GRE

NOVEMBER 2025

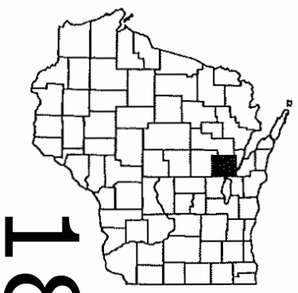
PROJECT ID: 4984-01-79

COUNTY: OUTAGAMIE

ORDER OF SHEETS



TOTAL SHEETS = 126



18

N

DESIGN DESIGNATION

| | | | |
|---|---|---|---|
| A.A.D.T. | 2025 | = | 2950 |
| A.A.D.T. | 2045 | = | 3000 |
| D.H.V. | | = | 10% |
| D.D. | | = | 60-40 |
| T. | | = | 8% |
| DESIGN SPEED | | = | 30 MPH |
| ESALS | | = | N/A |

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

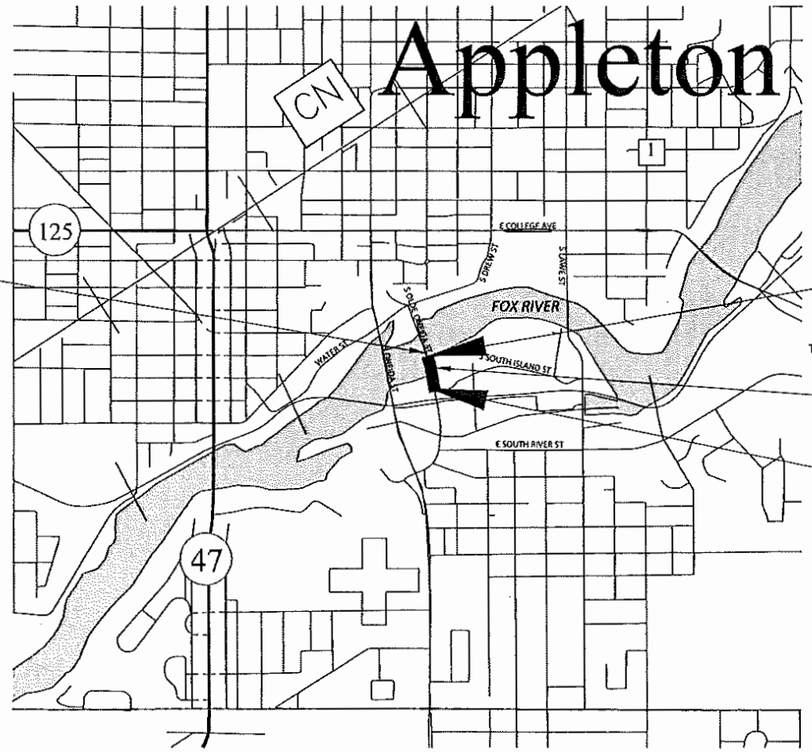
# C APPLETON, OLDE ONEIDA STREET

SOUTH MILL RACE BRIDGE

## LOC STR

## OUTAGAMIE COUNTY

| STATE PROJECT NUMBER |
|---|
| 4984-01-79 |




TOTAL NET LENGTH OF CENTERLINE = 0.053 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), OUTAGAMIE 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 |
| 4984-01-79 | WISC2026076 | 1 |
| | | |
| | | |
| | | |

ACCEPTED FOR
CITY OF APPLETON

DATE: 07.29.25 (Signature and Title of Official) CITY ENGINEER

ORIGINAL PLANS PREPARED BY


exp U.S. Services Inc.
T: +1.414.221.0088 | F: +1.414.221.0537
3701 E Evergreen Dr, Suite 300A
Appleton, WI 54913
U.S.A.
www.exp.com


• BUILDINGS • EARTH & ENVIRONMENT • ENERGY
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

WISCONSIN
ROWLAND P. ZINGLER-HOSLET
E-30521
GREEN BAY
WIS.
PROFESSIONAL ENGINEER

DATE: 7/24/25 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

| | |
|---|---|
| Surveyor | EXP U.S. SERVICES INC. |
| Designer | EXP U.S. SERVICES INC. |
| Project Manager | MICHAEL COHEN |
| Regional Examiner | |
| Regional Supervisor | KIMBERLY SLEZAK |

APPROVED FOR THE DEPARTMENT

DATE: 7/29/25 (Signature)

E

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\DD112138\010101-TI.DWG

PLOT DATE : 7/22/2025 6:46 PM

PLOT BY : JOHN BOURGEOIS

PLOT NAME :

## UTILITIES CONTACTS

AT&T
COMMUNICATION
KYLE WEBER
221 W WASHINGTON ST 4TH FLOOR
APPLETON, WI 54911
PHONE: 920-221-5969
EMAIL: KW715W@ATT.COM

CITY OF APPLETON
ELECTRIC, WATER, SEWER
CHAD WEYENBERG
100 N APPLETON ST
APPLETON, WI 54915
PHONE: 920-832-5915
EMAIL: CHAD.WEYENBERG@APPLETONWI.GOV

WE ENERGIES
ELECTRIC
ZACH DUGA
800 S LYNNDALE DR
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PHONE: 920-380-3458
EMAIL: ZACHARY.DUGA@WE-ENERGIES.COM

WE ENERGIES
GAS
JESUS VICTORIA
800 S LYNNDALE DR
APPLETON, WI 54914
PHONE: 920-380-3314
EMAIL: JESUS.VICTORIA@WECENERGYGROUP.COM

## ORDER OF SECTION 2 DETAIL SHEETS



## WISCONSIN DNR LIAISON

MATT SCHAEVE
NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
PHONE: 920-366-1544
EMAIL: MATTHEW.SCHAEVE@WISCONSIN.GOV

## STATEWIDE FERC COORDINATOR

CHERYL LAATSCH
WISCONSIN DNR
N7725 HWY 28
HORICON, WI 53032
PHONE: 920-382-9975
EMAIL: CHERYL.LAATSCH@WISCONSIN.GOV

## FERC LICENSE & COMPLIANCE COORDINATOR

JASON KREUSCHER
RENEWABLE WORLD ENERGIES
100 STATE STREET
NESHKORO, WI 54960
PHONE: 715-572-7602
EMAIL: JASON@RWEHYDRO.COM

## DESIGN PROJECT MANAGER

MIKE COHEN
NORTHEAST REGION
944 VAN DER PERREN WAY
GREEN BAY, WI 54304
PHONE: 920-492-5623
EMAIL: MICHAEL.COHEN@DOT.WI.GOV

## CITY OF APPLETON

CHAD WEYENBERG
PUBLIC WORKS
100 N APPLETON ST
APPLETON, WI 54915
PHONE: 920-832-6474
EMAIL: CHAD.WEYENBERG@APPLETONWI.GOV

## CITY OF APPLETON

MICHAEL HARDY
LIGHTING
2625 E GLANDALE AVE
APPLETON, WI 54911-8688
PHONE: 920-832-5580
EMAIL: MICHAEL.HARDY@APPLETON.ORG

## DESIGN PROJECT LEADER

ROWLAND HOSLET
EXP US SERVICES
3701 E. EVERGREEN DRIVE, SUITE 300A
APPLETON, WI 54913
PHONE: 920-857-6304
EMAIL: ROWLAND.HOSLET@EXP.COM

## COUNTY HIGHWAY COMMISSIONER

DEAN STEINGRABER
OUTAGAMIE COUNTY
320 S WALNUT ST
APPLETON, WI 54911
PHONE: 920-832-5673
EMAIL: DEAN.STEINGRABER@OUTAGAMIE.ORG

## GENERAL NOTES

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

2

## RUNOFF COEFFICIENT TABLE

| | HYDROLOGIC SOIL GROUP | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | | 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 STRIPTURF: | .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 SLOPETURF: | | | .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 = 0.530 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.377 ACRES

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

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | GENERAL NOTES | SHEET 2 | E |
|---|---|---|---|---|---|

2

N

ONEIDA STREET

CITY OF APPLETON

W EDISON AVENUE

FOX RIVER

MIDDLE APPLETON DAM

EXISTING STRUCTURE P-44-0723
PROPOSED STRUCTURE B-44-502

OLDE ONEIDA STREET

STRUCTURE B-44-886 (TO REMAIN)

WATER STREET

22+00

20+00

18+00

END PROJECT
STA 21+55
MATCH EXISTING
SAW CUT REQ'D

BEGIN PROJECT
STA 18+75
MATCH EXISTING
SAW CUT REQ'D

HYDROELECTRIC HERITAGE TRAIL

FOX RIVER

SOUTH MILL RACE
FOX RIVER

E LINCOLN STREET

E SOUTH RIVER STREET

E EAGLE FLATS PARKWAY

E SOUTH ISLAND STREET

2

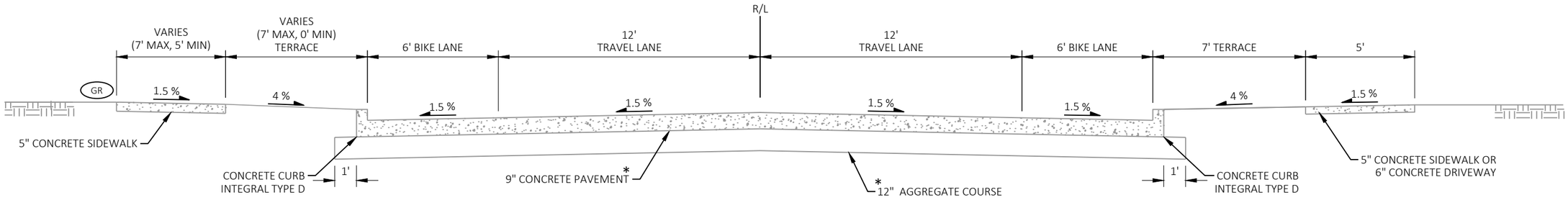
| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | PROJECT OVERVIEW | SHEET 3 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\020201-PO.DWG
LAYOUT NAME - 020201

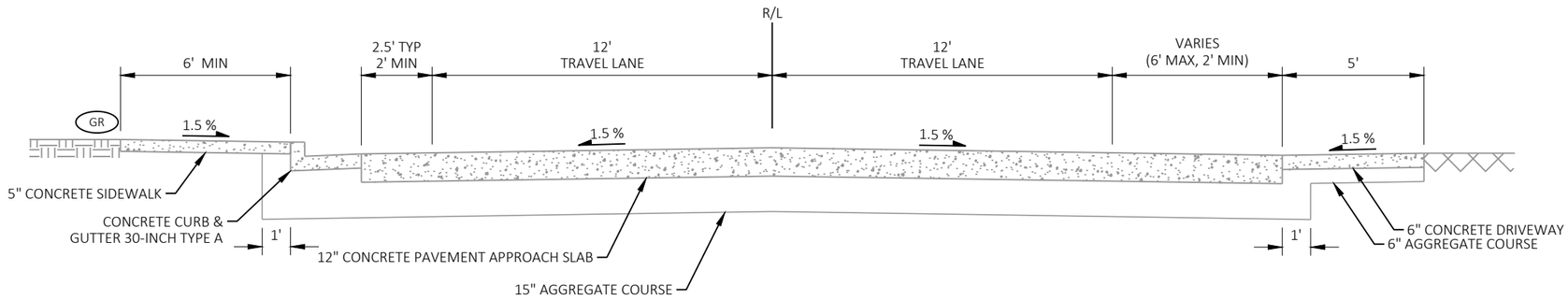
PLOT DATE : 7/22/2025 6:46 PM PLOT BY : JOHN BOURGEOIS PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2




EXISTING TYPICAL SECTION
OLDE ONEIDA STREET
STA 18+75 - STA 19+94 (P-44-723)




EXISTING TYPICAL SECTION
OLDE ONEIDA STREET
(P-44-723) STA 21+27 - STA 21+55 (P-44-886)

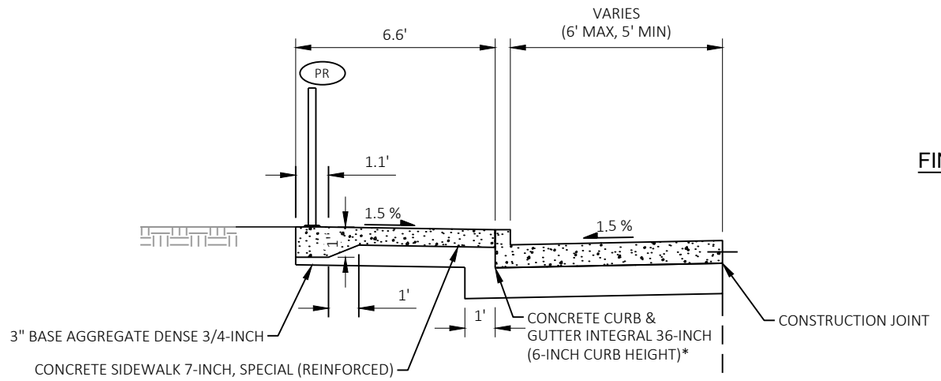
NOTES

* STA 19+74 - STA 19+94 (P-44-723) PAVEMENT STRUCTURE PER BORING LOG:
12" CONCRETE PAVEMENT APPROACH SLAB
18" AGGREGATE COURSE

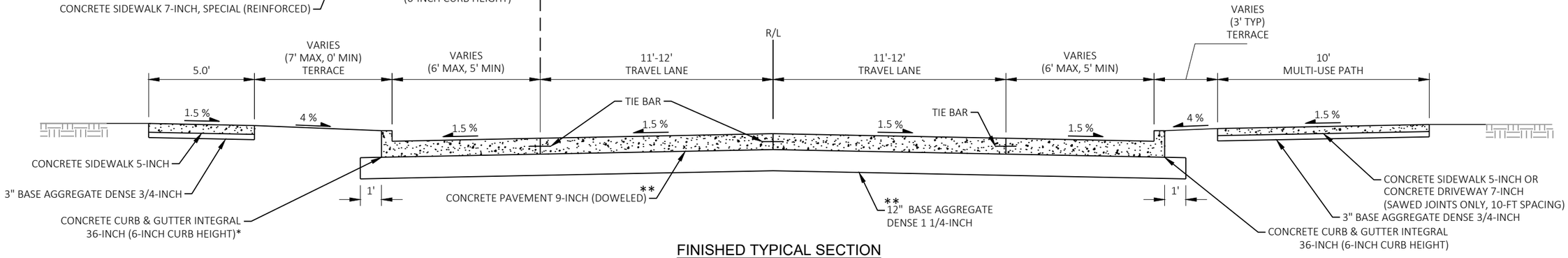
GR EXISTING GUARDRAIL OR RAILING. SEE REMOVALS FOR ADDITIONAL INFORMATION.

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | TYPICAL SECTIONS | SHEET 4 | E |
|---|---|---|---|---|---|

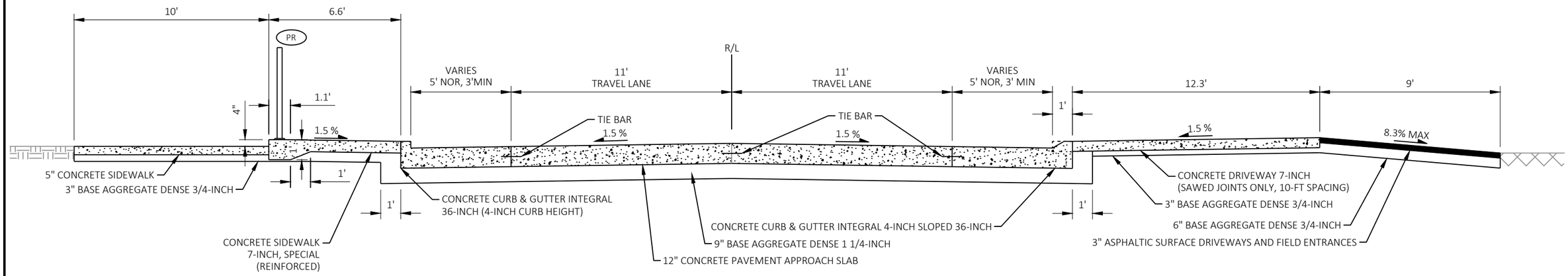
2




FINISHED TYPICAL SECTION
OLDE ONEIDA STREET
STA 19+14- STA 18+97 (B-44-502)




FINISHED TYPICAL SECTION
OLDE ONEIDA STREET
STA 18+75 - STA 18+97 (B-44-502)




FINISHED TYPICAL SECTION
OLDE ONEIDA STREET
(B-44-502) STA 21+35 - STA 21+55 (P-44-886)

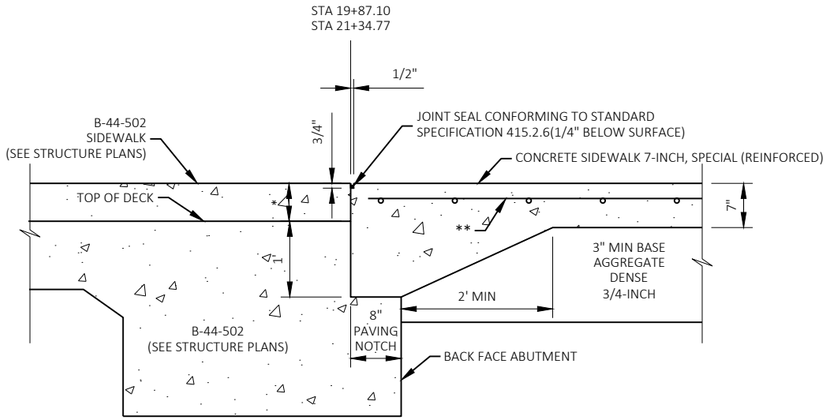
NOTES

* MAINTAIN 1.5% CROSS SLOPE IN GUTTER

** STA 19+75 - STA 19+90 (B-44-502) PROPOSED APPROACH SLAB PAVEMENT STRUCTURE:
12" CONCRETE PAVEMENT APPROACH SLAB
9" BASE AGGREGATE DENSE 1 1/4-INCH

PR PROPOSED RAILING. SEE CONSTRUCTION DETAILS AND PLAN DETAILS FOR ADDITIONAL INFORMATION.

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | TYPICAL SECTIONS | SHEET 5 | E |
|---|---|---|---|---|---|



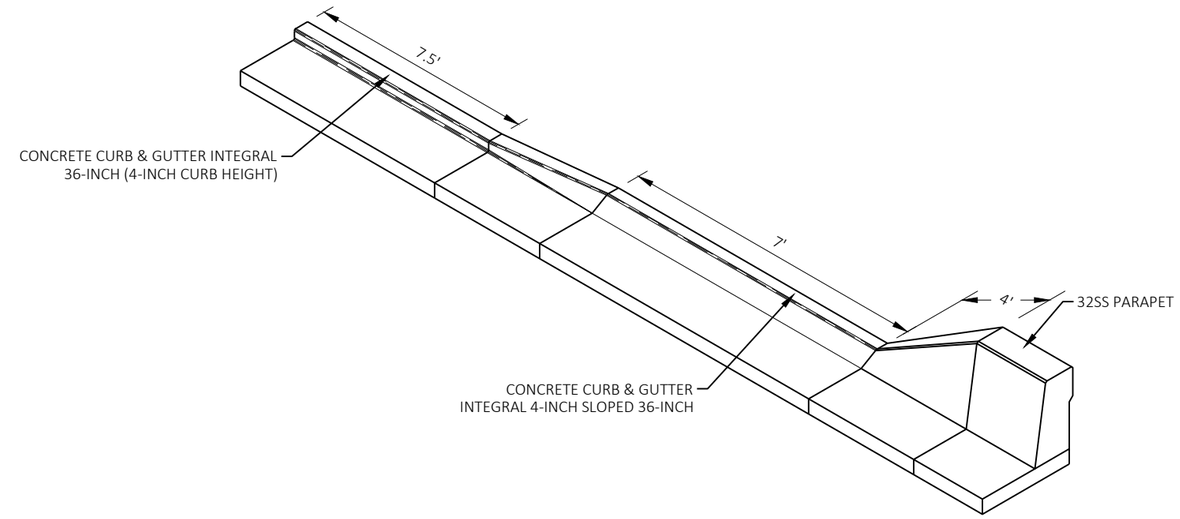

## SIDEWALK STRUCTURE APPROACH DETAIL

NOTES

* SIDEWALK THICKNESS IS 4" AT STA 19+87.10, RT AND STA 21+34.77, RT. SIDEWALK THICKNESS IS 6" AT STA 19+87.10, LT AND STA 21+34.77, LT.

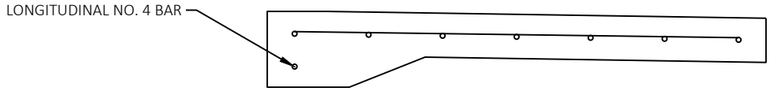
** MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

SEE SDD "CONCRETE PAVEMENT APPROACH SLAB" AND STRUCTURE PLANS FOR ADDITIONAL INFORMATION.

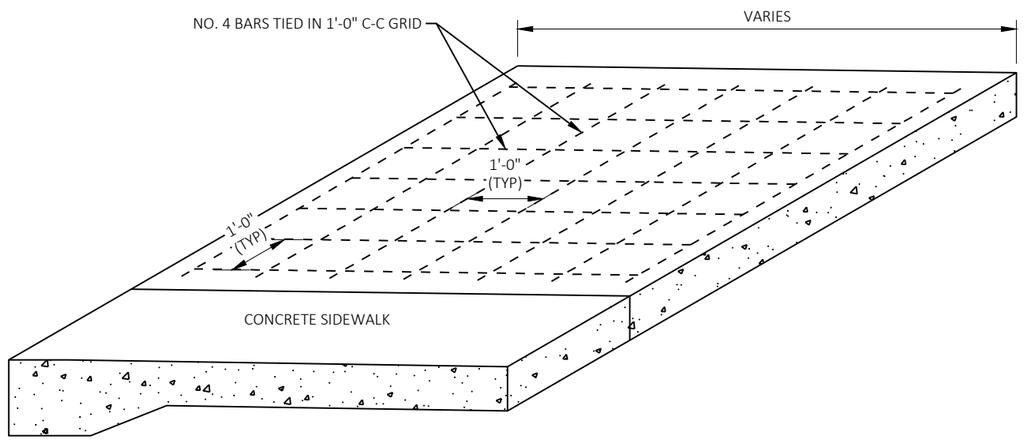



## URBAN DRIVEWAY DETAIL

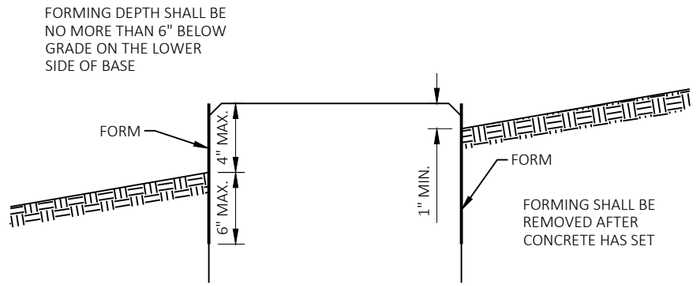
STA 21+35 TO STA 21+56




PROFILE VIEW OF REINFORCED CONCRETE SIDEWALK




## CONCRETE SIDEWALK 7-INCH, SPECIAL (REINFORCED) DETAIL

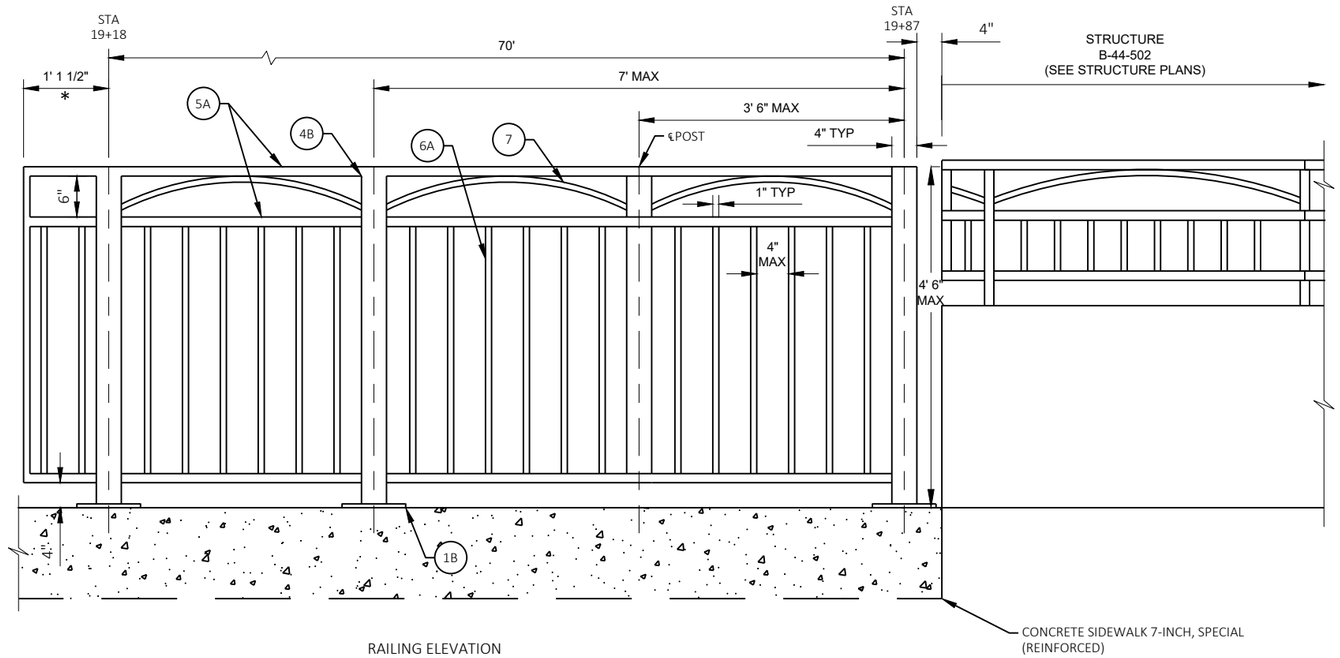



## CONCRETE BASES TYPE 2 FORMING DETAIL

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | CONSTRUCTION DETAILS | SHEET 6 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\021001-CD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/22/2025 6:46 PM
PLOT BY : JOHN BOURGEOIS
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2




RAILING ELEVATION

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 CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

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

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

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

ALL MATERIAL (EXCEPT NO. 3 & 12) 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 TEH CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

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

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

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

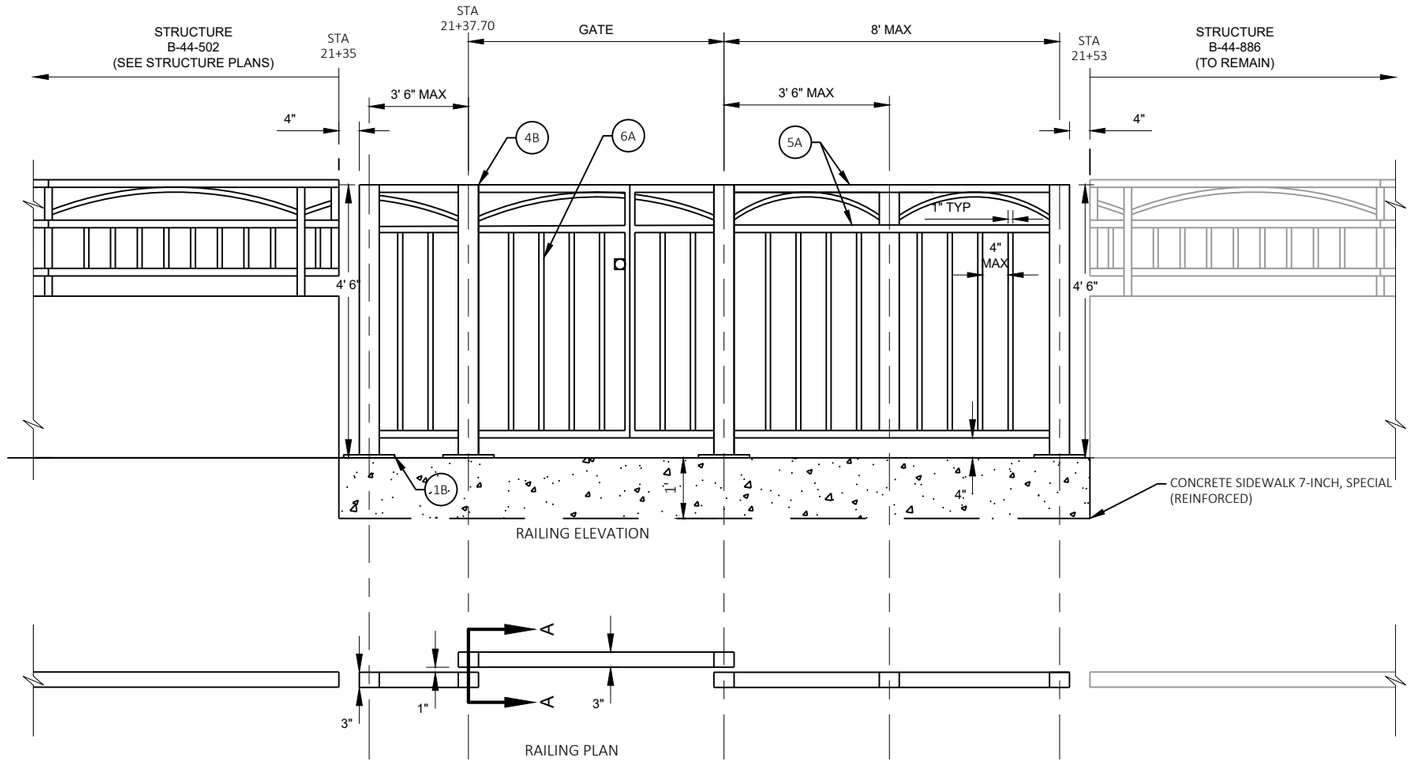
## RAILING STEEL PEDESTRIAN TYPE C3

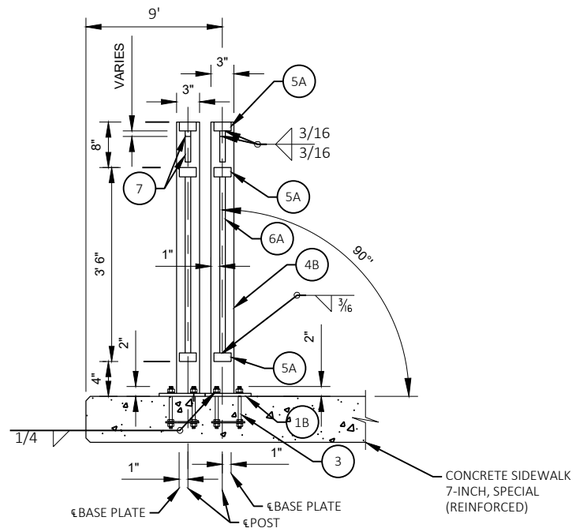
STA 19+17 - STA 19+87, LT

LEGEND

- (1B) PLATE $\frac{5}{8}$" X 6" X 10" WITH $\frac{3}{4}$" X 1 $\frac{1}{2}$" SLOTTED HOLES.
- (2B) $\frac{1}{4}$" X 5" X 9" ANCHOR PLATE WITH $\frac{11}{16}$" ø HOLES FOR ANCHOR BOLTS NO. 3.
- (3) 5/8" Ø X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS 5/8-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.
- (4B) STRUCTURAL TUBING 3" X 3" X $\frac{3}{16}$". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1 $\frac{1}{2}$" X $\frac{3}{16}$" RAILS. WELD TO NO. 1 & 4.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. (SPACE AT 6" MAX. C/L TO C/L SPACING). PLACE VERTICAL
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)
- * AS REQUIRED TO CLOSE SPACE BETWEEN RAILS AND OTHER STRUCTURES (TYP BOTH SIDES)

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | CONSTRUCTION DETAILS | SHEET 7 | E |
|---|---|---|---|---|---|




SECTION A-A
THRU RAILING

## RAILING STEEL PEDESTRIAN TYPE C3

STA 21+35 - STA 21+53, LT

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 CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

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

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

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

ALL MATERIAL (EXCEPT NO. 3 & 12) 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 TEH CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

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

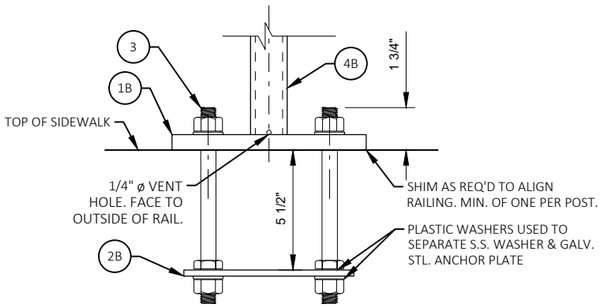
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDED 3 OR 4 POSTS.

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

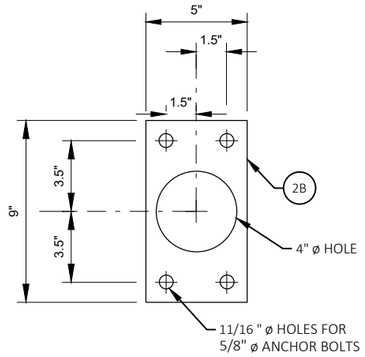
LEGEND

- (1B) PLATE $\frac{5}{8}$" X 6" X 10" WITH $\frac{3}{4}$" X 1 $\frac{1}{2}$" SLOTTED HOLES.
- (2B) $\frac{1}{4}$" X 5" X 9" ANCHOR PLATE WITH $\frac{11}{16}$" ø HOLES FOR ANCHOR BOLTS NO. 3.
- (3) 5/8" Ø X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS 5/8-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.
- (4B) STRUCTURAL TUBING 3" X 3" X $\frac{3}{16}$". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1 $\frac{1}{2}$" X $\frac{3}{16}$" RAILS. WELD TO NO. 1 & 4.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. (SPACE AT 6" MAX. C/L TO C/L SPACING). PLACE VERTICAL
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)

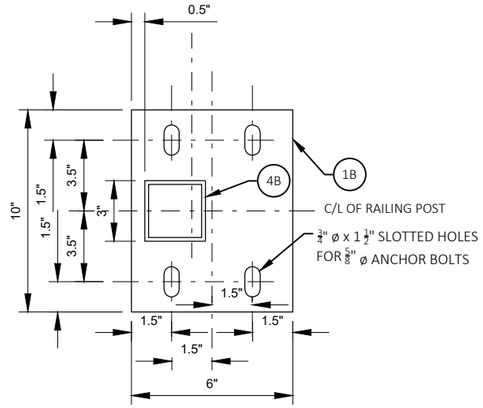
| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | CONSTRUCTION DETAILS | SHEET 8 | E |
|---|---|---|---|---|---|



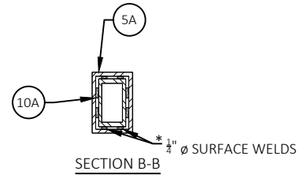

ANCHOR BOLTS FOR RAIL POSTS
(ANCHOR PLATE NOTE REQ'D WHEN TYPE "S" ANCHORS ARE USED.)



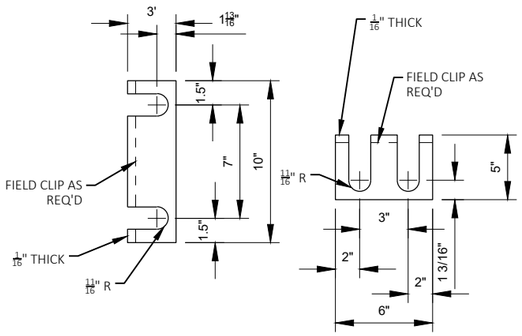

ANCHOR PLATE
FOR 3" X3" X 3/16" POSTS




TYPICAL RAIL POST BASE PLATE
FOR 3" X 3" X $\frac{3}{16}$" POSTS

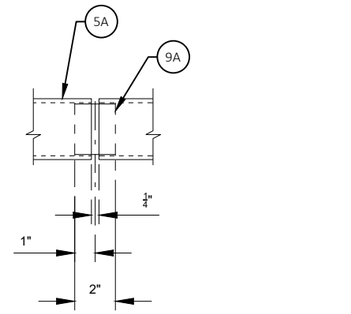



SECTION B-B

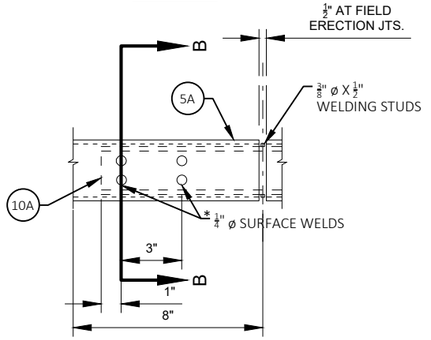



RAIL POST SHIM DETAIL

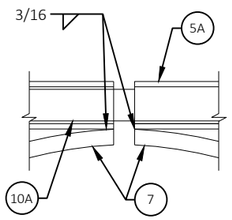
(2 SETS PER (1B) POST PLATE)




SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)




FIELD ERECTION JOINT DETAIL
(* MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE)




CURVED MEMBER JOINT DETAIL

LEGEND

(1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1 ½" SLOTTED HOLES.

(2B) ¼" X 5" X 9" ANCHOR PLATE WITH 11/16" ø HOLES FOR ANCHOR BOLTS NO. 3.

(3) 5/8" Ø X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS 5/8-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

(4B) STRUCTURAL TUBING 3" X 3" X $\frac{3}{16}$". PLACE VERTICAL. WELD TO NO. 1 & 5.

(5A) STRUCTURAL TUBING 3" X 1 ½" X $\frac{3}{16}$" RAILS. WELD TO NO. 1 & 4.

(6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. (SPACE AT 6" MAX. C/L TO C/L SPACING). PLACE VERTICAL

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

(9A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$" PLATES. PROVIDE "SLIDING FIT".

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

## RAILING STEEL PEDESTRIAN TYPE C3 (CONTINUED)

STA 21+32 - STA 21+53, LT

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS, P-44-723
- REMOVING CONCRETE SURFACE PARTIAL DEPTH

N

FOX RIVER
MIDDLE APPLETON DAM

FOX RIVER

REMOVING FENCE
MOVE LIGHT POLES (BY OTHERS)
REMOVING CONCRETE BASES
REMOVING FENCE
REMOVING INLET
REMOVING STORM SEWER 12-INCH

REMOVING GUARDRAIL STA 19+19 - STA 19+95, LT

21+00
20+00
19+00

SALVAGE METER PEDESTAL (CONTROL CABINET TO BE REMOVED BY OTHERS)
REMOVING FENCE
REMOVING CONCRETE BASES
REMOVING BOLLARD
REMOVING STORM SEWER 12-INCH
REMOVING INLET

REMOVING INLETS
REMOVING STORM SEWER 12-INCH
MOVE LIGHT POLE (BY OTHERS)
REMOVING CONCRETE BASES
REMOVING STORM SEWER 10-INCH
REMOVING INLETS
REMOVING GUARDRAIL STA 19+90 - STA 20+01

SOUTH MILL RACE
FOX RIVER

RELOCATE HYDRANT (BY OTHERS)

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | REMOVALS | SHEET 10 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\021101-RM.DWG
LAYOUT NAME - 021101

PLOT DATE : 7/22/2025 6:47 PM PLOT BY : JOHN BOURGEOIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

NOTES

CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS

LEGEND

- SAWING CONCRETE
- SAWING ASPHALT
- SLOPE INTERCEPT
- SILT FENCE
- PETROLEUM ABSORBENT BOOM
- SAFETY FENCE
- S1 CONCRETE SIDEWALK 5-INCH
- S2 CONCRETE SIDEWALK 7-INCH
- S3 CONCRETE SIDEWALK 7-INCH, SPECIAL (REINFORCED)
- D1 CONCRETE DRIVEWAY 7-INCH
- P1 12" CONCRETE PAVEMENT APPROACH SLAB
- P2 CONCRETE PAVEMENT 9-INCH (DOWELED)
- D2 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- C1 CONCRETE CURB & GUTTER INTEGRAL 36-INCH
- C2 CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH
- R1 RAILING STEEL PEDESTRAIN TYPE C3
- INLET / INLET PROTECTION TYPE C (SEE STORM SEWER DETAIL)
- MANHOLE (SEE STORM SEWER DETAIL)
- TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 40, EROSION MAT URBAN CLASS I TYPE B
- CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA
- RELOCATED HYDRANT (BY OTHERS)

N

FOX RIVER

FOX RIVER
MIDDLE APPLETON DAM

OLDE ONEIDA STREET

STRUCTURE B-44-502

CAULK WITH NON-BITUMINOUS FILLER

TRANSITION FROM 6-INCH TO 4-INCH CURB HEAD

STA 21+34.77

END PROJECT
STA 21+55
MATCH EXISTING
SAW CUT REQ'D

BEGIN PROJECT
STA 18+75
MATCH EXISTING
SAW CUT REQ'D

BEGIN CONSTRUCTION
STA 18+60
MATCH EXISTING
SAW CUT REQ'D

SAWED JOINTS ONLY, 10-FT SPACING

LEVEL LANDING

LEVEL LANDING

STA 19+72.10

STA 19+87.10

+14.42 -23.29' LT

+86.49 -50.65' LT

+94.78 -48.37' LT

+72.89 -29.67' LT

+74.29 -24.74' LT

+60.34 -18.48' LT

+60.37 4.52' RT

+75 4.50' RT

+65.93 25.18' RT

+65.93 30.74' RT

+73.28 36.52' RT

+47.36 31.71' RT

+69.47 31.99' RT

+27.01 40.46' RT

+26.61 49.05' RT

+46.47 48.50' RT

+48.36 48.58' RT

SOUTH MILL RACE
FOX RIVER

NORTH ISLAND TRAIL

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | PLAN DETAILS | SHEET 11 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\021201-PD.DWG
LAYOUT NAME - 021201

PLOT DATE : 9/14/2025 3:32 PM

PLOT BY : JESSICA SPLITTGERBER

PLOT NAME :

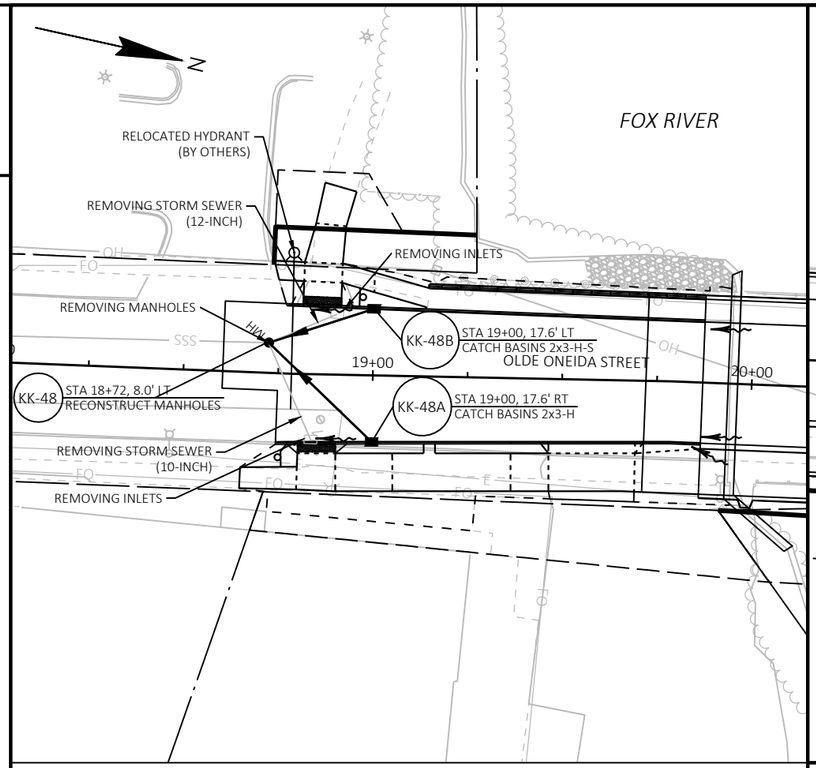
WISDOT/CADDS SHEET 42

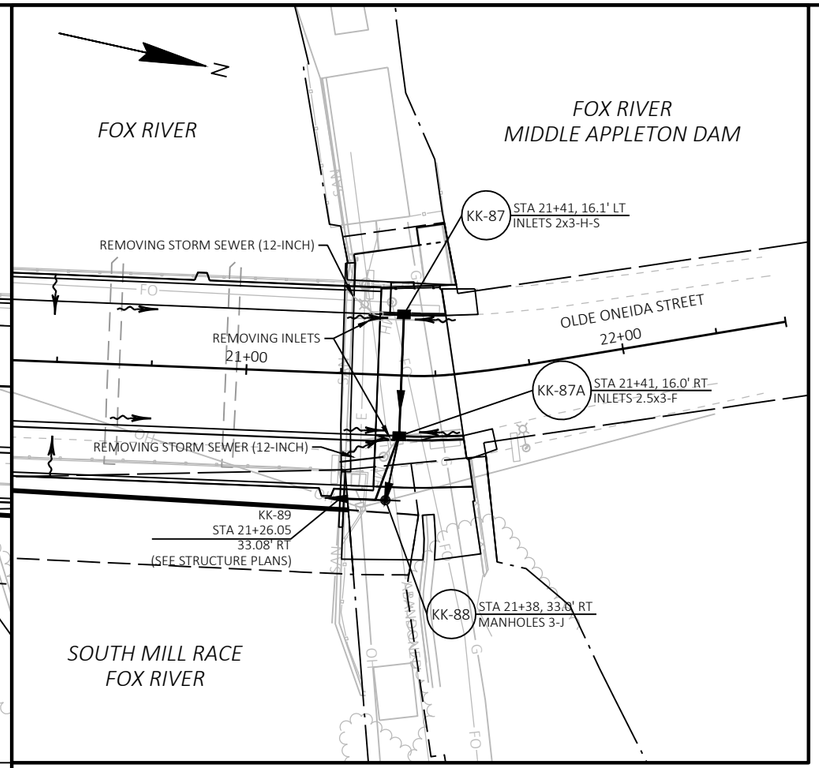
| PAVING GRADES | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 1 | 19+87.10 | 16.00' LT | 724.16 | 560289.01 | 828119.98 |
| 2 | 19+87.10 | 16.00' RT | 724.16 | 560294.77 | 828151.46 |
| 3 | 19+84.18 | 16.00' RT | 724.13 | 560291.90 | 828151.98 |
| 4 | 19+78.49 | 16.00' RT | 724.05 | 560286.61 | 828152.95 |
| 5 | 19+71.51 | 16.14' RT | 723.94 | 560279.80 | 828154.47 |
| 6 | 19+72.42 | 16.13' LT | 723.96 | 560274.26 | 828122.67 |
| 7 | 19+69.51 | 16.18' RT | 723.91 | 560277.85 | 828154.91 |
| 8 | 21+54.21 | 15.65' LT | 723.96 | 560451.22 | 828090.05 |
| 9 | 21+34.77 | 16.00' LT | 723.87 | 560434.28 | 828093.44 |
| 10 | 21+34.77 | 16.00' RT | 723.87 | 560440.03 | 828124.92 |
| 11 | 21+39.22 | 16.00' RT | 723.83 | 560444.40 | 828124.12 |
| 12 | 21+49.28 | 16.01' RT | 723.86 | 560455.48 | 828121.80 |
| 13 | 21+45.97 | 16.00' RT | 723.85 | 560451.62 | 828122.73 |
| 14 | 19+50.33 | 16.57' LT | 723.56 | 560252.52 | 828126.64 |
| 15 | 19+49.67 | 16.57' RT | 723.54 | 560258.48 | 828159.26 |
| 16 | 19+46.64 | 16.63' RT | 723.48 | 560255.52 | 828159.92 |
| 17 | 19+44.64 | 16.67' RT | 723.44 | 560253.57 | 828160.36 |
| 18 | 18+94.28 | 17.69' LT | 722.93 | 560197.38 | 828136.72 |
| 19 | 18+93.45 | 17.69' RT | 722.89 | 560203.62 | 828171.56 |
| 20 | 18+77.93 | 18.00' LT | 722.60 | 560181.64 | 828139.60 |
| 21 | 18+91.28 | 17.75' LT | 722.39 | 560194.42 | 828137.26 |
| 22 | 18+90.45 | 17.75' RT | 722.37 | 560200.69 | 828172.22 |
| 23 | 18+81.28 | 17.95' LT | 722.19 | 560184.59 | 828139.06 |

| PAVING GRADES | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 24 | 18+80.55 | 17.95' RT | 722.18 | 560191.02 | 828174.39 |
| 25 | 18+77.93 | 18.03' RT | 722.12 | 560188.11 | 828175.04 |
| 26 | 18+76.53 | 18.00' LT | 722.10 | 560180.27 | 828139.85 |
| 27 | 21+55.66 | 16.42' RT | 724.22 | 560462.67 | 828120.04 |
| 28 | 18+75.01 | 18.22' RT | 722.06 | 560185.28 | 828175.75 |
| 29 | 19+87.10 | 29.50' RT | 724.68 | 560297.19 | 828164.74 |
| 30 | 19+87.10 | 17.50' RT | 724.50 | 560295.04 | 828152.93 |
| 31 | 19+69.51 | 29.32' RT | 724.11 | 560280.47 | 828167.79 |
| 32 | 19+69.51 | 19.18' RT | 723.96 | 560278.45 | 828157.85 |
| 33 | 19+36.90 | 29.83' RT | 723.95 | 560248.61 | 828174.79 |
| 34 | 19+36.70 | 19.83' RT | 723.80 | 560246.42 | 828165.04 |
| 35 | 19+46.90 | 29.63' RT | 723.72 | 560258.37 | 828172.60 |
| 36 | 19+46.70 | 19.63' RT | 723.57 | 560256.18 | 828162.85 |
| 37 | 18+92.27 | 39.18' LT | 723.56 | 560191.12 | 828116.06 |
| 38 | 19+05.71 | 30.45' RT | 723.41 | 560218.17 | 828181.62 |
| 39 | 18+84.28 | 39.87' LT | 723.35 | 560183.16 | 828116.98 |
| 40 | 19+05.51 | 20.45' RT | 723.26 | 560215.98 | 828171.86 |
| 41 | 19+00.00 | 21.98' LT | 722.97 | 560202.12 | 828131.38 |
| 42 | 18+91.51 | 29.27' LT | 722.90 | 560192.35 | 828125.92 |
| 43 | 18+91.41 | 24.27' LT | 722.82 | 560193.25 | 828130.84 |
| 44 | 18+81.52 | 29.55' LT | 722.71 | 560182.50 | 828127.64 |
| 45 | 18+81.42 | 24.67' LT | 722.64 | 560183.38 | 828132.44 |
| 46 | 18+90.71 | 30.75' RT | 722.53 | 560203.53 | 828184.90 |

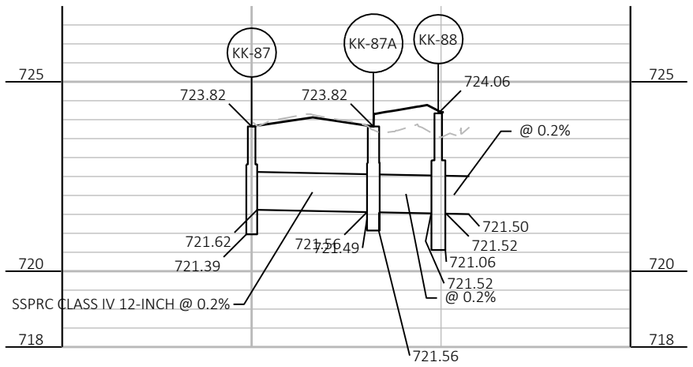
| PAVING GRADES | | | | | |
|---|---|---|---|---|---|
| POINT NUMBER | STATION | OFFSET | ELEVATION | NORTHING | EASTING |
| 47 | 18+90.51 | 20.75' RT | 722.38 | 560201.35 | 828175.15 |
| 48 | 18+80.32 | 30.46' RT | 722.54 | 560193.29 | 828186.69 |
| 49 | 18+80.44 | 24.46' RT | 722.45 | 560192.21 | 828180.79 |
| 50 | 19+00.00 | 27.14' LT | 723.04 | 560201.10 | 828126.33 |
| 51 | 21+34.77 | 29.50' RT | 724.40 | 560442.45 | 828138.20 |
| 52 | 21+56.24 | 29.96' RT | 724.42 | 560467.56 | 828132.68 |
| 53 | 21+27.18 | 31.47' LT | 723.90 | 560424.03 | 828079.59 |
| 54 | 21+34.77 | 23.03' LT | 724.46 | 560433.01 | 828086.52 |
| 55 | 21+37.31 | 16.07' LT | 723.85 | 560436.76 | 828092.91 |
| 56 | 21+37.31 | 23.38' LT | 724.44 | 560435.45 | 828085.72 |
| 57 | 21+43.86 | 39.19' LT | 723.90 | 560438.64 | 828069.07 |
| 58 | 21+56.50 | 39.80' LT | 723.94 | 560445.58 | 828066.47 |
| 59 | 21+53.79 | 22.75' LT | 724.04 | 560448.64 | 828083.42 |
| 60 | 21+37.25 | 24.38' LT | 724.44 | 560435.21 | 828084.75 |
| 61 | 21+43.35 | 24.74' LT | 724.28 | 560441.04 | 828083.31 |
| 62 | 21+43.43 | 23.75' LT | 724.27 | 560441.28 | 828084.29 |
| 63 | 18+77.93 | 18.53' RT | 722.58 | 560188.20 | 828175.53 |
| 64 | 18+76.44 | 20.64' RT | 722.55 | 560187.12 | 828177.88 |
| 65 | 18+76.64 | 24.64' RT | 722.53 | 560188.03 | 828181.77 |
| 66 | 18+76.76 | 30.51' RT | 722.62 | 560189.21 | 828187.52 |

2

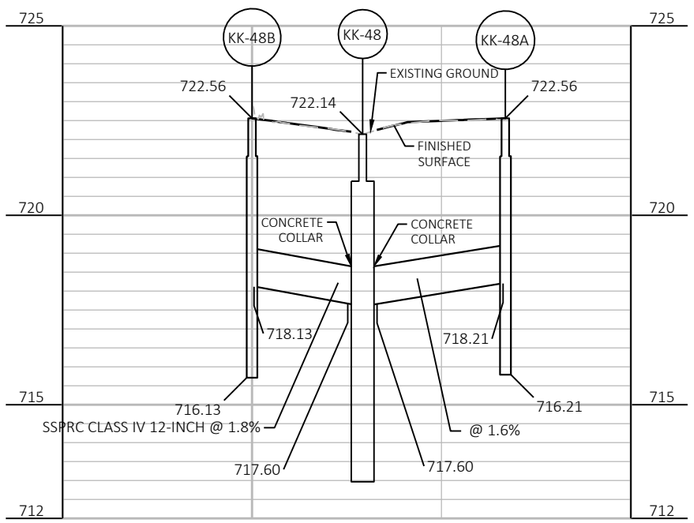



OLDE ONEIDA STREET STRUCTURE KK-87 - OUTLET KK-89




OLDE ONEIDA STREET STRUCTURE KK-48B - STRUCTURE KK-48A




STORM SEWER SCHEDULE

| FROM STRUCTURE | | | | TO STRUCTURE | PIPE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | RIM/ GRATE ELEV. | T.O.S. ELEV. | DEPTH | NO. | PIPE LENGTH C-C (FT) | CLASS | SIZE (IN) | INLET ELEV | OUTLET ELEV | SLOPE | COMMENT |
| KK-48B | 722.56 | 721.56 | 3.43 | KK-48 | 30 | SSPRC CLASS IV | 12 | 718.13 | 717.60 | 1.8% | |
| KK-48A | 722.56 | 721.56 | 3.35 | KK-48 | 38 | SSPRC CLASS IV | 12 | 718.21 | 717.60 | 1.6% | MATCH EXISTING. CONCRETE COLLARS FOR PIPE REQ'D |
| KK-87 | 723.82 | 722.82 | 1.20 | KK-87A | 32 | SSPRC CLASS IV | 12 | 721.62 | 721.56 | 0.2% | LESS THAN 6" OF ADJUSTMENT ANTICIPATED. CURB HEIGHT IS 4-INCHES |
| KK-87A | 723.82 | 722.86 | 1.30 | KK-88 | 18 | SSPRC CLASS III | 12 | 721.56 | 721.52 | 0.2% | |
| KK-88 | 724.06 | 722.82 | 1.30 | KK-89 | 12 | SSPRC CLASS III | 12 | 721.52 | 721.50 | 0.2% | |

NOTES

RIM ELEVATION SHOWN AT CURB FLOW LINE FOR INLETS. RIM ELEVATION SHOWN AT CENTER OF STRUCTURE FOR MANHOLES.

TOP OF STRUCTURE (T.O.S.) IS DETERMINED BY SUBTRACTING THE COVER HEIGHT AND 6-INCHES FOR ADJUSTMENT FROM THE RIM ELEVATION. H AND H-S COVERS ARE 6'. F COSVER IS 5.5". J COVER IS 8.875"

DEPTH OF STRUCTURE IS MEASURED BY SUBTRACTING INVERT ELEVATION FROM T.O.S.. ALL STRUCTURES HAVE NO SUMP.

PIPE SLOPE IS CALCULATED USING ((INLET ELEV - OUTLET ELEV)/PIPE LENGTH, C-C)*100

STRUCTURE STATION AND OFFSET IS TO CENTER OF STRUCTURE

2

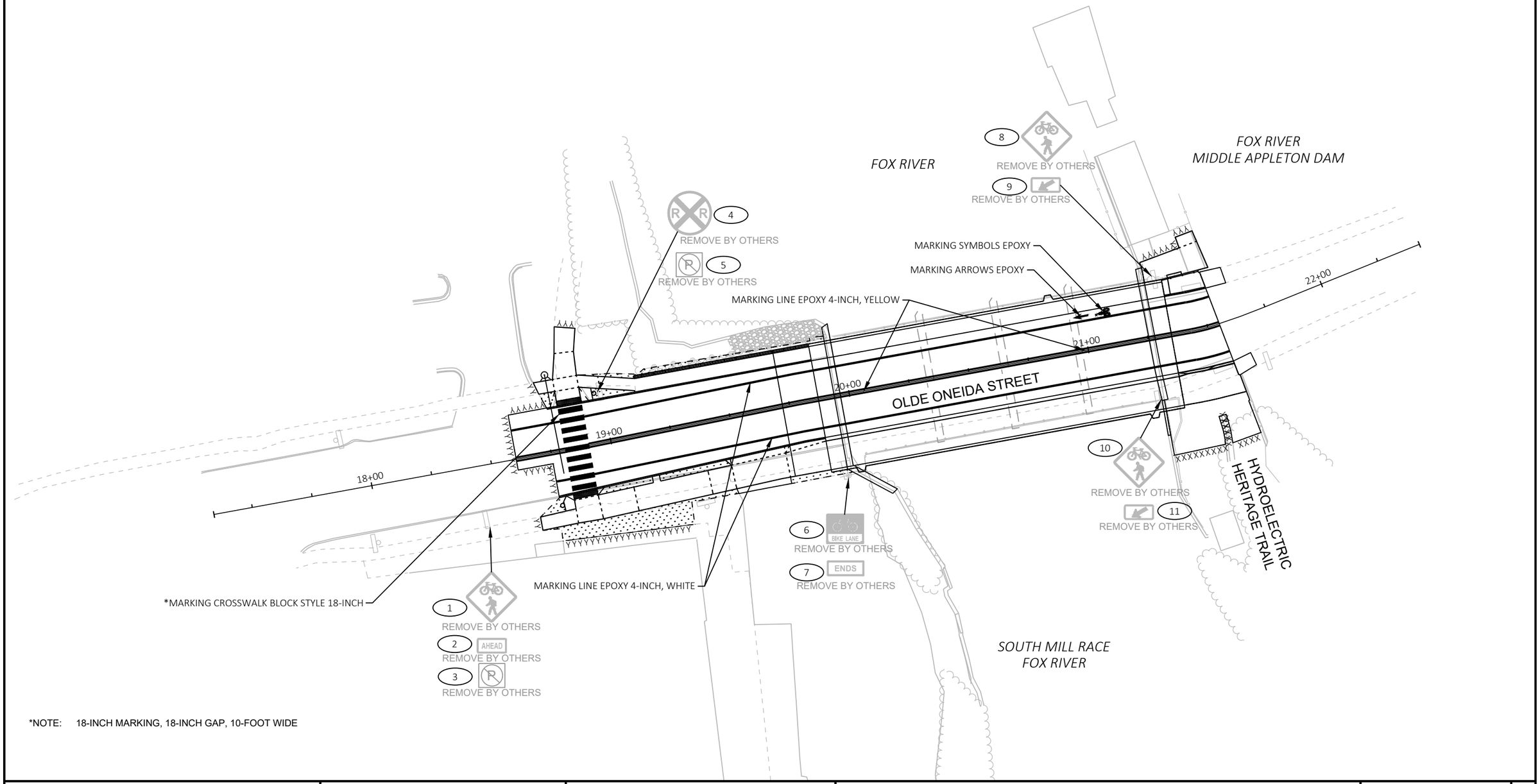
2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

X DENOTES SIGN NUMBER



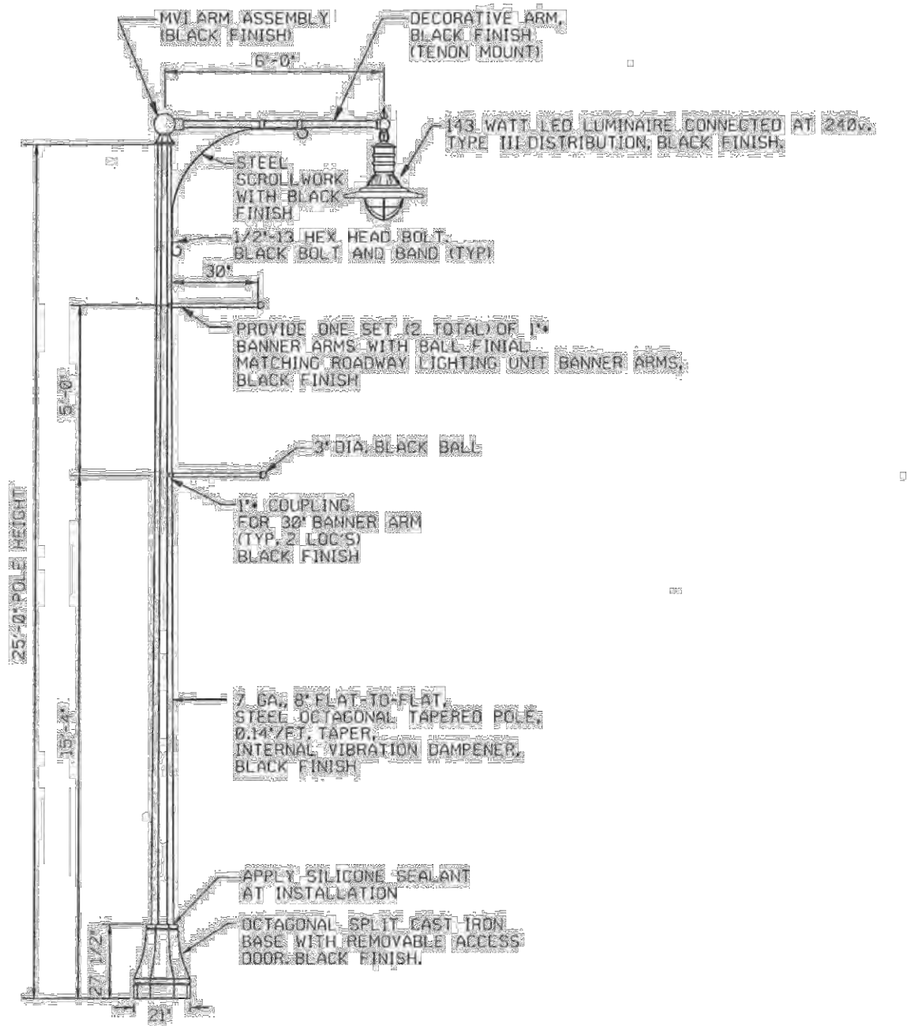

*NOTE: 18-INCH MARKING, 18-INCH GAP, 10-FOOT WIDE

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | PERMANENT SIGNING | SHEET 14 | E |
|---|---|---|---|---|---|

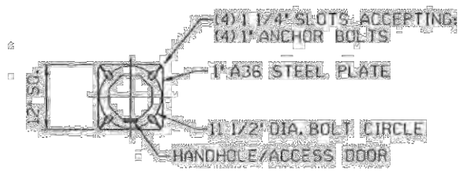
FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\023201-PS.DWG
LAYOUT NAME - 023201

PLOT DATE : 9/14/2025 3:53 PM PLOT BY : JESSICA SPLITTGERBER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

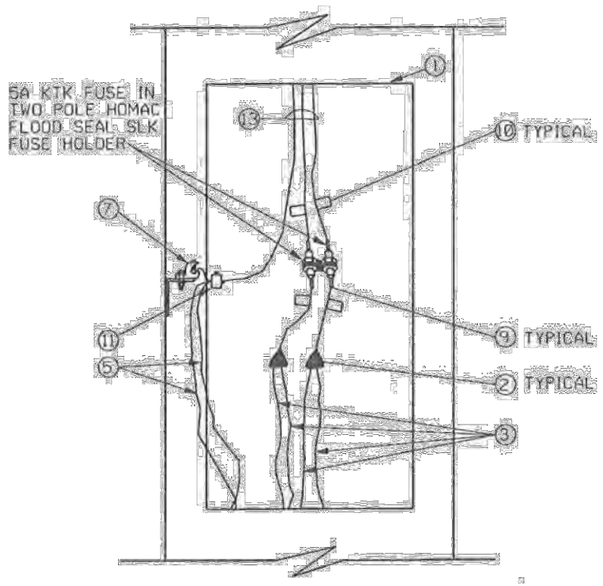



ELEVATION VIEW



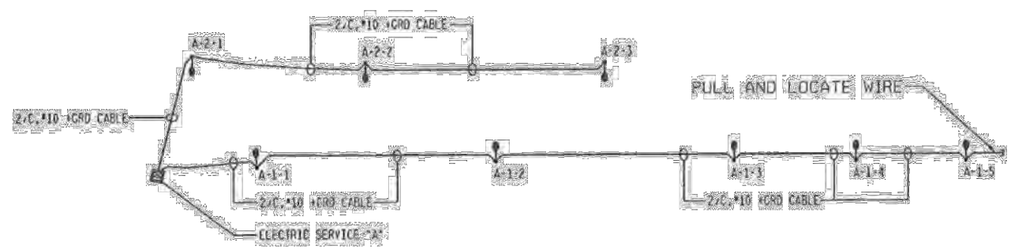

BASE PLATE DETAIL

BRIDGE LIGHTING UNIT
NO SCALE




POLE WIRING DETAIL
NO SCALE

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED CONDUCTORS WITH 18" SLACK
4. GROUNDED CONDUCTORS
5. SYSTEM GROUNDING CONDUCTORS
6. NOT USED
7. HANDHOLE GROUNDING LUG
8. NOT USED
9. 18" PIGTAIL BETWEEN SPLICE AND FUSE ASSEMBLY
10. CIRCUIT TAG
11. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTION (NOT INSULATED)
12. NOT USED
13. 3#12 TO LUMINAIRE WITH 18" SLACK BETWEEN FUSE AND LUMINAIRE




SERVICE "A" WIRING DIAGRAM
NTS

LIGHTING UNIT TO BE INSTALLED BY OTHERS

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | LIGHTING | SHEET 15 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\023601-LP.DWG
LAYOUT NAME - 023601
PLOT DATE : 7/22/2025 6:48 PM
PLOT BY : JOHN BOURGEOIS
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

## LIGHTING PLAN LEGEND

- CONCRETE CONTROL CABINET BASES TYPE 6 (CABINET BY OTHERS)
- PULL BOX NON-CONDUCTIVE 24X42-INCH
- CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH
- CONCRETE BASE TYPE 5 (30-FT LIGHT FIXTURE BY OTHERS)
- DECORATIVE STREET LIGHT (BY OTHERS)
- CONCRETE BASE TYPE 2 (RECTANGULAR RAPID FLASHING BEACON, BUTTONS, AND SIGNS BY OTHERS)
- TRAIL STYLE LAMP & POST (BY OTHERS)

N

INSTALL SALVAGED METER BREAKER

STA 18+97.01, -20.57' LT
SB 1

STA 19+05.24, -33.83' LT
CB 1

STA 19+04.94, -19.38' LT
PB 1

STA 18+75.68, 22.16' RT
SB 2

STA 19+15.29, 19.26' RT
SB 3

STA 19+08.51, 25.50' RT
PB 2

INTERCEPT EXISTING 2-INCH LIGHTING CONDUIT

REFER TO BRIDGE PLANS FOR STRUCTURAL CONDUIT

STA 21+29.73, 38.79' RT
PB 3

19+00

20+00

21+00

(1)

2

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | LIGHTING | SHEET 16 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\023601-LP.DWG
LAYOUT NAME - 023603
PLOT DATE : 7/22/2025 6:48 PM
PLOT BY : JOHN BOURGEOIS
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

BRIDGE OUT
R11-2B
48"X30"
1

TRAIL CLOSED
R11-2T
48"X30"
7

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"
2

AHEAD
W16-9P
24"X12"
8

ROAD CLOSED AHEAD
W20-3A
3

CLOSED
G20-62
48"X24"
9

ROAD CLOSED 500 FT
W20-3D
4

ACCESS TO OLDE ONEIDA STREET
R10-71 MOD.
66"X36"
10

SIDEWALK CLOSED
R9-9
24"X12"
5

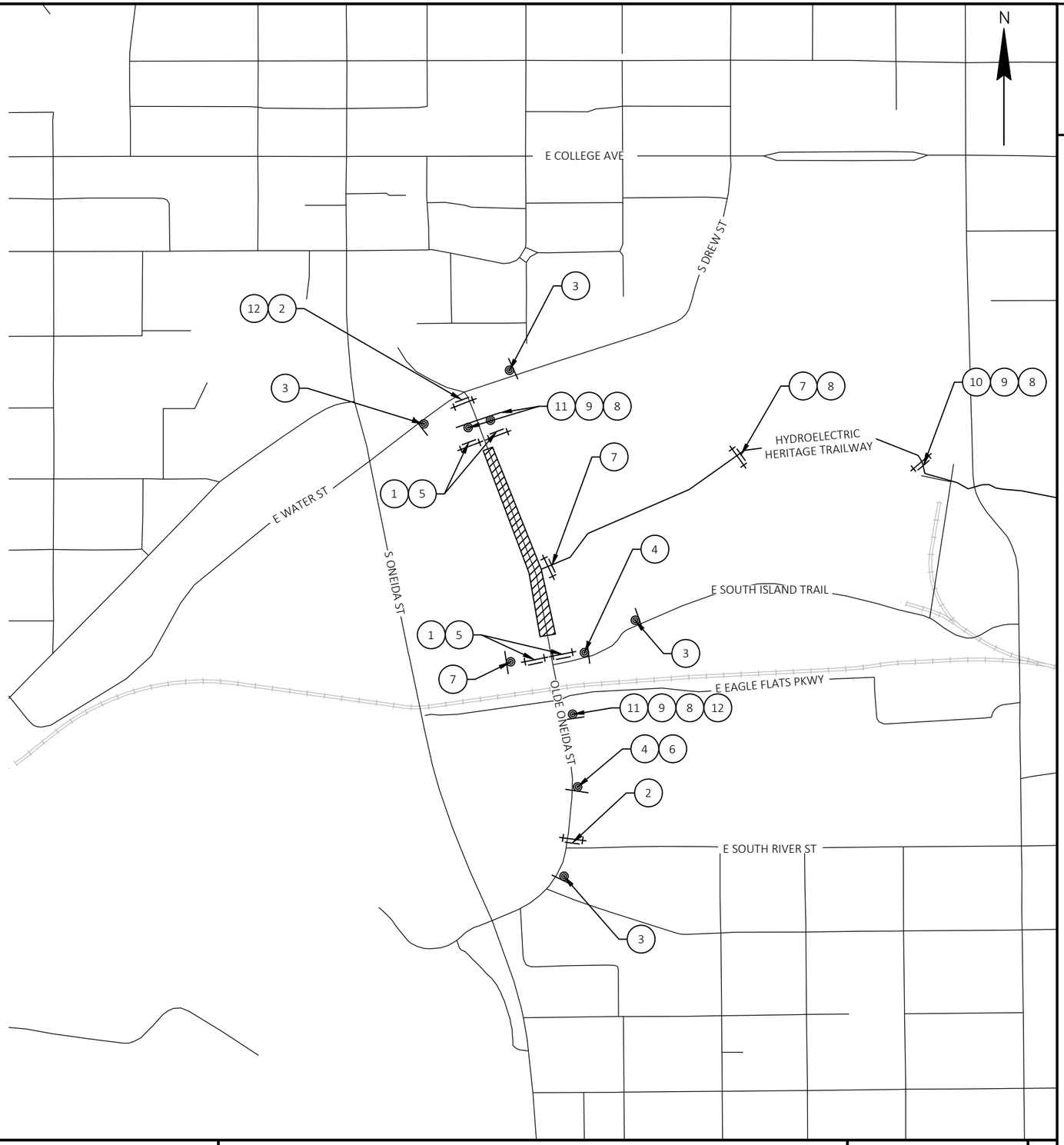
ACCESS TO HYDROELEC. HERITAGE TRL.
R10-71 MOD.
66"X36"
11

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"
6

MB
PCMS
12

LEGEND

- WORK ZONE
- TC SIGN ON PERMANENT SUPPORT
- TC BARRICADE TYPE III
- TC BARRICADE TYPE III WITH SIGN




NOTES

1. SIDEWALK CLOSURE SIGNS FOR THE NORTH ISLAND TRAIL ARE APPROXIMATE LOCATIONS AND ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD
2. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | DETOUR | SHEET 17 | E |
|---|---|---|---|---|---|

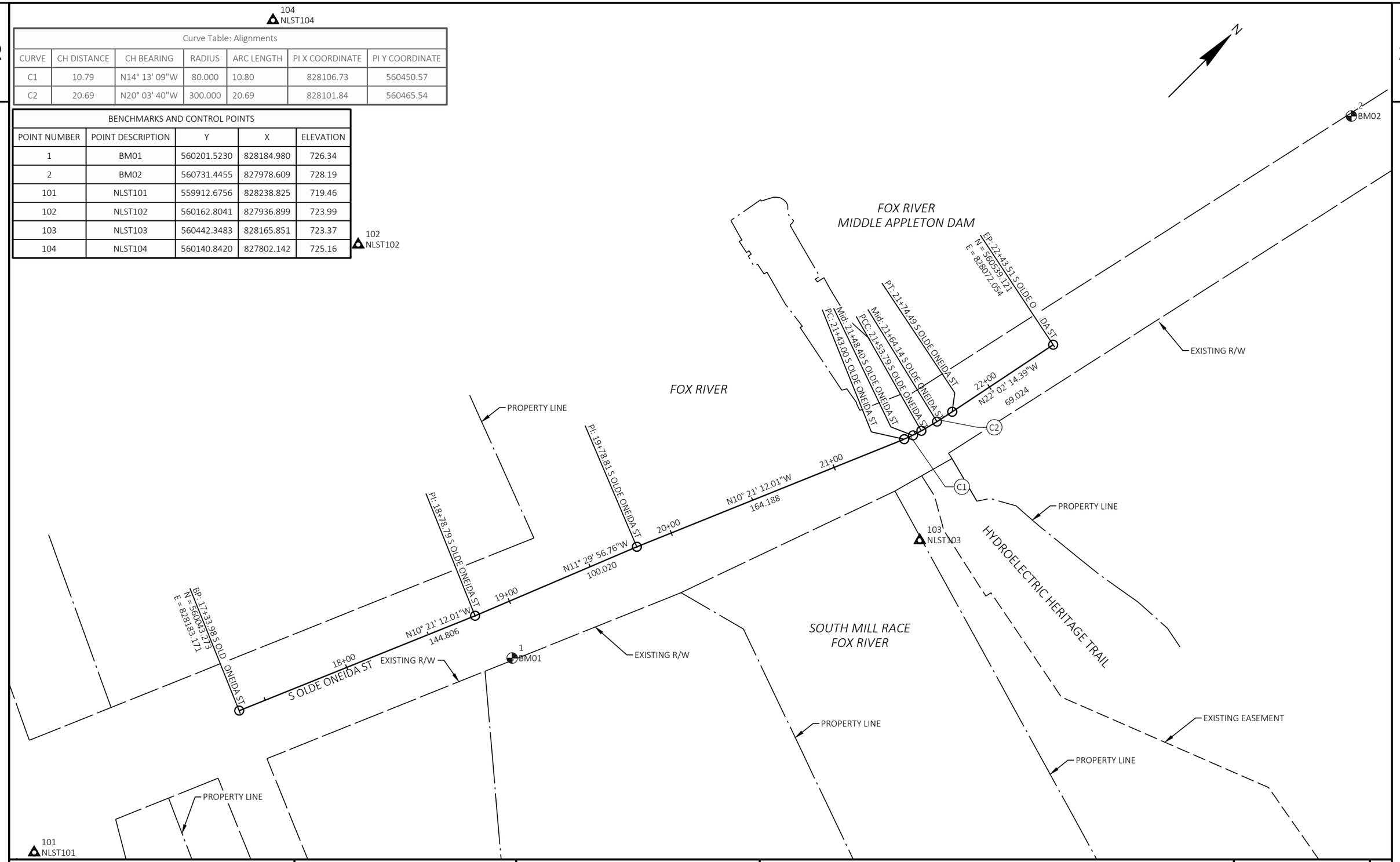
FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\027001-DT.DWG
LAYOUT NAME - 027001
PLOT DATE : 9/14/2025 3:50 PM
PLOT BY : JESSICA SPLITTGERBER
PLOT NAME :
PLOT SCALE : 1 IN:500 FT
WISDOT/CADDS SHEET 42

104
NLST104

| Curve Table: Alignments | | | | | | |
|---|---|---|---|---|---|---|
| CURVE | CH DISTANCE | CH BEARING | RADIUS | ARC LENGTH | PI X COORDINATE | PI Y COORDINATE |
| C1 | 10.79 | N14° 13' 09"W | 80.000 | 10.80 | 828106.73 | 560450.57 |
| C2 | 20.69 | N20° 03' 40"W | 300.000 | 20.69 | 828101.84 | 560465.54 |

| BENCHMARKS AND CONTROL POINTS | | | | |
|---|---|---|---|---|
| POINT NUMBER | POINT DESCRIPTION | Y | X | ELEVATION |
| 1 | BM01 | 560201.5230 | 828184.980 | 726.34 |
| 2 | BM02 | 560731.4455 | 827978.609 | 728.19 |
| 101 | NLST101 | 559912.6756 | 828238.825 | 719.46 |
| 102 | NLST102 | 560162.8041 | 827936.899 | 723.99 |
| 103 | NLST103 | 560442.3483 | 828165.851 | 723.37 |
| 104 | NLST104 | 560140.8420 | 827802.142 | 725.16 |

102
NLST102




| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | ALIGNMENT | SHEET 18 | E |
|---|---|---|---|---|---|

## Estimate Of Quantities

4984-01-79

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 203.0260 | Removing Structure Over Waterway Minimal Debris (structure) 01. P-44-723 | EACH | 1.000 | 1.000 |
| 0004 | 204.0100 | Removing Concrete Pavement | SY | 651.000 | 651.000 |
| 0006 | 204.0109.S | Removing Concrete Surface Partial Depth | SF | 107.000 | 107.000 |
| 0008 | 204.0155 | Removing Concrete Sidewalk | SY | 290.000 | 290.000 |
| 0010 | 204.0165 | Removing Guardrail | LF | 91.000 | 91.000 |
| 0012 | 204.0170 | Removing Fence | LF | 45.000 | 45.000 |
| 0014 | 204.0195 | Removing Concrete Bases | EACH | 4.000 | 4.000 |
| 0016 | 204.0220 | Removing Inlets | EACH | 4.000 | 4.000 |
| 0018 | 204.0245 | Removing Storm Sewer (size) 01. 10-Inch | LF | 28.000 | 28.000 |
| 0020 | 204.0245 | Removing Storm Sewer (size) 02. 12-Inch | LF | 48.000 | 48.000 |
| 0022 | 204.9060.S | Removing (item description) 01. Removing Bollard | EACH | 2.000 | 2.000 |
| 0024 | 205.0100 | Excavation Common | CY | 768.000 | 768.000 |
| 0026 | 205.0501.S | Excavation, Hauling, and Disposal of Petroleum Contaminated Soil | TON | 144.000 | 144.000 |
| 0028 | 206.1001 | Excavation for Structures Bridges (structure) 01. B-44-0502 | EACH | 1.000 | 1.000 |
| 0030 | 206.5001 | Cofferdams (structure) 01. B-44-0502 | EACH | 2.000 | 2.000 |
| 0032 | 210.1500 | Backfill Structure Type A | TON | 614.000 | 614.000 |
| 0034 | 213.0100 | Finishing Roadway (project)  01. 4984-01-79 | EACH | 1.000 | 1.000 |
| 0036 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 77.000 | 77.000 |
| 0038 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 470.000 | 470.000 |
| 0040 | 415.0090 | Concrete Pavement 9-Inch | SY | 417.000 | 417.000 |
| 0042 | 415.0410 | Concrete Pavement Approach Slab | SY | 125.000 | 125.000 |
| 0044 | 415.4100 | Concrete Pavement Joint Filling | SY | 557.000 | 557.000 |
| 0046 | 416.0620 | Drilled Dowel Bars | EACH | 40.000 | 40.000 |
| 0048 | 465.0120 | Asphaltic Surface Driveways and Field Entrances | TON | 13.000 | 13.000 |
| 0050 | 502.0100 | Concrete Masonry Bridges | CY | 584.000 | 584.000 |
| 0052 | 502.3200 | Protective Surface Treatment | SY | 1,044.000 | 1,044.000 |
| 0054 | 502.4204 | Adhesive Anchors No. 4 Bar | EACH | 24.000 | 24.000 |
| 0056 | 502.4205 | Adhesive Anchors No. 5 Bar | EACH | 302.000 | 302.000 |
| 0058 | 502.9000.S | Underwater Substructure Inspection (structure) 01. B-44-0502 | EACH | 2.000 | 2.000 |
| 0060 | 505.0400 | Bar Steel Reinforcement HS Structures | LB | 17,360.000 | 17,360.000 |
| 0062 | 505.0600 | Bar Steel Reinforcement HS Coated Structures | LB | 77,830.000 | 77,830.000 |
| 0064 | 506.0605 | Structural Steel HS | LB | 182,200.000 | 182,200.000 |
| 0066 | 506.2605 | Bearing Pads Elastomeric Non-Laminated | EACH | 18.000 | 18.000 |
| 0068 | 506.3010 | Welded Stud Shear Connectors 7/8x5-Inch | EACH | 7,128.000 | 7,128.000 |
| 0070 | 506.5000 | Bearing Assemblies Fixed (structure) 01. B-44-0502 | EACH | 18.000 | 18.000 |
| 0072 | 513.2001 | Railing Pipe | LF | 29.000 | 29.000 |
| 0074 | 513.7016 | Railing Steel Type C3 | LF | 304.000 | 304.000 |
| 0076 | 516.0500 | Rubberized Membrane Waterproofing | SY | 24.000 | 24.000 |
| 0078 | 531.8990 | Anchor Assemblies Poles on Structures | EACH | 3.000 | 3.000 |
| 0080 | 550.0020 | Pre-Boring Rock or Consolidated Materials | LF | 776.000 | 776.000 |
| 0082 | 550.1100 | Piling Steel HP 10-Inch X 42 Lb | LF | 1,185.000 | 1,185.000 |
| 0084 | 601.0344 | Concrete Curb & Gutter Integral 36-Inch | LF | 247.000 | 247.000 |
| 0086 | 601.0501 | Concrete Curb & Gutter Integral 4-Inch Sloped 36-Inch | LF | 16.000 | 16.000 |
| 0088 | 602.0410 | Concrete Sidewalk 5-Inch | SF | 506.000 | 506.000 |
| 0090 | 602.0420 | Concrete Sidewalk 7-Inch | SF | 1,054.000 | 1,054.000 |
| 0092 | 602.0515 | Curb Ramp Detectable Warning Field Natural Patina | SF | 40.000 | 40.000 |
| 0094 | 602.0815 | Concrete Driveway 7-Inch | SY | 32.000 | 32.000 |
| 0096 | 604.0400 | Slope Paving Concrete | SY | 52.000 | 52.000 |
| 0098 | 608.0312 | Storm Sewer Pipe Reinforced Concrete Class III 12-Inch | LF | 30.000 | 30.000 |

4984-01-79

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0100 | 608.0412 | Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch | LF | 100.000 | 100.000 |
| 0102 | 611.0420 | Reconstructing Manholes | EACH | 1.000 | 1.000 |
| 0104 | 611.0530 | Manhole Covers Type J | EACH | 1.000 | 1.000 |
| 0106 | 611.0615 | Inlet Covers Type F | EACH | 1.000 | 1.000 |
| 0108 | 611.0639 | Inlet Covers Type H-S | EACH | 3.000 | 3.000 |
| 0110 | 611.2003 | Manholes 3-FT Diameter | EACH | 1.000 | 1.000 |
| 0112 | 611.3230 | Inlets 2x3-FT | EACH | 3.000 | 3.000 |
| 0114 | 611.3253 | Inlets 2.5x3-FT | EACH | 1.000 | 1.000 |
| 0116 | 616.0700.S | Fence Safety | LF | 465.000 | 465.000 |
| 0118 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0120 | 624.0100 | Water | MGAL | 11.000 | 11.000 |
| 0122 | 625.0100 | Topsoil | SY | 138.000 | 138.000 |
| 0124 | 628.1504 | Silt Fence | LF | 100.000 | 100.000 |
| 0126 | 628.1520 | Silt Fence Maintenance | LF | 100.000 | 100.000 |
| 0128 | 628.1905 | Mobilizations Erosion Control | EACH | 7.000 | 7.000 |
| 0130 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 6.000 | 6.000 |
| 0132 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 138.000 | 138.000 |
| 0134 | 628.7015 | Inlet Protection Type C | EACH | 5.000 | 5.000 |
| 0136 | 629.0210 | Fertilizer Type B | CWT | 1.000 | 1.000 |
| 0138 | 630.0140 | Seeding Mixture No. 40 | LB | 3.000 | 3.000 |
| 0140 | 630.0500 | Seed Water | MGAL | 1.200 | 1.200 |
| 0142 | 642.5001 | Field Office Type B | EACH | 1.000 | 1.000 |
| 0144 | 643.0420 | Traffic Control Barricades Type III | DAY | 1,116.000 | 1,116.000 |
| 0146 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 1,488.000 | 1,488.000 |
| 0148 | 643.0900 | Traffic Control Signs | DAY | 4,092.000 | 4,092.000 |
| 0150 | 643.1000 | Traffic Control Signs Fixed Message | SF | 248.000 | 248.000 |
| 0152 | 643.1050 | Traffic Control Signs PCMS | DAY | 14.000 | 14.000 |
| 0154 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0156 | 645.0111 | Geotextile Type DF Schedule A | SY | 106.000 | 106.000 |
| 0158 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 1,180.000 | 1,180.000 |
| 0160 | 646.5020 | Marking Arrow Epoxy | EACH | 4.000 | 4.000 |
| 0162 | 646.5220 | Marking Symbol Epoxy | EACH | 4.000 | 4.000 |
| 0164 | 650.4000 | Construction Staking Storm Sewer | EACH | 5.000 | 5.000 |
| 0166 | 650.6501 | Construction Staking Structure Layout (structure) 01. B-44-0502 | EACH | 1.000 | 1.000 |
| 0168 | 650.7000 | Construction Staking Concrete Pavement | LF | 147.000 | 147.000 |
| 0170 | 650.9000 | Construction Staking Curb Ramps | EACH | 2.000 | 2.000 |
| 0172 | 650.9500 | Construction Staking Sidewalk (project) 01. 4984-01-79 | EACH | 1.000 | 1.000 |
| 0174 | 650.9911 | Construction Staking Supplemental Control (project) 01. 4984-01-79 | EACH | 1.000 | 1.000 |
| 0176 | 650.9920 | Construction Staking Slope Stakes | LF | 295.000 | 295.000 |
| 0178 | 652.0125 | Conduit Rigid Metallic 2-Inch | LF | 50.000 | 50.000 |
| 0180 | 652.0325 | Conduit Rigid Nonmetallic Schedule 80 2-Inch | LF | 676.000 | 676.000 |
| 0182 | 653.0164 | Pull Boxes Non-Conductive 24x42-Inch | EACH | 3.000 | 3.000 |
| 0184 | 653.0222 | Junction Boxes 18x12x6-Inch | EACH | 3.000 | 3.000 |
| 0186 | 654.0102 | Concrete Bases Type 2 | EACH | 2.000 | 2.000 |
| 0188 | 654.0105 | Concrete Bases Type 5 | EACH | 1.000 | 1.000 |
| 0190 | 654.0200 | Concrete Control Cabinet Bases Type 6 | EACH | 1.000 | 1.000 |
| 0192 | 690.0150 | Sawing Asphalt | LF | 90.000 | 90.000 |
| 0194 | 690.0250 | Sawing Concrete | LF | 180.000 | 180.000 |
| 0196 | 715.0502 | Incentive Strength Concrete Structures | DOL | 3,498.000 | 3,498.000 |

## Estimate Of Quantities

4984-01-79

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0198 | 715.0720 | Incentive Compressive Strength Concrete Pavement | DOL | 500.000 | 500.000 |
| 0200 | 999.1501.S | Crack and Damage Survey | EACH | 2.000 | 2.000 |
| 0202 | ASP.1T0A | On-the-Job Training Apprentice at $5.00/HR | HRS | 500.000 | 500.000 |
| 0204 | ASP.1T0G | On-the-Job Training Graduate at $5.00/HR | HRS | 2,000.000 | 2,000.000 |
| 0206 | SPV.0060 | Special 02. Remove, Salvage, and Reinstall Electrical Service Meter Breaker Pedestal | EACH | 1.000 | 1.000 |
| 0208 | SPV.0090 | Special 01. Railing Steel Pedestrian Type C3 | LF | 89.000 | 89.000 |
| 0210 | SPV.0090 | Special 02. Marking Crosswalk Epoxy Block Style 18-Inch | LF | 90.000 | 90.000 |
| 0212 | SPV.0090 | Special 03. Petroleum Absorbent Boom | LF | 400.000 | 400.000 |
| 0214 | SPV.0090 | Special 04. Contaminated Boom Disposal | LF | 400.000 | 400.000 |
| 0216 | SPV.0165 | Special 01. Concrete Sidewalk 7-Inch Special | SF | 1,125.000 | 1,125.000 |

3

## REMOVING PAVEMENT

| CATEGORY | STATION | TO | STATION | LOCATION | 204.0100 REMOVING CONCRETE PAVEMENT SY |
|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+94 | SOUTH APPROACH | 521 |
| 0010 | 21+27 | - | 21+55 | NORTH APPROACH | 130 |
| | | | | **TOTAL 0010** | **651** |

## MISCELLANEOUS REMOVING ITEMS

| CATEGORY | STATION | TO | STATION | LOCATION | 204.0165 REMOVING GUARDRAIL LF | 204.0170 REMOVING FENCE LF | 204.0195 REMOVING CONCRETE BASES EACH | 204.9060.01 REMOVING BOLLARD EACH |
|---|---|---|---|---|---|---|---|---|
| 0010 | 19+19 | - | 19+95 | LT | 79 | -- | 1 | -- |
| 0010 | 19+90 | - | 20+01 | RT | 12 | -- | 1 | -- |
| 0010 | | 21+32 | | LT, RT | -- | 20 | -- | -- |
| 0010 | 21+35 | - | 21+55 | LT | -- | 25 | 2 | 2 |
| | | | | **TOTAL 0010** | **91** | **45** | **4** | **2** |

## REMOVING SIDEWALK

| CATEGORY | STATION | TO | STATION | LOCATION | 204.0155 REMOVING CONCRETE SIDEWALK SY |
|---|---|---|---|---|---|
| 0010 | 18+66 | - | 19+90 | RT | 120 |
| 0010 | 18+73 | - | 19+90 | LT | 130 |
| 0010 | 21+32 | - | 21+55 | RT | 20 |
| 0010 | 21+32 | - | 21+55 | LT | 20 |
| | | | | **TOTAL 0010** | **290** |

## REMOVING STORM SEWER

| CATEGORY | STATION | LOCATION | 611.0420 RECONSTRUCTING MAHOLES EACH | 204.0220 REMOVING INLETS EACH | 204.0245.01 REMOVING STORM SEWER (01 10-INCH) LF | 204.0245.02 REMOVING STORM SEWER (02. 12-INCH) LF |
|---|---|---|---|---|---|---|
| 0010 | | | | | | |
| 0010 | 18+72 | 8.0' LT | 1 | -- | -- | -- |
| 0010 | 18+84 | 17.6' RT | -- | 1 | 28 | -- |
| 0010 | 18+90 | 17.6' LT | -- | 1 | -- | 20 |
| 0010 | 21+34 | 15.4' LT | -- | 1 | -- | 10 |
| 0010 | 21+37 | 21.6' RT | -- | -- | -- | 12 |
| 0010 | 21+40 | 17.1' RT | -- | 1 | -- | 6 |
| | | **TOTAL 0010** | **1** | **4** | **28** | **48** |

3

3

## EARTHWORK SUMMARY

| DIVISION | FROM/TO STATION | 205.0100 EXCAVATION COMMON (CUT) (CY) (1) | 205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL (CUT) (TONS) (2) | SALVAGED/UNUSABLE PAVEMENT MATERIAL (3) | AVAILABLE MATERIAL (4) | UNEXPANDED FILL | EXPANDED FILL (5) FACTOR 1.25 | MASS ORDINATE +/- (6) | WASTE (7) |
|---|---|---|---|---|---|---|---|---|---|
| DIVISION 1 | | | | | | | | | |
| OLDE ONEIDA STREET | 18+75.02/21+54.95 | 768 | 0 | 415 | 353 | 4 | 5 | 348 | 348 |
| STORM SEWER | PROJECT | 0 | 144 | 96 | 48 | 96 | 120 | -72 | 0 |
| | DIVISION 1 SUBTOTAL | 768 | 144 | 511 | 401 | 100 | 125 | 276 | 276 |
| | **TOTAL 0010** | 768 | -- | | | | | | |
| | **TOTAL 0040** | -- | 144 | | | | | | |

NOTES:
(1) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(2) EXCAVATION CAUSED BY STORM SEWER WORK ASSUMING ALL MATERIAL MUST BE HAULED AWAY AND REPLACED.
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS THE EXISTING CONCRETE, ASPHALT PAVEMENT, OR CONTAMINATED SOIL VOLUME, NOT AVAILABLE FOR FILL (MATERIAL TO BE WASTED)
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) EXPANDED FILL FACTOR = (UNEXPANDED FILL) * (FILL FACTOR)
(6) 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.
(7) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

## BASE AGGREGATE ITEMS

| CATEGORY | STATION | TO | STATION | LOCATION | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON | 624.0100 WATER MGAL |
|---|---|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+87 | SOUTH APPROACH | 40 | 386 | 9 |
| 0010 | 21+35 | - | 21+55 | NORTH APPROACH | 37 | 84 | 2 |
| | | | | **TOTAL 0010** | **77** | **470** | **11** |

## DRIVEWAY ITEMS

| CATEGORY | STATION | TO | STATION | LOCATION | 465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON | 602.0815 CONCRETE DRIVEWAY 7-INCH SY |
|---|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+87 | SOUTH APPROACH | 1 | 32 |
| 0010 | 21+35 | - | 21+55 | NORTH APPROACH | 12 | - |
| | | | | **TOTAL 0010** | **13** | **32** |

## CONCRETE PAVEMENT

| CATEGORY | STATION | TO | STATION | LOCATION | 415.0090 CONCRETE PAVEMENT 9-INCH SY | 415.0410 CONCRETE PAVEMENT APPROACH SLAB SY | 415.4100 CONCRETE PAVEMENT JOINT FILLING SY | 416.0620 DRILLED DOWEL BARS EACH | 650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+87 | SOUTH APPROACH | 417 | 53 | 483 | 40 | 127 |
| 0010 | 21+35 | - | 21+55 | NORTH APPROACH | -- | 72 | 74 | -- | 20 |
| | | | | **TOTAL 0010** | **417** | **125** | **557** | **40** | **147** |

## CURB AND GUTTER

| CATEGORY | STATION | TO | STATION | LOCATION | 601.0344 CONCRETE CURB & GUTTER INTEGRAL 36-INCH LF | 601.0501 CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH LF |
|---|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+87 | SOUTH APPROACH | 223 | -- |
| 0010 | 21+35 | - | 21+55 | NORTH APPROACH | 24 | 16 |
| | | | | **TOTAL 0010** | **247** | **16** |

## SIDEWALK

| CATEGORY | STATION | TO | STATION | LOCATION | 602.0410 CONCRETE SIDEWALK 5-INCH SF | 602.0420 CONCRETE SIDEWALK 7-INCH SF | SPV.0165.01 CONCRETE SIDEWALK 7-INCH SPECIAL SF | 602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF | 650.9000 CONSTRUCTION STAKING CURB RAMPS EACH | 650.9500 CONSTRUCTION STAKING SIDEWALK (01.4984-01-79) EACH |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+87 | SOUTH APPROACH | 207 | 1054 | 701 | 40 | 2 | -- |
| 0010 | 21+35 | - | 21+55 | NORTH APPROACH | 299 | -- | 424 | -- | -- | -- |
| 0010 | | | | UNDISTRIBUTED | -- | -- | -- | -- | -- | 1 |
| | | | | **TOTAL 0010** | **506** | **1054** | **1125** | **40** | **2** | **1** |

## STORM SEWER

| CATEGORY | STRUCTURE | TO | STRUCTURE | 608.0312 SSPRC CLASS III 12-INCH LF | 608.0412 SSPRC CLASS IV 12-INCH LF | 611.0530 MANHOLE COVERS TYPE J EACH | 611.0615 INLET COVERS TYPE F EACH | 611.0639 INLET COVERS TYPE H-S EACH | 611.2003 MANHOLES 3-FT DIAMETER EACH | 611.3230 INLETS 2X3-FT EACH | 611.3253 INLETS 2.5X3-FT EACH | 650.4000 CONSTRUCTION STAKING STORM SEWER EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | KK-48B | - | KK-48 | -- | 30 | -- | -- | 1 | -- | 1 | -- | 1 |
| 0010 | KK-48A | - | KK-48 | -- | 38 | -- | -- | 1 | -- | 1 | -- | 1 |
| 0010 | KK-87 | - | KK-87A | -- | 32 | -- | 1 | -- | -- | -- | 1 | 1 |
| 0010 | KK-87A | - | KK-88 | 18 | -- | -- | -- | 1 | -- | 1 | -- | 1 |
| 0010 | KK-88 | - | KK-89 | 12 | -- | 1 | -- | -- | 1 | -- | -- | 1 |
| | | | **TOTAL 0010** | **30** | **100** | **1** | **1** | **3** | **1** | **3** | **1** | **5** |

## EROSION CONTROL AND RESTORATION

| CATEGORY | STATION | | TO STATION | LOCATION | 616.0700.S FENCE SAFETY LF | 625.0100 TOPSOIL SY | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.1905 MOBILIZATION EROSION CONTROL EACH | 628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH | 628.2008 EROSION MAT URBAN CLASS I TYPE B SY | 629.0210 FERTILIZER TYPE B CWT | 630.0140 SEEDING MIXTURE NO.40 LB | 630.0500 SEED WATER MGAL | SPV.0090.03 PETROLEUM ABSORBENT BOOM LF | SPV.0090.04 CONTAMINATED BOOM DISPOSAL LF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+87 | SOUTH APPROACH | 25 | 110 | 80 | 80 | -- | -- | 110 | 1 | 2 | 1.2 | -- | -- |
| 0010 | 21+48 | | 21+58 | RT | 40 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | UNDISTRIBUTED | 400 | 28 | 20 | 20 | 7 | 6 | 28 | -- | 1 | -- | -- | -- |
| | | | | **TOTAL 0010** | **465** | **138** | **100** | **100** | **7** | **6** | **138** | **1** | **3** | **1.2** | -- | -- |
| 0040 | 19+87 | - | 21+23 | LT | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 150 | 150 |
| 0040 | 20+16 | - | 21+26 | RT | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 250 | 250 |
| | | | | **TOTAL 0040** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | **400** | **400** |

## LIGHTING

| CATEGORY | STATION | OFFSET | TO | STATION | OFFSET | 652.0325 CONDUIT RIDGID NONMETALIC SCHEDULE 80 2-INCH LF | 653.0164 PULL BOXES NON-CONDUCTIVE 24x42-INCH EACH | 654.0102 CONCRETE BASES TYPE 2 EACH | 654.0105 CONCRETE BASES TYPE 5 EACH | 654.0200 CONCRETE CONTROL CABINET BASES TYPE 6 EACH |
|---|---|---|---|---|---|---|---|---|---|---|
| 0040 | 18+76 | 22.2' RT | | 19+09 | 25.5' RT | 33 | -- | 1 | -- | -- |
| 0040 | 18+97 | 20.6' LT | | 19+05 | 19.4' LT | 8 | -- | 1 | -- | -- |
| 0040 | 19+05 | 19.4' LT | | 19+05 | 33.8' LT | 59 | 1 | -- | -- | 1 |
| 0040 | 19+05 | 19.4' LT | | 19+09 | 25.5' RT | 45 | -- | -- | -- | -- |
| 0040 | 19+05 | 19.4' LT | | 19+90 | 22.5'LT | 85 | -- | -- | -- | -- |
| 0040 | 19+09 | 25.5' RT | | 19+15 | 19.3' RT | 10 | 1 | -- | -- | -- |
| 0040 | 19+09 | 25.5' RT | | 19+90 | 30.0' RT | 81 | -- | -- | 1 | -- |
| 0040 | 21+34 | 22.2'LT | | 21+54 | 22.9'LT | 16 | -- | -- | -- | -- |
| 0040 | 21+30 | 38.8'RT | | 21+50 | 34.5'RT | 24 | 1 | -- | -- | -- |
| 0040 | 21+30 | 38.8'RT | | 21+56 | 22.8'RT | 35 | -- | -- | -- | -- |
| 0040 | 21+30 | 38.8'RT | | 21+35 | 30'RT | 10 | -- | -- | -- | -- |
| | | | | | **TOTAL 0040** | **406** | **3** | **2** | **1** | **1** |

## INLET PROTECTION

| CATEGORY | STATION | LOCATION | 628.7015 INLET PROTECTION TYPE C EACH |
|---|---|---|---|
| 0010 | 19+00 | 17.6' LT | 1 |
| 0010 | 19+00 | 17.6' RT | 1 |
| 0010 | 21+41 | 16.1' LT | 1 |
| 0010 | 21+41 | 16.0' RT | 1 |
| | UNDISTRIBUTED | | 1 |
| | | **TOTAL 0010** | 5 |

## TRAFFIC CONTROL ITEMS

| CATEGORY | DAYS | TRAFFIC CONTROL BARRICADES TYPE III EACH | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | TRAFFIC CONTROL SIGNS EACH | 643.0900 TRAFFIC CONTROL SIGNS DAY | 643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF | TRAFFIC CONTROL SIGNS PCMS EACH | 643.1050 TRAFFIC CONTROL SIGNS PCMS DAY | 643.5000 TRAFFIC CONTROL EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 124 | 9 | 1116 | 18 | 2232 | 33 | 4092 | 248 | 2 | 14 | 1 |
| **TOTAL 0010** | | **9** | **1116** | **18** | **2232** | **33** | **4092** | **248** | **2** | **14** | **1** |

## PAVEMENT MARKINGS

| CATEGORY | LOCATION | 646.1020 MARKING LINE EPOXY 4-INCH LF YELLOW | 646.1020 MARKING LINE EPOXY 4-INCH LF WHITE | 646.5020 MARKING ARROW EPOXY EACH | 646.5220 MARKING SYMBOL EPOXY EACH | SPV.0090.02 MARKING CROSSWALK EPOXY BLOCK STYLE 18-INCH LF |
|---|---|---|---|---|---|---|
| 0010 | PROJECT | 590 | 590 | 4 | 4 | 90 |
| **TOTAL 0010** | | **590** | **590** | **4** | **4** | **90** |
| | | **1180** | | | | |

## RAILING

| CATEGORY | STATION | TO | STATION | LOCATION | SPV.0090.01 RAILING STEEL PEDESTRIAN TYPE C3 LF |
|---|---|---|---|---|---|
| 0010 | 19+14 | - | 19+87 | SOUTH APPROACH | 73 |
| 0010 | 21+35 | - | 21+55 | NORTH APPROACH | 16 |
| **TOTAL 0010** | | | | | **89** |

## CONSTRUCTION STAKING

| CATEGORY | LOCATION | 650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (01.4984-01-79) EACH | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF |
|---|---|---|---|
| 0010 | PROJECT | 1 | 295 |
| **TOTAL 0010** | | **1** | **295** |

## SAWING

| CATEGORY | STATION | TO | STATION | LOCATION | 690.0150 SAWING ASPHALT LF | 690.250 SAWING CONCRETE LF |
|---|---|---|---|---|---|---|
| 0010 | 18+60 | - | 19+87 | SOUTH APPROACH | 47 | 150 |
| 0010 | 21+35 | - | 21+55 | NORTH APPROACH | 43 | 30 |
| **TOTAL 0010** | | | | | **90** | **180** |

# TRANSPORTATION PROJECT PLAT NO: 4984-01-21 -4.01

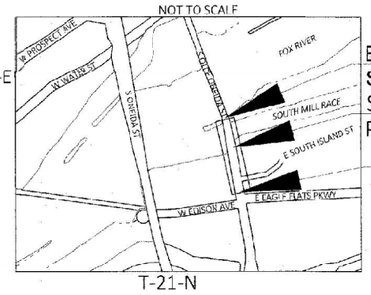
PART OF THE GOVERNMENT LOT 2 OF SECTION 35, T.21N-R.17.E. CITY OF APPLETON, OUTAGAMIE COUNTY, WISCONSIN

RELOCATION ORDER: OLDE ONEIDA ST. BRIDGE P-44-723 OUTAGAMIE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF APPLETON 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 CITY OF APPLETON 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 CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF APPLETON, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

LOCATION MAP
NOT TO SCALE




END PROJECT
STA 22+43
STRUCTURE
P-44-0723
BEGIN
PROJECT
STA 17+33

Document #: 2318564
Date: 07-22-2024 Time: 2:42 PM
Pages: 2 Fee: $25.00
County: OUTAGAMIE COUNTY State: WI
Sarah R. Van Camp
SARAH R VAN CAMP, REGISTER OF DEEDS
Return via MAIL (REGULAR)
APPLETON, CITY OF
Cabinet N, Page 229-230

27

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4984-01-21-4.01
AMENDMENT NO:___

THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 4987-01-21

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

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, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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 OR AS AGREED UPON IN WRITING, 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.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM 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 CITY OF APPLETON

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.

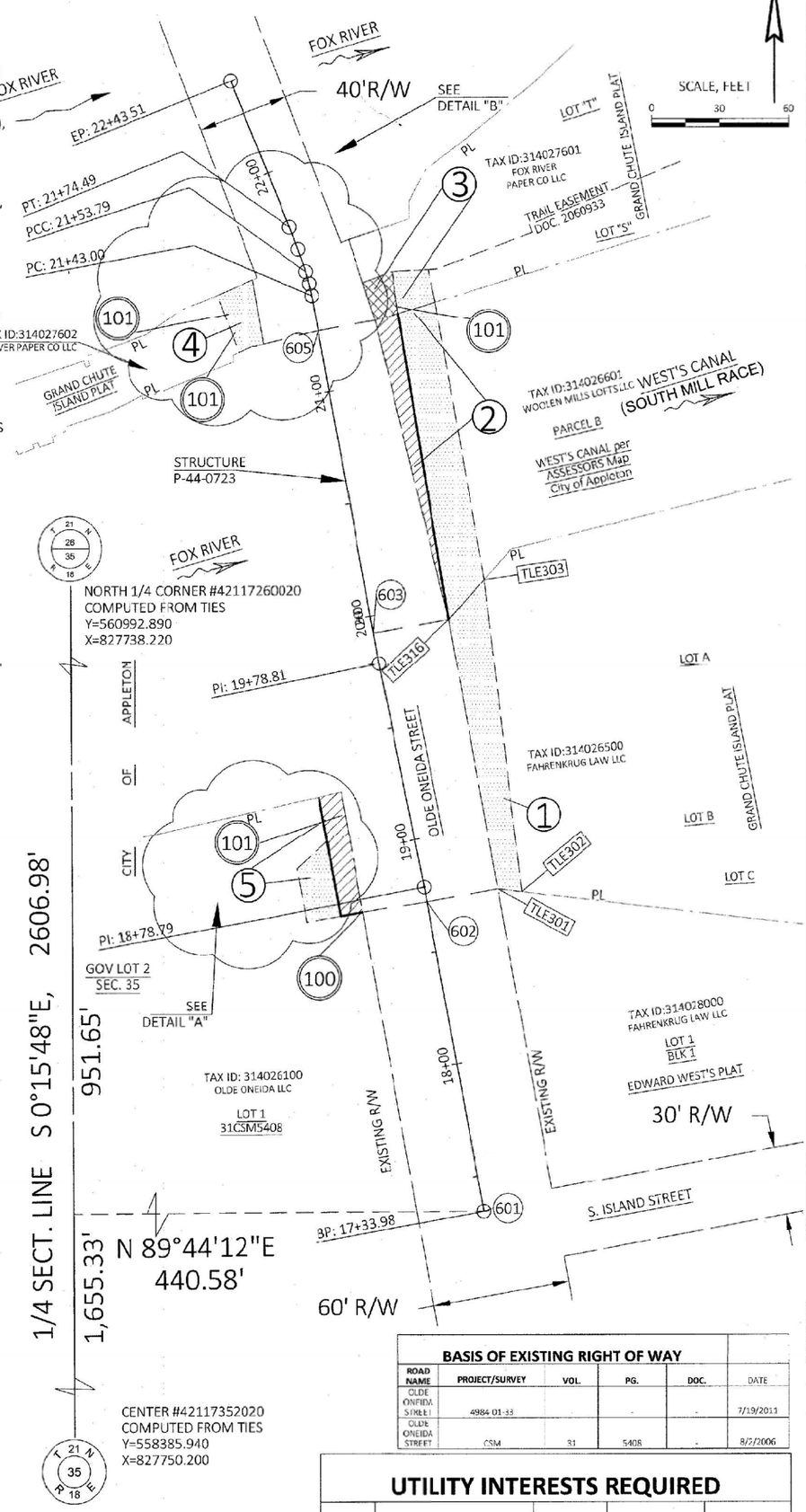
## CONVENTIONAL SYMBOLS AND ABBREVIATIONS

| | | | |
|---|---|---|---|
| STATE, COUNTY, or TOWN LINE | | ACCESS POINT/ DRIVEWAY CONNECTION | AP |
| SECTION LINE | | ACCESS RIGHTS | AR |
| QUARTER LINE | | ACRES | AC |
| SIXTEENTH LINE | | AND OTHERS | ET AL |
| PROPOSED REFERENCE LINE | | CENTERLINE | C/L |
| PROPOSED R/W LINE | | CERTIFIED SURVEY MAP | CSM |
| EXISTING R/W OR HE LINE | | DOCUMENT | DOC |
| PROPERTY LINE | P.L. | HIGHWAY EASEMENT | HE |
| EASEMENT LINE | | LAND CONTRACT | LC |
| CORPORATE LIMITS | | MONUMENT | MON |
| EXISTING CENTERLINE | | PAGE | P |
| LOT & TIE LINES | | PERMANENT LIMITED EASEMENT | PLE |
| UNDERGROUND FACILITY (TYP) (TELEPHONE,GAS,ELECTRIC,CABLE TV,FIBER OPTIC) | (T) | PROPERTY LINE | PL |
| ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL) | | RECORDED AS | ( 100' ) |
| ACCESS RESTRICTED (BY ACQUISITION) | | REFERENCE LINE | R/L |
| ACCESS RESTRICTED (BY STATUTORY AUTHORITY) | | REMAINING | REM |
| FEE (HATCH VARIES) | | RIGHT-OF-WAY | R/W |
| TEMPORARY LIMITED EASEMENT | | SECTION | SEC |
| PERMANENT LIMITED EASEMENT | | SQUARE FEET | SF |
| PARCEL NUMBER | 102 | STATION | STA |
| UTILITY NUMBER | W | TEMPORARY LIMITED EASEMENT | TLE |
| OFF-PREMISE SIGN | OP-28 | VOLUME | V |
| BUILDING | B | **CURVE DATA** | |
| FOUND IRON PIPE/PIN | (1-INCH UNLESS NOTED) | LONG CHORD | LCH |
| R/W MONUMENT | ● (SET) | LONG CHORD BEARING | LCB |
| R/W STANDARD | ▲ (SET) | RADIUS | R |
| SIGN | SIGN | DEGREE OF CURVE | D |
| SECTION CORNER SYMBOL | | CENTRAL ANGLE OR DELTA | Δ/DELTA |
| | | LENGTH OF CURVE | L |
| | | TANGENT | T |

| | NON COMPENSABLE | COMPENSABLE |
|---|---|---|
| POWER POLE | ○ | ● |
| TELEPHONE POLE | ⌀ | ● |
| TELEPHONE PEDESTAL | ⌑ | ■ |

## CONVENTIONAL UTILITY SYMBOLS

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




CENTER #42117352020
COMPUTED FROM TIES
Y=558385.940
X=827750.200

## BASIS OF EXISTING RIGHT OF WAY

| ROAD NAME | PROJECT/SURVEY | VOL. | PG. | DOC. | DATE |
|---|---|---|---|---|---|
| OLDE ONEIDA STREET | 4984-01-33 | - | - | - | 7/19/2013 |
| OLDE ONEIDA STREET | CSM | 31 | 5408 | - | 8/2/2006 |

## UTILITY INTERESTS REQUIRED

| UTILITY # | OWNER(S) | PARCEL | INTEREST REQUIRED | EASEMENTS |
|---|---|---|---|---|
| 100 | AT&T | 5 | RELEASE OF RIGHTS | J.8957 I.20 |
| 101 | WE Energies | 3,4,5 | RELEASE OF RIGHTS | - |

## SCHEDULE OF LANDS & INTERESTS REQUIRED

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

| PARCEL NUMBER | PARCEL OWNER(S) | PARCEL REQUIRED | R/W SF REQUIRED NEW | PLE | TOTAL | TLE SF |
|---|---|---|---|---|---|---|
| 1 | FAHRENKRUG LAW LLC | TLE | - | - | - | 1822 |
| 2 | WOOLEN MILLS LOFTS LLC | FEE, TLE | 479 | - | 479 | 2516 |
| 3 | FOX RIVER PAPER CO LLC | PLE, TLE | - | 218 | 218 | 272 |
| 4 | FOX RIVER PAPER CO LLC | TLE | - | - | - | 389 |
| 5 | OLDE ONEIDA LLC | FEE, TLE | 134 | - | 134 | 432 |

exp U.S. Services Inc.
t +1.414.221.0088 | f +1.414.221.0637
241 N Broadway, Suite 203
Milwaukee, WI 53202
U.S.A.
www.exp.com

I, NATHAN ANDEREGG 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 CITY OF APPLETON I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN NATHAN A. ANDEREGG S-2732 GREEN BAY, WI LAND SURVEYOR

SIGNATURE: Nathan Anderegg DATE: 6/25/24
PRINT NAME: NATHAN ANDEREGG
REGISTRATION NUMBER: S-2732

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF APPLETON

SIGNATURE: _____ DATE: 7/26/24
PRINT NAME: JACOB A. WOODFORD

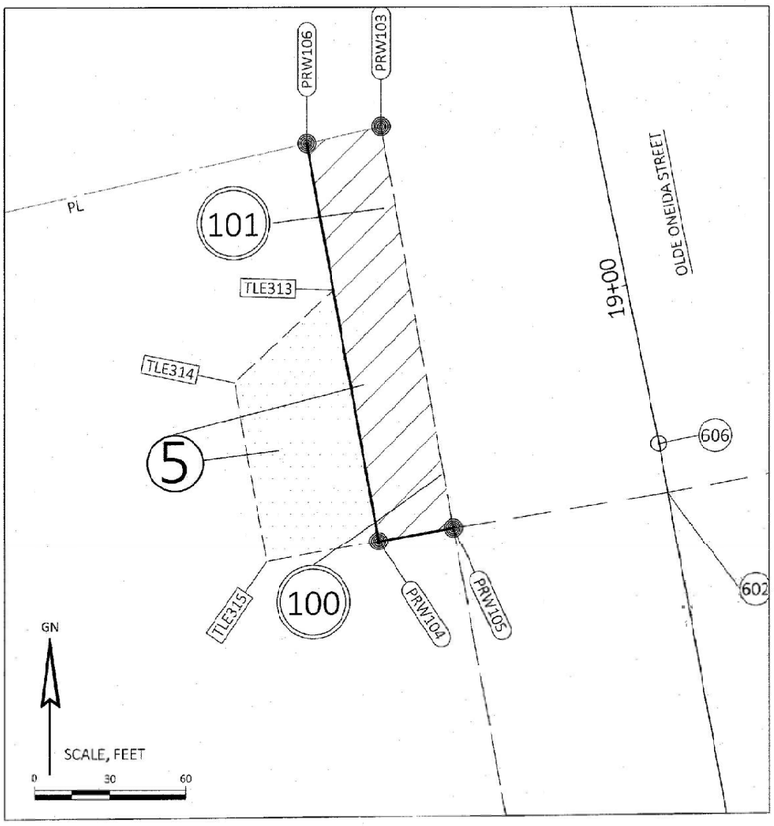
FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-001\D0121222\D040101-RP.DWG
APPRAISAL PLAT DATE :
PLOT SCALE :
PLOT NAME : Jessica Splittgerber
PLOT BY :
PLOT DATE : 6/20/2024 9:31 AM
PLOT DATE :
PLOT DATE :

# TRANSPORTATION PROJECT PLAT NO: 4984-01-21 -4.01 EXTENSION

RELOCATION ORDER: OLDE ONEIDA ST. BRIDGE P-44-723 CITY OF APPLETON OUTAGAMIE COUTY

## DETAIL "A"

NOT TO SCALE




| R/W COURSE TABLE | | | |
|---|---|---|---|
| FROM PT # | TO PT # | BEARING | DISTANCE |
| 601 | 602 | N10° 21' 12"W | 138.28' |
| 602 | 105 | S80° 46' 20"W | 28.61' |
| 105 | 104 | S79° 43' 50"W | 10.00' |
| 104 | 106 | N10° 16' 10"W | 53.15' |
| 106 | 103 | N77° 18' 60"E | 10.00' |
| 103 | 105 | S10° 16' 10"E | 53.57' |
| 105 | 602 | N80° 46' 20"E | 28.61' |
| 602 | 606 | N10° 21' 12"W | 6.53' |
| 606 | 607 | N11° 29' 57"W | 100.02' |
| 607 | 603 | N10° 21' 12"W | 13.68' |
| 603 | 316 | N79° 38' 48"E | 33.57' |
| 316 | 100 | N09° 19' 42"W | 135.89' |
| 100 | 107 | S72° 49' 14"W | 10.67' |
| 107 | 605 | S79° 38' 48"W | 25.41' |
| 605 | 603 | S10° 21' 12"E | 134.60' |

| PLE COURSE TABLE | | | |
|---|---|---|---|
| FROM PT # | TO PT # | BEARING | DISTANCE |
| 607 | 605 | N10° 21' 12"W | 148.27' |
| 605 | 107 | N79° 38' 48"E | 25.41' |
| 107 | 100 | N72° 49' 14"E | 10.67' |
| 100 | 304 | N08° 28' 46"W | 18.57' |
| 304 | 102 | S69° 21' 33"W | 13.79' |
| 102 | 107 | S18° 06' 55"E | 17.53' |
| 107 | 605 | S79° 38' 48"W | 25.41' |

| TLE COURSE TABLE | | | |
|---|---|---|---|
| FROM PT # | TO PT # | BEARING | DISTANCE |
| 602 | 301 | N79° 38' 48"E | 31.39' |
| 301 | 302 | S83° 19' 43"E | 10.72' |
| 302 | 303 | N06° 53' 59"W | 137.86' |
| 303 | 306 | N09° 53' 41"W | 123.63' |
| 306 | 308 | N12° 05' 40"W | 14.64' |
| 308 | 304 | S86° 29' 28"W | 16.00' |
| 304 | 100 | S08° 28' 46"E | 18.57' |
| 100 | 316 | S09° 19' 42"E | 135.89' |
| 316 | 301 | S10° 16' 10"E | 120.21' |
| 301 | 602 | S79° 38' 48"W | 31.39' |
| 602 | 104 | S80° 30' 09"W | 38.61' |
| 104 | 315 | S79° 43' 50"W | 15.00' |
| 315 | 314 | N10° 16' 10"W | 24.00' |
| 314 | 313 | N47° 06' 41"E | 17.81' |
| 313 | 104 | S10° 16' 10"E | 33.60' |
| 104 | 602 | N80° 30' 09"E | 38.61' |
| 602 | 606 | N10° 21' 12"W | 6.53' |
| 606 | 607 | N11° 29' 57"W | 100.02' |
| 607 | 605 | N10° 21' 12"W | 148.27' |
| 605 | 312 | S76° 19' 52"W | 24.71' |
| 312 | 311 | S71° 30' 20"W | 11.42' |
| 311 | 310 | N20° 37' 31"W | 27.06' |
| 310 | 309 | N66° 25' 17"E | 15.87' |
| 309 | 312 | S09° 47' 19"E | 28.87' |
| 312 | 605 | N76° 19' 52"E | 24.71' |

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4984-01-21-4.01 EXT.
AMENDMENT NO.___

PAGE 2 OF 2
FOR ADDITIONAL INFORMATION
REFER TO SHEET 1 OF 2

| Station and Offset Table | | |
|---|---|---|
| Point | Station | Offset |
| 302 | 18+69.12 | 41.64' |
| 602 | 18+72.26 | 0.00' |
| 301 | 18+72.26 | 31.39' |
| 105 | 18+72.82 | -28.61' |
| 104 | 18+72.84 | -38.61' |
| 315 | 18+72.86 | -53.61' |
| 606 | 18+78.79 | 0.000' |
| 314 | 18+97.93 | -53.20' |
| 313 | 19+07.20 | -38.00' |
| 106 | 19+26.75 | -37.58' |
| 103 | 19+26.95 | -27.57' |
| 607 | 19+78.81 | 0.00' |
| 603 | 19+92.49 | 0.00' |
| 316 | 19+92.49 | 33.57' |
| 303 | 20+06.75 | 51.95' |
| 311 | 21+24.04 | -35.98' |
| 312 | 21+25.66 | -24.67' |
| 605 | 21+27.08 | 0.00' |
| 107 | 21+27.08 | 25.41' |
| 100 | 21+28.35 | 36.00' |
| 306 | 21+30.38 | 52.94' |
| 102 | 21+44.13 | 23.05' |
| 308 | 21+44.21 | 52.51' |
| 304 | 21+45.69 | 36.67' |
| 310 | 21+56.47 | -40.12' |
| 309 | 21+58.06 | -23.31' |

### CENTER LINE ALIGNMENT

BP= STATION 17+33.98
Y 560043.273
X 828183.171
BEARING N10° 21' 12"W DISTANCE 144.81'

PI= STATION 18+78.79
Y 560185.721
X 828157.147
BEARING N11° 29' 57"W DISTANCE 100.02'

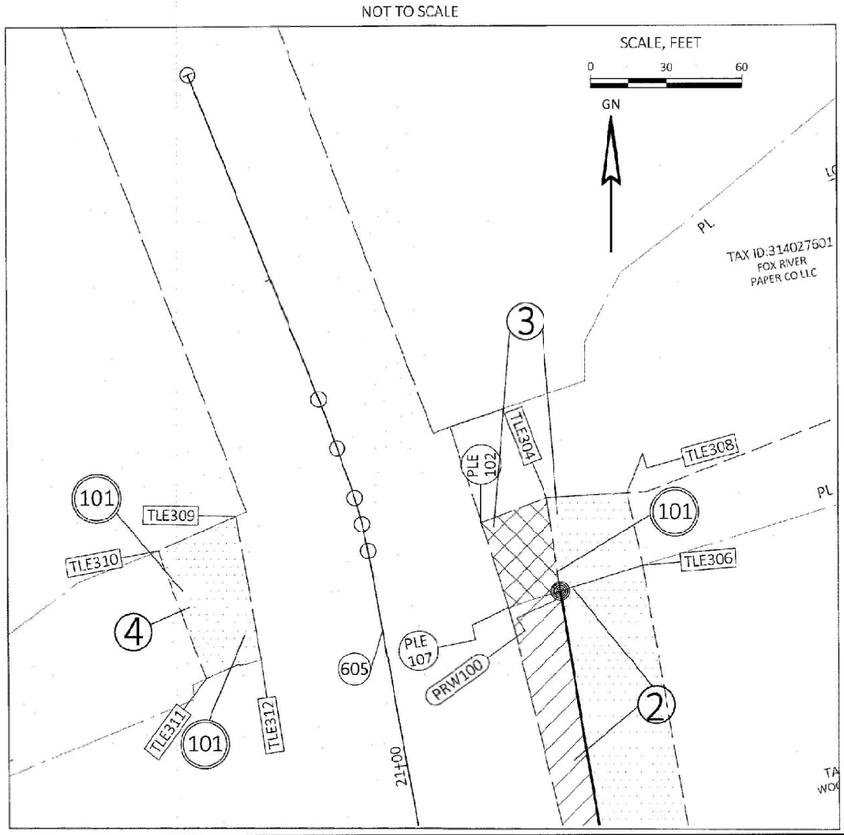
PI= STATION 19+78.81
Y 560283.734
X 828137.207
BEARING N10° 21' 12"W DISTANCE 164.19

ARC
PC= STATION 21+43.00
Y 560445.248
X 828107.700
CC= N 560430.871 E 828029.002
PI= STATION 21+48.40
Y 560450.566
X 828106.728
TAN 5.41
DB N10° 21' 12"W
DA N18° 05' 06"W
LCHORD DIST 10.79 BEARING N14° 13' 09"W
EXTERNAL DIST 0.18
MID ORD 0.18
RADIUS 80.00
DEG 71° 37' 11"
DELTA 07° 43' 54"
LENGTH 10.80
PT= STATION 21+53.79
Y 560455.705
X 828105.050

ARC
PC= STATION 21+53.79
Y 560455.705
X 828105.050
CC= N 560362.577 E 827819.871
PI= STATION 21+64.14
Y 560465.545
X 828101.837
TAN 10.35
DB N18° 05' 06"W
DA N22° 02' 14"W
LCHORD DIST 20.69 BEARING N20° 03' 40"W
EXTERNAL DIST 0.18
MID ORD 0.18
RADIUS 300.00
DEG 19° 05' 55"
DELTA 03° 57' 09"
LENGTH 20.69
PT= STATION 21+74.49
Y 560475.140
X 828097.953
BEARING N22° 02' 14"W DISTANCE 59.02
END= STATION 22+43.51
Y 560539.121
X 828072.054

## DETAIL "B"

NOT TO SCALE








PLOT SCALE :
PLOT NAME :
PLOT BY : Jessica Spitzgerber
PLOT DATE : 6/20/2024 9:31 AM
PLOT DATE :
PLOT DATE :
FILE NAME : C:\PW_WORK\EXP-PW_BSNTLEY.COM_EXP-PW-01\D0112122\D040101-RP.DWG
APPRAISAL PLAT DATE :

LEGEND

- SLOPE INTERCEPT
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- TEMPORARY LIMITED EASEMENT
- PERMANENT LIMITED EASEMENT
- INLET / MANHOLE (SEE STORM SEWER DETAIL)
- RELOCATED HYDRANT (BY OTHERS)

FOX RIVER
MIDDLE APPLETON DAM

N

FOX RIVER

RELOCATED HYDRANT (BY OTHERS)

WE ENERGIES (ELECTRIC)

ASPHALT CE

PI: 18+78.79

PI: 19+78.81

BP: 17+33.98

AT&T (COMMUNICATION)

END CONSTRUCTION STA 21+63, LT

PC: 21+43.00

PCC: 21+53.79

PT: 21+74.49

EP: 22+43.51

22+00

BEGIN CONSTRUCTION STA 18+60

18+00

19+00

20+00

21+00

REMOVING STRUCTURE OVER WATERWAY DEBRIS CARTURE (P-44-0723)
PROPOSED STRUCTURE B-44-502
(SEE STRUCTURE PLANS)

STA 21+34.77

CITY OF APPLETON (WATER)

STA 19+87.10

CITY OF APPLETON (ELECTRIC)

END PROJECT STA 21+55

BEGIN PROJECT STA 18+75
Y=560,181.993
X=828,157.828

CITY OF APPLETON (SEWER)

FOX RIVER

23'

CAUTION

END CONSTRUCTION STA 21+64, RT

ASPHALT CE

WE ENERGIES (ELECTRIC)

WE ENERGIES (GAS)

CITY OF APPLETON (ELECTRIC)

AT&T (COMMUNICATION)

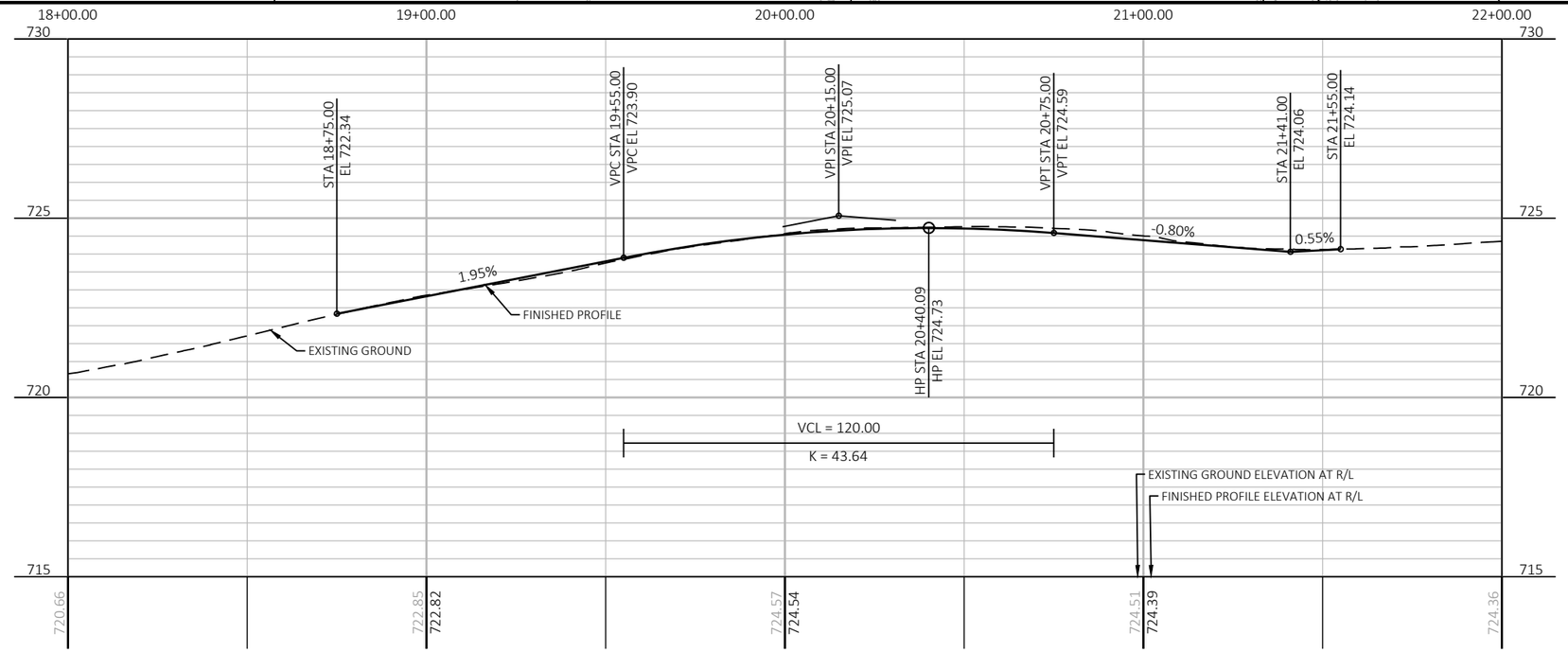
SOUTH MILL RACE
FOX RIVER

AT&T (COMMUNICATION)

E SOUTH ISLAND ST

5

5




| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | PLAN AND PROFILE | SHEET 29 | E |
|---|---|---|---|---|---|

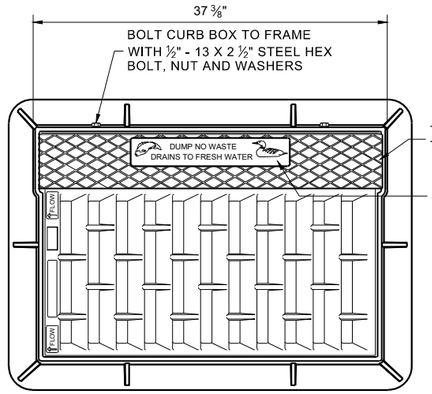
FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\050101-PP.DWG
LAYOUT NAME - 01

PLOT DATE : 7/22/2025 6:50 PM PLOT BY : JOHN BOURGEOIS PLOT NAME : PLOT SCALE : 1 IN:40 FT

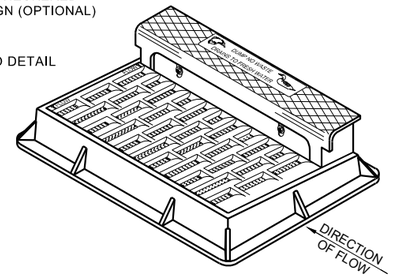
WISDOT/CADDS SHEET 44

# Standard Detail Drawing List

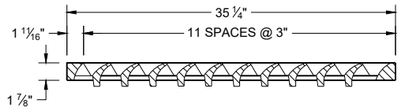
| | |
|---|---|
| 08A05-22A | INLET COVERS TYPE A, H, A-S, H-S & Z |
| 08A05-22C | INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S |
| 08A05-22E | INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M |
| 08B09-04 | MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER |
| 08C07-03 | INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT |
| 08D01-24A | CONCRETE CURB & GUTTER |
| 08D01-24B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D05-22A | CURB RAMPS TYPES 1 AND 1-A |
| 08D05-22B | CURB RAMPS TYPES 2 AND 3 |
| 08D05-22C | CURB RAMPS TYPES 4A AND 4A1 |
| 08D05-22D | CURB RAMPS TYPE 4B AND 4B1 |
| 08D05-22E | CURB RAMPS TYPES 5, 6, 7A, 7B & 8 |
| 08D05-22F | CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS |
| 08D05-22G | CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES |
| 08D18-04 | DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y |
| 08E09-06 | SILT FENCE |
| 08E10-02 | INLET PROTECTION TYPE A, B, C AND D |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 09B02-10 | CONDUIT |
| 09B16-03 | PULL BOX  NON-CONDUCTIVE |
| 09C02-09 | CONCRETE BASES, TYPES 1, 2,  5, & 6 |
| 09C05-10 | CONCRETE CONTROL CABINET BASES |
| 12A03-10 | NAME PLATE (STRUCTURES) |
| 13B02-09A | CONCRETE PAVEMENT APPROACH SLAB |
| 13C01-19 | CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES |
| 13C13-11 | URBAN DOWELED CONCRETE PAVEMENT |
| 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 |
| 13C18-08F | CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C02-09C | DETOUR SIGNING FOR MAINLINE CLOSURES |
| 15C07-16E | PAVEMENT MARKING FOR BIKE LANES |
| 15C08-24A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |
| 15C11-10B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS |
| 15C29-08A | BICYCLE LANE MARKING |

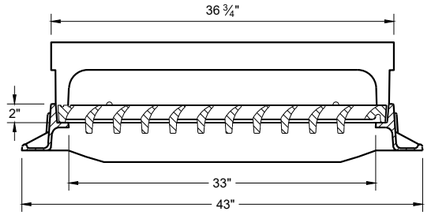


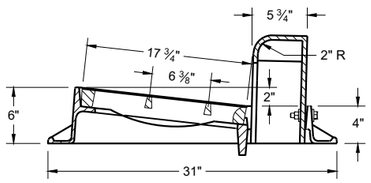

NOTE: EITHER CASTING IS ACCEPTABLE

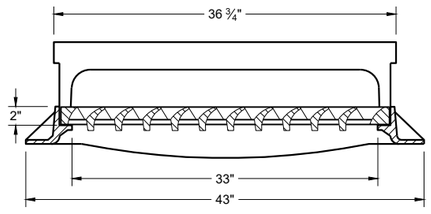


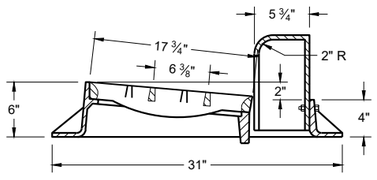

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"



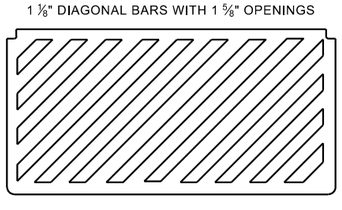




**TYPE "H"**

NOTE: EITHER CASTING IS ACCEPTABLE

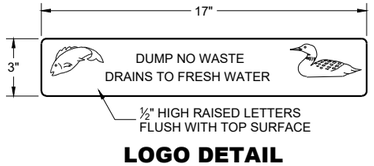
1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



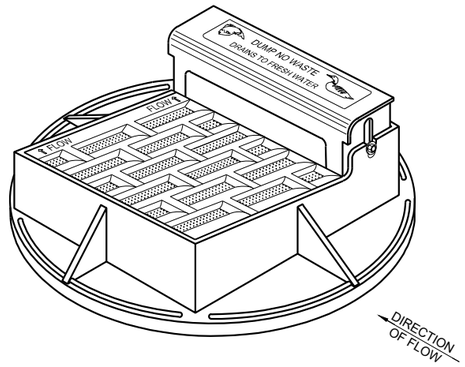
**SPECIAL GRATE FOR TYPE "H" COVER**

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

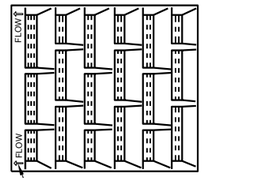


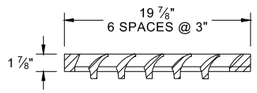

**LOGO DETAIL**

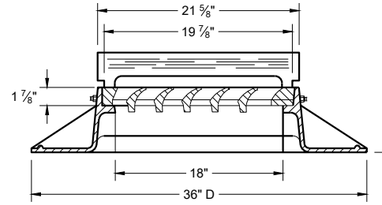


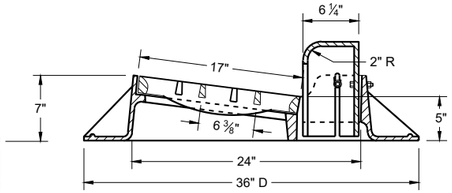

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE



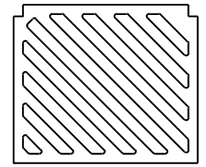




**TYPE "A"**

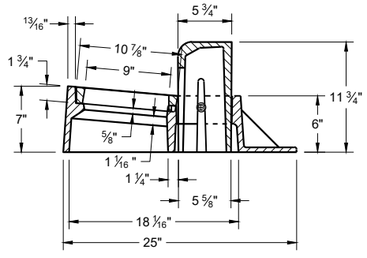
1" DIAGONAL BARS
WITH 1 1/2" OPENINGS

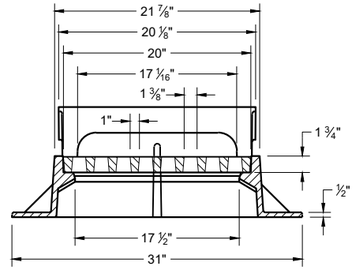


**SPECIAL GRATE FOR TYPE "A" COVER**

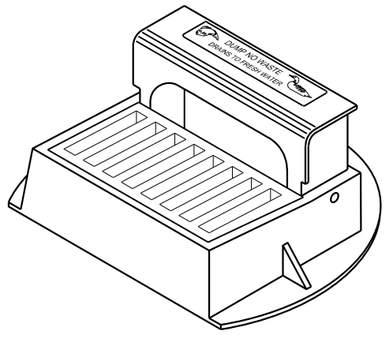
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)




**TYPE "Z"**




## 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.

# INLET COVERS
# TYPES A, H, A-S, H-S AND Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2025
DATE

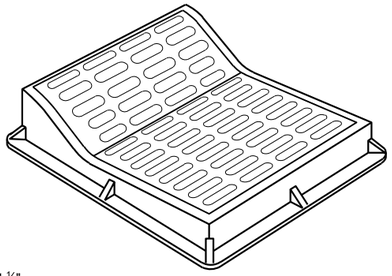
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

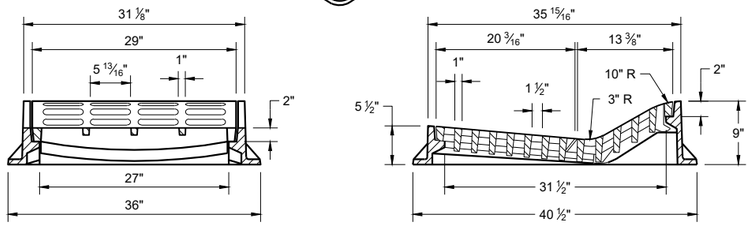
FHWA

## 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.

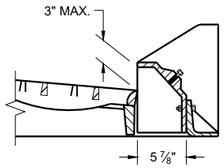
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.






### TYPE "F"

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

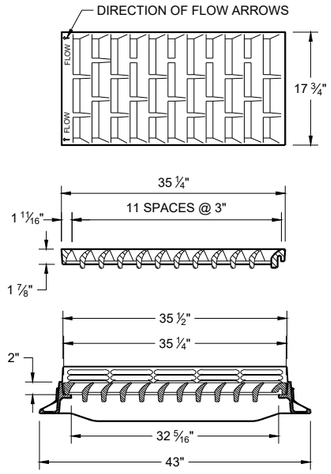



### ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

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

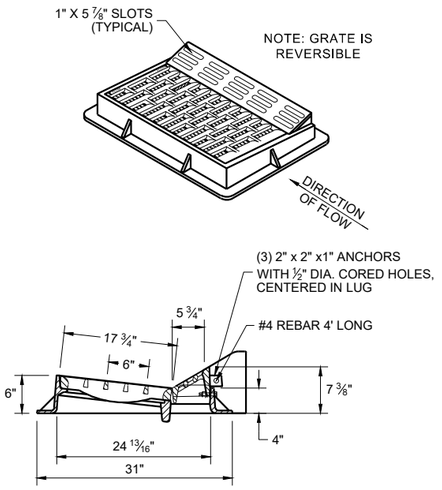
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

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



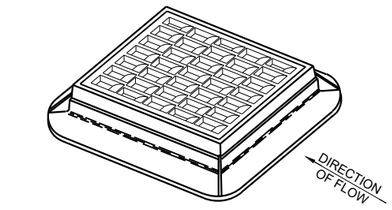

### TYPE "HM"

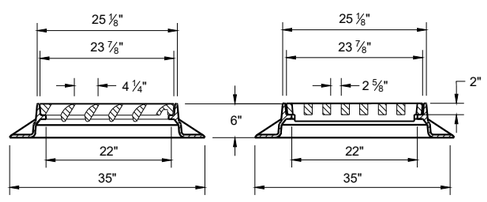
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



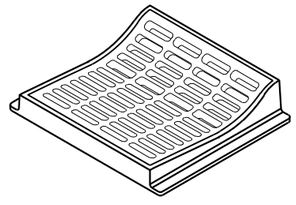

NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

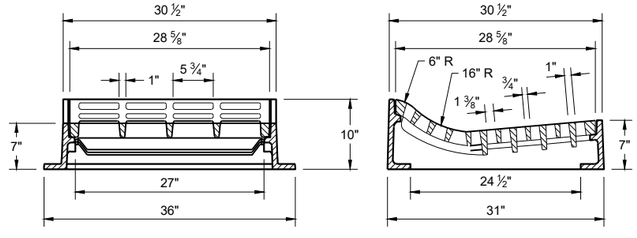
**NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.**




### 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**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



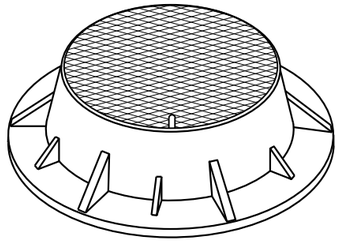
6
SDD 08A05-22c

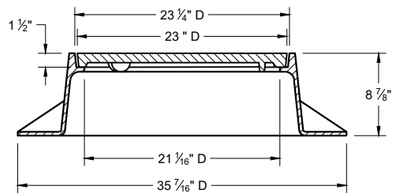
## GENERAL NOTES

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

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

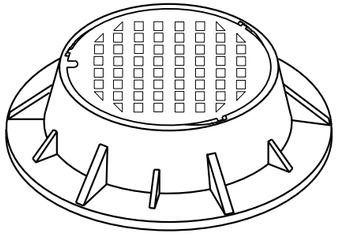
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

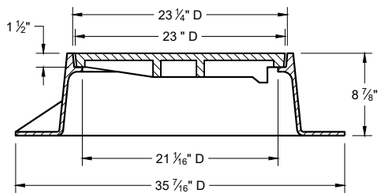





**TYPE "J"**

**NOTE: EITHER CASTING IS ACCEPTABLE**

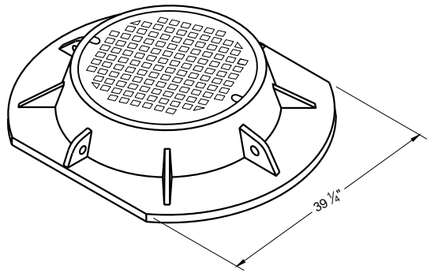


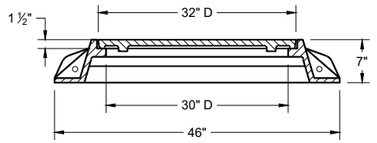



**TYPE "J" SPECIAL**

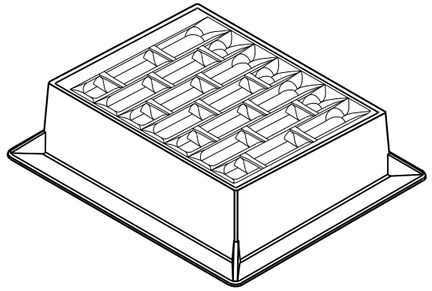
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

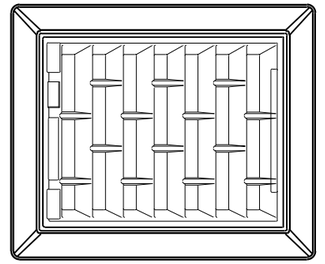
**NOTE: EITHER CASTING IS ACCEPTABLE**

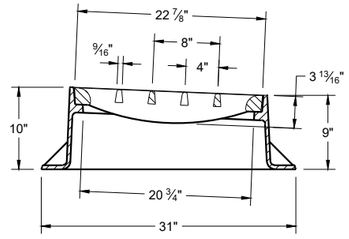


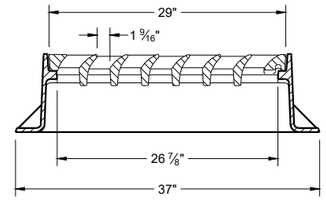




**TYPE "K"**

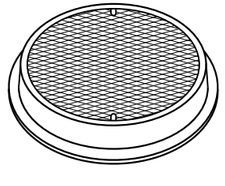


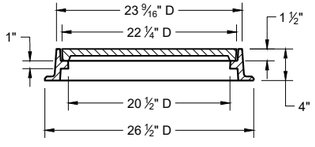





**INLET COVER TYPE "BW"**



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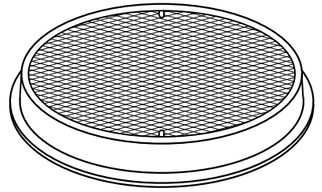

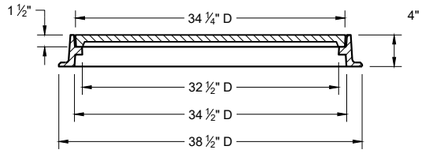


**TYPE "M"**

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

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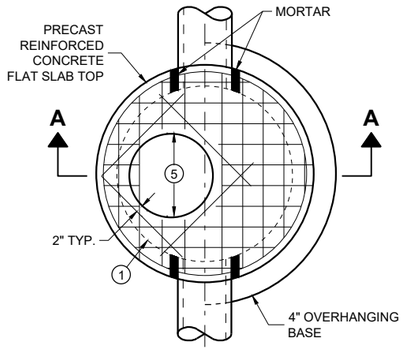
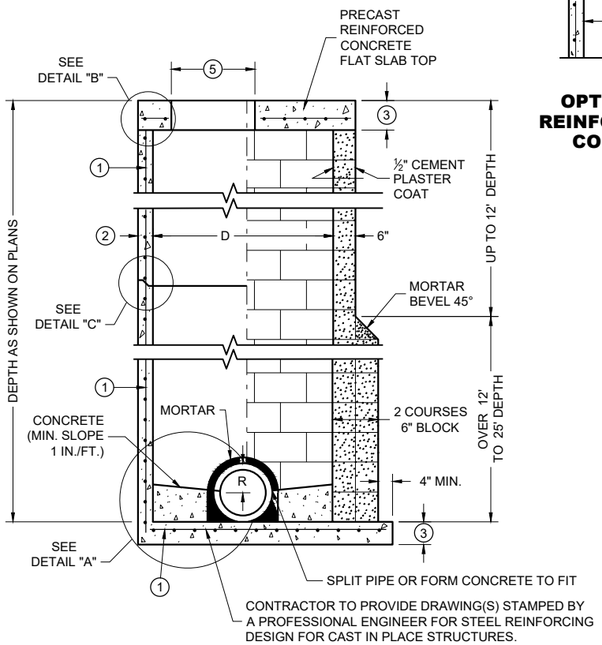



**PLAN VIEW**

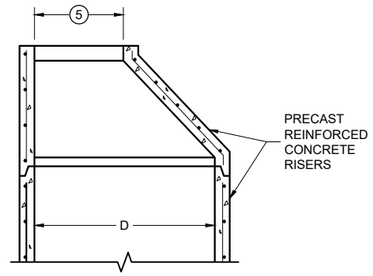
## CIRCULAR OPENING



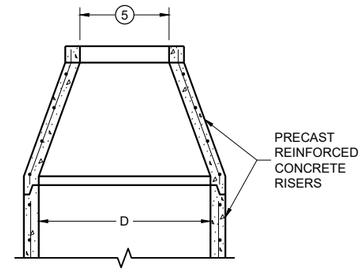

**SECTION A - A**

**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

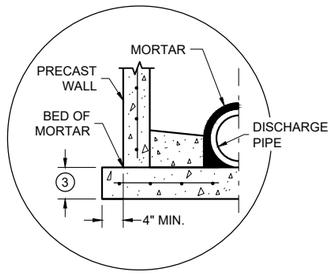
**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** (1)



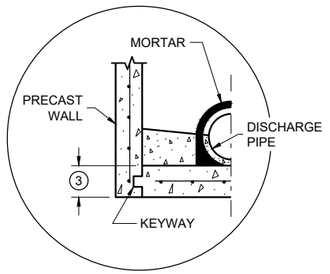

**OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP**




**OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP**

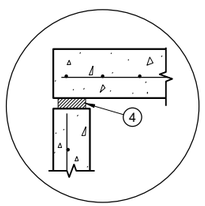



**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

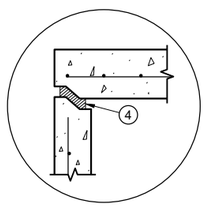



**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION**

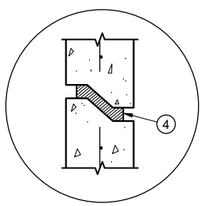
## DETAIL "A"




**TOP WITH PLAIN END JOINT**




**TOP WITH TONGUE AND GROOVE JOINT**




**RISER WITH TONGUE AND GROOVE JOINT**

## DETAIL "B"

## DETAIL "C"

### MANHOLE COVER OPENING MATRIX

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

### PIPE MATRIX

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

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

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

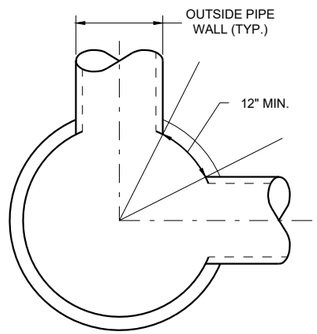
(1) FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

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

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

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

(5) SEE MANHOLE COVER OPENING MATRIX.




**MINIMUM HORIZONTAL PIPE SEPARATION**

## DETAIL "D"

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

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


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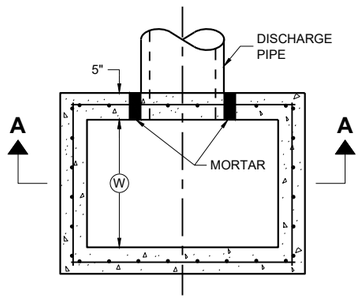
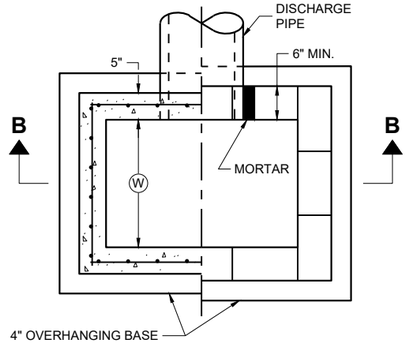
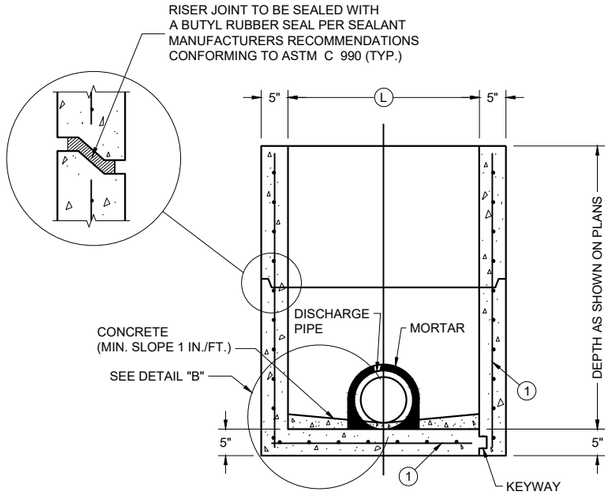



**PLAN VIEW**



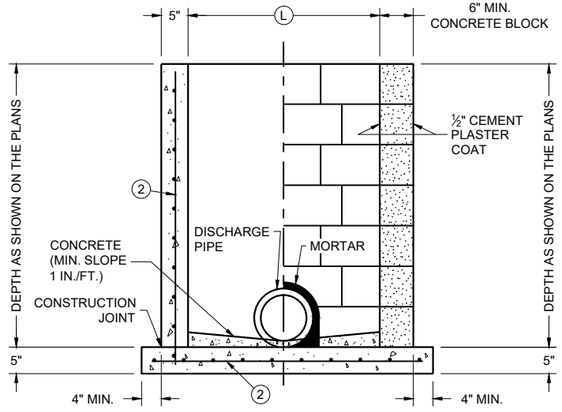

**PLAN VIEW**




**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE**

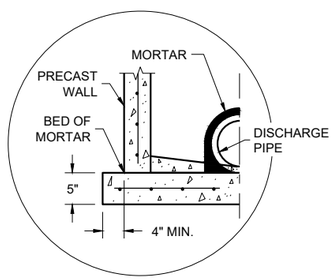
**SECTION A - A**




**CAST IN PLACE REINFORCED CONCRETE**

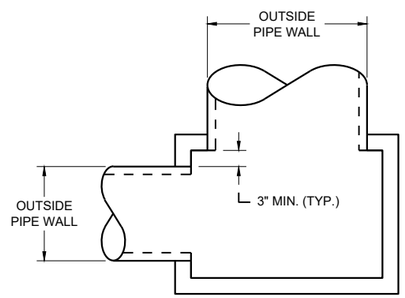
**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** (1)

**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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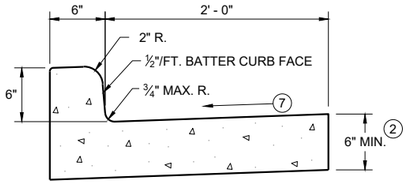
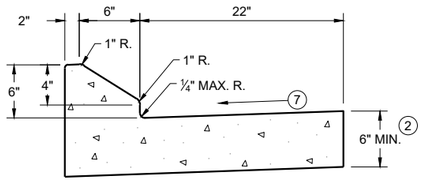
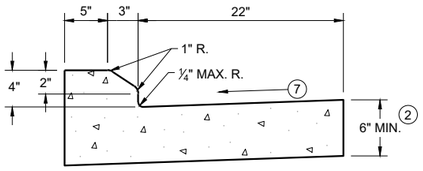


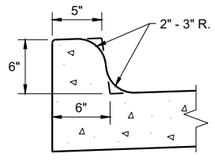

**TYPES A (1) & D**



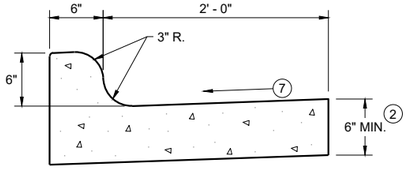

**6" SLOPED CURB TYPES G (1) & J**




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

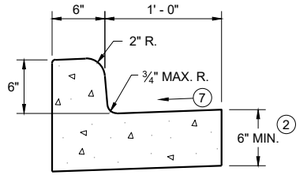



**TYPES K (1) & L**
(OPTIONAL CURB SHAPE)



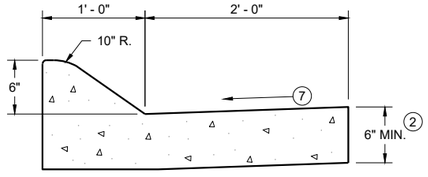

**TYPES K (1) & L**

**CONCRETE CURB AND GUTTER 30"**

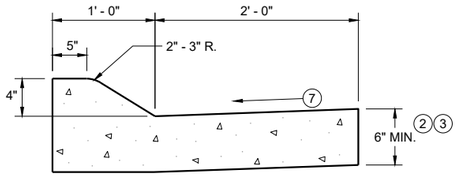



**TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 18"**

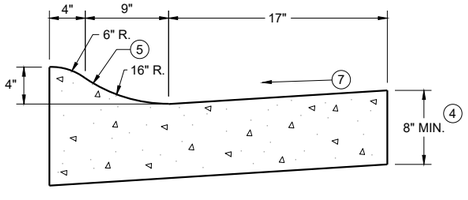



**6" SLOPED CURB TYPES A (1) & D**



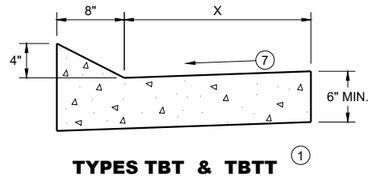

**4" SLOPED CURB TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 36"**




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

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

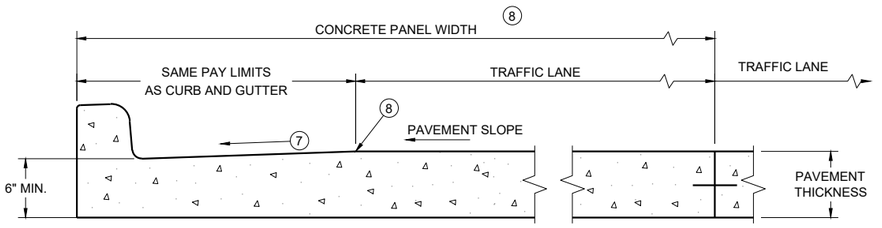



**TYPES TBT & TBTT (1)**

**CONCRETE CURB AND GUTTER**

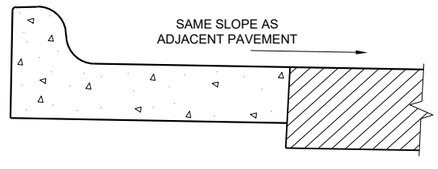
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

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




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

* BIKE LANE IS NOT SHOWN




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

## GENERAL NOTES

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

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

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

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

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

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

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

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

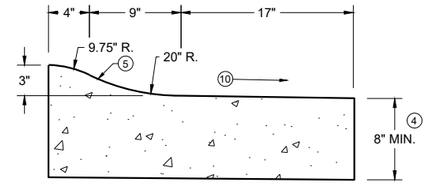
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

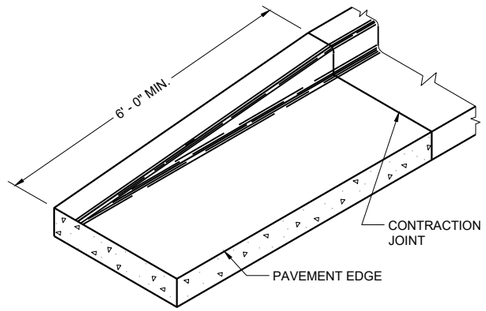
(9) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



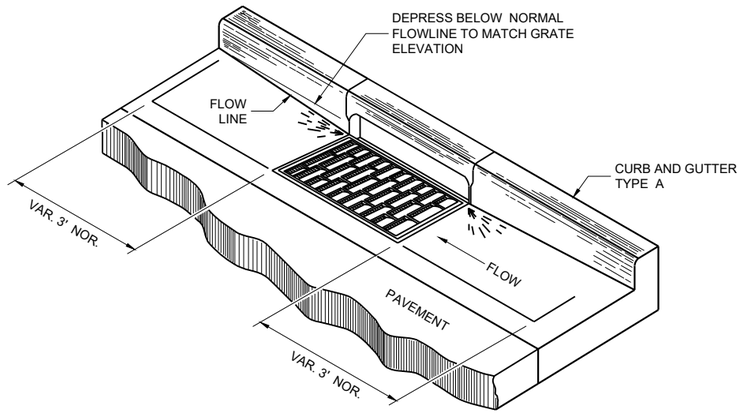

**3" SLOPED CURB TYPES R (1) & T**

**CONCRETE CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




**END SECTION CURB AND GUTTER**




**DETAIL OF CURB AND GUTTER AT INLETS**

(TYPICAL H INLET COVER SHOWN)

## GENERAL NOTES

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

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

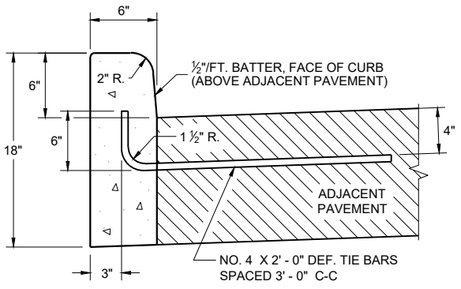
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

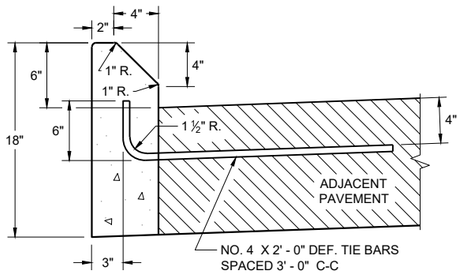
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

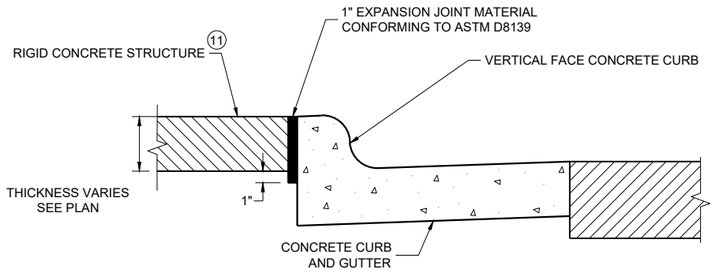



**TYPES A (1) & D**

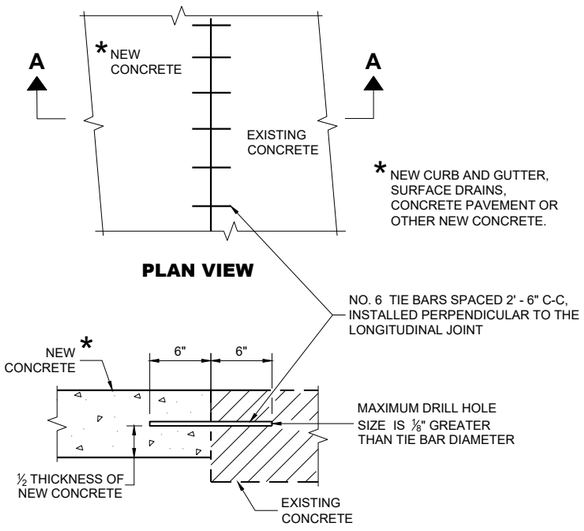



**TYPES G (1) & J**

**CONCRETE CURB**



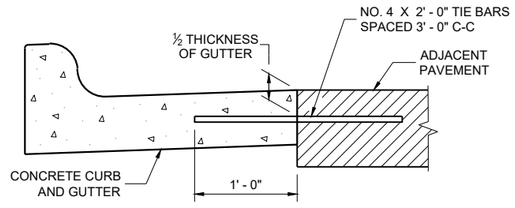

**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)**



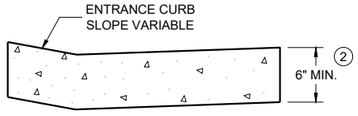

**PLAN VIEW**

**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**




**TYPICAL TIE BAR LOCATION (1)**




**DRIVEWAY ENTRANCE CURB (10)**

(WHEN DIRECTED BY THE ENGINEER)

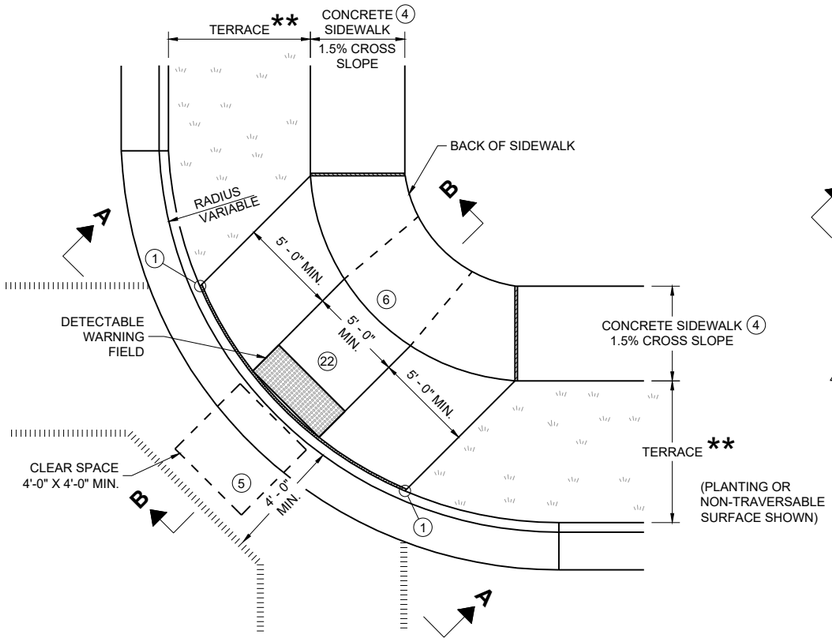
**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

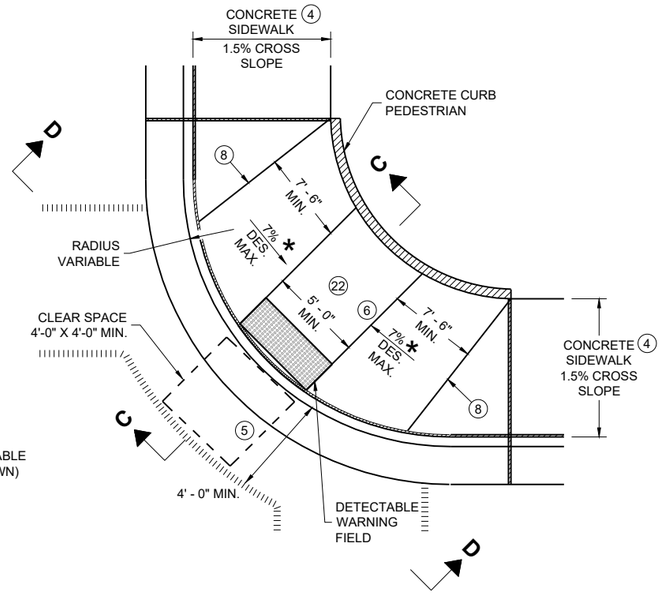

6
SDD 08D01-24b




**PLAN VIEW**

## CURB RAMP TYPE 1

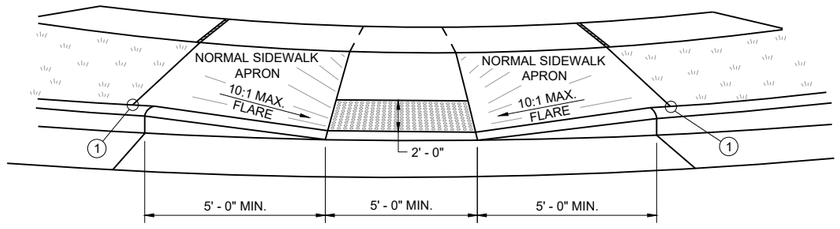
**(CENTER OF CORNER RADIUS)**



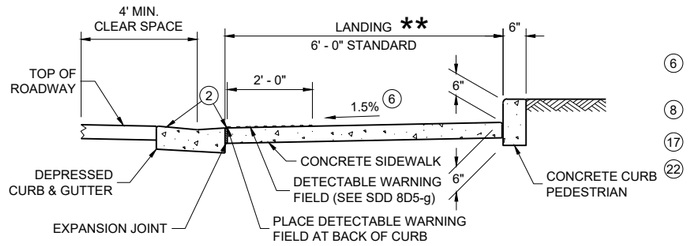

**PLAN VIEW**

## CURB RAMP TYPE 1 - A

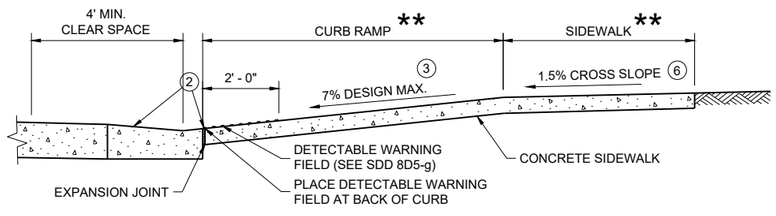
**(NO TERRACE)**



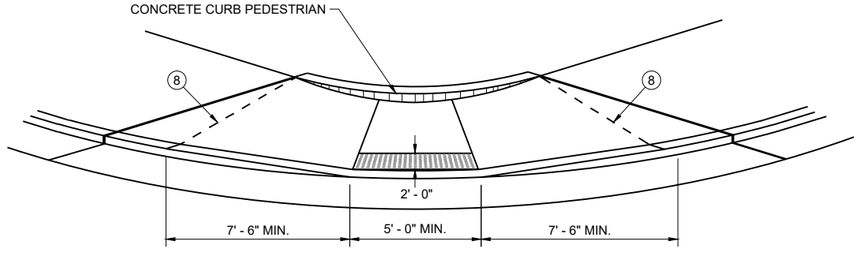

**VIEW A - A FOR TYPE 1**




**SECTION C - C FOR TYPE 1 - A**




**SECTION B - B FOR TYPE 1**




**VIEW D - D FOR TYPE 1 - A**

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

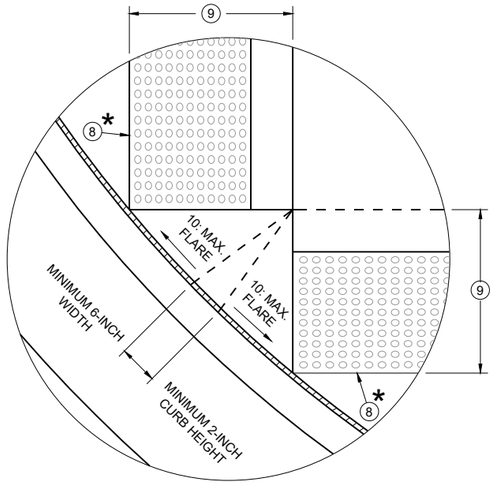
## LEGEND

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

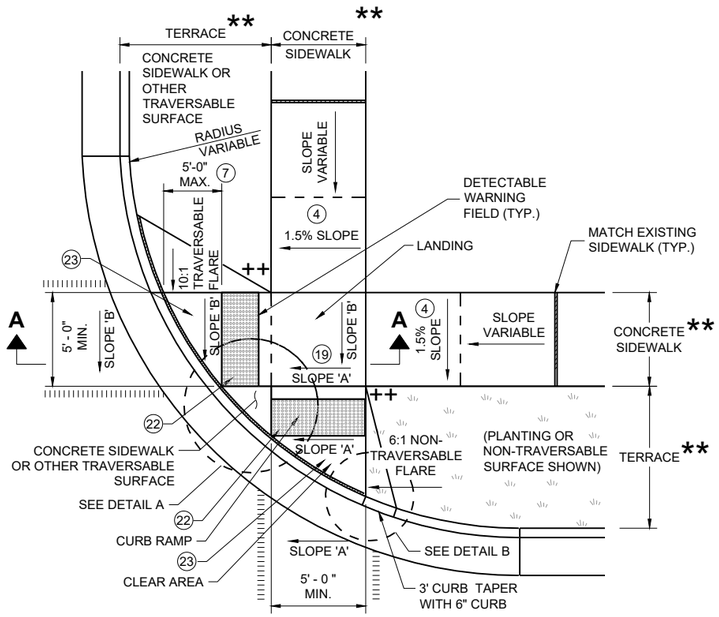
**CURB RAMPS TYPE 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION


6
SDD 08D05-22a



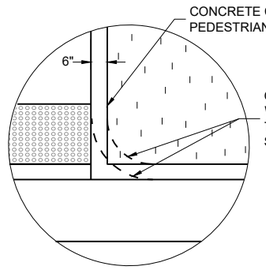

**DETAIL A**



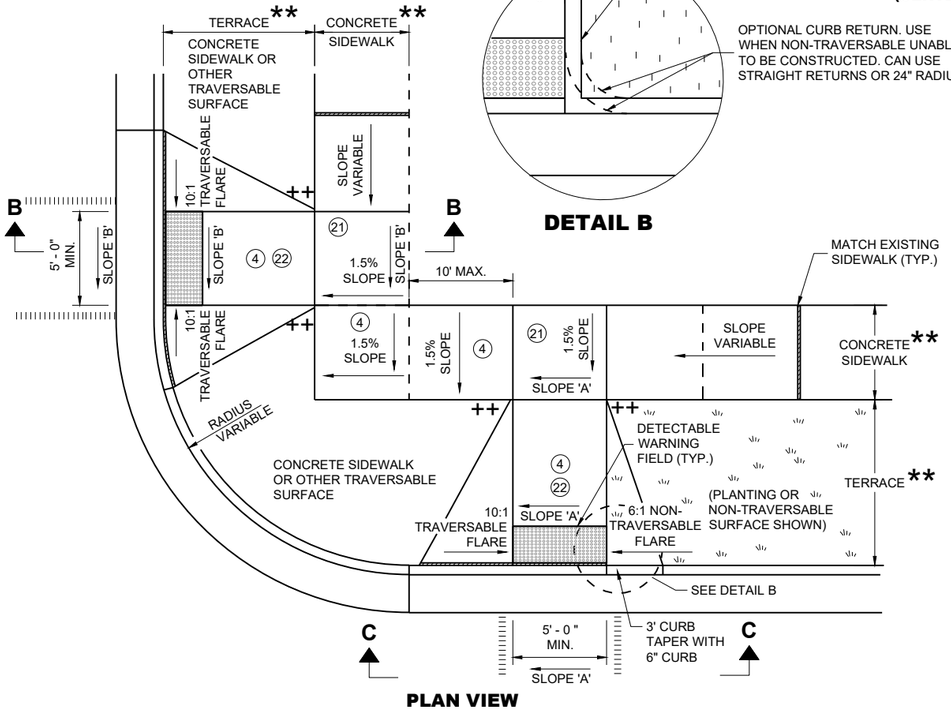

**PLAN VIEW**

## CURB RAMP TYPE 2

**(CENTER OF CORNER RADIUS)**




**DETAIL B**




**PLAN VIEW**

## CURB RAMP TYPE 3

**(OUTSIDE OF CROSSWALK AREA)**

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

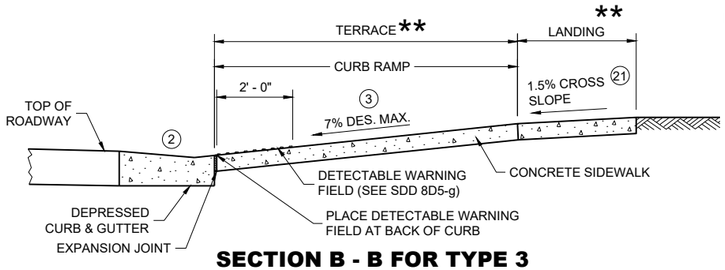
(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

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

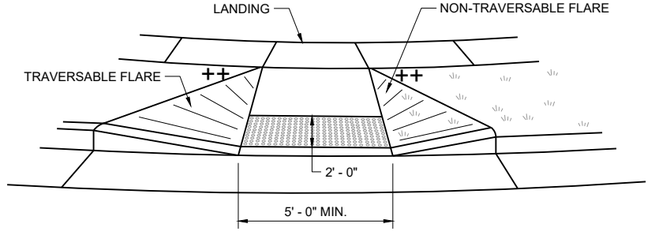
(21) PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

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

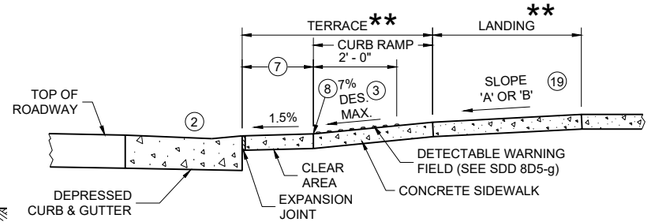
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.




**SECTION B - B FOR TYPE 3**




**VIEW C - C FOR TYPE 3**




**SECTION A - A FOR TYPE 2**

### LEGEND

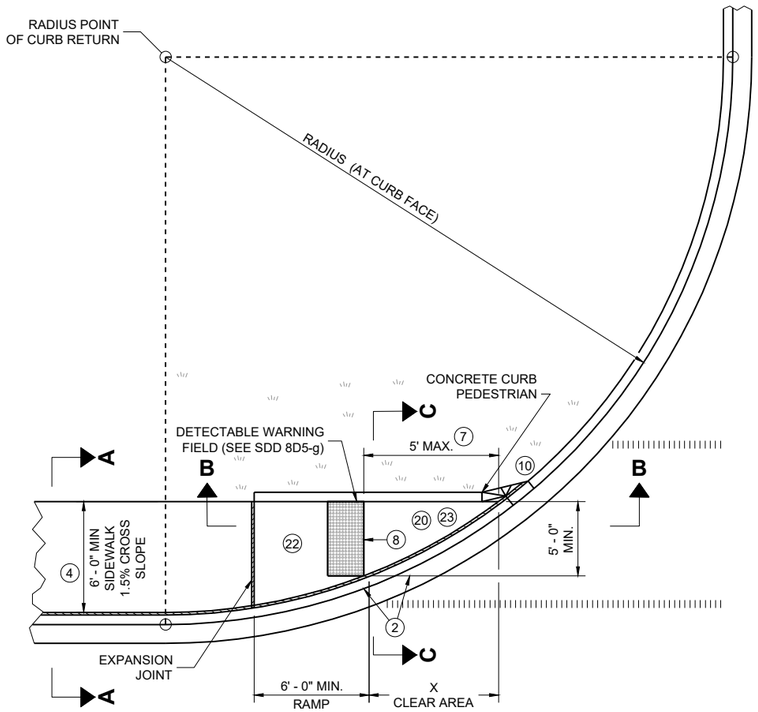
| | |
|---|---|
| ▨ | ½" EXPANSION JOINT SIDEWALK |
| – – – – | CONTRACTION JOINT SIDEWALK |
| ıllıllıllıllıl | PAVEMENT MARKING CROSSWALK (WHITE) |
| * | MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK |
| ** | WIDTH SHOWN ELSEWHERE IN THE PLANS |
| ++ | CONSTRUCT 6" WEDGE TO AVOID CONCRETE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

## CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

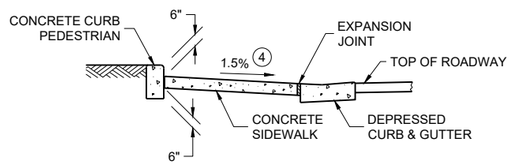


6
SDD 08D05-22b

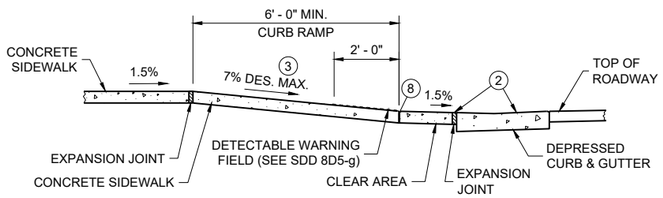



**PLAN VIEW**

**CURB RAMP TYPE 4A**




**SECTION C - C FOR TYPE 4A**



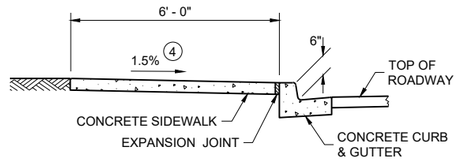

**SECTION B - B FOR TYPE 4A AND TYPE 4A1**

## LEGEND

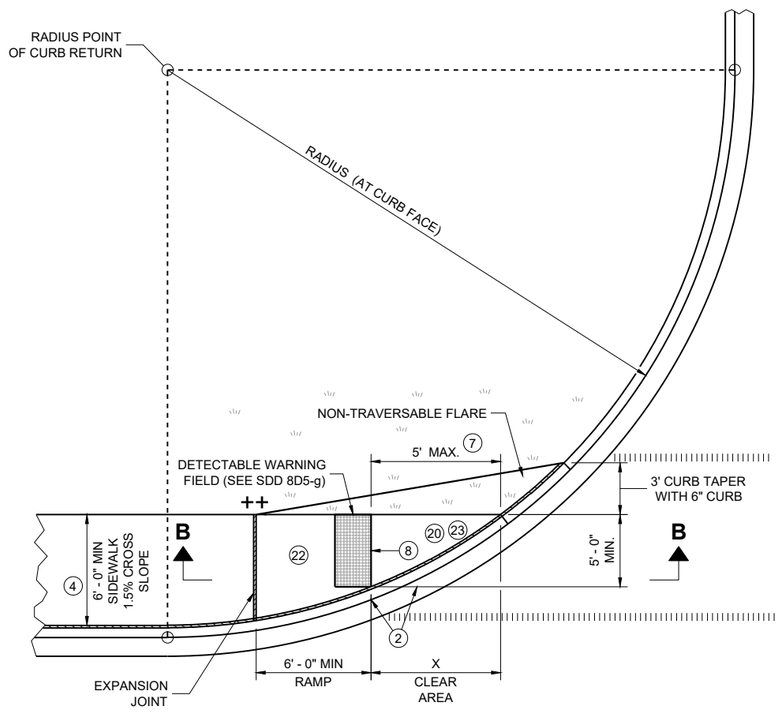
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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

INTERMEDIATE RADII CAN BE INTERPOLATED




**SECTION A - A FOR TYPE 4A**




**PLAN VIEW**

**CURB RAMP TYPE 4A1**

## GENERAL NOTES

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

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

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

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

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

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

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

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

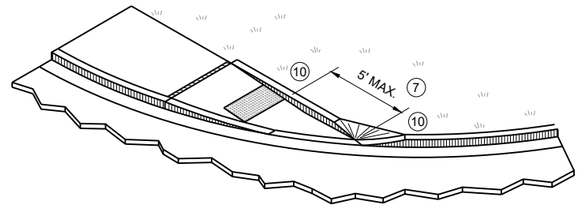
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

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

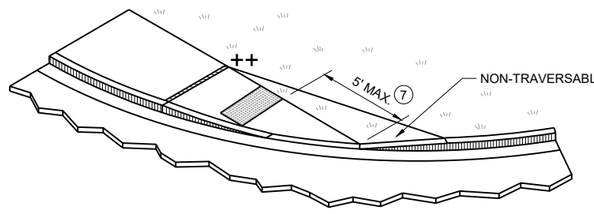
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

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

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



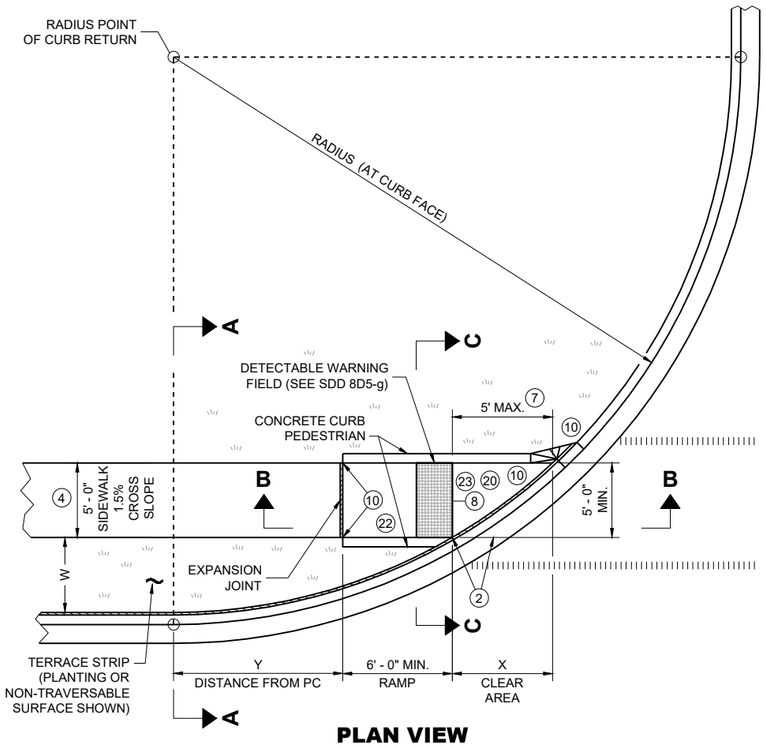

**ISOMETRIC VIEW FOR TYPE 4A**




**ISOMETRIC VIEW FOR TYPE 4A1**

**CURB RAMPS**
**TYPE 4A AND 4A1**

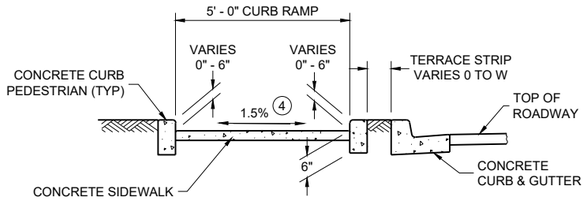
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




**PLAN VIEW**
**CURB RAMP TYPE 4B**

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

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




**SECTION C - C FOR TYPE 4B**

## LEGEND

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

## GENERAL NOTES

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

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

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

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

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

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

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

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

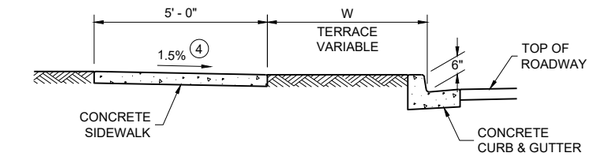
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

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

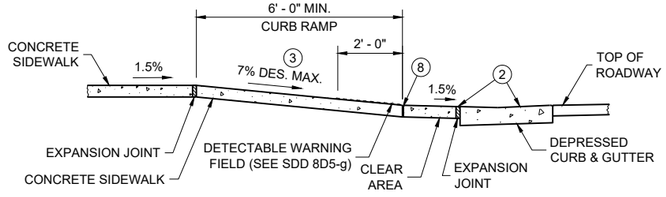
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

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

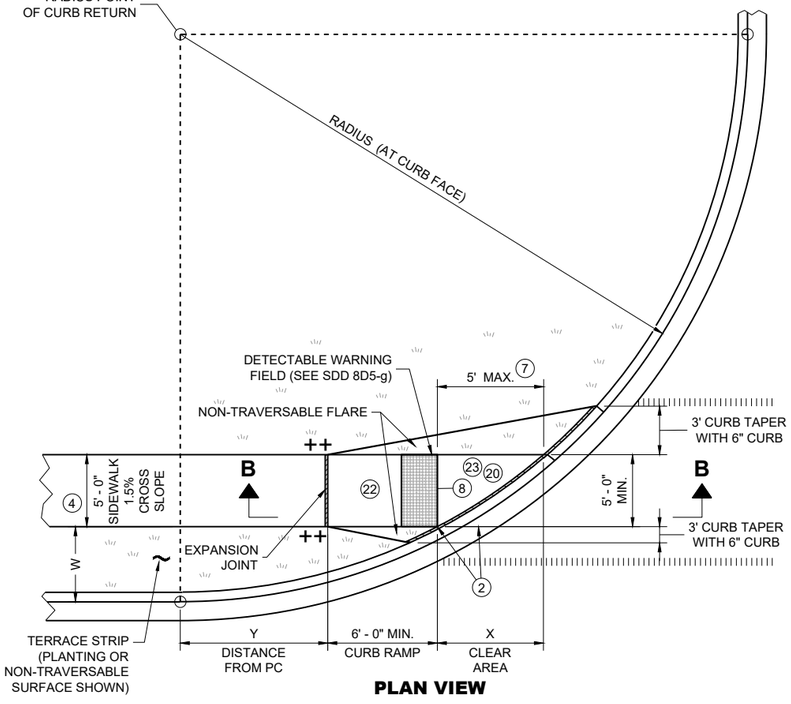
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



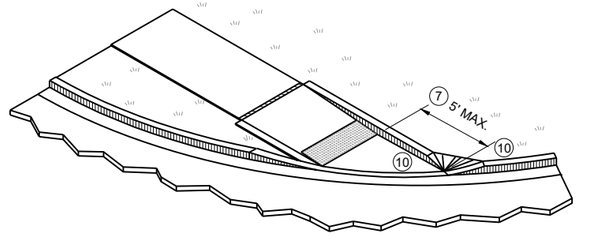

**SECTION A - A FOR TYPE 4B**



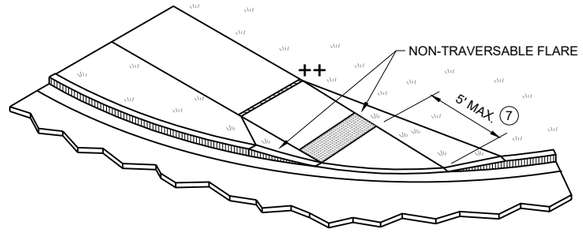

**SECTION B - B FOR TYPE 4B AND TYPE 4B1**




**PLAN VIEW**
**CURB RAMP TYPE 4B1**



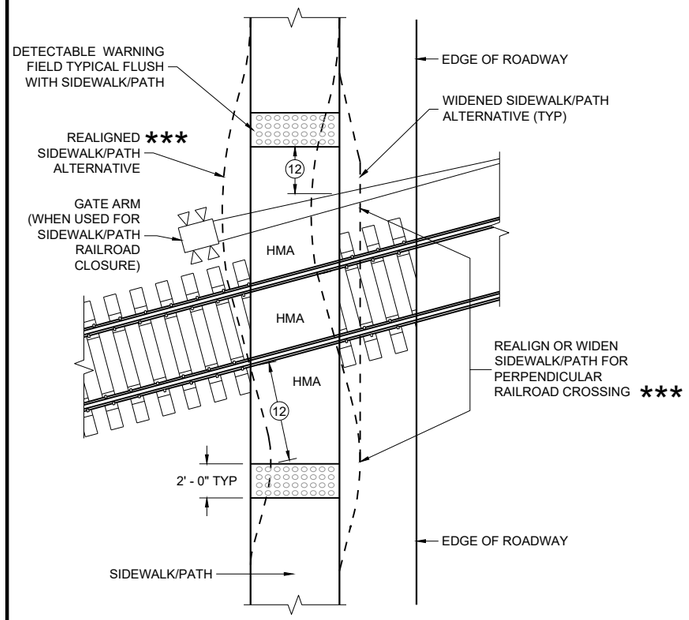

**ISOMETRIC VIEW FOR TYPE 4B**




**ISOMETRIC VIEW FOR TYPE 4B1**

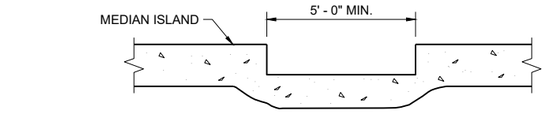
**CURB RAMPS**
**TYPE 4B AND 4B1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

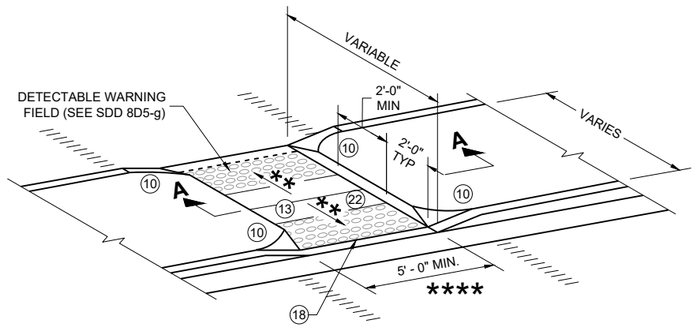



## CURB RAMP TYPE 8

### DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS




### SECTION A - A FOR TYPE 5




## CURB RAMP TYPE 5

### MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

## GENERAL NOTES

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

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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

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

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

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

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

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

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

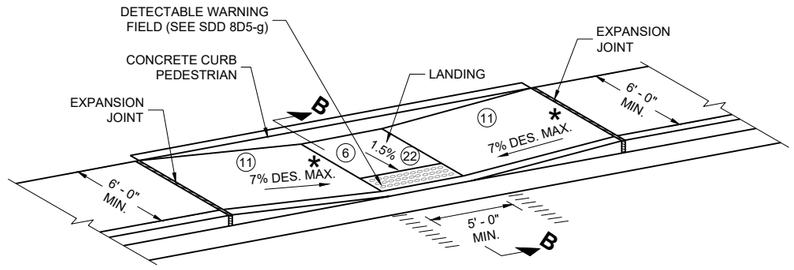
(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH, WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM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

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

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

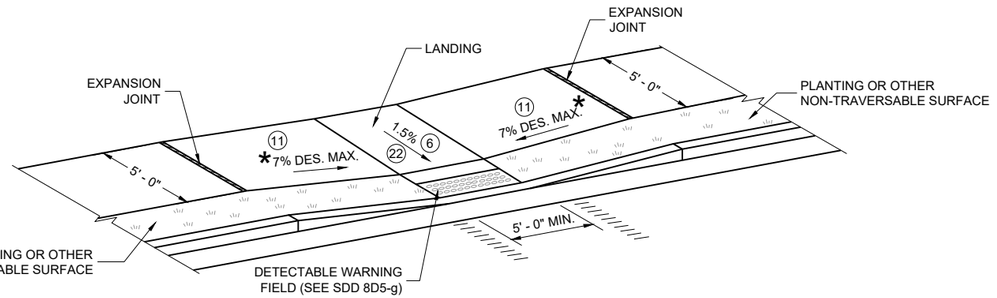
(18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE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

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




## CURB RAMP TYPE 7A

### FOR INTERSECTIONS AND MID BLOCK CROSSINGS

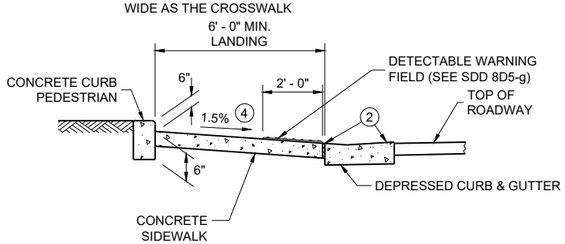



## CURB RAMP TYPE 7B

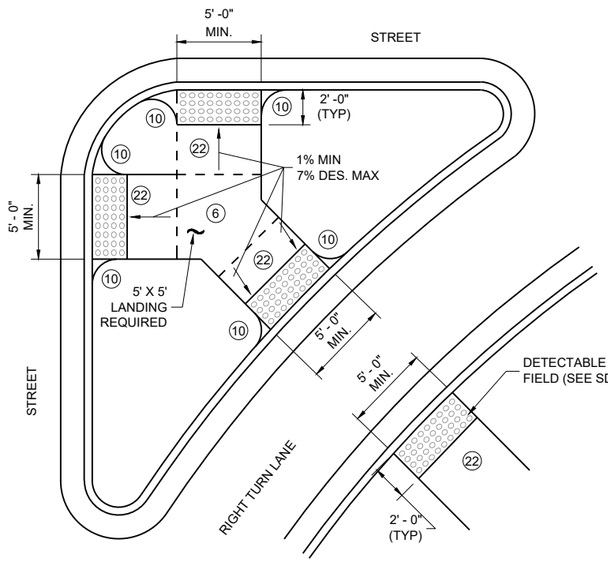
### FOR INTERSECTIONS AND MID BLOCK CROSSINGS

## LEGEND

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




### SECTION B - B FOR TYPE 7A




## CURB RAMP TYPE 6

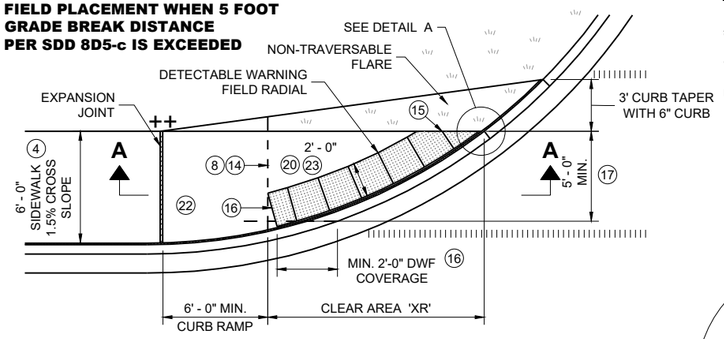
### DETECTABLE WARNING AT ISLANDS

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

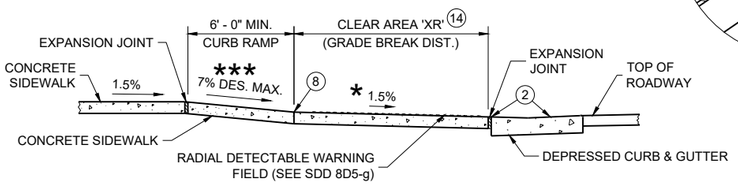
**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED**




**PLAN VIEW**

## CURB RAMP TYPE 4A1

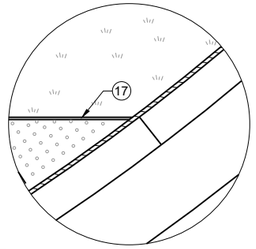
## (GRADE BREAK DISTANCE GREATER THAN 5 FEET)



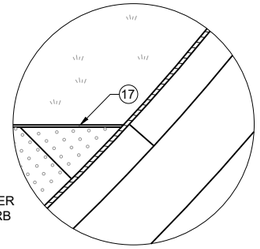

**SECTION A - A FOR TYPE 4A1**

## LEGEND

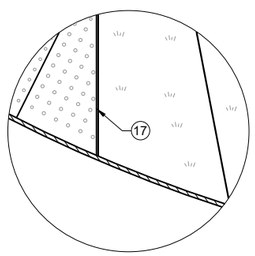
| | |
|---|---|
| ═══ | ½" EXPANSION JOINT SIDEWALK |
| – – – – | CONTRACTION JOINT SIDEWALK |
| ıı ıı ıı ıı | PAVEMENT MARKING CROSSWALK (WHITE) |
| ** | WIDTH SHOWN ELSEWHERE IN THE PLANS |
| *** | MAXIMUM 8.3% |
| ++ | CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE |




**DETAIL A**




**DETAIL B**




**DETAIL C**

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

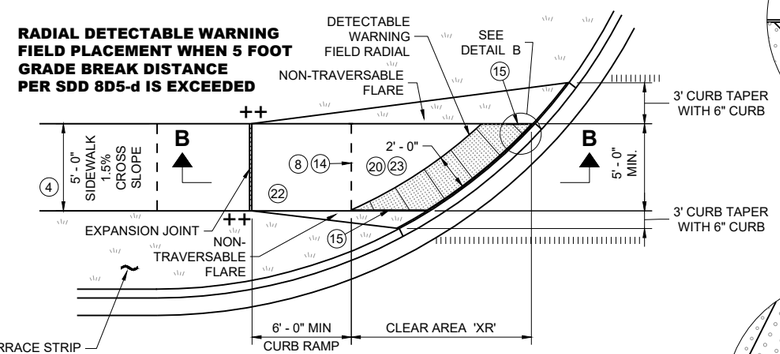
(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

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

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

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

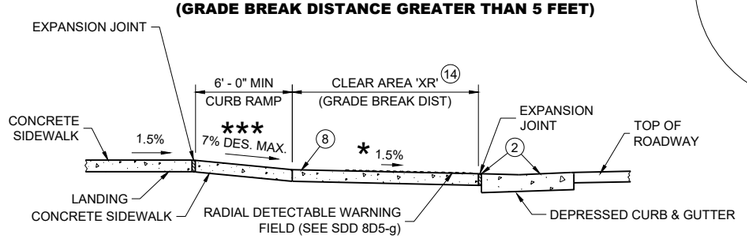
**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED**




**PLAN VIEW**

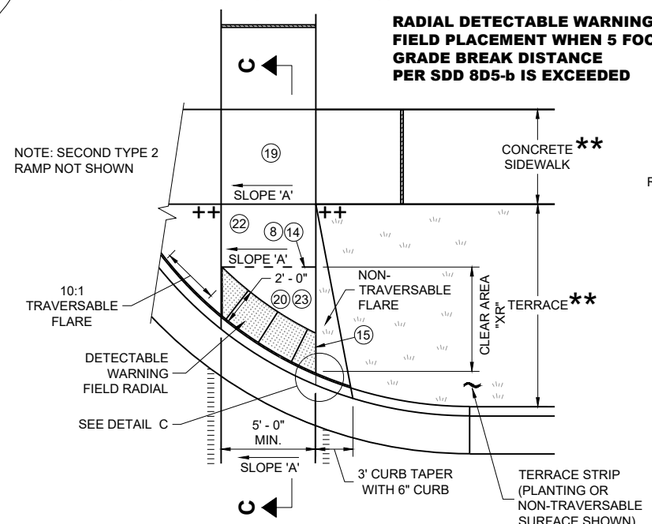
## CURB RAMP TYPE 4B1

**(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**




**SECTION B - B FOR TYPE 4B1**

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

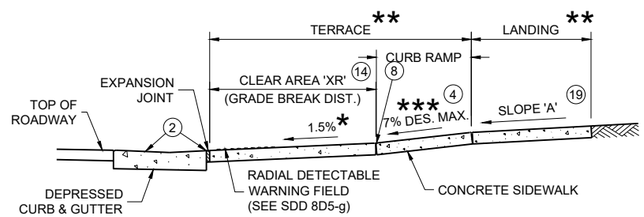



**PLAN VIEW**

## CURB RAMP TYPE 2

**(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

**(ON LINE WITH SIDEWALK)**



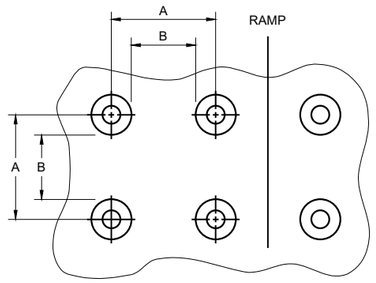

**SECTION C - C FOR TYPE 2**

**CURB RAMPS**
**RADIAL DETECTABLE WARNING**

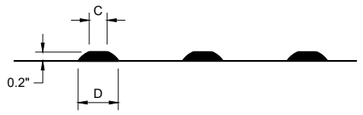
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

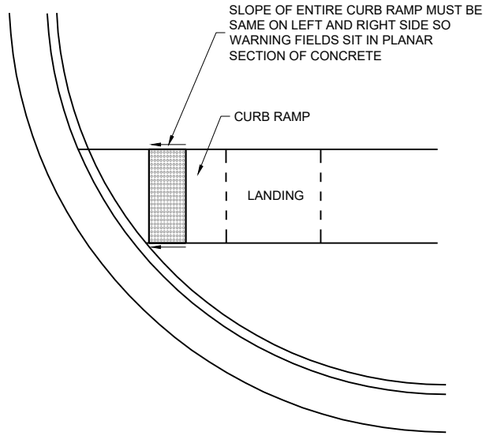
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.




**PLAN VIEW**




**ELEVATION VIEW**




**DETECTABLE WARNING FIELD**
**PLANAR INSTALLATION**

## GENERAL NOTES

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

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

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

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

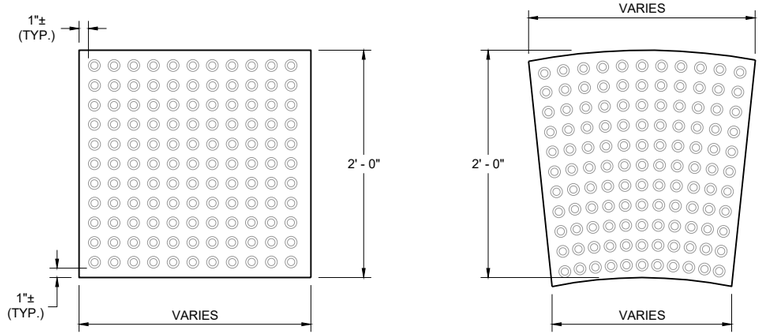
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE.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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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

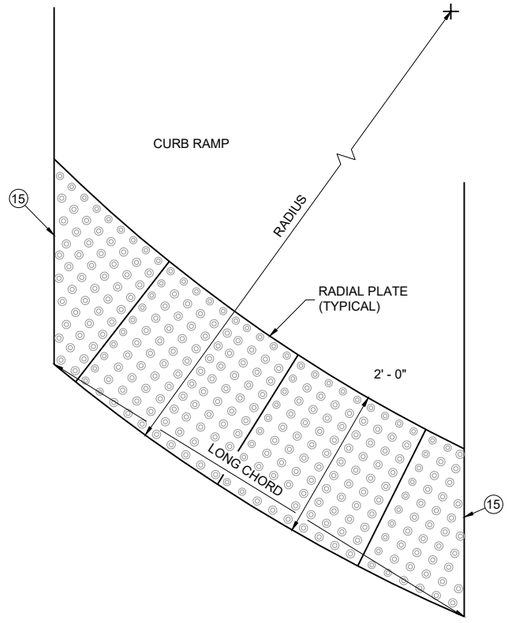
## TRUNCATED DOMES
### DETECTABLE WARNING PATTERN DETAIL



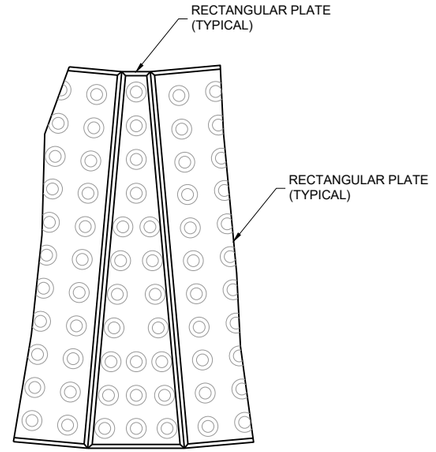

**RECTANGULAR PLATES**

**RADIAL PLATES**

**PLAN VIEW**
**DETECTABLE WARNING FIELDS (TYPICAL)**




**PLAN VIEW**
**RADIAL DETECTABLE WARNING FIELD ATTRIBUTES**




**PLAN VIEW**
**RADIAL WEDGE PLATE CONNECTION DETAIL**

**CURB RAMPS**
**RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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SDD 08D05-22g

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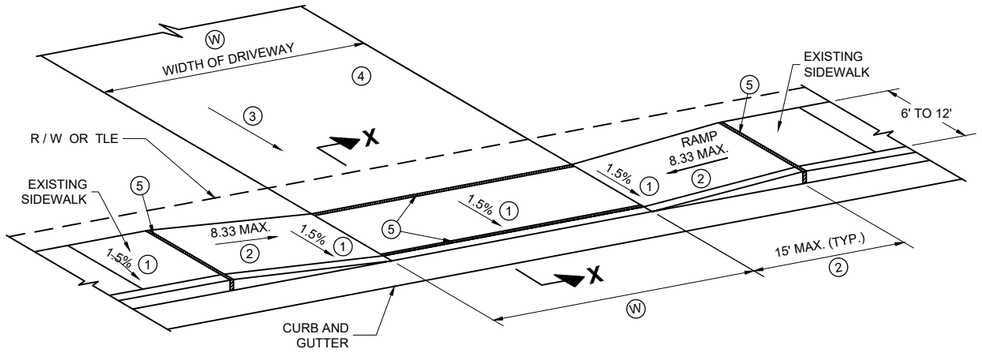
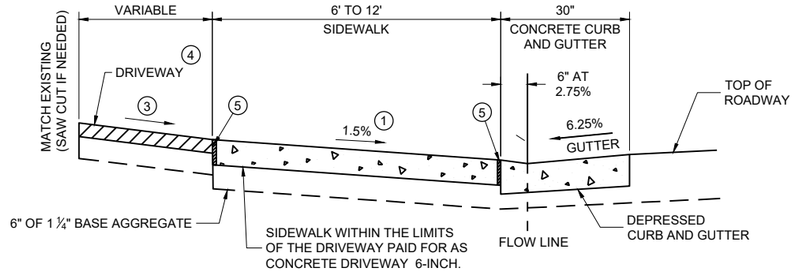
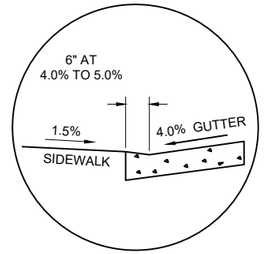
SDD 08D05-22g



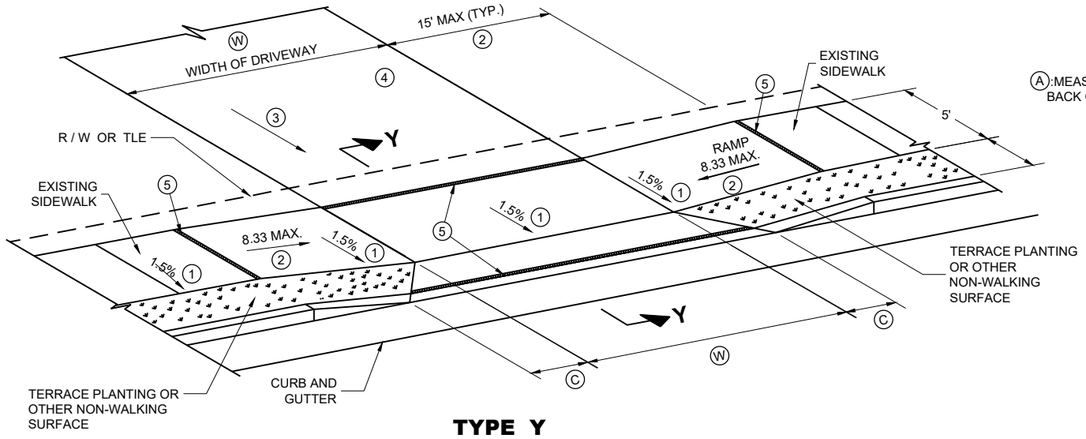

**TYPE X**
**SIDEWALK ABUTS CURB AND GUTTER**
**TERRACE VARIES 0 TO 3 FEET**




**SECTION X - X**




**SECTION X - X**
**4% GUTTER SLOPE**




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

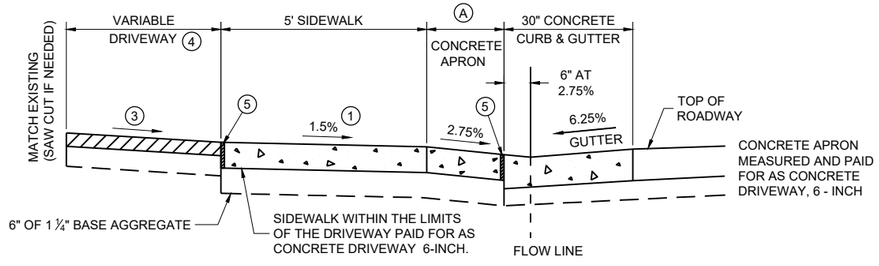
Ⓦ: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

Ⓐ:MEASURE FROM BACK OF CURB

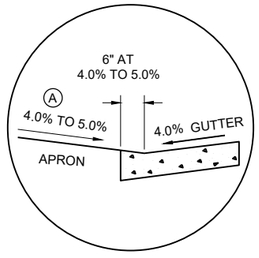
**TABLE Y**

| Ⓐ FEET | Ⓒ FEET |
|---|---|
| 3.5' | 2.0' |
| 4.5' | 3.0' |
| 5.5' | 3.5' |




NOTE: SIDEWALK MY BE DEPRESSED IN DRIVEWAY AREAS

**SECTION Y - Y**




**SECTION Y - Y**
**4% GUTTER SLOPE**

## DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER

**(URBAN AND SUBURBAN)**

## GENERAL NOTES

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

Ⓦ IS SHOWN ON PLAN AND PROFILE SHEETS.

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

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

② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

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

⑤ ½" EXPANSION JOINT FILLER

**DRIVEWAY AND SIDEWALK RAMPS TYPES X AND Y**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



SDD 08D18-04

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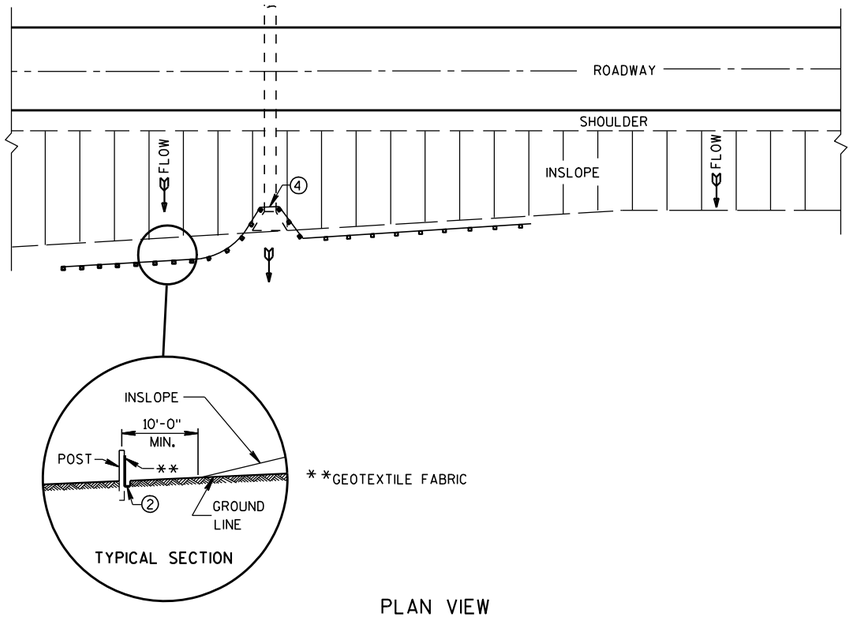
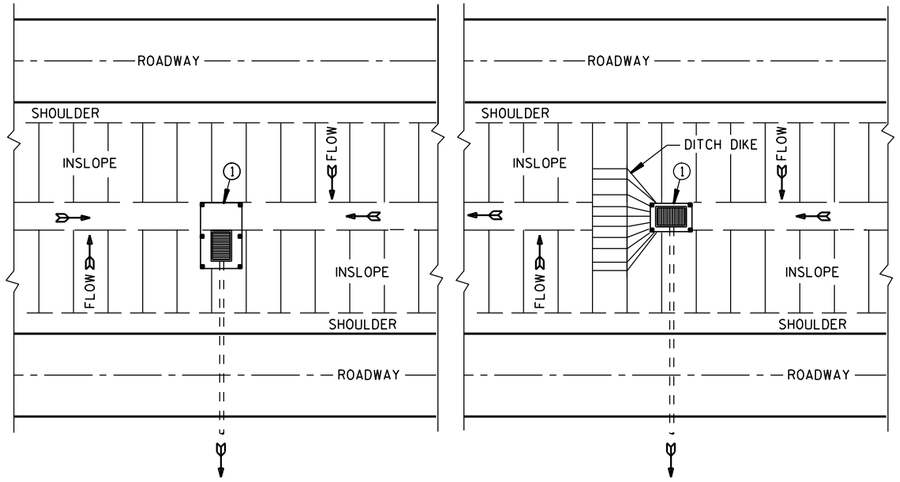



PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



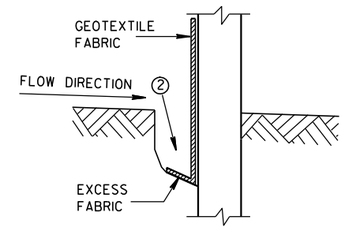

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

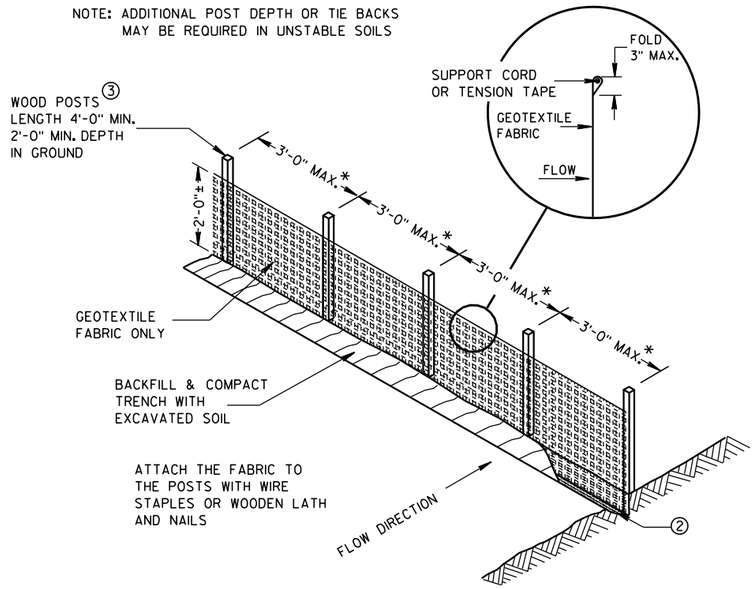
## GENERAL NOTES

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

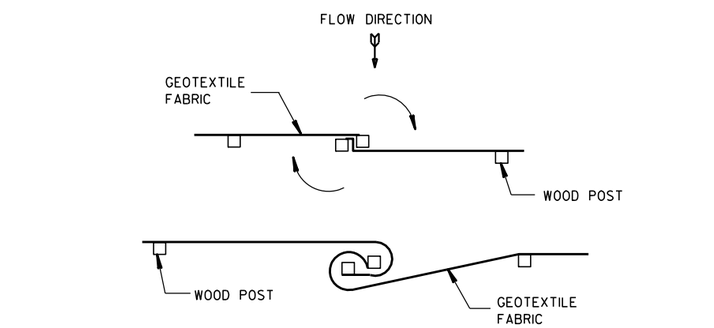
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



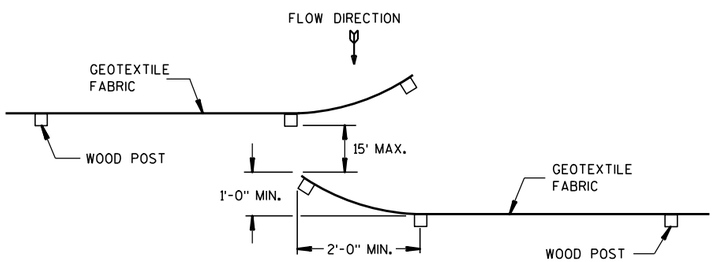

## TRENCH DETAIL




## SILT FENCE

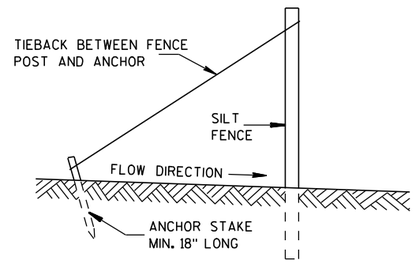



TWIST METHOD




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



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S.D.D. 8 E 9-6

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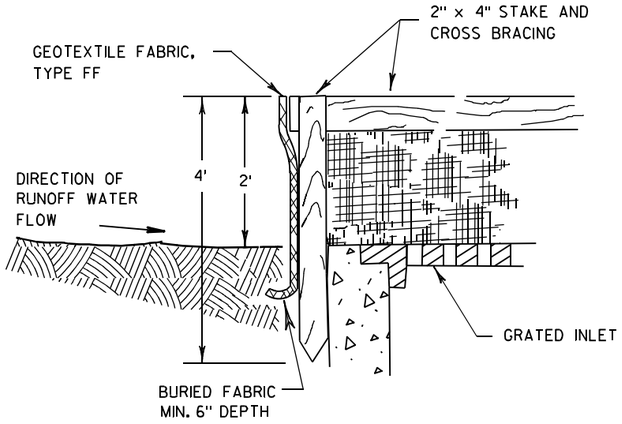
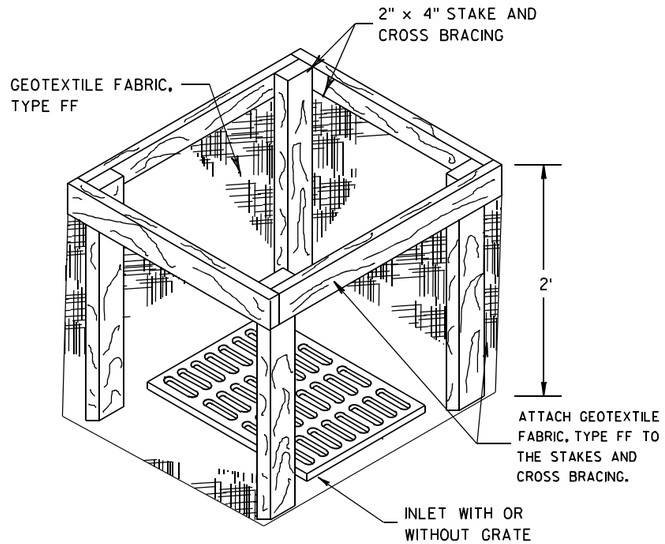
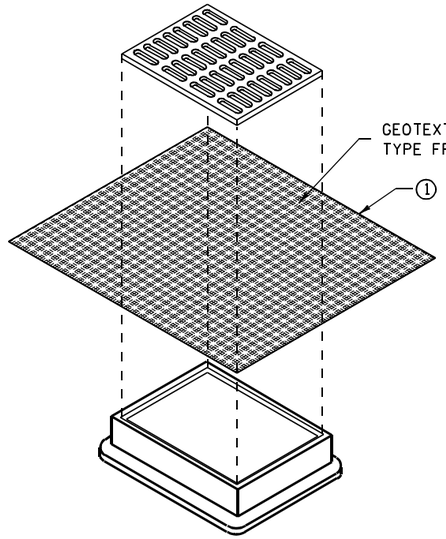
S.D.D. 8 E 9-6



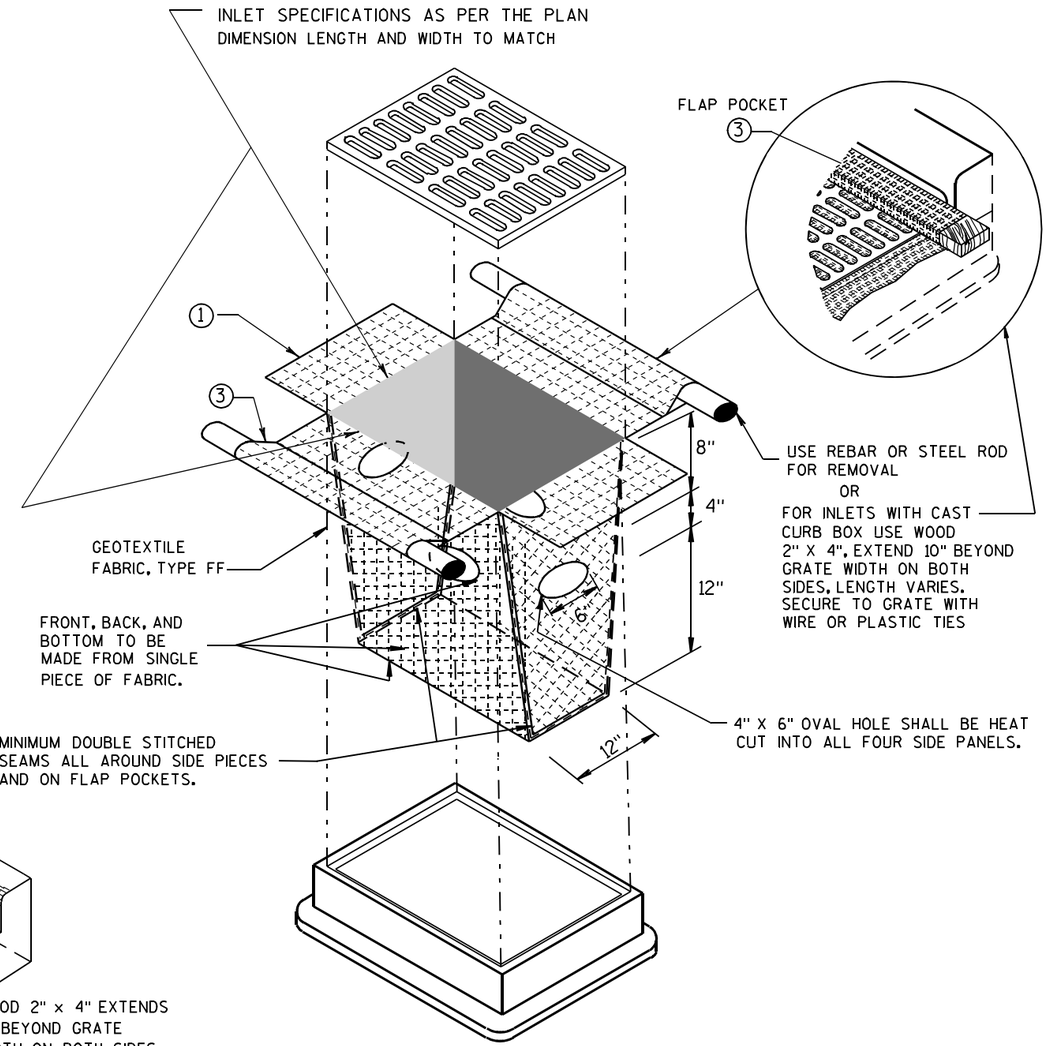




## INLET PROTECTION, TYPE A



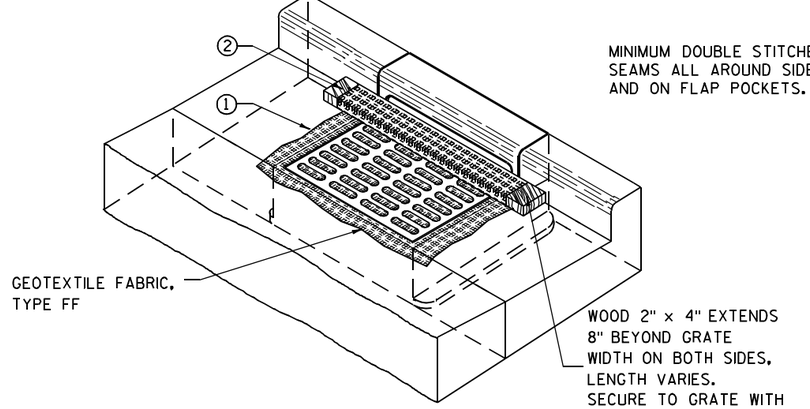

## INLET PROTECTION, TYPE B
## (WITHOUT CURB BOX)

(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

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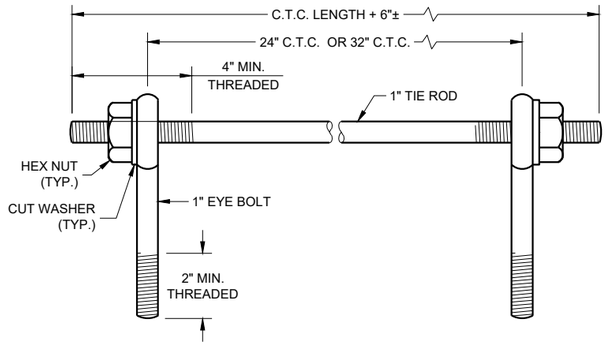
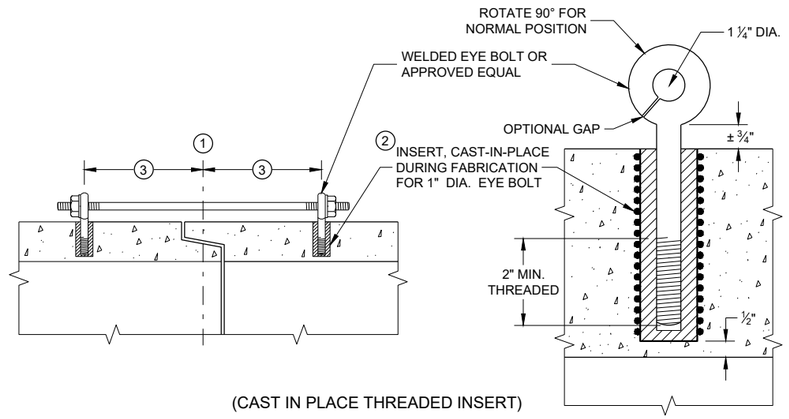
S.D.D. 8 E 10-2




**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.

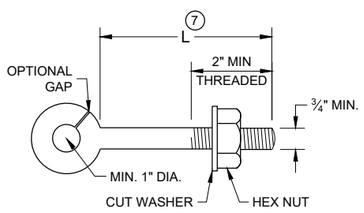
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

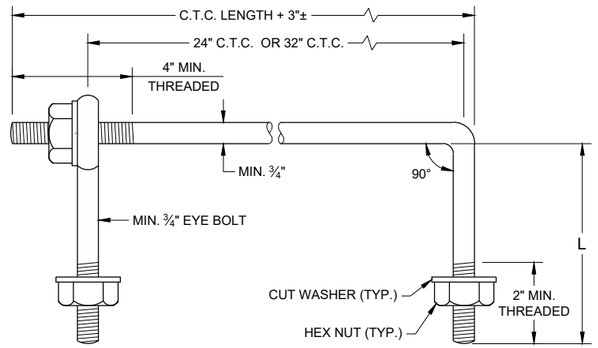
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

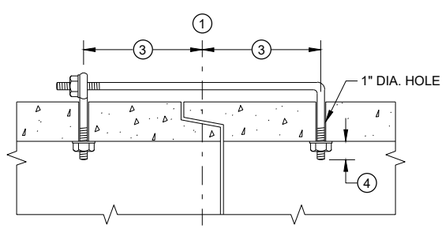



**EYE BOLT** (7)

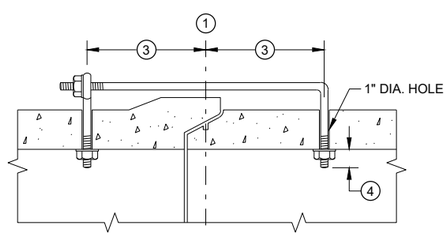
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.




**EYE BOLT AND TIE ROD**




(TONGUE AND GROOVE PIPE)




(MODIFIED BELL PIPE)

**LONGITUDINAL SECTION**

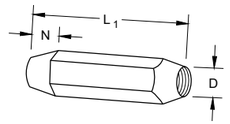
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

## 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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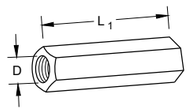
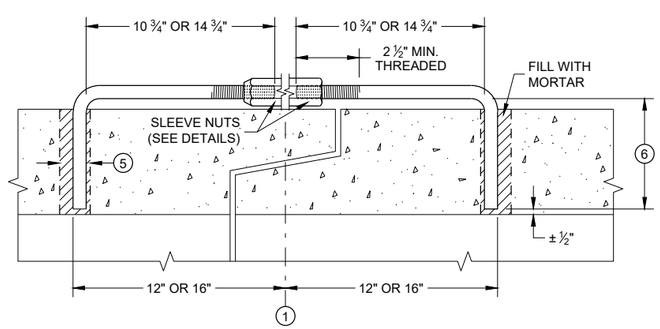



PLAIN

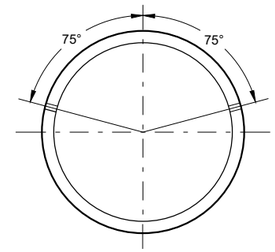
RIGHT AND LEFT THREADS

**SLEEVE NUTS**



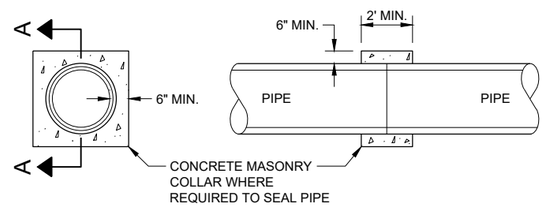

**LONGITUDINAL SECTION**

## 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**

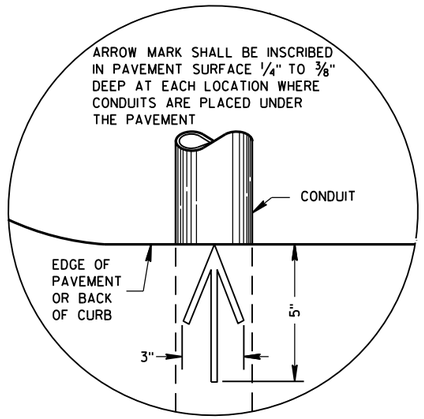
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



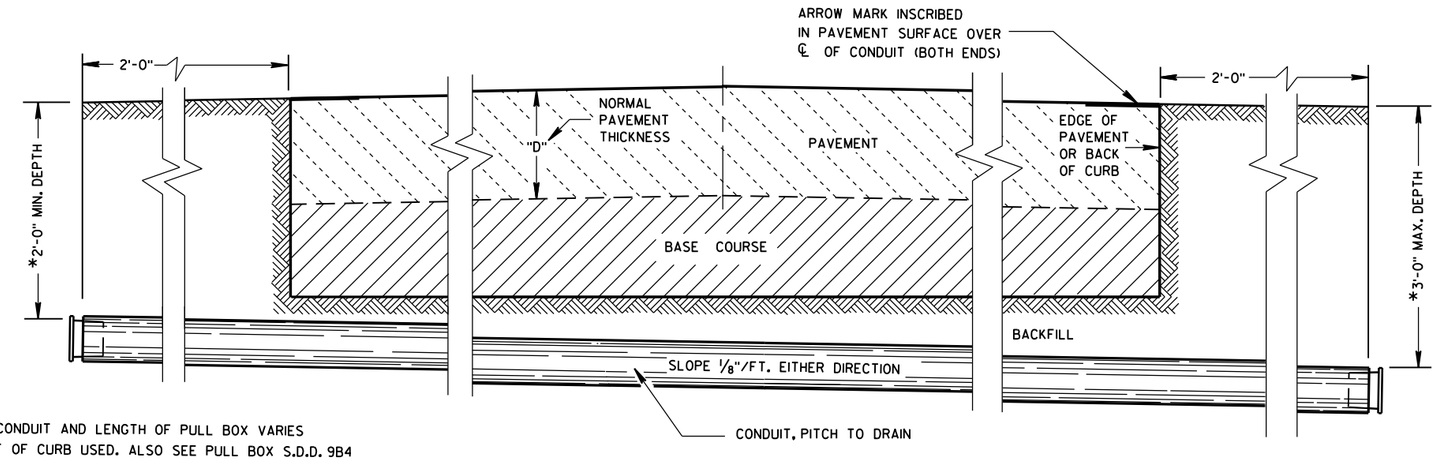
SDD 08F04 - 08

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




6

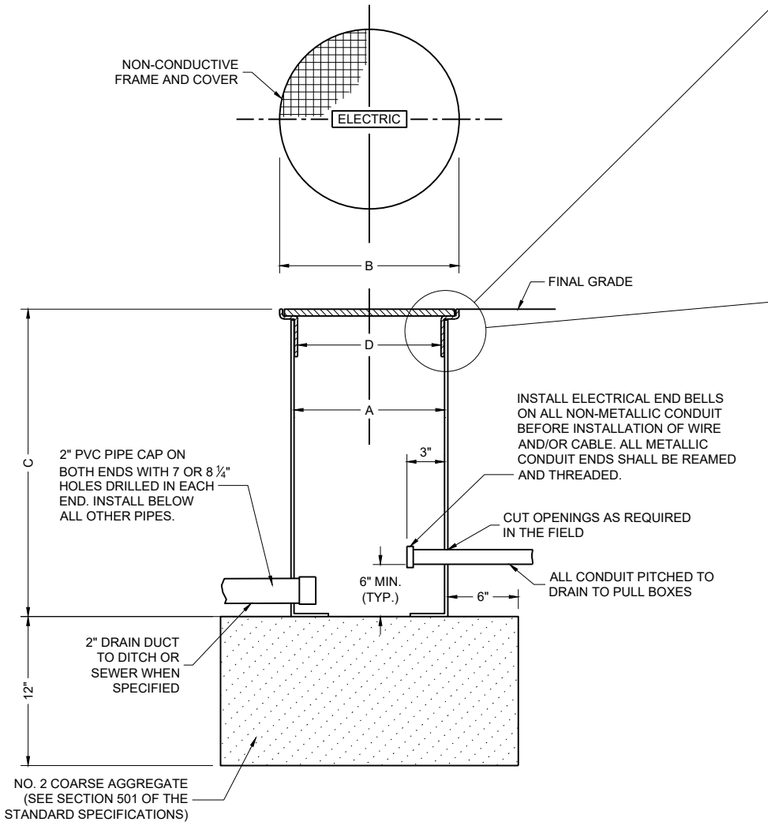
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS
AND WEIGHTS

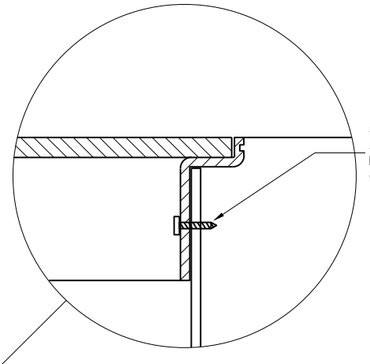
| DIMENSION IN INCHES | | NON- CONDUCTIVE PULL BOX | |
|---|---|---|---|
| BOX DIAMETER ** (INSIDE) | A | 24 | 24 |
| BOX OVERALL OUTSIDE DIAMETER | B | 27 | 27 |
| BOX LENGTH | C | 36 | 42 |
| FRAME OPENING | D | 22 ½ | 22 ½ |
| WEIGHT IN POUNDS * | | | |
| COVER | | 50 | 50 |
| BOX ONLY | | 75 | 85 |

*THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

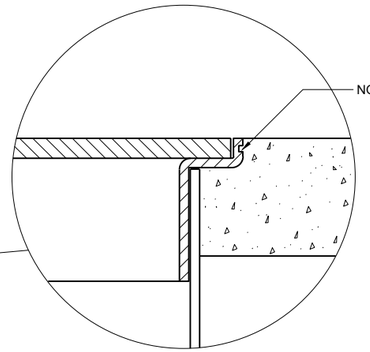
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



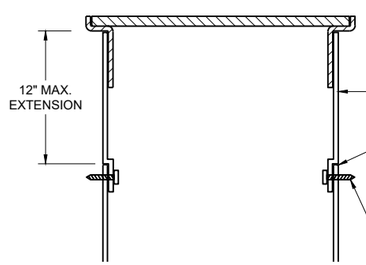

**NON-CONDUCTIVE PULL BOX**




**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".

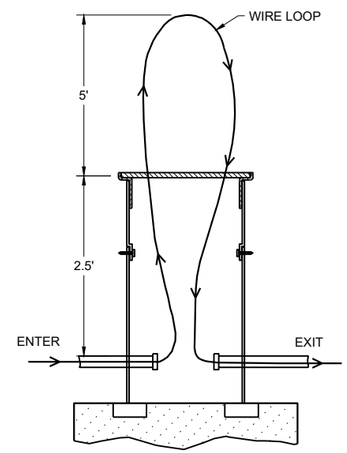
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

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

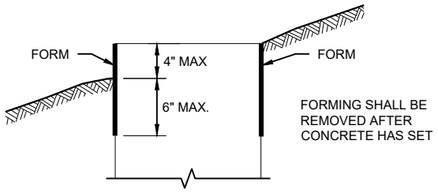
APPROVED
November 2024 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA



6
SDD 09B16-03

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.

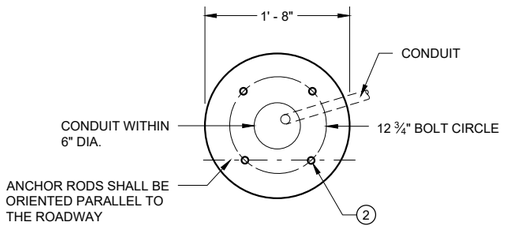
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

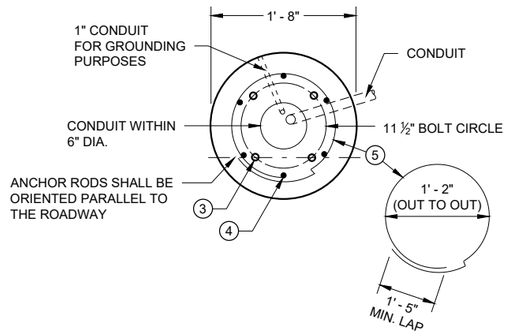
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

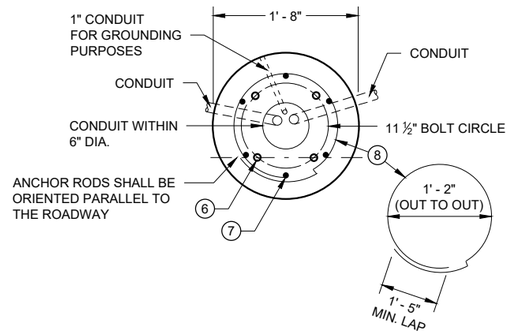
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

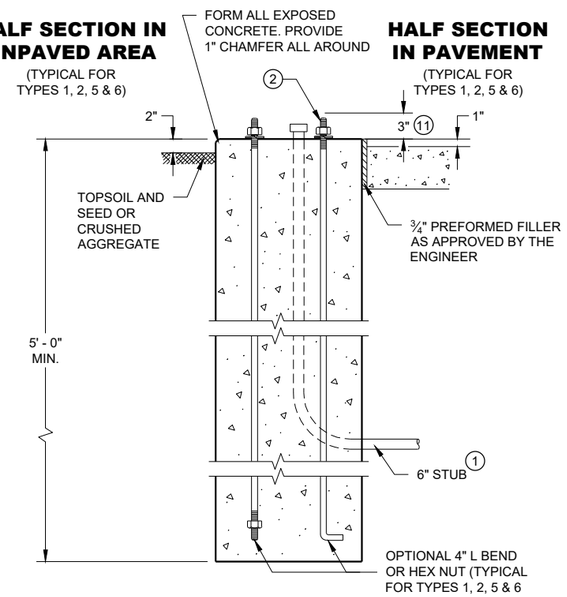
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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.

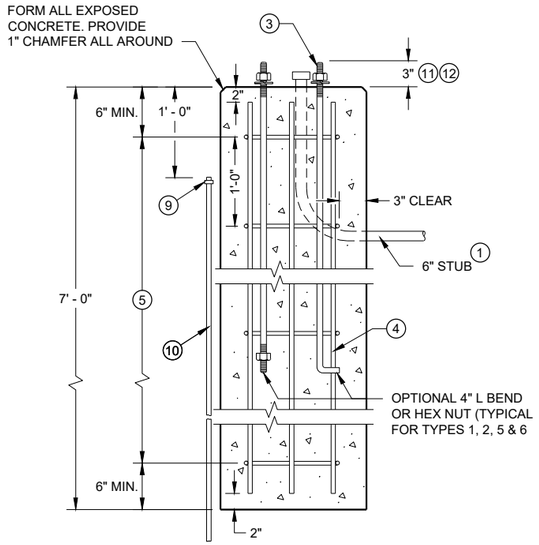
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

**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**

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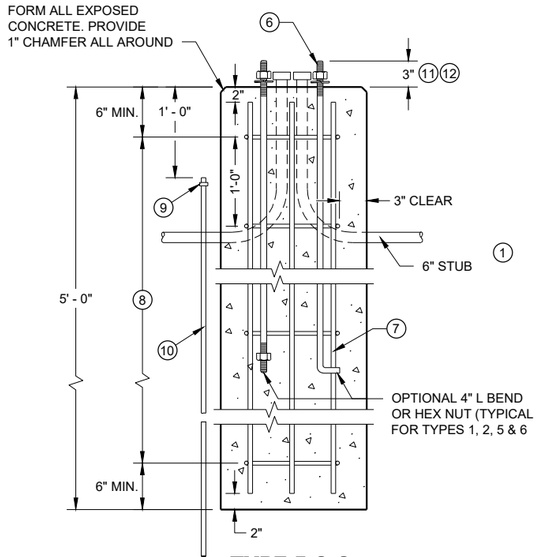



**TYPE 5 & 6**

## 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



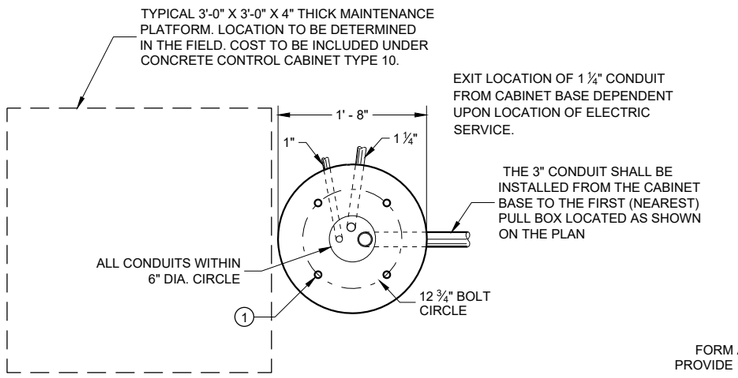


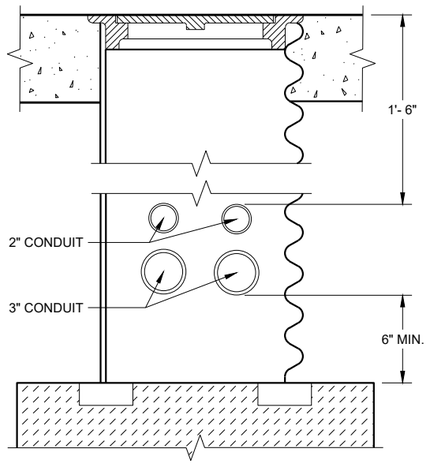
SDD 09C02 - 09

6

| CONTROL CABINET BASE TYPE | DIMENSIONS | | | | CUBIC YARD CONCRETE (APPROX.) |
|---|---|---|---|---|---|
| | H | I | J | K | |
| TYPE 6 - 30" CABINET | 34" | 60" | 10" | 17" | .64 |
| TYPE 7 - 38" CABINET | 42" | 60" | 10" | 21" | .93 |
| TYPE 8 - 38" CABINET | 42" | 72" | 12" | 21" | 1.29 |
| TYPE 9 - VARIABLE | 54" | 72" | 14" | 27" | 1.56 |
| TYPE 10 - POST MOUNT | AS SHOWN | | | | .65* |

*INCLUDES MAINTENANCE PLATFORM.




**CONDUIT LOCATIONS IN 24" X 36" PULL BOX**

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)

## GENERAL NOTES

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

INSTALL FOUR (4) ½" INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS 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.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE 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.

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.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

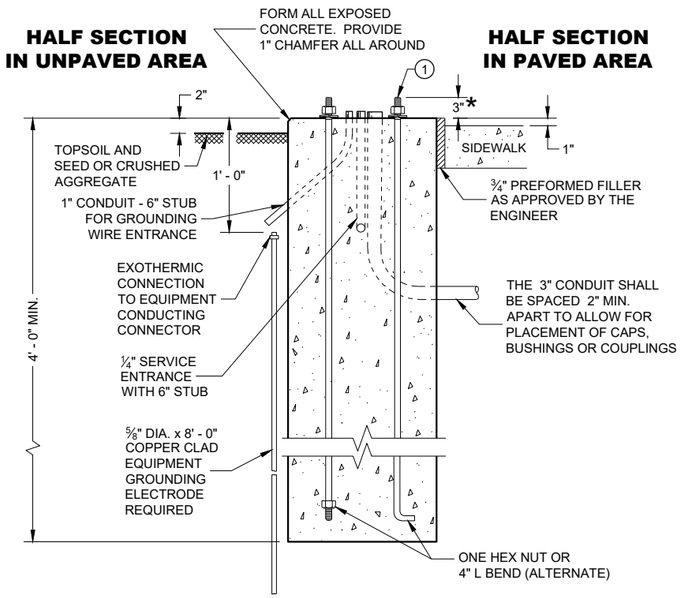
STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

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

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2 OF THE STANDARD SPECIFICATIONS.

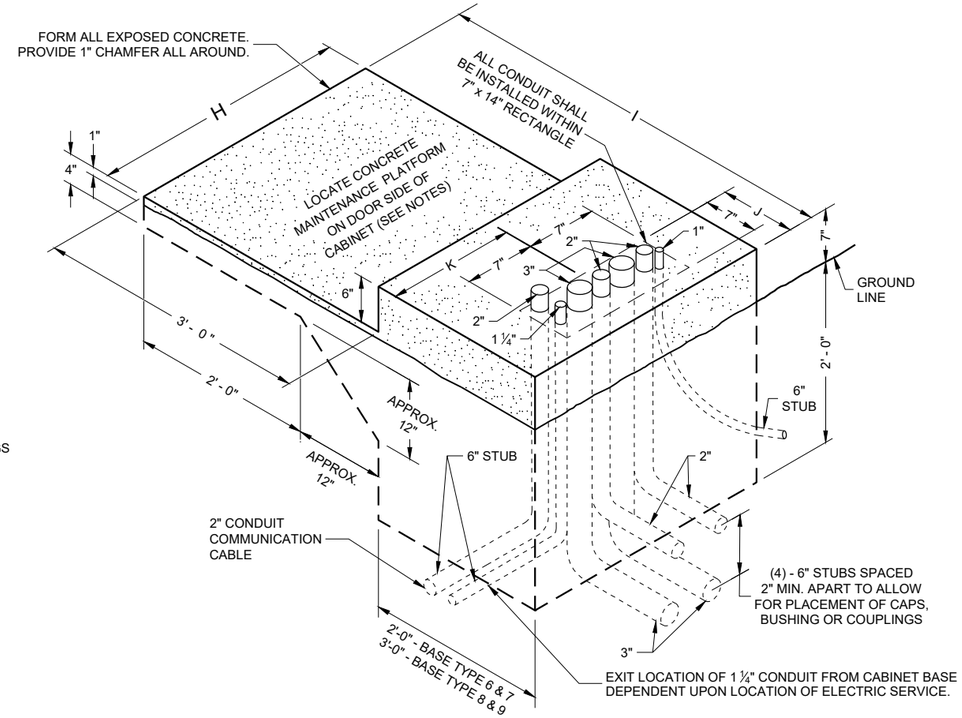
**HALF SECTION IN UNPAVED AREA**

**HALF SECTION IN PAVED AREA**




**TYPE 10**

*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.




**ISOMETRIC VIEW**
**TYPE 6, 7, 8 AND 9**

**CONCRETE CABINET CONTROL BASES**

**CONCRETE CABINET CONTROL BASES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2016
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 52
FHWA

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SDD 09C05 - 10

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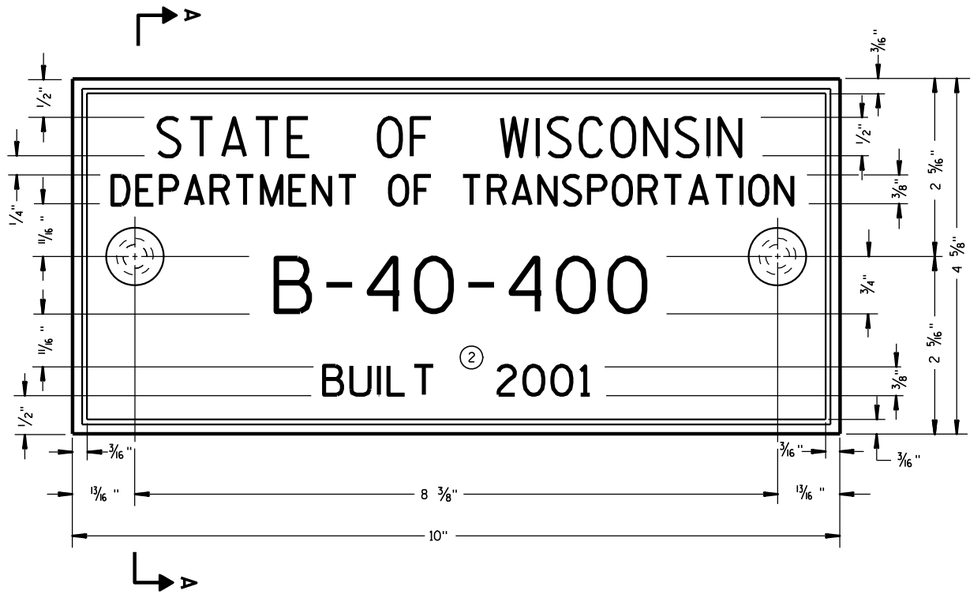



**TYPICAL NAME PLATE**
(BRIDGES, CULVERTS, AND RETAINING WALLS)




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

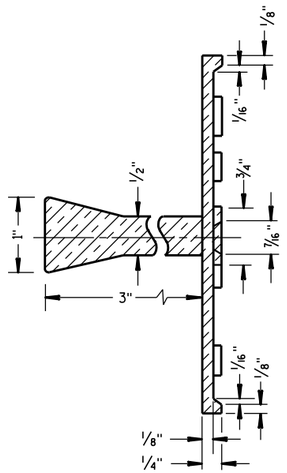
## GENERAL NOTES

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.

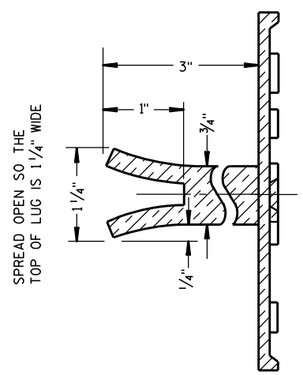
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

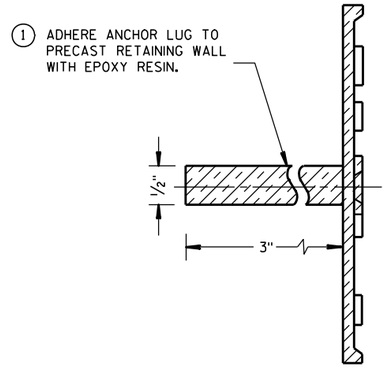
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.




**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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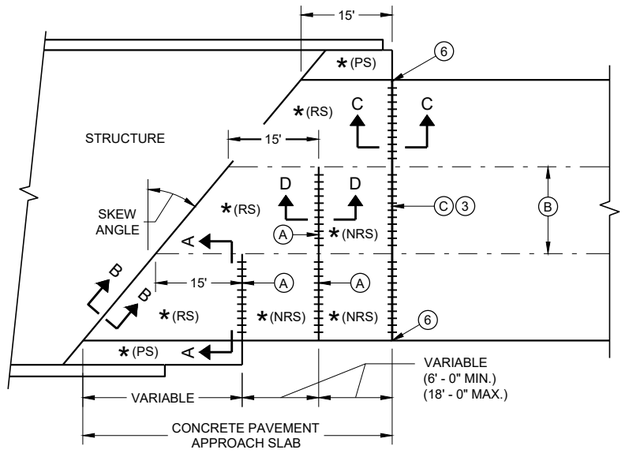
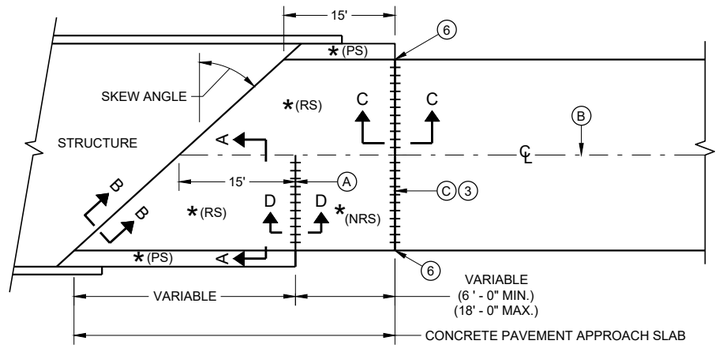
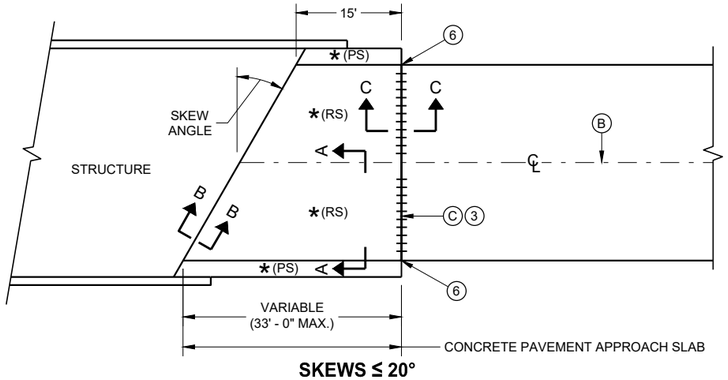
S.D.D. 12 A 3-10




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




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




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

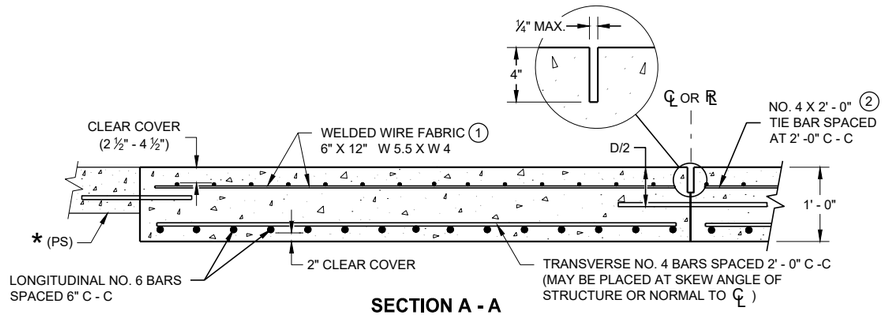
**APPROACH SLAB AND ADJACENT PAVEMENT**

* (RS) = REINFORCED CONCRETE SLAB

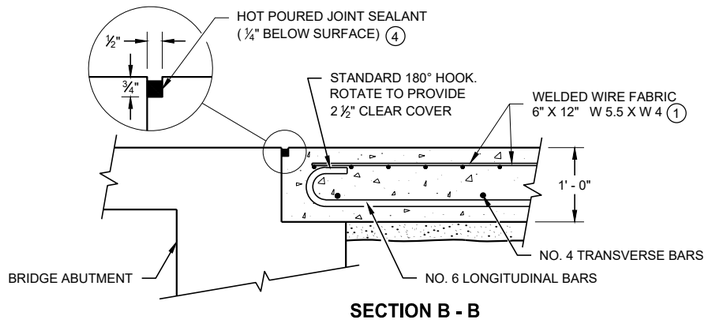
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

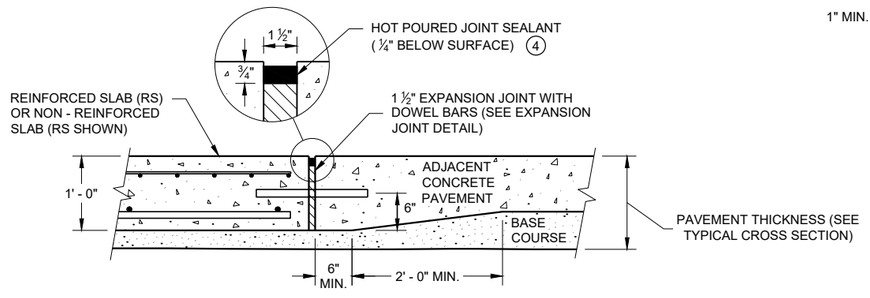
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)




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




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




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

## 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.

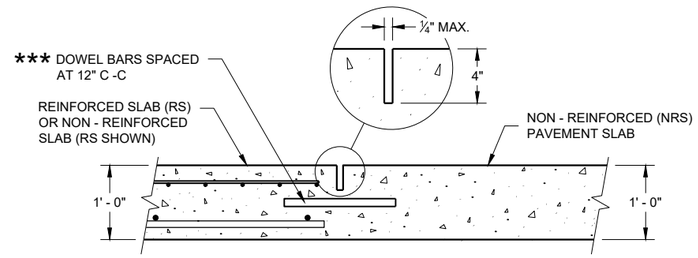
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

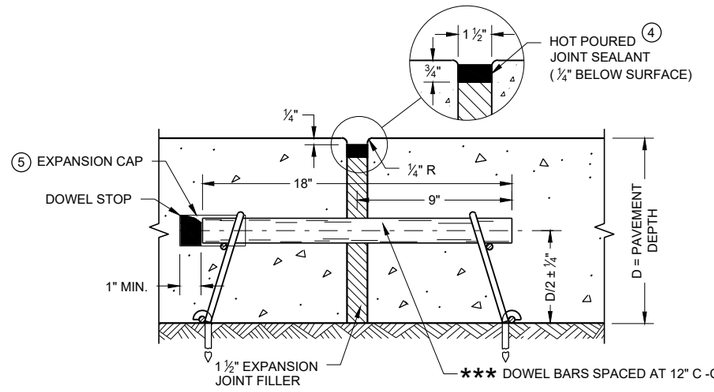
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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




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




**EXPANSION JOINT DETAIL**

**CONCRETE PAVEMENT APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

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

FHWA





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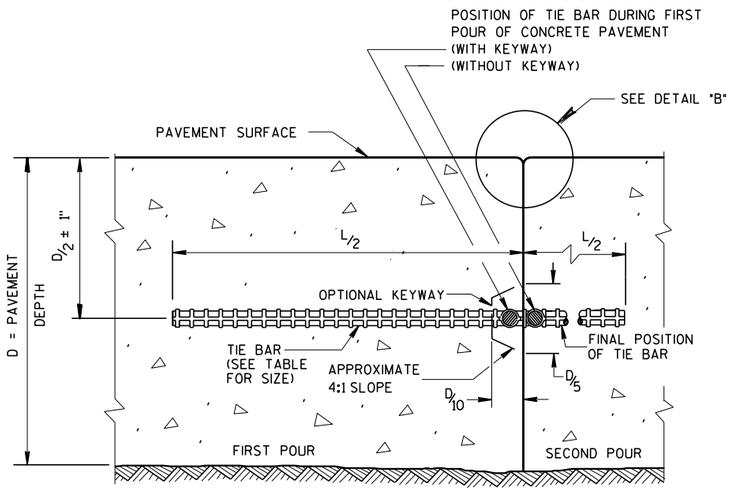
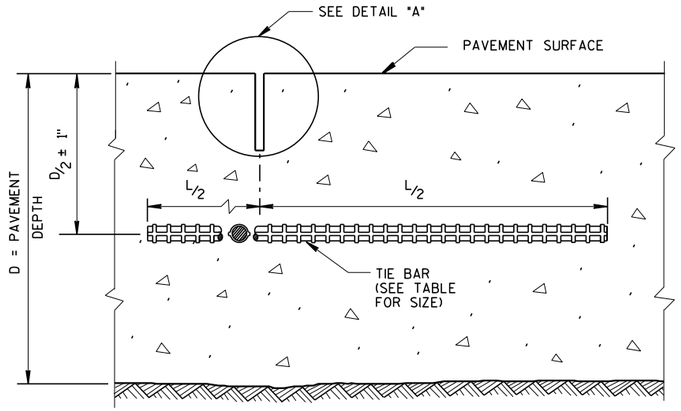
SDD 13B02 - 09a




## CONSTRUCTION JOINT




## SAWED JOINT

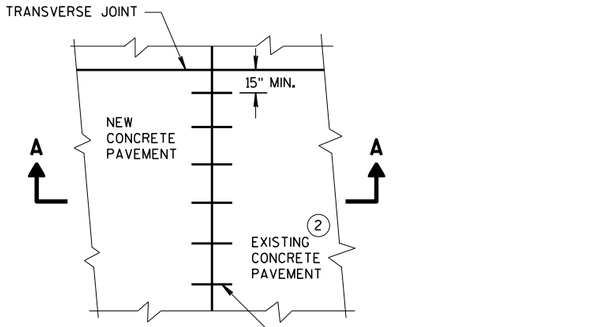
## GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

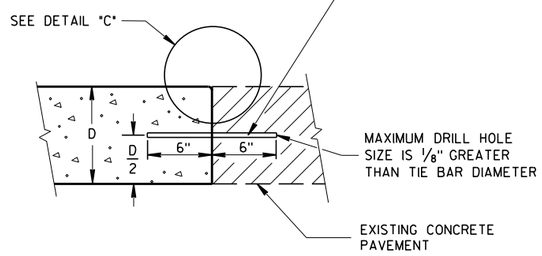
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

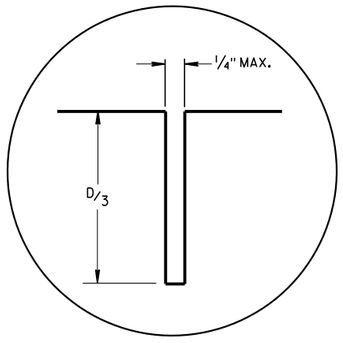



PLAN VIEW

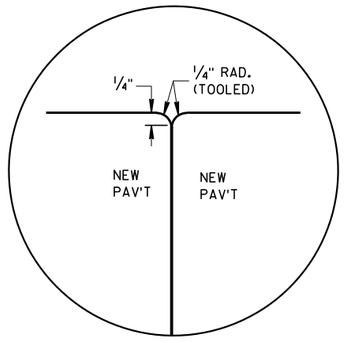



SECTION A-A

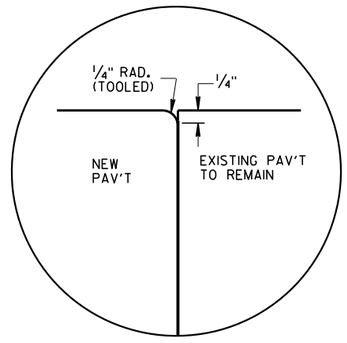
## LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT




## DETAIL "A"




## DETAIL "B"



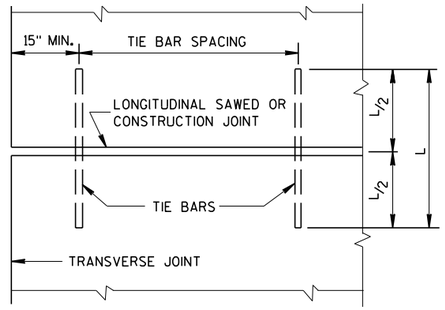

## DETAIL "C"

## 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 — PAVEMENT SUPE
FHWA



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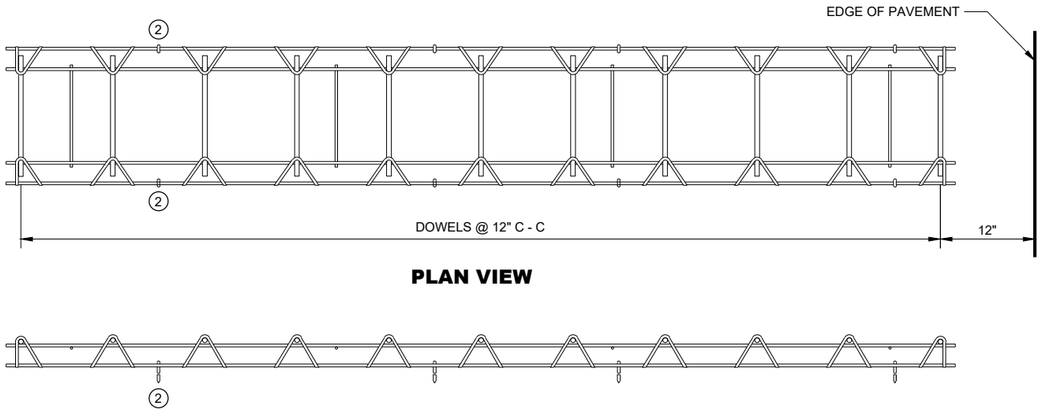
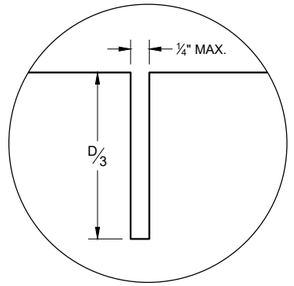



**PLAN VIEW**




**SIDE VIEW**

## CONTRACTION JOINT DOWEL ASSEMBLY (1)




**JOINT DETAIL**

## GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

(1) OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.

(2) SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

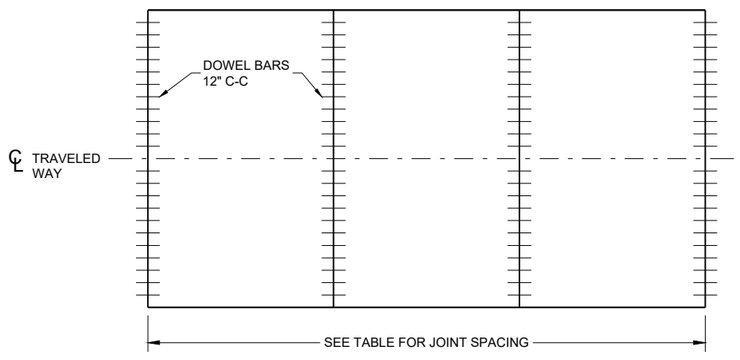
(3) FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.

(4) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

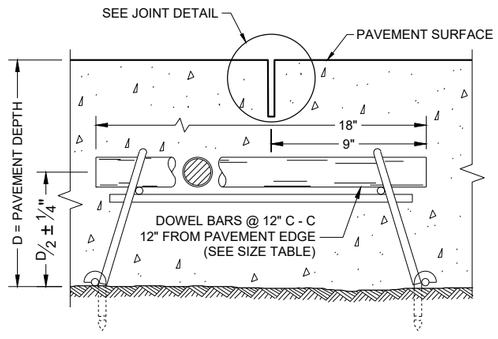
(5) INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.

(6) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

(7) ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



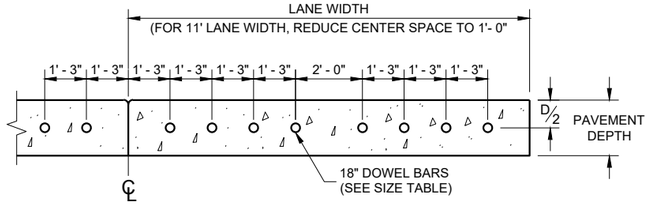

**CONTRACTION JOINT LOCATIONS**



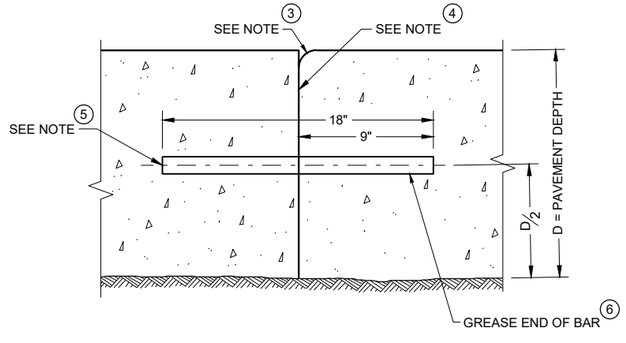

**DOWELED CONTRACTION JOINT**

## PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

| PAVEMENT DEPTH (D) | DOWEL BAR DIAMETER | CONTRACTION JOINT SPACING |
|---|---|---|
| 6", 6 ½" | NONE | 12' |
| 7", 7 ½" | 1" | 14' |
| 8" & ABOVE | 1 ¼" | 15' |




**DRILLED DOWEL BAR CONSTRUCTION JOINT (7)**




**TRANSVERSE CONSTRUCTION JOINT**

**URBAN DOWELED CONCRETE PAVEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR

FHWA





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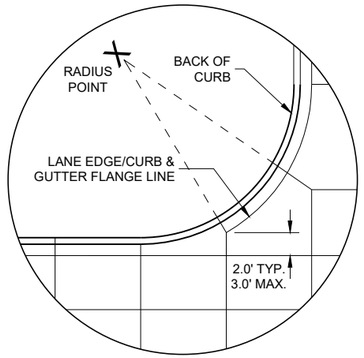
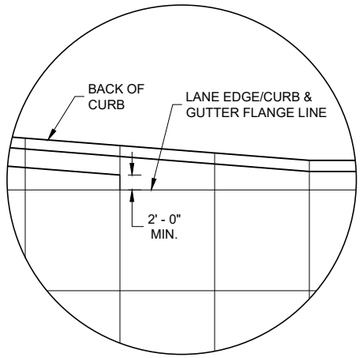
SDD 13C13 - 11




**DETAIL "A"**

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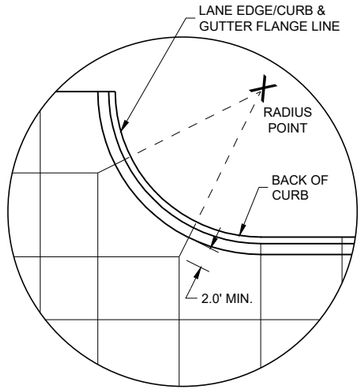
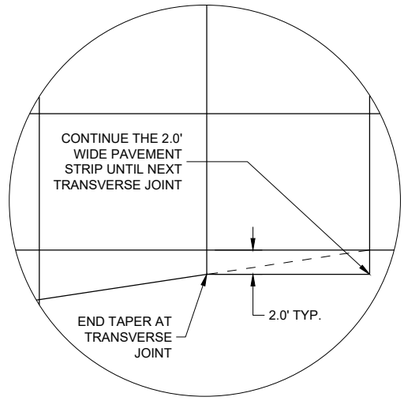



**DETAIL "C"**




**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.

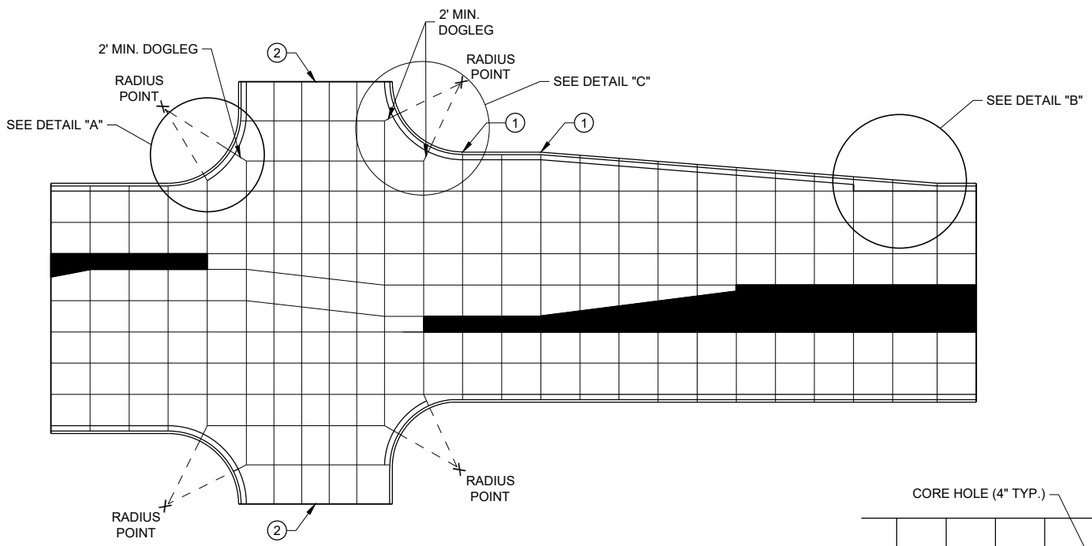
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

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.

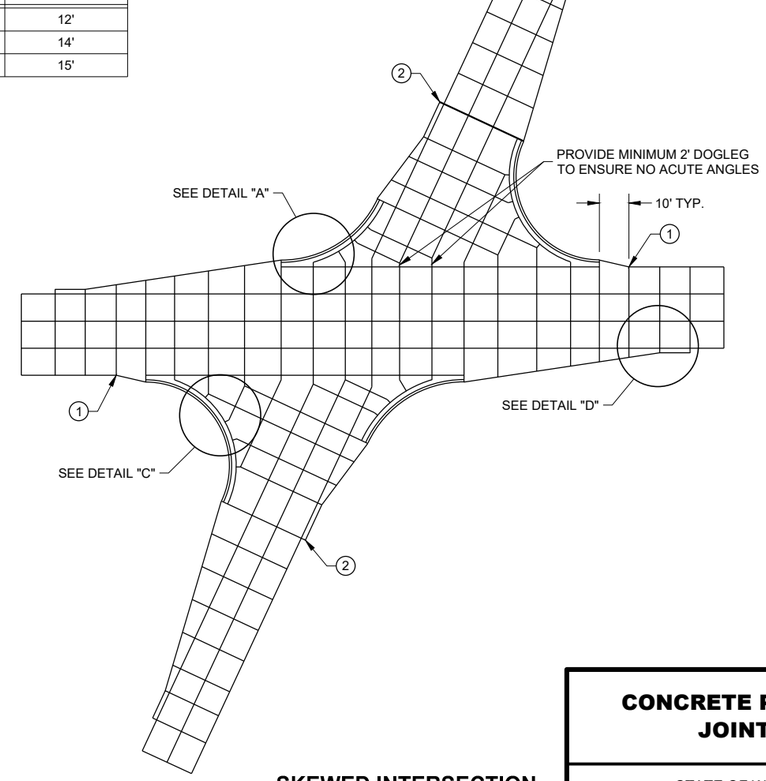
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



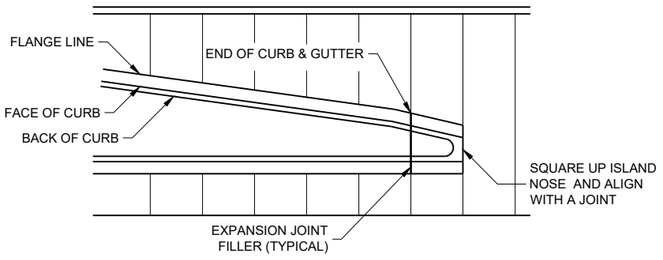

**STANDARD INTERSECTION**

PAVEMENT DEPTH AND JOINT SPACING TABLE

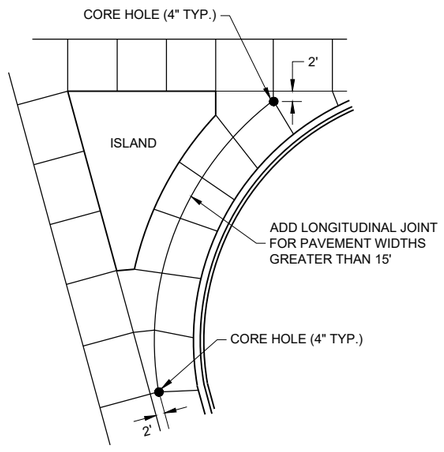
| PAVEMENT DEPTH (D) | CONTRACTION JOINT SPACING |
|---|---|
| 6", 6 ½" | 12' |
| 7", 7 ½" | 14' |
| 8" & ABOVE | 15' |




**SKEWED INTERSECTION**




**APPROACH TO MEDIAN**




**LARGE RIGHT TURN**

**CONCRETE PAVEMENT JOINTING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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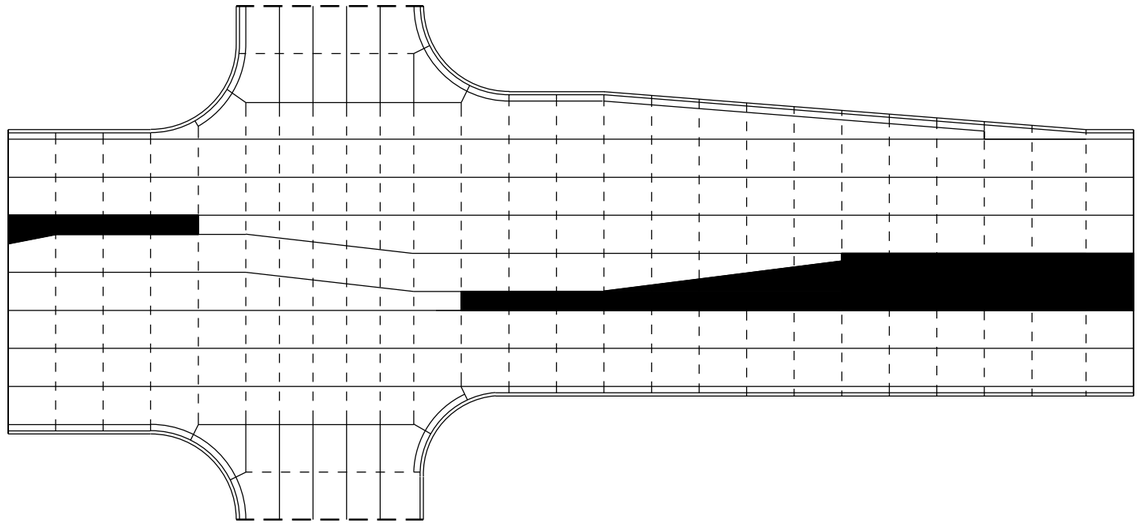
## LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

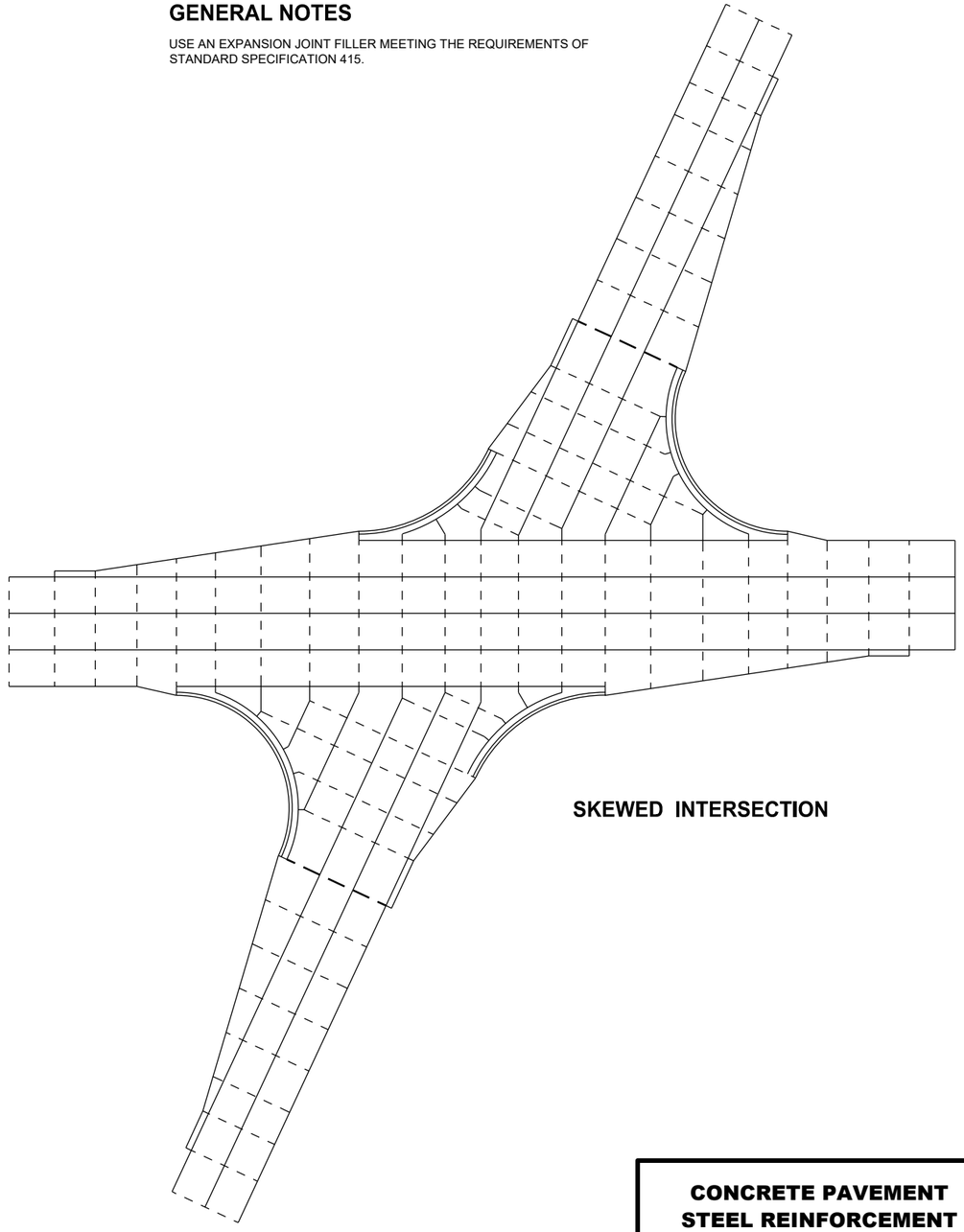
TIED JOINT



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**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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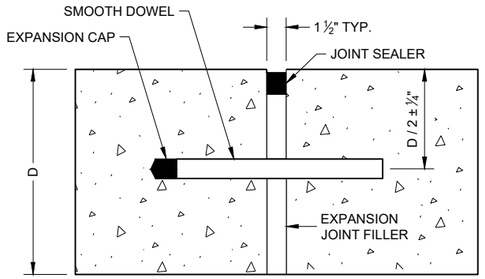
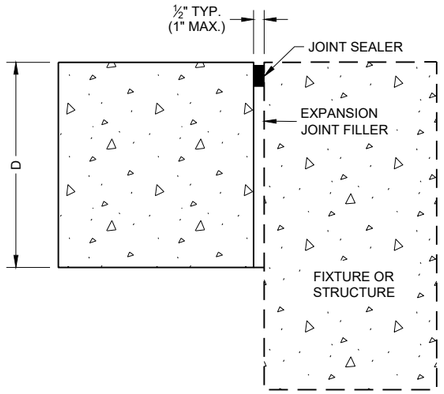



**DOWELED TRANSVERSE** (1)




**UNTIED - LONGITUDINAL**

## EXPANSION JOINTS

### TIE BAR TABLE

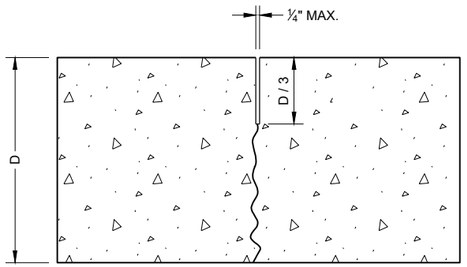
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|---|---|---|---|
| < 10 ½" | NO. 4 | 30" | 36" |
| ≥ 10 ½" | NO. 5 | 36" | 36" |
| | NO. 4 * | 30" | 24" ** |

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

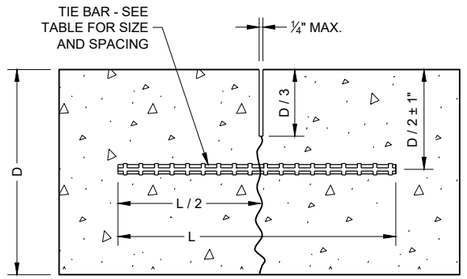
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

### GENERAL NOTES

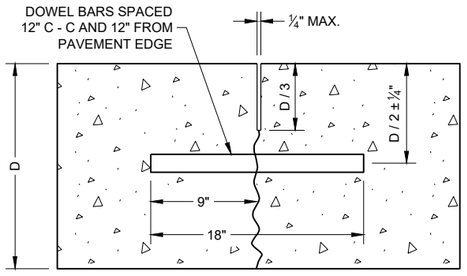
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM 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**

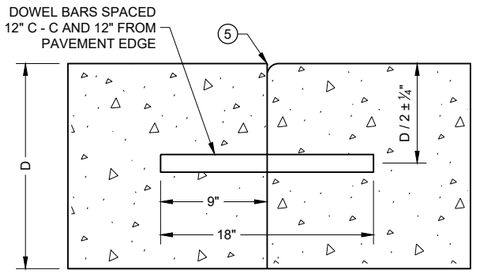



**TIED LONGITUDINAL**

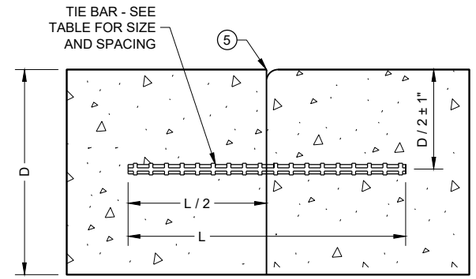



**DOWELED TRANSVERSE**

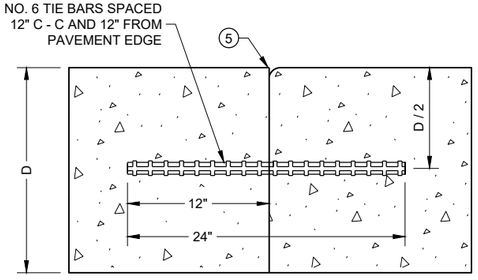
## CONTRACTION JOINTS (2)



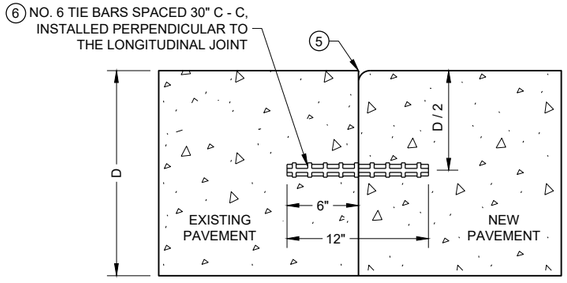

**DOWELED TRANSVERSE** (3)




**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

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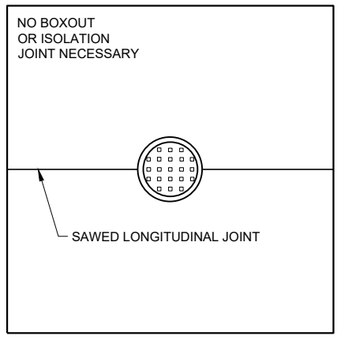
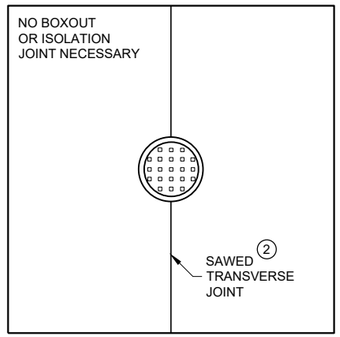
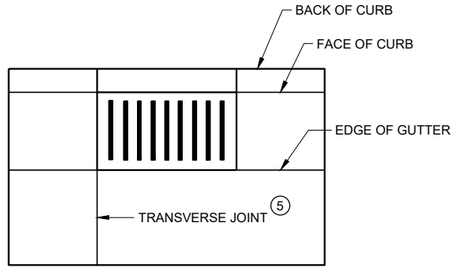



**MANHOLE WITH LONGITUDINAL JOINT**



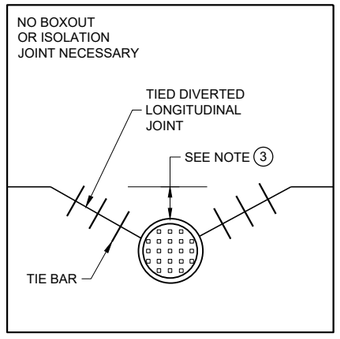

**MANHOLE WITH TRANSVERSE JOINT**



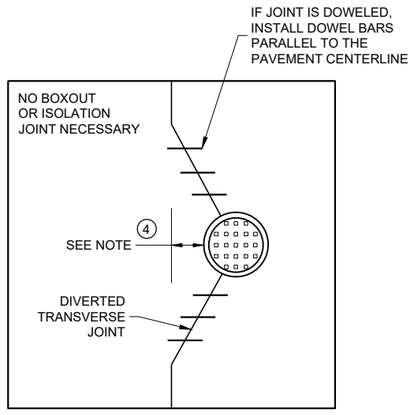

**INLET WITH TRANSVERSE JOINT**

## GENERAL NOTES

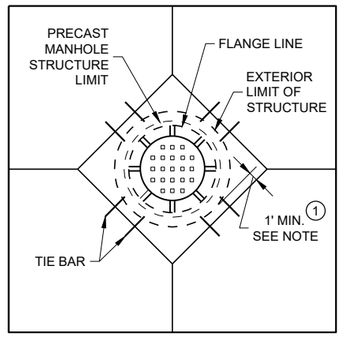
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF 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

FHWA

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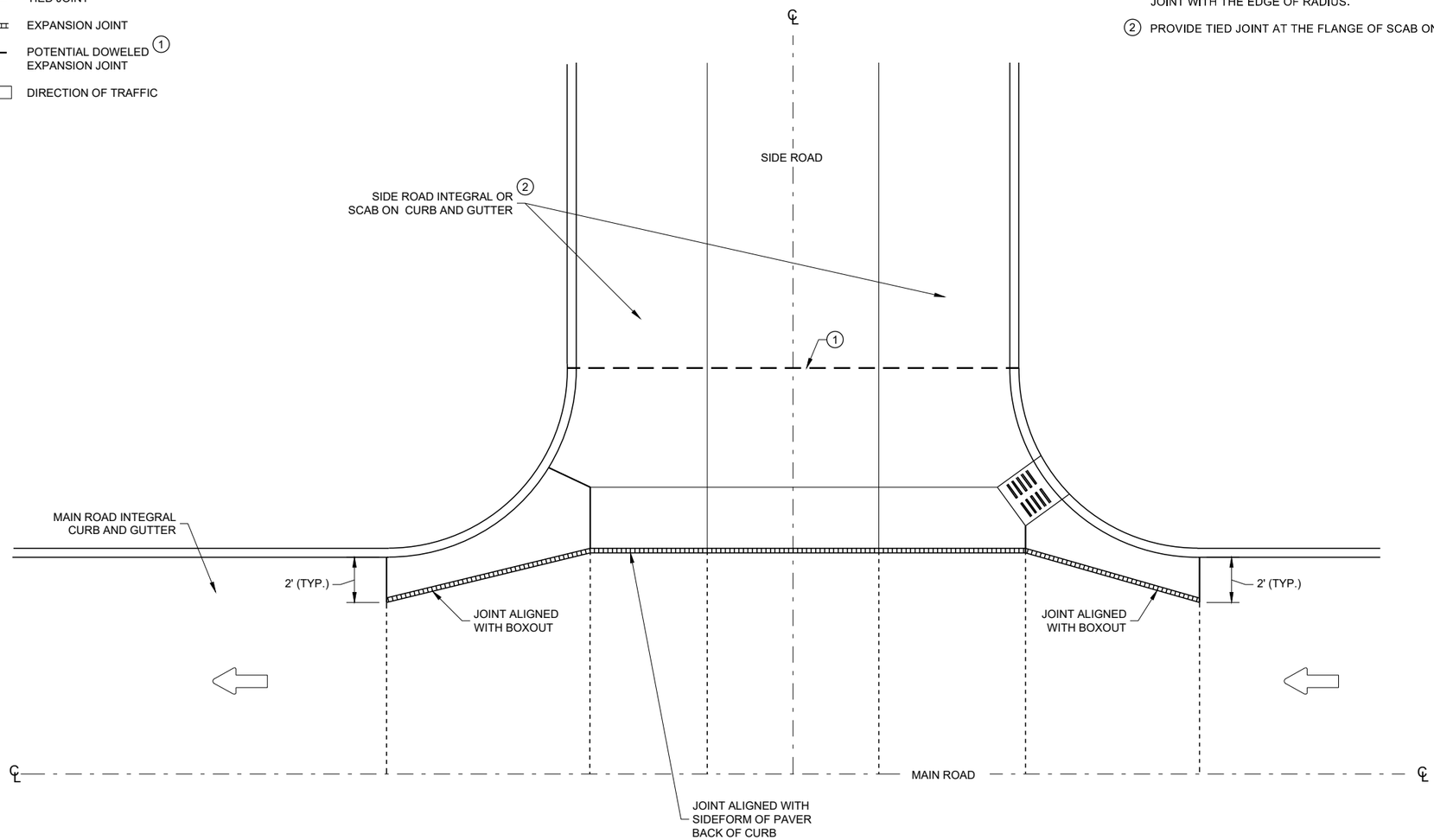
SDD13C18 - 08d

## 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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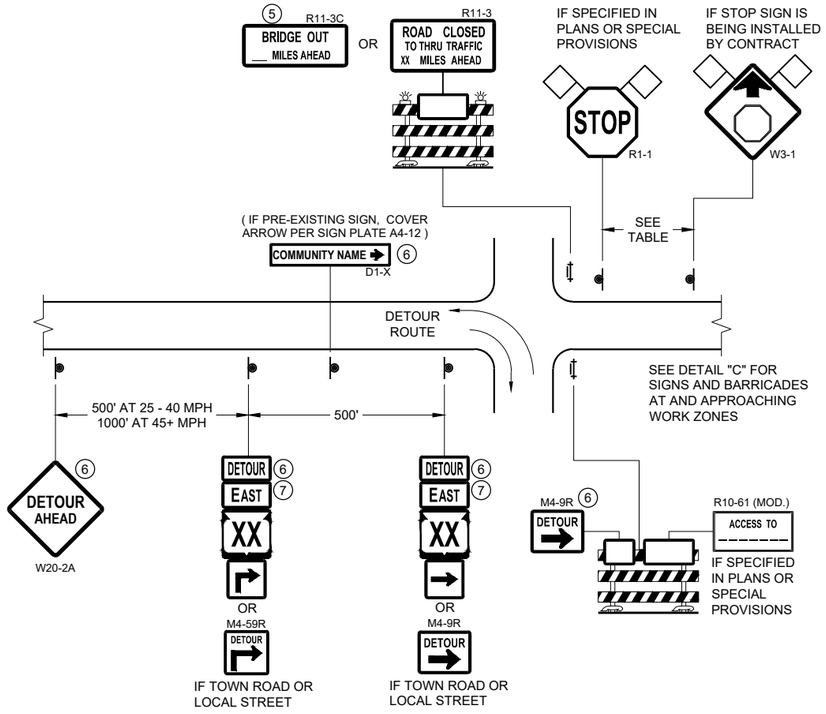
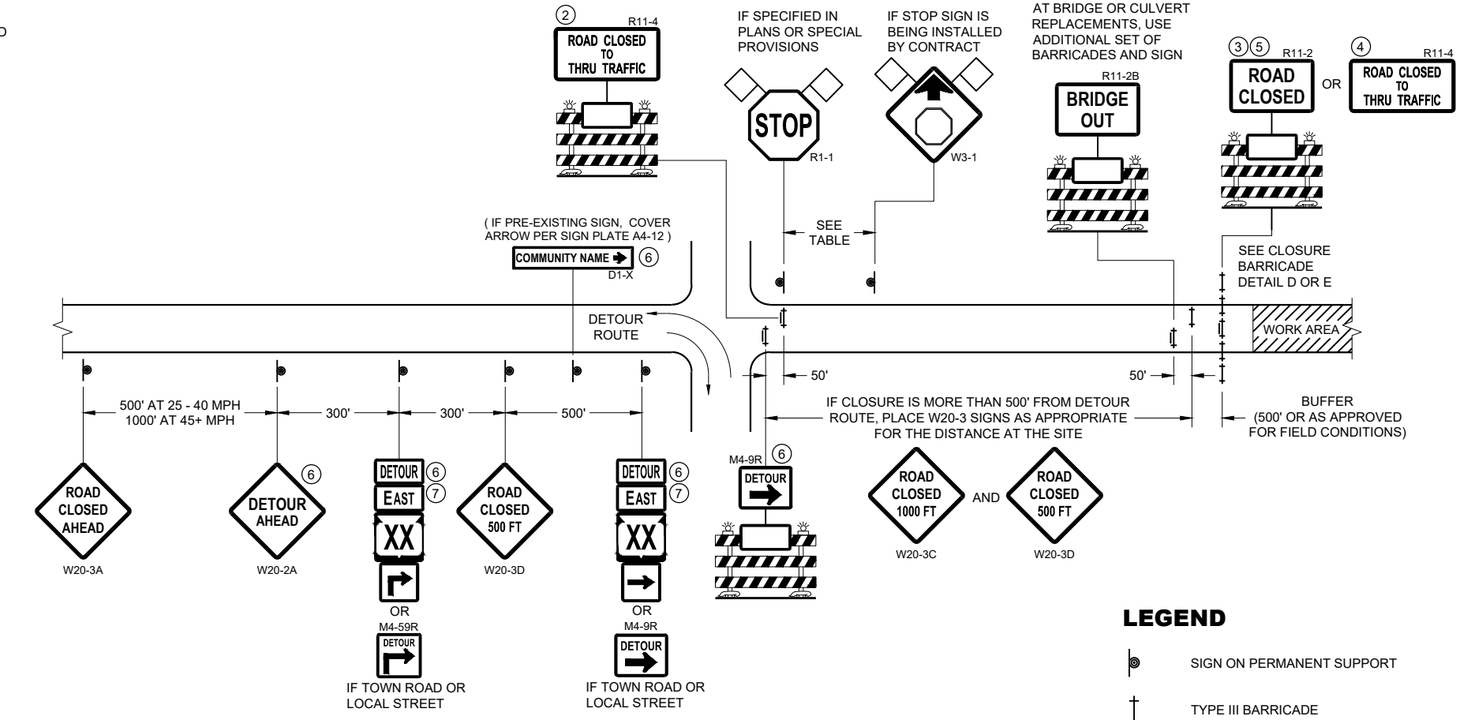


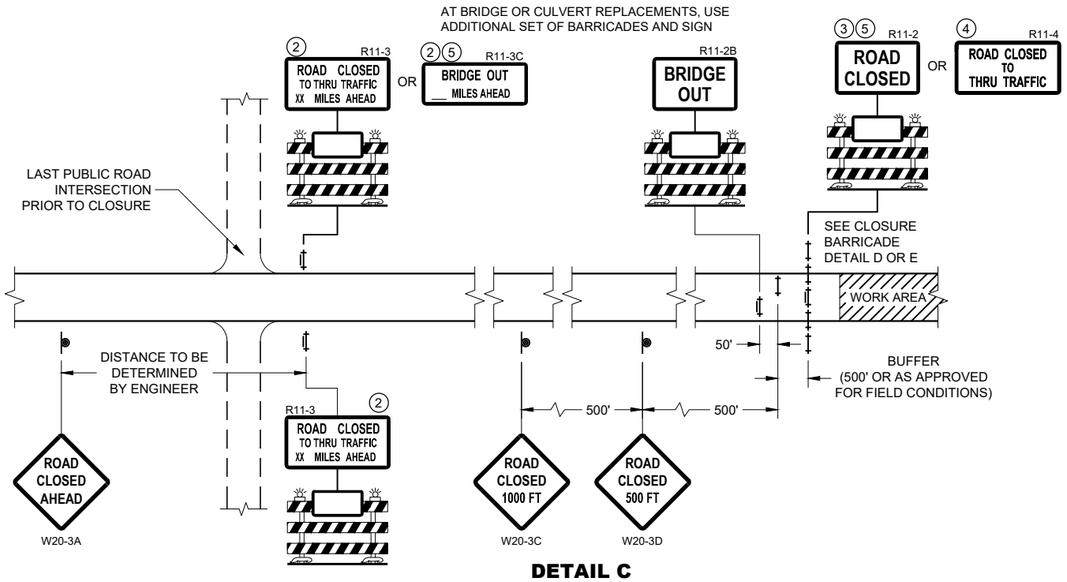

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

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





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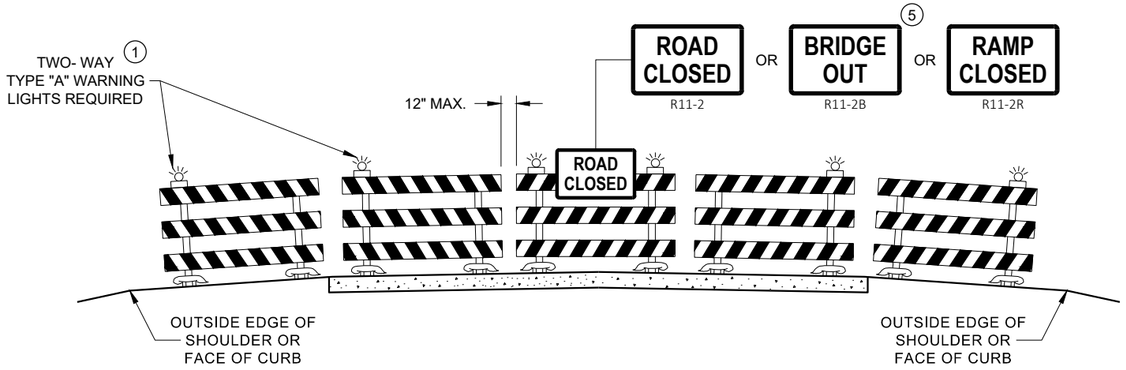
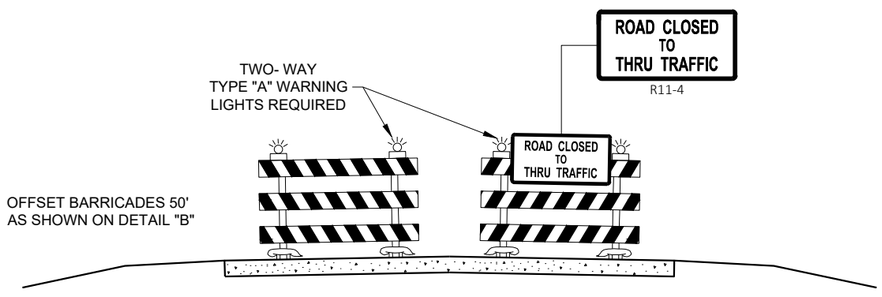



**DETAIL D**
**ROAD CLOSURE BARRICADE DETAIL**
**APPROACH VIEW**




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

## LEGEND

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

## GENERAL NOTES

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

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

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

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

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

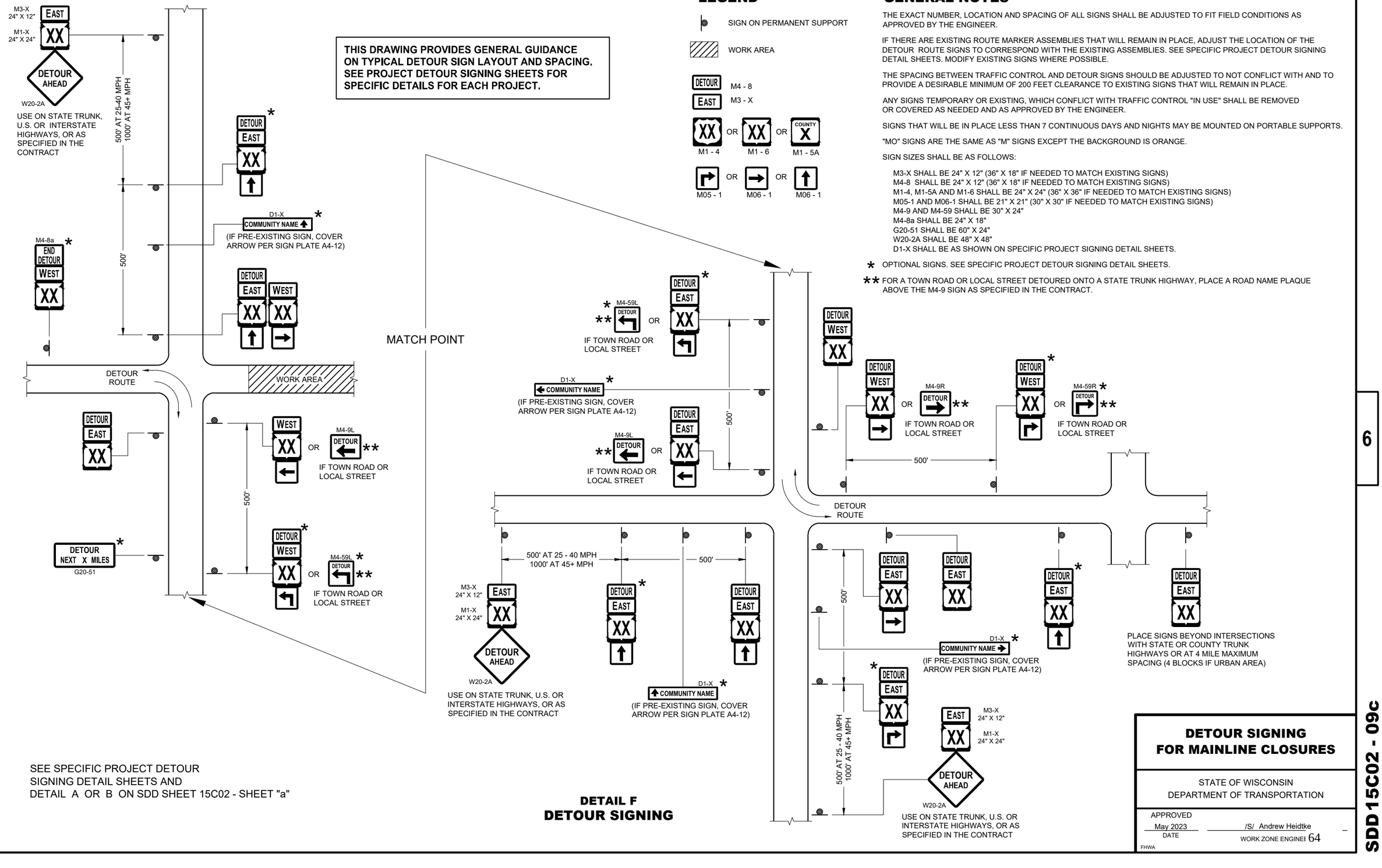
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

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

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

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




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

**DETAIL F**
**DETOUR SIGNING**

# DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

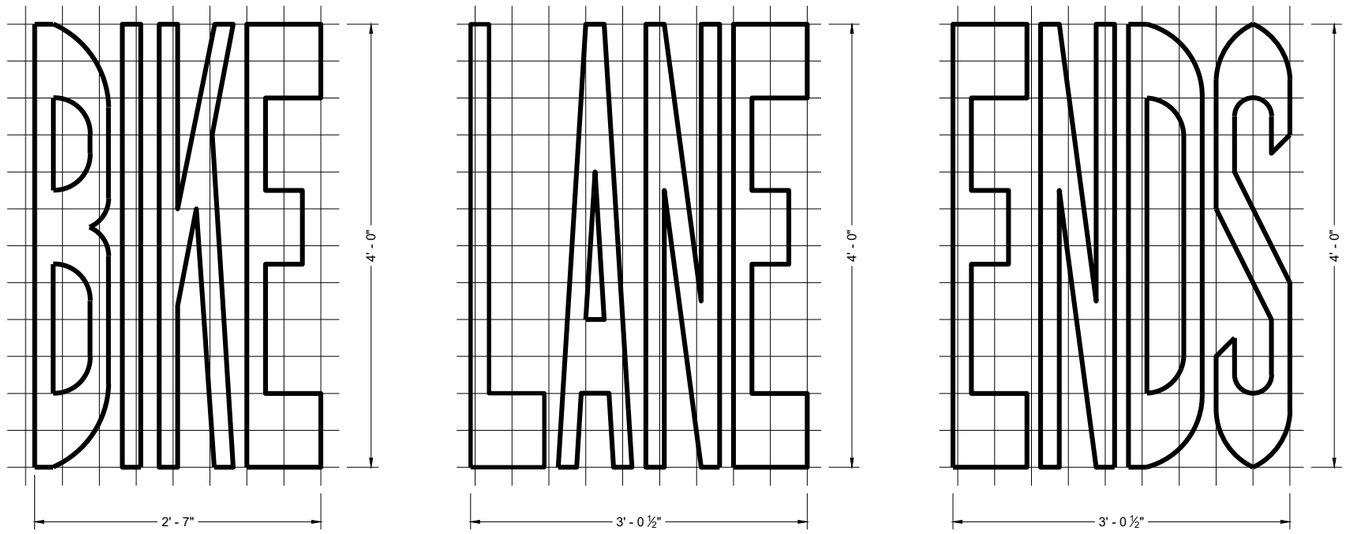
FHWA





6

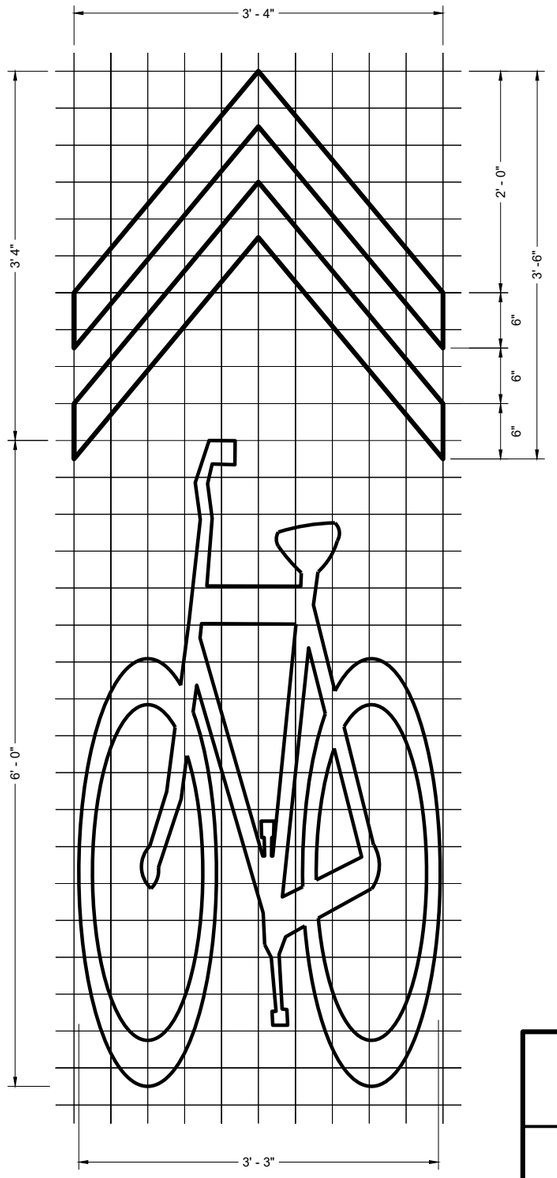
SDD 15C02 - 09c




**BIKE LANE WORDS**

## GENERAL NOTES

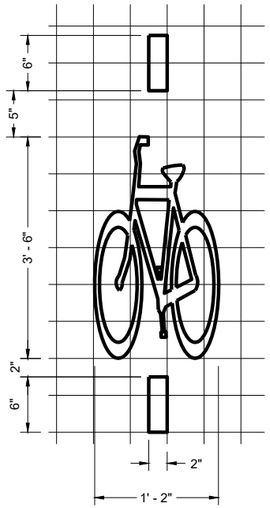
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.







**BIKE LANE ARROW**




**BICYCLE DETECTOR PAVEMENT MARKING**




**BIKE LANE SYMBOL**




**BIKE LANE SYMBOL FOR SHARED LANE**

**PAVEMENT MARKING FOR BIKE LANES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

6

SDD 15C07-16e

## 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.

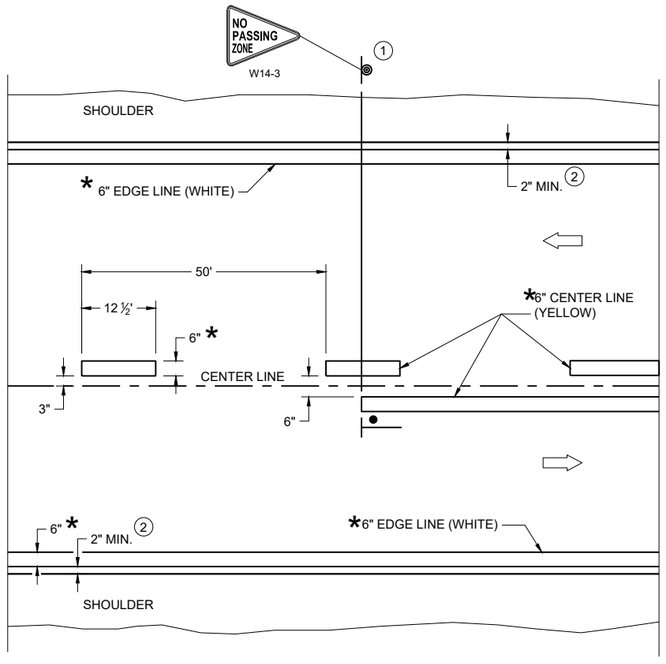
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

## LEGEND

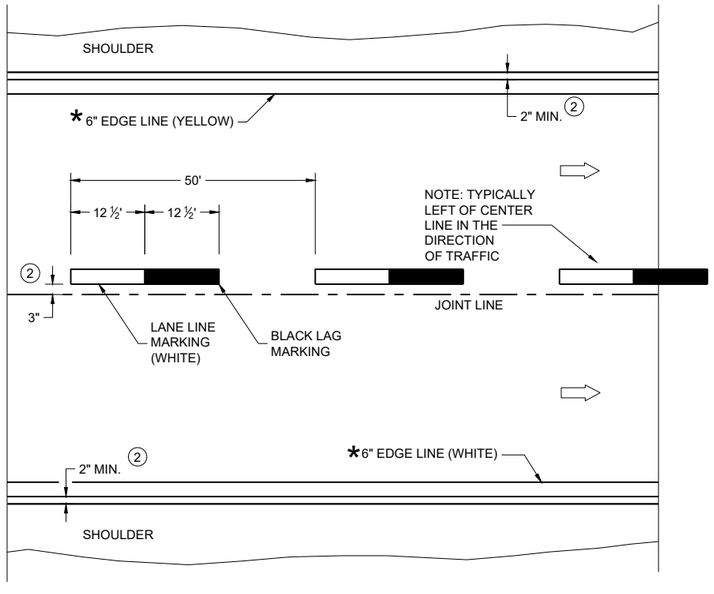
"T" MARKING

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
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

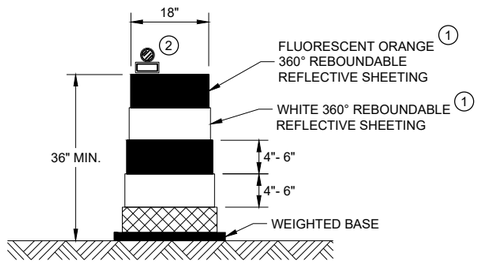


SDD 15C08-24a

SDD 15C08-24a

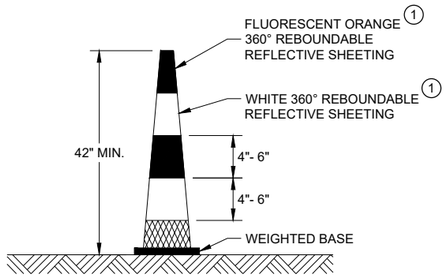
## GENERAL NOTES

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




### DRUM

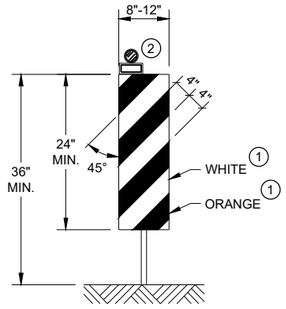
BALLAST WIDTHS
RANGE FROM 24"-36"




### 42" CONE

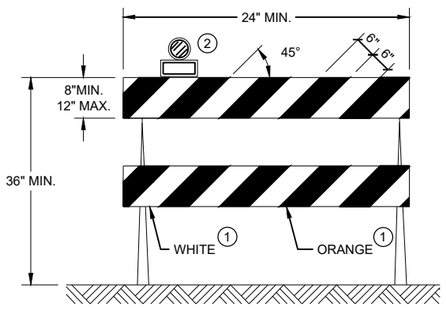
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



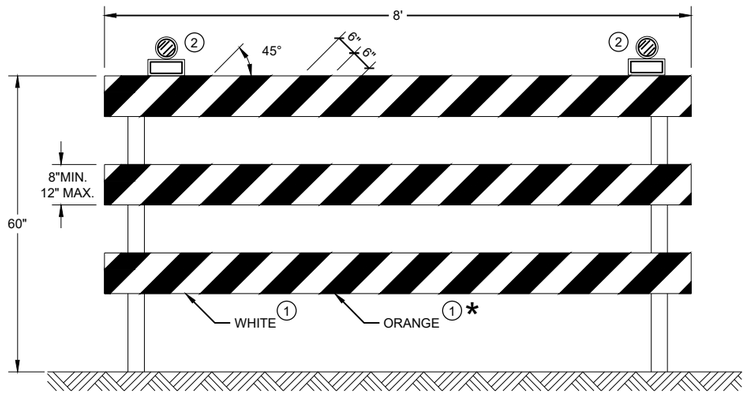

### VERTICAL PANEL

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




### TYPE II BARRICADE

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




### TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

## CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



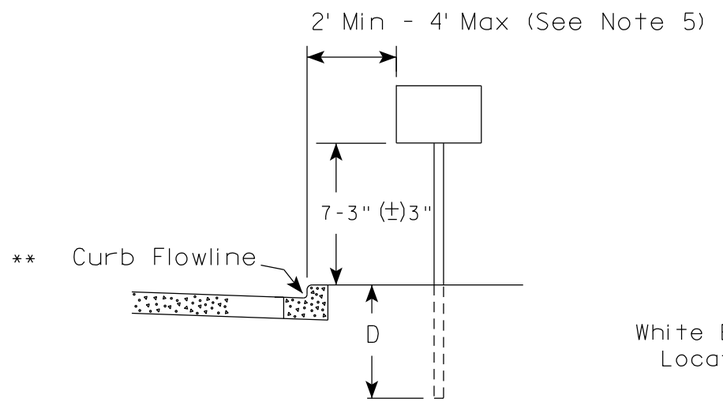
6

SDD 15C11 - 10b

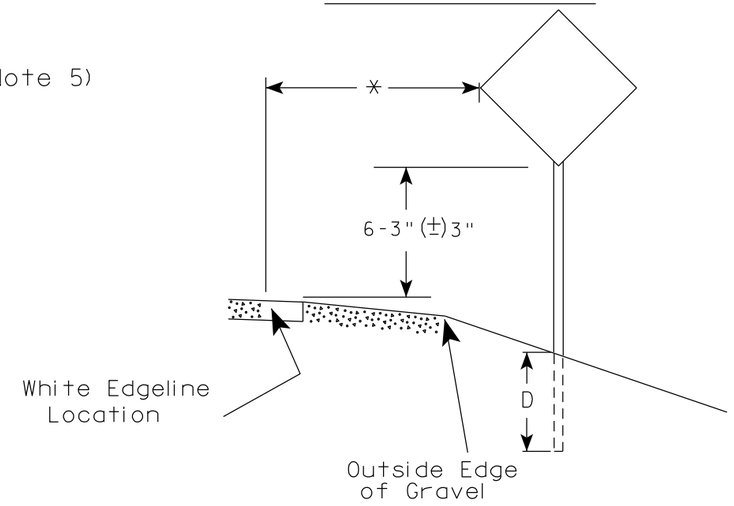
6

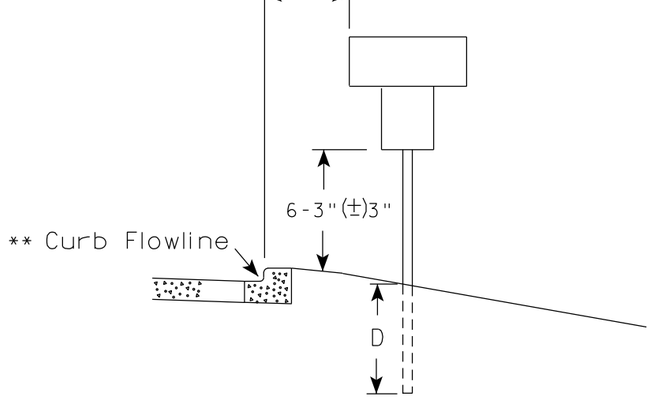
SDD 15C11 - 10b

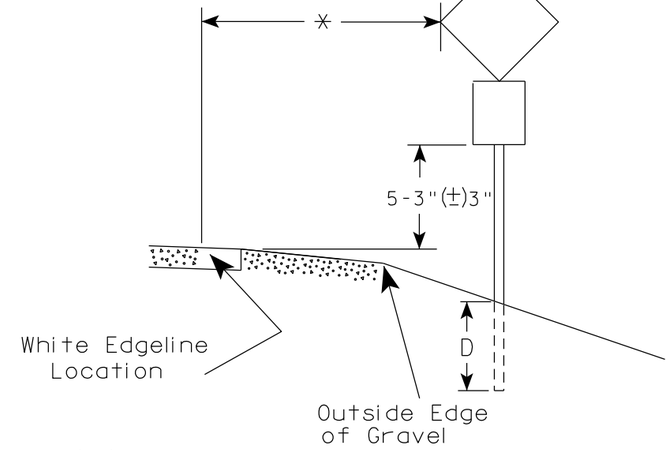
## URBAN AREA




## RURAL AREA (See Note 2)




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

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

POST EMBEDMENT DEPTH

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

## GENERAL NOTES

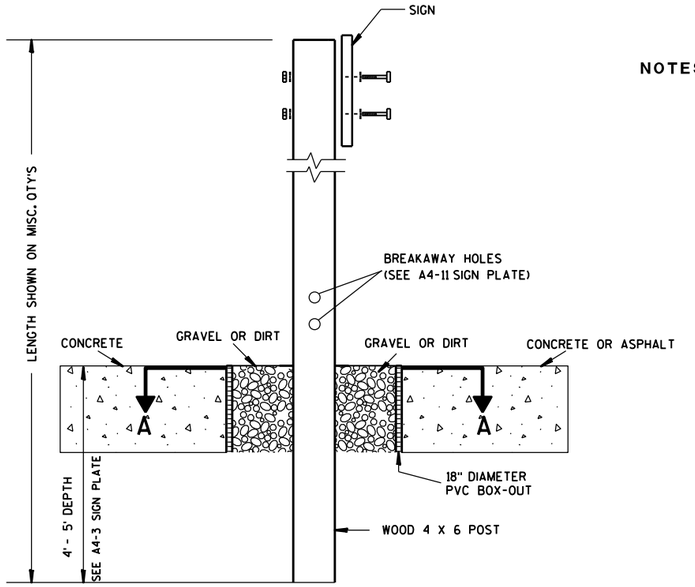
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron 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.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

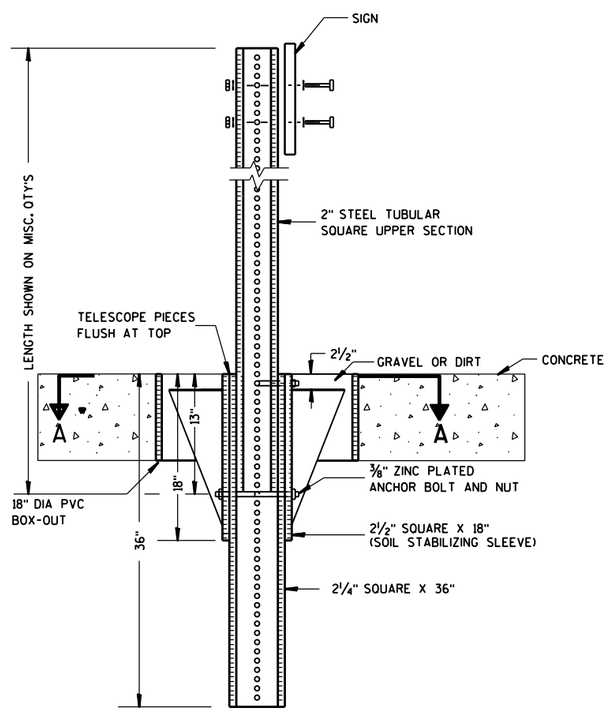
DATE 12/6/23 PLATE NO. A4-3.23




**ELEVATION VIEW**

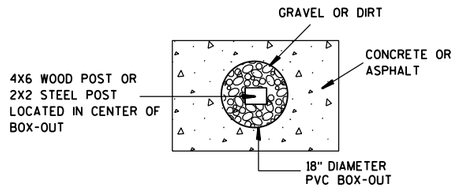
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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

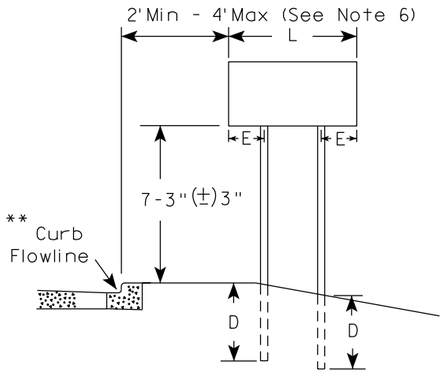
DATE 1/27/14 PLATE NO. A4-3B.1

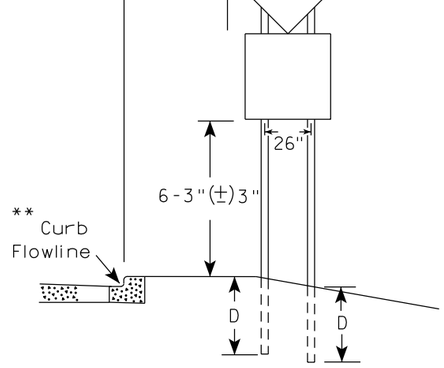
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



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

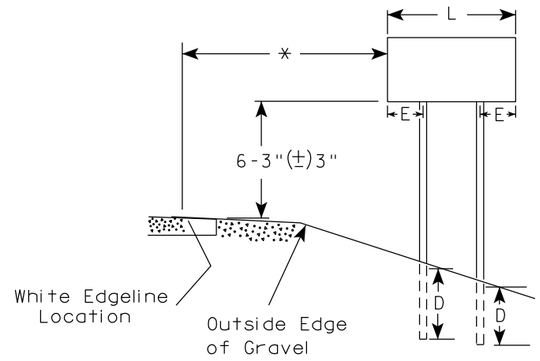
## URBAN AREA

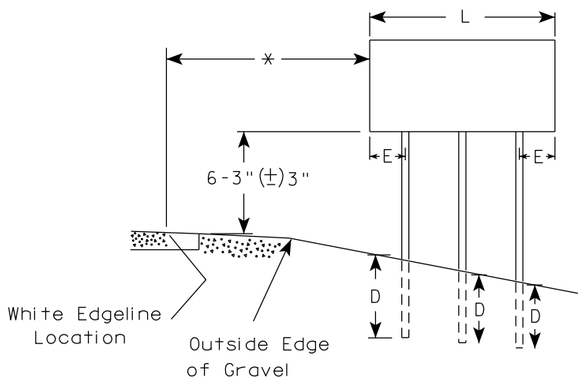


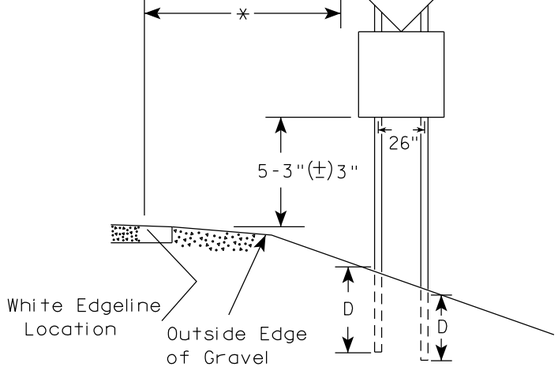




48" DIAMOND WARNING SIGN

## 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' |

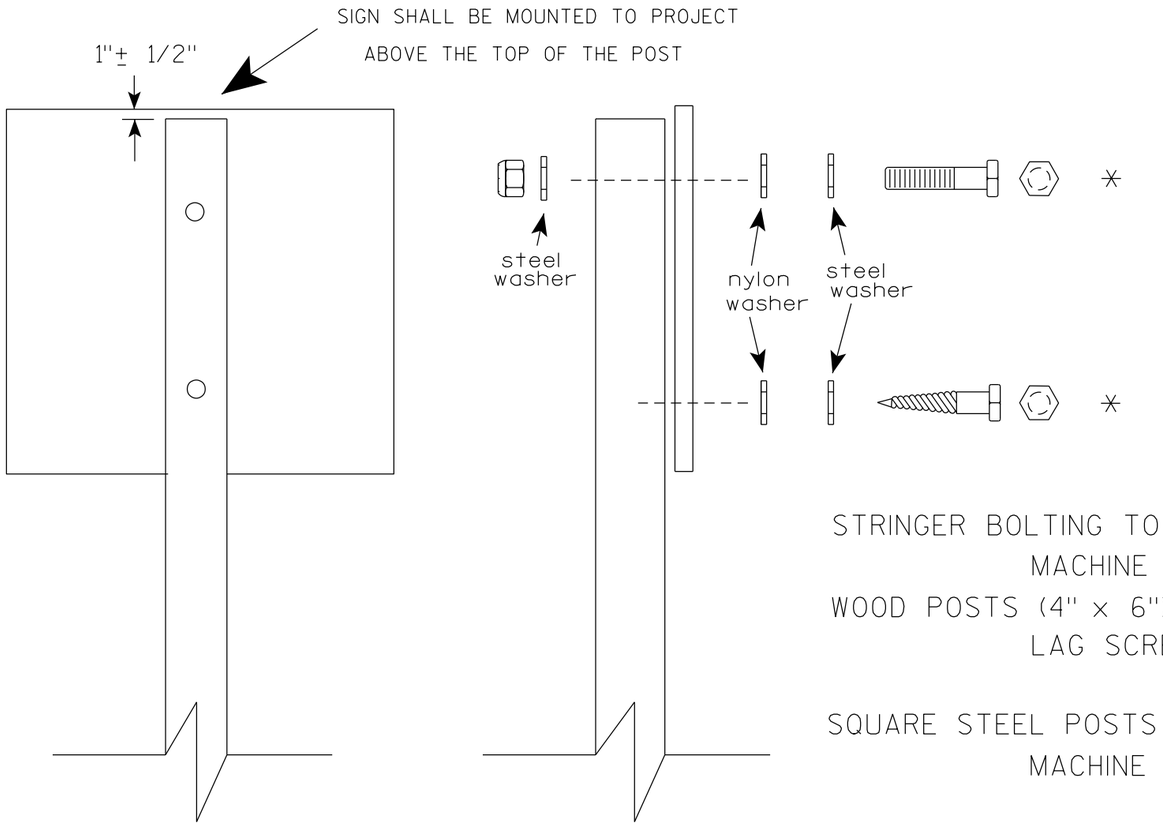
**TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS**

*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: 70 | 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

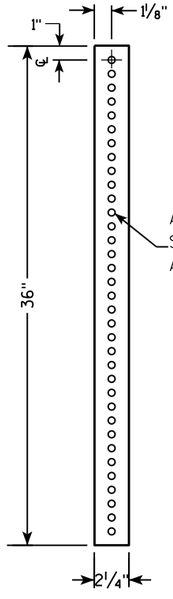
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

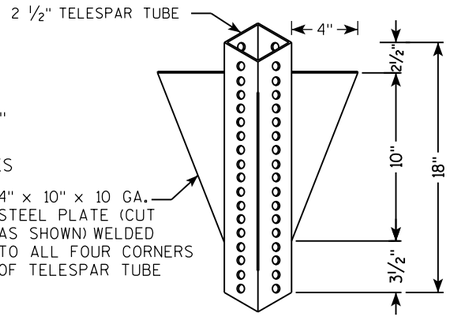
SHEET NO: 71 E

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

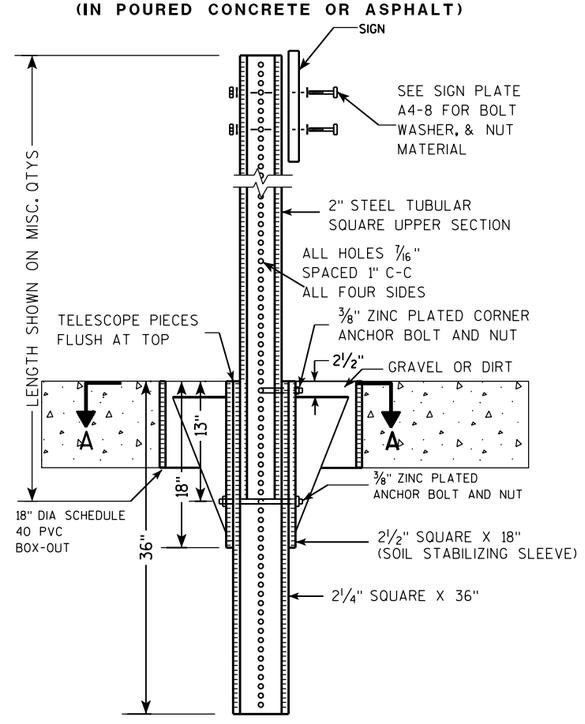
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



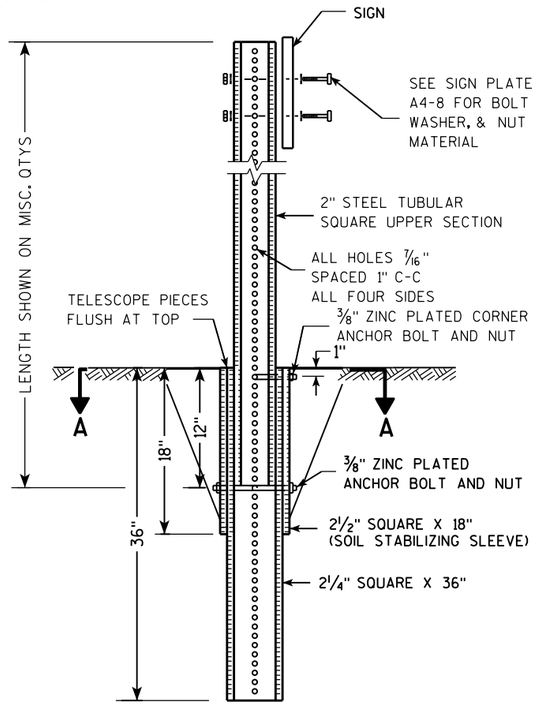

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

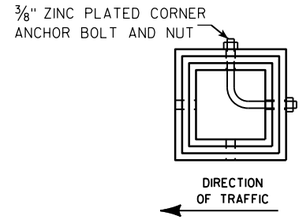



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




## 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).**

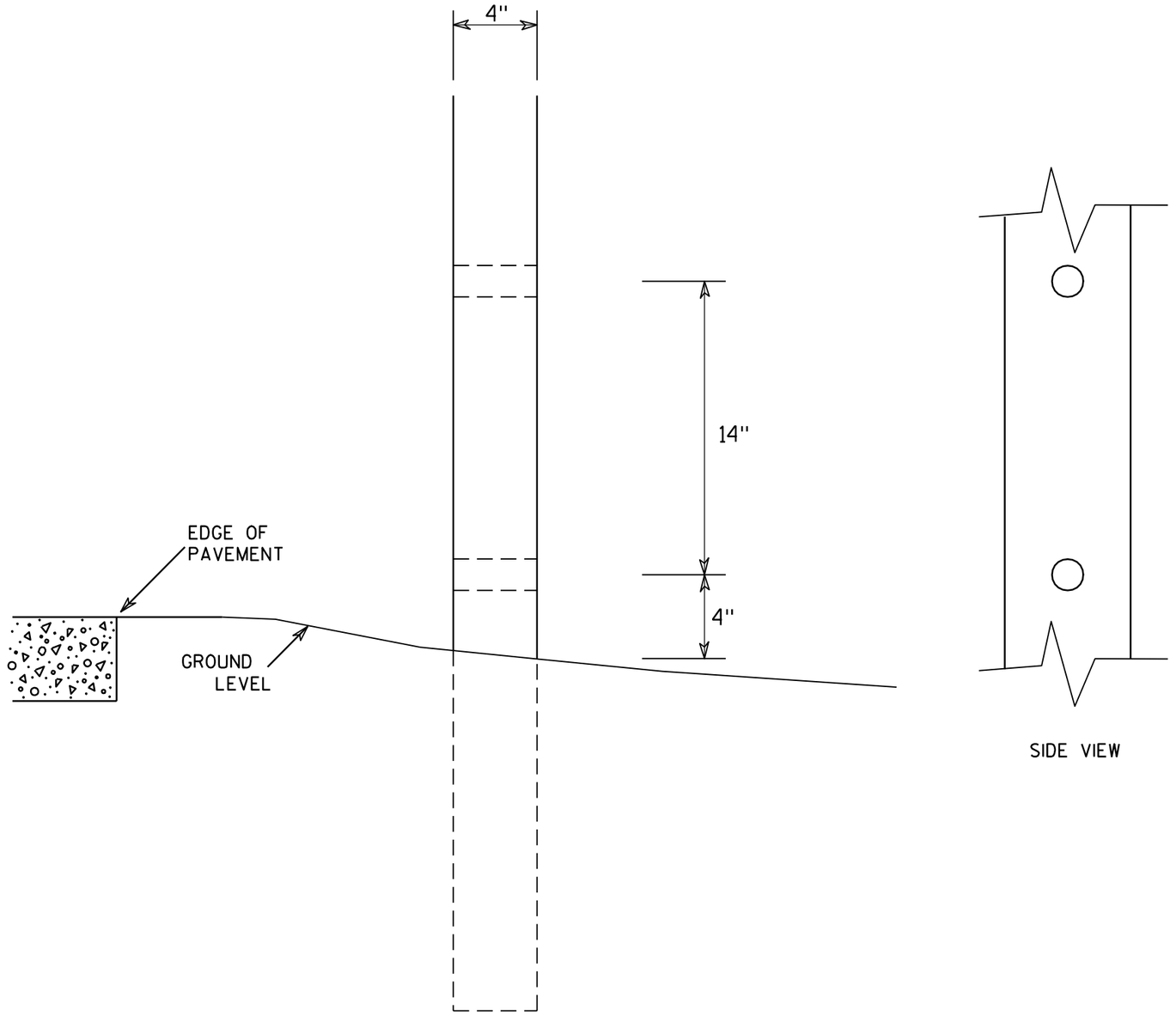
TUBULAR STEEL
SIGN POST
A4-9

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE 72 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.

7

7

# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

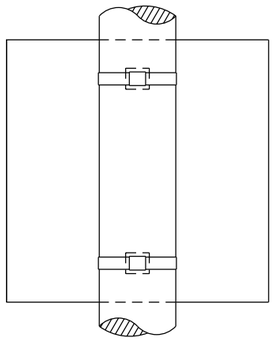
APPROVED Chester J Spang for State Traffic Engineer

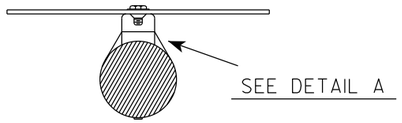
DATE 3/27/97 PLATE NO. A4-11.2

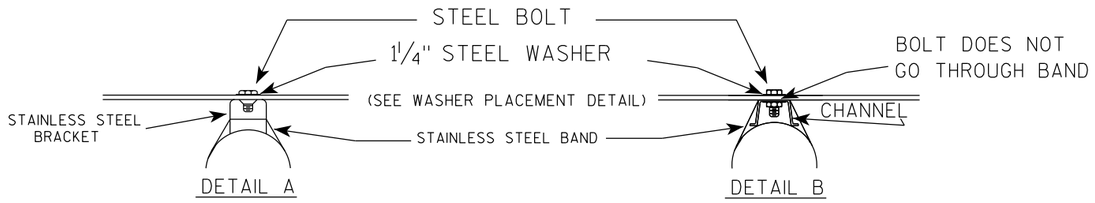
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 73 | E |
|---|---|---|---|---|---|

# BANDING

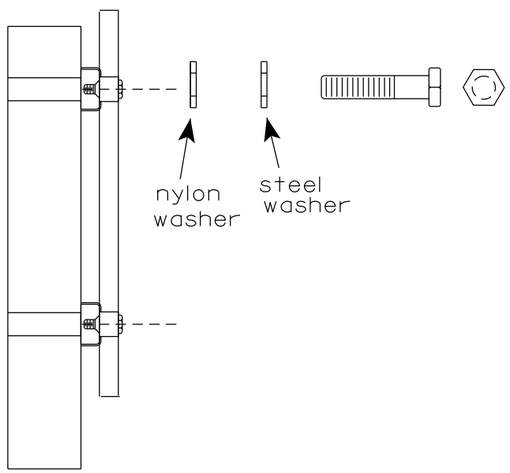
SINGLE SIGN






WASHER PLACEMENT

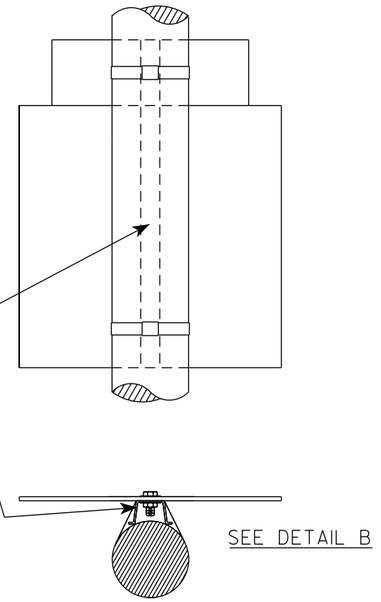



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

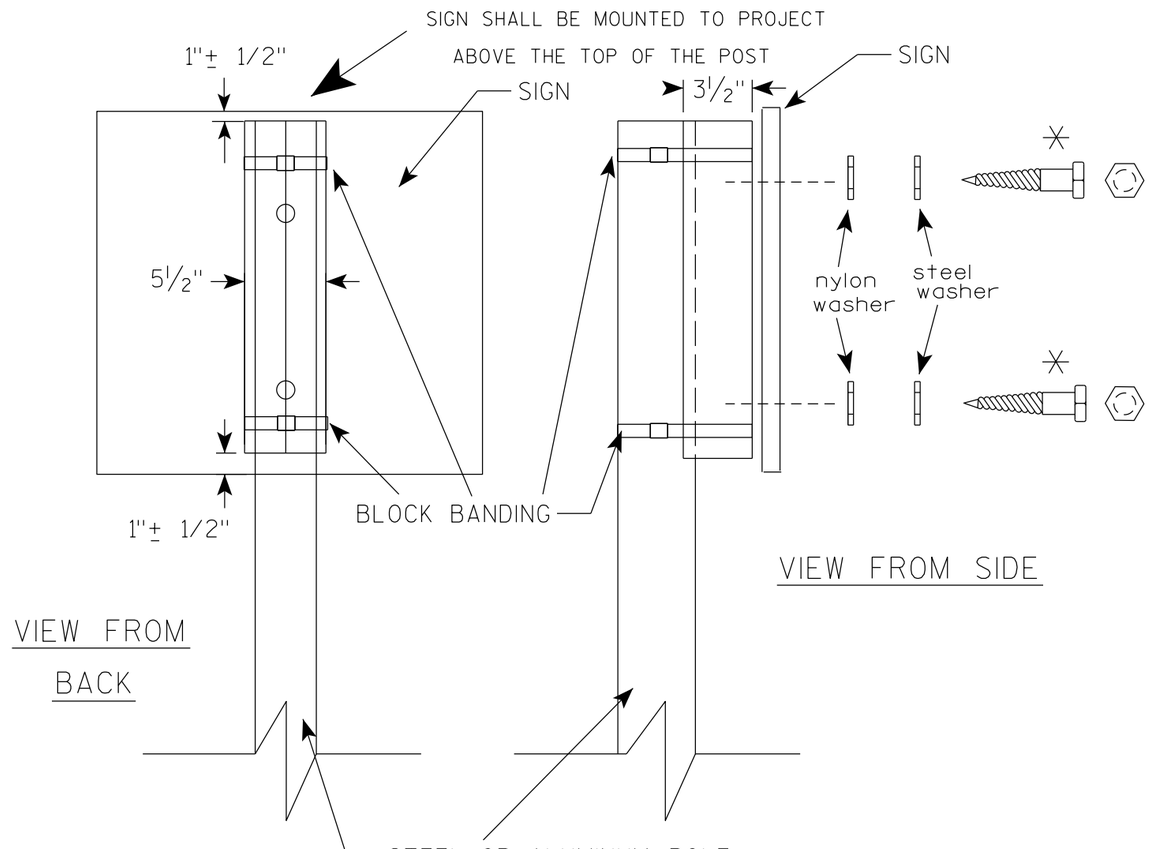
DATE 6/10/19 PLATE NO. A5-9.4

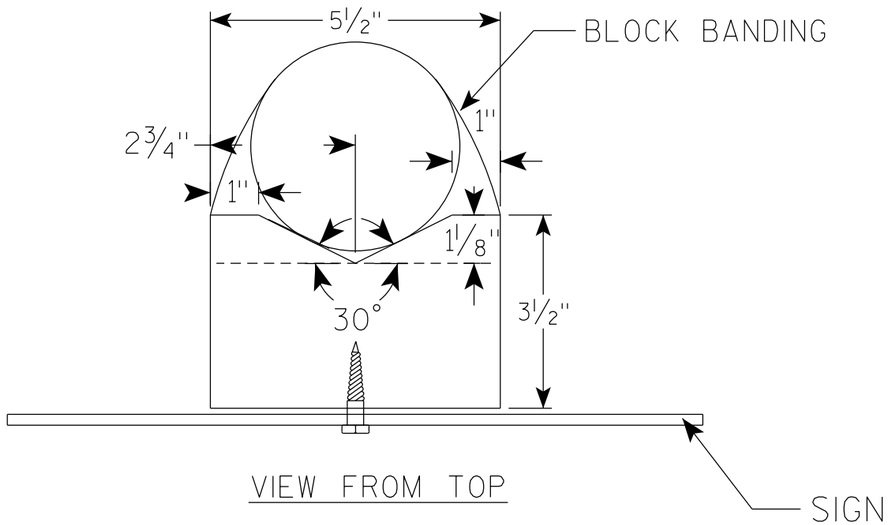
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 74 | E |
|---|---|---|---|---|---|

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

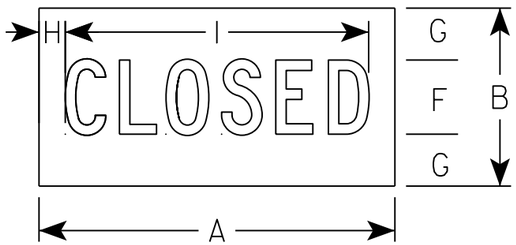
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 75 E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Material shall be .040 aluminmum




G20-62

| 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 | 48 | 24 | | | | 10 | 7 | 3 1/2 | 40 7/8 | | | | | | | | | | | | | | | | | | 8.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
G20-62

WISCONSIN DEPT OF TRANSPORTATION

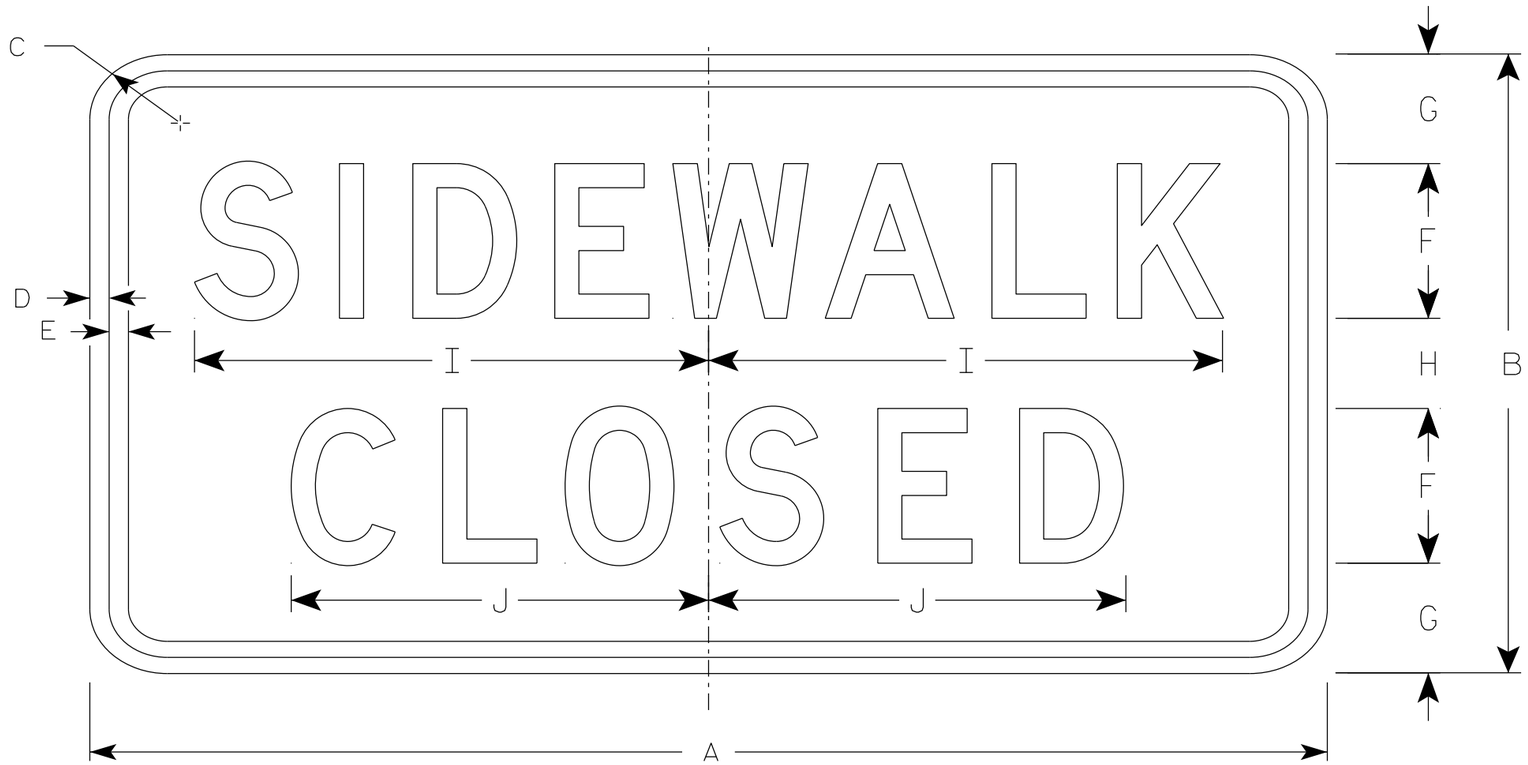
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/24/15 PLATE NO G20-62.1



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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G2062.DGN PLOT DATE : 01-DEC-2015 17:53 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 20.431338:1.000000




R9-9

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

| 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 | ½ | ½ | 3 | 2 ⅛ | 1 ¾ | 10 | 8 ⅛ | | | | | | | | | | | | | | | | | 2.0 |
| 2M | 24 | 12 | 1 ½ | ½ | ½ | 3 | 2 ⅛ | 1 ¾ | 10 | 8 ⅛ | | | | | | | | | | | | | | | | | 2.0 |
| 3 | 30 | 18 | 1 ½ | ½ | ½ | 4 | 3 ½ | 3 | 12 ½ | 10 ¼ | | | | | | | | | | | | | | | | | 3.75 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

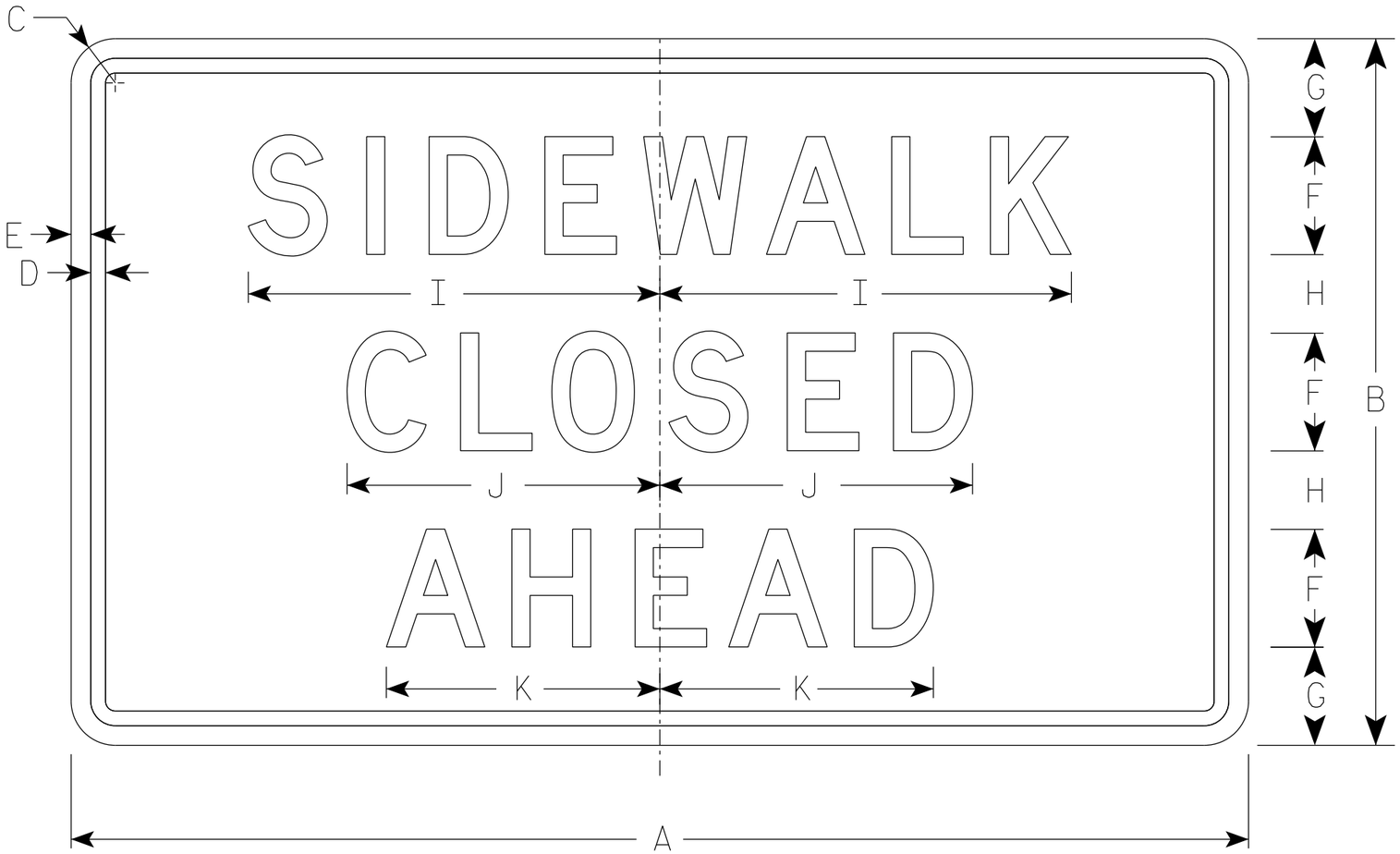
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 77 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D




R9-9A

| 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 | 18 | 1 ½ | ⅜ | ½ | 3 | 2 ½ | 2 | 10 ½ | 8 | 7 | | | | | | | | | | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 ½ | ⅜ | ½ | 3 | 2 ½ | 2 | 10 ½ | 8 | 7 | | | | | | | | | | | | | | | | 3.75 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

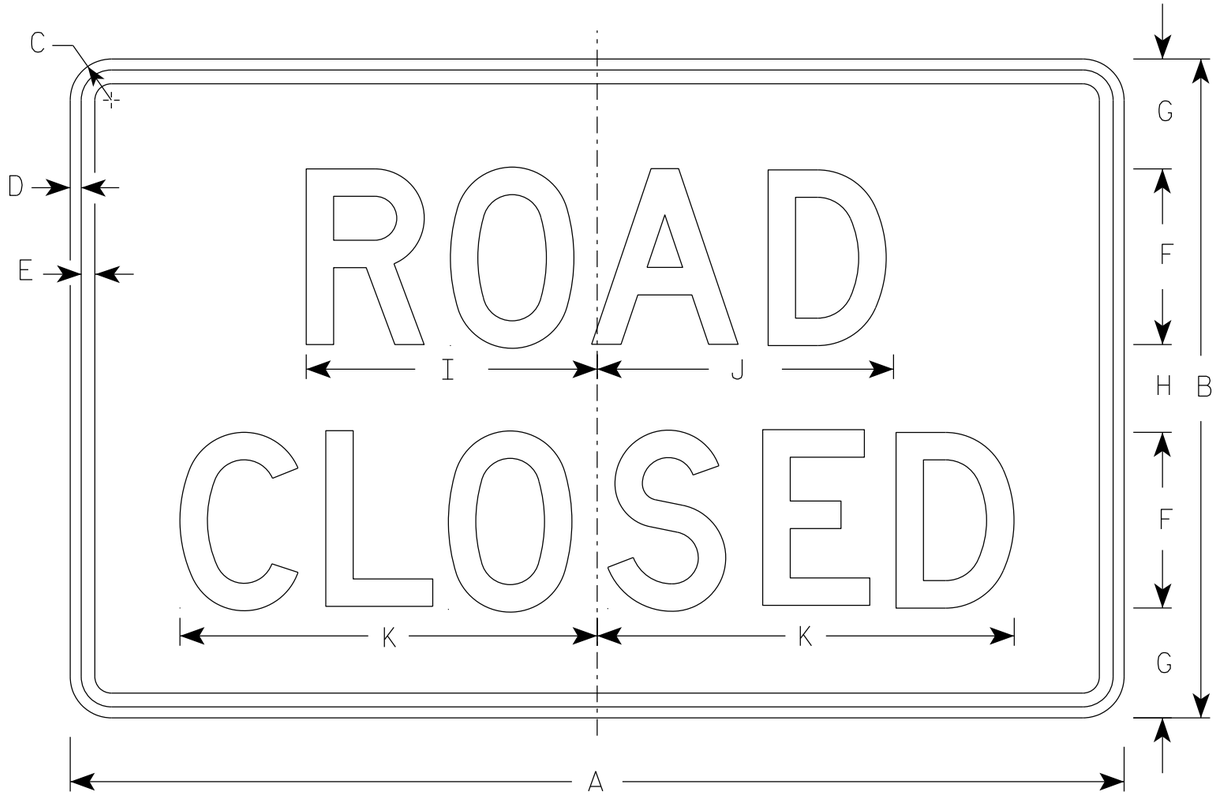
STANDARD SIGN
R9-9A

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9A.2

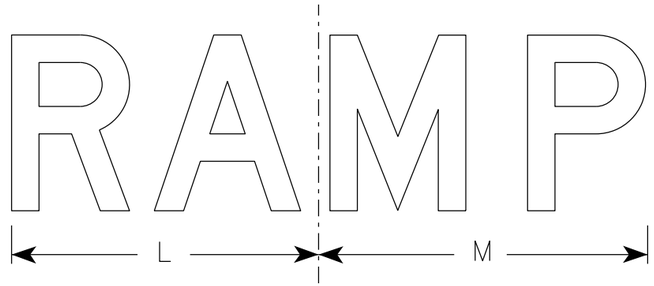
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 78 | E



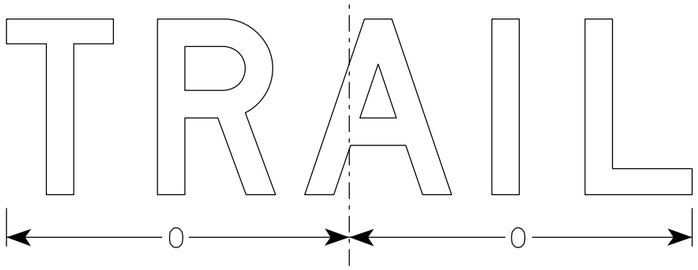

R11-2

NOTES

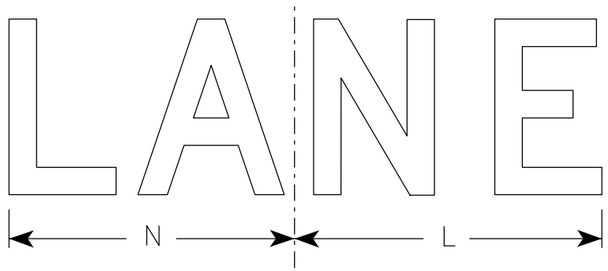
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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

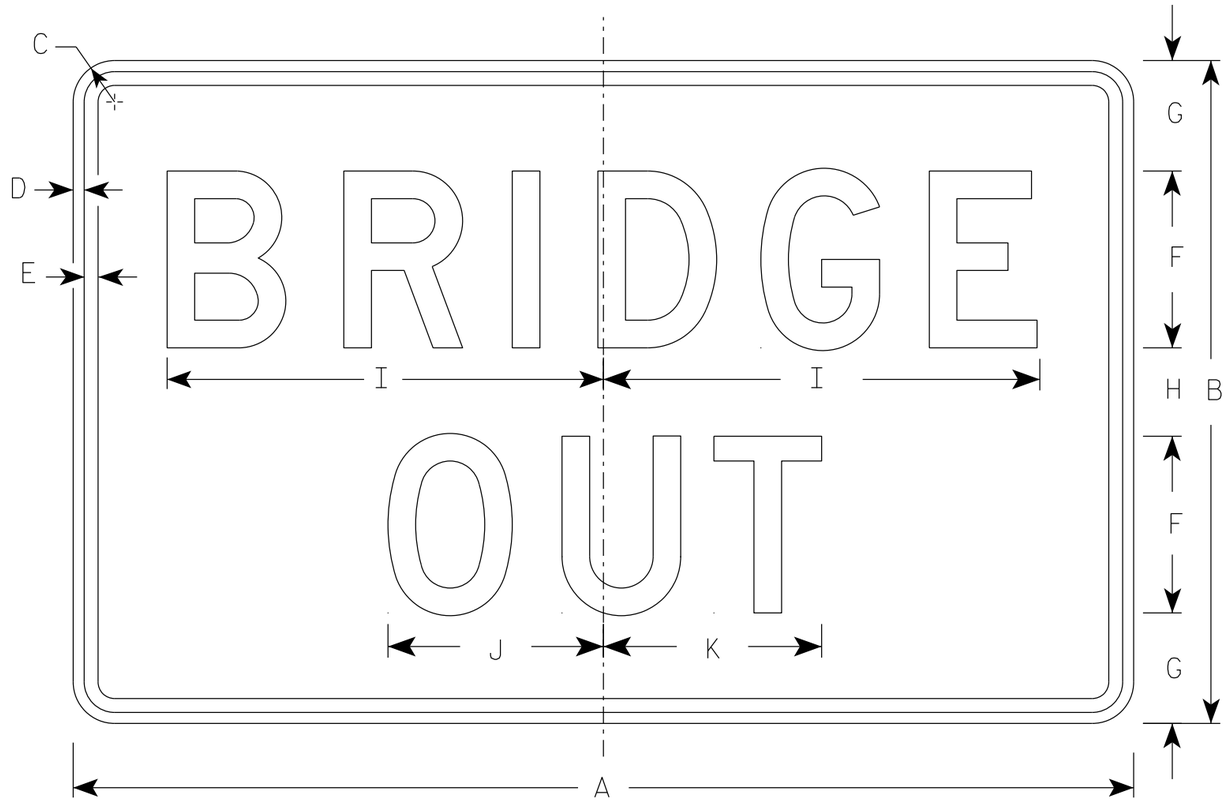
DATE 2/5/24 PLATE NO. R11-2.12

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






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

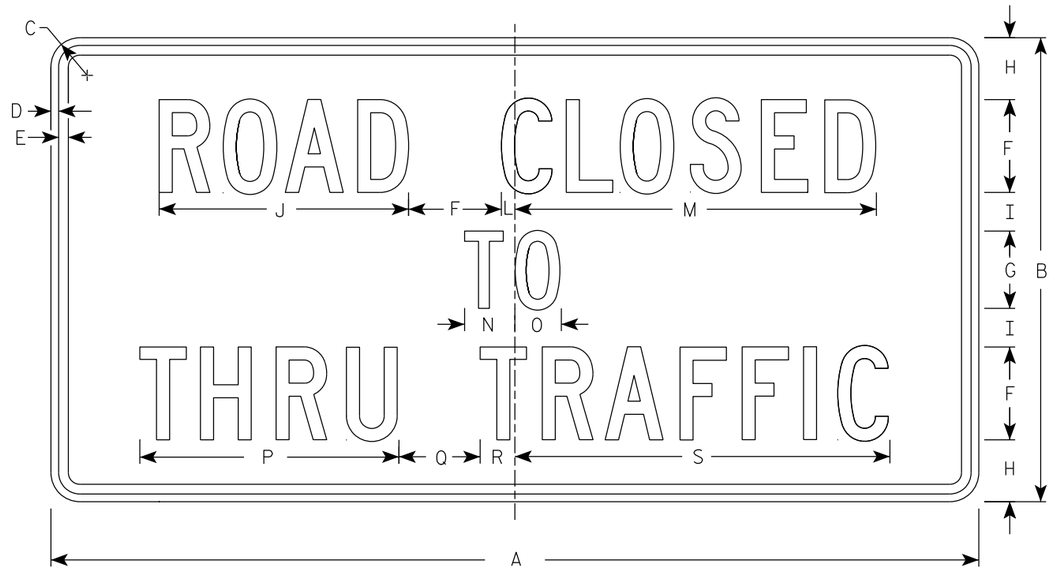
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 80 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

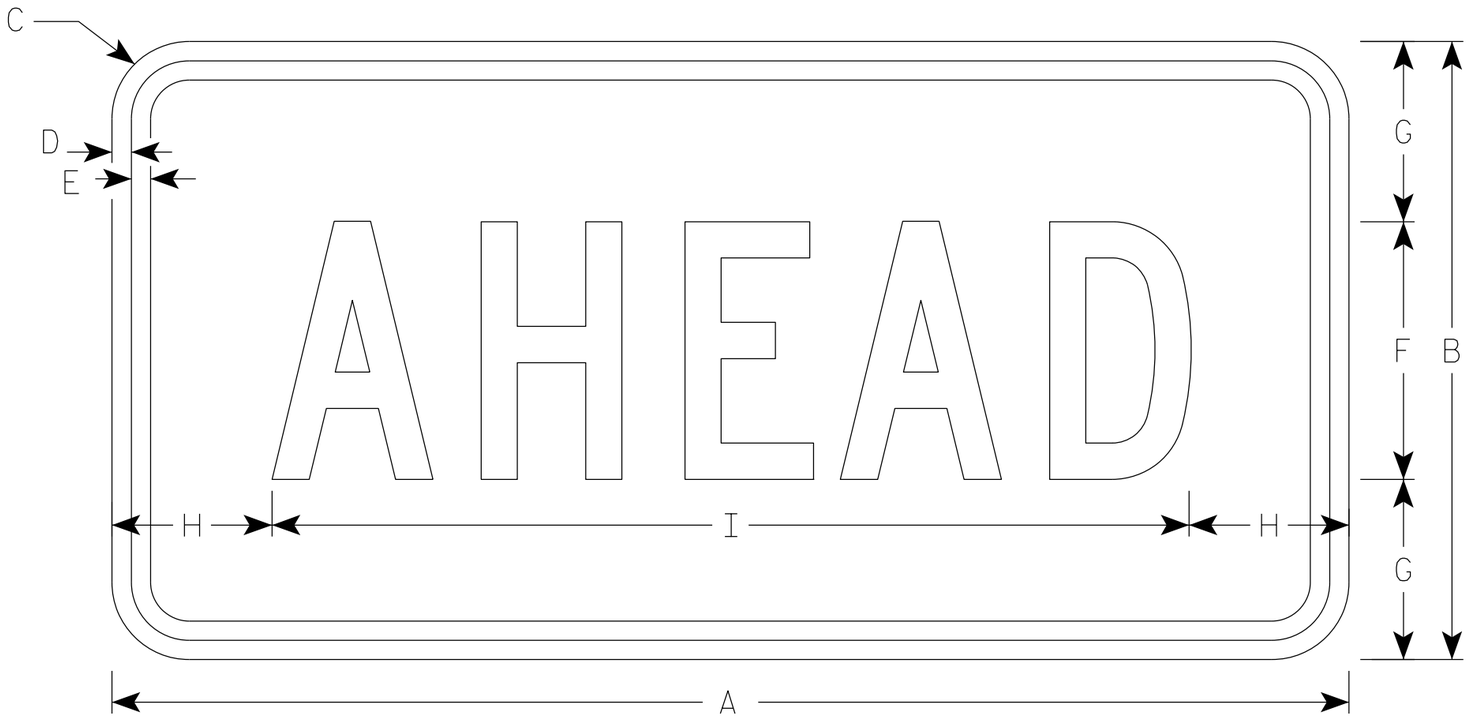
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-4.4

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

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - C




W16-9P

* For 36" x 36" Warning Signs, use 30" x 18" W16-9P signs.
* For 48" x 48" Warning Signs, use 48" x 24" W16-9P signs.

| | SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2S | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 5 | 3 1/2 | 3 1/8 | 17 3/4 | | | | | | | | | | | | | | | | | | 2.0 |
| * | 2M | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 7 | 5 1/2 | 2 3/4 | 24 1/2 | | | | | | | | | | | | | | | | | | 3.75 |
| * | 3 | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 7 | 3 1/2 | 2 3/4 | 24 1/2 | | | | | | | | | | | | | | | | | | 3.75 |
| * | 4 | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 10 | 7 | 6 1/8 | 35 3/4 | | | | | | | | | | | | | | | | | | 8.0 |
| | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

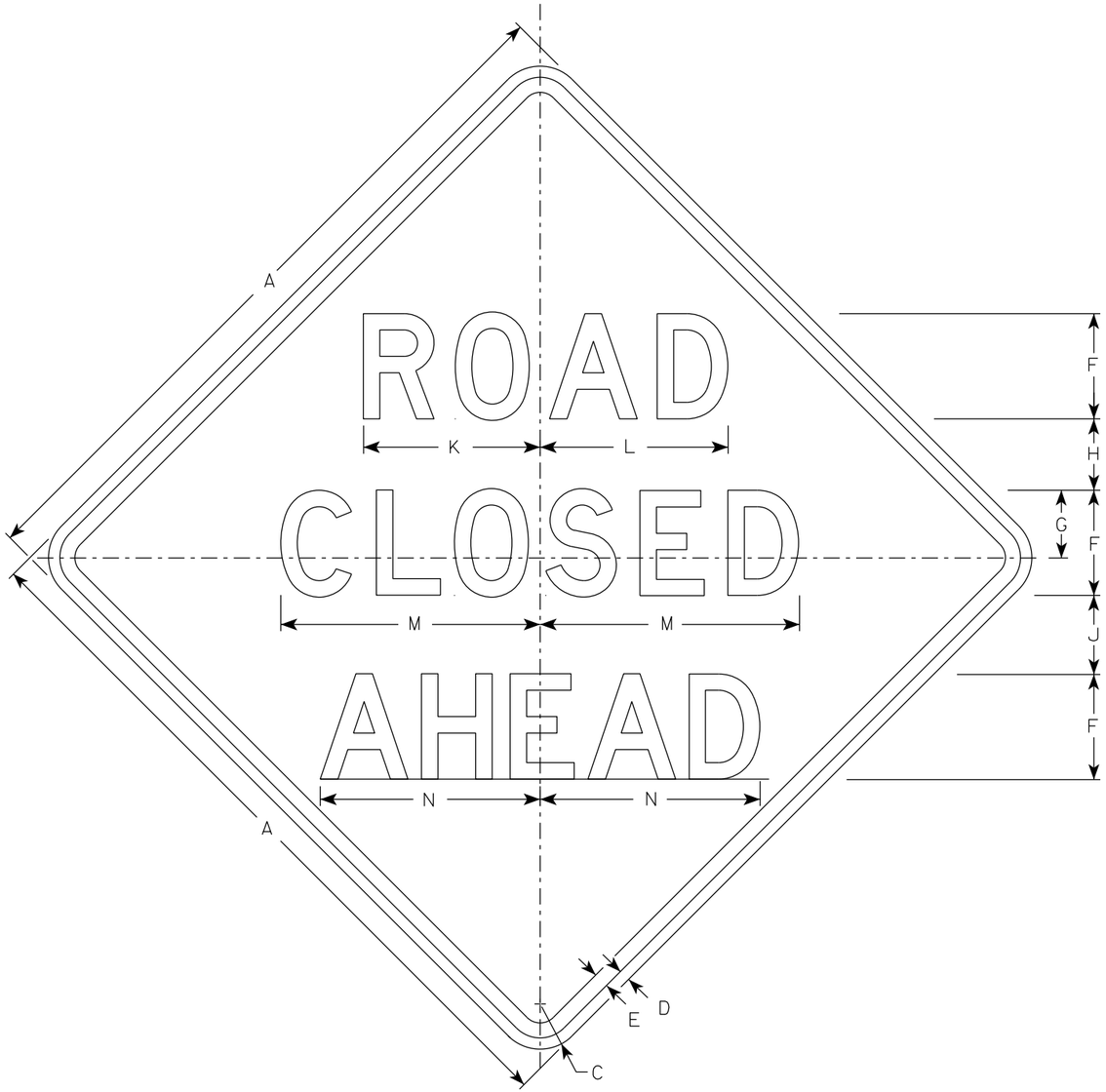
DATE 1/9/2024 PLATE NO. W16-9P.9

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

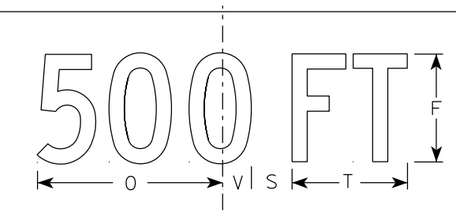


7

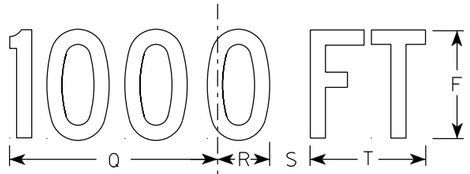
7



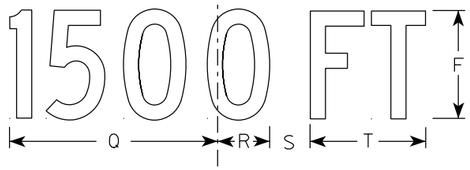

W20-3A



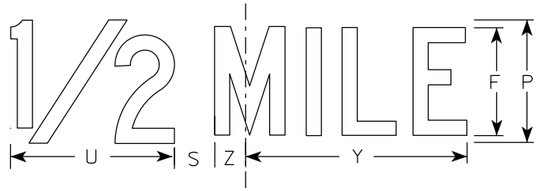

W20-3D



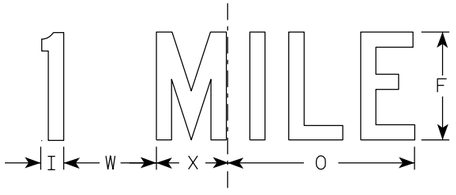

W20-3C




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

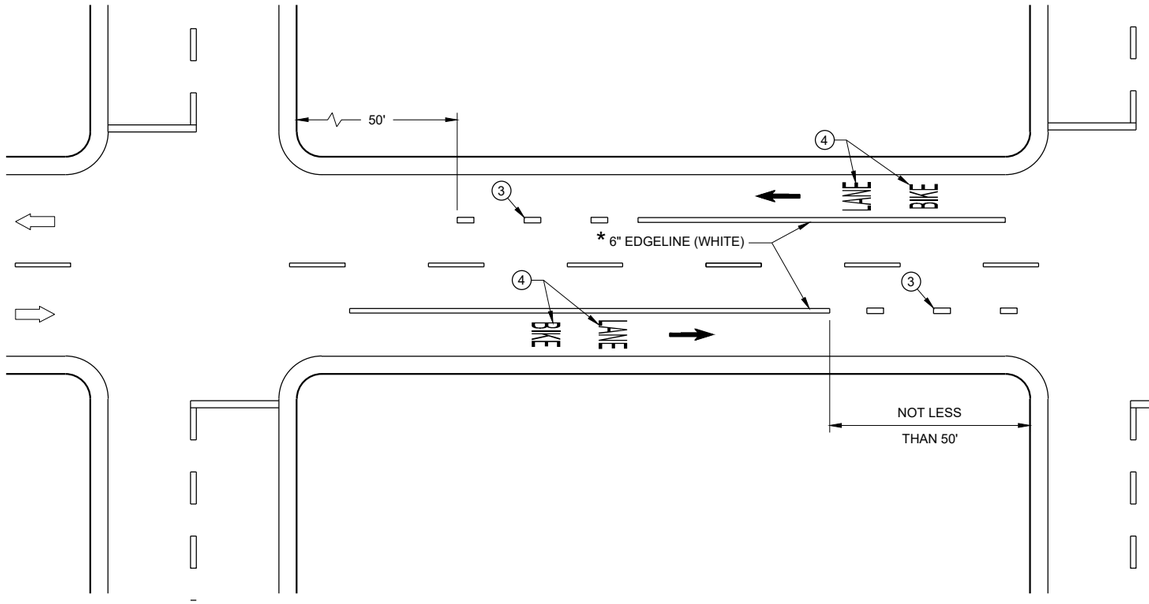
APPROVED Matthew R Rauch
for State Traffic Engineer

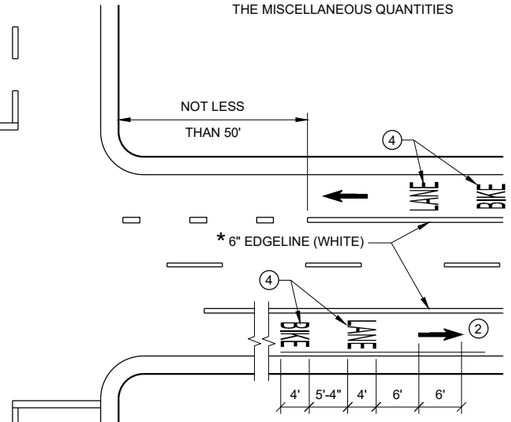
DATE 1/10/2024 PLATE NO. W20-3.8

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



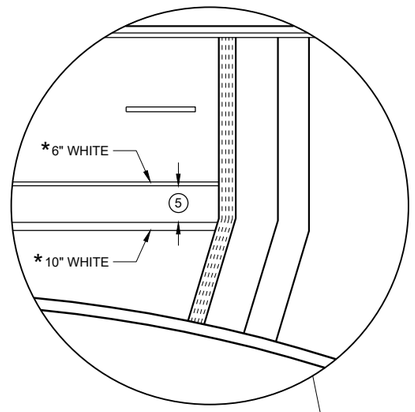




## GENERAL NOTES

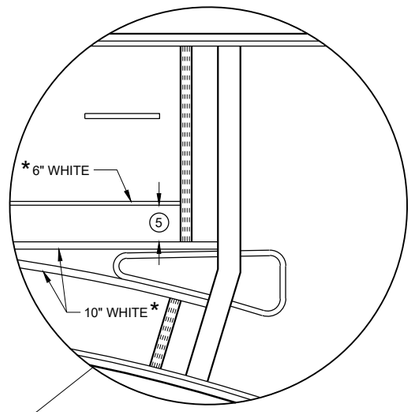
1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. BIKE SYMBOLS OR WORDS MAY BE USED.
5. BIKE ACCOMMODATION IS TYPICAL 5 FEET WIDE AND MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT ≥ 45 MPH.
6. OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FOOT WIDE TURN LANE).
7. REFER TO CONTRACT PLANS FOR LANE WIDTH.

DIRECTION OF TRAVEL

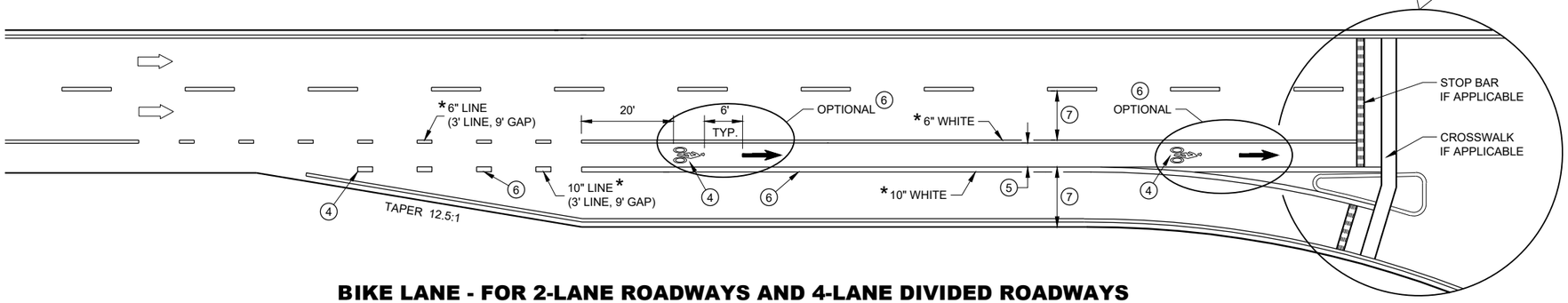
**DESIGNATED BIKE LANE - NO PARKING**




**4 LANE DIVIDED WITHOUT ISLAND**




**4 LANE DIVIDED WITH ISLAND**




**BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS**
**(4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)**

**BIKE LANE MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER
FHWA

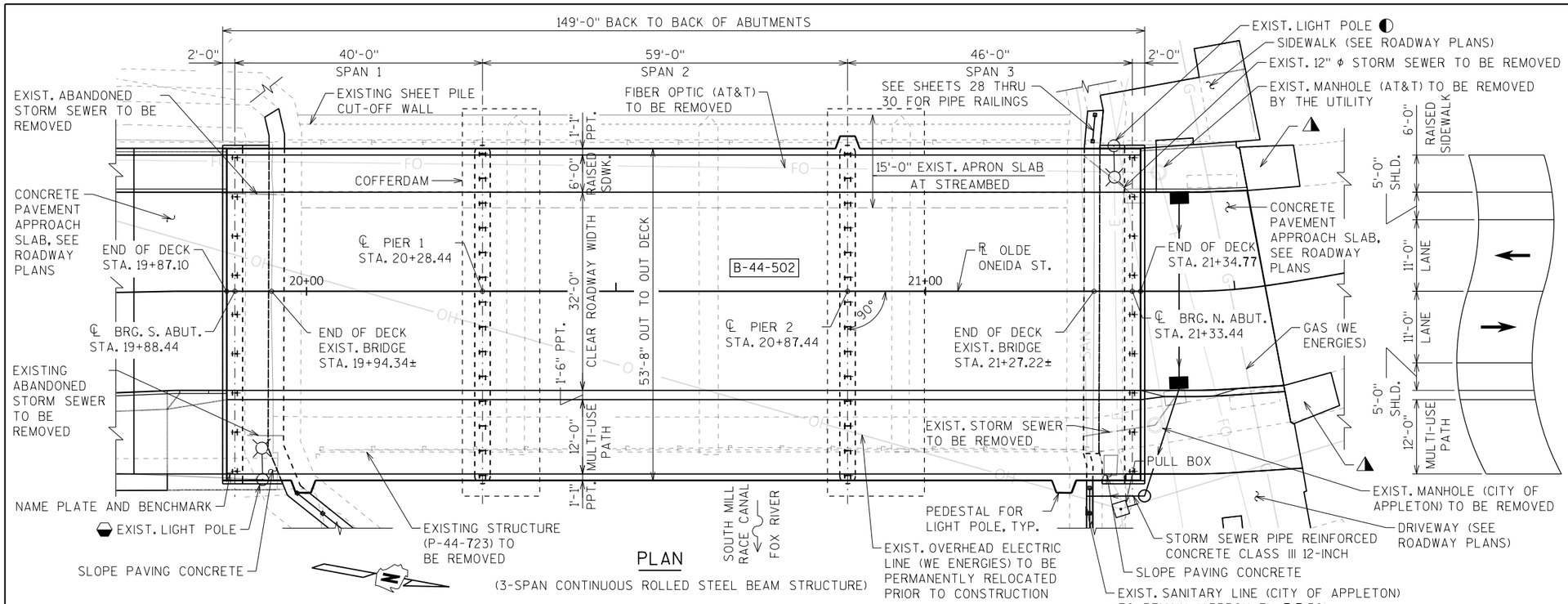


6

SDD 15C29-08a

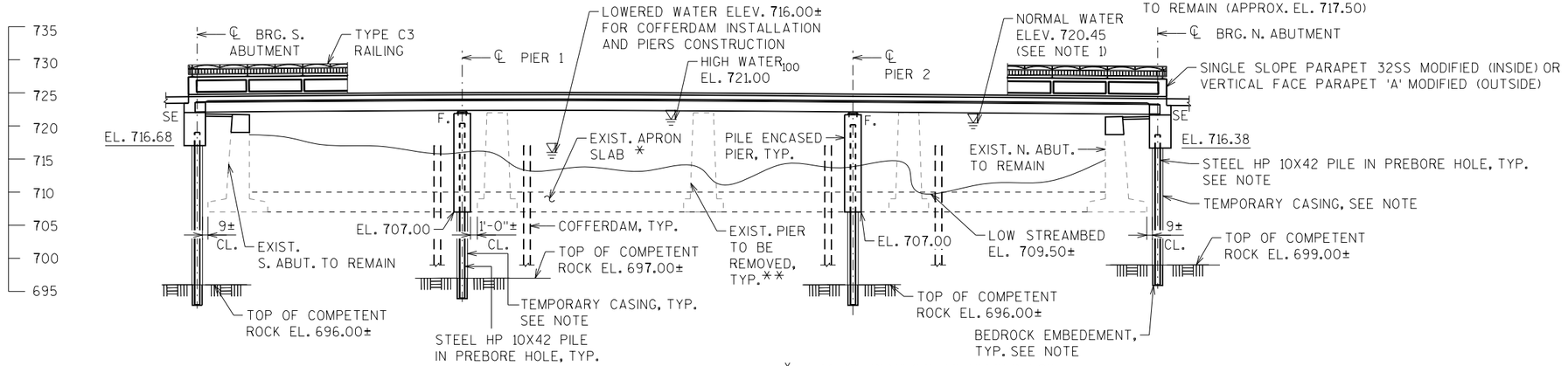
6

SDD 15C29-08a




## PLAN

(3-SPAN CONTINUOUS ROLLED STEEL BEAM STRUCTURE)




## ELEVATION

(LOOKING WEST)

* TO BE REMOVED AS NEEDED FOR CONSTRUCTION OF NEW PIERS.

** PIERS TO BE REMOVED TO 1 FOOT BELOW STREAMBED.

▲ SEE SHEETS 1 THRU 5 FOR RAISED SIDEWALK AND RAILING MODIFICATION (B-44-886)

◐ EXISTING LIGHT POLE TO BE REMOVED BY THE CITY. LIGHT POLE BASE REMOVED BY THE CONTRACTOR.

◒ EXISTING LIGHT POLE TO BE MOVED BY THE CITY. LIGHT POLE BASE REMOVED BY THE CONTRACTOR.

## BENCHMARKS

| BENCHMARK | LOCATION | COORDINATES | | ELEVATION |
|---|---|---|---|---|
| | | NORTHING | EASTING | |
| BM3277 | HYDRANT ON THE EAST SIDE OF THE STREET, 115' SOUTH OF THE SOUTH LIMITS OF BRIDGE | 560201.52 | 828184.98 | 726.34 |
| BMST | LIGHT POLE BASE ON THE WEST SIDE OF THE NORTH BRIDGE, 300' NORTH OF THE NORTH LIMITS OF THE SOUTH BRIDGE | 560731.45 | 827978.61 | 728.19 |
| HYD3275 | HYDRANT ON THE SW CORNER OF W. EDISON AVE. AND S. OLDE ONEIDA ST. | 559874.11 | 828168.84 | 722.17 |

## FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

ESTIMATED 26'-0" LONG. AT SOUTH ABUTMENT
ESTIMATED 23'-0" LONG. AT NORTH ABUTMENT

PIERS TO BE SUPPORTED ON HP 10X42 STEEL PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

ESTIMATED 26'-0" LONG. AT PIER 1
ESTIMATED 27'-0" LONG. AT PIER 2

NOTE:

HP PILE TO BE FIRMLY SEATED IN 1'-6" DIA. PRE-BORED HOLE MINIMUM 3'-0" DEEP INTO COMPETENT ROCK. BACKFILL THE HOLE WITH CEMENT GROUT UP TO TOP OF THE COMPETENT ROCK. FOR ABUTMENTS, FILL THE REMAINING HOLE WITH GROUT UP TO THE BOTTOM OF THE ABUTMENT CAP AND REMOVE TEMPORARY CASING. FOR PIERS, FILL THE HOLE WITH SAND UP TO THE BOTTOM OF PILE ENCASEMENT CONCRETE AND REMOVE TEMPORARY CASING.
COST OF BACKFILLING AND TEMPORARY CASING INCLUDED UNDER THE BID PRICE FOR PRE-BORING ROCK OR CONSOLIDATED MATERIALS.

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
AARON BONK (608) 261-0261

CONSULTANT:
KAMLESH KUMAR (312) 616-7418

STATE PROJECT NUMBER

4984-01-79

## LIST OF DRAWINGS



WISCONSIN
KAMLESH KUMAR
40742-6
CHICAGO, IL
PROFESSIONAL ENGINEER

DATE: 7/31/2025

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

PLANS PREPARED BY
exp U.S. Services Inc.
BUILDINGS • EARTH & ENVIRONMENT • ENERGY
INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/12/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

# STRUCTURE B-44-502

OLDE ONEIDA STREET BRIDGE OVER SOUTH CANAL

| COUNTY | TOWN/CITY/~~VILLAGE~~ |
|---|---|
| OUTAGAMIE | APPLETON |

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

| DESIGNED BY | DESIGN CK'D. | DRAWN BY | PLANS CK'D. |
|---|---|---|---|
| SH | KK | SH | KK |

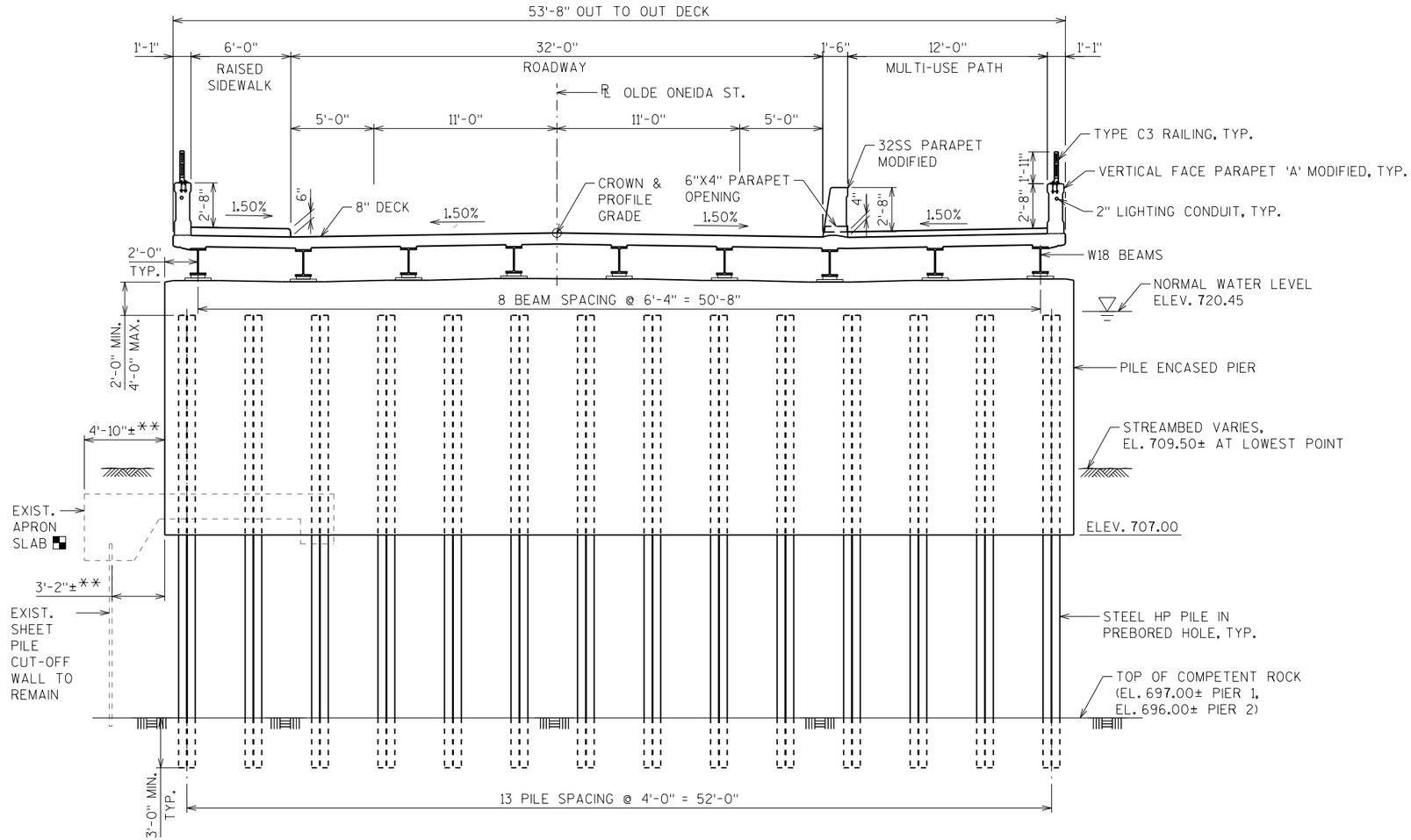
GENERAL PLAN

SHEET 1 OF 30
85

8

8

| STATE PROJECT NUMBER |
|---|
| 4984-01-79 |

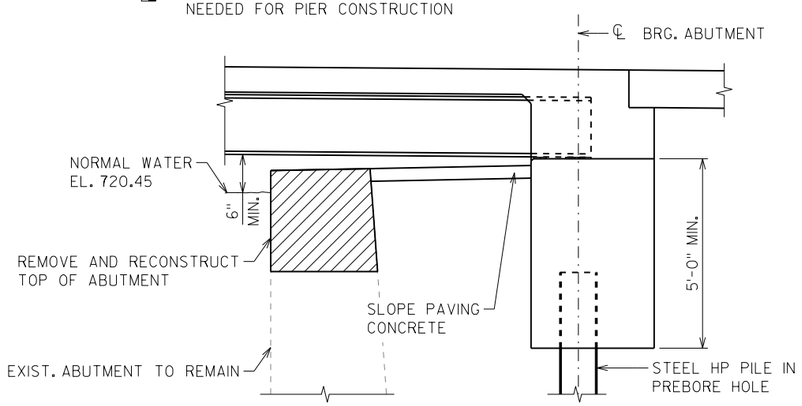



## TYPICAL CROSS SECTION AT PIER

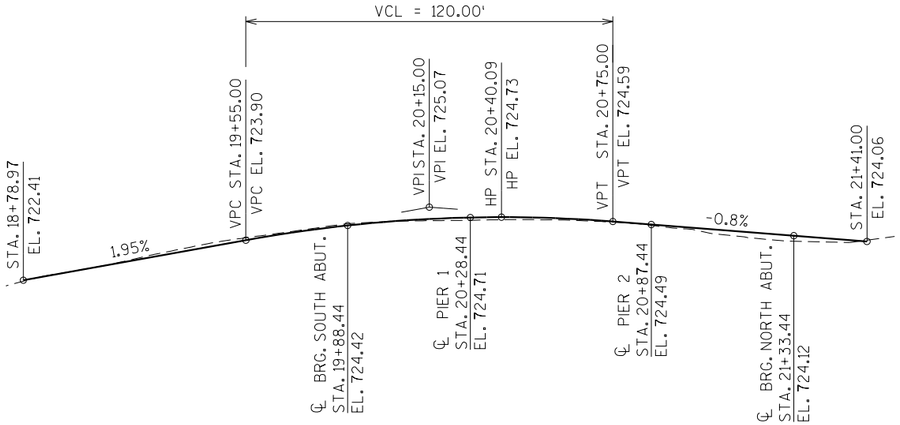
(LOOKING NORTH)

** VERIFY IN FIELD

■ TO BE PARTIALLY REMOVED AS NEEDED FOR PIER CONSTRUCTION




## SECTION THRU ABUTMENT




## PROFILE GRADE LINE - OLDE ONEIDA ST.

## DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.35
OPERATING RATING FACTOR: RF = 1.75
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 DECK & PARAPETS ___ $F'_C$ = 4,000 P.S.I.
ALL OTHER ___ $F'_C$ = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 ____ $F_Y$ = 60,000 P.S.I.
HIGH STRENGTH STRUCTURAL STEEL
(ASTM A709 GRADE 50) _____ $F_Y$ = 50,000 P.S.I.

ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED ACCORDING TO ASTM A123.

## TRAFFIC MAINTENANCE

THE BRIDGE WILL BE CLOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC DURING BRIDGE REPLACEMENT.

## TRAFFIC VOLUME

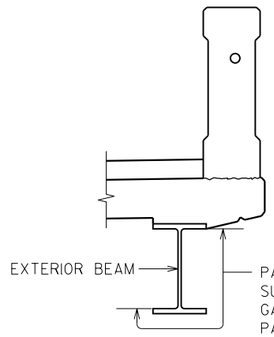
A.A.D.T. = 2,950 (2025); 3,000 (2045)
R.D.S. = 30 M.P.H.

## HYDRAULIC DATA

100 YEAR FREQUENCY

$HW_{100}$ = EL. 721.00*
ROAD OVERTOPPING = NA
SCOUR CRITICAL CODE = 5

*$HW_{100}$ IS BASED ON THE CITY OF APPLETON FLOOD INSURANCE RATE MAP WITH AN EFFECTIVE DATE OF FEBRUARY 16, 2018.




## PAINTING DETAIL

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

CROSS SECTION

SHEET 2 OF 30
86

STATE PROJECT NUMBER

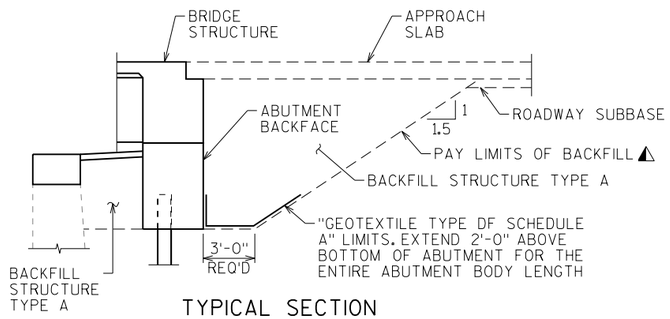
4984-01-79

## TOTAL ESTIMATED QUANTITIES - STRUCTURE B-44-502

| BID ITEM NUMBER | BID ITEMS | UNIT | SUPER - STRUCTURE | SOUTH ABUTMENT | PIER 1 | PIER 2 | NORTH ABUTMENT | TOTALS |
|---|---|---|---|---|---|---|---|---|
| 203.0260 | REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-44-723 | EACH | - | - | - | - | - | 1 |
| 206.1001 | EXCAVATION FOR STRUCTURES BRIDGES B-44-502 | EACH | - | - | - | - | - | 1 |
| 206.5001 | COFFERDAMS B-44-502 | EACH | - | - | 1 | 1 | - | 2 |
| 210.1500 | BACKFILL STRUCTURE TYPE A | TON | - | 310 | - | - | 304 | 614 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 324.0 | 59.2* | 74.7 | 73.6 | 51.2* | 583 |
| 502.3200 | PROTECTIVE SURFACE TREATMENT | SY | 1,044 | - | - | - | - | 1,044 |
| 502.4205 | ADHESIVE ANCHORS NO. 5 BAR | EACH | - | 160 | - | - | 142 | 302 |
| 502.9000.S | UNDERWATER SUBSTRUCTURE INSPECTION B-44-502 | EACH | - | - | 1 | 1 | - | 2 |
| 505.0400 | BAR STEEL REINFORCEMENT HS STRUCTURES | LB | - | 5,420* | 3,380 | 3,350 | 5,210* | 17,360 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 77,740 | - | 0 | 0 | - | 77,740 |
| 506.0605 | STRUCTURAL STEEL HS** | LB | 182,200 | - | - | - | - | 182,200 |
| 506.2605 | BEARING PADS ELASTOMERIC NON-LAMINATED | EACH | - | 9 | - | - | 9 | 18 |
| 506.3010 | WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH | EACH | 7,128 | - | - | - | - | 7,128 |
| 506.5000 | BEARING ASSEMBLIES FIXED B-44-502 | EACH | - | - | 9 | 9 | - | 18 |
| 513.2001 | RAILING PIPE | LF | - | 16 | - | - | 13 | 29 |
| 513.7016 | RAILING STEEL TYPE C3 | LF | 296 | - | - | - | - | 296 |
| 516.0500 | RUBBERIZED MEMBRANE WATERPROOFING | SY | - | 12 | - | - | 12 | 24 |
| 531.8990 | ANCHOR ASSEMBLIES POLES ON STRUCTURES | EACH | 3 | - | - | - | - | 3 |
| 550.0020 | PRE-BORING ROCK OR CONSOLIDATED MATERIALS | LF | - | 214 | 182 | 196 | 184 | 776 |
| 550.1100 | PILING STEEL HP 10-INCH X 42 LB | LF | - | 234 | 364 | 378 | 207 | 1,185 |
| 604.0400 | SLOPE PAVING CONCRETE | SY | - | 27 | - | - | 25 | 52 |
| 645.0111 | GEOTEXTILE TYPE DF SCHEDULE A | SY | - | 53 | - | - | 53 | 106 |
| 652.0125 | CONDUIT RIGID METALLIC 2-INCH | LF | 50 | - | - | - | - | 50 |
| 652.0325 | CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH | LF | 270 | - | - | - | - | 270 |
| 653.0222 | JUNCTION BOXES 18X12X6-INCH | EACH | 3 | - | - | - | - | 3 |
| | | | | | | | | |
| | NON-BID/INCIDENTAL ITEMS | | | | | | | |
| | PREFORMED JOINT FILLER | SIZE | - | - | - | - | - | 3/4" |
| | NAME PLATE | EACH | - | - | - | - | - | 1 |
| | NON-BITUMINOUS JOINT FILLER | LF | - | - | - | - | - | - |
| | PLASTIC OR ZINC SHEETS 1/8-INCH | O | - | - | - | - | - | - |
| | POLYETHLENE SHEETS | SF | - | - | - | - | - | - |

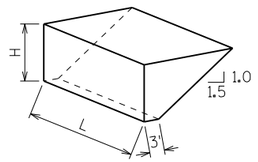
* INCLUDES QUANTITIES FOR PROPOSED ABUTMENT AND EXISTING ABUTMENT RECONSTRUCTION.

** SEE SPECIAL PROVISION "HOT DIP GALVANIZING AND PAINTING FOR STRUCTURAL STEEL".




### TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.




### ABUTMENT BACKFILL DIAGRAM

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

## GENERAL NOTES

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

DRAWINGS SHALL NOT BE SCALED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

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

BEVEL ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

AT THE BACKFACE OF THE ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURAL BACKFILL.

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

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENT SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

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

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP OF DECK, SIDEWALKS, TOP AND ROADWAY FACES OF EXTERIOR PARAPETS, AND ALL FACES OF INTERIOR PARAPET.

THE EXISTING STRUCTURE TO BE REMOVED, P-44-723, IS A PRESTRESSED CONCRETE CHANNEL BEAM STRUCTURE. IT HAS AN OVERALL LENGTH OF 135'-3" AND OVERALL WIDTH OF 50'-4".

INFORMATION ON THESE DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWINGS FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE.

ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.

CONTROL OF STORM WATER AT THE STRUCTURE DURING CONSTRUCTION SHALL BE INCIDENTAL TO THE PROJECT.

ALL NEW ADJACENT CONCRETE PAVEMENT SHALL BE JOINT SEALED.

CAULK ALL SIDEWALK TO WING/RETAINING WALL JOINTS WITH NON BITUMINOUS FILLER.

SACK RUBBING FINAL TEXTURE TO MATCH COLLEGE AVENUE.

REMOVE EXISTING BRIDGE NAME PLATE AND RETURN TO OWNER.

ADD SURVEY MONUMENT TO STRUCTURE B-44-502. OBTAIN FROM WISDOT NE REGION SURVEYOR.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

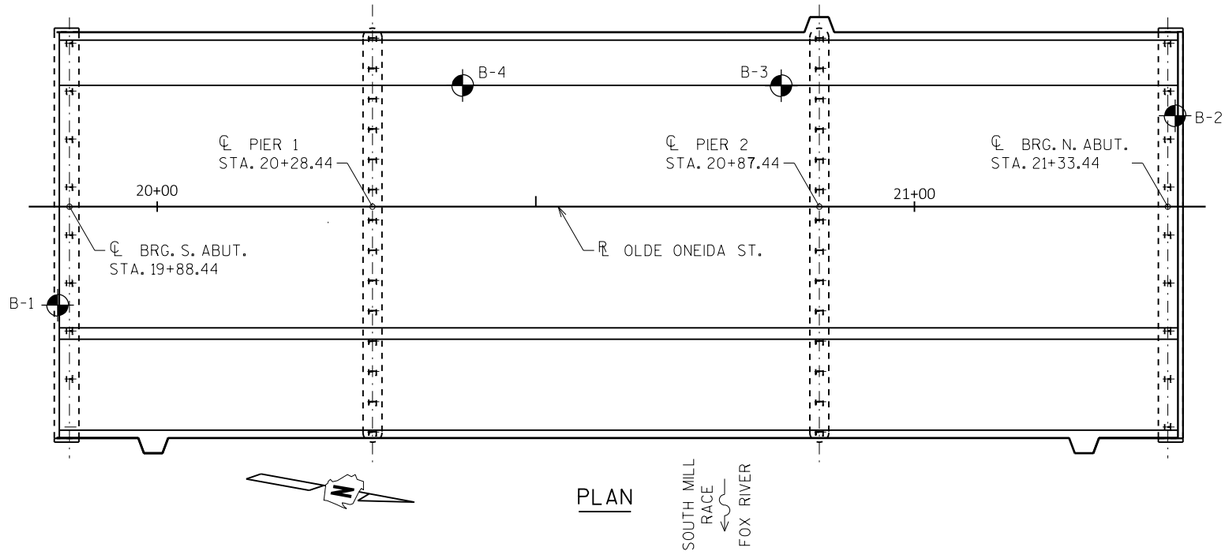
STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

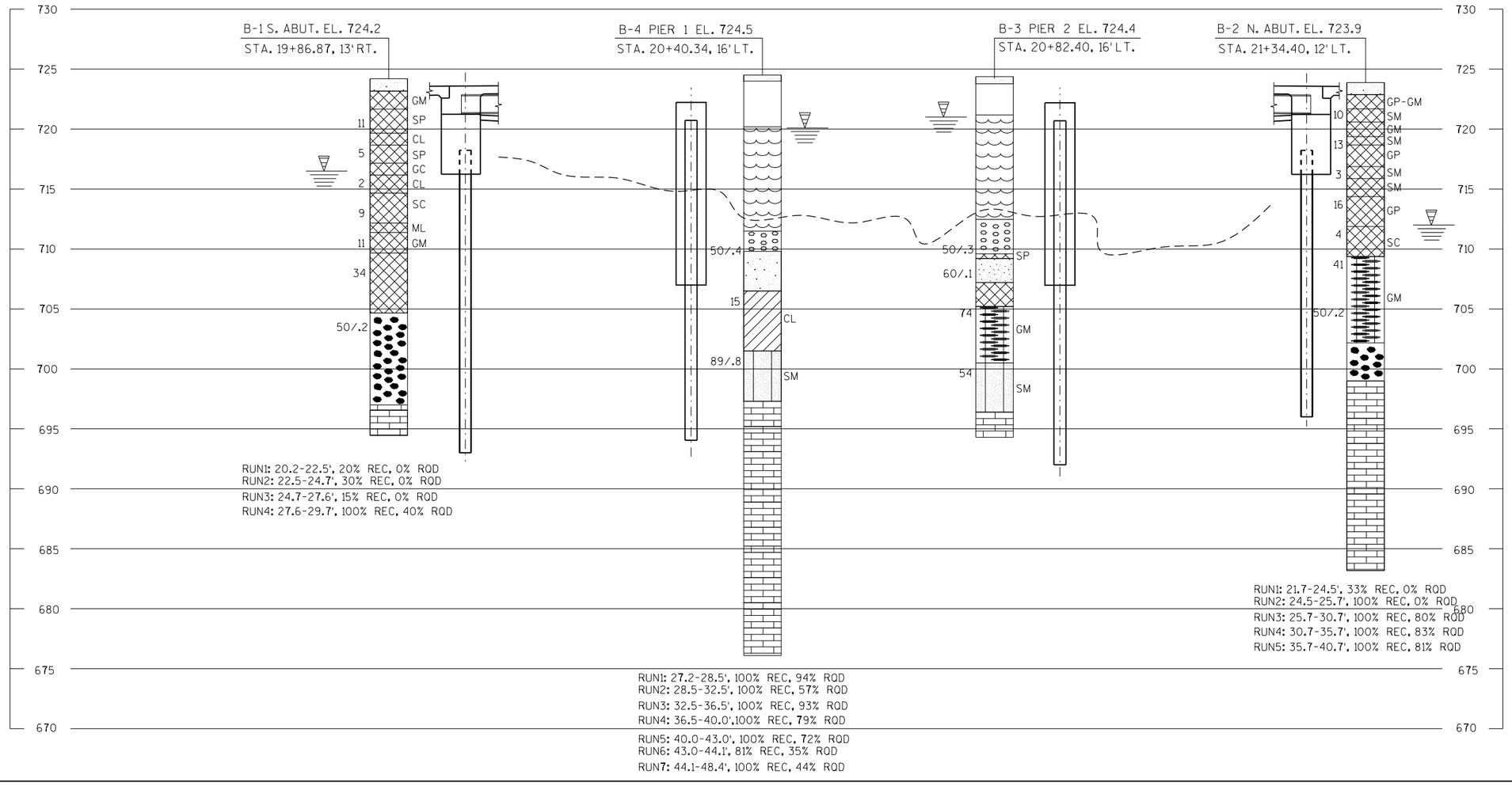
QUANTITIES & GENERAL NOTES

SHEET 3 OF 30
87

| BORING # | DATE COMPLETED | NORTHING (Y) | EASTING (X) |
|---|---|---|---|
| 1 - S. ABUT. | 8/22/2022 | 560297 | 828147 |
| 4 - PIER 1 | 8/25/2022 | 560345 | 828112 |
| 3 - PIER 2 | 8/26/2022 | 560389 | 828104 |
| 2 - N. ABUT. | 8/23/2022 | 560437 | 828098 |
| BORINGS COMPLETED BY: AET, INC. | | | |
| REPORT COMPLETED BY: AET, INC. | | | |
| ALL COORDINATES REFERENCED TO WISCRS, NAD 83, | | | |
| COORDINATES COLLECTED USING NON-SURVEY GRADE | | | |




PLAN




STATE PROJECT NUMBER

4984-01-79

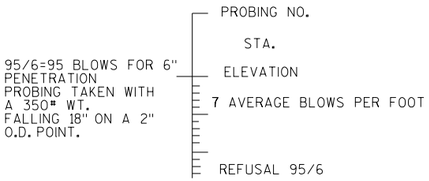
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

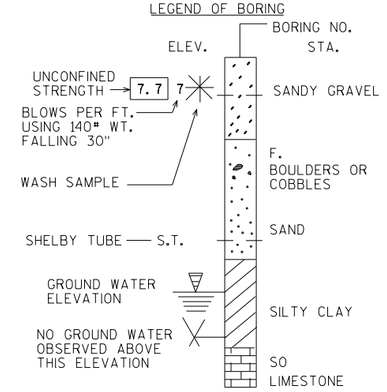
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, DOLOMITE
GRAVEL, CLAY, IGNEOUS ROCK
FILL, TILL, BOULDERS OR COBBLES

LEGEND OF PROBING




LEGEND OF BORING




UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

SUBSURFACE EXPLORATION

SHEET 4 OF 30
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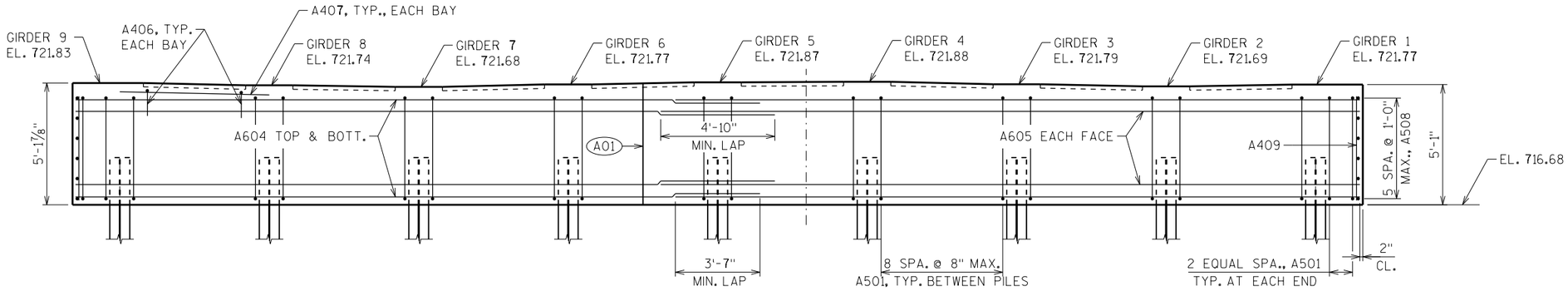
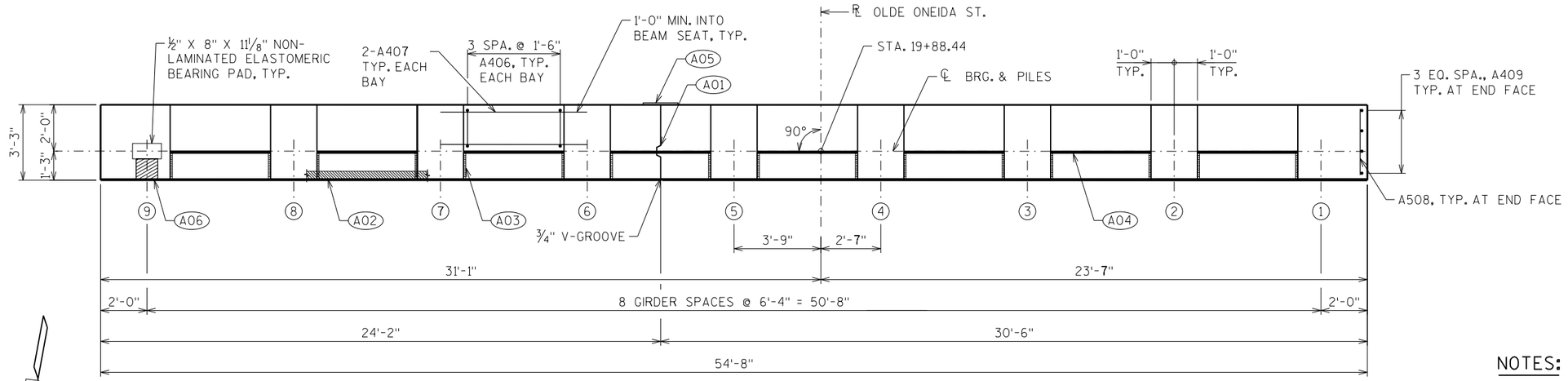
STATE PROJECT NUMBER

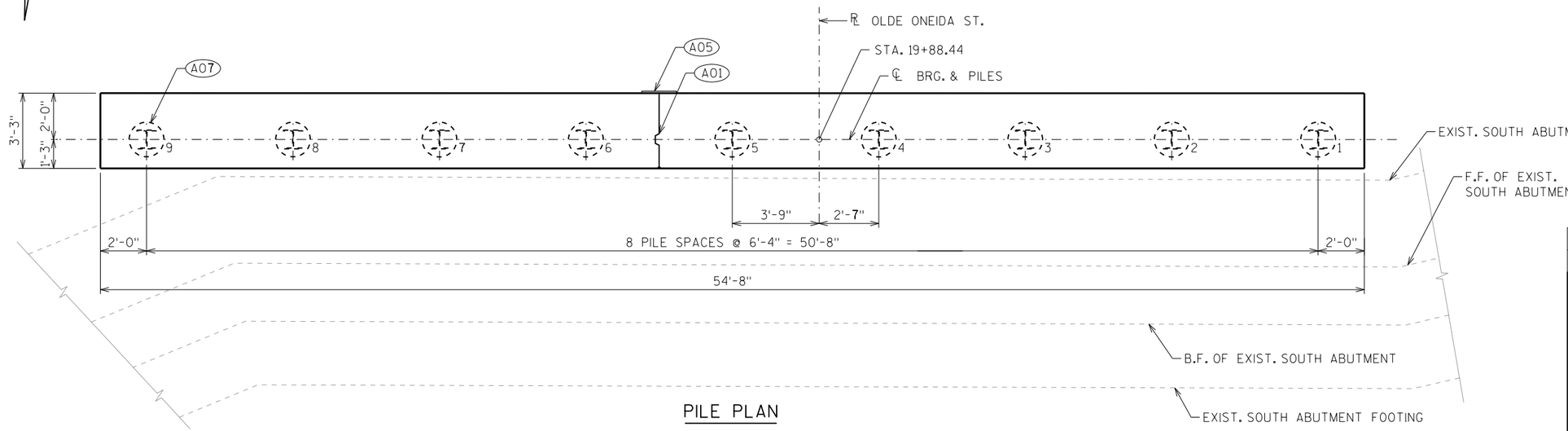
4984-01-79




ELEVATION
(LOOKING SOUTH)




PLAN




PILE PLAN

NOTES:

1. SEE LEGEND ON SHEET 6.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

SOUTH ABUTMENT
PLAN & ELEVATION

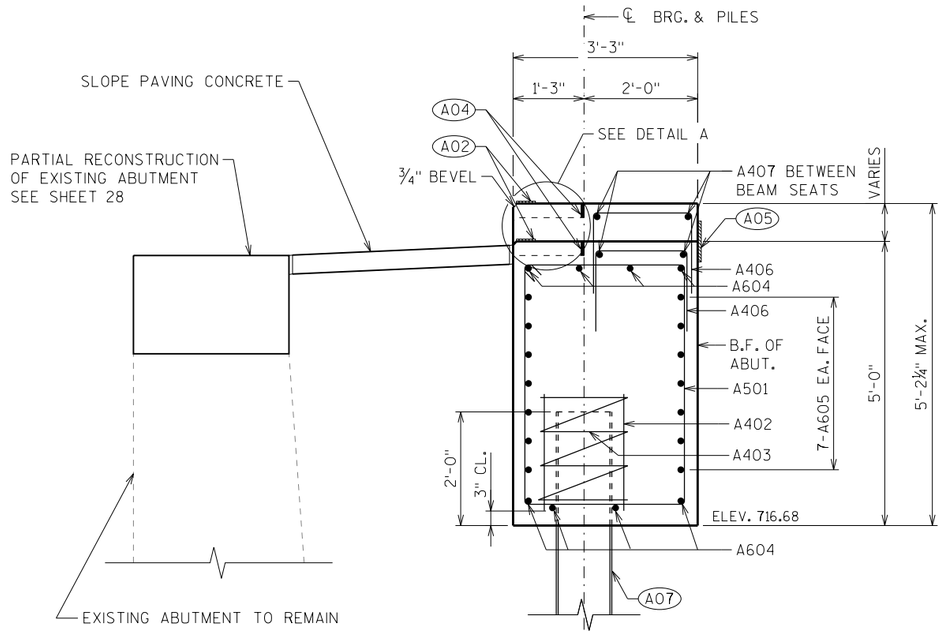
SHEET 5 OF 30
89

8

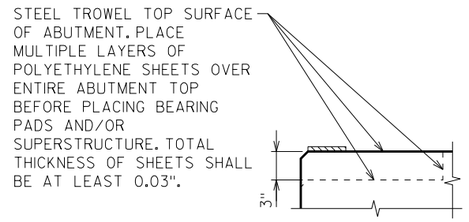
8

STATE PROJECT NUMBER

4984-01-79




SECTION THRU BODY

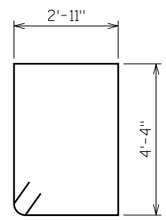



DETAIL A

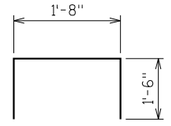
## BILL OF BARS

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

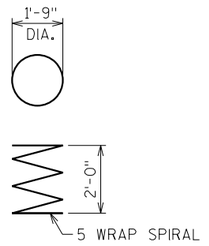
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| A501 | | 78 | 15'-2" | X | BODY-STIRRUPS-VERTICAL |
| A402 | | 18 | 2'-3" | | BODY-2 PER PILE-VERTICAL |
| A403 | | 9 | 28'-0" | X | BODY-1 PER PILE-5 WRAP SPIRAL-1'-9" DIA. |
| A604 | | 16 | 29'-0" | | BODY-TOP & BOTT.-HORIZONTAL |
| A605 | | 28 | 29'-7" | | BODY-F.F. & B.F.-HORIZONTAL |
| A406 | | 32 | 4'-6" | X | BODY-TOP-BETWEEN BEAM SEATS-VERT. |
| A407 | | 16 | 6'-4" | | BODY-TOP-BETWEEN BEAM SEATS-HORIZ. |
| A508 | | 12 | 2'-11" | | BODY-HORIZONTAL-END FACE |
| A409 | | 8 | 4'-8" | | BODY-VERTICAL-END FACE |




A501




A406




A403

## LEGEND

(A01) VERTICAL CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 8". SEE SHEET 8 FOR ALTERNATE CONSTRUCTION JOINT DETAIL.

(A02) 4" X ½" PREFORMED JOINT FILLER, FULL LENGTH OF ABUTMENT.

(A03) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A04) ¾" PREFORMED JOINT FILLER ACCORDING TO STD. SPEC. 502.2.7 (3" HIGH X 4'-4" LENGTH) BETWEEN TWO BRIDGE SEATS.

(A05) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A06) ½" PREFORMED JOINT FILLER UNDER GIRDER FLANGE IN FRONT OF BEARING PAD.

(A07) SUPPORT ABUTMENT ON HP 10X42 STEEL PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. ESTIMATED 26'-0" LONG WITH THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS PER PILE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

SOUTH ABUTMENT DETAILS

SHEET 6 OF 30

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8

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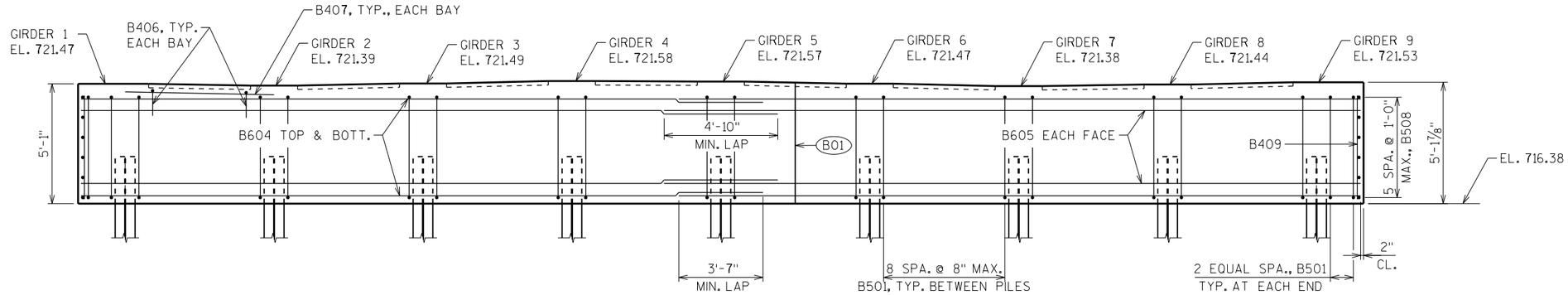
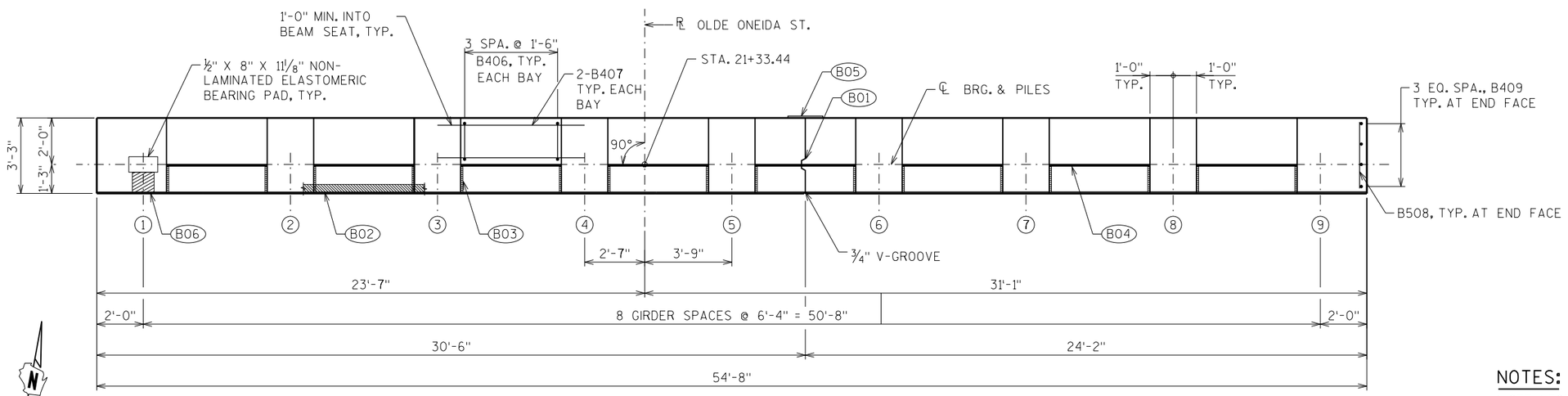
STATE PROJECT NUMBER

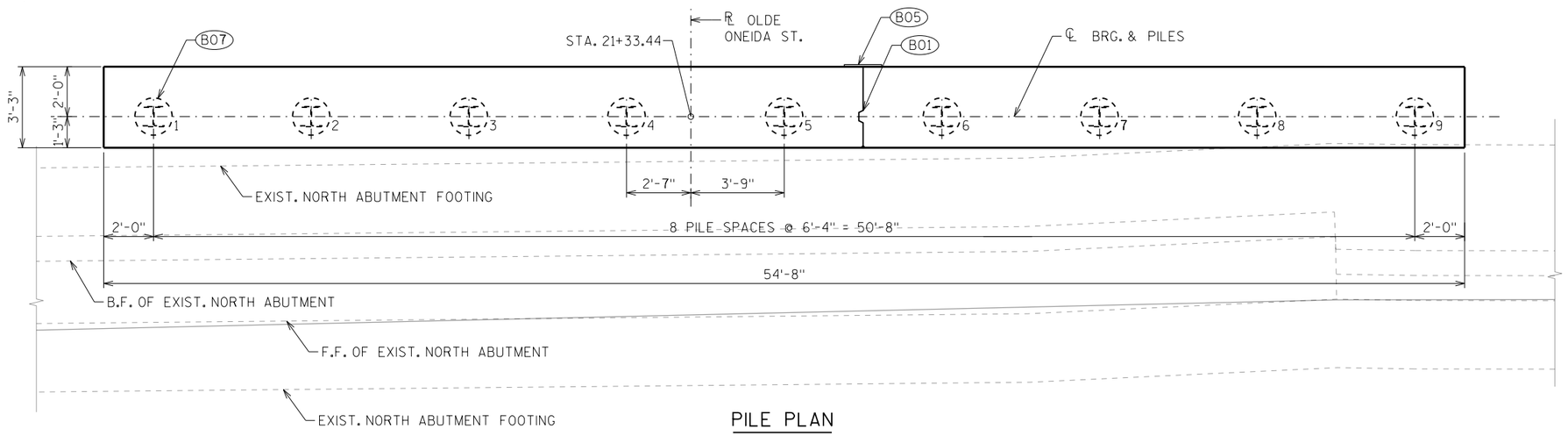
4984-01-79




ELEVATION
(LOOKING NORTH)




PLAN




PILE PLAN

NOTES:

1. SEE LEGEND ON SHEET 8.

8

8

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

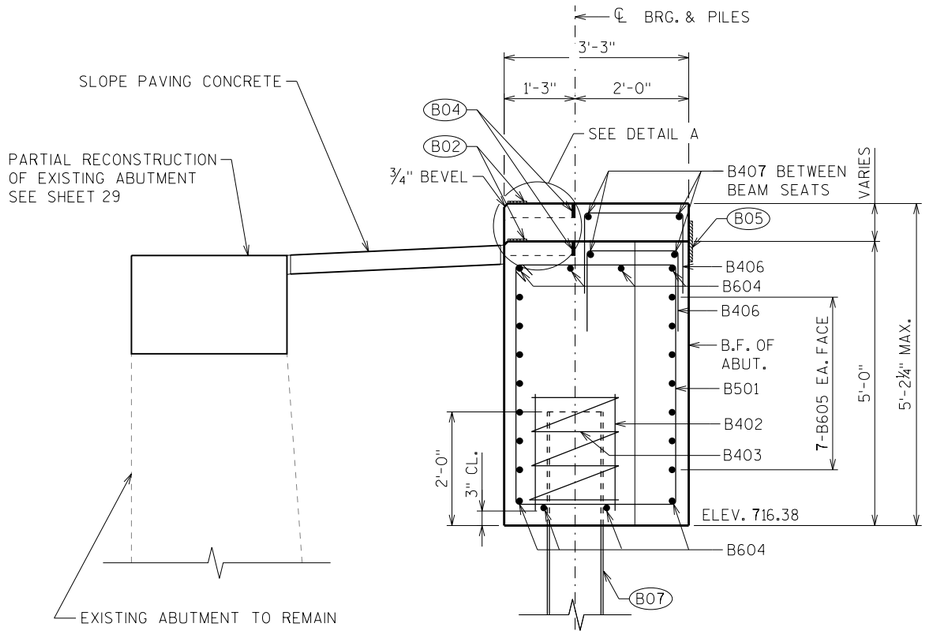
DRAWN BY SH | PLANS CK'D. KK

NORTH ABUTMENT
PLAN & ELEVATION

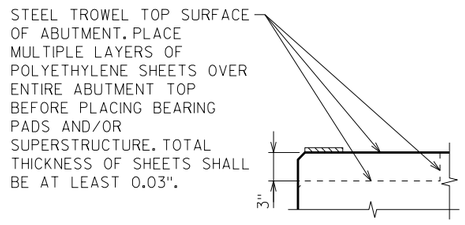
SHEET 7 OF 30
91

STATE PROJECT NUMBER

4984-01-79




SECTION THRU BODY

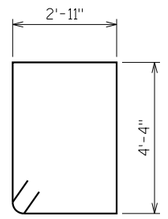



DETAIL A

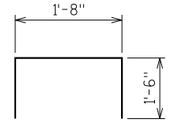
## BILL OF BARS

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

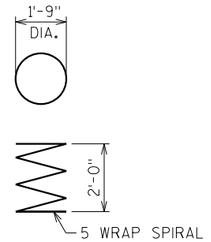
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| B501 | | 78 | 15'-2" | X | BODY-STIRRUPS-VERTICAL |
| B402 | | 18 | 2'-3" | | BODY-2 PER PILE-VERTICAL |
| B403 | | 9 | 28'-0" | X | BODY-1 PER PILE-5 WRAP SPIRAL-1'-9" DIA. |
| B604 | | 16 | 29'-0" | | BODY-TOP & BOTT.-HORIZONTAL |
| B605 | | 28 | 29'-7" | | BODY-F.F. & B.F.-HORIZONTAL |
| B406 | | 32 | 4'-6" | X | BODY-TOP-BETWEEN BEAM SEATS-VERT. |
| B407 | | 16 | 6'-4" | | BODY-TOP-BETWEEN BEAM SEATS-HORIZ. |
| B508 | | 12 | 2'-11" | | BODY-HORIZONTAL-END FACE |
| B409 | | 8 | 4'-8" | | BODY-VERTICAL-END FACE |




B501




B406




B403

## LEGEND

(B01) VERTICAL CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 8". SEE ALTERNATE CONSTRUCTION JOINT DETAIL ON THIS SHEET.

(B02) 4" X ½" PREFORMED JOINT FILLER. FULL LENGTH OF ABUTMENT.

(B03) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

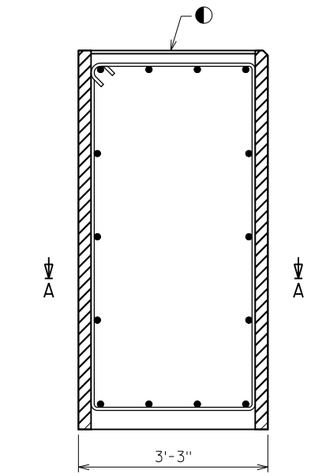
(B04) ¾" PREFORMED JOINT FILLER ACCORDING TO STD. SPEC. 502.2.7 (3" HIGH X 4'-4" LENGTH) BETWEEN TWO BRIDGE SEATS.

(B05) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

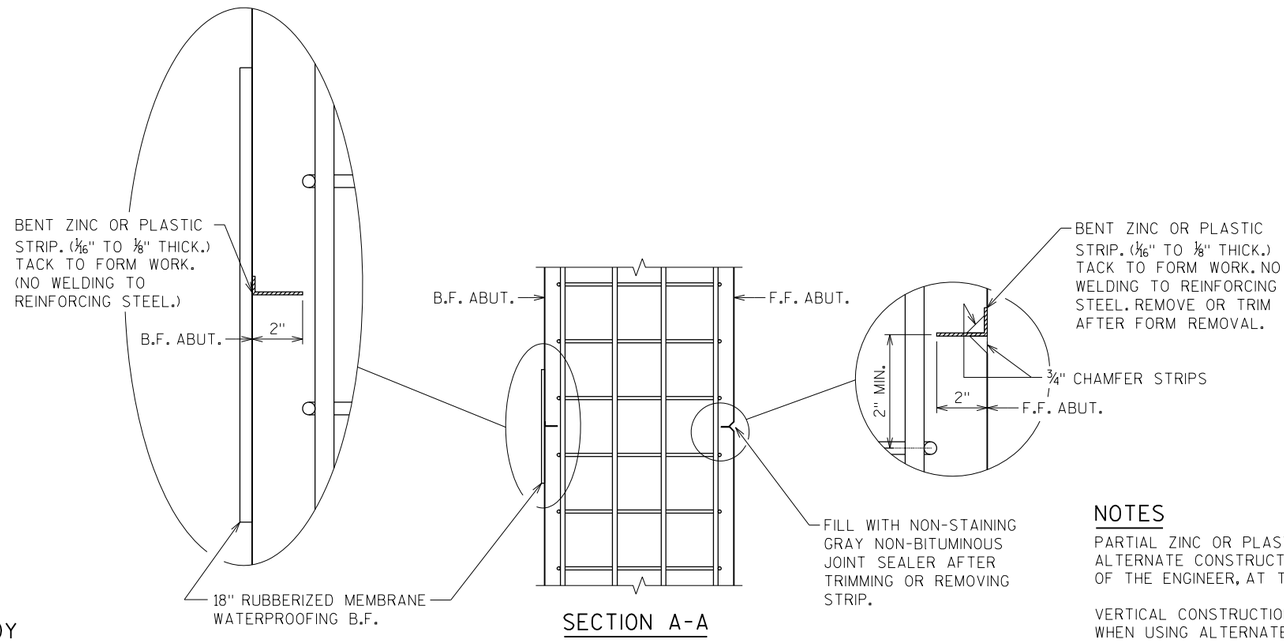
(B06) ½" PREFORMED JOINT FILLER UNDER GIRDER FLANGE IN FRONT OF BEARING PAD.

(B07) SUPPORT ABUTMENT ON HP 10X42 STEEL PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. ESTIMATED 23'-0" LONG WITH THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS PER PILE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

◐ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY ½" DEEP.




SECTION THRU ABUTMENT BODY




SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

## NOTES

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

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

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

SAW CUTTING JOINT IS NOT ALLOWED.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

NORTH ABUTMENT DETAILS

SHEET 8 OF 30

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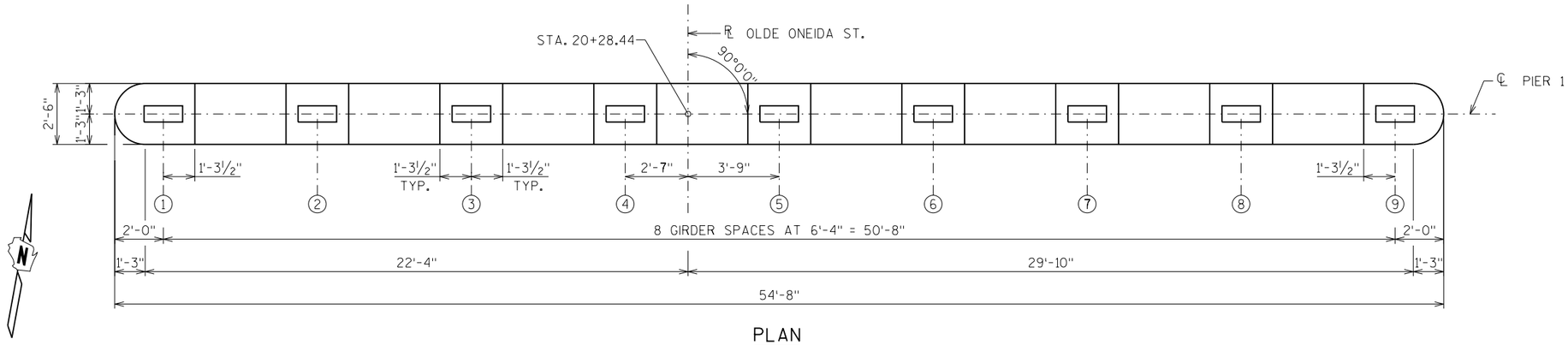
STATE PROJECT NUMBER

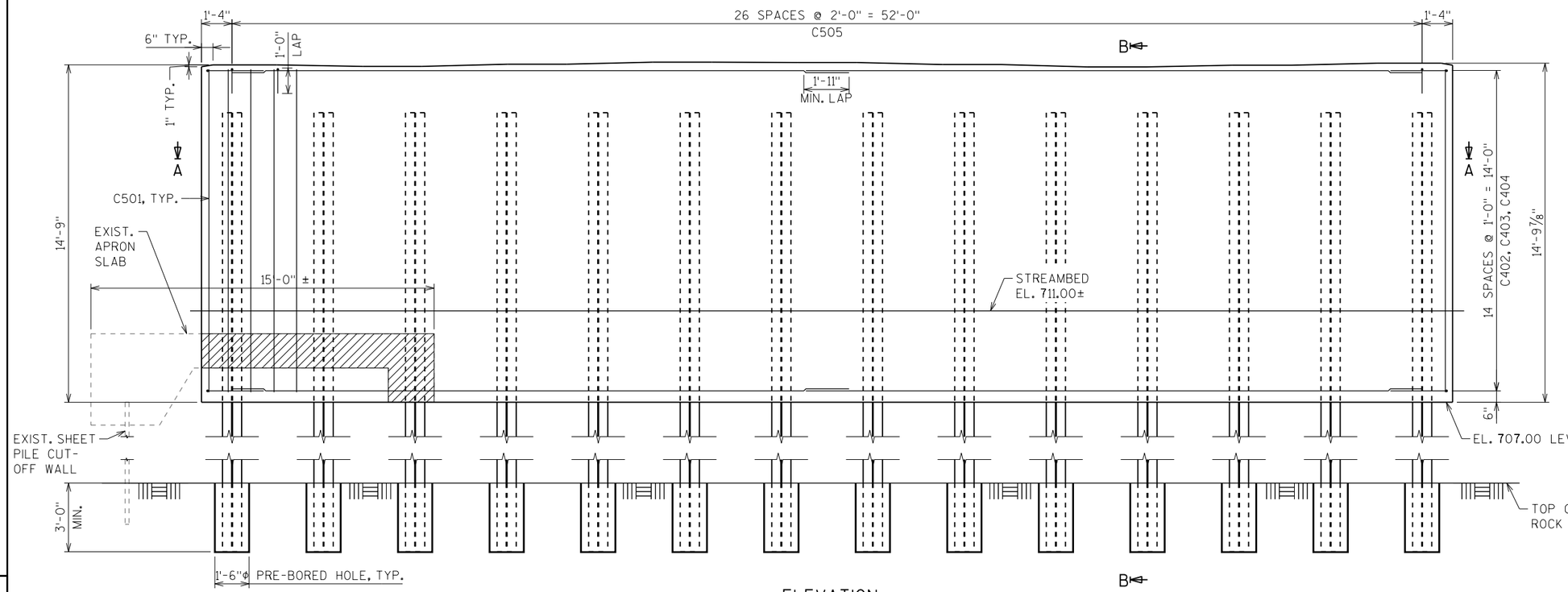
4984-01-79




PLAN

## BEAM SEAT ELEVATION

| GIRDER | ELEV. |
|---|---|
| 1 | 721.74 |
| 2 | 721.67 |
| 3 | 721.77 |
| 4 | 721.86 |
| 5 | 721.84 |
| 6 | 721.75 |
| 7 | 721.65 |
| 8 | 721.72 |
| 9 | 721.81 |




ELEVATION

(LOOKING NORTH)

## LEGEND

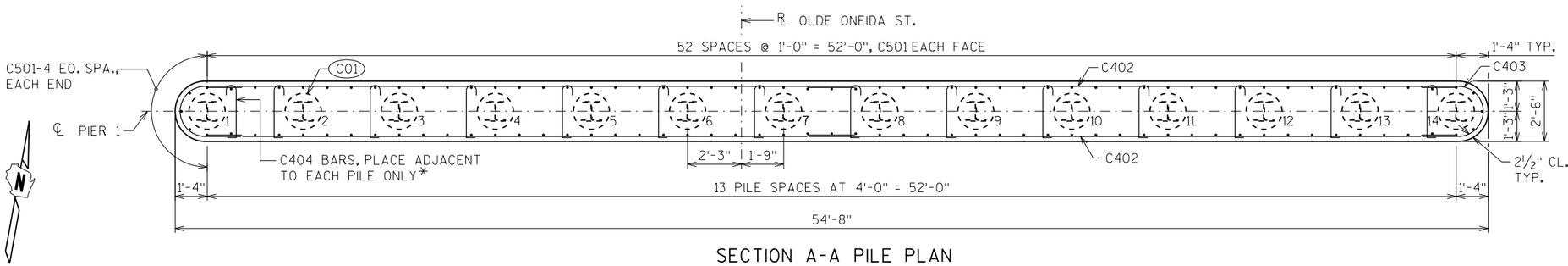
▨ CONCRETE REMOVAL

SEE SHEET 10 FOR OTHER LEGEND.

## NOTES

REMOVE EXISTING APRON SLAB AS NEEDED FOR PIER CONSTRUCTION. COST INCLUDED UNDER THE BID PRICE FOR "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-44-723".

SEE SHEET 10 FOR SECTION B-B.




SECTION A-A PILE PLAN

* TIE TO NEAREST VERTICAL C501 BARS BOTH FACES WITH A 1'-0" VERTICAL SPACING TO MATCH C402 & C403 BARS. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

PIER 1

SHEET 9 OF 30

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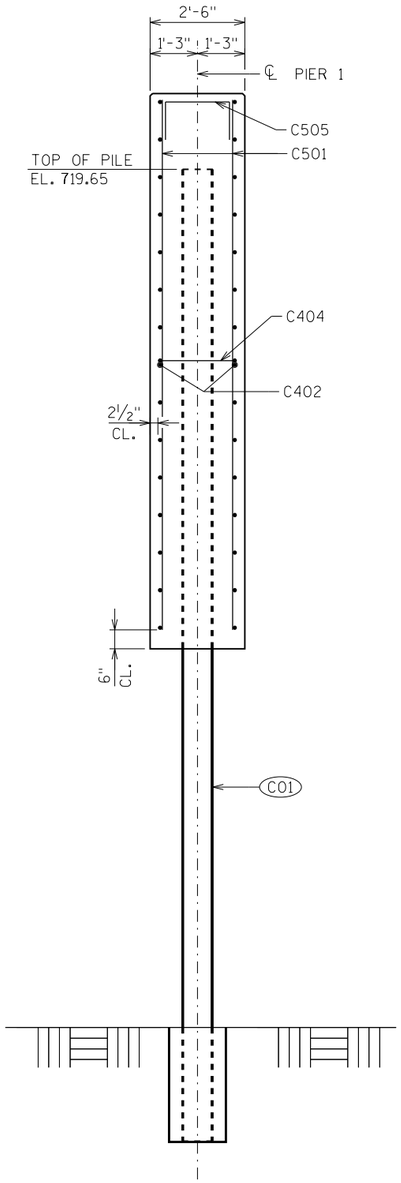
8

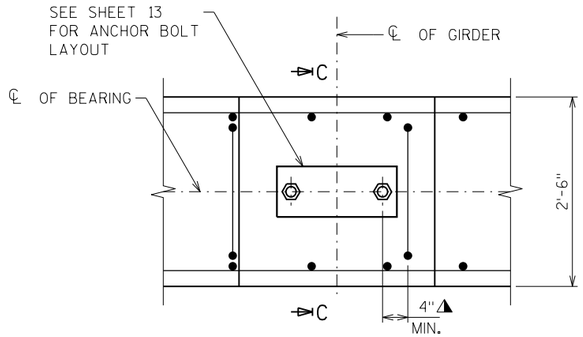
8

STATE PROJECT NUMBER

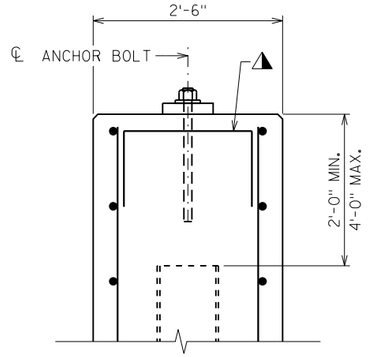
4984-01-79




SECTION B-B




PARTIAL PIER CAP PLAN

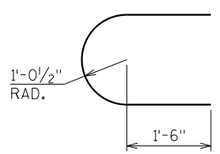



SECTION C-C

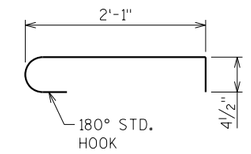
## BILL OF BARS

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

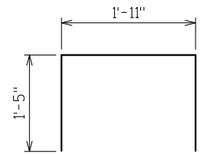
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| C501 | | 112 | 14'-0" | | PIER VERTICAL |
| C402 | | 60 | 27'-0" | | PIER HORIZONTAL-TRANSVERSE |
| C403 | | 30 | 6'-3" | X | PIER NOSE ENDS-HORIZONTAL |
| C404 | | 210 | 2'-11" | X | PIER TIES |
| C505 | | 27 | 4'-6" | X | PIER TOP-VERTICAL-U BAR |




C403




C404




C505

## LEGEND

(C01) SUPPORT PIER ON HP 10X42 STEEL PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. ESTIMATED 26'-0" LONG WITH THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS PER PILE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

◭ DISPLACE C505 BARS AS NEEDED TO PROVIDE 4" MIN. CLEAR BETWEEN ANCHOR BOLTS AND REINFORCEMENT.

## NOTE

AT PIER 1, COFFERDAM REQUIRED. CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC 502.3.5.3. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET IN DEPTH, UNLESS APPROVED OTHERWISE.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

PIER 1 DETAILS

SHEET 10 OF 30

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8

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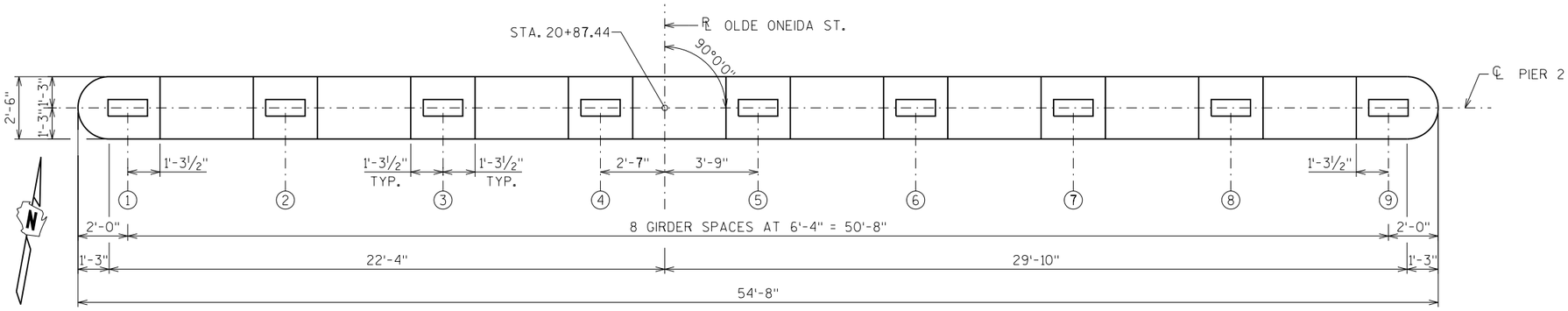
STATE PROJECT NUMBER

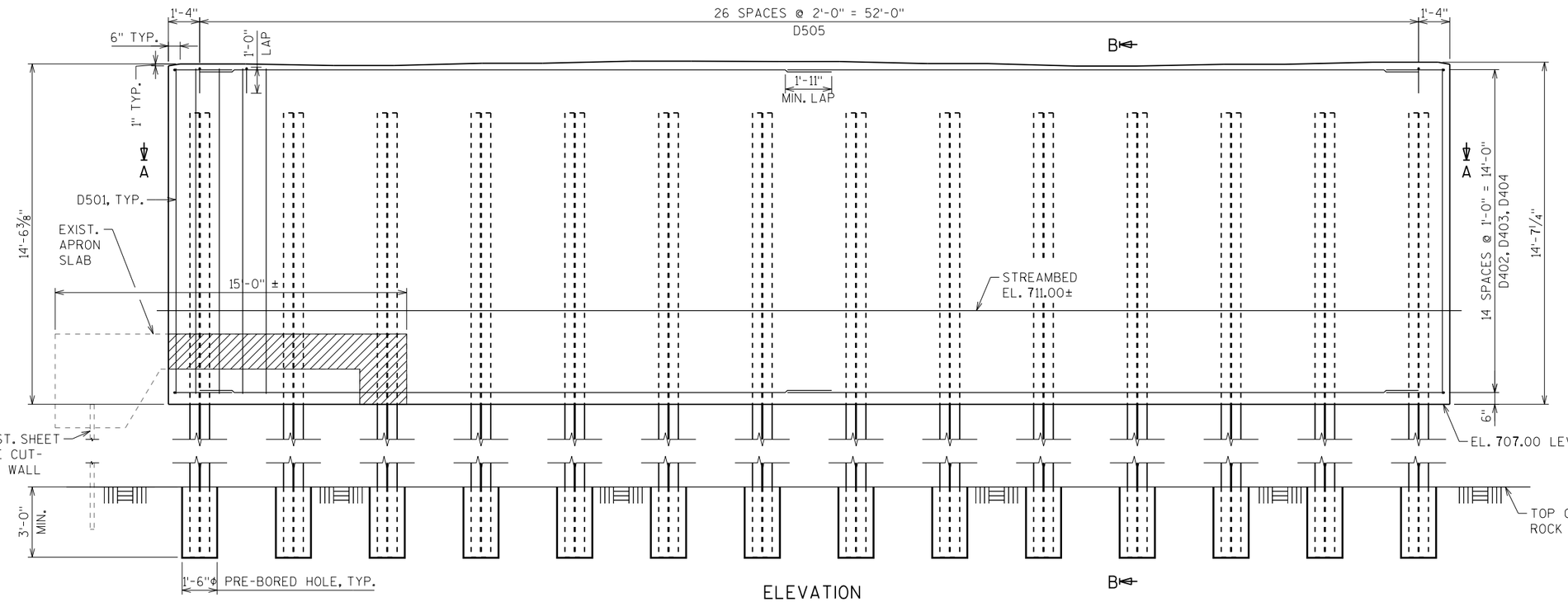
4984-01-79



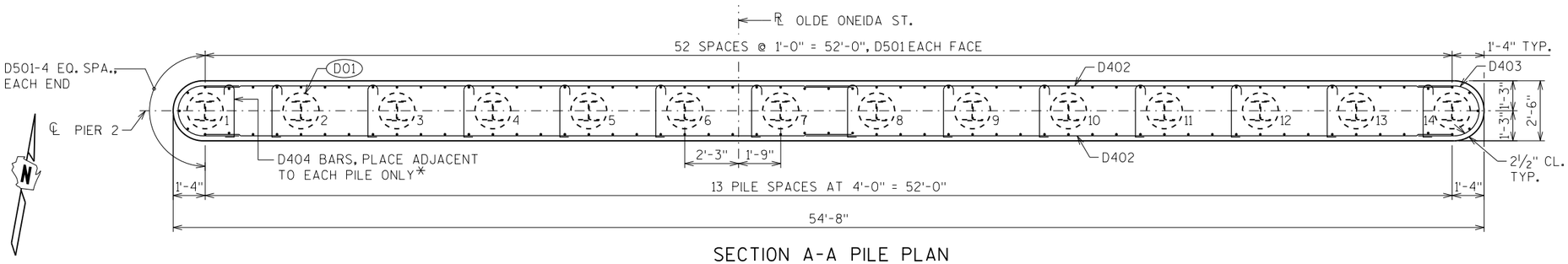

PLAN

## BEAM SEAT ELEVATION

| GIRDER | ELEV. |
|---|---|
| 1 | 721.52 |
| 2 | 721.45 |
| 3 | 721.54 |
| 4 | 721.64 |
| 5 | 721.62 |
| 6 | 721.53 |
| 7 | 721.43 |
| 8 | 721.49 |
| 9 | 721.59 |




ELEVATION
(LOOKING NORTH)




SECTION A-A PILE PLAN

## LEGEND

CONCRETE REMOVAL

SEE SHEET 12 FOR OTHER LEGEND.

## NOTES

REMOVE EXISTING APRON SLAB AS NEEDED FOR PIER CONSTRUCTION. COST INCLUDED UNDER THE BID PRICE FOR "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-44-723".

SEE SHEET 12 FOR SECTION B-B.

* TIE TO NEAREST VERTICAL D501 BARS BOTH FACES WITH A 1'-0" VERTICAL SPACING TO MATCH D402 & D403 BARS. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

PIER 2

SHEET 11 OF 30

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8

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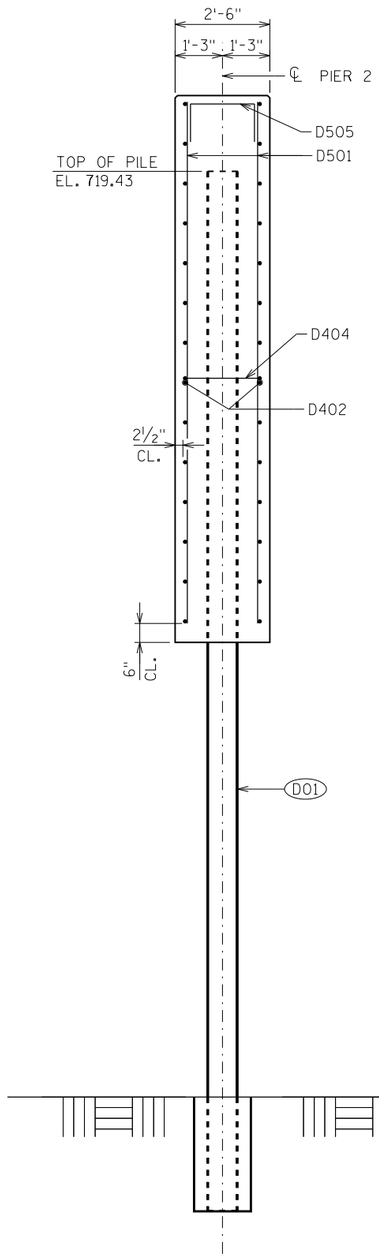
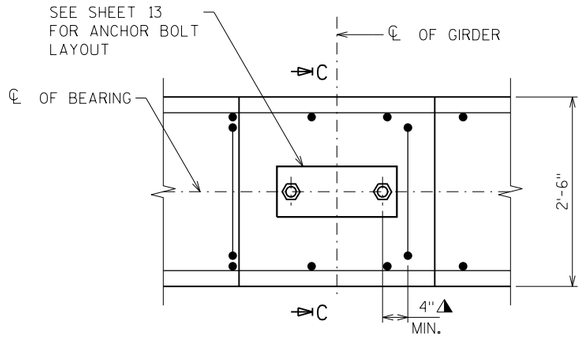
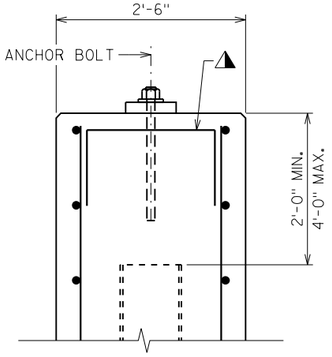



SECTION B-B




PARTIAL PIER CAP PLAN

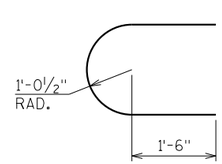



SECTION C-C

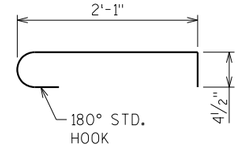
## BILL OF BARS

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

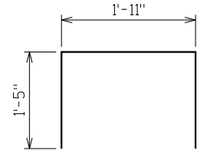
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| D501 | | 112 | 13'-9" | | PIER VERTICAL |
| D402 | | 60 | 27'-0" | | PIER HORIZONTAL-TRANSVERSE |
| D403 | | 30 | 6'-3" | X | PIER NOSE ENDS-HORIZONTAL |
| D404 | | 210 | 2'-11" | X | PIER TIES |
| D505 | | 27 | 4'-6" | X | PIER TOP-VERTICAL-U BAR |




D403




D404




D505

## LEGEND

(D01) SUPPORT PIER ON HP 10X42 STEEL PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. ESTIMATED 27'-0" LONG WITH THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS PER PILE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

⚠ DISPLACE D505 BARS AS NEEDED TO PROVIDE 4" MIN. CLEAR BETWEEN ANCHOR BOLTS AND REINFORCEMENT.

## NOTE

AT PIER 2, COFFERDAM REQUIRED. CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC 502.3.5.3. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET IN DEPTH, UNLESS APPROVED OTHERWISE.

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PIER 2 DETAILS

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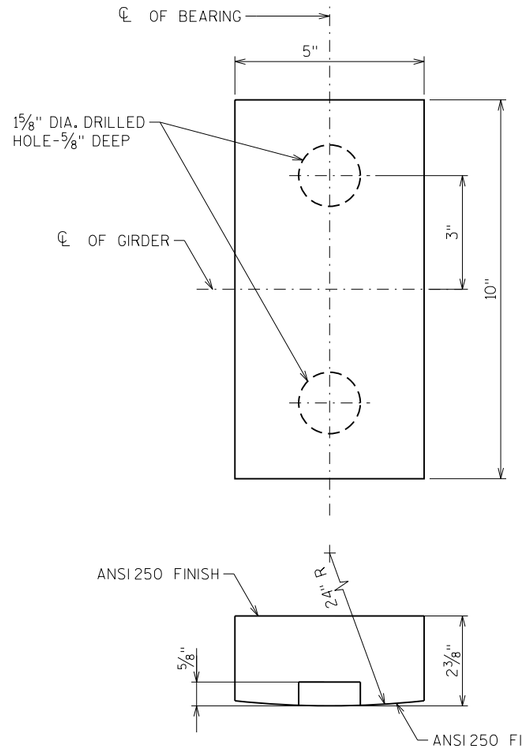
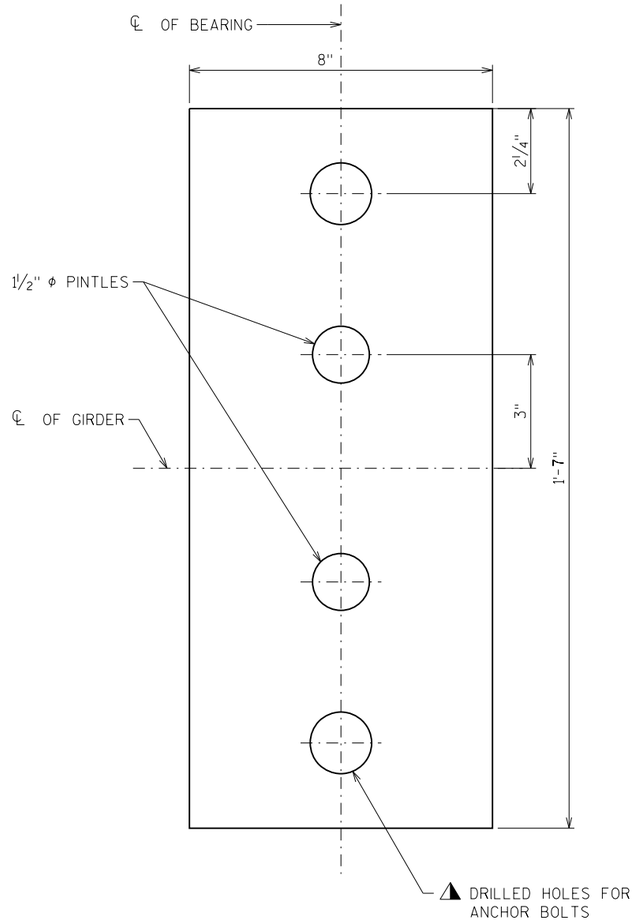
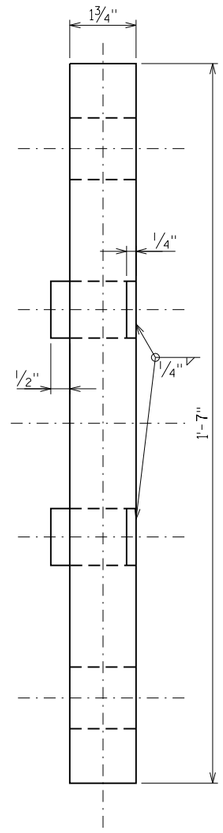
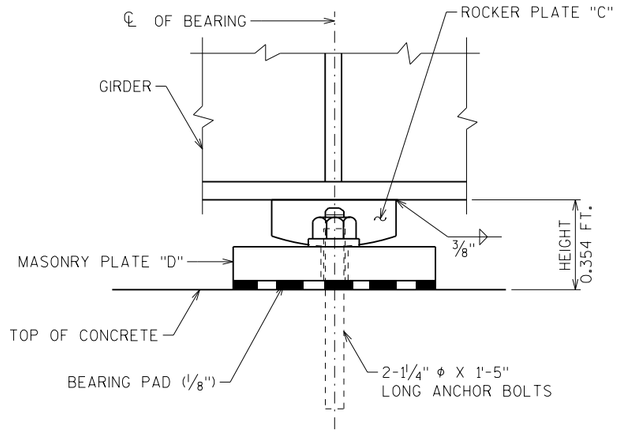



ROCKER PLATE "C"




MASONRY PLATE "D"




FIXED BEARING ASSEMBLY TYPE "A"

## NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF MASONRY PLATE "D" BY THE SHIM PLATE THICKNESS.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WRAP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS +2¼", ABOVE TOP OF CONCRETE.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR ASTM A572 GRADE 50.

ALL MATERIAL IN TYPE "A" BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-44-502", EACH.

CHAMFER TOP OF PINTLES ⅛". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

PROVIDE ⅛" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 55, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE "C" SHALL BE GALVANIZED.

MASONRY PLATE "D" SHALL BE GALVANIZED.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATES SHALL HAVE LENGTH AND WIDTH DIMENSIONS THAT MATCH MASONRY PLATE "D".

⚠ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "D" SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

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FIXED BEARING
PIERS 1 & 2

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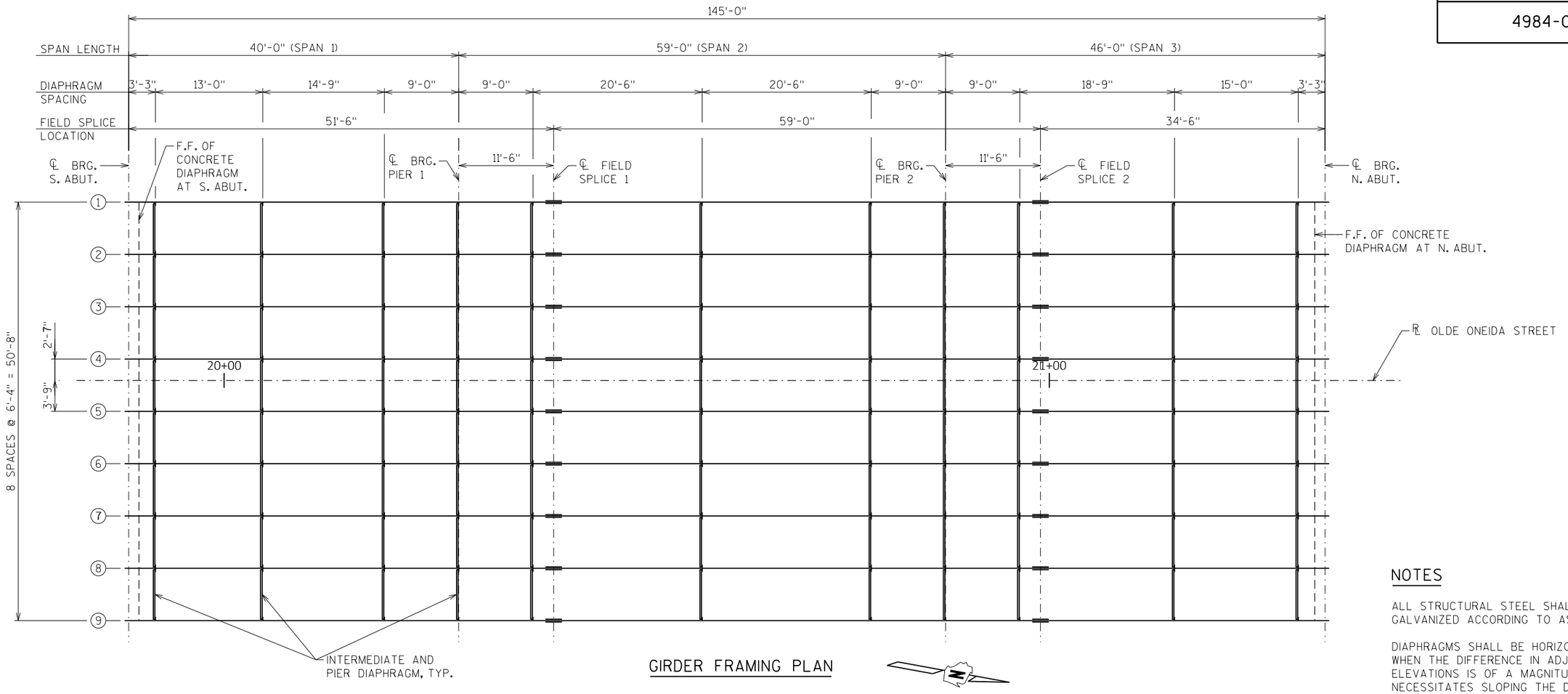
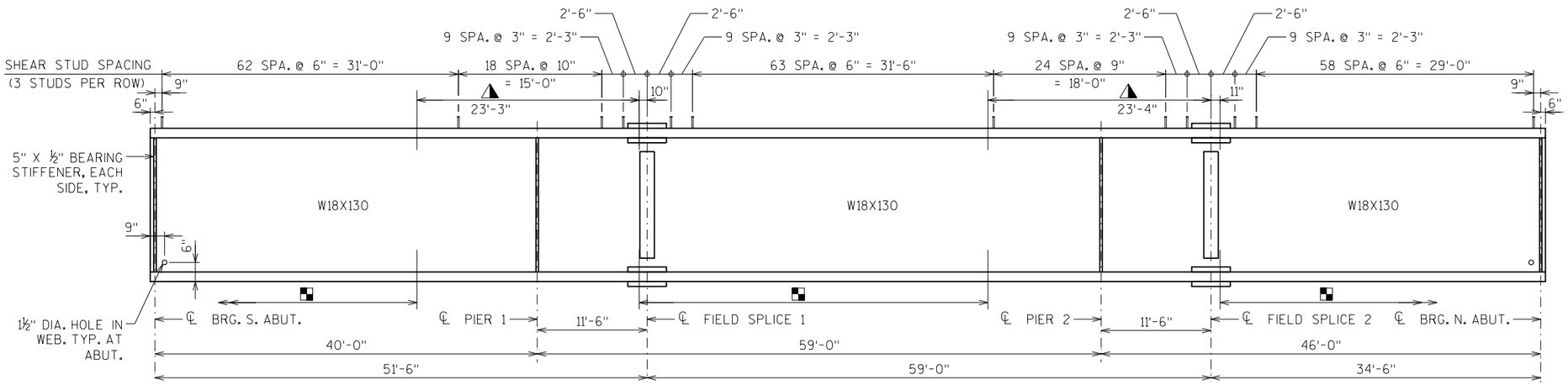



GIRDER FRAMING PLAN




GIRDER ELEVATION

## NOTES

ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED ACCORDING TO ASTM A123.

DIAPHRAGMS SHALL BE HORIZONTAL EXCEPT WHEN THE DIFFERENCE IN ADJACENT GIRDER ELEVATIONS IS OF A MAGNITUDE THAT NECESSITATES SLOPING THE DIAPHRAGMS.

WHEN DIAPHRAGMS ARE SLOPED, PLACE CENTER OF DIAPHRAGM AT MID-DEPTH OF GIRDER.

ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" Φ HIGH STRENGTH ASTM A325 BOLTS.

## LEGEND

▲ TOP FLANGE TENSION ZONE. FIELD WELDING PROBHITED IN TOP FLANGE TENSION ZONE AREAS, EXCEPT SHEAR CONNECTORS.

■ BOTTOM FLANGE TENSION ZONE. FIELD WELDING PROBHITED IN BOTTOM FLANGE TENSION ZONE AREAS.

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FRAMING PLAN

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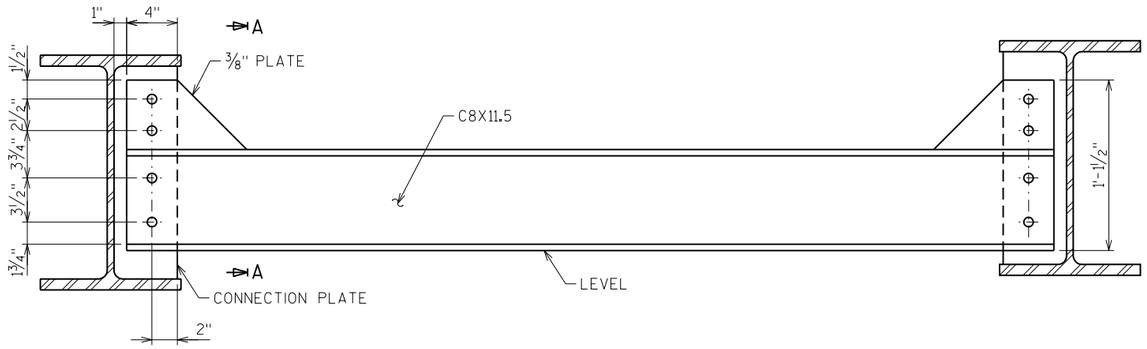
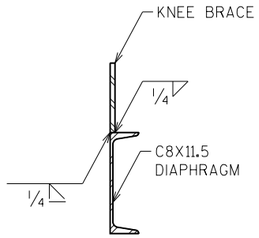


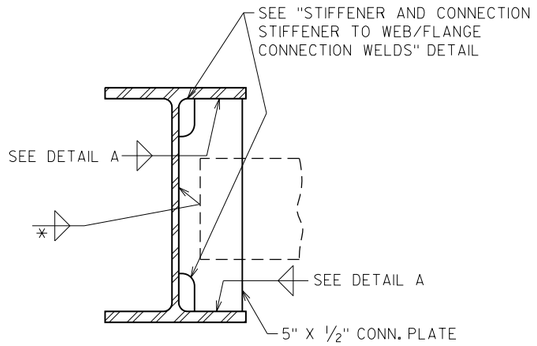

INTERMEDIATE AND PIER DIAPHRAGM CONNECTION



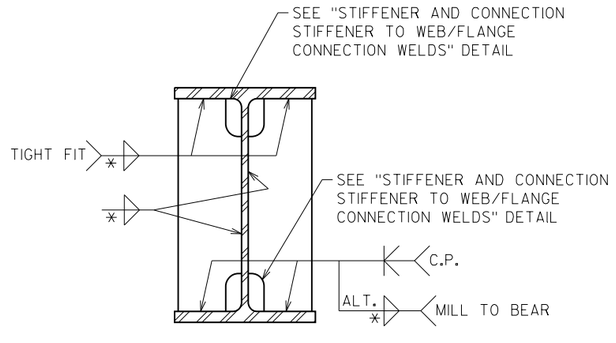

SECTION A-A

## NOTES

ALL FLAME CUT EDGES OF PLATE SHALL BE GROUND OR PLANED TO REMOVE THE HARDENED SURFACE CAUSED BY THE FLAME, AND CORNERS CHAMFERED 1/16" MINIMUM.




CONNECTION STIFFENER DETAILS



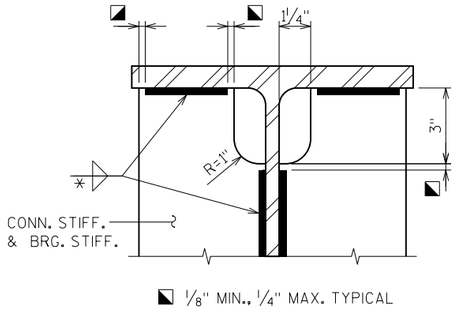

BEARING STIFFENER DETAILS
TYPICAL AT ABUTMENT AND PIER

## * TABLE OF FILLET WELD SIZES

| MATERIAL THICKNESS OF THICKER PART JOINED | ⬬ MIN. SIZE OF FILLET WELD |
|---|---|
| TO 1/2" INCLUSIVE | 3/16" |
| OVER 1/2" TO 3/4" | 1/4" |
| OVER 3/4" TO 1 1/2" | △ 5/16" |
| OVER 1 1/2" | △ 3/8" |

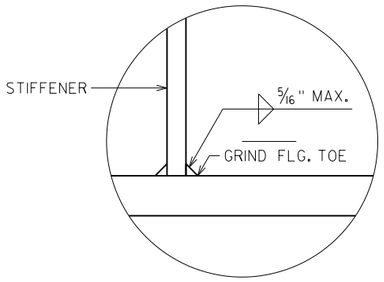
⬬ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"




◥ 1/8" MIN., 1/4" MAX. TYPICAL

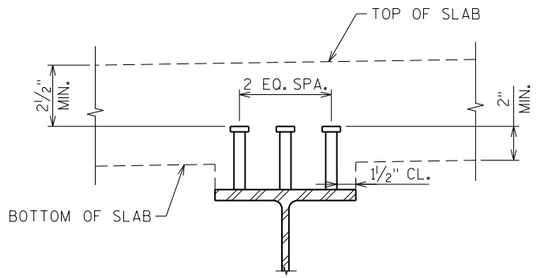
STIFFENER AND CONNECTION
STIFFENER TO WEB/FLANGE
CONNECTION WELDS




DETAIL A

CONNECTION STIFFENER
DETAIL @ TENSION FLANGE

NOTE: USE THREE FIELD WELDED 7/8" DIA. X 5" LONG ⊖ STUDS EQUALLY SPACED WITH A MIN. OF 1 1/2" CL. FROM THE FLANGE EDGE. STUDS SHALL NOT BE PLACED OVER FIELD SPLICE PLATES.




⊖ USE DIFFERENT LENGTH STUDS IF 2 1/2" MIN. CLEARANCE OR 2" EXTENSION CRITERIA IS VIOLATED.

SHEAR CONNECTION DETAILS

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GIRDER DETAILS

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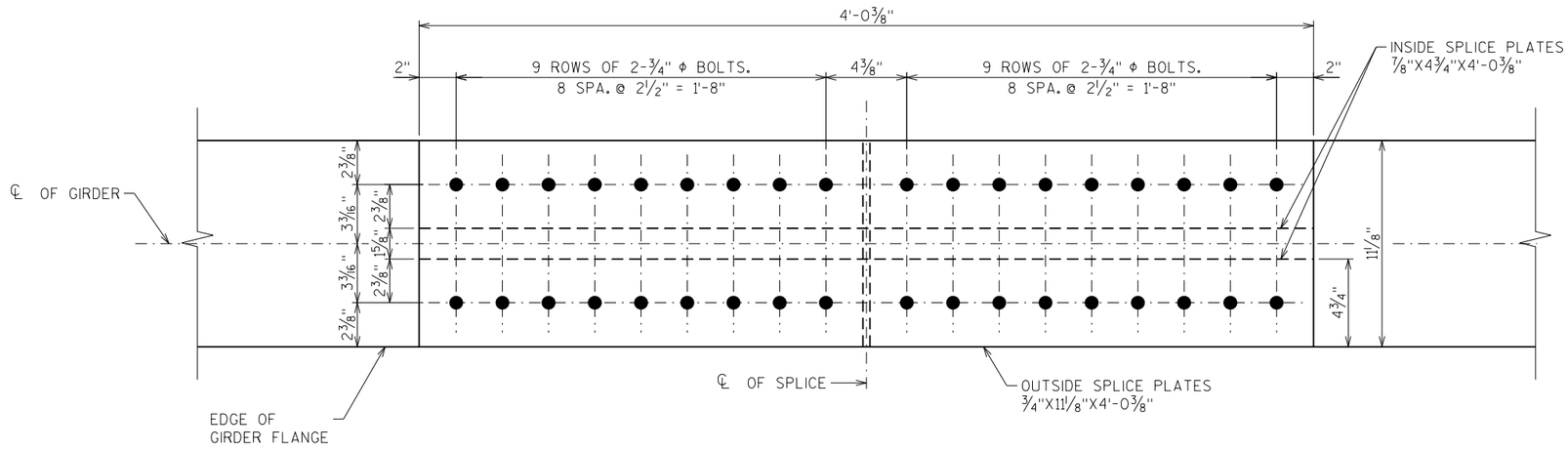
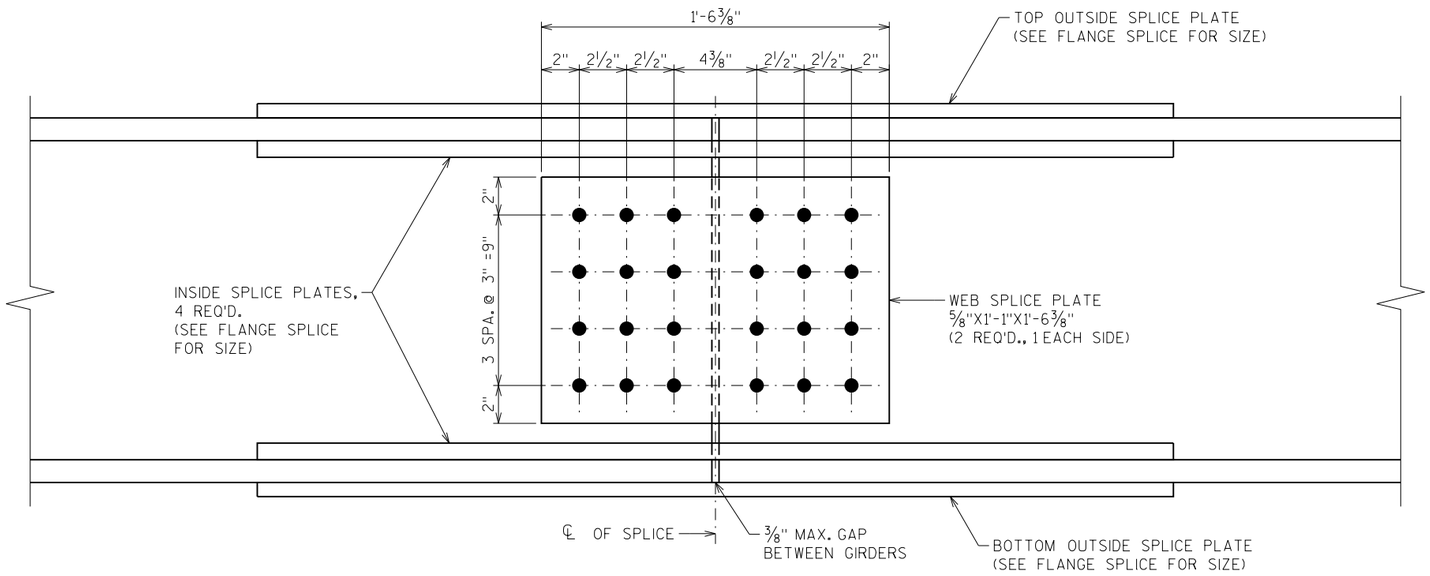



## FLANGE SPLICE

(TOP AND BOTTOM FLANGE)




## WEB SPLICE

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FIELD SPLICE

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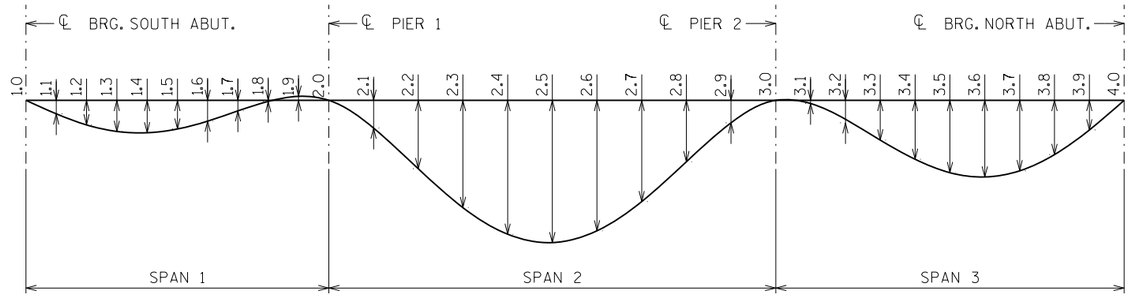



## DEFLECTION DIAGRAM

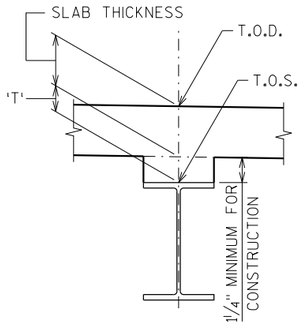
TYPICAL FOR ALL GIRDERS

| DEAD LOAD DEFLECTIONS (INCHES) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LOCATION | S. ABUT. | SPAN 1 | | | | | | | | | PIER 1 |
| SPAN POINT | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 |
| DL - STEEL ONLY | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| DL - DECK | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| DL - SUPERIMPOSED * | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| TOTAL | 0.0 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 |

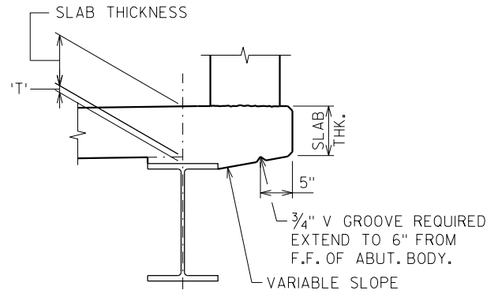
| LOCATION | PIER 1 | SPAN 2 | | | | | | | | | PIER 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SPAN POINT | 2.0 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.8 | 2.9 | 3.0 |
| DL - STEEL ONLY | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 |
| DL - DECK | 0.0 | 0.2 | 0.4 | 0.5 | 0.7 | 0.7 | 0.7 | 0.5 | 0.3 | 0.2 | 0.0 |
| DL - SUPERIMPOSED * | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 |
| TOTAL | 0.0 | 0.4 | 0.6 | 0.8 | 1.1 | 1.1 | 1.1 | 0.8 | 0.5 | 0.4 | 0.0 |

| LOCATION | PIER 2 | SPAN 3 | | | | | | | | | N. ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SPAN POINT | 3.0 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 | 3.9 | 4.0 |
| DL - STEEL ONLY | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| DL - DECK | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.2 | 0.0 |
| DL - SUPERIMPOSED * | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| TOTAL | 0.0 | 0.3 | 0.3 | 0.4 | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 0.0 |

DEFLECTIONS ARE GIVEN IN DECIMALS OF AN INCH.
POSITIVE VALUES INDICATE DOWNWARD DEFLECTIONS.
* SUPERIMPOSED DEAD LOAD DOES NOT INCLUDE FUTURE WEARING SURFACE.




## HAUNCH DETAIL




## SECTION THROUGH SLAB

## NOTES

'T' = HAUNCH HEIGHT AT CENTERLINE OF GIRDER.

TO DETERMINE 'T': AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES SHALL BE TAKEN AT CENTERLINE OF BEARINGS AND AT 0.1 POINTS.

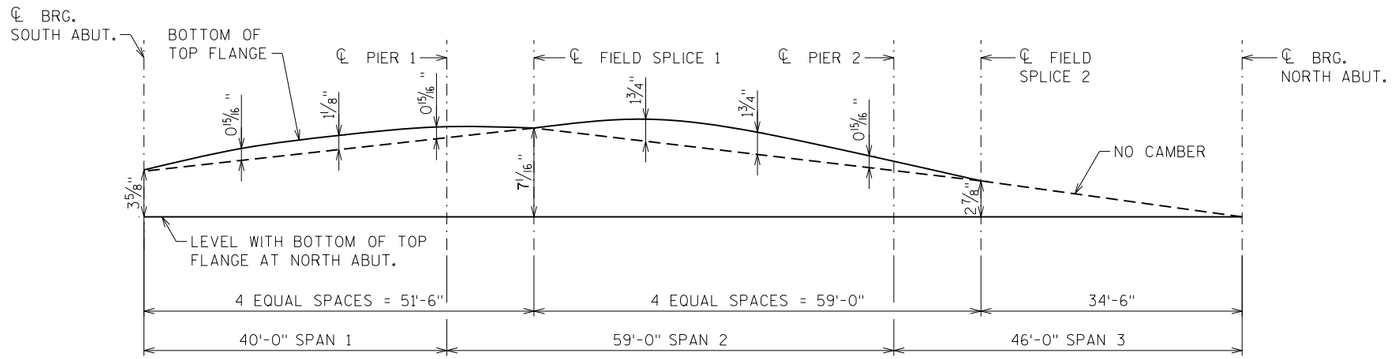
TOP OF DECK ELEVATION AT FINAL GRADE

\- TOP OF STEEL ELEVATION AFTER STEEL ERECTION

\+ CONC. ONLY DEFLECTION; DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED

\- SLAB THICKNESS

= 'T' VALUE FOR SETTING HAUNCH




## BLOCKING DIAGRAM

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BLOCKING AND DEFLECTION DIAGRAMS

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## ELEVATIONS AT TOP OF DECK (T.O.D.) & TOP OF STEEL (T.O.S.)* - SPAN 1

| | | CL S. ABUT. | 0.1 SPAN | 0.2 SPAN | 0.3 SPAN | 0.4 SPAN | 0.5 SPAN | 0.6 SPAN | 0.7 SPAN | 0.8 SPAN | 0.9 SPAN | CL PIER 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WEST DECK EDGE | T.O.D. | 724.27 | 724.31 | 724.36 | 724.39 | 724.43 | 724.46 | 724.49 | 724.51 | 724.53 | 724.55 | 724.56 |
| GIRDER 1 | T.O.D. | 724.26 | 724.31 | 724.35 | 724.39 | 724.42 | 724.45 | 724.48 | 724.51 | 724.53 | 724.54 | 724.55 |
| | T.O.S. | 723.41 | | | | | | | | | | 723.70 |
| SIDEWALK CURB FACE | T.O.D. | 724.18 | 724.23 | 724.27 | 724.31 | 724.34 | 724.37 | 724.40 | 724.42 | 724.44 | 724.46 | 724.47 |
| GIRDER 2 | T.O.D. | 724.19 | 724.24 | 724.28 | 724.32 | 724.35 | 724.38 | 724.41 | 724.43 | 724.45 | 724.47 | 724.48 |
| | T.O.S. | 723.34 | | | | | | | | | | 723.63 |
| GIRDER 3 | T.O.D. | 724.29 | 724.33 | 724.37 | 724.41 | 724.45 | 724.48 | 724.50 | 724.53 | 724.55 | 724.56 | 724.58 |
| | T.O.S. | 723.44 | | | | | | | | | | 723.73 |
| GIRDER 4 | T.O.D. | 724.38 | 724.43 | 724.47 | 724.51 | 724.54 | 724.57 | 724.60 | 724.62 | 724.64 | 724.66 | 724.67 |
| | T.O.S. | 723.53 | | | | | | | | | | 723.82 |
| CROWN / RL | T.O.D. | 724.42 | 724.47 | 724.51 | 724.55 | 724.58 | 724.61 | 724.64 | 724.66 | 724.68 | 724.70 | 724.71 |
| GIRDER 5 | T.O.D. | 724.36 | 724.41 | 724.45 | 724.49 | 724.52 | 724.55 | 724.58 | 724.61 | 724.63 | 724.64 | 724.65 |
| | T.O.S. | 723.51 | | | | | | | | | | 723.80 |
| GIRDER 6 | T.O.D. | 724.27 | 724.31 | 724.36 | 724.39 | 724.43 | 724.46 | 724.49 | 724.51 | 724.53 | 724.55 | 724.56 |
| | T.O.S. | 723.42 | | | | | | | | | | 723.71 |
| GIRDER 7 | T.O.D. | 724.17 | 724.22 | 724.26 | 724.30 | 724.33 | 724.36 | 724.39 | 724.42 | 724.44 | 724.45 | 724.46 |
| | T.O.S. | 723.32 | | | | | | | | | | 723.61 |
| O.F. OF PARAPET | T.O.D. | 724.16 | 724.20 | 724.25 | 724.28 | 724.32 | 724.35 | 724.38 | 724.40 | 724.42 | 724.44 | 724.45 |
| GIRDER 8 | T.O.D. | 724.24 | 724.28 | 724.32 | 724.36 | 724.40 | 724.43 | 724.45 | 724.48 | 724.50 | 724.51 | 724.53 |
| | T.O.S. | 723.39 | | | | | | | | | | 723.68 |
| GIRDER 9 | T.O.D. | 724.33 | 724.38 | 724.42 | 724.46 | 724.49 | 724.52 | 724.55 | 724.57 | 724.59 | 724.61 | 724.62 |
| | T.O.S. | 723.48 | | | | | | | | | | 723.77 |
| EAST DECK EDGE | T.O.D. | 724.34 | 724.38 | 724.42 | 724.46 | 724.50 | 724.53 | 724.55 | 724.58 | 724.60 | 724.61 | 724.63 |

## ELEVATIONS AT TOP OF DECK (T.O.D.) & TOP OF STEEL (T.O.S.)* - SPAN 2

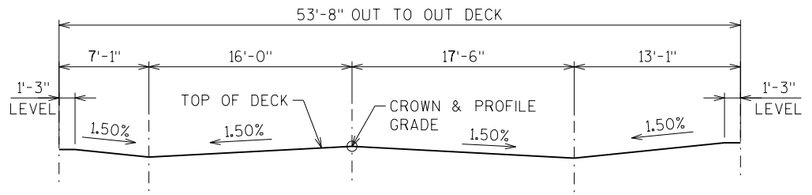
| | | CL PIER 1 | 0.1 SPAN | FS1 | 0.2 SPAN | 0.3 SPAN | 0.4 SPAN | 0.5 SPAN | 0.6 SPAN | 0.7 SPAN | 0.8 SPAN | 0.9 SPAN | CL PIER 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WEST DECK EDGE | T.O.D. | 724.56 | 724.57 | | 724.57 | 724.57 | 724.56 | 724.54 | 724.51 | 724.47 | 724.43 | 724.38 | 724.33 |
| GIRDER 1 | T.O.D. | 724.55 | 724.57 | | 724.57 | 724.57 | 724.55 | 724.53 | 724.50 | 724.47 | 724.42 | 724.38 | 724.33 |
| | T.O.S. | 723.70 | | 723.71 | | | | | | | | | 723.48 |
| SIDEWALK CURB FACE | T.O.D. | 724.47 | 724.48 | | 724.49 | 724.48 | 724.47 | 724.45 | 724.42 | 724.39 | 724.34 | 724.29 | 724.25 |
| GIRDER 2 | T.O.D. | 724.48 | 724.49 | | 724.50 | 724.49 | 724.48 | 724.46 | 724.43 | 724.40 | 724.35 | 724.31 | 724.26 |
| | T.O.S. | 723.63 | | 723.64 | | | | | | | | | 723.41 |
| GIRDER 3 | T.O.D. | 724.58 | 724.59 | | 724.59 | 724.59 | 724.58 | 724.56 | 724.53 | 724.49 | 724.45 | 724.40 | 724.35 |
| | T.O.S. | 723.73 | | 723.74 | | | | | | | | | 723.50 |
| GIRDER 4 | T.O.D. | 724.67 | 724.68 | | 724.69 | 724.68 | 724.67 | 724.65 | 724.62 | 724.59 | 724.54 | 724.50 | 724.45 |
| | T.O.S. | 723.82 | | 723.83 | | | | | | | | | 723.60 |
| CROWN / RL | T.O.D. | 724.71 | 724.72 | | 724.73 | 724.72 | 724.71 | 724.69 | 724.66 | 724.63 | 724.58 | 724.53 | 724.49 |
| GIRDER 5 | T.O.D. | 724.65 | 724.67 | | 724.67 | 724.67 | 724.65 | 724.63 | 724.60 | 724.57 | 724.52 | 724.48 | 724.43 |
| | T.O.S. | 723.80 | | 723.81 | | | | | | | | | 723.58 |
| GIRDER 6 | T.O.D. | 724.56 | 724.57 | | 724.57 | 724.57 | 724.56 | 724.54 | 724.51 | 724.47 | 724.43 | 724.38 | 724.34 |
| | T.O.S. | 723.71 | | 723.72 | | | | | | | | | 723.49 |
| GIRDER 7 | T.O.D. | 724.46 | 724.48 | | 724.48 | 724.48 | 724.46 | 724.44 | 724.41 | 724.38 | 724.33 | 724.29 | 724.24 |
| | T.O.S. | 723.61 | | 723.62 | | | | | | | | | 723.39 |
| O.F. OF PARAPET | T.O.D. | 724.45 | 724.46 | | 724.46 | 724.46 | 724.45 | 724.43 | 724.40 | 724.36 | 724.32 | 724.27 | 724.22 |
| GIRDER 8 | T.O.D. | 724.53 | 724.54 | | 724.54 | 724.54 | 724.53 | 724.51 | 724.48 | 724.44 | 724.40 | 724.35 | 724.30 |
| | T.O.S. | 723.68 | | 723.69 | | | | | | | | | 723.45 |
| GIRDER 9 | T.O.D. | 724.62 | 724.63 | | 724.64 | 724.63 | 724.62 | 724.60 | 724.57 | 724.54 | 724.49 | 724.45 | 724.40 |
| | T.O.S. | 723.77 | | 723.78 | | | | | | | | | 723.55 |
| EAST DECK EDGE | T.O.D. | 724.63 | 724.64 | | 724.64 | 724.64 | 724.62 | 724.60 | 724.58 | 724.54 | 724.50 | 724.45 | 724.40 |

## ELEVATIONS AT TOP OF DECK (T.O.D.) & TOP OF STEEL (T.O.S.)* - SPAN 3

| | | CL PIER 2 | 0.1 SPAN | 0.2 SPAN | FS2 | 0.3 SPAN | 0.4 SPAN | 0.5 SPAN | 0.6 SPAN | 0.7 SPAN | 0.8 SPAN | 0.9 SPAN | CL N. ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WEST DECK EDGE | T.O.D. | 724.33 | 724.30 | 724.26 | | 724.22 | 724.19 | 724.15 | 724.11 | 724.08 | 724.04 | 724.00 | 723.97 |
| GIRDER 1 | T.O.D. | 724.33 | 724.29 | 724.26 | | 724.22 | 724.18 | 724.15 | 724.11 | 724.07 | 724.04 | 724.00 | 723.96 |
| | T.O.S. | 723.48 | | | 723.39 | | | | | | | | 723.11 |
| SIDEWALK CURB FACE | T.O.D. | 724.25 | 724.21 | 724.17 | | 724.14 | 724.10 | 724.06 | 724.03 | 723.99 | 723.95 | 723.92 | 723.88 |
| GIRDER 2 | T.O.D. | 724.26 | 724.22 | 724.18 | | 724.15 | 724.11 | 724.07 | 724.04 | 724.00 | 723.96 | 723.93 | 723.89 |
| | T.O.S. | 723.41 | | | 723.31 | | | | | | | | 723.04 |
| GIRDER 3 | T.O.D. | 724.35 | 724.32 | 724.28 | | 724.24 | 724.21 | 724.17 | 724.13 | 724.10 | 724.06 | 724.02 | 723.98 |
| | T.O.S. | 723.50 | | | 723.41 | | | | | | | | 723.13 |
| GIRDER 4 | T.O.D. | 724.45 | 724.41 | 724.37 | | 724.34 | 724.30 | 724.26 | 724.23 | 724.19 | 724.15 | 724.12 | 724.08 |
| | T.O.S. | 723.60 | | | 723.50 | | | | | | | | 723.23 |
| CROWN / RL | T.O.D. | 724.49 | 724.45 | 724.41 | | 724.38 | 724.34 | 724.30 | 724.27 | 724.23 | 724.19 | 724.16 | 724.12 |
| GIRDER 5 | T.O.D. | 724.43 | 724.39 | 724.36 | | 724.32 | 724.28 | 724.25 | 724.21 | 724.17 | 724.14 | 724.10 | 724.06 |
| | T.O.S. | 723.58 | | | 723.49 | | | | | | | | 723.21 |
| GIRDER 6 | T.O.D. | 724.34 | 724.30 | 724.26 | | 724.23 | 724.19 | 724.15 | 724.11 | 724.08 | 724.04 | 724.00 | 723.97 |
| | T.O.S. | 723.49 | | | 723.39 | | | | | | | | 723.12 |
| GIRDER 7 | T.O.D. | 724.24 | 724.20 | 724.17 | | 724.13 | 724.09 | 724.06 | 724.02 | 723.98 | 723.95 | 723.91 | 723.87 |
| | T.O.S. | 723.39 | | | 723.30 | | | | | | | | 723.02 |
| O.F. OF PARAPET | T.O.D. | 724.22 | 724.19 | 724.15 | | 724.11 | 724.08 | 724.04 | 724.00 | 723.97 | 723.93 | 723.89 | 723.86 |
| GIRDER 8 | T.O.D. | 724.30 | 724.27 | 724.23 | | 724.19 | 724.16 | 724.12 | 724.08 | 724.05 | 724.01 | 723.97 | 723.93 |
| | T.O.S. | 723.45 | | | 723.36 | | | | | | | | 723.08 |
| GIRDER 9 | T.O.D. | 724.40 | 724.36 | 724.32 | | 724.29 | 724.25 | 724.21 | 724.18 | 724.14 | 724.10 | 724.07 | 724.03 |
| | T.O.S. | 723.55 | | | 723.45 | | | | | | | | 723.18 |
| EAST DECK EDGE | T.O.D. | 724.40 | 724.36 | 724.33 | | 724.29 | 724.25 | 724.22 | 724.18 | 724.14 | 724.11 | 724.07 | 724.03 |

O.F. = OUTSIDE FACE

* THESE ELEVATIONS ARE TO TOP OF STEEL (SPLICE AND COVER PLATE THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND THEY ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.




SIMPLIFIED BRIDGE CROSS SECTION

(LOOKING NORTH, NOT IN SCALE)

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

TOP OF DECK & TOP OF STEEL ELEVATIONS

SHEET 18 OF 30

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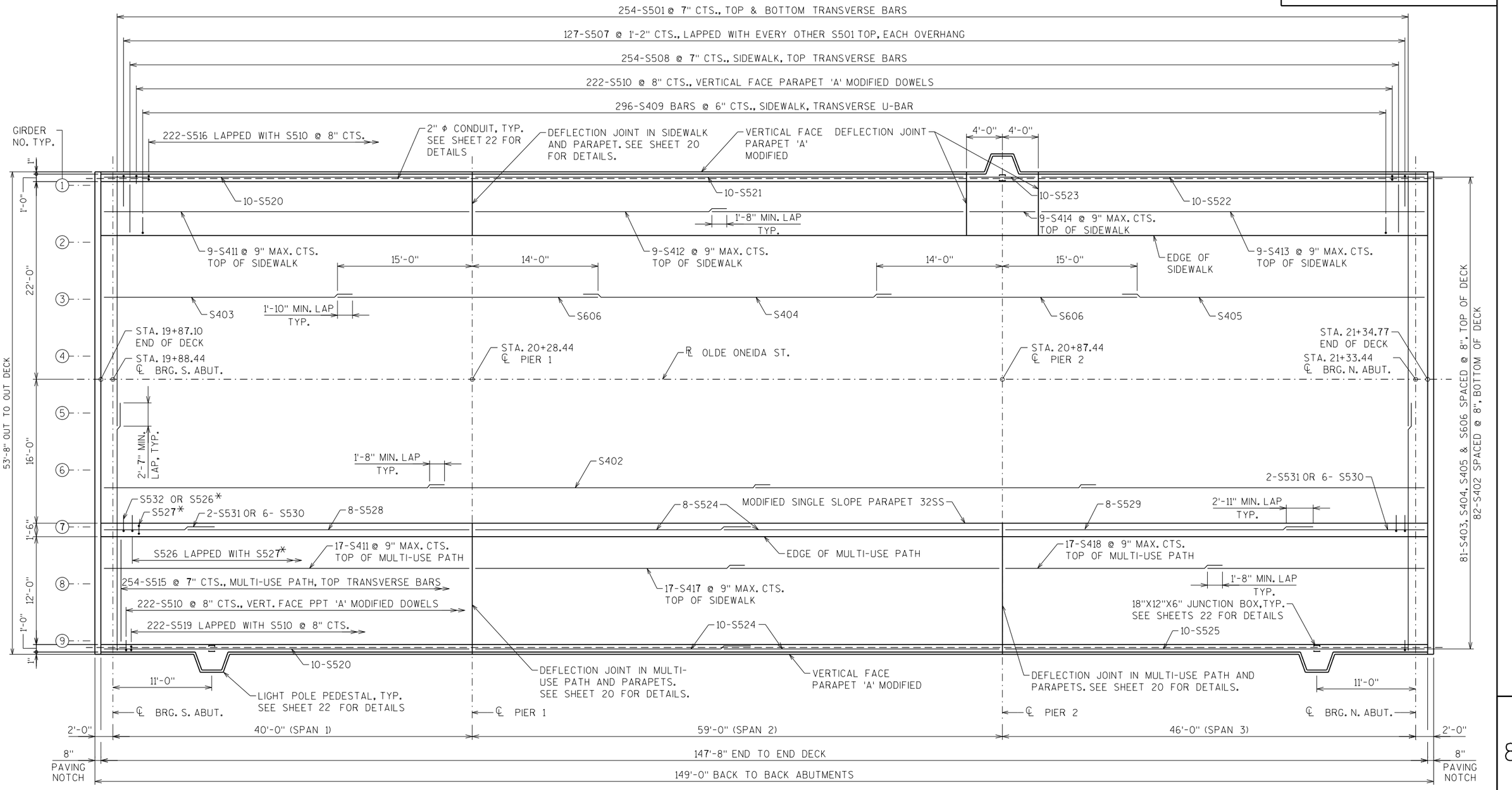
STATE PROJECT NUMBER

4984-01-79




*SEE SHEET 23 FOR DETAILS OF MODIFIED SINGLE SLOPE PARAPET 32SS

DECK PLAN

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

DECK PLAN

SHEET 19 OF 30

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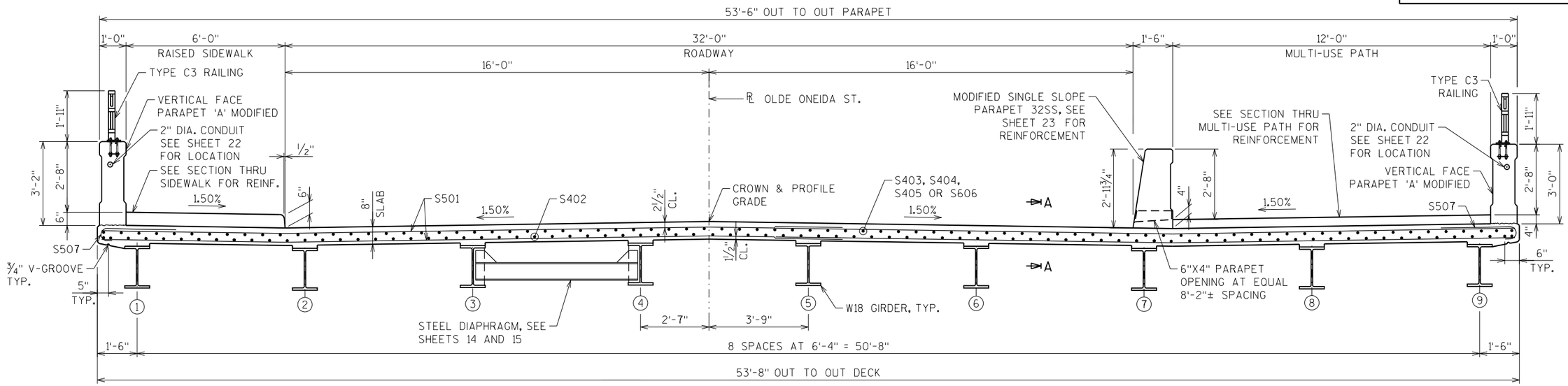
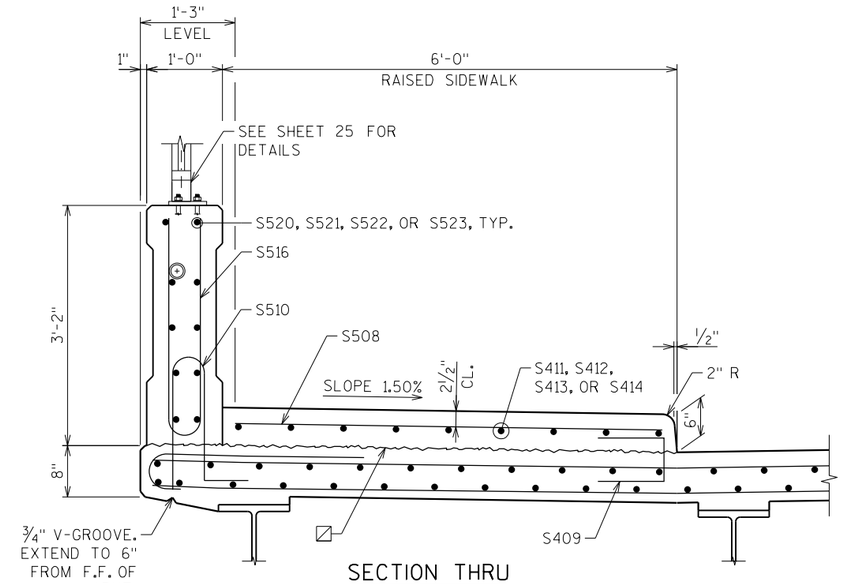
| STATE PROJECT NUMBER |
|---|
| 4984-01-79 |



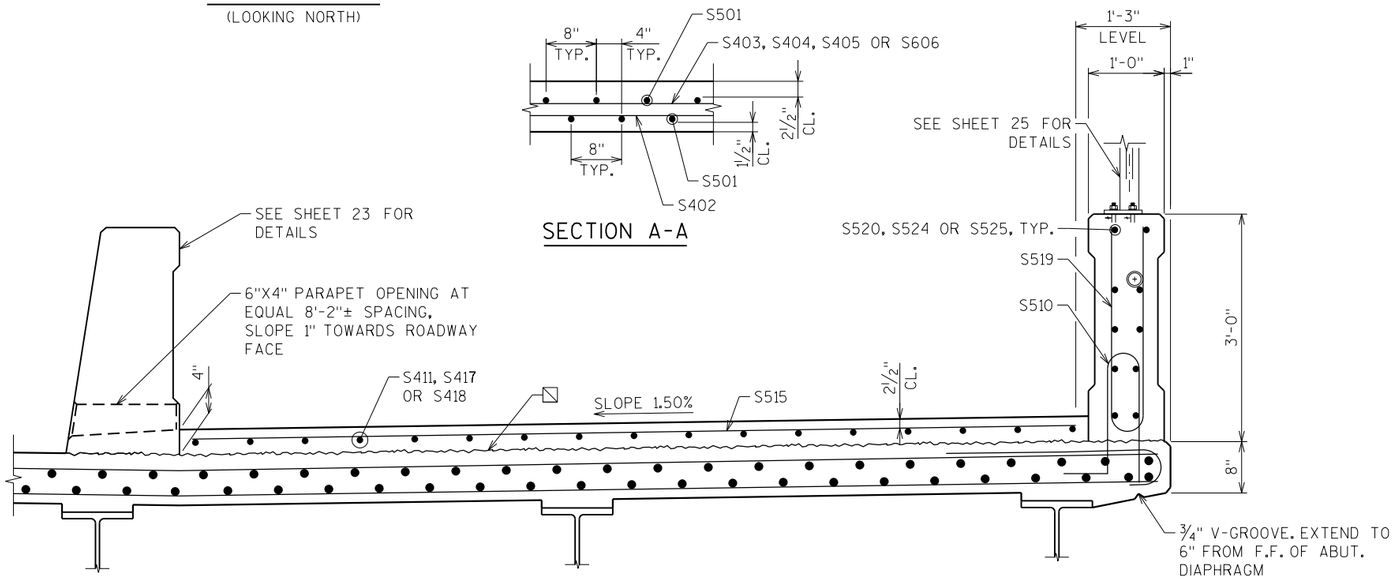

## CROSS SECTION
(LOOKING NORTH)



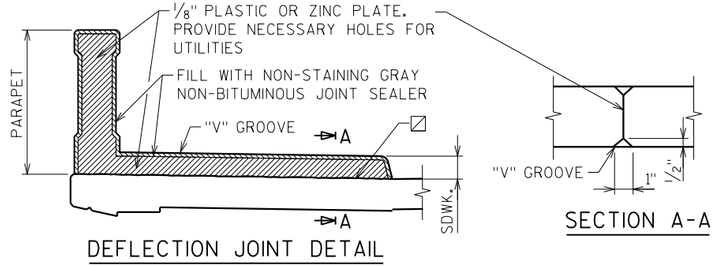

## SECTION THRU SIDEWALK/WEST PARAPET




## SECTION A-A




## SECTION THRU MULTI-USE PATH/EAST PARAPET




## DEFLECTION JOINT DETAIL




## SECTION A-A

### LEGEND

☑ CONSTRUCTION JOINT-STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE CROSS SLOPE.

NOTES:

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

| NO. | DATE | REVISION | BY |
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

DECK CROSS SECTION

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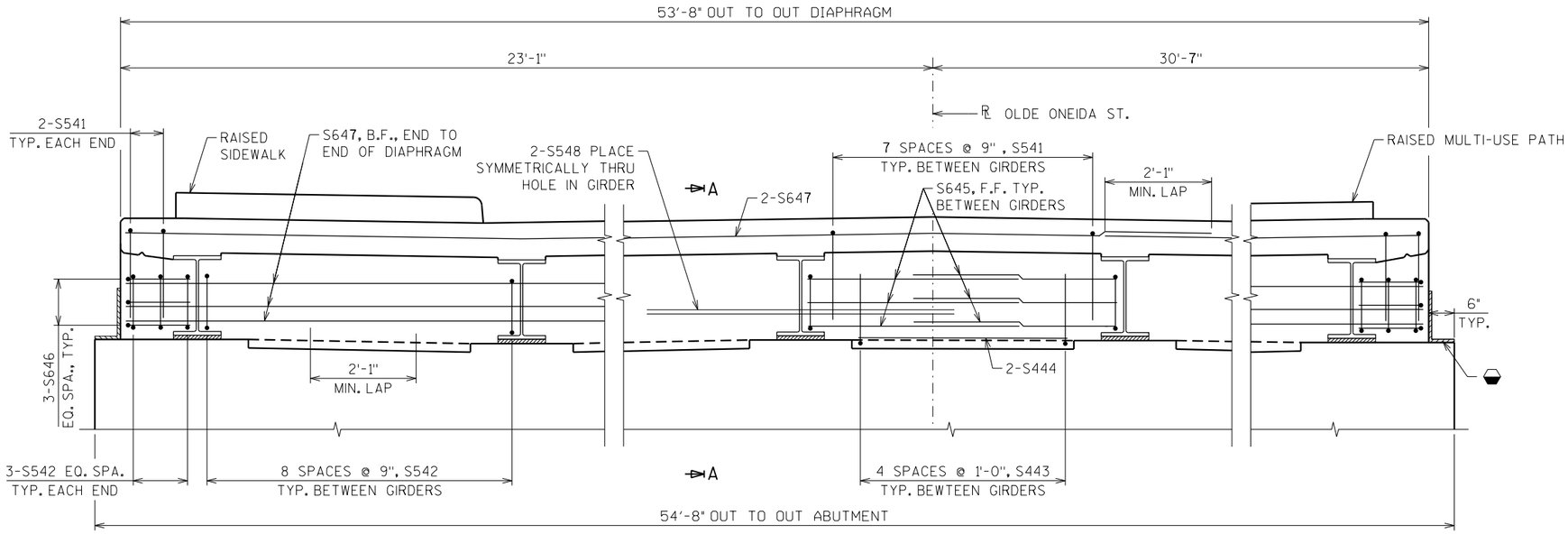
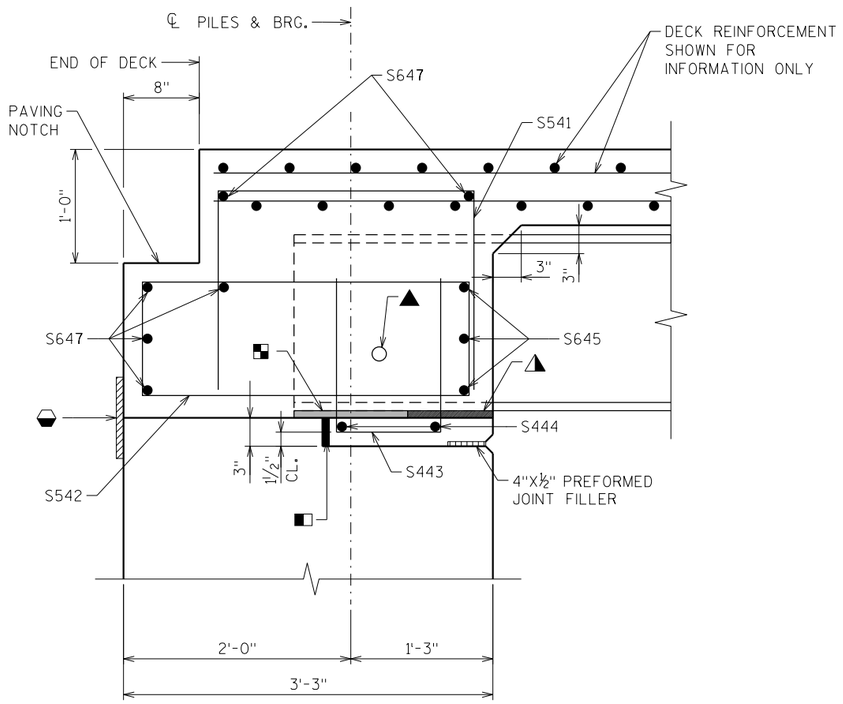



## ABUTMENT DIAPHRAGM ELEVATION

(LOOKING SOUTH - SOUTH ABUTMENT SHOWN, NORTH ABUTMENT SIMILAR)
(PARAPETS NOT SHOWN FOR CLARITY. SEE SIDEWALK STRUCTURE APPROACH DETAIL IN ROADWAY PLANS FOR PAVING NOTCH AT THE SIDEWALK)

## LEGEND

- 18" RUBBERIZED MEMBRANE WATERPROOFING.
- ½"X8"X11⅛" NON-LAMINATED ELASTOMERIC BEARING PAD, TYP.
- 1½" DIA. HOLE IN WEB FOR TWO S548 HORIZONTAL BARS PLACED SYMMETRICAL ABOUT ℄ GIRDERS.
- PREFORMED JOINT FILLER UNDER GIRDER FLANGE IN FRONT OF BRG. PAD. (3" MIN.) FILLER THK. = ½"
- ¾" PREFORMED JOINT FILLER ACCORDING TO STD. SPEC. 502.2.7 (3" HIGH X 4'-4" LENGTH) BETWEEN TWO BRIDGE SEATS




## SECTION A-A

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

ABUTMENT DIAPHRAGM

SHEET 21 OF 30

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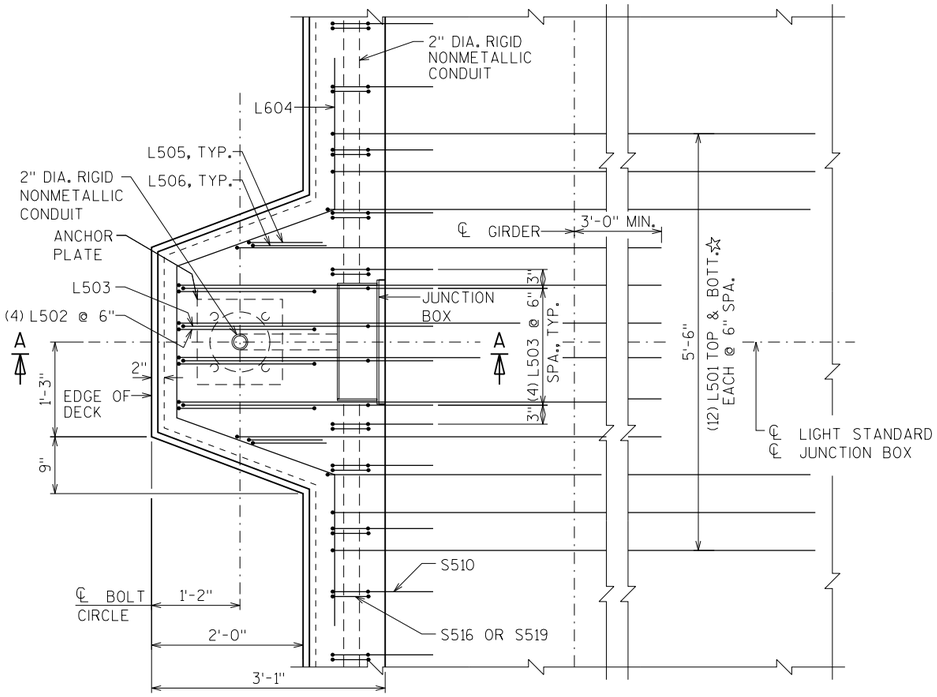
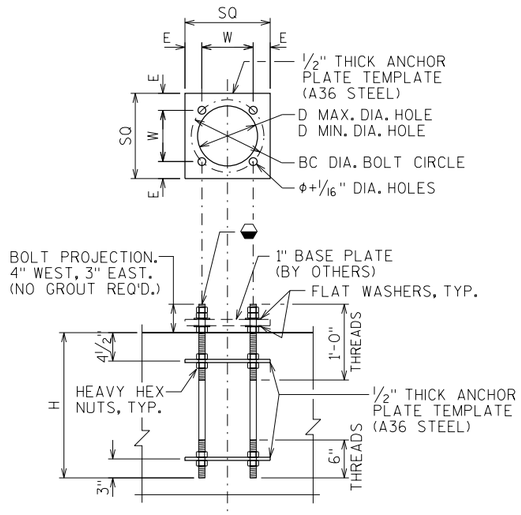


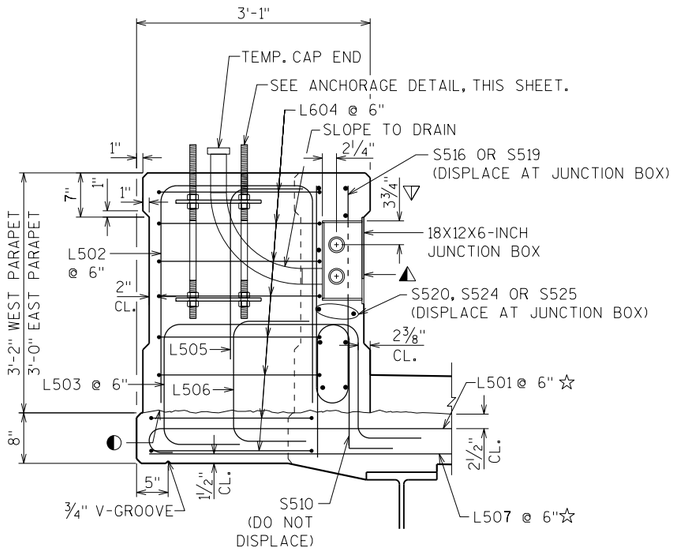

PLAN AT LIGHT STANDARD
(DECK STEEL NOT SHOWN FOR CLARITY)



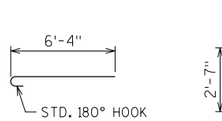

ANCHOR ROD ASSEMBLY DETAIL
(1 REQ'D.-WEST PARAPET, 2 REQ'D.-EAST PARAPET)
(4) - ANCHOR RODS REQUIRED PER ASSEMBLY

ANCHOR TABLE

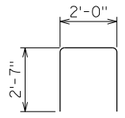
| SYMBOL | WEST | EAST |
|---|---|---|
| SQ | 1'-1½" | 9⅝" |
| E | 2 11/16" | 1 13/16" |
| W | 8⅛" | 6" |
| BC | 11½" | 8½" |
| ϕ | 1" | ¾" |
| D MAX. | 9½" | 7" |
| D MIN. | 5" | 5" |
| H | 1'-11" | 1'-8" |



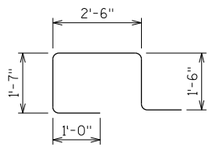

SECTION A-A WEST/EAST PARAPET PEDESTAL



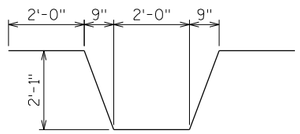

L501




L502

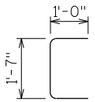



L503




L604


L505




L506

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 | LOCATION |
|---|---|---|---|---|---|
| L501 | X | 36 | 6'-11" | X | LIGHT STD.-TRANS.-DECK-TOP |
| L502 | X | 12 | 6'-8" | X | LIGHT STD.-VERT.-PARAPET |
| L503 | X | 12 | 7'-2" | X | LIGHT STD.-VERT.-PARAPET |
| L604 | X | 24 | 10'-0" | X | LIGHT STD.-HORIZ.-PARAPET |
| L505 | X | 6 | 3'-2" | X | LIGHT STD.-VERT.-PARAPET |
| L506 | X | 6 | 3'-4" | X | LIGHT STD.-VERT.-PARAPET |
| L507 | X | 36 | 6'-4" | | LIGHT STD.-TRANS.-DECK-BOTTOM |

## NOTES

SEE SHEET 24 FOR CONDUIT DETAILS.

BID ITEMS SHALL BE:

"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURE"
"CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCT LIST.

## LEGEND

◑ CONSTRUCTION JOINT, STRKIE OFF AS SHOWN.

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

◓ 1" DIA. ANCHOR RODS ASTM F1554 GR 55, HEAVY HEX NUTS ASTM A563, AND WASHERS ASTM F436. ANCHOR ASSEMBLIES SHALL BE GALVANIZED PER SECTION 531 OF THE STANDARD SPECIFICATION. PROVIDE (2) WASHERS AND (7) NUTS PER ANCHOR ROD.

☆ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN DECK.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
4984-01-79

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

LIGHTING DETAILS

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STATE PROJECT NUMBER

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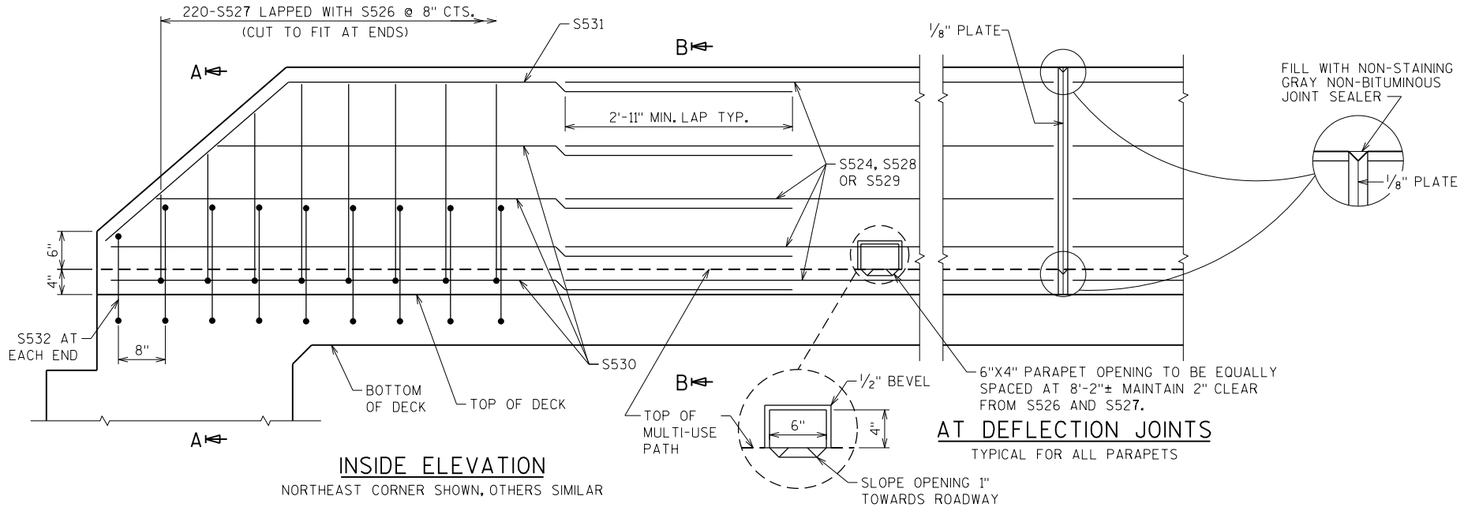


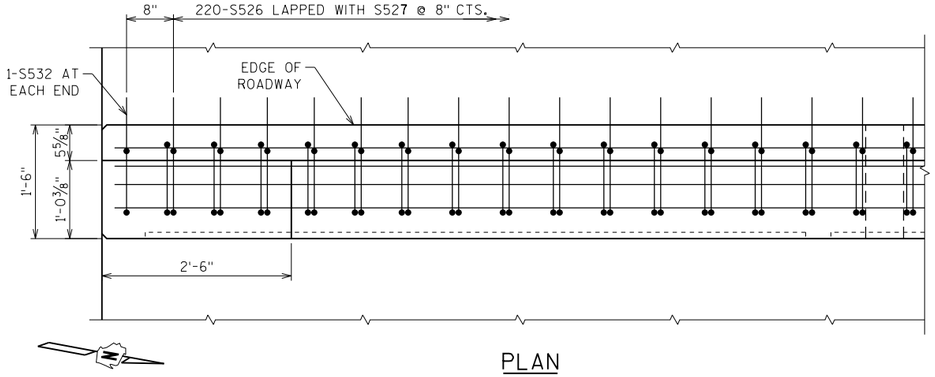

INSIDE ELEVATION

NORTHEAST CORNER SHOWN, OTHERS SIMILAR

AT DEFLECTION JOINTS

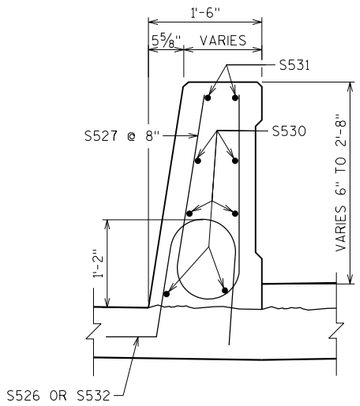
TYPICAL FOR ALL PARAPETS

PARAPET OPENING DETAIL

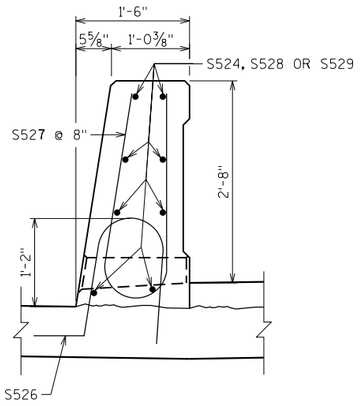



PLAN

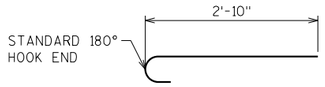
NORTHEAST CORNER SHOWN, OTHERS SIMILAR




SECTION A-A END SECTION THRU PARAPET ON DECK




SECTION B-B TYPICAL SECTION THRU PARAPET ON DECK

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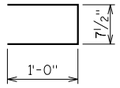


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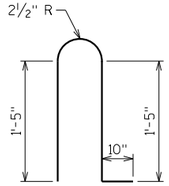


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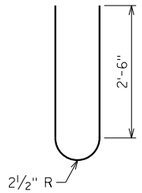


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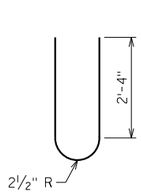


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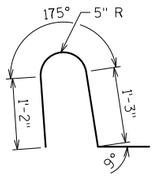


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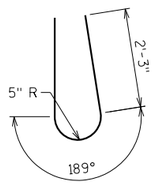


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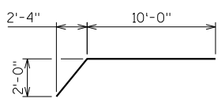


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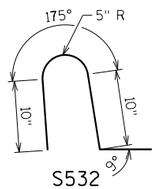


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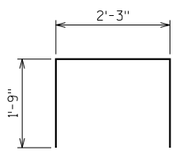


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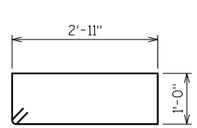


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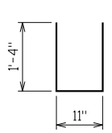


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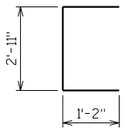


S646

## 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 | LOCATION |
|---|---|---|---|---|---|
| S501 | X | 1016 | 28'-0" | | DECK-BOT. & TOP-HORIZ.-TRAN. |
| S402 | X | 328 | 38'-1" | | DECK BOT.-HORIZ.-LONGIT. |
| S403 | X | 81 | 28'-0" | | DECK- TOP-HORIZ.-LONGIT.-SPAN 1 |
| S404 | X | 81 | 34'-8" | | DECK- TOP-HORIZ.-LONGIT.-SPAN 2 |
| S405 | X | 81 | 34'-0" | | DECK- TOP-HORIZ.-LONGIT.-SPAN 3 |
| S606 | X | 162 | 29'-0" | | DECK-TOP-HORIZ.-LONGIT.-OVER PIERS |
| S507 | X | 254 | 3'-5" | X | DECK-TOP-TRAN.-DECK EDGE |
| S508 | X | 254 | 5'-8" | | RAISED 6" SIDEWALK-TOP-TRANS. |
| S409 | X | 296 | 2'-6" | X | RAISED 6" SIDEWALK/DECK-TRANS.-U BAR |
| S510 | X | 444 | 4'-4" | X | DECK/VERT. FACE 'A' MODIFIED PARAPET-VERT.-DOWEL |
| S411 | X | 26 | 41'-0" | | HORIZ.-LONGIT.-6" SIDEWALK SPAN 1 & 4" MULTI-USE PATH SPAN 1 |
| S412 | X | 9 | 54'-8" | | RAISED 6" SIDEWALK-TOP-HORIZ.-LONGIT.-SPAN 2 |
| S413 | X | 9 | 43'-0" | | RAISED 6" SIDEWALK-TOP-HORIZ.-LONGIT.-SPAN 3 |
| S414 | X | 9 | 7'-8" | | RAISED 6" SIDEWALK-TOP-HORIZ.-LONGIT.-BTWN. DFLN. JOINTS |
| S515 | X | 254 | 11'-8" | | RAISED 4" MULTI-USE PATH-TOP-TRANS. |
| S516 | X | 222 | 5'-9" | X | PARAPET-WEST VERT. FACE 'A' MODIFIED-VERT.-U-BARS |
| S417 | X | 34 | 30'-2" | | RAISED 4" MULTI-USE PATH-TOP-HORIZ.-LONGIT.-SPAN 2 |
| S418 | X | 34 | 23'-8" | | RAISED 4" MULTI-USE PATH-TOP-HORIZ.-LONGIT.-SPAN 3 |
| S519 | X | 222 | 5'-5" | X | PARAPET-EAST VERT. FACE 'A' MODIFIED-VERT.-U-BARS |
| S520 | X | 20 | 41'-0" | | PARAPET-VERT. FACE 'A'-HORIZ.-LONGIT.-W. SPAN 1 & E. SPAN 1 |
| S521 | X | 10 | 54'-8" | | PARAPET-WEST VERT. FACE 'A' MODIFIED-HORIZ.-LONGIT.-SPAN 2 |
| S522 | X | 10 | 43'-0" | | PARAPET-WEST VERT. FACE 'A' MODIFIED-HORIZ.-LONGIT.-SPAN 3 |
| S523 | X | 10 | 7'-8" | | PARAPET-WEST VERT. FACE 'A'-HORIZ.-LONGIT.-BTWN. DFLN. JOINTS |
| S524 | X | 36 | 30'-9" | | PARAPET-HORIZ.-LONGIT.-EAST VERT. FACE 'A' SPAN 2 & 32SS SPAN 2 |
| S525 | X | 10 | 47'-0" | | PARAPET-EAST VERT. FACE 'A' MODIFIED-HORIZ.-LONGIT.-SPAN 3 |
| S526 | X | 220 | 4'-6" | X | DECK/PARAPET 32SS MODIFIED-VERT.-DOWEL |
| S527 | X | 220 | 6'-0" | X | PARAPETS-32SS MODIFIED-VERT.-U-BARS |
| S528 | X | 8 | 31'-9" | | PARAPET-32SS MODIFIED-HORIZ.-LONGIT.-SPAN 1 |
| S529 | X | 8 | 37'-9" | | PARAPET-32SS MODIFIED-HORIZ.-LONGIT.-SPAN 3 |
| S530 | X | 8 | 13'-0" | | PARAPET-32SS MODIFIED-HORIZ.-LONGIT.-END SECTION |
| S531 | X | 4 | 13'-1" | X | PARAPET-32SS MODIFIED-HORIZ.-LONGIT.-END SECTION |
| S532 | X | 2 | 3'-9" | X | DECK/PARAPET 32SS MODIFIED-VERT.-END SECTION |
| S541 | X | 136 | 5'-6" | X | ABUT.DIAPHRAGM/DECK-VERT. |
| S542 | X | 156 | 8'-6" | X | ABUT.DIAPHRAGM-VERT. |
| S443 | X | 80 | 3'-5" | X | ABUT.DIAPHRAGM-VERT.-U-BAR-BTWN. BEAM SEATS |
| S444 | X | 32 | 4'-0" | | ABUT.DIAPHRAGM-HORIZ.-BTWN. BEAM SEATS |
| S645 | X | 96 | 4'-1" | | ABUT.DIAPHRAGM-HORIZ.-BTWN. GIRDERS |
| S646 | X | 12 | 4'-11" | X | ABUT.DIAPHRAGM-HORIZ.-OVERHANG- U BARS |
| S647 | X | 24 | 28'-5" | | ABUT.DIAPHRAGM-HORIZ.-TOP & BEHIND GIRDERS |
| S548 | X | 36 | 6'-0" | | ABUT.DIAPHRAGM-HORIZ.-THRU GIRDERS |

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

MODIFIED PARAPET 32SS & SUPERSTR. BILL OF BARS

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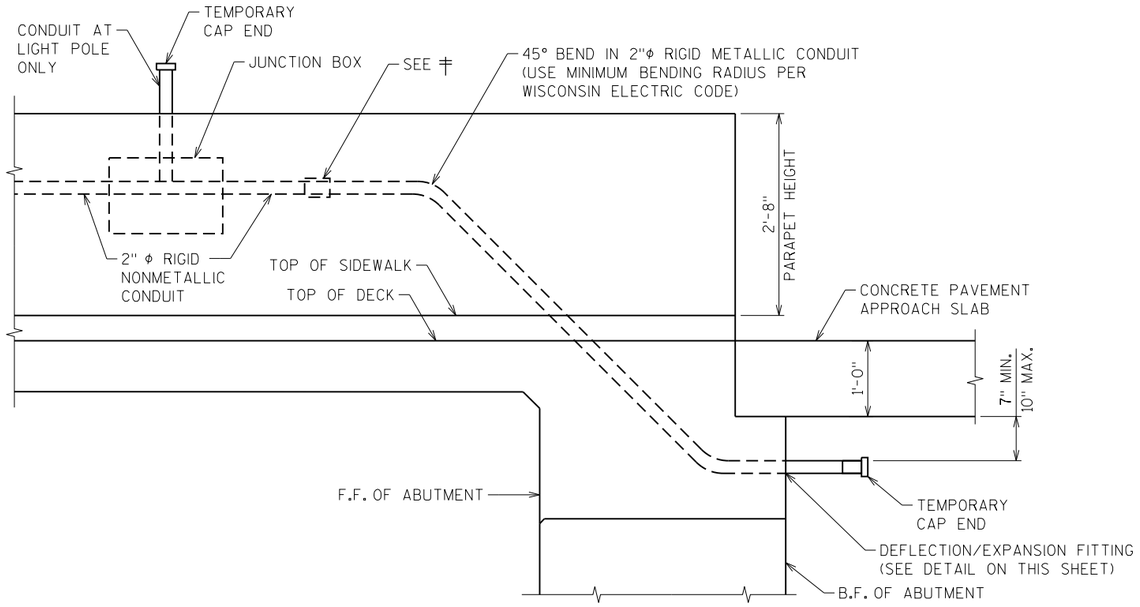



OUTSIDE ELEVATION OF PARAPET AT ABUTMENT

(RAILING AND CONCRETE PANEL NOT SHOWN FOR CLARITY)

## NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

## LEGEND

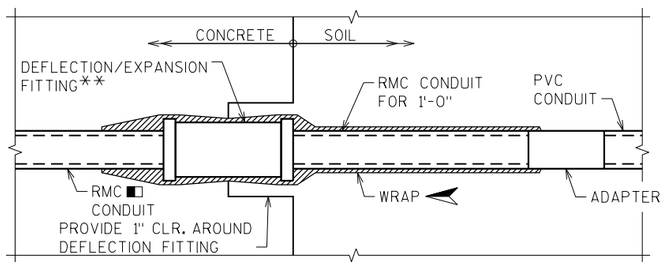
◧ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

‡ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED)

◥ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT -1/4" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):

- UP TO 3/4" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER.




DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 3/4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION.
BOND JUMPER NOT SHOWN FOR CLARITY
(CONCRETE TO SOIL FITTING)

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| NO. | DATE | REVISION | BY |
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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

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CONDUIT DETAILS

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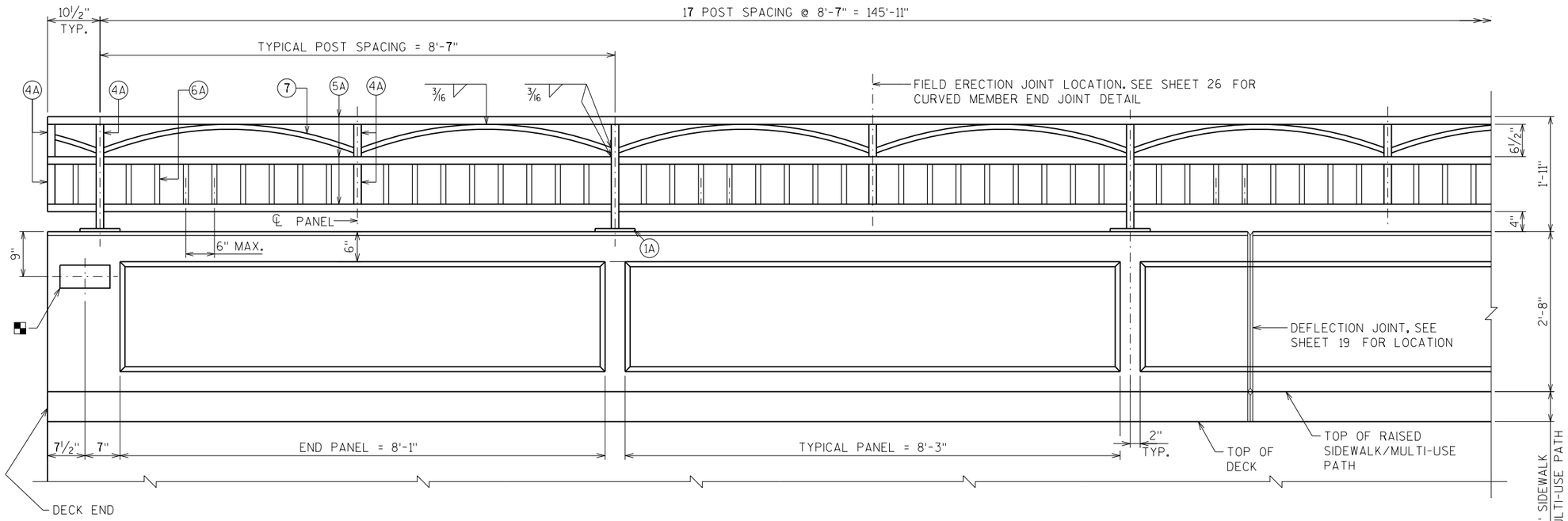
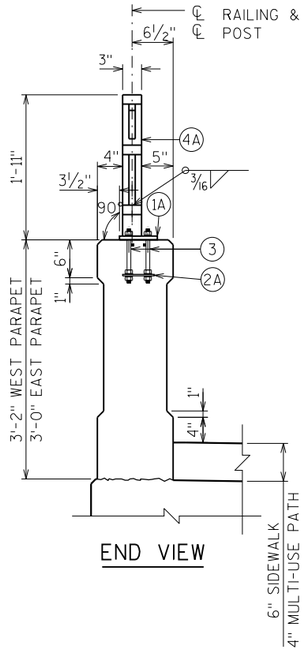
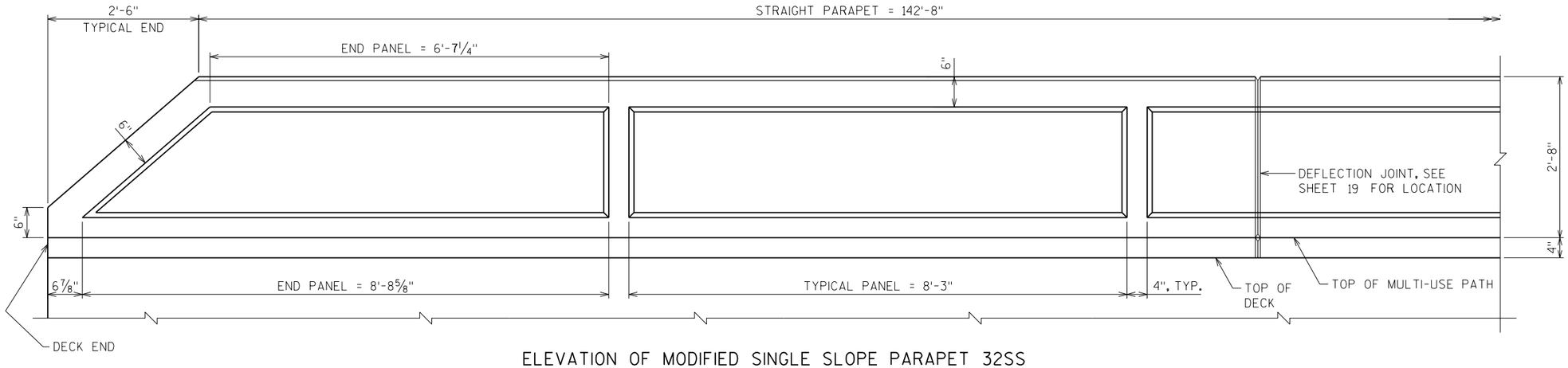



ELEVATION OF TYPE C3 RAILING ON VERTICAL PARAPET



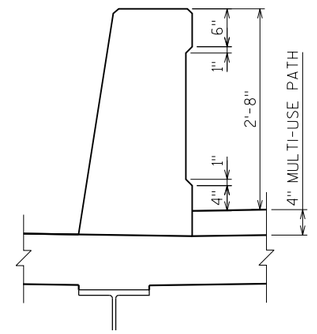

END VIEW

■ NAME PLATE ON INTERIOR SIDE OF EAST PARAPET (SOUTH EAST CORNER OF BRIDGE)
(NAME PLATE TO BE FLUSH WITH INTERIOR FACE OF PARAPET)




ELEVATION OF MODIFIED SINGLE SLOPE PARAPET 32SS

(LOOKING WEST)




END VIEW

NOTE:

SEE LEGEND ON SHEET 26.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

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TYPE 'C3' RAILING & PARAPET AESTHETICS

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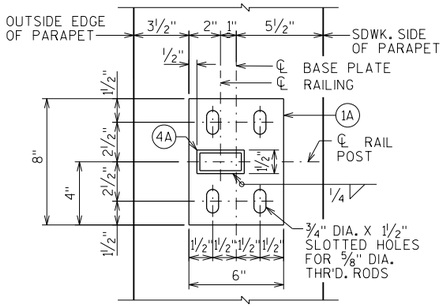
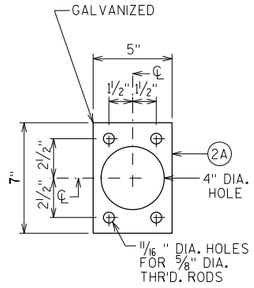
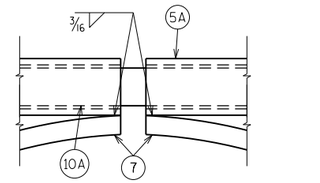


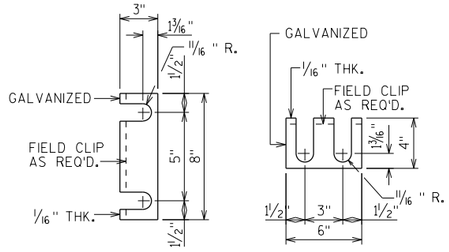

TYPICAL RAIL POST BASE PLATE




ANCHOR PLATE

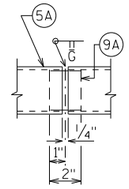



CURVED MEMBER JOINT DETAIL



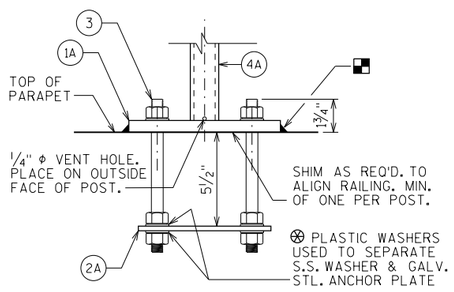

RAIL POST SHIM DETAIL

(2 SETS PER POST)



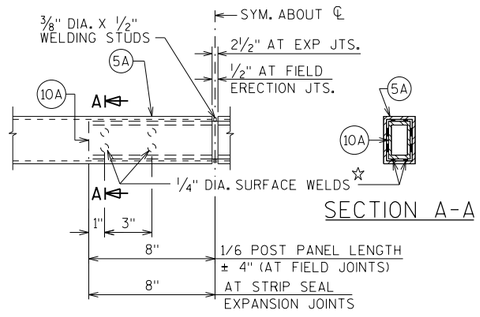

SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)




ANCHORAGE FOR RAIL POSTS

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




SECTION A-A

FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

## LEGEND

(1A) PLATE ⅝" X 6" X 8" WITH ¾" X 1½" SLOTTED HOLES.

(2A) ¼" X 5" X 7" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D. RODS NO. 3.

(3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

(4A) STRUCTURAL TUBING 3" X 1½" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

(5A) STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

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

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

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

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

## NOTES

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

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

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

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

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

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

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

ALL MATERIAL (EXCEPT NO. 3 & 12) 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.

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

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

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

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STATE OF WISCONSIN
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STRUCTURE B-44-502

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COMBINATION RAILING TYPE 'C3' DETAILS

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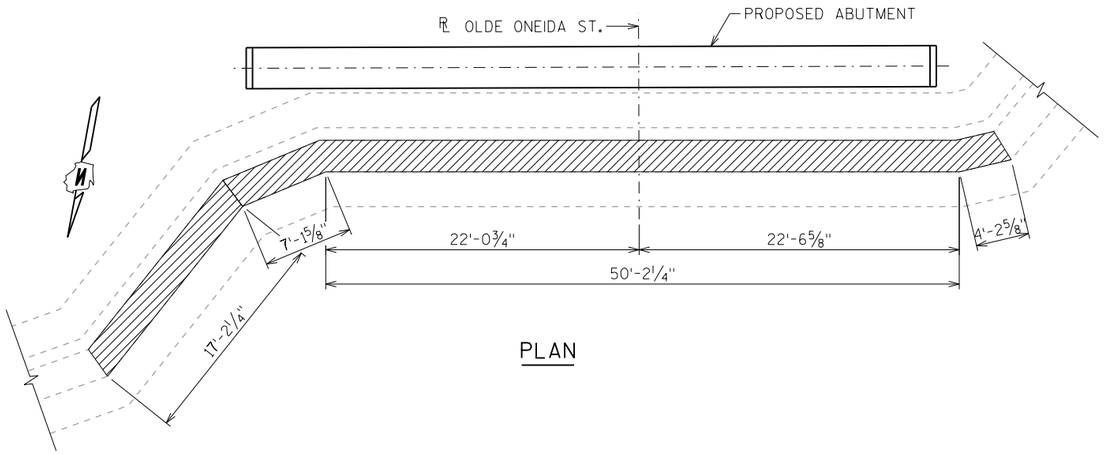
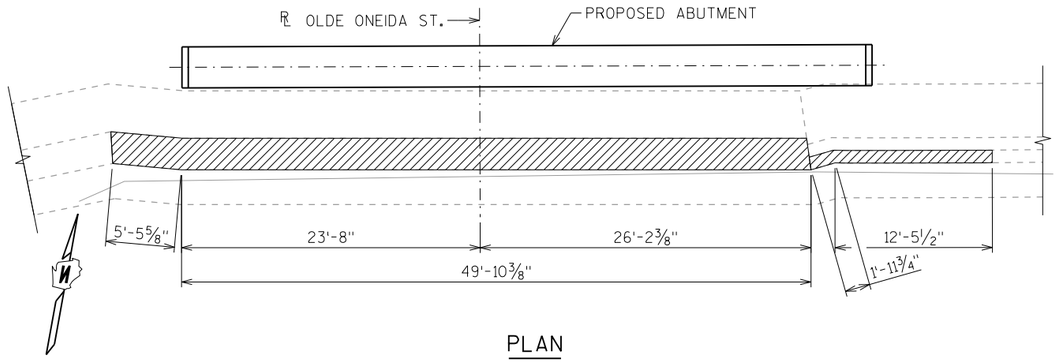



PLAN

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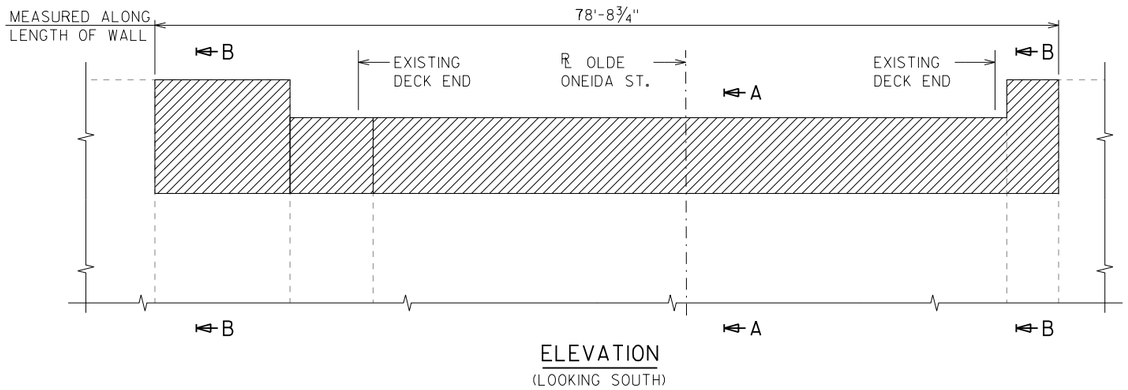
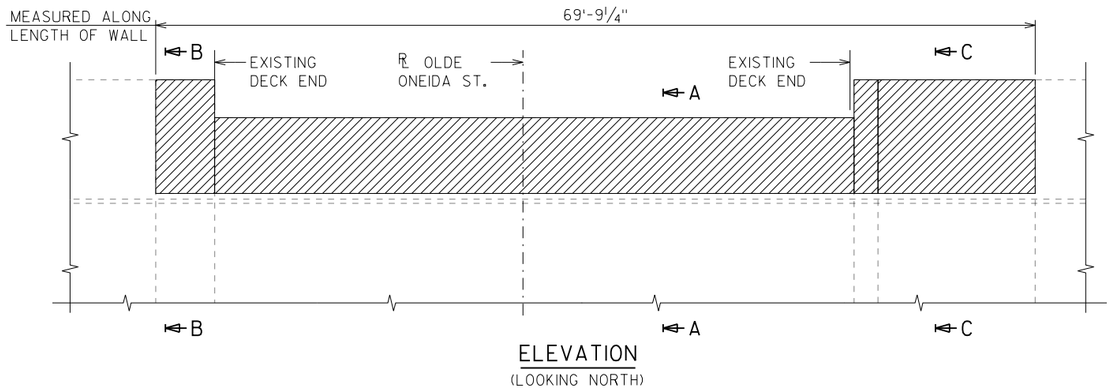


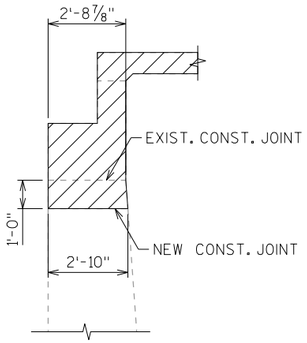

ELEVATION
(LOOKING SOUTH)

EXISTING SOUTH ABUTMENT

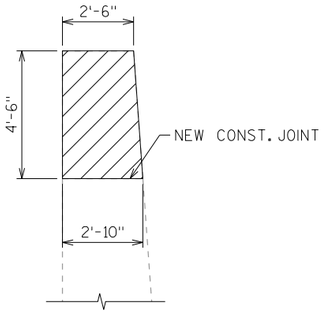



ELEVATION
(LOOKING NORTH)

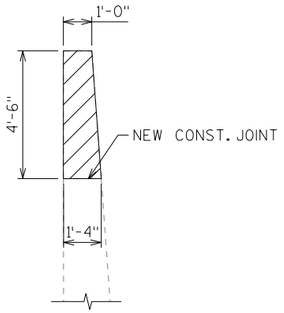
EXISTING NORTH ABUTMENT




SECTION A-A




SECTION B-B




SECTION C-C

## LEGEND

CONCRETE REMOVAL

## NOTE

COST OF CONCRETE REMOVAL IS INCLUDED UNDER THE BID PRICE FOR "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-44-723".

| NO. | DATE | REVISION | BY |
|---|---|---|---|

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

EXISTING ABUTMENTS PARTIAL REMOVAL

SHEET 27 OF 30

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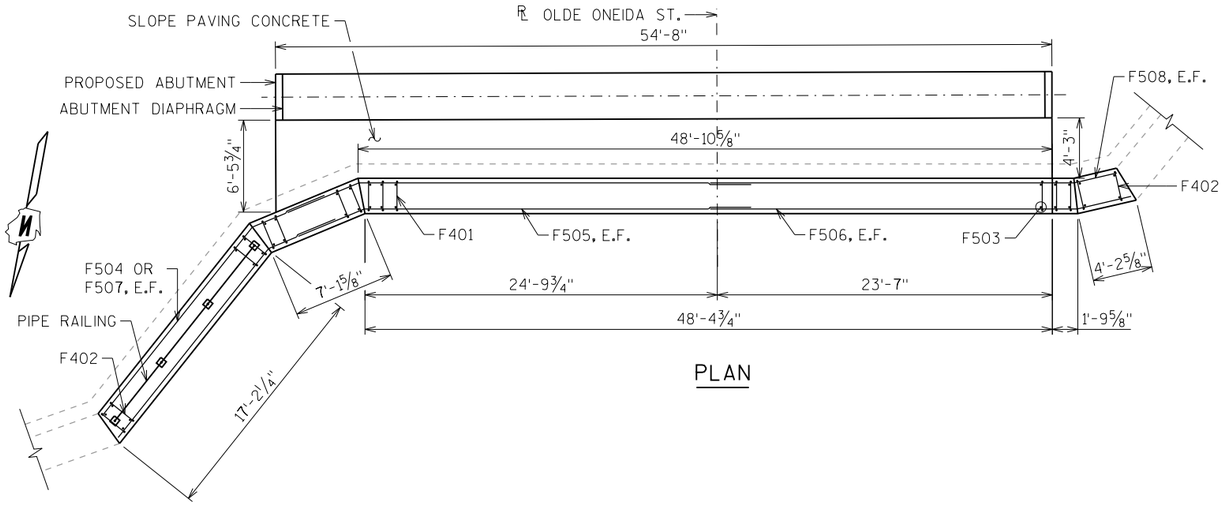
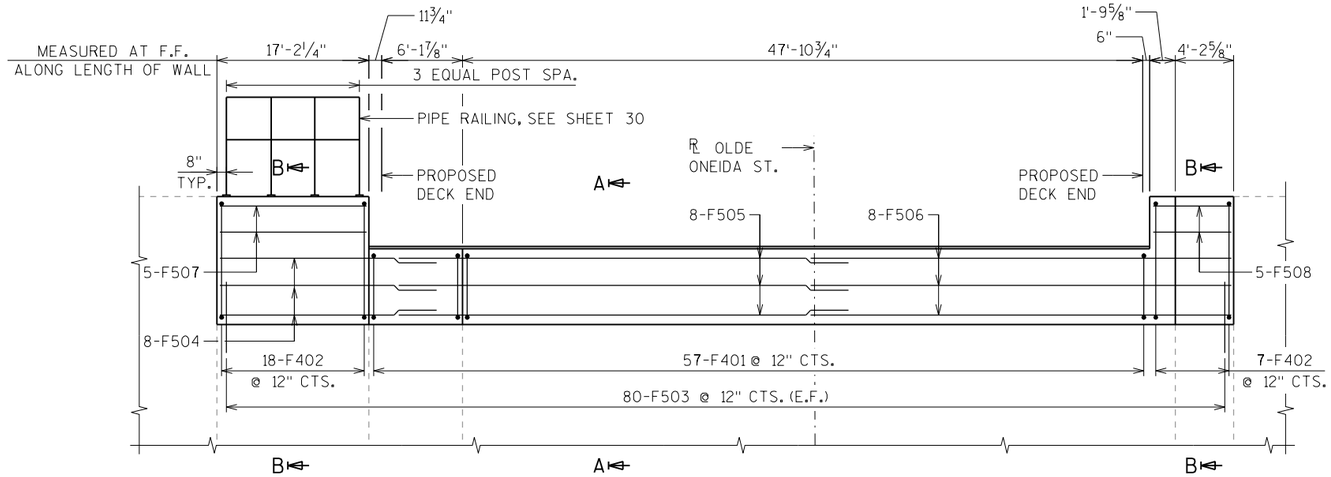
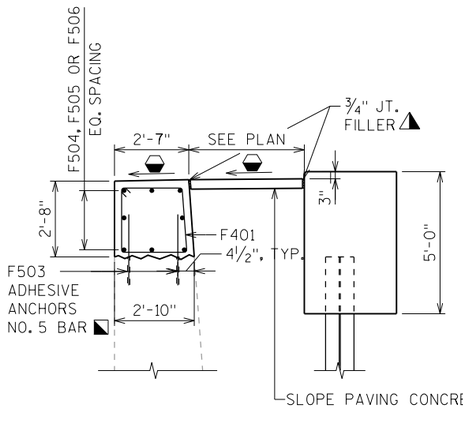



PLAN

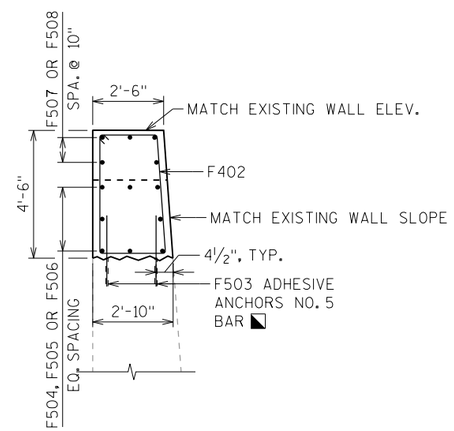



ELEVATION

(LOOKING SOUTH)




SECTION A-A

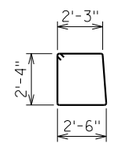



SECTION B-B

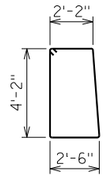
## BILL OF BARS

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

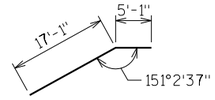
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| F401 | | 57 | 9'-8" | X | ABUT.-TRANS.-STIRRUP |
| F402 | | 25 | 13'-3" | X | WALL-TRANS.-STIRRUP |
| F503 | | 160 | 2'-6" | | DOWEL-VERTICAL |
| F504 | | 8 | 22'-2" | X | ABUT.-HORIZ.-EAST END |
| F505 | | 8 | 30'-9" | X | ABUT.-HORIZ.-MID |
| F506 | | 8 | 29'-9" | X | ABUT.-HORIZ.-WEST END |
| F507 | | 5 | 16'-10" | | WALL-HORIZ.-EAST END |
| F508 | | 5 | 5'-7" | X | WALL-HORIZ.-WEST END |



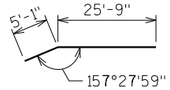

F401




F402




F504

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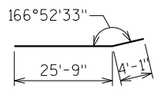


F506


F508

## NOTES

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)

⬟ SLOPE THE TOP OF THE RECONSTRUCTED EXISTING ABUTMENT AND THE SLOPE PAVING 1-INCH FROM F.F. OF NEW ABUTMENT TO THE F.F. OF EXISTING ABUTMENT

## LEGEND

◥ EMBED 1'-0" MIN. INTO EXIST. CONCRETE

| NO. | DATE | REVISION | BY |
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| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

EXISTING SOUTH ABUTMENT RECONSTRUCTION

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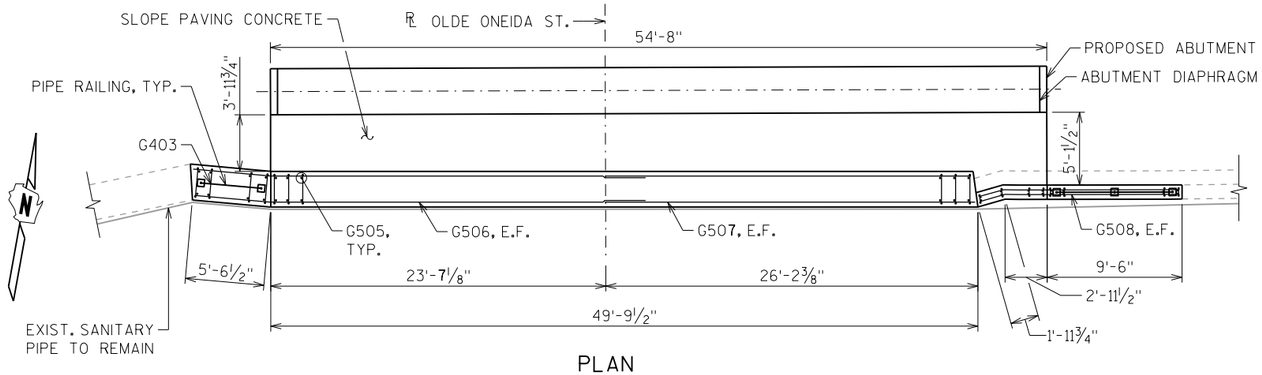
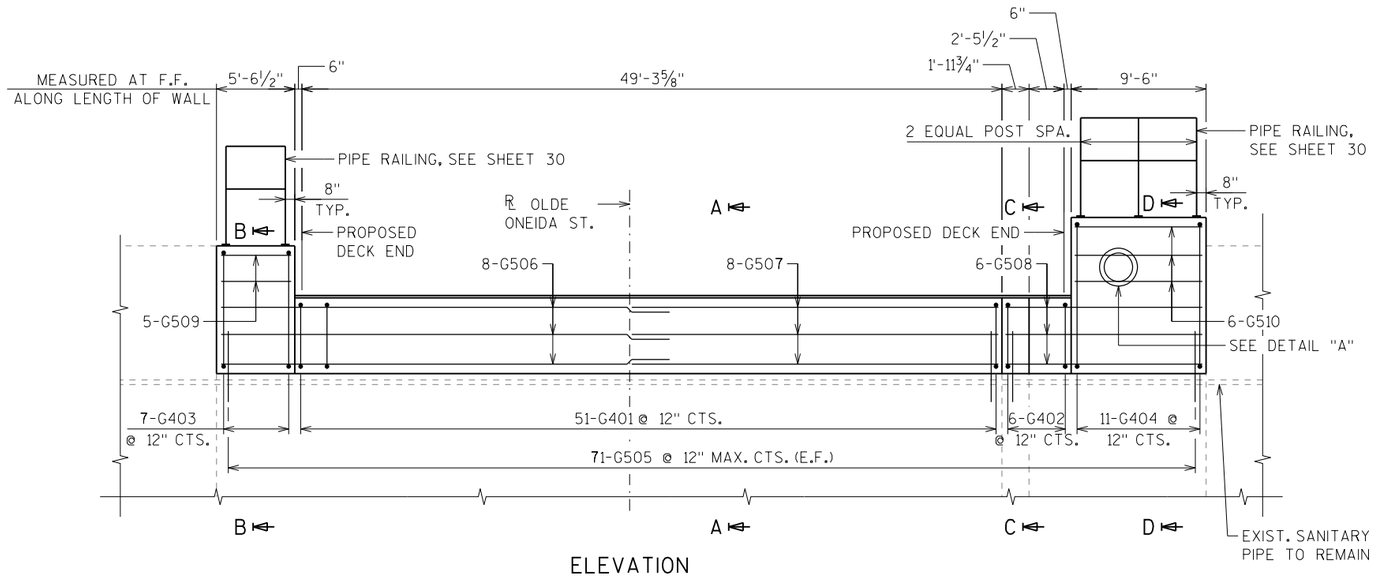



PLAN

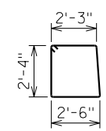



ELEVATION
(LOOKING NORTH)

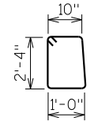
## BILL OF BARS

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

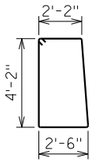
| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| G401 | | 51 | 9'-8" | X | ABUT.-TRANS.-STIRRUP |
| G402 | | 6 | 7'-0" | X | RETAINING WALL BELOW DECK-TRANS.-STIRRUP |
| G403 | | 7 | 13'-3" | X | WINGWALL-TRANS.-STIRRUP-WEST END |
| G404 | | 11 | 12'-3" | X | RETAINING WALL-TRANS.-STIRRUP-EAST END |
| G505 | | 142 | 2'-6" | | DOWEL-VERTICAL |
| G506 | | 8 | 31'-9" | X | ABUT.-HORIZ. |
| G507 | | 8 | 26'-3" | | ABUT.-HORIZ. |
| G508 | | 6 | 14'-1" | X | RETAINING WALL-HORIZ. |
| G509 | | 5 | 5'-2" | | WINGWALL-HORIZ.-WEST END |
| G510 | | 6 | 9'-2" | | RETAINING WALL-HORIZ. |
| G511 | | 16 | 3'-2" | | RETAINING WALL-VERT. & HORIZ.-PIPE-EACH FACE |
| G512 | | 8 | 2'-2" | | RETAINING WALL-DIAGONAL-PIPE-EACH FACE |



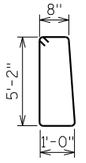

G401



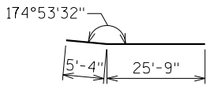

G402



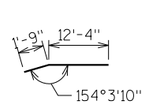

G403




G404




G506



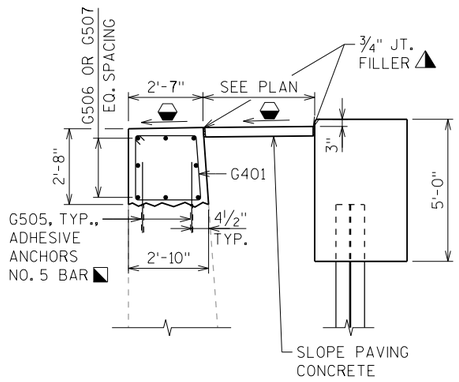

G508

## NOTES

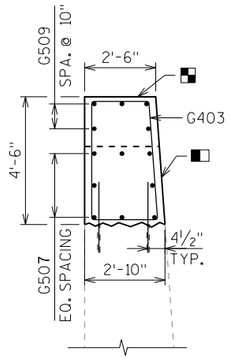
1. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)
2. SLOPE THE TOP OF THE RECONSTRUCTED EXISTING ABUTMENT AND THE SLOPE PAVING 1-INCH FROM F.F. OF NEW ABUTMENT TO THE F.F. OF EXISTING ABUTMENT

## LEGEND

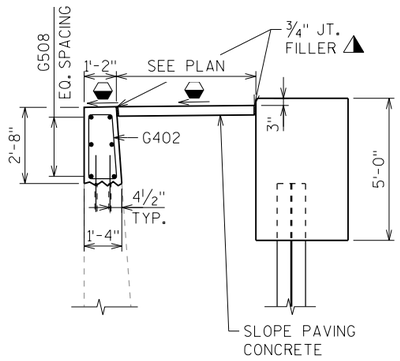
- EMBED 1'-0" MIN. INTO EXIST. CONCRETE
- MATCH EXISTING ELEVATION
- MATCH EXISTING WALL SLOPE



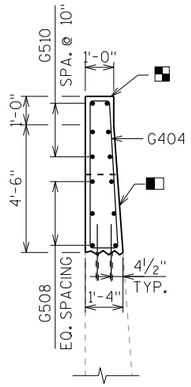

SECTION A-A




SECTION B-B




SECTION C-C

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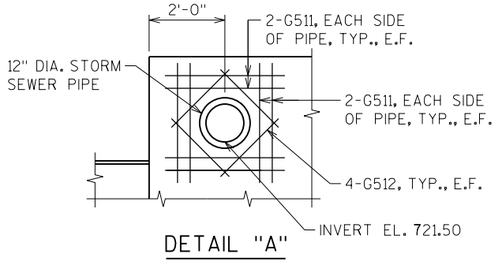


DETAIL "A"

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

EXISTING NORTH ABUTMENT RECONSTRUCTION

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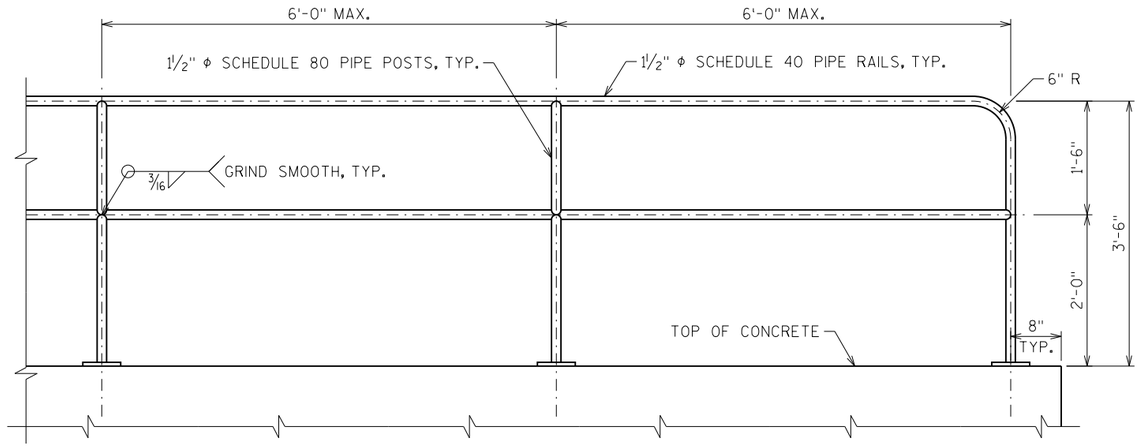
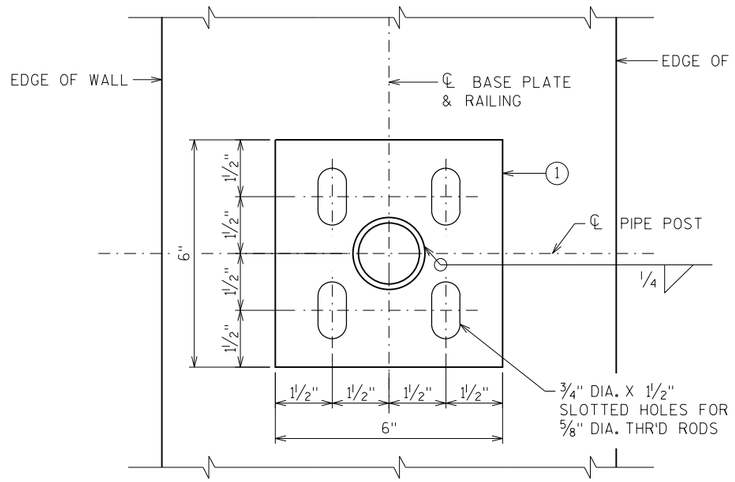
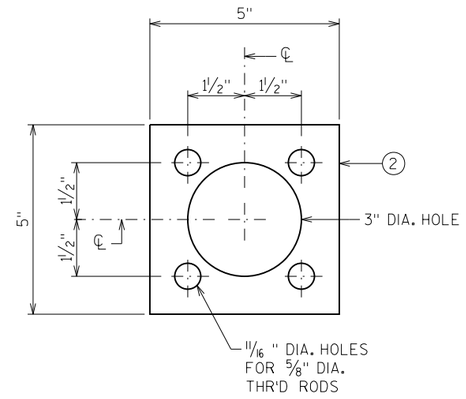


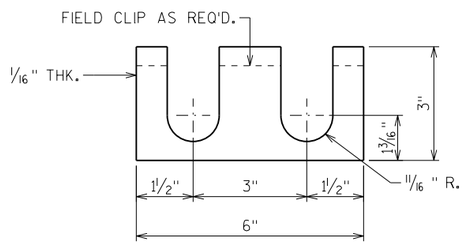

ELEVATION




TYPICAL PIPE RAIL POST BASE PLATE

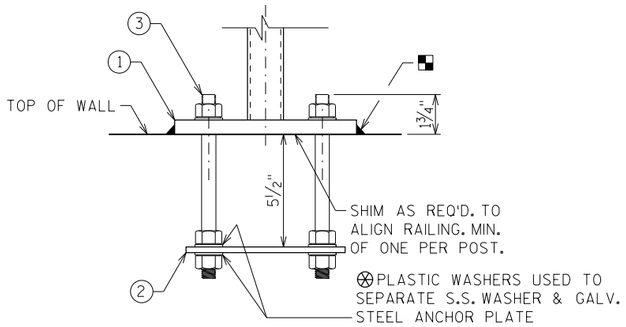



ANCHOR PLATE




TYPICAL PIPE RAIL POST SHIM PLATE

(2 SETS PER POST)




ANCHOR FOR PIPE RAIL POSTS

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

## LEGEND

(1) PLATE ⅝" X 6" X 6" WITH ¾" X 1½" SLOTTED HOLES.

(2) ¼" X 5" X 5" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D. RODS NO. 3.

(3) ⅝" DIA. X 9" LONG. TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP.
ALTERNATE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" MINIMUM IN CONCRETE FOR RAIL POSTS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

## NOTES

BID ITEM SHALL BE "RAILING PIPE", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

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

ALL PLATES AND BARS SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORS SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN ALL DIRECTION.

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

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

THE PIPE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

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

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

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-502

DRAWN BY SH | PLANS CK'D. KK

PIPE RAILING DETAILS

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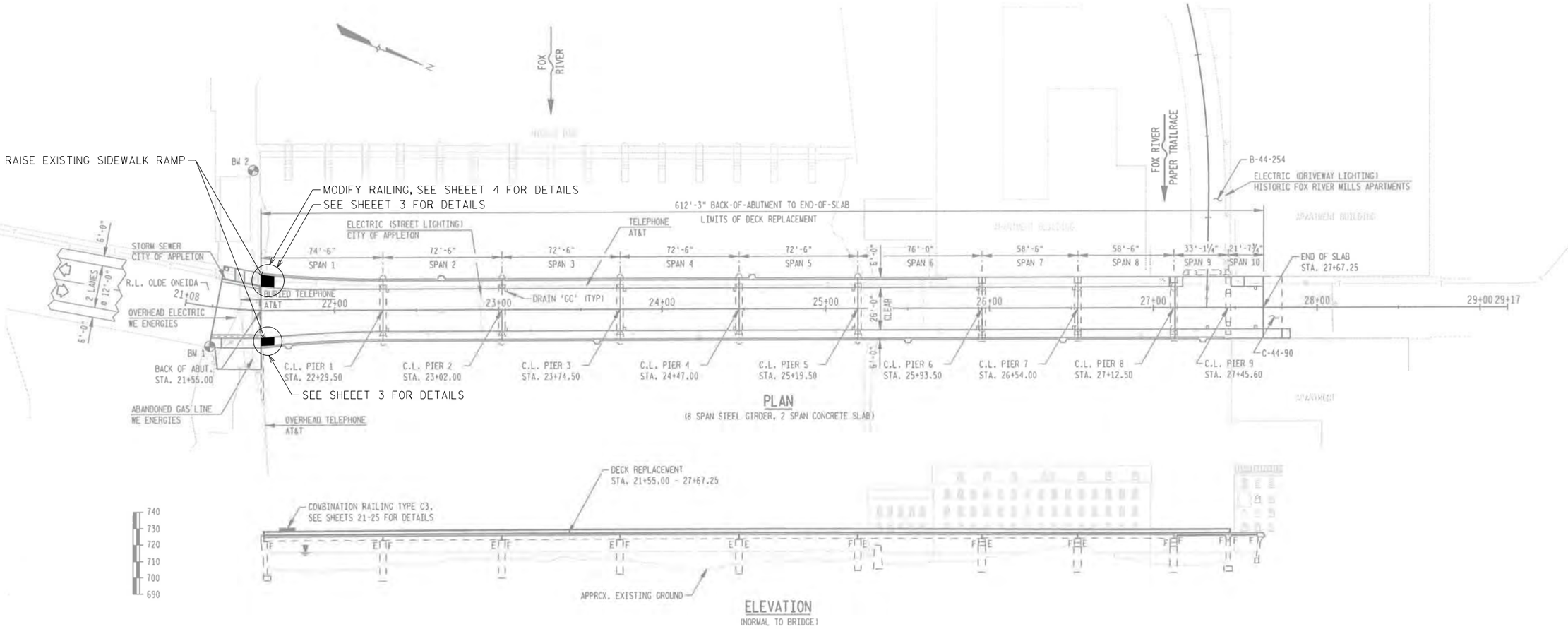


## DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY SIDEWALK _____ $F'_C$ = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 ____ $F_Y$ = 60,000 P.S.I.

## TRAFFIC DATA

OLDE ONEIDA ST.

A.D.T. = 4,300 (2012)
A.D.T. = 6,800 (2032)
DESIGN SPEED = 30 M.P.H.

## LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. RAISED SIDEWALK DETAILS
4. COMBINATION RAILING TYPE C3
5. COMBINATION RAILING MODIFICATION DETAILS

NOTES:

PLAN AND ELEVATION OF STRUCTURE B-44-886 REFERENCED FROM 2012 PLANS.

TRAFFIC DATA IS TAKEN FROM 2012 PLANS.

WISCONSIN
KAMLESH KUMAR
40742-6
CHICAGO, IL
PROFESSIONAL ENGINEER

DATE: 7/17/2025

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
AARON BONK (608) 261-0261

CONSULTANT:
KAMLESH KUMAR (312) 616-7418

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

PLANS PREPARED BY
exp U.S. Services Inc.
BUILDINGS·EARTH & ENVIRONMENT·ENERGY
INDUSTRIAL·INFRASTRUCTURE·SUSTAINABILITY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/12/25
CHIEF STRUCTURES DESIGN ENGINEER DATE

# STRUCTURE B-44-886

OLDE ONEIDA STREET BRIDGE OVER FOX RIVER

COUNTY OUTAGAMIE | ~~TOWN~~/CITY/~~VILLAGE~~ APPLETON

DESIGN SPEC.
REHABILITATION - N/A

| DESIGNED BY | SH | DESIGN CK'D. | MAF | DRAWN BY | SH | PLANS CK'D. | MAF |
|---|---|---|---|---|---|---|---|

GENERAL PLAN

SHEET 1 OF 5
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STATE PROJECT NUMBER

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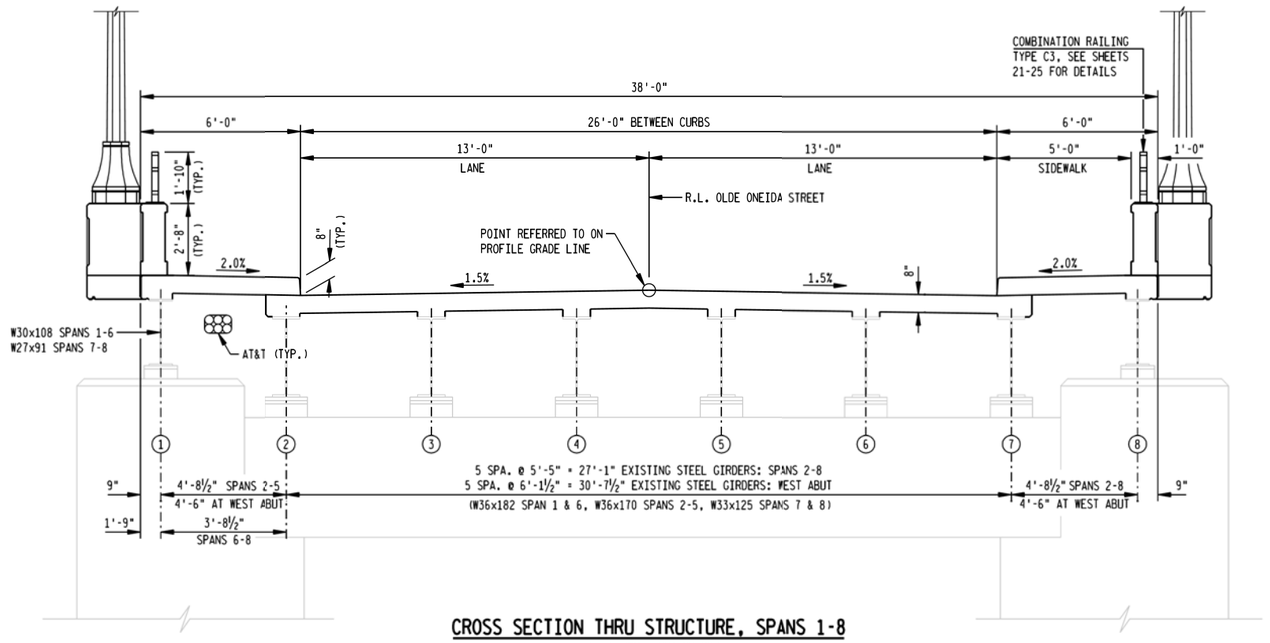
## TOTAL ESTIMATED QUANTITIES - STRUCTURE B-44-886

| BID ITEM NUMBER | BID ITEMS | UNIT | SUPER - STRUCTURE | TOTALS |
|---|---|---|---|---|
| 204.0109.S | REMOVING CONCRETE SURFACE PARTIAL DEPTH | SF | 107 | 107 |
| 502.0100 | CONCRETE MASONRY BRIDGES | CY | 1 | 1 |
| 502.4204 | ADHESIVE ANCHORS NO. 4 BAR | EACH | 24 | 24 |
| 505.0600 | BAR STEEL REINFORCEMENT HS COATED STRUCTURES | LB | 90 | 90 |
| 513.7016 | RAILING STEEL TYPE C3 | LF | 8 | 8 |




**CROSS SECTION THRU STRUCTURE, SPANS 1-8**

PIER 3 SHOWN, LOOKING NORTH

## GENERAL NOTES

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

DRAWINGS SHALL NOT BE SCALED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 1" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

INFORMATION ON DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWINGS FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1 INCH DEEP SAW CUT, UNLESS SPECIFIED OTHERWISE.

GALVANIZED WELDED WIRE FABRIC IS QUANTIFIED UNDER THE BID ITEM BAR STEEL REINFORCEMENT HS COATED STRUCTURES.

NOTE:

CROSS SECTION OF STRUCTURE B-44-886 REFERENCED FROM 2012 PLANS.

8

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| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-886

DRAWN BY SH | PLANS CK'D. MAF

CROSS SECTION & QUANTITIES

SHEET 2 OF 5

STATE PROJECT NUMBER

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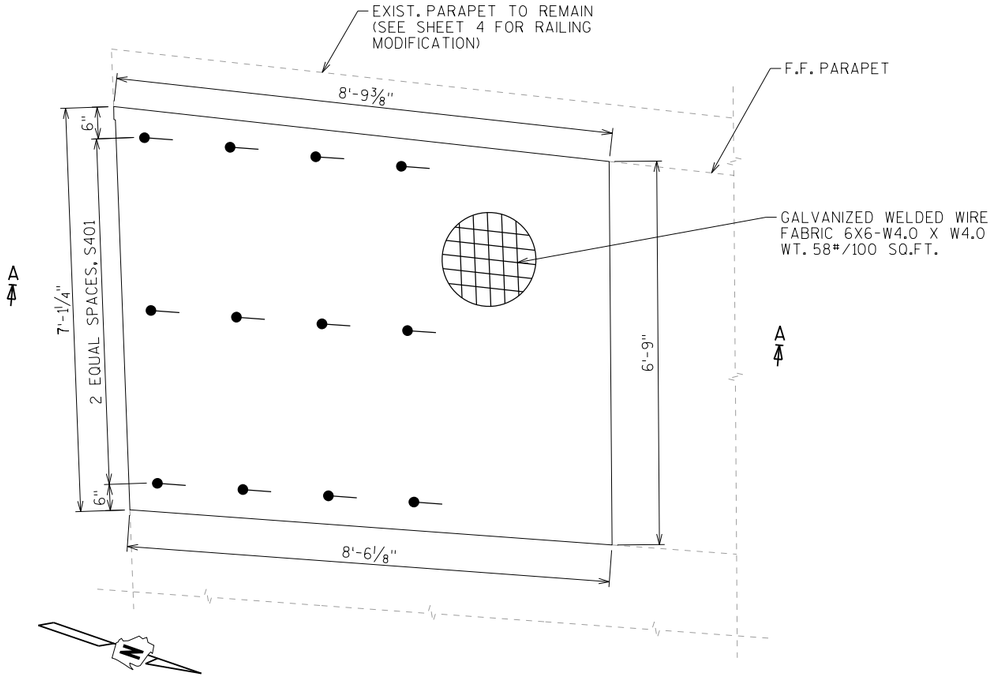
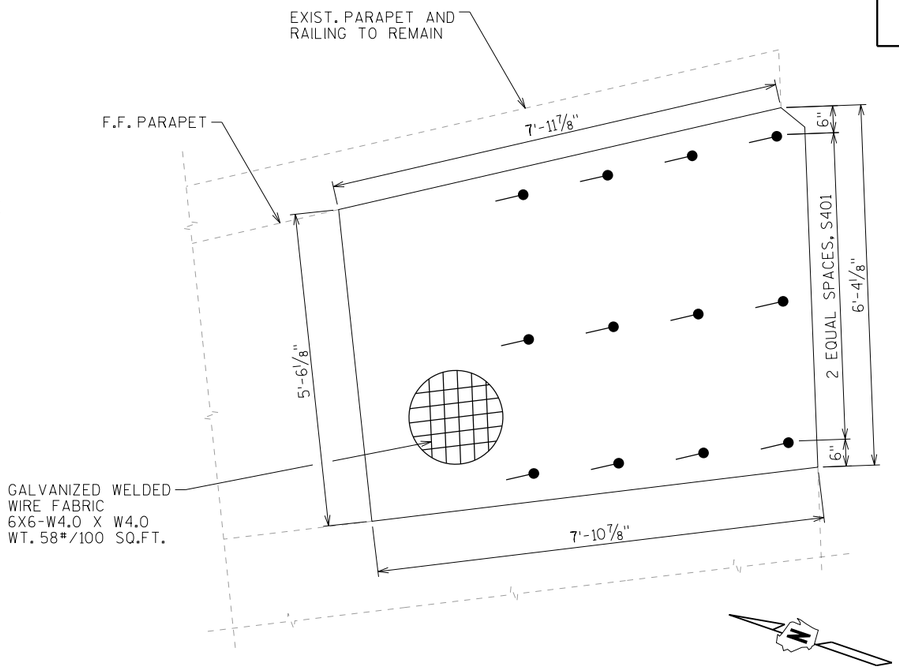
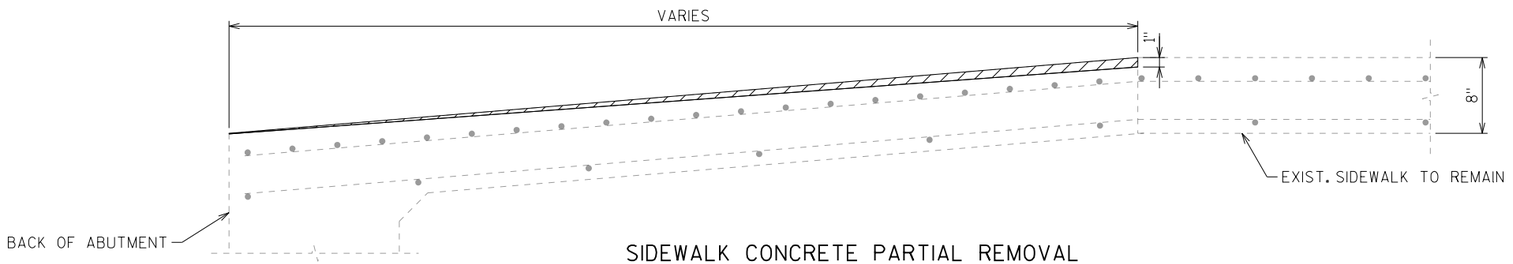



WEST SIDEWALK PLAN

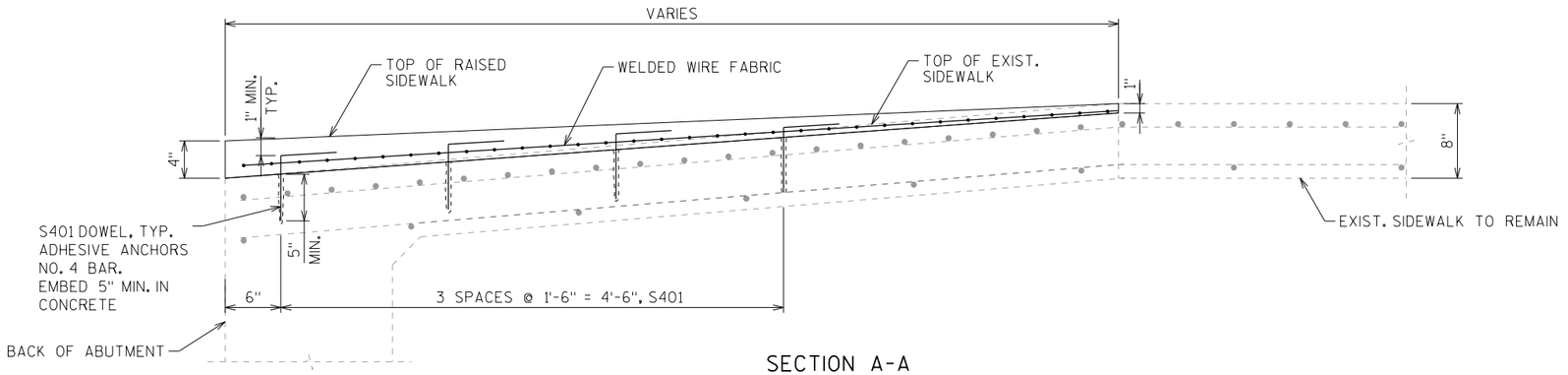



EAST SIDEWALK PLAN




SIDEWALK CONCRETE PARTIAL REMOVAL

WEST SIDEWALK SHOWN, EAST SIDEWALK SIMILAR




SECTION A-A

WEST SIDEWALK SHOWN, EAST SIDEWALK SIMILAR

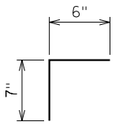
LEGEND

CONCRETE REMOVAL

F.F. FRONT FACE

BILL OF BARS

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | LOCATION |
|---|---|---|---|---|---|
| S401 | X | 24 | 1'-0" | X | SIDEWALK-VERT.-DOWEL |




S401

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-886

DRAWN BY SH | PLANS CK'D. MAF

RAISED SIDEWALK DETAILS

SHEET 3 OF 5

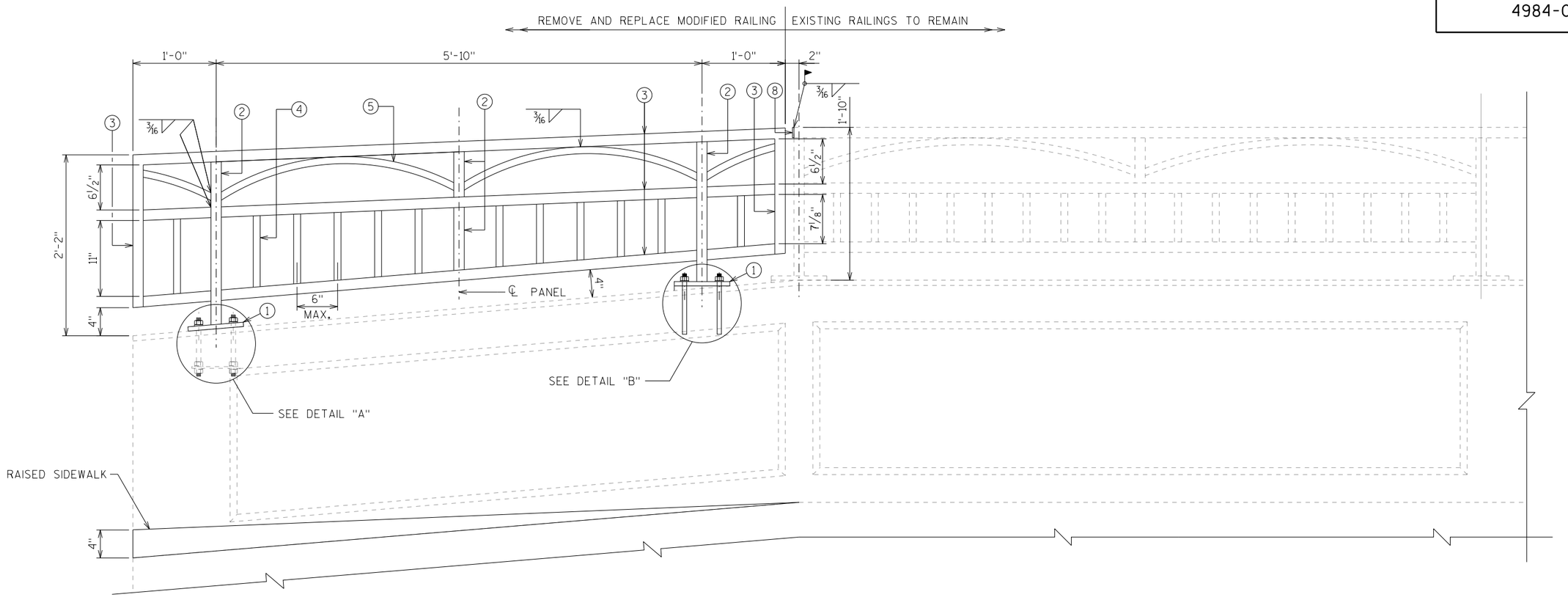
117

8

8

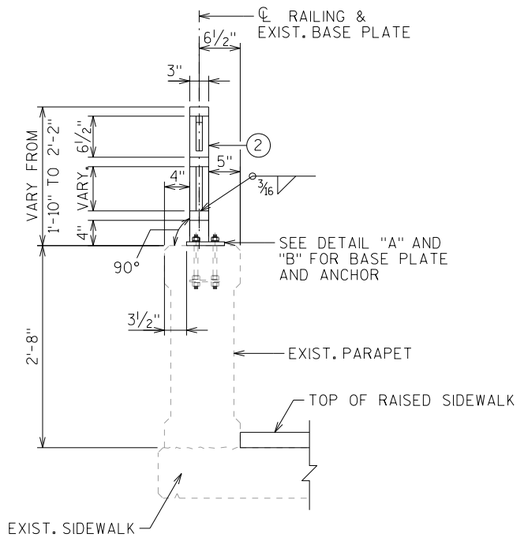
STATE PROJECT NUMBER

4984-01-79

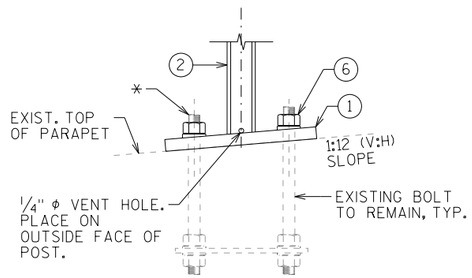



ELEVATION OF PARAPET - WEST SIDE

(LOOKING WEST)

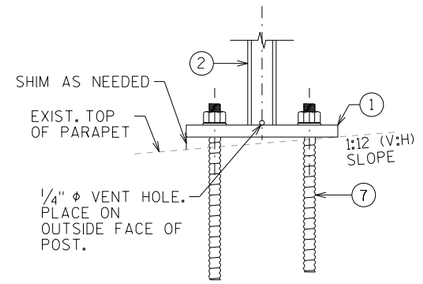



SECTION THRU PARAPET ON SIDEWALK




DETAIL "A"

* PRIOR TO FABRICATION, VERIFY LOCATION AND ORIENTATION OF EXISTING ANCHOR BOLTS IN FIELD AND USE IT AS TEMPLATE FOR DRILLING HOLES IN THE BASE PLATE. USE BEVELED WASHERS OR SHIM PLATES AS NEEDED.




DETAIL "B"

NOTE:

COST OF EXISTING RAILING REMOVAL SHALL INCLUDED IN THE COST OF RAILING STEEL TYPE C3.

EXISTING ANCHOR BOLTS SHALL BE CLEANED AND REUSED IN NEW CONSTRUCTION.

SEE SHEET 5 FOR LEGEND.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-886

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COMBINATION RAILING TYPE C3

SHEET 4 OF 5

STATE PROJECT NUMBER

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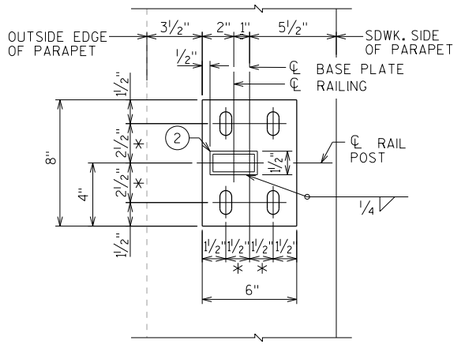
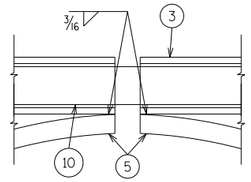
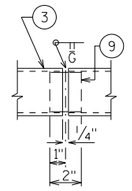



## TYPICAL RAIL POST BASE PLATE

* PRIOR TO FABRICATION, VERIFY LOCATION AND ORIENTATION OF EXISTING ANCHOR BOLTS IN FIELD AND USE IT AS TEMPLATE FOR DRILLING HOLES IN THE BASE PLATE.

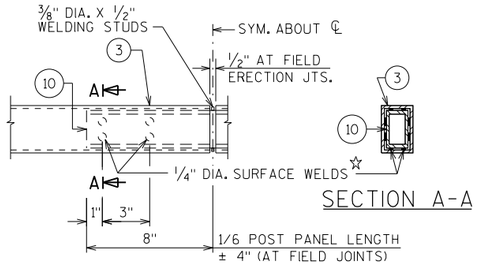



## CURVED MEMBER JOINT DETAIL




## SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)




## SECTION A-A

## FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

## LEGEND

(1) PLATE ⅝" X 6" X 8" WITH ¾" X 1½" SLOTTED HOLES.

(2) STRUCTURAL TUBING 3" X 1½" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 3.

(3) STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 2. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(4) BAR 1" X 1" PICKETS. WELD TO NO. 3. (SPACE AT 6" MAX. ℄ TO ℄ SPACING). PLACE VERTICAL.

(5) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 2 & 3.

(6) NUT AND WASHER FOR ⅝" X 7½" LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS.

(7) 4-TYPE 316 STAINLESS STEEL CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POST. ADHESIVE SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

(8) PLATE 3/16" X 1½" X 3". WELD IN THE FIELD WITH EXISTING STRUCTURAL TUBE.

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

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

## RAILING NOTES

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

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

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

ALL 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.

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

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

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| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-44-886

DRAWN BY SH | PLANS CK'D. MAF

COMBINATION RAILING MODIFICATION DETAIL

SHEET 5 OF 5

OLDE ONEIDA STREET

| 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 NOTE 1 | 1.25 | NOTE 4 |
| 18+75 | 0 | 76.20 | 32.33 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19+00 | 25 | 83.21 | 32.33 | 0.00 | 74 | 30 | 0 | 74 | 0 | 44 |
| 19+50 | 50 | 72.20 | 33.17 | 1.77 | 144 | 61 | 2 | 218 | 3 | 125 |
| 19+87 | 37 | 72.46 | 42.17 | 0.00 | 99 | 52 | 1 | 317 | 4 | 170 |
| 21+35 | 148 | 71.88 | 45.17 | 0.00 | 396 | 239 | 0 | 713 | 4 | 327 |
| 21+41 | 6 | 77.05 | 45.17 | 0.00 | 17 | 10 | 0 | 730 | 4 | 334 |
| 21+55 | 14 | 70.15 | 45.17 | 0.16 | 38 | 23 | 0 | 768 | 4 | 349 |

| | |
|---|---|
| 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 |
| 4 - MASS ORDINATE | [(CUT - SALVAGED PAVT) - (FILL * FILL FACTOR)]; POSITIVE INDICATES AN EXCESS OF MATERIAL |

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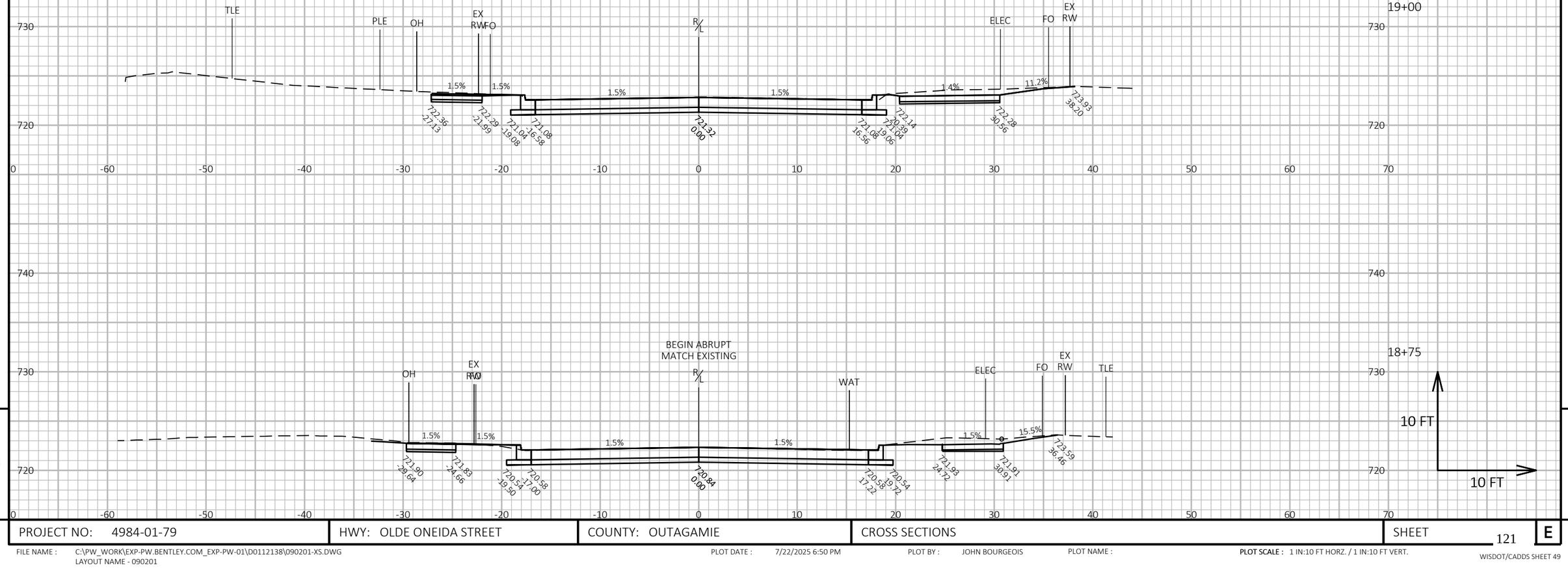
| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | EARTHWORK DATA | SHEET 120 | E |
|---|---|---|---|---|---|

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| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | CROSS SECTIONS | SHEET 121 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\090201-XS.DWG
LAYOUT NAME - 090201

PLOT DATE : 7/22/2025 6:50 PM

PLOT BY : JOHN BOURGEOIS

PLOT NAME :

**PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | CROSS SECTIONS | SHEET 122 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\090201-XS.DWG
LAYOUT NAME - 090202

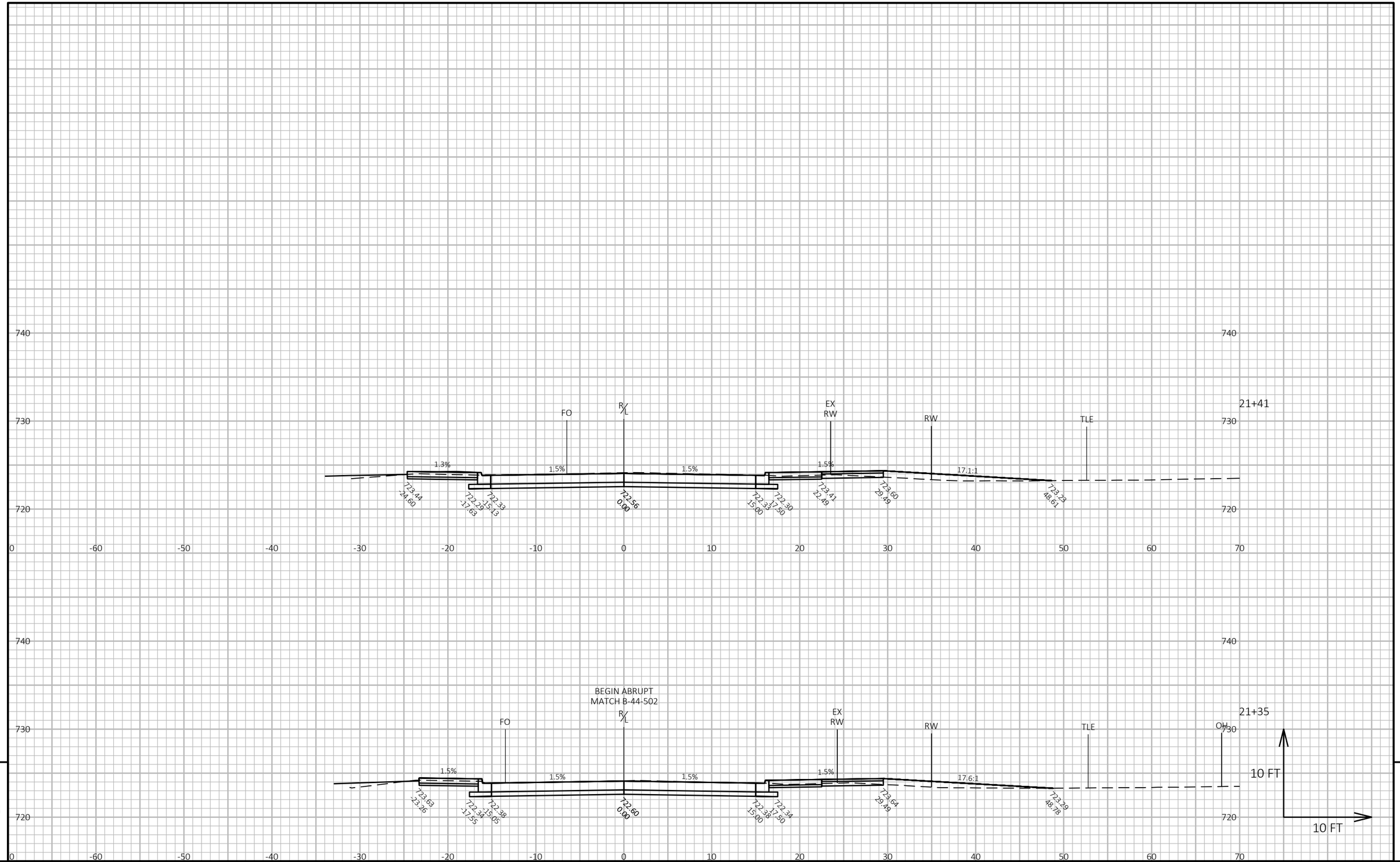
PLOT DATE : 7/22/2025 6:50 PM

PLOT BY : JOHN BOURGEOIS

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

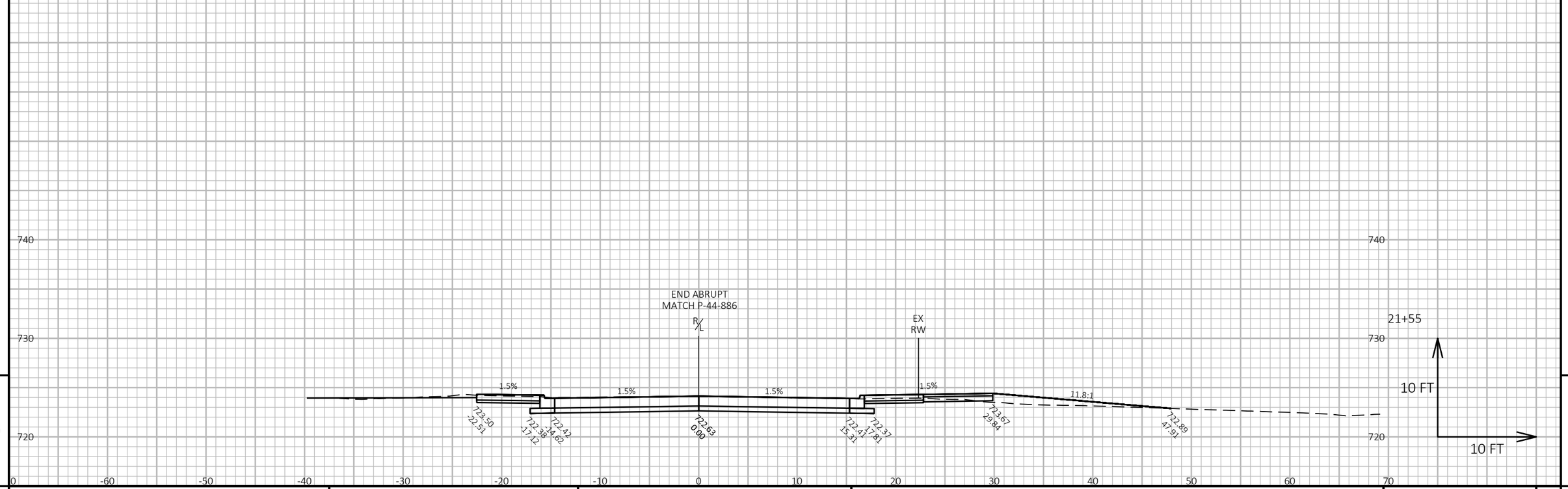



| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | CROSS SECTIONS | SHEET 123 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\090201-XS.DWG
LAYOUT NAME - 090203

PLOT DATE : 7/22/2025 6:51 PM PLOT BY : JOHN BOURGEOIS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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| PROJECT NO: 4984-01-79 | HWY: OLDE ONEIDA STREET | COUNTY: OUTAGAMIE | CROSS SECTIONS | SHEET 124 | E |
|---|---|---|---|---|---|

FILE NAME : C:\PW_WORK\EXP-PW.BENTLEY.COM_EXP-PW-01\D0112138\090201-XS.DWG
LAYOUT NAME - 090204

PLOT DATE : 7/22/2025 6:51 PM PLOT BY : JOHN BOURGEOIS PLOT NAME :

**PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

*Wisconsin Department of Transportation*

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through innovation and exceptional service.

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