PORTION OF 50TH AVE, FRONTAGE RD, AND 171ST ST.
5) CONSTRUCT PORTIONS OF THE CTH J NORTH APPROACH.
6) CONSTRUCT PORTIONS OF THE 50TH AVE EAST APPROACH.

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CONSTRUCTION STAGING - STAGE 2A | SHEET 43 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\TRAFFIC CONTROL\025100-TC (TC OVERVIEW - STAGE 2A).DWG PLOT DATE : 9/19/2024 10:11 AM PLOT BY : SEH LAYOUT NAME : STAGE 2A PLOT SCALE : 1.0 IN = 150.0 FT

2

2

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

EB STH 29

WB STH 29

CTH J

ROAD CLOSED
R11-2
48"X30"

T2

25'
(TYP)

10'TJ'

T1
(DOUBLE)

11'TJ'

12'

12'

12'TJ'

T2

MATCH LINE 297+00'NB'

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

WB EXIT RAMP

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION
FIXED MESSAGE SIGN

## KEYNOTE LEGEND: PAVEMENT MARKING

- (T1) TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- (T2) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (T3) TEMPORARY MARKING STOP LINE PAINT 18-INCH
- (M1) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (M2) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (M3) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 2A | SHEET 44 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 2a).dwg
PLOT DATE : 9/19/2024 10:13 AM
PLOT BY : SEH
LAYOUT NAME : 01
PLOT SCALE : 1.0 IN = 40.0 FT
WISDOT/CADDS SHEET 42

2

N

MATCH LINE 297+00'NB'

MATCH LINE 303+00'NB'

MATCH LINE 130+80'EB'

MATCH LINE 134+40'EB'

CTH J

50TH AVE

13'TJ'

14'TJ'

15'TJ'

16'TJ'

17'TJ'

18'TJ'

12'

25' (TYP)

10' (TYP)

14'TS'

R40'

R60'

(DOUBLE)

ROAD CLOSED

R11-2
48"X30"

MOVE SIGNS

STOP

R1-1

ALL WAY

R1-3P
18"X6"

R3-2
24"X24"

MOVE DIRECTIONAL SIGNS

COUNTY J

TO EAST

29

R3-1
24"X24"

WEST

COUNTY J

MOVE HWY J
DIRECTIONAL

R1-3P
18"X6"
MOVE SIGNS

BLDG

SHED

WELL

CONC

T1 T2 T3

## KEYNOTE LEGEND: PAVEMENT MARKING

| | |
|---|---|
| T1 | TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW) |
| T2 | TEMPORARY MARKING LINE PAINT 4-INCH (WHITE) |
| T3 | TEMPORARY MARKING STOP LINE PAINT 18-INCH |
| M1 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) |
| M2 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) |
| M3 | TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH |

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 2A | SHEET 45 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 2a).dwg PLOT DATE : 9/19/2024 10:14 AM PLOT BY : SEH LAYOUT NAME : 02 PLOT SCALE : 1.0 IN = 40.0 FT

2

2

N

BLDG

51ST AVE

WELL

MATCH LINE 303+00'NB'

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

ROAD CLOSED

R11-2
48"X30"

25'
(TYP)

10'
(TYP)

R60'

T2

T1

(DOUBLE)

22'TJ'

CTH J

21'TJ'

20'TJ'

19'TJ'

12'

12'

T2

SPEED LIMIT 35

MOVE EX SPEED LIMIT SIGN TO TEMP SUPPORT

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

## KEYNOTE LEGEND: PAVEMENT MARKING

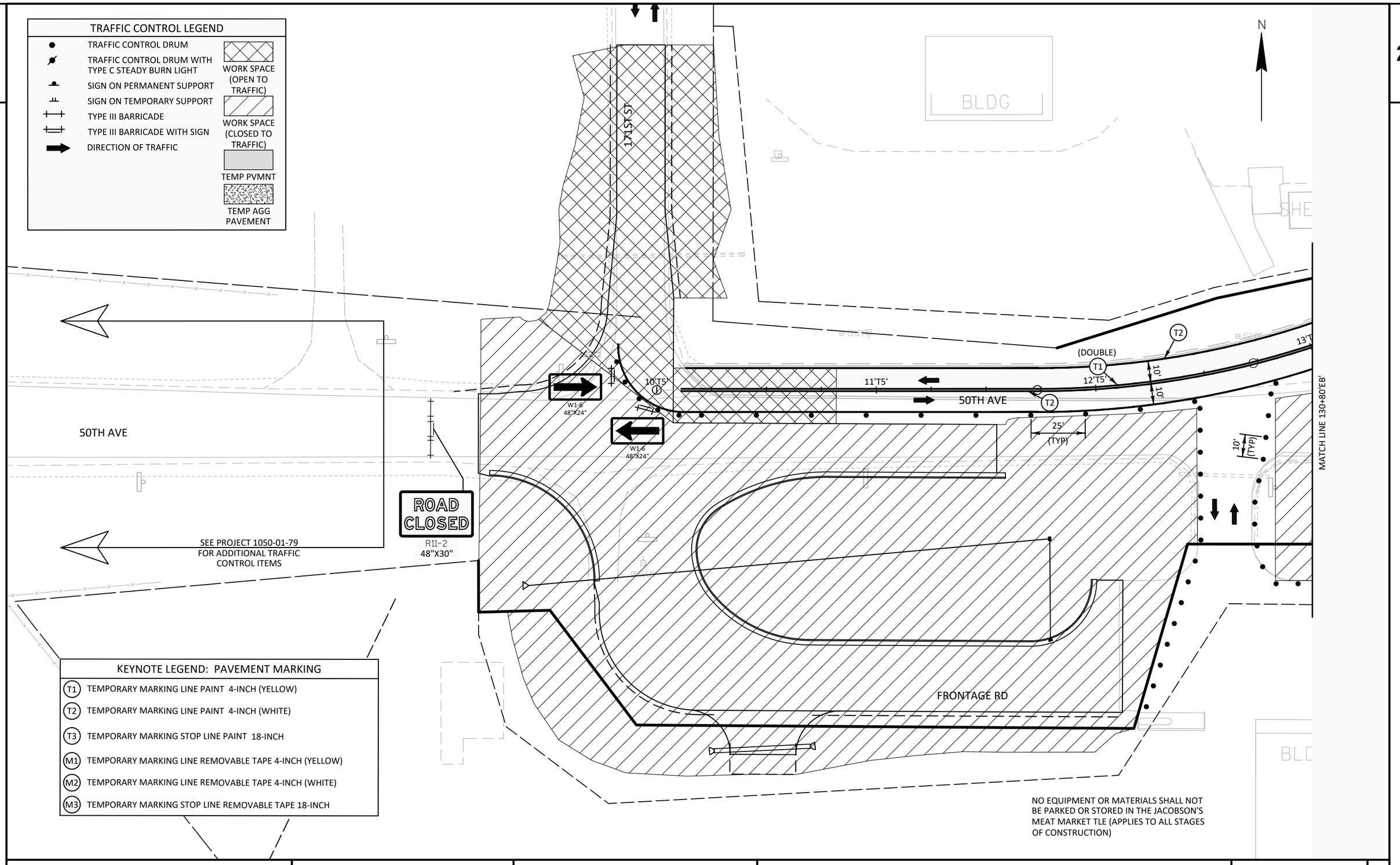
| | |
|---|---|
| T1 | TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW) |
| T2 | TEMPORARY MARKING LINE PAINT 4-INCH (WHITE) |
| T3 | TEMPORARY MARKING STOP LINE PAINT 18-INCH |
| M1 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) |
| M2 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) |
| M3 | TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 2A | SHEET 46 E |
|---|---|---|---|---|

2

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT




## KEYNOTE LEGEND: PAVEMENT MARKING

- (T1) TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- (T2) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (T3) TEMPORARY MARKING STOP LINE PAINT 18-INCH
- (M1) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (M2) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (M3) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

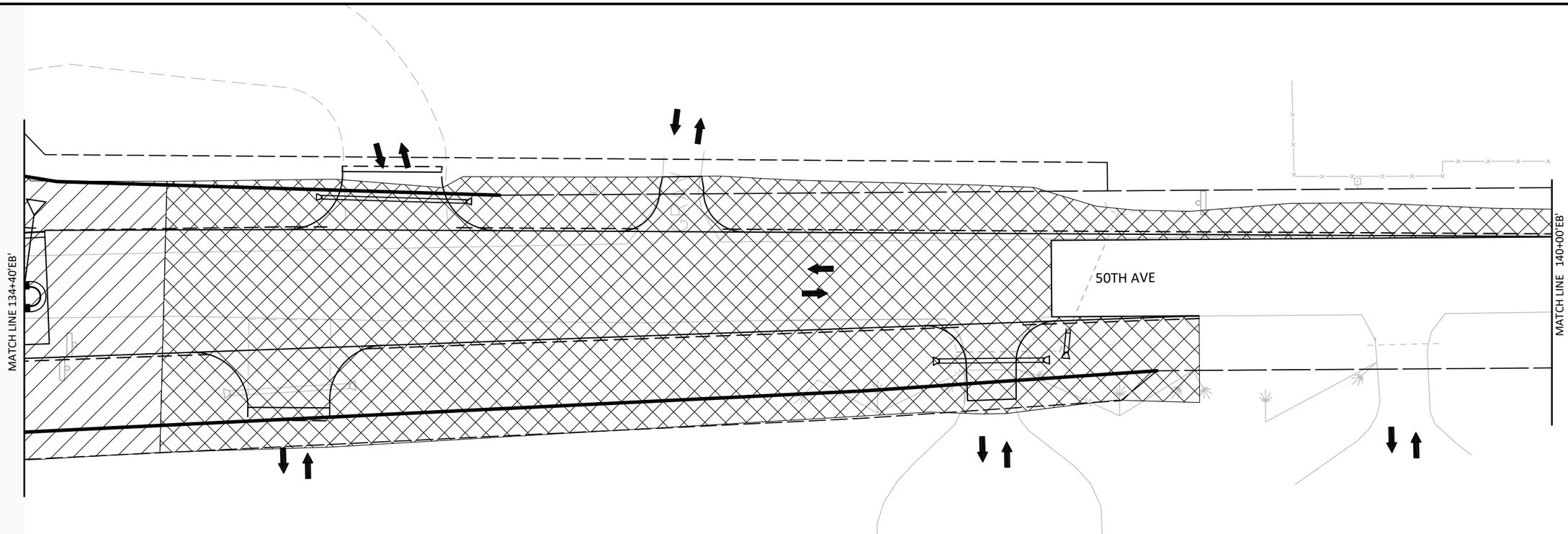
NO EQUIPMENT OR MATERIALS SHALL NOT BE PARKED OR STORED IN THE JACOBSON'S MEAT MARKET TLE (APPLIES TO ALL STAGES OF CONSTRUCTION)

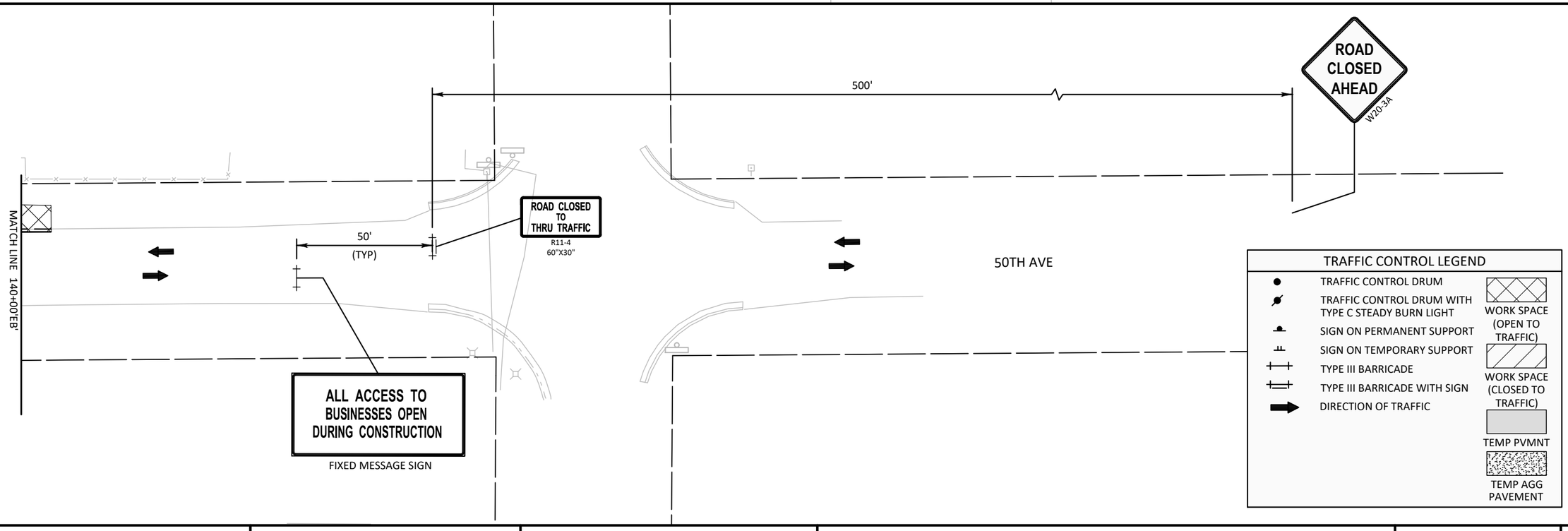
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 2A | SHEET 47 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 2a).dwg PLOT DATE : 9/19/2024 10:14 AM PLOT BY : SEH LAYOUT NAME : 04 PLOT SCALE : 1.0 IN = 40.0 FT

WISDOT/CADDS SHEET 42

2

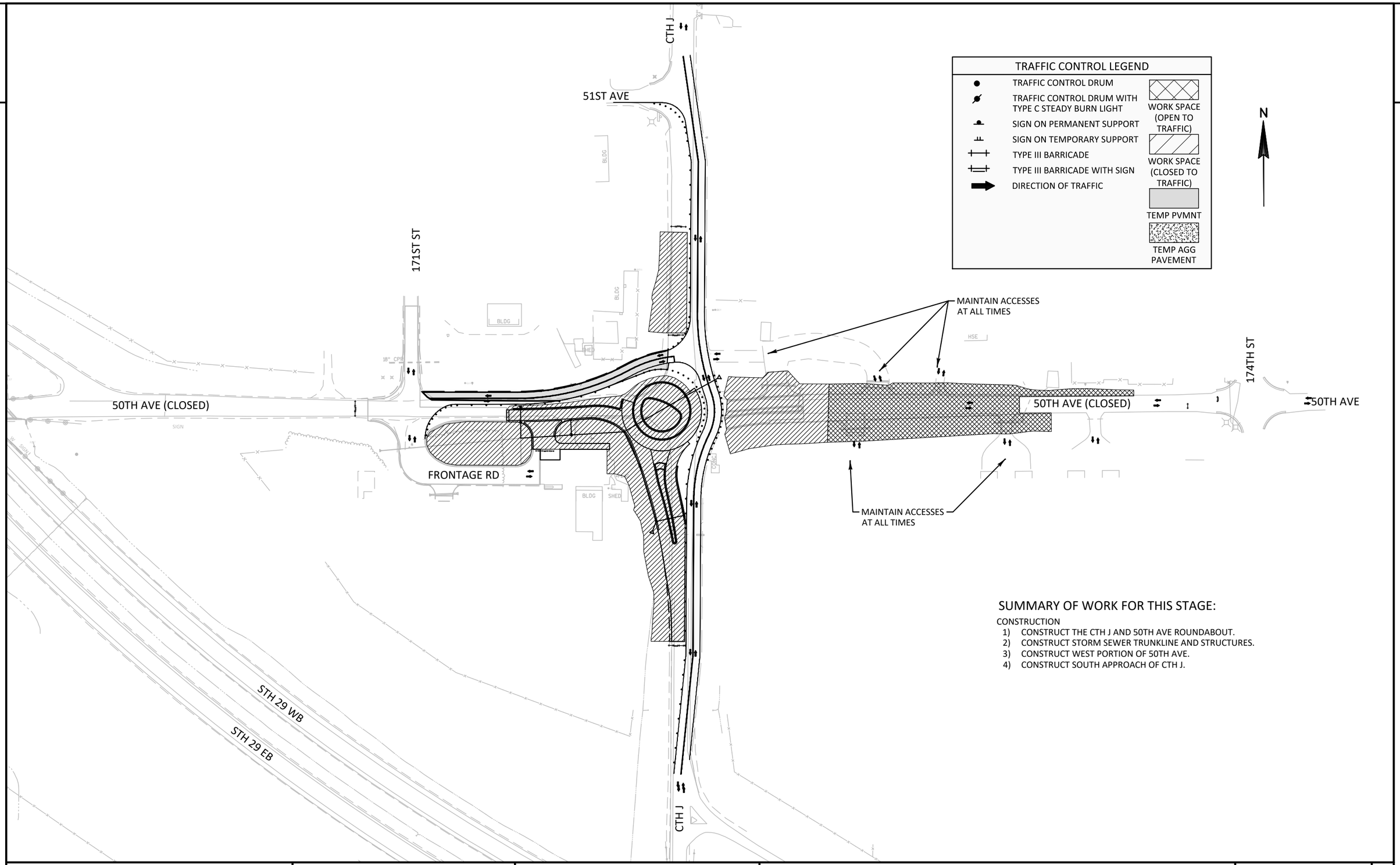



| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 2A | SHEET 48 E |
|---|---|---|---|---|

2

2




TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

## SUMMARY OF WORK FOR THIS STAGE:

CONSTRUCTION

1) CONSTRUCT THE CTH J AND 50TH AVE ROUNDABOUT.
2) CONSTRUCT STORM SEWER TRUNKLINE AND STRUCTURES.
3) CONSTRUCT WEST PORTION OF 50TH AVE.
4) CONSTRUCT SOUTH APPROACH OF CTH J.

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CONSTRUCTION STAGING - STAGE 2B | SHEET 49 | E |
|---|---|---|---|---|---|

2

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

BLDG

171ST ST

INSTALL PERMANENT SIGN

STOP
R1-1
30"X30"

18" CPP

SEPV

SEPTIC

GUY

10'T5'

10'

11'T5'

12'T5'

13'T

MATCH LINE 130+80'EB'

M2

R60'

25'
(TYP)

50TH AVE

ROAD CLOSED
R11-2
48"X30"

SEE PROJECT 1050-01-79
FOR ADDITIONAL TRAFFIC
CONTROL ITEMS

ROAD CLOSED
R11-2
48"X30"

FRONTAGE RD

ROAD CLOSED
R11-2
48"X30"

BLD

## KEYNOTE LEGEND: PAVEMENT MARKING

- (T1) TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- (T2) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (T3) TEMPORARY MARKING STOP LINE PAINT 18-INCH
- (M1) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (M2) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (M3) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

NO EQUIPMENT OR MATERIALS SHALL NOT BE PARKED OR STORED IN THE JACOBSON'S MEAT MARKET TLE (APPLIES TO ALL STAGES OF CONSTRUCTION)

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 2B | SHEET 50 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 2b).dwg
PLOT DATE : 9/19/2024 10:18 AM
PLOT BY : SEH
LAYOUT NAME : 04
PLOT SCALE : 1.0 IN = 40.0 FT
WISDOT/CADDS SHEET 42

2

2

CTH J

51ST AVE

171ST ST

174TH ST

50TH AVE (CLOSED)

50TH AVE (CLOSED)

50TH AVE

FRONTAGE RD

STH 29 WB

STH 29 EB

CTH J

MAINTAIN ACCESSES AT ALL TIMES

MAINTAIN ACCESSES AT ALL TIMES

N

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

## SUMMARY OF WORK FOR THIS STAGE:

CONSTRUCTION

1) CONSTRUCT TEMPORARY 50TH AVE CONNECTION TO CTH J.
2) CONSTRUCT PORTIONS OF THE CTH J AND 50TH AVE ROUNDABOUT.
3) CONSTRUCT PORTIONS OF THE WEST APPROACH OF 50TH AVE.

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CONSTRUCTION STAGING - STAGE 3 | SHEET 51 | E |
|---|---|---|---|---|---|

2

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

EB STH 29

WB STH 29

CTH J

ROAD CLOSED
R11-2
48"X30"

25'
(TYP)

10'TJ'

11'TJ'

12'

12'

12'TJ'

MATCH LINE 297+00'NB'

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

WB EXIT RAMP

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 3 | SHEET 52 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 3).dwg PLOT DATE : 9/19/2024 10:24 AM PLOT BY : SEH LAYOUT NAME : 01 PLOT SCALE : 1.0 IN = 40.0 FT

WISDOT/CADDS SHEET 42

2

MATCH LINE 130+80'EB'

50TH AVE

BLDG

N

ROAD CLOSED
R11-2
48"X30"

MOVE SIGNS

R1-1 STOP
ALL WAY
R1-3P
18"X6"

M1 (DOUBLE)
M2
M3

MOVE SIGNS

MOVE DIRECTIONAL SIGNS

COUNTY J
TO EAST
29

R3-2
24"X24"

MATCH LINE 297+00'NB'

MATCH LINE 303+00'NB'

13'TJ'
14'TJ'
15'TJ'
16'TJ'
17'TJ'
18'TJ'

25' (TYP)

12'

CTH J

T3

R50'

10' (TYP)

R3-1
24"X24"

WEST
COUNTY J

MOVE HWY J DIRECTIONAL

MOVE SIGNS

ROAD CLOSED
R11-2
48"X30"

MATCH LINE 134+40'EB'

## KEYNOTE LEGEND: PAVEMENT MARKING

| | |
|---|---|
| T1 | TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW) |
| T2 | TEMPORARY MARKING LINE PAINT 4-INCH (WHITE) |
| T3 | TEMPORARY MARKING STOP LINE PAINT 18-INCH |
| M1 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) |
| M2 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) |
| M3 | TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH |

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC

- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 3 | SHEET 53 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 3).dwg PLOT DATE : 9/19/2024 10:24 AM PLOT BY : SEH LAYOUT NAME : 02 PLOT SCALE : 1.0 IN = 40.0 FT

2

2

N

BLDG

51ST AVE

WELL

SEPV

SEPV

SEPV

SEPV

SEPV

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

ROAD CLOSED

R11-2
48"X30"

10'
(TYP)

25'
(TYP)

MATCH LINE 303+00'NB'

CTH J

22'TJ'

21'TJ'

20'TJ'

19'TJ'

12'

12'

21" CMA

21" CMA

SPEED LIMIT 35

MOVE EX SPEED LIMIT SIGN TO TEMP SUPPORT

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 3 | SHEET 54 E |
|---|---|---|---|---|

2

2

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

171ST ST

18" CPP

STOP
R1-1

BLDG

SEPV

SEPTIC

GUT

50TH AVE

M2

9'

16'T3'

17'T3'

25'
(TYP)

M1
(DOUBLE)

MATCH LINE 130+80'EB'

ROAD CLOSED
R11-2
48"X30"

SEE PROJECT 1050-01-79
FOR ADDITIONAL TRAFFIC
CONTROL ITEMS

FRONTAGE RD

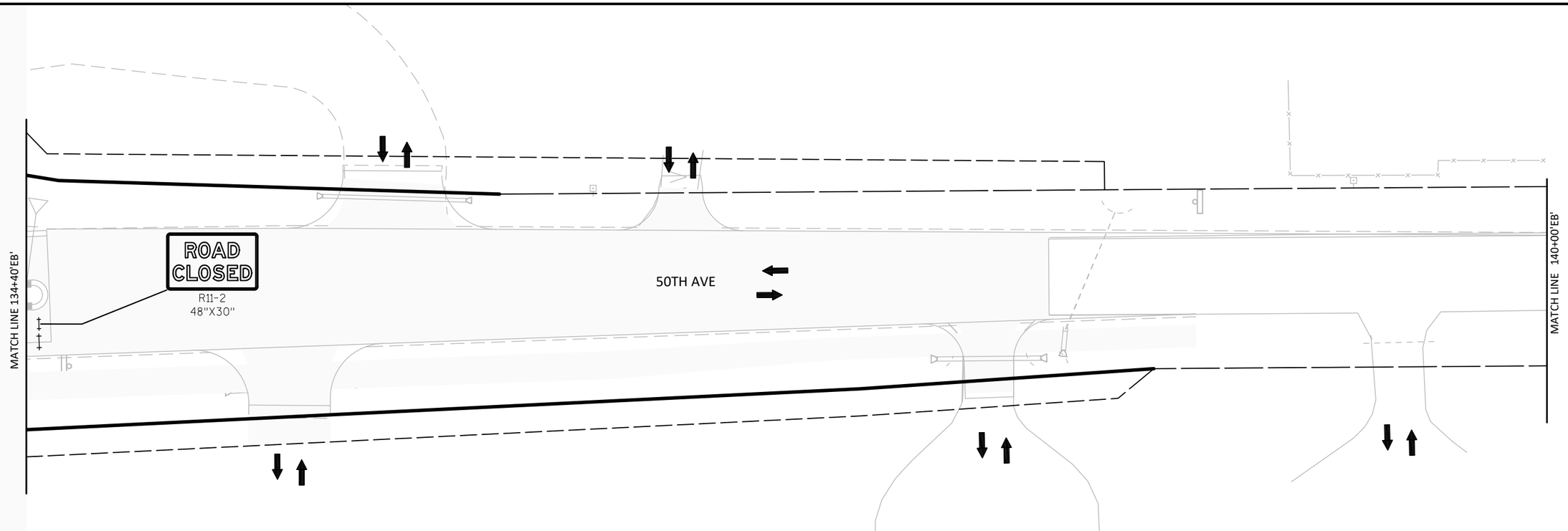
NO EQUIPMENT OR MATERIALS SHALL NOT BE PARKED OR STORED IN THE JACOBSON'S MEAT MARKET TLE (APPLIES TO ALL STAGES OF CONSTRUCTION)

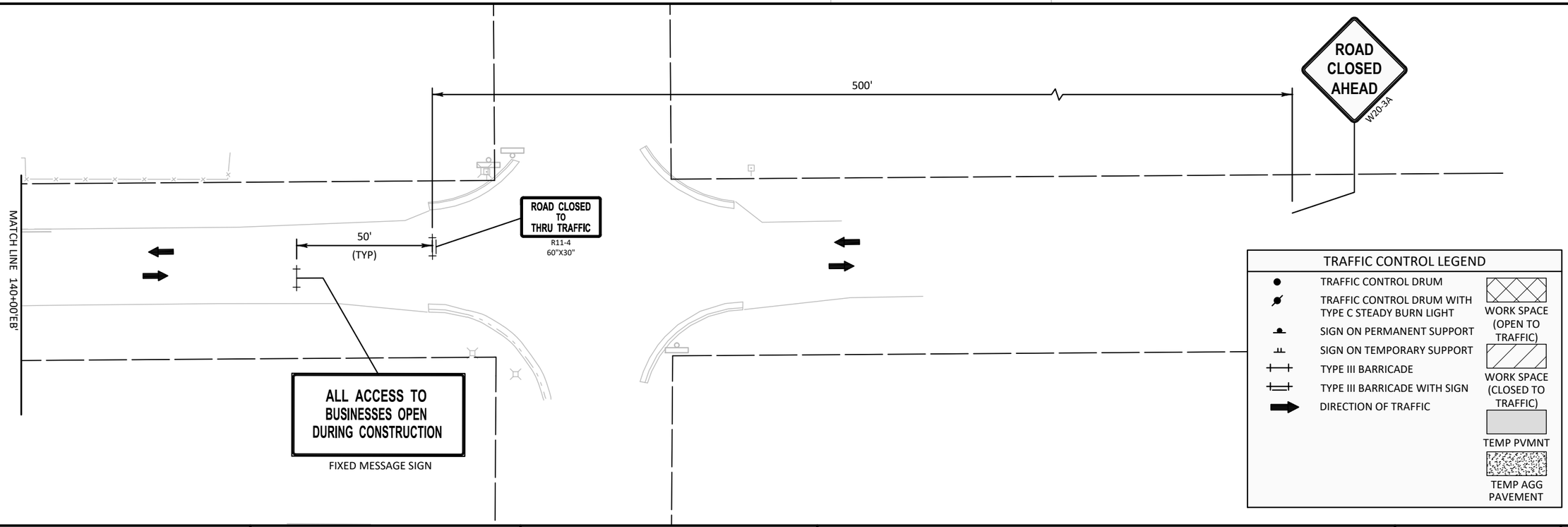
## KEYNOTE LEGEND: PAVEMENT MARKING

- (T1) TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- (T2) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (T3) TEMPORARY MARKING STOP LINE PAINT 18-INCH
- (M1) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (M2) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (M3) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 3 | SHEET 55 E |
|---|---|---|---|---|

2




TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 3 | SHEET 56 E |
|---|---|---|---|---|

2

| TRAFFIC CONTROL LEGEND | |
|---|---|
| TRAFFIC CONTROL DRUM | WORK SPACE (OPEN TO TRAFFIC) |
| TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT | |
| SIGN ON PERMANENT SUPPORT | WORK SPACE (CLOSED TO TRAFFIC) |
| SIGN ON TEMPORARY SUPPORT | |
| TYPE III BARRICADE | TEMP PVMNT |
| TYPE III BARRICADE WITH SIGN | TEMP AGG PAVEMENT |
| DIRECTION OF TRAFFIC | |

N

51ST AVE

CTH J

171ST ST

174TH ST

50TH AVE

50TH AVE

50TH AVE

REMOVE TEMPORARY PAVEMENTS AND RESTORE OUTSIDE SHOULDER

REMOVE TEMPORARY ACCESS

MAINTAIN ACCESSES AT ALL TIMES

MAINTAIN ACCESSES AT ALL TIMES

ABANDON EXISTING CULVERT PIPE SEAL EAST INLET WALL

REMOVE TEMPORARY PAVEMENTS AND RESTORE OUTSIDE SHOULDER

STH 29 WB

STH 29 EB

CTH J

BLDG

BLDG

BLDG

SHED

HSE

SIGN

## SUMMARY OF WORK FOR THIS STAGE:

CONSTRUCTION

1) CONSTRUCT REMAINING PORTIONS OF THE EAST 50TH AVE APPROACH.
2) REMOVE TEMPORARY PAVEMENTS ALONG CTH J.
3) CONSTRUCT REMAINING PORTIONS OF THE SOUTH AND NORTH CTH J APPROACHES.

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CONSTRUCTION STAGING - STAGE 4 | SHEET 57 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\TRAFFIC CONTROL\025100-TC (TC OVERVIEW - STAGE 4).DWG PLOT DATE : 9/19/2024 10:27 AM PLOT BY : SEH LAYOUT NAME : STAGE 4 PLOT SCALE : 1.0 IN = 150.0 FT

WISDOT/CADDS SHEET 42

2

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

N

EB STH 29

WB STH 29

CTH J

T1 (DOUBLE)

M1 (DOUBLE)

25' (TYP)

MATCH LINE 297+00'NB'

ROAD CLOSED

R11-2
48"X30"

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

WB EXIT RAMP

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

## KEYNOTE LEGEND: PAVEMENT MARKING

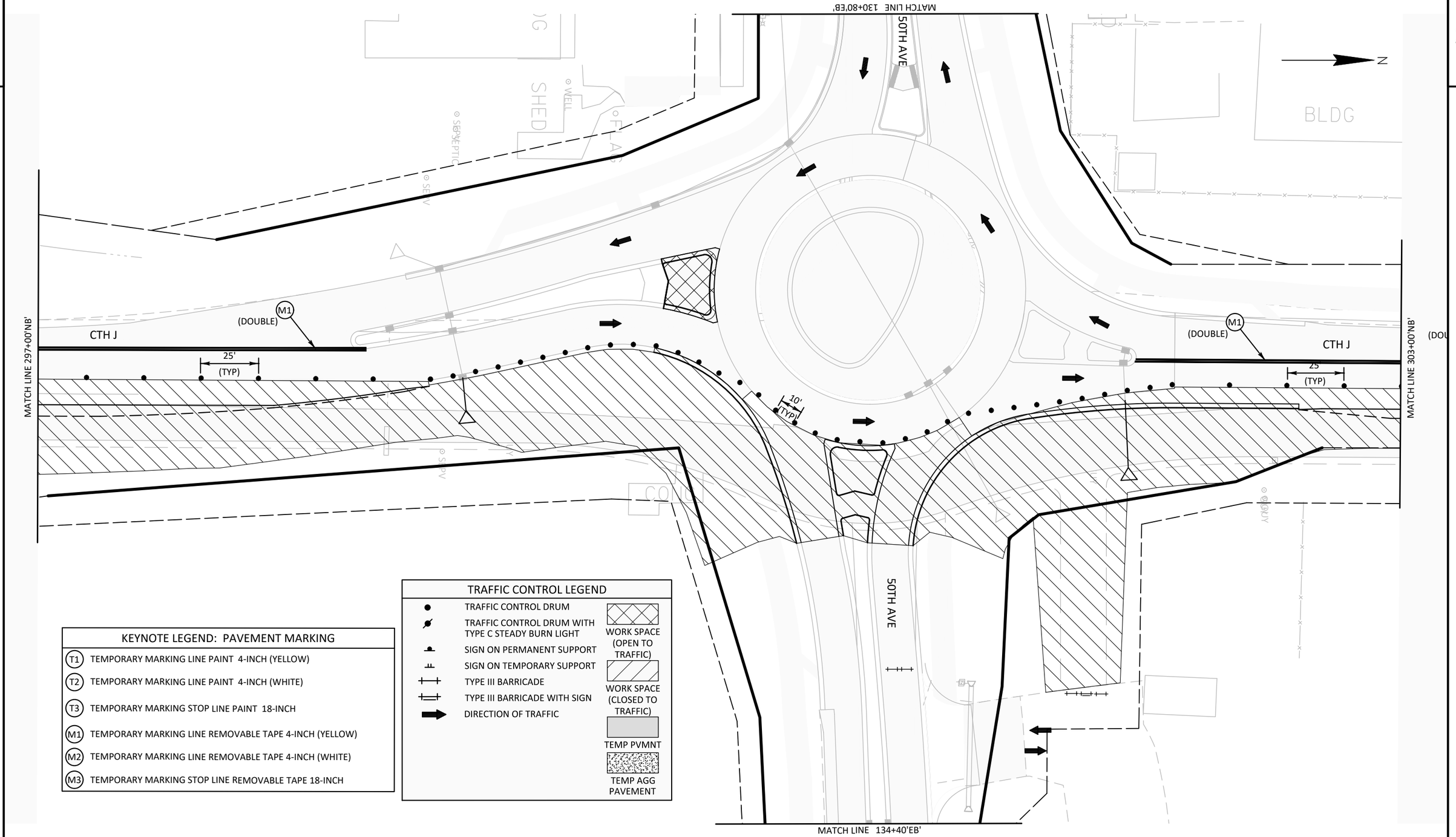
- (T1) TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- (T2) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (T3) TEMPORARY MARKING STOP LINE PAINT 18-INCH
- (M1) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (M2) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (M3) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 4 | SHEET 58 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 4).dwg PLOT DATE : 9/19/2024 10:27 AM PLOT BY : SEH LAYOUT NAME : 01 PLOT SCALE : 1.0 IN = 40.0 FT

WISDOT/CADDS SHEET 42

2




| KEYNOTE LEGEND: PAVEMENT MARKING | |
|---|---|
| T1 | TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW) |
| T2 | TEMPORARY MARKING LINE PAINT 4-INCH (WHITE) |
| T3 | TEMPORARY MARKING STOP LINE PAINT 18-INCH |
| M1 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) |
| M2 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) |
| M3 | TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH |

| TRAFFIC CONTROL LEGEND | |
|---|---|
| | TRAFFIC CONTROL DRUM |
| | TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT |
| | SIGN ON PERMANENT SUPPORT |
| | SIGN ON TEMPORARY SUPPORT |
| | TYPE III BARRICADE |
| | TYPE III BARRICADE WITH SIGN |
| | DIRECTION OF TRAFFIC |
| | WORK SPACE (OPEN TO TRAFFIC) |
| | WORK SPACE (CLOSED TO TRAFFIC) |
| | TEMP PVMNT |
| | TEMP AGG PAVEMENT |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 4 | SHEET 59 E |
|---|---|---|---|---|

2

2

N

BLDG

51ST AVE

WELL

SEPV

ALL ACCESS TO BUSINESSES OPEN DURING CONSTRUCTION

FIXED MESSAGE SIGN

M1

(DOUBLE)

T1

(DOUBLE)

25'

(TYP)

CTH J

MATCH LINE 303+00'NB'

21" CMA

21" CMA

SEE TRAFFIC CONTROL, ADVANCE WARNING SIGNS
45 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
FOR ADDITIONAL TRAFFIC CONTROL ITEMS

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

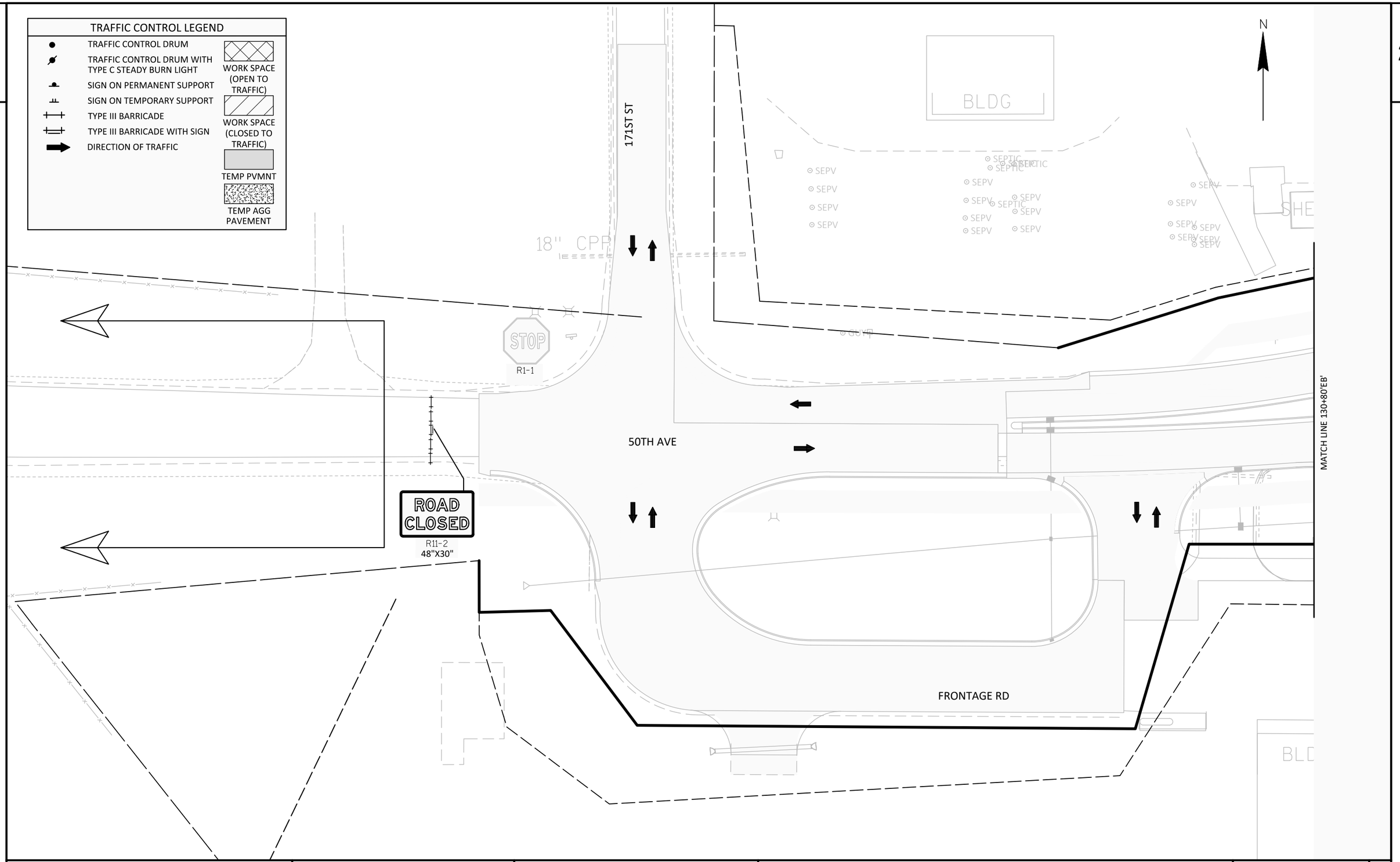
## KEYNOTE LEGEND: PAVEMENT MARKING

| | |
|---|---|
| T1 | TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW) |
| T2 | TEMPORARY MARKING LINE PAINT 4-INCH (WHITE) |
| T3 | TEMPORARY MARKING STOP LINE PAINT 18-INCH |
| M1 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) |
| M2 | TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) |
| M3 | TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 4 | SHEET 60 E |
|---|---|---|---|---|

## TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- WORK SPACE (OPEN TO TRAFFIC)
- WORK SPACE (CLOSED TO TRAFFIC)
- TEMP PVMNT
- TEMP AGG PAVEMENT

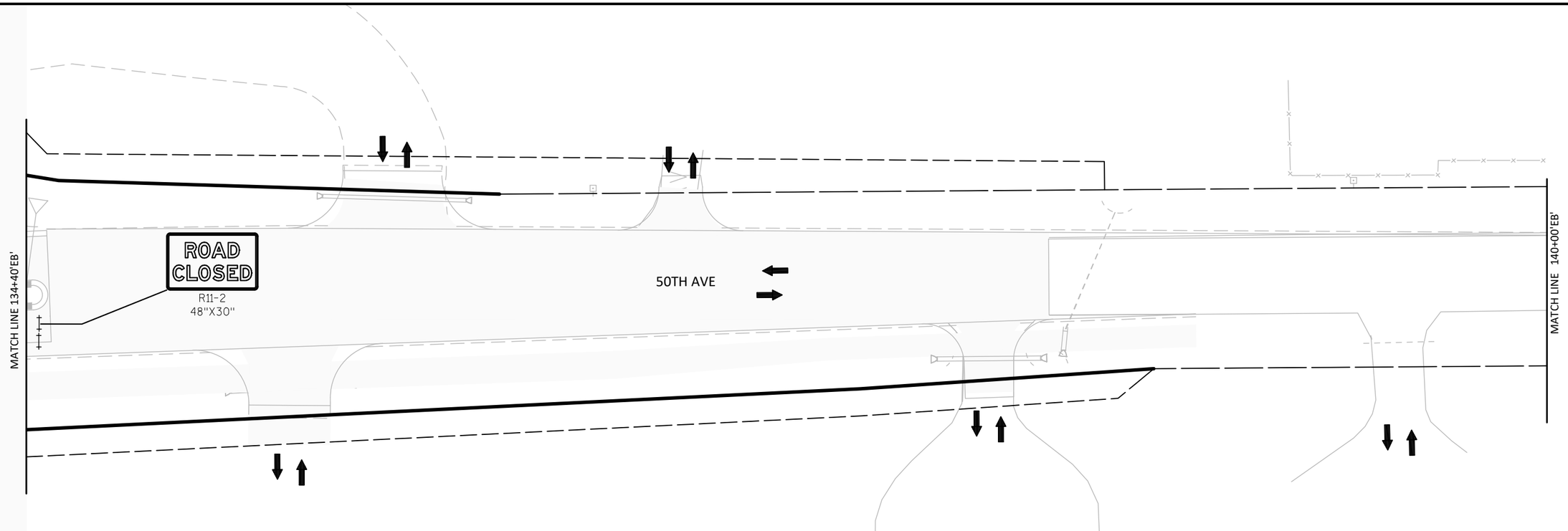


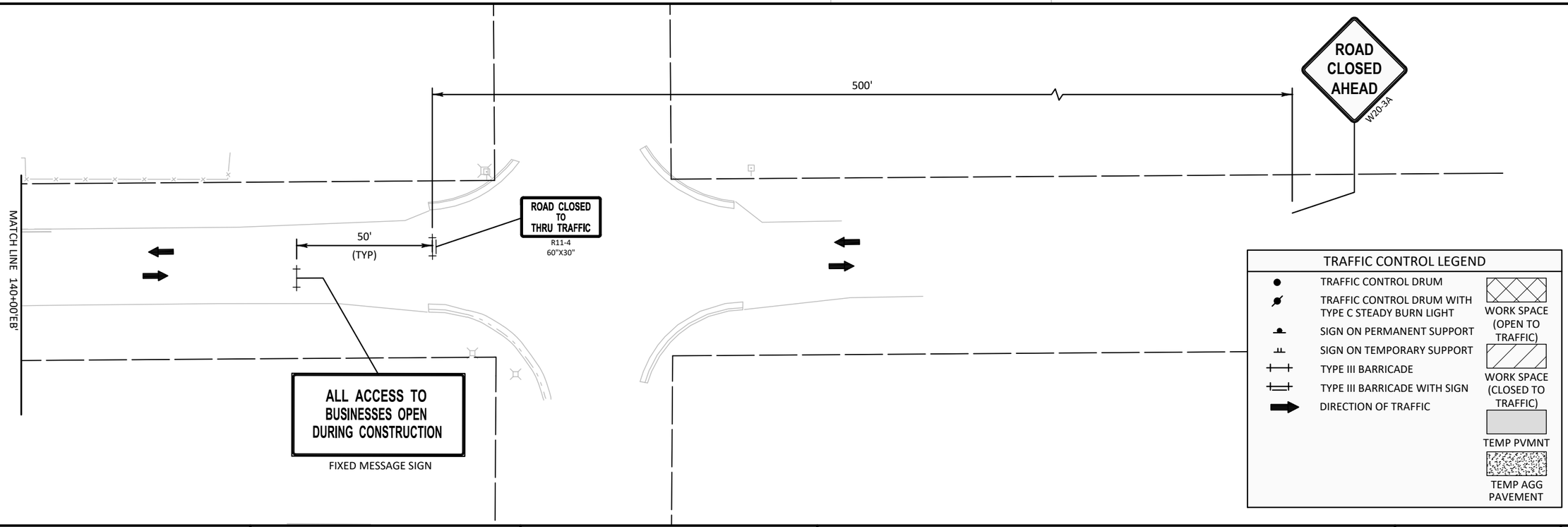

2

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 4 | SHEET 61 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 4).dwg PLOT DATE : 9/19/2024 10:28 AM PLOT BY : SEH LAYOUT NAME : 04 PLOT SCALE : 1.0 IN = 40.0 FT
WISDOT/CADDS SHEET 42

2

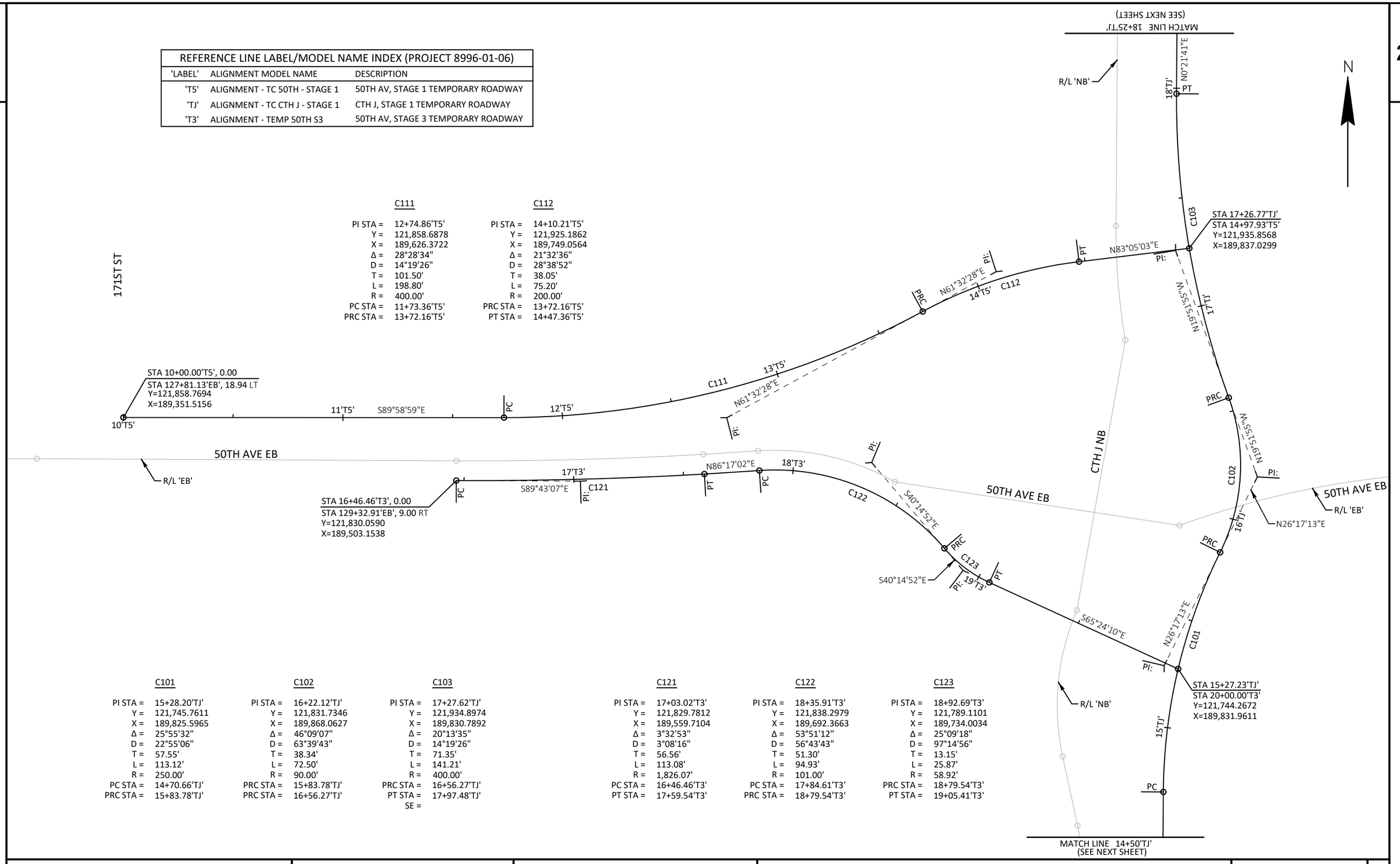



| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL, STAGE 4 | SHEET 62 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025200-tc (TC Sheets - Stage 4).dwg PLOT DATE : 9/19/2024 10:28 AM PLOT BY : SEH LAYOUT NAME : 05 PLOT SCALE : 1.0 IN = 40.0 FT
WISDOT/CADDS SHEET 42

| REFERENCE LINE LABEL/MODEL NAME INDEX (PROJECT 8996-01-06) | | |
|---|---|---|
| 'LABEL' | ALIGNMENT MODEL NAME | DESCRIPTION |
| 'T5' | ALIGNMENT - TC 50TH - STAGE 1 | 50TH AV, STAGE 1 TEMPORARY ROADWAY |
| 'TJ' | ALIGNMENT - TC CTH J - STAGE 1 | CTH J, STAGE 1 TEMPORARY ROADWAY |
| 'T3' | ALIGNMENT - TEMP 50TH S3 | 50TH AV, STAGE 3 TEMPORARY ROADWAY |



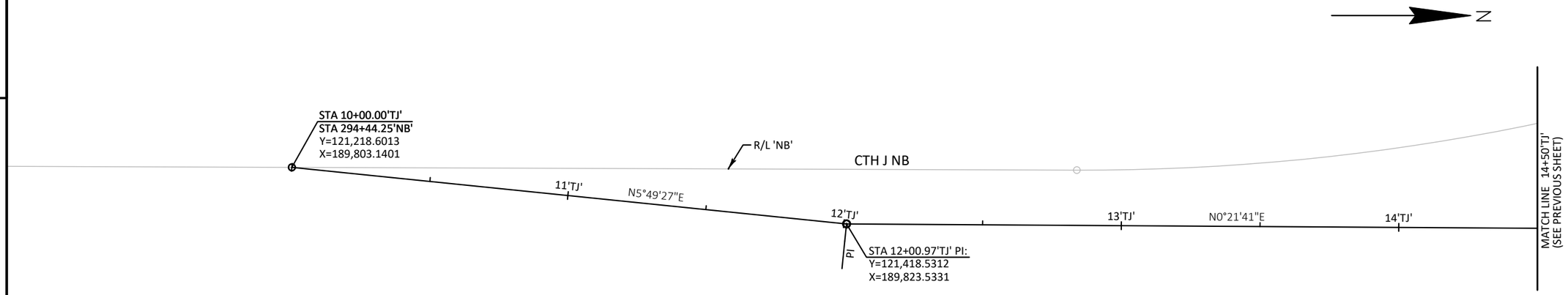

| C111 | | C112 | |
|---|---|---|---|
| PI STA = | 12+74.86'T5' | PI STA = | 14+10.21'T5' |
| Y = | 121,858.6878 | Y = | 121,925.1862 |
| X = | 189,626.3722 | X = | 189,749.0564 |
| Δ = | 28°28'34" | Δ = | 21°32'36" |
| D = | 14°19'26" | D = | 28°38'52" |
| T = | 101.50' | T = | 38.05' |
| L = | 198.80' | L = | 75.20' |
| R = | 400.00' | R = | 200.00' |
| PC STA = | 11+73.36'T5' | PRC STA = | 13+72.16'T5' |
| PRC STA = | 13+72.16'T5' | PT STA = | 14+47.36'T5' |

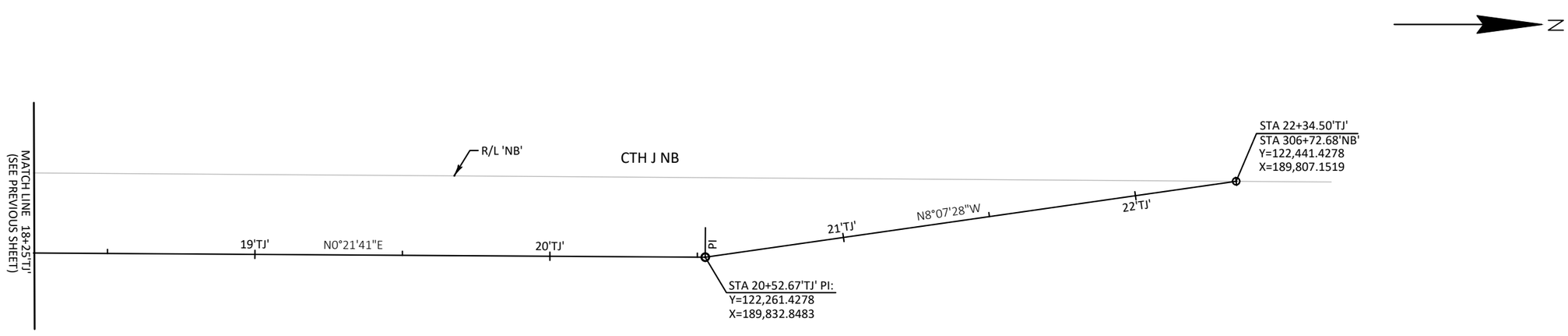
| C101 | | C102 | | C103 | |
|---|---|---|---|---|---|
| PI STA = | 15+28.20'TJ' | PI STA = | 16+22.12'TJ' | PI STA = | 17+27.62'TJ' |
| Y = | 121,745.7611 | Y = | 121,831.7346 | Y = | 121,934.8974 |
| X = | 189,825.5965 | X = | 189,868.0627 | X = | 189,830.7892 |
| Δ = | 25°55'32" | Δ = | 46°09'07" | Δ = | 20°13'35" |
| D = | 22°55'06" | D = | 63°39'43" | D = | 14°19'26" |
| T = | 57.55' | T = | 38.34' | T = | 71.35' |
| L = | 113.12' | L = | 72.50' | L = | 141.21' |
| R = | 250.00' | R = | 90.00' | R = | 400.00' |
| PC STA = | 14+70.66'TJ' | PRC STA = | 15+83.78'TJ' | PRC STA = | 16+56.27'TJ' |
| PRC STA = | 15+83.78'TJ' | PRC STA = | 16+56.27'TJ' | PT STA = | 17+97.48'TJ' |
| | | | | SE = | |

| C121 | | C122 | | C123 | |
|---|---|---|---|---|---|
| PI STA = | 17+03.02'T3' | PI STA = | 18+35.91'T3' | PI STA = | 18+92.69'T3' |
| Y = | 121,829.7812 | Y = | 121,838.2979 | Y = | 121,789.1101 |
| X = | 189,559.7104 | X = | 189,692.3663 | X = | 189,734.0034 |
| Δ = | 3°32'53" | Δ = | 53°51'12" | Δ = | 25°09'18" |
| D = | 3°08'16" | D = | 56°43'43" | D = | 97°14'56" |
| T = | 56.56' | T = | 51.30' | T = | 13.15' |
| L = | 113.08' | L = | 94.93' | L = | 25.87' |
| R = | 1,826.07' | R = | 101.00' | R = | 58.92' |
| PC STA = | 16+46.46'T3' | PC STA = | 17+84.61'T3' | PRC STA = | 18+79.54'T3' |
| PT STA = | 17+59.54'T3' | PRC STA = | 18+79.54'T3' | PT STA = | 19+05.41'T3' |

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL: ALIGNMENT DETAILS | SHEET 63 | E |
|---|---|---|---|---|---|

2

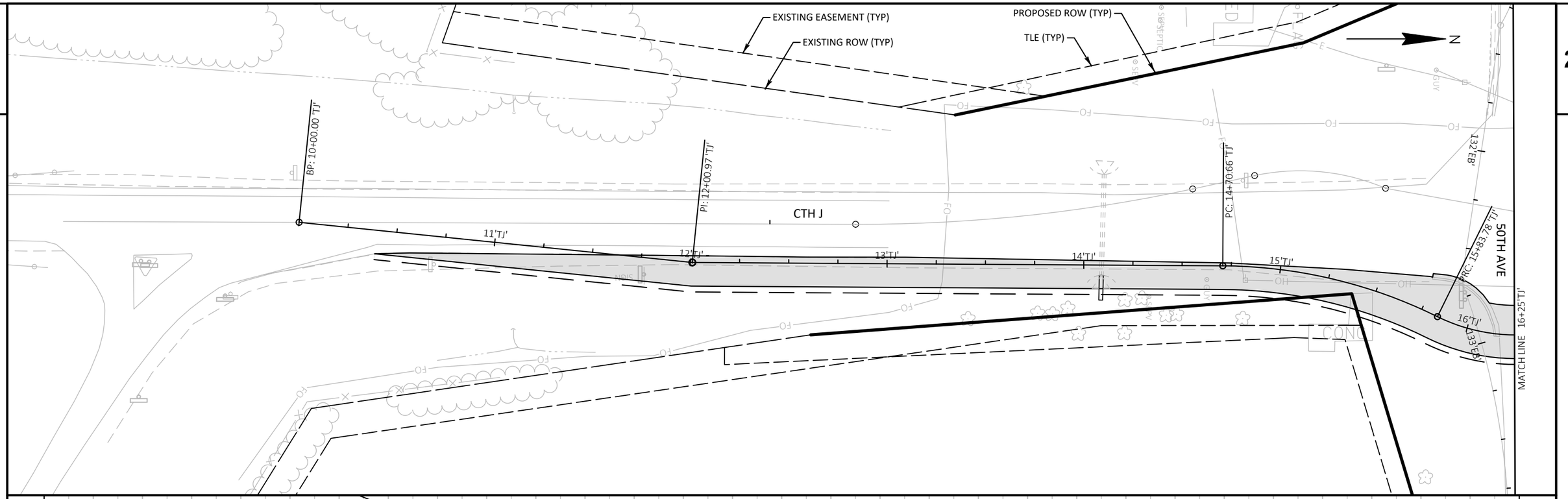



| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL: ALIGNMENT DETAILS | SHEET 64 E |
|---|---|---|---|---|

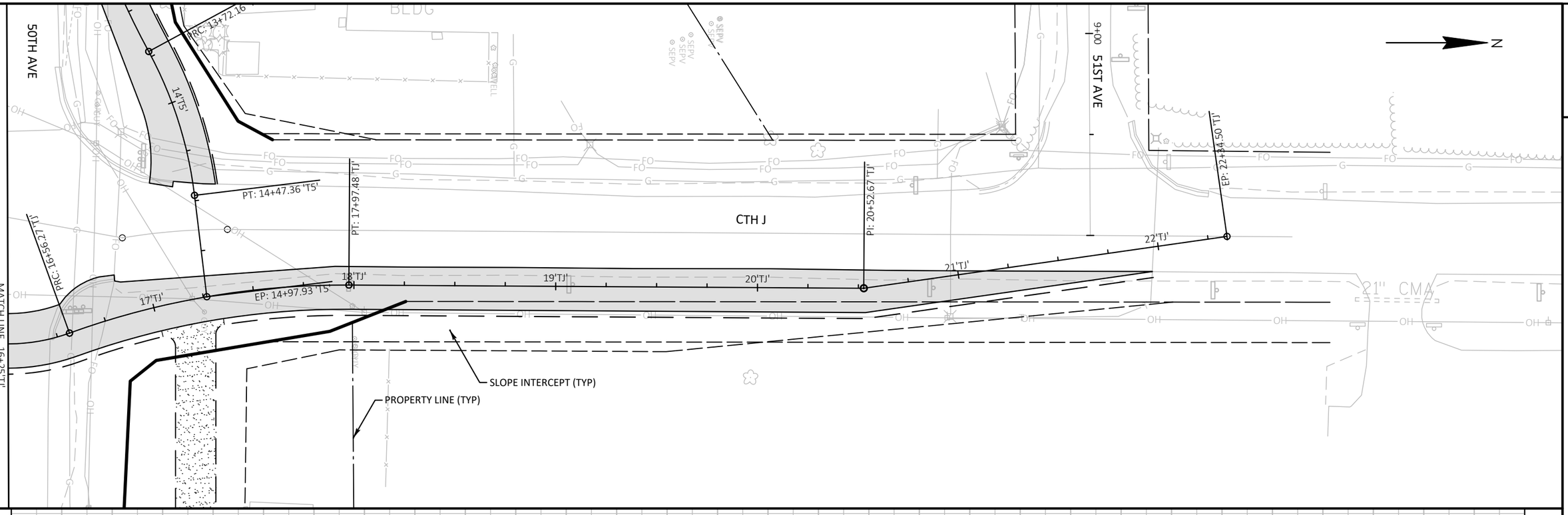
FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\89960176\SheetsPlan\Traffic Control\025400_ad (TC Alignment Detail).dwg PLOT DATE : 7/26/2024 8:46 AM PLOT BY : SEH LAYOUT NAME : 02 PLOT SCALE : 1.0 IN = 40.0 FT
WISDOT/CADDS SHEET 42

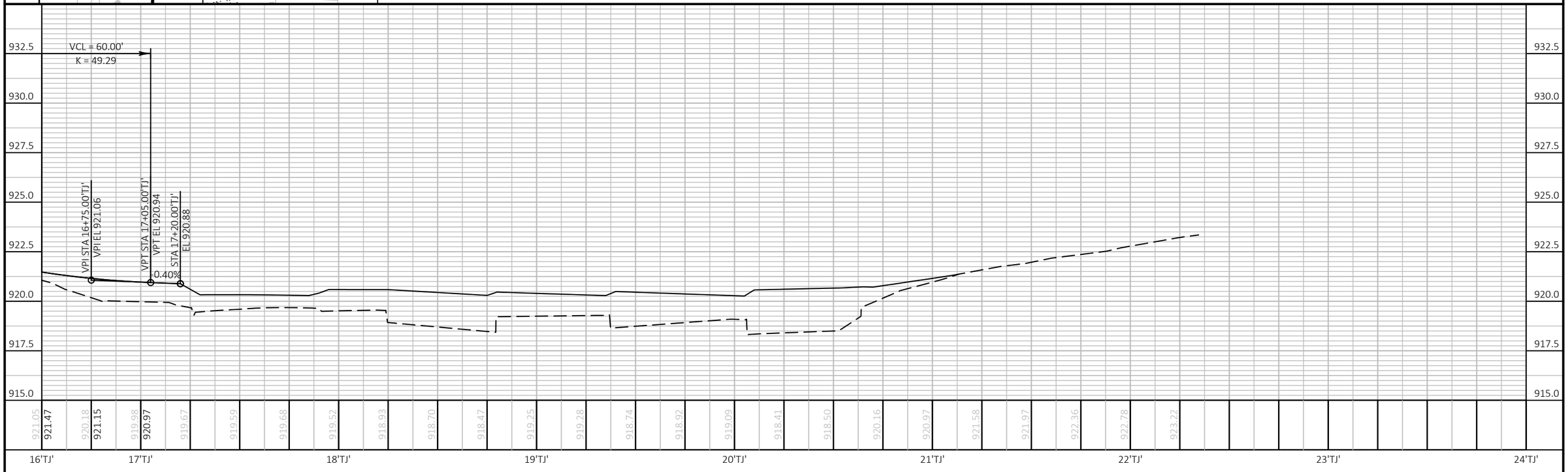
2




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL: PLAN AND PROFILE STAGE 1 TEMPORARY CTH J | SHEET 65 E |
|---|---|---|---|---|

2

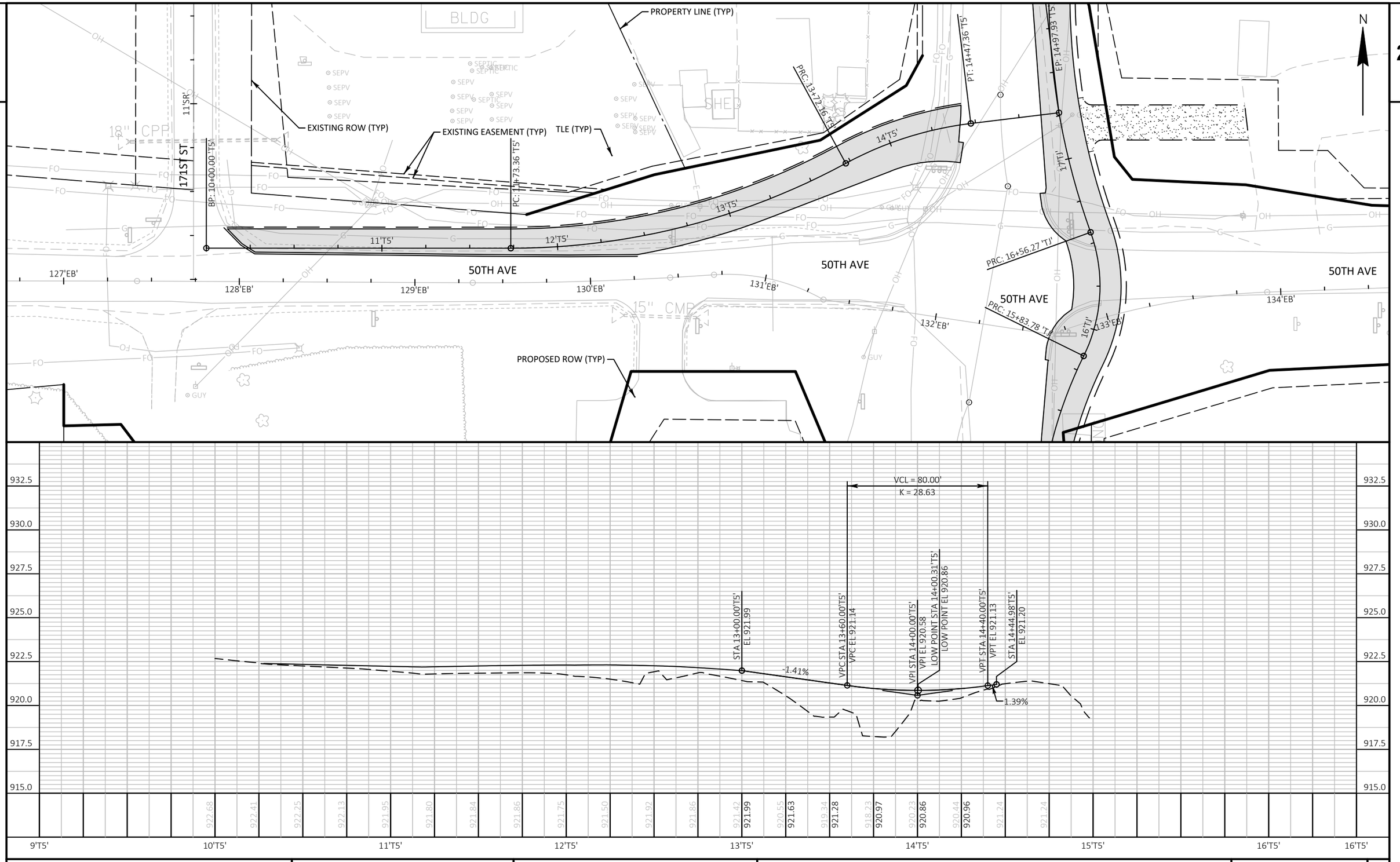



| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL: PLAN AND PROFILE STAGE 1 TEMPORARY CTH J | SHEET 66 E |
|---|---|---|---|---|


FILE NAME : X:\AE\C\CHIPH\159106\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\8996017 6\SheetsPlan\Traffic Control\025500_pp (TC Plan & Profile).dwg
LAYOUT NAME - J2
PLOT DATE : 7/26/2024 8:48 AM
PLOT BY : ----
LAYOUT NAME : J2
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | TRAFFIC CONTROL: PLAN AND PROFILE STAGE 1 TEMPORARY 50TH AVE | SHEET 67 E |
|---|---|---|---|---|

SHEET LOCATION INDEX MAP

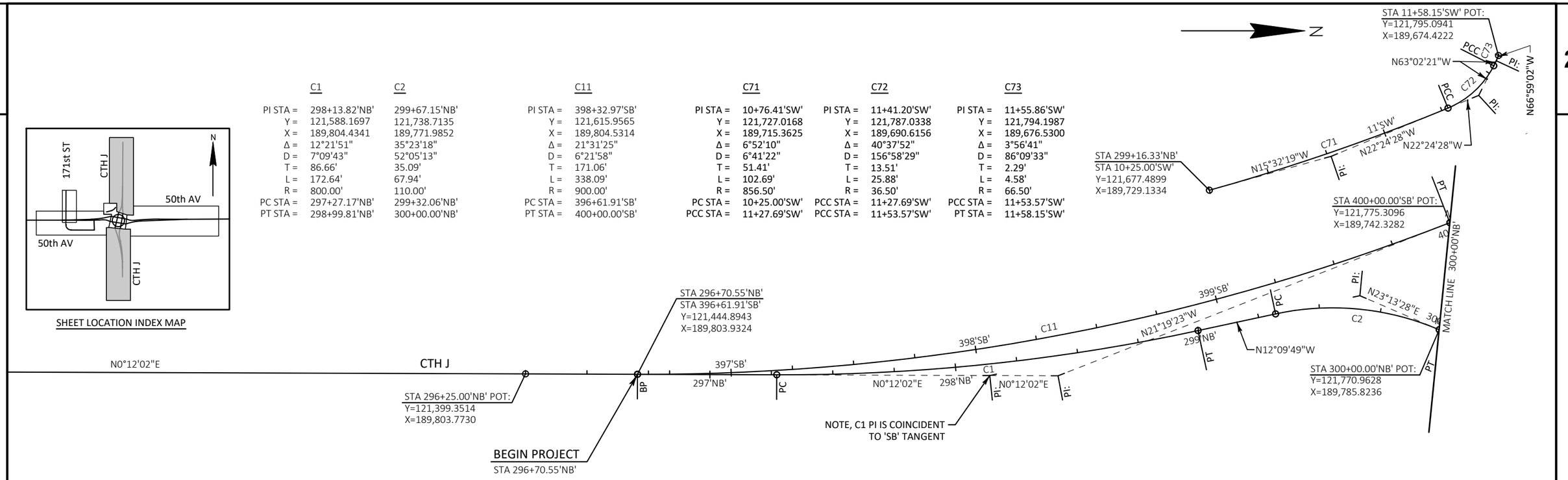
| | C1 | C2 |
|---|---|---|
| PI STA = | 298+13.82'NB' | 299+67.15'NB' |
| Y = | 121,588.1697 | 121,738.7135 |
| X = | 189,804.4341 | 189,771.9852 |
| Δ = | 12°21'51" | 35°23'18" |
| D = | 7°09'43" | 52°05'13" |
| T = | 86.66' | 35.09' |
| L = | 172.64' | 67.94' |
| R = | 800.00' | 110.00' |
| PC STA = | 297+27.17'NB' | 299+32.06'NB' |
| PT STA = | 298+99.81'NB' | 300+00.00'NB' |

| | C11 |
|---|---|
| PI STA = | 398+32.97'SB' |
| Y = | 121,615.9565 |
| X = | 189,804.5314 |
| Δ = | 21°31'25" |
| D = | 6°21'58" |
| T = | 171.06' |
| L = | 338.09' |
| R = | 900.00' |
| PC STA = | 396+61.91'SB' |
| PT STA = | 400+00.00'SB' |

| | C71 |
|---|---|
| PI STA = | 10+76.41'SW' |
| Y = | 121,727.0168 |
| X = | 189,715.3625 |
| Δ = | 6°52'10" |
| D = | 6°41'22" |
| T = | 51.41' |
| L = | 102.69' |
| R = | 856.50' |
| PC STA = | 10+25.00'SW' |
| PCC STA = | 11+27.69'SW' |

| | C72 |
|---|---|
| PI STA = | 11+41.20'SW' |
| Y = | 121,787.0338 |
| X = | 189,690.6156 |
| Δ = | 40°37'52" |
| D = | 156°58'29" |
| T = | 13.51' |
| L = | 25.88' |
| R = | 36.50' |
| PCC STA = | 11+27.69'SW' |
| PCC STA = | 11+53.57'SW' |

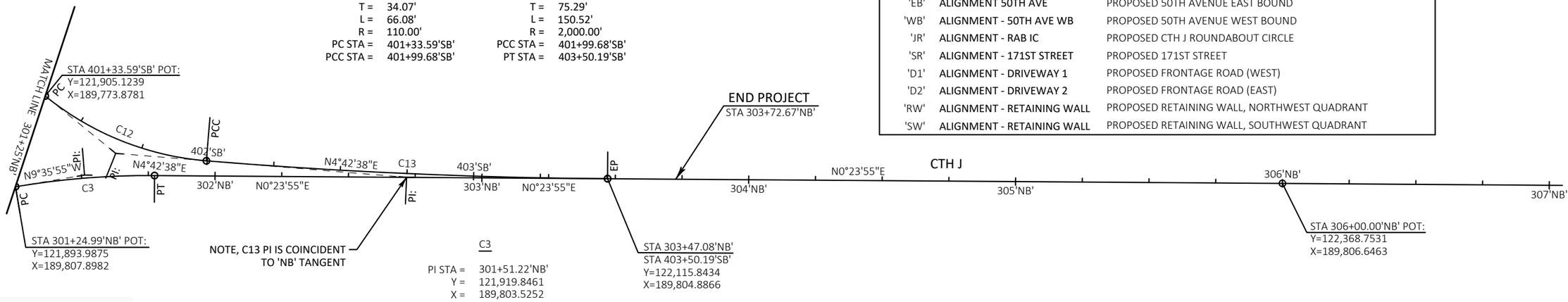
| | C73 |
|---|---|
| PI STA = | 11+55.86'SW' |
| Y = | 121,794.1987 |
| X = | 189,676.5300 |
| Δ = | 3°56'41" |
| D = | 86°09'33" |
| T = | 2.29' |
| L = | 4.58' |
| R = | 66.50' |
| PCC STA = | 11+53.57'SW' |
| PT STA = | 11+58.15'SW' |




| | C12 |
|---|---|
| PI STA = | 401+67.67'SB' |
| Y = | 121,931.5538 |
| X = | 189,795.3810 |
| Δ = | 34°25'14" |
| D = | 52°05'13" |
| T = | 34.07' |
| L = | 66.08' |
| R = | 110.00' |
| PC STA = | 401+33.59'SB' |
| PCC STA = | 401+99.68'SB' |

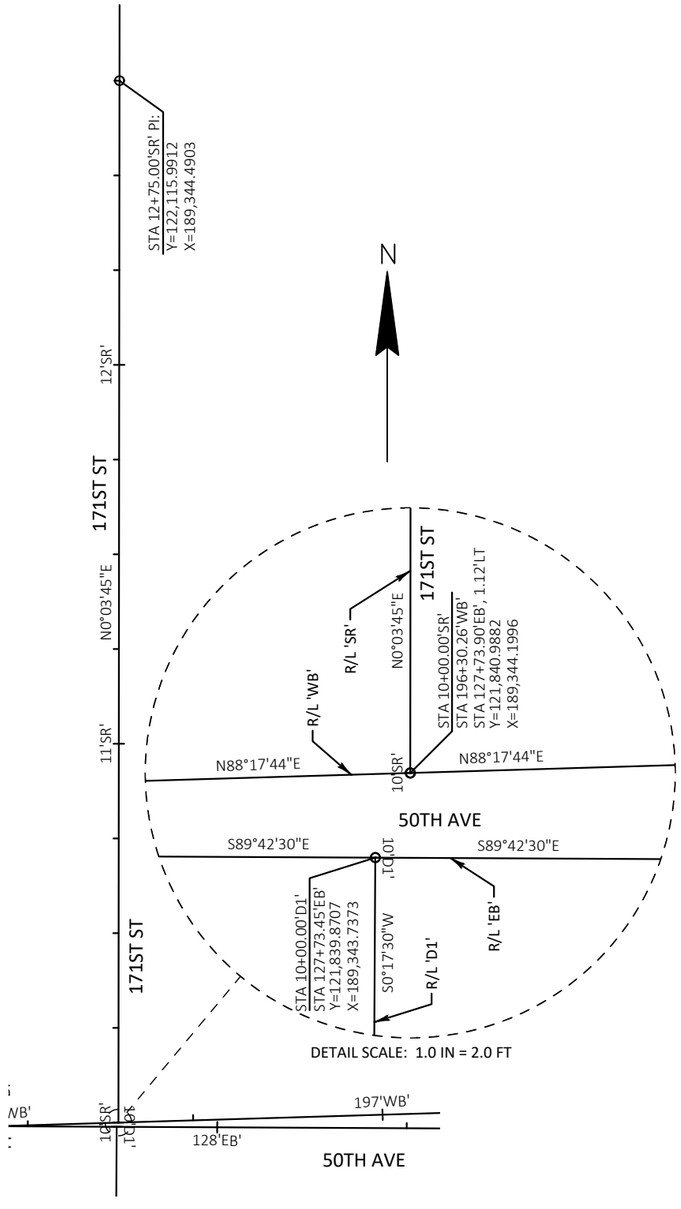
| | C13 |
|---|---|
| PI STA = | 402+74.97'SB' |
| Y = | 122,040.5509 |
| X = | 189,804.3626 |
| Δ = | 4°18'43" |
| D = | 2°51'53" |
| T = | 75.29' |
| L = | 150.52' |
| R = | 2,000.00' |
| PCC STA = | 401+99.68'SB' |
| PT STA = | 403+50.19'SB' |

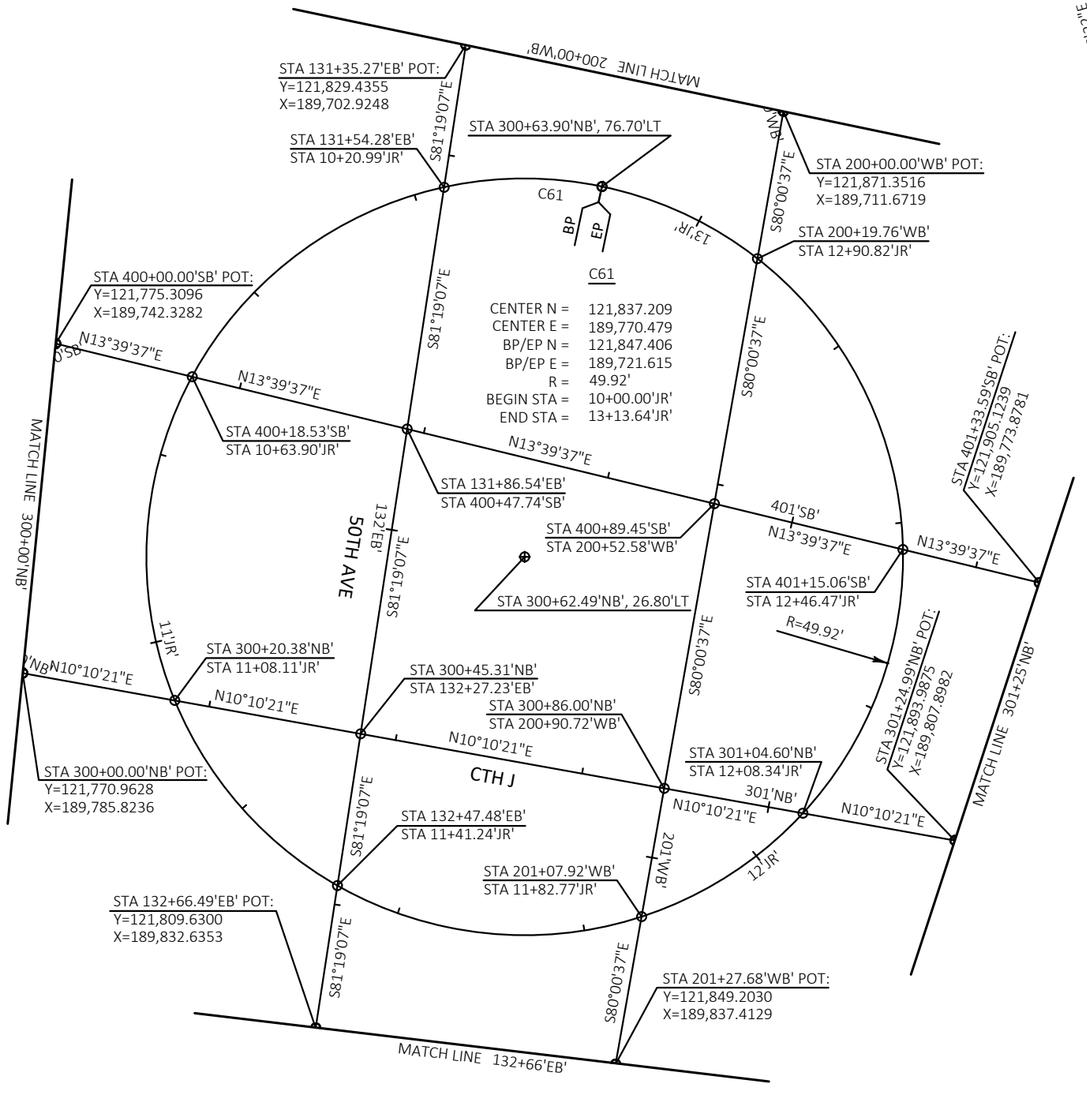
| REFERENCE LINE LABEL/MODEL NAME INDEX (PROJECT 8996-01-06) | | |
|---|---|---|
| 'LABEL' | ALIGNMENT MODEL NAME | DESCRIPTION |
| 'NB' | ALIGNMENT - CTH J NB | PROPOSED CTH J NORTH BOUND - PRIMARY PROJECT ALIGNMENT |
| 'SB' | ALIGNMENT - CTH J SB | PROPOSED CTH J SOUTH BOUND |
| 'EB' | ALIGNMENT 50TH AVE | PROPOSED 50TH AVENUE EAST BOUND |
| 'WB' | ALIGNMENT - 50TH AVE WB | PROPOSED 50TH AVENUE WEST BOUND |
| 'JR' | ALIGNMENT - RAB IC | PROPOSED CTH J ROUNDABOUT CIRCLE |
| 'SR' | ALIGNMENT - 171ST STREET | PROPOSED 171ST STREET |
| 'D1' | ALIGNMENT - DRIVEWAY 1 | PROPOSED FRONTAGE ROAD (WEST) |
| 'D2' | ALIGNMENT - DRIVEWAY 2 | PROPOSED FRONTAGE ROAD (EAST) |
| 'RW' | ALIGNMENT - RETAINING WALL | PROPOSED RETAINING WALL, NORTHWEST QUADRANT |
| 'SW' | ALIGNMENT - RETAINING WALL | PROPOSED RETAINING WALL, SOUTHWEST QUADRANT |

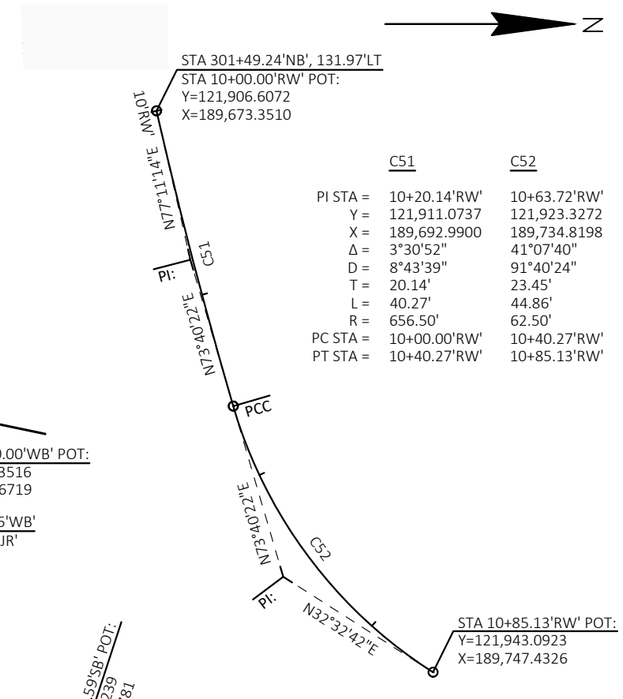



| C3 | |
|---|---|
| PI STA = | 301+51.22'NB' |
| Y = | 121,919.8461 |
| X = | 189,803.5252 |
| Δ = | 9°59'31" |
| D = | 19°05'55" |
| T = | 26.23' |
| L = | 52.32' |
| R = | 300.00' |
| PC STA = | 301+24.99'NB' |
| PT STA = | 301+77.31'NB' |

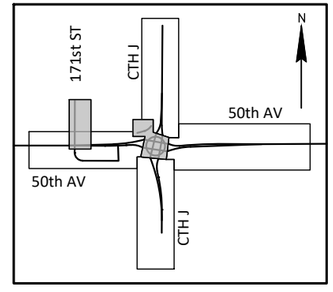
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | ALIGNMENT DETAILS | SHEET 68 E |
|---|---|---|---|---|




| | C51 | C52 |
|---|---|---|
| PI STA = | 10+20.14'RW' | 10+63.72'RW' |
| Y = | 121,911.0737 | 121,923.3272 |
| X = | 189,692.9900 | 189,734.8198 |
| Δ = | 3°30'52" | 41°07'40" |
| D = | 8°43'39" | 91°40'24" |
| T = | 20.14' | 23.45' |
| L = | 40.27' | 44.86' |
| R = | 656.50' | 62.50' |
| PC STA = | 10+00.00'RW' | 10+40.27'RW' |
| PT STA = | 10+40.27'RW' | 10+85.13'RW' |

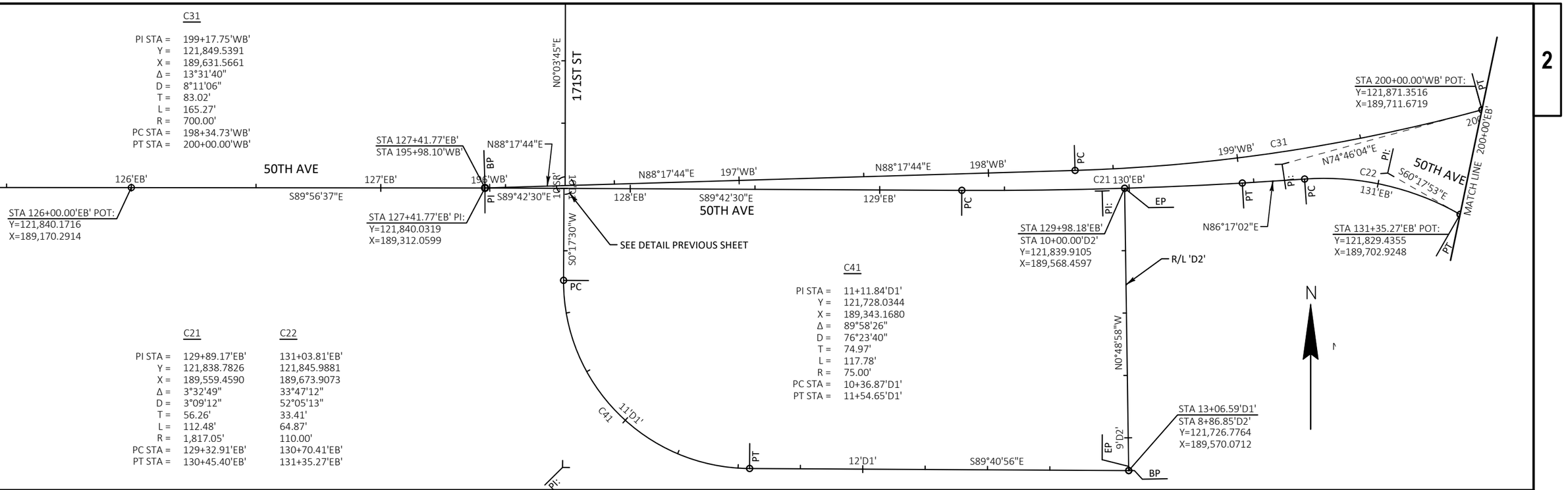



SHEET LOCATION INDEX MAP

2

C31

| | |
|---|---|
| PI STA = | 199+17.75'WB' |
| Y = | 121,849.5391 |
| X = | 189,631.5661 |
| Δ = | 13°31'40" |
| D = | 8°11'06" |
| T = | 83.02' |
| L = | 165.27' |
| R = | 700.00' |
| PC STA = | 198+34.73'WB' |
| PT STA = | 200+00.00'WB' |




C21

| | |
|---|---|
| PI STA = | 129+89.17'EB' |
| Y = | 121,838.7826 |
| X = | 189,559.4590 |
| Δ = | 3°32'49" |
| D = | 3°09'12" |
| T = | 56.26' |
| L = | 112.48' |
| R = | 1,817.05' |
| PC STA = | 129+32.91'EB' |
| PT STA = | 130+45.40'EB' |

C22

| | |
|---|---|
| PI STA = | 131+03.81'EB' |
| Y = | 121,845.9881 |
| X = | 189,673.9073 |
| Δ = | 33°47'12" |
| D = | 52°05'13" |
| T = | 33.41' |
| L = | 64.87' |
| R = | 110.00' |
| PC STA = | 130+70.41'EB' |
| PT STA = | 131+35.27'EB' |

C41

| | |
|---|---|
| PI STA = | 11+11.84'D1' |
| Y = | 121,728.0344 |
| X = | 189,343.1680 |
| Δ = | 89°58'26" |
| D = | 76°23'40" |
| T = | 74.97' |
| L = | 117.78' |
| R = | 75.00' |
| PC STA = | 10+36.87'D1' |
| PT STA = | 11+54.65'D1' |

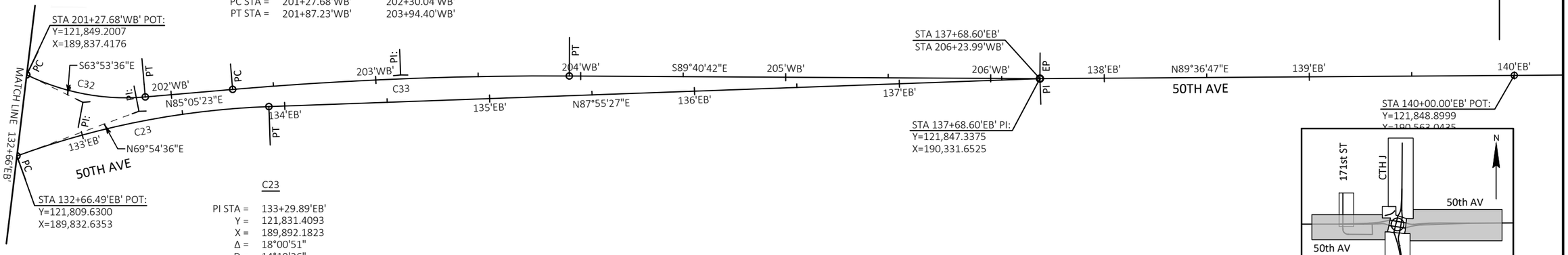
1.0 IN = 50.0 FT

C32

| | |
|---|---|
| PI STA = | 201+58.20'WB' |
| Y = | 121,835.7714 |
| X = | 189,864.8220 |
| Δ = | 31°01'01" |
| D = | 52°05'13" |
| T = | 30.52' |
| L = | 59.55' |
| R = | 110.00' |
| PC STA = | 201+27.68'WB' |
| PT STA = | 201+87.23'WB' |

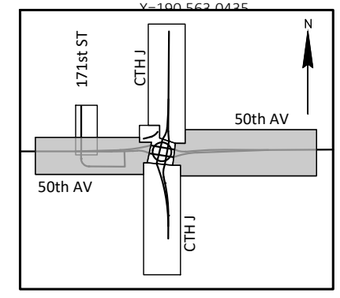
C33

| | |
|---|---|
| PI STA = | 203+12.28'WB' |
| Y = | 121,849.0878 |
| X = | 190,019.8276 |
| Δ = | 5°13'54" |
| D = | 3°10'59" |
| T = | 82.24' |
| L = | 164.36' |
| R = | 1,800.00' |
| PC STA = | 202+30.04'WB' |
| PT STA = | 203+94.40'WB' |




C23

| | |
|---|---|
| PI STA = | 133+29.89'EB' |
| Y = | 121,831.4093 |
| X = | 189,892.1823 |
| Δ = | 18°00'51" |
| D = | 14°19'26" |
| T = | 63.40' |
| L = | 125.76' |
| R = | 400.00' |
| PC STA = | 132+66.49'EB' |
| PT STA = | 133+92.25'EB' |




SHEET LOCATION INDEX MAP

| | | | | |
|---|---|---|---|---|
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | ALIGNMENT DETAILS | SHEET 70 E |

8996-01-07

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 201.0105 | Clearing | STA | 6.000 | 6.000 |
| 0004 | 201.0205 | Grubbing | STA | 6.000 | 6.000 |
| 0006 | 203.0100 | Removing Small Pipe Culverts | EACH | 4.000 | 4.000 |
| 0016 | 204.0150 | Removing Curb & Gutter | LF | 237.000 | 237.000 |
| 0026 | 205.0100 | Excavation Common | CY | 4,590.000 | 4,590.000 |
| 0034 | 208.0100 | Borrow | CY | 5,981.000 | 5,981.000 |
| 0040 | 213.0100 | Finishing Roadway (project) 02. 8996-01-07 | EACH | 1.000 | 1.000 |
| 0042 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 393.000 | 393.000 |
| 0044 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 6,264.000 | 6,264.000 |
| 0048 | 405.0100 | Coloring Concrete WisDOT Red | CY | 198.000 | 198.000 |
| 0050 | 415.0080 | Concrete Pavement 8-Inch | SY | 3,293.000 | 3,293.000 |
| 0054 | 415.2010 | Concrete Truck Apron 12-inch | SY | 449.000 | 449.000 |
| 0056 | 455.0605 | Tack Coat | GAL | 160.000 | 160.000 |
| 0058 | 460.2000 | Incentive Density HMA Pavement | DOL | 640.000 | 640.000 |
| 0062 | 460.7423 | HMA Pavement 3 HT 58-28 H | TON | 538.000 | 538.000 |
| 0064 | 460.7444 | HMA Pavement 4 HT 58-34 H | TON | 449.000 | 449.000 |
| 0066 | 465.0120 | Asphaltic Surface Driveways and Field Entrances | TON | 54.000 | 54.000 |
| 0068 | 465.0125 | Asphaltic Surface Temporary | TON | 692.000 | 692.000 |
| 0112 | 520.2024 | Culvert Pipe Temporary 24-Inch | LF | 13.000 | 13.000 |
| 0116 | 520.8000 | Concrete Collars for Pipe | EACH | 1.000 | 1.000 |
| 0124 | 522.0412 | Culvert Pipe Reinforced Concrete Class IV 12-Inch | LF | 45.000 | 45.000 |
| 0126 | 522.0418 | Culvert Pipe Reinforced Concrete Class IV 18-Inch | LF | 81.000 | 81.000 |
| 0130 | 522.1012 | Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch | EACH | 4.000 | 4.000 |
| 0132 | 522.1018 | Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch | EACH | 7.000 | 7.000 |
| 0140 | 601.0405 | Concrete Curb & Gutter 18-Inch Type A | LF | 191.000 | 191.000 |
| 0142 | 601.0413 | Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G | LF | 2,543.000 | 2,543.000 |
| 0144 | 601.0415 | Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J | LF | 199.000 | 199.000 |
| 0148 | 601.0580 | Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R | LF | 302.000 | 302.000 |
| 0154 | 602.0405 | Concrete Sidewalk 4-Inch | SF | 4,787.000 | 4,787.000 |
| 0158 | 602.0515 | Curb Ramp Detectable Warning Field Natural Patina | SF | 320.000 | 320.000 |
| 0174 | 606.0200 | Riprap Medium | CY | 30.000 | 30.000 |
| 0176 | 608.0412 | Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch | LF | 233.000 | 233.000 |
| 0178 | 608.0418 | Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch | LF | 249.000 | 249.000 |
| 0180 | 608.0424 | Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch | LF | 187.000 | 187.000 |
| 0182 | 608.0430 | Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch | LF | 178.000 | 178.000 |
| 0186 | 611.0624 | Inlet Covers Type H | EACH | 2.000 | 2.000 |
| 0188 | 611.0630 | Inlet Covers Type HM-GJ | EACH | 3.000 | 3.000 |
| 0190 | 611.0633 | Inlet Covers Type HM-GJ-S | EACH | 10.000 | 10.000 |
| 0192 | 611.0639 | Inlet Covers Type H-S | EACH | 1.000 | 1.000 |
| 0194 | 611.0642 | Inlet Covers Type MS | EACH | 1.000 | 1.000 |
| 0196 | 611.0652 | Inlet Covers Type T | EACH | 3.000 | 3.000 |
| 0200 | 611.3004 | Inlets 4-FT Diameter | EACH | 8.000 | 8.000 |
| 0204 | 611.3230 | Inlets 2x3-FT | EACH | 10.000 | 10.000 |
| 0206 | 611.3902 | Inlets Median 2 Grate | EACH | 1.000 | 1.000 |
| 0228 | 618.0100 | Maintenance and Repair of Haul Roads (project) 02. 8996-01-07 | EACH | 1.000 | 1.000 |
| 0230 | 619.1000 | Mobilization | EACH | 0.150 | 0.150 |
| 0232 | 620.0300 | Concrete Median Sloped Nose | SF | 297.000 | 297.000 |
| 0236 | 624.0100 | Water | MGAL | 139.000 | 139.000 |
| 0240 | 625.0500 | Salvaged Topsoil | SY | 14,100.000 | 14,100.000 |

8996-01-07

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0242 | 627.0200 | Mulching | SY | 3,660.000 | 3,660.000 |
| 0244 | 628.1504 | Silt Fence | LF | 332.000 | 332.000 |
| 0246 | 628.1520 | Silt Fence Maintenance | LF | 63.000 | 63.000 |
| 0248 | 628.1905 | Mobilizations Erosion Control | EACH | 6.000 | 6.000 |
| 0250 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 5.000 | 5.000 |
| 0252 | 628.2004 | Erosion Mat Class I Type B | SY | 12,700.000 | 12,700.000 |
| 0254 | 628.7005 | Inlet Protection Type A | EACH | 13.000 | 13.000 |
| 0256 | 628.7015 | Inlet Protection Type C | EACH | 10.000 | 10.000 |
| 0258 | 628.7504 | Temporary Ditch Checks | LF | 60.000 | 60.000 |
| 0260 | 628.7555 | Culvert Pipe Checks | EACH | 38.000 | 38.000 |
| 0264 | 629.0205 | Fertilizer Type A | CWT | 10.630 | 10.630 |
| 0268 | 630.0120 | Seeding Mixture No. 20 | LB | 750.000 | 750.000 |
| 0272 | 630.0200 | Seeding Temporary | LB | 450.000 | 450.000 |
| 0274 | 630.0500 | Seed Water | MGAL | 288.000 | 288.000 |
| 0278 | 633.5200 | Markers Culvert End | EACH | 5.000 | 5.000 |
| 0280 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 8.000 | 8.000 |
| 0282 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 21.000 | 21.000 |
| 0284 | 634.0616 | Posts Wood 4x6-Inch X 16-FT | EACH | 3.000 | 3.000 |
| 0286 | 634.0618 | Posts Wood 4x6-Inch X 18-FT | EACH | 1.000 | 1.000 |
| 0288 | 637.0620 | Sign Flags Permanent Type II | EACH | 16.000 | 16.000 |
| 0290 | 637.2210 | Signs Type II Reflective H | SF | 169.000 | 169.000 |
| 0292 | 637.2230 | Signs Type II Reflective F | SF | 20.000 | 20.000 |
| 0294 | 638.2102 | Moving Signs Type II | EACH | 14.000 | 14.000 |
| 0296 | 638.2602 | Removing Signs Type II | EACH | 49.000 | 49.000 |
| 0298 | 638.3000 | Removing Small Sign Supports | EACH | 20.000 | 20.000 |
| 0300 | 642.5401 | Field Office Type D | EACH | 0.150 | 0.150 |
| 0302 | 643.0300 | Traffic Control Drums | DAY | 20,800.000 | 20,800.000 |
| 0304 | 643.0420 | Traffic Control Barricades Type III | DAY | 4,200.000 | 4,200.000 |
| 0306 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 5,000.000 | 5,000.000 |
| 0308 | 643.0715 | Traffic Control Warning Lights Type C | DAY | 1,125.000 | 1,125.000 |
| 0312 | 643.0900 | Traffic Control Signs | DAY | 4,130.000 | 4,130.000 |
| 0318 | 643.1000 | Traffic Control Signs Fixed Message | SF | 120.000 | 120.000 |
| 0320 | 643.1050 | Traffic Control Signs PCMS | DAY | 66.000 | 66.000 |
| 0322 | 643.3105 | Temporary Marking Line Paint 4-Inch | LF | 7,475.000 | 7,475.000 |
| 0324 | 643.3150 | Temporary Marking Line Removable Tape 4-Inch | LF | 2,700.000 | 2,700.000 |
| 0328 | 643.3805 | Temporary Marking Stop Line Paint 18-Inch | LF | 60.000 | 60.000 |
| 0330 | 643.3850 | Temporary Marking Stop Line Removable Tape 18-Inch | LF | 12.000 | 12.000 |
| 0332 | 643.5000 | Traffic Control | EACH | 0.500 | 0.500 |
| 0334 | 645.0120 | Geotextile Type HR | SY | 58.000 | 58.000 |
| 0336 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 5,953.000 | 5,953.000 |
| 0340 | 646.3020 | Marking Line Epoxy 8-Inch | LF | 163.000 | 163.000 |
| 0344 | 646.5020 | Marking Arrow Epoxy | EACH | 4.000 | 4.000 |
| 0348 | 646.6320 | Marking Dotted Extension Epoxy 18-Inch | LF | 93.000 | 93.000 |
| 0350 | 646.7120 | Marking Diagonal Epoxy 12-Inch | LF | 77.000 | 77.000 |
| 0352 | 646.7420 | Marking Crosswalk Epoxy Transverse Line 6-Inch | LF | 524.000 | 524.000 |
| 0354 | 646.8120 | Marking Curb Epoxy | LF | 68.000 | 68.000 |
| 0356 | 646.8220 | Marking Island Nose Epoxy | EACH | 4.000 | 4.000 |
| 0358 | 650.4000 | Construction Staking Storm Sewer | EACH | 25.000 | 25.000 |
| 0360 | 650.4500 | Construction Staking Subgrade | LF | 3,117.000 | 3,117.000 |

8996-01-07

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0362 | 650.5000 | Construction Staking Base | LF | 3,117.000 | 3,117.000 |
| 0364 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter | LF | 142.000 | 142.000 |
| 0370 | 650.8501 | Construction Staking Electrical Installations (project) 01. 8996-01-07 | EACH | 1.000 | 1.000 |
| 0372 | 650.9000 | Construction Staking Curb Ramps | EACH | 16.000 | 16.000 |
| 0376 | 650.9911 | Construction Staking Supplemental Control (project) 02. 8996-01-07 | EACH | 1.000 | 1.000 |
| 0378 | 650.9920 | Construction Staking Slope Stakes | LF | 3,017.000 | 3,017.000 |
| 0380 | 652.0225 | Conduit Rigid Nonmetallic Schedule 40 2-Inch | LF | 1,530.000 | 1,530.000 |
| 0382 | 652.0235 | Conduit Rigid Nonmetallic Schedule 40 3-Inch | LF | 8.000 | 8.000 |
| 0384 | 653.0154 | Pull Boxes Non-Conductive 24x36-Inch | EACH | 4.000 | 4.000 |
| 0386 | 654.0106 | Concrete Bases Type 6 | EACH | 12.000 | 12.000 |
| 0388 | 654.0224 | Concrete Control Cabinet Bases Type L24 | EACH | 1.000 | 1.000 |
| 0390 | 655.0610 | Electrical Wire Lighting 12 AWG | LF | 1,872.000 | 1,872.000 |
| 0392 | 655.0620 | Electrical Wire Lighting 8 AWG | LF | 5,277.000 | 5,277.000 |
| 0394 | 656.0201 | Electrical Service Meter Breaker Pedestal (location) 01. CTH J & 50th Ave | EACH | 1.000 | 1.000 |
| 0396 | 657.0255 | Transformer Bases Breakaway 11 1/2-Inch Bolt Circle | EACH | 12.000 | 12.000 |
| 0398 | 657.0327 | Poles Type 6-Aluminum | EACH | 12.000 | 12.000 |
| 0400 | 657.0615 | Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT | EACH | 12.000 | 12.000 |
| 0402 | 659.1120 | Luminaires Utility LED B | EACH | 12.000 | 12.000 |
| 0404 | 659.2124 | Lighting Control Cabinets 120/240 24-Inch | EACH | 1.000 | 1.000 |
| 0406 | 690.0150 | Sawing Asphalt | LF | 2,194.000 | 2,194.000 |
| 0412 | 715.0720 | Incentive Compressive Strength Concrete Pavement | DOL | 2,212.000 | 2,212.000 |
| 0418 | SPV.0060 | Special 01. Construction Staking Roundabout CTH J &  50th Avenue | EACH | 1.000 | 1.000 |

3

## CLEARING & GRUBBING

| STAGE | STATION | LOCATION | 201.0105 CLEARING STA | 201.0205 GRUBBING STA |
|---|---|---|---|---|
| 1 | 298+00 - 300+00 'NB' | RT | 2 | 2 |
| | 134+00 - 138+00 'EB' | RT | 4 | 4 |
| | SUBTOTAL STAGE 1 | | 6 | 6 |
| | **PROJECT TOTAL** | | **6** | **6** |

## REMOVING CULVERTS

| STAGE | STATION | LT/RT | 203.0100 REMOVING SMALL PIPE CULVERTS LENGTH LF | EACH | REMARKS |
|---|---|---|---|---|---|
| 2 | 130+39 'EB' | RT | 41 | 1 | DRIVEWAY, 15-INCH |
| | 398+54 'NB' | CL | 52 | 1 | RD CULVERT, 24-INCH |
| | 137+95 'EB' | RT | 27 | 1 | DRIVEWAY, 12-INCH |
| | SUBTOTAL STAGE 2 | | | 3 | |
| 4 | 298+50 'NB' | RT | | 1 | TEMP CULVERT, UNDER TEMP RD |
| | SUBTOTAL STAGE 4 | | | 1 | |
| | **PROJECT TOTAL** | | | **4** | |

## REMOVING CURB & GUTTER

| STAGE | LOCATION | 204.0150 REMOVING CURB & GUTTER LF | REMARKS |
|---|---|---|---|
| 1 | NW QUAD | 88 | NW INTERSECTION CORNER |
| | SW QUAD | 50 | SW INTERSECTION CORNER |
| | SUBTOTAL STAGE 1 | 138 | |
| 2 | NE QUAD | 49 | NE INTERSECTION CORNER |
| | SE QUAD | 50 | SE INTERSECTION CORNER |
| | SUBTOTAL STAGE 2 | 99 | |
| | **PROJECT TOTAL** | **237** | |

EARTHWORK SUMMARY (PROJECT ID 8996-01-07)

CATEGORY 0010

| SUBSTAGE | FROM/TO STATION | LOCATION | 205.0100 COMMON EXCAVATION (1) CUT (2) | SALVAGED / UNUSABLE PAVEMENT MATERIAL (3) | AVAILABLE MATERIAL (4) | UNEXPANDED FILL | EXPANDED FILL (5) FACTOR 1.25 | MASS ORDINATE +/- (6) | WASTE | 208.0100 BORROW | COMMENT: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10+40'TJ' - 21+95'TJ' | CTH J - TEMP | 401 | 0 | 401 | 1,121 | 1,401 | -1,000 | | | |
| | 10+28'T1' - 14+27'T1' | 50TH AVE - TEMP | 144 | 0 | 144 | 160 | 200 | -56 | | | |
| | | STAGE 1 SUBTOTALS | 545 | 0 | 545 | 1,281 | 1,601 | -1,056 | 0 | 1,056 | |
| 2A | 201+73'WB' - 206+24'WB' | 50TH AVE | 430 | 153 | 277 | 486 | 608 | -331 | | | |
| | 10+00'JR' - 11+95'JR' | ROUNDABOUT | 171 | 102 | 69 | 1,619 | 2,024 | -1,955 | | | |
| | 296+71'NB' - 300+0'NB' | CTH J | 224 | 114 | 110 | 234 | 293 | -183 | | | |
| | 302+01'NB' - 303+73'NB' | CTH J | 80 | 40 | 40 | 7 | 9 | 31 | | | |
| | 396+61'SB' - 400+00'SB' | CTH J | 235 | 36 | 199 | 693 | 866 | -667 | | | |
| | 402+04'SB' - 403+50'SB' | CTH J | 78 | 51 | 27 | 64 | 80 | -53 | | | |
| | 133+14'EB' - 140+11'EB' | 50TH AVE | 612 | 139 | 473 | 300 | 375 | 98 | | | |
| | | STAGE 2A SUBTOTALS | 1,830 | 635 | 1,195 | 3,403 | 4,254 | -3,059 | 635 | 3,161 | |
| 2B | 129+40'EB' - 131+35'EB' | 50TH AVE | 107 | 76 | 31 | 361 | 451 | -420 | | | |
| | | STAGE 2B SUBTOTALS | 107 | 76 | 31 | 361 | 451 | -420 | 76 | 420 | |
| 3 | 197+96'WB' - 200+00'WB' | 50TH AVE | 102 | 54 | 48 | 326 | 408 | -360 | | | |
| | 11+95'JR' - 13+14'JR | ROUNDABOUT | 109 | 100 | 9 | 510 | 638 | -629 | | | |
| | 401+35'SB' - 402+04'SB' | CTH J | 19 | 19 | 0 | 197 | 246 | -246 | | | |
| | 301+25'NB' - 302+01'NB' | CTH J | 28 | 28 | 0 | 88 | 110 | -110 | | | |
| | | STAGE 3 SUBTOTALS | 258 | 201 | 57 | 1,121 | 1,401 | -1,344 | 201 | 1,344 | |
| 4 | 294+47'NB' - 300+00'NB' | CTH J | 1,183 | 130 | 1,053 | 25 | 31 | 1,022 | | | |
| | 301+25'NB' - 306+40'NB' | CTH J | 621 | 148 | 473 | 184 | 230 | 243 | | | |
| | 132+66'EB' - 133+14'EB' | 50TH AVE | 29 | 17 | 12 | 153 | 191 | -179 | | | |
| | 201+28'WB' - 201+73'WB' | 50TH AVE | 17 | 26 | -9 | 186 | 233 | -242 | | | |
| | | STAGE 4 SUBTOTALS | 1,850 | 321 | 1,529 | 548 | 685 | 844 | 844 | 0 | |
| | | PROJECT TOTALS | 4,590 | | | | | | 1,756 | 5,981 | |

NOTES:

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

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

(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL

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

(5) EXPANDED FILL FACTOR = 1.25

DEPENDING ON SELECTIONS:

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

3

## BASE AGGREGATE DENSE

| STAGE | STATION - STATION | *305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON | 624.0100 WATER MGAL | REMARKS |
|---|---|---|---|---|---|
| 1 | PROJECT WIDE | 126 | 2060 | 44 | AGG UNDER TEMP PAVING |
| | SUBTOTAL STAGE 1 | 126 | 2060 | 44 | |
| 2A | 134+48 - 140+11 'EB' | 23 | 1460 | 30 | EAST LEG ASPH |
| | 133+13 - 134+48 'EB' | 0 | 182 | 4 | EAST LEG CONC |
| | 302+57 - 303+73 'NB' | 19 | 392 | 9 | NORTH LEG ASPH |
| | 302+01 - 303+72 'NB' | 0 | 10 | 1 | NORTH LEG CONC |
| | SUBTOTAL STAGE 2A | 41 | 2044 | 44 | |
| 2B | 10+00 - 13+13.64 'RAB IC' | 0 | 369 | 8 | ROUNDABOUT |
| | 296+70 - 298+37 'NB' | 16 | 606 | 13 | SOUTH LEG ASPH |
| | 296+70 - 300+16 'NB' | 0 | 345 | 7 | SOUTH LEG CONC |
| | 129+40 - 131+35 'EB' | 0 | 204 | 5 | WEST LEG CONC |
| | SUBTOTAL STAGE 2B | 16 | 1523 | 33 | |
| 3 | 10+00 - 13+13.64 'RAB IC' | 0 | 88 | 2 | ROUNDABOUT |
| | 129+40 - 131+35 'EB' | 0 | 213 | 5 | WEST LEG CONC |
| | 301+25 - 302+00'NB' | 0 | 155 | 4 | NORTH LEG CONC |
| | SUBTOTAL STAGE 3 | 0 | 456 | 11 | |
| 4 | 132+72 - 133+14 'EB' | 0 | 131 | 3 | EAST LEG CONC |
| | 296+70 - 300+00 'NB' | 45 | 22 | 2 | SOUTH LEG CONC /SHOULDER |
| | 301+25 - 306+40 'NB' | 41 | 27 | 2 | NORTH LEG CONC / SHOULDER |
| | SUBTOTAL STAGE 4 | 87 | 181 | 7 | |
| | PROJECT TOTAL | 270 | 6264 | 139 | |

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

## DRIVEWAY ITEMS

| STAGE | STATION | LT/RT | *305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON) | 465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES (TON) | REMARKS |
|---|---|---|---|---|---|
| 1 | 17+15 'TJ' | RT | 70 | - | AGG/TEMP |
| | 135+36 'EB' | RT | 26 | 8 | AGG/ASPH |
| | | | 96 | 8 | |
| 2A / 2B | 202+64 'WB' | LT | 27 | 20 | AGG/ASPH |
| | 204+30 'WB' | LT | - | 13 | ASPH |
| | 205+36 'WB' | LT | - | 7 | ASPH |
| | 137+94 'EB' | RT | - | 6 | ASPH |
| | | | 27 | 46 | |
| | PROJECT TOTALS | | 123 | 54 | |

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

## CONCRETE PAVEMENT ITEMS

| STAGE | LOCATION | 405.0100 COLORING CONCRETE WISDOT RED CY | 415.0080 CONCRETE PAVEMENT 8-INCH SY | 415.2010 CONCRETE TRUCK APRON 12-INCH SY | 602.0405 CONCRETE SIDEWALK 4-INCH SF | 602.0410 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF | REMARKS |
|---|---|---|---|---|---|---|---|
| 2A | 133+13 - 134+48 'EB' | - | 433 | - | - | - | EAST LEG |
| | SUBTOTAL STAGE 2A | 0 | 433 | 0 | 0 | 0 | |
| 2B | 10+00 - 13+13.64 'RAB IC' | 150 | 477 | 449 | - | - | ROUNDABOUT |
| | 129+40 - 131+35 'EB' | - | 434 | - | | - | WEST LEG |
| | 298+37 - 300+00 'NB' | - | 702 | - | - | - | SOUTH LEG |
| | SUBTOTAL STAGE 2B | 150 | 1613 | 449 | 0 | 0 | |
| 3 | 129+40 - 131+25 'EB' | 13 | 424 | - | 1310 | 80 | WEST LEG |
| | 301+25 - 302+00 'NB' | 5 | 321 | - | 593 | 80 | NORTH LEG |
| | 10+00 - 13+13.64 'RAB IC' | - | 264 | - | - | - | ROUNDABOUT |
| | SUBTOTAL STAGE 3 | 18 | 1009 | 0 | 1903 | 160 | |
| 4 | 299+75 - 300+00 'NB' | 15 | - | - | 1469 | 80 | SOUTH LEG |
| | 132+70 - 134+15 'EB' | 15 | 238 | - | 1415 | 80 | EAST LEG |
| | SUBTOTAL STAGE 4 | 30 | 238 | 0 | 2884 | 160 | |
| | **PROJECT TOTAL** | 198 | 3293 | 449 | 4787 | 320 | |

## ASPHALTIC PAVEMENT ITEMS

| STAGE | STATION | LOWER LAYER THICKNESS IN | UPPER LAYER THICKNESS IN | 455.0605 TACK COAT GAL | 460.7423 HMA PAVEMENT 3 HT 58-28 H TON | 460.7444 HMA PAVEMENT 4 HT 58-34 H TON | 465.0125 ASPHALTIC SURFACE TEMPORARY TON | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 1 | PROJECT WIDE | - | 4.00 | - | - | - | 692 | STAGE 2-3 TEMP PAVEMENT |
| | SUBTOTAL STAGE 1 | | | 0 | 0 | 0 | 692 | |
| 2A | 134+48 - 140+11 'EB' | 3.00 | 2.50 | 84 | 282 | 235 | - | EAST LEG |
| | 302+00 - 303+73 'NB' | 3.00 | 2.50 | 37 | 125 | 105 | - | NORTH LEG |
| | SUBTOTAL STAGE 2A | | | 121 | 407 | 340 | 0 | |
| 2B | 296+70 - 298+37 'NB' | 3.00 | 2.50 | 39 | 131 | 109 | - | SOUTH LEG |
| | SUBTOTAL STAGE 2B | | | 39 | 131 | 109 | 0 | |
| | **PROJECT TOTALS** | | | **160** | **538** | **449** | **692** | |

3

## TEMPORARY CULVERT PIPE ITEMS

| STAGE | STATION | INLET OFFSET | ELEV. (FT) | STATION | OUTLET OFFSET | ELEV. (FT) | SLOPE (%) | 520.2024 CULVERT PIPE TEMPORARY 24-INCH LF | 520.8000 CONCRETE COLLAR FOR PIPES EACH |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 298+47 'NB | RT | 919.00 | 298+47 'NB | RT | 918.96 | 0 | 13 | 1 |
| | SUBTOTAL STAGE 1 | | | | | | | 13 | 1 |
| | | | | | | | | **13** | **1** |

## CULVERT PIPE ITEMS

| STAGE | STATION | INLET OFFSET | ELEV. (FT) | STATION | OUTLET OFFSET | ELEV. (FT) | SLOPE (%) | PIPE THICKNESS | 522.0412 CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF | 522.0418 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF | *522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH | *522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2A | 134+30.32 'EB' | 45.67' LT | 918.98 | 133+87.15 'EB' | 54.23' LT | 918.76 | 0.49% | 2.5" | - | 45 | - | 2 |
| | 135+52.55 'EB' | 43.65' RT | 919.26 | 135+16.57 'EB' | 44.45' RT | 919.21 | 0.16% | 2.5" | - | 36 | - | 2 |
| | 135+98.47 'EB' | 31.66' LT | 919.82 | 135+53.95 'EB' | 35.37' LT | 919.60 | 0.49% | 2" | 45 | - | 2 | - |
| | SUBTOTAL STAGE 2A | | | | | | | | 45 | 81 | 2 | 4 |
| | | | | | | | | | **45** | **81** | **2** | **4** |

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

## RIPRAP ITEMS

| STAGE | LOCATION | 606.0200 RIPRAP MEDIUM CY | 645.0120 GEOTEXTILE TYPE HR SY |
|---|---|---|---|
| 2 | 133+87 'EB' LT | 4 | 8 |
| | 134+30 'EB' LT | 4 | 8 |
| | 135+16 'EB' RT | 4 | 8 |
| | 135+54 'EB' LT | 4 | 8 |
| | 137+80 'EB' RT | 3 | 5 |
| | 138+20 'EB' RT | 3 | 5 |
| | SUBTOTAL STAGE 2 | 22 | 42 |
| 4 | 301+81 'NB' RT | 4 | 8 |
| | 298+81 'NB' RT | 4 | 8 |
| | SUBTOTAL STAGE 4 | 8 | 16 |
| | **PROJECT TOTAL** | **30** | **58** |

3

## CONCRETE CURB & GUTTER ITEMS

| STAGE | STATION - STATION | LOCATION | 601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A LF | 601.0413 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G LF | 601.0415 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J LF | 601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R LF | REMARKS |
|---|---|---|---|---|---|---|---|
| 2A | 302+01 - 302+58 'NB' | LT | | 57 | 70 | | NORTH OUTSIDE |
| | 133+24 - 134+48 'EB' | LT | - | 265 | - | - | EAST ISLAND |
| | 133+24 - 134+48 'EB' | LT/RT | - | 203 | - | - | EAST OUTSIDE |
| | SUBTOTAL STAGE 2A | | 0 | 525 | 70 | 0 | |
| 2B | 10+00 - 13+13.64 'RAB IC' | LT | 191 | - | - | 302 | ROUNDABOUT |
| | 129+40 - 131+35 'EB' | LT | - | 199 | - | - | WEST ISLAND |
| | 129+78 - 131+35 'EB' | RT | - | 201 | 76 | - | WEST OUTSIDE |
| | 298+37 - 300+00 'NB' | LT | - | 276 | - | - | SOUTH ISLAND |
| | 298+68 - 300+00 'NB' | LT/RT | - | 277 | - | - | SOUTH OUTSIDE |
| | SUBTOTAL STAGE 2B | | 191 | 953 | 76 | 302 | |
| 3 | 129+40 - 131+35 'EB' | LT | - | 200 | - | - | WEST ISLAND |
| | 129+78 - 131+35 'EB' | LT | - | 174 | | - | WEST OUTSIDE |
| | 301+30 - 302+00 'NB' | LT | - | 120 | - | - | NORTH ISLAND |
| | 301+30 - 302+00 'NB' | LT/RT | - | 98 | - | - | NORTH OUTSIDE |
| | SUBTOTAL STAGE 3 | | 0 | 592 | 0 | 0 | |
| 4 | 132+70 - 133+15 'EB' | LT | - | 105 | - | - | EAST ISLAND |
| | 132+70 - 133+15 'EB' | LT/RT | - | 191 | - | - | EAST OUTSIDE |
| | 299+75 - 299+95 'NB' | LT | - | 68 | - | - | SOUTH ISLAND |
| | 299+59 - 300+14 ' NB | RT | | 109 | 53 | | NORTH OUTSIDE |
| | SUBTOTAL STAGE 4 | | 0 | 473 | 53 | 0 | |
| | **PROJECT TOTAL** | | **191** | **2543** | **199** | **302** | |

## CONCRETE MEDIAN SLOPED NOSE

| STAGE | LOCATION | 620.0300 CONCRETE MEDIAN SLOPED NOSE SF | REMARKS |
|---|---|---|---|
| 2A | 132+66 - 134+48 'EB' | 86 | EAST LEG |
| | SUBTOTAL STAGE 2A | 86 | |
| 2B | 298+37 - 300+00 'NB' | 76 | SOUTH LEG |
| | SUBTOTAL STAGE 2B | 76 | |
| 3 | 301+25 - 302+57 'NB' | 69 | NORTH LEG |
| | 129+40 - 131+35 'EB' | 66 | WEST LEG |
| | SUBTOTAL STAGE 3 | 135 | |
| | **PROJECT TOTAL** | 297 | |

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## STORM SEWER PIPE ITEMS

| STAGE | FROM STRUCTURE | TO STRUCTURE | 608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF | 608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF | 608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF | 608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF | REMARKS |
|---|---|---|---|---|---|---|---|
| 2A | 22 | 23 | 27 | - | - | - | |
| | 23 | 24 | 8 | - | - | - | |
| | | SUBTOTAL STAGE 2A | 35 | 0 | 0 | 0 | |
| 2B | 02 | 03 | 33 | - | - | - | |
| | 03 | 04 | 23 | - | - | - | |
| | 04 | 05 | 5 | - | - | - | |
| | 02 | 07 | - | - | - | 87 | |
| | 07 | 08 | 38 | - | - | - | |
| | 07 | 09 | - | - | - | 91 | |
| | 09 | 18 | - | - | 122 | - | |
| | 18 | 19 | 10 | - | - | - | |
| | 18 | 20 | 10 | - | - | - | |
| | 18 | 21 | - | 62 | - | - | |
| | 09 | 10 | - | - | 65 | - | |
| | 10 | 11 | - | 99 | - | - | |
| | 11 | 12 | - | 22 | - | - | |
| | 11 | 13 | - | 22 | - | - | |
| | 13 | 14 | 27 | - | - | - | |
| | 13 | 15 | - | 7 | - | - | |
| | 15 | 16 | - | 22 | - | - | |
| | | SUBTOTAL STAGE 2B | 146 | 234 | 187 | 178 | |
| 3 | 25 | 26 | 17 | - | - | - | PARTIAL |
| | 26 | 27 | 6 | - | - | - | |
| | | SUBTOTAL STAGE 3 | 23 | 0 | 0 | 0 | |
| 4 | 16 | 17 | - | 15 | - | - | |
| | 25 | 26 | 29 | - | - | - | PARTIAL |
| | | SUBTOTAL STAGE 4 | 29 | 15 | 0 | 0 | |
| | | **PROJECT TOTAL** | 233 | 249 | 187 | 178 | |

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## STORM SEWER STRUCTURE ITEMS

| STAGE | STRUCTURE NUMBER | **STATION | **OFFSET | *522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH | *522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH | 611.0624 INLET COVERS TYPE H EACH | 611.0630 INLET COVERS TYPE HM-GJ EACH | 611.0633 INLET COVERS TYPE HM-GJ-S EACH | 611.0639 INLET COVERS TYPE H-S EACH | 611.0642 INLET COVERS TYPE MS EACH | 611.0652 INLET COVERS TYPE T EACH | 611.3004 INLETS 4-FT DIAMETER EACH | 611.3230 INLETS 2 X 3-FT EACH | 611.3902 INLETS MEDIAN 2 GRATE EACH | 633.5200 MARKERS CULVERT END EACH | RIM ELEVATION FT | INVERT ELEVATION FT | ***DEPTH FT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2A | 22 | 134+45 'EB' | 35.32' LT | 1 | - | - | - | - | - | - | - | - | - | - | 1 | - | 919.11 | - |
| | 23 | 134+40 'EB' | 9.52' LT | - | - | - | - | 1 | - | - | - | - | 1 | - | - | 922.85 | 919.23 | 2.62 |
| | 24 | 134+40 'EB' | 1.55' LT | - | - | 1 | 1 | - | - | - | - | - | 1 | - | - | 923.07 | 919.37 | 2.70 |
| | | SUBTOTAL STAGE 2A | | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | | | |
| 2B | 03 | 129+60 'EB' | 19.50' RT | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 922.73 | 918.30 | 3.43 |
| | 04 | 129+60 'EB' | 1.5' LT | - | - | - | - | 1 | - | - | - | - | 1 | - | - | 923.16 | 918.52 | 3.64 |
| | 05 | 129+60 'EB' | 5.93' LT | - | - | - | - | 1 | - | - | - | - | 1 | - | - | 923.05 | 918.65 | 3.40 |
| | 07 | 130+44 'EB' | 56.63' RT | - | - | - | - | | - | 2 | - | - | - | 1 | - | 920.51 | 917.41 | 3.10 |
| | 08 | 130+44 'EB' | 19.50' RT | - | - | - | - | 1 | - | - | - | - | 1 | - | - | 923.37 | 919.10 | 3.27 |
| | 09 | 131+43 'EB' | 26.79' RT | - | - | - | 1 | - | - | - | - | 1 | - | - | - | 925.11 | 917.68 | 6.43 |
| | 10 | 299+67 'NB' | 44.36' LT | - | - | 1 | - | - | - | - | - | 1 | - | - | - | 924.35 | 917.87 | 5.48 |
| | 11 | 298+81 'NB' | 29.25' LT | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 923.20 | 918.16 | 4.04 |
| | 12 | 298+62 'NB' | 40.01' LT | - | 1 | - | - | - | - | - | - | - | - | - | 1 | - | 918.23 | |
| | 13 | 298+82 'NB' | 8.25' LT | - | - | - | - | 1 | - | - | - | - | 1 | - | - | 923.53 | 918.24 | 4.29 |
| | 14 | 298+55 'NB' | 7.12' LT | - | - | - | - | - | 1 | - | - | - | 1 | - | - | 923.53 | 918.93 | 3.60 |
| | 15 | 298+82 'NB' | 1.50' LT | - | - | - | | 1 | - | - | - | - | 1 | - | - | 923.71 | 918.26 | 4.45 |
| | 16 | 298+81 'NB' | 19.50' RT | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 923.40 | 918.33 | 4.07 |
| | 18 | 132+38 'EB' | 49.40' LT | - | - | - | - | - | - | - | 1 | 1 | - | - | - | 924.32 | 918.04 | 5.20 |
| | 19 | 132+30 'EB' | 56.32' LT | - | - | - | - | - | - | - | 1 | 1 | - | - | - | 924.35 | 919.09 | 4.18 |
| | 20 | 132+43 'EB' | 41.24' LT | - | - | - | - | - | - | - | 1 | 1 | - | - | - | 924.35 | 919.09 | 4.18 |
| | 21 | 133+17 'EB' | 70.44' LT | - | 1 | - | - | - | - | - | - | - | - | - | 1 | - | 918.23 | |
| | | SUBTOTAL STAGE 2B | | 0 | 2 | 1 | 1 | 8 | 1 | 2 | 3 | 8 | 6 | 1 | 2 | | | |
| 3 | 26 | 301+79 'NB' | 1.50' LT | - | - | - | - | 1 | - | - | - | - | 1 | - | - | 923.46 | 918.90 | 3.56 |
| | 27 | 301+80 'NB' | 6.72' LT | - | - | - | 1 | - | - | - | - | - | 1 | - | - | 923.53 | 919.03 | 3.50 |
| | | SUBTOTAL STAGE 3 | | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | | | |
| 4 | 17 | 298+81 'NB' | 33.80' RT | - | 1 | - | - | - | - | - | - | - | - | - | 1 | - | 918.38 | |
| | 25 | 301+81 'NB' | 44.26' RT | 1 | - | - | - | - | - | - | - | - | - | - | 1 | - | 918.68 | |
| | | SUBTOTAL STAGE 4 | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | | |
| | | **PROJECT TOTALS** | | **2** | **3** | **2** | **3** | **10** | **1** | **2** | **3** | **8** | **10** | **1** | **5** | | | |

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**STATION & OFFSET TO CENTER OF STRUCTURE UNLESS OTHERWISE NOTED IN THE PLANS

***DEPTH = RIM ELEV - INVERT ELEV - COVER HT - 6 INCH ADJ RING HT; INLETS MEDIAN DEPTH = RIM ELEV - INVERT ELEV

3

## FINISHING ITEMS

| STAGE | DISTURBED AREA SF | 625.0500 SALVAGED TOPSOIL SY | 627.0200 MULCHING SY | 628.2004 EROSION MAT CLASS I TYPE B SY | 629.0205 FERTILIZER TYPE A CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|---|
| 1 | 26300 | 2256 | 2923 | - | 1.90 | 132 | 79 | 0 |
| UNDISTRIBUTED | | 564 | 737 | - | 0.48 | 34 | 20 | 0 |
| SUBTOTAL STAGE 1 | | 2820 | 3660 | 0 | 2.38 | 166 | 99 | 0 |
| 2A | 44100 | 4234 | - | 4900 | 3.10 | 221 | 133 | 111 |
| UNDISTRIBUTED | | 1059 | - | 1225 | 0.78 | 56 | 33 | 28 |
| SUBTOTAL STAGE 2A | | 5293 | 0 | 6125 | 3.88 | 277 | 166 | 139 |
| 2B | 7270 | 808 | - | 808 | 0.60 | 37 | 22 | 19 |
| UNDISTRIBUTED | | 202 | - | 202 | 0.15 | 9 | 6 | 5 |
| SUBTOTAL STAGE 2B | | 1010 | 0 | 1010 | 0.75 | 46 | 28 | 24 |
| 3 | 10800 | 1067 | - | 1200 | 0.80 | 54 | 33 | 27 |
| UNDISTRIBUTED | | 267 | - | 300 | 0.20 | 14 | 8 | 7 |
| SUBTOTAL STAGE 3 | | 1334 | 0 | 1500 | 1.00 | 68 | 41 | 34 |
| 4 | 29100 | 2878 | - | 3234 | 2.10 | 146 | 88 | 73 |
| UNDISTRIBUTED | | 720 | - | 809 | 0.53 | 38 | 22 | 18 |
| SUBTOTAL STAGE 4 | | 3644 | 0 | 4065 | 2.63 | 193 | 116 | 91 |
| **PROJECT TOTALS** | | **14100** | **3660** | **12700** | **10.63** | **750** | **450** | **288** |

## EROSION CONTROL ITEMS

| STAGE | STATION | LT/RT | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.7005 INLET PROTECTION TYPE A EACH | 628.7015 INLET PROTECTION TYPE C EACH | 628.7504 TEMPORARY DITCH CHECKS LF | 628.7555 CULVERT PIPE CHECKS EACH | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATONS EMERGENCY EROSION CONTROL EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 130+00 'EB' -302+50 'NB' | LT | 265 | 50 | | | | | | | |
| | 298+47 ' NB | RT | | | | | | 1 | | | |
| | 128+23 'EB' | LT | | | | | | 2 | | | |
| | 135+60 'EB' | RT | | | | | | 2 | | | |
| | 303+73 'NB' | LT/RT | - | - | 1 | - | 24 | - | - | - | |
| | VARIES | LT/RT | - | - | 1 | - | 24 | - | 2 | 1 | |
| | SUBTOTAL STAGE 1 | | 265 | 50 | 2 | 0 | 48 | 5 | 2 | 1 | |
| 2A | 127+00 - 129+50 'EB' | RT | 390 | 50 | | | | | | | |
| | 128+48 'EB' | RT | | | | | | 2 | | | |
| | 134+30 'EB' | LT | | | | | | 2 | | | |
| | 135+52 'EB' | RT | | | | | | 2 | | | |
| | 135+98 'EB' | LT | | | | | | 2 | | | |
| | 134+40 'EB' | LT | | | 2 | 2 | | | | | INLETS 23, 24 |
| | 129+60 'EB' | RT | | | 2 | 1 | | | | | INLETS 2, 6 |
| | 138+40 'EB' | LT | | | | | | 2 | | | |
| | VARIES | | | | | 1 | | 9 | 1 | 1 | AEW 1 |
| | SUBTOTAL STAGE 2A | | 0 | 0 | 4 | 4 | 0 | 19 | 1 | 1 | |
| 2B | 132+35 'EB' | LT | | | 3 | 3 | | | | | INLETS 18, 19, 20 |
| | 133+07 'EB' | LT | | | | | | 6 | | | AEW 21 |
| | 129+60 'EB' | RT/LT | | | 3 | 3 | | | | | INLETS 3, 4, 5 |
| | 130+44 'EB' | RT | | | 2 | 1 | | | | | INLET 7, 8 |
| | 298+55 'NB' | LT | | | 1 | 1 | | | | | INLET 14 |
| | 298+62 'NB' | RT/LT | | | | | | 6 | | | AEW 12 |
| | 298+82 'NB' | RT/LT | | | 4 | 4 | | | | | INLETS 11, 13, 15, 16 |
| | 299+67 'NB' | LT | | | 1 | 1 | | | | | INLET 10 |
| 2B | 301+80 'NB' | LT | | | 2 | 2 | | | | | INLETS 26, 27 |
| | VARIES | | | | | | | | 1 | 1 | |
| | SUBTOTAL STAGE 2B | | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 | |
| 3 | 301+80 'NB' | LT | | | 2 | 2 | | | | | INLETS 26, 27 |
| | VARIES | - | | | | | | | 1 | 1 | |
| | SUBTOTAL STAGE 3 | | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 | |
| 4 | 209+81 'NB' | | | | | | | 6 | | | AEW 17 |
| | UNDISTRIBUTED | - | | | | | | | 1 | 1 | |
| | SUBTOTAL STAGE 4 | | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 1 | |
| | UNDISTRIBUTED | | 67 | 13 | 3 | 2 | 12 | 8 | | | |
| | **PROJECT TOTAL** | | **332** | **63** | **13** | **10** | **60** | **38** | **6** | **5** | |

3

## PERMANENT SIGNING

| SIGN NUMBER | SIGN CODE | SIGN MESSAGE | SIZE W" X H" | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 637.0620 SIGNS FLAGS PERMANENT TYPE II EACH | 634.0612 POSTS WOOD 4X6-INCH 12-FT EACH | 634.0614 POSTS WOOD 4X6-INCH 14-FT EACH | 634.0616 POSTS WOOD 4X6-INCH 16-FT EACH | 634.0618 POSTS WOOD 4X6-INCH 18-FT EACH |
|---|---|---|---|---|---|---|---|---|---|---|
| 01-01 | W2-6 | ROUNDABOUT AHEAD | 30"x30" | - | 6.25 | - | - | - | - | 1 |
| 01-02 | W13-1 | 15 MPH | 18"x18" | - | 2.25 | - | - | - | - | - |
| 01-03 | R4-7 | KEEP LEFT/RIGHT SYMBOL | 24" X 30" | 5.00 | - | - | - | - | 1 | - |
| 01-36 | W5-54 | IN ROAD OBJECT MARKER | 18" X 18" | - | 2.25 | - | - | - | - | - |
| 01-04 | R1-2 | YIELD | 36"x31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-05 | R1-2 | YIELD | 36"x31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-06 | R6-1R | ONE WAY FOR ROUNDABOUTS | 36" X 12" | 3.00 | - | - | 2 | - | - | - |
| 01-07 | R6-4B | CHEVRON FOR ROUNDABOUTS | 60" X 24" | 10.00 | - | - | - | - | - | - |
| 01-08 | R6-1R | ONE WAY FOR ROUNDABOUTS | 36" X 12" | 3.00 | | - | 2 | - | - | - |
| 01-09 | R6-4B | CHEVRON FOR ROUNDABOUTS | 60" X 24" | 10.00 | - | - | - | - | - | - |
| 01-10 | R4-7 | KEEP LEFT/RIGHT SYMBOL | 24" X 30" | 5.00 | - | - | - | 1 | - | - |
| 01-11 | R1-2 | YIELD | 36"x31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-12 | R1-2 | YIELD | 36"x31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-13 | D1-1 | CTH J RIGHT | 36"x18" | 4.50 | - | - | - | 1 | - | - |
| 01-15 | M1-5A | CTH J | 24"x24" | 4.00 | - | - | - | 1 | - | - |
| 01-14 | R2-1 | SPEED LIMIT | 24"x30" | 5.00 | - | - | - | - | 1 | - |
| 01-16 | R4-7 | KEEP LEFT/RIGHT SYMBOL | 24" X 30" | 5.00 | - | - | - | 1 | - | - |
| 01-17 | R1-2 | YIELD | 36" X 31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-18 | R1-2 | YIELD | 36" X 31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-19 | R6-1R | ONE WAY FOR ROUNDABOUTS | 36" X 12" | 3.00 | - | - | 2 | - | - | - |
| 01-20 | R6-4B | CHEVRON FOR ROUNDABOUTS | 60" X 24" | 10.00 | - | - | - | - | - | - |
| 01-21 | R6-1R | ONE WAY FOR ROUNDABOUTS | 36" X 12" | 3.00 | - | - | 2 | - | - | - |
| 01-22 | R6-4B | CHEVRON FOR ROUNDABOUTS | 60" X 24" | 10.00 | - | - | - | - | - | - |
| 01-23 | R1-2 | YIELD | 36" X 31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-24 | R1-2 | YIELD | 36" X 31" | 3.88 | - | 2 | - | 1 | - | - |
| 01-25 | D1-1 | CTH J RIGHT | 36"x18" | 4.50 | - | - | - | 1 | - | - |
| 01-28 | M1-5A | CTH J | 24" X 24" | 4.00 | - | - | - | 1 | - | - |
| 01-27 | R5-1A | WRONG WAY | 36"x24" | 7.00 | - | - | - | - | - | - |
| 01-26 | R2-1 | SPEED LIMIT | 24"x30" | 5.00 | - | - | - | - | 1 | - |
| 01-29 | R5-1 | DO NOT ENTER | 30"x30" | 6.25 | - | | - | - | - | - |
| 01-36 | D1-1 | 50TH AVE | 66"X15" | 7.00 | - | | - | 2 | - | - |
| 01-37 | D1-1 | 50TH AVE | 66"X15" | 7.00 | - | - | - | 2 | - | - |
| 02-30 | W2-6 | ROUNDABOUT AHEAD | 30"x30" | - | 6.25 | - | - | 1 | - | - |
| 02-31 | W13-1 | 15 MPH | 18"x18" | - | 2.25 | - | - | - | - | - |
| 02-32 | M1-85 | HERITAGE | 24"x24" | 4.00 | - | - | - | - | - | - |
| 02-33 | M1-85-C | CABIN RIDGE RIDES RIGHT | 24"x12" | 2.00 | - | - | - | - | - | - |
| 02-34 | R4-7 | KEEP LEFT/RIGHT SYMBOL | 24" X 30" | 5.00 | - | - | - | 1 | - | - |
| 02-35 | R1-1 | STOP | 30" x 30" | 5.18 | - | - | - | 1 | - | - |
| | | **PROJECT TOTALS** | | **169.00** | **20.00** | **16** | **8** | **21** | **3** | **1** |

## SIGN REMOVAL ITEMS

| STAGE | STATION | LT/RT | SIGN NUMBER | MESSAGE | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH |
|---|---|---|---|---|---|---|
| 1 | 299+28 'NB' | LT | R01-18 | CTH J EAST | 2 | 1 |
| | 299+26 'NB' | LT | R01-17 | SPEED LIMIT 40 MPH | 1 | 1 |
| | 300+44 'NB' | LT | R01-15 | STOP SIGN | 1 | 1 |
| | 300+44 'NB' | LT | R01-16 | 4-WAY | 1 | - |
| | 300+37 'NB' | LT | R01-14 | CTH J / TO STH 29 EAST | 6 | 1 |
| | | | | SUBTOTAL STAGE 1 | 11 | 4 |
| 2A | 300+45 'NB' | RT | R01-01 | STOP SIGN | 1 | 1 |
| | 300+45 'NB' | RT | R01-02 | 4-WAY | 1 | - |
| | 300+46 'NB' | RT | R01-03 | STH 29 WEST / CTH J WEST | 6 | 1 |
| | 301+14 'NB' | RT | R01-05 | STOP SIGN | 1 | 1 |
| | 301+14 'NB' | RT | R01-06 | 4-WAY | 1 | - |
| | 301+11 'NB' | RT | R01-07 | CTH J | 1 | 1 |
| | 301+17 'NB' | RT | R01-08 | TO STH 29 EAST / TO STH 29 WEST | 8 | 1 |
| | 302+40 'NB' | RT | R01-09 | SPEED LIMIT 35 MPH | 1 | 1 |
| | | | | SUBTOTAL STAGE 2A | 20 | 6 |
| 2B | 301+38 'NB' | LT | R01-12 | STOP SIGN | 1 | 1 |
| | 301+38 'NB' | LT | R01-13 | 4-WAY | 1 | - |
| | 301+40 'NB' | LT | R01-10 | TO STH 29 EAST / TO STH 29 WEST | 8 | 1 |
| | 301+38 'NB' | LT | R01-11 | CTH J | 2 | 1 |
| | 127+51 'EB' | LT | R02-22 | STOP SIGN | 1 | 1 |
| | 128+49 'EB' | LT | R02-21 | JCT STH 29 | 2 | 1 |
| | 130+44 'EB' | LT | R02-20 | SPEED LIMIT 45 MPH | 1 | 1 |
| | 128+78 'EB' | RT | R02-19 | CABIN RIDGE RIDES | 1 | 1 |
| | 138+71 'EB' | LT | R02-23 | STOP SIGN AHEAD | 1 | 1 |
| | 134+50'EB' | LT | R01-04 | - | - | 2 |
| | | | | SUBTOTAL STAGE 2B | 18 | 10 |
| | | | | **PROJECT TOTAL** | **49** | **20** |

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## TRAFFIC CONTROL

| STAGE | LOCATION | APPROX. SERVICE PERIOD | 643.0300 TRAFFIC CONTROL DRUMS | | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III | | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A | | 643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C | | 643.0900 TRAFFIC CONTROL SIGNS | | 638.2102 MOVING SIGNS TYPE II | 643.1050 TRAFFIC CONTROL SIGNS PCMS | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DAYS | QTY. | DAYS | QTY. | DAYS | QTY. | DAYS | QTY. | DAYS | QTY. | DAYS | EACH | QTY. | DAYS | |
| 1 | PRIOR TO CONSTRUCTION | 14 | 10 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 2 | 28 | |
| | | 30 | 110 | 3300 | 16 | 480 | 18 | 540 | 6 | 180 | 27 | 810 | 4 | 0 | 0 | |
| | SUBTOTAL STAGE 1 | | | 3440 | | 480 | | 540 | | 180 | | 810 | 4 | | 28 | |
| 2A | | 54 | 140 | 7560 | 18 | 972 | 20 | 1080 | 6 | 324 | 23 | 1242 | 6 | 0 | 0 | |
| | SUBTOTAL STAGE 2A | | | 7560 | | 972 | | 1080 | | 324 | | 1242 | 6 | | 0 | |
| 2B | | 20 | 115 | 2300 | 22 | 440 | 26 | 520 | 6 | 120 | 22 | 440 | - | 0 | 0 | |
| | SUBTOTAL STAGE 2b | | | 2300 | | 440 | | 520 | | 120 | | 440 | 0 | | 0 | |
| 3 | | 31 | 90 | 2790 | 40 | 1240 | 52 | 1612 | 6 | 186 | 20 | 620 | 4 | 0 | 0 | |
| | SUBTOTAL STAGE 3 | | | 2790 | | 1240 | | 1612 | | 186 | | 620 | 4 | | 0 | |
| 4 | | 19 | 65 | 1235 | 18 | 342 | 22 | 418 | 6 | 114 | 17 | 323 | - | 2 | 38 | |
| | SUBTOTAL STAGE 4 | | | 1235 | | 342 | | 418 | | 114 | | 323 | 0 | | 38 | |
| | UNDISTRIBUTED QTY | | | 3475 | | 726 | | 824 | | 200 | | 695 | - | | 0 | |
| | PROJECT TOTALS | | | 20800 | | 4200 | | 5000 | | 1125 | | 4130 | 14 | | 66 | |

## TRAFFIC CONTROL FMS

| STAGE | LOCATION | LOCATION | 643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF | REMARKS |
|---|---|---|---|---|
| 1 | PROJECT | RT | 120 | 3 SIGNS |
| | SUBTOTAL STAGE 1 | | 120 | |
| | **PROJECT TOTAL** | | **120** | |

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## PAVEMENT MARKING

| STAGE | STATION - STATION | LT/RT | 646.1020 MARKING LINE EPOXY 4-INCH SOLID WHITE LF | 646.1020 MARKING LINE EPOXY 4-INCH SOLID YELLOW LF | 646.3020 MARKING LINE EPOXY 8-INCH WHITE LF | 646.5020 MARKING ARROW EPOXY WHITE EACH | 646.6320 MARKING DOTTED EXTENSION EPOXY 18-INCH WHITE LF | 646.7120 MARKING DIAGONAL EPOXY 12-INCH YELLOW LF | 646.7420 MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH WHITE LF | 646.8120 MARKING CURB EPOXY YELLOW LF | 646.8820 MARKING ISLAND NOSE EPOXY YELLOW EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 129+40 - 131+35 'EB' | LT/RT | 332 | 60 | 62 | 1 | - | - | 306 | 15 | 1 | WEST LEG |
| | 132+66 - 140+11 'EB' | LT/RT | 343 | 1,495 | 33 | 1 | - | 77 | 69 | 21 | 1 | EAST LEG |
| | 301+25 - 303+73 'NB' | LT/RT | 719 | 1,166 | 31 | 1 | - | - | 72 | 16 | 1 | NORTH LEG |
| | 296+70 - 300+00 'NB' | LT/RT | 814 | 1,024 | 37 | 1 | - | - | 77 | 16 | 1 | SOUTH LEG |
| | 10+00 - 13+13.64 'RAB IC' | LT/RT | - | - | - | - | 93 | - | - | - | - | ROUNDABOUT |
| | **PROJECT TOTAL** | | **5,953** | | **163** | **4** | **93** | **77** | **524** | **68** | **4** | |

## TEMPORARY MARKING ITEMS

| STAGE | STATION | 643.3105 TEMPORARY MARKING LINE PAINT 4-INCH SOLID WHITE LF | 643.3105 TEMPORARY MARKING LINE PAINT 4-INCH SOLID YELLOW LF | 643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH SOLID WHITE LF | 643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH SOLID YELLOW LF | 643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH LF | 643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF |
|---|---|---|---|---|---|---|---|
| 2A | 10+10'T1' - 14+50'T1' | 940 | 880 | - | - | 12 | - |
| | 10+00'TJ' - 22+35'TJ' | 2460 | 2470 | - | - | 24 | - |
| | SUBTOTAL STAGE 2A | 3400 | 3350 | 0 | 0 | 36 | 0 |
| 2B | 10+00'T1' - 10+65'T1' | - | - | 90 | - | - | - |
| | SUBTOTAL STAGE 2B | 0 | 0 | 90 | 0 | 0 | 0 |
| 3 | 16+50'T3' - 19+85'T3' | - | - | 1050 | 860 | - | 12 |
| | 16+85'TJ' - 17+90'TJ' | 105 | - | - | - | 24 | - |
| | SUBTOTAL STAGE 3 | 105 | 0 | 1050 | 860 | 24 | 12 |
| 4 | 294+60'NB' - 298+45'NB' | - | 420 | - | 350 | - | - |
| | 301+85'NB' - 304+75'NB' | - | 200 | - | 350 | - | - |
| | SUBTOTAL STAGE 4 | 0 | 620 | 0 | 700 | 0 | 0 |
| | **PROJECT TOTALS** | **7475** | | **2700** | | **60** | **12** |

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## CONSTRUCTION STAKING

| STAGE | STATION | 650.4000 CONSTRUCTION STAKING STORM SEWER EACH | 650.4500 CONSTRUCTION STAKING SUBGRADE LF | 650.5000 CONSTRUCTION STAKING BASE LF | 650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF | 650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (8996-01-07) EACH | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF | SPV.0060.01 CONSTRUCTION STAKING ROUNDABOUT CTH J & 50TH AVENUE EACH |
|---|---|---|---|---|---|---|---|---|
| | PROJECT | - | - | - | - | 1 | - | 1 |
| 1 | 294+82 - 306+36 'NB' | - | 1154 | 1154 | | - | 1154 | - |
| | 127+91 - 131+96 'EB' | - | 405 | 405 | - | - | 405 | - |
| | SUBTOTAL STAGE 1 | 0 | 1559 | 1559 | 0 | 1 | 1559 | 1 |
| 2A | VARIES | 6 | - | - | - | - | - | - |
| | 134+48 - 140+11 'EB' | | 563 | 563 | | | 563 | |
| | 302+01 - 303+73 'NB' | | 172 | 172 | 71 | | 172 | |
| | | | | | | - | | - |
| | SUBTOTAL STAGE 2A | 6 | 735 | 735 | 71 | 0 | 735 | 0 |
| 2B | VARIES | 17 | | | | - | | - |
| | 296+71 - 298+37 'NB' | | 166 | 166 | - | - | 166 | - |
| | | | | | | - | | - |
| | SUBTOTAL STAGE 2B | 17 | 166 | 166 | 0 | 0 | 166 | 0 |
| 4 | VARIES | 2 | - | - | - | - | - | - |
| | 294+47 - 298+37 'NB' | | 390 | 390 | | | 290 | |
| | 303+73 - 306+40 'NB' | | 267 | 267 | 71 | - | 267 | - |
| | | | | | | - | | - |
| | SUBTOTAL STAGE 4 | 2 | 657 | 657 | 71 | 0 | 557 | 0 |
| | PROJECT TOTALS | 25 | 3117 | 3117 | 142 | 1 | 3017 | 1 |

## SAWCUT

| STAGE | STATION | 690.0150 SAWING ASPHALT LF |
|---|---|---|
| 2A | 127+00 'EB' | 26 |
| | 127+89 - 130+48 'EB' | 295 |
| | 130+27 'EB' | 40 |
| | 130+63 'EB' | 27 |
| | 9+12 'D2' | 48 |
| | 138+16.61 'EB' | 26 |
| | 133+14 'EB' | 28 |
| | 303+65.51 'NB' | 34 |
| | 302+01-303+65 'NB' | 164 |
| | 302+01 'NB' | 42 |
| | SUBTOTAL STAGE 2 | 730 |
| 2B | 296+64.6 'NB' | 34 |
| | 296+64 - 300+00 'NB' | 336 |
| | 9+32 'D2" | 44 |
| | 301+30 'NB' | 48 |
| | 132+80 'EB' | 32 |
| | SUBTOTAL STAGE 2B | 494 |
| 4 | 294+80 - 298+32 'NB' | 350 |
| | 301+15 - 306+40 'NB' | 525 |
| | 132+70 - 133+14 'EB' | 40 |
| | 132+70 - 133+14 'EB' | 55 |
| | SUBTOTAL STAGE 4 | 970 |
| | PROJECT TOTAL | 2194 |

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## PULL BOX ITEMS

| NO. | 653.0154 PULL BOXES NON-CONDUCTIVE 24X36-INCH EACH |
|---|---|
| LPB1 | 1 |
| LPB2 | 1 |
| LPB3 | 1 |
| LPB4 | 1 |
| PROJECT TOTAL | 4 |

## LIGHTING UNIT ITEMS

| LIGHTING UNIT NO. | 654.0106 CONCRETE BASES TYPE 6 EACH | 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH | 657.0327 POLES TYPE 6-ALUMINUM EACH | 657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH | 659.1120 LUMINAIRES UTILITY LED B EACH |
|---|---|---|---|---|---|
| LCC-A-1 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-2 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-3 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-4 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-5 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-6 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-7 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-8 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-9 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-10 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-11 | 1 | 1 | 1 | 1 | 1 |
| LCC-A-12 | 1 | 1 | 1 | 1 | 1 |
| PROJECT TOTAL | 12 | 12 | 12 | 12 | 12 |

## LIGHTING ELECTRICAL WIRE AND CONDUIT ITEMS

| FROM | TO | 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH (FT) | 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH (FT) | 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG (FT) | 655.0620 ELECTRICAL WIRE LIGHTING 8 AWG (FT) |
|---|---|---|---|---|---|
| LCC-A | LPB3 | | 8 | 0 | 108 |
| LCC-A-1 | LCC-A-2 | 199 | | 156 | 627 |
| LCC-A-2 | LCC-A-3 | 86 | | 156 | 288 |
| LCC-A-3 | LPB1 | 32 | | 156 | 126 |
| LPB1 | LCC-A-5 | 75 | | 156 | 255 |
| LCC-A-5 | LCC-A-4 | 197 | | 156 | 621 |
| LCC-A-5 | LCC-A-6 | 73 | | 156 | 249 |
| LCC-A-6 | LPB2 | 48 | | 0 | 174 |
| LPB2 | LCC-A-8 | 69 | | 156 | 237 |
| LPB2 | LPB3 | 33 | | 0 | 258 |
| LCC-A-8 | LCC-A-7 | 204 | | 156 | 642 |
| LCC-A-8 | LCC-A-9 | 98 | | 156 | 324 |
| LCC-A-9 | LBP4 | 40 | | 156 | 150 |
| LBP4 | LCC-A-11 | 80 | | 0 | 270 |
| LCC-A-11 | LCC-A-10 | 203 | | 156 | 639 |
| LCC-A-11 | LCC-A-12 | 93 | | 156 | 309 |
| PROJECT TOTALS | | 1530 | 8 | 1872 | 5277 |

## LIGHTING CONTROL CABINET ITEMS

| CABINET | 654.0224 CONCRETE CONTROL CABINET BASES TYPE L24 EACH | 656.0201 ELECTRICAL SERVICE METER BREAKER PEDESTAL 01. CTH J & 50TH AVE EACH | 659.2124 LIGHTING CONTROL CABINETS 120/240 24-INCH EACH |
|---|---|---|---|
| LCC-A | 1 | 1 | 1 |
| PROJECT TOTALS | 1 | 1 | 1 |

## CONVENTIONAL ABBREVIATIONS

| | |
|---|---|
| ACCESS RIGHTS | AR |
| ACRES | AC |
| AHEAD | AH |
| ALUMINUM | ALUM |
| AND OTHERS | ET AL |
| BACK | BK |
| BLOCK | BLK |
| CENTERLINE | C/L |
| CERTIFIED SURVEY MAP | CSM |
| CONCRETE | CONC |
| COUNTY | CO |
| COUNTY TRUNK HIGHWAY | CTH |
| DISTANCE | DIST |
| CORNER | COR |
| DOCUMENT NUMBER | DOC |
| EASEMENT | EASE |
| EXISTING | EX |
| GAS VALVE | GV |
| GRID NORTH | GN |
| HIGHWAY EASEMENT | HE |
| IDENTIFICATION | ID |
| LAND CONTRACT | LC |
| LEFT | LT |
| MONUMENT | MON |
| NATIONAL GEODETIC SURVEY | NGS |
| NUMBER | NO |
| OUTLOT | OL |
| PAGE | P |
| POINT OF TANGENCY | PT |
| PERMANENT LIMITED EASEMENT | PLE |
| POINT OF BEGINNING | POB |
| POINT OF CURVATURE | PC |
| POINT OF COMPOUND CURVE | PCC |
| POINT OF INTERSECTION | PI |
| PROPERTY LINE | PL |
| RECORDED AS | (100') |
| REEL / IMAGE | R/I |
| REFERENCE LINE | R/L |
| REMAINING | REM |
| RESTICTIVE DEVELOPMENT EASEMENT | RDE |
| RIGHT | RT |
| RIGHT OF WAY | R/W |
| SECTION | SEC |
| SEPTIC VENT | SEPV |
| SQUARE FEET | SF |
| STATE TRUNK HIGHWAY | STH |
| STATION | STA |
| TELEPHONE PEDESTAL | TP |
| TEMPORARY LIMITED EASEMENT | TLE |
| TRANSPORTATION PROJECT PLAT | TPP |
| UNITED STATES HIGHWAY | USH |
| VOLUME | V |

## CURVE DATA

| | |
|---|---|
| LONG CHORD | LCH |
| LONG CHORD BEARING | LCB |
| RADIUS | R |
| DEGREE OF CURVE | D |
| CENTRAL ANGLE | Δ/DELTA |
| LENGTH OF CURVE | L |
| TANGENT | T |
| DIRECTION AHEAD | DA |
| DIRECTION BACK | DB |

## CONVENTIONAL UTILITY SYMBOLS

| | |
|---|---|
| —W— | WATER |
| —G— | GAS |
| —T— | TELEPHONE |
| —OH— | OVERHEAD TRANSMISSION LINES |
| —E— | ELECTRIC |
| —TV— | CABLE TELEVISION |
| —FO— | FIBER OPTIC |
| —SAN— | SANITARY SEWER |
| —SS— | STORM SEWER |

## CONVENTIONAL SYMBOLS

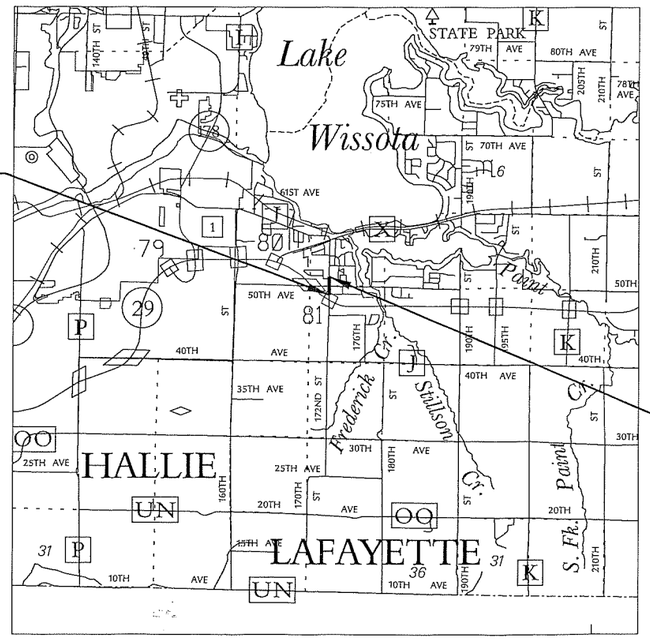
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE (P.L.)
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) (W (TYPE))
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING — TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL (18, 23, 24, 26, 25, 9)
SECTION CORNER MONUMENT
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN (R1-25)

| | COMPENSABLE | NON-COMPENSABLE |
|---|---|---|
| ELECTRIC POLE | ■ | □ |
| TELEPHONE POLE | ● | ○ |
| PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.) | ⊗ | ⊘ |

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25) UTILITY NUMBER (40)
PARALLEL OFFSETS

R 8 W | R 7 W




LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.191 MI.

BEGIN RELOCATION ORDER
STA. 296+40.00

Y= 121,420.300
X= 189,803.392

412.810 FEET SOUTH AND 1307.592 FEET EAST OF THE NORTHWEST CORNER OF SECTION 14, T28N, R8W.

END RELOCATION ORDER
STA. 306+50.00

Y= 122,425.906
X= 189,807.044

592.796 FEET NORTH AND 1311.244 FEET EAST OF THE NORTHWEST CORNER OF SECTION 14, T28N, R8W.

**NOTES:**

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), CHIPPEWA COUNTY, NAD 83, (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT OF WAY MONUMENTS ARE 3/4" X 24" REBAR AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

| R/W PROJECT NUMBER | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| 8996-01-06 | | |
| FEDERAL PROJECT NUMBER 8996-01-06 | 4.01 | 4 |

PLAT OF RIGHT-OF-WAY REQUIRED FOR

# CTH J & 50TH AVE INTERSECTION

CHIPPEWA FALLS - CTH K

CTH J — CHIPPEWA COUNTY

CONSTRUCTION PROJECT NUMBER
8996-01-07

ORIGINAL PLAT PREPARED BY

SEH

WISCONSIN
JASON L. CANCE
S-2688
CHIPPEWA FALLS
WI
LAND SURVEYOR

I JASON L. CANCE, PROFESSIONAL LAND SURVEYOR S-2688, HEREBY CERTIFY THAT THIS SURVEY IS CORRECT AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

1-30-2023 (Date) (Signature)

REVISION DATE
10-12-2023 N.C.
4-23-2024 N.C.

APPROVED FOR CHIPPEWA COUNTY
DATE: 1-31-23 (Signature)
DATE: (Sign)

E

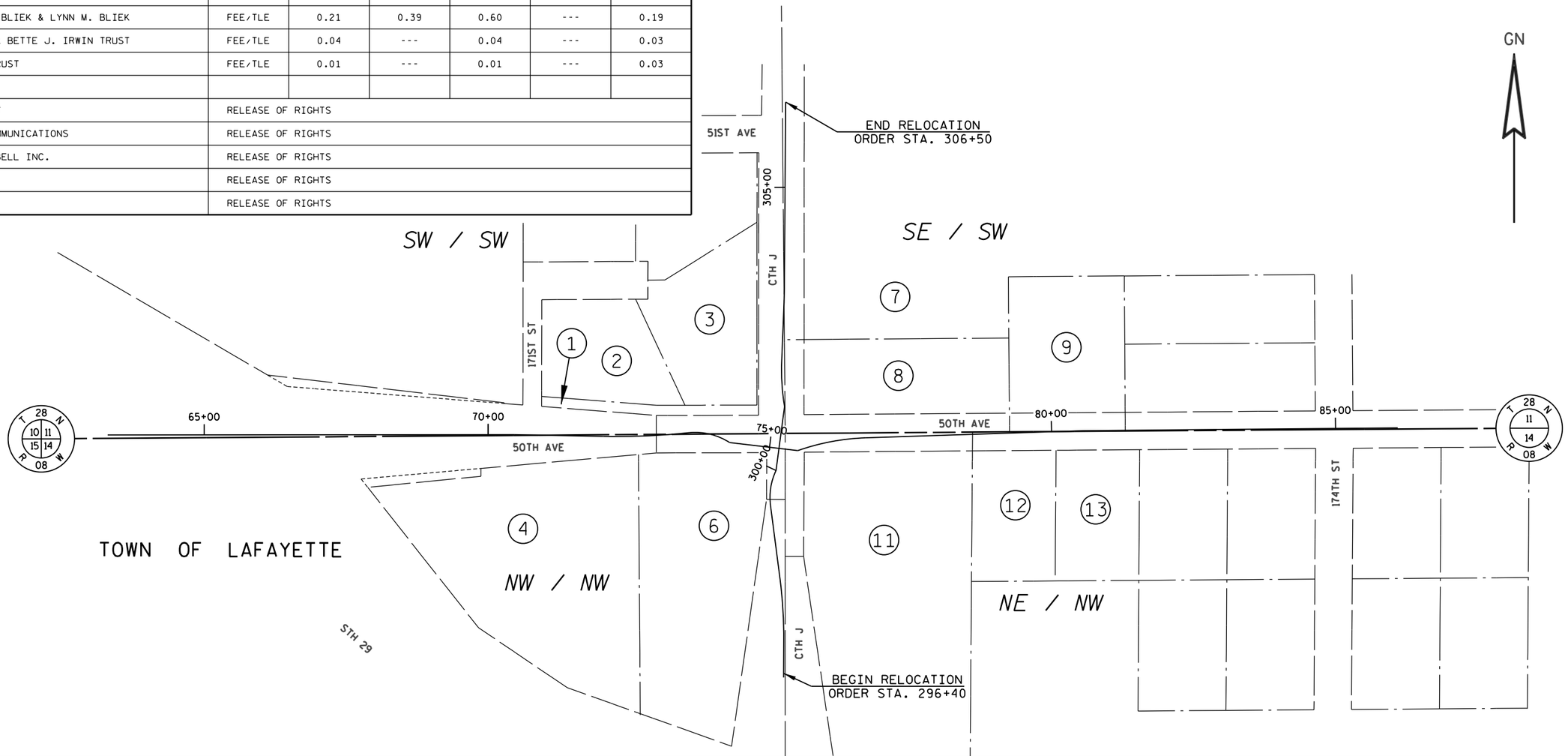


FILE NAME : X:\AE\C\CHIPH\161439\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\78630072\RW\Chippewa CTH J RAMP RW PLAT SHEET 100.dgn PLOT DATE : 1/30/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 50

# SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

| PARCEL NUMBER | SHEET NUMBER | OWNER (S) | INTEREST REQUIRED | R/W NEW ACRES | R/W EXISTING ACRES | R/W TOTAL ACRES | PLE ACRES | TLE ACRES |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.04 | WALTER M. & LINDA P. KOGUTKIEWICZ AND RANDY L. & KATHLEEN M. NELSON | FEE/TLE | 0.09 | --- | 0.09 | --- | 0.06 |
| 2 | 4.04 | MJ SLONGA ENTERPRISE LLC | FEE/TLE | 0.01 | --- | 0.01 | --- | 0.05 |
| 3 | 4.04 | KURTENBACH INVESTMENTS LLC | FEE/TLE | 0.09 | --- | 0.09 | --- | 0.02 |
| 4 | 4.04 | J&S SALES OF CHIPPEWA FALLS LLC | FEE/TLE | 0.49 | --- | 0.49 | 0.24 | 0.23 |
| 6 | 4.04 | 4 KIDS REALTY LLC | FEE/TLE | 0.39 | --- | 0.39 | --- | 0.18 |
| 7 | 4.05 | LIBERTY CHRISTIAN SCHOOL INC. | FEE/TLE | 0.01 | 0.06 | 0.07 | --- | 0.16 |
| 8 | 4.05 | GREGORY S. MITWEDE & MARGARET C. MITWEDE | FEE/TLE | 0.14 | 0.40 | 0.54 | --- | 0.22 |
| 9 | 4.05 | JAN MAHONEY | TLE | --- | --- | --- | --- | 0.05 |
| 11 | 4.05 | TIMOTHY S. BLIEK & LYNN M. BLIEK | FEE/TLE | 0.21 | 0.39 | 0.60 | --- | 0.19 |
| 12 | 4.05 | ROBERT A. & BETTE J. IRWIN TRUST | FEE/TLE | 0.04 | --- | 0.04 | --- | 0.03 |
| 13 | 4.05 | TJ GAIER TRUST | FEE/TLE | 0.01 | --- | 0.01 | --- | 0.03 |
| | | | | | | | | |
| 50 | 4.03 & 4.04 | XCEL ENERGY | RELEASE OF RIGHTS | | | | | |
| 51 | 4.03 & 4.04 | CHARTER COMMUNICATIONS | RELEASE OF RIGHTS | | | | | |
| 52 | 4.03 & 4.04 | WISCONSIN BELL INC. | RELEASE OF RIGHTS | | | | | |
| 53 | 4.03 | AT&T | RELEASE OF RIGHTS | | | | | |
| 54 | 4.03 | CINC | RELEASE OF RIGHTS | | | | | |




4

4

| REVISION DATE 10-12-2023 4-23-2024 | | 0 100' 200' | HWY: 50TH AVENUE | STATE R/W PROJECT NUMBER 8996-01-06 | PLAT SHEET NO: 4.02 | |
|---|---|---|---|---|---|---|
| | | | COUNTY: CHIPPEWA | CONSTRUCTION PROJECT NUMBER 8996-01-07 | PS&E SHEET 89 | E |

FILE NAME : X:\AE\C\CHIPH\161439\5-final-dsgn\51-drawings\40-TransHwy\Civil 3D\78630072\RW\Chippewa CTH J TRAMER PLAT SHEET00.dgn PLOT DATE : 4/22/2024 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

PI STA. = 72+67.81
Y=121836.156
X=189550.608
DELTA = 6°13'40" LT
D = 4°46'29"
T = 65.28'
L = 130.43'
R = 1200.00'
PC STA. 72+02.53
PT STA. 73+32.96

PI STA. = 73+93.80
Y=121847.422
X=189676.225
DELTA = 38°20'58" RT
D = 52°05'13"
T = 38.25'
L = 73.63'
R = 110.00'
PC STA. 73+55.55
PT STA. 74+29.18

PI STA. = 303+10.04
Y=122085.946
X=189804.679
DELTA = 1°54'04" LT
D = 3°49'11"
T = 24.89'
L = 49.77'
R = 1500.00'
PC STA. 302+85.15
PT STA. 303+34.92

PI STA. = 297+51.32
Y=121531.614
X=189804.043
DELTA = 7°43'48" LT
D = 7°09'43"
T = 54.05'
L = 107.93'
R = 800.00'
PC STA. 296+97.27
PT STA. 298+05.20

PI STA. = 299+69.34
Y=121747.990
X=189775.961
DELTA = 32°52'08" RT
D = 52°05'13"
T = 32.45'
L = 63.10'
R = 110.00'
PC STA. 299+36.90
PT STA. 300+00.00

PI STA. = 301+54.14
Y=121929.905
X=189798.412
DELTA = 11°33'17" RT
D = 14°19'26"
T = 40.47'
L = 80.67'
R = 400.00'
PC STA. 301+13.67
PT STA. 301+94.34

EXISTING RIGHT OF WAY WAS BASED ON THE FOLLOWING:

50TH AVE.
- CSM NO. 3376
- CSM NO. 2979
- PROJECT F020-1(33)
- TRAVELED CENTERLINE

CTH J
- PROJECT F020-1(33)
- CSM NO. 3376
- CSM NO. 2979

| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 600 | 72+52.00 | 3.14' LT |
| 601 | 72+52.00 | 40.42' LT |
| 602 | 73+29.00 | 59.00' LT |
| 603 | 73+96.00 | 83.00' LT |
| 604 | 301+76.00 | 50.00' LT |
| 605 | 301+91.00 | 40.64' LT |
| 606 | 302+42.00 | 42.64' LT |
| 607 | 302+42.00 | 0.00' LT |
| 608 | 302+42.00 | 37.42' RT |
| 609 | 300+66.88 | 7.51' RT |
| 610 | 297+46.00 | 50.42' RT |
| 611 | 297+46.00 | 0.00' RT |
| 612 | 297+46.00 | 58.19' LT |
| 613 | 297+75.00 | 52.33' LT |
| 614 | 299+50.00 | 67.00' LT |
| 615 | 74+29.18 | 43.76' LT |
| 616 | 73+07.00 | 52.00' RT |
| 617 | 72+80.00 | 134.00' RT |
| 618 | 70+62.00 | 134.00' RT |
| 619 | 70+13.00 | 73.00' RT |
| 620 | 69+87.45 | 73.00' RT |
| 621 | 69+87.45 | 59.30' RT |
| 622 | 69+87.45 | 1.68' RT |
| 623 | 70+94.73 | 0.00' RT |
| 624 | 73+22.98 | 0.00' RT |
| 625 | 73+90.37 | 0.00' RT |
| 626 | 300+65.83 | 0.00' RT |

TOWN OF LAFAYETTE

(50) XCEL ENERGY
*AMBIGUOUS EASEMENT*
*DOC. NO. 299037*
*AFFECTS PARCELS 1, 2, & 3*

(52) WISCONSIN BELL INC.
*1 ROD EASEMENT*
*DOC. NO. 515668*
*AFFECTS PARCELS 1, 2, & 3*

ROADWAY EASEMENT
DOC. NO. 736328

171ST ST

SW / SW

LOT 1
CSM 3376
DOC. # 738679

(2) MJ SLONGA ENTERPRISE, LLC

(3) KURTENBACH INVESTMENTS LLC

WALTER KOGUTKIEWICZ ETAL.

CHARTER COMMUNICATIONS

(54) CINC

(53) AT&T

(51)

(1)

LOT 2
CSM 3376
DOC. # 738679

TLE SLOPES
0.04 AC.

TLE SLOPES
0.01 AC.

TLE SLOPES
0.02 AC.

TLE SLOPES
0.05 AC.

SLOPE INTERCEPT

PARCEL 1 ACQUIRED AS PART OF PROJECT 1050-01-20

PARCEL 2 ACQUIRED AS PART OF PROJECT 1050-01-20

CTH J

80'

66'

305+00

PT 303+34.92

PI 303+10.04

PC 302+85.15

PI 301+54.14

PT 301+94.34

PC 301+13.67

PI 73+93.80

PT 73+32.96

PI 70+45.78

PC 72+02.53

70+00

PI 72+67.81

PC 73+55.55

75+00

PT 74+29.18

PI 299+69.34

PT 300+00.00

PC 299+36.90

PI 297+51.32

PC 296+97.27

VARIABLE

BEGIN RELOCATION
ORDER STA. 296+40

R=N89°57'39"E

R=S88°53'50"E

R=S83°24'03"E

R=N07°35'05"E

R=N00°23'55"E

R=N02°17'59"E

R=N84°52'30"E

R=N07°23'41"W

R=N00°20'07"E

SEE TRANSPORTATION PROJECT
PLAT 1050-01-20-4.01
AMENDMENT NO. 1
DOC. NO. 947787

50TH AVE

STH 29

NW / NW

(50) XCEL ENERGY

(53) AT&T

(6) 4 KIDS REALTY LLC.

(4) J & S SALES OF CHIPPEWA FALLS

(52) WISCONSIN BELL INC.
*1 ROD EASEMENT*
*DOC. NO. 560033*

LOT 1
CSM 2979
DOC. # 709216

LOT 2
CSM 2979
DOC. # 709216

TLE SLOPES
0.18 AC.

TLE SLOPES
0.23 AC.

PLE DRAINAGE
0.24 AC.

SLOPE INTERCEPT

P.L.

FO

G

JP

IP

T 28 N 11 14 R 08 W 221

FND PK NAIL
Y = 121,851.916
X = 191,116.772

COMPUTED LOCATION OF 40 CORNER
Y = 121,842.587
X = 189,806.194

STA 75+16.66 =
STA 300+39.47
Y = 121,816.409
X = 189,795.127

T 28 N 10 11 15 14 R 08 W 222

COMPUTED POSTION PER TIES
Y = 121,833.110
X = 188,495.800

**NOTE**
THE ALIGNMENTS SHOWN ON THIS PLAT DO NOT MATCH DESIGN ALIGNMENTS SHOWN ON PLAN SHEETS FOR THIS PROJECT.

| COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 222-622 | N89°35'08"E | 774.51' |
| 622-623 | N89°35'08"E | 107.27' |
| 623-600 | N89°35'08"E | 157.19' |
| 600-601 | N01°15'34"W | 37.28' |
| 601-602 | N72°46'40"E | 76.10' |
| 602-603 | N78°16'00"E | 96.38' |
| 603-604 | N56°57'57"E | 58.15' |
| 604-605 | N30°01'38"E | 19.14' |
| 605-606 | N00°02'53"E | 51.38' |
| 606-607 | S87°42'01"E | 42.64' |
| 607-608 | S87°42'01"E | 37.42' |
| 608-609 | S10°47'36"W | 177.01' |
| 609-610 | S08°28'03"E | 316.99' |
| 610-611 | S86°50'42"W | 50.42' |
| 611-612 | S86°50'42"W | 58.19' |
| 612-613 | N08°02'58"E | 27.62' |
| 613-614 | N11°28'01"W | 181.41' |
| 614-615 | N23°07'22"W | 65.53' |
| 615-616 | S89°44'49"W | 93.23' |
| 616-617 | S16°17'38"W | 87.00' |
| 617-618 | N89°36'00"W | 226.61' |
| 618-619 | N37°07'12"W | 76.83' |
| 619-620 | S89°57'39"W | 25.55' |
| 620-621 | N00°01'33"W | 13.70' |
| 621-622 | N00°02'26"W | 57.62' |
| 222-609 | N89°35'08"E | 1310.43' |
| 609-221 | N89°35'32"E | 1310.61' |
| 600-624 | N89°35'08"E | 70.94' |
| 624-625 | N89°35'08"E | 67.04' |
| 625-626 | N89°35'08"E | 125.89' |
| 626-609 | N89°35'08"E | 7.59' |

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 653 | 70+90.92 | 185.01' LT |
| 654 | 71+00.00 | 185.00' LT |
| 655 | 71+14.00 | 60.00' LT |
| 656 | 72+76.00 | 53.00' LT |
| 657 | 73+28.00 | 64.00' LT |
| 658 | 73+96.00 | 88.00' LT |
| 659 | 301+79.00 | 54.00' LT |
| 660 | 299+32.00 | 75.00' LT |
| 661 | 299+45.00 | 82.00' LT |
| 662 | 299+46.00 | 112.00' LT |
| 663 | 299+56.00 | 112.00' LT |
| 664 | 73+63.00 | 83.00' RT |
| 665 | 73+23.00 | 80.00' RT |
| 666 | 72+73.00 | 155.00' RT |
| 667 | 70+50.00 | 170.00' RT |
| 668 | 70+00.00 | 135.00' RT |
| 669 | 69+87.45 | 93.06' RT |

| PLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 670 | 69+49.58 | 76.79' RT |
| 671 | 68+83.58 | 213.89' RT |
| 672 | 67+87.84 | 92.49' RT |
| 673 | 67+87.26 | 2.99' RT |
| 674 | 69+49.09 | 1.93' RT |

| PLE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 222-673 | N89°35'08"E | 574.31' |
| 673-674 | N89°35'08"E | 161.84' |
| 674-670 | S00°24'52"E | 74.86' |
| 670-671 | S25°40'09"W | 152.16' |
| 671-672 | N38°17'54"W | 154.60' |
| 672-673 | N00°24'52"W | 89.50' |

GN

4

4

REVISION DATE 10-12-2023 4-23-2024

DATE 4-17-2024

GRID FACTOR N/A

SCALE, FEET
0 50' 100'

HWY: 50TH AVENUE

COUNTY: CHIPPEWA

STATE R/W PROJECT NUMBER 8996-01-06

CONSTRUCTION PROJECT NUMBER 8996-01-07

PLAT SHEET NO: 4.03

PS&E SHEET 90

E

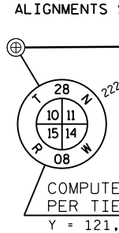
| COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 222-700 | N89°35'08"E | 1310.43' |
| 700-701 | N13°29'54"W | 200.65' |
| 701-702 | S87°42'01"E | 43.35' |
| 702-703 | S87°42'01"E | 36.72' |
| 703-704 | S21°27'19"E | 40.43' |
| 704-705 | S09°30'29"E | 87.29' |
| 705-706 | S38°34'09"E | 16.43' |
| 706-707 | S87°15'41"E | 64.66' |
| 707-708 | S80°47'10"E | 72.69' |
| 708-709 | S88°13'53"E | 162.33' |
| 709-710 | N89°35'20"E | 240.81' |
| 710-711 | S00°30'43"E | 31.56' |
| 711-712 | S00°30'43"E | 1.40' |
| 712-713 | S00°30'43"E | 33.04' |
| 713-714 | S85°44'42"W | 108.24' |
| 714-715 | S87°18'18"W | 354.04' |
| 715-716 | S73°13'16"W | 123.04' |
| 716-717 | S04°20'41"E | 275.41' |
| 717-718 | N89°47'19"W | 56.53' |
| 718-719 | N89°47'19"W | 65.46' |
| 719-700 | N10°35'49"E | 369.35' |
| 700-221 | N89°35'32"E | 1310.61' |
| 700-720 | N89°35'32"E | 476.80' |
| 720-712 | N10°35'32"E | 135.51' |
| 700-221 | N89°35'32"E | 698.30' |

EXISTING RIGHT OF WAY WAS BASED ON THE FOLLOWING:

50TH AVE.
- CSM NO. 4309
- CSM NO. 460
- SUNRISE VILLAGE
- FIRST ADDITION TO STILLSON SHORES
- PROJECT F020-1(33)
- TRAVELED CENTERLINE

CTH J
- PROJECT F020-1(33)
- CSM NO. 4309
- TRAVELED CENTERLINE

**NOTE**
THE ALIGNMENTS SHOWN ON THIS PLAT DO NOT MATCH DESIGN ALIGNMENTS SHOWN ON PLAN SHEETS FOR THIS PROJECT.




COMPUTED POSTION PER TIES
Y = 121,833.110
X = 188,495.800

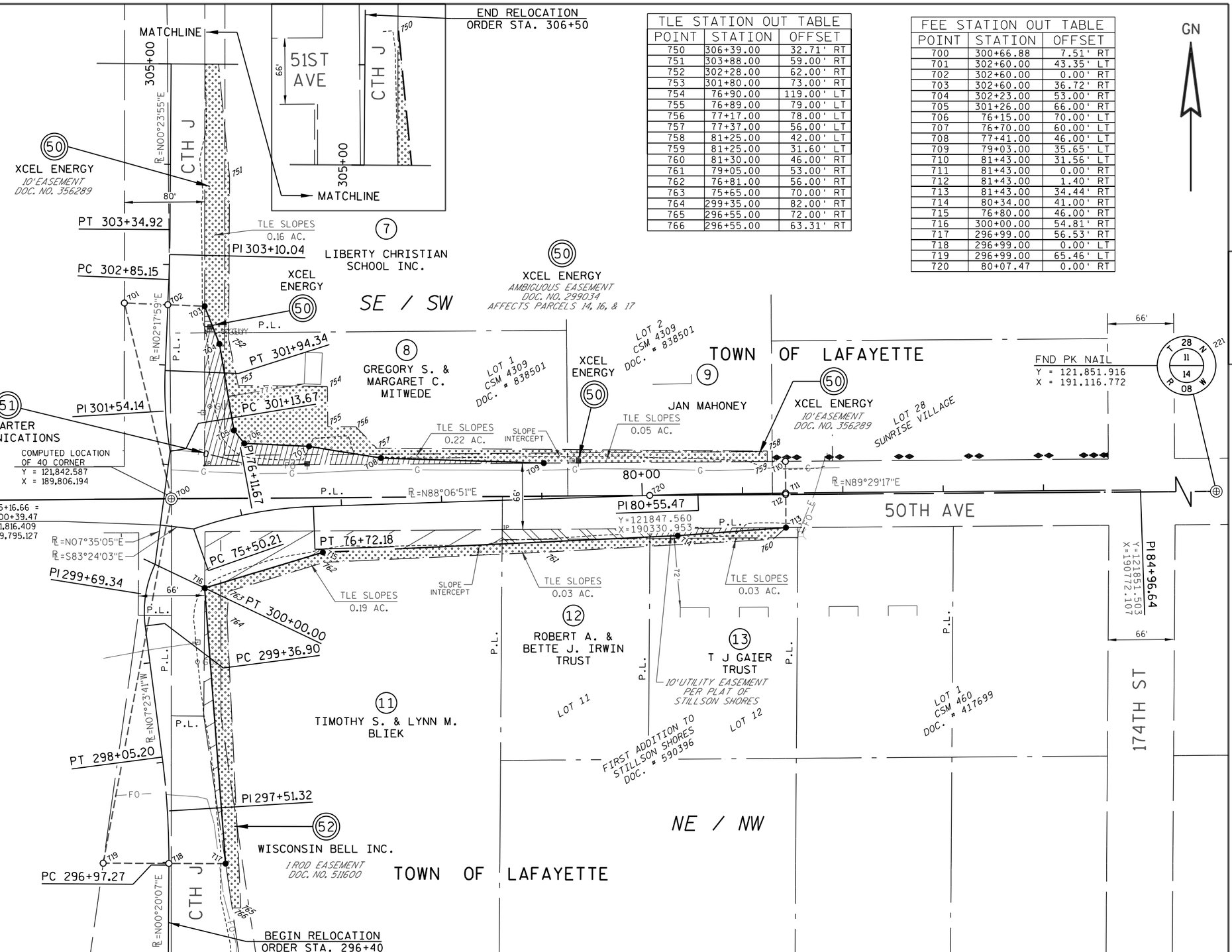
PI STA. = 303+10.04
Y=122085.946
X=189804.679
DELTA = 1°54'04" LT
D = 3°49'11"
T = 24.89'
L = 49.77'
R = 1500.00'
PC STA. 302+85.15
PT STA. 303+34.92

PI STA. = 76+11.67
Y=1218362.925
X=189886.441
DELTA = 17°28'15" RT
D = 14°19'26"
T = 61.46'
L = 121.97'
R = 400.00'
PC STA. 75+50.21
PT STA. 76+72.18

PI STA. = 297+51.32
Y=121531.614
X=189804.043
DELTA = 7°43'48" LT
D = 7°09'43"
T = 54.05'
L = 107.93'
R = 800.00'
PC STA. 296+97.27
PT STA. 298+05.20

PI STA. = 299+69.34
Y=121747.990
X=189775.961
DELTA = 32°52'08" RT
D = 52°05'13"
T = 32.45'
L = 63.10'
R = 110.00'
PC STA. 299+36.90
PT STA. 300+00.00

PI STA. = 301+54.14
Y=121929.905
X=189798.412
DELTA = 11°33'17" RT
D = 14°19'26"
T = 40.47'
L = 80.67'
R = 400.00'
PC STA. 301+13.67
PT STA. 301+94.34



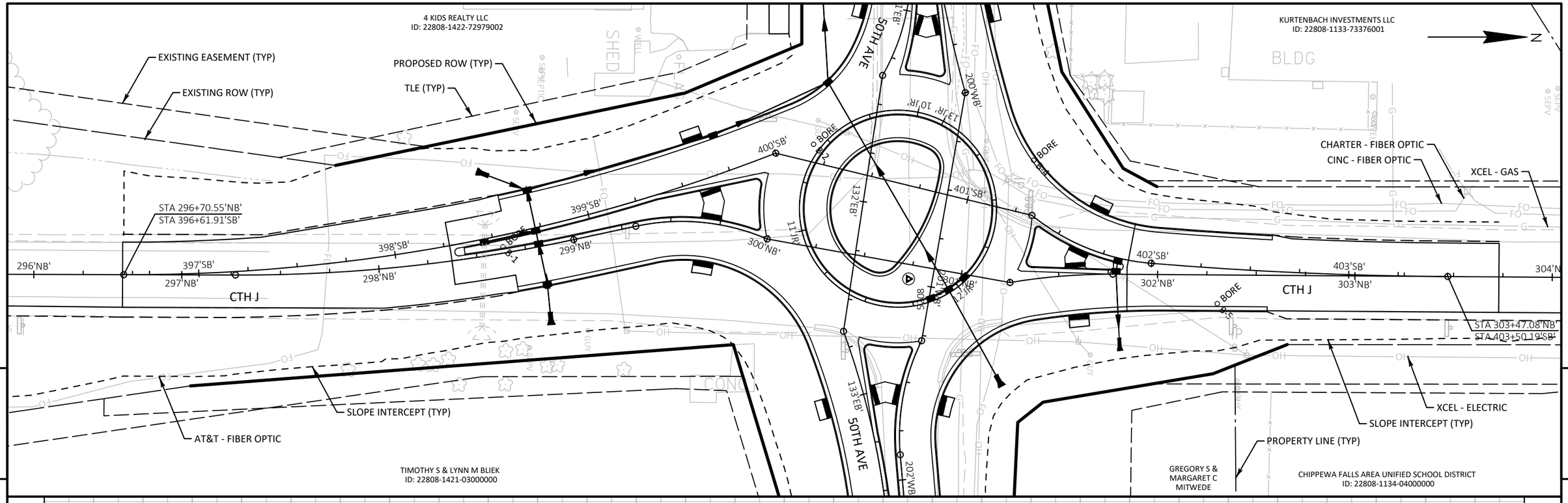

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 750 | 306+39.00 | 32.71' RT |
| 751 | 303+88.00 | 59.00' RT |
| 752 | 302+28.00 | 62.00' RT |
| 753 | 301+80.00 | 73.00' RT |
| 754 | 76+90.00 | 119.00' LT |
| 755 | 76+89.00 | 79.00' LT |
| 756 | 77+17.00 | 78.00' LT |
| 757 | 77+37.00 | 56.00' LT |
| 758 | 81+25.00 | 42.00' LT |
| 759 | 81+25.00 | 31.60' LT |
| 760 | 81+30.00 | 46.00' RT |
| 761 | 79+05.00 | 53.00' RT |
| 762 | 76+81.00 | 56.00' RT |
| 763 | 75+65.00 | 70.00' RT |
| 764 | 299+35.00 | 82.00' RT |
| 765 | 296+55.00 | 72.00' RT |
| 766 | 296+55.00 | 63.31' RT |

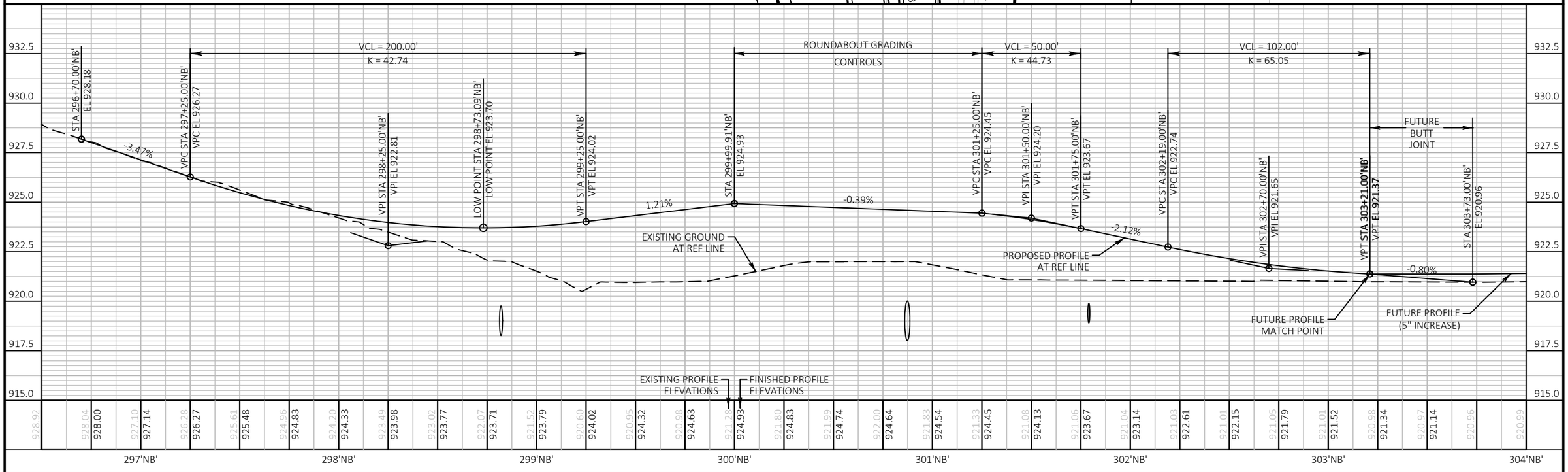
| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 700 | 300+66.88 | 7.51' RT |
| 701 | 302+60.00 | 43.35' LT |
| 702 | 302+60.00 | 0.00' RT |
| 703 | 302+60.00 | 36.72' RT |
| 704 | 302+23.00 | 53.00' RT |
| 705 | 301+26.00 | 66.00' RT |
| 706 | 76+15.00 | 70.00' LT |
| 707 | 76+70.00 | 60.00' LT |
| 708 | 77+41.00 | 46.00' LT |
| 709 | 79+03.00 | 35.65' LT |
| 710 | 81+43.00 | 31.56' LT |
| 711 | 81+43.00 | 0.00' RT |
| 712 | 81+43.00 | 1.40' RT |
| 713 | 81+43.00 | 34.44' RT |
| 714 | 80+34.00 | 41.00' RT |
| 715 | 76+80.00 | 46.00' RT |
| 716 | 300+00.00 | 54.81' RT |
| 717 | 296+99.00 | 56.53' RT |
| 718 | 296+99.00 | 0.00' LT |
| 719 | 296+99.00 | 65.46' LT |
| 720 | 80+07.47 | 0.00' RT |

GN

| REVISION DATE | 10-12-2023 | 4-23-2024 |
|---|---|---|
| DATE 4-17-2024 | SCALE, FEET 0 50' 100' | HWY: 50TH AVE |
| GRID FACTOR N/A | | COUNTY: CHIPPEWA |

STATE R/W PROJECT NUMBER 8996-01-06
CONSTRUCTION PROJECT NUMBER 8996-01-07
PLAT SHEET NO: 4.04
PS&E SHEET 91 E




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: CTH J NB | SHEET 92 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\050101_PP (PLAN & PROFILE).DWG
LAYOUT NAME - NB

PLOT DATE : 7/26/2024 8:52 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

4 KIDS REALTY LLC
ID: 22808-1422-72979002

KURTENBACH INVESTMENTS LLC
ID: 22808-1133-73376001

EXISTING EASEMENT (TYP)
EXISTING ROW (TYP)
PROPOSED ROW (TYP)
TLE (TYP)

STA 296+70.55'NB'
STA 396+61.91'SB'

CHARTER - FIBER OPTIC
CINC - FIBER OPTIC
XCEL - GAS

CTH J

STA 303+47.08'NB'
STA 403+50.19'SB'

SLOPE INTERCEPT (TYP)
AT&T - FIBER OPTIC
XCEL - ELECTRIC
PROPERTY LINE (TYP)

50TH AVE

TIMOTHY S & LYNN M BLIEK
ID: 22808-1421-03000000

GREGORY S & MARGARET C MITWEDE

CHIPPEWA FALLS AREA UNIFIED SCHOOL DISTRICT
ID: 22808-1134-04000000

5

5

VCL = 200.00'
K = 39.99

ROUNDABOUT GRADING CONTROLS

VCL = 50.00'
K = 70.59

VCL = 102.00'
K = 65.26

STA 396+61.91'SB'
EL 928.16

VPC STA 397+25.00'SB'
VPC EL 925.96

VPI STA 398+25.00'SB'
VPI EL 922.47

LOW POINT STA 398+64.54'SB'
LOW POINT EL 923.52

VPT STA 399+25.00'SB'
VPT EL 923.98

STA 400+00.00'SB'
EL 925.11

VPC STA 401+35.00'SB'
VPC EL 924.55

VPI STA 401+60.00'SB'
VPI EL 924.17

VPT STA 401+85.00'SB'
VPT EL 923.62

VPC STA 402+24.00'SB'
VPC EL 922.77

VPI STA 402+75.00'SB'
VPI EL 921.64

VPT STA 403+26.00'SB'
VPT EL 921.32

STA 403+50.19'SB'
EL 921.17

STA 401+33.59'SB'
EL 924.57

-3.49%
1.51%
-0.41%
-1.49%
-2.20%
-0.64%

EXISTING GROUND AT REF LINE
PROPOSED PROFILE AT REF LINE

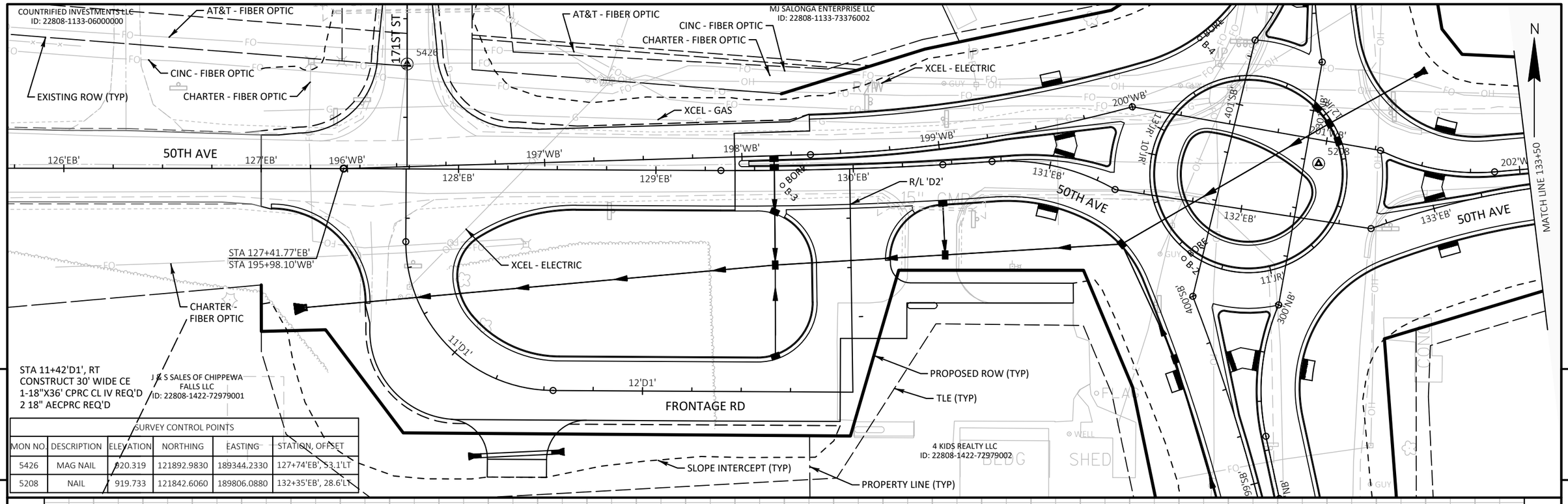
EXISTING PROFILE ELEVATIONS
FINISHED PROFILE ELEVATIONS

| 397'SB' | 398'SB' | 399'SB' | 400'SB' | 401'SB' | 402'SB' | 403'SB' | 404'SB' |
|---|---|---|---|---|---|---|---|
| 927.68 | 927.70 | 926.87 | 926.83 | 926.03 | 925.96 | 925.22 | 925.16 |
| 924.74 | 924.52 | 923.99 | 924.04 | 923.09 | 923.72 | 922.19 | 923.55 |
| 920.65 | 923.53 | 920.04 | 923.68 | 920.89 | 923.98 | 920.92 | 924.36 |
| 921.02 | 924.73 | 921.21 | 925.11 | 921.55 | 925.01 | 921.88 | 924.91 |
| 921.93 | 924.81 | 921.46 | 924.70 | 921.13 | 924.60 | 921.02 | 924.31 |
| 921.03 | 923.84 | 921.04 | 923.29 | 921.03 | 922.74 | 921.01 | 922.25 |
| 921.02 | 921.84 | 921.00 | 921.54 | 920.98 | 921.33 | 920.97 | 921.17 |

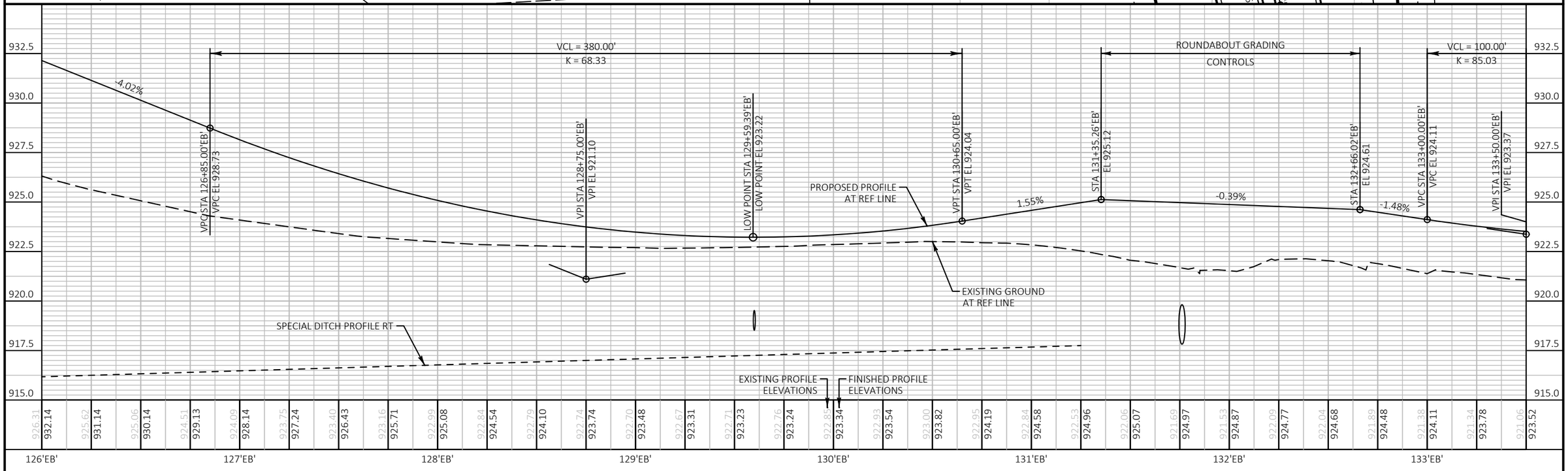
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: CTH J SB | SHEET 93 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\050101_PP (PLAN & PROFILE).DWG
LAYOUT NAME - SB

PLOT DATE : 7/26/2024 8:52 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:50 FT




| SURVEY CONTROL POINTS | | | | | |
|---|---|---|---|---|---|
| MON NO. | DESCRIPTION | ELEVATION | NORTHING | EASTING | STATION, OFFSET |
| 5426 | MAG NAIL | 920.319 | 121892.9830 | 189344.2330 | 127+74'EB', 53.1'LT |
| 5208 | NAIL | 919.733 | 121842.6060 | 189806.0880 | 132+35'EB', 28.6'LT |




| | | | | |
|---|---|---|---|---|
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: 50TH AVENUE EB | SHEET 94 E |

GREGORY S & MARGARET
C MITWEDE
ID: 22808-1134-74309001

JAN MAHONEY
ID: 22808-1134-74309002

MARY L SCHEIDLER
ID: 22808-1134-67070028

| SURVEY CONTROL POINTS | | | | | |
|---|---|---|---|---|---|
| MON NO. | DESCRIPTION | ELEVATION | NORTHING | EASTING | STATION, OFFSET |
| 5420 | 1" PIPE | 920.688 | 121811.8730 | 190136.0940 | 135+72'EB', 28.4'RT |
| 5417 | 1" PIPE | 922.378 | 121878.3660 | 190201.6730 | 136+40'EB', 35.7'LT |
| 5418 | 1 1/4" REBAR | 922.202 | 121879.8290 | 190405.6520 | 138+43'EB', 32.0'LT |

N

STA 202+64'WB', LT
RECONSTRUCT 36' WIDE CE
1-18"X46' CPRC CL IV REQ'D
2 18" AECPRC REQ'D

STA 204+30'WB', LT
RECONSTRUCT 36' WIDE CE
1-12"X46' CPRC CL IV REQ'D
2 12" AECPRC REQ'D

STA 205+36'WB', LT
RECONSTRUCT 16' WIDE PE
SAWCUT REQ'D

CONTRACTOR TO PROTECT RED MAPLE TREE AND MINIMIZE IMPACTS TO THE ROOT ZONE DURING GRADING OPERATIONS

EXISTING EASEMENT (TYP)

XCEL - ELECTRIC

XCEL - GAS

STA 137+68.60'EB'
STA 206+23.99'WB'

5417

5418

CHARTER - FIBER OPTIC

6" BORE

MATCH LINE 133+50

203'WB'

204'WB'

205'WB'

206'WB'

138'EB'

139'EB'

140'EB'

141'EB'

134'EB'

135'EB'

136'EB'

137'EB'

50TH AVE

XCEL - ELECTRIC

5420

SLOPE INTERCEPT (TYP)

PROPERTY OWNER
IRRIGATION SYSTEM

PROPOSED ROW (TYP)

TLE (TYP)

STA 135+36'EB', RT
CONSTRUCT 30' WIDE CE
1-18"X36' CPRC CL IV REQ'D
2 18" AECPRC REQ'D

STA 137+94'EB', RT
RECONSTRUCT 18' WIDE PE
1-15"X30' CPRC CL IV REQ'D
2 15" AECPRC REQ'D
SAWCUT REQ'D

PROPERTY LINE (TYP)

TIMOTHY S & LYNN M BLIEK
ID: 22808-1421-03000000

ROBERT A & BETTE J IRWIN TRUST
ID: 22808-1421-66290011

T J GAIER TRUST
ID: 22808-1421-66290012

BRENDA GAIER
ID: 22808-1421-70460001A

IRWIN RENTAL PROPERTIES LLC
ID: 22808-1421-70460001B

5

5

VCL = 100.00'
K = 85.03

VCL = 120.00'
K = 156.74

VPI STA 133+50.00'EB'
VPI EL 923.37

VPT STA 134+00.00'EB'
VPT EL 923.22

VPC STA 136+40.00'EB'
VPC EL 922.49

VPI STA 137+00.00'EB'
VPI EL 922.31

VPT STA 137+60.00'EB'
VPT EL 922.58

STA 138+16.61'EB'
EL 922.85

PROPOSED PROFILE
AT REF LINE

-0.30%

0.46%

EXISTING GROUND
AT REF LINE

LOW POINT STA 136+87.64'EB'
LOW POINT EL 922.42

SPECIAL DITCH PROFILE RT

STA 138+31'EB'
(1)-RCCP 15-INCH CL IV
(1)-CONCRETE COLLAR REQ'D
SKEW 6.0° LHF

EXISTING PROFILE
ELEVATIONS

FINISHED PROFILE
ELEVATIONS

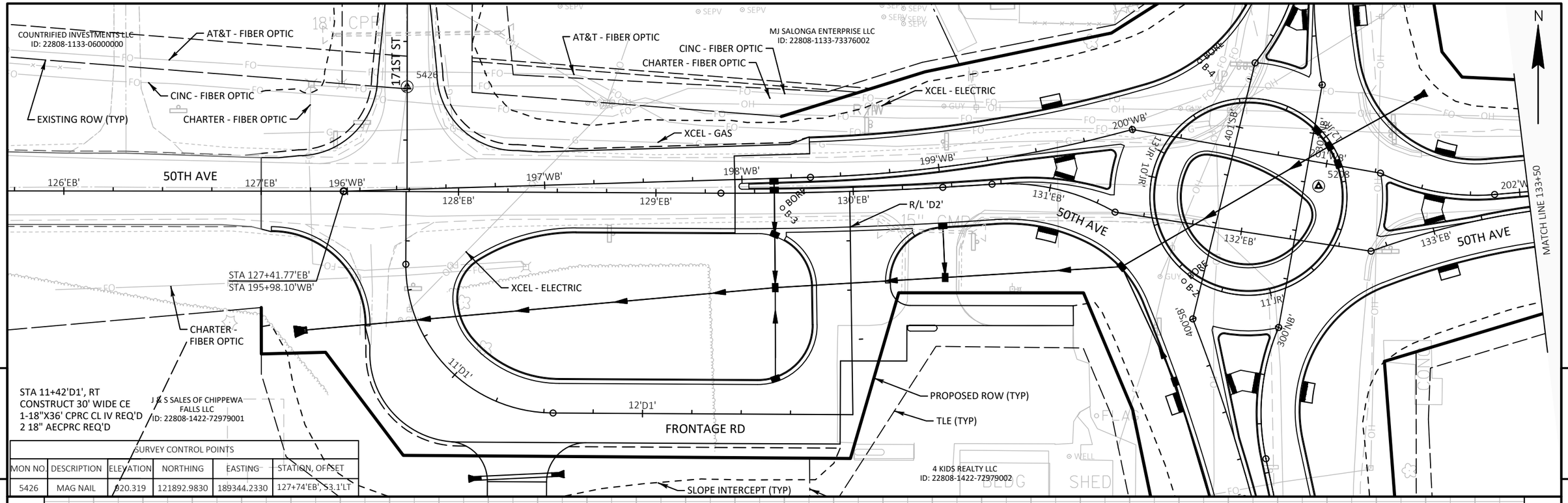
932.5
930.0
927.5
925.0
922.5
920.0
917.5
915.0

| 134'EB' | 135'EB' | 136'EB' | 137'EB' | 138'EB' | 139'EB' | 140'EB' | 141'EB' |
|---|---|---|---|---|---|---|---|
| 921.06 | 923.52 | 921.07 | 923.33 | 921.05 | 923.22 | 921.04 | 923.14 |
| 921.15 | 923.07 | 921.29 | 922.99 | 921.44 | 922.92 | 921.63 | 922.84 |
| 921.84 | 922.76 | 922.07 | 922.69 | 922.23 | 922.61 | 922.44 | 922.54 |
| 922.67 | 922.46 | 922.84 | 922.42 | 922.77 | 922.42 | 922.71 | 922.46 |
| 922.65 | 922.54 | 922.66 | 922.65 | 922.77 | 922.77 | 922.88 | 922.99 |
| 923.17 | 923.36 | 923.55 | 923.75 | 923.94 | 924.14 | 924.31 | 924.33 |
| 924.36 | 924.38 | | | | | | |

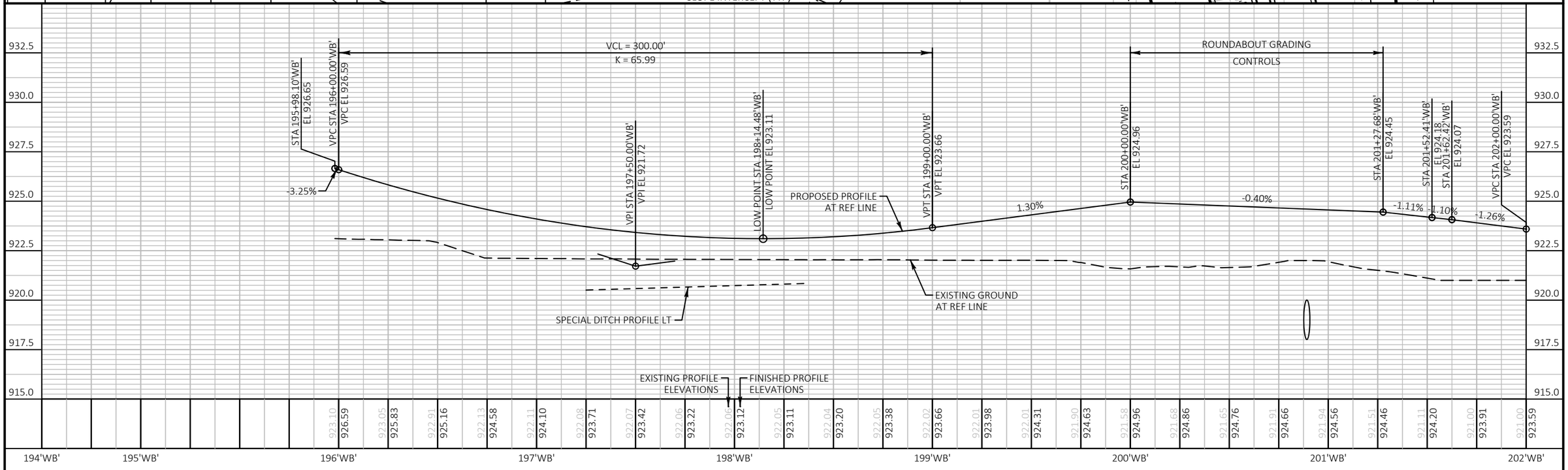
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: 50TH AVENUE EB | SHEET 95 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\050101_PP (PLAN & PROFILE).DWG
LAYOUT NAME - EB2

PLOT DATE : 7/26/2024 8:52 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:50 FT




| SURVEY CONTROL POINTS | | | | | |
|---|---|---|---|---|---|
| MON NO. | DESCRIPTION | ELEVATION | NORTHING | EASTING | STATION, OFFSET |
| 5426 | MAG NAIL | 920.319 | 121892.9830 | 189344.2330 | 127+74'EB', 53.1'LT |




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: 50TH AVENUE WB | SHEET 96 E |
|---|---|---|---|---|


FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\050101_PP (PLAN & PROFILE).DWG
LAYOUT NAME - WB1
PLOT DATE : 7/26/2024 8:53 AM
PLOT BY : DEAN STODOLA
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

GREGORY S & MARGARET
C MITWEDE
ID: 22808-1134-74309001

JAN MAHONEY
ID: 22808-1134-74309002

MARY L SCHEIDLER
ID: 22808-1134-67070028

STA 202+64'WB', LT
RECONSTRUCT 36' WIDE CE
1-18"X46' CPRC CL IV REQ'D
2 18" AECPRC REQ'D

STA 204+30'WB', LT
RECONSTRUCT 36' WIDE CE
1-12"X46' CPRC CL IV REQ'D
2 12" AECPRC REQ'D

STA 205+36'WB', LT
RECONSTRUCT 16' WIDE PE
SAWCUT REQ'D

CONTRACTOR TO PROTECT RED MAPLE TREE AND MINIMIZE IMPACTS TO THE ROOT ZONE DURING GRADING OPERATIONS

| SURVEY CONTROL POINTS | | | | | |
|---|---|---|---|---|---|
| MON NO. | DESCRIPTION | ELEVATION | NORTHING | EASTING | STATION, OFFSET |
| 5420 | 1" PIPE | 920.688 | 121811.8730 | 190136.0940 | 135+72'EB', 28.4'RT |
| 5417 | 1" PIPE | 922.378 | 121878.3660 | 190201.6730 | 136+40'EB', 35.7'LT |
| 5418 | 1 1/4" REBAR | 922.202 | 121879.8290 | 190405.6520 | 138+43'EB', 32.0'LT |

N

EXISTING EASEMENT (TYP)
XCEL - ELECTRIC
XCEL - GAS
STA 137+68.60'EB'
STA 206+23.99'WB'
5417
5418
CHARTER - FIBER OPTIC
BORE
MATCH LINE 133+50
208'WB'
204'WB'
205'WB'
206'WB'
138'EB'
139'EB'
140'EB'
141'EB'
134'EB'
135'EB'
136'EB'
137'EB'
XCEL - ELECTRIC
50TH AVE
5420
SLOPE INTERCEPT (TYP)
PROPERTY OWNER
IRRIGATION SYSTEM
PROPOSED ROW (TYP)
TLE (TYP)
PROPERTY LINE (TYP)

STA 135+36'EB', RT
CONSTRUCT 30' WIDE CE
1-18"X36' CPRC CL IV REQ'D
2 18" AECPRC REQ'D

STA 137+94'EB', RT
RECONSTRUCT 18' WIDE PE
1-15"X30' CPRC CL IV REQ'D
2 15" AECPRC REQ'D
SAWCUT REQ'D

TIMOTHY S & LYNN M BLIEK
ID: 22808-1421-03000000

ROBERT A & BETTE J IRWIN TRUST
ID: 22808-1421-66290011

T J GAIER TRUST
ID: 22808-1421-66290012

BRENDA GAIER
ID: 22808-1421-70460001A

IRWIN RENTAL PROPERTIES LLC
ID: 22808-1421-70460001B

5

5

VCL = 100.00'
K = 97.09

VCL = 120.00'
K = 209.49

VPC STA 202+00.00'WB'
VPC EL 923.59

VPI STA 202+50.00'WB'
VPI EL 922.96

VPT STA 203+00.00'WB'
VPT EL 922.84

VPC STA 204+70.00'WB'
VPC EL 922.45

LOW POINT STA 205+18.91'WB'
LOW POINT EL 922.39

VPI STA 205+30.00'WB'
VPI EL 922.31

VPT STA 205+90.00'WB'
VPT EL 922.51

STA 206+23.99'WB'
EL 922.62

-1.26%
-0.23%
0.34%

PROPOSED PROFILE
AT REF LINE

EXISTING GROUND
AT REF LINE

SPECIAL DITCH PROFILE LT

EXISTING PROFILE
ELEVATIONS

FINISHED PROFILE
ELEVATIONS

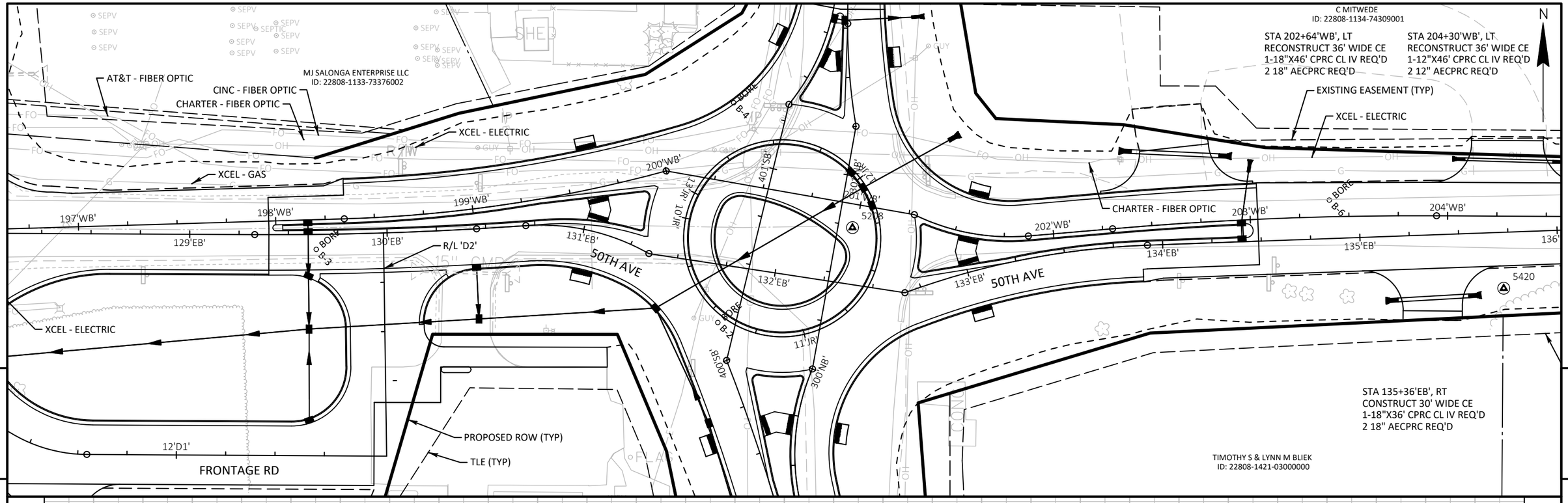
932.5
930.0
927.5
925.0
922.5
920.0
917.5
915.0

| 921.00 | 921.00 | 921.00 | 921.00 | 921.00 | 921.00 | 921.00 | 921.00 | 921.00 | 921.00 | 921.56 | 922.00 | 922.01 | 922.02 | 922.03 | 922.20 | 922.15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 923.59 | 923.31 | 923.09 | 922.93 | 922.84 | 922.78 | 922.73 | 922.67 | 922.61 | 922.55 | 922.49 | 922.43 | 922.40 | 922.39 | 922.41 | 922.46 | 922.54 |

202'WB' 203'WB' 204'WB' 205'WB' 206'WB' 207'WB' 208'WB' 209'WB' 209'WB'

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: 50TH AVENUE WB | SHEET 97 E |
|---|---|---|---|---|

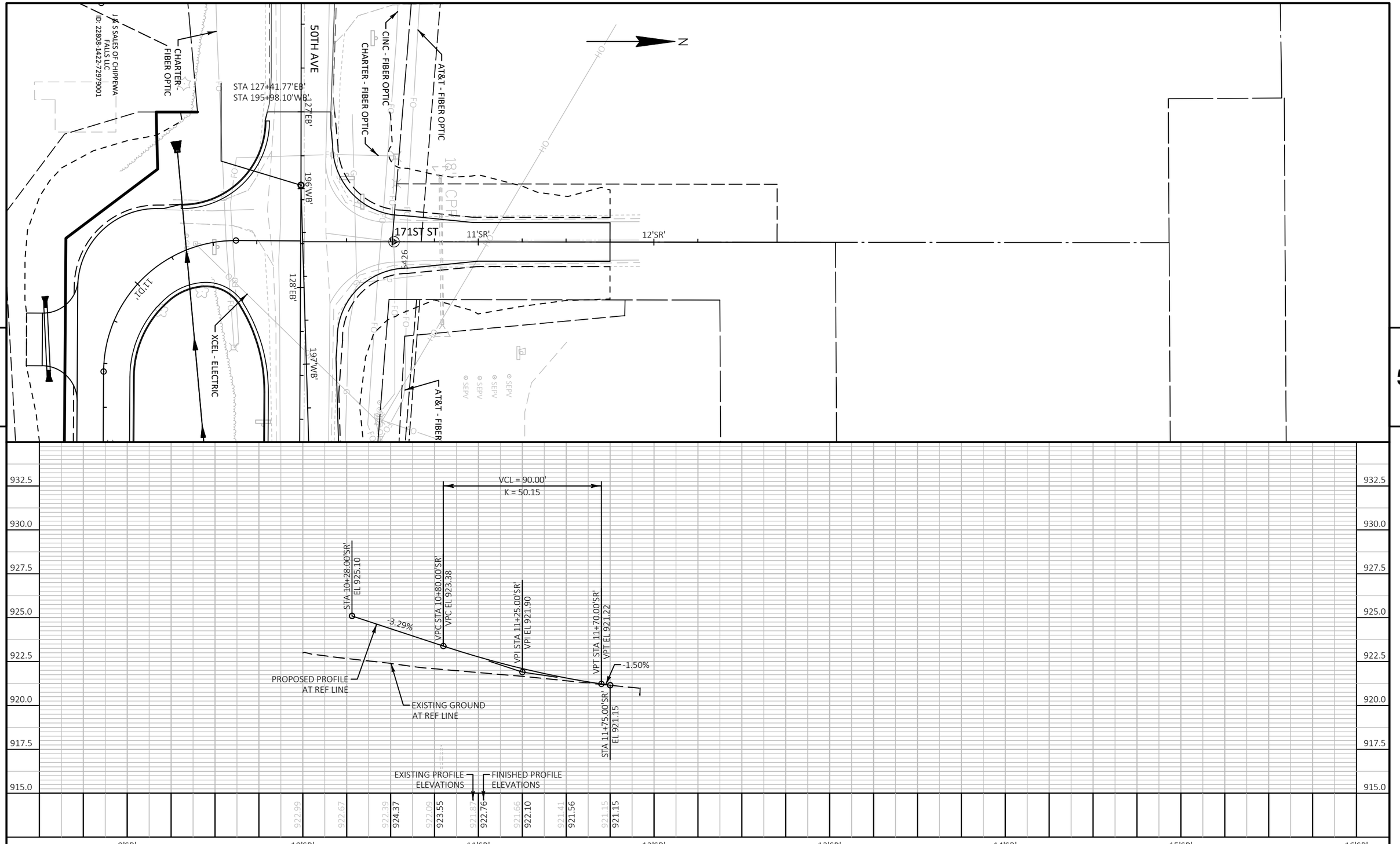
FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\050101_PP (PLAN & PROFILE).DWG
LAYOUT NAME - WB2
PLOT DATE : 7/26/2024 8:53 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: ROUNDABOUT CIRCLE | SHEET 98 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\050101_PP (PLAN & PROFILE).DWG
LAYOUT NAME - RA

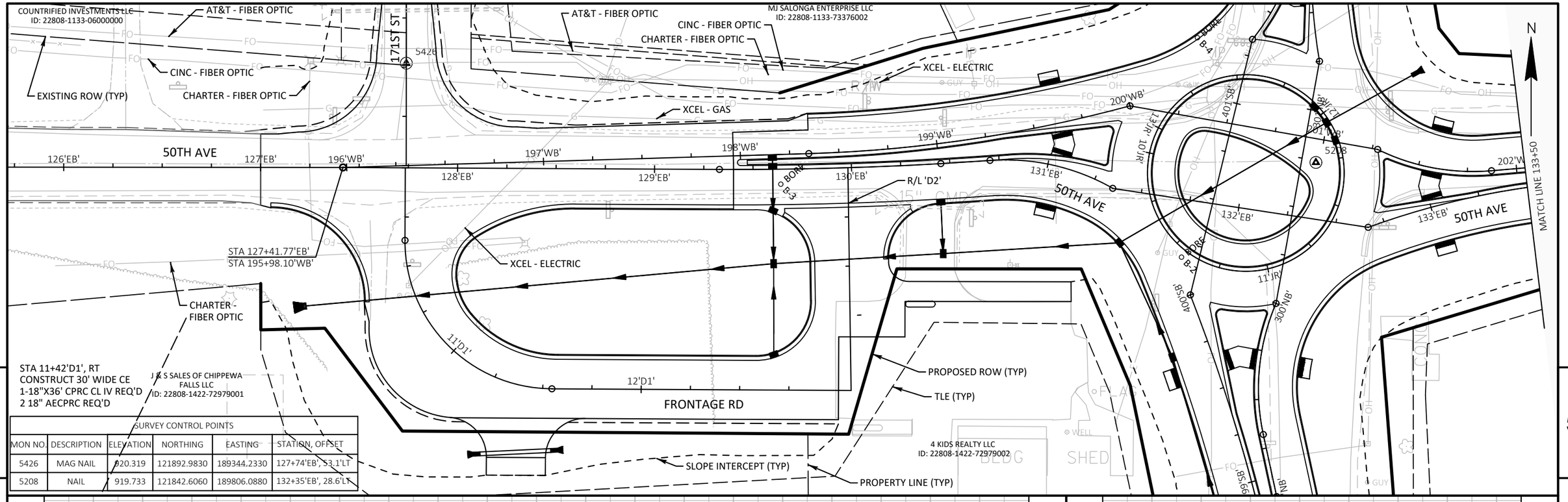
PLOT DATE : 7/26/2024 8:53 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:50 FT



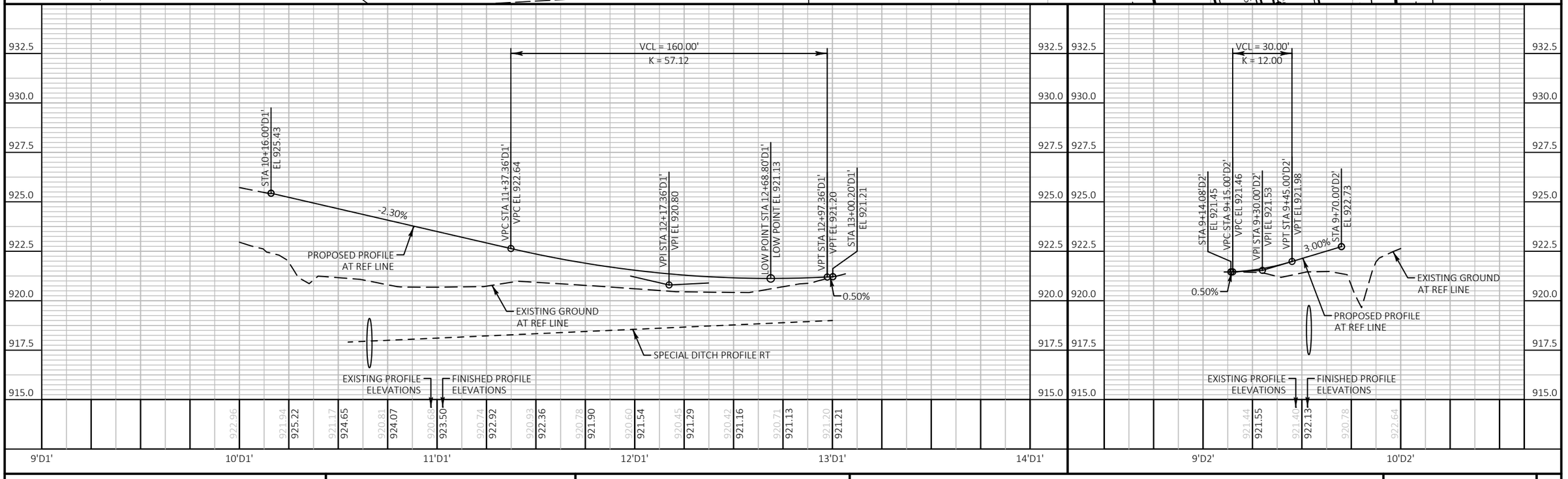

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: 171ST STREET | SHEET 99 E |
|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\050101_PP (PLAN & PROFILE).DWG
LAYOUT NAME - SR

PLOT DATE : 7/26/2024 8:53 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:50 FT




| SURVEY CONTROL POINTS | | | | | |
|---|---|---|---|---|---|
| MON NO. | DESCRIPTION | ELEVATION | NORTHING | EASTING | STATION, OFFSET |
| 5426 | MAG NAIL | 920.319 | 121892.9830 | 189344.2330 | 127+74'EB', 53.1'LT |
| 5208 | NAIL | 919.733 | 121842.6060 | 189806.0880 | 132+35'EB', 28.6'LT |

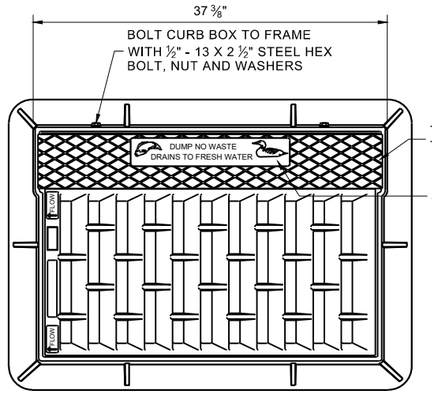



| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PLAN AND PROFILE: FRONTAGE ROADS | SHEET 100 E |
|---|---|---|---|---|

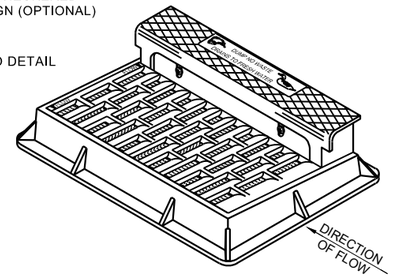
# Standard Detail Drawing List

| | |
|---|---|
| 08A05-21A | INLET COVERS TYPE A, H, A-S, H-S & Z |
| 08A05-21B | INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM |
| 08A05-21C | INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S |
| 08C06-03 | INLETS 3-FT AND 4-FT DIAMETER |
| 08C07-03 | INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT |
| 08C08-03 | INLETS MEDIAN 1 AND 2 GRATE |
| 08D01-23A | CONCRETE CURB & GUTTER |
| 08D01-23B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D05-21A | CURB RAMPS TYPES 1 AND 1-A |
| 08D05-21B | CURB RAMPS TYPES 2 AND 3 |
| 08D05-21C | CURB RAMPS TYPES 4A AND 4A1 |
| 08D05-21D | CURB RAMPS TYPE 4B AND 4B1 |
| 08D05-21E | CURB RAMPS TYPES 5, 6, 7A, 7B & 8 |
| 08D05-21F | CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS |
| 08D05-21G | CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES |
| 08D21-01 | DRIVEWAYS WITHOUT CURB & GUTTER |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E10-02 | INLET PROTECTION TYPE A, B, C AND D |
| 08E15-01 | CULVERT PIPE CHECK |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 09B02-10 | CONDUIT |
| 09B16-02 | PULL BOX  NON-CONDUCTIVE |
| 09C02-09 | CONCRETE BASES, TYPES 1, 2,  5, & 6 |
| 09C03-04 | TRANSFORMER/PEDESTAL BASES |
| 09C14-03 | CONCRETE CONTROL CABINET BASE, TYPE L |
| 09D01-05 | CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL) |
| 09D04-03 | LIGHTING CONTROL CABINET 120/240 VOLT |
| 09E01-15A | POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2 |
| 09E01-15B | POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY) |
| 09E01-15C | POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4 |
| 09E01-15D | POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET) |
| 09E01-15E | POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET) |
| 09E01-15F | POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 17 (40 FEET) |
| 09E01-15G | HARDWARE DETAILS FOR POLE MOUNTINGS |
| 09E03-06 | NON-FREEWAY LIGHTING UNIT POLE WIRING |
| 10A07-03 | ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES PHASE-TO-PHASE SYSTEMS |
| 11B02-02 | CONCRETE MEDIAN NOSE |
| 13C01-19 | CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES |
| 13C18-08A | CONCRETE PAVEMENT JOINTING |
| 13C18-08B | CONCRETE PAVEMENT STEEL REINFORCEMENT |
| 13C18-08C | CONCRETE PAVEMENT JOINT TYPES |
| 13C18-08D | CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES |
| 13C18-08E | CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS |
| 13C18-08F | CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER |
| 13C18-08G | CONCRETE PAVEMENT JOINTING ACCELERATION/DECELERATION LANE |
| 14B29-01 | SAFETY EDGE |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C05-05 | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS |
| 15C07-15D | ROUNDABOUT ARROWS |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |
| 15C08-23B | TEMPORARY LONGITUDINAL PAVEMENT MARKING |
| 15C12-09A | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION |

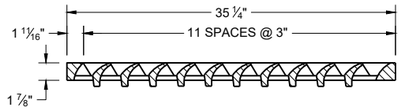
6

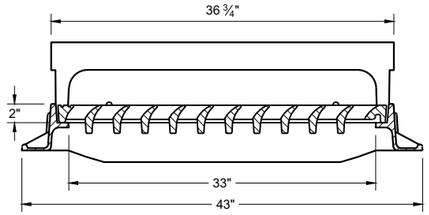


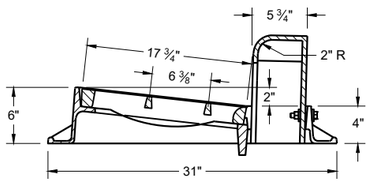

NOTE: EITHER CASTING IS ACCEPTABLE

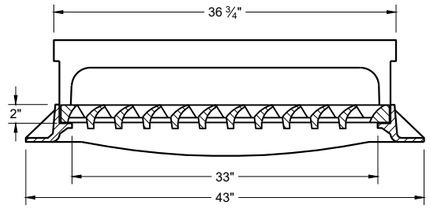


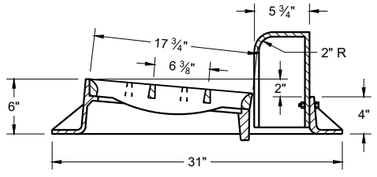

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"



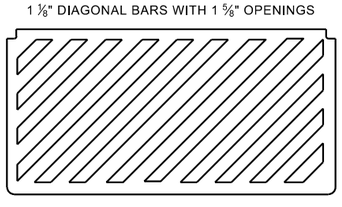




**TYPE "H"**

NOTE: EITHER CASTING IS ACCEPTABLE

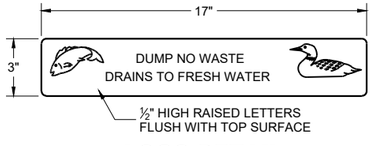
1 ⅛" DIAGONAL BARS WITH 1 ⅝" OPENINGS



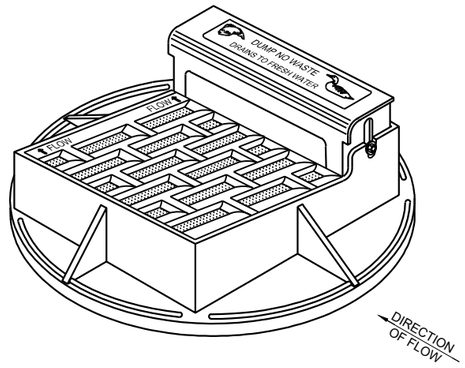
**SPECIAL GRATE FOR TYPE "H" COVER**

(MEASURES 35" X 17 ¾" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

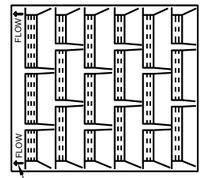


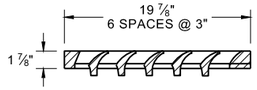

**LOGO DETAIL**

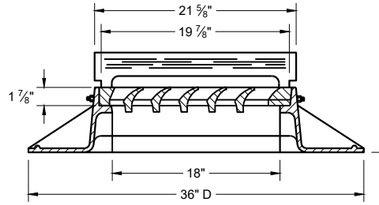


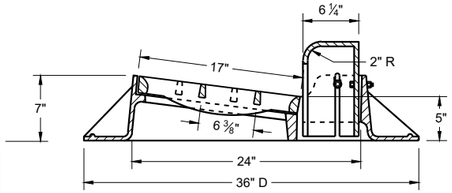

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE




**TYPE "A"**

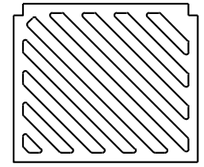
## GENERAL NOTES

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

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

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

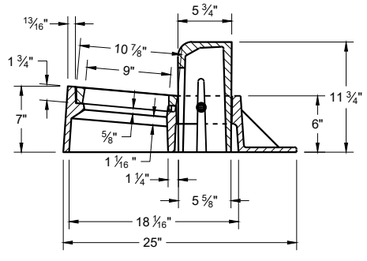
1" DIAGONAL BARS WITH 1 ½" OPENINGS



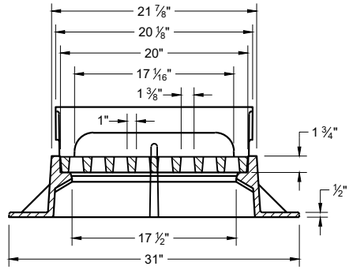
**SPECIAL GRATE FOR TYPE "A" COVER**

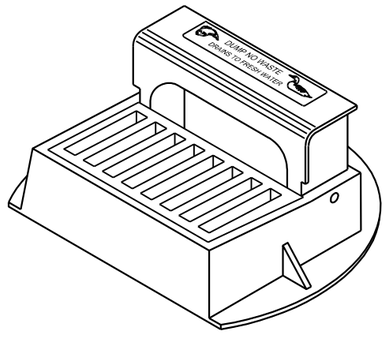
(MEASURES 19 ¾" X 17" X 1 ⅞")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)




**TYPE "Z"**



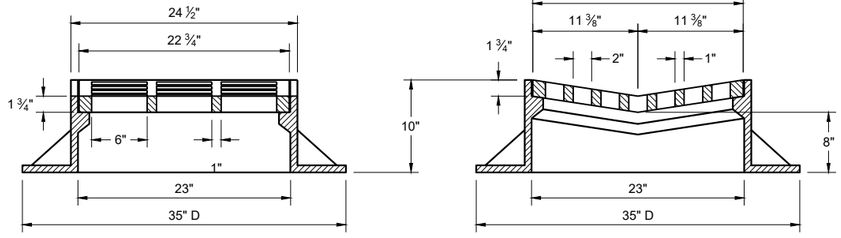

**INLET COVERS**
**TYPES A, H, A-S, H-S AND Z**

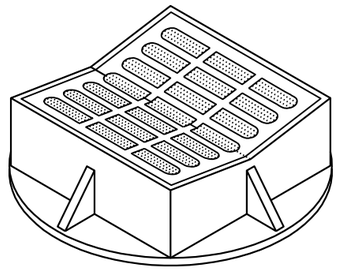
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

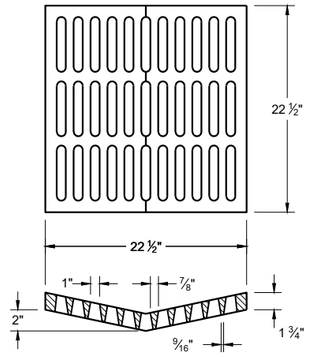
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA



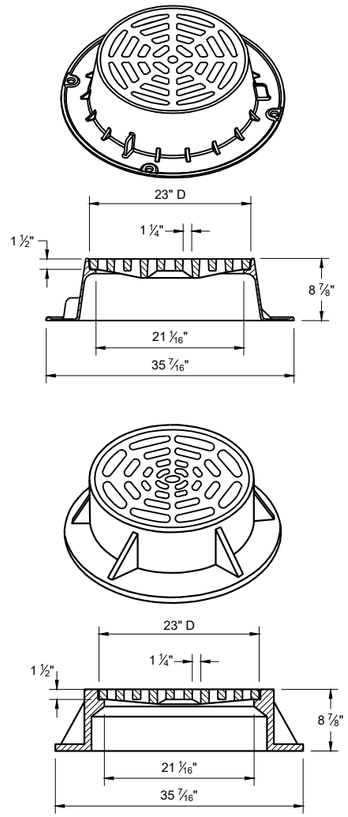
**TYPE "B"**




## 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"**

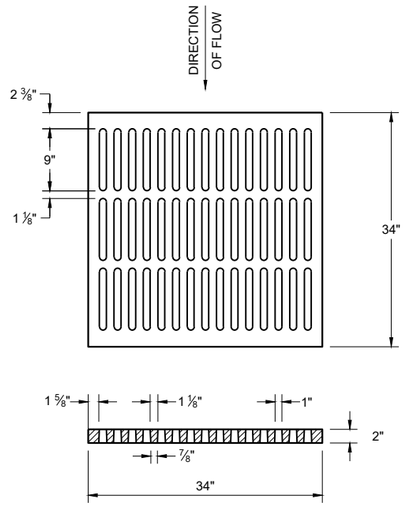
NOTE: EITHER CASTING IS ACCEPTABLE

## 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.

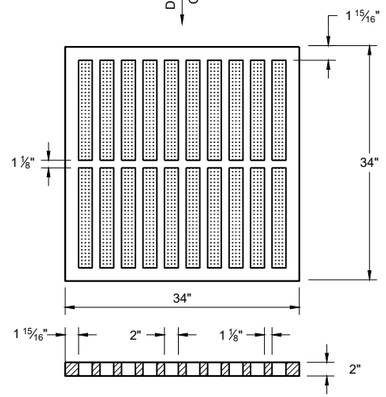
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.




**ALTERNATIVE TYPE "MS"**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

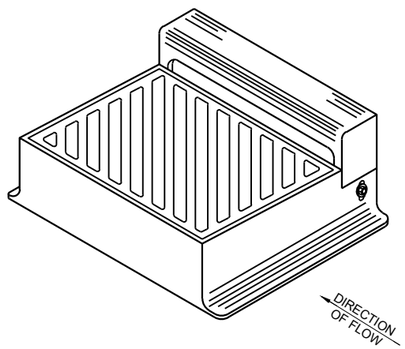
**NOTED AS TYPE MS-A ON THE DRAINAGE TABLE**



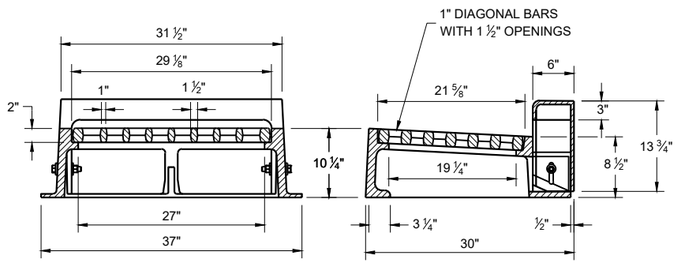

**TYPE "MS"**

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"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



6

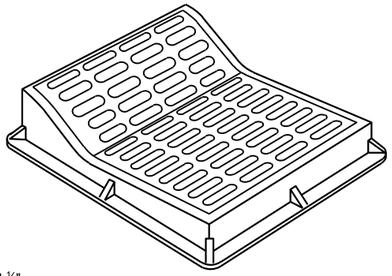
SDD 08A05-21b

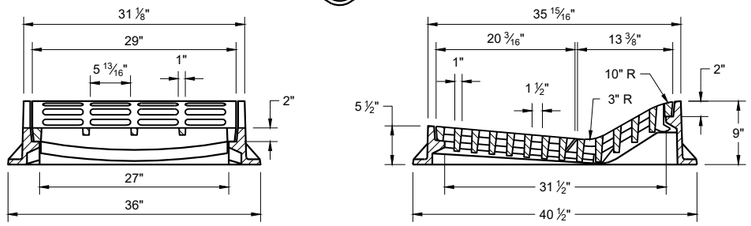
SDD 08A05-21b

## GENERAL NOTES

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

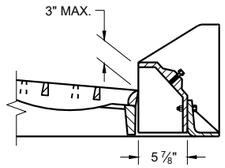
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.






### TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

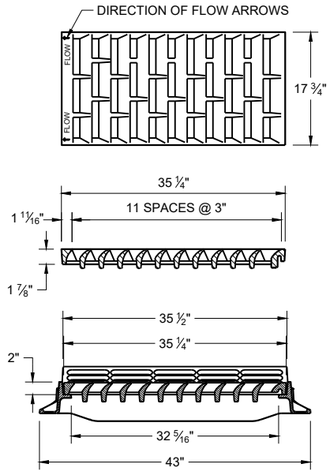



### ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
**NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE**

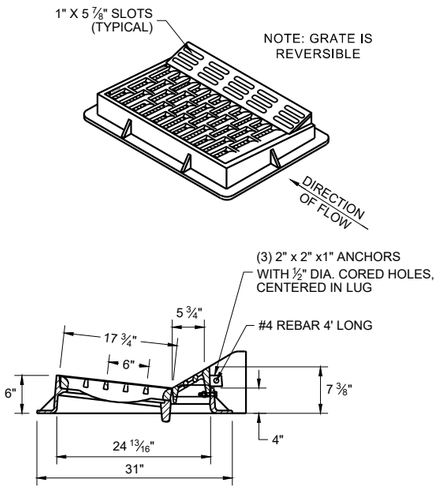
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

**NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.**



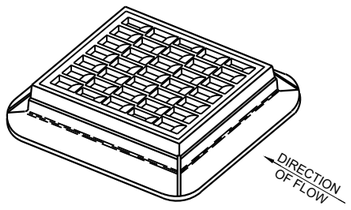

### TYPE "HM"

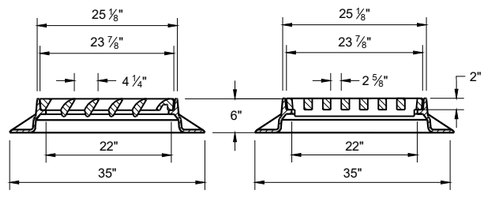
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



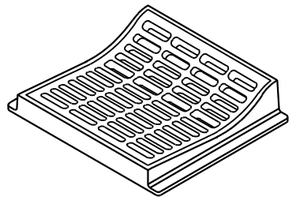

NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

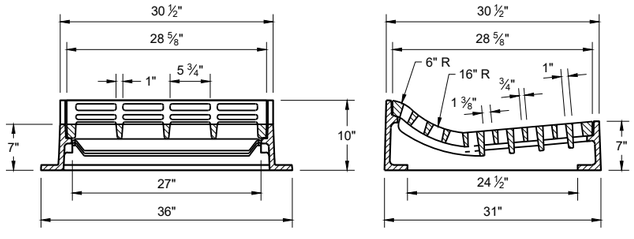
**NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.**




### TYPE "S"






### TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

**INLET COVERS**
**TYPES F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S**

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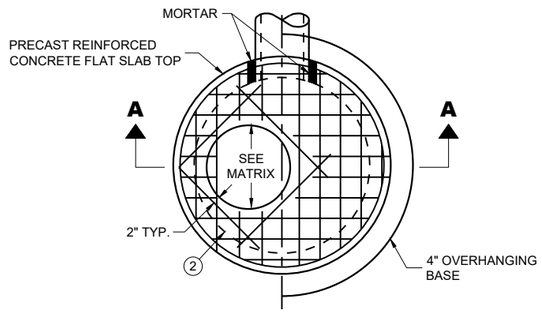
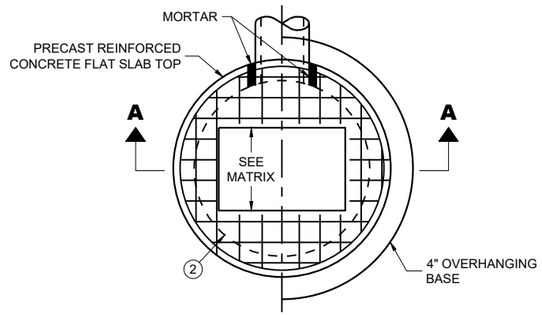
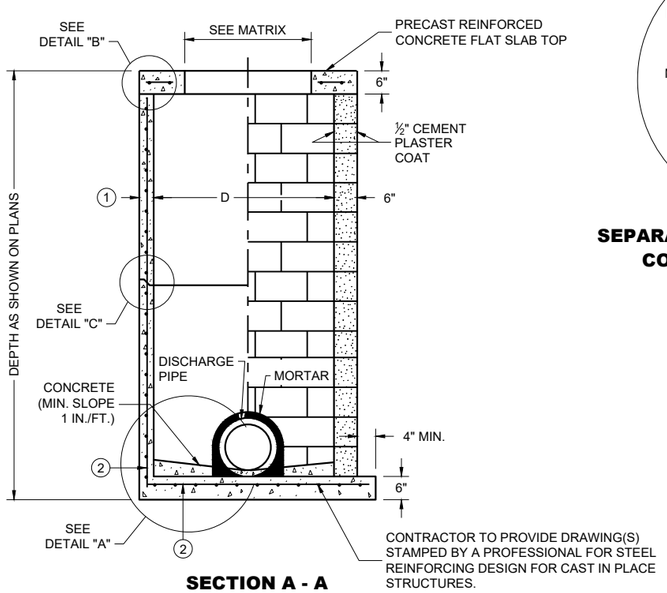



**PLAN VIEW CIRCULAR OPENING**




**PLAN VIEW RECTANGULAR OPENING**




**SECTION A - A**

**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** (2)

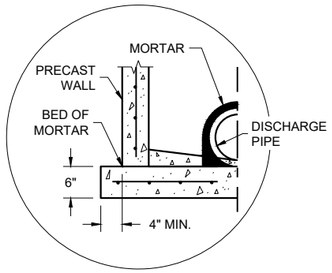
**CIRCULAR INLETS WITH FLAT TOP**

## CATCH BASIN COVER OPENING MATRIX

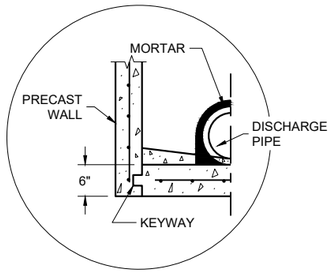
| INLET SIZE | INLET COVER TYPE | ALL A'S | ALL B'S | BW | C | F | ALL H'S | S | T | V | WM | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPENING SIZE (FT.) | | | | | | | | | | | |
| 3-FT | 2 DIA. | | | | X | | | | | | | X |
| | 2 X 2 | X | X | | | | | X | | X | | |
| 4-FT | 2 DIA. | | | | X | | | | | | | X |
| | 2 X 2 | X | X | | | | | X | | X | | |
| | 2 X 2.5 | | | X | | | | X | X | X | X | |
| | 2 X 3 | | | | | | X | | | | | |
| | 2.5 X 3 | | | | | X | | | | | | |

## PIPE MATRIX

| INLET SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | 180° SEPARATION (IN) | 90° SEPARATION (IN) |
| 3-FT | 15 | 12 |
| 4-FT | 24 | 18 |

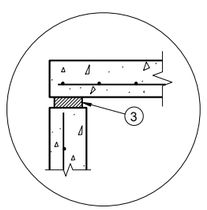



**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

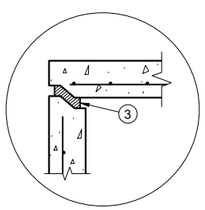



**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION**

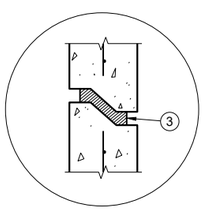
**DETAIL "A"**




**TOP WITH PLAIN END JOINT**




**TOP WITH TONGUE AND GROOVE JOINT**




**RISER WITH TONGUE AND GROOVE JOINT**

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

## GENERAL NOTES

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

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

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

ALL 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.

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

ALL PRECAST INLET 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.

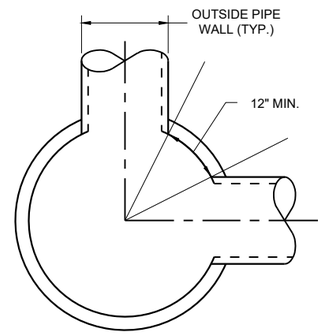
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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) MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMTER PRECAST INLETS.

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

(3) 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.




**MINIMUM HORIZONTAL PIPE SEPARATION**

**DETAIL "D"**

**INLETS 3-FT AND 4-FT DIAMETER**

STATE OF WISCONSIN
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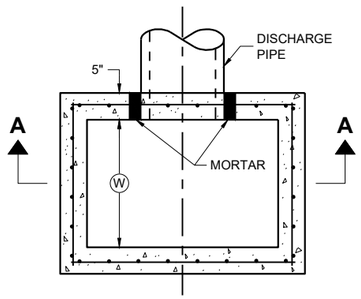
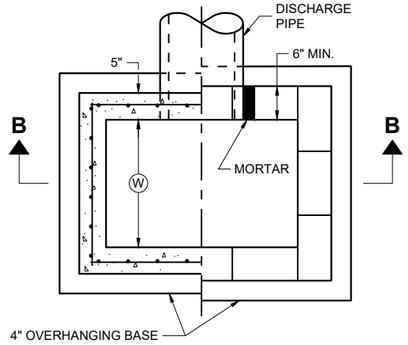
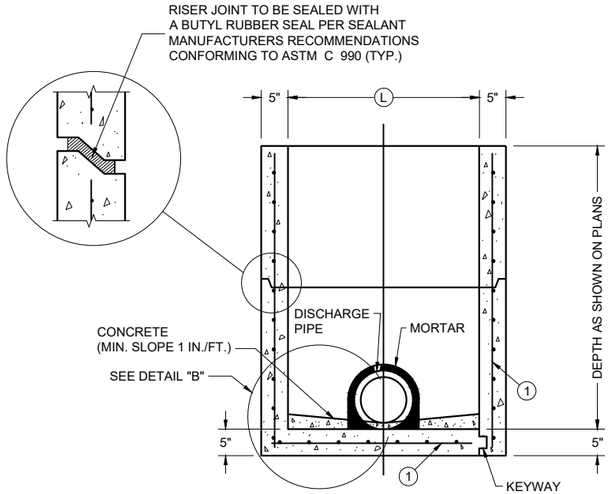
**INLETS 3-FT AND 4-FT DIAMETER**




**PLAN VIEW**



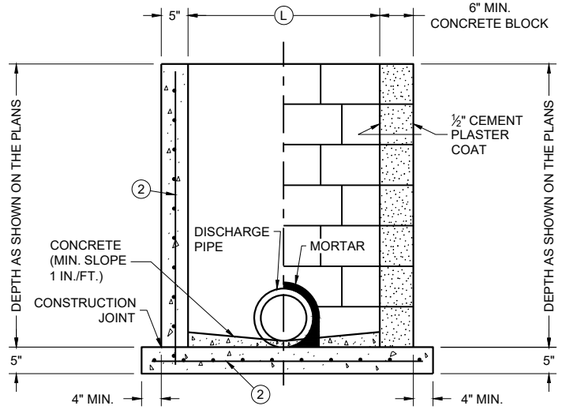

**PLAN VIEW**




**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE**

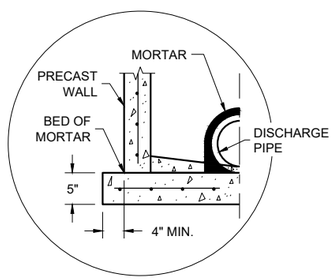
**SECTION A - A**




**CAST IN PLACE REINFORCED CONCRETE**

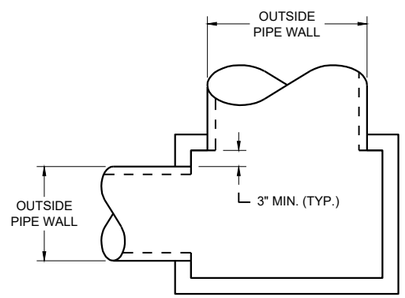
**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** (1)

**SECTION B - B**




**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

**DETAIL "B"**




**DETAIL "A"**

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

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

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

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

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

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

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

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" 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.

## CATCH BASIN COVER MATRIX

| INLET SIZE | WIDTH (W) (FT.) | LENGTH (L) (FT.) | INLET COVER TYPE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ALL A'S | ALL B'S | BW | F | ALL H'S | S | T | V | WM | V V-B |
| 2 X 2-FT | 2 | 2 | X | X | | | | X | | | | |
| 2 X 2.5-FT | 2 | 2.5 | | | X | | | X | X | X | X | |
| 2 X 3-FT | 2 | 3 | | | | | X | | | | | |
| 2.5 X 3-FT | 2.5 | 3 | | | | X | | | | | | |
| 2 X 3.5-FT | 2 | 3.5 | | | | | | | | | | X |

## PIPE MATRIX

| CATCH BASIN SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | WIDTH (IN) | LENGTH (IN) |
| 2 X 2-FT | 12 | 12 |
| 2 X 2.5-FT | 12 | 18 |
| 2 X 3-FT | 12 | 24 |
| 2.5 X 3-FT | 18 | 24 |
| 2 X 3.5-FT | 12 | 30 |

**INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT**

**INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT**

STATE OF WISCONSIN
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/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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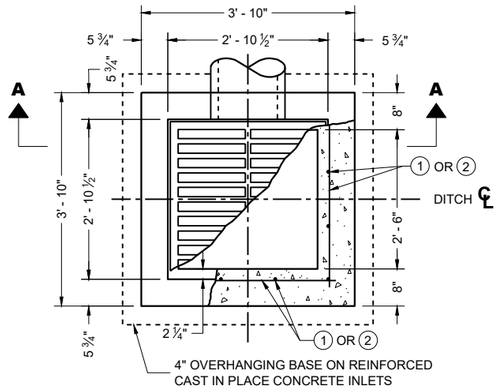
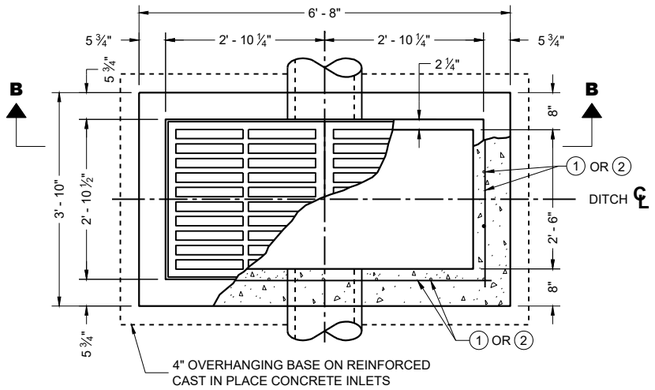
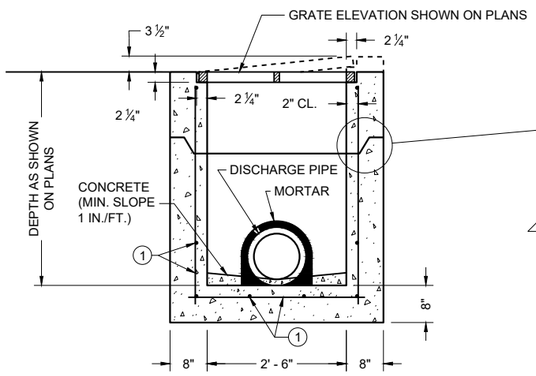


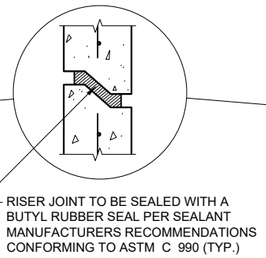

**PLAN VIEW**

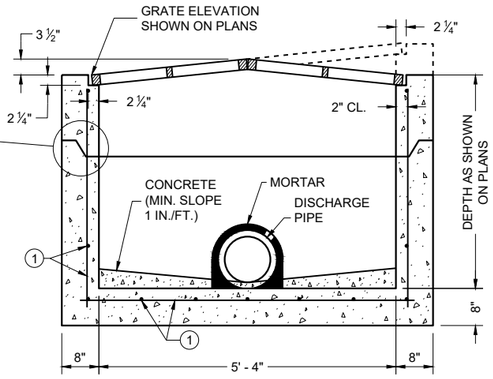



**PLAN VIEW**

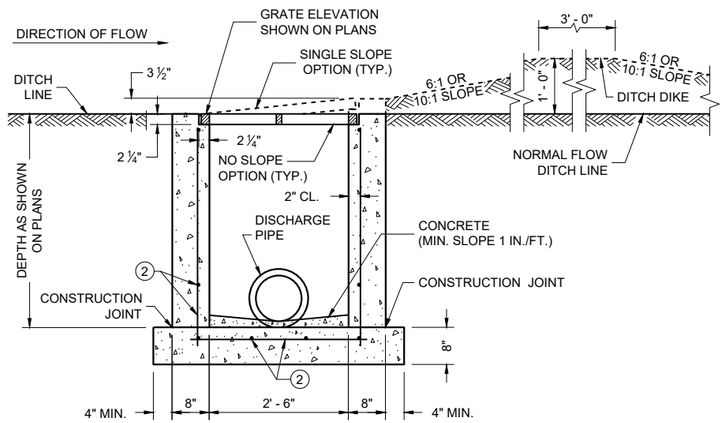



**PRECAST REINFORCED CONCRETE SECTION A - A**



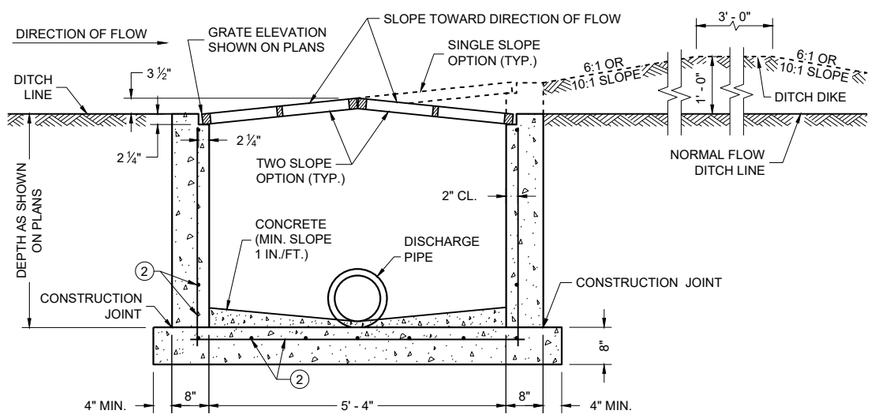




**PRECAST REINFORCED CONCRETE SECTION B - B**




**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.

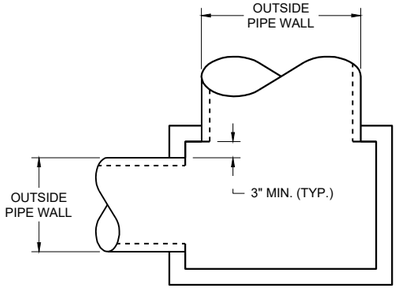
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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 |

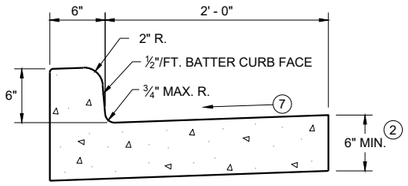
**INLETS**
**MEDIAN 1 AND 2 GRATE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

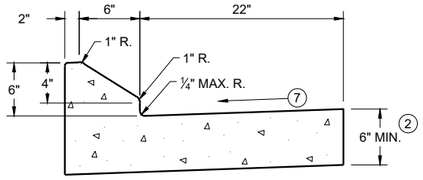
APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

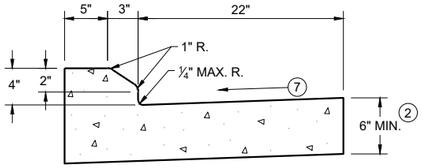

6
SDD 08C08-03



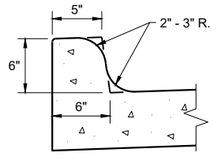

**TYPES A (1) & D**



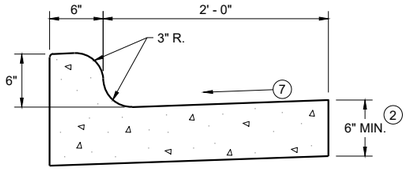

**6" SLOPED CURB TYPES G (1) & J**




**4" SLOPED CURB TYPES G (1) & J**

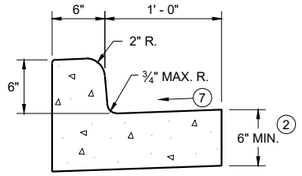



**TYPES K (1) & L**
(OPTIONAL CURB SHAPE)



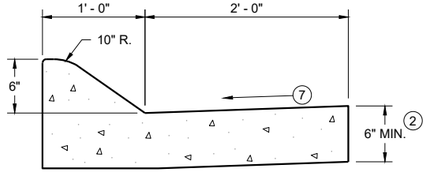

**TYPES K (1) & L**

**CONCRETE CURB AND GUTTER 30"**

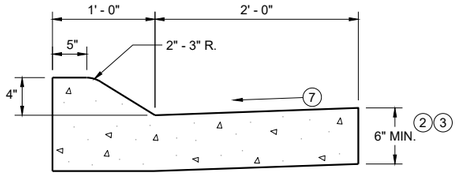



**TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 18"**

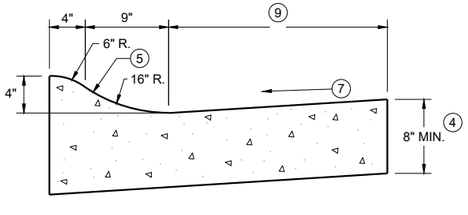



**6" SLOPED CURB TYPES A (1) & D**



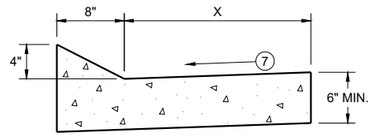

**4" SLOPED CURB TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 36"**




**4" SLOPED CURB TYPES R (1) & T**

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

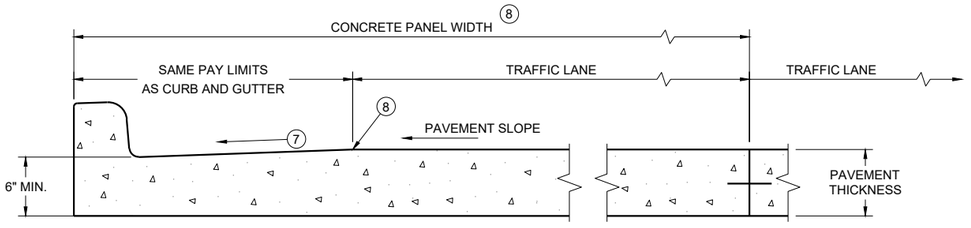



**TYPES TBT & TBTT (1)**

**CONCRETE CURB AND GUTTER**

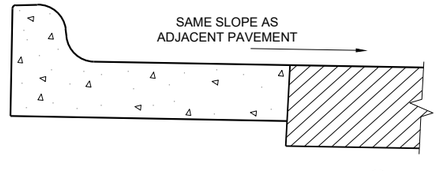
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

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




**PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER**

* BIKE LANE IS NOT SHOWN




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

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

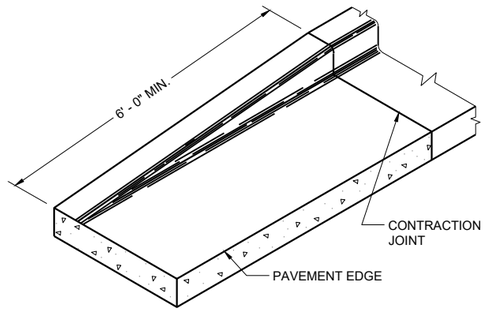
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

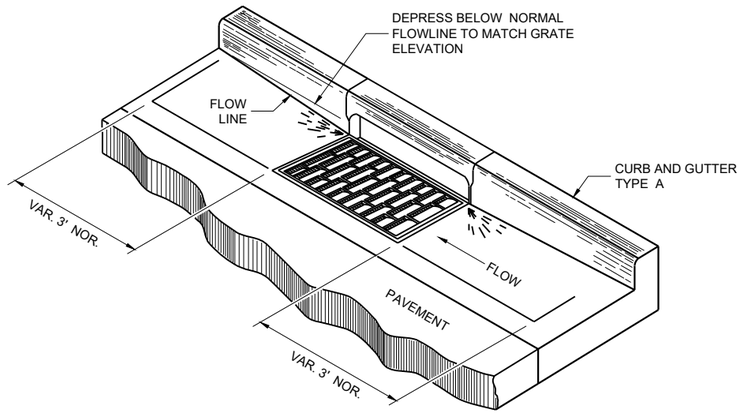
**CONCRETE CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a




## 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.

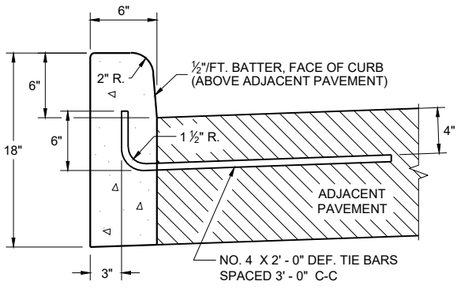
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

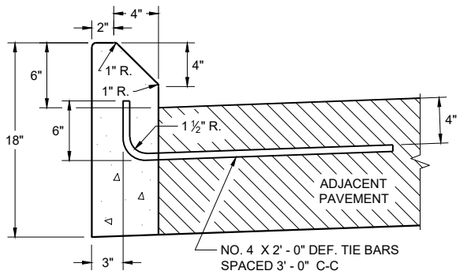
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.

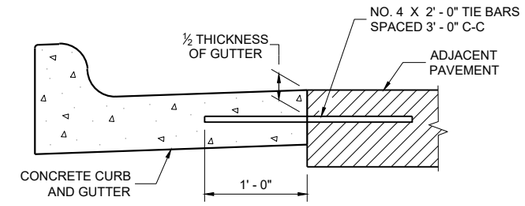



TYPES A (1) & D

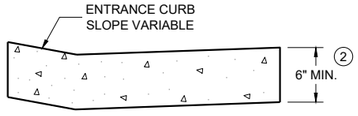



TYPES G (1) & J

## CONCRETE CURB

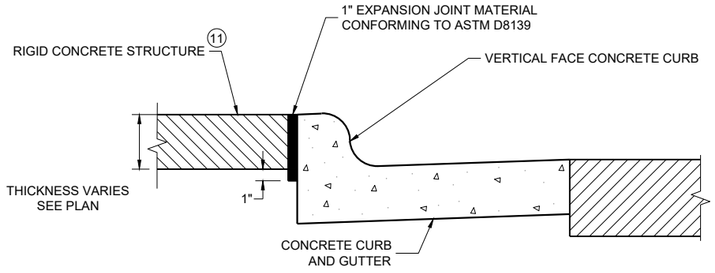



## TYPICAL TIE BAR LOCATION (1)

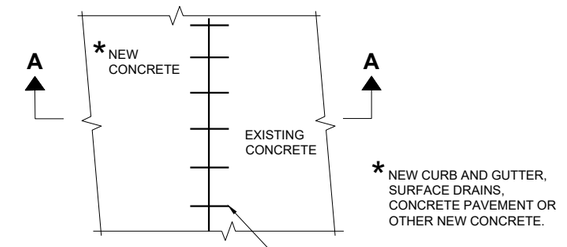



## DRIVEWAY ENTRANCE CURB (10)

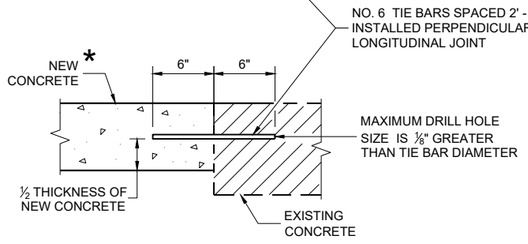
(WHEN DIRECTED BY THE ENGINEER)




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




PLAN VIEW




SECTION A - A

## TIE BARS DRILLED INTO EXISTING PAVEMENT

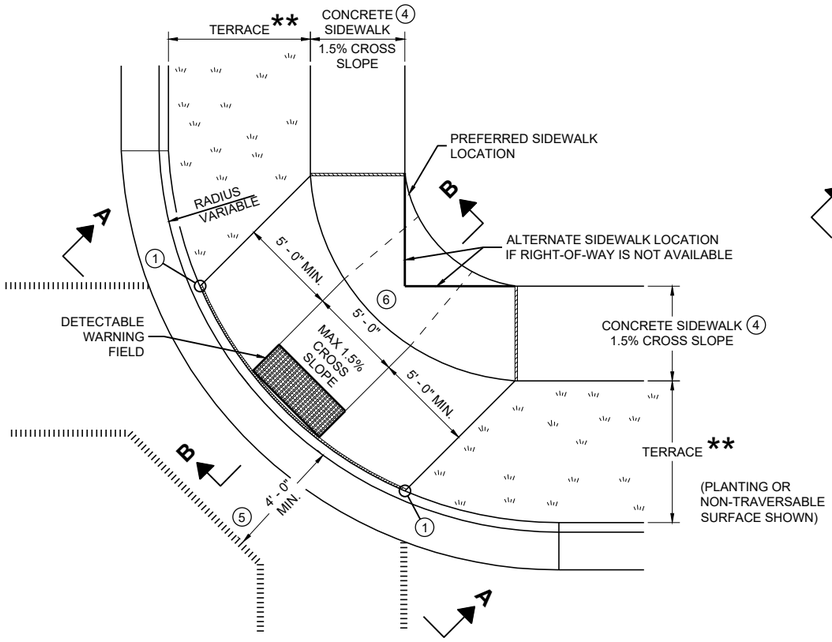
**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

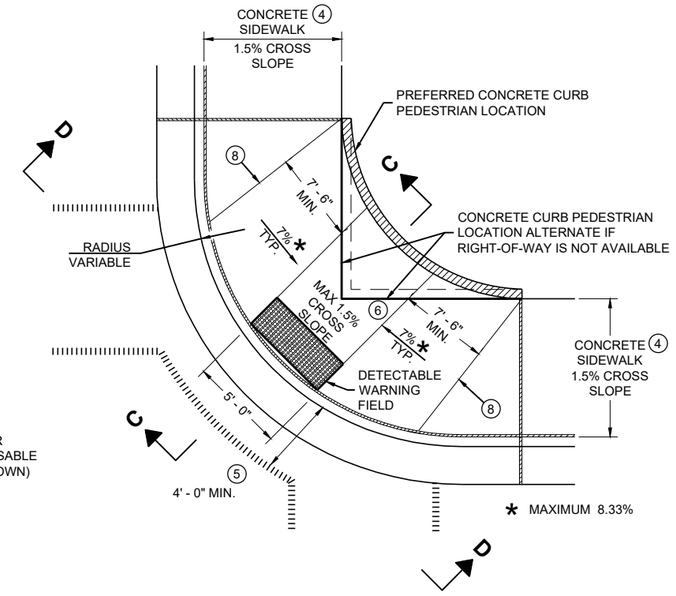

6
SDD 08D01-23b




**PLAN VIEW**

## CURB RAMP TYPE 1

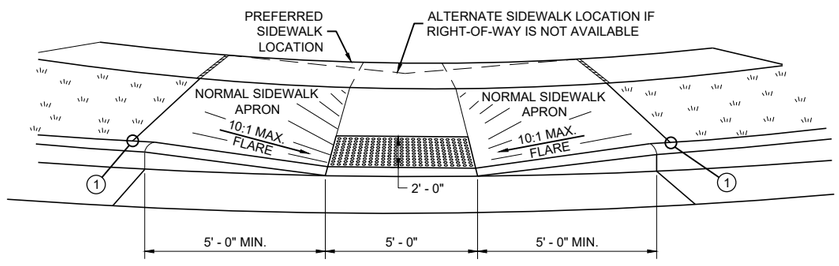
**(CENTER OF CORNER RADIUS)**




**PLAN VIEW**

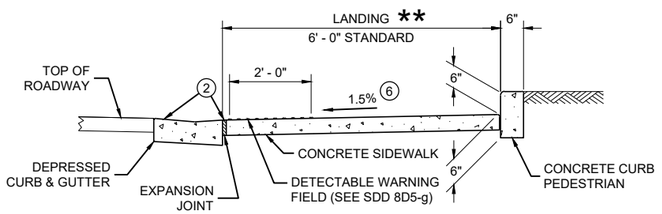
## CURB RAMP TYPE 1 - A

**(NO TERRACE)**

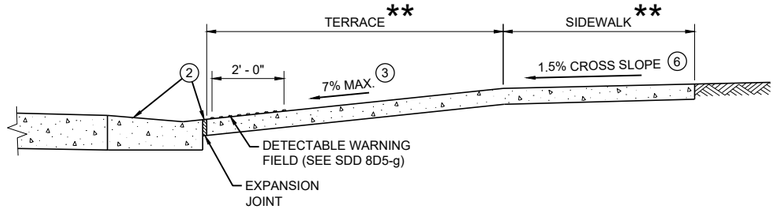



## VIEW A - A FOR TYPE 1

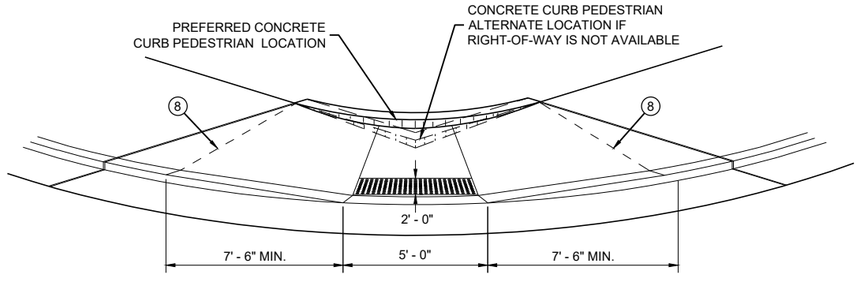
** WIDTH SHOWN ELSEWHERE IN THE PLANS




## 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 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 RAMP.

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE

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

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

## LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS TYPE 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION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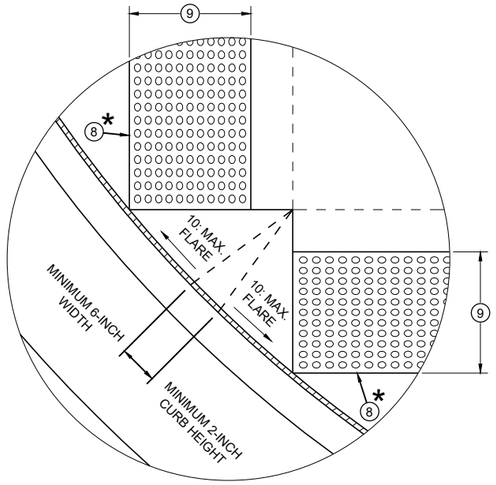
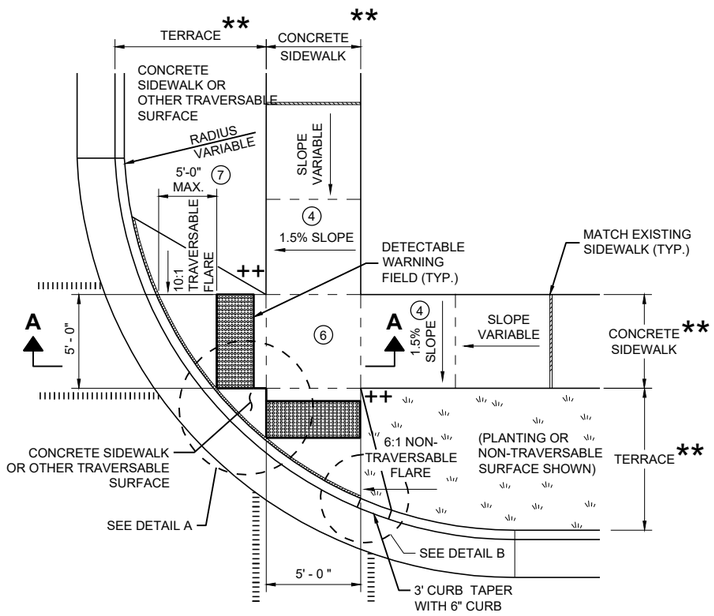
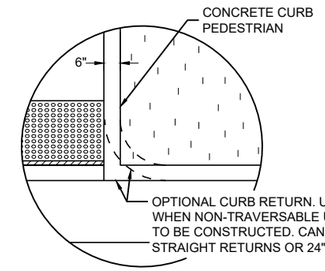
SDD 08D05-21a



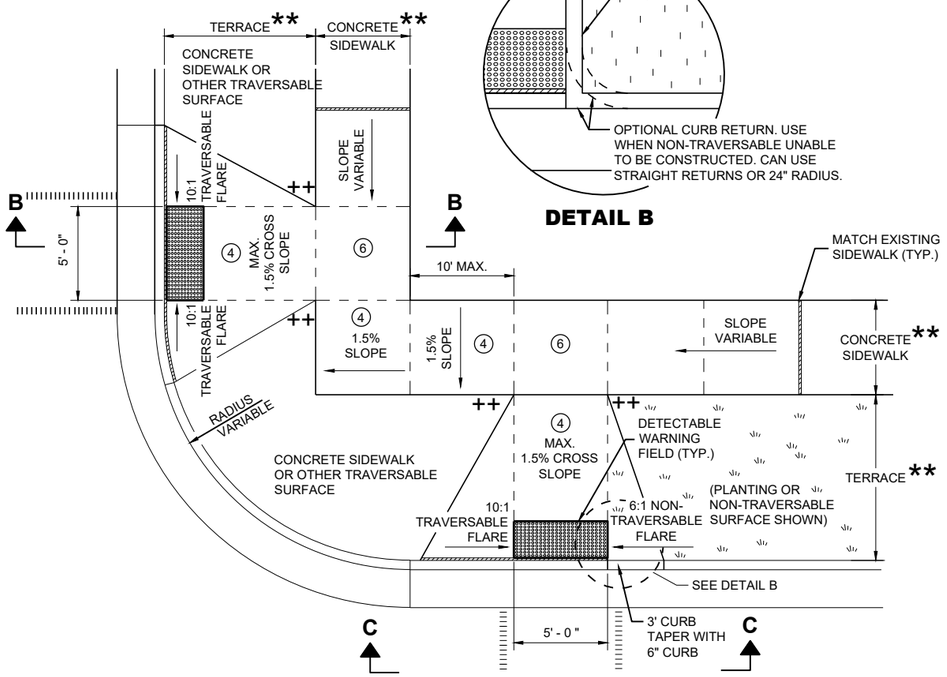

**DETAIL A**




**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 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

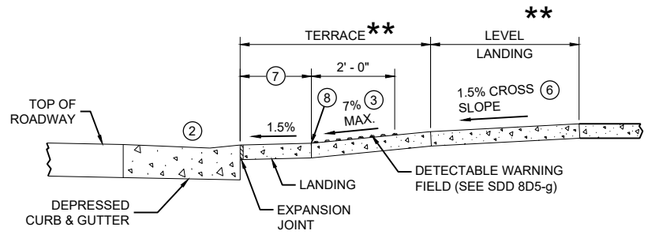
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

(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% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

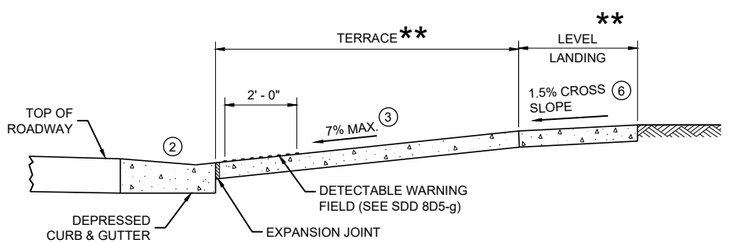



**SECTION A - A FOR TYPE 2**

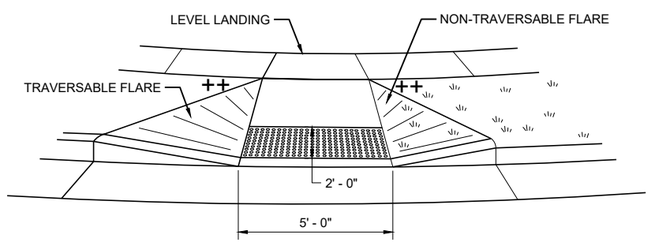
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE




**SECTION B - B FOR TYPE 3**



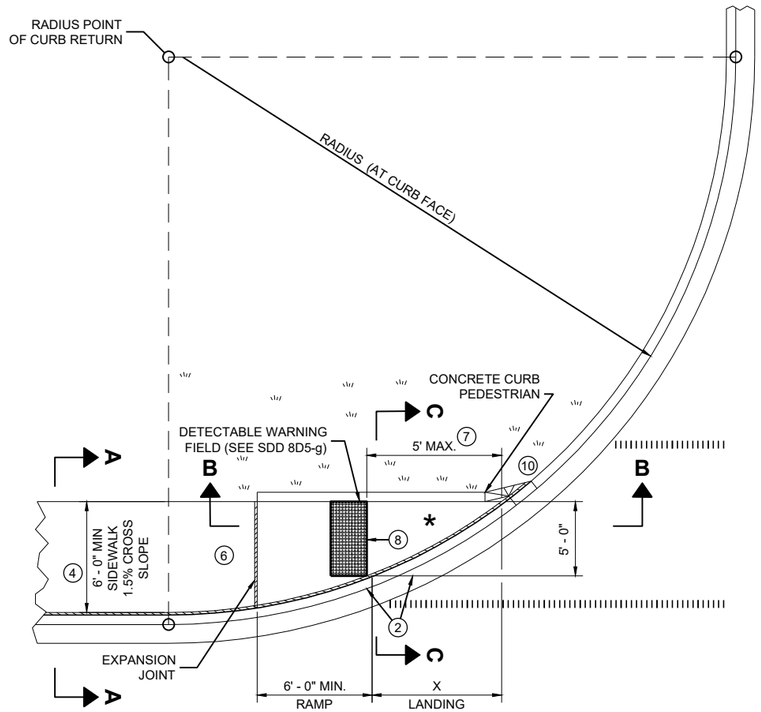

**VIEW C - C FOR TYPE 3**

## LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS TYPE 2 AND 3**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

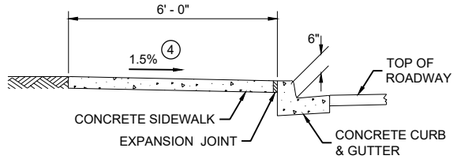



**PLAN VIEW**

**CURB RAMP TYPE 4A**

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

INTERMEDIATE RADII CAN BE INTERPOLATED




**SECTION A - A FOR TYPE 4A**

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

(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.

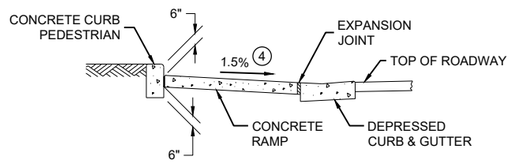
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

## LEGEND

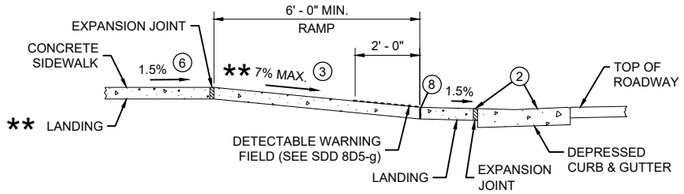
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)

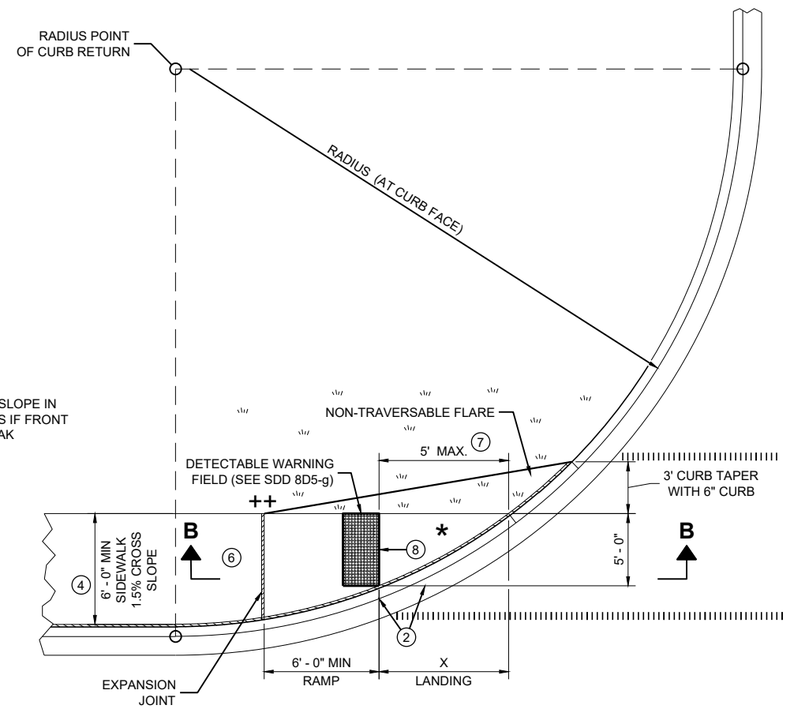



**SECTION C - C FOR TYPE 4A**




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

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

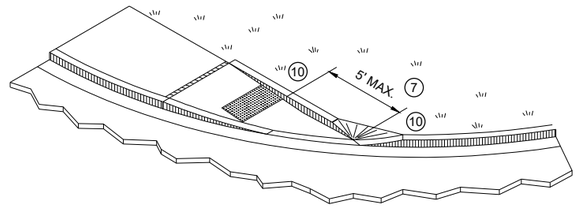



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

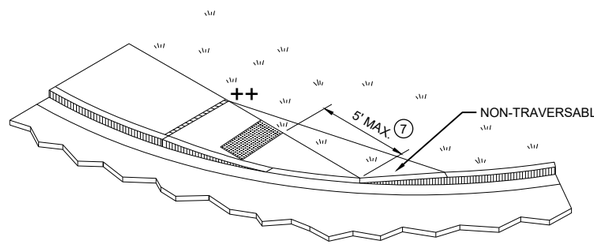
**PLAN VIEW**

**CURB RAMP TYPE 4A1**

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



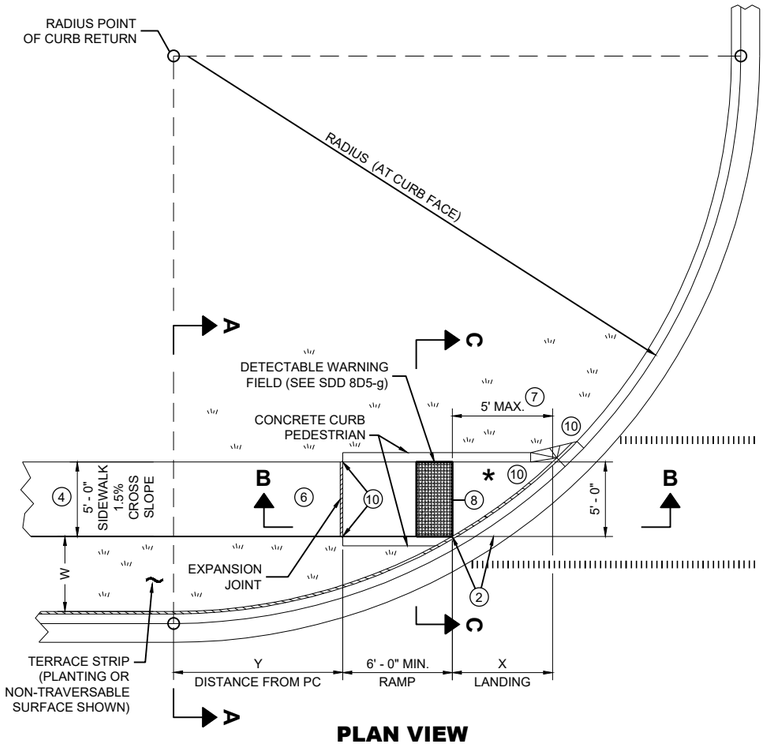

**ISOMETRIC VIEW FOR TYPE 4A**




**ISOMETRIC VIEW FOR TYPE 4A1**

**CURB RAMPS**
**TYPE 4A AND 4A1**

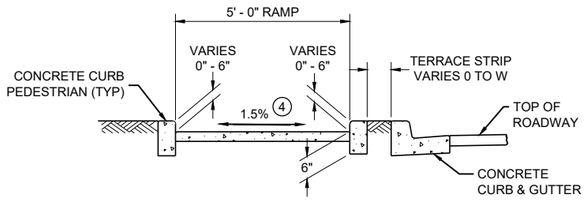
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




**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 1/4" | 0' - 5" | 2' - 1" | 1' - 4 1/2" | 1' - 5" | 2' - 1" | 0' - 10" | 2' - 7 1/2" | 0' - 3 1/4" | 3' - 0 1/4" | | | | | | |
| 15 FEET | 4' - 6 3/4" | 2' - 1 3/4" | 3' - 9" | 3' - 5 3/4" | 3' - 1 1/4" | 4' - 6" | 2' - 6 3/4" | 5' - 4 1/2" | 2' - 1" | 6' - 1" | 1' - 8" | 6' - 8 1/2" | 1' - 3 1/4" | 7' - 2 1/2" | 0' - 10 3/4" | 7' - 7 1/4" |
| 20 FEET | | | 4' - 11 1/2" | 5' - 1 3/4" | 4' - 3 1/4" | 6' - 5 1/2" | 3' - 8 3/4" | 7' - 7" | 3' - 3" | 8' - 6 1/2" | 2' - 10" | 9' - 4 1/2" | 2' - 5 1/2" | 10' - 1 1/4" | 2' - 1 1/4" | 10' - 9" |
| 30 FEET | | | | | | | | | 4' - 10 3/4" | 12' - 5 3/4" | 4' - 5 1/2" | 13' - 7 3/4" | 4' - 0 3/4" | 14' - 8 1/2" | 3' - 8 1/2" | 15' - 8 1/4" |
| 40 FEET | | | | | | | | | | | | | | | 4' - 10 3/4" | 19' - 8 1/4" |

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)

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

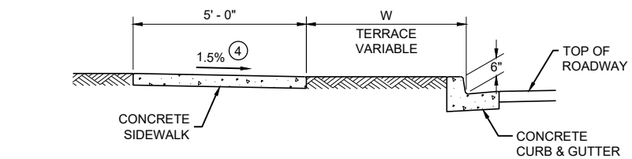
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

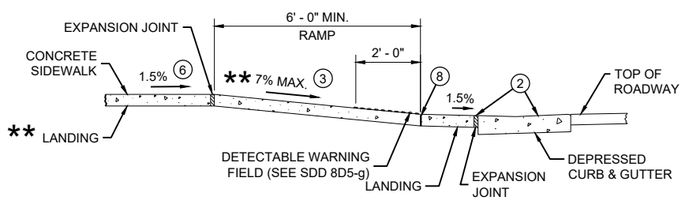
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

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

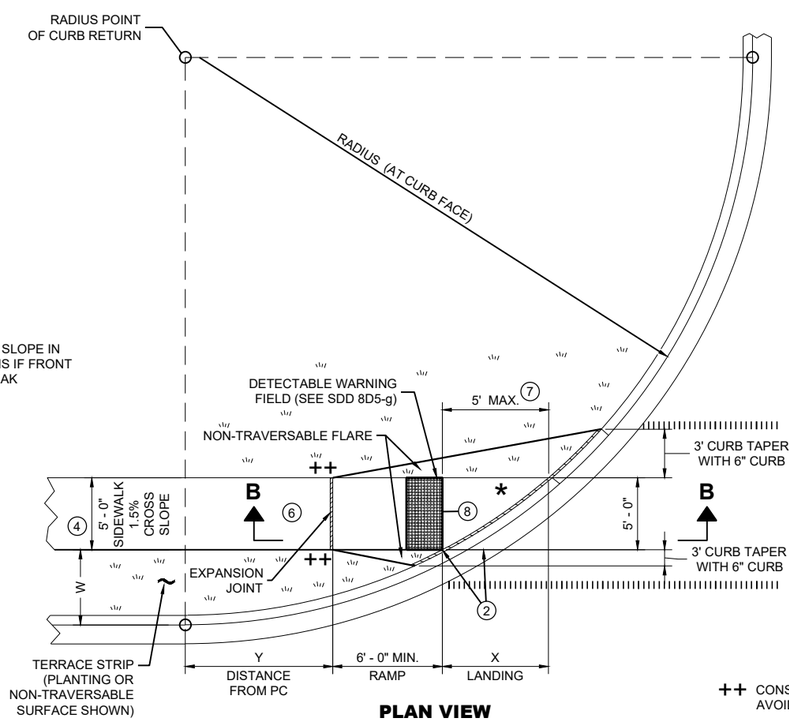



**SECTION A - A FOR TYPE 4B**




** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

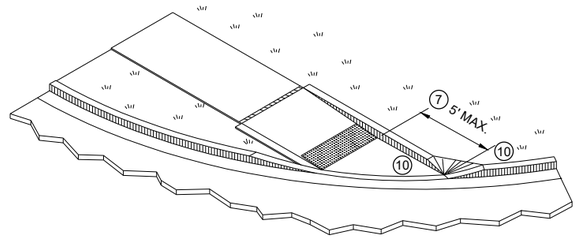
**SECTION B - B FOR TYPE 4B AND TYPE 4B1**



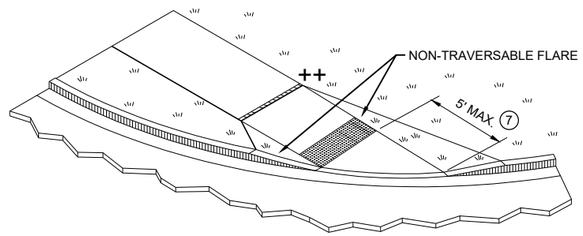

**PLAN VIEW**
**CURB RAMP TYPE 4B1**

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE




**ISOMETRIC VIEW FOR TYPE 4B**



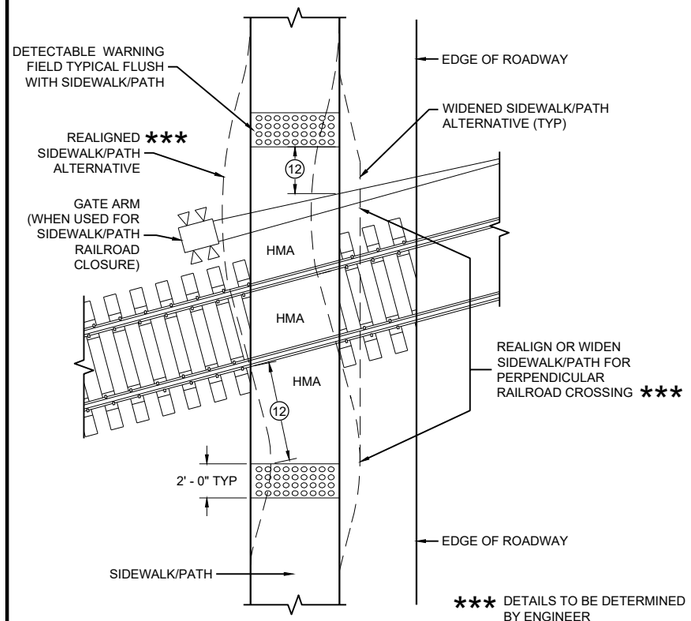

**ISOMETRIC VIEW FOR TYPE 4B1**

**CURB RAMPS**
**TYPE 4B AND 4B1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

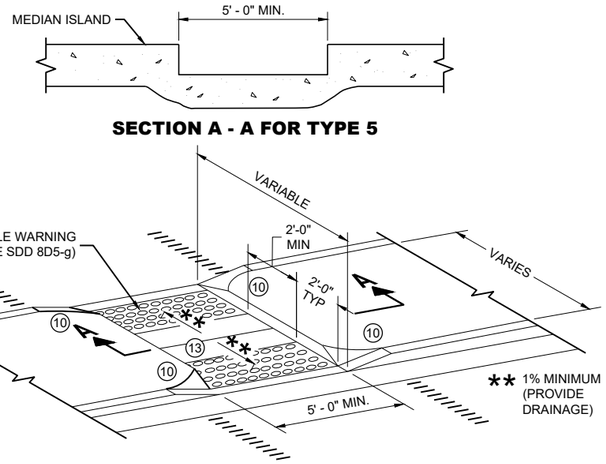
6

SDD 08D05-21d




## 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 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%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

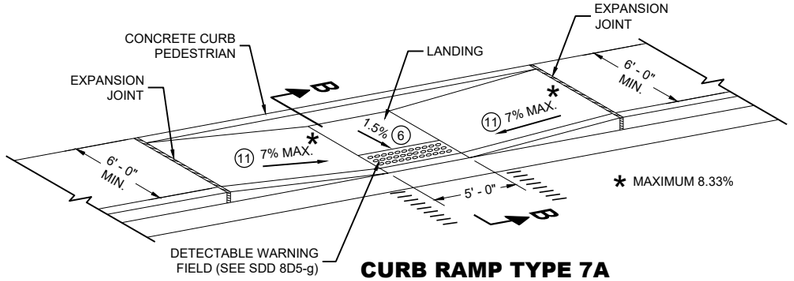
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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.

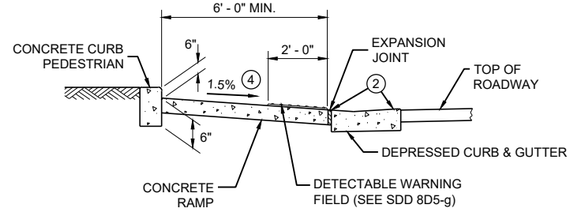
## LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

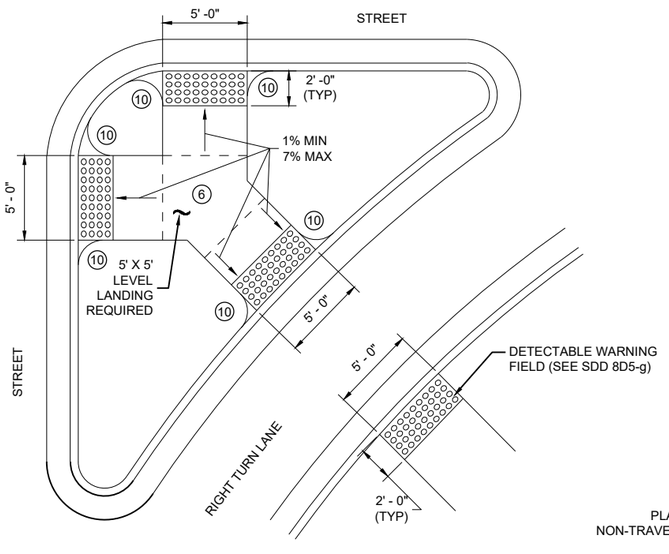



## CURB RAMP TYPE 7A

### FOR INTERSECTIONS AND MID BLOCK CROSSINGS



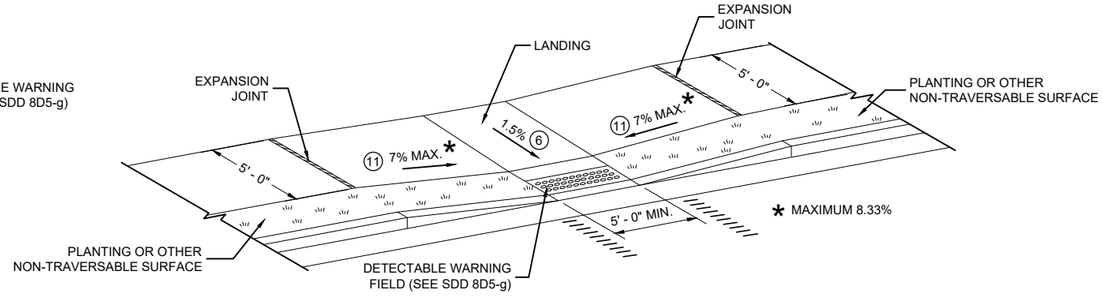

### SECTION B - B FOR TYPE 7A




## CURB RAMP TYPE 6

### DETECTABLE WARNING AT ISLANDS

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




## CURB RAMP TYPE 7B

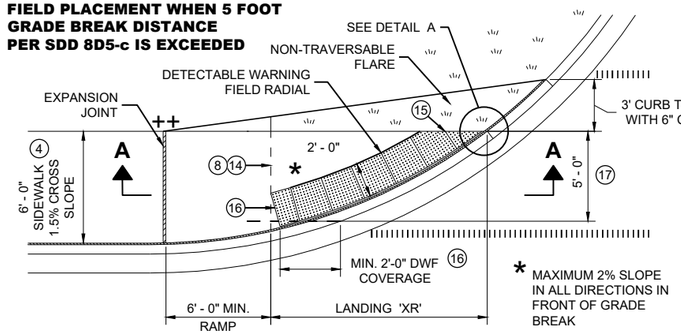
### FOR INTERSECTIONS AND MID BLOCK CROSSINGS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

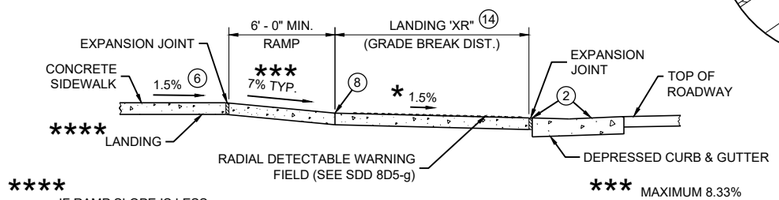
SDD 08D05-21e

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

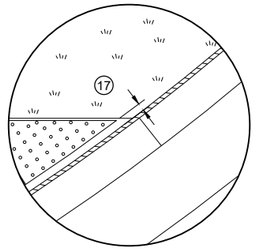



**PLAN VIEW**

## CURB RAMP TYPE 4A1
## (GRADE BREAK DISTANCE GREATER THAN 5 FEET)




**SECTION A - A FOR TYPE 4A1**



**DETAIL A**

## LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

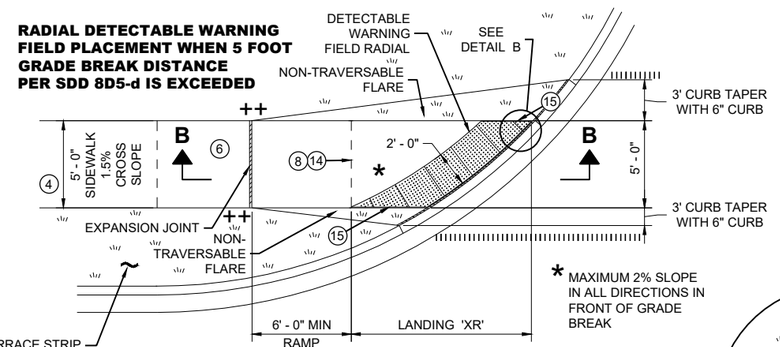
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(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.

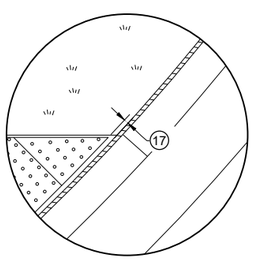
(17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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

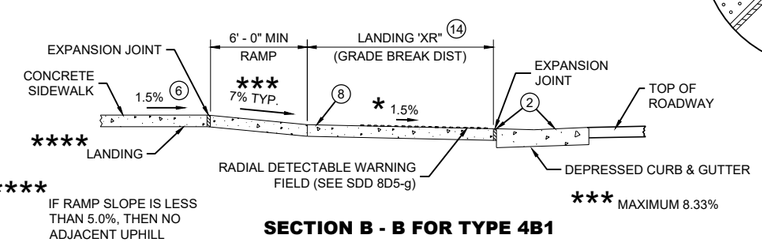



**PLAN VIEW**

## CURB RAMP TYPE 4B1
**(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

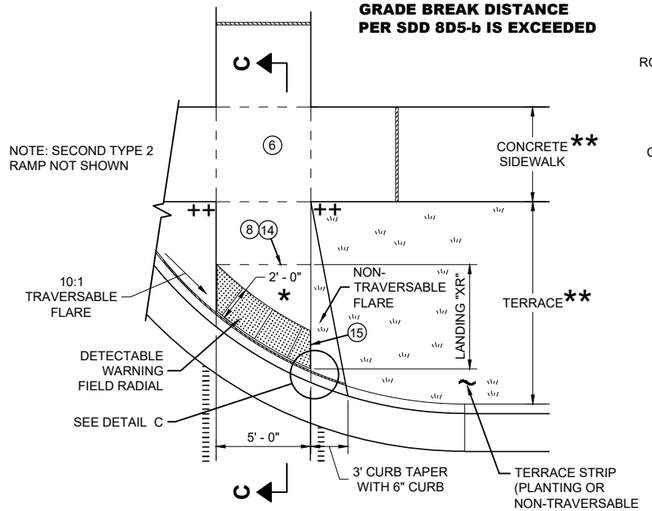


**DETAIL B**



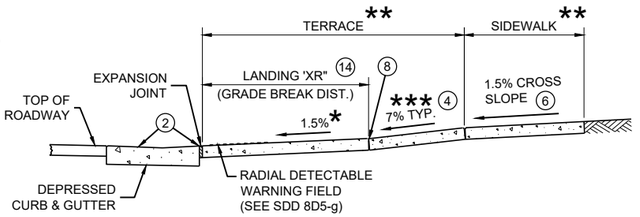

**SECTION B - B FOR TYPE 4B1**

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

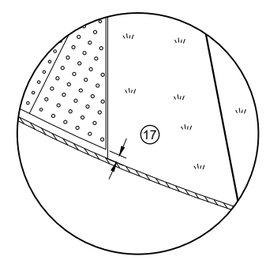



**PLAN VIEW**

## CURB RAMP TYPE 2
**(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**
**(ON LINE WITH SIDEWALK)**




**SECTION C - C FOR TYPE 2**



**DETAIL C**

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

**CURB RAMPS**
**RADIAL DETECTABLE WARNING**

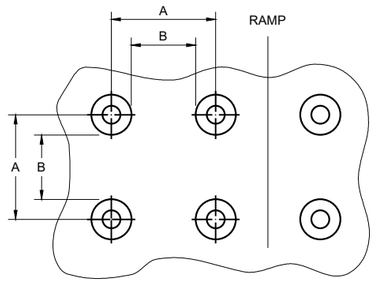
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

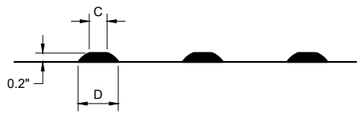
SDD 08D05-21f

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

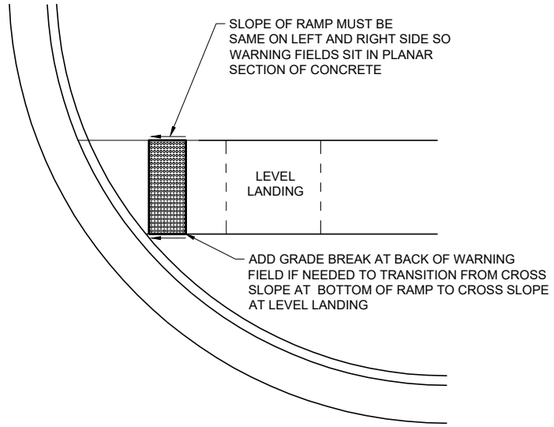
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.




**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.

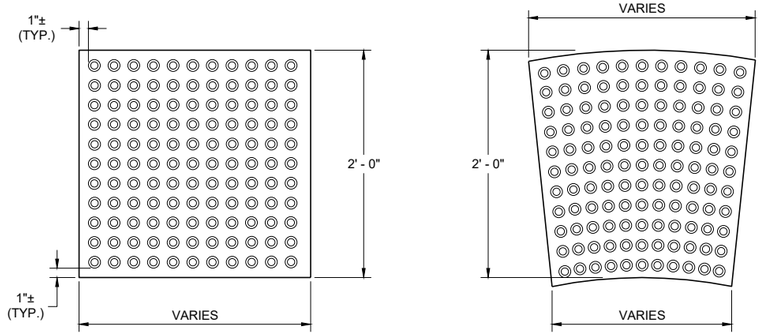
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE.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

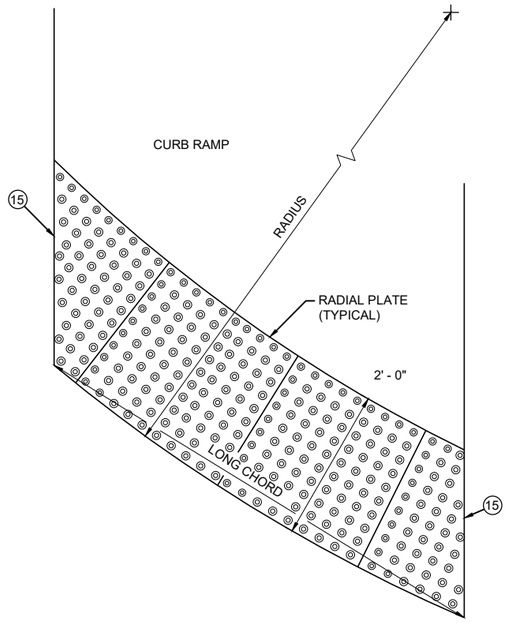
## TRUNCATED DOMES
### DETECTABLE WARNING PATTERN DETAIL



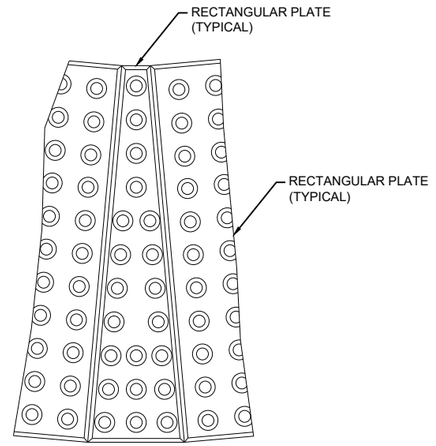

**RECTANGULAR PLATES**

**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
July 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

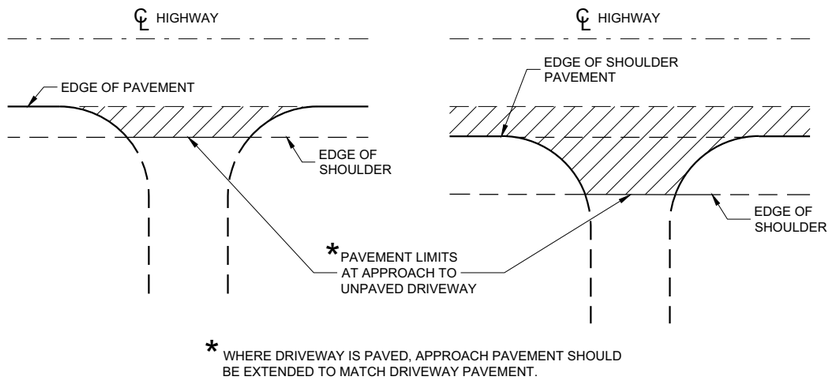
FHWA

6

SDD 08D05-21g

6

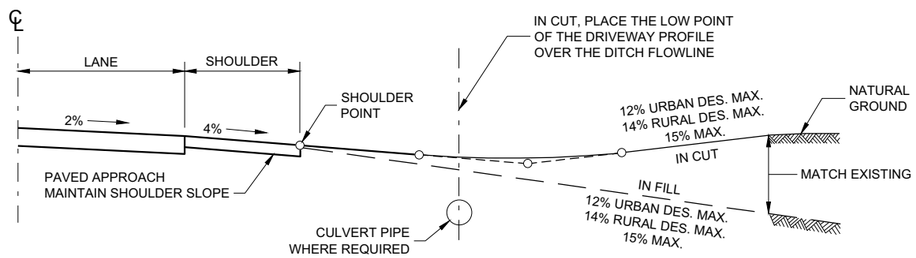
SDD 08D05-21g



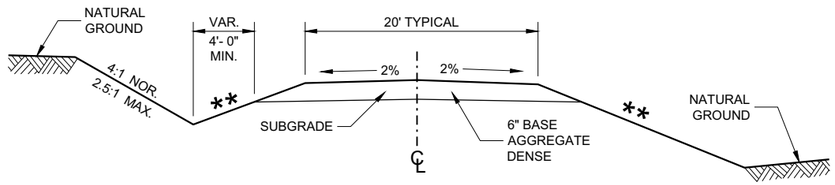

**PLAN VIEW**
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**
(PAVED SHOULDER ON HIGHWAY)

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




## TYPICAL DRIVEWAY PROFILES

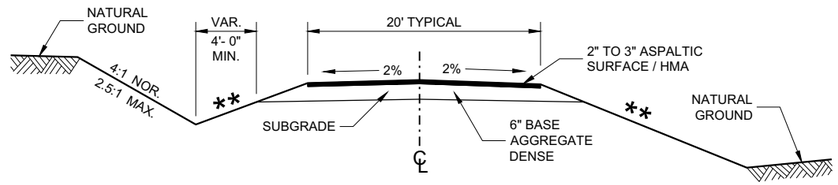



**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

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

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




**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

6

SDD 08D21 - 01

SDD 08D21 - 01

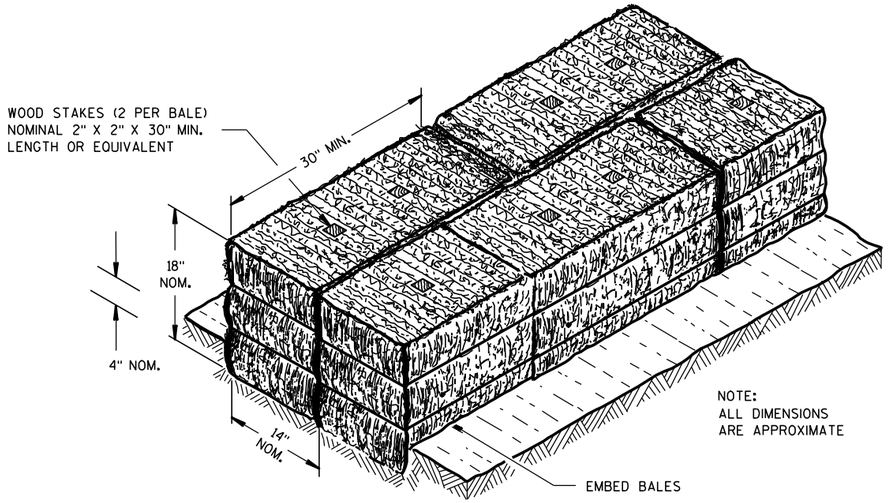
## DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

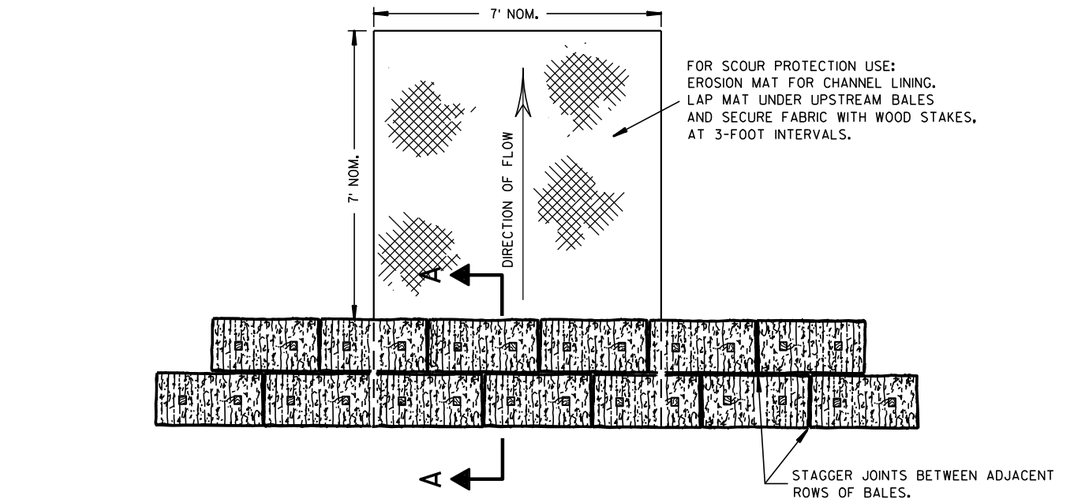
APPROVED
December 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

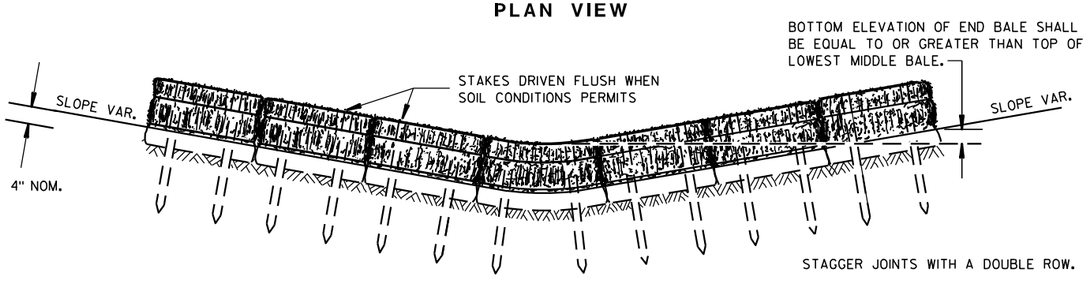
FHWA




**SECTION A-A**




**PLAN VIEW**



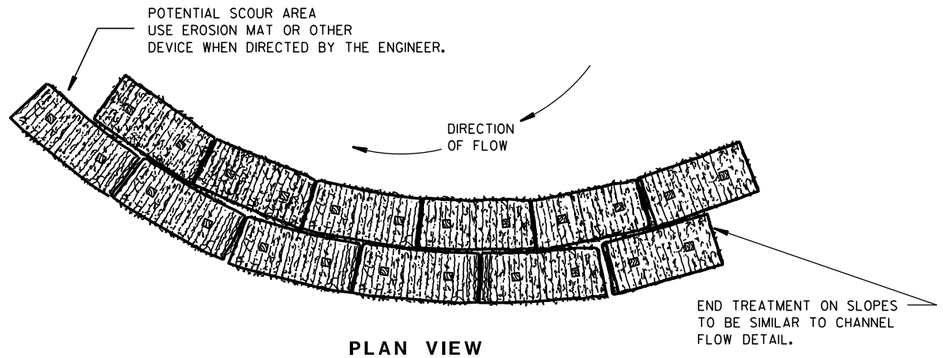

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

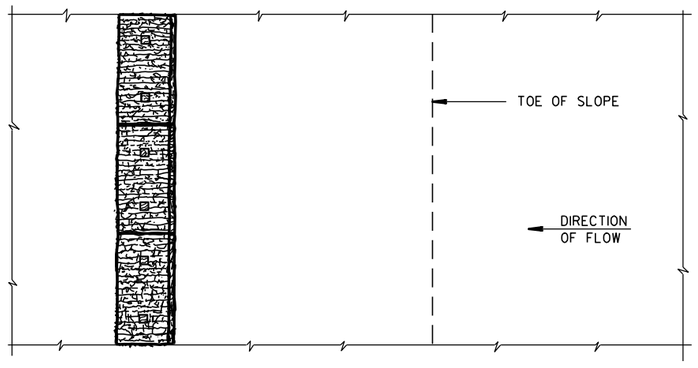
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

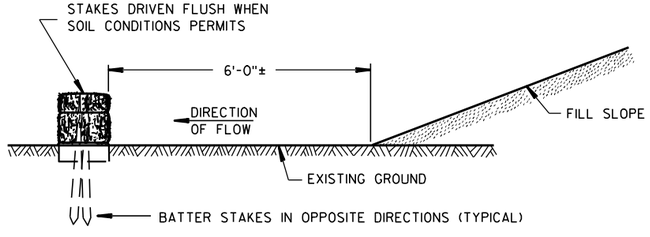



**PLAN VIEW**

WHEN ALTERING THE DIRECTION OF FLOW




**PLAN VIEW**




**FRONT ELEVATION**

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

## EROSION BALES FOR SHEET FLOW

## TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



6

S.D.D. 8 E 8-3

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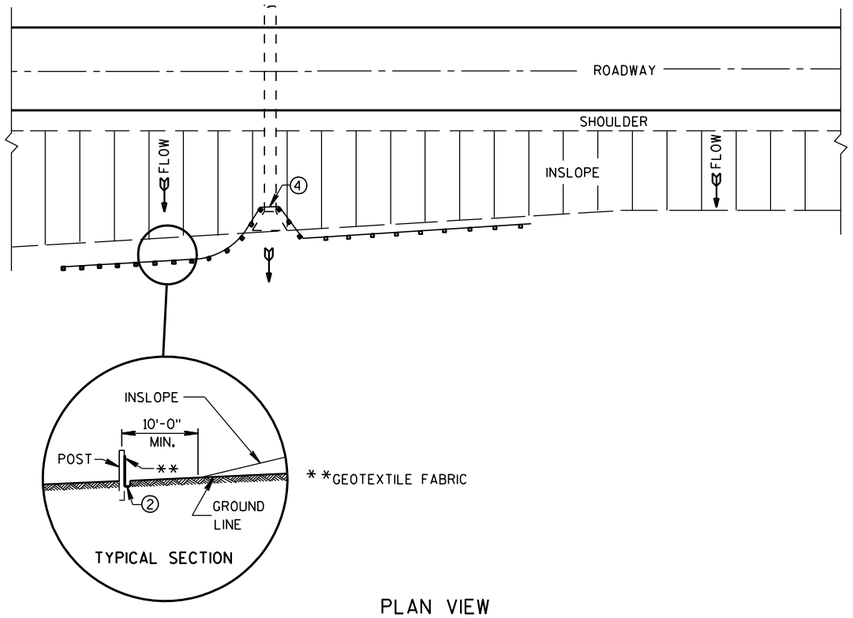
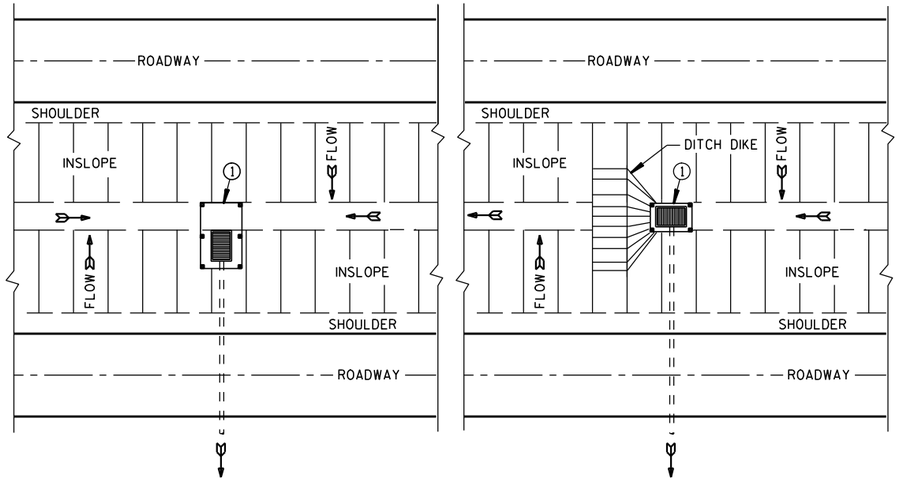
S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



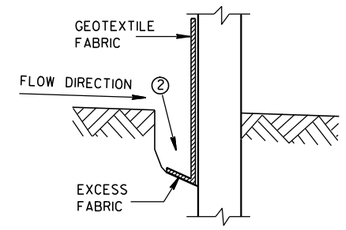

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

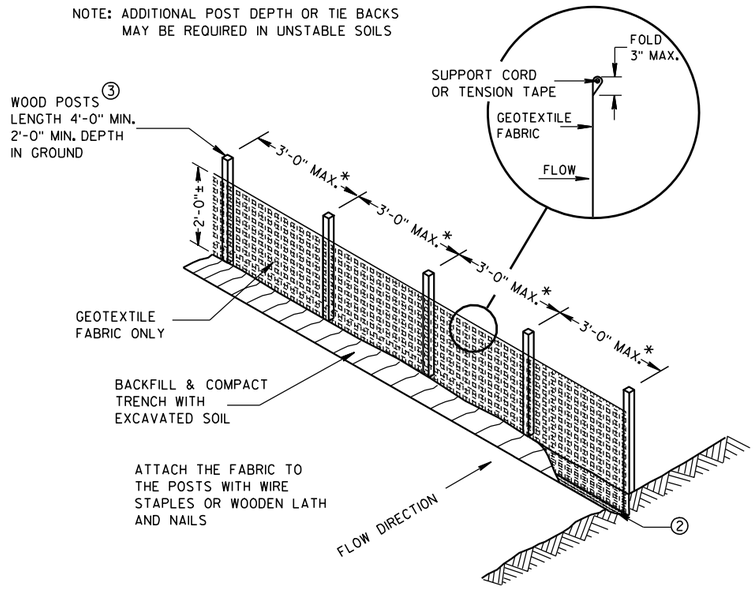
## GENERAL NOTES

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

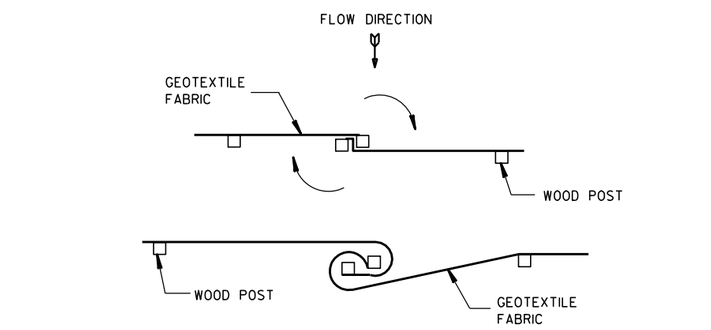
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



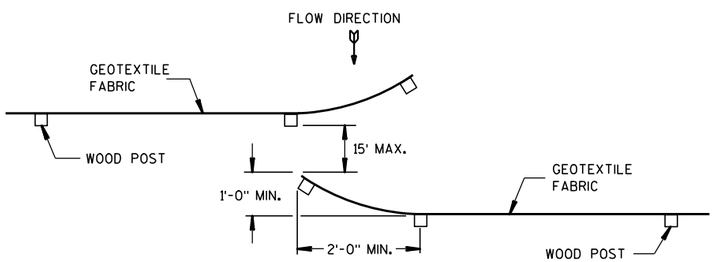

## TRENCH DETAIL




## SILT FENCE

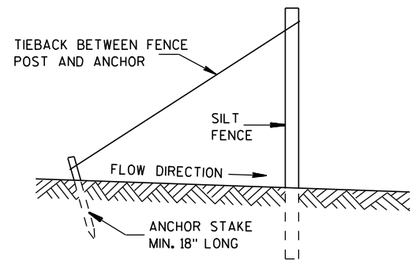



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE 5




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

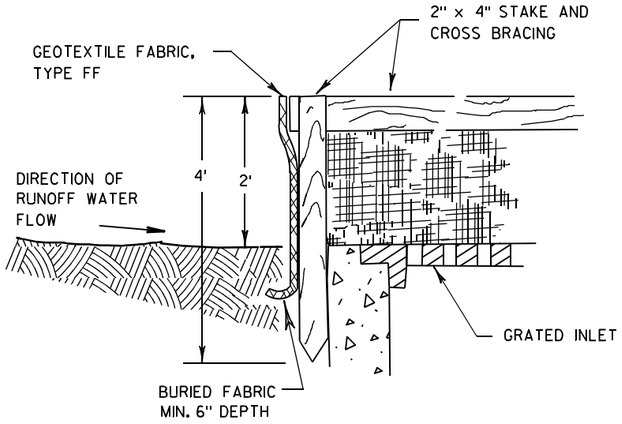


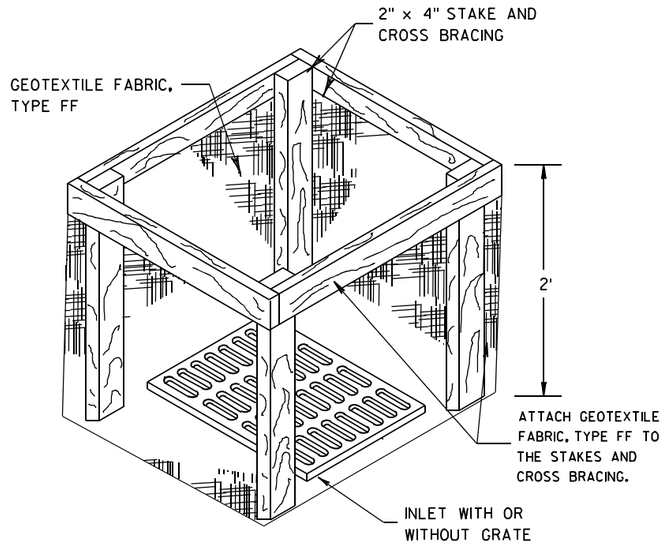
6

S.D.D. 8 E 9-6

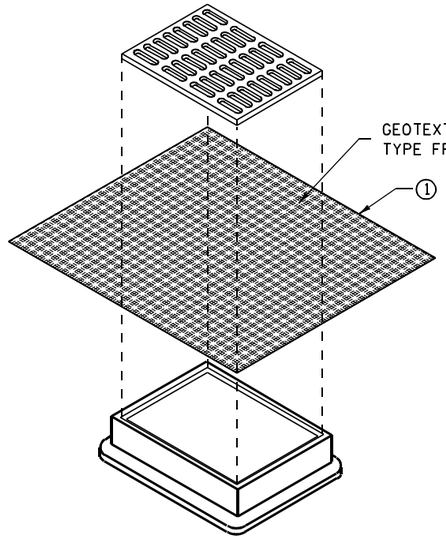
6

S.D.D. 8 E 9-6



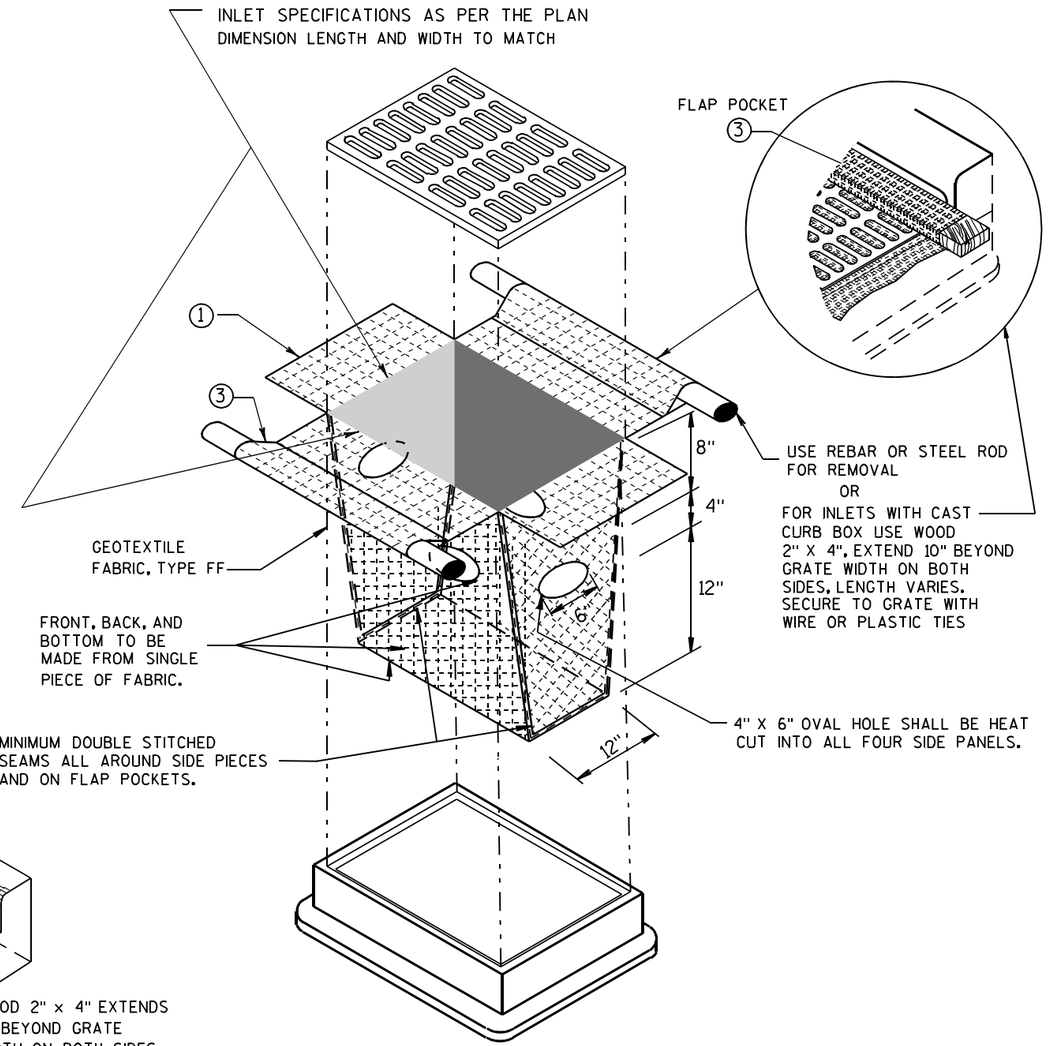




## INLET PROTECTION, TYPE A



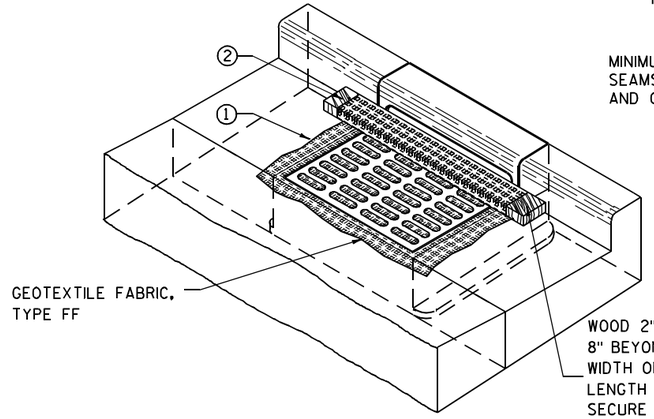

## INLET PROTECTION, TYPE B
## (WITHOUT CURB BOX)

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




## INLET PROTECTION, TYPE D

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




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

## GENERAL NOTES

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

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

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

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

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

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

## INSTALLATION NOTES

### TYPE B & C

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

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

### TYPE D

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

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

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

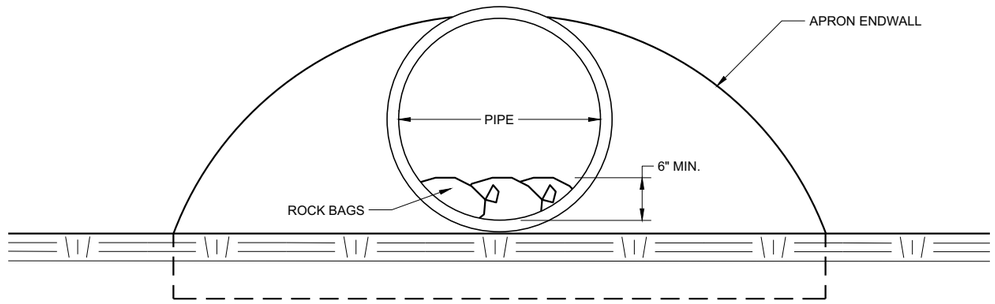
**INLET PROTECTION**
**TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

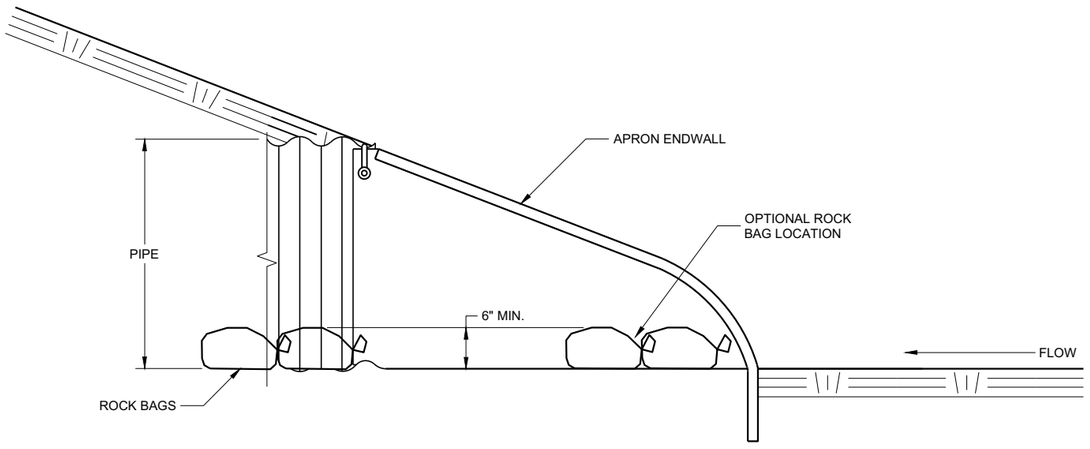
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA




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




**END VIEW**




**SIDE VIEW**

## CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA



6

SDD 08E15 - 01

6

SDD 08E15 - 01

## METAL APRON ENDWALLS

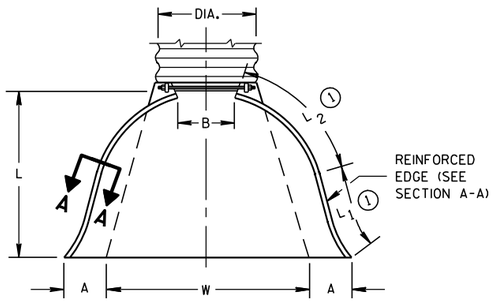
| PIPE DIA. (IN.) | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | .064 | .060 | 6 | 6 | 6 | 21 | 12 | 17 1/2 | 24 | 2 1/2 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

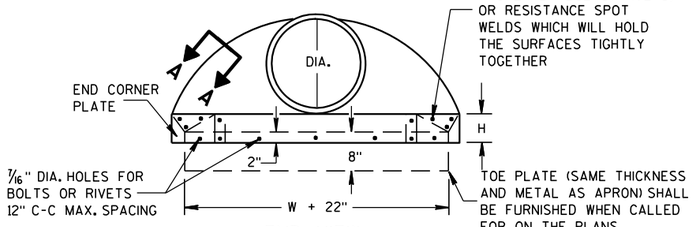
## REINFORCED CONCRETE APRON ENDWALLS

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

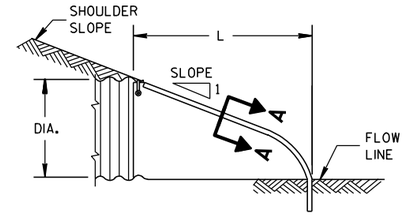
*MINIMUM
**MAXIMUM




PLAN VIEW

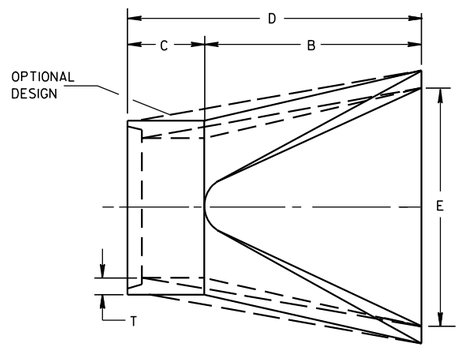



END VIEW

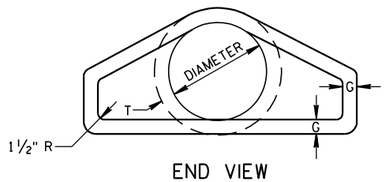



SIDE ELEVATION

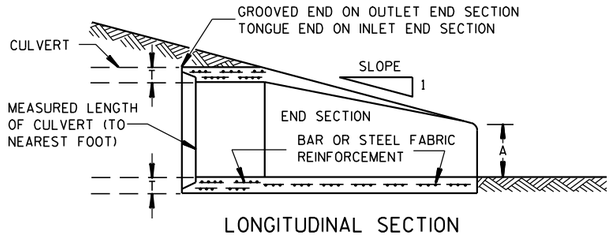
## METAL ENDWALLS




PLAN

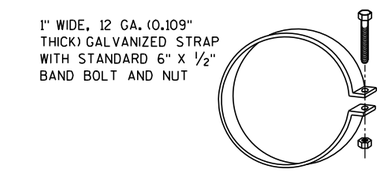



END VIEW



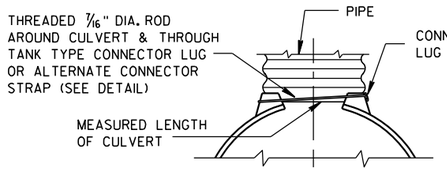

LONGITUDINAL SECTION

## CONCRETE ENDWALLS

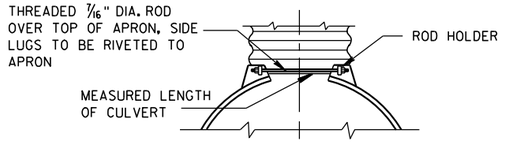



ALTERNATE FOR TYPE 1 CONNECTION

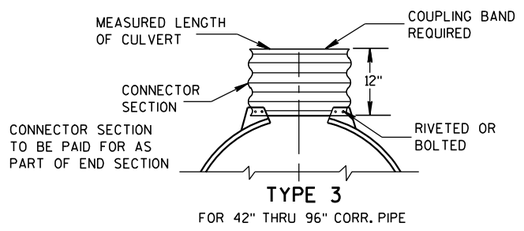
## END SECTION CONNECTOR STRAP



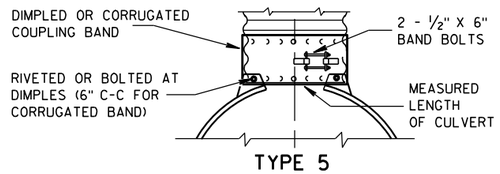

TYPE 1
FOR 12" THRU 24" CORR. PIPE




TYPE 2
FOR 30" THRU 96" CORR. PIPE




TYPE 3
FOR 42" THRU 96" CORR. PIPE




TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

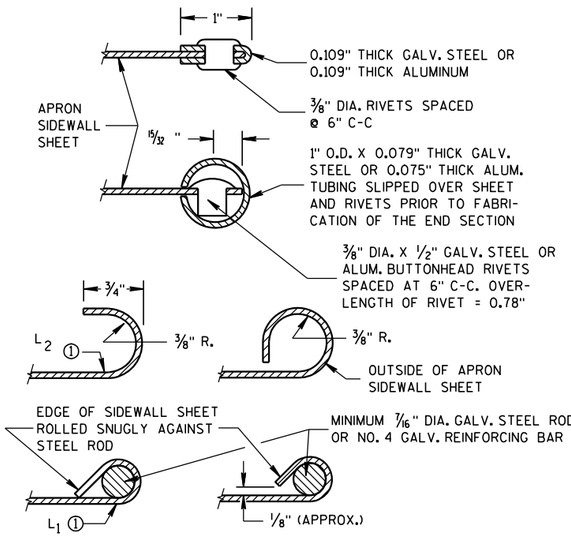
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

## CONNECTION DETAILS




## SECTION A-A

## GENERAL NOTES

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

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

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

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

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

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

**APRON ENDWALLS FOR CULVERT PIPE**

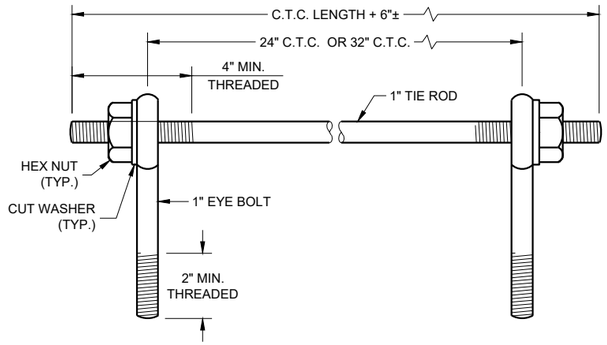
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

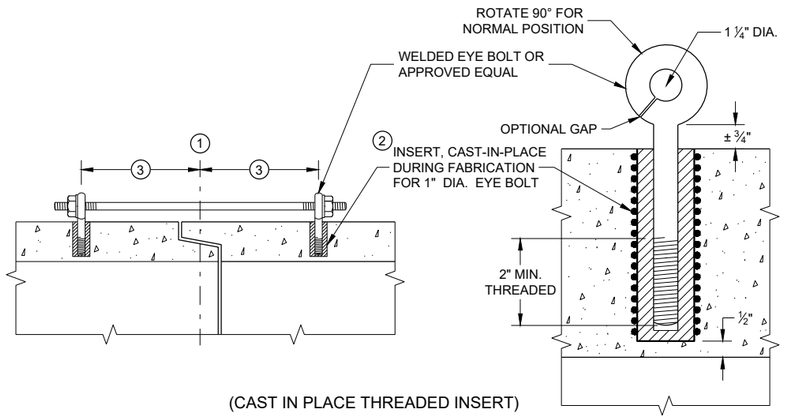


6

S.D.D. 8 F 1-11




**EYE BOLTS AND TIE ROD**




(CAST IN PLACE THREADED INSERT)

**LONGITUDINAL SECTIONS**

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

## GENERAL NOTES

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

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

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

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

(1) 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.

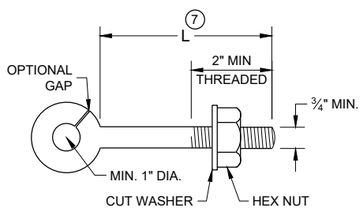
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

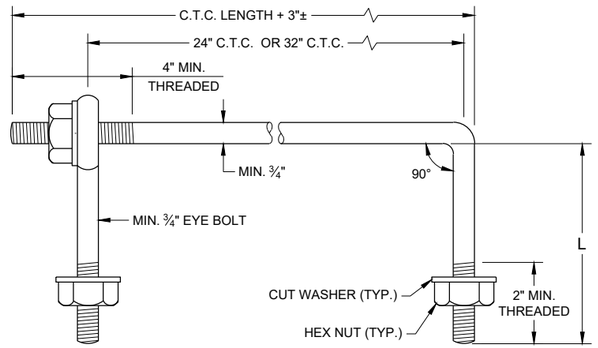
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

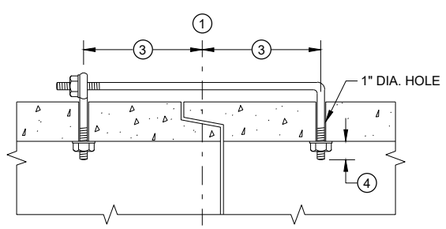



**EYE BOLT** (7)

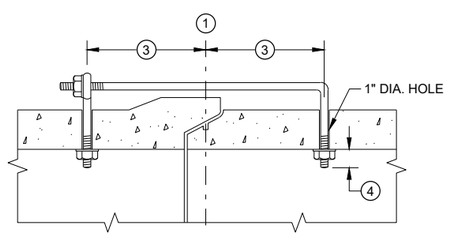
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.




**EYE BOLT AND TIE ROD**




(TONGUE AND GROOVE PIPE)




(MODIFIED BELL PIPE)

**LONGITUDINAL SECTION**

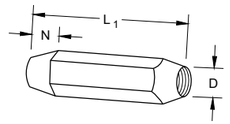
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

## 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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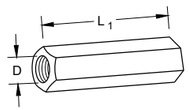
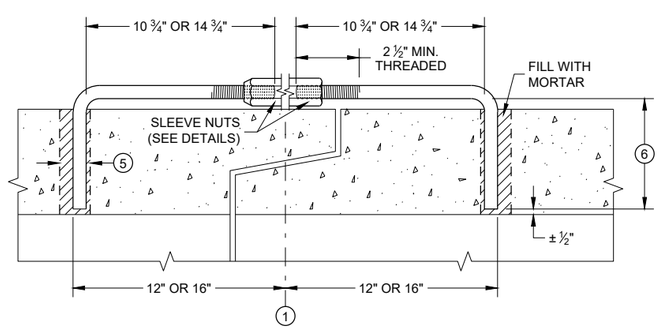



PLAIN

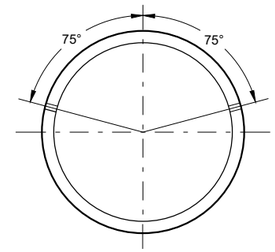
RIGHT AND LEFT THREADS

**SLEEVE NUTS**



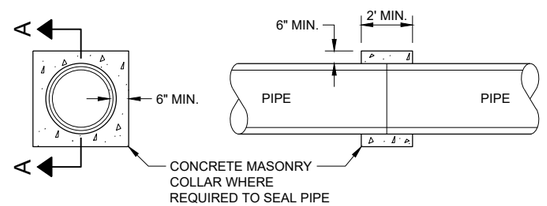

**LONGITUDINAL SECTION**

## 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

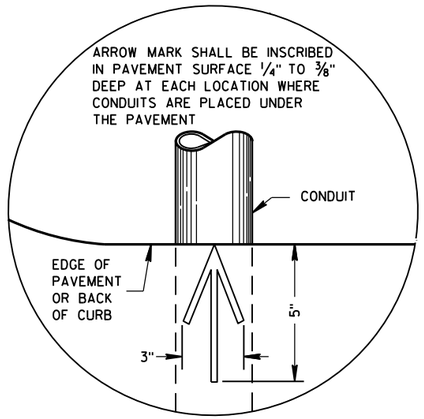
APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA



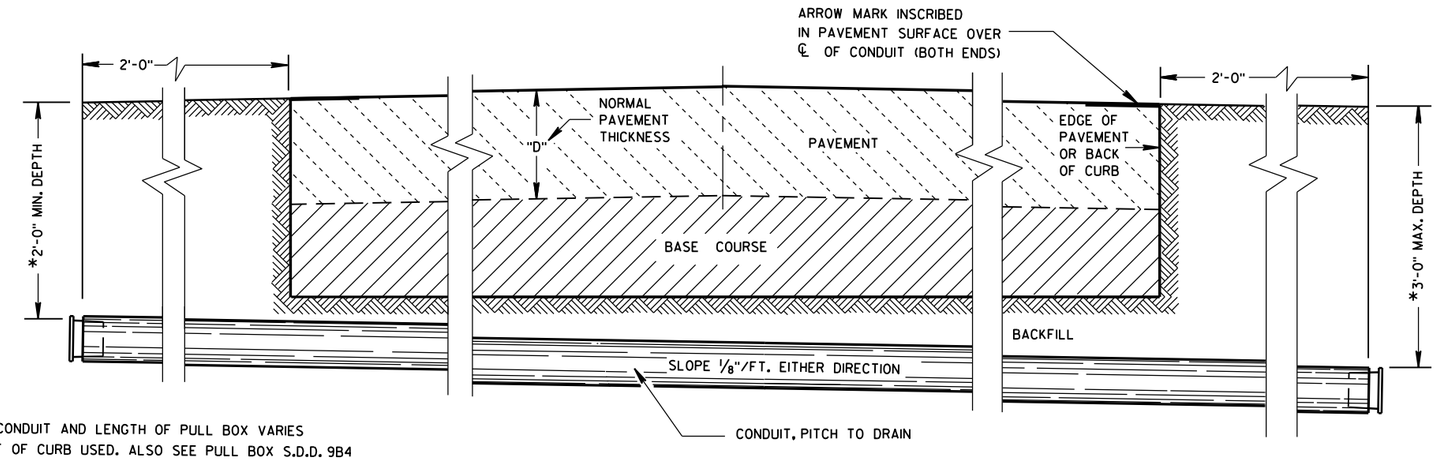
SDD 08F04 - 08

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
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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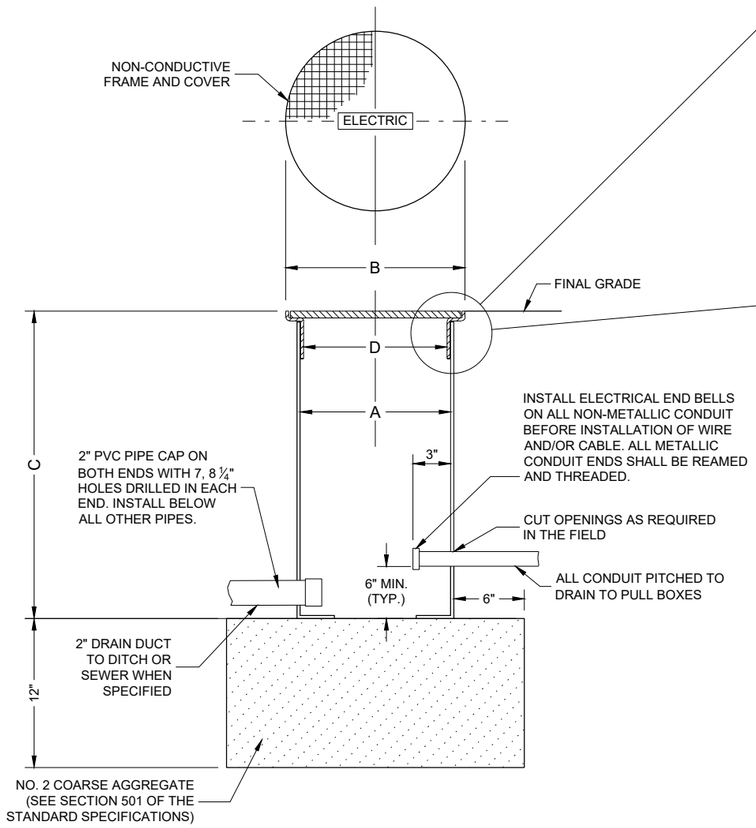
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

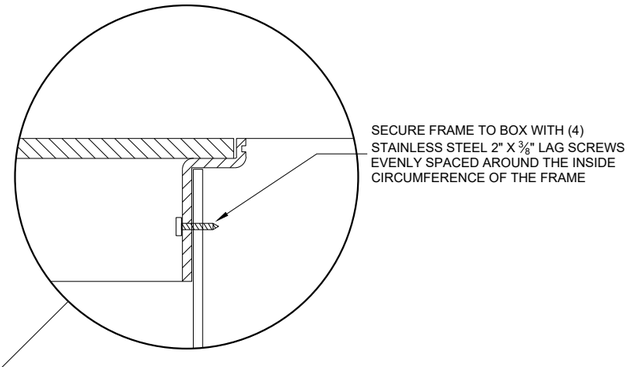
| DIMENSION IN INCHES | | NON- CONDUCTIVE PULL BOX | |
|---|---|---|---|
| BOX DIAMETER ** (INSIDE) | A | 24 | 24 |
| BOX OVERALL OUTSIDE DIAMETER | B | 27 | 27 |
| BOX LENGTH | C | 36 | 42 |
| FRAME OPENING | D | 22 ½ | 22 ½ |
| WEIGHT IN POUNDS * | | | |
| COVER | | 50 | 50 |
| BOX ONLY | | 75 | 85 |

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

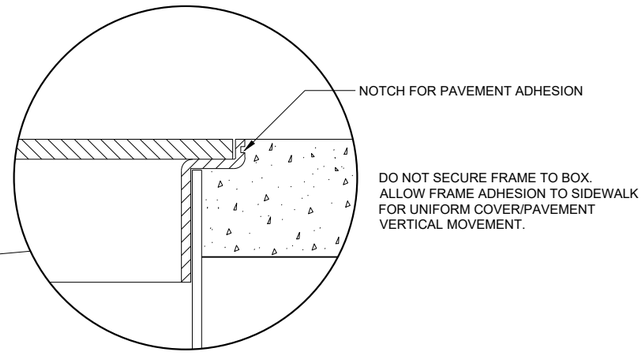
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



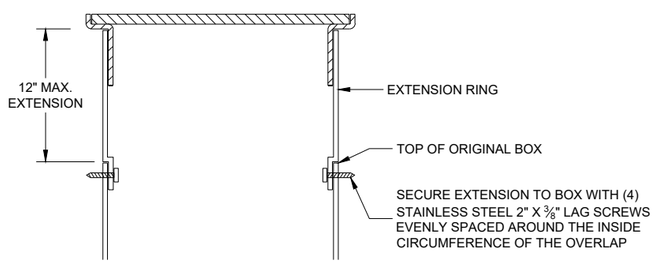

**NON-CONDUCTIVE PULL BOX**




**INSTALLED IN SOD OR CRUSHED AGGREGATE**




**INSTALLED IN SIDEWALK**




**BOX EXTENSION**

## GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

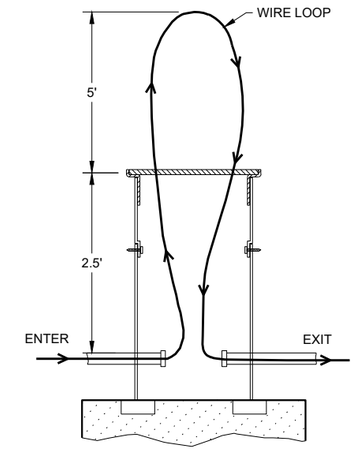
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.




**MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX**

**PULL BOXES NON-CONDUCTIVE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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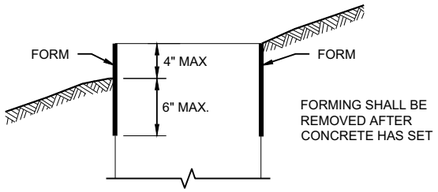
SDD 09B16 - 02

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.

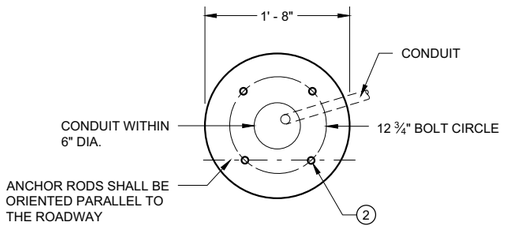
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

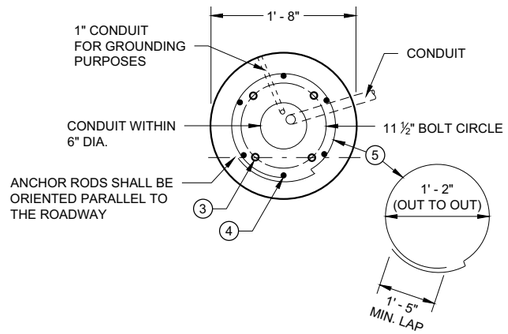
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

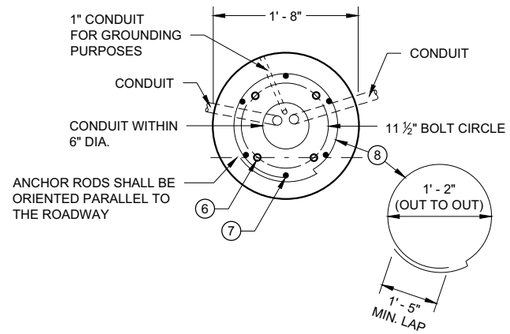
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

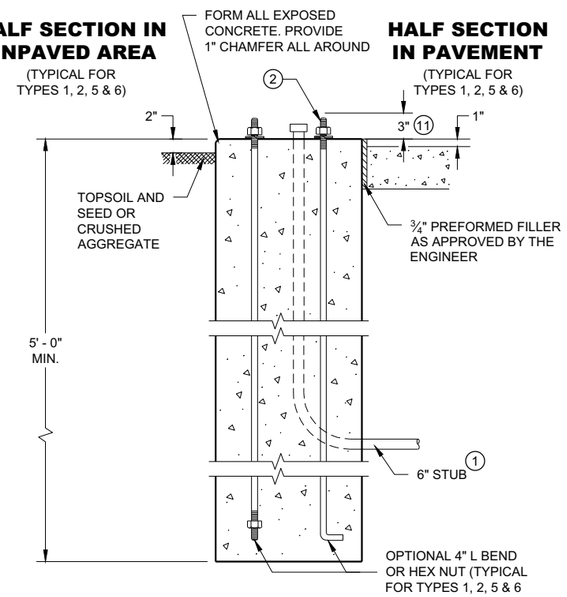
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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.

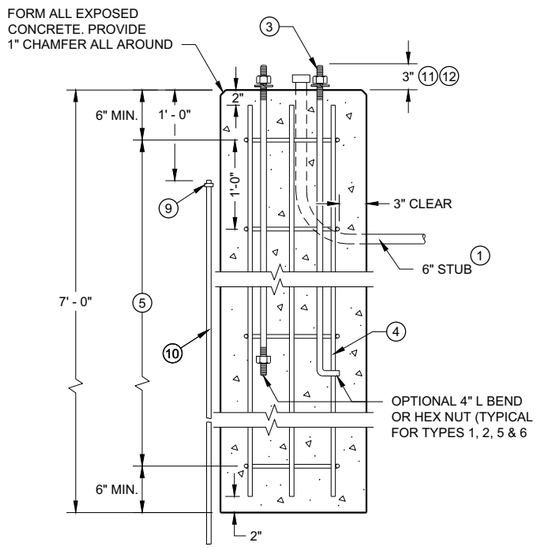
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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

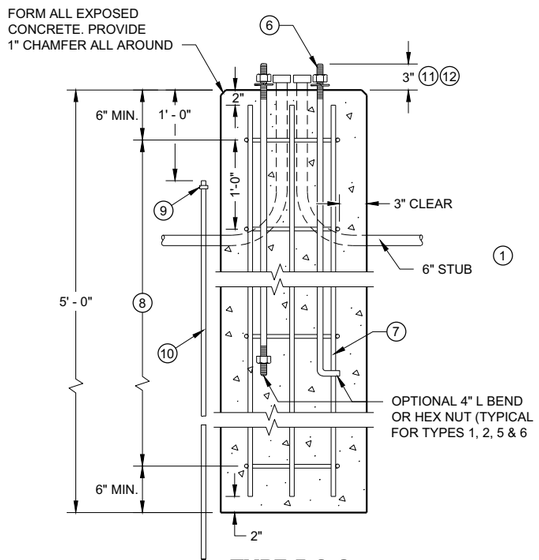
**HALF SECTION IN PAVEMENT**
(TYPICAL FOR TYPES 1, 2, 5 & 6)




**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 ENGI

FHWA

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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.

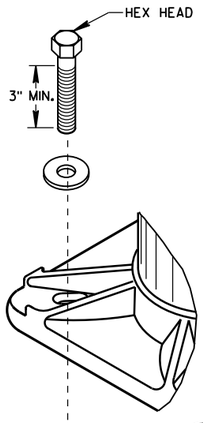
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

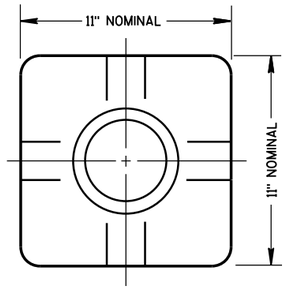
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

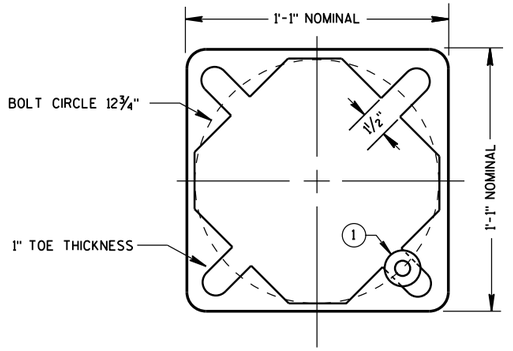
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

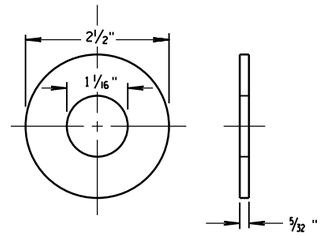



TOP VIEW
(PEDESTAL BASE)

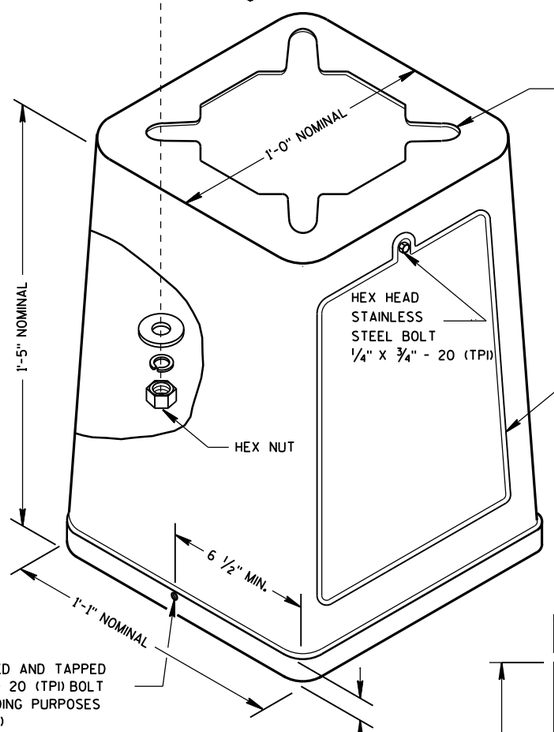



BOTTOM VIEW
(PEDESTAL BASE)

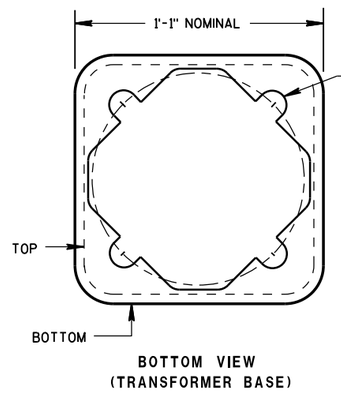



ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

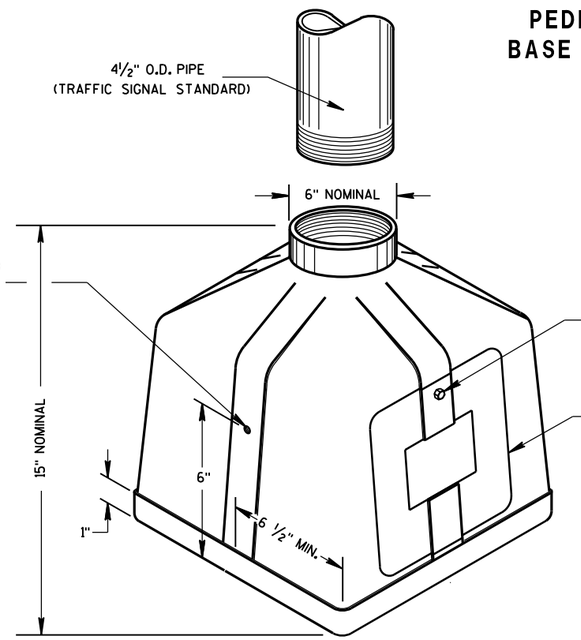
**PEDESTAL BASE WASHER** (1)



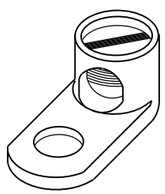

ISOMETRIC VIEW




BOTTOM VIEW
(TRANSFORMER BASE)

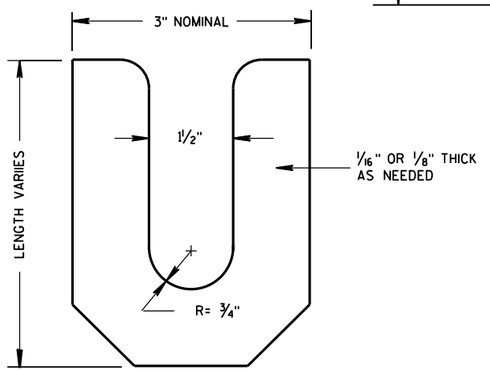



ISOMETRIC VIEW
**PEDESTAL BASE**



**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
FHWA



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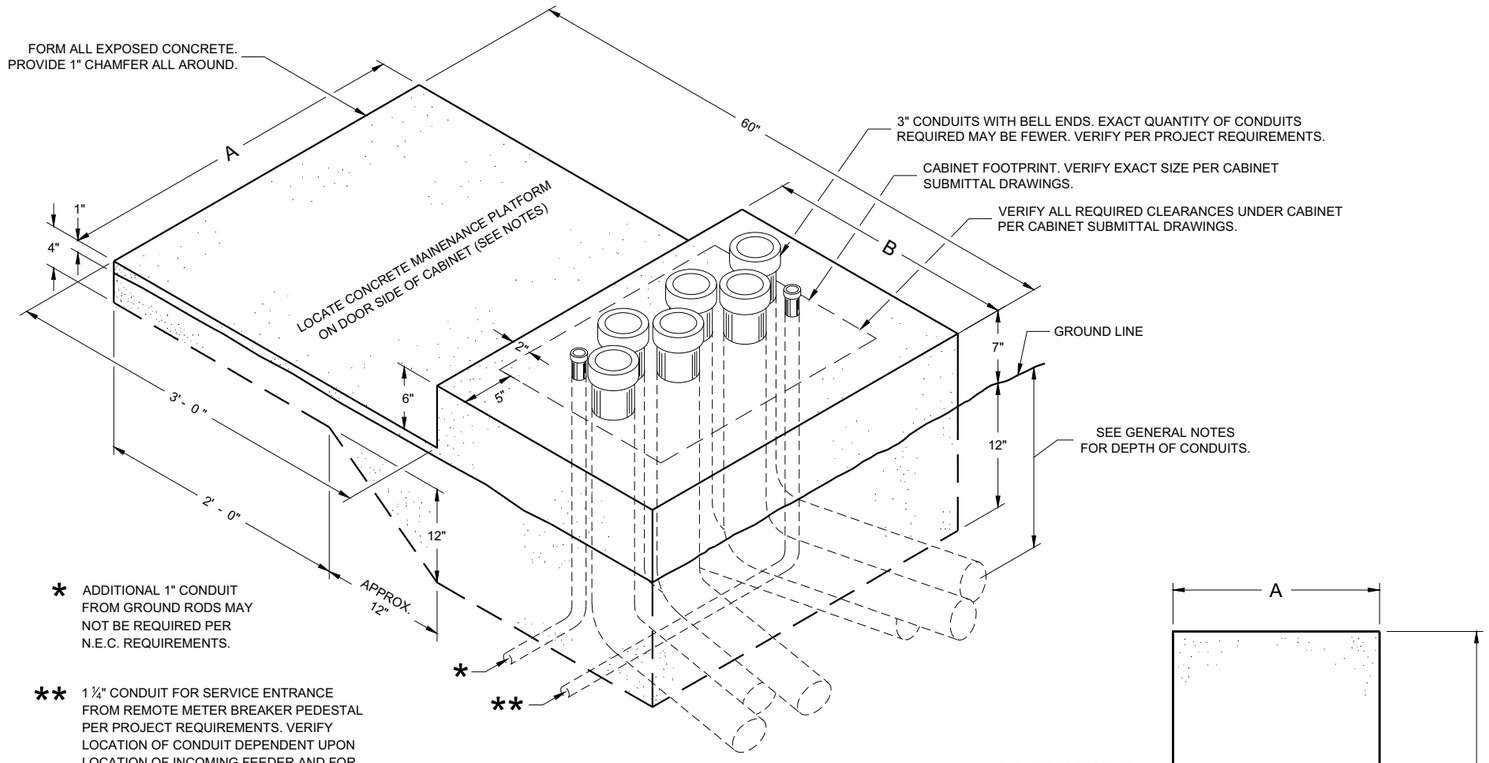
S.D.D. 9 C 3-4




* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

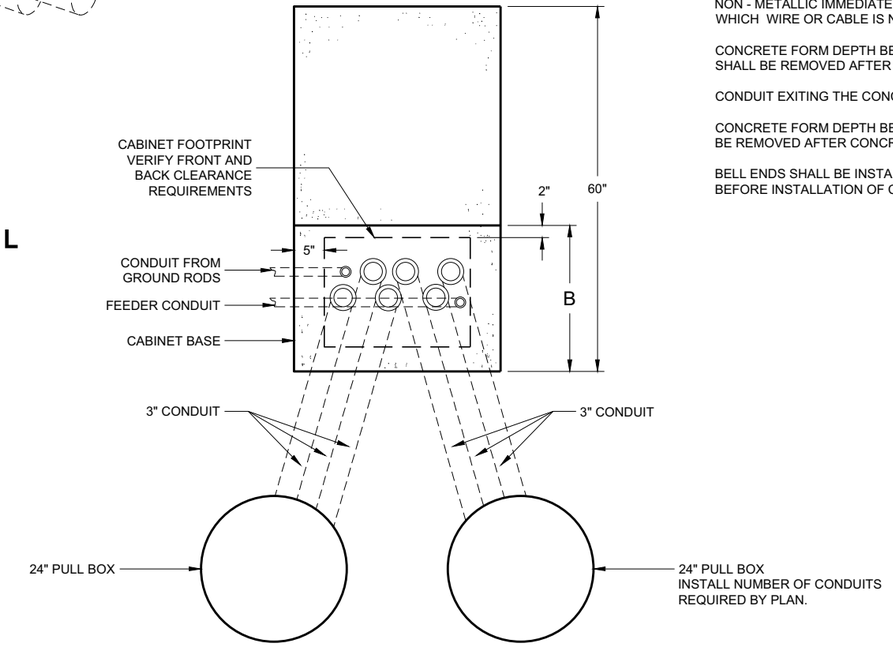
** 1 ¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

**ISOMETRIC VIEW**

## CONCRETE CONTROL CABINET BASE, TYPE L

( C.Y. CONCRETE = APPROX. 0.4 )

| CONCRETE BASE TYPE | CABINET WIDTH | DIMENSIONS | | MAXIMUM 3" CONDUITS |
|---|---|---|---|---|
| | | A | B | |
| L24 | 24" | 34" | 24" | 4 |
| L30 | 30" | 40" | 24" | 6 |




**PLAN VIEW**

## CONCRETE CONTROL CABINET BASE, TYPE L

## GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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.

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

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

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 BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

**CONCRETE CONTROL CABINET BASE, TYPE L**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 128

FHWA

SDD 09C14 - 03

SDD 09C14 - 03



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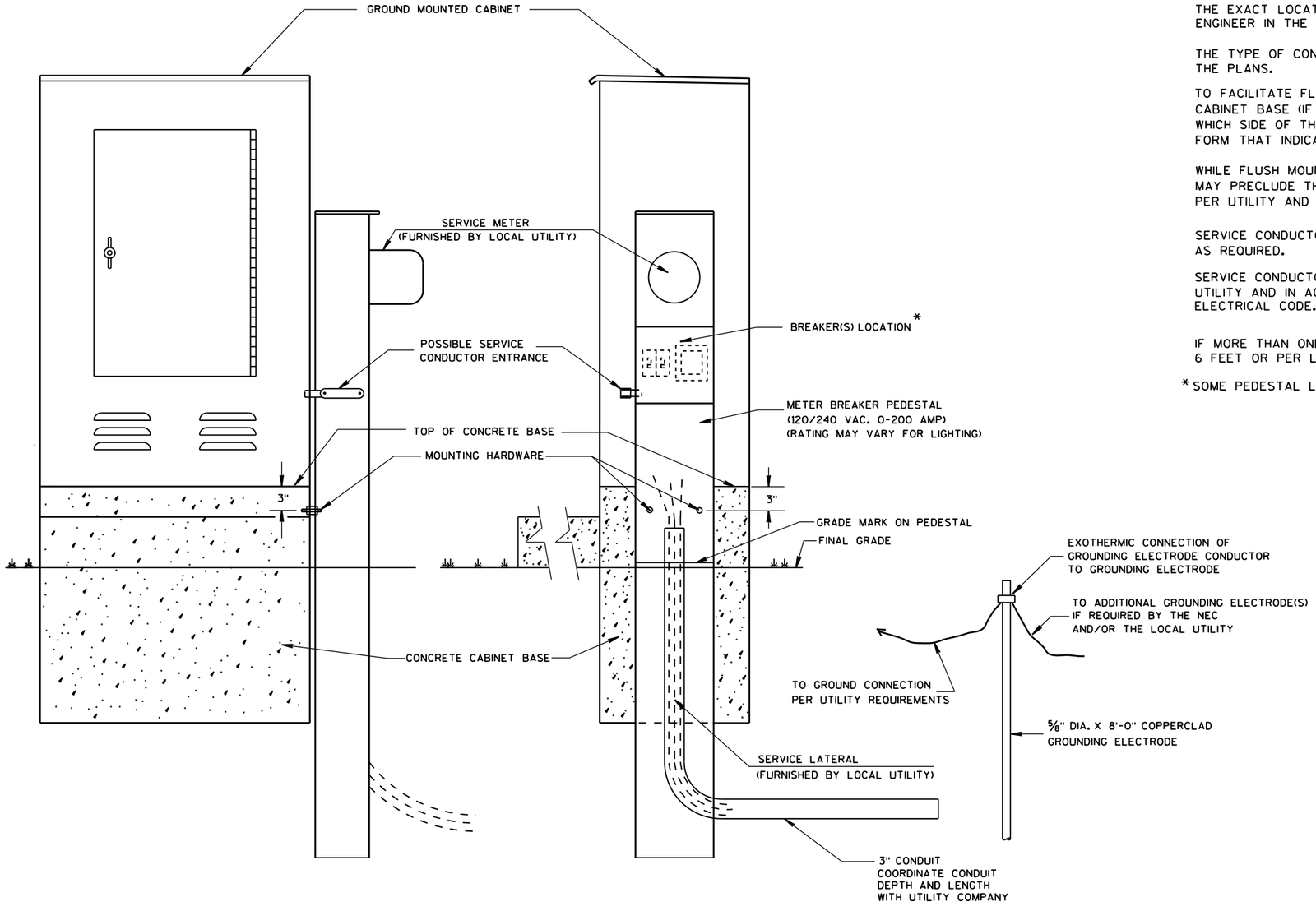


**TYPICAL CABINET SERVICE INSTALLATION**

## GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

**CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)**

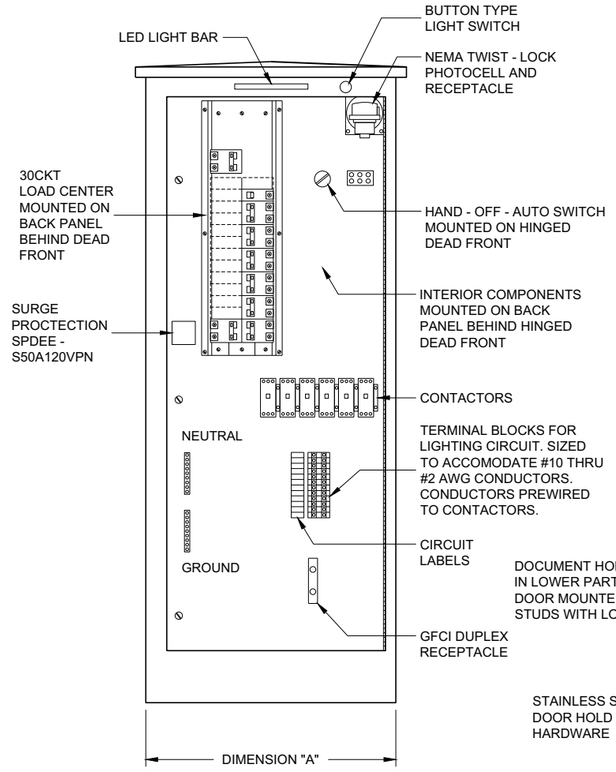
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

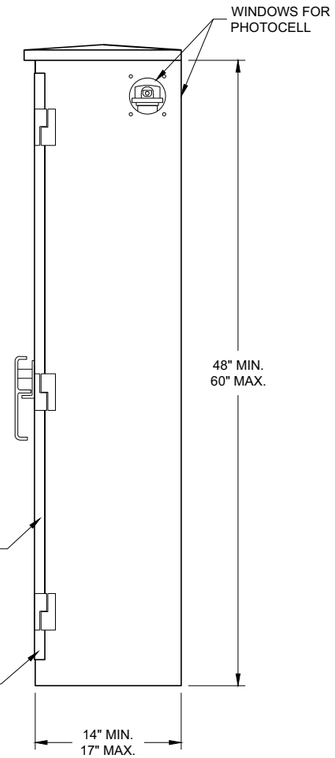
/S/ Ahmet Demirbilek
STATE ELECTRICAL

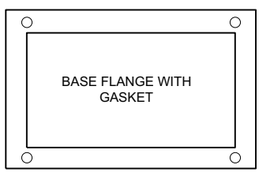
FHWA

## FRONT INTERIOR ELEVATION



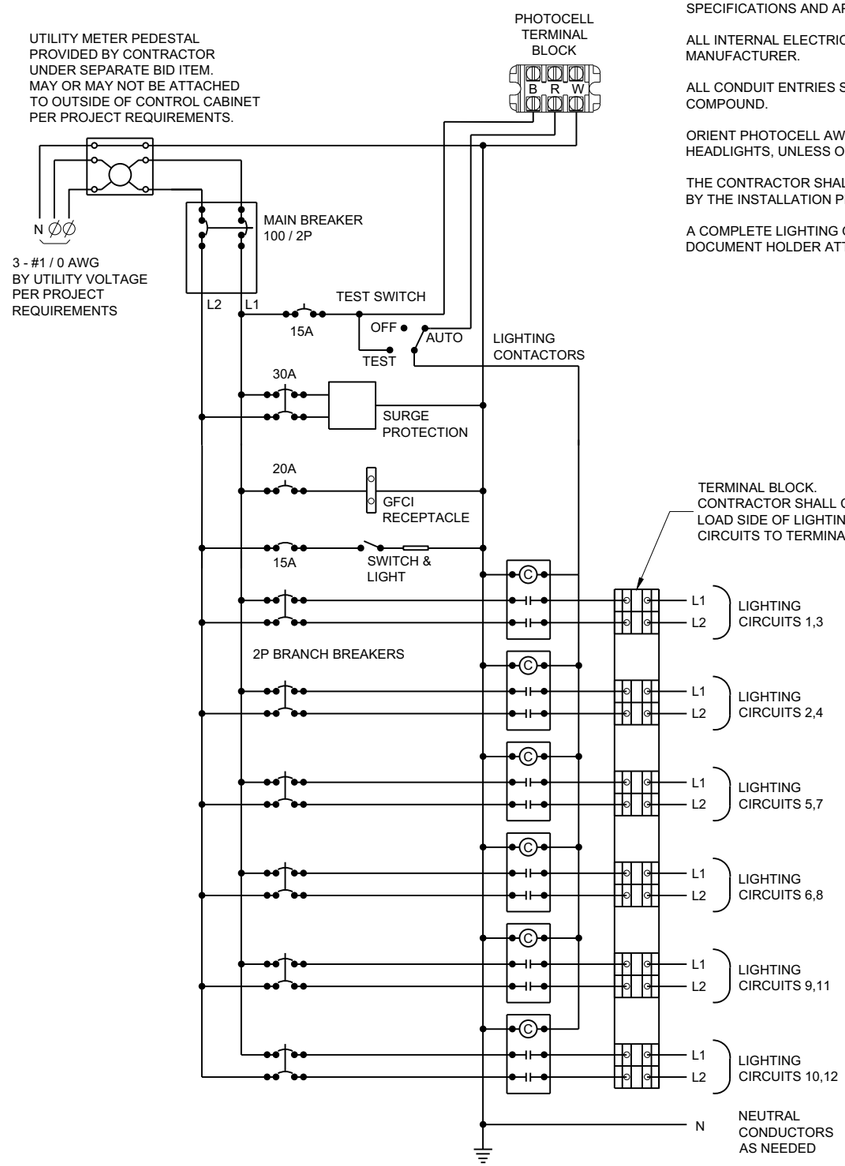

## SIDE VIEW




| TABLE OF DIMENSIONS (INCHES) | | |
|---|---|---|
| CONCRETE BASE TYPE | CABINET WIDTH | DIMENSION "A" |
| L24 | 24" | 24" |
| L30 | 30" | 30" |

## LIGHTING CONTROL CABINET




## CONTROL CABINET SCHEMATIC

## 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.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE - WIRED BY THE CABINENT MANUFACTURER.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS, UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISION.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

**LIGHTING CONTROL CABINET**
**120 / 240 VOLT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 130

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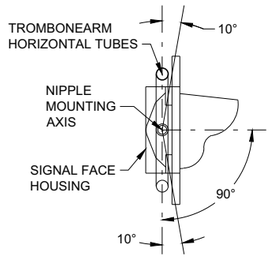
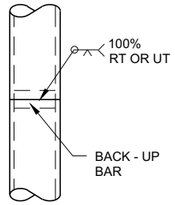



**SECTION A-A**

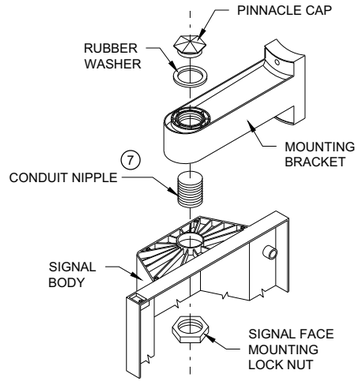
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

**FOR MANUFACTURERS USE ONLY**

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.




**POLE SPLICE DETAIL**




**SIGNAL FACE MOUNTING DETAIL**

**(BANDED)**

## GENERAL NOTES

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

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING,PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) ASREQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

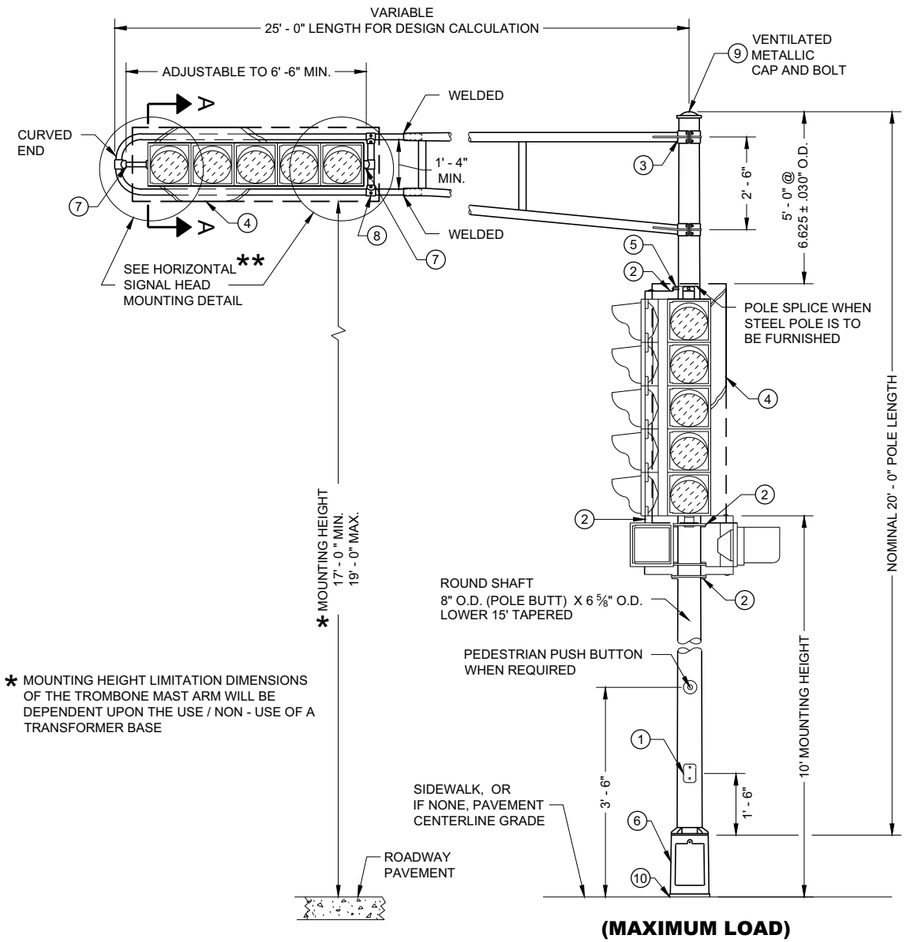
(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOTINTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW ( ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUTIS THE SLIDING TYPE.

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

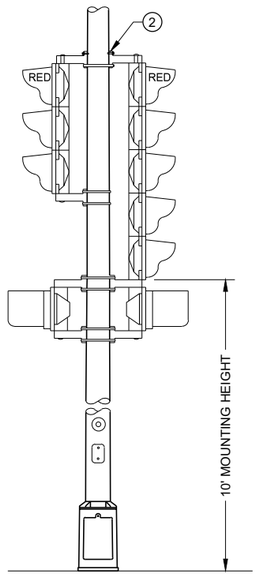
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

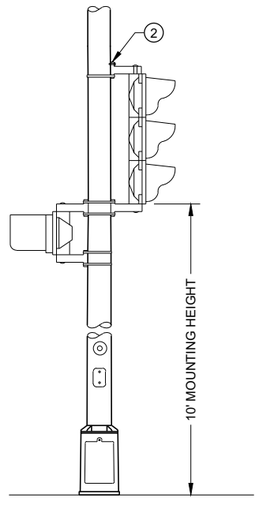



* MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE / NON - USE OF A TRANSFORMER BASE

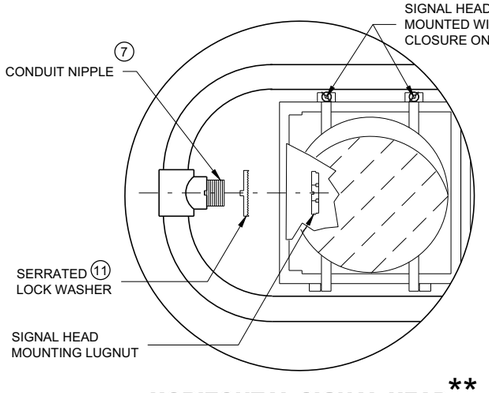
**(MAXIMUM LOAD)**




**TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES**




**TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE**




**HORIZONTAL SIGNAL HEAD MOUNTING DETAIL** **

** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

**TYPE 2 POLE MOUNTING CONFIGURATION**

**POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA



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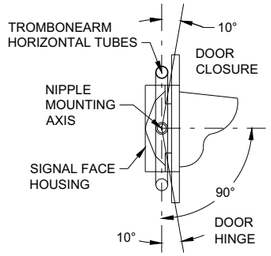
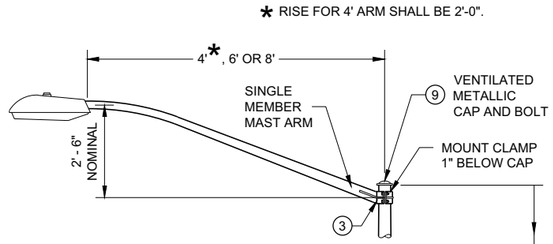
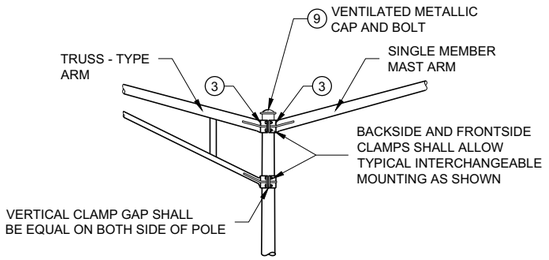
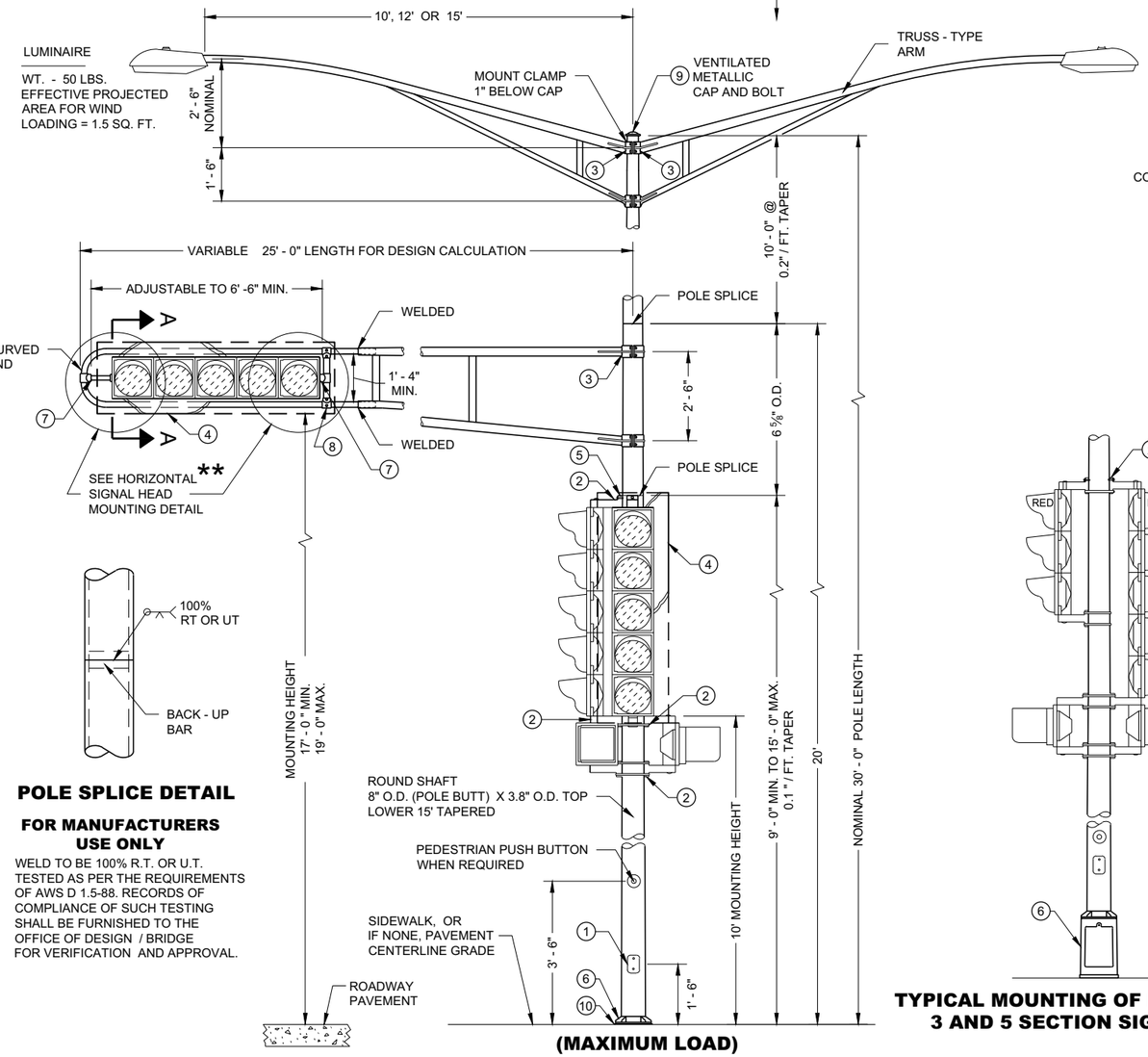



**SECTION A-A**

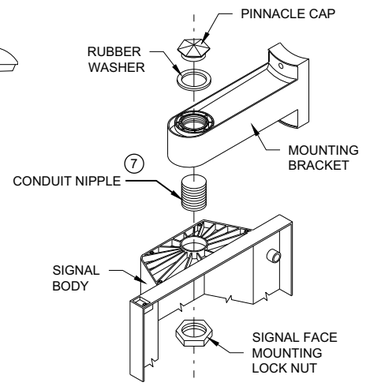



**INTERCHANGEABLE MOUNTING DETAIL**




**(MAXIMUM LOAD)**




**SIGNAL FACE MOUNTING DETAIL**

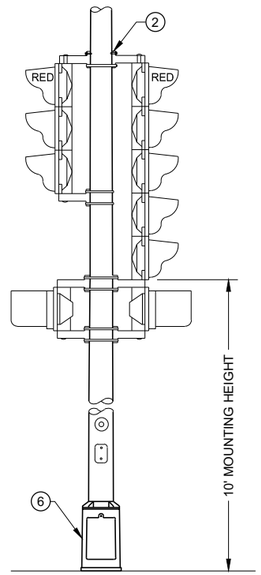
**(BANDED)**



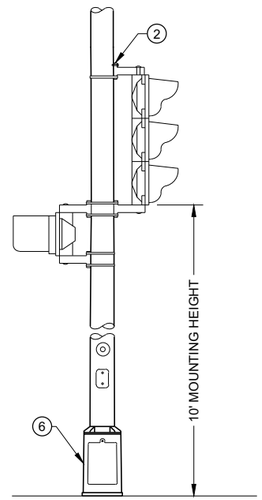

**POLE SPLICE DETAIL**

**FOR MANUFACTURERS USE ONLY**

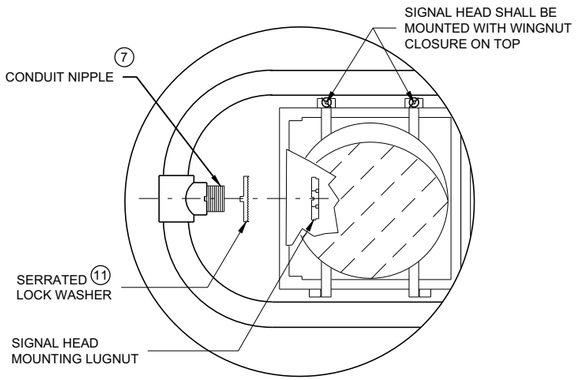
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.




**TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES**




**TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE**




**HORIZONTAL SIGNAL HEAD ** MOUNTING DETAIL**

** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

## GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.

(7) 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 FACES AND BRACKET ENDS.

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW ( ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

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

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

**TYPE 3 POLE MOUNTING CONFIGURATION**

**POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION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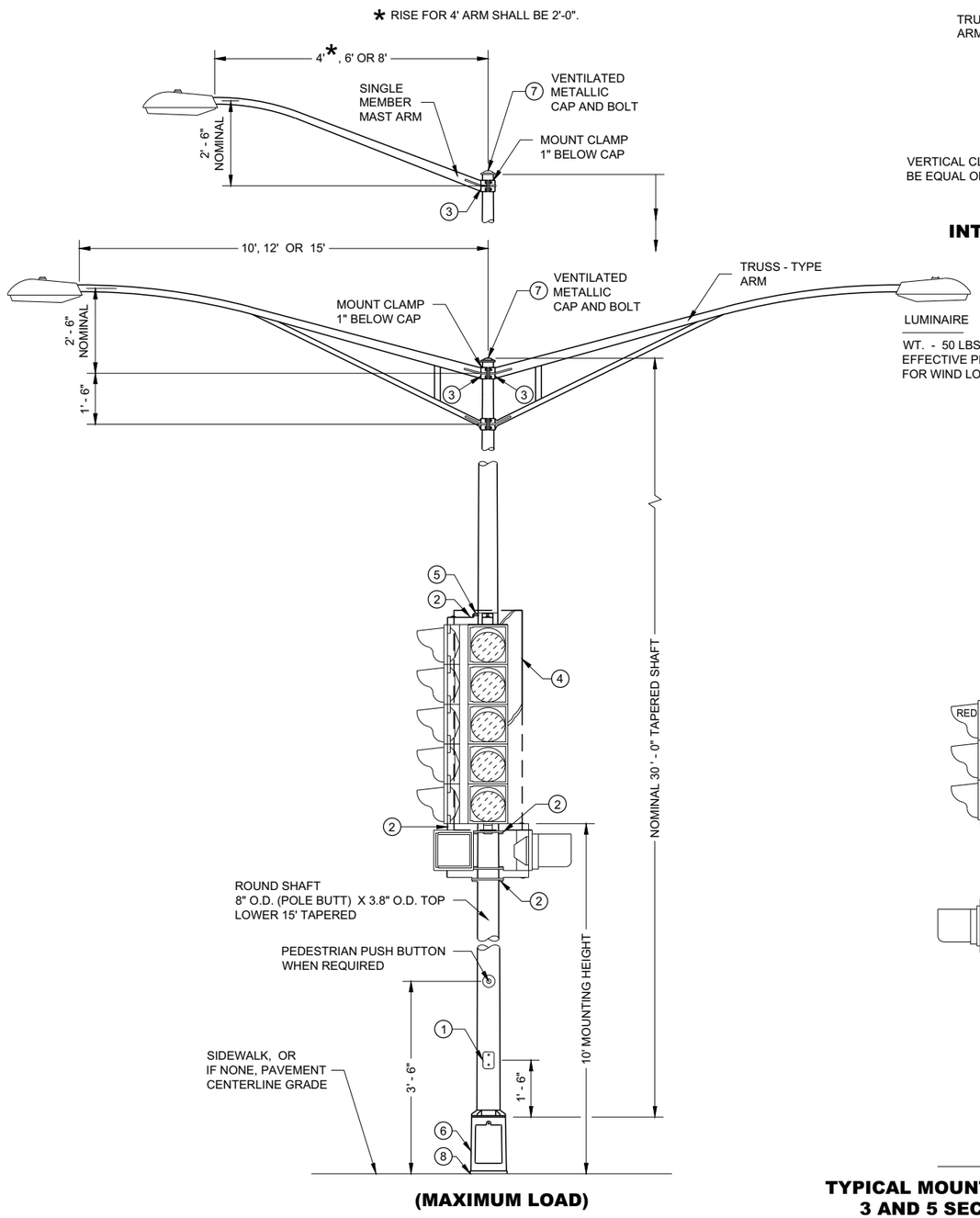
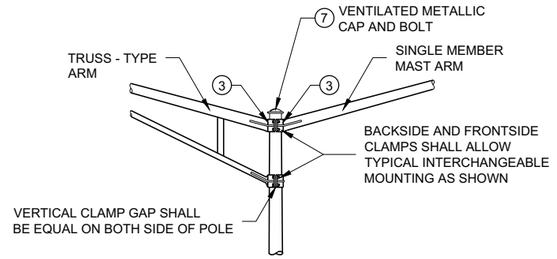



**(MAXIMUM LOAD)**




**INTERCHANGEABLE MOUNTING DETAIL**

## GENERAL NOTES

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

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE ( .1196" ).

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

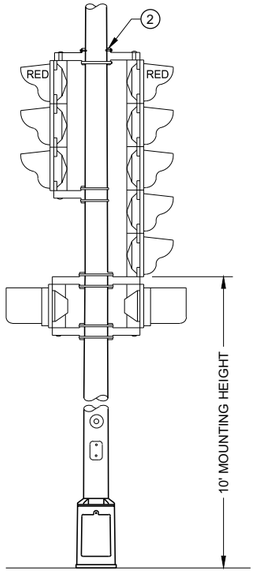
(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

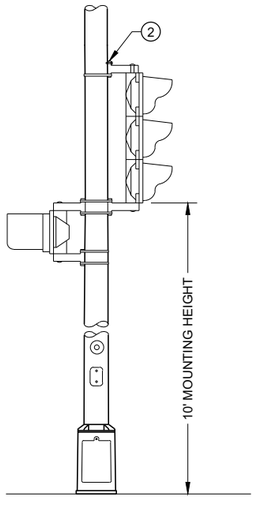
(7) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(8) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

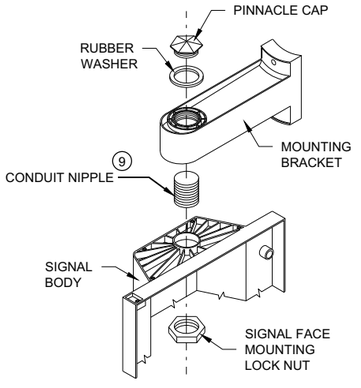
(9) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE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




**TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES**




**TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE**




**SIGNAL FACE MOUNTING DETAIL**
**(BANDED)**

**TYPE 4 POLE MOUNTING CONFIGURATION**

**POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4**

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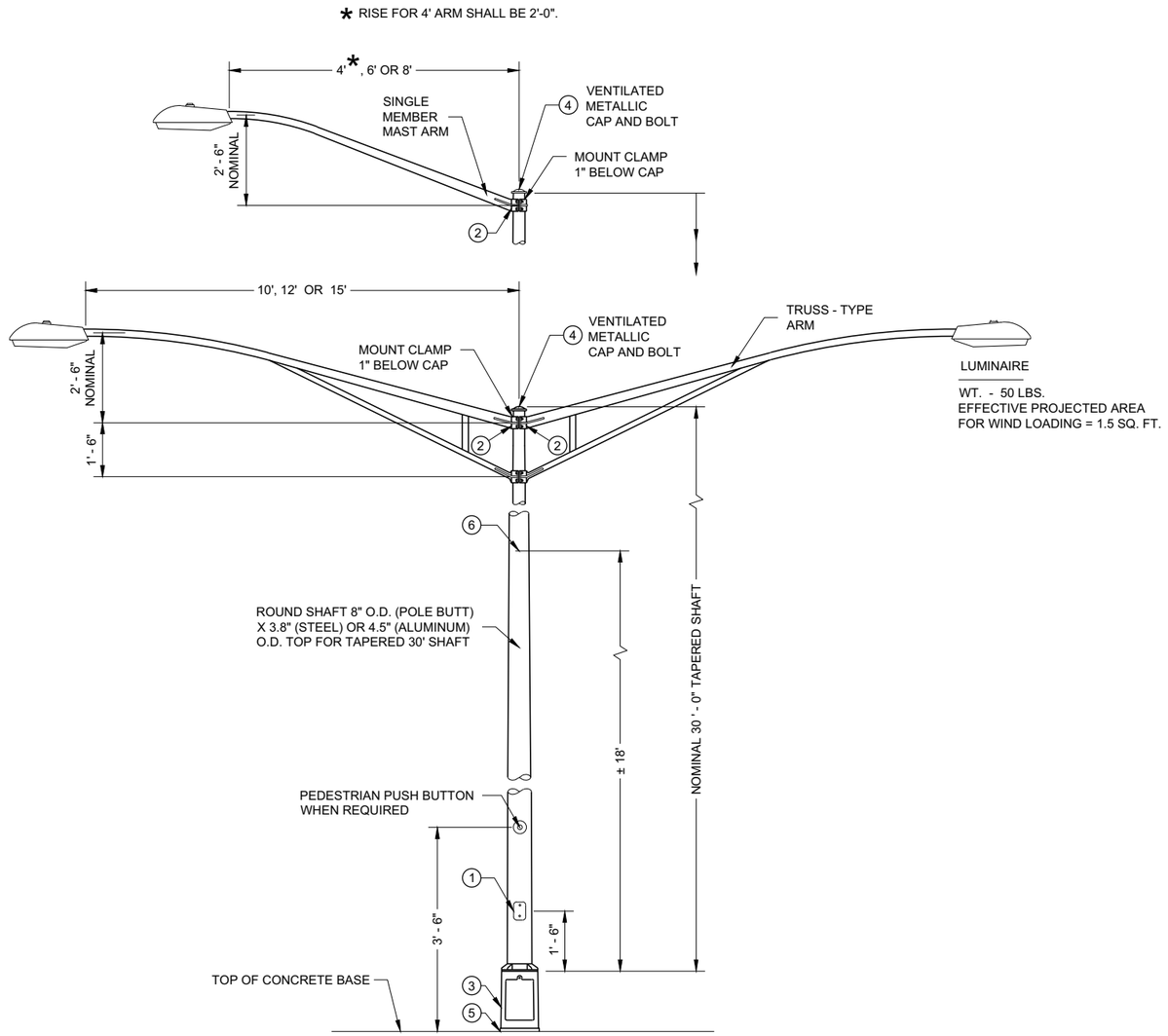



**TYPE 5 POLE MOUNTING CONFIGURATION**

**(MAXIMUM LOAD)**

**LIGHTING ONLY**

## GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

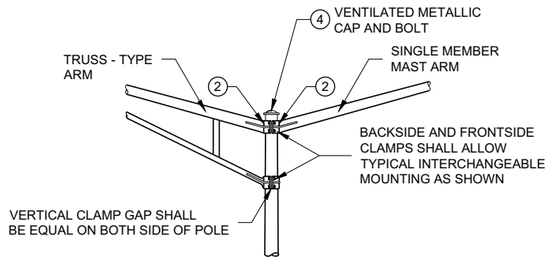
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

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

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.




**INTERCHANGEABLE MOUNTING DETAIL**

**POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 ( 30 FEET )**

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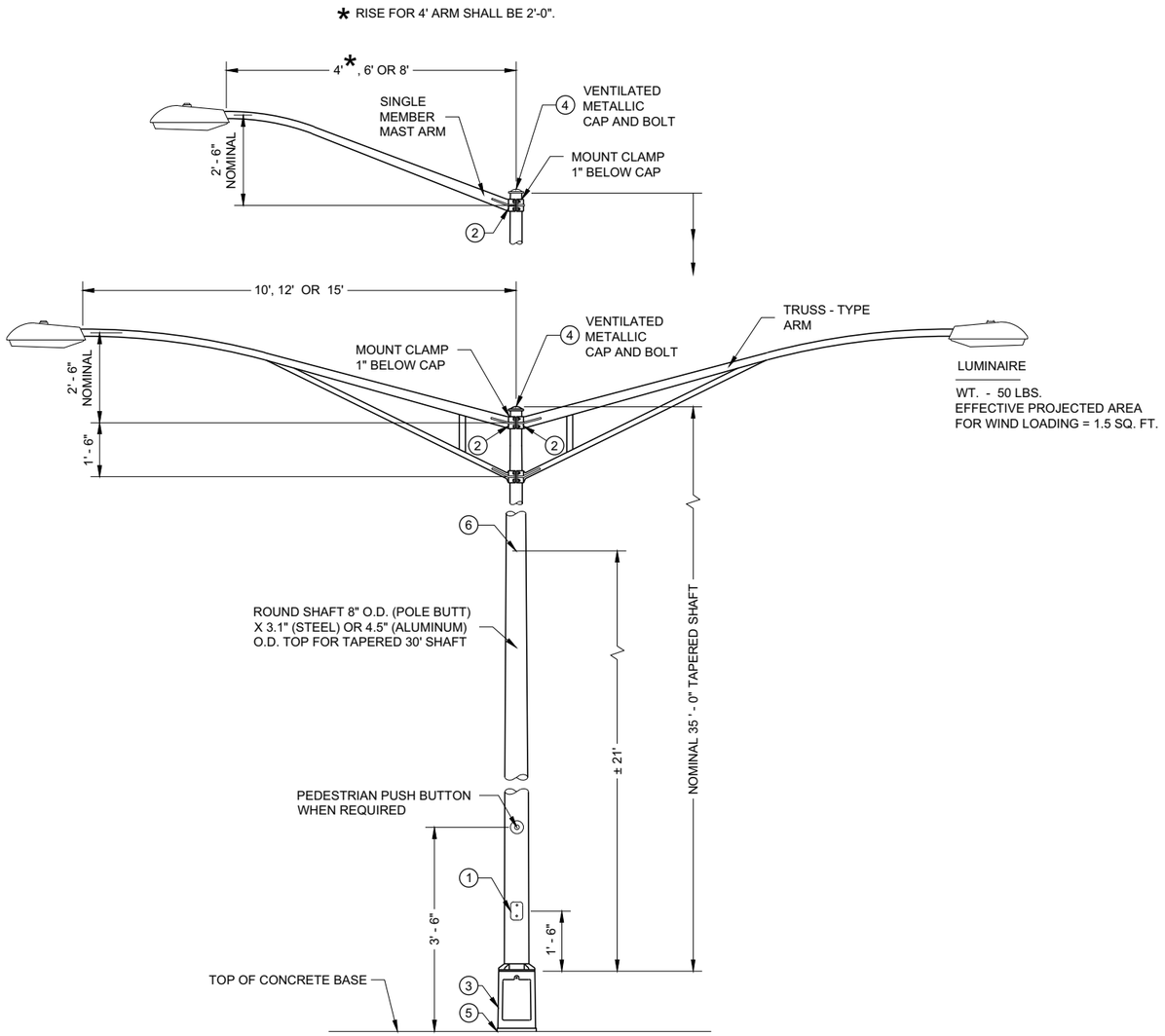



**TYPE 6 POLE MOUNTING CONFIGURATION**
**(MAXIMUM LOAD)**
**LIGHTING ONLY**

## GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 6 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 6 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 6 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.219".

TYPE 6 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

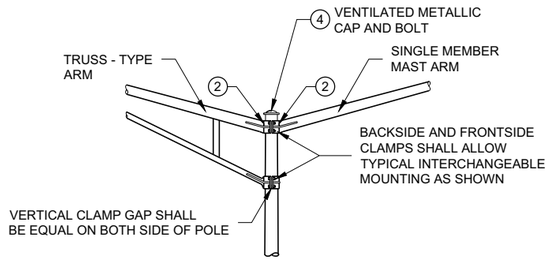
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

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

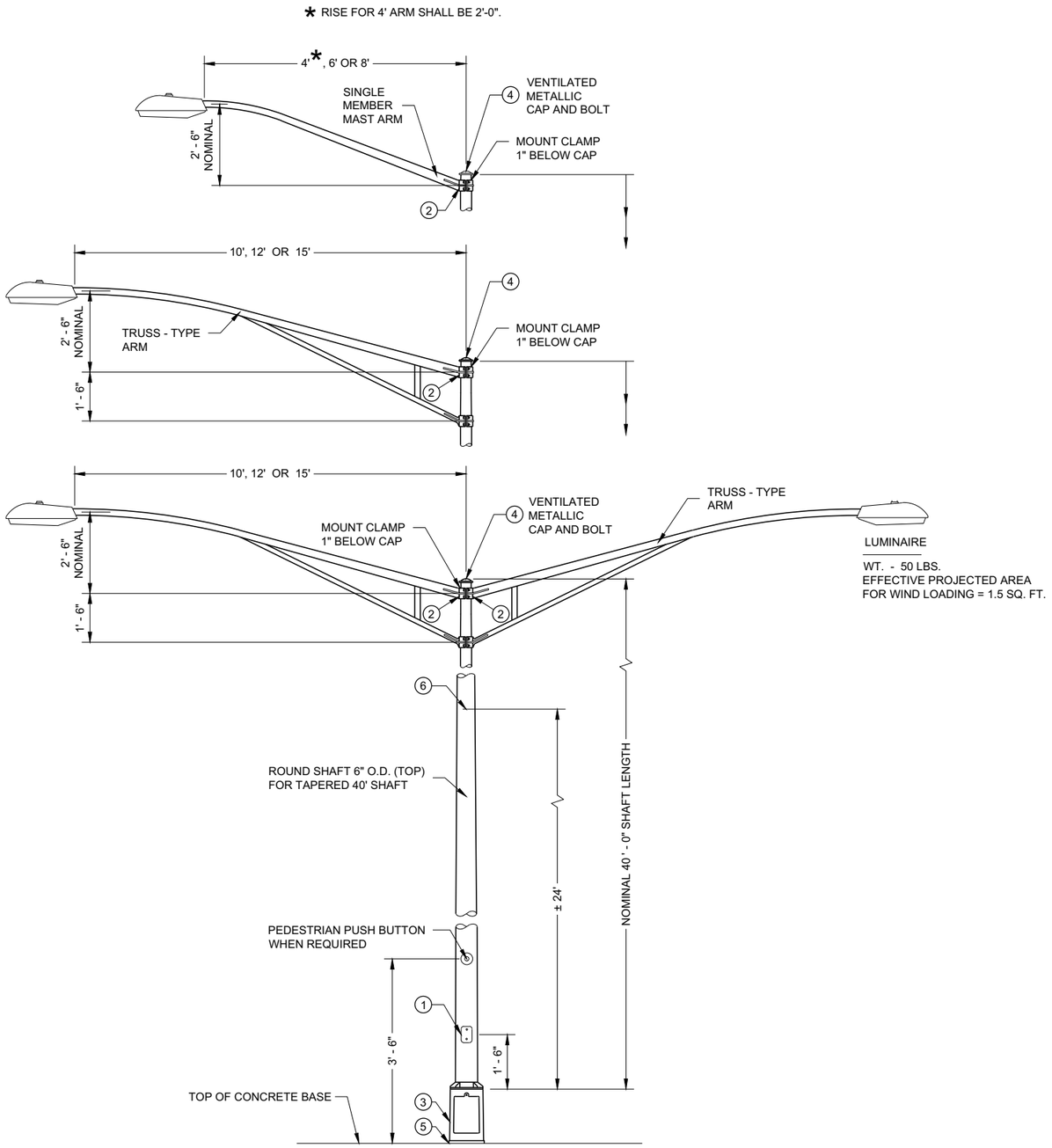
(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.




**INTERCHANGEABLE MOUNTING DETAIL**

**POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 ( 35 FEET )**




**TYPE 17 POLE MOUNTING CONFIGURATION**
**(MAXIMUM LOAD)**
**LIGHTING ONLY**

## GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL LUMINAIRE POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 17 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 17 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SHOE BASE SHALL BE SLOTTED TO ACCEPT A 15" BOLT CIRCLE (14" X 16" SLOT) USING 1" ANCHOR RODS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

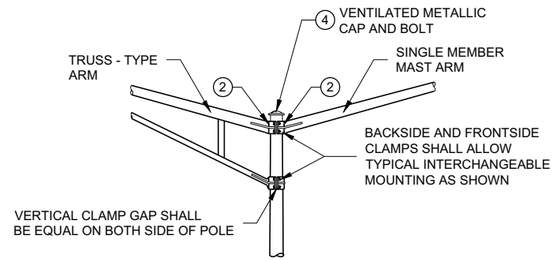
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM FHWA APPROVED TRANSFORMER BASE WHEN REQUIRED, SHALL HAVE AN ULTIMATE STATIC LOAD STRENGTH OF AT LEAST 40,000 FT. - LBS.

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

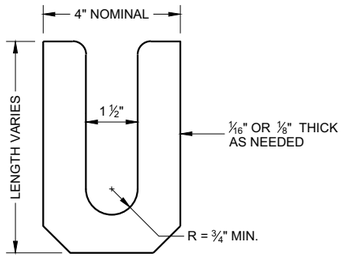
(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(6) INTERNAL DUMBELL - TYPE VIBRATION DAMPER.

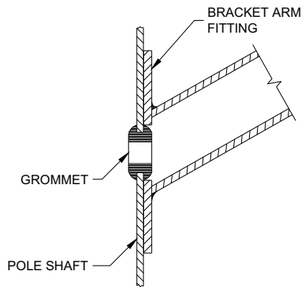



**INTERCHANGEABLE MOUNTING DETAIL**

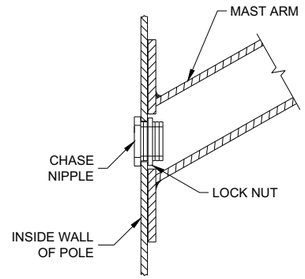
**POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 17 ( 40 FEET )**




**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.

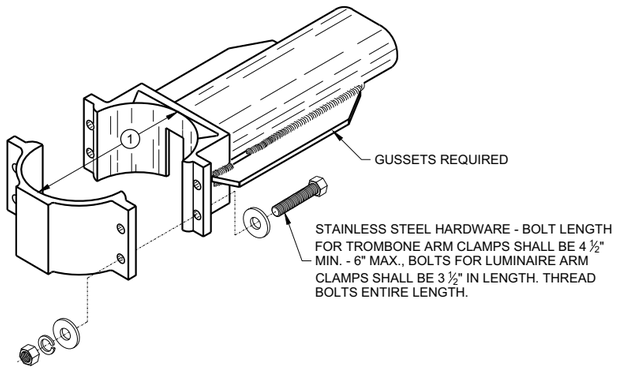
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

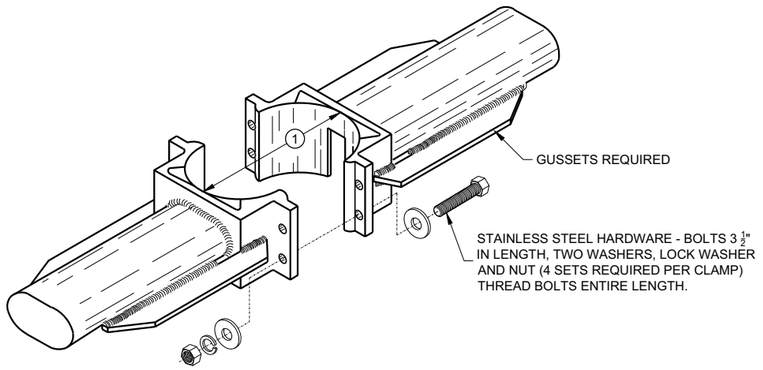
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

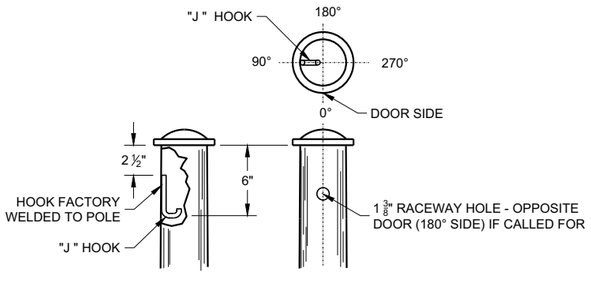
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



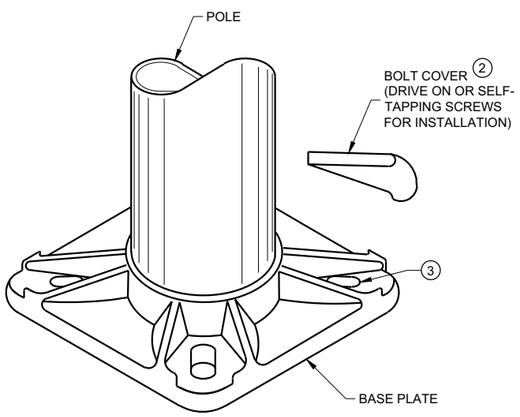

**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



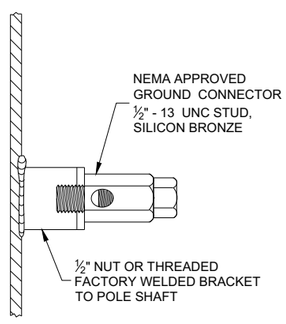

**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**

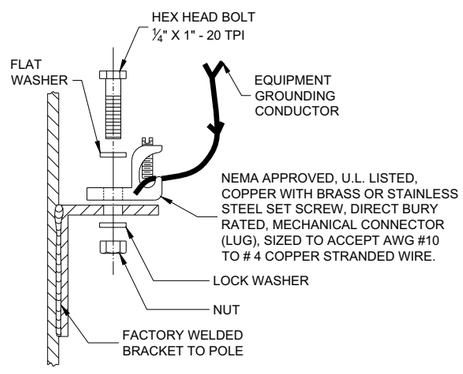


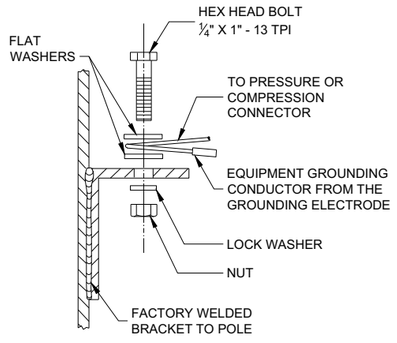

**TYPICAL "J" HOOK LOCATION**




**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 ENGI

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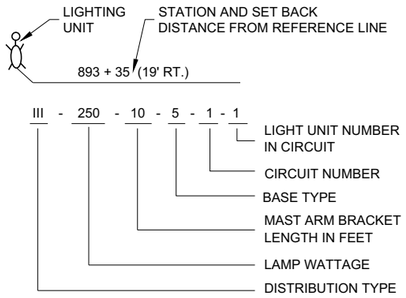
## GENERAL NOTES

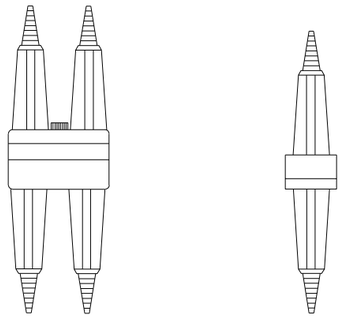
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



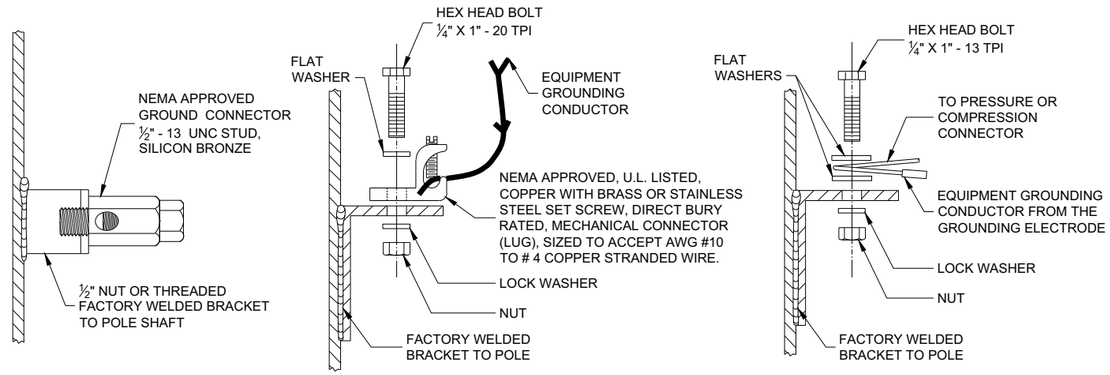

**LIGHTING UNIT CODE**
**(TYPICAL)**



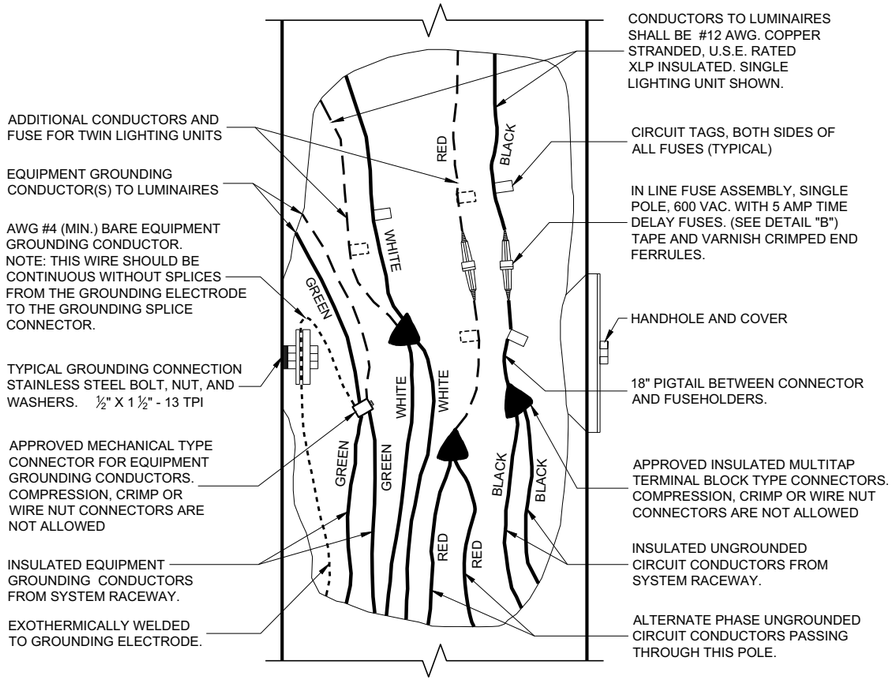
**DETAIL "A"**
**BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT**



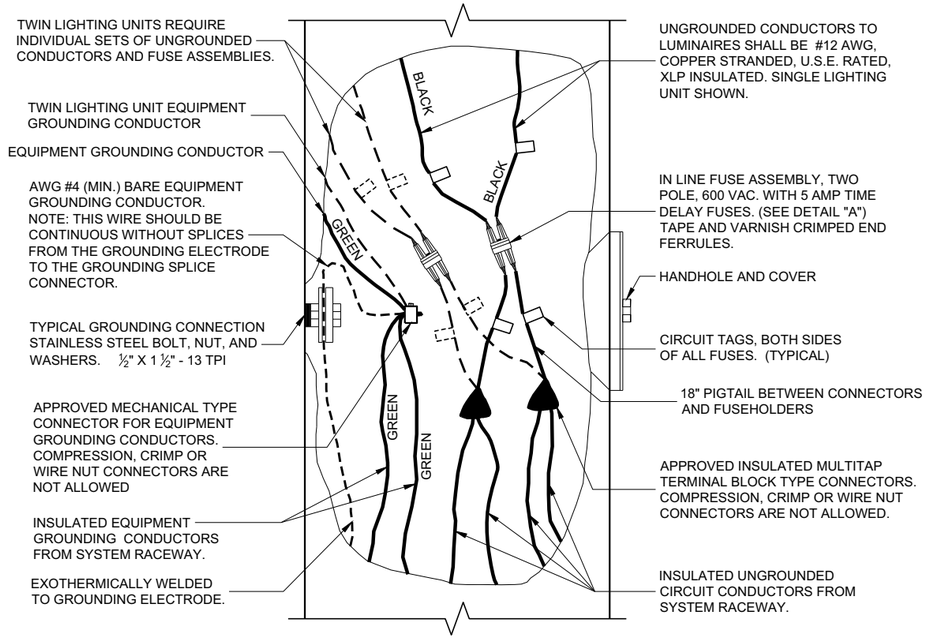
**DETAIL "B"**
**BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT**




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




**3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR**




**2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR**

**NON - FREEWAY LIGHTING UNIT POLE WIRING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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## GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

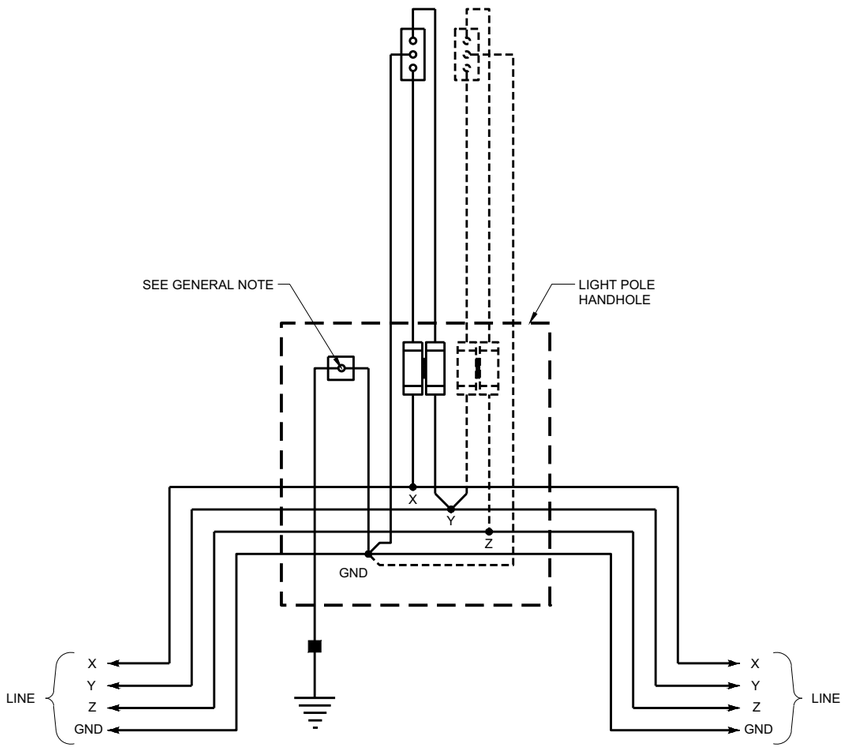
THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLD GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

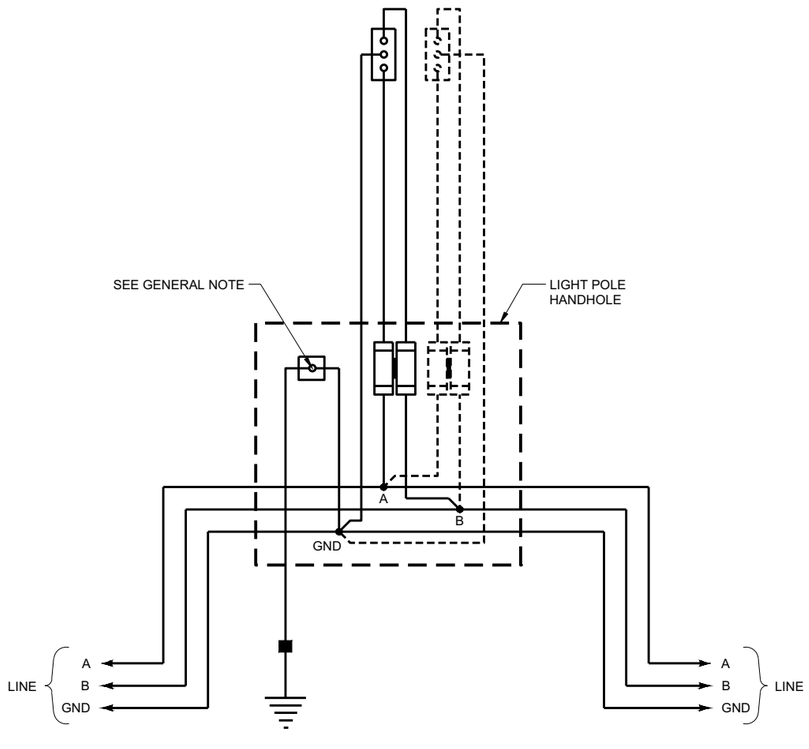
## LEGEND

| | |
|---|---|
| A,B,X,Y,Z | UNGROUNDED CIRCUIT CONDUCTORS |
| N | GROUNDED CIRCUIT CONDUCTORS |
| GND | EQUIPMENT GROUNDING CONDUCTOR |
| P | POLE (ELECTRICAL CIRCUIT) |
| ϕ | PHASE (ELECTRICAL CURRENT) |
| | HANDHOLE GROUND LUG |
| | SINGLE-POLE (1P) FUSE ASSEMBLY |
| | TWO-POLE (2P) FUSE ASSEMBLY |
| | UNFUSED LUMINAIRE |
| | EQUIPMENT GROUNDING ELECTRODE |
| | TERMINAL |
| | SPLICE |
| | CONDUCTOR |
| | EXOTHERMIC WELD |




**TYPICAL WIRING DIAGRAM**

PHASE - TO - PHASE DELTA SYSTEM
3 - ϕ 480VAC 3 WIRE




**TYPICAL WIRING DIAGRAM**

UNGROUNDED SYSTEM
1 - ϕ 120 - 120VAC 2 WIRE

**ELECTRICAL DETAILS**
**GROUND MOUNT LIGHT POLES**
**PHASE - TO - PHASE SYSTEMS**

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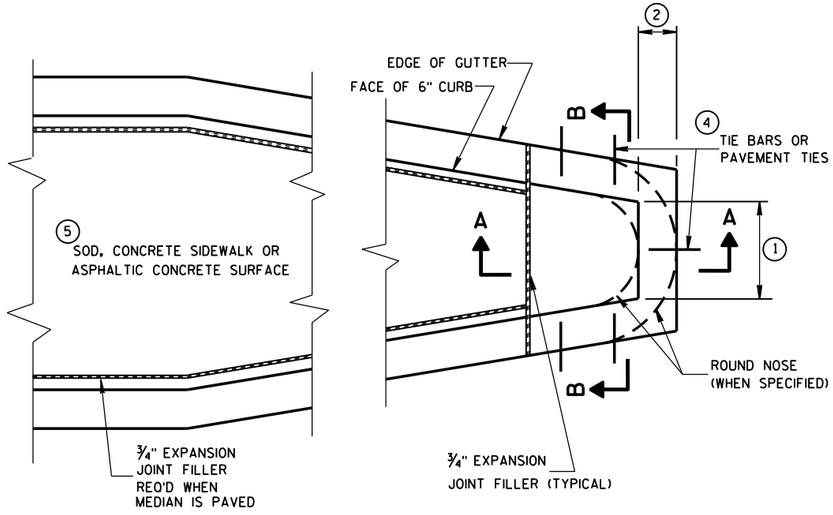
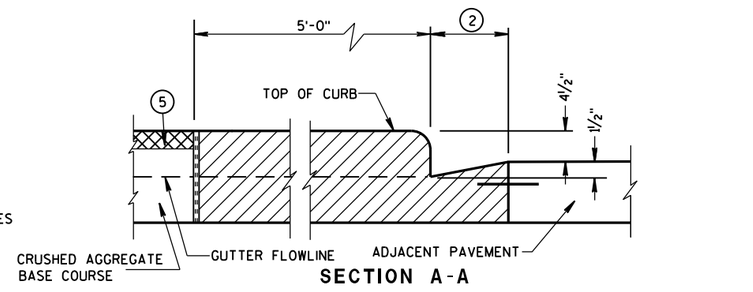
SDD 10A07 - 03




## CONCRETE MEDIAN BLUNT NOSE DETAIL

## 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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

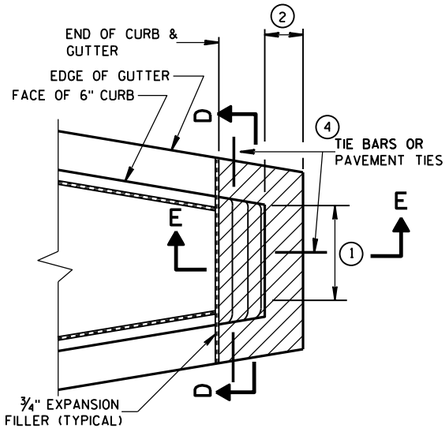
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

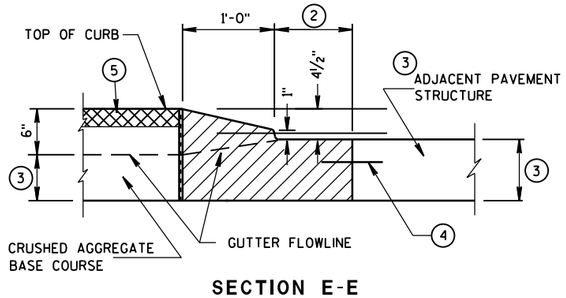
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

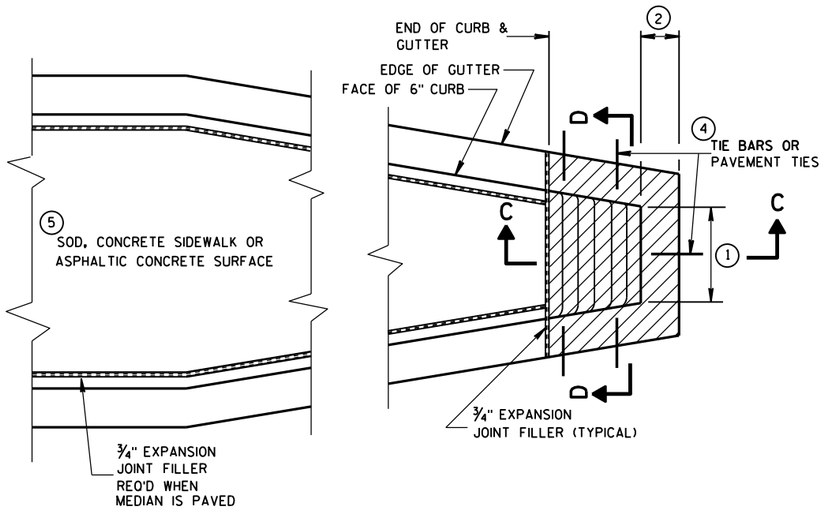
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

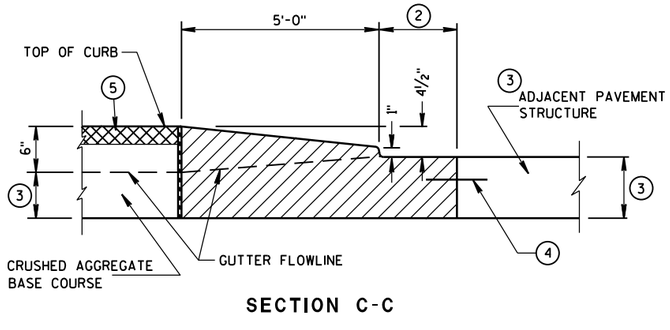
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



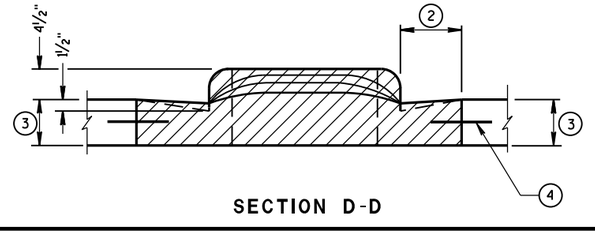




## CONCRETE MEDIAN SLOPED NOSE TYPE 2

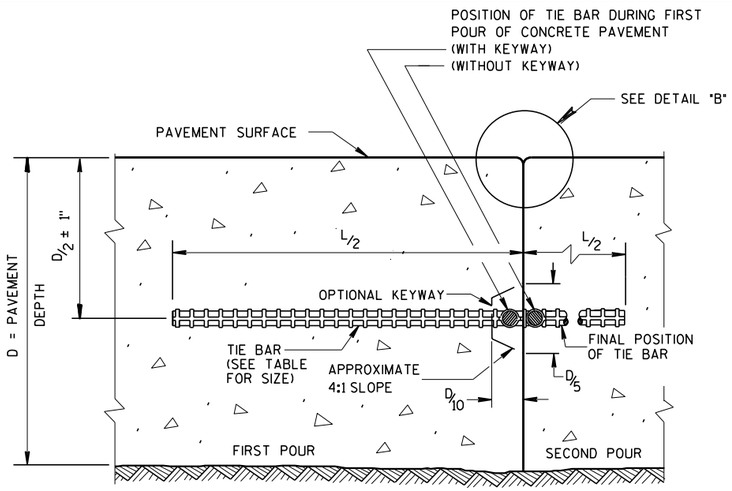


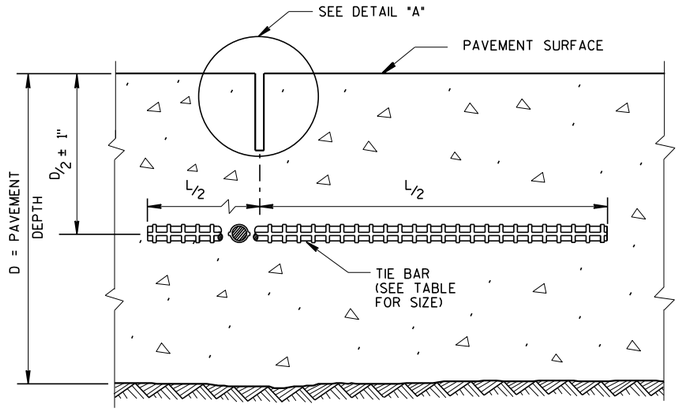

## CONCRETE MEDIAN SLOPED NOSE TYPE 1




| CONCRETE MEDIAN NOSE | |
|---|---|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION | |
| APPROVED<br>6/8/2006<br>DATE<br>FHWA | /S/ Jerry H. Zogg<br>ROADWAY STANDARDS D<br>ENGINEER |




## CONSTRUCTION JOINT




## SAWED JOINT

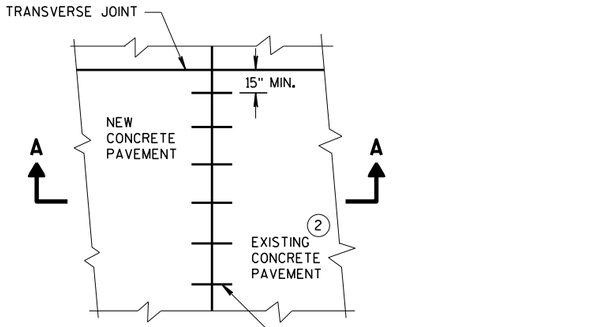
## GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

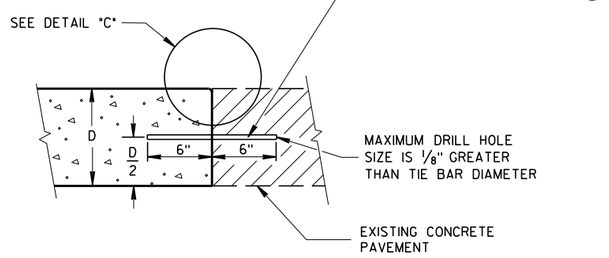
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

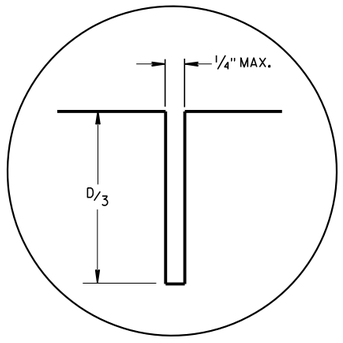



PLAN VIEW

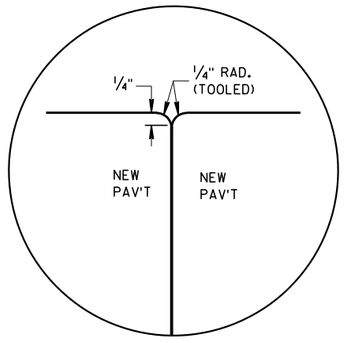



SECTION A-A

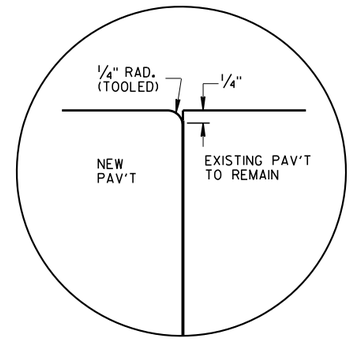
## LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT




DETAIL "A"




DETAIL "B"



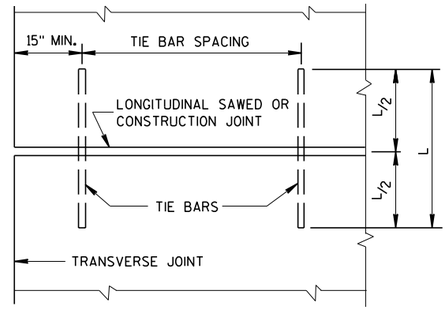

DETAIL "C"

### TIE BAR TABLE

| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|---|---|---|---|
| < 10 1/2" | NO. 4 | 30" | 36" |
| ≥ 10 1/2" | NO. 5 | 36" | 36" |
| | NO. 4 * | 30" | 24" ** |

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.




PLAN VIEW
SHOWING LOCATION OF TIE BARS

## CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA





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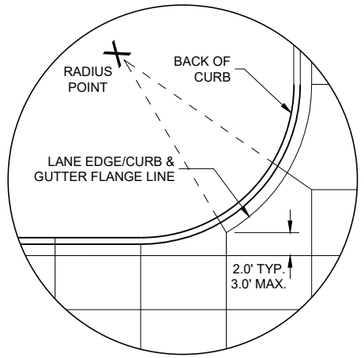
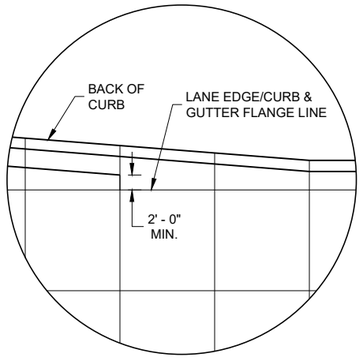
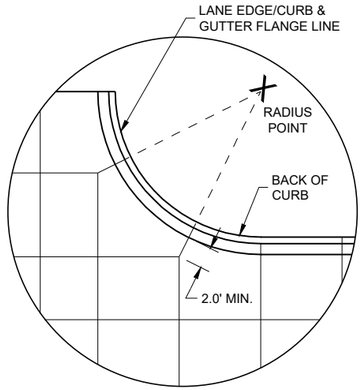
S.D.D. 13 C 1-19



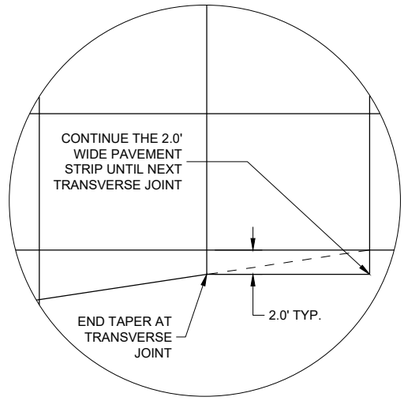

**DETAIL "A"**




**DETAIL "B"**




**DETAIL "C"**




**DETAIL "D"**

## GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

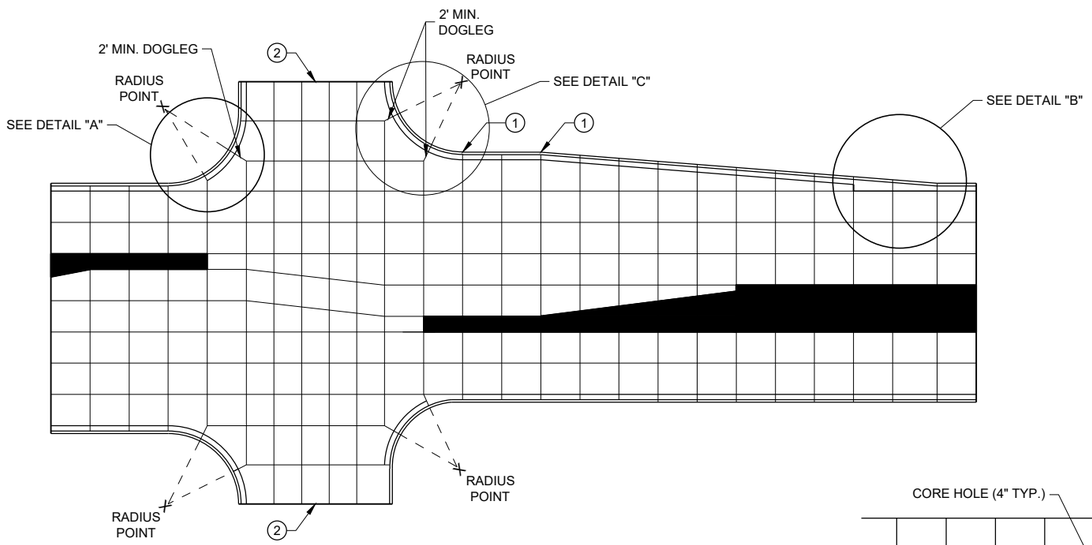
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

(2) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.

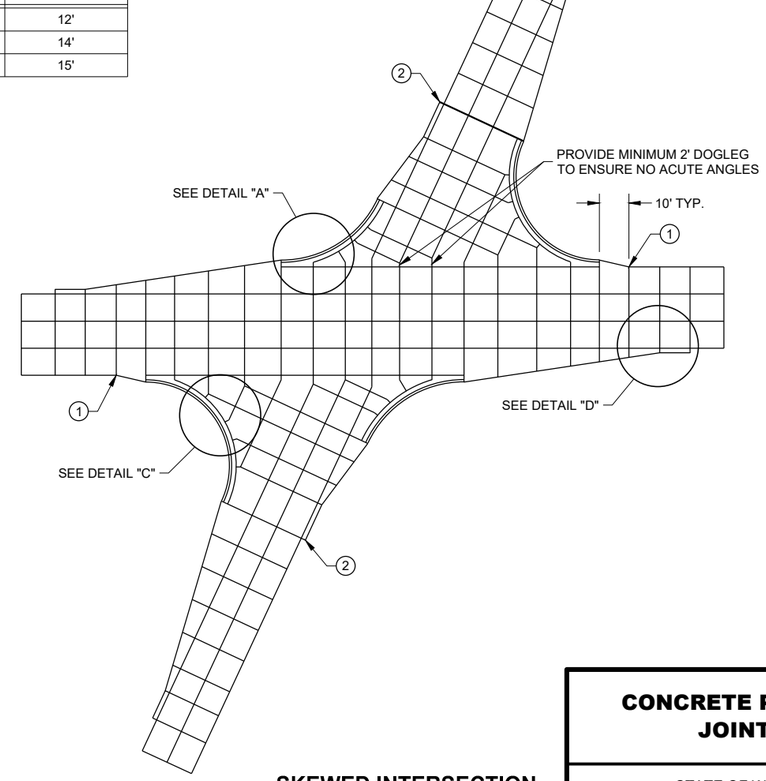
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



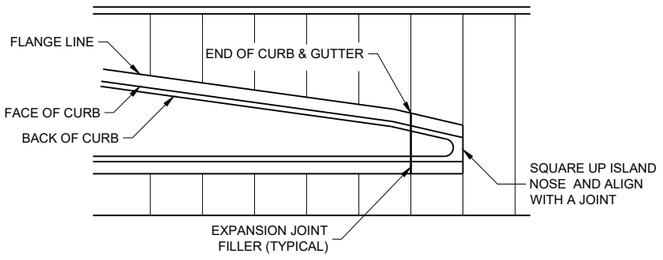

**STANDARD INTERSECTION**

PAVEMENT DEPTH AND JOINT SPACING TABLE

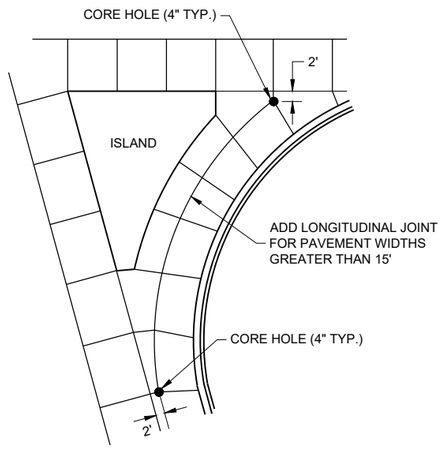
| PAVEMENT DEPTH (D) | CONTRACTION JOINT SPACING |
|---|---|
| 6", 6 ½" | 12' |
| 7", 7 ½" | 14' |
| 8" & ABOVE | 15' |




**SKEWED INTERSECTION**




**APPROACH TO MEDIAN**




**LARGE RIGHT TURN**

**CONCRETE PAVEMENT JOINTING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6

SDD 13C18 - 08a

6

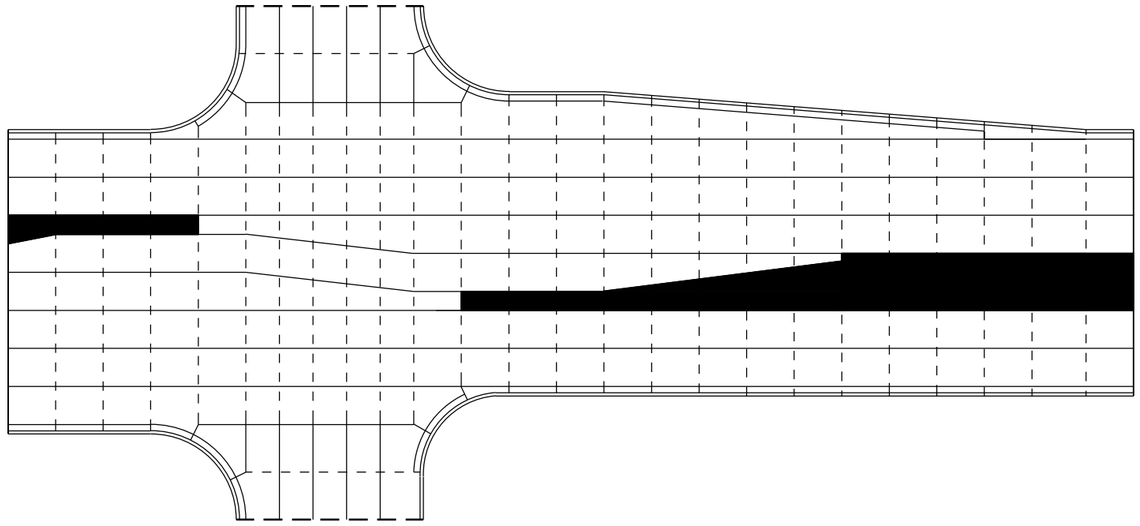
SDD 13C18 - 08a

## LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

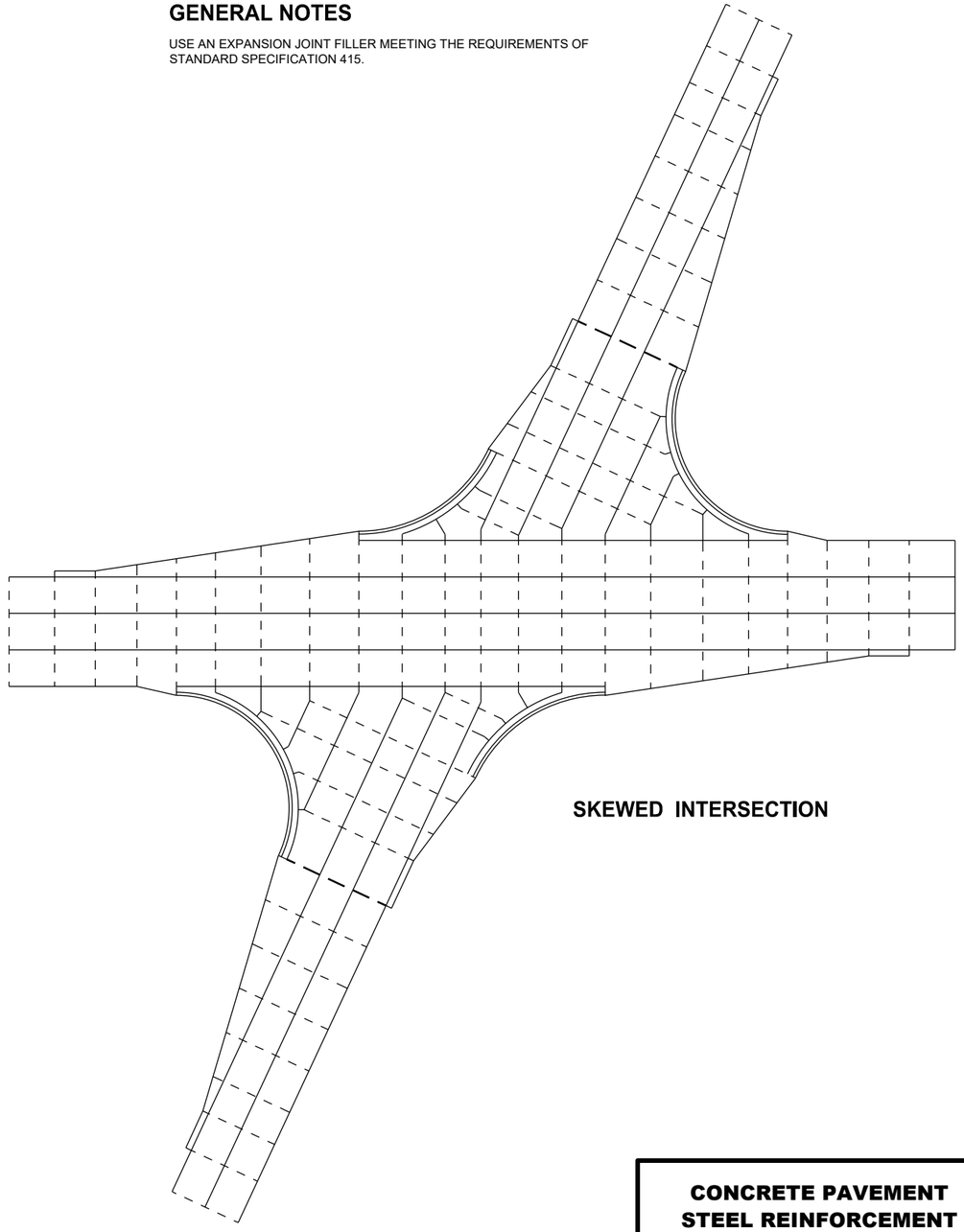
TIED JOINT



STANDARD INTERSECTION

## GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

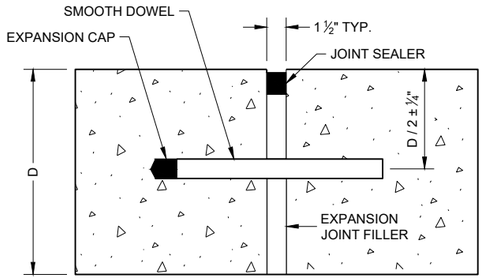
SDD 13C18 - 08b

**CONCRETE PAVEMENT STEEL REINFORCEMENT**

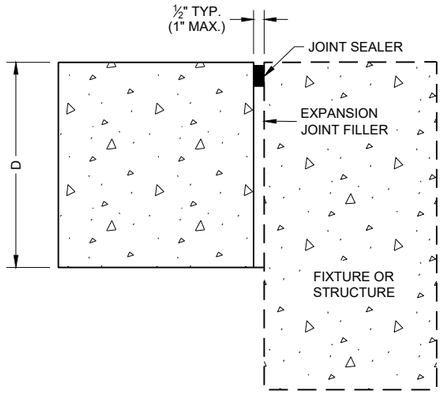


6

SDD 13C18 - 08b




**DOWELED TRANSVERSE** (1)




**UNTIED - LONGITUDINAL**

## EXPANSION JOINTS

### TIE BAR TABLE

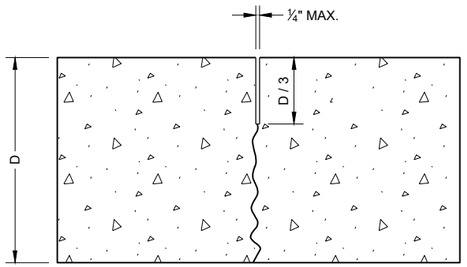
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|---|---|---|---|
| < 10 ½" | NO. 4 | 30" | 36" |
| ≥ 10 ½" | NO. 5 | 36" | 36" |
| | NO. 4 * | 30" | 24" ** |

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

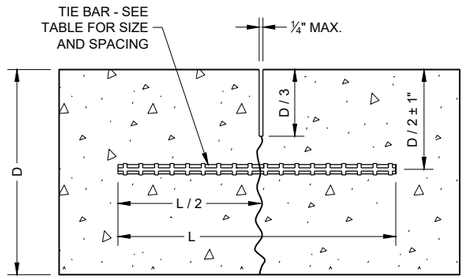
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

### GENERAL NOTES

1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.




**UNDOWELED TRANSVERSE**

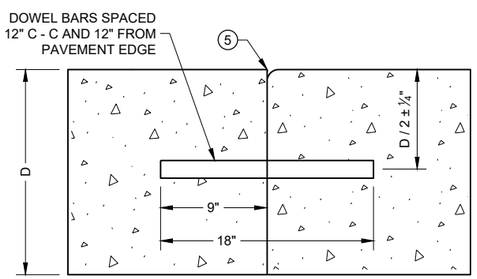



**TIED LONGITUDINAL**

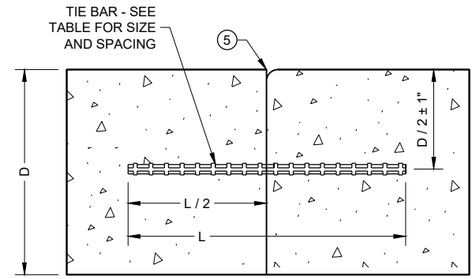



**DOWELED TRANSVERSE**

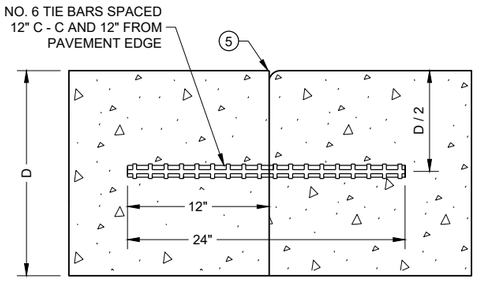
## CONTRACTION JOINTS (2)



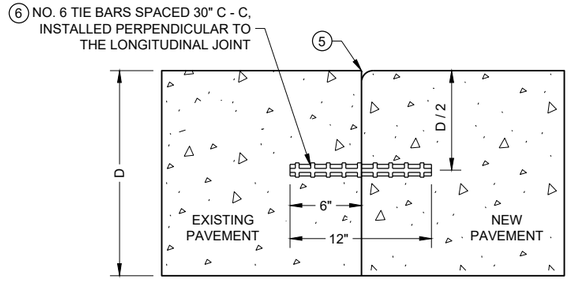

**DOWELED TRANSVERSE** (3)




**TIED LONGITUDINAL**



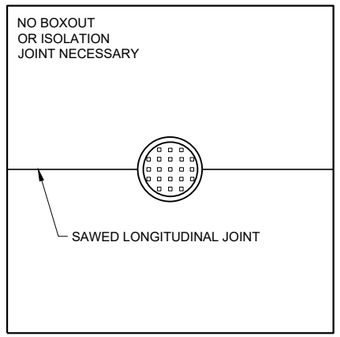

**TIED TRANSVERSE** (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



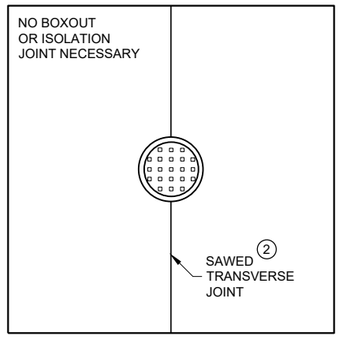

**TIED LONGITUDINAL TO EXISTING**

## CONSTRUCTION JOINTS (4)

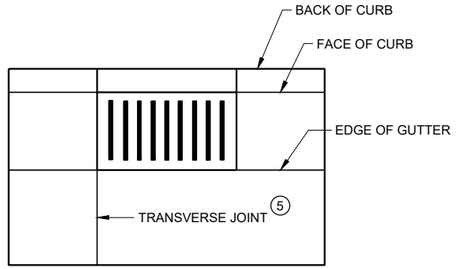
**CONCRETE PAVEMENT JOINT TYPES**




**MANHOLE WITH LONGITUDINAL JOINT**



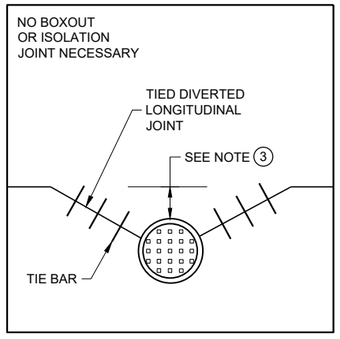

**MANHOLE WITH TRANSVERSE JOINT**



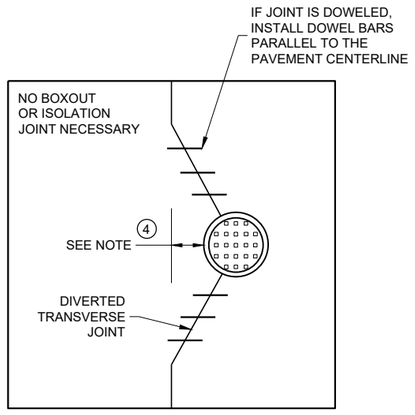

**INLET WITH TRANSVERSE JOINT**

## GENERAL NOTES

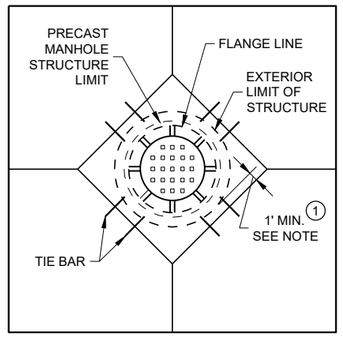
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
4. IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.




**MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT**




**MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT**




**DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS**

**CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISO

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SDD13C18 - 08d
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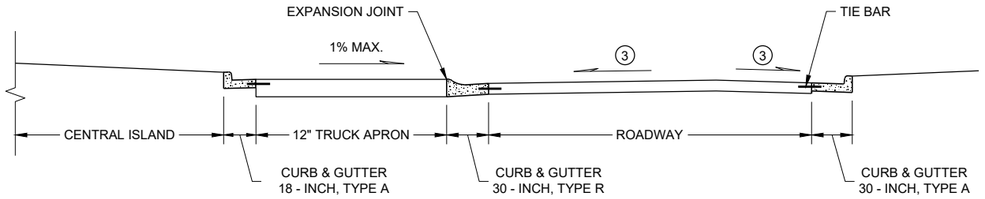
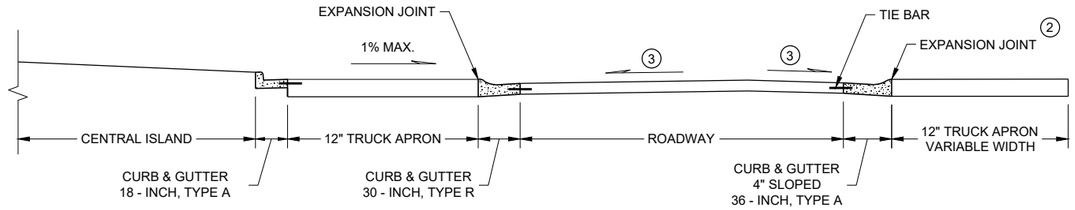
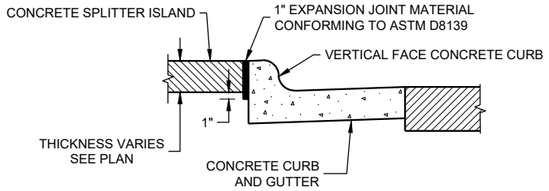


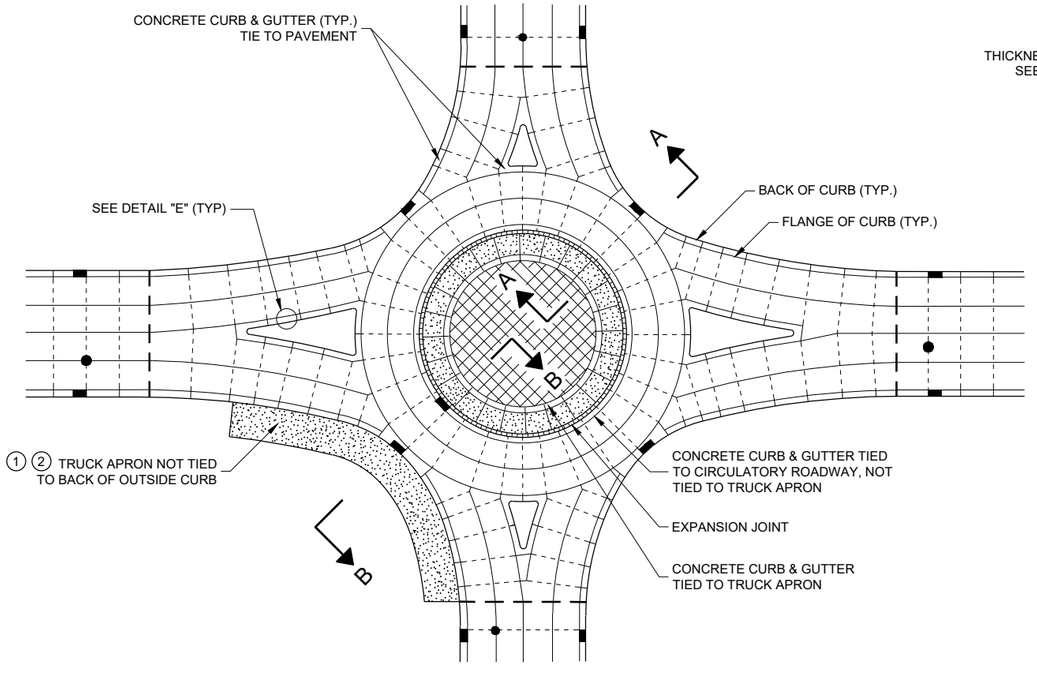

**SECTION A - A**



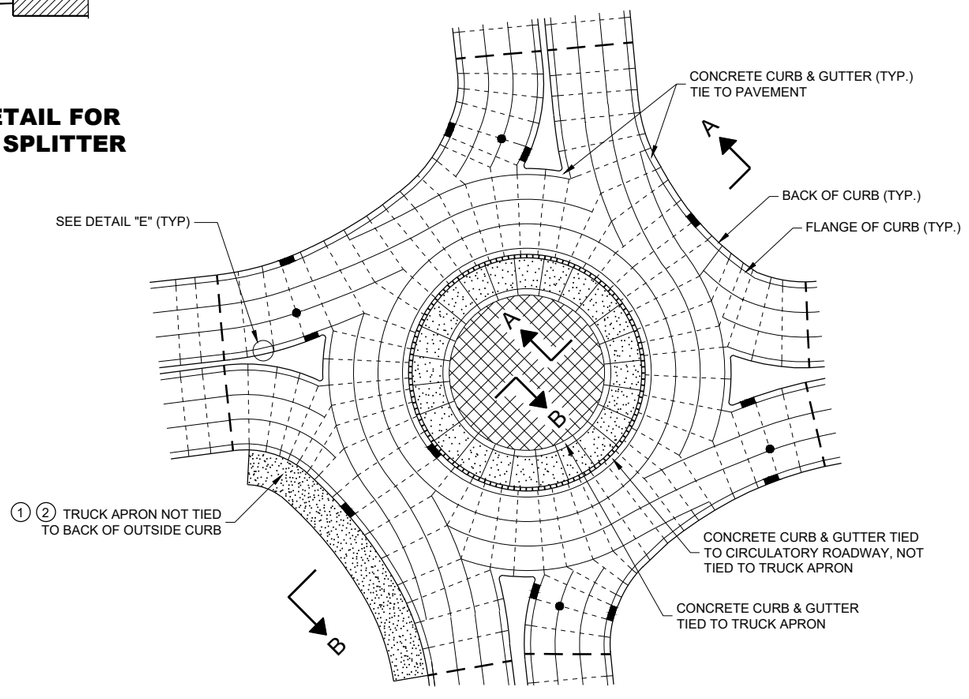

**SECTION B - B**




**DETAIL 'E'**
**EXPANSION JOINT DETAIL FOR VERTICAL CURB AT A SPLITTER ISLAND**




**ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS**




**PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS**

## GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"

USE EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

(1) DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE / OVERWEIGHT VEHICLES.

(2) TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON IS LESS THAN 3 FEET.

(3) CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

## LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

**CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

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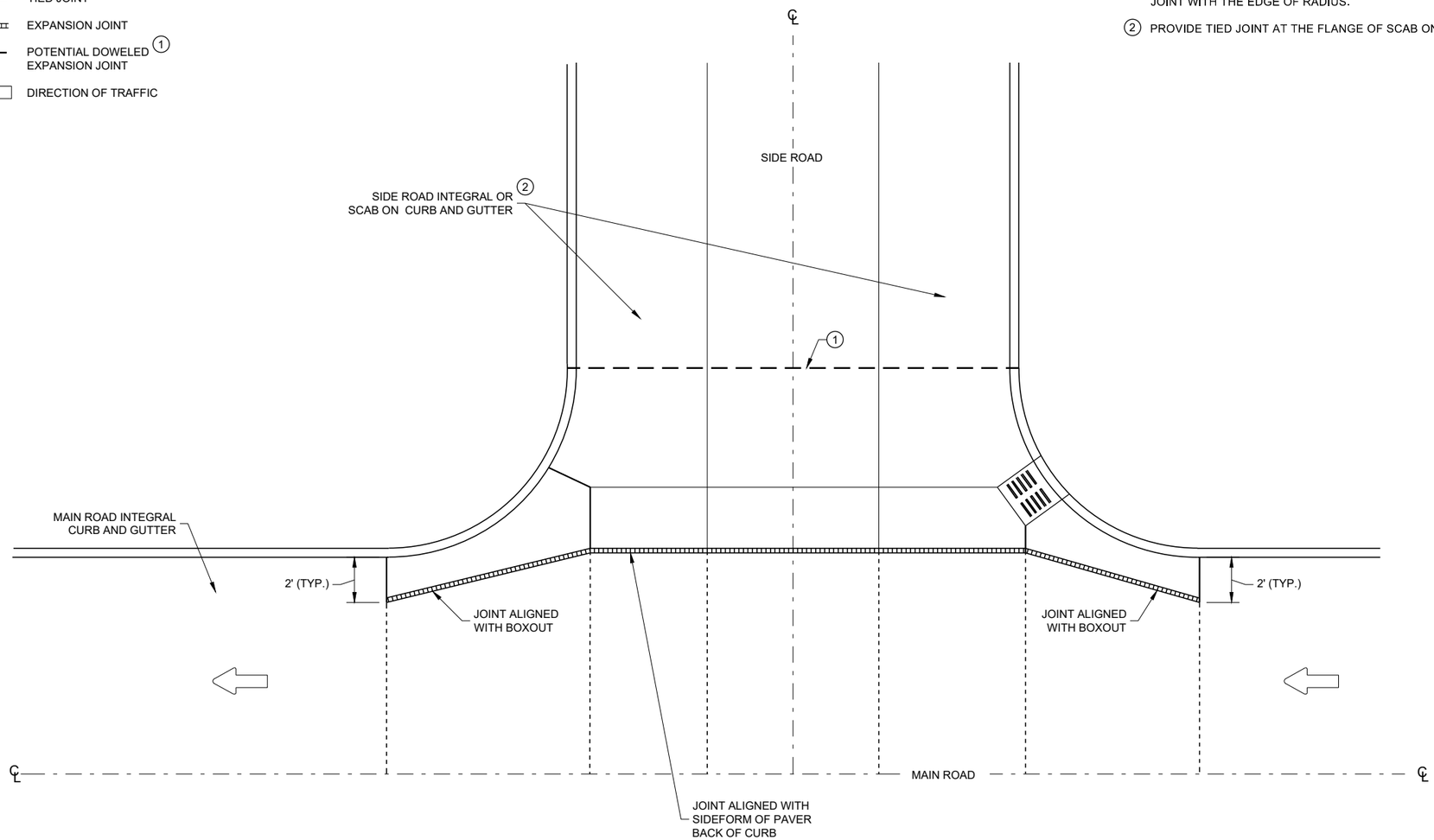
## LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC




## GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

**INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

**CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

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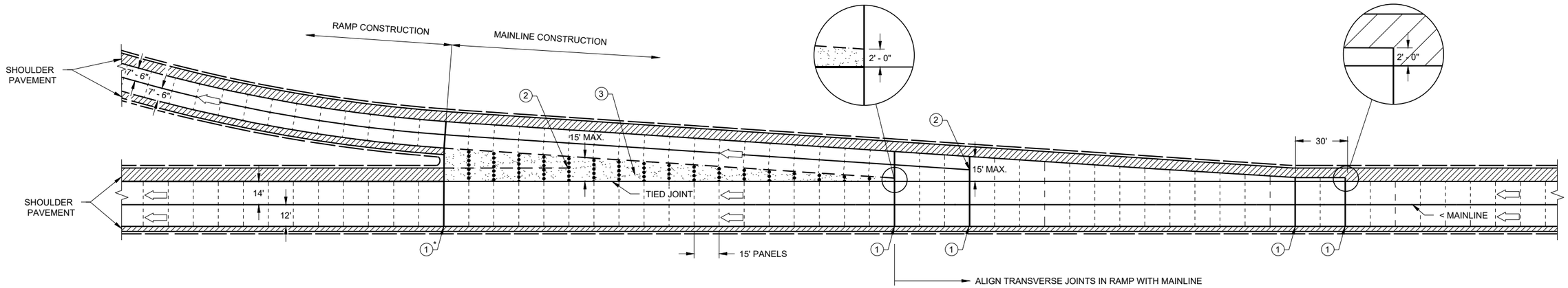
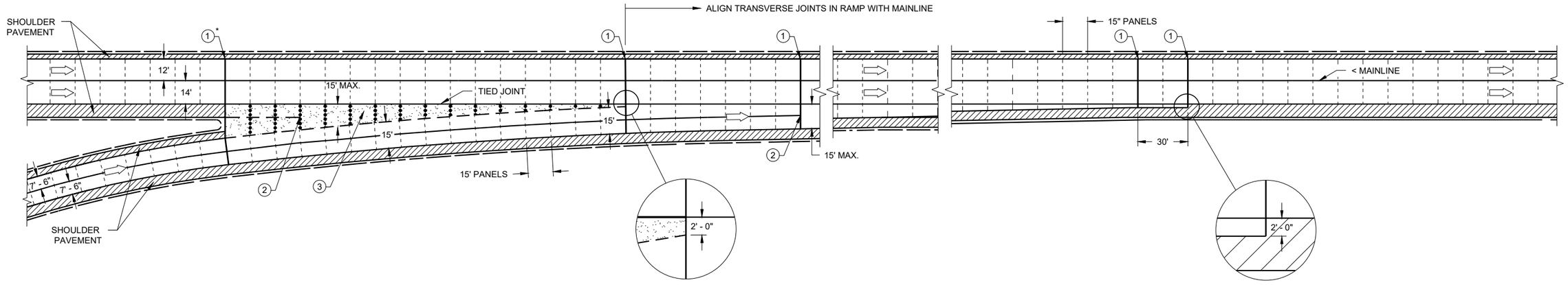
SDD 13C18 - 08f




## DECELERATION LANE




## ACCELERATION LANE

## GENERAL NOTES

PAVEMENT AND BASE THICKNESS, PANEL LENGTHS, JOINTS AND REINFORCEMENT FOR THE DECELERATION AND ACCELERATION LANES, INCLUDING TAPERS, SHALL BE THE SAME AS THE MAINLINE, EXCEPT WHERE OTHERWISE NOTED.

ALL REINFORCEMENT BARS SHALL BE EPOXY COATED CONFORMING TO SUBSECTION 505.2.6 OF THE STANDARD SPECIFICATIONS.

LANE AND SHOULDER WIDTHS MAY VARY FROM SHOWN. SEE CONSTRUCTION PLANS FOR ACTUAL PROPOSED WIDTHS.

(1) CRITICAL TRANSVERSE JOINT LOCATIONS AT PAVEMENT WIDTH CHANGES.
((1)* IS NOT A CRITICAL TRANSVERSE JOINT WHEN ASPHALTIC GORE IS INSTALLED).

(2) STOP LONGITUDINAL JOINT WITH CORE HOLE (2" TYP.) WHEN IT MEETS THE FIRST TRANSVERSE JOINT LESS THAN 15' WIDE OR STOP LONGITUDINAL JOINT WHEN IT MEETS 2' AWAY FROM THE TIED JOINT OF THE MAINLINE.

(3) DISREGARD THE JOINT DETAILS IN AND AROUND THE GORE WHEN ASPHALTIC GORE IS INSTALLED.

## LEGEND

- DOWELED JOINT
- UNDOWELED JOINT
- TIED JOINT
- UNTIED JOINT
- GORE
- DIRECTION OF TRAVEL

**CONCRETE PAVEMENT JOINTING ACCELERATION/ DECELERATION LANE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

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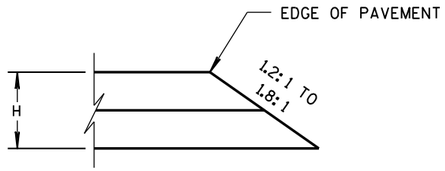
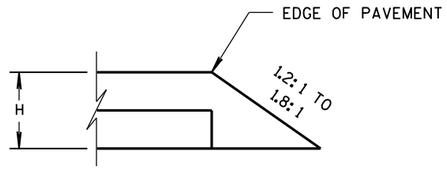


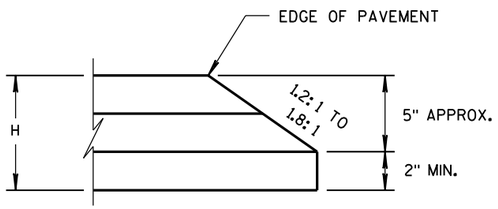

CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



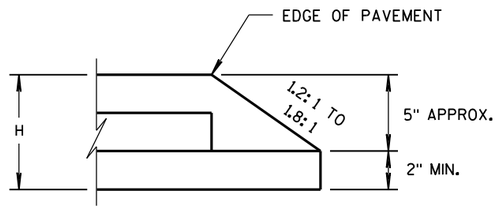

CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS




CONSTRUCTED WITH FINAL TWO LAYERS

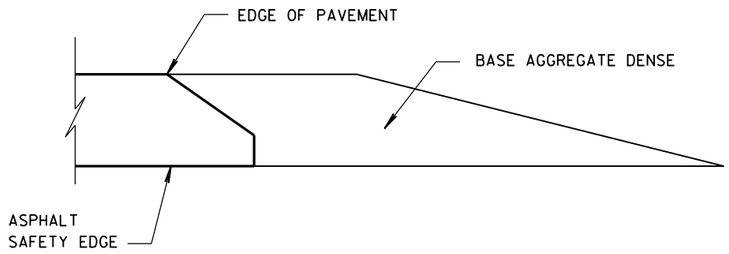
FOR H GREATER THAN 5"




CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

## HMA PAVEMENT AND HMA OVERLAYS




## FINISHED SHOULDER AGGREGATE PLACEMENT

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

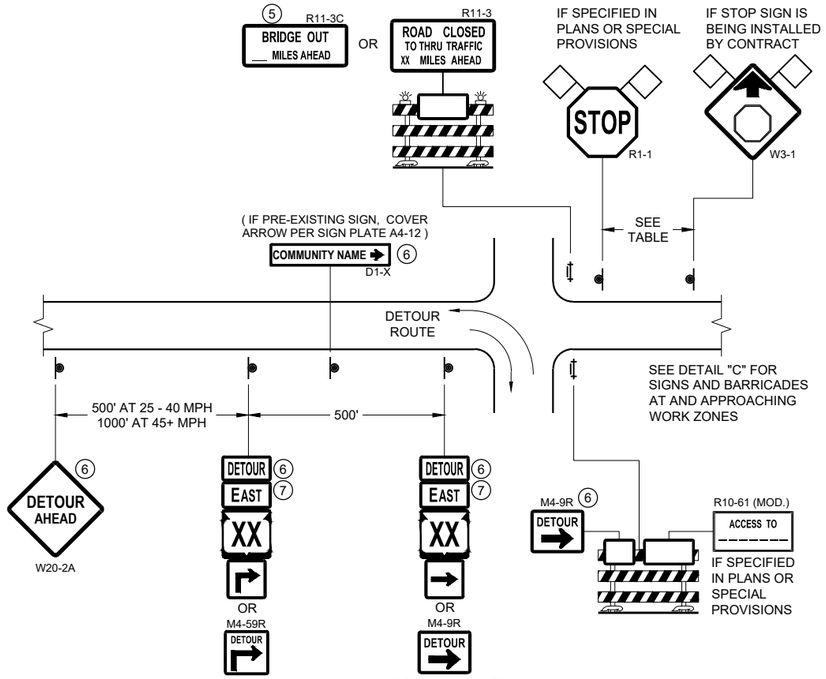
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

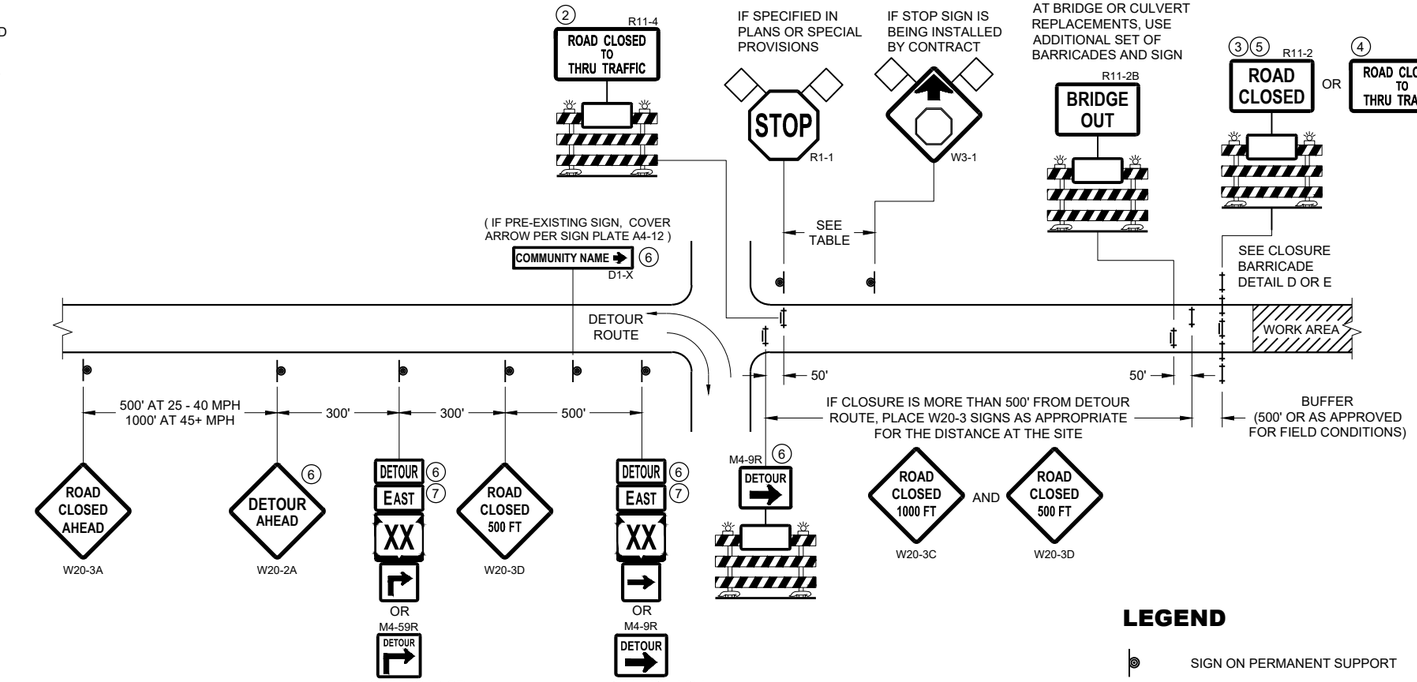
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA




## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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



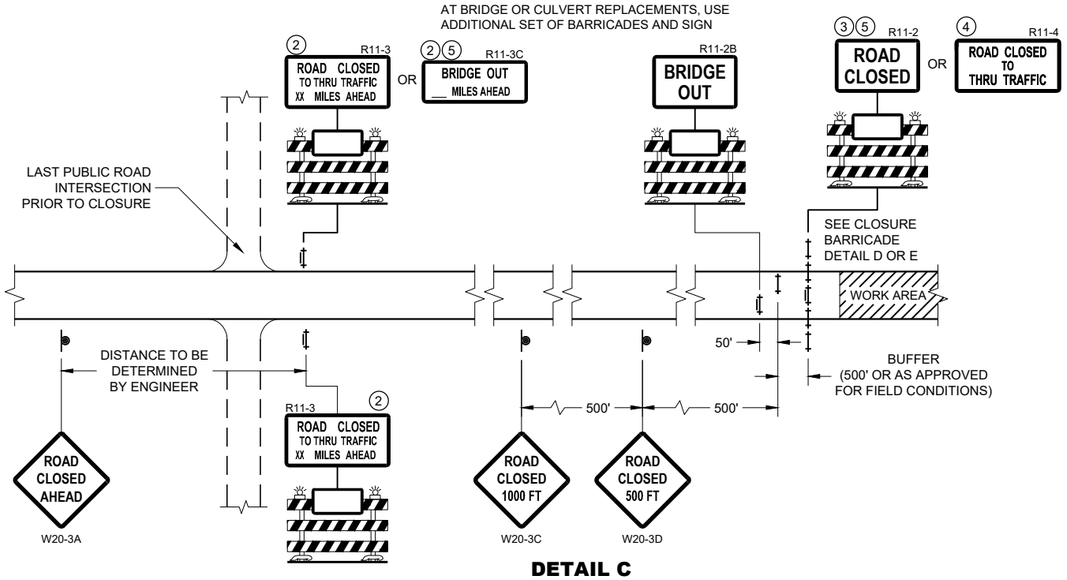

## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

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

## LEGEND

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

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




## DETAIL C
## MAINLINE CLOSURE, NO POSTED DETOUR

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

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

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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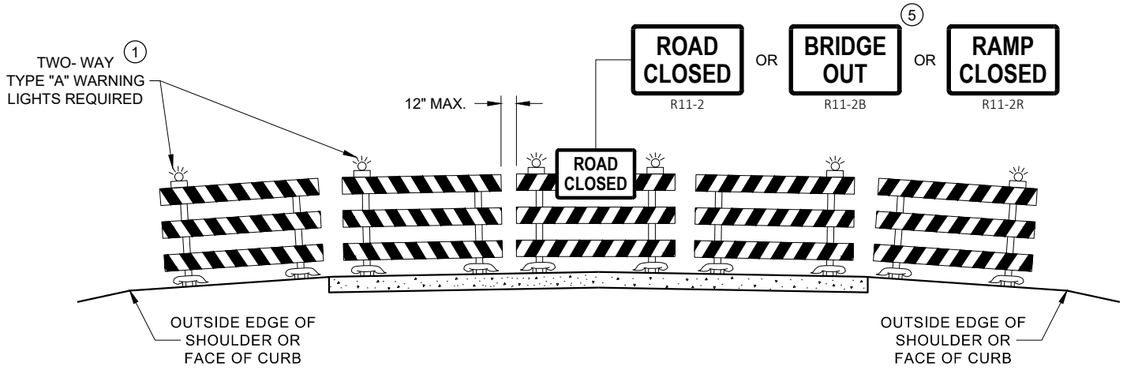
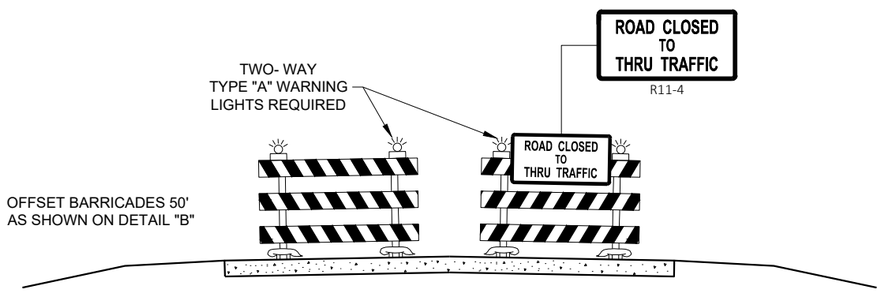



**DETAIL D**
**ROAD CLOSURE BARRICADE DETAIL**
**APPROACH VIEW**




**DETAIL E**
**LANE CLOSURE BARRICADE DETAIL**
**APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**BARRICADES AND SIGNS FOR VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA



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SDD 15C02 - 09b

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SDD 15C02 - 09b

## GENERAL NOTES

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

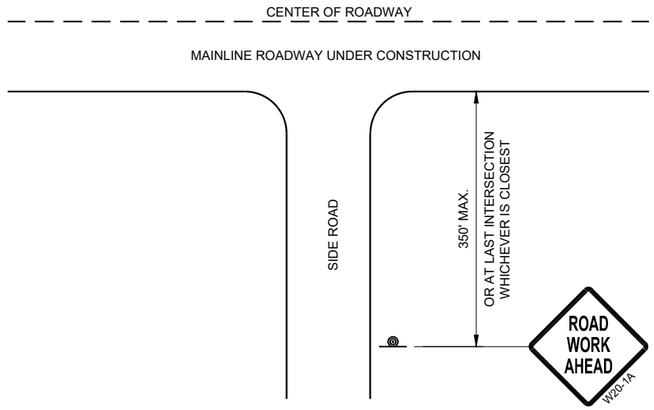
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



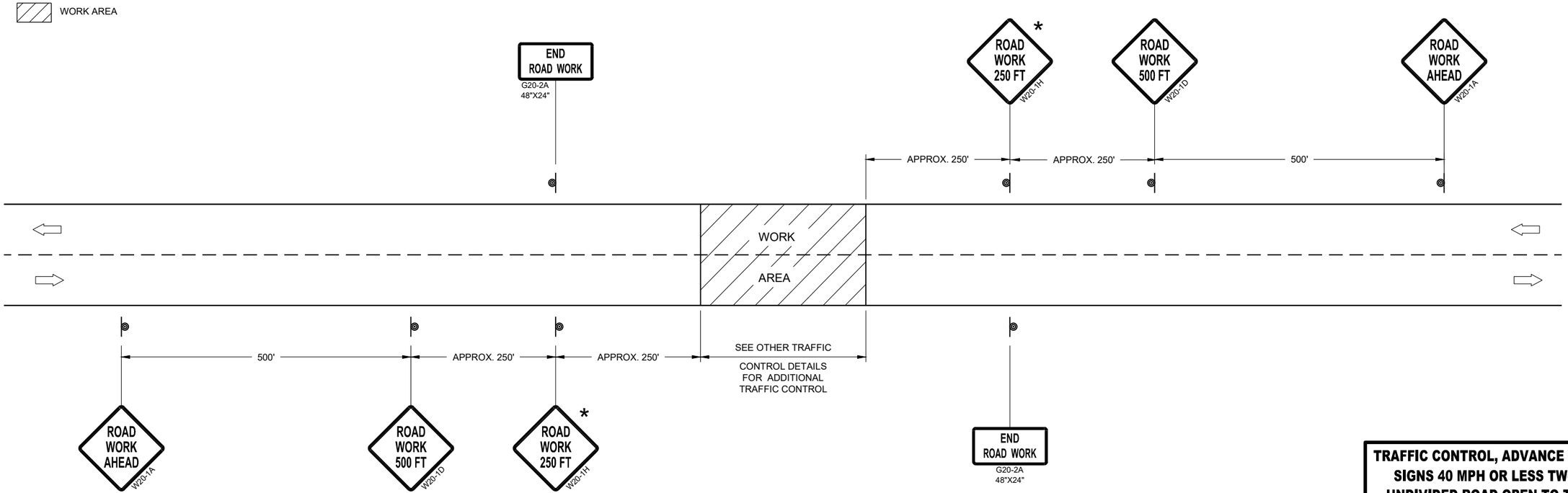

**TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL**

## LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA




**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS**

**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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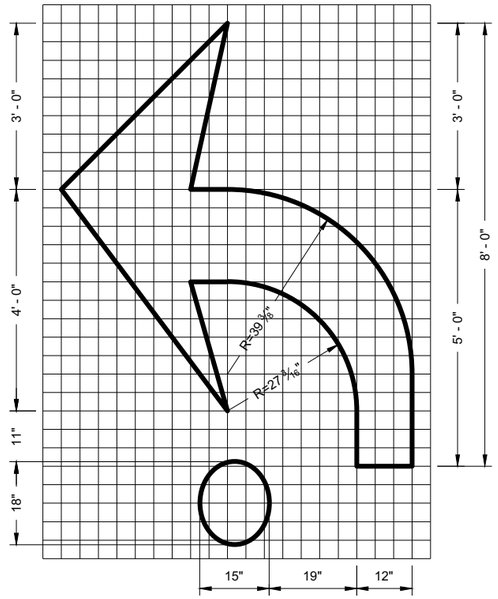
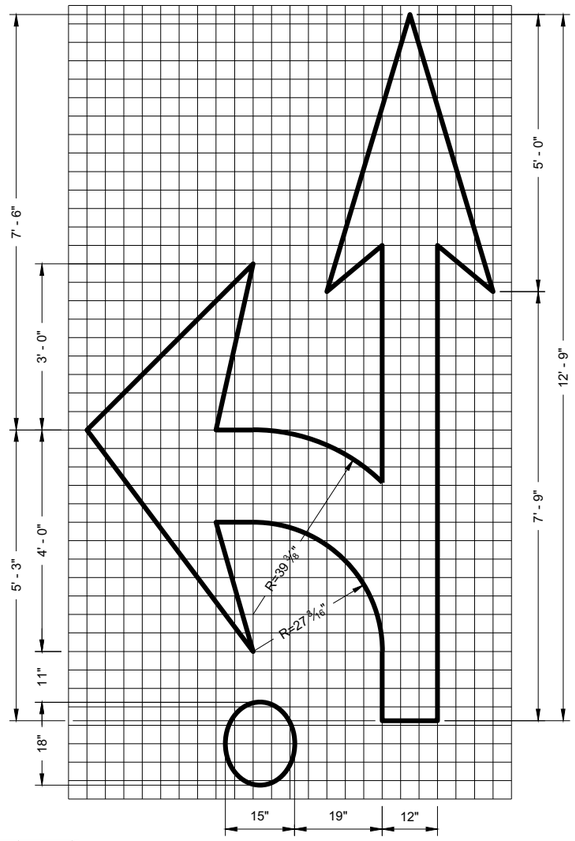
SDD 15C05 - 05

## GENERAL NOTES

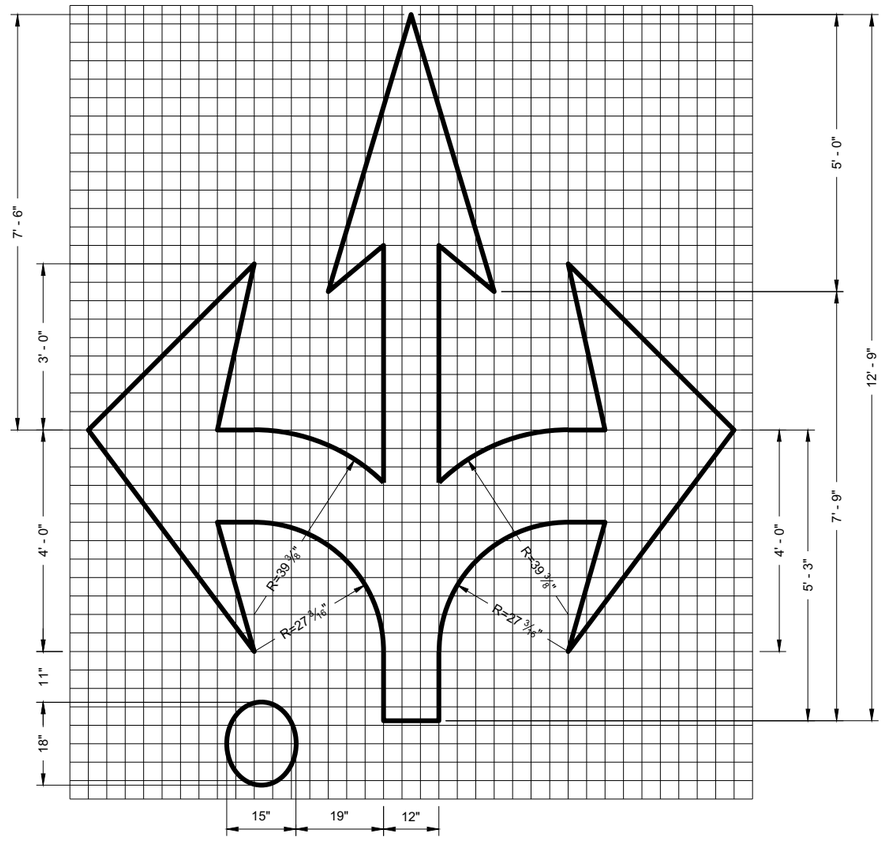
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



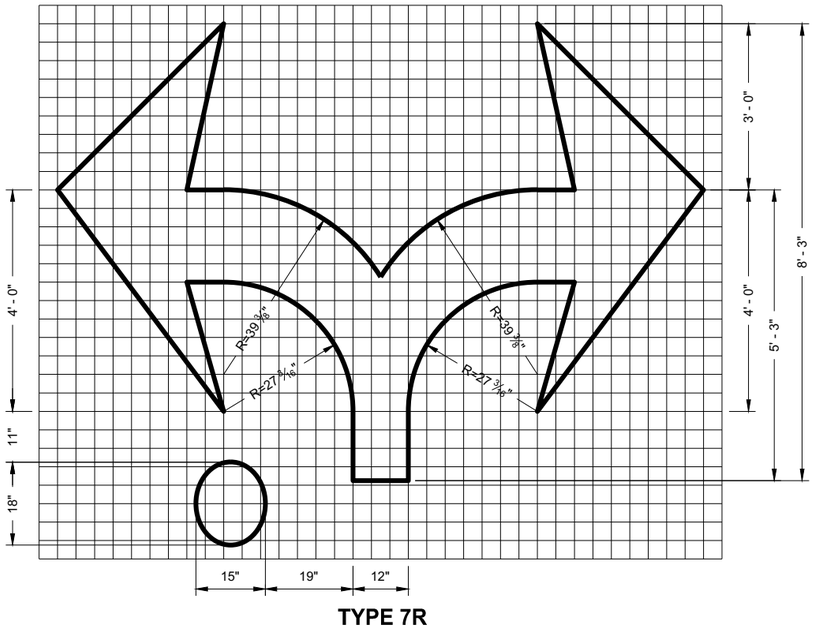

TYPE 2R




TYPE 3R




TYPE 6R




TYPE 7R

**ROUNDABOUT MARKING ARROWS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA



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SDD 15C07 - 15d

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

## GENERAL NOTES

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

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

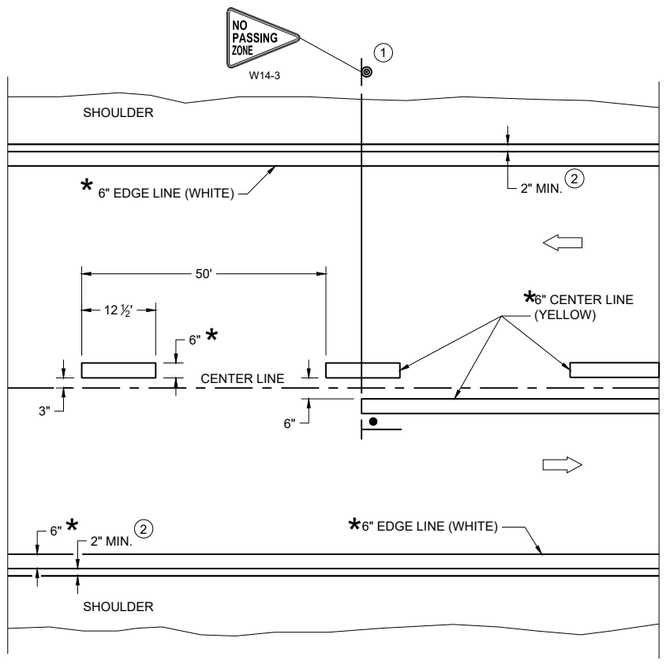
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

## LEGEND

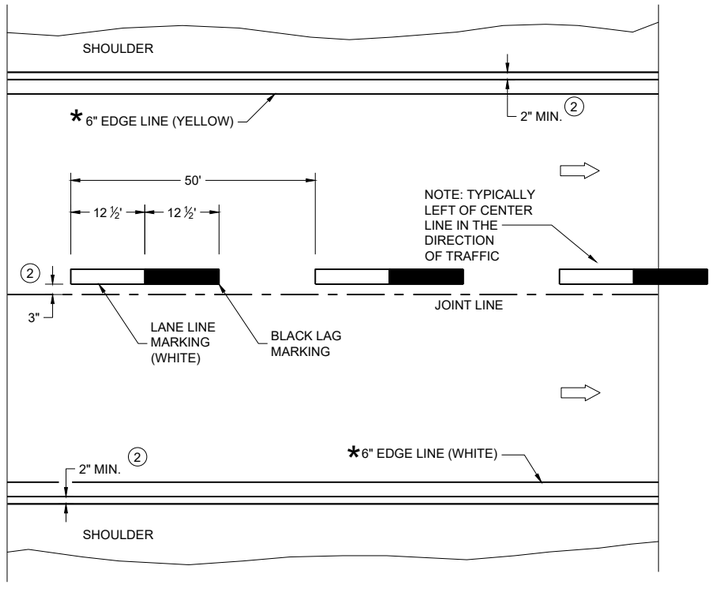
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC




TWO WAY TRAFFIC




ONE WAY TRAFFIC

**PERMANENT PAVEMENT MARKING**

6

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

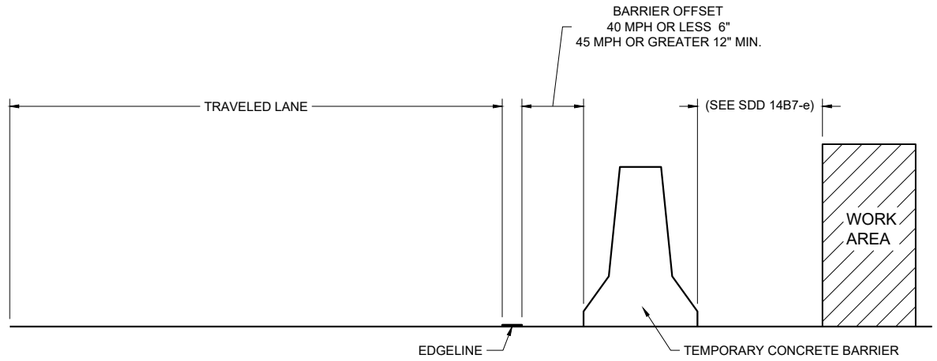
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA





SDD 15C08-23a




**TEMPORARY BARRIER OFFSET FROM EDGELINE**

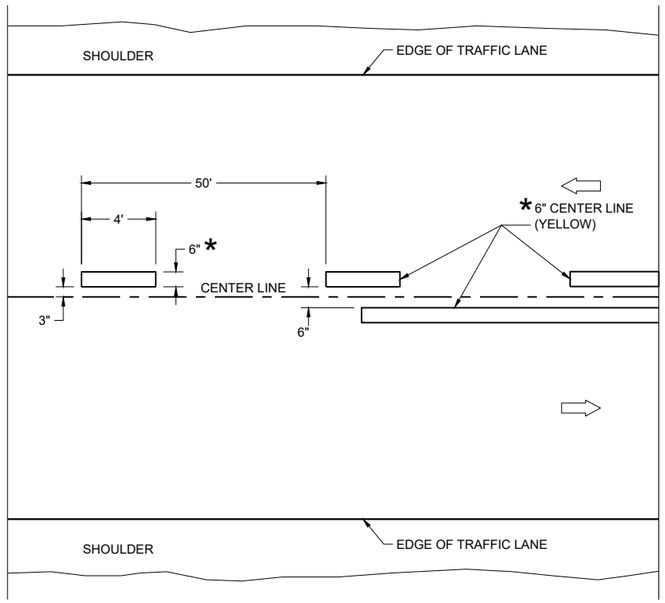
## GENERAL NOTES

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

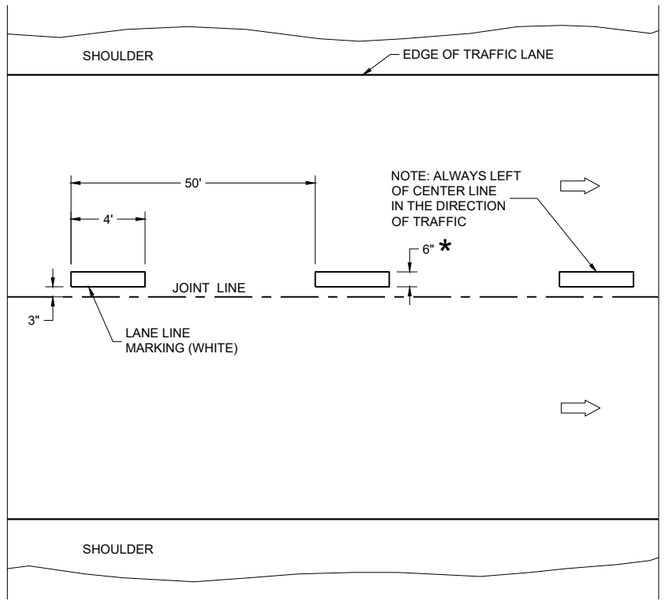
## LEGEND

DIRECTION OF TRAFFIC

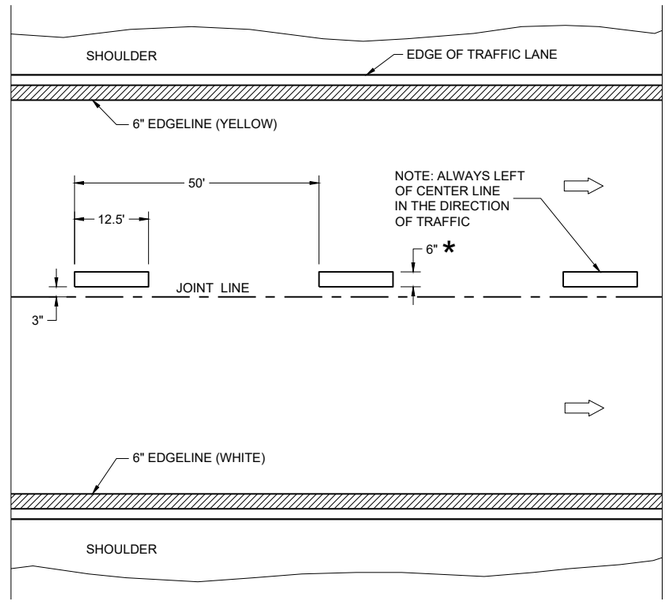
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES




**TWO WAY TRAFFIC**




**ONE WAY TRAFFIC**




**FREEWAYS AND EXPRESSWAYS**

**TEMPORARY PAVEMENT MARKING**

**TEMPORARY LONGITUDINAL PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer

FHWA



6

SDD 15C08-23b

6

SDD 15C08-23b

## LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

## GENERAL NOTES

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

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

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

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

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

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

## FLAGGING

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

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

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

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

## TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

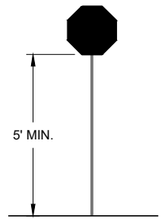
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



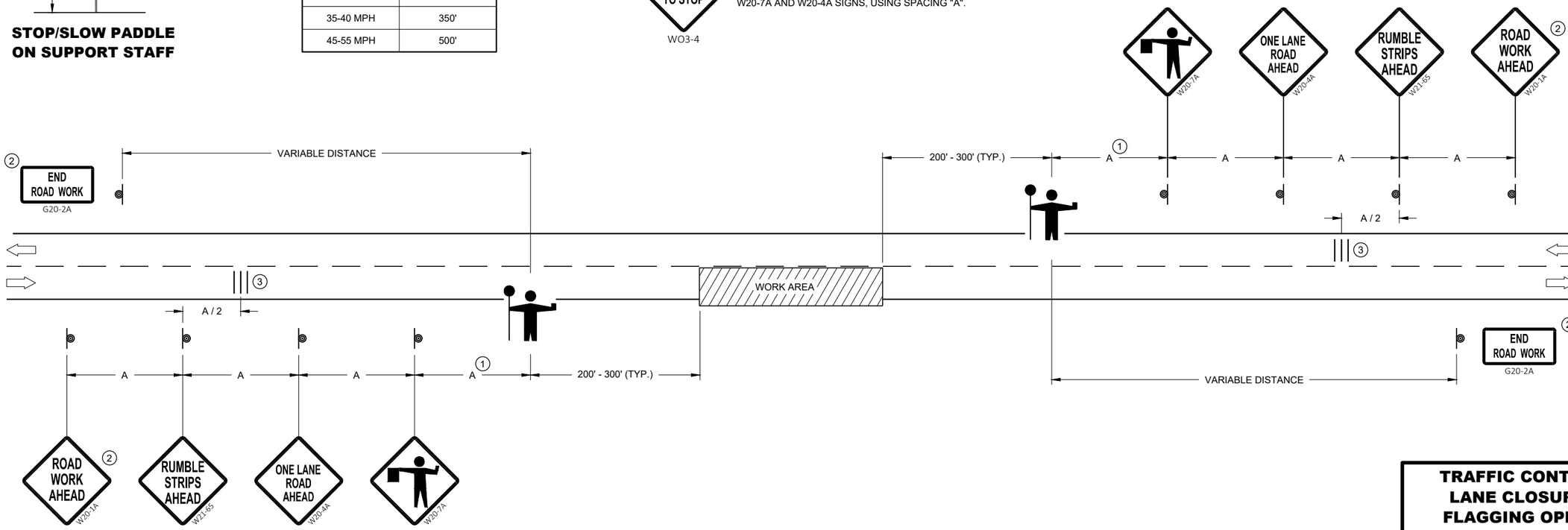

**STOP/SLOW PADDLE ON SUPPORT STAFF**

## SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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




# TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



6

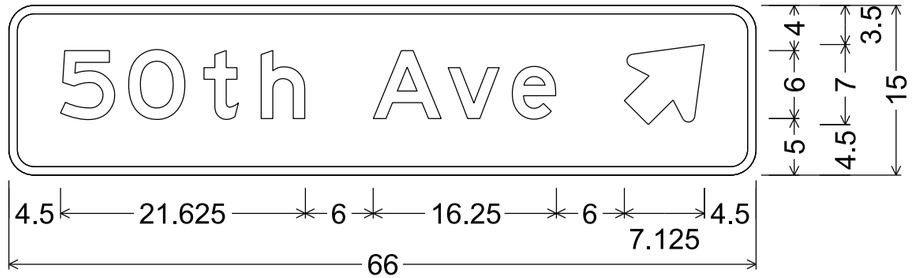
SDD 15C12 - 09a

6

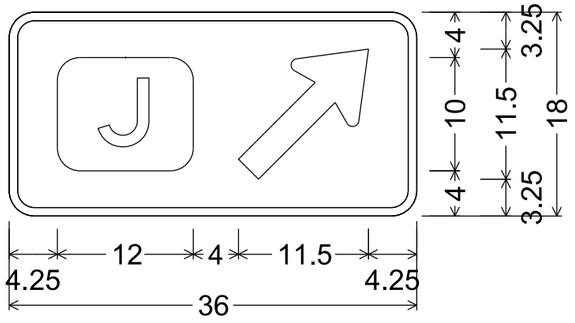
SDD 15C12 - 09a

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E




D1-1; 2.250" Radius, 0.750" Border




D1-1; 2.250" Radius, 0.750" Border

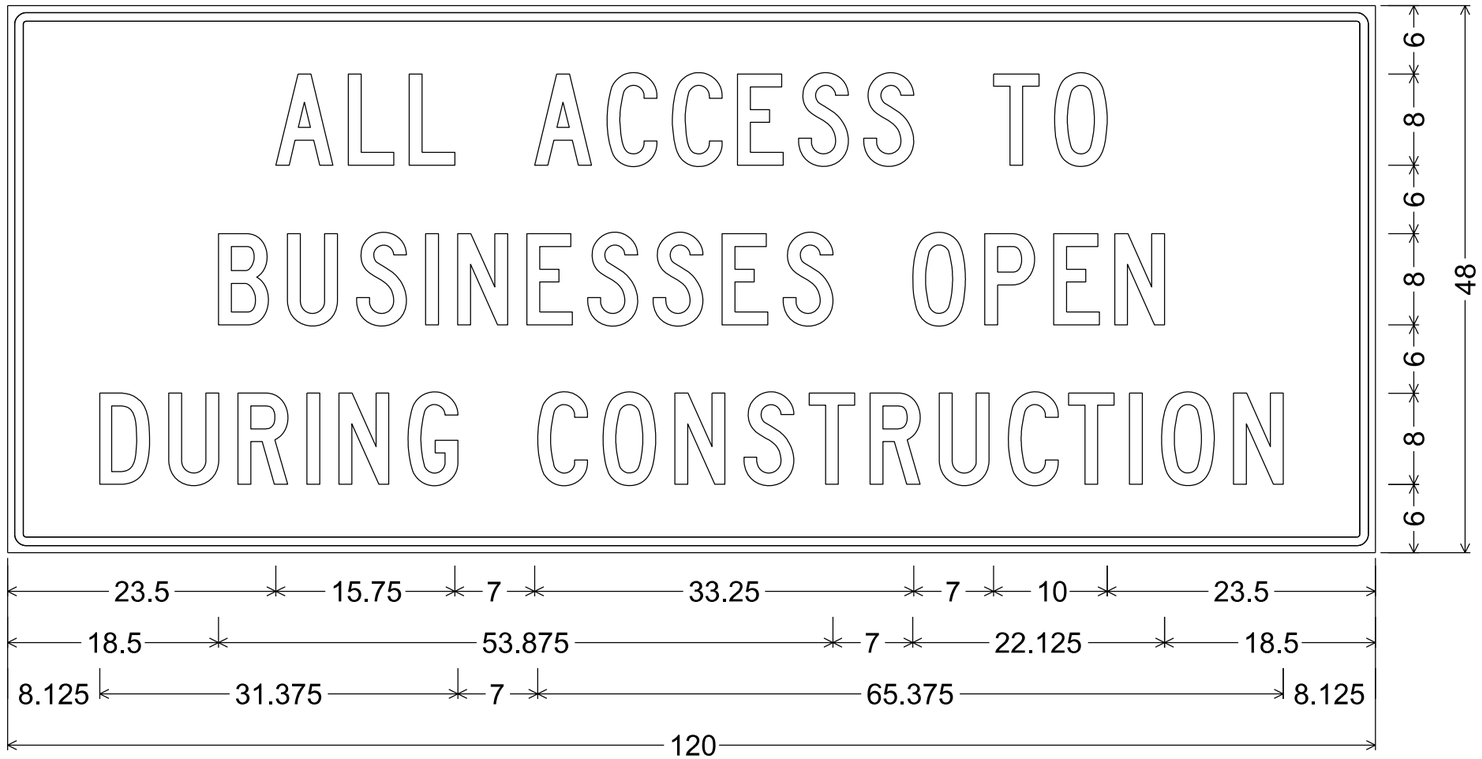
7

7

| 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | PERMANENT SIGNING | SHEET NO: 157 | E |
|---|---|---|---|---|---|

NOTES

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

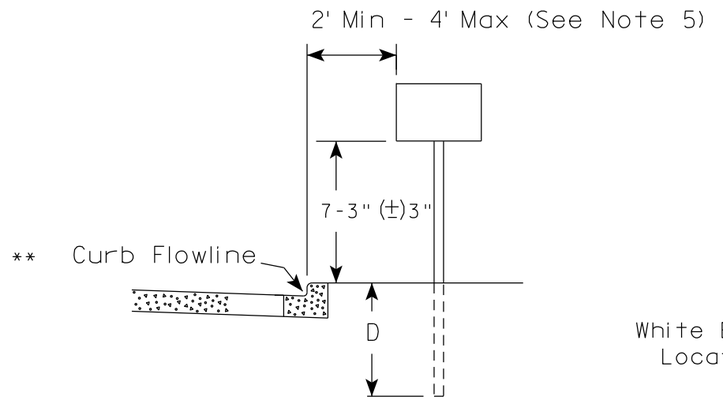



1.625" Radius, 0.750" Border, 0.625" Indent

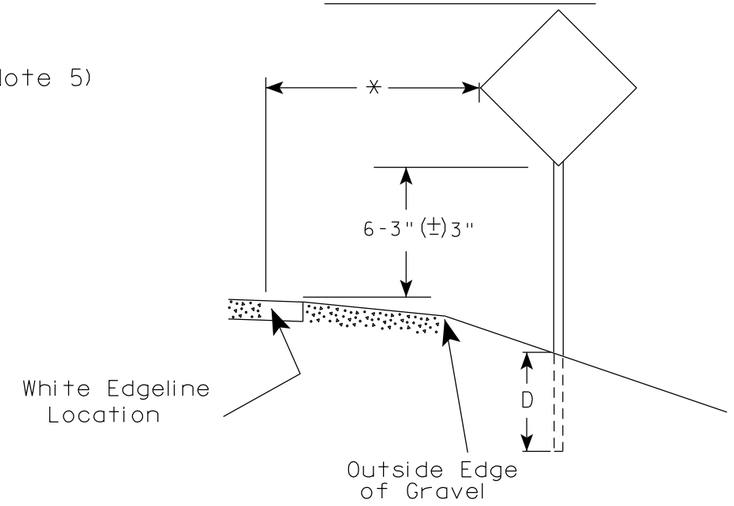
7

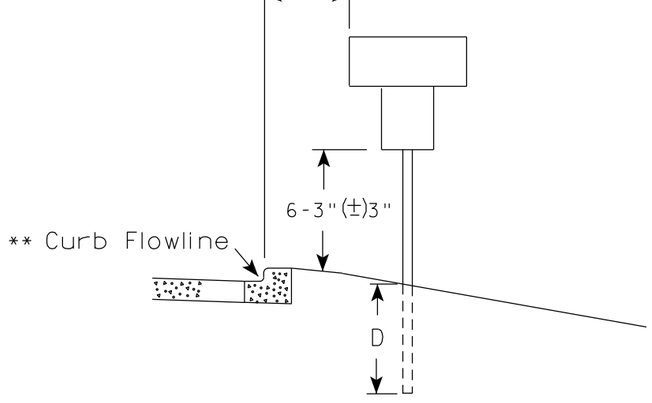
7

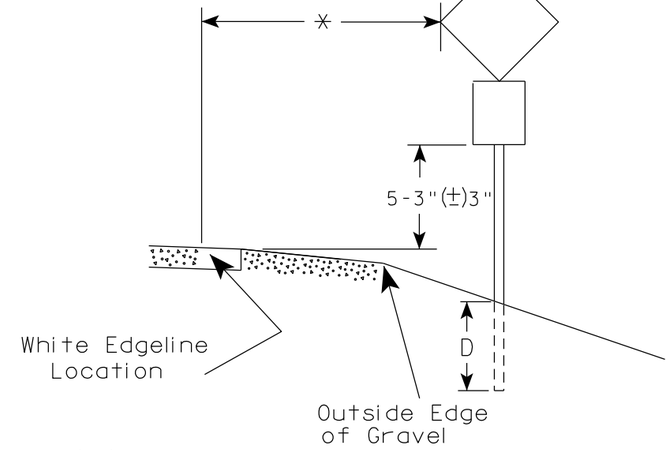
## URBAN AREA




## RURAL AREA (See Note 2)




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

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

## 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' |

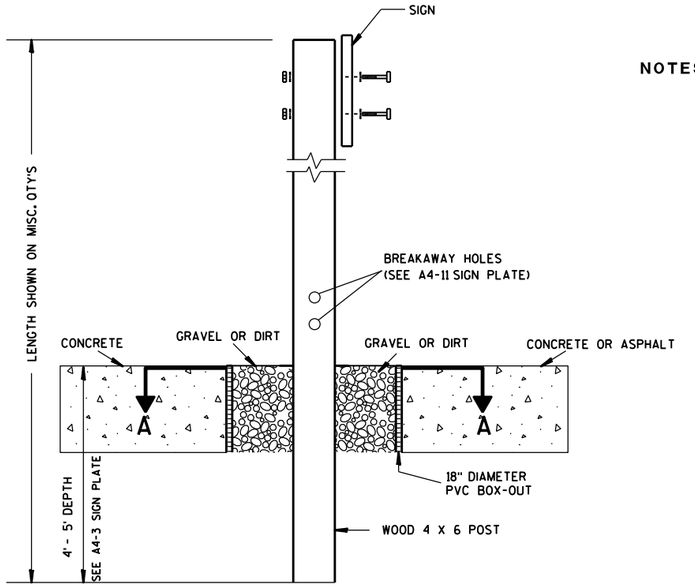
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

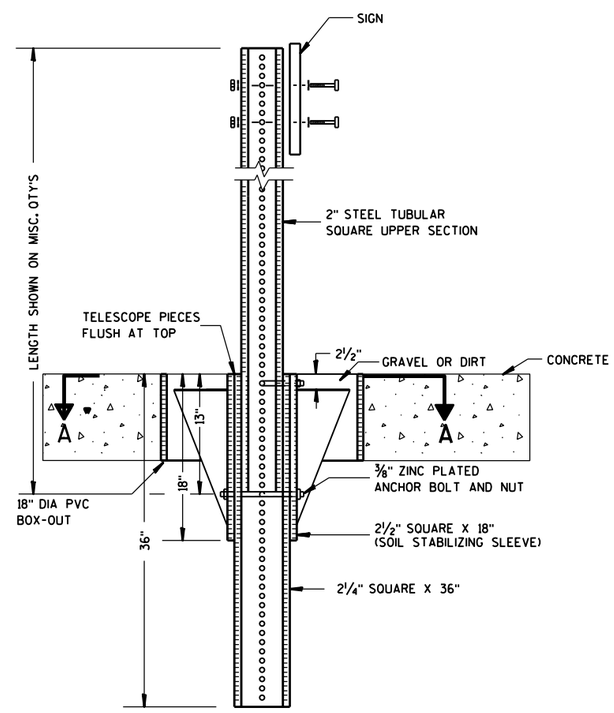
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 159 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

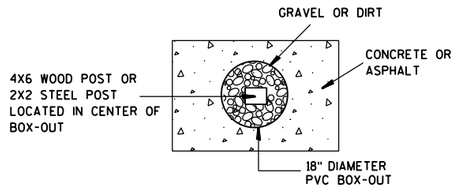
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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




**ELEVATION VIEW**

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




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

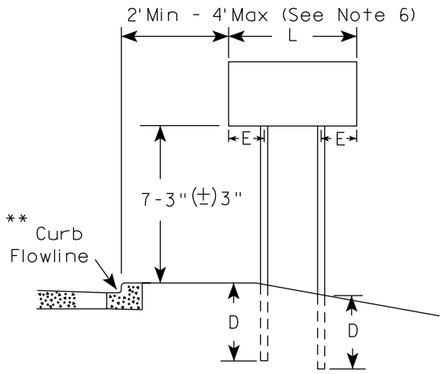
DATE 1/27/14 PLATE NO. A4-3B.1

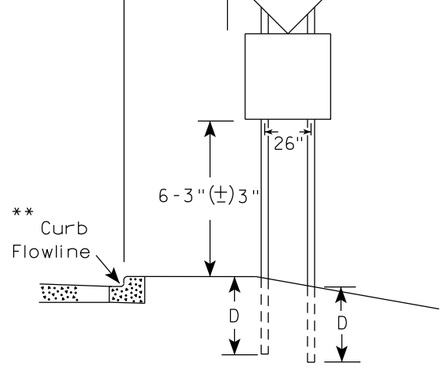
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



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

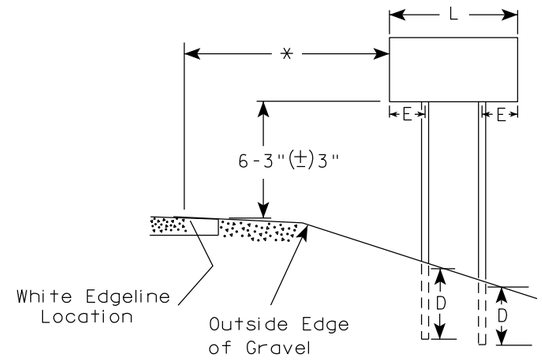
## URBAN AREA

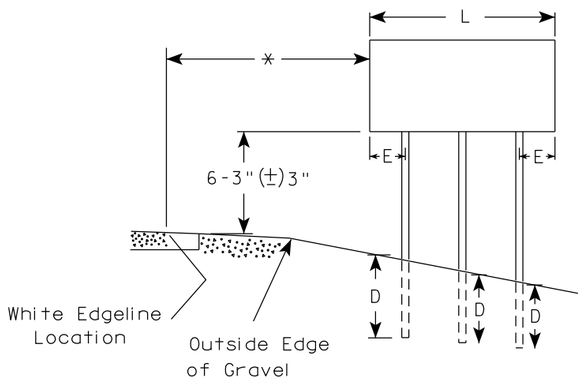


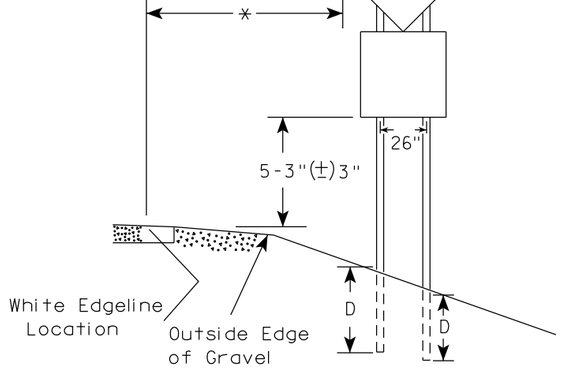




48" DIAMOND WARNING SIGN

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN

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

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

### GENERAL NOTES

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

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

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

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

### POST EMBEDMENT DEPTH

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

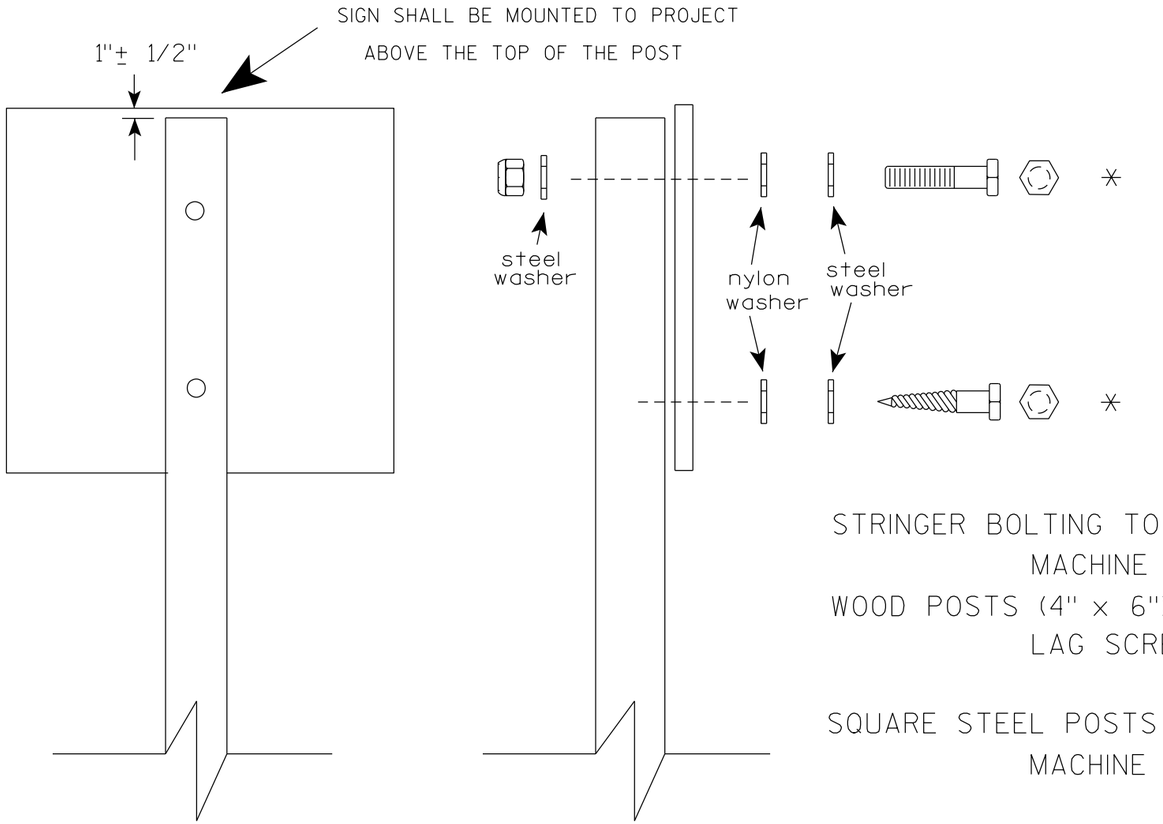
# TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 161 | E |
|---|---|---|---|---|---|




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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

# ATTACHMENT OF SIGNS TO POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

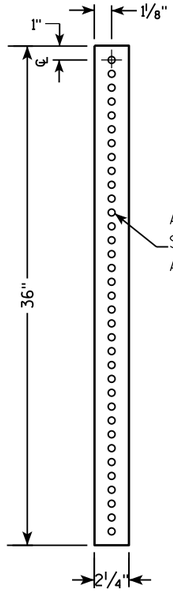
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

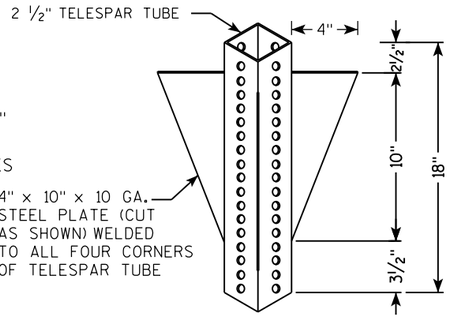
SHEET NO: 162 E

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

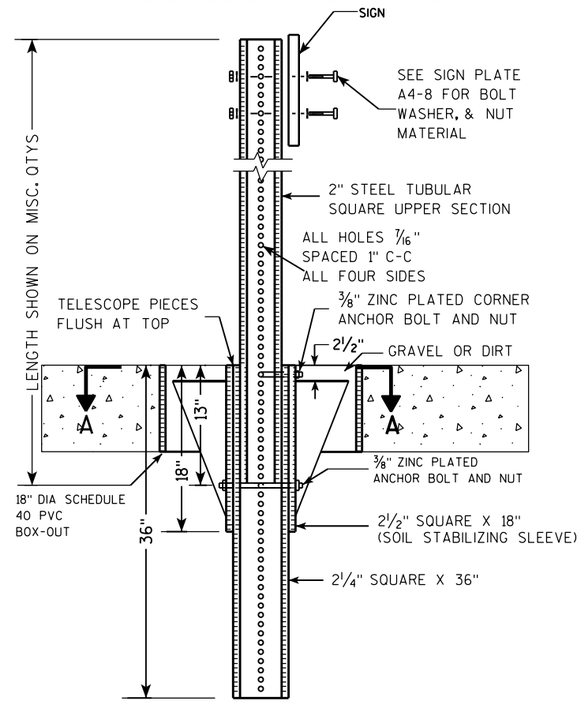
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



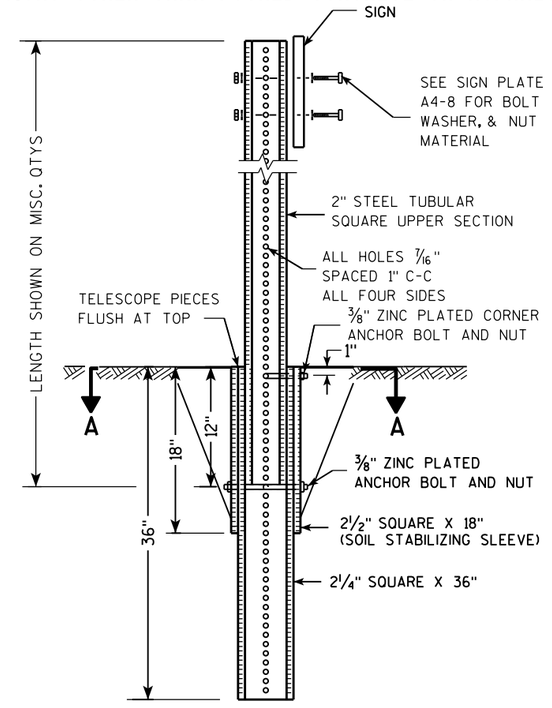

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

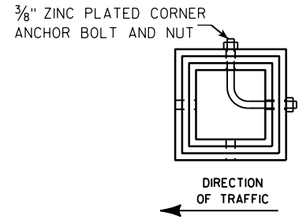



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




## 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*

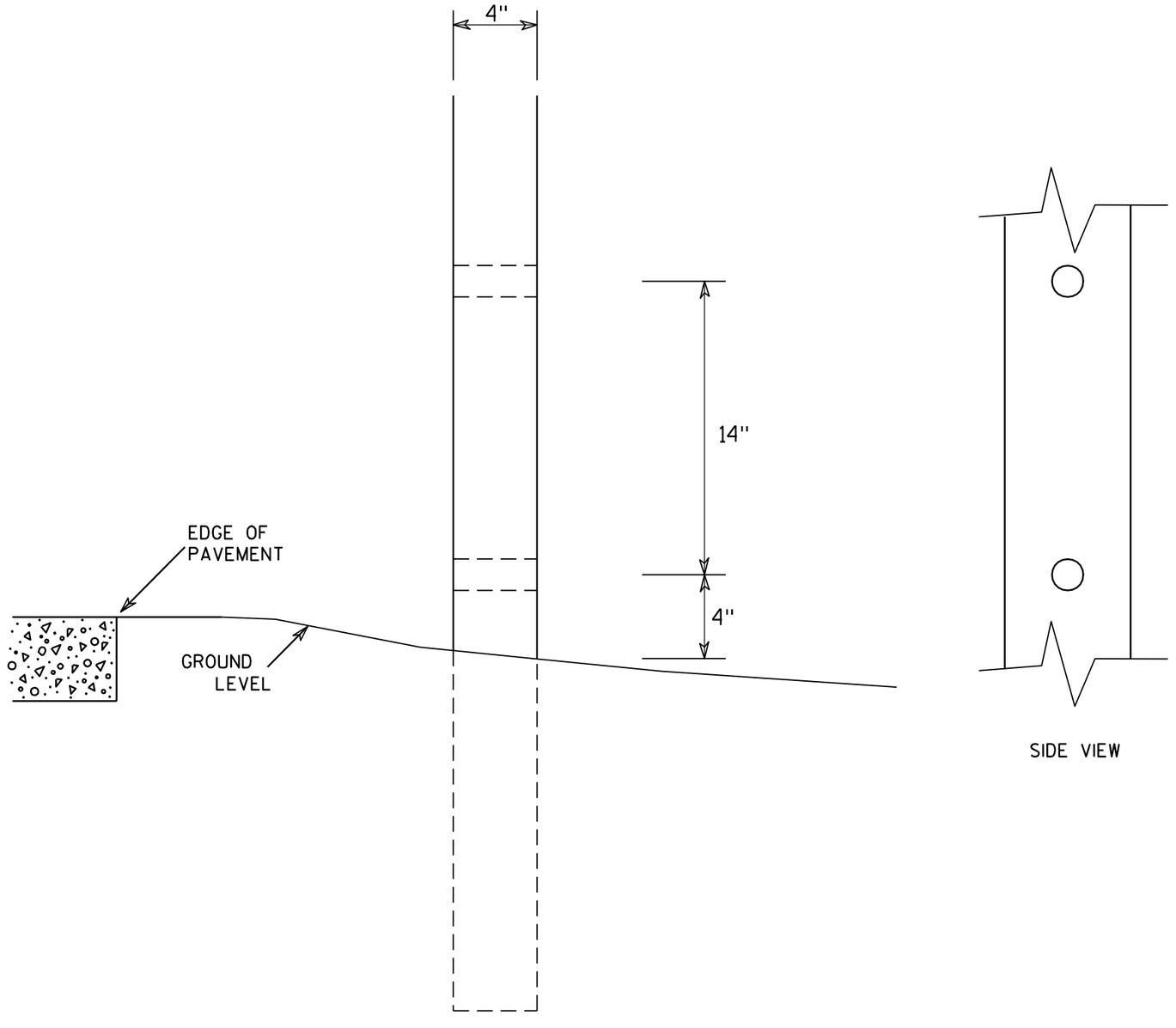
APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9



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

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






SIDE VIEW

GENERAL NOTES

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

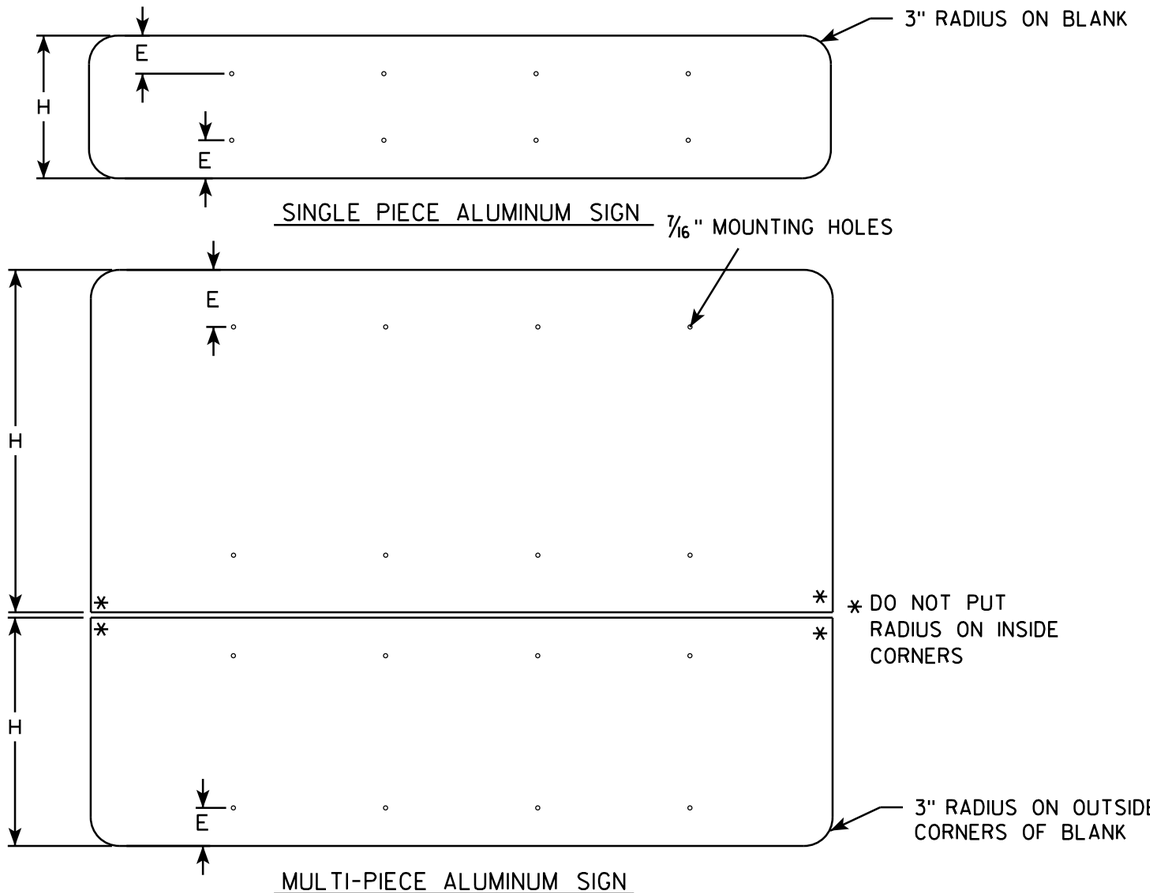
# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

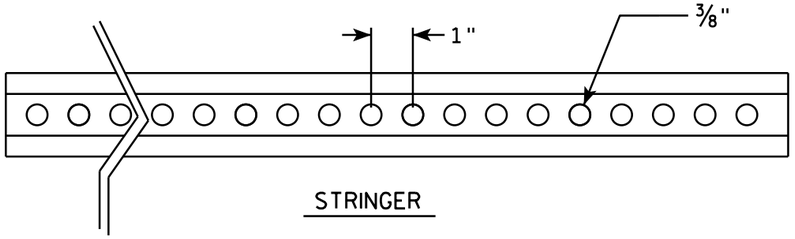
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 164 | E |
|---|---|---|---|---|---|




# GENERAL NOTES

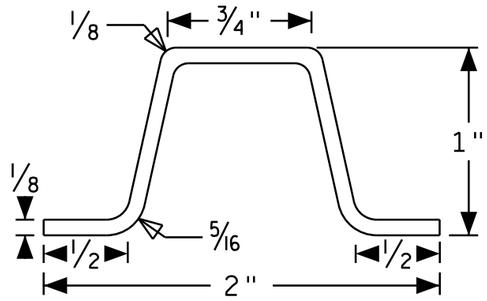
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER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

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

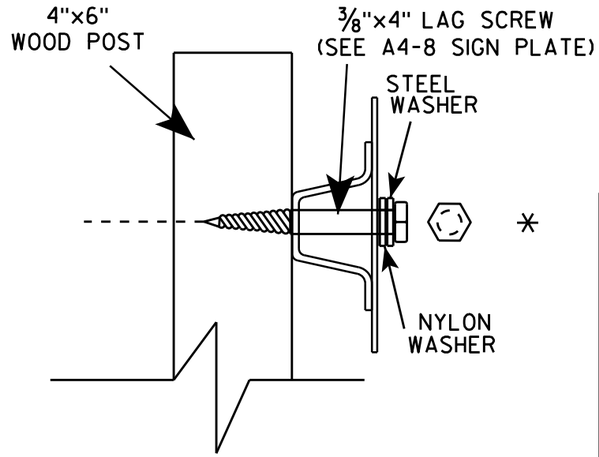



STRINGER

CROSS SECTION VIEW OF CHANNEL




POST MOUNTING




## SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 4/26/16 PLATE NO A4-18.1

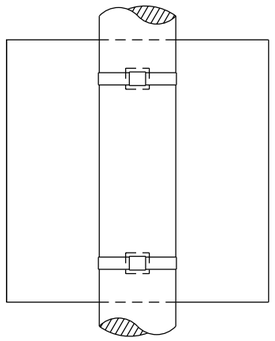
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

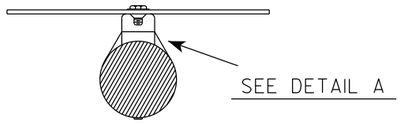


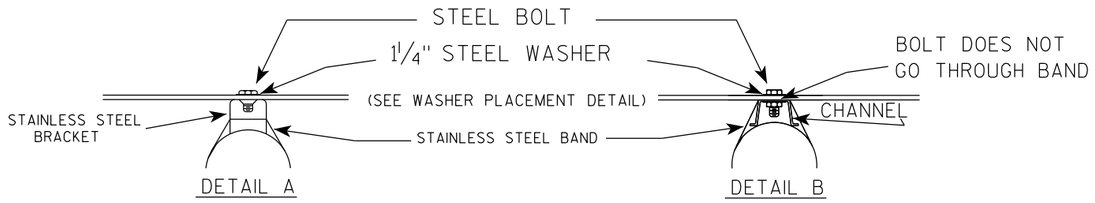
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

# BANDING

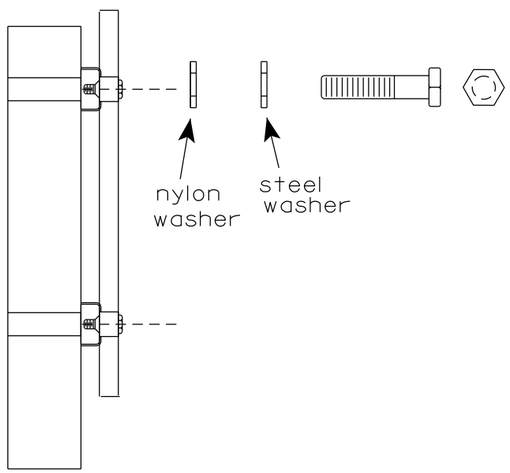
SINGLE SIGN






WASHER PLACEMENT

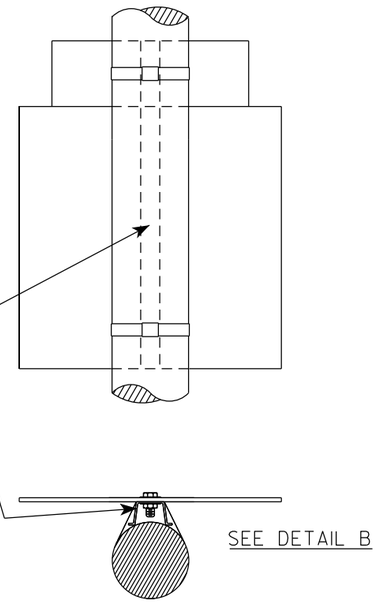



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY




STANDARD SIGN
SIGN BANDING DETAILS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

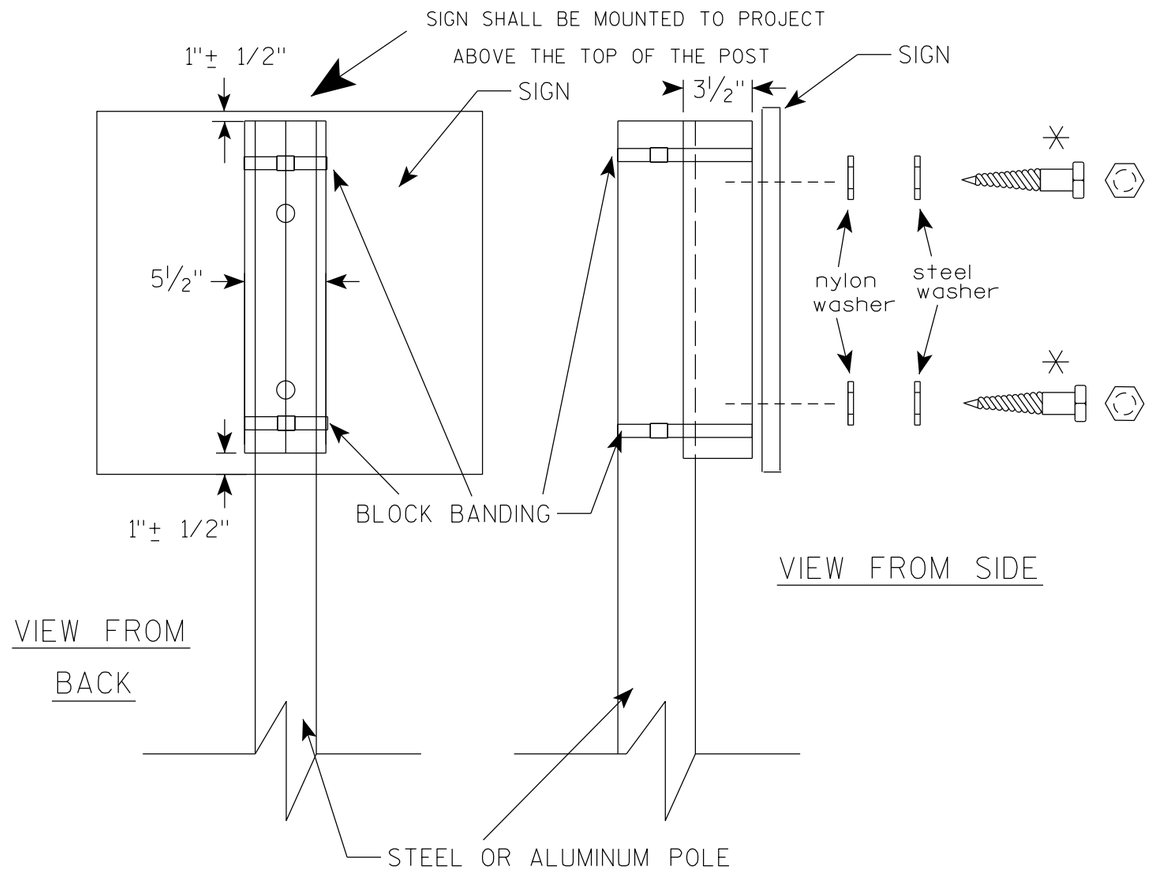
DATE 6/10/19 PLATE NO. A5-9.4

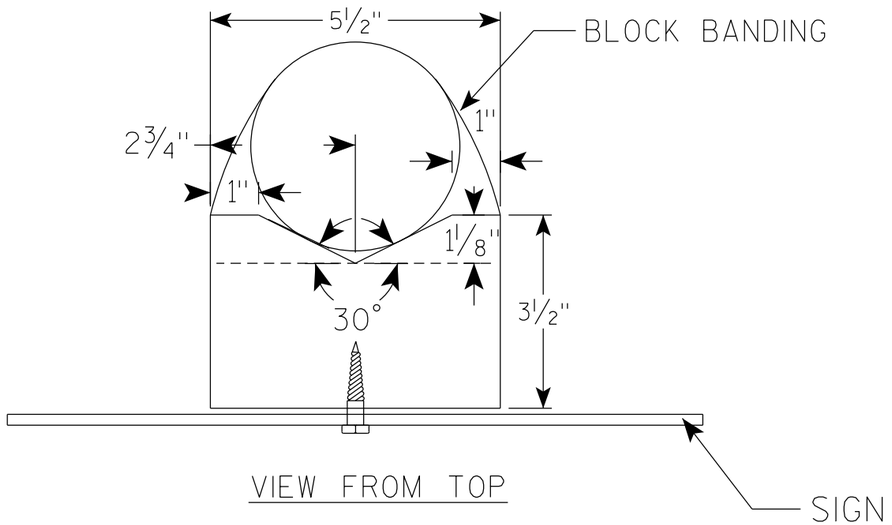
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 166 | E |
|---|---|---|---|---|---|

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

7

7




## GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

# BLOCK BANDING DETAIL ( V-BLOCK OPTION )

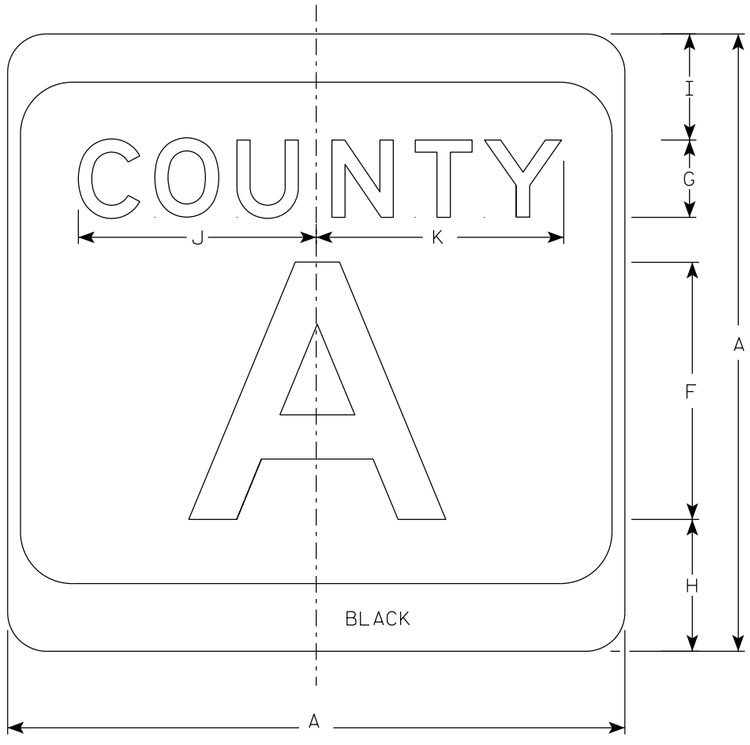
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

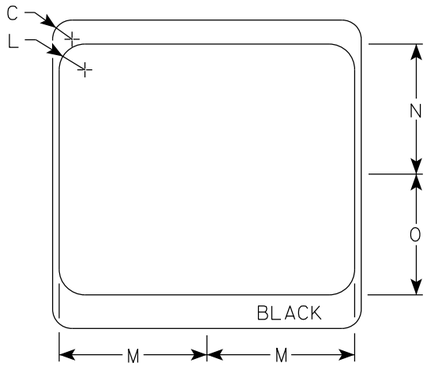
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 167 E

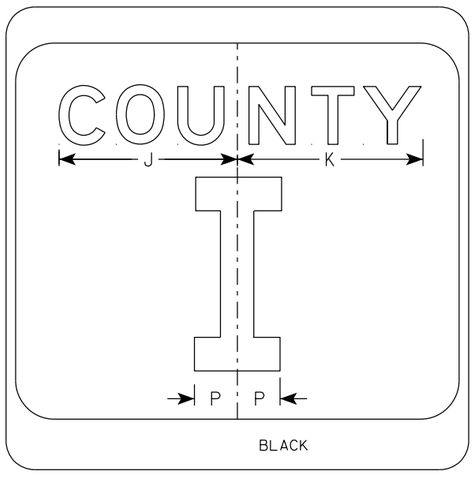


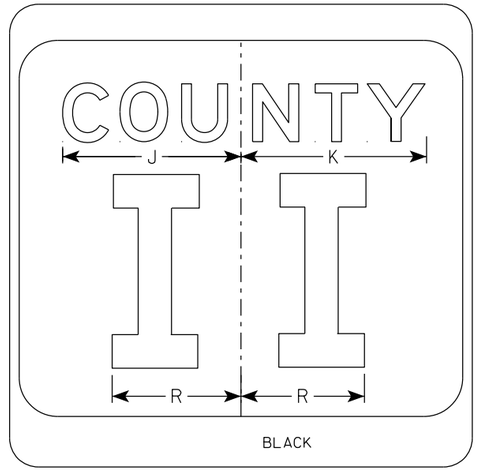

M1-5A




NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.




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

CTH MARKER
M1-5A FOR ASSEMBLIES

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

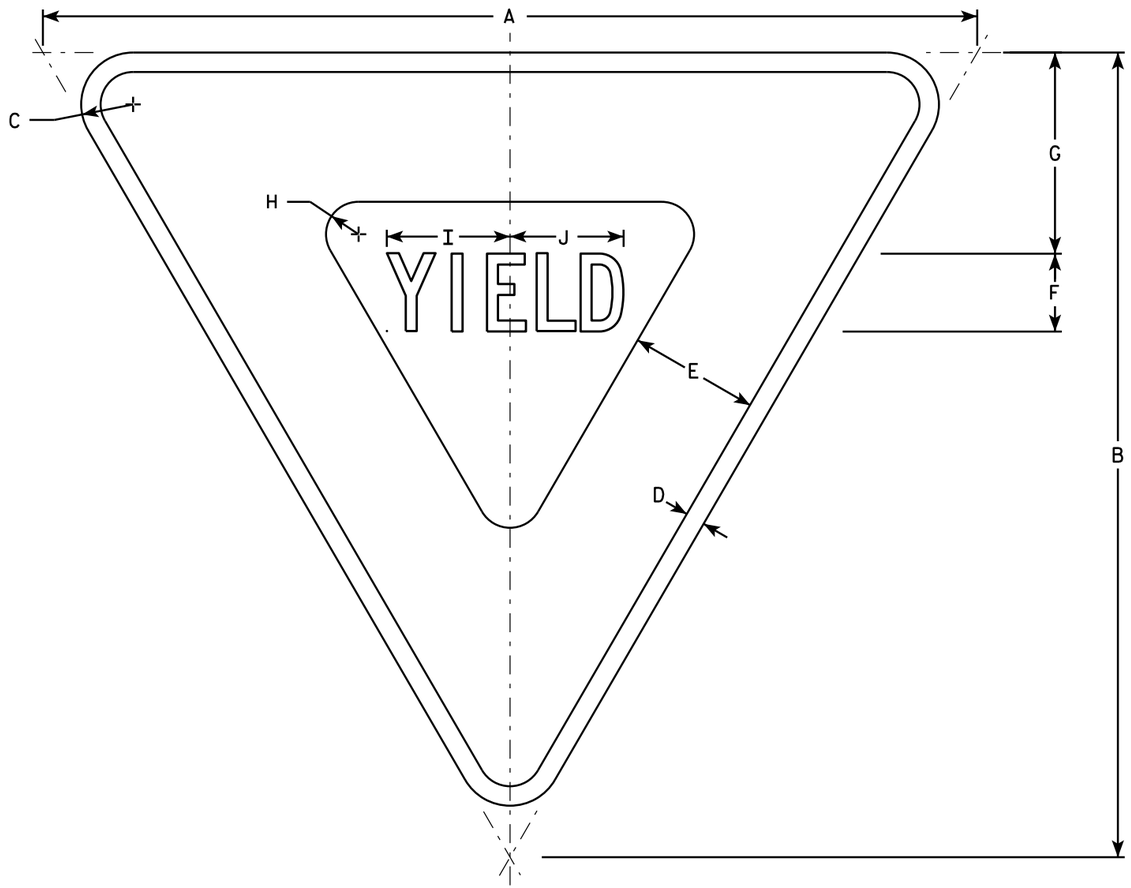
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7




R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | 26 | 1 1/2 | 5/8 | 4 | 2 1/2 | 6 3/8 | 7/8 | 4 | 3 5/8 | | | | | | | | | | | | | | | | | 2.71 |
| 2S | 36 | 31 | 2 | 3/4 | 5 | 3 | 7 3/4 | 1 1/4 | 4 3/4 | 4 3/8 | | | | | | | | | | | | | | | | | 3.88 |
| 2M | 48 | 42 | 3 | 1 | 6 | 4 | 9 3/4 | 2 | 6 1/4 | 5 7/8 | | | | | | | | | | | | | | | | | 7.00 |
| 3 | 48 | 42 | 3 | 1 | 6 | 4 | 9 3/4 | 2 | 6 1/4 | 5 7/8 | | | | | | | | | | | | | | | | | 7.00 |
| 4 | 48 | 42 | 3 | 1 | 6 | 4 | 9 3/4 | 2 | 6 1/4 | 5 7/8 | | | | | | | | | | | | | | | | | 7.00 |
| 5 | 60 | 52 | 3 | 1 1/2 | 8 | 5 | 13 | 2 1/2 | 7 7/8 | 7 1/4 | | | | | | | | | | | | | | | | | 10.83 |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 18 | 15 1/2 | 1 | 3/8 | 2 1/2 | 1 1/2 | 3 7/8 | 5/8 | 2 3/8 | 2 1/4 | | | | | | | | | | | | | | | | | 0.97 |

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE P1-2.12

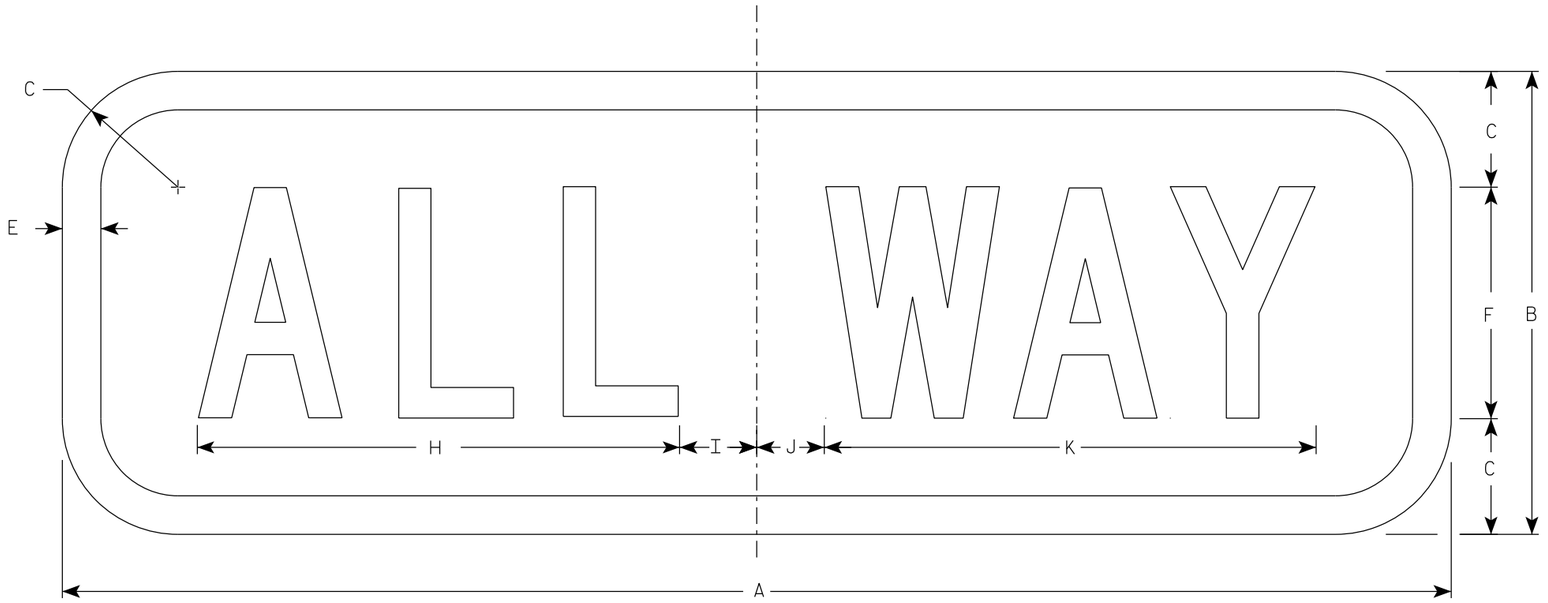
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. For 30"x30" R1-1 use 18"x6" R1-3P sign
   For 36"x36" R1-1 use 24"x9" R1-3P sign
   For 48"x48" R1-1 use 30"x12" R1-3P sign




R1-3P

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 6 | 1 1/2 | | 1/2 | 3 | | 6 1/4 | 1 1/4 | 7/8 | 6 3/8 | | | | | | | | | | | | | | | | 0.75 |
| 2S | 18 | 6 | 1 1/2 | | 1/2 | 3 | | 6 1/4 | 1 1/4 | 7/8 | 6 3/8 | | | | | | | | | | | | | | | | 0.75 |
| 2M | 24 | 9 | 1 1/2 | | 1/2 | 5 | | 9 1/4 | 1 1/4 | 3/4 | 9 3/4 | | | | | | | | | | | | | | | | 1.5 |
| 3 | 24 | 9 | 1 1/2 | | 1/2 | 5 | | 9 1/4 | 1 1/4 | 3/4 | 9 3/4 | | | | | | | | | | | | | | | | 1.5 |
| 4 | 30 | 12 | 1 1/2 | | 5/8 | 6 | | 11 | 2 1/4 | 1 1/2 | 11 3/4 | | | | | | | | | | | | | | | | 2.5 |
| 5 | 30 | 12 | 1 1/2 | | 5/8 | 6 | | 11 | 2 1/4 | 1 1/2 | 11 3/4 | | | | | | | | | | | | | | | | 2.5 |

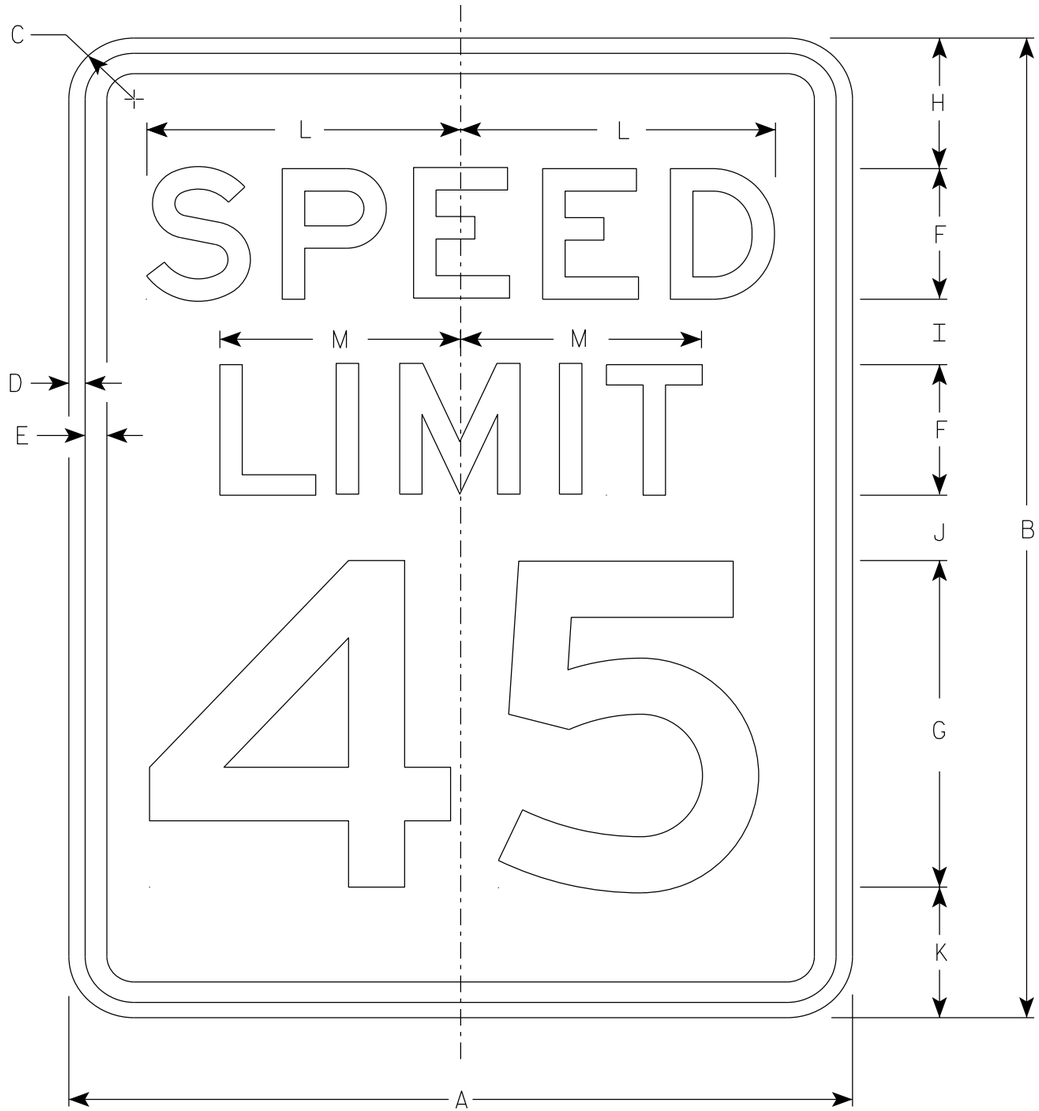
STANDARD SIGN
R1-3P

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 1/19/23 PLATE NO. R1-3P.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 170 E




R2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 24 | 1 1/2 | 3/8 | 1/2 | 3 | 8 | 3 | 2 | 2 | 3 | 7 1/4 | 5 1/2 | | | | | | | | | | | | | | 3.0 |
| 2S | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 4 | 10 | 3 | 2 1/4 | 3 3/8 | 3 3/8 | 9 5/8 | 7 3/8 | | | | | | | | | | | | | | 5.0 |
| 2M | 30 | 36 | 1 7/8 | 1/2 | 5/8 | 5 | 12 | 5 | 2 1/2 | 2 1/2 | 4 | 12 | 9 1/4 | | | | | | | | | | | | | | 7.5 |
| 3 | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5 | 5 | 6 | 14 3/8 | 11 | | | | | | | | | | | | | | 12.0 |
| 4 | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5 | 5 | 6 | 14 3/8 | 11 | | | | | | | | | | | | | | 12.0 |
| 5 | 48 | 60 | 3 | 3/4 | 1 | 8 | 20 | 6 | 4 1/2 | 6 3/4 | 6 3/4 | 19 1/4 | 14 5/8 | | | | | | | | | | | | | | 20.0 |

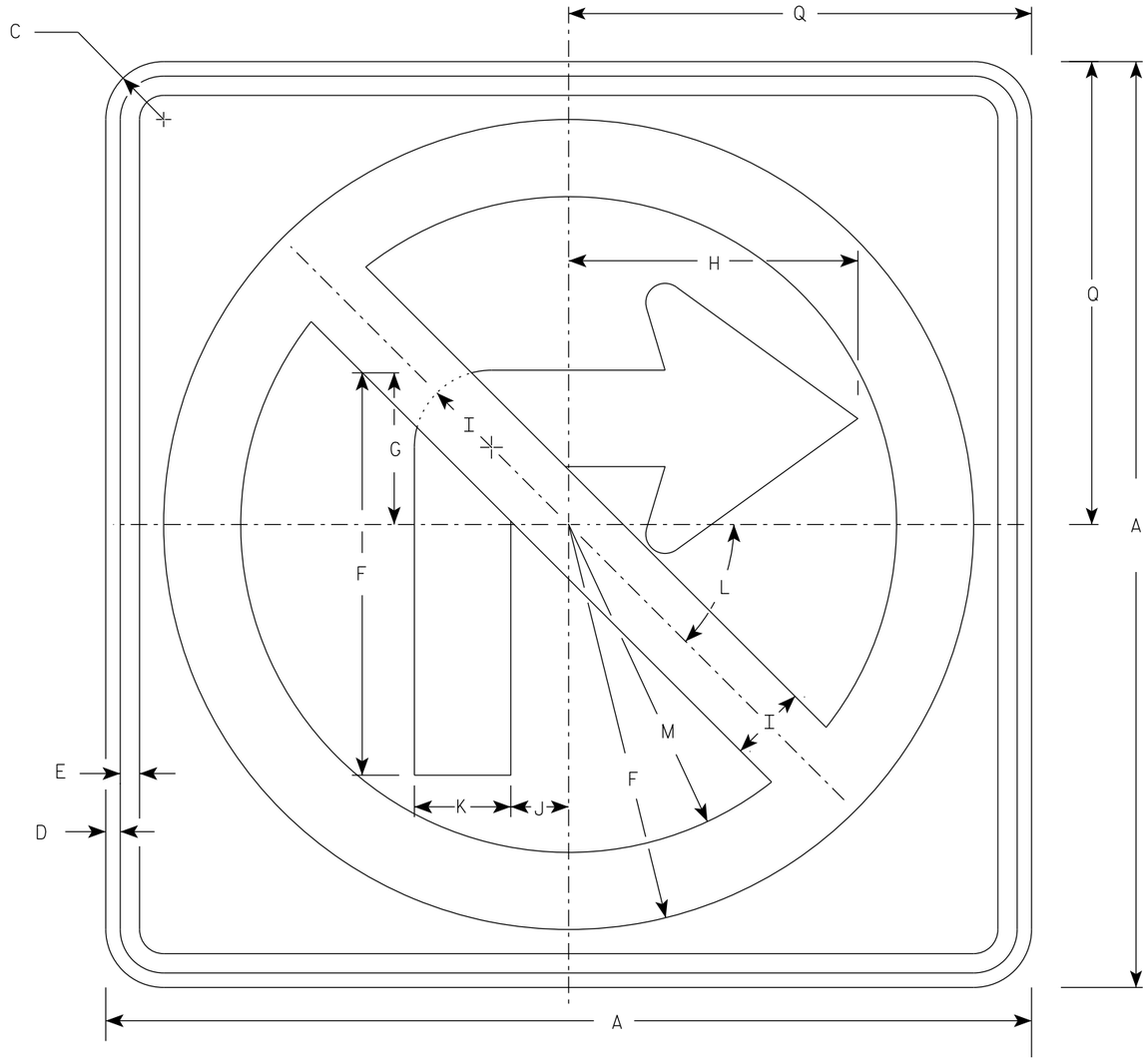
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

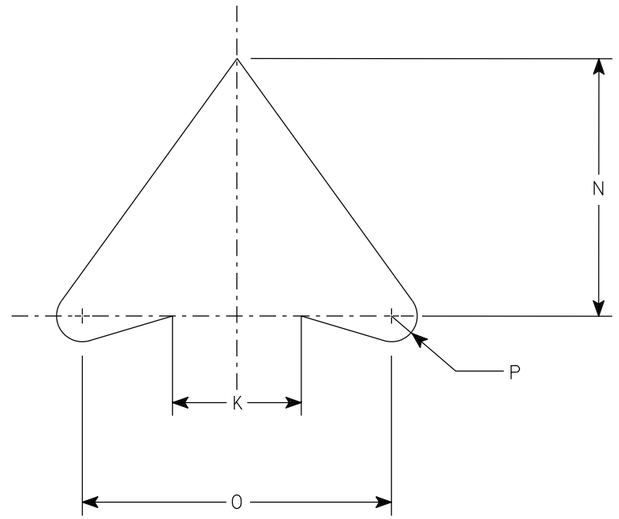
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 171 | E




R3-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 ½ | ⅜ | ½ | 10 ½ | 4 | 7 ½ | 2 | 1 ½ | 2 ½ | 45 | 8 ½ | 5 | 6 | ½ | 12 | | | | | | | | | | 4.0 |
| 2S | 24 | | 1 ½ | ⅜ | ½ | 10 ½ | 4 | 7 ½ | 2 | 1 ½ | 2 ½ | 45° | 8 ½ | 5 | 6 | ½ | 12 | | | | | | | | | | 4.0 |
| 2M | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45 | 12 ¾ | 7 ½ | 9 | ¾ | 18 | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45 | 12 ¾ | 7 ½ | 9 | ¾ | 18 | | | | | | | | | | 9.0 |
| 4 | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45° | 12 ¾ | 7 ½ | 9 | ¾ | 18 | | | | | | | | | | 9.0 |
| 5 | 48 | | 2 ¼ | ¾ | 1 | 21 | 8 | 15 | 4 | 3 | 5 | 45° | 17 | 10 | 12 | 1 | 24 | | | | | | | | | | 16.0 |

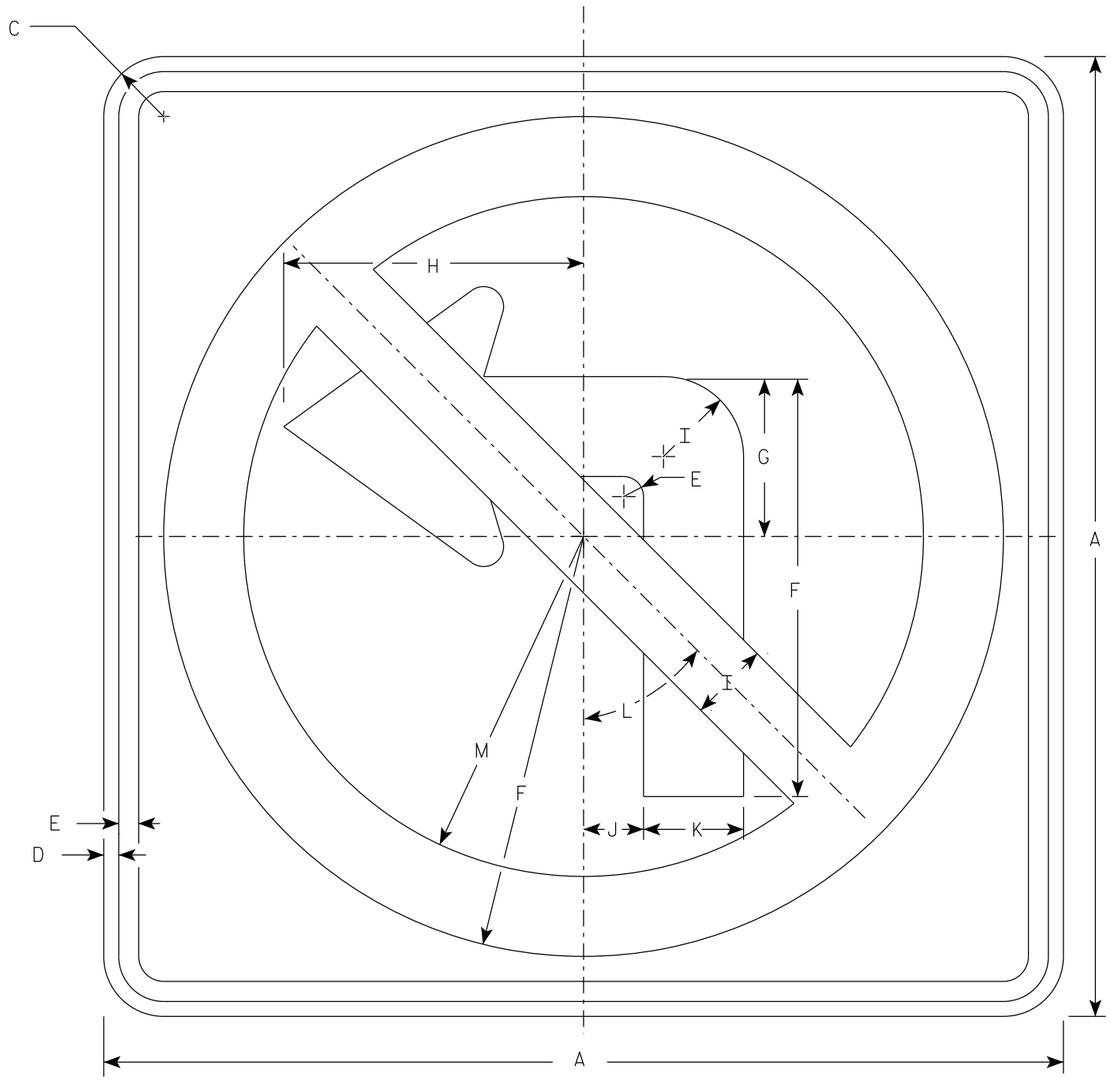
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-1.6

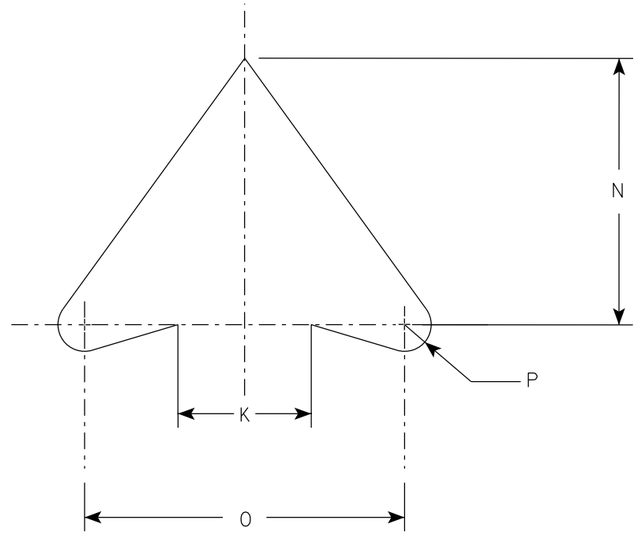
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 172 | E




R3-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 ½ | ⅜ | ½ | 10 ½ | 4 | 7 ½ | 2 | 1 ½ | 2 ½ | 45° | 8 ½ | 5 | 6 | ½ | | | | | | | | | | | 4.0 |
| 2S | 24 | | 1 ½ | ⅜ | ½ | 10 ½ | 4 | 7 ½ | 2 | 1 ½ | 2 ½ | 45° | 8 ½ | 5 | 6 | ½ | | | | | | | | | | | 4.0 |
| 2M | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45° | 12 ¾ | 7 ½ | 9 | ¾ | | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45° | 12 ¾ | 7 ½ | 9 | ¾ | | | | | | | | | | | 9.0 |
| 4 | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45° | 12 ¾ | 7 ½ | 9 | ¾ | | | | | | | | | | | 9.0 |
| 5 | 48 | | 2 ¼ | ¾ | 1 | 21 | 8 | 15 | 4 | 3 | 5 | 45° | 17 | 10 | 12 | 1 | | | | | | | | | | | 16.0 |

STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

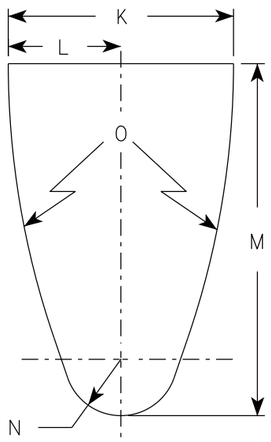
DATE 2/2/23 PLATE NO. R3-2.11

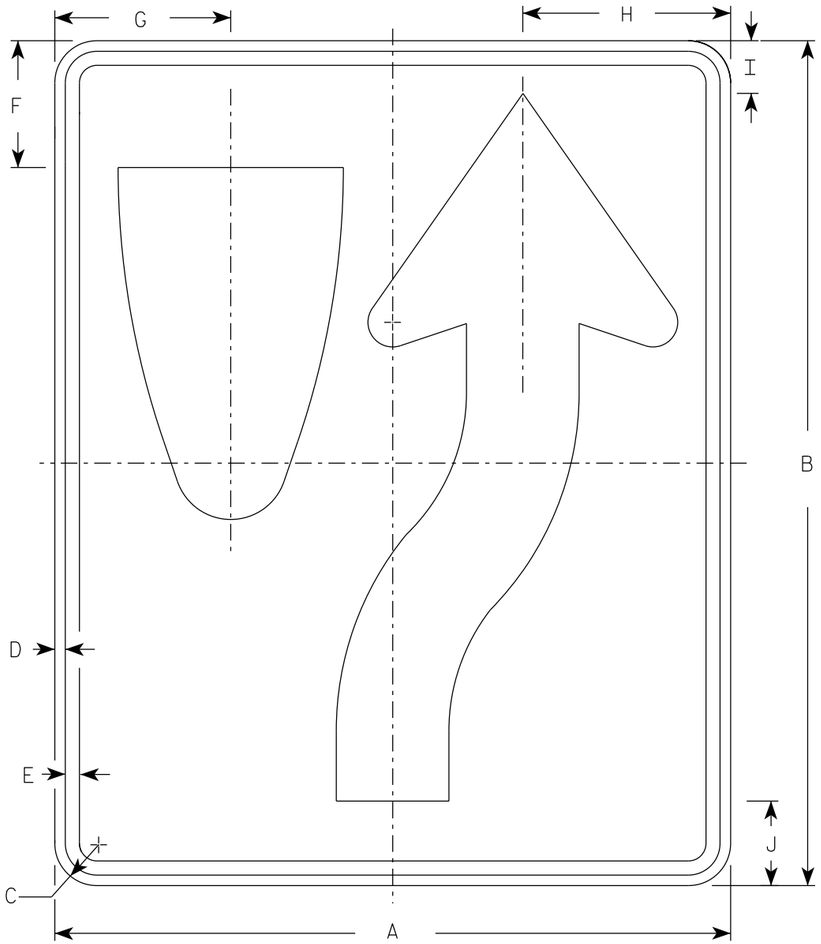
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 173 | E

## NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. R4-8 is the same as R4-7 except Legend is reversed.

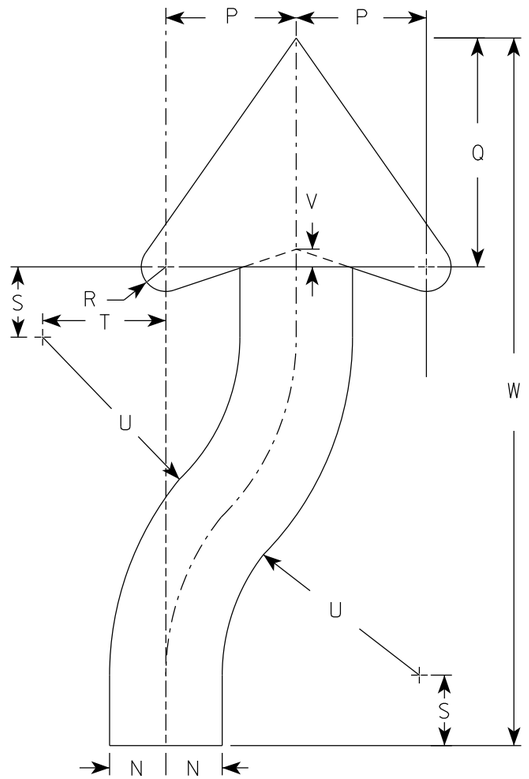
## DIVIDER DETAIL




R4-7

## ARROW DETAIL




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 24 | 1 1/2 | 3/8 | 1/2 | 3 3/8 | 4 3/4 | 5 1/2 | 1 3/8 | 2 1/4 | 6 | 3 | 9 3/8 | 1 1/2 | 22 1/2 | 3 1/2 | 6 1/8 | 5/8 | 1 7/8 | 3 1/4 | 6 3/4 | 1/2 | 20 3/8 | | | | 3.0 |
| 2S | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 4 1/2 | 6 1/4 | 7 3/8 | 1 7/8 | 3 | 8 | 4 | 12 1/2 | 2 | 30 | 4 5/8 | 8 1/8 | 7/8 | 2 1/2 | 4 3/8 | 9 | 5/8 | 25 1/8 | | | | 5.0 |
| 2M | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 4 1/2 | 6 1/4 | 7 3/8 | 1 7/8 | 3 | 8 | 4 | 12 1/2 | 2 | 30 | 4 5/8 | 8 1/8 | 7/8 | 2 1/2 | 4 3/8 | 9 | 5/8 | 25 1/8 | | | | 5.0 |
| 3 | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 3/4 | 9 3/8 | 11 1/8 | 2 7/8 | 4 1/2 | 12 | 6 | 18 3/4 | 3 | 45 | 6 7/8 | 12 1/4 | 1 1/4 | 3 3/4 | 6 5/8 | 13 1/2 | 1 | 40 3/4 | | | | 12.0 |
| 4 | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 3/4 | 9 3/8 | 11 1/8 | 2 7/8 | 4 1/2 | 12 | 6 | 18 3/4 | 3 | 45 | 6 7/8 | 12 1/4 | 1 1/4 | 3 3/4 | 6 5/8 | 13 1/2 | 1 | 40 3/4 | | | | 12.0 |
| 5 | 48 | 60 | 3 | 3/4 | 1 | 9 | 12 1/2 | 14 3/4 | 3 3/4 | 6 | 16 | 8 | 25 | 4 | 60 | 9 1/4 | 16 1/4 | 1 5/8 | 5 | 8 3/4 | 18 | 1 1/4 | 50 1/4 | | | | 20.0 |

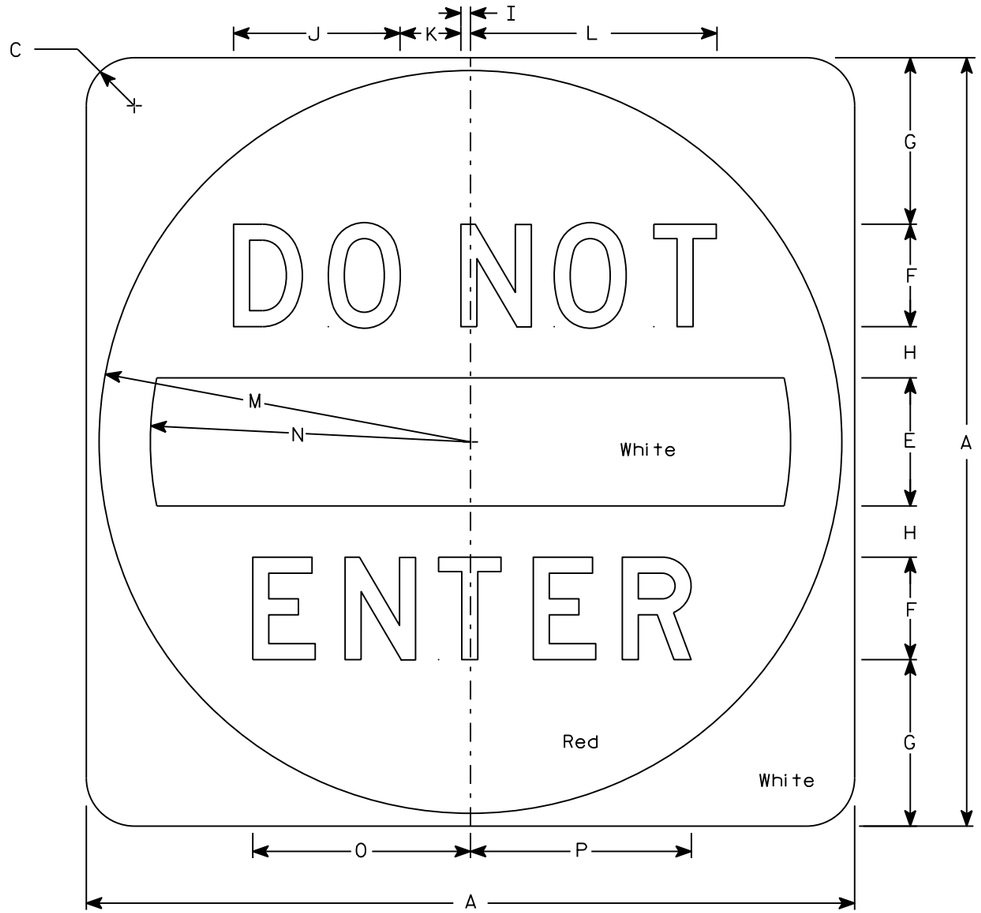
# STANDARD SIGN
# R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/17/23 PLATE NO. R4-7.9

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 174 | E |
|---|---|---|---|---|---|




R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | | 1 7/8 | | 5 | 4 | 6 1/2 | 2 | 3/8 | 6 1/2 | 2 3/8 | 9 5/8 | 14 1/2 | 12 1/2 | 8 1/2 | 8 5/8 | | | | | | | | | | | 6.25 |
| 2M | 36 | | 2 1/4 | | 6 | 5 | 7 1/2 | 2 1/2 | 1/2 | 8 1/8 | 3 | 12 1/8 | 17 1/2 | 15 | 10 5/8 | 10 3/4 | | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 1/4 | | 6 | 5 | 7 1/2 | 2 1/2 | 1/2 | 8 1/8 | 3 | 12 1/8 | 17 1/2 | 15 | 10 5/8 | 10 3/4 | | | | | | | | | | | 9.0 |
| 4 | 36 | | 2 1/4 | | 6 | 5 | 7 1/2 | 2 1/2 | 1/2 | 8 1/8 | 3 | 12 1/8 | 17 1/2 | 15 | 10 5/8 | 10 3/4 | | | | | | | | | | | 9.0 |
| 5 | 48 | | 3 | | 8 | 6 | 11 | 3 | 5/8 | 9 3/4 | 3 5/8 | 14 1/2 | 23 1/2 | 20 | 12 3/4 | 12 7/8 | | | | | | | | | | | 16.0 |

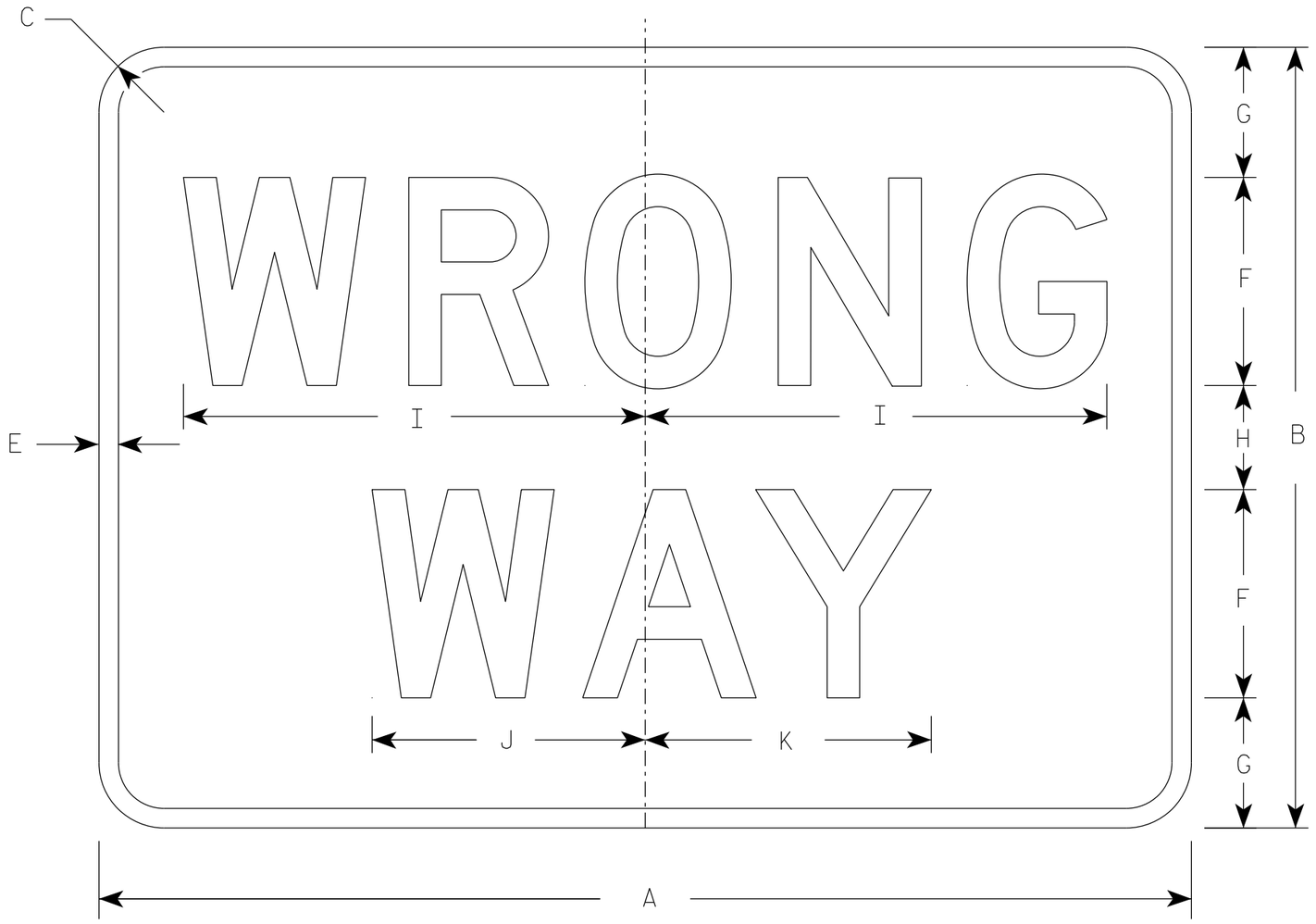
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 175 | E




R5-1A

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - D

| 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 | 18 | 1 1/2 | | 1/2 | 5 | 3 | 2 | 11 | 6 1/2 | 6 7/8 | | | | | | | | | | | | | | | | 3.75 |
| 2S | 36 | 24 | 1 1/2 | | 5/8 | 6 | 4 1/2 | 3 | 13 1/4 | 7 7/8 | 8 1/4 | | | | | | | | | | | | | | | | 6.00 |
| 2M | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |
| 3 | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |
| 4 | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |
| 5 | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |

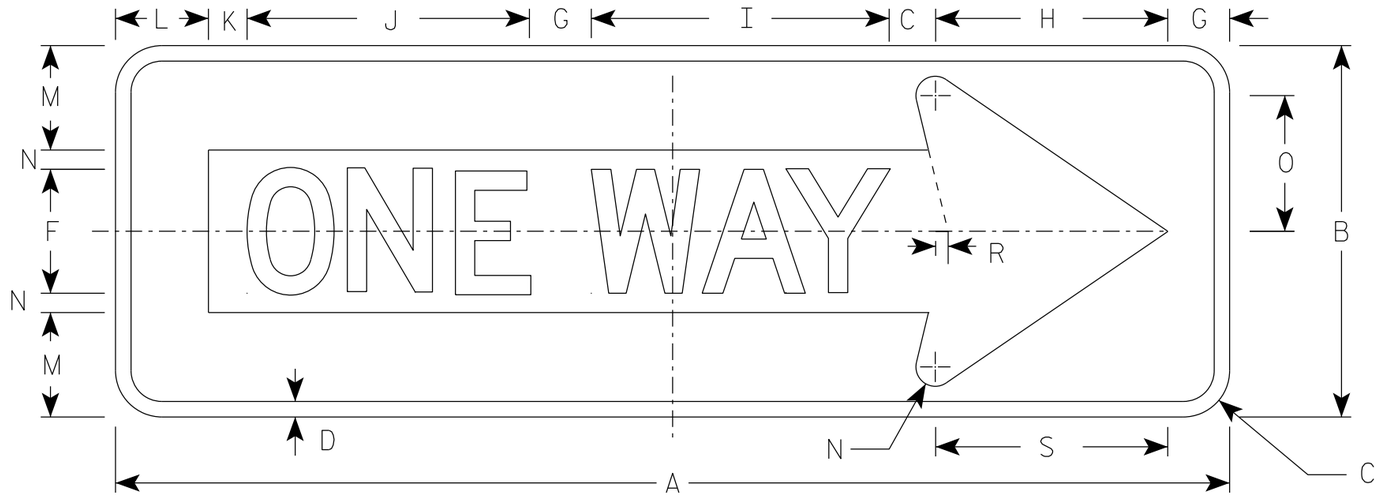
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R5-1A.3

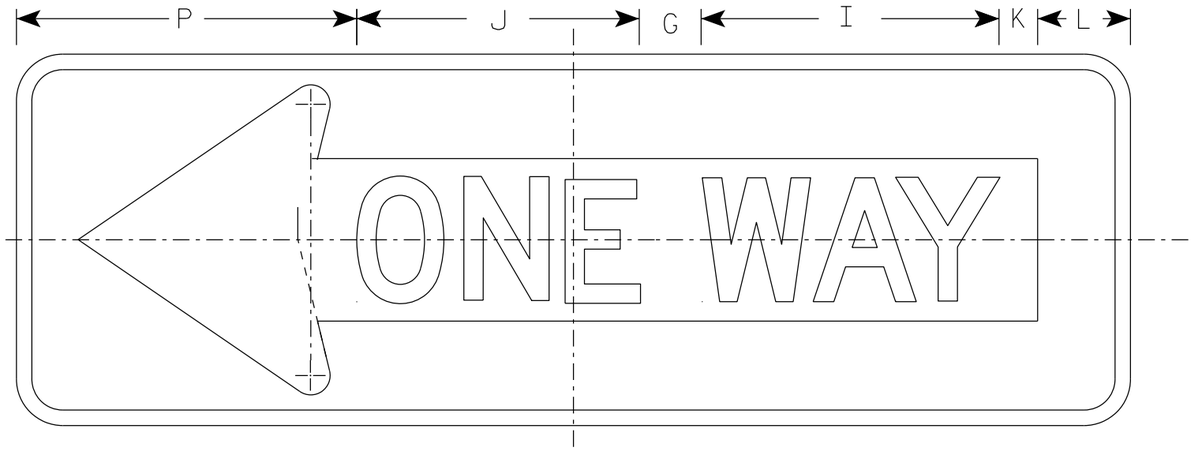
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 176 | E




R6-1R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Black
   Message - Black Legend & White Arrow & Border
3. Message Series - D




R6-1L

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 36 | 12 | 1 ½ | ½ | | 4 | 2 | 7 ½ | 9 ⅝ | 9 ⅛ | 1 ¼ | 3 | 3 ⅜ | ⅝ | 4 ⅜ | 11 | | ⅜ | 7 ½ | | | | | | | | 3.0 |
| 2M | 54 | 18 | 1 ½ | ¾ | | 6 | 3 | 11 ¼ | 13 ⅝ | 14 ½ | 1 ⅞ | 4 ½ | 5 | 1 | 6 ½ | 16 ½ | | ⅝ | 11 ¼ | | | | | | | | 6.75 |
| 3 | 54 | 18 | 1 ½ | ¾ | | 6 | 3 | 11 ¼ | 13 ⅝ | 14 ½ | 1 ⅞ | 4 ½ | 5 | 1 | 6 ½ | 16 ½ | | ⅝ | 11 ¼ | | | | | | | | 6.75 |
| 4 | 54 | 18 | 1 ½ | ¾ | | 6 | 3 | 11 ¼ | 13 ⅝ | 14 ½ | 1 ⅞ | 4 ½ | 5 | 1 | 6 ½ | 16 ½ | | ⅝ | 11 ¼ | | | | | | | | 6.75 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
R6-1 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

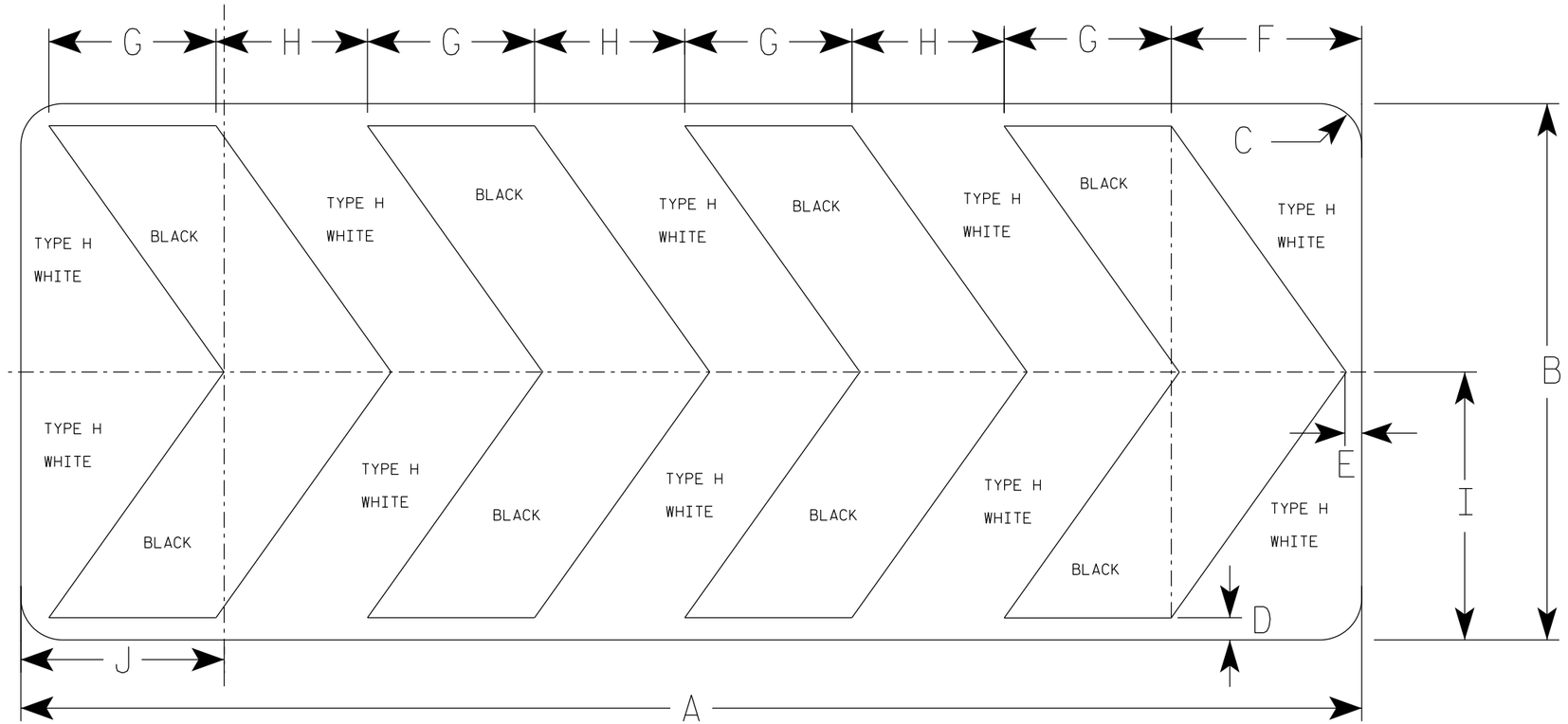
DATE 8/30/23 PLATE NO. R6-1.4

PROJECT NO:

SHEET NO: 177 E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK




R6-4B

| 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 | 60 | 24 | 1 7/8 | 1 | 3/4 | 8 1/2 | 7 1/2 | 6 3/4 | 12 | 9 1/8 | | | | | | | | | | | | | | | | | 10.0 |
| 2M | 60 | 24 | 1 7/8 | 1 | 3/4 | 8 1/2 | 7 1/2 | 6 3/4 | 12 | 9 1/8 | | | | | | | | | | | | | | | | | 10.0 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
R6-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

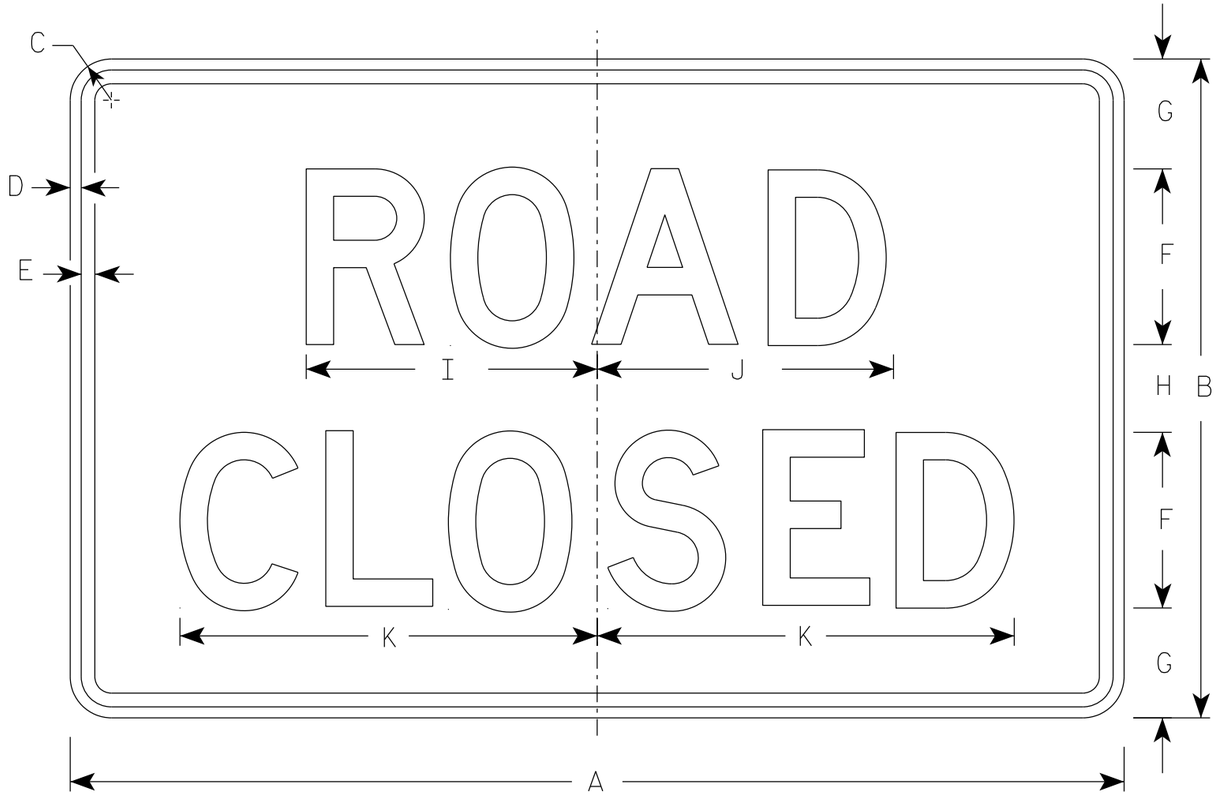
DATE 10/26/23 PLATE NO. R6-4.4

PROJECT NO: | SHEET NO: 178 | E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R64B.dgn PLOT DATE : 26-OCT 2023 1:36 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

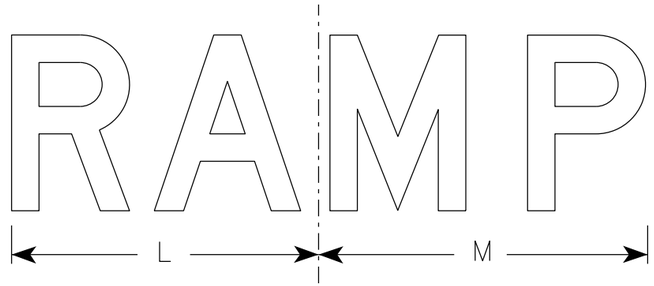
7 7



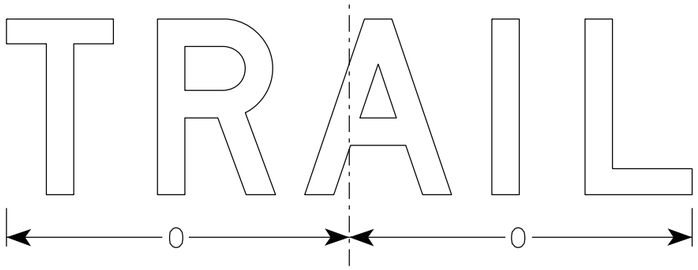

R11-2

NOTES

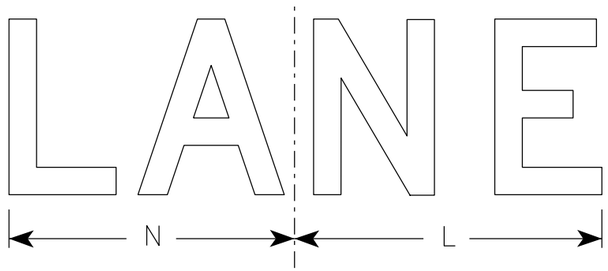
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.




R11-2R




R11-2T




R11-2L

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 2M | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 3 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 4 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |
| 5 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | | | | | | | | | | | | 10.0 |

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

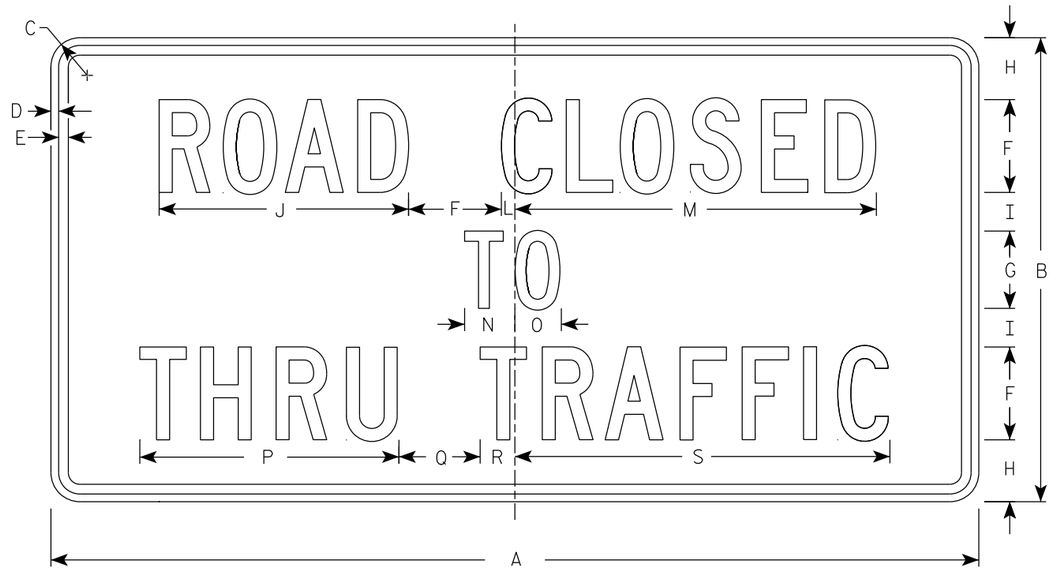
DATE 2/5/24 PLATE NO. R11-2.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42


7




R11-4

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| 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 | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 2M | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

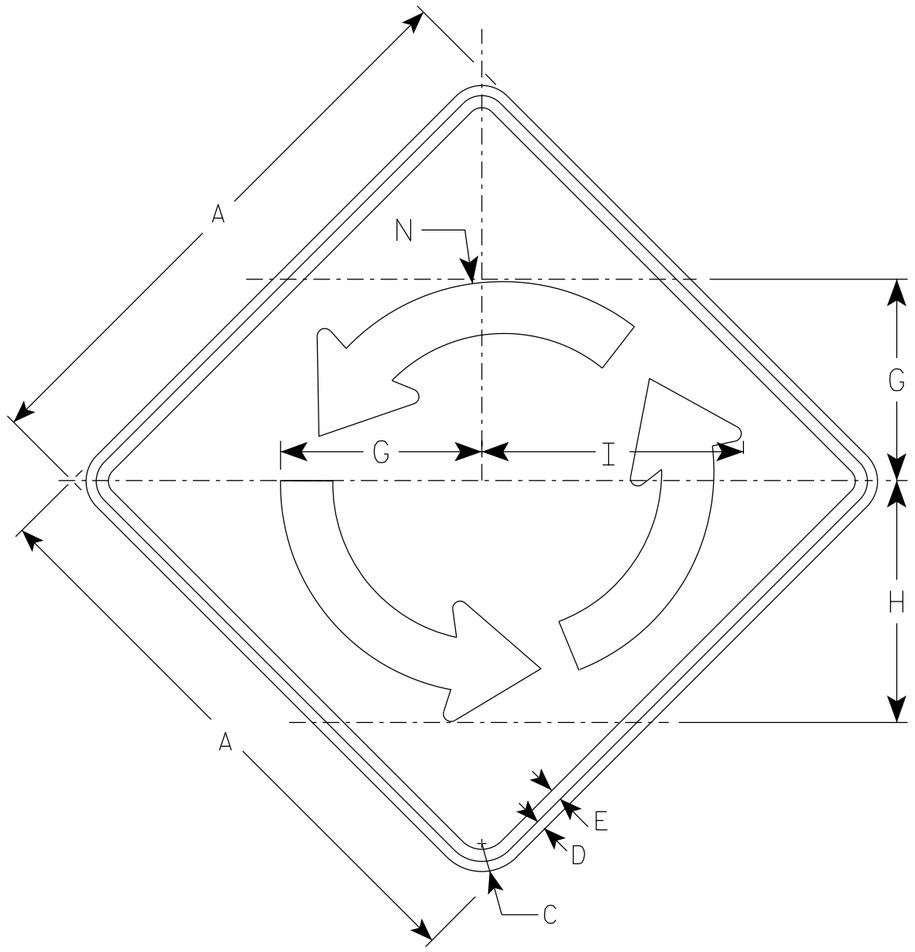
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-4.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E

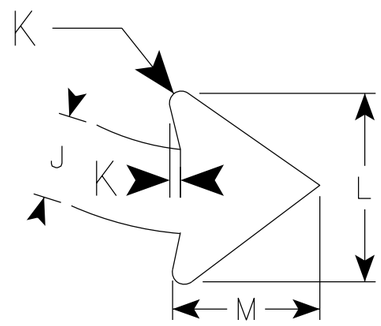



W2-6

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black

Arrow Detail




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 3/8 | 12 1/2 | 13 1/2 | 2 3/4 | 3/8 | 6 | 4 3/4 | 11 1/8 | | | | | | | | | | | 6.25 |
| 2M | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 3/8 | 12 1/2 | 13 1/2 | 2 3/4 | 3/8 | 6 | 4 3/4 | 11 1/8 | | | | | | | | | | | 6.25 |
| 3 | 36 | | 2 1/4 | 5/8 | 3/4 | | 12 1/2 | 15 | 16 1/4 | 3 1/4 | 1/2 | 7 3/8 | 5 3/4 | 13 3/8 | | | | | | | | | | | 9.00 |
| 4 | 48 | | 3 | 3/4 | 1 | | 16 5/8 | 20 | 16 1/4 | 4 3/8 | 5/8 | 9 3/4 | 7 5/8 | 17 7/8 | | | | | | | | | | | 16.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W2-6

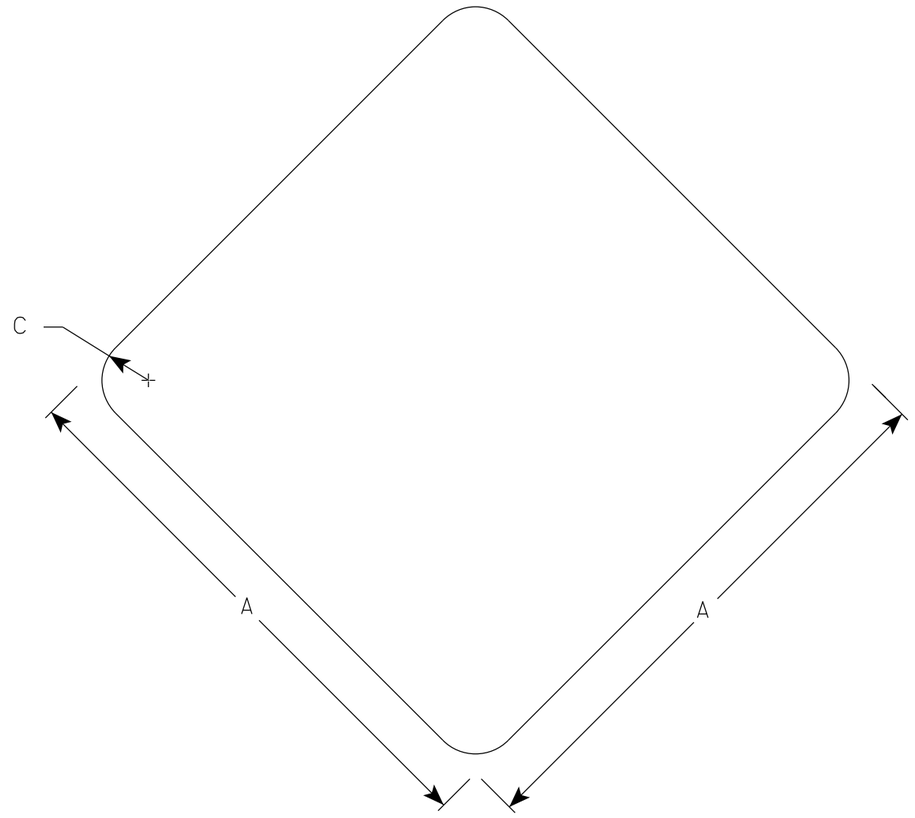
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/2023 PLATE NO. W2-6.8

PROJECT NO:

SHEET NO: 181 E




W5-54

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12 | | 1 ½ | | | | | | | | | | | | | | | | | | | | | | | | 1.0 |
| 2S | 18 | | 1 ½ | | | | | | | | | | | | | | | | | | | | | | | | 2.25 |
| 2M | 18 | | 1 ½ | | | | | | | | | | | | | | | | | | | | | | | | 2.25 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W5-54

*WISCONSIN DEPT OF TRANSPORTATION*

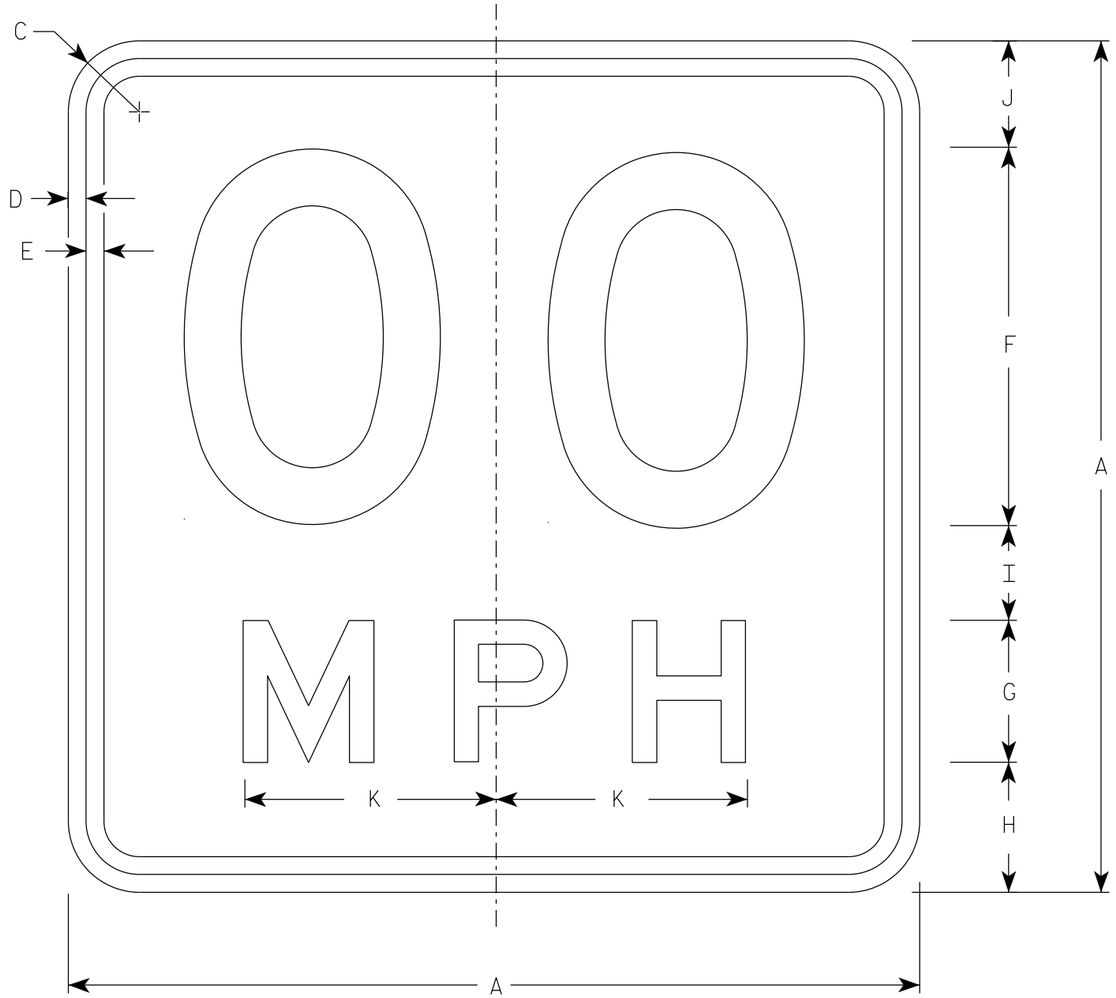
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/2024 PLATE NO. W5-54.9

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:\CAEfiles\Projects\tr_stdplate_W554.dgn PLOT DATE : 5-MARCH 2024 11:55 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42




W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
   Line 2 is Series E

| | SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 18 | | 1 1/2 | 3/8 | 3/8 | 8 | 3 | 2 3/4 | 2 | 2 1/4 | 5 3/8 | | | | | | | | | | | | | | | | 2.25 |
| * | 2S | 18 | | 1 1/2 | 3/8 | 3/8 | 8 | 3 | 2 3/4 | 2 | 2 1/4 | 5 3/8 | | | | | | | | | | | | | | | | 2.25 |
| * | 2M | 18 | | 1 1/2 | 3/8 | 3/8 | 8 | 3 | 2 3/4 | 2 | 2 1/4 | 5 3/8 | | | | | | | | | | | | | | | | 2.25 |
| | 3 | 24 | | 1 1/2 | 3/8 | 1/2 | 10 | 4 | 4 | 2 3/4 | 3 1/4 | 6 5/8 | | | | | | | | | | | | | | | | 4.00 |
| | 4 | 36 | | 2 1/4 | 5/8 | 3/4 | 16 | 6 | 5 1/2 | 4 | 4 1/2 | 10 5/8 | | | | | | | | | | | | | | | | 9.00 |
| | 5 | 36 | | 2 1/4 | 5/8 | 3/4 | 16 | 6 | 5 1/2 | 4 | 4 1/2 | 10 5/8 | | | | | | | | | | | | | | | | 9.00 |

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

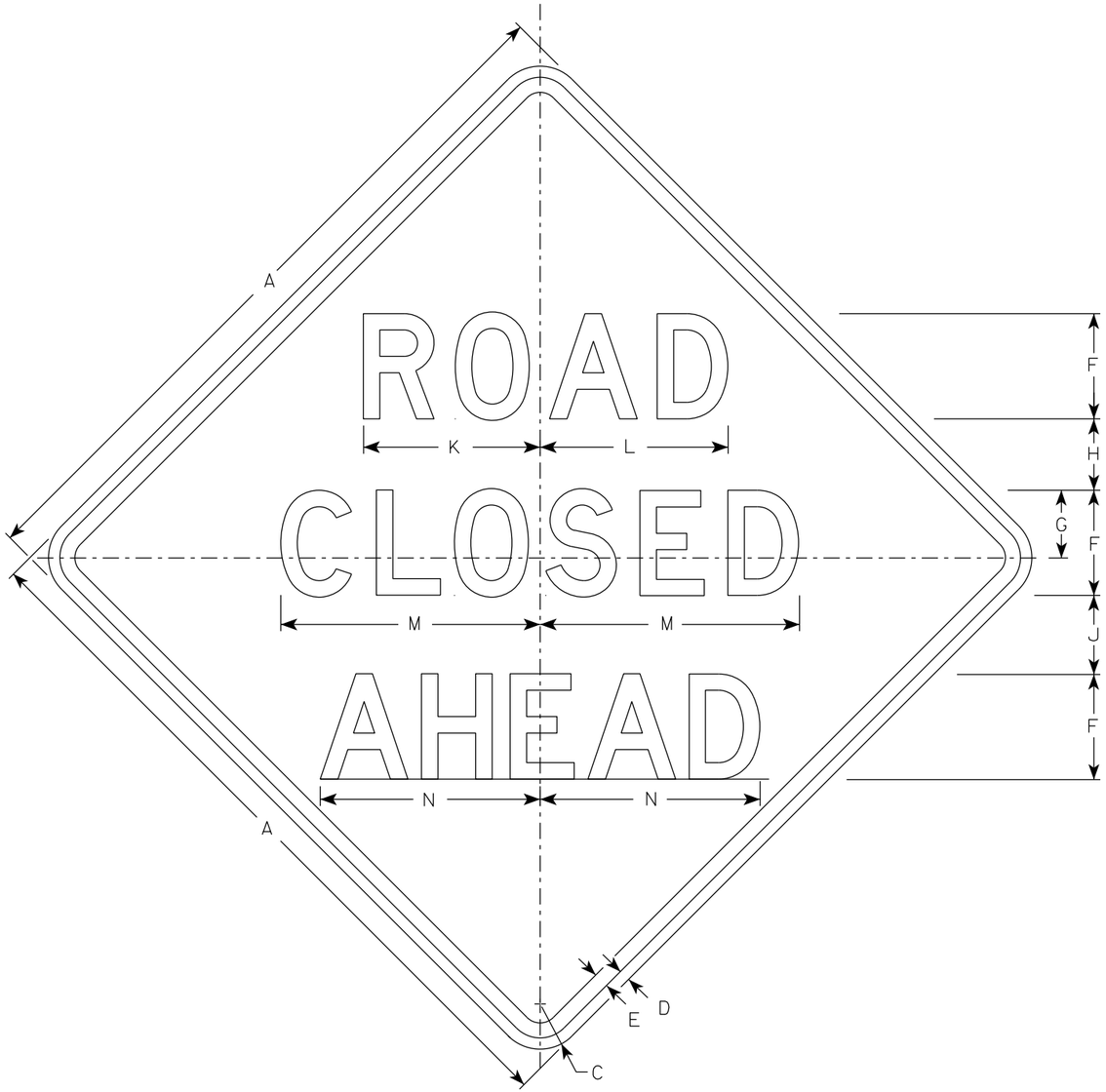
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

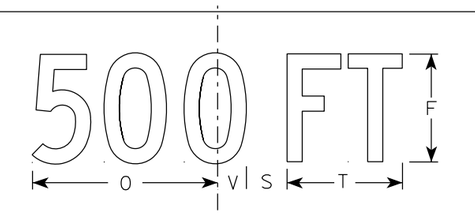
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



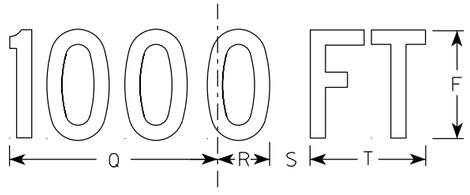
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W131.dgn PLOT DATE : 8-Jan 2024 11:07 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



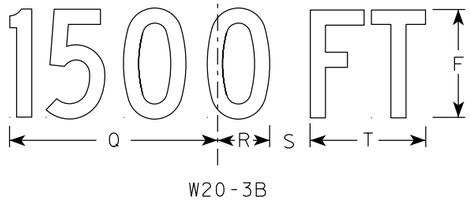

W20-3A



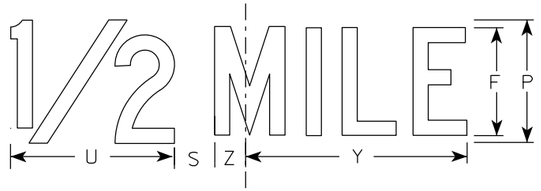

W20-3D



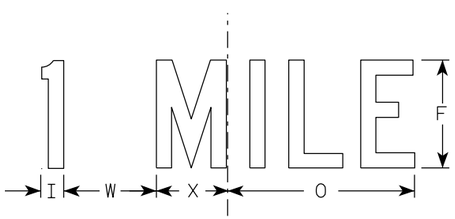

W20-3C




W20-3B




W20-3G




W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | | 2 1/4 | 5/8 | 3/4 | 5 | 3 3/8 | 3 1/2 | 1 1/8 | 4 | 8 3/8 | 8 7/8 | 12 1/2 | 11 | 9 | 6 | 10 1/8 | 2 1/2 | 1 7/8 | 5 5/8 | 8 | 1 3/8 | 4 1/2 | 3 1/2 | 10 3/4 | 1 3/4 | 9.0 |
| 2S | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 2M | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 3 | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 4 | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |
| 5 | 48 | | 3 | 3/4 | 1 | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6 | 4 5/8 | 14 3/8 | 2 3/8 | 16.0 |

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

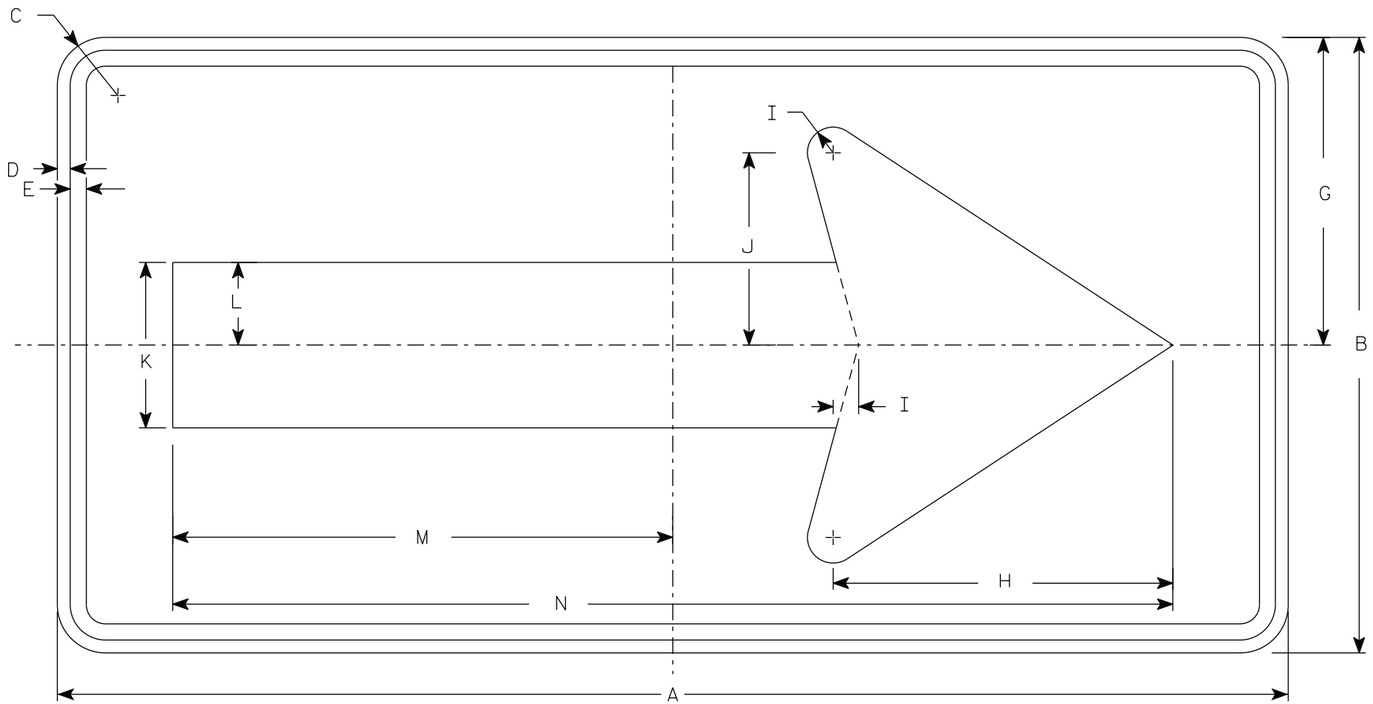
DATE 1/10/2024 PLATE NO. W20-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W203.DGN PLOT DATE : 10-JAN 2024 12:02 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42


7




WO1-6

## NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 24 | 1 7/8 | 1/2 | 5/8 | | 12 | 13 1/4 | 1 | 7 1/2 | 6 1/2 | 3 1/4 | 19 1/2 | 39 | | | | | | | | | | | | | 8.0 |
| 2M | 48 | 24 | 1 7/8 | 1/2 | 5/8 | | 12 | 13 1/4 | 1 | 7 1/2 | 6 1/2 | 3 1/4 | 19 1/2 | 39 | | | | | | | | | | | | | 8.0 |
| 3 | 60 | 30 | 1 7/8 | 1/2 | 5/8 | | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8 | 4 | 24 3/8 | 48 3/4 | | | | | | | | | | | | | 12.5 |
| 4 | 60 | 30 | 1 7/8 | 1/2 | 5/8 | | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8 | 4 | 24 3/8 | 48 3/4 | | | | | | | | | | | | | 12.5 |
| 5 | 60 | 30 | 1 7/8 | 1/2 | 5/8 | | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8 | 4 | 24 3/8 | 48 3/4 | | | | | | | | | | | | | 12.5 |

STANDARD SIGN
WO1-6

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

PROJECT ID 8996-01-07

CTH J 'NB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 294+47 | 29447 | 0 | 10.81 | 1.10 | 0 | 0 | 0 | 0 | 0 |
| | 295+00 | 29500 | 53 | 14.94 | 0.14 | 25 | 1 | 25 | 2 | 24 |
| | 295+50 | 29550 | 50 | 14.17 | 0.00 | 27 | 0 | 52 | 2 | 51 |
| | 296+00 | 29600 | 50 | 22.70 | 0.00 | 34 | 0 | 86 | 2 | 85 |
| | 296+50 | 29650 | 50 | 32.58 | 0.00 | 51 | 0 | 138 | 2 | 136 |
| | 296+70 | 29670 | 20 | 109.00 | 1.17 | 52 | 0 | 190 | 2 | 188 |
| | 297+00 | 29700 | 30 | 68.36 | 0.00 | 99 | 1 | 289 | 3 | 285 |
| | 297+50 | 29750 | 50 | 76.65 | 0.00 | 134 | 0 | 423 | 3 | 420 |
| | 298+00 | 29800 | 50 | 118.78 | 0.00 | 181 | 0 | 604 | 3 | 601 |
| | 298+50 | 29850 | 50 | 121.10 | 0.74 | 222 | 1 | 826 | 4 | 822 |
| | 299+00 | 29900 | 50 | 117.72 | 14.44 | 221 | 14 | 1,047 | 21 | 1,026 |
| | 299+50 | 29950 | 50 | 138.54 | 80.87 | 237 | 88 | 1,284 | 132 | 1,152 |
| | 300+00 | 30000 | 50 | 101.99 | 74.27 | 223 | 144 | 1,507 | 311 | 1,196 |
| | | | | | | 1507 | 249 | | | |

PROJECT ID 8996-01-07

CTH J 'NB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 301+25 | 30125 | 0 | 18.28 | 78.01 | 0 | 0 | 0 | 0 | 0 |
| | 301+50 | 30150 | 25 | 21.98 | 92.48 | 19 | 79 | 19 | 99 | -80 |
| | 302+00 | 30200 | 50 | 9.74 | 46.45 | 29 | 129 | 48 | 259 | -211 |
| | 302+50 | 30250 | 50 | 23.20 | 7.72 | 31 | 50 | 79 | 322 | -244 |
| | 303+00 | 30300 | 50 | 35.59 | 11.90 | 54 | 18 | 133 | 345 | -212 |
| | 303+50 | 30350 | 50 | 79.01 | 11.19 | 106 | 21 | 239 | 372 | -133 |
| | 304+00 | 30400 | 50 | 46.18 | 0.00 | 116 | 10 | 355 | 385 | -30 |
| | 304+50 | 30450 | 50 | 41.03 | 0.00 | 81 | 0 | 436 | 385 | 51 |
| | 305+00 | 30500 | 50 | 39.85 | 0.00 | 75 | 0 | 511 | 385 | 126 |
| | 305+50 | 30550 | 50 | 26.79 | 0.00 | 62 | 0 | 572 | 385 | 188 |
| | 306+00 | 30600 | 50 | 12.24 | 0.03 | 36 | 0 | 608 | 385 | 224 |
| | 306+40 | 30640 | 40 | 4.44 | 1.66 | 12 | 1 | 621 | 386 | 235 |
| | | | | | | 621 | 309 | | | |

9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 186 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090100_EW (EARTH WORK).DWG
LAYOUT NAME - 01

PLOT DATE : 7/26/2024 8:54 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1" = 1'

PROJECT ID 8996-01-07

CTH J 'SB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 396+62 | 39662 | 0 | 45.08 | 1.15 | 0 | 0 | 0 | 0 | 0 |
| | 397+00 | 39700 | 38 | 36.26 | 4.69 | 57 | 4 | 57 | 5 | 52 |
| | 397+50 | 39750 | 50 | 32.34 | 11.25 | 64 | 15 | 121 | 24 | 97 |
| | 398+00 | 39800 | 50 | 31.44 | 31.99 | 59 | 40 | 180 | 74 | 106 |
| | 398+50 | 39850 | 50 | 13.87 | 56.16 | 42 | 82 | 222 | 176 | 46 |
| | 399+00 | 39900 | 50 | 0.34 | 90.51 | 13 | 136 | 235 | 345 | -110 |
| | 399+50 | 39950 | 50 | 0.00 | 125.09 | 0 | 200 | 235 | 595 | -360 |
| | 400+00 | 40000 | 50 | 0.00 | 109.74 | 0 | 217 | 235 | 867 | -632 |
| | | | | | | 235 | 693 | | | |

PROJECT ID 8996-01-07

CTH J 'SB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 401+34 | 40134 | 0 | 0.00 | 122.54 | 0 | 0 | 0 | 0 | 0 |
| | 401+50 | 40150 | 16 | 0.00 | 133.92 | 0 | 76 | 0 | 95 | -95 |
| | 402+00 | 40200 | 50 | 0.00 | 51.32 | 0 | 172 | 0 | 309 | -309 |
| | 402+50 | 40250 | 50 | 5.55 | 20.50 | 5 | 67 | 5 | 393 | -387 |
| | 403+00 | 40300 | 50 | 21.76 | 0.04 | 25 | 19 | 30 | 416 | -386 |
| | 403+50 | 40350 | 50 | 32.84 | 0.00 | 51 | 0 | 81 | 416 | -335 |
| | 403+50 | 40350 | 0 | 32.87 | 0.00 | 0 | 0 | 81 | 416 | -335 |
| | | | | | | 81 | 333 | | | |

9

9

PROJECT ID 8996-01-07

50TH AVE 'EB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 127+00 | 12700 | 0 | 52.59 | 267.42 | 0 | 0 | 0 | 0 | 0 |
| | 127+50 | 12750 | 50 | 0.00 | 29.52 | 49 | 275 | 49 | 344 | -295 |
| | 128+00 | 12800 | 50 | 0.00 | 16.93 | 0 | 43 | 49 | 397 | -349 |
| | 128+50 | 12850 | 50 | 0.16 | 75.83 | 0 | 86 | 49 | 505 | -456 |
| | 129+00 | 12900 | 50 | 9.12 | 75.23 | 9 | 140 | 57 | 680 | -622 |
| | 129+50 | 12950 | 50 | 5.26 | 68.90 | 13 | 133 | 71 | 846 | -776 |
| | | | | | | 71 | 677 | | | |

PROJECT ID 8996-01-07

50TH AVE 'EB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| | 129+50 | 12950 | 0 | 5.26 | 68.90 | 0 | 0 | 0 | 0 | 0 |
| | 129+60 | 12960 | 10 | 5.39 | 50.94 | 2 | 22 | 2 | 28 | -26 |
| | 130+00 | 13000 | 40 | 5.74 | 4.19 | 8 | 41 | 10 | 79 | -69 |
| | 130+44 | 13044 | 44 | 26.25 | 18.67 | 26 | 19 | 36 | 102 | -66 |
| | 130+50 | 13050 | 6 | 22.13 | 19.29 | 5 | 4 | 42 | 107 | -66 |
| | 131+00 | 13100 | 50 | 6.42 | 89.88 | 26 | 101 | 68 | 234 | -166 |
| | 131+35 | 13135 | 35 | 1.81 | 99.09 | 5 | 122 | 73 | 387 | -313 |
| | | | | | | 73 | 309 | | | |

PROJECT ID 8996-01-07

50TH AVE 'EB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 132+66 | 13266 | 0 | 14.48 | 78.74 | 0 | 0 | 0 | 0 | 0 |
| | 133+00 | 13300 | 34 | 18.10 | 92.49 | 21 | 108 | 21 | 135 | -114 |
| | 133+50 | 13350 | 50 | 16.86 | 56.45 | 32 | 138 | 53 | 307 | -254 |
| | 134+00 | 13400 | 50 | 12.30 | 33.66 | 27 | 83 | 80 | 411 | -332 |
| | 134+50 | 13450 | 50 | 16.52 | 21.65 | 27 | 51 | 107 | 475 | -369 |
| | 135+00 | 13500 | 50 | 19.36 | 11.84 | 33 | 31 | 140 | 514 | -374 |
| | 135+36 | 13536 | 36 | 21.48 | 7.38 | 27 | 13 | 167 | 530 | -363 |
| | 135+50 | 13550 | 14 | 23.17 | 7.38 | 12 | 4 | 179 | 535 | -356 |
| | 136+00 | 13600 | 50 | 33.11 | 4.42 | 52 | 11 | 231 | 549 | -318 |
| | 136+50 | 13650 | 50 | 46.91 | 0.75 | 74 | 5 | 305 | 555 | -250 |
| | 137+00 | 13700 | 50 | 43.43 | 1.02 | 84 | 2 | 388 | 557 | -168 |
| | 137+50 | 13750 | 50 | 25.08 | 1.84 | 63 | 3 | 452 | 560 | -108 |
| | 137+94 | 13794 | 44 | 42.05 | 0.00 | 55 | 1 | 507 | 562 | -55 |
| | 138+00 | 13800 | 6 | 67.68 | 0.07 | 12 | 0 | 519 | 562 | -43 |
| | 138+50 | 13850 | 50 | 10.69 | 1.99 | 73 | 2 | 591 | 564 | 27 |
| | 139+00 | 13900 | 50 | 8.65 | 0.00 | 18 | 2 | 609 | 567 | 43 |
| | 139+50 | 13950 | 50 | 7.53 | 0.00 | 15 | 0 | 624 | 567 | 58 |
| | 140+00 | 14000 | 50 | 7.65 | 0.00 | 14 | 0 | 638 | 567 | 72 |
| | 140+11 | 14011 | 11 | 7.32 | 0.00 | 3 | 0 | 641 | 567 | 75 |
| | | | | | | 641 | 453 | | | |

9

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| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 188 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090100_EW (EARTH WORK).DWG
LAYOUT NAME - 03

PLOT DATE : 7/26/2024 8:54 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

PROJECT ID 8996-01-07

50TH AVE 'WB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 195+98 | 19598 | 0 | 0.00 | 33.41 | 0 | 0 | 0 | 0 | 0 |
| | 196+00 | 19600 | 2 | 0.00 | 32.30 | 0 | 2 | 0 | 3 | -3 |
| | 196+50 | 19650 | 50 | 0.00 | 14.67 | 0 | 43 | 0 | 57 | -57 |
| | 197+00 | 19700 | 50 | 0.00 | 0.21 | 0 | 14 | 0 | 75 | -75 |
| | 197+50 | 19750 | 50 | 17.27 | 0.00 | 16 | 0 | 16 | 75 | -59 |
| | 198+00 | 19800 | 50 | 17.58 | 1.11 | 32 | 1 | 48 | 76 | -28 |
| | 198+50 | 19850 | 50 | 14.97 | 9.74 | 30 | 10 | 78 | 89 | -10 |
| | 199+00 | 19900 | 50 | 2.23 | 21.85 | 16 | 29 | 94 | 125 | -31 |
| | 199+50 | 19950 | 50 | 0.00 | 62.01 | 2 | 78 | 96 | 222 | -126 |
| | 200+00 | 20000 | 50 | 5.52 | 97.55 | 5 | 148 | 102 | 407 | -306 |
| | | | | | | 102 | 326 | | | |

PROJECT ID 8996-01-07

50TH AVE 'WB'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 201+28 | 20128 | 0 | 4.64 | 103.97 | 0 | 0 | 0 | 0 | 0 |
| | 201+50 | 20150 | 22 | 4.72 | 121.93 | 4 | 92 | 4 | 115 | -111 |
| | 202+00 | 20200 | 50 | 4.40 | 69.40 | 8 | 177 | 12 | 336 | -324 |
| | 202+50 | 20250 | 50 | 6.36 | 47.48 | 10 | 108 | 22 | 472 | -450 |
| | 202+64 | 20264 | 14 | 6.21 | 35.36 | 3 | 21 | 25 | 499 | -473 |
| | 203+00 | 20300 | 36 | 5.02 | 26.35 | 7 | 41 | 33 | 550 | -517 |
| | 203+50 | 20350 | 50 | 5.62 | 9.58 | 10 | 33 | 43 | 592 | -549 |
| | 204+00 | 20400 | 50 | 11.46 | 2.69 | 16 | 11 | 59 | 606 | -547 |
| | 204+30 | 20430 | 30 | 30.76 | 0.00 | 23 | 1 | 82 | 608 | -526 |
| | 204+50 | 20450 | 20 | 38.59 | 0.00 | 26 | 0 | 108 | 608 | -500 |
| | 205+00 | 20500 | 50 | 52.67 | 0.00 | 85 | 0 | 192 | 608 | -415 |
| | 205+36 | 20536 | 36 | 65.07 | 0.00 | 78 | 0 | 271 | 608 | -337 |
| | 205+50 | 20550 | 14 | 59.91 | 0.00 | 32 | 0 | 303 | 608 | -305 |
| | 206+00 | 20600 | 50 | 41.07 | 0.00 | 94 | 0 | 397 | 608 | -211 |
| | 206+24 | 20624 | 24 | 34.85 | 0.00 | 34 | 0 | 430 | 608 | -177 |
| | | | | | | 430 | 486 | | | |

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| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 189 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090100_EW (EARTH WORK).DWG
LAYOUT NAME - 04

PLOT DATE : 7/26/2024 8:54 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1" = 1'

PROJECT ID 8996-01-07

FRONTAGE ROAD 'D1'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) | | INCREMENTAL VOL (CY) | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| 0010 | 10+57 | 1057 | 0 | 61.46 | 156.87 | 0 | 0 | 0 | 0 | 0 |
| | 11+00 | 1100 | 43 | 52.44 | 176.55 | 91 | 266 | 91 | 332 | -241 |
| | 11+50 | 1150 | 50 | 31.73 | 50.57 | 78 | 210 | 169 | 595 | -426 |
| | 11+75 | 1175 | 25 | 27.89 | 40.66 | 28 | 42 | 196 | 648 | -451 |
| | 12+00 | 1200 | 25 | 29.55 | 43.48 | 27 | 39 | 223 | 696 | -473 |
| | 12+50 | 1250 | 50 | 34.91 | 41.75 | 60 | 79 | 283 | 795 | -512 |
| | 12+70 | 1270 | 20 | 45.43 | 29.48 | 30 | 26 | 312 | 828 | -516 |
| | | | | | | 312 | 662 | | | |

PROJECT ID 8996-01-07

FRONTAGE ROAD 'D1'

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) | | INCREMENTAL VOL (CY) | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| 0010 | 10+60 | 1060 | 0 | 70.32 | 152.99 | 0 | 92 | 0 | 115 | -115 |
| | 11+00 | 1100 | 40 | 52.44 | 168.61 | 15 | 30 | 15 | 152 | -137 |
| | 11+50 | 1150 | 50 | 31.73 | 50.57 | 41 | 15 | 56 | 171 | -115 |
| | 11+75 | 1175 | 25 | 27.89 | 40.66 | 49 | 26 | 105 | 204 | -99 |
| | | | | | | 105 | 163 | | | |

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PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 190 | E

PROJECT ID 8996-01-07

CTH J 'TJ' - TEMPORARY ROADWAY

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 10+40 | 1040 | 0 | 6.97 | 32.06 | 0 | 0 | 0 | 0 | 0 |
| | 10+50 | 1050 | 10 | 6.51 | 35.19 | 2 | 12 | 2 | 16 | -13 |
| | 11+00 | 1100 | 50 | 4.46 | 32.84 | 10 | 63 | 13 | 94 | -82 |
| | 11+50 | 1150 | 50 | 4.50 | 71.47 | 8 | 97 | 21 | 215 | -194 |
| | 12+00 | 1200 | 50 | 7.28 | 85.97 | 11 | 146 | 32 | 397 | -365 |
| | 12+50 | 1250 | 50 | 17.38 | 49.22 | 23 | 125 | 55 | 554 | -499 |
| | 13+00 | 1300 | 50 | 15.65 | 34.23 | 31 | 77 | 85 | 650 | -565 |
| | 13+50 | 1350 | 50 | 21.00 | 26.70 | 34 | 56 | 119 | 721 | -602 |
| | 14+00 | 1400 | 50 | 7.02 | 40.73 | 26 | 62 | 145 | 799 | -654 |
| | 14+09 | 1409 | 9 | 2.91 | 45.99 | 2 | 14 | 147 | 817 | -670 |
| | 14+50 | 1450 | 41 | 0.00 | 62.99 | 2 | 83 | 149 | 920 | -771 |
| | 15+00 | 1500 | 50 | 0.00 | 66.70 | 0 | 120 | 149 | 1,070 | -921 |
| | 15+50 | 1550 | 50 | 0.00 | 35.64 | 0 | 95 | 149 | 1,189 | -1,040 |
| | 16+00 | 1600 | 50 | 10.21 | 0.05 | 9 | 33 | 158 | 1,230 | -1,072 |
| | 16+50 | 1650 | 50 | 18.95 | 0.00 | 27 | 0 | 185 | 1,230 | -1,045 |
| | 17+00 | 1700 | 50 | 10.53 | 0.21 | 27 | 0 | 213 | 1,231 | -1,018 |
| | 17+19 | 1719 | 19 | 10.22 | 1.56 | 7 | 1 | 220 | 1,231 | -1,011 |
| | 17+50 | 1750 | 31 | 24.80 | 0.07 | 20 | 1 | 240 | 1,232 | -992 |
| | 18+00 | 1800 | 50 | 18.35 | 3.24 | 40 | 3 | 280 | 1,236 | -956 |
| | 18+50 | 1850 | 50 | 12.65 | 9.63 | 29 | 12 | 309 | 1,251 | -942 |
| | 19+00 | 1900 | 50 | 11.80 | 5.68 | 23 | 14 | 331 | 1,269 | -937 |
| | 19+50 | 1950 | 50 | 10.82 | 9.36 | 21 | 14 | 352 | 1,286 | -934 |
| | 20+00 | 2000 | 50 | 7.87 | 6.66 | 17 | 15 | 370 | 1,305 | -935 |
| | 20+50 | 2050 | 50 | 3.45 | 17.56 | 10 | 22 | 380 | 1,333 | -953 |
| | 21+00 | 2100 | 50 | 3.35 | 15.18 | 6 | 30 | 386 | 1,371 | -984 |
| | 21+50 | 2150 | 50 | 3.91 | 5.89 | 7 | 20 | 393 | 1,395 | -1,002 |
| | 21+95 | 2195 | 45 | 5.72 | 0.00 | 8 | 5 | 401 | 1,401 | -1,000 |
| | | | | | | 401 | 1121 | | | |

PROJECT ID 8996-01-07

50TH AVE 'T1' - TEMPORARY ROADWAY

| CATEGORY | STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | INCREMENTAL VOL (CY) CUT | INCREMENTAL VOL (CY) FILL | CUMULATIVE VOL (CY) CUT 1.00 | CUMULATIVE VOL (CY) EXPANDED FILL 1.25 | CUMULATIVE VOL (CY) MASS ORDINATE |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 10+28 | 1028 | 0 | 8.44 | 1.09 | 0 | 0 | 0 | 0 | 0 |
| | 10+50 | 1050 | 22 | 4.60 | 4.50 | 5 | 2 | 5 | 3 | 2 |
| | 11+00 | 1100 | 50 | 12.21 | 7.93 | 16 | 12 | 21 | 17 | 4 |
| | 11+50 | 1150 | 50 | 11.74 | 4.08 | 22 | 11 | 43 | 31 | 12 |
| | 12+00 | 1200 | 50 | 11.56 | 2.43 | 22 | 6 | 65 | 39 | 26 |
| | 12+50 | 1250 | 50 | 12.82 | 4.56 | 23 | 6 | 87 | 47 | 40 |
| | 13+00 | 1300 | 50 | 13.47 | 21.28 | 24 | 24 | 112 | 77 | 35 |
| | 13+50 | 1350 | 50 | 0.80 | 28.03 | 13 | 46 | 125 | 134 | -9 |
| | 14+00 | 1400 | 50 | 6.17 | 18.78 | 6 | 43 | 131 | 188 | -57 |
| | 14+27 | 1427 | 27 | 18.85 | 0.00 | 13 | 9 | 144 | 200 | -56 |
| | | | | | | 144 | 160 | | | |

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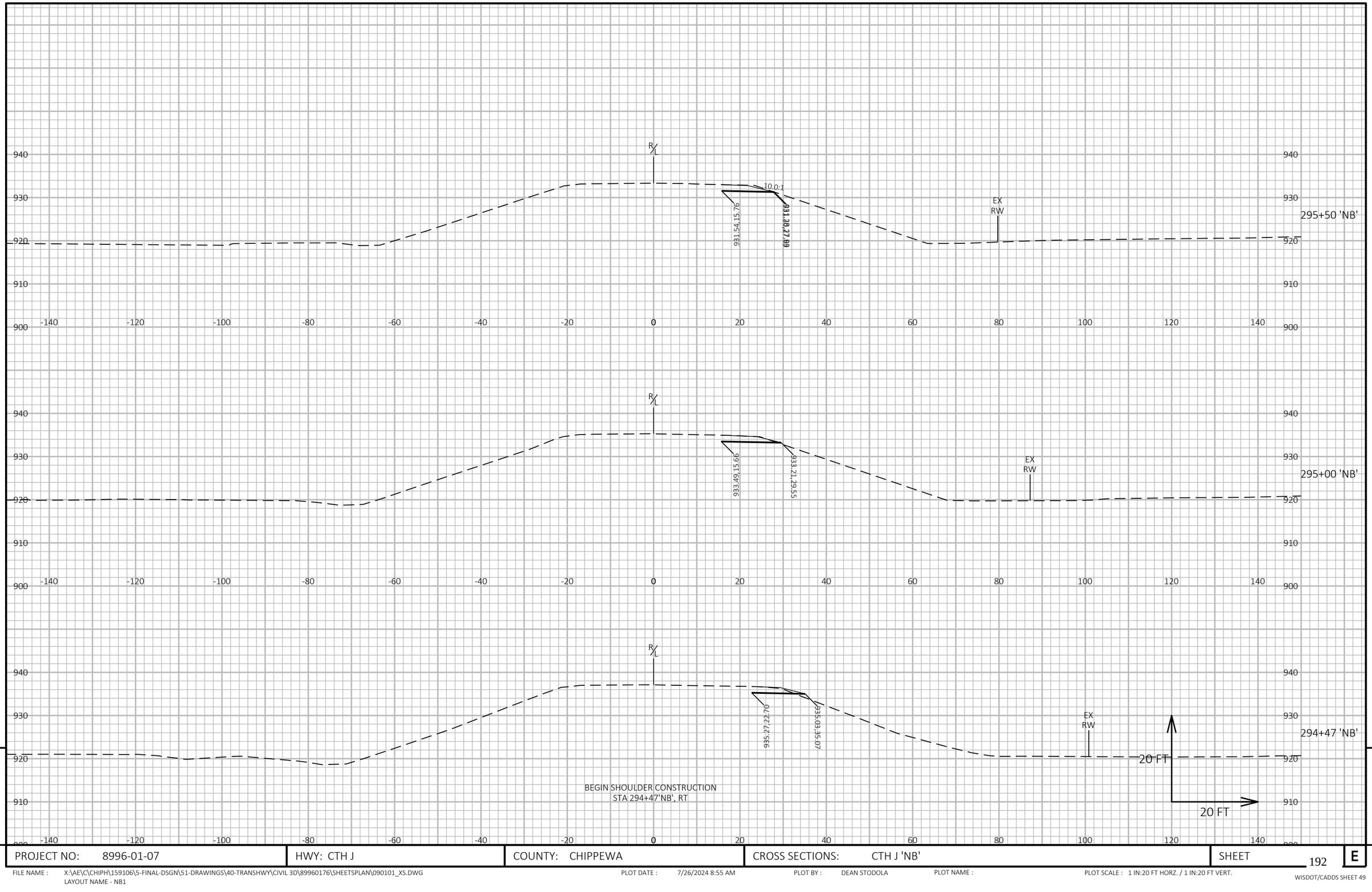
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | EARTHWORK DATA | SHEET 191 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090100_EW (EARTH WORK).DWG
LAYOUT NAME - 06

PLOT DATE : 7/26/2024 8:54 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49




9

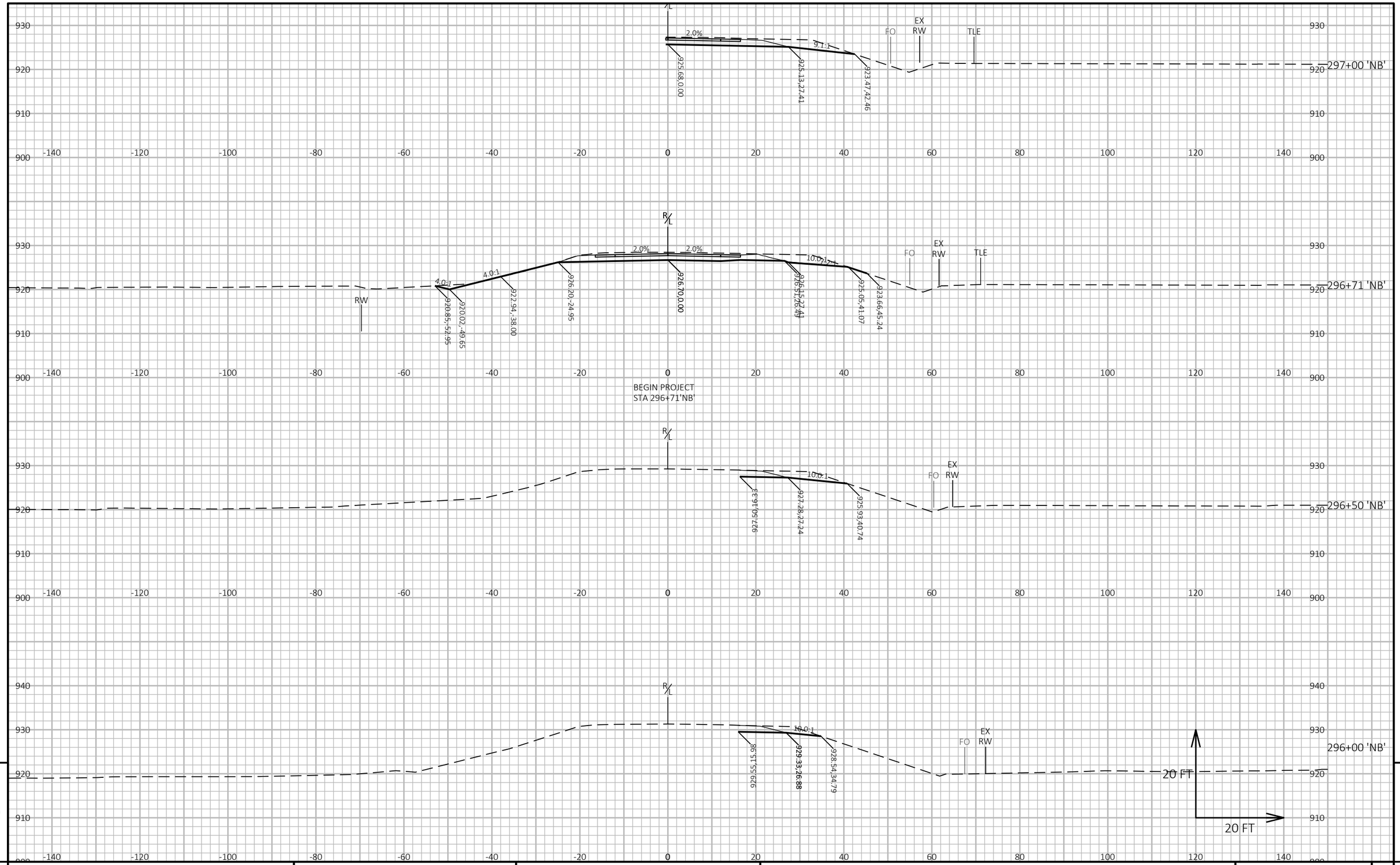
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'NB' | SHEET 192 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - NB1

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

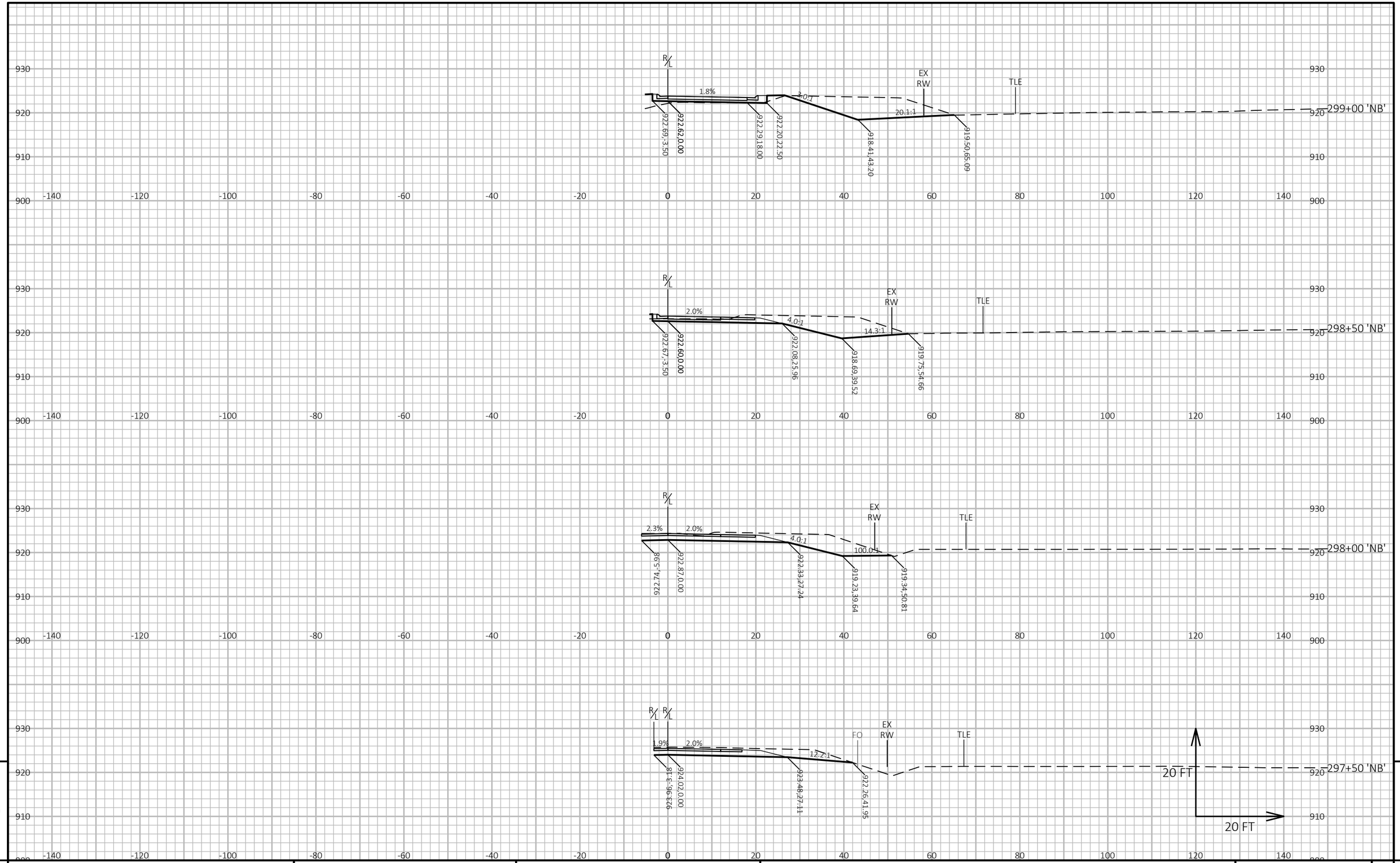



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'NB' | SHEET 193 E |

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - NB2

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

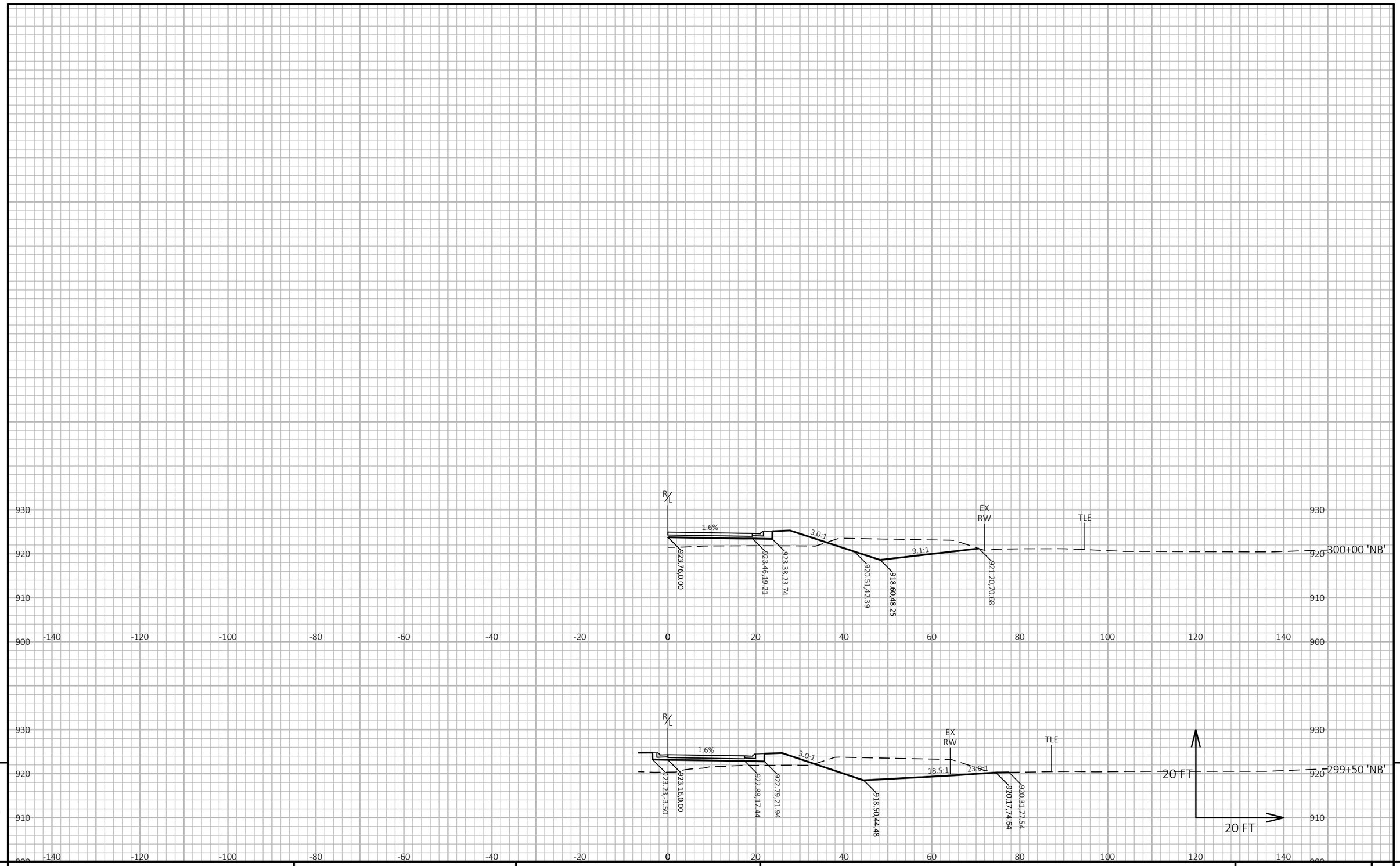
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'NB' | SHEET 194 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - NB3

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



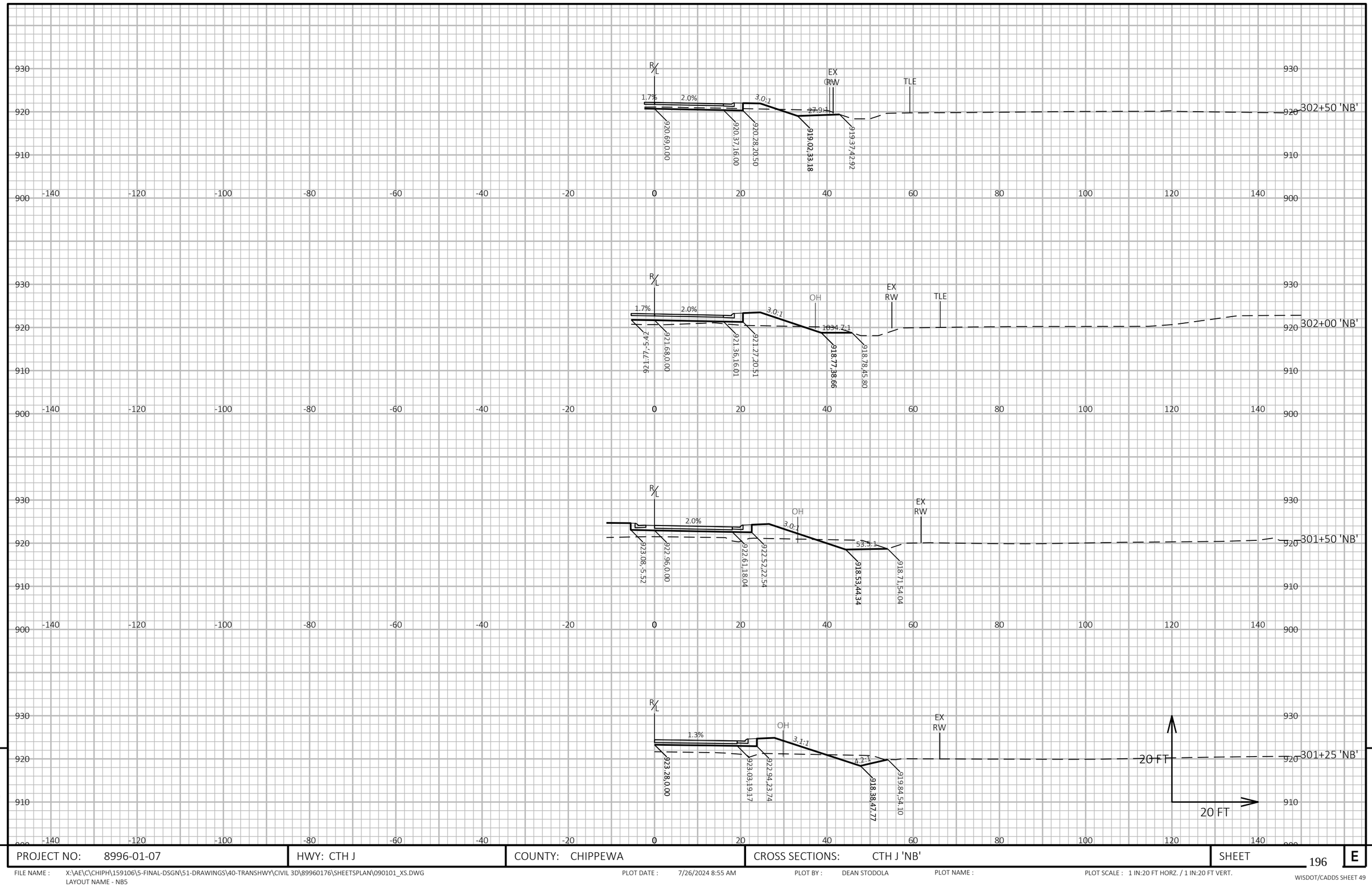

9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'NB' | SHEET 195 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - NB4

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.




9

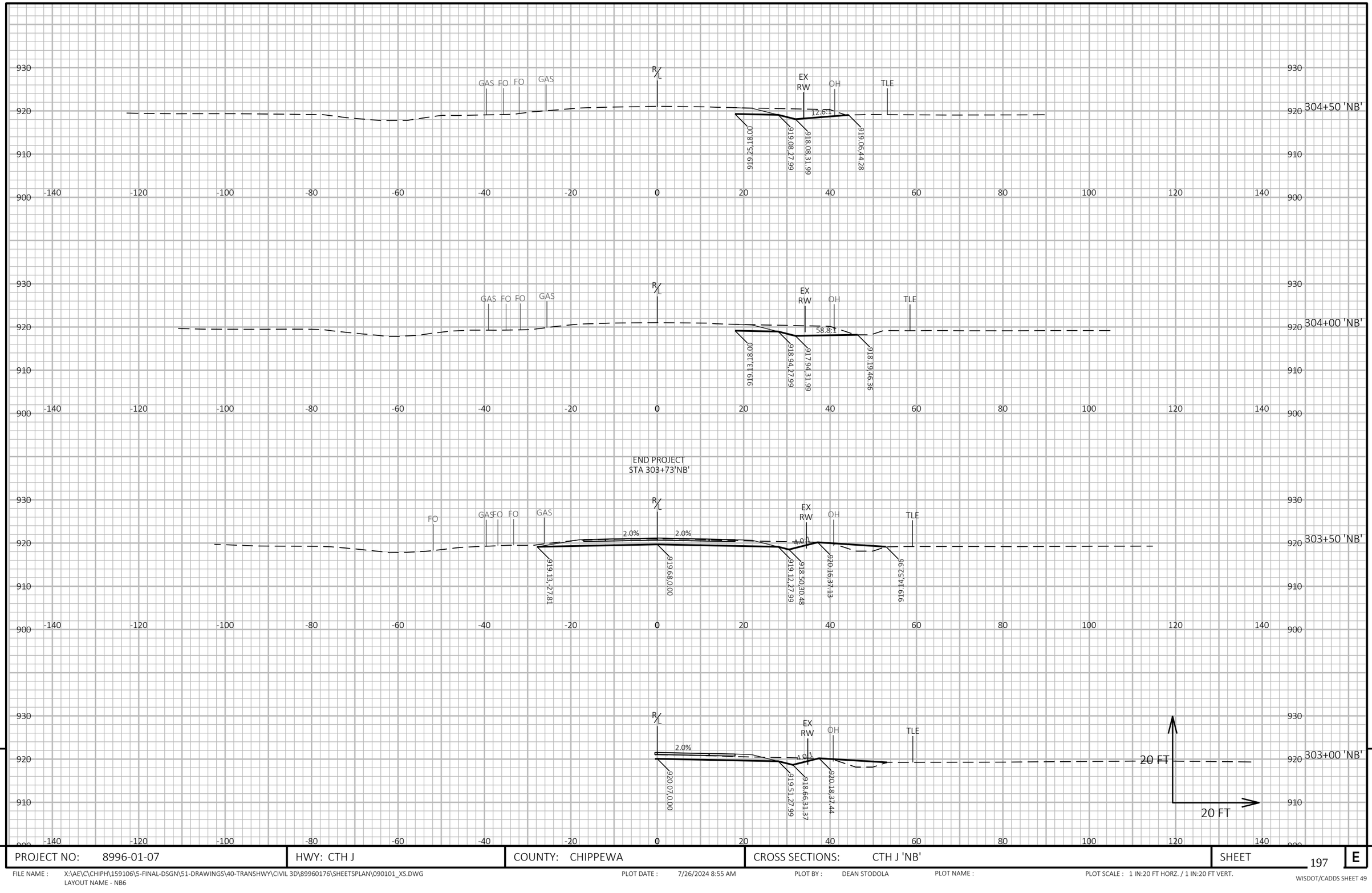
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'NB' | SHEET 196 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - NB5

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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9

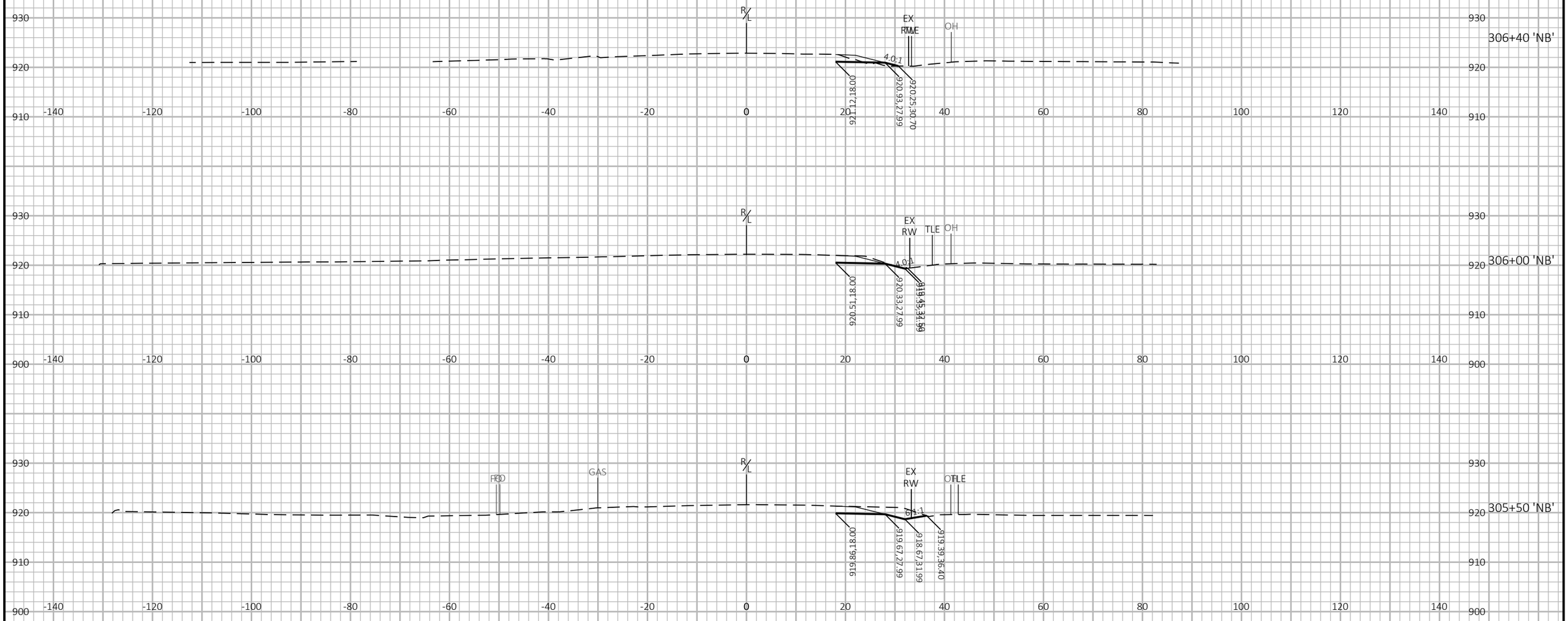
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'NB' | SHEET 197 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - NB6

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

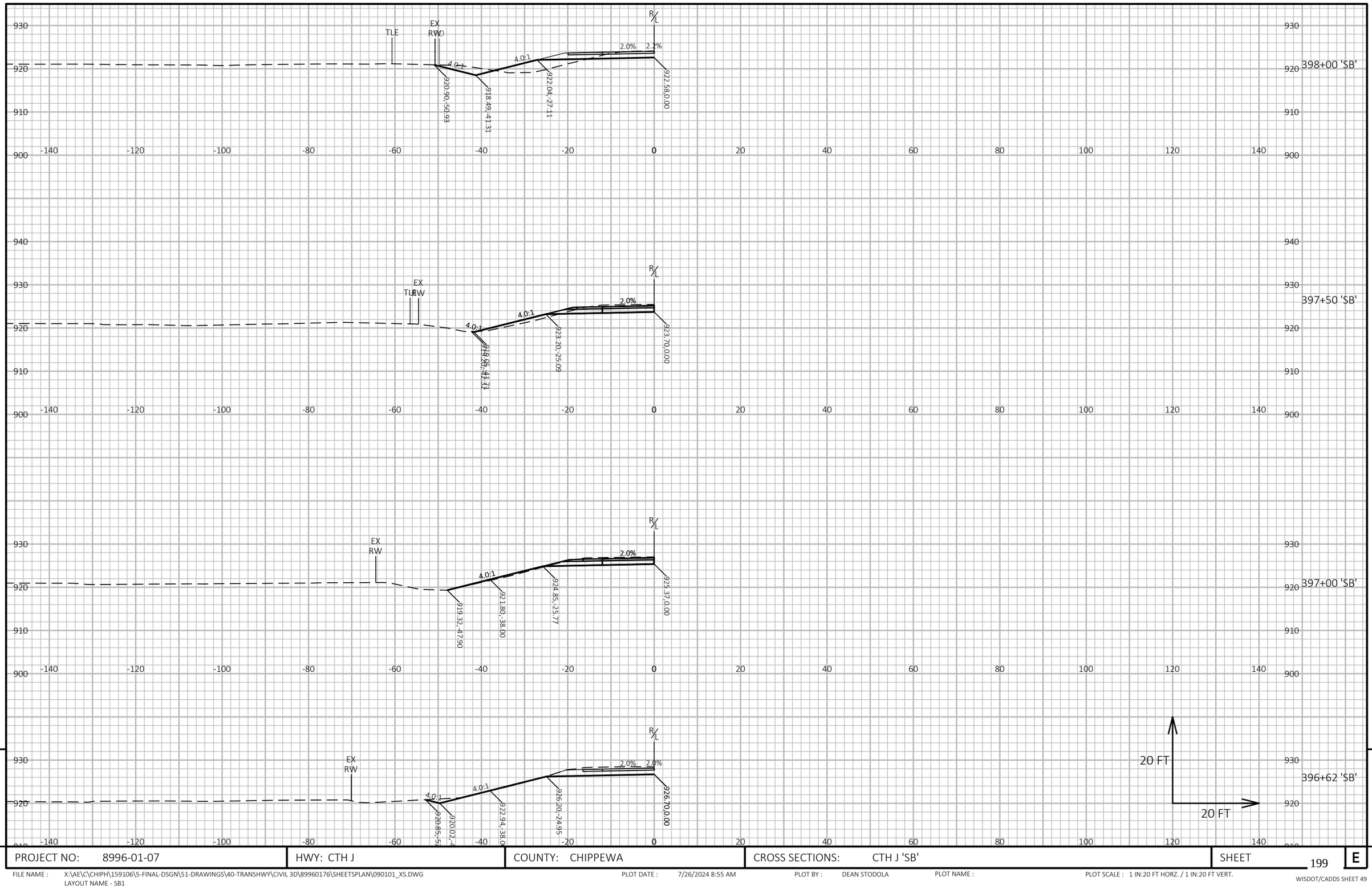
WISDOT/CADDS SHEET 49

END SHOULDER CONSTRUCTION
STA 306+40'NB', RT




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'NB' | SHEET 198 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - NB7
PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

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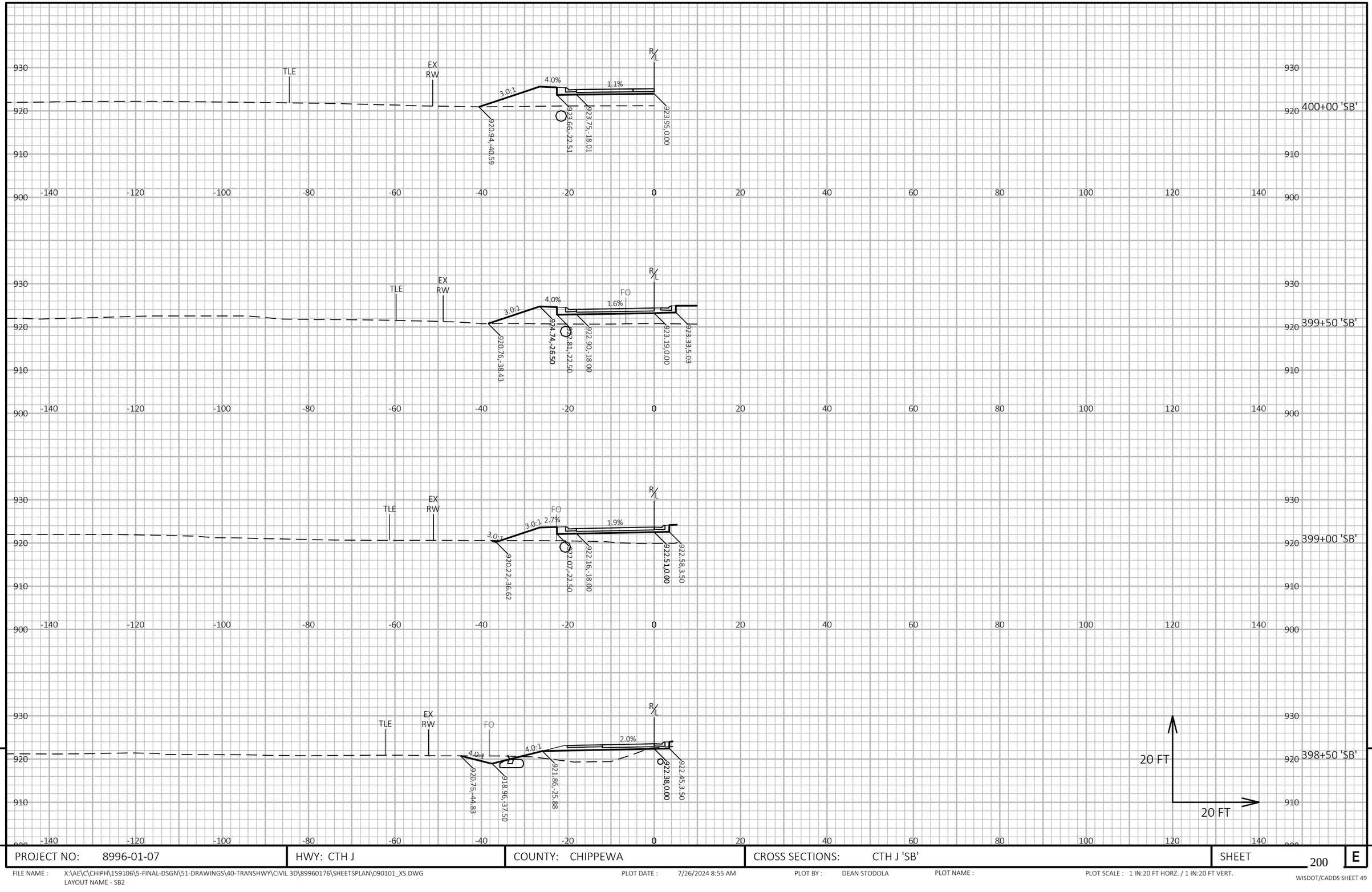
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'SB' | SHEET 199 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - SB1

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'SB' | SHEET 200 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - SB2

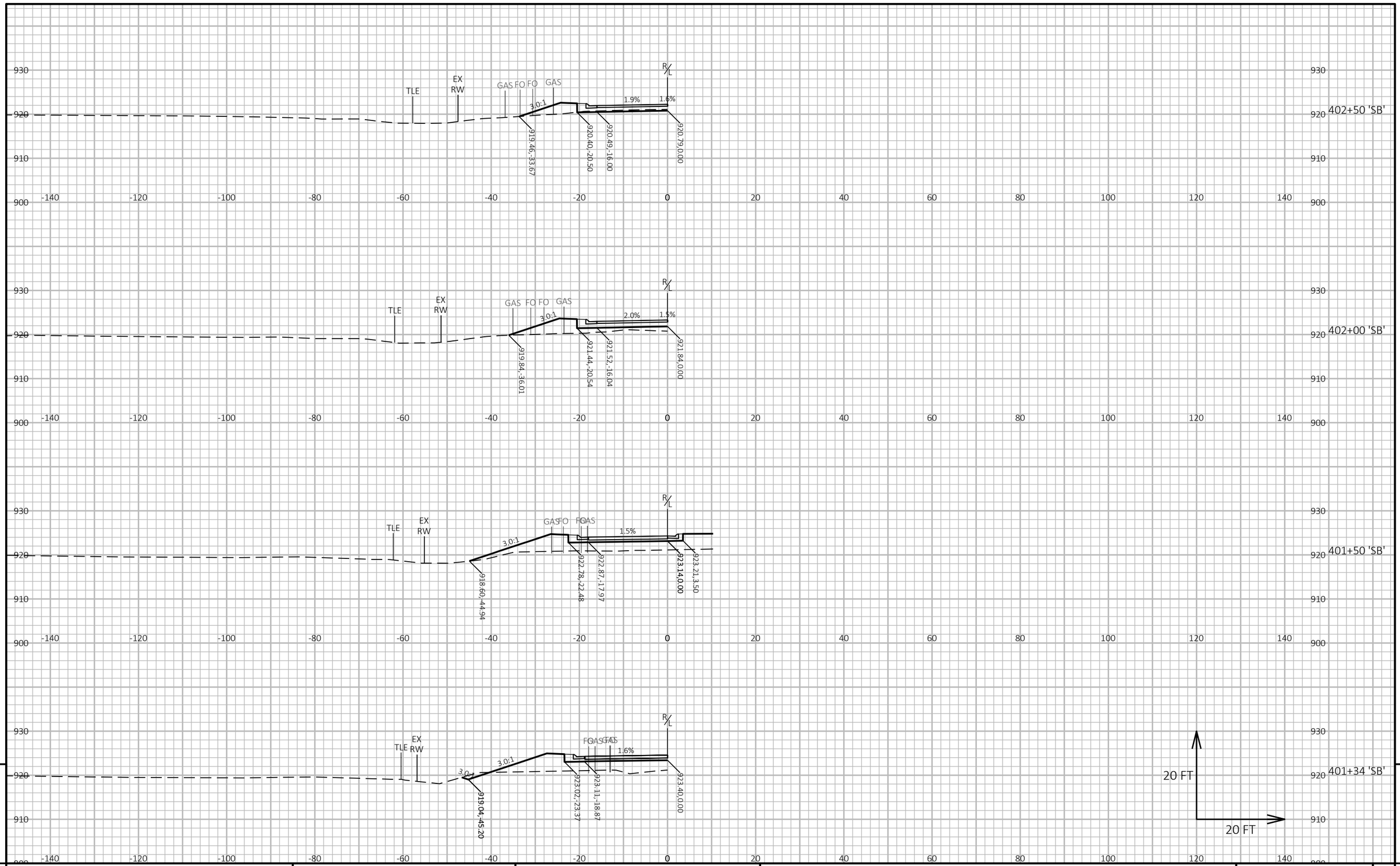
PLOT DATE : 7/26/2024 8:55 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

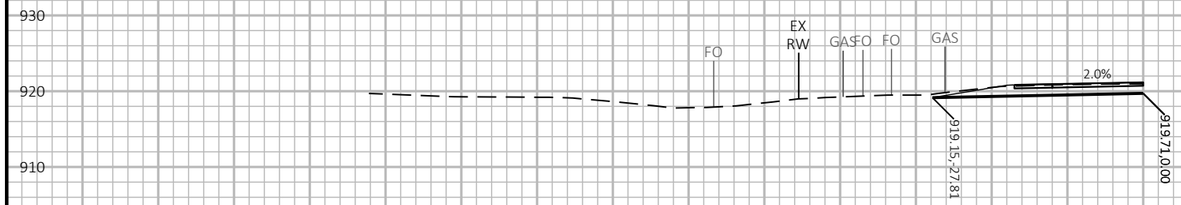
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'SB' | SHEET 201 | E |
|---|---|---|---|---|---|

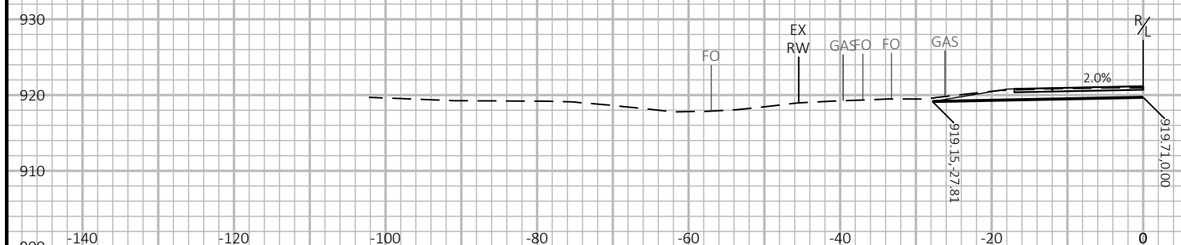
FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - SB3

PLOT DATE : 7/26/2024 8:55 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

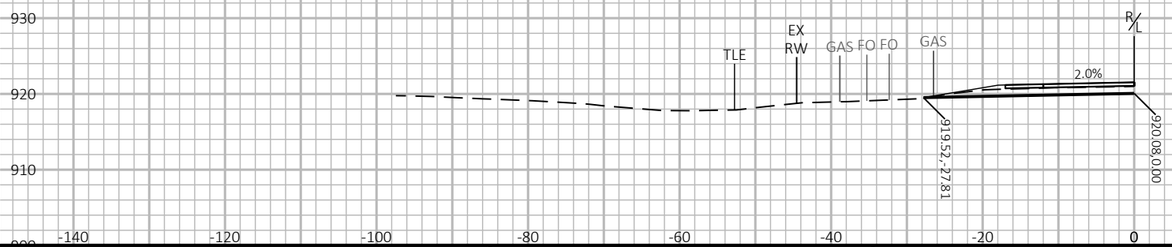
WISDOT/CADDS SHEET 49



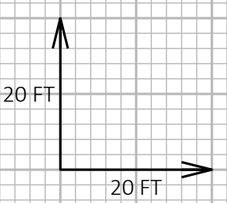

930
920
910
900
403+50 'SB'




930
920
910
900
403+50 'SB'




930
920
910
900
403+00 'SB'




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: CTH J 'SB' | SHEET 202 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - SB4

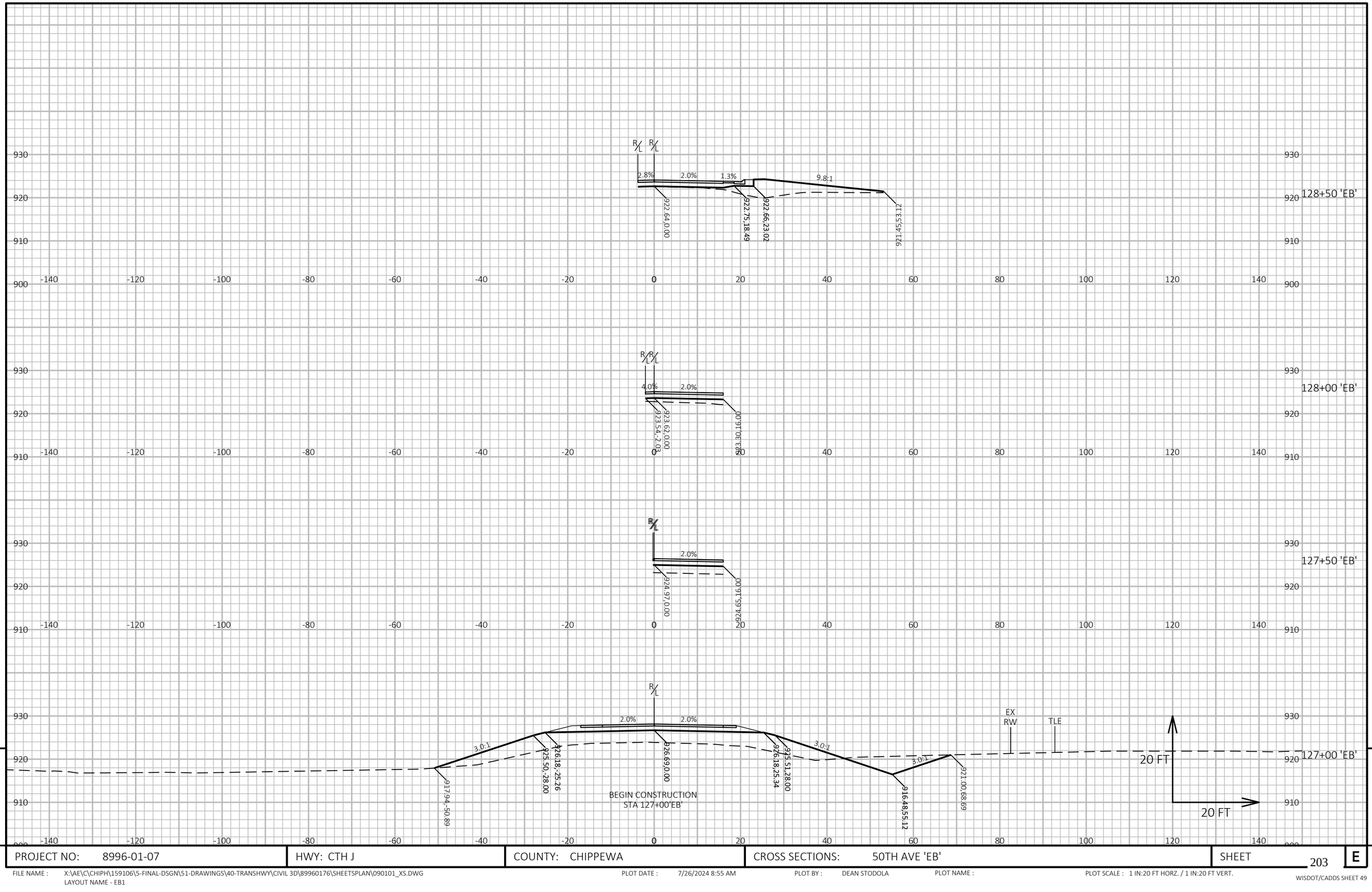
PLOT DATE : 7/26/2024 8:55 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 203 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB1

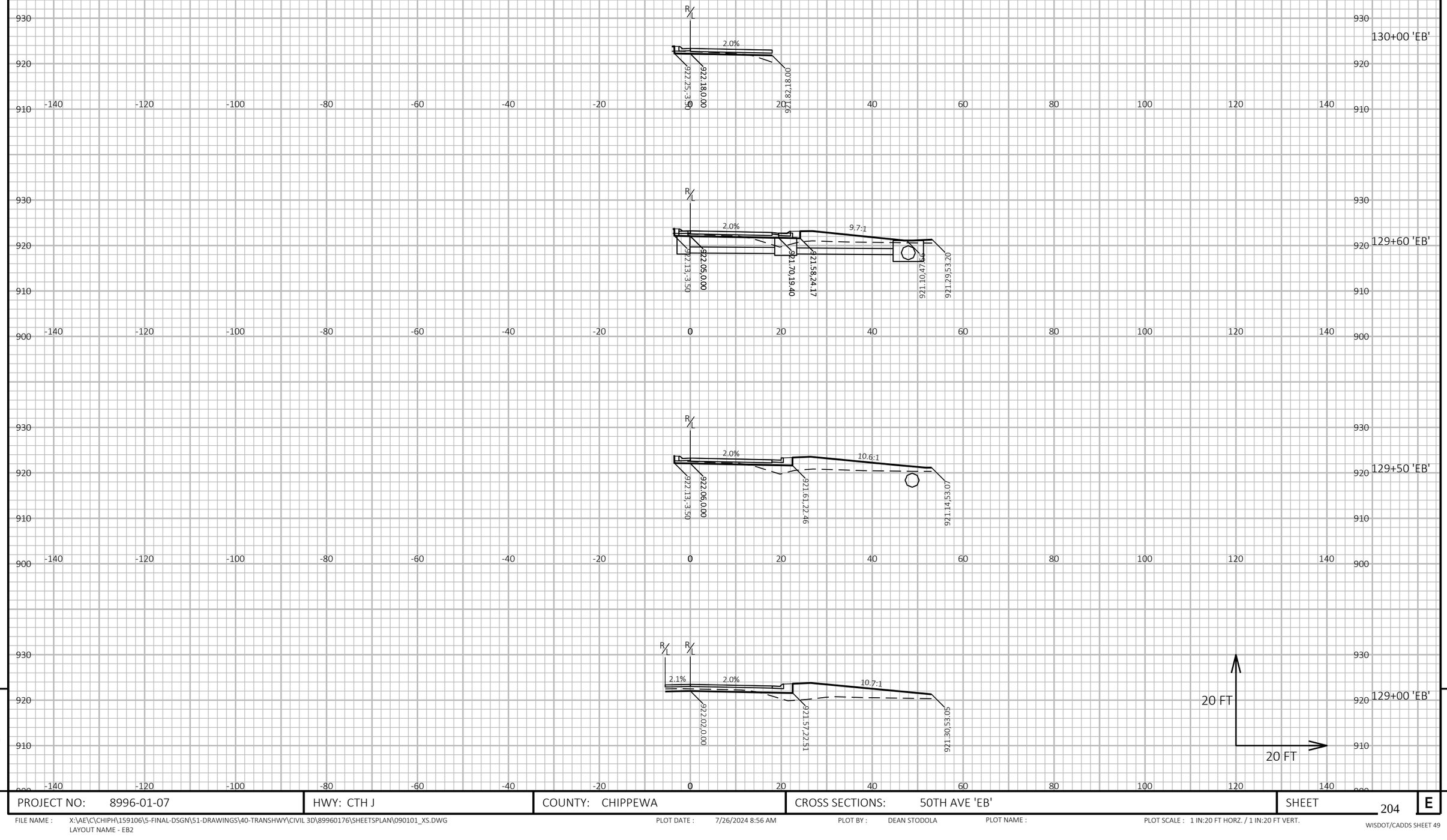
PLOT DATE : 7/26/2024 8:55 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 204 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB2

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

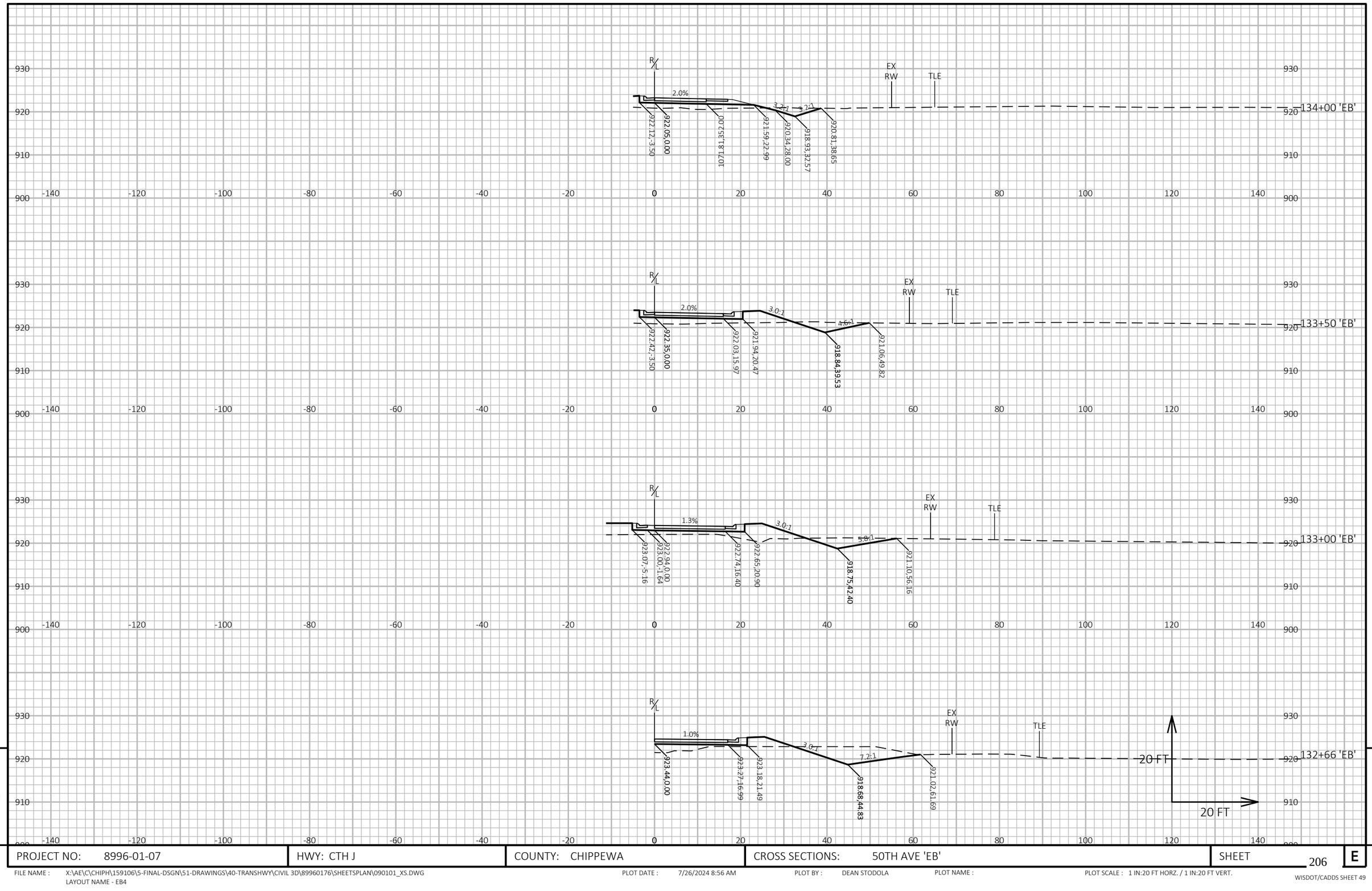
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 205 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB3

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

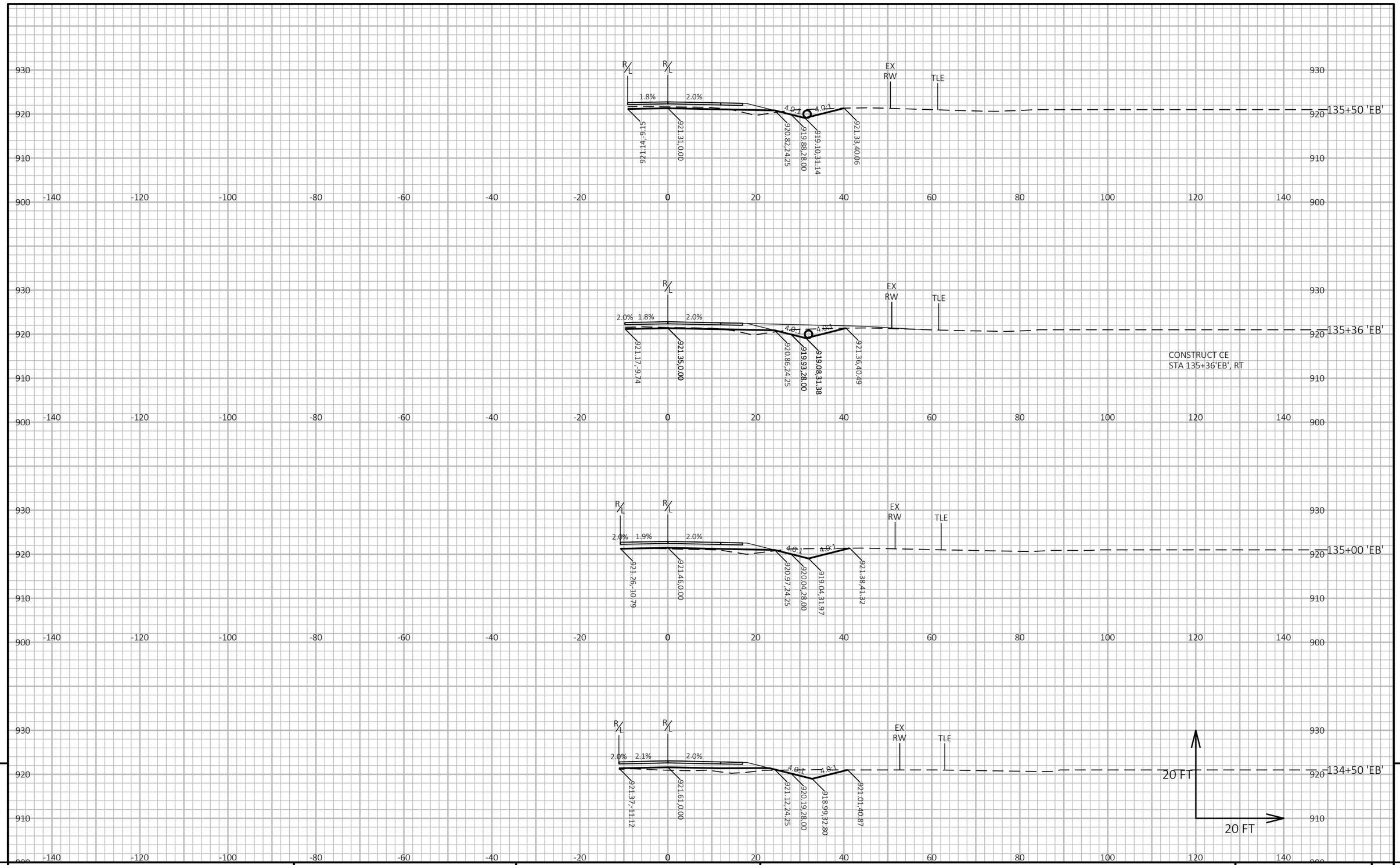
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 206 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB4

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

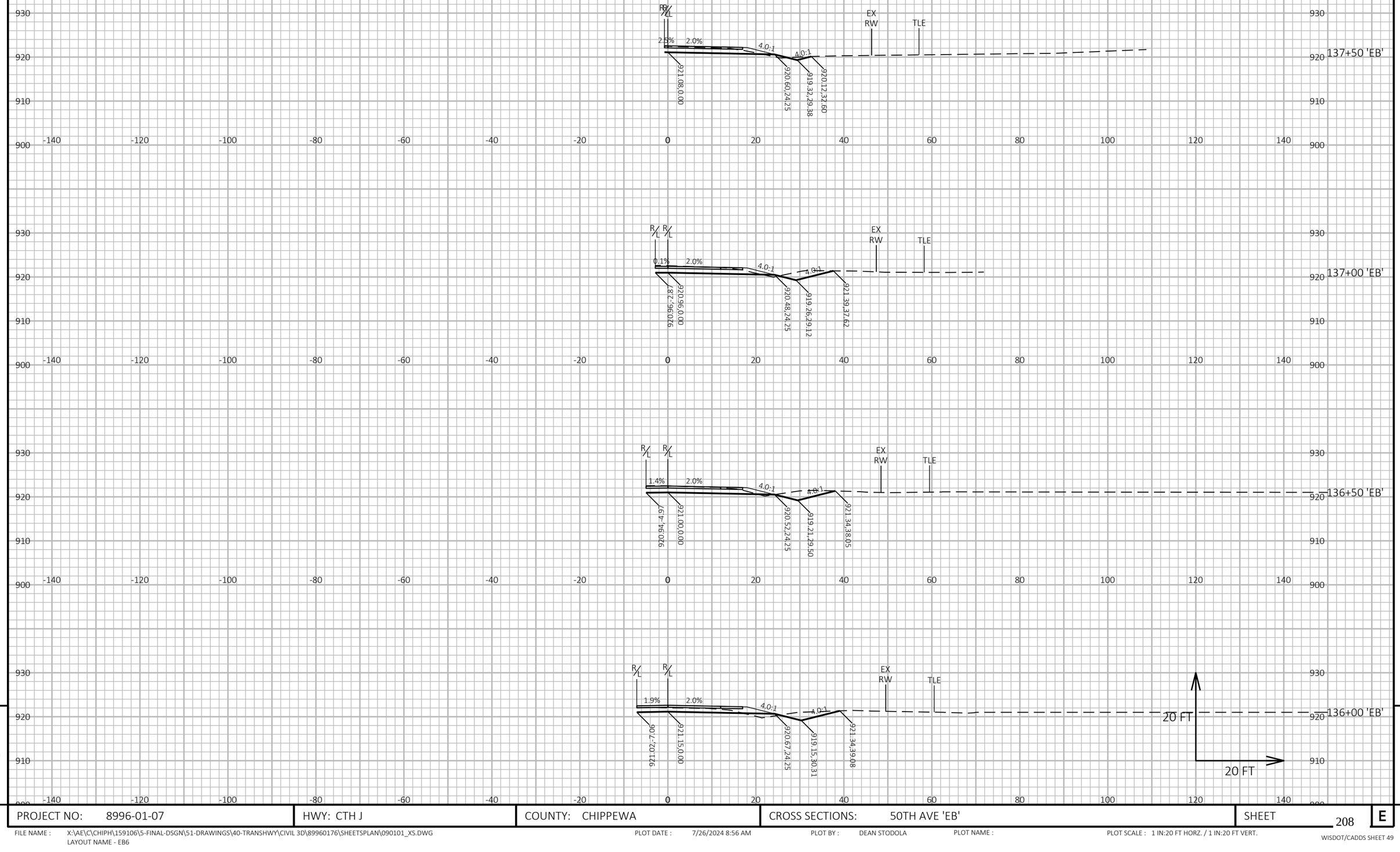
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 207 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB5

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

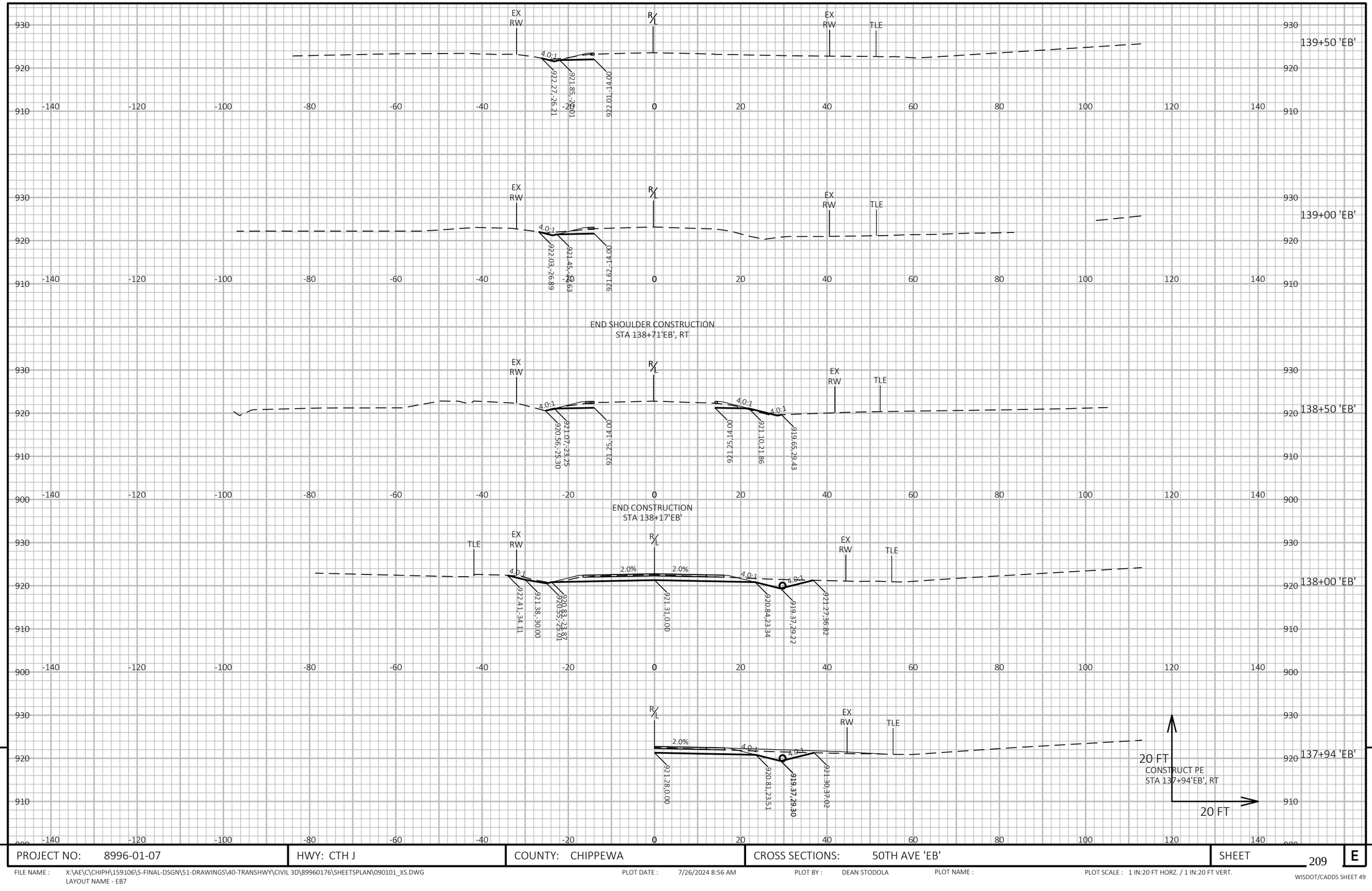
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 208 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB6

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



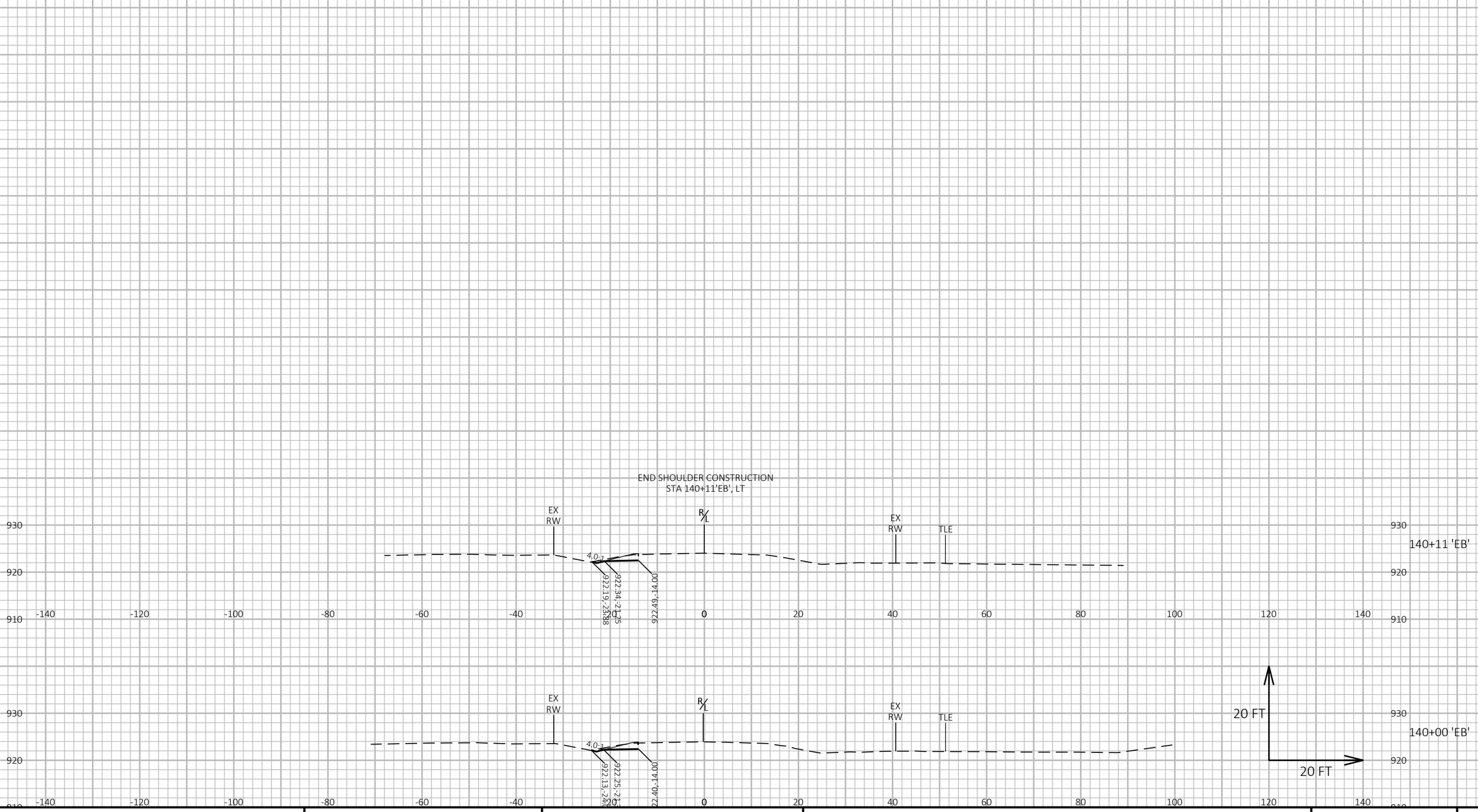

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 209 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB7

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

END SHOULDER CONSTRUCTION
STA 140+11'EB', LT




9

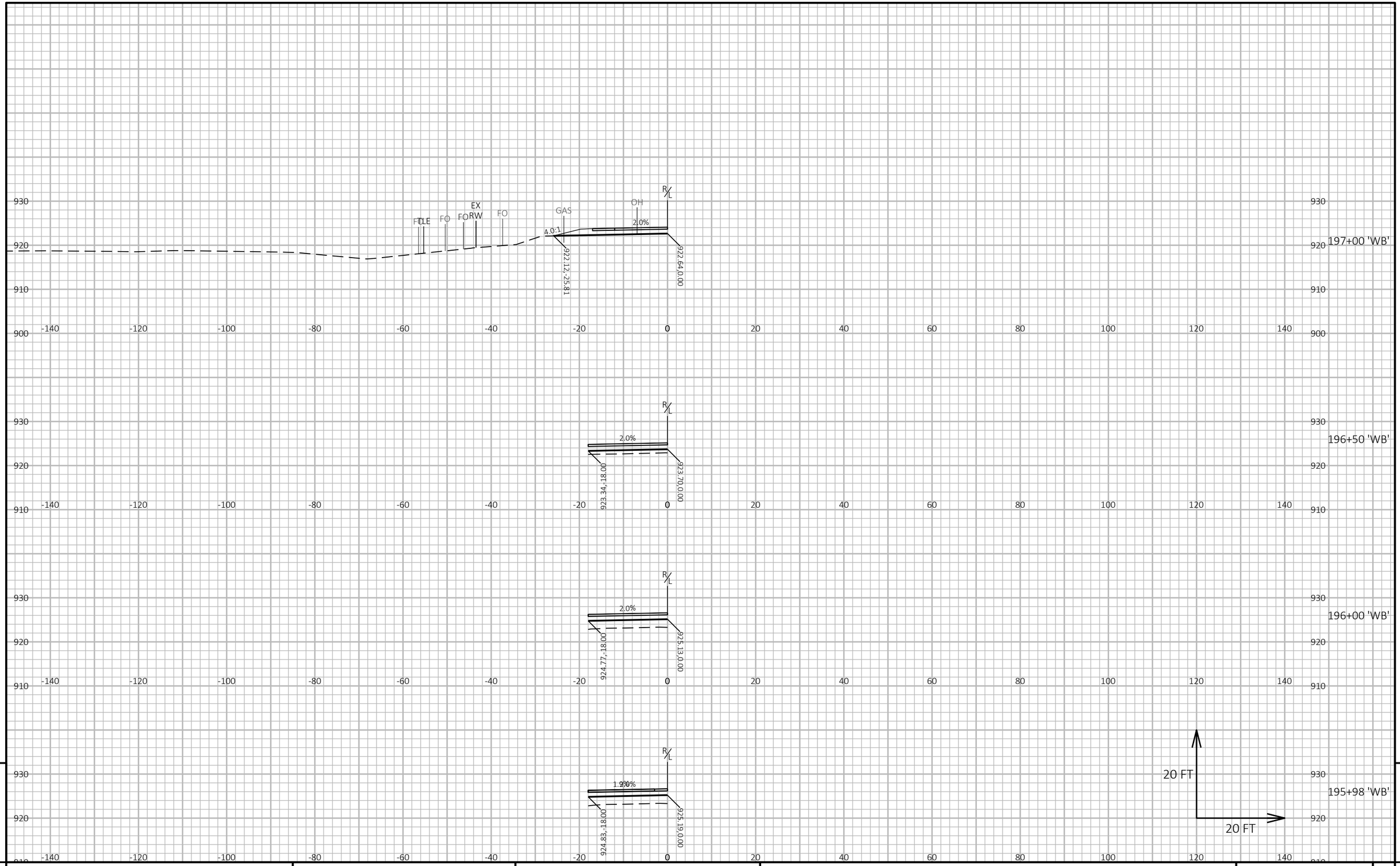
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'EB' | SHEET 210 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - EB8

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

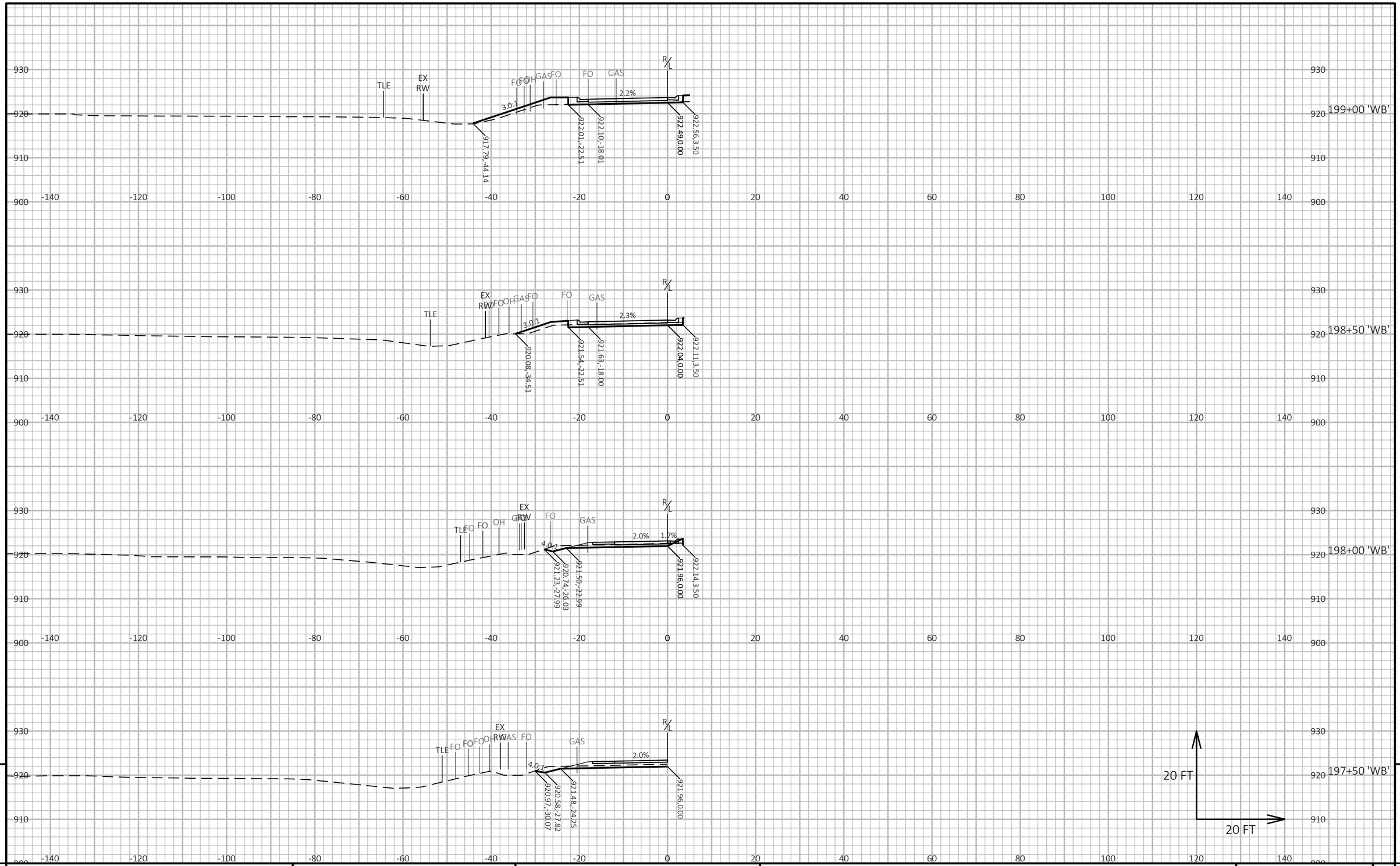
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'WB' | SHEET 211 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - WB1

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

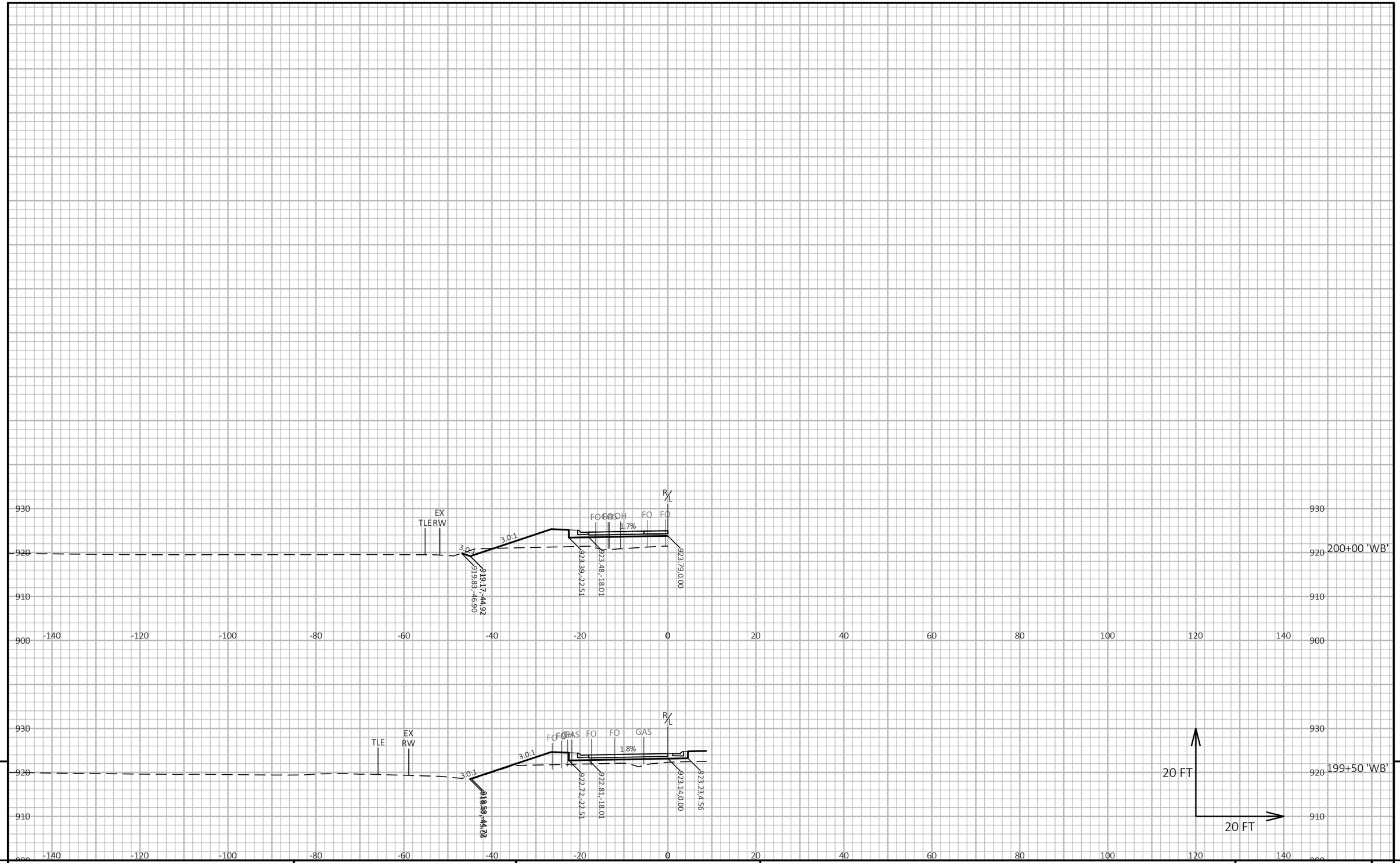
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'WB' | SHEET 212 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - WB2

PLOT DATE : 7/26/2024 8:56 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'WB' | SHEET 213 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - WB3

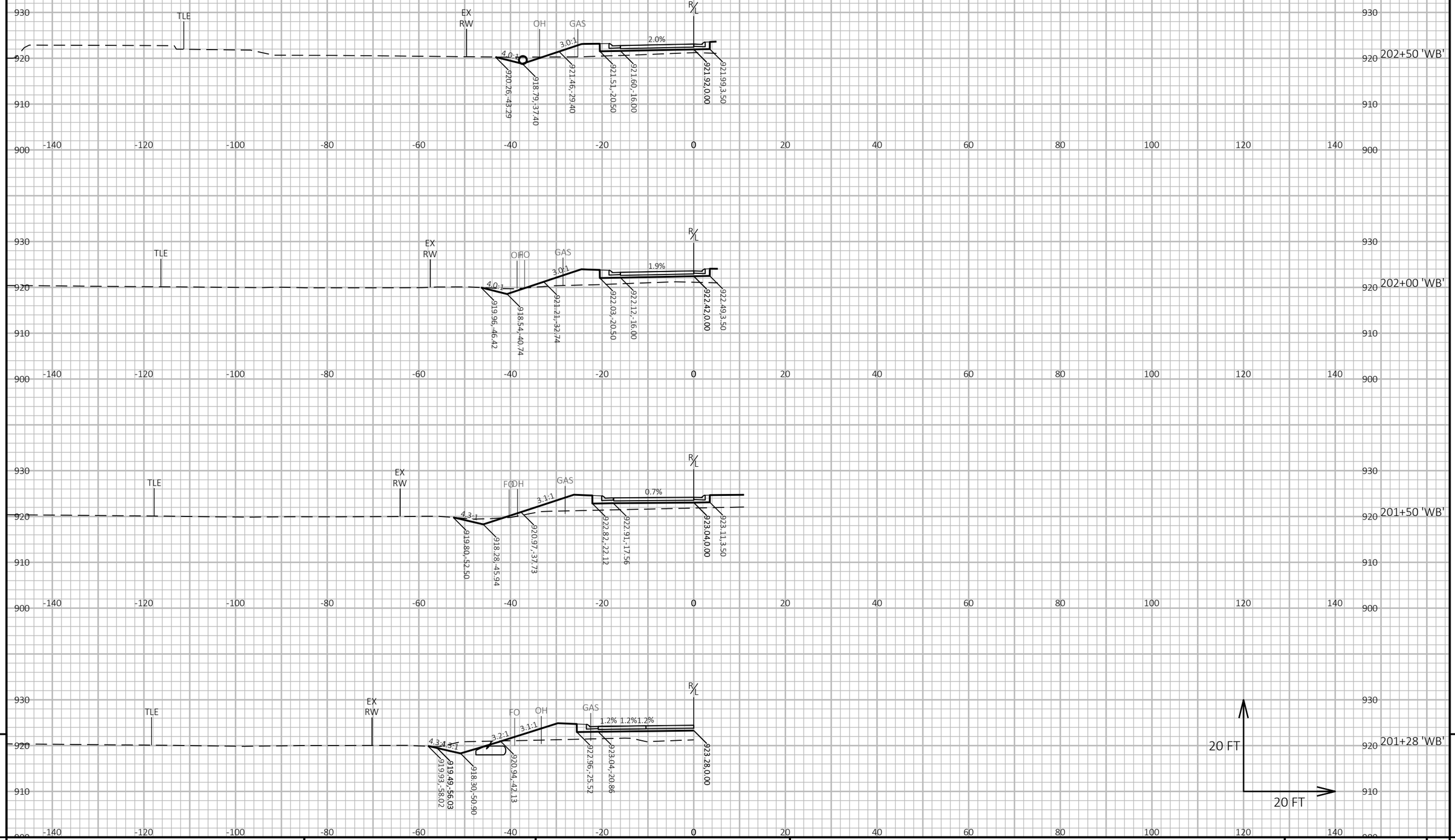
PLOT DATE : 7/26/2024 8:56 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'WB' | SHEET 214 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - WB4

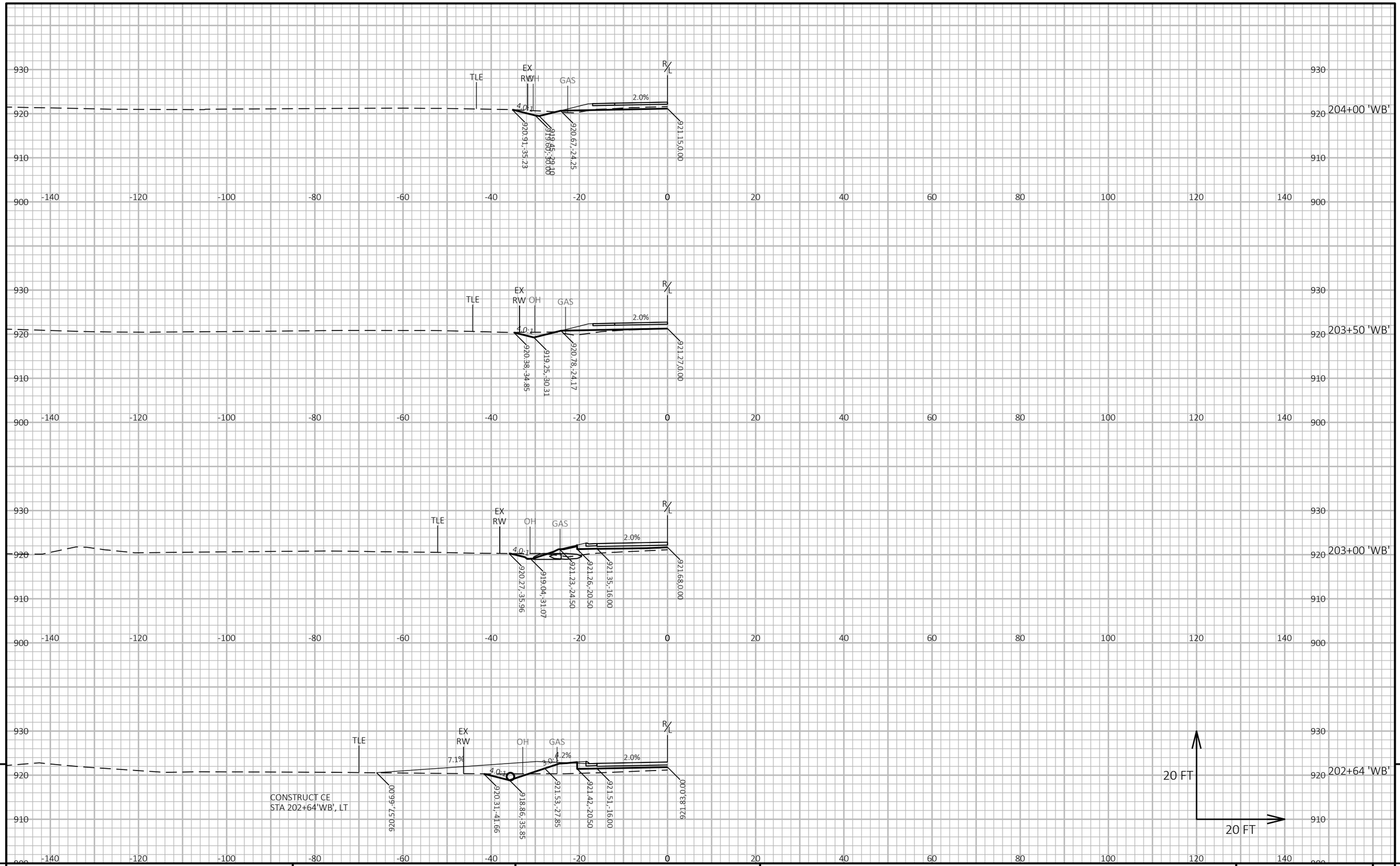
PLOT DATE : 7/26/2024 8:56 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'WB' | SHEET 215 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - WB5

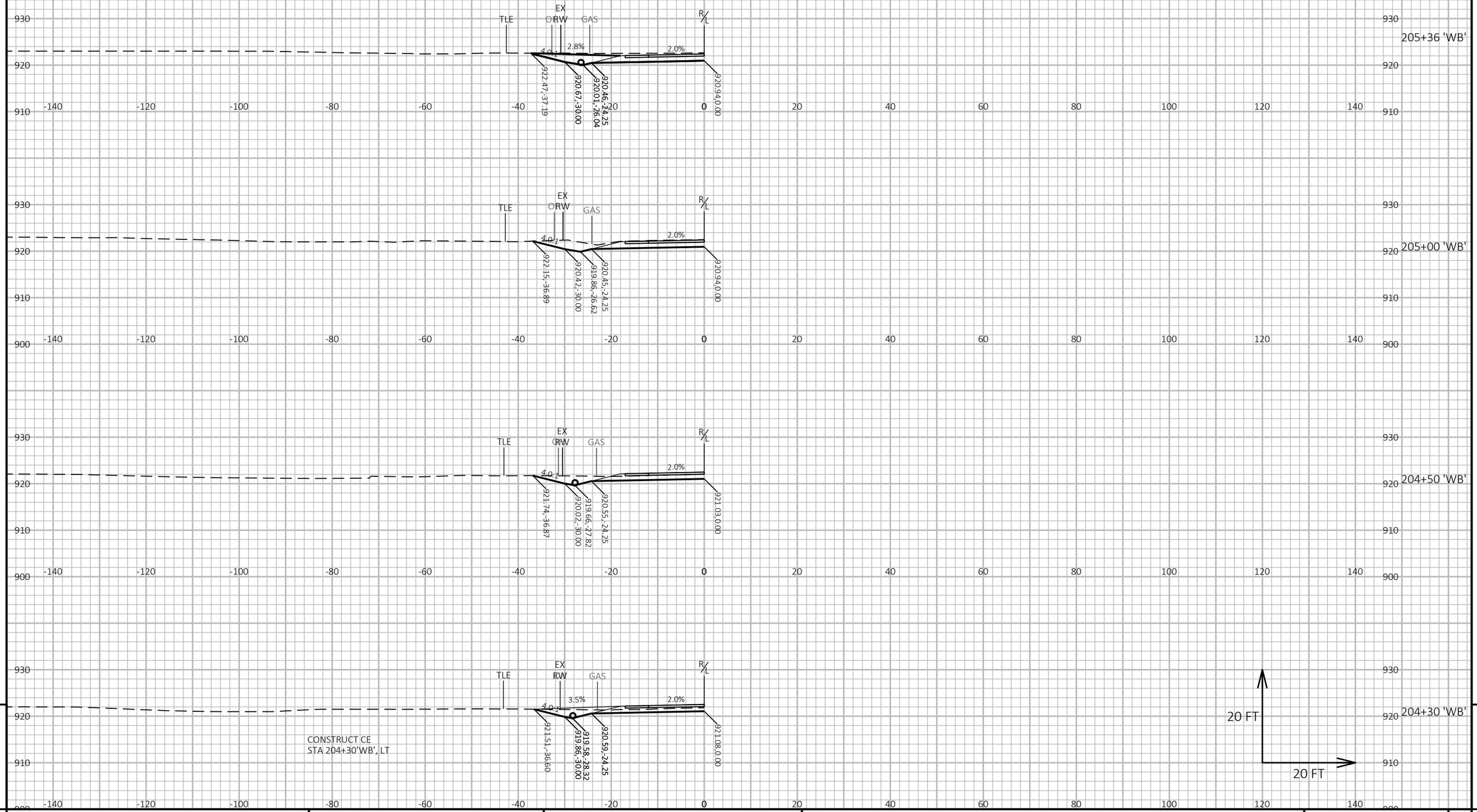
PLOT DATE : 7/26/2024 8:57 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'WB' | SHEET 216 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - WB6

PLOT DATE : 7/26/2024 8:57 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

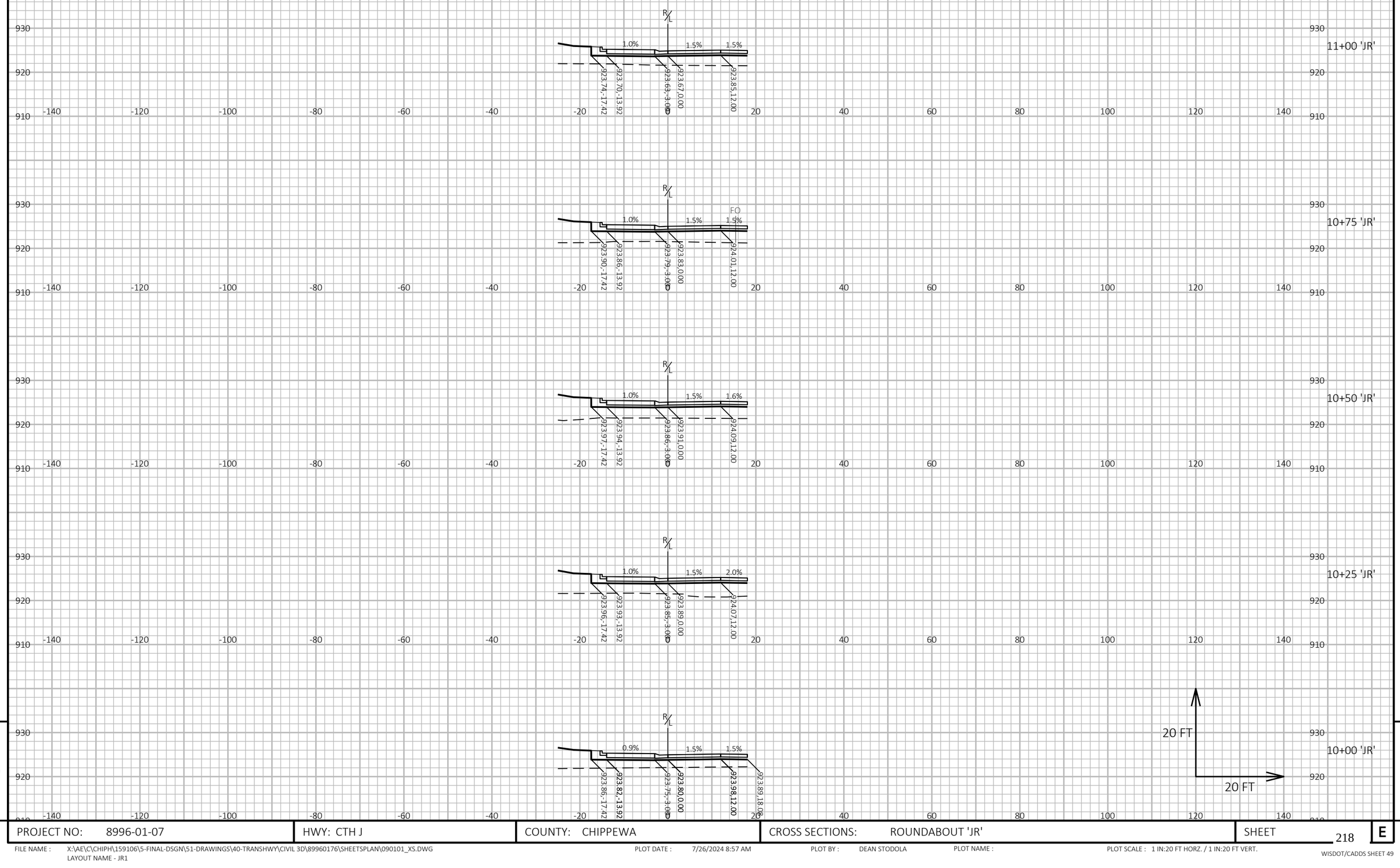
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 50TH AVE 'WB' | SHEET 217 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - WB7

PLOT DATE : 7/26/2024 8:57 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

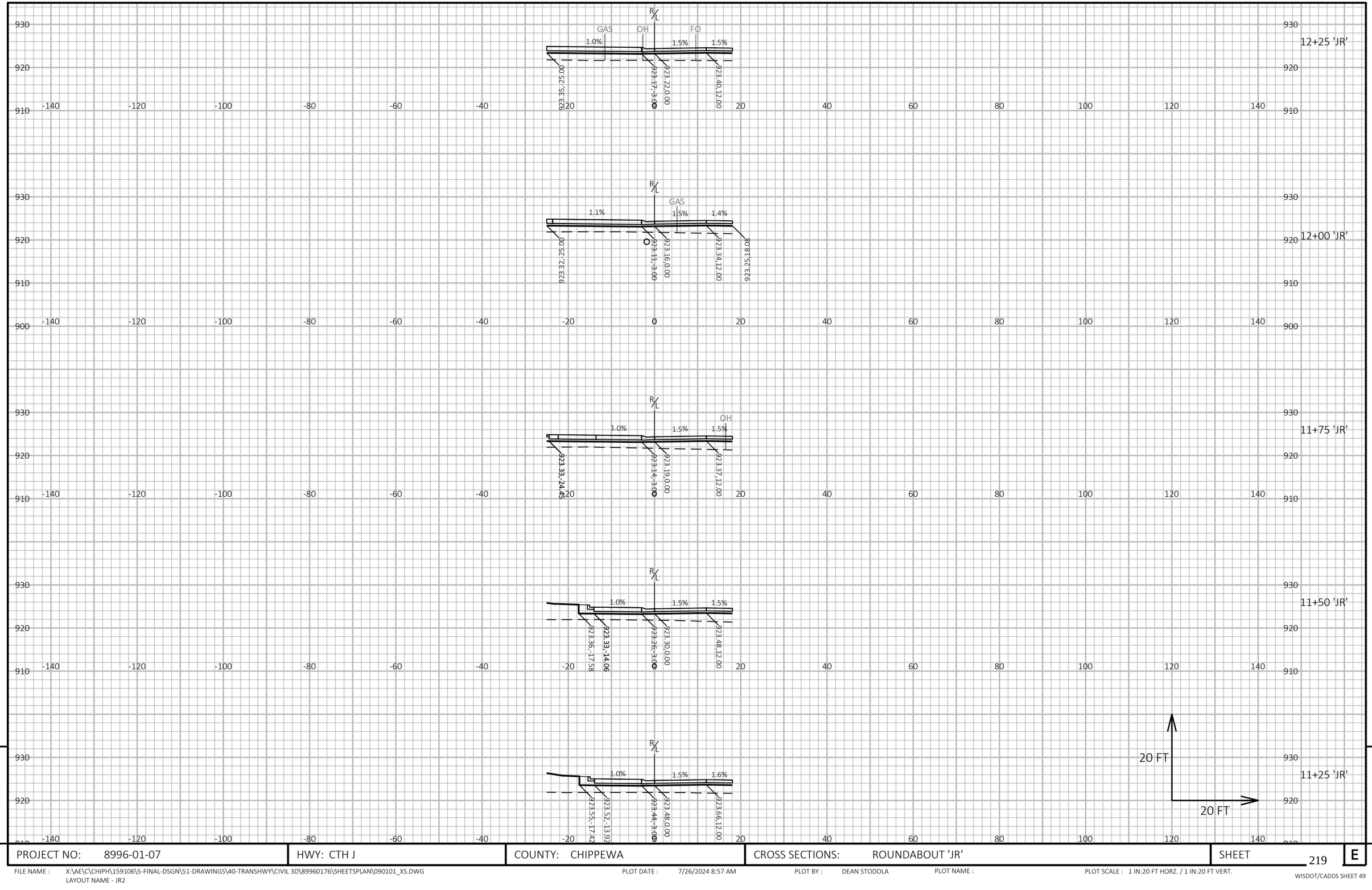
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: ROUNDABOUT 'JR' | SHEET 218 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - JR1

PLOT DATE : 7/26/2024 8:57 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: ROUNDABOUT 'JR' | SHEET 219 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - JR2

PLOT DATE : 7/26/2024 8:57 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: ROUNDABOUT 'JR' | SHEET 220 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - JR3

PLOT DATE : 7/26/2024 8:57 AM

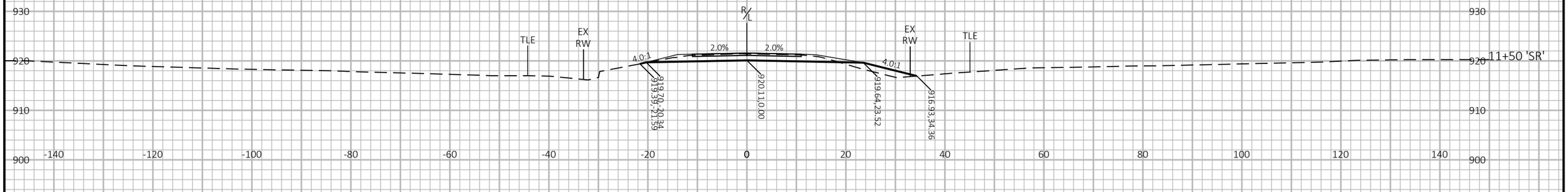
PLOT BY : DEAN STODOLA

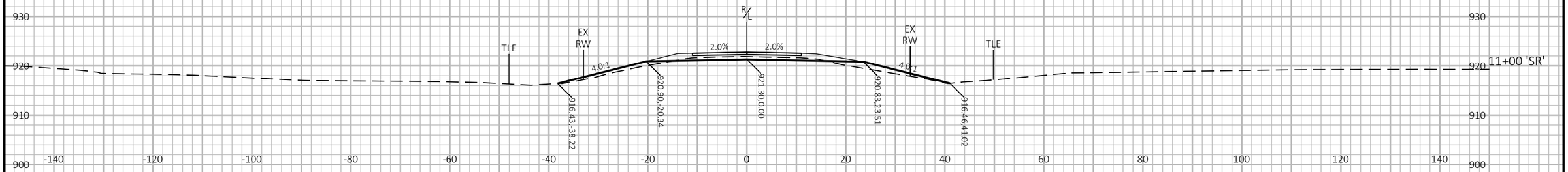
PLOT NAME :

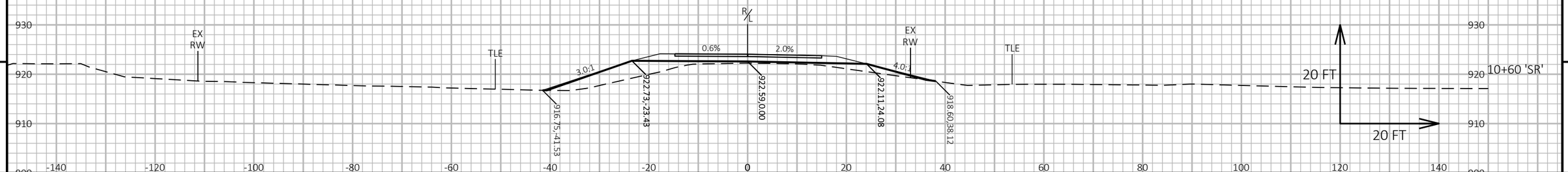
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 11+75'SR'




9

9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: 171ST STREET 'SR' | SHEET 221 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - SR1

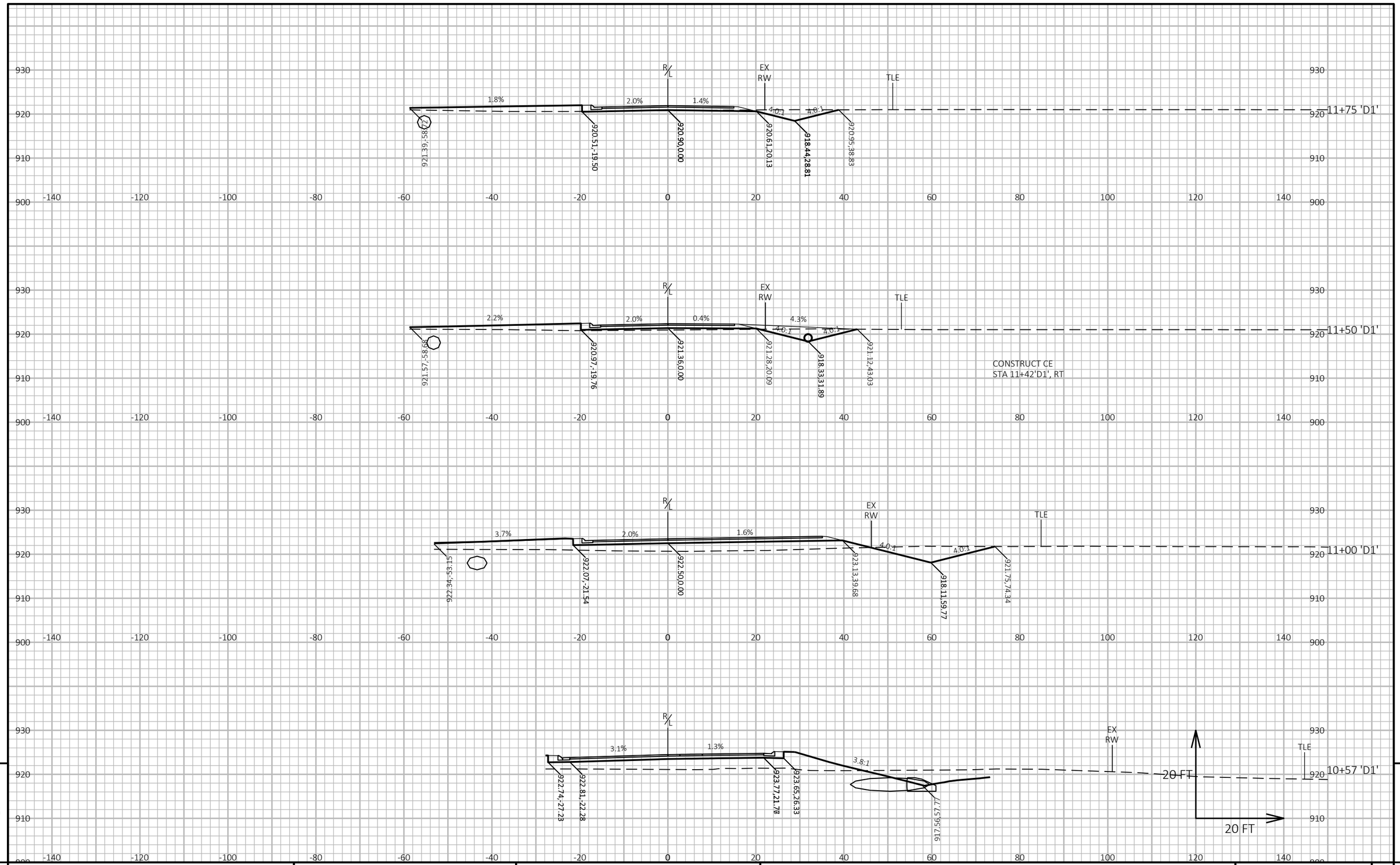
PLOT DATE : 7/26/2024 8:57 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

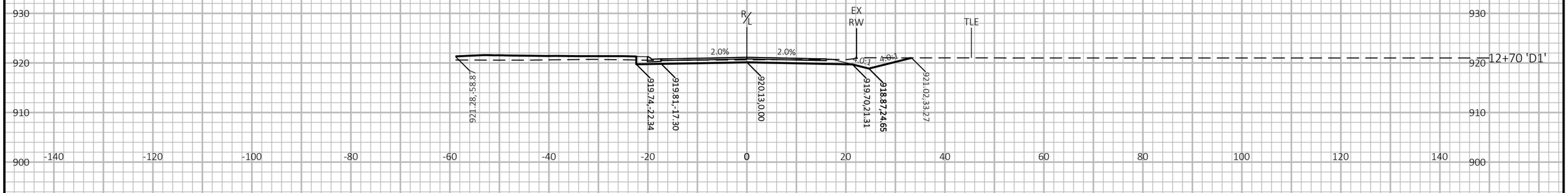
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: DRIVEWAY 'D1' | SHEET 222 | E |
|---|---|---|---|---|---|

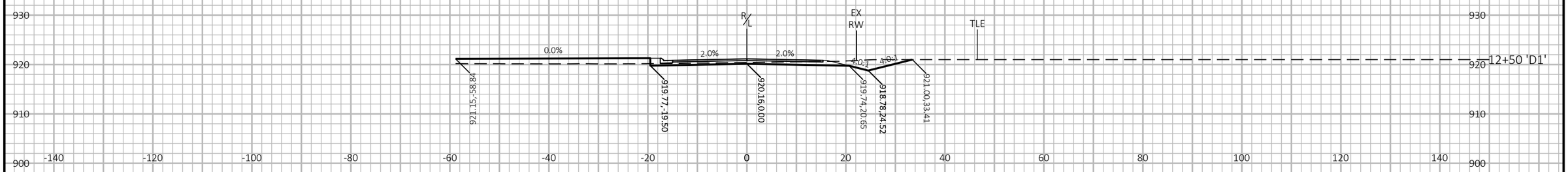
FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - D11

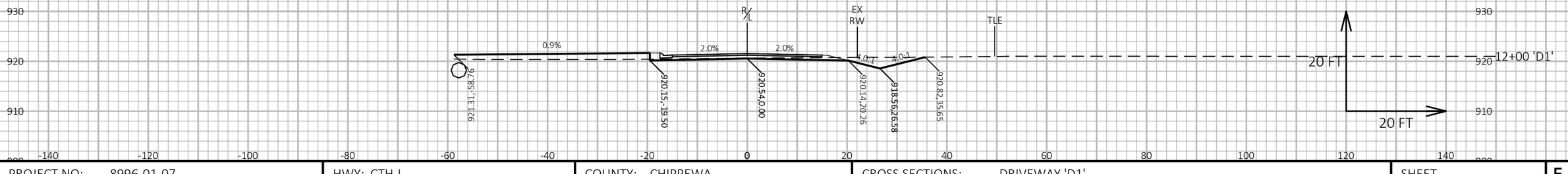
PLOT DATE : 7/26/2024 8:57 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 13+00'D1'

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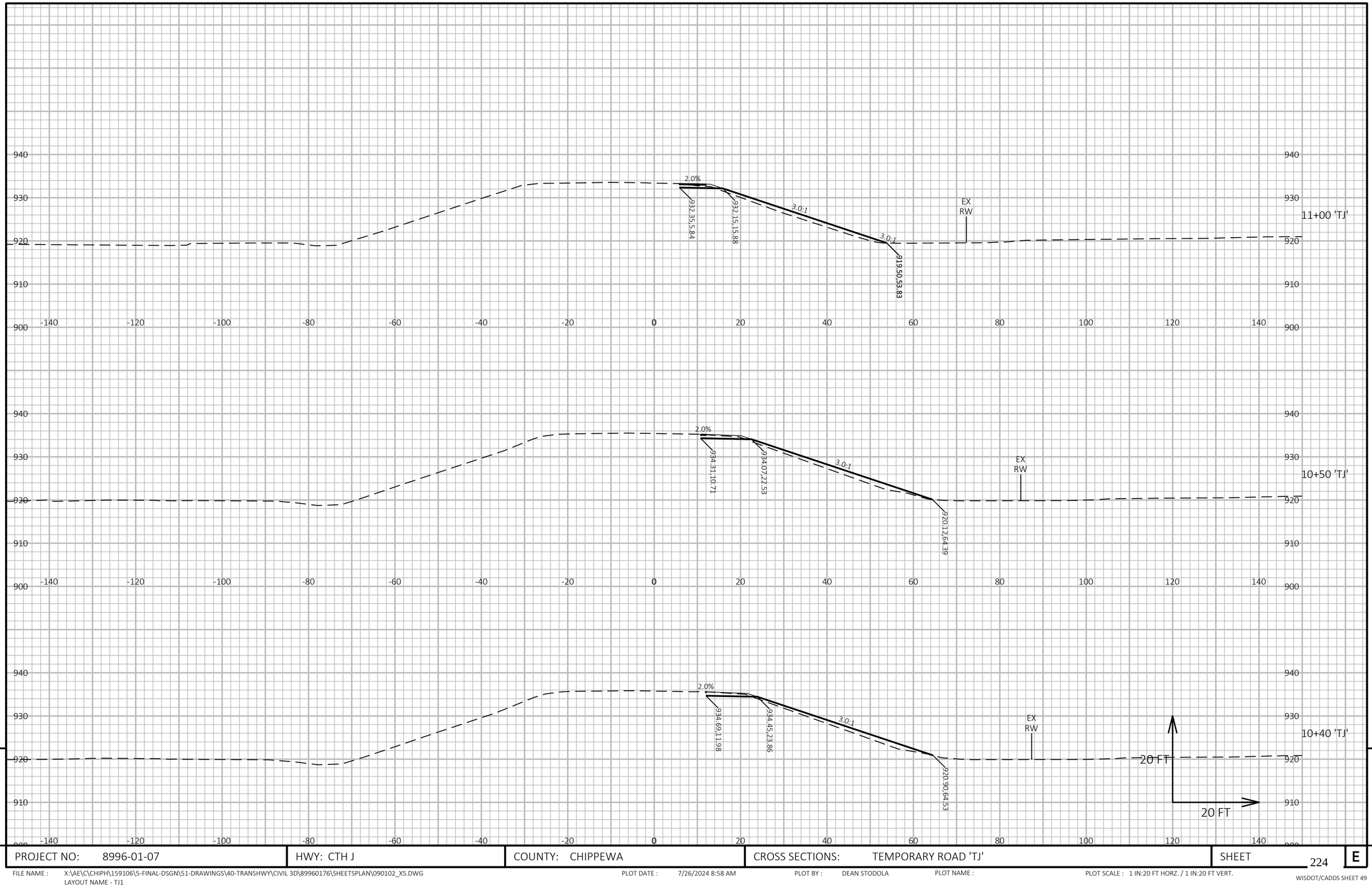
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: DRIVEWAY 'D1' | SHEET 223 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - D12

PLOT DATE : 7/26/2024 8:57 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

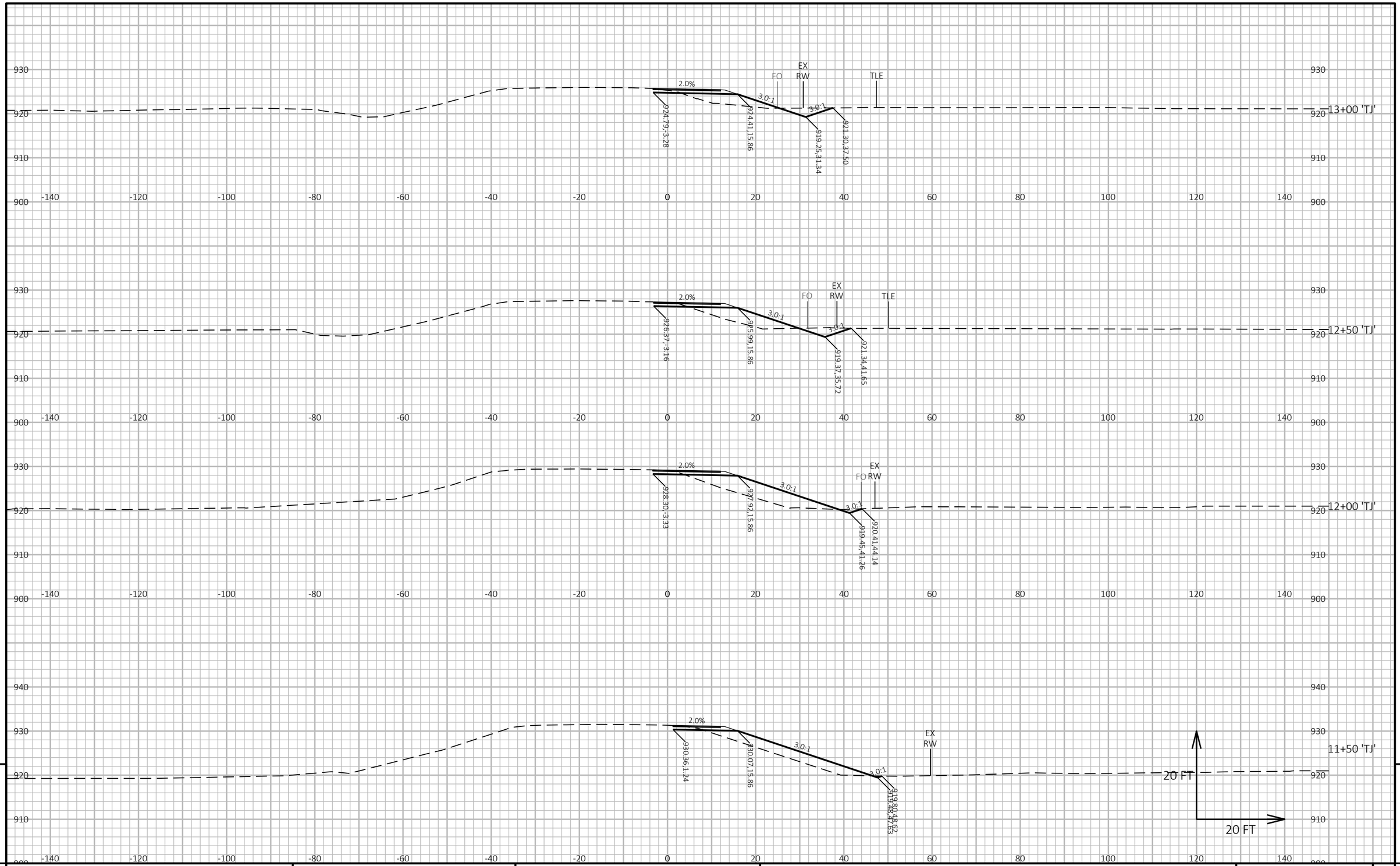
9

| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'TJ' | SHEET 224 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - TJ1

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'TJ' | SHEET 225 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - TJ2

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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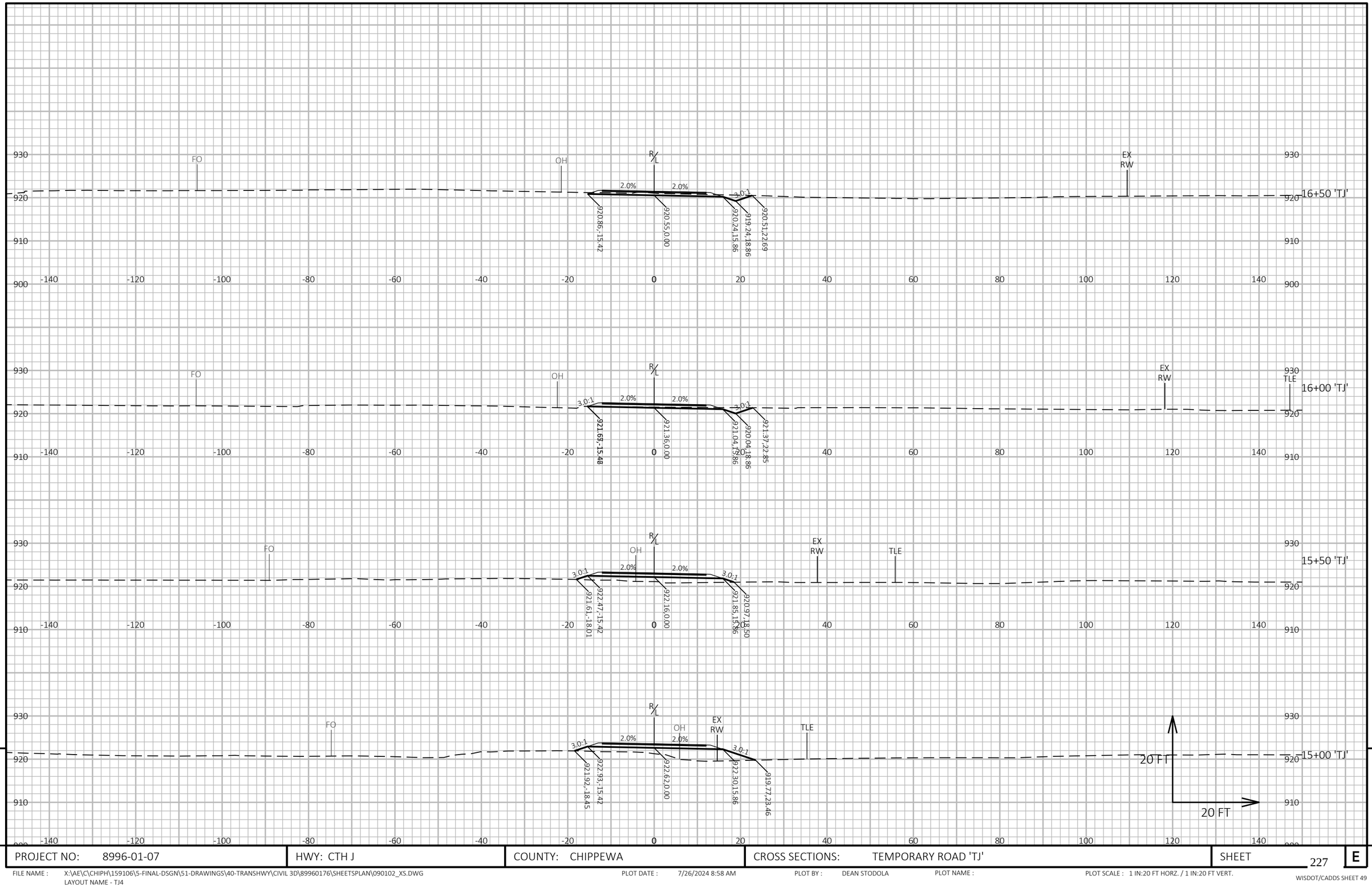
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'TJ' | SHEET 226 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - TJ3

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'TJ' | SHEET 227 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - TJ4

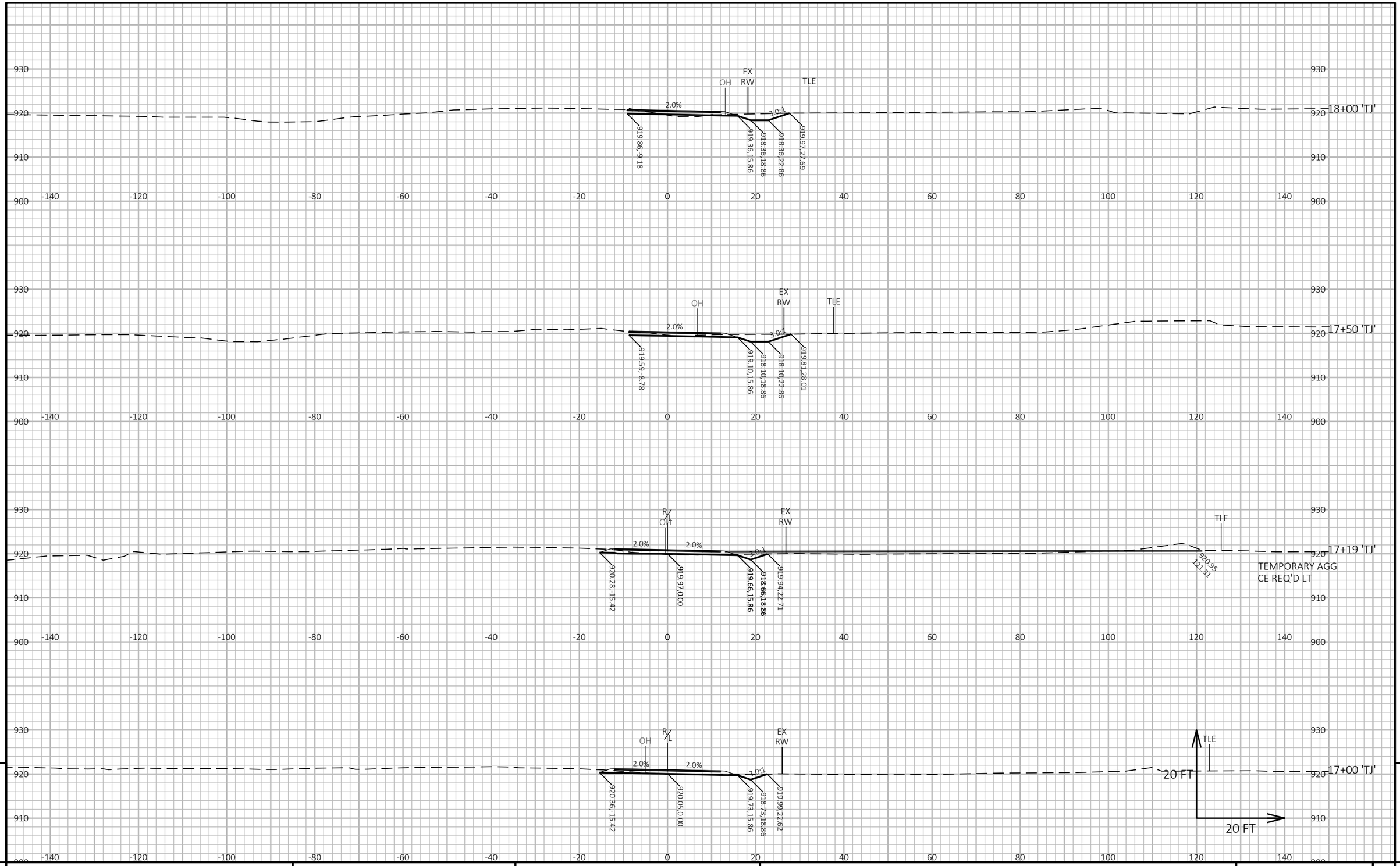
PLOT DATE : 7/26/2024 8:58 AM

PLOT BY : DEAN STODOLA

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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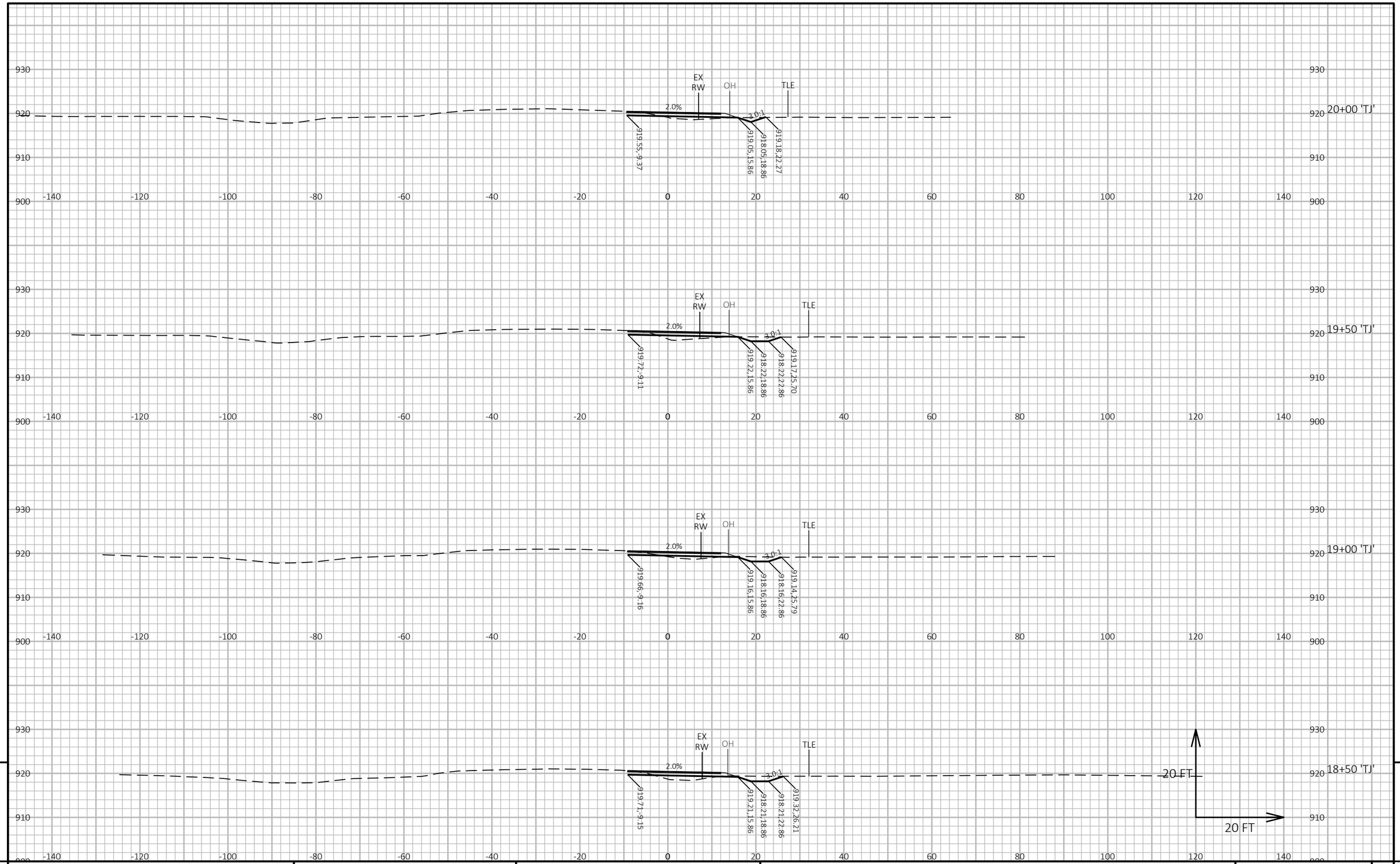
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'TJ' | SHEET 228 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - TJ5

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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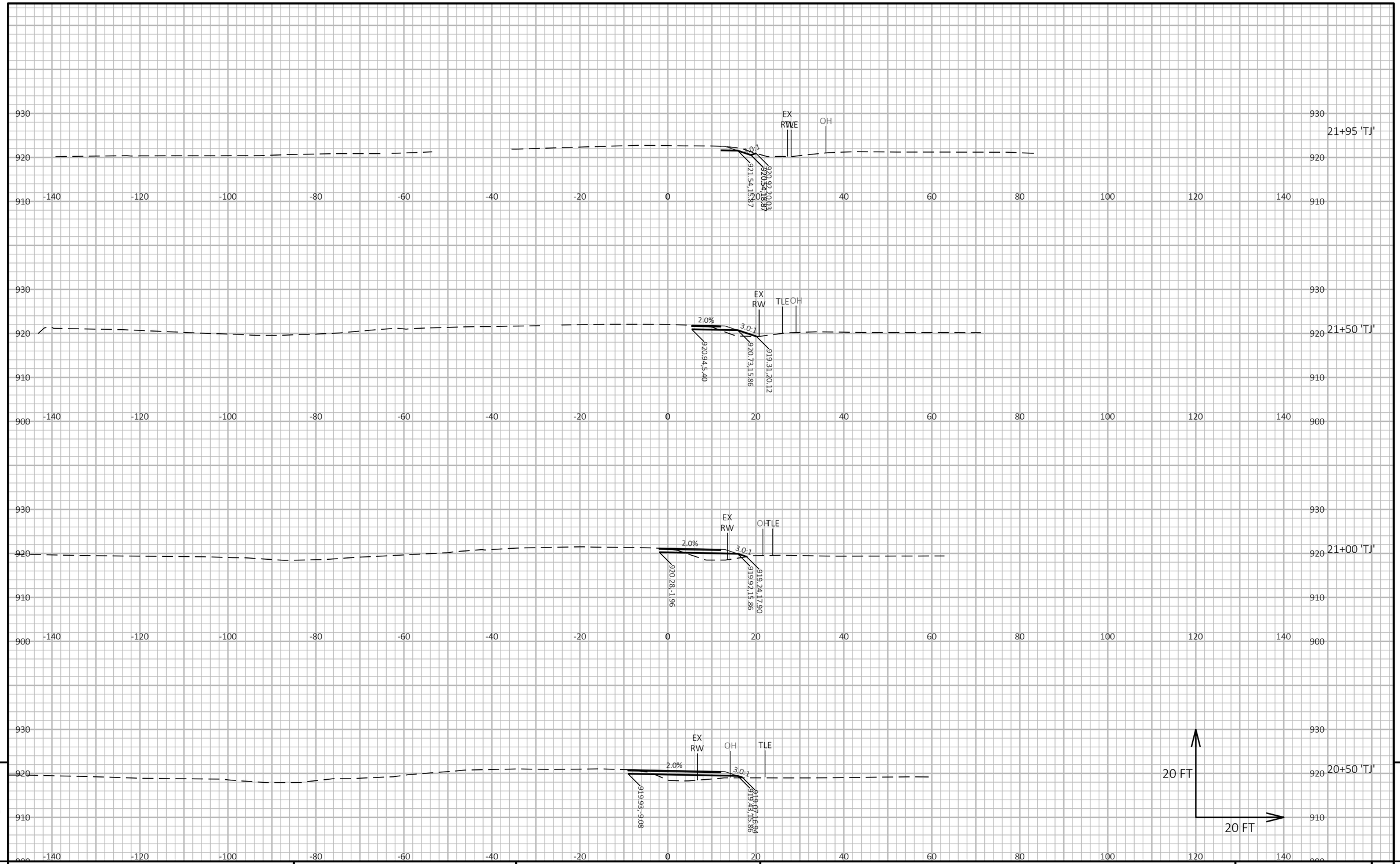
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'TJ' | SHEET 229 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - TJ6

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'TJ' | SHEET 230 | E |
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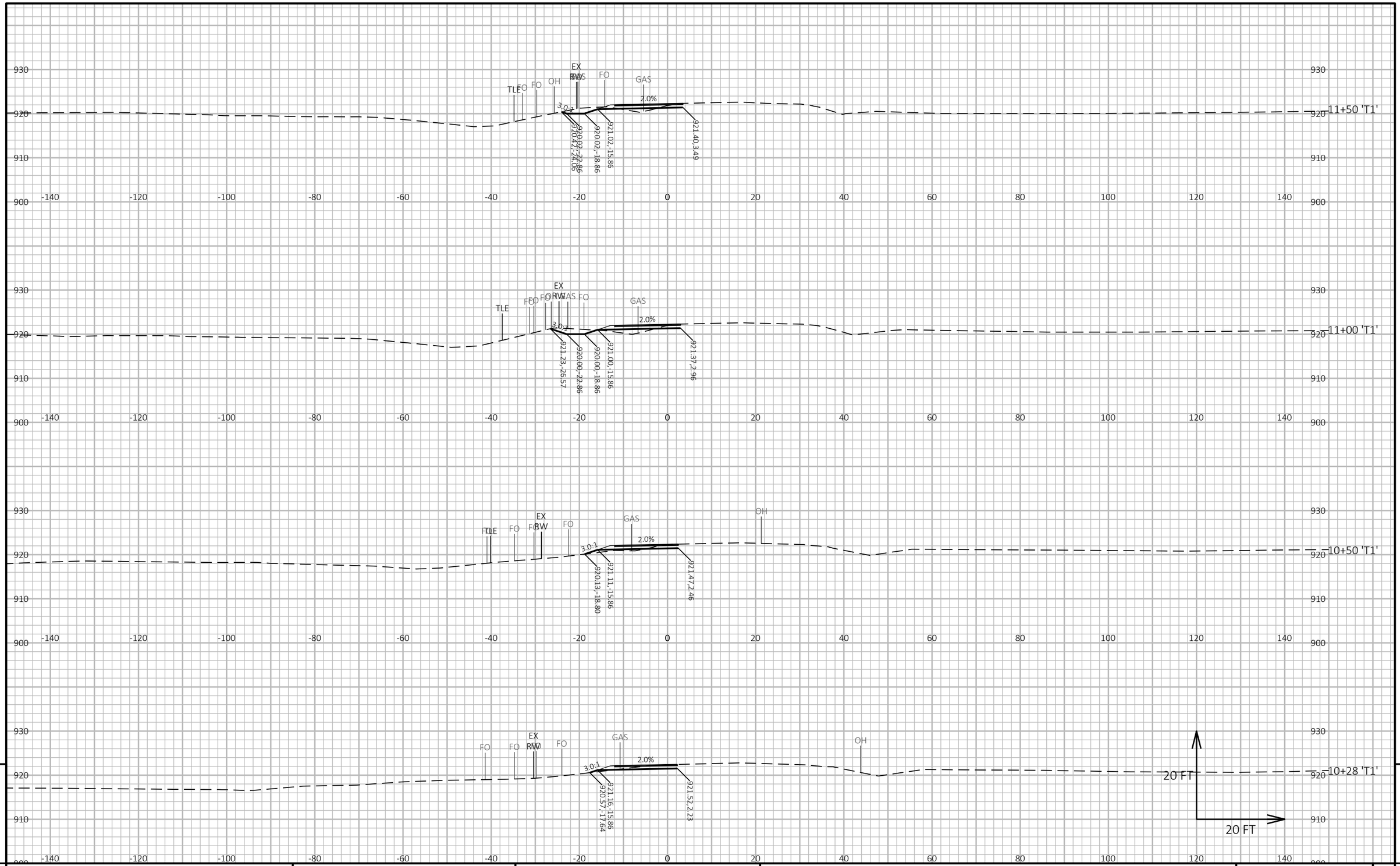
FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - TJ7

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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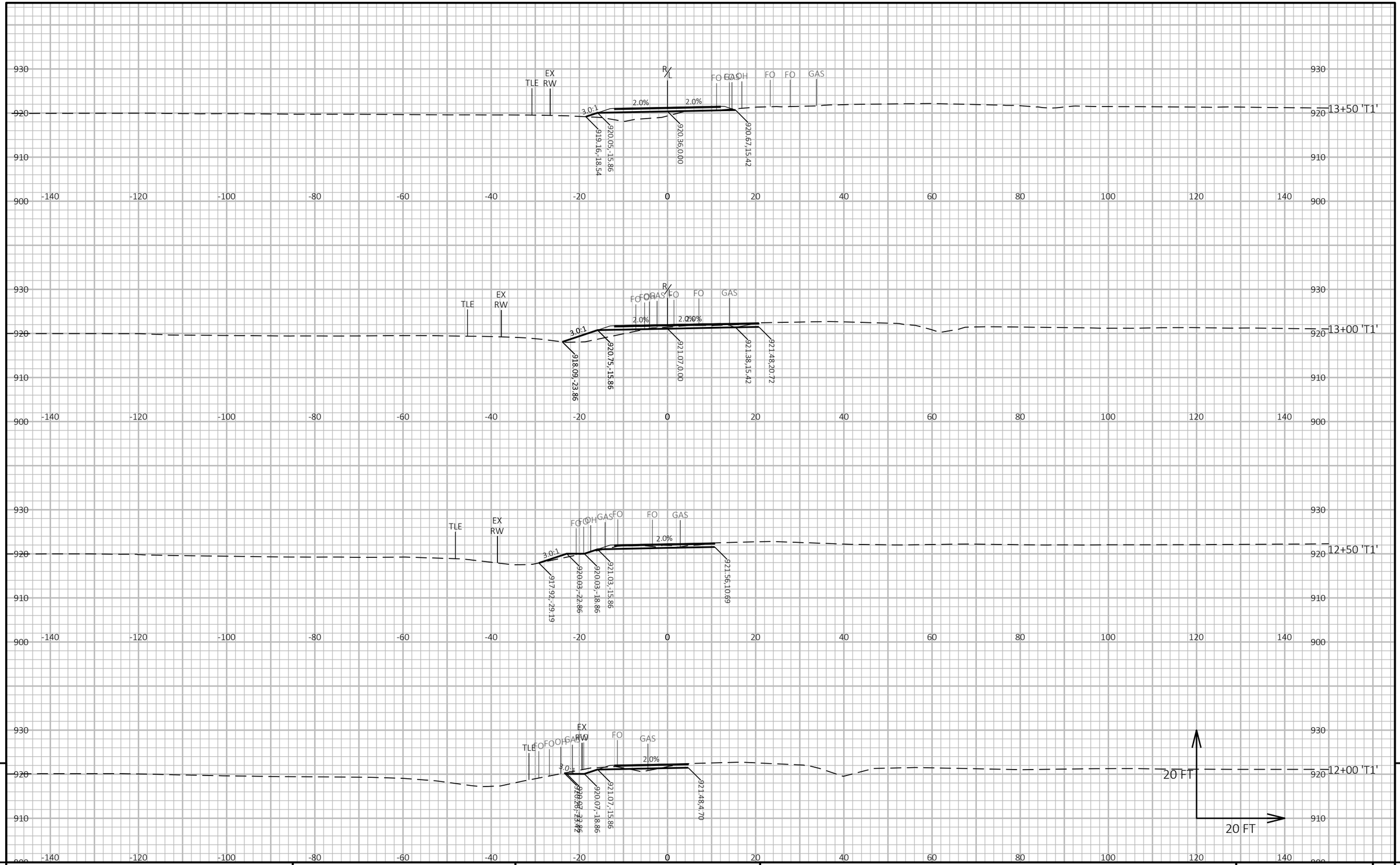
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'T1' | SHEET 231 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - T1 1

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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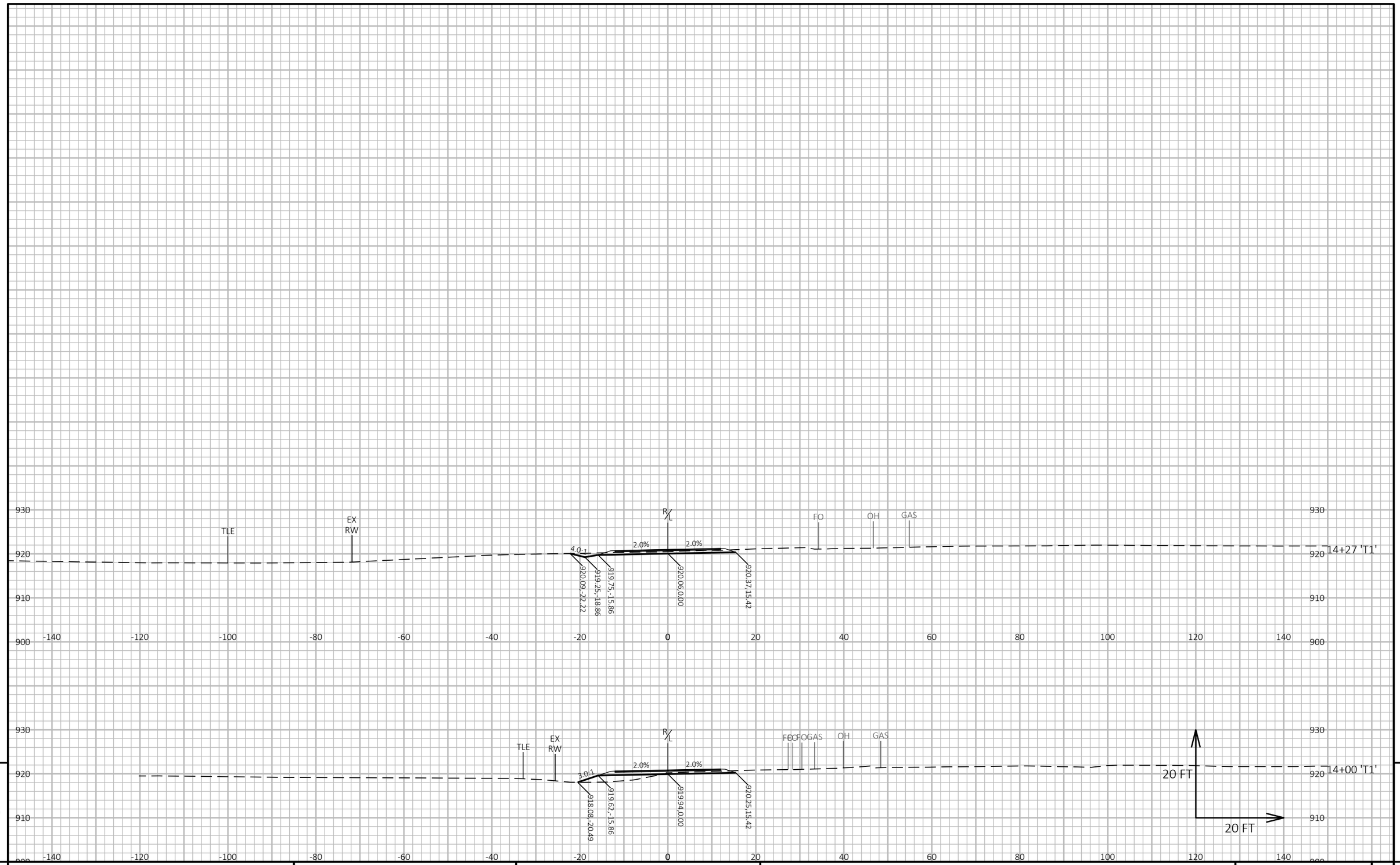
| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'T1' | SHEET 232 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - T1 2

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 8996-01-07 | HWY: CTH J | COUNTY: CHIPPEWA | CROSS SECTIONS: TEMPORARY ROAD 'T1' | SHEET 233 | E |
|---|---|---|---|---|---|

FILE NAME : X:\AE\C\CHIPH\159106\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\CIVIL 3D\89960176\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - T1 3

PLOT DATE : 7/26/2024 8:58 AM PLOT BY : DEAN STODOLA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

**Wisconsin Department of Transportation**

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