

PROJECT ID: 4984-20-60
WITH: N/A

COUNTY: OUTAGAMIE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	5	Plan
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans

TOTAL SHEETS = 36



DESIGN DESIGNATION

A.A.D.T.	2004	=	19,600
A.A.D.T.	2028	=	38,000
D.H.V.		=	3840
D.D.		=	58.42
T.		=	5.4%
DESIGN SPEED		=	35 MPH
ESALS		=	5,524,640

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS

REFERENCE LINE

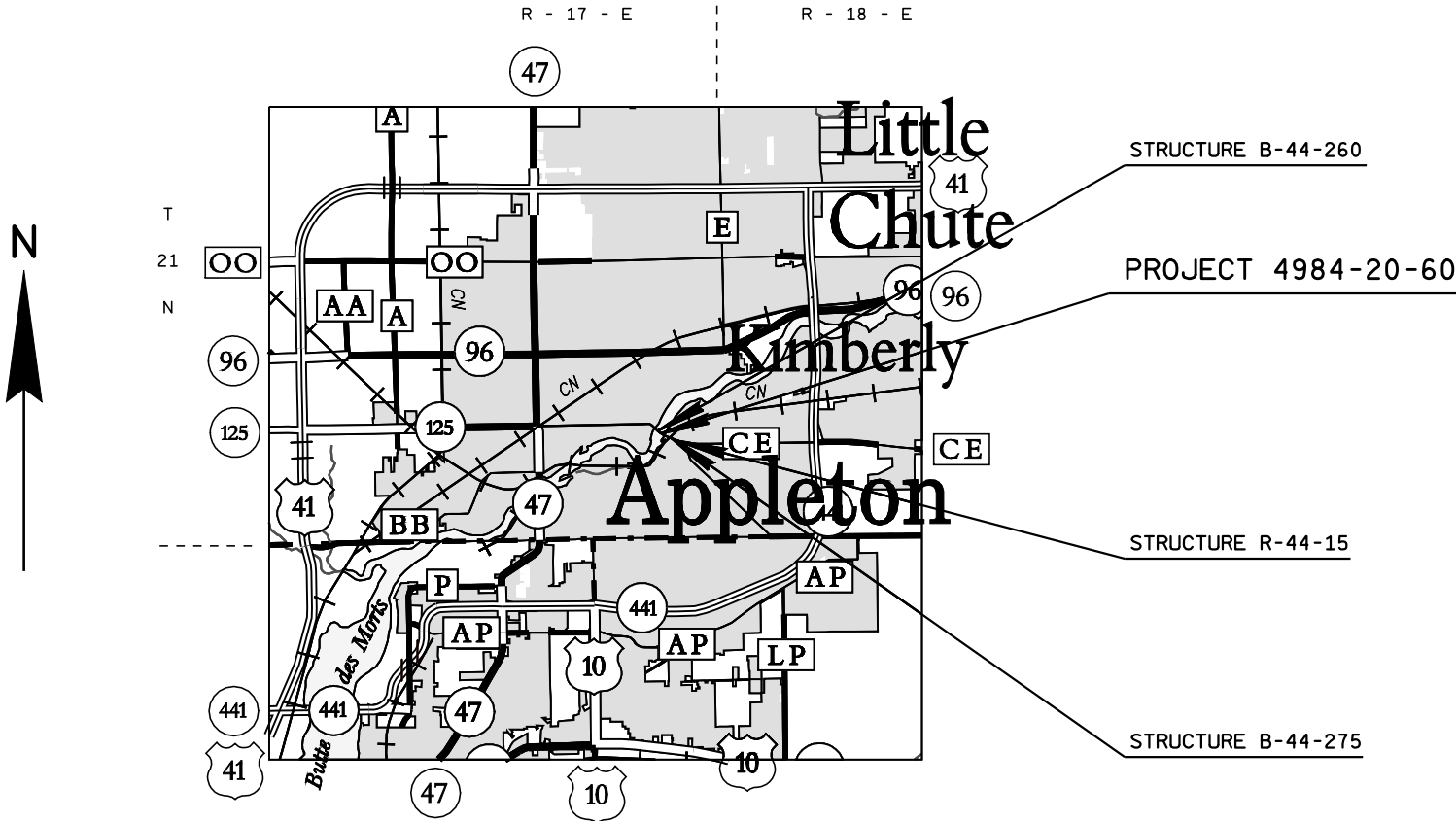
COMBUSTIBLE FLUIDS

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
STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT
COLLEGE AVENUE, CITY OF APPLETON
FOX RIVER BRIDGE RAILING REPLACE
LOCAL STREET
OUTAGAMIE COUNTY

STATE PROJECT NUMBER
4984-20-60



LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.470 MI.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4984-20-60	—	—

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	_____
Designer	T. FENDRICK
Project Manager	C. KAROW
Regional Examiner	_____
Regional Supervisor	R. ROOYAKKERS
C.O. Examiner	_____

APPROVED FOR THE DEPARTMENT

DATE: 1-30-13 _____
(Signature)

E

UTILITIES

CITY OF APPLETON DEPT. OF PUBLIC WORKS
100 NORTH APPLETON STREET
APPLETON, WI 54911
ATTN: MARK LAHAY
PHONE: 920-832-6474

CANADIAN NATIONAL RAILWAY CONTACTS

MAIN RAILROAD CONTACT:

JACKIE MACEWICZ
MANAGER PUBLIC WORKS
1625 DEPOT STREET
STEVENS POINT, WI 54481
PHONE: 715-345-2503
FAX: 715-345-2534
EMAIL: JACKIE.MACEWICZ@CN.CA

RAILROAD FLAGGING CONTACT:

MARY ELLEN CARMODY
AUDIT OFFICER
ADMINISTRATION SERVICE CENTER
2800 LIVERNOIS, SUITE 330
TROY, MI 48083
PHONE: 248-740-6227
FAX: 248-740-6036
EMAIL: MARYELLEN.CARMODY@CN.CA

OTHER CONTACTS

DEPARTMENT OF NATURAL RESOURCES
ATTN: MATTHEW SCHAEVE
2984 SHAWANO AVE.
GREEN BAY, WI 54313-6727
PHONE: 920-662-5472
EMAIL: MATTHEW.SCHAEVE@WISCONSIN.GOV

US ARMY CORPS OF ENGINEERS
ATTN: ANN NYE
GREEN BAY FIELD OFFICE
211 N. BROADWAY, SUITE 221
GREEN BAY, WI 54303
PHONE: 920-448-2824
EMAIL: ANN.M.NYE@USACE.ARMY.MIL

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN IN THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHING THE PROJECT AREA THAT ARE NOT SHOWN.

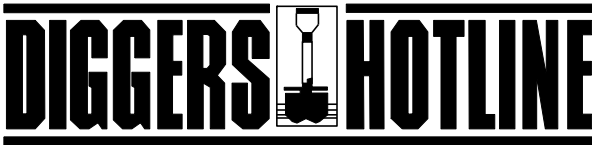
NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL RAILING DIMENSIONS IN THE FIELD PRIOR TO FABRICATION.

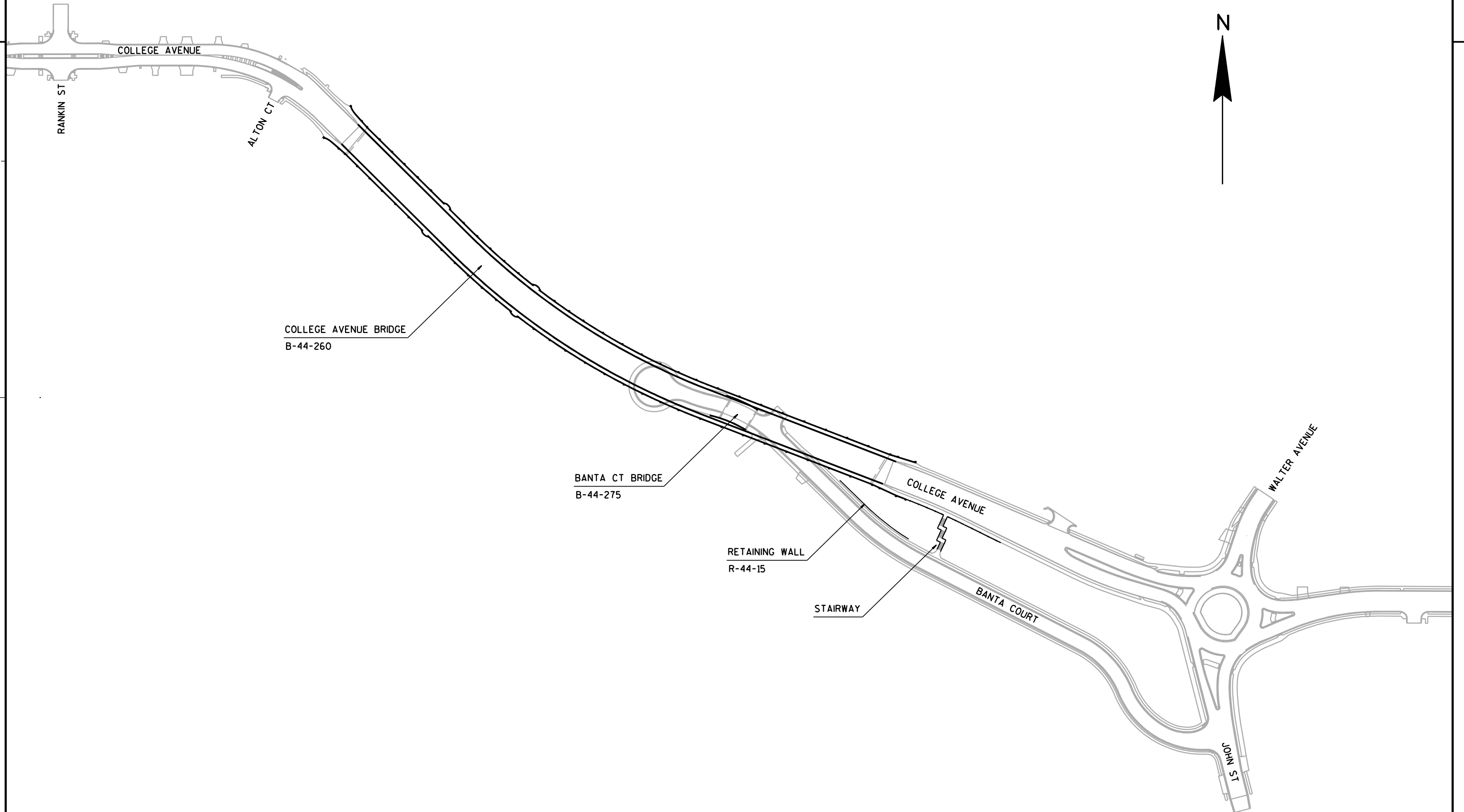
DISTURBED AREAS THAT WERE PREVIOUSLY LAWNS SHALL BE SEEDED WITH SEED MIXTURE NO. 20.

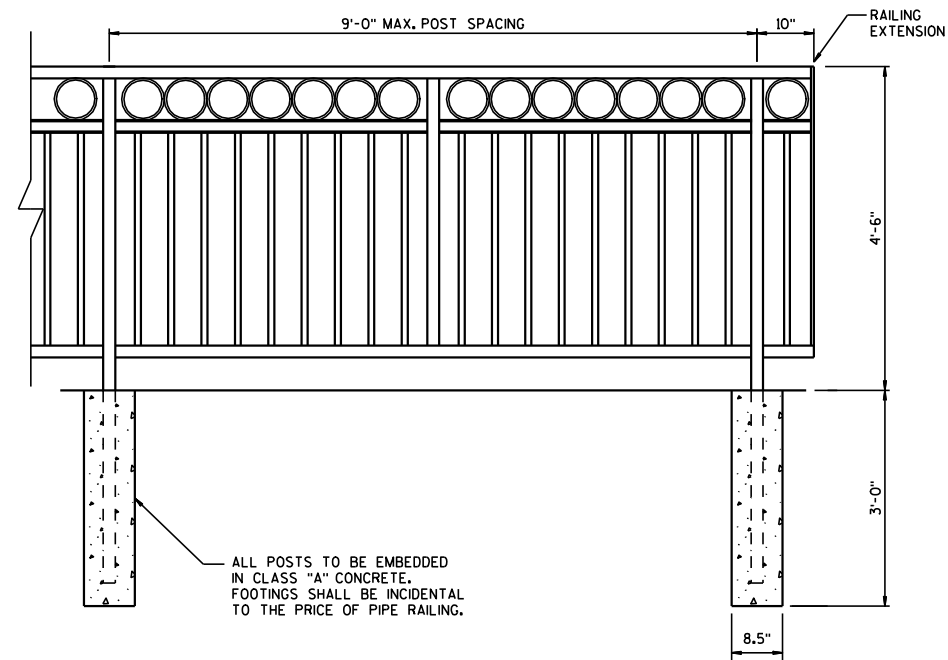
EMERGENCY CONTACT NUMBERS FOR WE ENERGIES

ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-662-4797
GAS 24 HOUR EMERGENCY SERVICE: 1-800-261-5325



Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

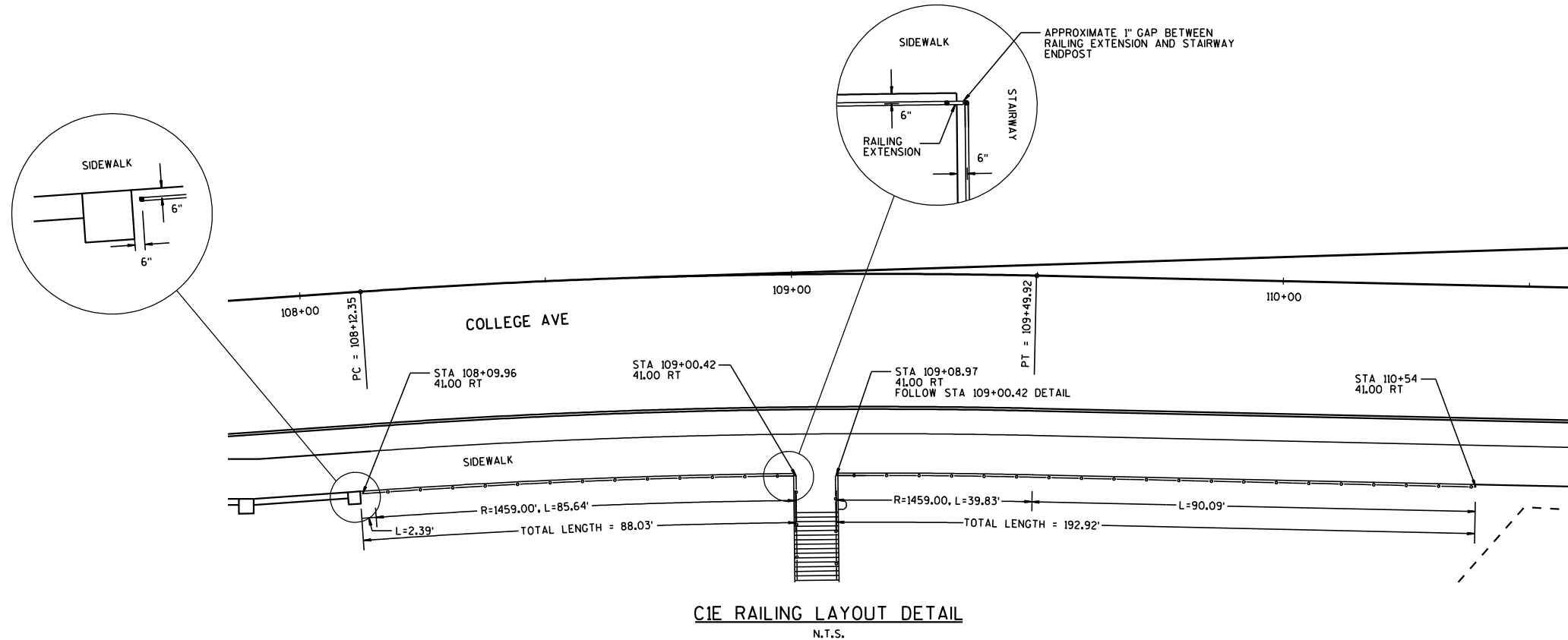


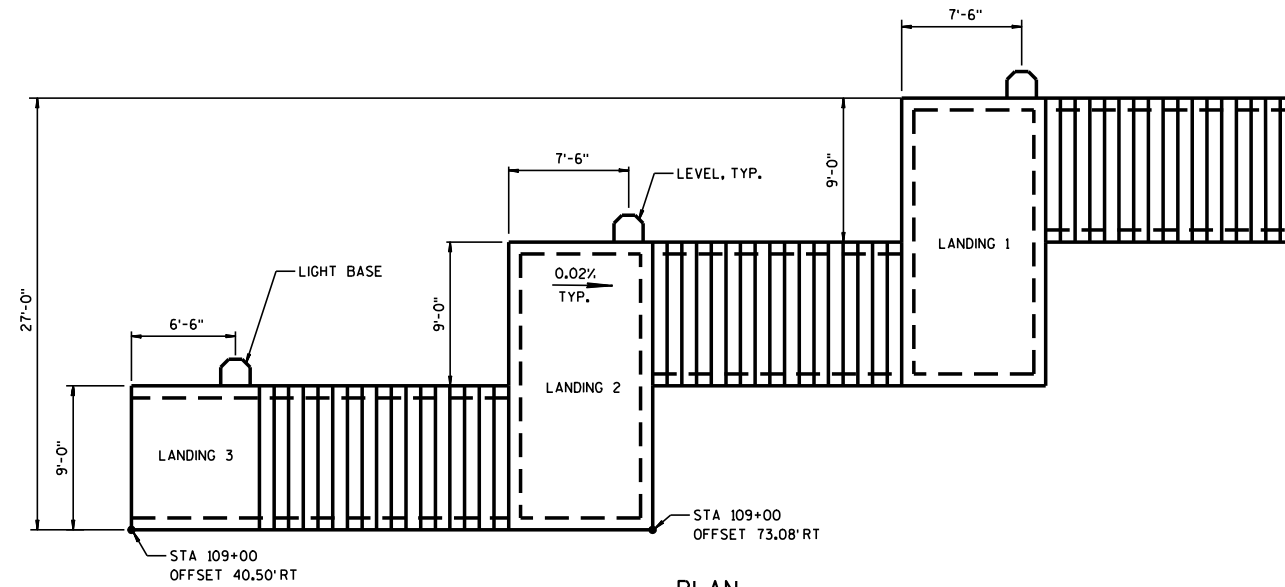
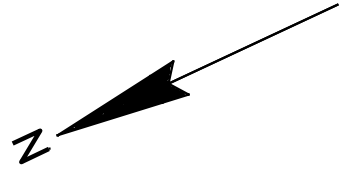


RAILING STEEL TYPE C1E GALVANIZED AND PAINTED, SIDEWALK

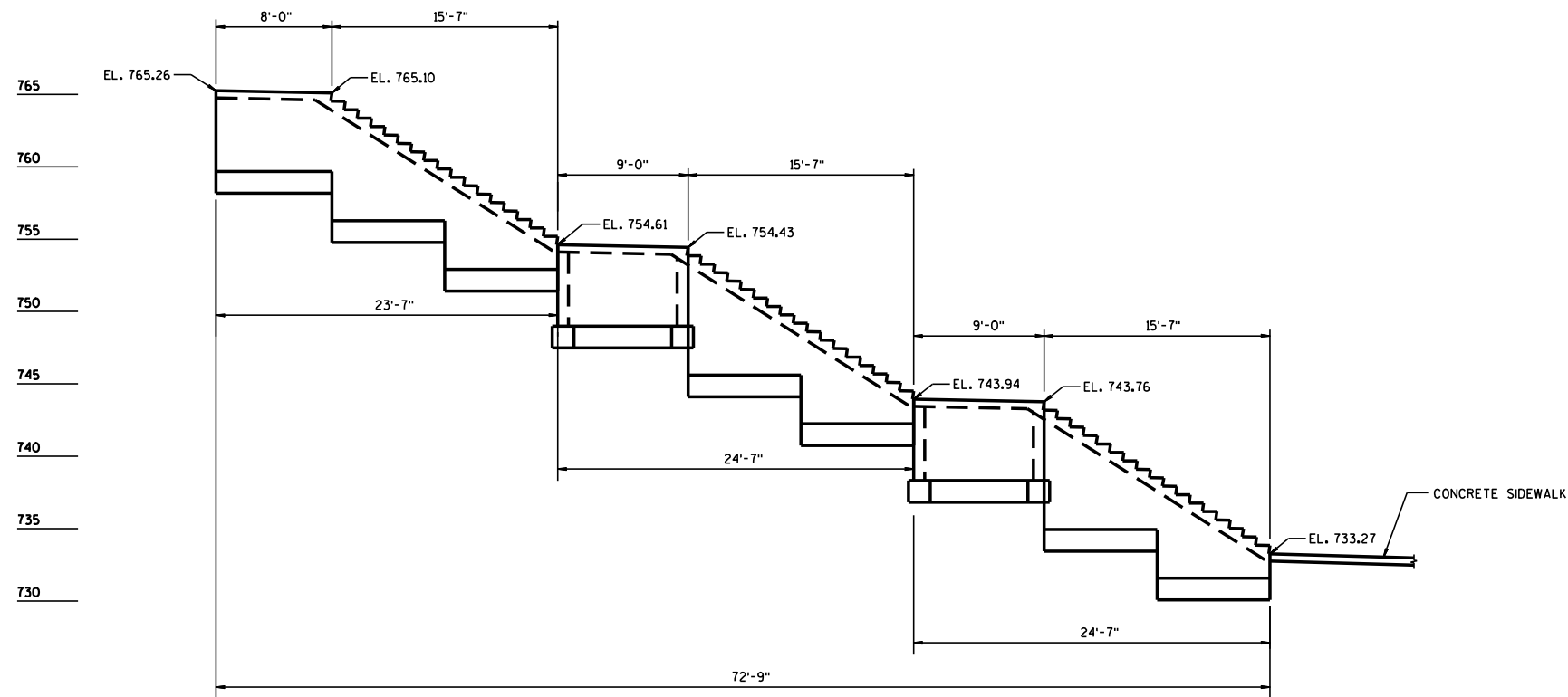
STA 108+09.96 TO STA 109+00.42
STA 109+08.97 TO STA 110+54

NOTE:
CONTRACTOR SHALL FIELD VERIFY RAILING MEASUREMENTS PRIOR TO MANUFACTURING.





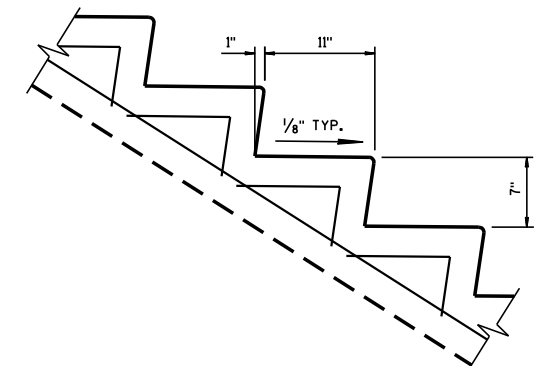
PLAN



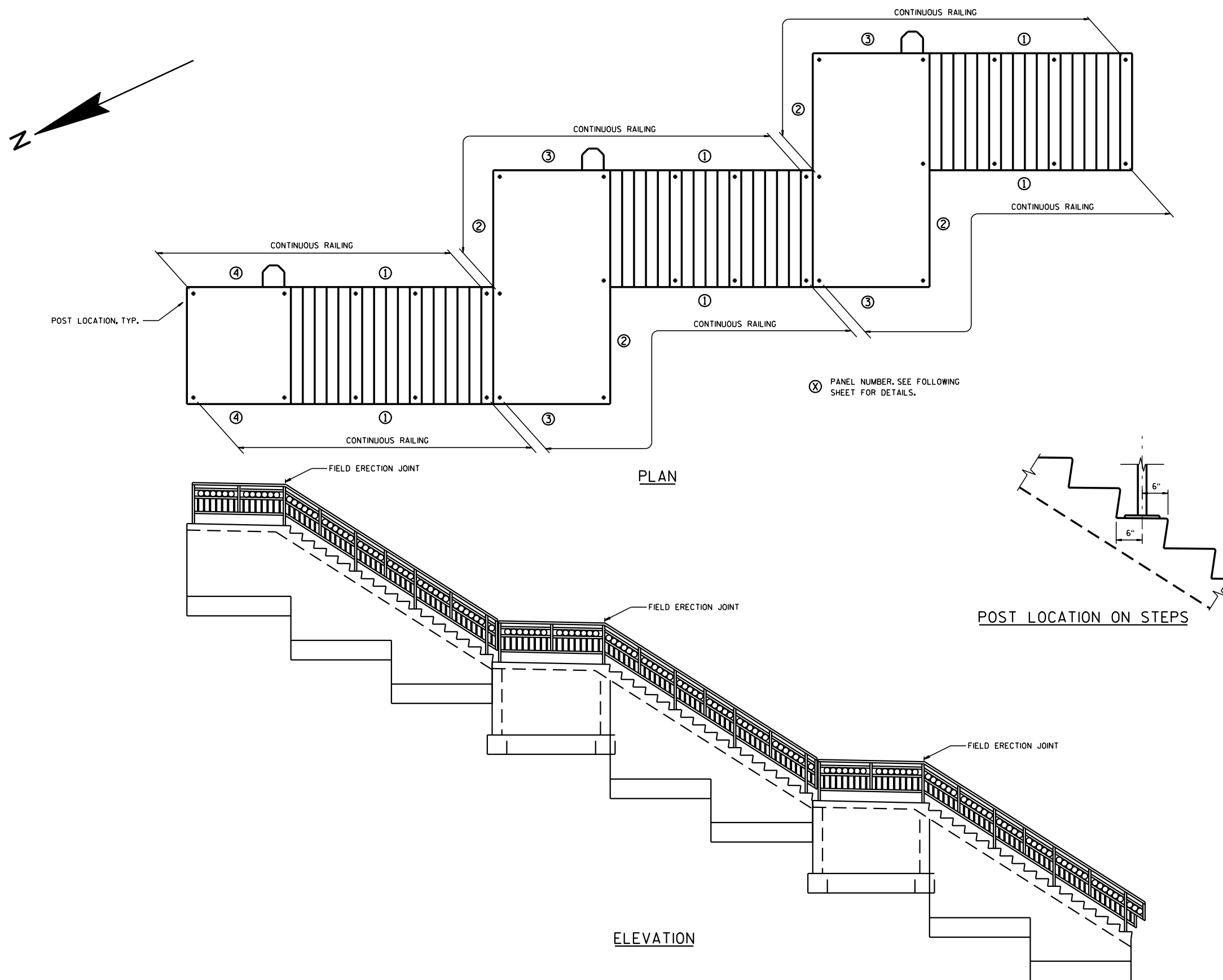
ELEVATION

GENERAL NOTES

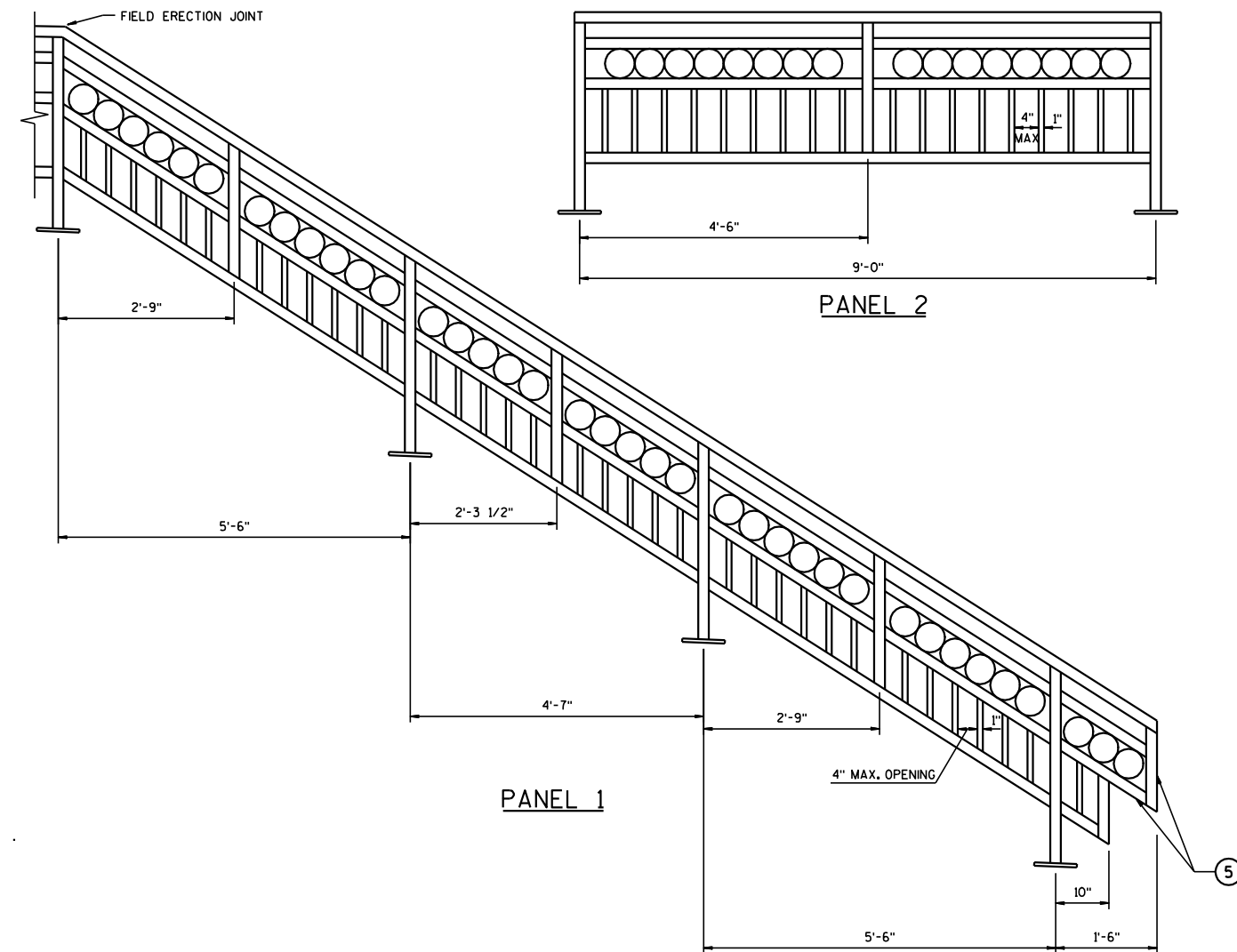
DRAWINGS SHALL NOT BE SCALED.



PART SECTION THRU STEPS



GENERAL NOTES
DRAWINGS SHALL NOT BE SCALED.



NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE CID GALVANIZED AND PAINTED, STAIRWAY", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.

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.

NO. 1 AND NO. 7 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B (NO. 4, NO. 5, AND NO. 6).

EXISTING ANCHORS SHALL BE LEFT IN PLACE AND REUSED.

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.

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.

AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 3) & SHIMS SHALL BE GALVANIZED AND RECEIVE A TWO-COAT PAINT SYSTEM PER WISDOT STANDARD SPECS SECTIONS 506, 513 AND 517 AND THE SPECIAL PROVISIONS ARTICLE 9. SHIMS SHALL BE GALVANIZED AND GIVEN ONE COAT OF PAINT. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038, BLACK.

$\frac{1}{4}$ " ϕ VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS AND NEAR BOTTOM OF ANCHOR POSTS TO FACILITATE 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.

PANEL 2

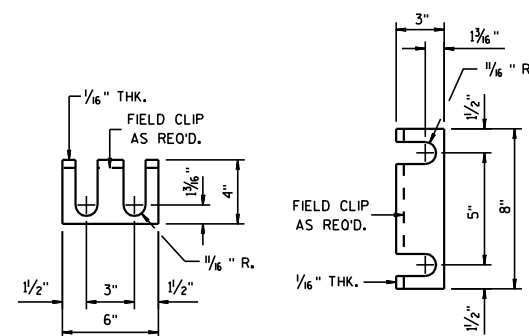
PANEL 3

PANEL 4

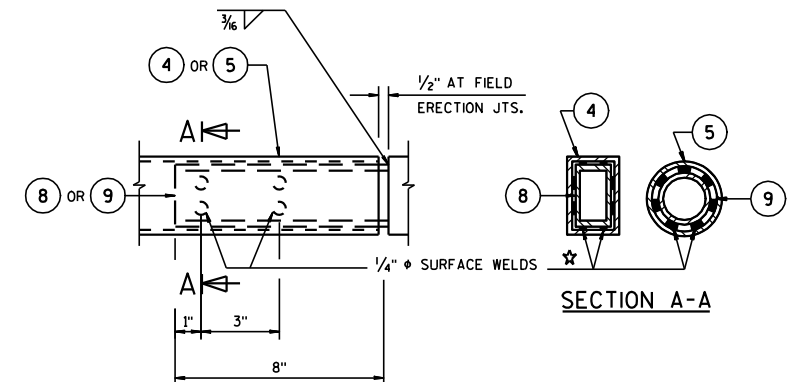
PANEL 1

LEGEND

- ① PLATE $\frac{5}{8}$ " X 6" X 8" WITH $\frac{3}{4}$ " X $\frac{1}{2}$ " SLOTTED HOLES.
- ③ $\frac{5}{8}$ " DIA. X $6\frac{1}{2}$ " LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), $\frac{5}{8}$ " ϕ , MINIMUM PULLOUT CAPACITY OF 15 KIPS. EMBED A MIN. OF 5")
- ④ STRUCTURAL TUBING 2" X 2" X $\frac{3}{16}$ ". PLACE VERTICAL. WELD TO NO. 1 & 5.
- ⑤ 2" ϕ STANDARD PIPE RAIL (2.375" O.D.) WELD TO NO. 4.
- ⑥ STRUCTURAL TUBING 1" X $\frac{1}{2}$ " X $\frac{1}{8}$ " PICKETS. WELD TO NO. 4. SPACE AT 5" MAX. ϕ TO ϕ SPACING. PLACE VERTICAL.
- ⑦ 4" ϕ SCH. 40 PIPE ($4\frac{1}{2}$ " O.D.) $\frac{1}{2}$ " LONG SLICES. WELD TO NO. 4.
- ⑧ RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. (8" @ FIELD ERECTION JTS.)
- ⑨ CIRCULAR SLEEVE FABRICATED FROM $\frac{1}{2}$ " ϕ STANDARD PIPE. (8" @ FIELD ERECTION JTS.)

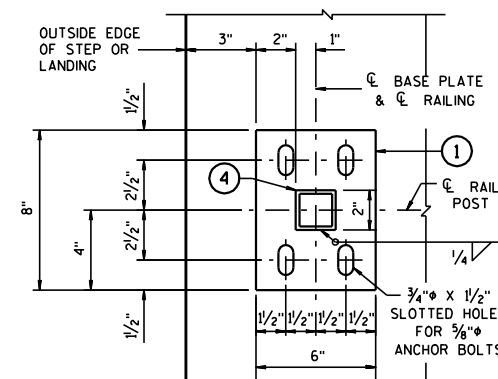


RAIL POST SHIM DETAIL
(2 SETS PER POST)

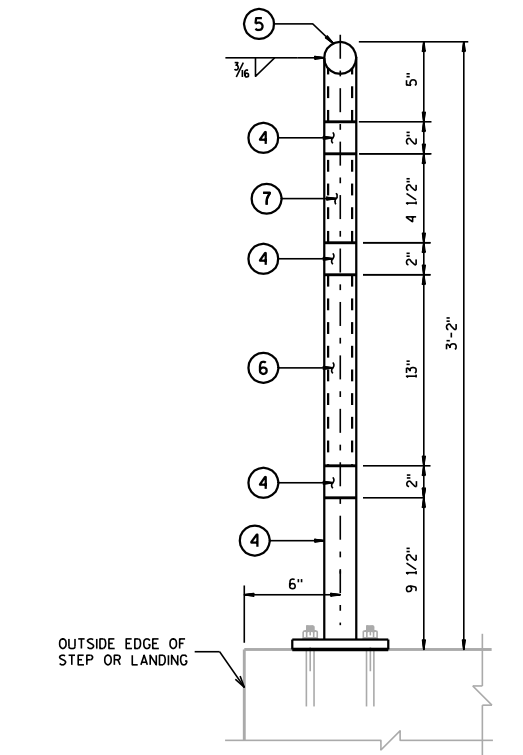


FIELD ERECTION JOINT DETAIL

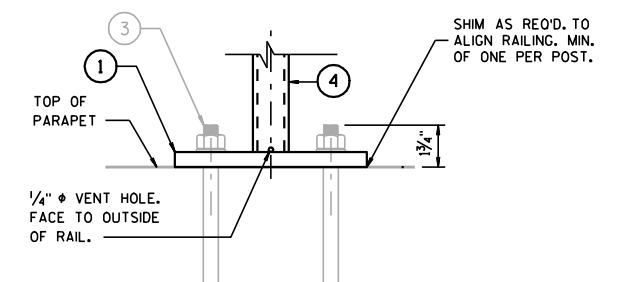
★ MIN. $\frac{5}{8}$ " FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



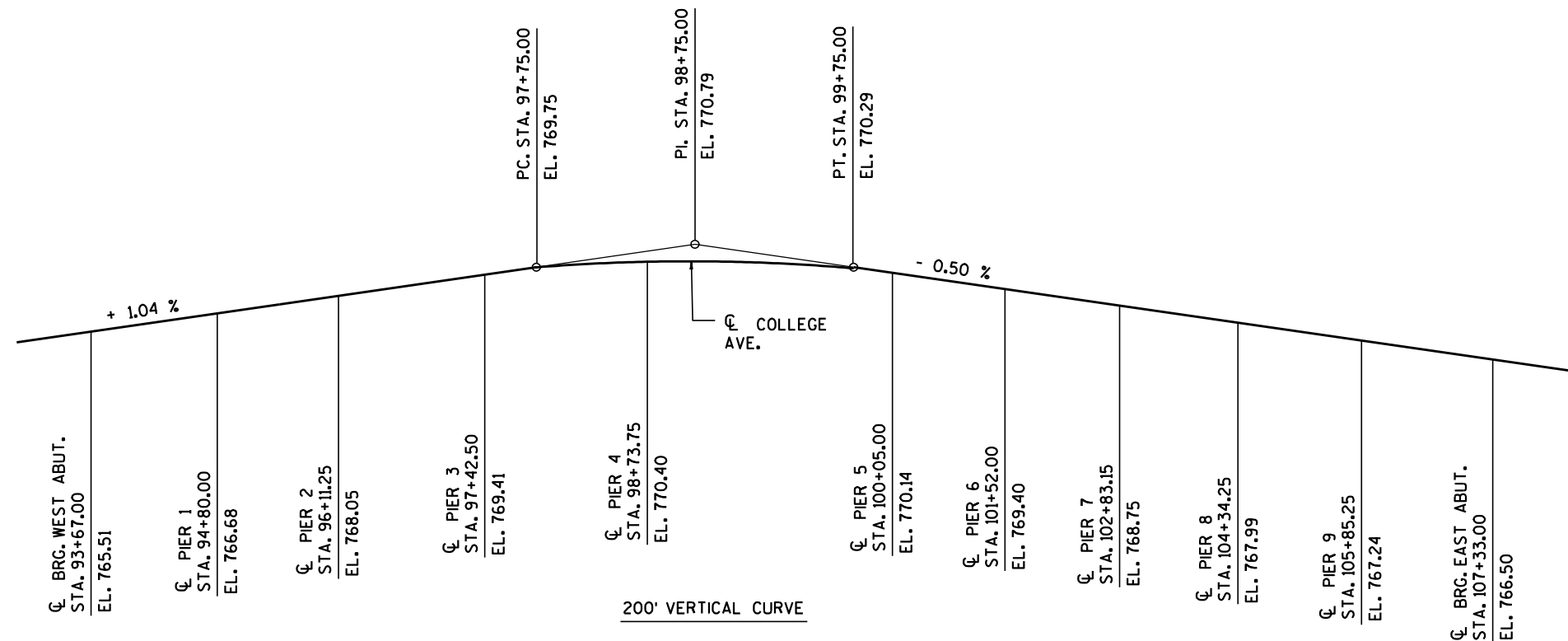
TYPICAL RAIL POST BASE PLATE



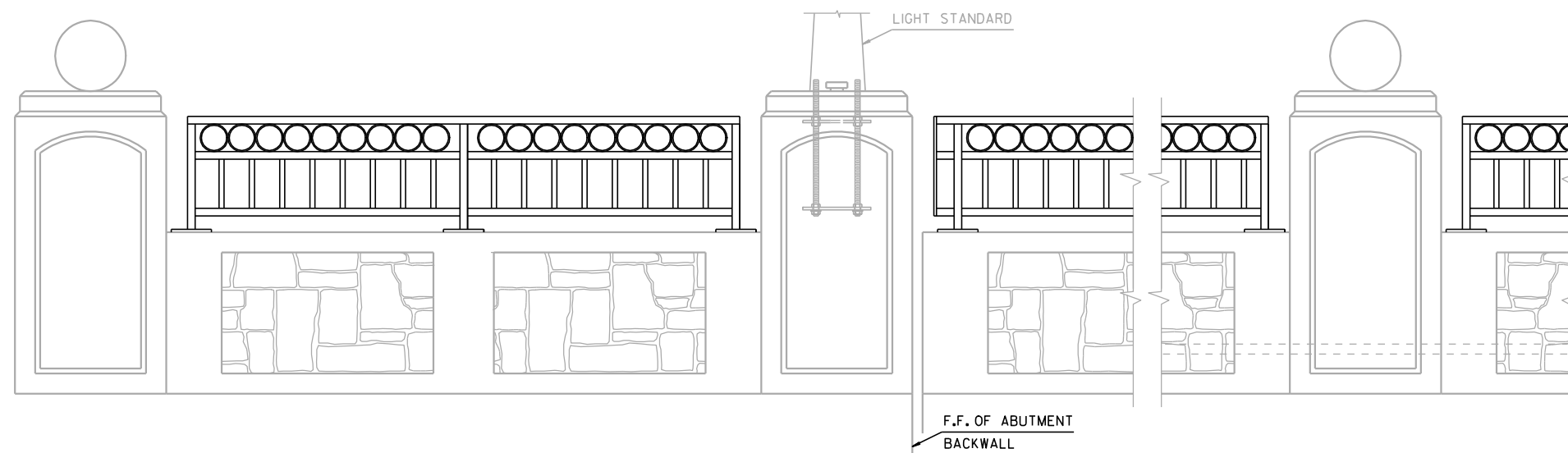
SECTION THRU RAILING



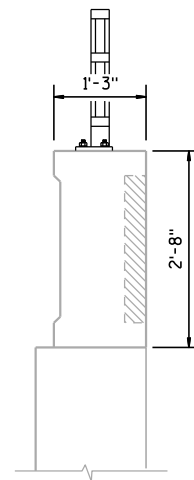
ANCHOR BOLTS FOR RAIL POSTS



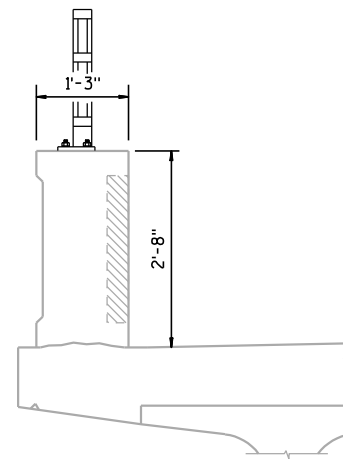
PROFILE GRADE LINE COLLEGE AVENUE
B-44-260



PART ELEVATION
 (WING 2 SHOWN, WING 1 SIMILAR)
 (WING 4 SHOWN, WING 3 SIMILAR)

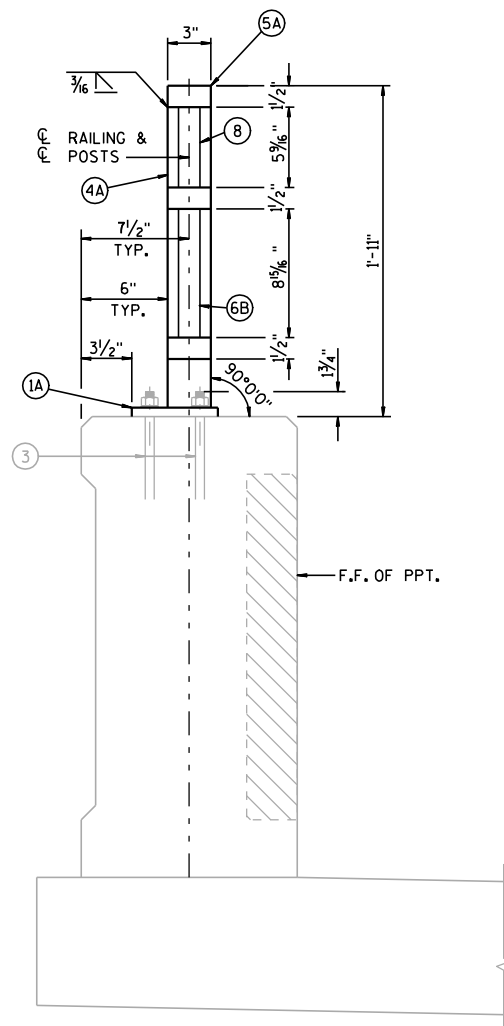


WING SECTIONS
 AT PARAPET

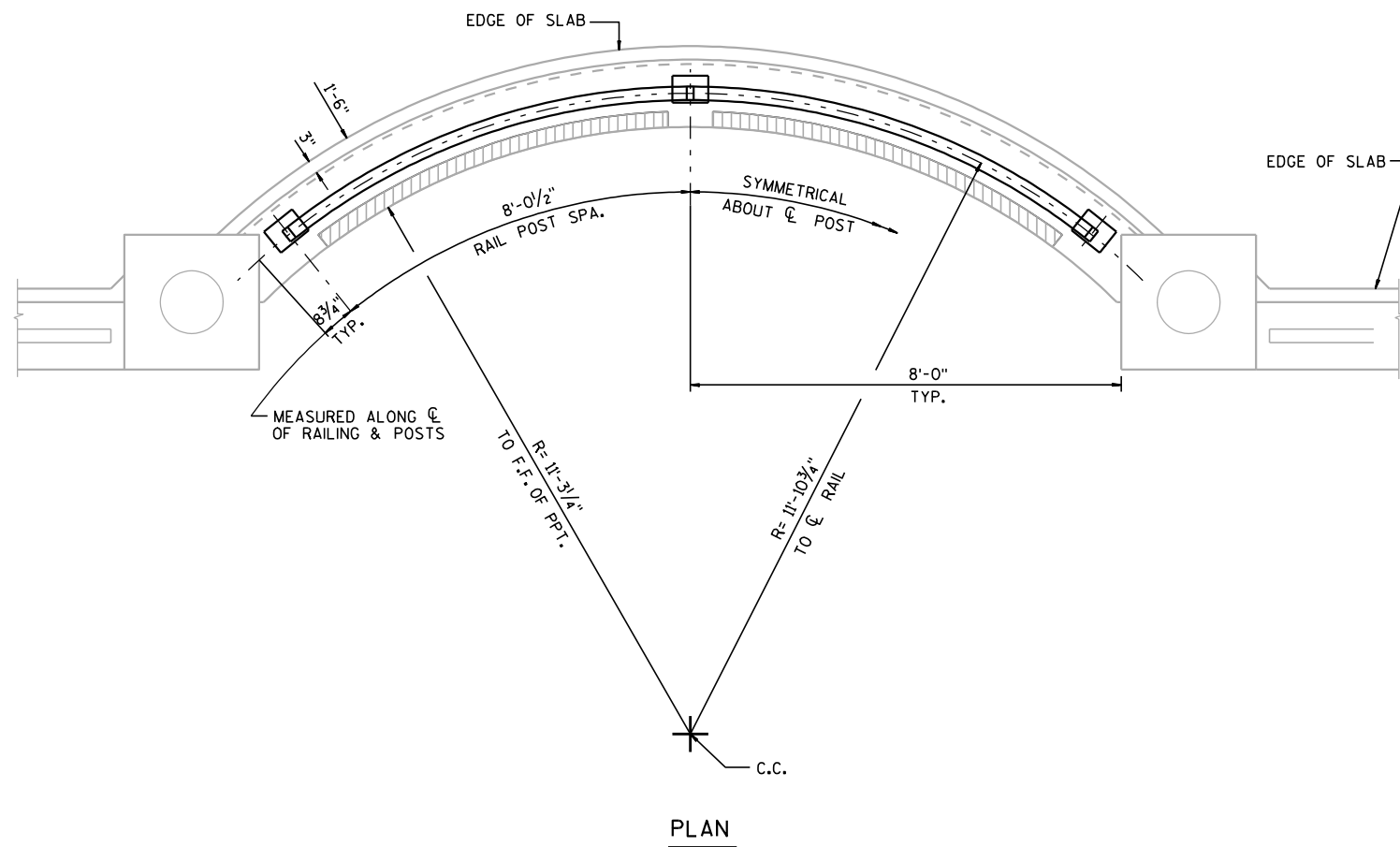


SECTION THRU PARAPET ON DECK

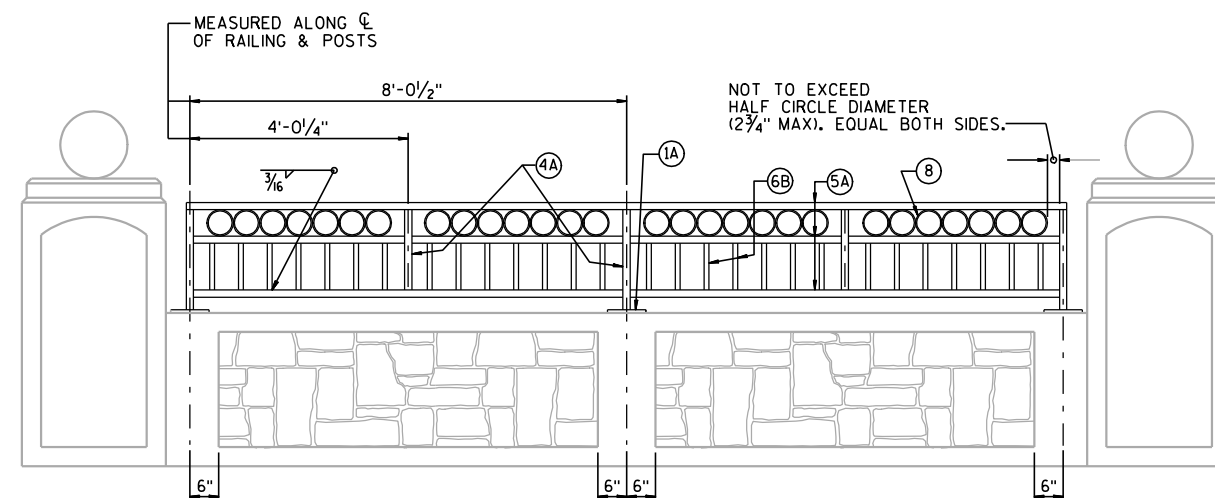
PARAPET 'A' DETAILS
 (E. & W. ABUTMENT B-44-260)



SECTION THRU RAILING AT LOOKOUT



PLAN

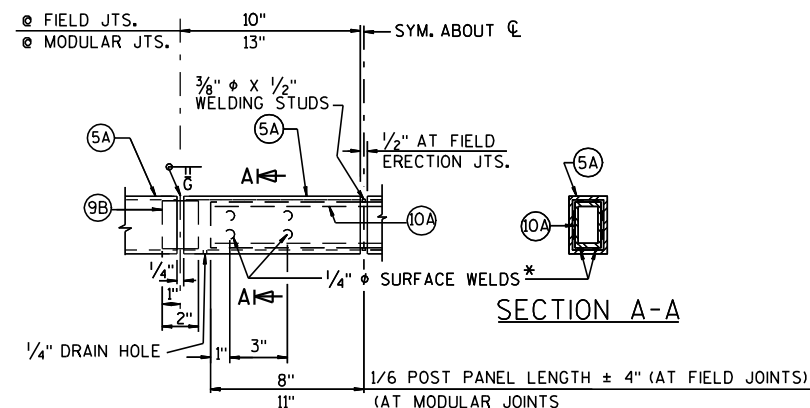
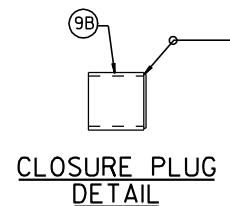
INSIDE ELEVATION
AT PIERS 2 & 4PARAPET 'A' @ LOOKOUTS
B-44-260 (WITH RAILING)

LEGEND

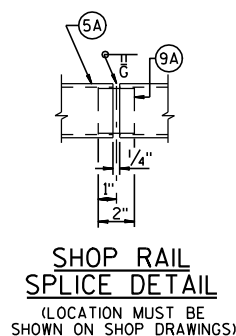
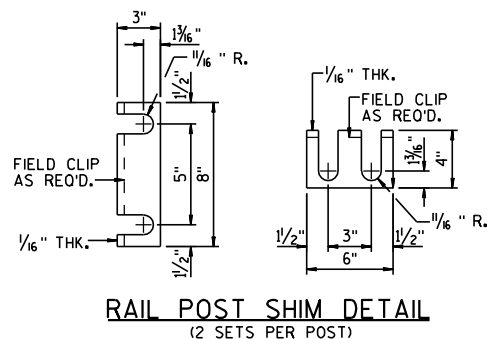
- (1A) PLATE $\frac{5}{8}$ " X 6" X 8" WITH $\frac{3}{4}$ " X $\frac{1}{2}$ " SLOTTED HOLES.
- (3) $\frac{5}{8}$ " DIA. X $\frac{7}{2}$ " LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), $\frac{5}{8}$ " ϕ , MINIMUM PULLOUT CAPACITY OF 15 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- (4A) STRUCTURAL TUBING 3" X $\frac{1}{2}$ " X $\frac{3}{16}$ ". PLACE VERTICAL. WELD TO NO. 1A & 5A.
- (5A) STRUCTURAL TUBING 3" X $\frac{1}{2}$ " X $\frac{3}{16}$ " RAILS. WELD TO NO. 4A.
- (6B) STRUCTURAL TUBING 1" X $\frac{1}{2}$ " X $\frac{1}{8}$ " PICKETS. WELD TO NO. 5A. SPACE AT 6" MAX. ϕ TO ϕ SPACING. PLACE VERTICAL.
- (8) 5" ϕ SCH. 40 PIPE ($\frac{5}{16}$ " O.D.) $\frac{1}{2}$ " LONG SLICES. WELD TO NO. 5A.

NOTE: SEE "PARAPET 'A'
RAILING DETAILS"
SHEET FOR NOTES.





*MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



B-44-260

(1A) PLATE $\frac{5}{8}$ " X 6" X 8" WITH $\frac{3}{4}$ " X $1\frac{1}{2}$ " SLOTTED HOLES.

- (3) $\frac{3}{8}$ " DIA. A193 STEEL BOLT WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), $\frac{3}{8}$ " ϕ , MINIMUM PULLOUT CAPACITY OF 15 KIPS, EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- (4A) STRUCTURAL TUBING 3" X $1\frac{1}{2}$ " X $\frac{3}{16}$ ". PLACE VERTICAL. WELD TO NO. 1A & 5A.
- (5A) STRUCTURAL TUBING 3" X $1\frac{1}{2}$ " X $\frac{3}{16}$ " RAILS. WELD TO NO. 4A. INSIDE OF TUBE TO BE PAINTED & ALL MODULAR & FIELD ERECTION JOINTS.
- (6C) STRUCTURAL TUBING 1" X $1\frac{1}{2}$ " X $\frac{1}{8}$ " PICKETS. WELD TO NO. 11A. PLACE VERTICAL.
- (8) 5" ϕ SCH. 40 PIPE (5 $\frac{9}{16}$ " O.D.) $1\frac{1}{2}$ " LONG SLICES. WELD TO NO. 5A.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. PROVIDE "SLIDING FIT".
- (9B) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. PROVIDE "SLIDING FIT", WITH $\frac{3}{16}$ " PLATE AT ONE END WELDED ALL AROUND TO PREVENT WATER FROM GETTING INTO THE RAIL.
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. (1'-4" & FIELD ERECTION JTS.)
- (11A) BAR $2\frac{1}{2}$ " X 1" X 1'-10".
- (12) $\frac{1}{2}$ " DIA. STAINLESS STEEL BOLT WITH NUT AND LOCKWASHER.

BID ITEM SHALL BE "RAILING STEEL TYPE C/C GALVANIZED AND PAINTED, B-44-260", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.

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.

NO. 1, 8, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B (NO. 4, NO. 5, AND NO. 6).

EXISTING ANCHORS SHALL BE LEFT IN PLACE & REUSED.

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.

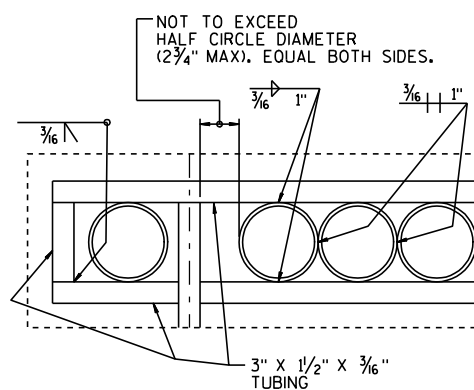
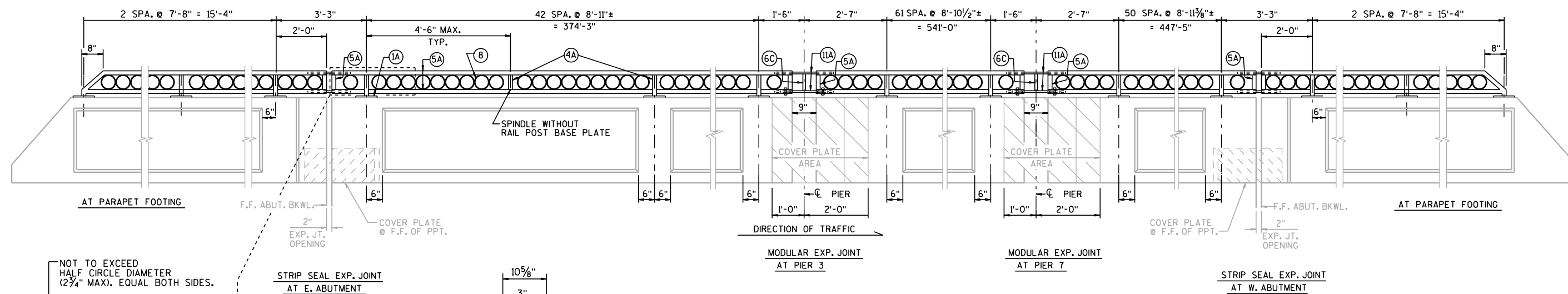
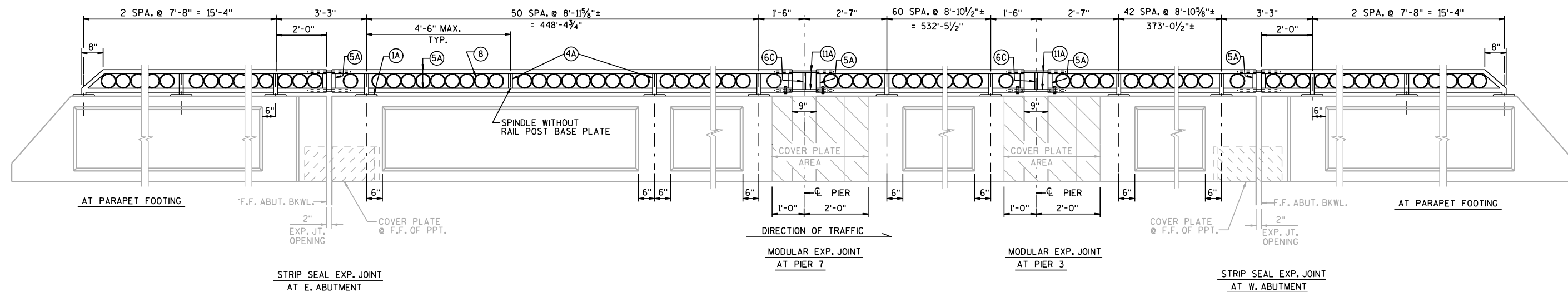
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO.1 AND CAULK AROUND PERIMETER OF PLATE NO.1 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 3) & SHIMS SHALL BE GALVANIZED AND RECEIVE A TWO-COAT PAINT SYSTEM PER WISDOT STANDARD SPECS SECTIONS 506, 513 AND 517 AND THE SPECIAL PROVISIONS ARTICLE 9. SHIMS SHALL BE GALVANIZED AND GIVEN ONE COAT OF PAINT. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038, BLACK.

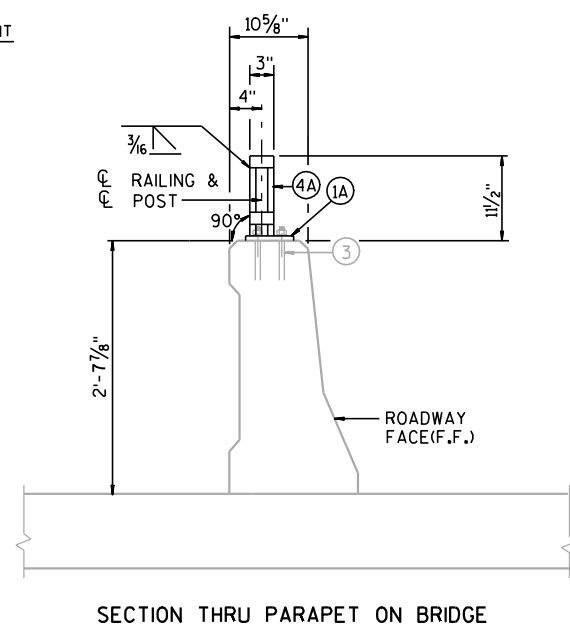
1/4"φ VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS AND NEAR BOTTOM OF ANCHOR POSTS TO FACILITATE DRAINAGE.

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.



STRIP SEAL EXP. JOINT
AT E. ABUTMENT



SDWK. SIDE ELEVATION
(AT SOUTH PARAPET LF LOOKING NORTH)

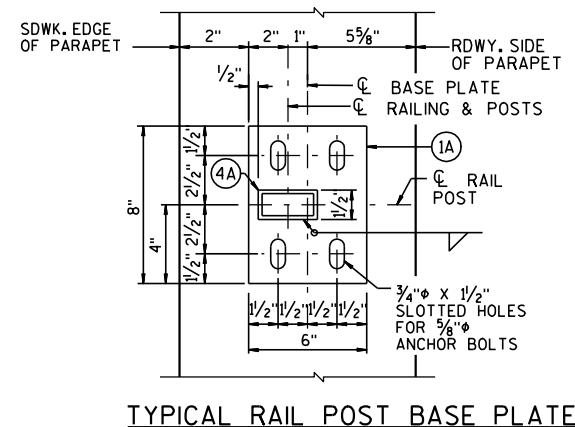
PARAPET 'LF' RAILING
B-44-260

NOTE:

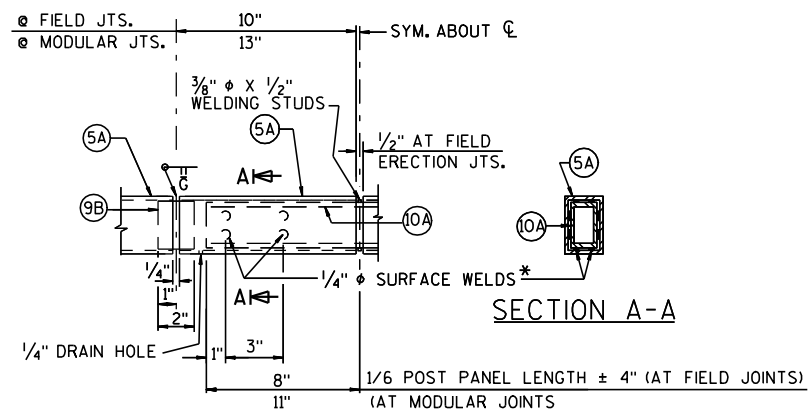
DIMENSIONS IN OUTSIDE ELEVATION VIEWS ARE GIVEN ALONG ϕ OF RAILING & POSTS AND BASED ON 9" OPENINGS AT MODULAR EXPANSION JOINTS AND 2" OPENINGS AT STRIP SEAL EXPANSION JOINTS.

LEGEND

- (1A) PLATE $\frac{5}{8}$ " X 6" X 8" WITH $\frac{3}{4}$ " X 1 $\frac{1}{2}$ " SLOTTED HOLES.
- (3) $\frac{5}{8}$ " DIA. X 7 $\frac{1}{2}$ " LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), $\frac{5}{8}$ " ϕ , MINIMUM PULLOUT CAPACITY OF 15 KIPS, EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- (4A) STRUCTURAL TUBING 3" X 1 $\frac{1}{2}$ " 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. 4.
- (6C) STRUCTURAL TUBING 1" X 1 $\frac{1}{2}$ " X $\frac{1}{8}$ " PICKETS. WELD TO NO. 11. PLACE VERTICAL.
- (8) 5 ϕ SCH. 40 PIPE (5 $\frac{5}{8}$ " O.D.) 1 $\frac{1}{2}$ " LONG SLICES. WELD TO NO. 5A.
- (11A) BAR 2 $\frac{1}{2}$ " X 1" X 1'-10".
- (15) PLATE, $\frac{1}{4}$ " WELDED ALL AROUND TO NO. 5A.

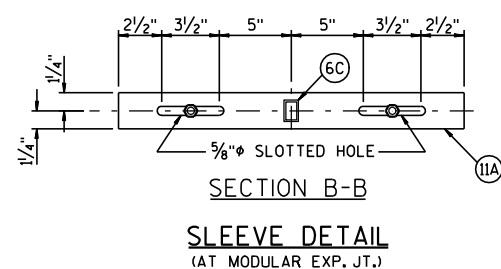
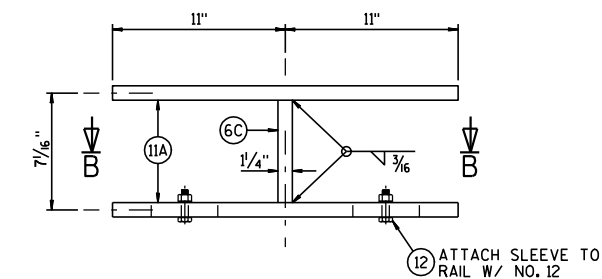


CLOSURE PLUG
DETAIL



FIELD ERECTION JOINT DETAIL

*MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



3"

1 1/2"

1 1/2" R.

1/16" THK.

FIELD CLIP AS REQ'D.

5"

8"

1/16" THK.

1 1/2"

1/16" THK.

FIELD CLIP AS REQ'D.

1 1/2"

4"

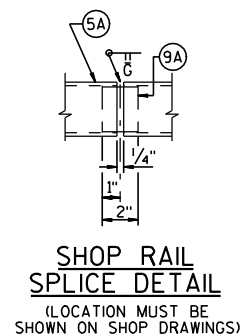
1 1/2"

6"

1 1/2" R.

RAIL POST SHIM DETAIL

(2 SETS PER POST)



PARAPET 'LF' RAILING DETAILS
B-44-260

LEGEND

- 1A) PLATE $\frac{5}{8}$ " X 6" X 8" WITH $\frac{3}{4}$ " X $1\frac{1}{2}$ " SLOTTED HOLES.
- 3) $\frac{5}{8}$ " DIA. X $7\frac{1}{2}$ " LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), $\frac{5}{8}$ " ϕ , MINIMUM PULLOUT CAPACITY OF 15 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- 4A) STRUCTURAL TUBING 3" X $1\frac{1}{2}$ " X $\frac{3}{8}$ ". PLACE VERTICAL. WELD TO NO. 1A & 5A.
- 5A) STRUCTURAL TUBING 3" X $1\frac{1}{2}$ " X $\frac{3}{8}$ " RAILS. WELD TO NO. 4A. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXP. JOINTS.
- 6C) STRUCTURAL TUBING 1" X $1\frac{1}{2}$ " X $\frac{1}{8}$ " PICKETS. WELD TO NO. 11A. PLACE VERTICAL.
- 8) 5" ϕ SCH. 40 PIPE (5 $\frac{5}{8}$ " O.D.) $1\frac{1}{2}$ " LONG SLICES. WELD TO NO. 5A.
- 9A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{8}$ " PLATES. PROVIDE "SLIDING FIT".
- 9B) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{8}$ " PLATES. PROVIDE "SLIDING FIT". WITH $\frac{3}{8}$ " PLATE AT ONE END WELDED ALL AROUND TO PREVENT WATER FROM GETTING INTO THE RAIL.
- 10A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{8}$ " PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)
- 11A) BAR 2 $\frac{1}{2}$ " X 1" X 1'-10".
- 12) $\frac{1}{2}$ " DIA. STAINLESS STEEL BOLT WITH NUT AND LOCKWASHER.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C1B GALVANIZED AND PAINTED, B-44-260", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.

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.

NO. 1, 8, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B (NO. 4, NO. 5, AND NO. 6).

EXISTING ANCHORS SHALL BE LEFT IN PLACE AND REUSED.

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.

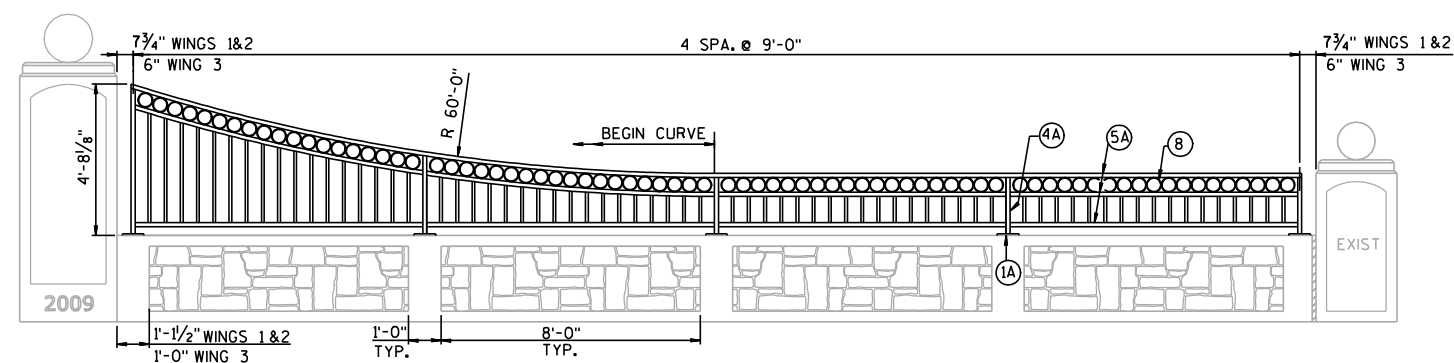
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO.1 AND CAULK AROUND PERIMETER OF PLATE NO.1 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 3) & SHIMS SHALL BE GALVANIZED AND RECEIVE A TWO-COAT PAINT SYSTEM PER WISDOT STANDARD SPECS. SECTIONS 506, 513 AND 517 AND THE SPECIAL PROVISIONS ARTICLE 9. SHIMS SHALL BE GALVANIZED AND GIVEN ONE COAT OF PAINT. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038, BLACK.

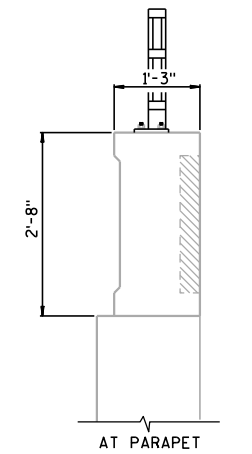
1/4"Ø VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS AND NEAR BOTTOM OF ANCHOR POSTS TO FACILITATE DRAINAGE.

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

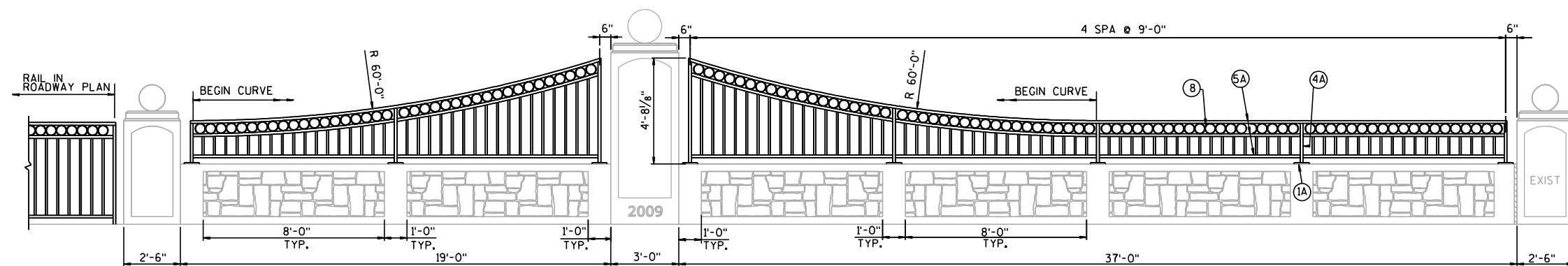
TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



WING EXTENSIONS AT WINGS 1 THRU 3



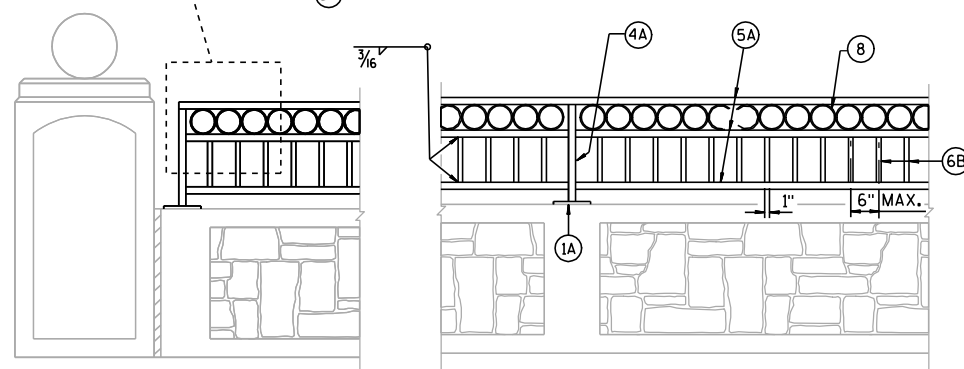
BARRIER SECTIONS



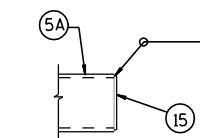
WING EXTENSIONS AT WING 4

WING EXT. PARAPET
B-44-260

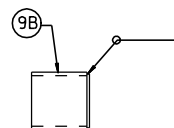
NOTE: SEE WING EXT. RAILING SHEET FOR DETAILS



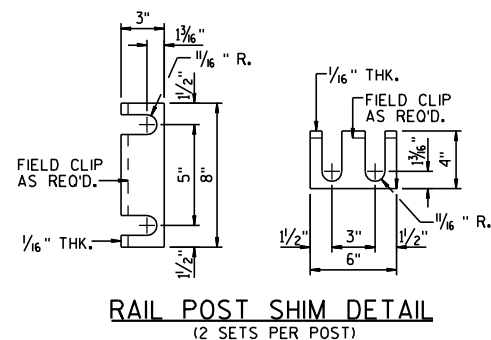
ELEVATION



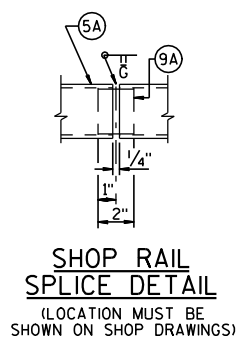
TUBING END
DETAIL



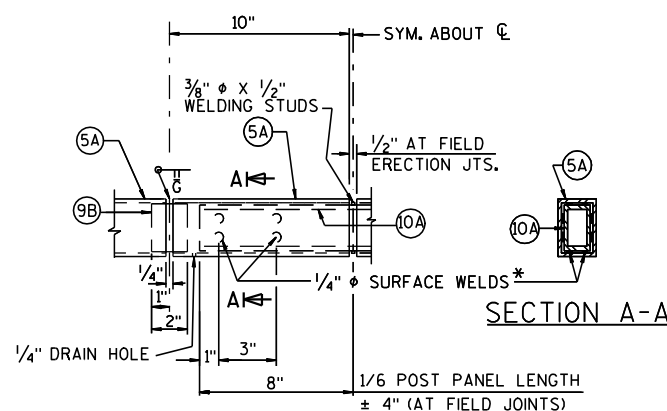
CLOSURE PLUG
DETAIL



RAIL POST SHIM DETAIL

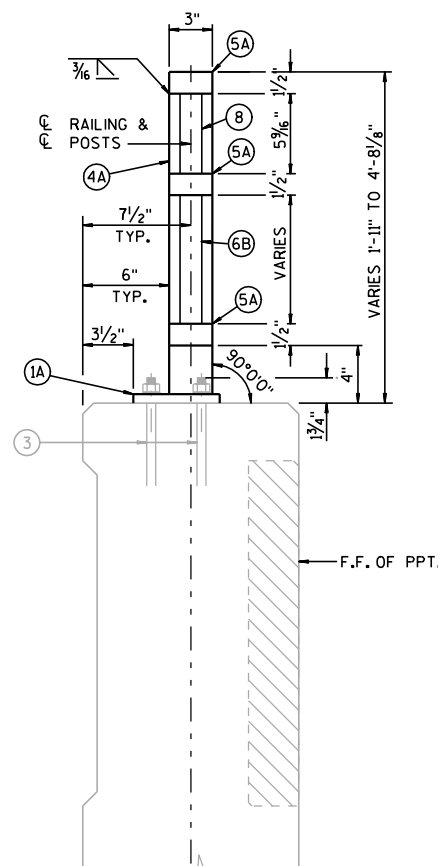


SHOP RAIL
SPLICE DETAIL
(LOCATION MUST BE
SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

*MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



SECTION THRU RAILING

(1A) PLATE $\frac{5}{8}$ " X 6" X 8" WITH $\frac{3}{4}$ " X $1\frac{1}{2}$ " SLOTTED HOLES.

- (3) 3/4" DIA. X 7 1/2" LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 3/8" Ø, MINIMUM PULLOUT CAPACITY OF 20 KIPS, EMBED A MIN. OF 7" FOR RAILS.)
- (4A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16" RAILS. WELD TO NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION JOINTS.
- (6B) STRUCTURAL TUBING 1" X 1/2" X 1/8" PICKETS. WELD TO NO. 5. SPACE AT 6" MAX. \varnothing TO \varnothing SPACING. PLACE VERTICAL.
- (8) 5" Ø SCH. 40 PIPE (5% O.D.) 1/2" LONG SLICES. WELD TO NO. 5A.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- (9B) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT". WITH 3/16" PLATE AT ONE END WELDED ALL AROUND TO PREVENT WATER FROM GETTING INTO THE RAIL.
- (10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" Ø FIELD ERECTION JTS.) PAINTED
- (15) PLATE 1/4" WELDED ALL AROUND TO NO. 5A TO PREVENT WATER FROM GETTING INTO THE RAIL.

BID ITEM SHALL BE "RAILING STEEL TYPE C1C GALVANIZED AND PAINTED, B-44-260", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.

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.

NO. 1, 8, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709
GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M.
A500 GRADE B (NO. 4, NO. 5, AND NO. 6).

EXISTING ANCHORS SHALL BE LEFT IN PLACE & REUSED.

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.

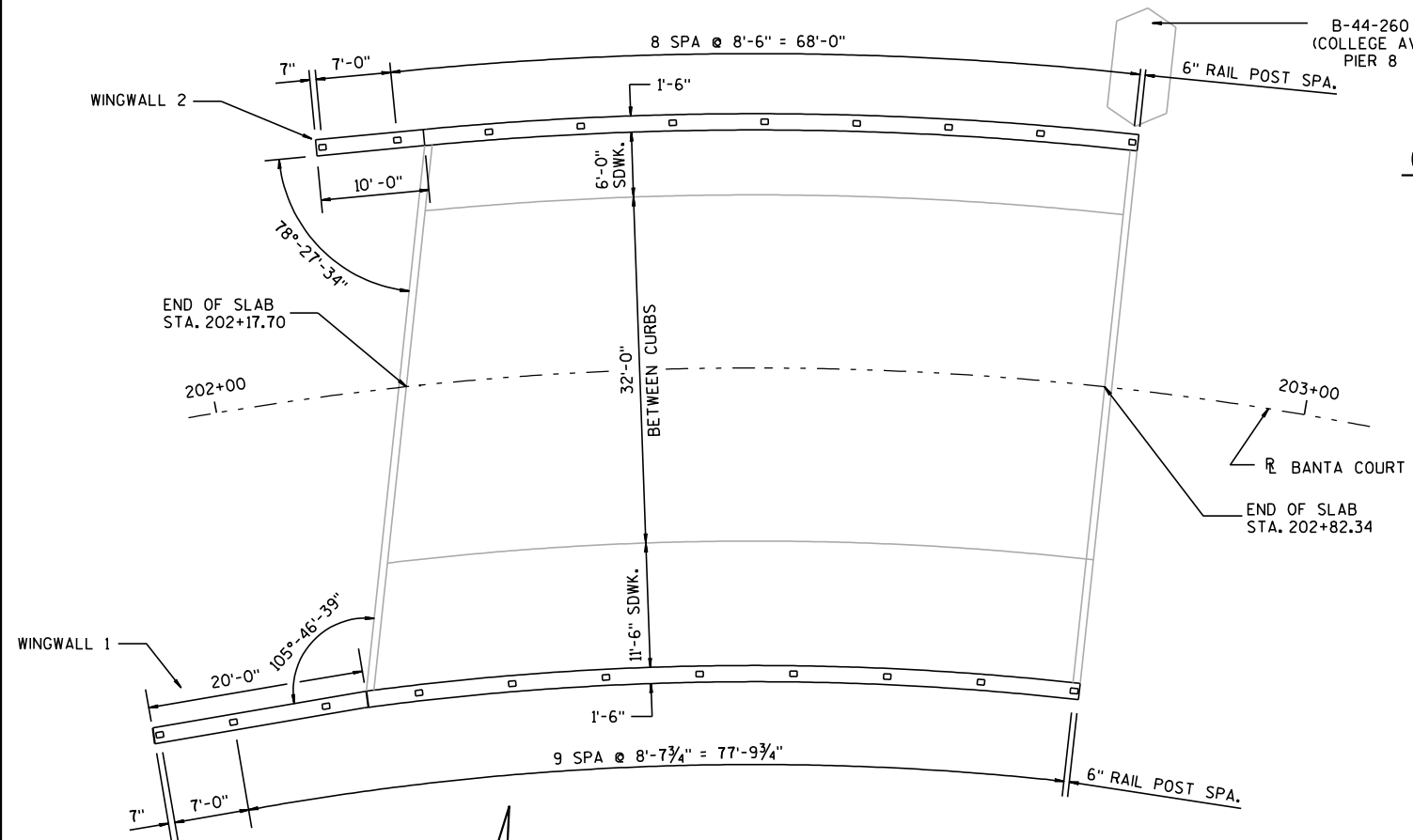
FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO.1 AND CAULK AROUND PERIMETER OF PLATE NO.1 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 3) & SHIMS SHALL BE GALVANIZED AND RECEIVE A TWO-COAT PAINT SYSTEM PER WISDOT STANDARD SPECS SECTIONS 506, 513 AND 517 AND THE SPECIAL PROVISIONS ARTICLE 9. SHIMS SHALL BE GALVANIZED AND GIVEN ONE COAT OF PAINT. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038, BLACK.

1/4" Ø VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS AND NEAR BOTTOM OF ANCHOR POSTS TO FACILITATE DRAINAGE.

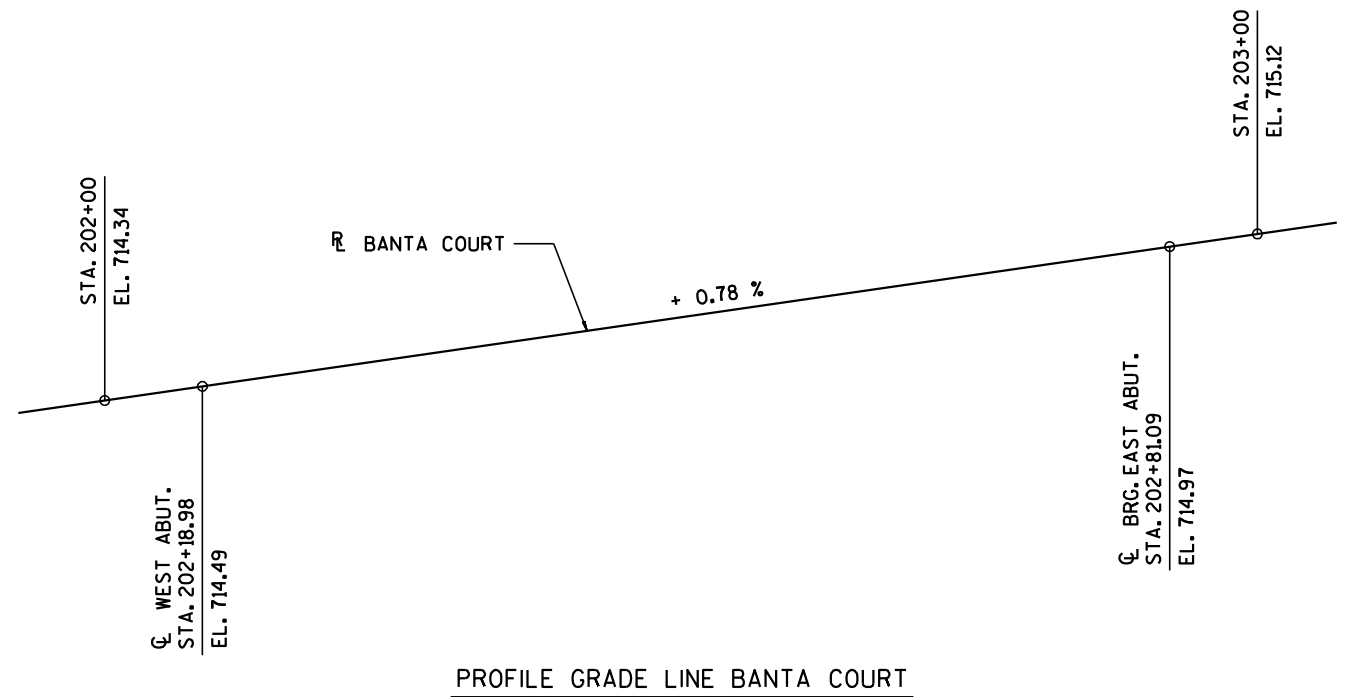
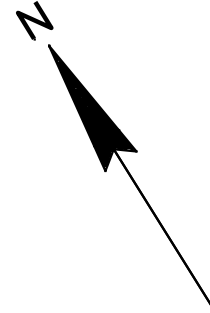
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

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



CURVE DATA

P.I. = STA. 202+71.12
 Δ = 31°-36'-24"
 D = 19°-05'-55"
 T = 84.91'
 L = 165.49'
 R = 300.00'
 $S.E.$ = N.C.
 $P.C.$ = STA. 201+86.21
 $P.T.$ = STA. 203+51.70



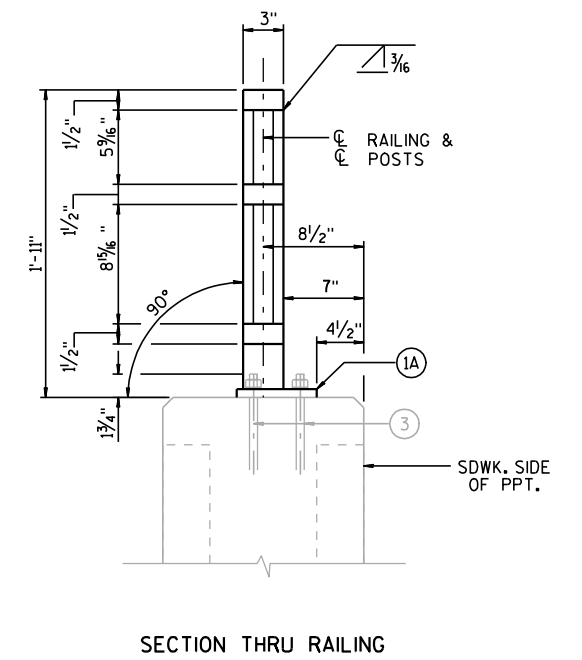
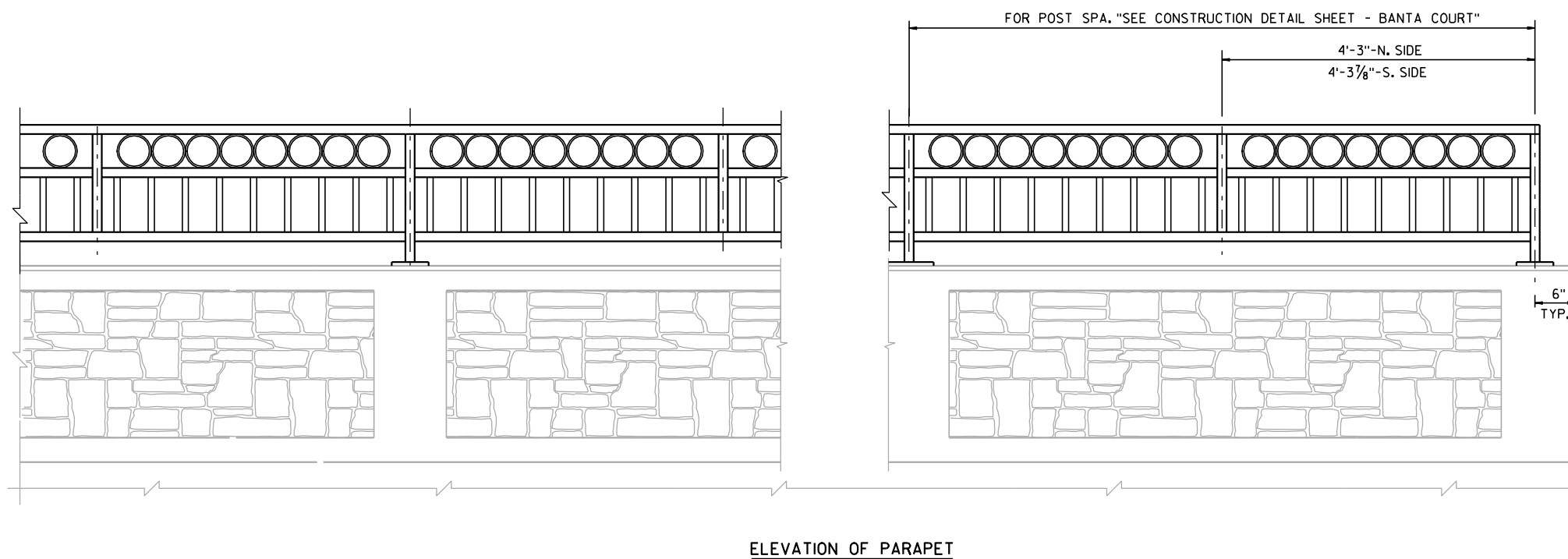
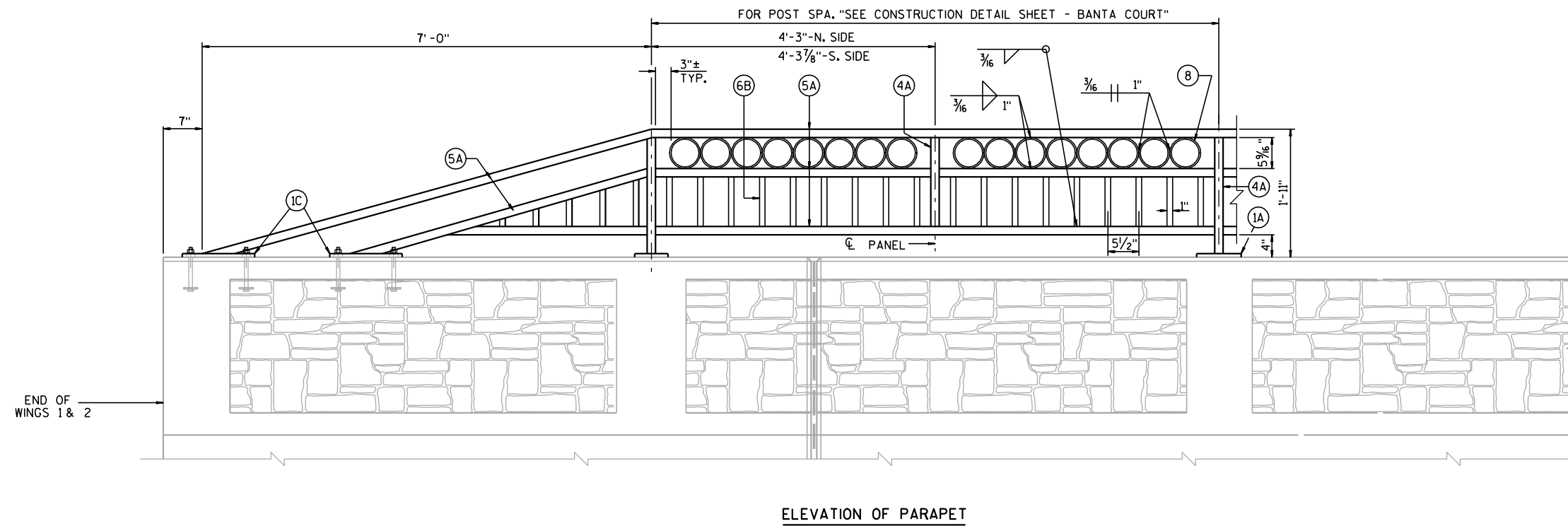
PLAN

SHOWING RAIL POST SPACING

ELEVATION

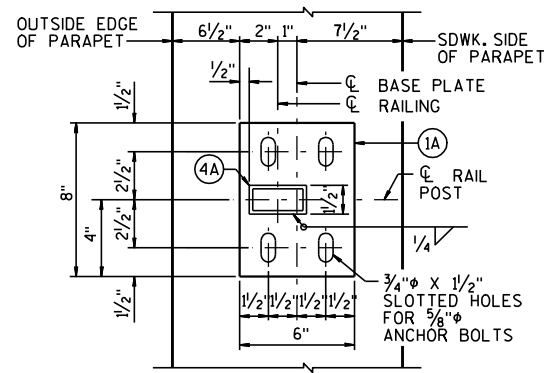
NORMAL TO POWER CANAL
(FOX RIVER)

STRUCTURE B-44-275

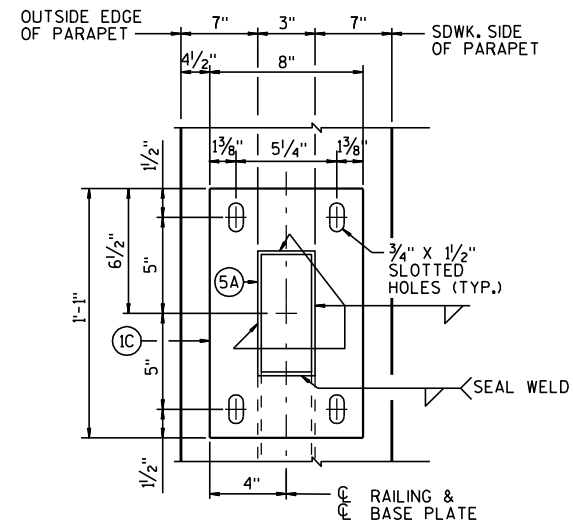


COMBINATION RAIL TYPE C1
B-44-275

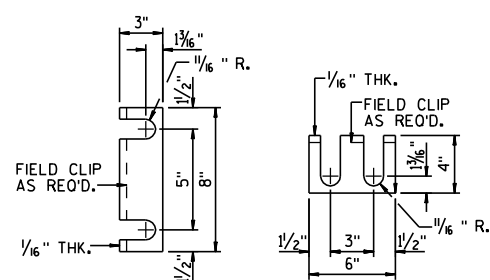
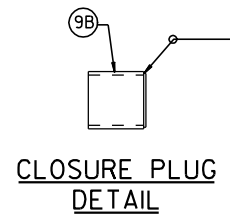
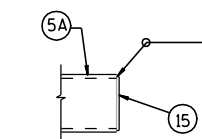
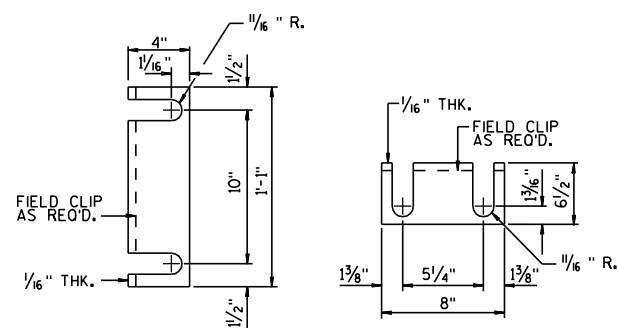
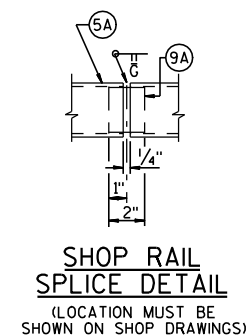
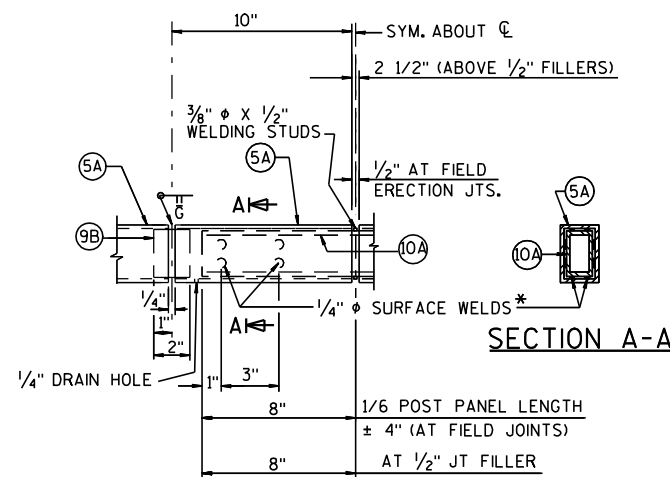
NOTE:
 FOR RAILING NOTES & LEGEND SEE SHEET
 "COMBINATION RAIL TYPE C1 DETAILS"



TYPICAL RAIL POST BASE PLATE



END RAIL BASE PLATE

RAIL POST SHIM DETAIL
(2 SETS PER POST)CLOSURE PLUG
DETAILTUBING END
DETAILEND RAIL SHIM DETAIL
(2 SETS PER POST)SHOP RAIL
SPLICE DETAIL
(LOCATION MUST BE
SHOWN ON SHOP DRAWINGS)

FIELD ERECTION JOINT DETAIL

*MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

LEGEND

- 1A PLATE 5/8" X 6" X 8" WITH 3/4" X 1/2" SLOTTED HOLES.
- 1C PLATE 5/8" X 8" X 1'-1" WITH 3/4" X 1/2" SLOTTED HOLES.
- 3 5/8" DIA. X 7 1/2" LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" Ø, MINIMUM PULLOUT CAPACITY OF 15 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- 4A STRUCTURAL TUBING 3" X 1/2" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.
- 5A STRUCTURAL TUBING 3" X 1/2" X 3/16" RAILS. WELD TO NO. 1 & NO. 4.
- 6B STRUCTURAL TUBING 1" X 1/2" X 1/8" PICKETS. WELD TO NO. 5. SPACE AT 6" MAX. Ø TO Ø SPACING. PLACE VERTICAL.
- 8 5" Ø SCH. 40 PIPE (5 5/16 O.D.) 1/2" LONG SLICES. WELD TO NO. 5A.
- 9A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- 9B RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT". WITH 3/16" PLATE AT ONE END WELDED ALL AROUND TO PREVENT WATER FROM GETTING INTO THE RAIL.
- 10A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" Ø FIELD ERECTION JTS.)
- 15 PLATE 1/4" WELDED ALL AROUND TO NO. 5A TO PREVENT WATER FROM GETTING INTO THE RAIL.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C1 GALVANIZED AND PAINTED, B-44-275", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.

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.

NO. 1, 8, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B (NO. 4, NO. 5, AND NO. 6).

EXISTING ANCHORS SHALL BE LEFT IN PLACE AND REUSED.

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.

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.

AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 3) & SHIMS SHALL BE GALVANIZED AND RECEIVE A TWO-COAT PAINT SYSTEM PER WISDOT STANDARD SPECS SECTIONS 506, 513 AND 517 AND THE SPECIAL PROVISIONS ARTICLE 9. SHIMS SHALL BE GALVANIZED AND GIVEN ONE COAT OF PAINT. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038, BLACK.

1/4" Ø VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS AND NEAR BOTTOM OF ANCHOR POSTS TO FACILITATE DRAINAGE.

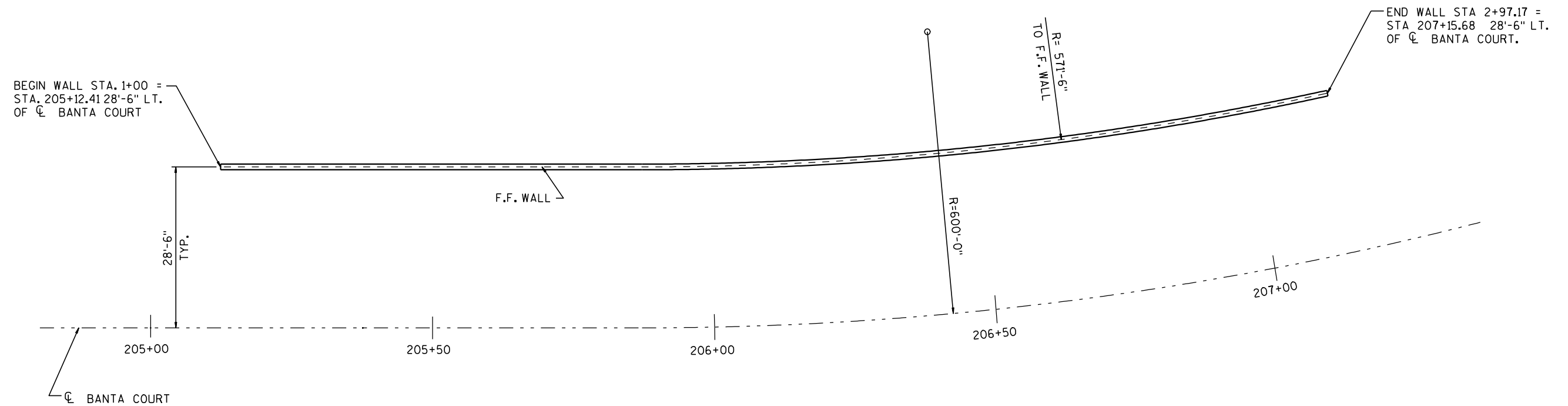
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

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

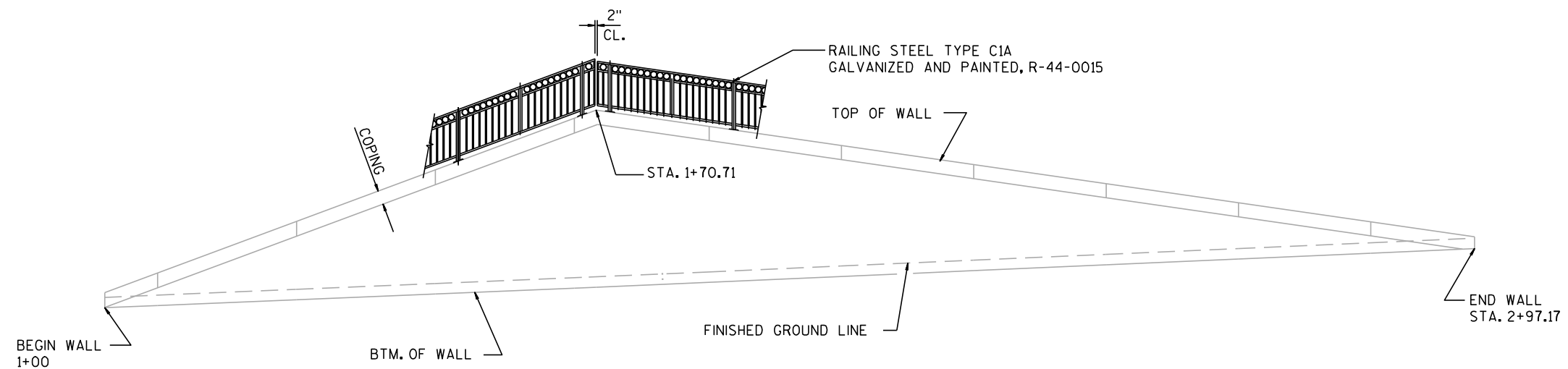
COMBINATION RAIL TYPE "C1" DETAILS
B-44-275

2

2



PLAN
STA. ARE GIVEN TO F.F. OF WALL

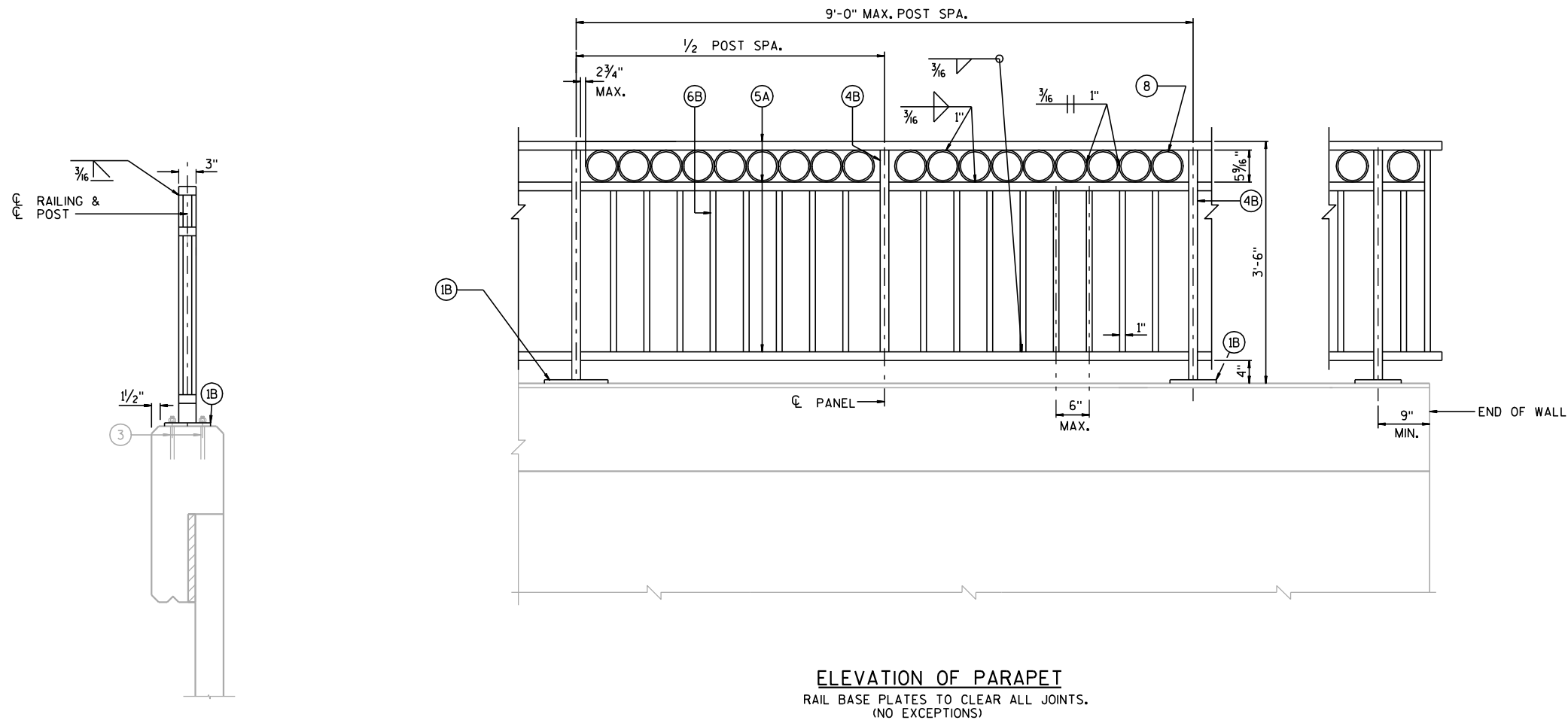


ELEVATION
(LOOKING @ F.F. OF WALL)

TABLE OF WALL ELEVATIONS

STATIONING ALONG C BANTA COURT	BEGIN WALL 205+12.41	205+20	205+40	205+60	205+80	205+83.12	206+00	206+20	206+40	206+60	206+80	207+00	END WALL 207+15.68
STATIONING ALONG F.F. OF WALL	BEGIN WALL 1+00	1+07.59	1+27.59	1+47.59	1+67.59	1+70.71	1+86.98	2+06.03	2+25.08	2+44.13	2+63.18	2+82.23	END WALL 2+97.17
TOP OF WALL ELEV.	721.74	724.56	731.99	739.42	746.85	748.01	745.66	742.91	740.16	737.41	734.66	731.92	729.76
BOTTOM OF WALL ELEV.	719.55	719.87	720.71	721.54	722.38	722.51	723.22	724.06	724.90	725.73	726.57	727.41	728.07

RETAINING WALL ALONG BANTA COURT
R-44-15

**END VIEW**

(CENTER RAILING BASE PLATE ON TOP OF COPING)

LEGEND

- (1B) PLATE 5/8" X 6" X 10" WITH 3/4" X 1/2" SLOTTED HOLES
- (3) 5/8" DIA. X 7 1/2" LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" Ø, MINIMUM PULLOUT CAPACITY OF 15 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- (4B) STRUCTURAL TUBING 3" X 3" X 3/16". PLACE VERTICAL. WELD TO NO.1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16" RAILS. WELD TO NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION JOINTS.
- (6B) STRUCTURAL TUBING 1" X 1 1/2" X 1/8" PICKETS. WELD TO NO. 5. SPACE AT 6" MAX. CL TO CL SPACING. PLACE VERTICAL.
- (8) 5" Ø SCH. 40 PIPE (5 5/16 O.D.) 1 1/2" LONG SLICES. WELD TO NO. 5A.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" Ø FIELD ERECTION JTS.) PAINTED.
- (15) PLATE 1/4" WELDED ALL AROUND TO NO. 5A TO PREVENT WATER FROM GETTING INTO THE RAIL.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C1A GALVANIZED AND PAINTED, R-44-0015", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.

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.

NO. 1, 8, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B (NO. 4, NO. 5, AND NO. 6).

EXISTING ANCHORS SHALL BE LEFT IN PLACE AND REUSED.

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.

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.

AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 3) & SHIMS SHALL BE GALVANIZED AND RECEIVE A TWO-COAT PAINT SYSTEM PER WISDOT STANDARD SPECS SECTIONS 506, 513 AND 517 AND THE SPECIAL PROVISIONS ARTICLE 9. SHIMS SHALL BE GALVANIZED AND GIVEN ONE COAT OF PAINT. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038, BLACK.

1/4" Ø VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS AND NEAR BOTTOM OF ANCHOR POSTS TO FACILITATE 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.

COMBINATION RAIL TYPE C1A
R-44-15

▲ CENTER BASE PLATE
ON TOP OF COPING

ANCHOR BOLTS FOR RAIL POSTS

RAIL POST SHIM DETAIL
(2 SETS PER POST)

*MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

CLOSURE PLUG
DETAIL

TUBING END
DETAIL

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

COMBINATION RAIL TYPE C1A DETAILS
R-44-15

LEGEND

- (1B) PLATE $\frac{5}{8}$ " X 6" X 10" WITH $\frac{3}{4}$ " X $\frac{1}{2}$ " SLOTTED HOLES
- (3) $\frac{5}{8}$ " DIA. X $7\frac{1}{2}$ " LONG ASTM F593 TYPE 316 STAINLESS STEEL ANCHOR BOLTS WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), $\frac{5}{8}$ " ϕ , MINIMUM PULLOUT CAPACITY OF 15 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)
- (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. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION JOINTS.
- (6B) STRUCTURAL TUBING 1" X $1\frac{1}{2}$ " X $\frac{1}{8}$ " PICKETS. WELD TO NO. 5. SPACE AT 6" MAX. \perp TO \perp SPACING. PLACE VERTICAL.
- (8) 5" ϕ SCH. 40 PIPE (5% O.D.) $1\frac{1}{2}$ " LONG SLICES. WELD TO NO. 5A.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. PROVIDE "SLIDING FIT".
- (9B) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. PROVIDE "SLIDING FIT". WITH $\frac{3}{16}$ " PLATE AT ONE END WELDED ALL AROUND TO PREVENT WATER FROM GETTING INTO THE RAIL.
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $\frac{3}{16}$ " PLATES. (1'-4" @ FIELD ERECTION JTS.) PAINTED.
- (15) PLATE $\frac{1}{4}$ " WELDED ALL AROUND TO NO. 5A TO PREVENT WATER FROM GETTING INTO THE RAIL.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C1A GALVANIZED AND PAINTED, R-44-0015", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN, AND PAINTING.

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.

NO. 1, 2, 8, 9 AND NO. 10 SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A500 GRADE B (NO. 4, NO. 5, AND NO. 6).

EXISTING ANCHORS SHALL BE LEFT IN PLACE AND REUSED.

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.

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.

AFTER FABRICATION, ALL MATERIAL, EXCEPT ANCHORAGE (NO. 3) & SHIMS SHALL BE GALVANIZED AND RECEIVE A TWO-COAT PAINT SYSTEM PER WISDOT STANDARD SPECS SECTIONS 506, 513 AND 517 AND THE SPECIAL PROVISIONS ARTICLE 9. SHIMS SHALL BE GALVANIZED AND GIVEN ONE COAT OF PAINT. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038, BLACK.

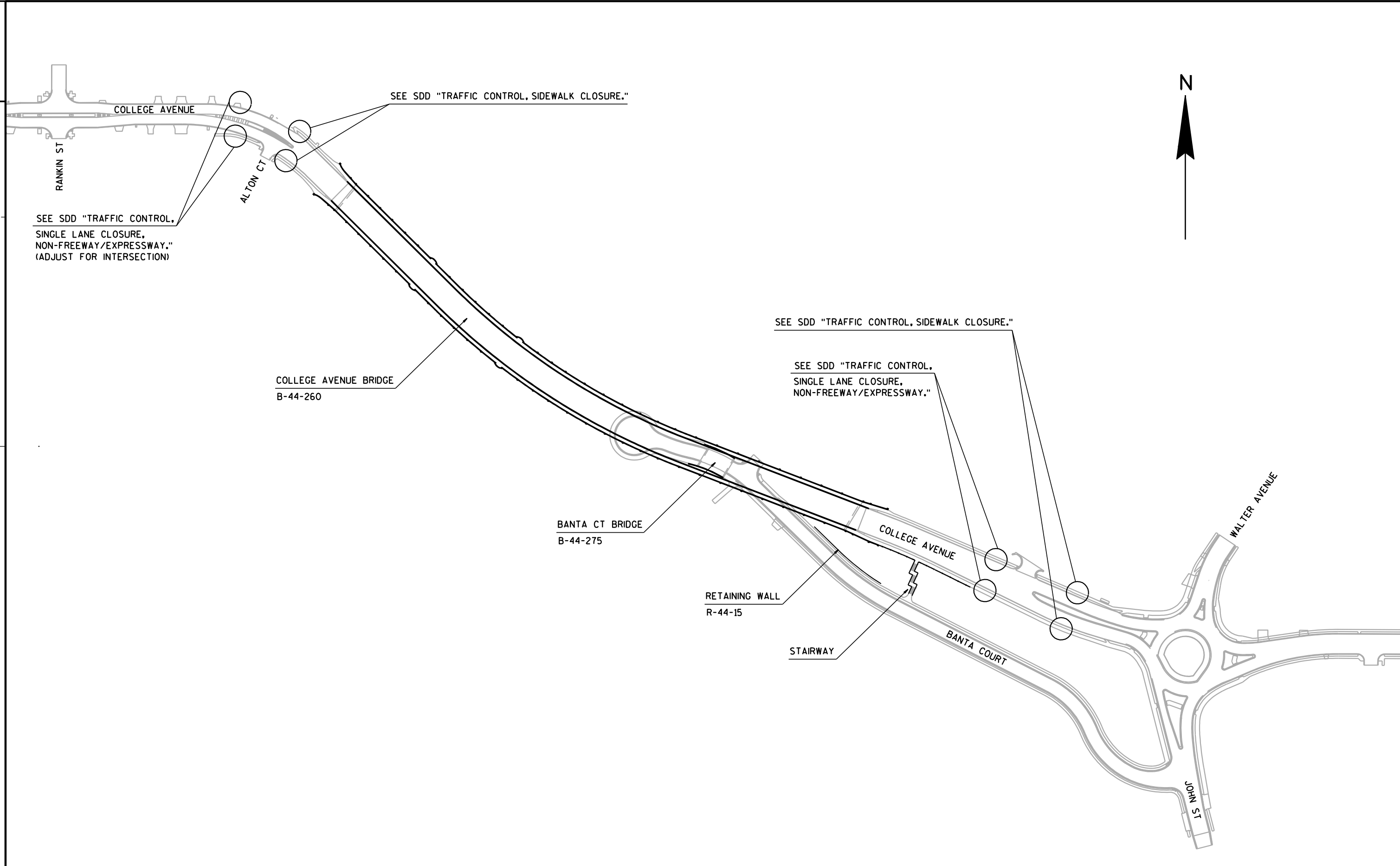
1/4"Ø VENT HOLES LOCATED IN TOP RAIL OVER RAIL POSTS AND AT LOW END OF OTHER RAILS AND NEAR BOTTOM OF ANCHOR POSTS TO FACILITATE DRAINAGE.

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.

2

2



PROJECT NO: 4984-20-60

HWY: COLLEGE AVENUE

COUNTY: OUTAGAMIE

TRAFFIC CONTROL DETAIL - COLLEGE AVENUE

SHEET

E

FILE NAME : F:\D3_498420\025002_+c.DGN

PLOT DATE : 30-JAN-2013 07:26 PLOT BY : dotmzc

PLOT BY : dotmzc

PLOT NAME : 025002 +c PLOT SCALE : 200:1

PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

TWO-LANE ROADWAY

SYMBOLS

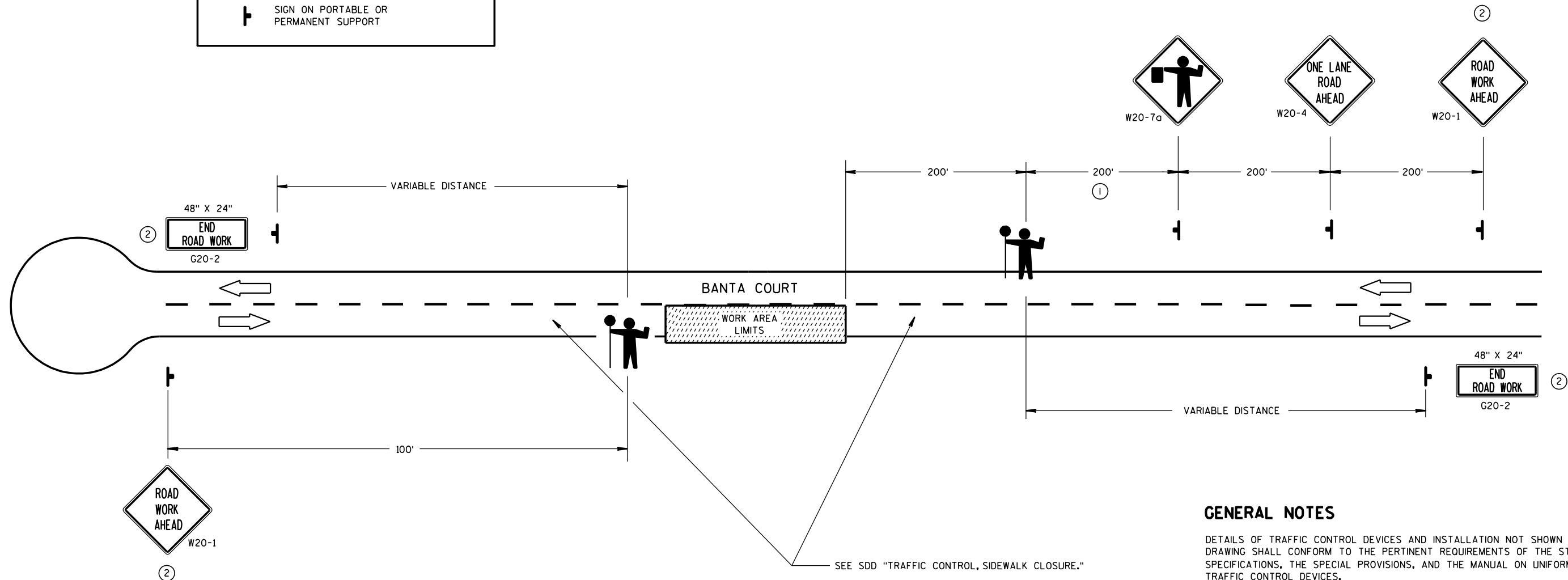


WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW
PADDLE FASTENED ON SUPPORT STAFFSIGN ON PORTABLE OR
PERMANENT SUPPORT

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

TRAFFIC CONTROL FOR LANE CLOSURE
(SUITABLE FOR MOVING OPERATIONS)

GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE 'FLAGGER AHEAD', THE 'ROAD WORK AHEAD' AND THE ONE LANE ROAD AHEAD' SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

DATE 06MAR13		E S T I M A T E O F Q U A N T I T I E S			
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4984-20-60 QUANTITY
0010	203.0225.S	DEBRI S CONTAINMENT (STRUCTURE) 01. B-44-260	LS	1.000	1.000
0020	203.0225.S	DEBRI S CONTAINMENT (STRUCTURE) 02. B-44-275	LS	1.000	1.000
0030	213.0100	FINI SHING ROADWAY (PROJECT) 01. 4984-20-60	EACH	1.000	1.000
0040	502.6105	MASONRY ANCHORS TYPE S 5/8-INCH	EACH	1.000	1.000
0050	619.1000	MOBI LI ZATION	EACH	1.000	1.000
0060	628.2004	EROSION MAT CLASS I TYPE B	SY	150.000	150.000
0070	629.0210	FERTI LIZER TYPE B	CWT	0.100	0.100
0080	630.0120	SEEDING MIXTURE NO. 20	LB	4.000	4.000
0090	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0100	643.0100	TRAFFI C CONTROL (PROJECT) 01. 4984-20-60	EACH	1.000	1.000
0110	643.0300	TRAFFI C CONTROL DRUMS	DAY	1,120.000	1,120.000
0120	643.0410	TRAFFI C CONTROL BARRICADES TYPE II	DAY	84.000	84.000
0130	643.0420	TRAFFI C CONTROL BARRICADES TYPE III	DAY	40.000	40.000
0140	643.0705	TRAFFI C CONTROL WARNING LIGHTS TYPE A	DAY	164.000	164.000
0150	643.0715	TRAFFI C CONTROL WARNING LIGHTS TYPE C	DAY	220.000	220.000
0160	643.0800	TRAFFI C CONTROL ARROW BOARDS	DAY	20.000	20.000
0170	643.0900	TRAFFI C CONTROL SIGNS	DAY	210.000	210.000
0180	SPV.0075	SPECIAL 01. STREET AND SIDEWALK SWEEPING	HRS	30.000	30.000
0190	SPV.0105	SPECIAL 01. REMOVI NG RAILI NG STEEL TYPE C1A, R-44-0015	LS	1.000	1.000
0200	SPV.0105	SPECIAL 02. REMOVI NG RAILI NG STEEL TYPE C1B, B-44-260	LS	1.000	1.000
0210	SPV.0105	SPECIAL 03. REMOVI NG RAILI NG STEEL TYPE C1C, B-44-260	LS	1.000	1.000
0220	SPV.0105	SPECIAL 04. REMOVI NG RAILI NG STEEL TYPE C1D, STAIRWAY	LS	1.000	1.000
0230	SPV.0105	SPECIAL 05. REMOVI NG RAILI NG STEEL TYPE C1E, SIDEWALK	LS	1.000	1.000
0240	SPV.0105	SPECIAL 06. REMOVI NG RAILI NG STEEL TYEP C1, B-44-275	LS	1.000	1.000
0250	SPV.0105	SPECIAL 07. RAILI NG STEEL TYPE C1A GALVANIZED AND PAI NTED, R-44-0015	LS	1.000	1.000
0260	SPV.0105	SPECIAL 08. RAILI NG STEEL TYPE C1B GALVANIZED AND PAI NTED, B-44-260	LS	1.000	1.000
0270	SPV.0105	SPECIAL 09. RAILI NG STEEL TYPE C1C GALVANIZED AND PAI NTED, B-44-260	LS	1.000	1.000
0280	SPV.0105	SPECIAL 10. RAILI NG STEEL TYPE C1D GALVANIZED AND PAI NTED, STAI RWAY	LS	1.000	1.000
0290	SPV.0105	SPECIAL 11. RAILI NG STEEL TYPE C1E GALVANIZED AND PAI NTED, SI DEWALK	LS	1.000	1.000
0300	SPV.0105	SPECIAL 12. RAILI NG STEEL TYPE C1 GALVANIZED AND PAI NTED, B-44-275	LS	1.000	1.000
0310	SPV.0165	SPECIAL 01. CONCRETE STAI NI NG MULTI -COLOR B-44-260	SF	750.000	750.000
0320	SPV.0165	SPECIAL 02. CONCRETE STAI NI NG MULTI -COLOR B-44-275	SF	125.000	125.000
0330	SPV.0165	SPECIAL 03. CONCRETE STAI NI NG MULTI -COLOR R-44-0015	SF	125.000	125.000
0340	SPV.0180	SPECIAL 01. CLEANI NG CONCRETE	SY	115.000	115.000

DEBRIS CONTAINMENT (STRUCTURE)

CATEGORY	LOCATION	203. 0225. S LS	REMARKS
0010	01. B-44-260	1	COLLEGE AVENUE
0010	02. B-44-275	1	BANTA COURT
TOTAL 0010		2	

FINISHING ROADWAY (PROJECT)

CATEGORY	LOCATION	213. 0100 EACH	REMARKS
0010	ENTIRE PROJECT	1	
TOTAL 0010		1	

MASONRY ANCHORS TYPE S 5/8-INCH

CATEGORY	LOCATION	502. 6105 EACH	REMARKS
0010	UNDISTRIBUTED	1	
TOTAL 0010		1	

MOBILIZATION

CATEGORY	LOCATION	619. 1000 EACH	REMARKS
0010	ENTIRE PROJECT	1	
TOTAL 0010		1	

LANDSCAPE SUMMARY

CATEGORY	STATION TO	STATION	LOCATION	628. 2004 EROSION MAT CLASS I TYPE B SY	629. 0210 FERTILIZER TYPE B CWT	630. 0120 SEED MIX NO. 20 LB	REMARKS
0010	108+00	109+50	COLLEGE AVE RT	150	0.1	4	SIDEWALK RAILING
TOTAL 0010				150	0	4	

FIELD OFFICE TYPE B

CATEGORY	LOCATION	642. 5001 EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		1	

TRAFFIC CONTROL (PROJECT)

CATEGORY	LOCATION	643. 0100 EACH	REMARKS
0010	4984-20-60	1	
TOTAL 0010		1	

TRAFFIC CONTROL

CATEGORY	LOCATION	APPROX. SERVI CE PERI OD DAYS	643. 0300		643. 0410		643. 0420		643. 0705		643. 0715		643. 0800		643. 0900	
			DRUMS		BARRI CADES TYPE II		BARRI CADES TYPE III		WARNI NG LIGHTS TYPE A		WARNI NG LIGHTS TYPE C		ARROW BOARDS		SIGNS	
			NO. I N		NO. I N		NO. I N		NO. I N		NO. I N		NO. I N		NO. I N	
			SERVI CE	DAY	SERVI CE	DAY	SERVI CE	DAY	SERVI CE	DAY	SERVI CE	DAY	SERVI CE	DAY	SERVI CE	DAY
COLLEGE AVENUE																
0010	EASTBOUND LANE CLOSURE	10	55	550	--	--	2	20	4	40	10	100	1	10	6	60
0010	WESTBOUND LANE CLOUSRE	10	55	550	--	--	2	20	4	40	10	100	1	10	6	60
0010	SIDWALK CLOSURE	20	--	--	4	80	--	--	4	80	--	--	--	--	4	80
BANTA COURT																
0010	LANE CLOSURE	1	20	20	--	--	--	--	--	--	20	20	--	--	6	6
0010	SIDEWALK CLOSURE	1	--	--	4	4	--	--	4	4	--	--	--	--	4	4
TOTAL 0010			1120		84		40		164		220		20		210	

SPECIAL(STREET AND SIDEWALK SWEEPING)

CATEGORY	LOCATION	SPV. 0075. 01	REMARKS
		HRS	
0010	UNDI STRIBUTED	30	
TOTAL 0010		30	

REMOVING RAILING

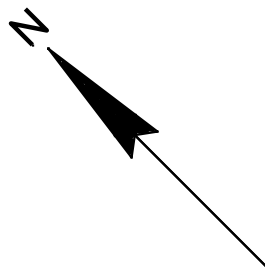
CATEGORY	LOCATION	SPV. 0105. 01	SPV. 0105. 02	SPV. 0105. 03	SPV. 0105. 04	SPV. 0105. 05	SPV. 0105. 06	REMARKS
		LS	LS	LS	LS	LS	LS	
0010	R-44-0015	1	--	--	--	--	--	
0010	B-44-260	--	1	--	--	--	--	
0010	B-44-260	--	--	1	--	--	--	
0010	STAR IWAY	--	--	--	1	--	--	
0010	SIDEWALK	--	--	--	--	1	--	
0010	B-44-275	--	--	--	--	--	1	
TOTAL 0010		1	1	1	1	1	1	

RAILING

CATEGORY	LOCATION	SPV. 0105. 07 LS	SPV. 0105. 08 LS	SPV. 0105. 09 LS	SPV. 0105. 10 LS	SPV. 0105. 11 LS	SPV. 0105. 12 LS	REMARKS
0010	R-44-0015	1	--	--	--	--	--	
0010	B-44-260	--	1	--	--	--	--	
0010	B-44-260	--	--	1	--	--	--	
0010	STAI RWAY	--	--	--	1	--	--	
0010	SI DEWALK	--	--	--	--	1	--	
0010	B-44-275	--	--	--	--	--	1	
TOTAL 0010		1	1	1	1	1	1	

CONCRETE STAINING AND CLEANING

CATEGORY	LOCATION	SPV. 0165. 01 SF	SPV. 0165. 02 SF	SPV. 0165. 03 SF	SPV. 0180. 01 SY	REMARKS
0010	B-44-260	750	--	--	85	
0010	B-44-275	--	125	--	15	
0010	R-44-0015	--	--	125	15	
TOTAL 0010		750	125	125	115	



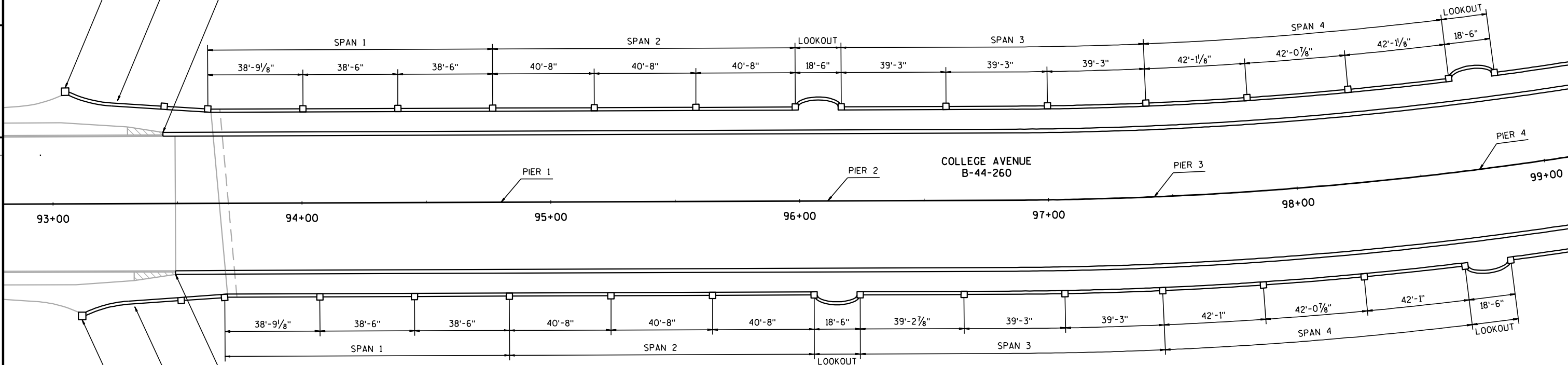
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RAILING STEEL TYPE C1C
GALVANIZED AND PAINTED, B-44-260
BEGIN STA 93+05

WINGWALL 2

RAILING STEEL TYPE C1B
GALVANIZED AND PAINTED, B-44-260
BEGIN STA 93+44



RAILING STEEL TYPE C1B
GALVANIZED AND PAINTED, B-44-260
BEGIN STA 93+49

WINGWALL 1

RAILING STEEL TYPE C1C
GALVANIZED AND PAINTED, B-44-260
BEGIN STA 93+11

NOTE:

SPAN NUMBER TO BE USED IN CONJUNCTION WITH
"RAIL POST SPACING DIMENSION TABLE" ON PARAPET 'A'
RAILING B-44-260 INSIDE ELEVATIONS SHEET.

PROJECT NO: 4984-20-60

HWY: COLLEGE AVENUE

COUNTY: OUTAGAMIE

PLAN

SHEET

E

FILE NAME : F:\D3_498420\050201.prn.DGN

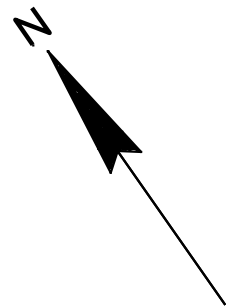
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PLOT BY : dotmzc

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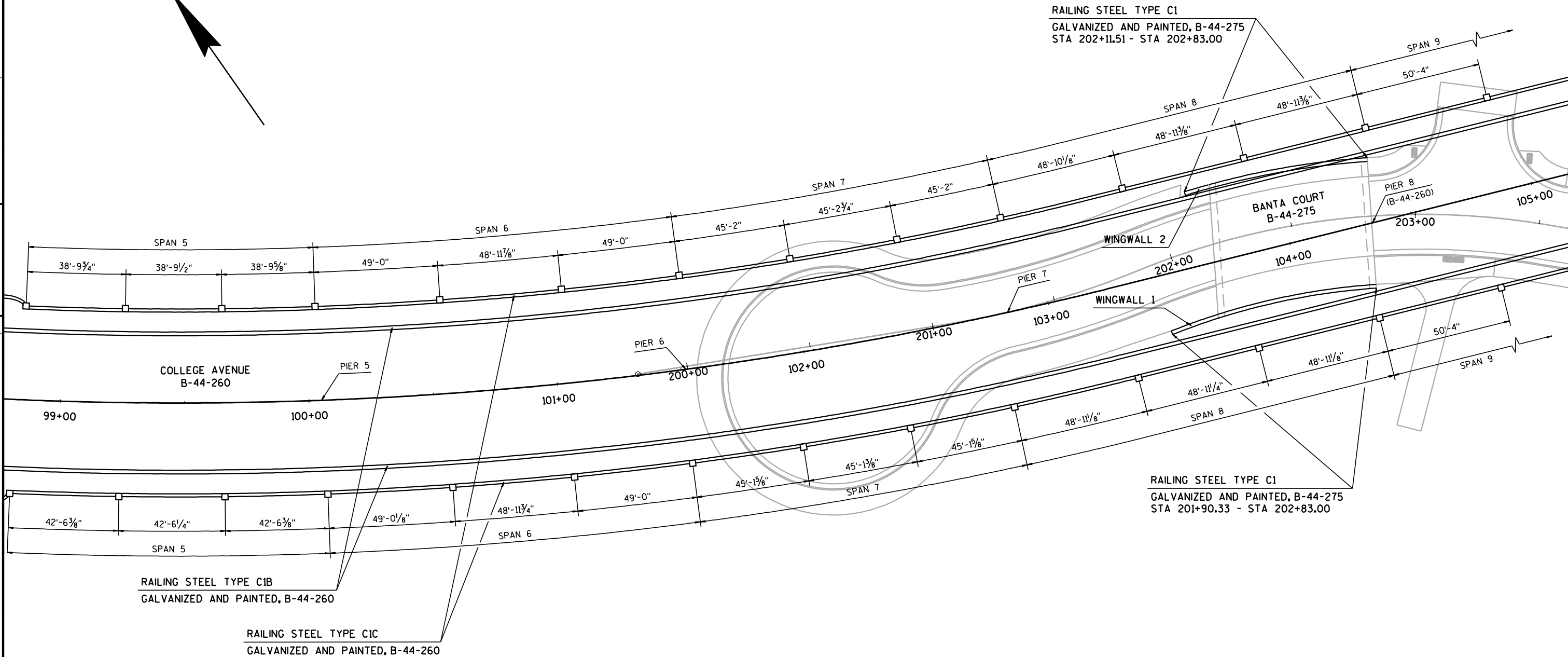
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WISDOT/CADDs SHEET 44

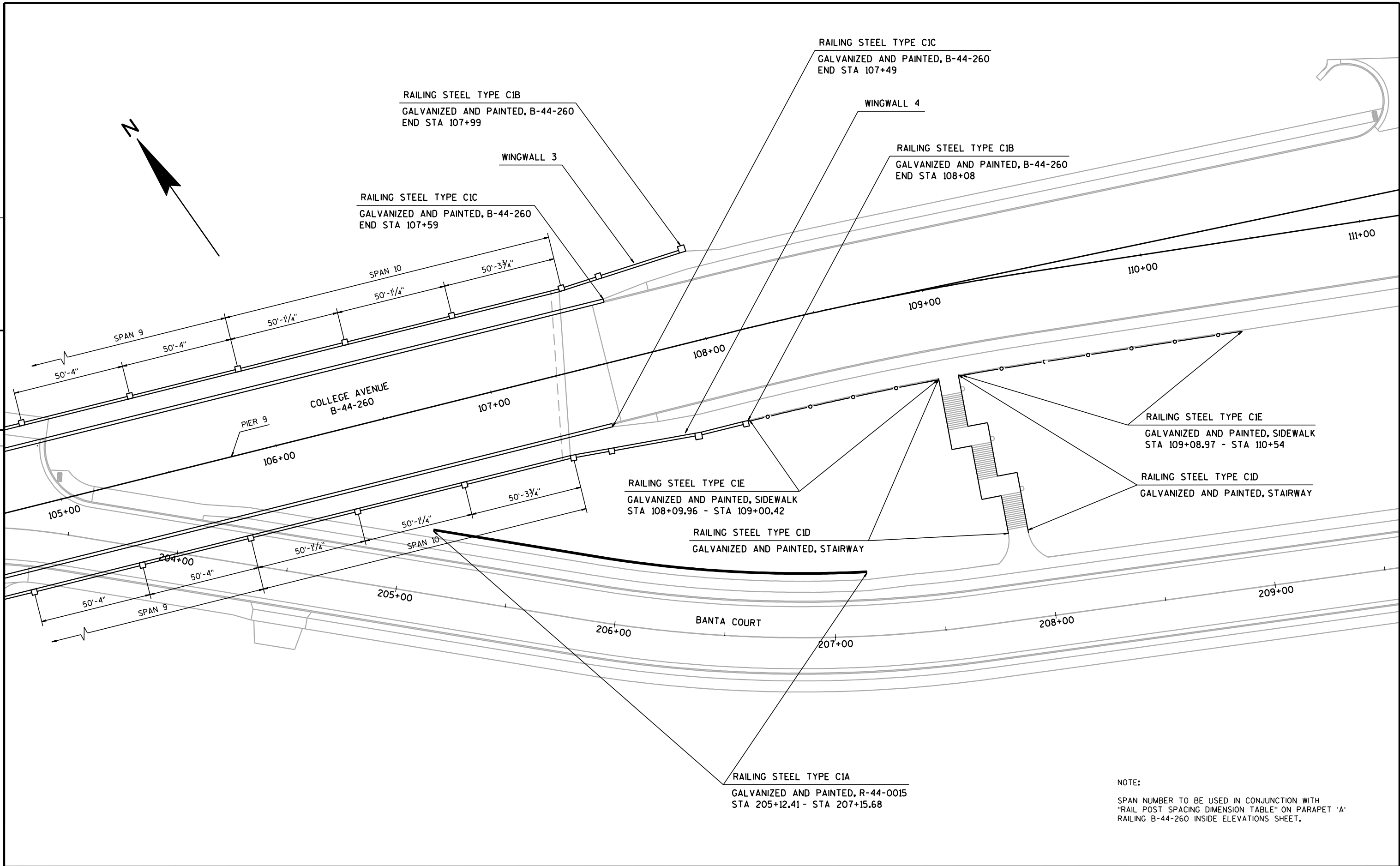


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NOTE:
SPAN NUMBER TO BE USED IN CONJUNCTION WITH
"RAIL POST SPACING DIMENSION TABLE" ON PARAPET 'A'
RAILING B-44-260 INSIDE ELEVATIONS SHEET.



PROJECT NO: 4984-20-60	HWY: COLLEGE AVENUE	COUNTY: OUTAGAMIE	PLAN	SHEET	E
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Standard Detail Drawing List

15D20-01	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

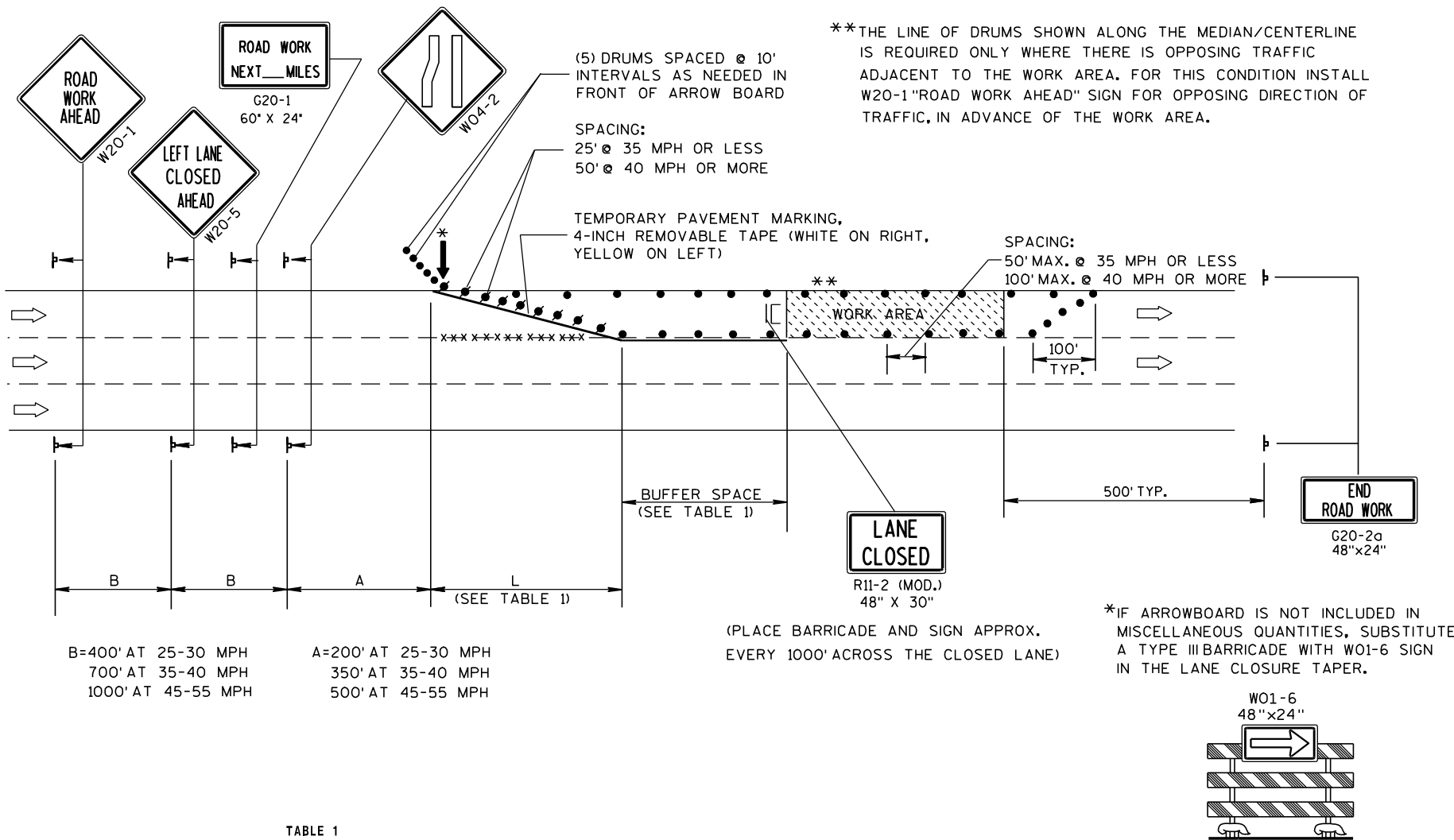


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':
L = WS AT 45 MPH OR GREATER
 $L = \frac{WS^2}{60}$ AT 40 MPH OR LESS
L = TAPER LENGTH IN FEET
S = NON-CONSTRUCTION SPEED LIMIT (MPH)
W = WIDTH OF LANE CLOSURE

LEGEND

- /● DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- ⌵ POST MOUNTED SIGN
- ↑ ARROW BOARD
- IC/C TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

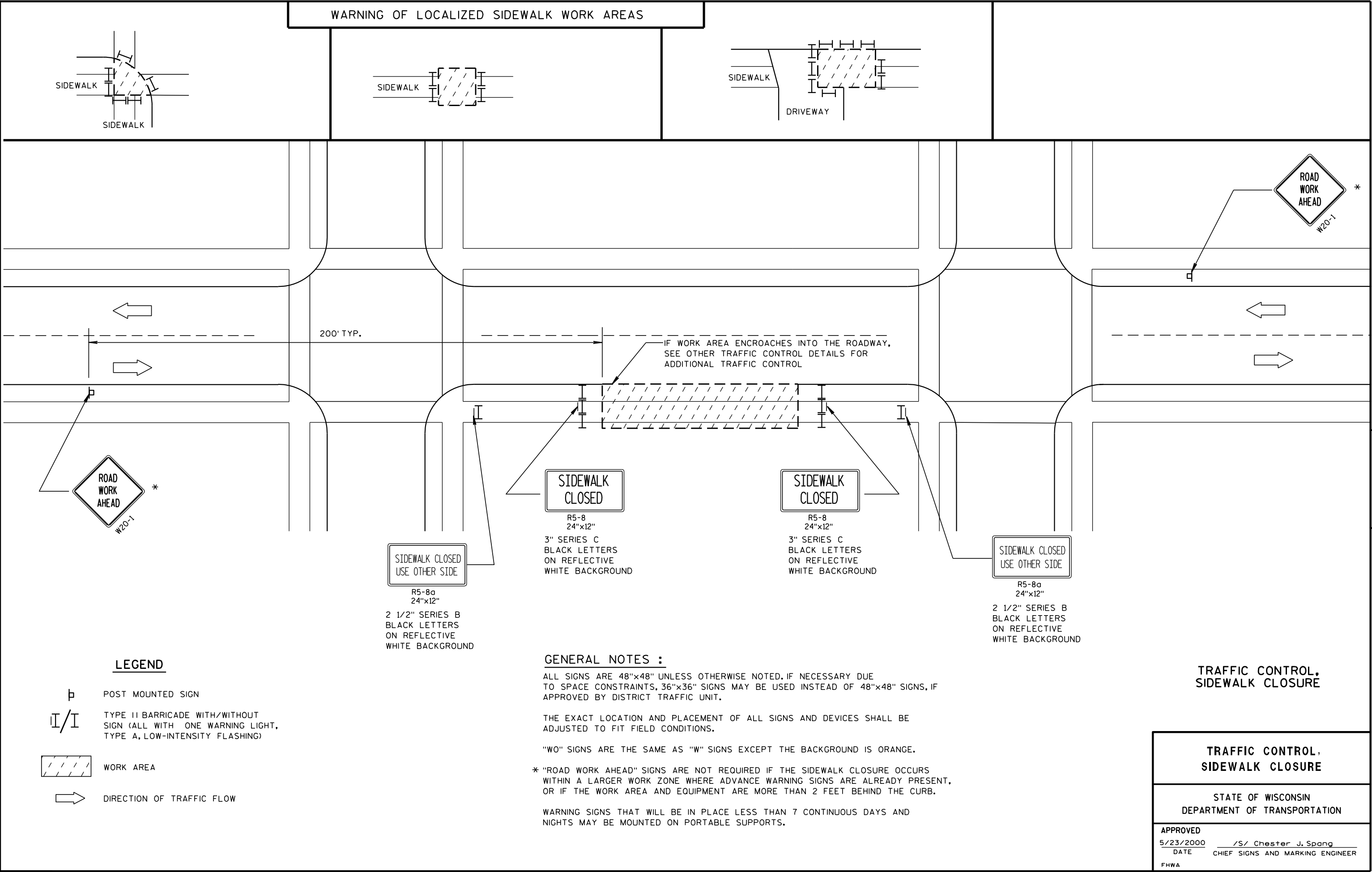
PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

BARRICADES IN A CLOSED LANE 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.

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/23/00 DATE	/S/ Chester J. Spang CHIEF SIGNS AND MARKING ENGINEER
FHWA	



Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>