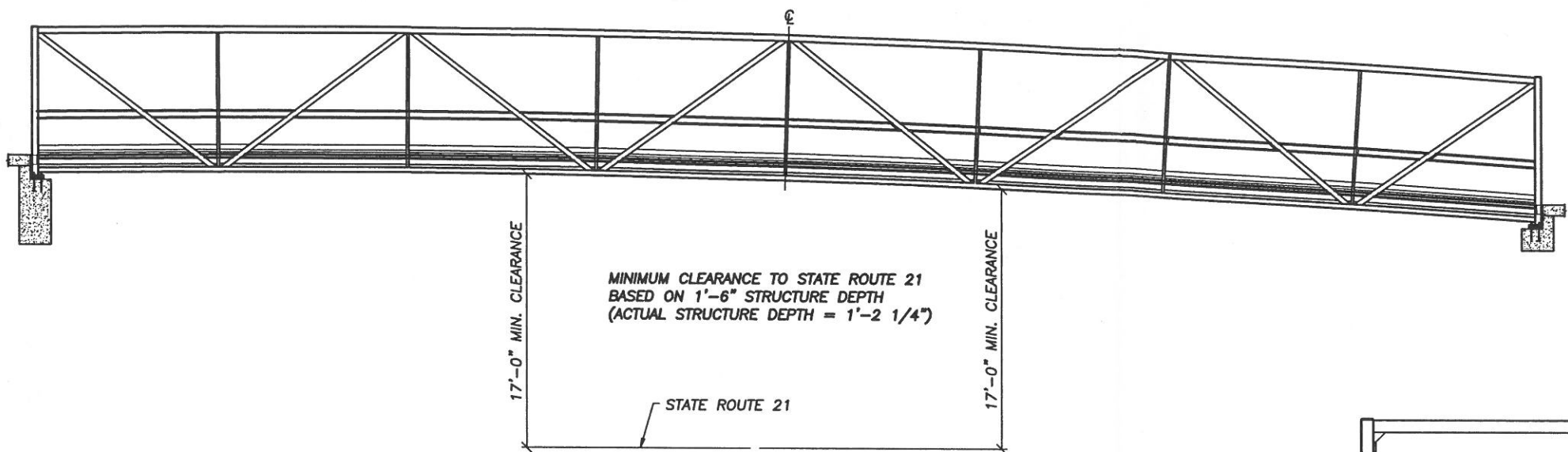


LINCOLN WAY PEDESTRIAN BRIDGE

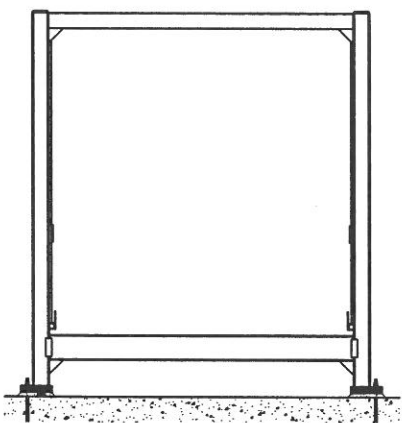
STARK COUNTY, OHIO



NOTE:
BRIDGE TO HAVE A 1'-2" SHOP CAMBER
(INCLUDES A 3/4" ALLOWANCE FOR DEAD LOAD
DEFLECTION AND 1'-1 1/4" RESIDUAL
CAMBER)

ESTIMATED BRIDGE
LIFTING WEIGHT: 31,000 LBS.

ELEVATION VIEW



END VIEW

MATERIAL NOTES:

- 1) THE BRIDGE IS FABRICATED FROM COLD-FORMED WELDED AND SEAMLESS HIGH STRENGTH, LOW-ALLOY STRUCTURAL TUBING WITH IMPROVED ATMOSPHERIC CORROSION RESISTANCE MEETING THE REQUIREMENTS OF ASTM A847, AND PLATES AND STRUCTURAL SHAPES MEETING THE REQUIREMENTS OF ASTM A588, A606, OR A242. (FY = 50,000 PSI).
- 2) THE WELDING PROCESS SHALL BE THE FLUX CORE ARC WELDING PROCESS, UTILIZING E80T1 ELECTRODES.
- 3) WELDED CONNECTIONS SHALL BE WELDS OF THE SIZE SHOWN.
 - A) BOTH ENDS OF VERTICALS, DIAGONALS, FLOOR BEAMS AND WIND BRACING SHALL BE WELDED ALL AROUND.
 - B) BOTTOM OF STRINGERS SHALL BE STITCH WELDED TO TOP OF FLOOR BEAMS.
 - C) MISCELLANEOUS MEMBERS WILL BE STITCH WELDED TO THEIR SUPPORTING MEMBERS.
- 4) TEN PERCENT OF EACH DIFFERING STRUCTURAL WELD (DIFFERING WELD TO BE DEFINED BY TYPE, SIZE, LENGTH) SHALL BE RANDOMLY TESTED (MAGNETIC PARTICLE). ALL STRUCTURAL WELDS SHALL BE VISUALLY INSPECTED AND CONFORM TO AWS D1.1.
- 5) SHOP SPLICES OF CHORDS (WHEN REQUIRED OR AS NECESSARY) SHALL BE FULL PENETRATION JOINTS USING JOINT DETAIL B-U2A-GF. ALL OF THESE WELDS SHALL BE TESTED. THE TOP CHORD TESTING SHALL BE MAG. PARTICLE AND THE BOTTOM CHORD TESTING SHALL BE MAG. PARTICLE.
- 6) ALL EXPOSED SURFACES OF STEEL WILL BE SAND BLASTED IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL SURFACE PREPARATION SPECIFICATION NO. 6 BLAST CLEANING (SSPC-SP6).
- 7) BRIDGE DECKING TO BE 3"x12" DOUGLAS FIR-LARCH SELECT STRUCTURAL S1S1E, ACZA TREATED.
- 8) RUBRAIL TO BE 2"x6" SOUTHERN YELLOW PINE (S4S).
- 9) BRIDGE TO BE FABRICATED AND DELIVERED TO THE SITE AS 2 UNITS.
- 10) STRINGERS SHALL SPAN A MINIMUM OF 2 BAYS
- 11) SHOP SPLICE LOCATIONS SHALL BE APPROVED BY THE SEALING ENGINEER.
- 12) ALL HARDWARE FOR BOLTING FIELD SPLICES SHALL BE A325 TYPE III EXCEPT NON-STRUCTURAL CONNECTIONS DO NOT REQUIRE A325. ALL BOLTS IN FIELD SPLICE SHALL BE TIGHTENED TO PROVIDE A MIN. BOLT TENSION EQUAL TO PROOF LOAD. PROVISIONS OF AASHTO DIV. II SECT. 11 SHALL APPLY.
- 13) THE CHAIN LINK FENCING SHALL BE GALVANIZED AND VINYL COATED, WITH A MAXIMUM OPENING OF 1 INCH. THE VINYL COATING SHALL BE THE SAME COLOR AS USED ON THE VANDAL PROTECTION FENCE.

DO NOT SCALE DRAWINGS

DESIGN DATA

- 1) DESIGN OF SUPERSTRUCTURE SHALL BE IN ACCORDANCE WITH AASHTO, AISC, & PROJECT SPECIFICATIONS.
- 2) DESIGN LOADS:
 - LIVE LOAD
 - A) A MINIMUM UNIFORM LIVE LOAD OF 85 psf APPLIED TO THE ENTIRE DECK SURFACE; OR
 - B) 10,000 LB VEHICLE (H5)
 - C) 1,000 LB POINT LOAD (IN ADDITION TO THE DESIGN VEHICLE, IF ANY, BRIDGE WILL SAFELY ACCOMMODATE ANY VEHICLE WITH WHEEL LOADS LESS THAN OR EQUAL TO THE DESIGN POINT LOAD.)
 - WIND LOAD
 - A) A LATERAL WIND LOAD OF 35 psf ON THE FULL HEIGHT OF THE BRIDGE, AS IF ENCLOSED.
 - B) AN UPLIFT WIND LOAD OF 20 psf APPLIED AT THE WINDWARD QUARTER POINT IF THE TRANSVERSE BRIDGE WIDTH.

TEMPERATURE/LENGTH CHART

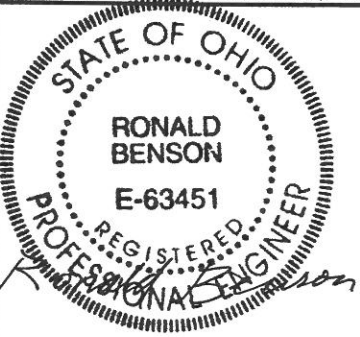
TEMPERATURE	LENGTH
-40°F	103'-8 1/8"
70°F	103'-9"
110°F	103'-9 3/8"

BRIDGE REACTIONS

COMBINE REACTIONS AS PER LOCAL OR GOVERNING BUILDING CODES AS REQUIRED				+ DOWNWARD LOAD - UPWARD LOAD
LOAD	P lbs	H lbs	L lbs	
DEAD	7,800			
UNIFORM LIVE	17,500			
VEHICLE	5,000			
WIND		18,000	12,000	
WINDWARD	-18,000			
LEEWARD	9,900			
THERMAL			1,600	

"P" - VERTICAL LOAD EACH BASE PLATE (4 PER BRIDGE)
"H" - HORIZONTAL LOAD EACH FOOTING (2 PER BRIDGE)
"L" - LONGITUDINAL LOAD EACH BASE PLATE (4 PER BRIDGE)

ENGINEER'S SIGNATURE AND SEAL ARE TO ASSUME DESIGN RESPONSIBILITY FOR THE PREFABRICATED STEEL SUPERSTRUCTURE AS DRAWN AND SUPPLIED BY WHEELER CONSOLIDATED, INDEPENDENT OF ITS FINAL POSITION. THIS DESIGN RESPONSIBILITY IS LIMITED TO THE PREFABRICATED STEEL SUPERSTRUCTURE ONLY AND DOES NOT INCLUDE ANY DESIGN RESPONSIBILITY, PERTAINING TO, BUT NOT LIMITED TO, SUBSTRUCTURE DESIGN OR CAPACITY, HYDRAULICS, SOILS, SCOUR ANALYSIS, PERMITTING PROCEDURES, ERECTION, ROADWAY GEOMETRICS, ETC.



6/14/02

INDEX

- 1) COVER SHEET
- 2) GENERAL PLAN & ELEVATION
- 3) END & SECTION
- 4) BEARING DETAILS
- 5) WELD DETAILS
- 6) FENCING DETAILS
- 7) SPLICE DETAILS
- 8) SPLICE DETAILS

REV.	DESCRIPTION	DATE	INT.

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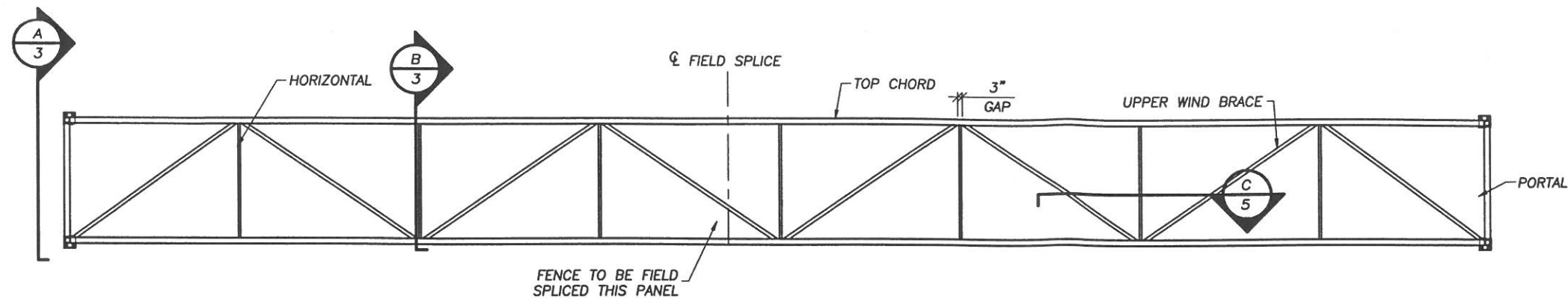
COVER SHEET

103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
LINCOLN WAY PEDESTRIAN BRIDGE
STARK COUNTY, OHIO

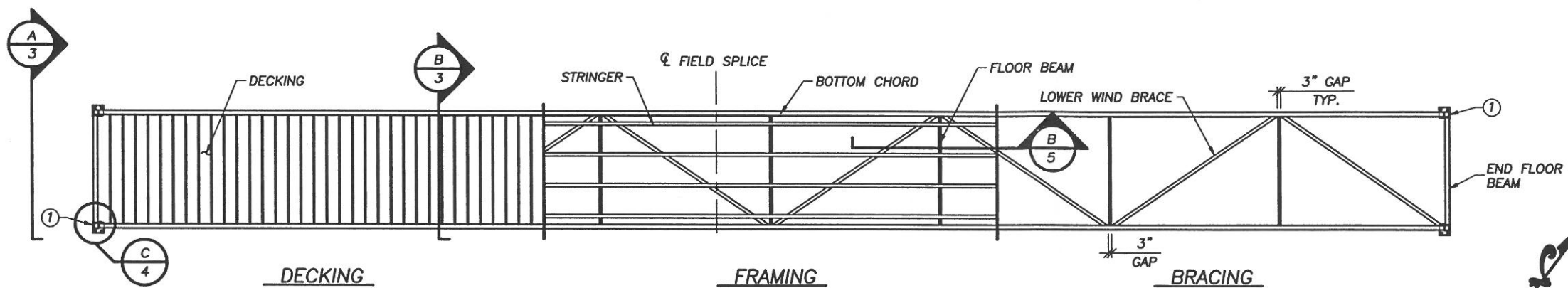


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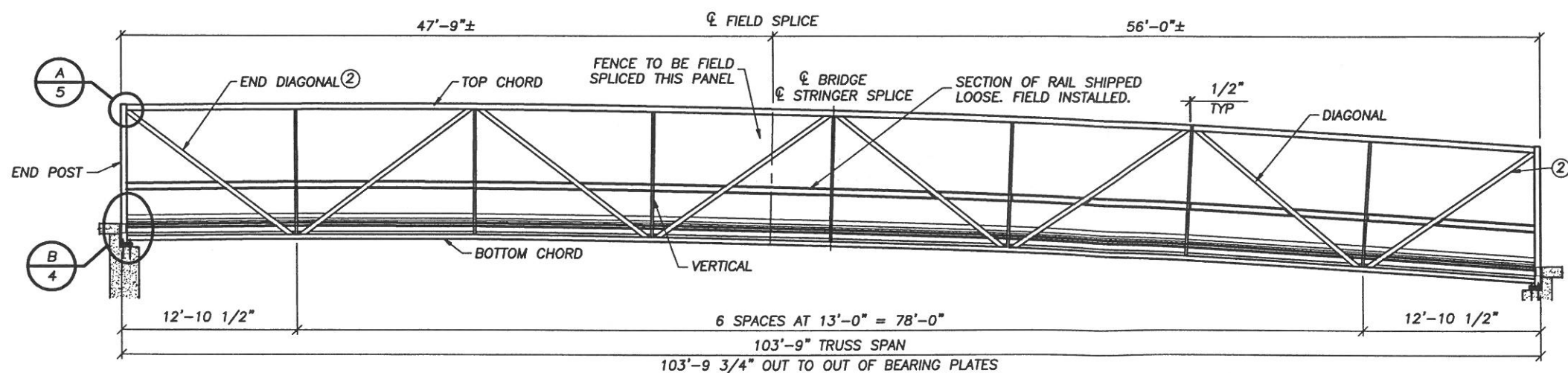
DATE: 6/03/02	TRACKING NO. T9994	SHEET NO.
CHK: PME	DWN: MJP	ORDER NO. 08793
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(A) UPPER BRACING PLAN

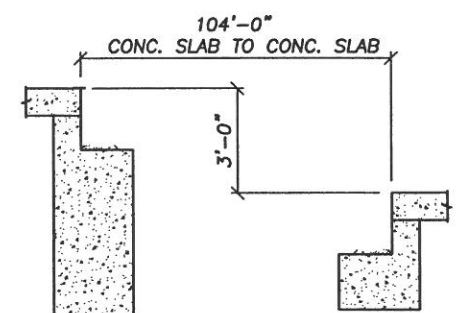


(B) LOWER BRACING PLAN



(C) ELEVATION

MEMBER SIZE TABLE	
MEMBER	SIZE
TOP CHORD	TS 5x5x1/4
BOTTOM CHORD	TS 4x4x1/4
END POSTS	TS 5x5x3/8
VERTICAL WEB	TS 2x2x1/4
END DIAGONAL	TS 4x4x1/4
DIAGONAL WEB	TS 4x4x1/4
FLOOR BEAM	TS 6x2x1/4
WIND BRACE	TS 3x3x1/4
END FLOOR BEAM	TS 8x4x3/8
PORTAL	TS 5x5x3/8
UPPER HORIZONTAL	TS 2x2x1/4
COVER PLATE	PL 1/4x6
RUBRAIL	2x6 S.Y.P.
TOE RAIL	TS 2x2x1/4
TOE PLATE	C 5x6.7
DECKING (S1S1E)	3x12 DOUG. FIR
STRINGER	TS 5x3x3/16
BEARING PLATES	PL 3/4x10
PORTAL STIFFENERS	PL 1/2x5x5



(D) SUBSTRUCTURE LAYOUT

KEY NOTES:

- ① BRIDGE NAME PLATE/ LOAD LIMIT PLATE EA. END. PLATE SHALL STATE, "5 TON VEHICLE LOAD LIMIT."
- ② END DIAGONAL TO BE DOUBLE MITERED AT TOP CHORD CONNECTION.

SHEET TITLE:

GENERAL PLAN & ELEVATION

103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
LINCOLN WAY PEDESTRIAN BRIDGE
STARK COUNTY, OHIO



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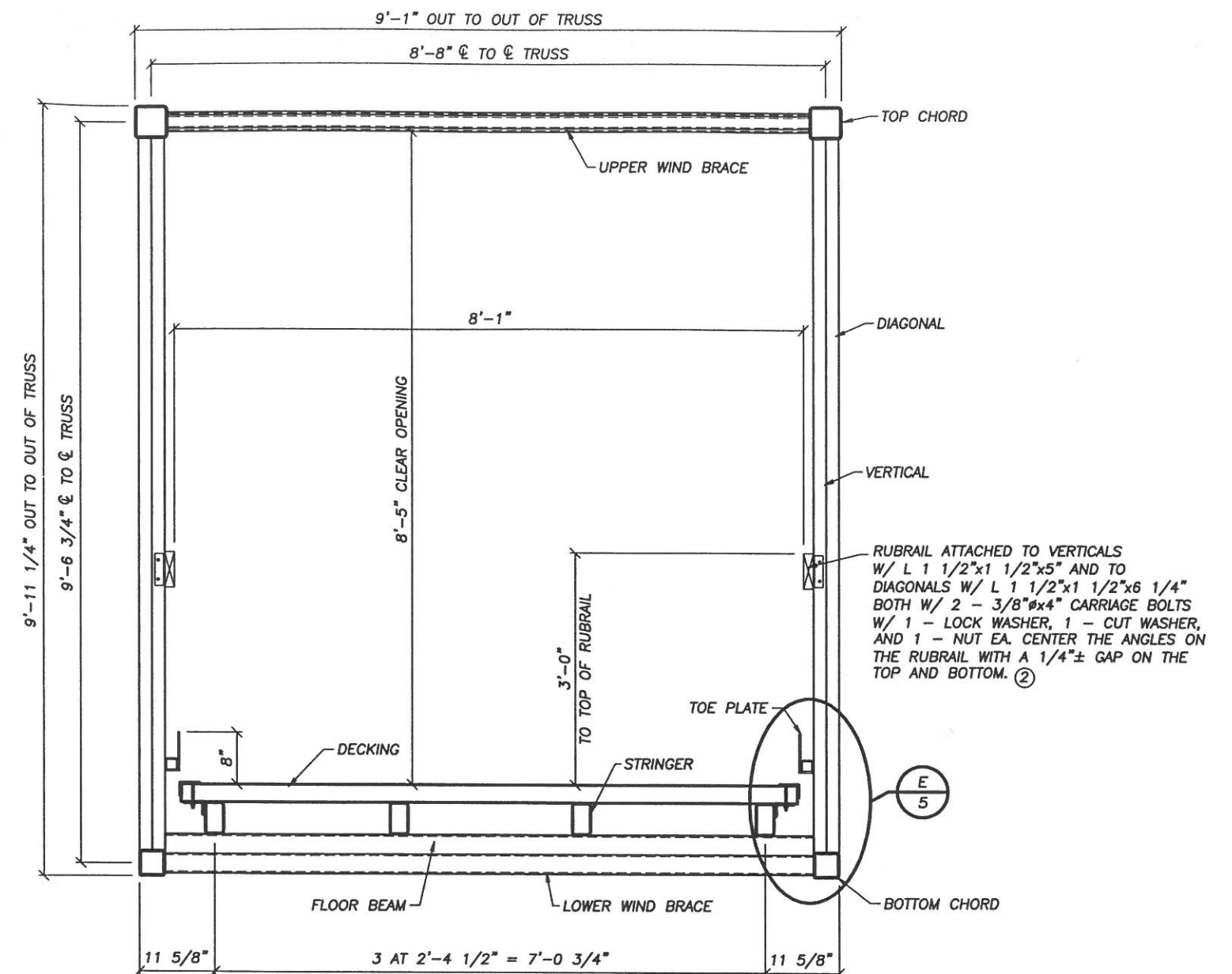
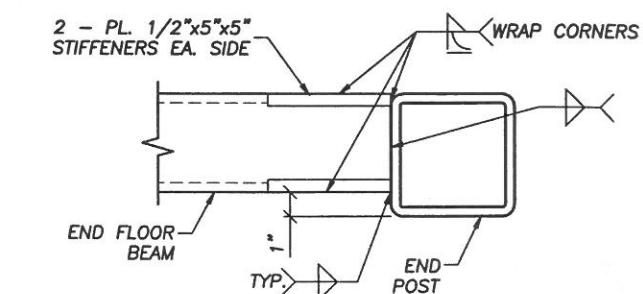
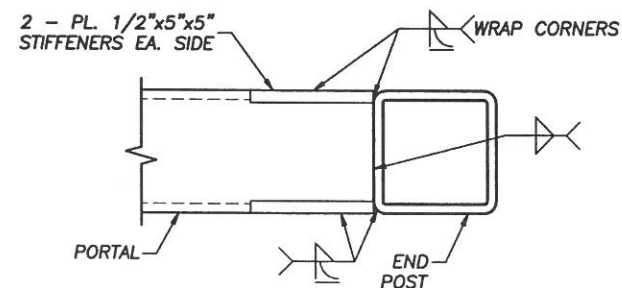
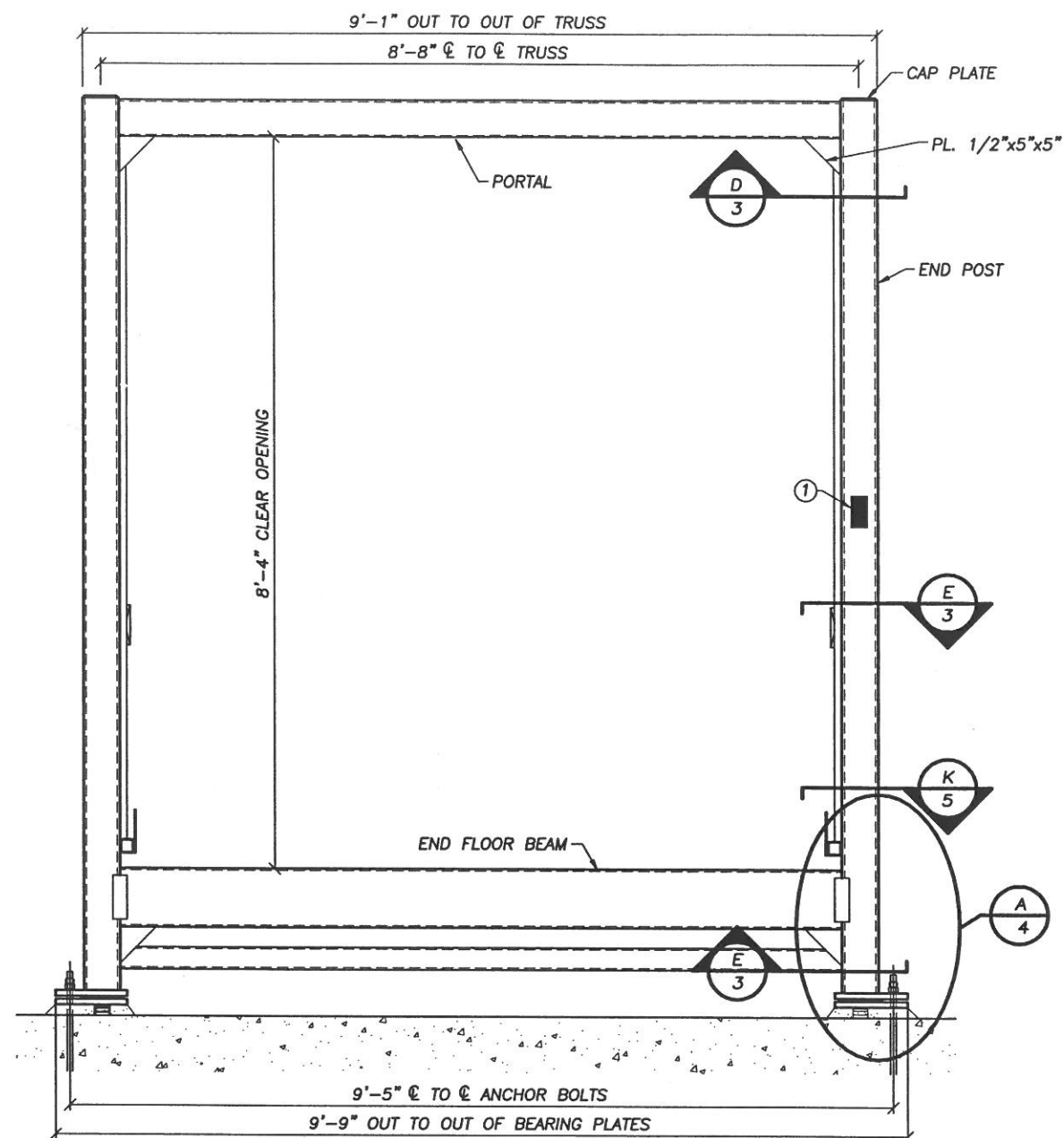
SHEET NO.

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KEY NOTES:

- ① BRIDGE NAME PLATE/ LOAD LIMIT PLATE EA. END. PLATE SHALL STATE, "5 TON VEHICLE LOAD LIMIT."
- ② MINIMIZE THE UNSUPPORTED LENGTH AT DIAGONALS (ALWAYS ATTACH TO THE BOTTOM OF THE DIAGONAL).

- ② MINIMIZE THE UNSUPPORTED LENGTH AT DIAGONALS (ALWAYS ATTACH TO THE BOTTOM OF THE DIAGONAL).

SHEET TITLE:

END AND SECTION DETAILS

**103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
LINCOLN WAY PEDESTRIAN BRIDGE
STARK COUNTY, OHIO**



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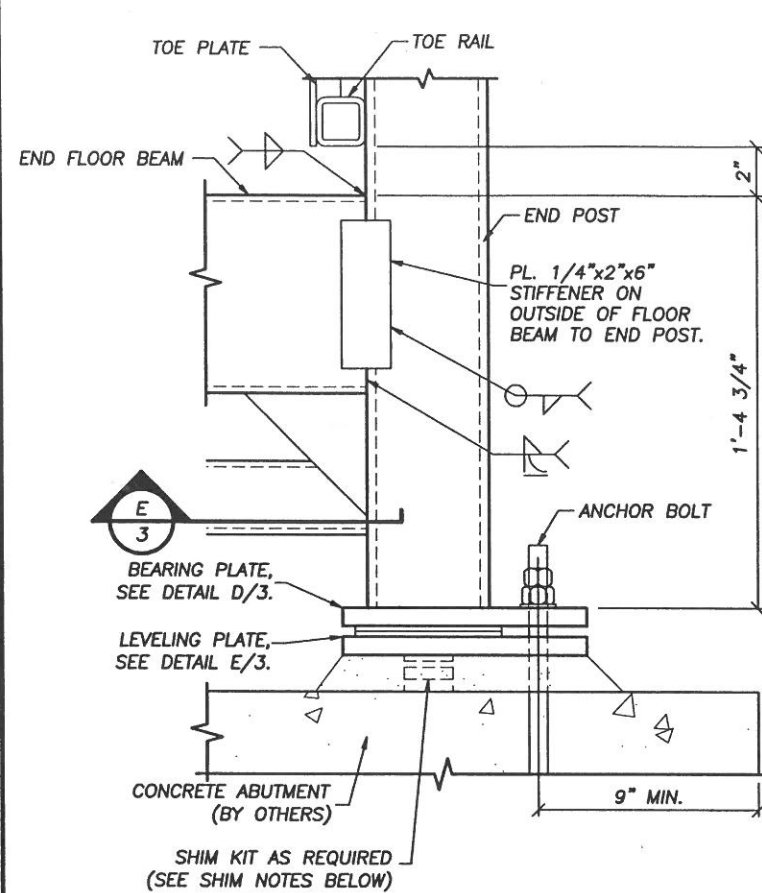
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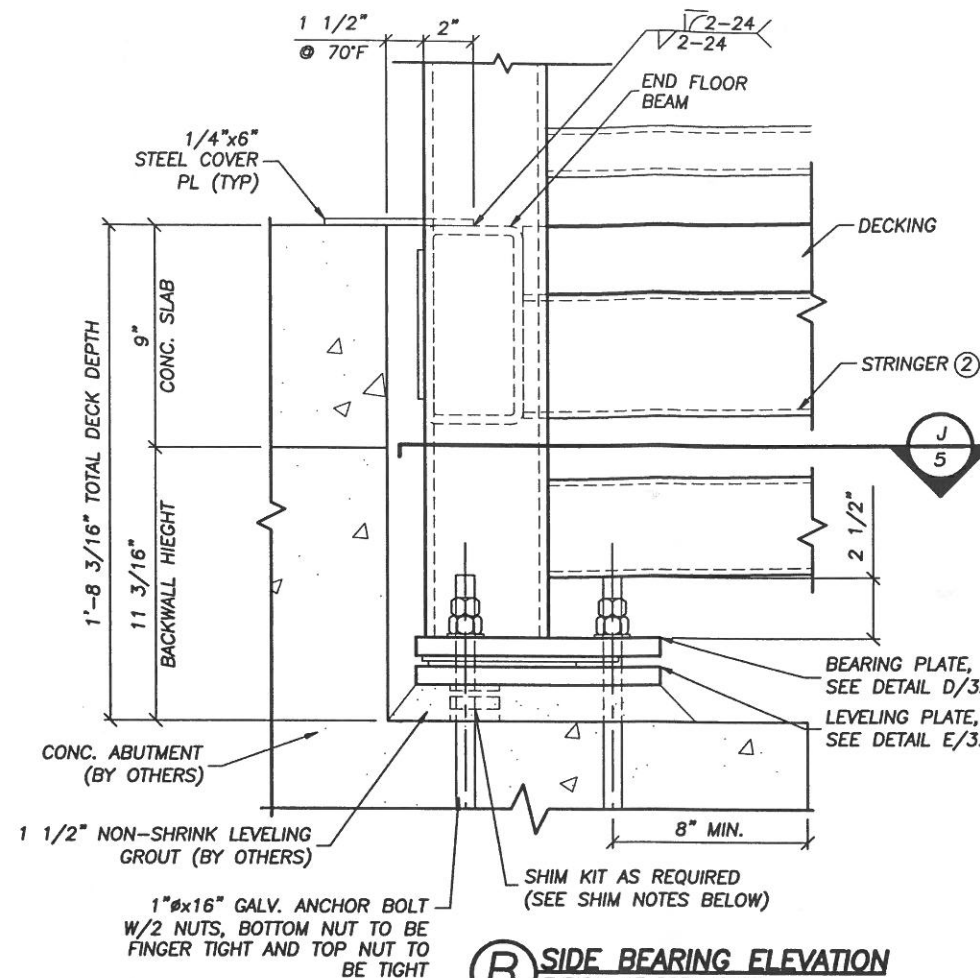
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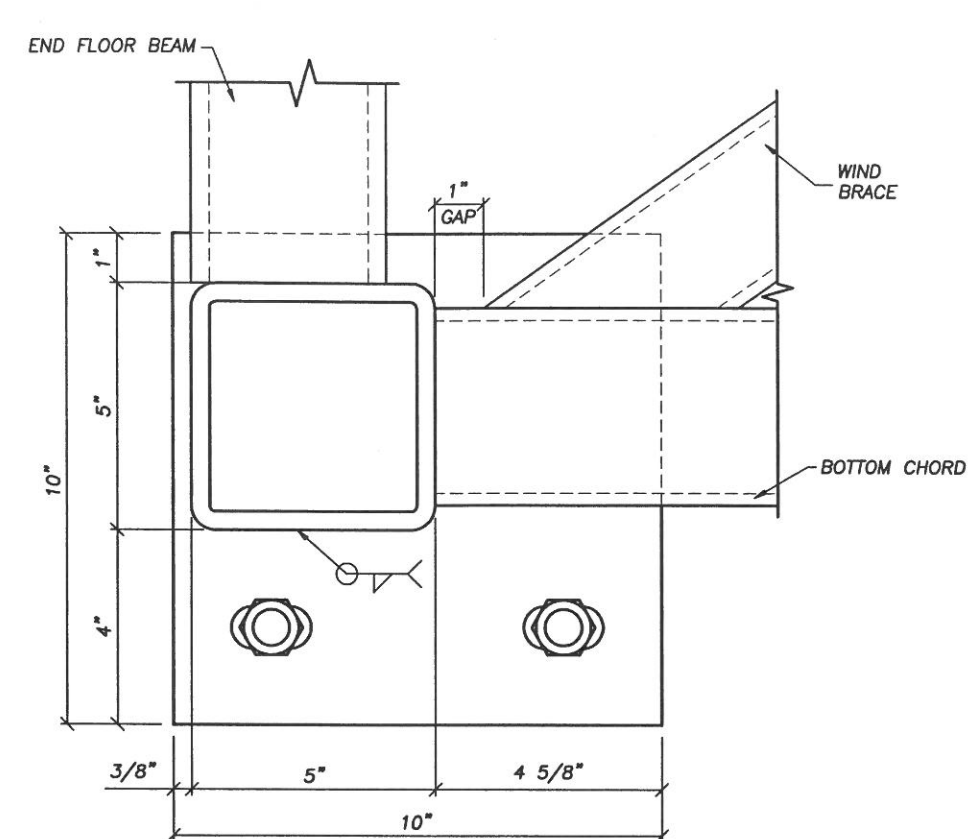
3 OF 8



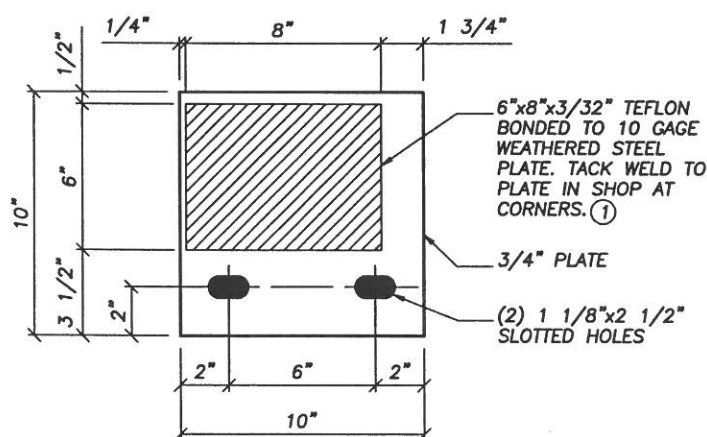
A END BEARING ELEVATION
TYPICAL AT BOTH ENDS



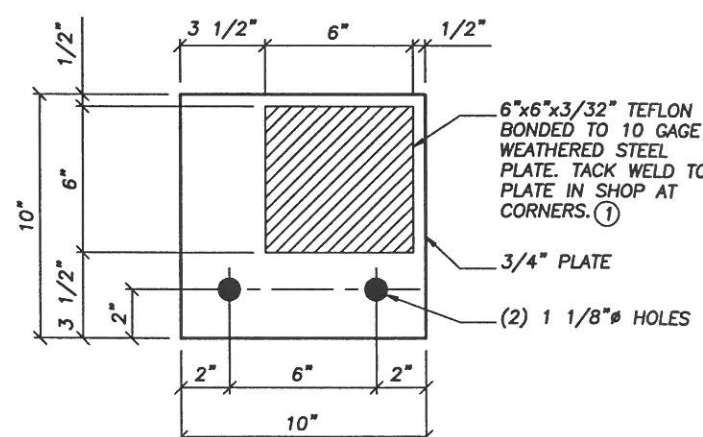
B SIDE BEARING ELEVATION
TYPICAL AT BOTH ENDS



C BEARING CONNECTION
TYPICAL AT BOTH ENDS



D BEARING PLATE



E LEVELING PLATE

ANCHOR BOLT NOTES:
ANCHOR BOLTS SHALL HAVE AN EMBEDMENT DEPTH OF 10 INCHES. THE CHEMICAL ADHESIVE SHALL BE LIQUID ROC 300 OR EQUAL AS APPROVED BY THE SEALING ENGINEER. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ABUTMENT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID ANCHOR RODS, 2" CLEARANCE REQUIRED. ANCHORS SHALL BE SURROUNDED BY AT LEAST ONE BAR ON ALL SIDES.

SHIM KIT NOTES:
FINAL ELEVATION ADJUSTMENT OF THE BRIDGE WILL BE MADE WITH TWO INCH BY TWO INCH SQUARE SHIMS (PROVIDED). SHIM PLATES SHALL BE CENTERED ON THE END POST. ALLOW COVER PLATES TO JUST TOUCH THE TOP OF THE ABUTMENT BACKWALL, DO NOT ALLOW ANY BRIDGE WEIGHT TO REST ON COVER PLATES.

WHEN THE DEAD LOAD REACTION EXCEEDS 20,000 LBS, THE SHIM KIT SHALL BE PLACED ON A 4"x4"x1/2" PL. (PROVIDED). FOR BRIDGES WITH CONCRETE DECK, THE BEARINGS SHALL NOT BE GROUTED UNTIL AFTER DECK PLACEMENT. IN ALL CASES THE CONTRACTOR SHALL ENSURE STABILITY PRIOR TO GROUTING.

SHEET NOTES:
1. ANY STEEL TUBING MEMBERS NOT COMPLETELY SEALED SHALL HAVE A 3/8" WEEP HOLE AT BOTH ENDS.

KEY NOTES:
① TEFLON TO BE COVERED UP DURING SHIPMENT AND LIFTING TO AVOID DAMAGE TO THE TEFLON PRIOR TO BRIDGE PLACEMENT.
② ADJUST ELEVATION OF STRINGER (UP 1/8"±) TO MATCH TOP OF DECKING WITH TOP OF END FLOOR BEAM.

FILLET WELD CHART	
THICKNESS OF THINNEST PIECE	WELD SIZE
1/4" OR LESS	1/4"
3/8" OR GREATER	5/16"
NON STANDARD WELDS	
NONE	

WELD PROCEDURES	
FILLET	PARTIAL PEN
FC-03	FC-06
FC-04	
	FULL PEN
	FC-05

WELD NOTES:
NON-STRUCTURAL WELDS INCLUDE RAILING, TOE PLATES, COVER PLATES, & TIE DOWNS. FILLET WELDS AT THESE LOCATIONS SHALL BE 3/16."

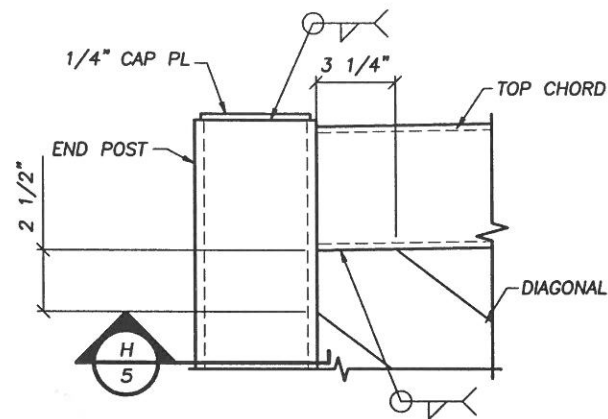
MATCHED EDGES OF ANY MEMBERS SHALL HAVE PARTIAL PENETRATION WELDS.

THE RADIUS OF ANY MEMBER SHALL BE BUILT UP AS REQUIRED TO OBTAIN FULL WELD THROAT THICKNESS.

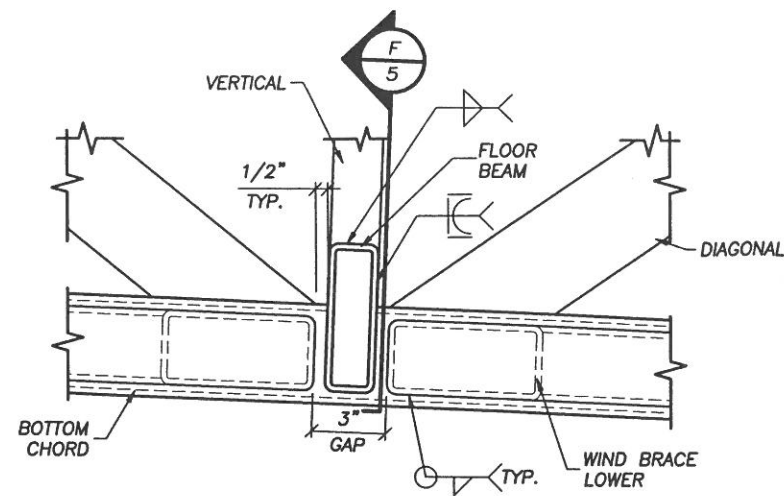
SHEET TITLE:
BEARING DETAILS
103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
LINCOLN WAY PEDESTRIAN BRIDGE
STARK COUNTY, OHIO

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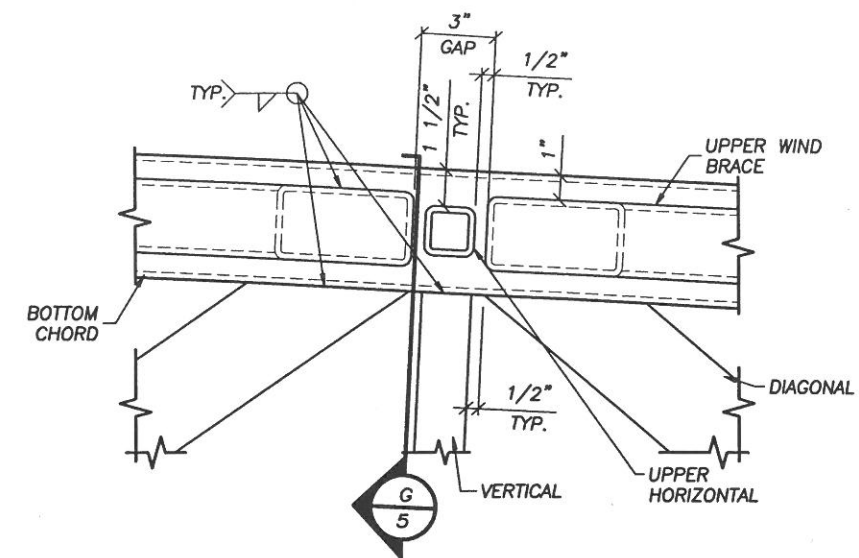
DATE: 6/03/02 TRACKING NO. T9994 SHEET NO.
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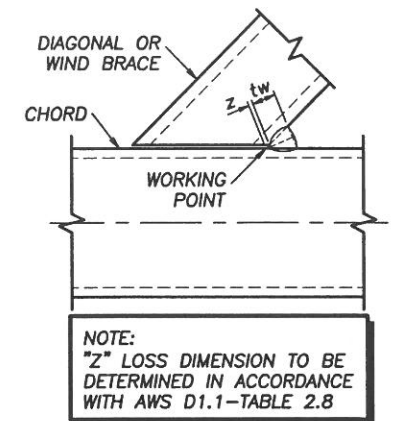
A END POST TO CHORD WELD DETAIL



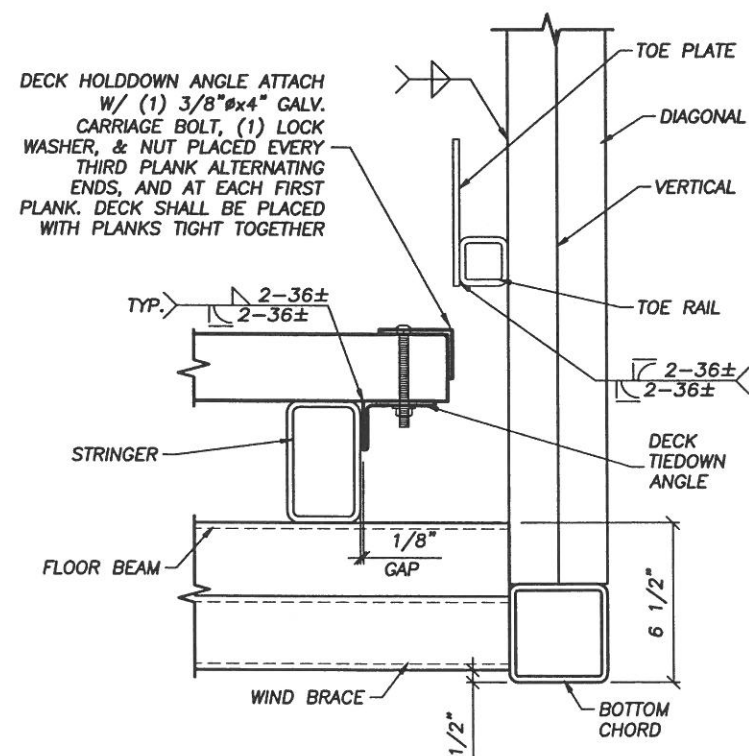
B BOTTOM CHORD ASSEMBLY WELD DETAIL



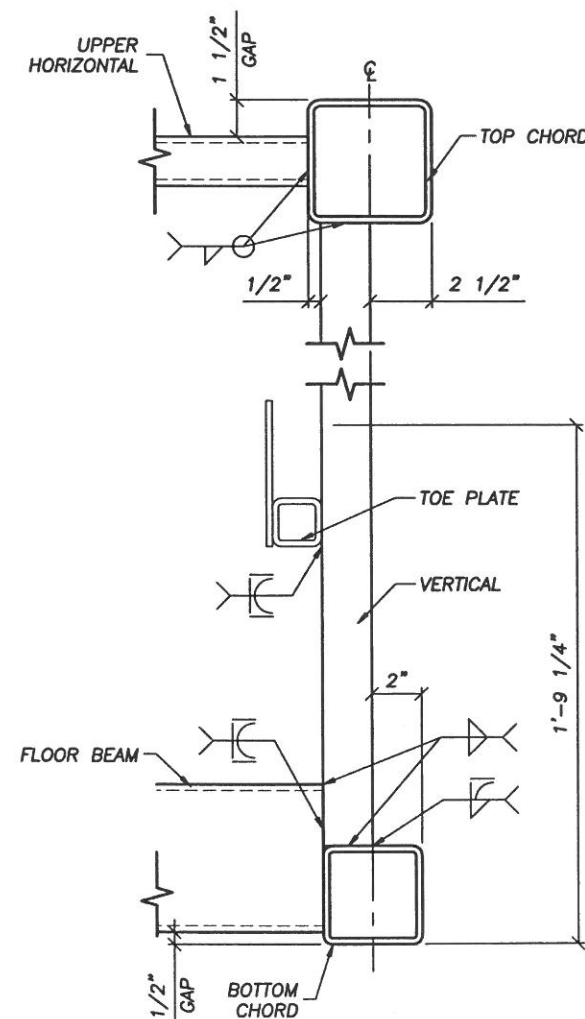
C TOP CHORD ASSEMBLY WELD DETAIL



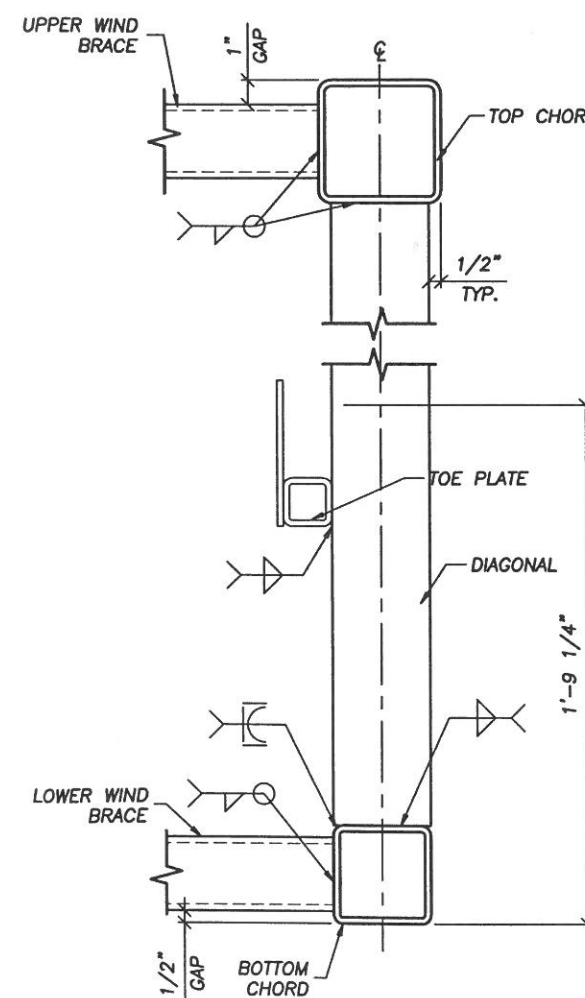
D DIAGONAL & WIND BRACE WELD STANDARD



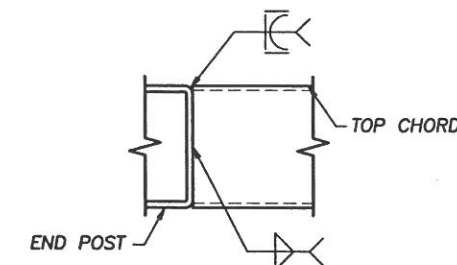
E SECTION AT EDGE DECK ATTACHMENT



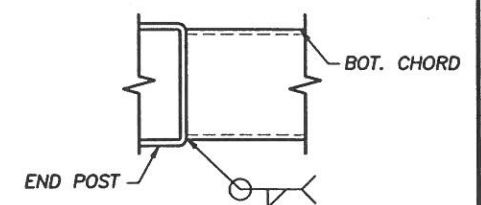
F SECTION AT VERTICAL ATTACHMENT DETAIL



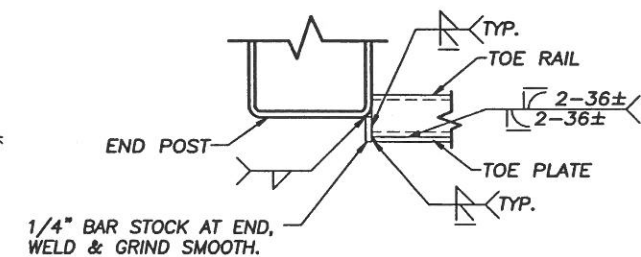
G SECTION AT DIAGONAL ATTACHMENT DETAIL



H TOP CHORD TO END POST WELD DETAIL



J BOTTOM CHORD TO END POST WELD DETAIL



K TOE PLATE TO END POST ATTACHMENT DETAIL

SHEET TITLE:

WELD DETAILS
103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
LINCOLN WAY PEDESTRIAN BRIDGE
STARK COUNTY, OHIO



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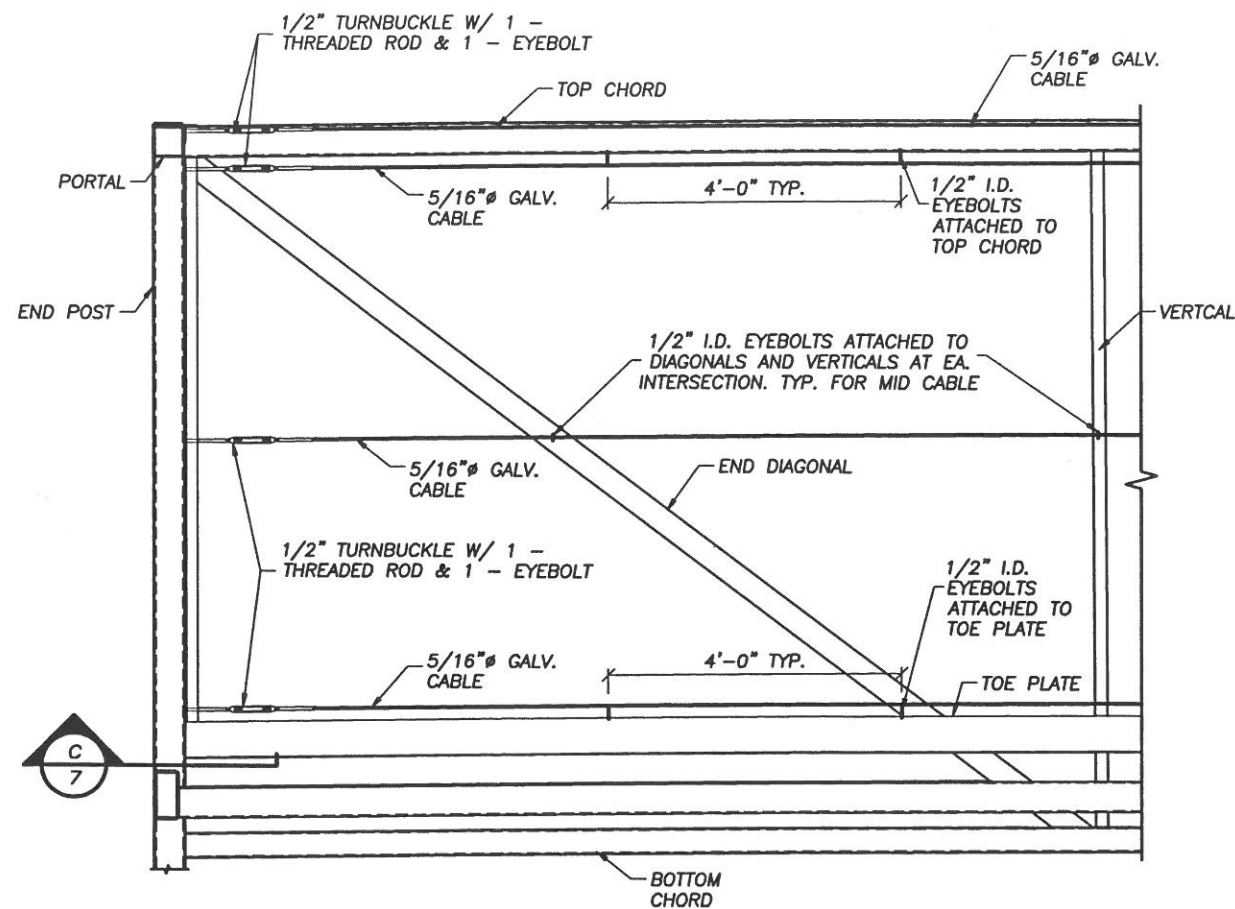
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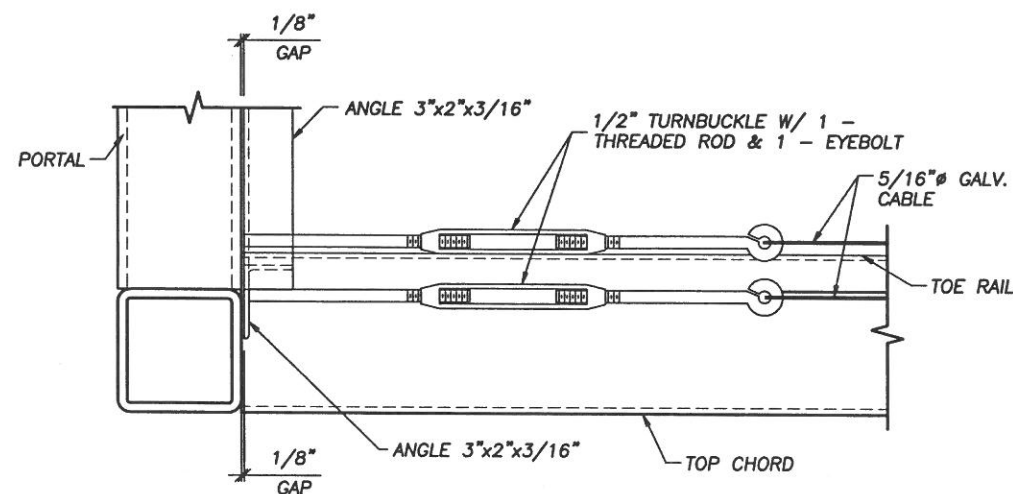
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ORDER NO. 08793

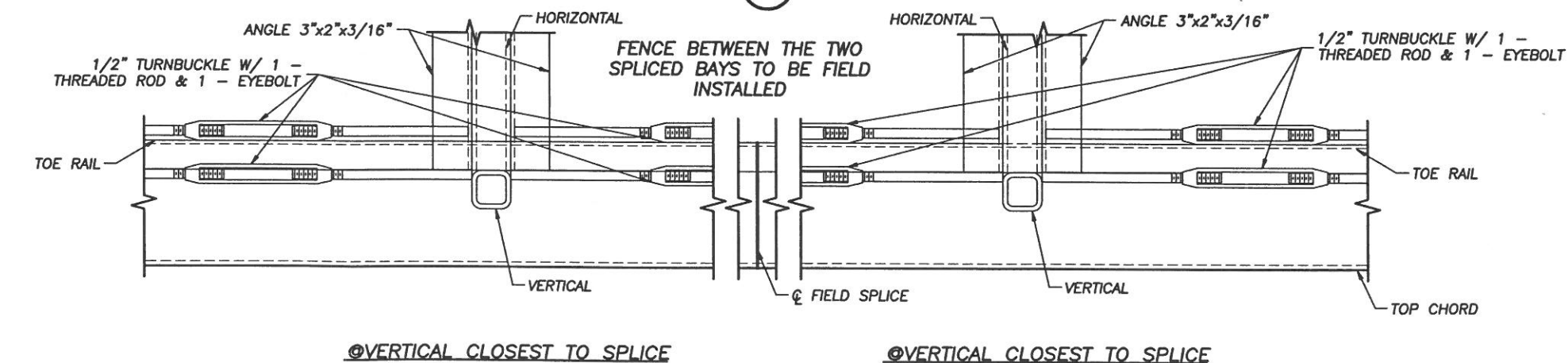
5 OF 8



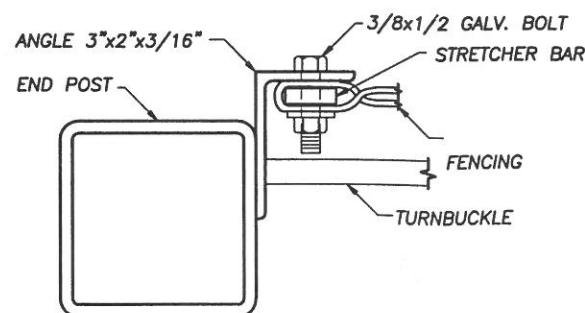
A ELEVATION VIEW AT
END BAY FENCE ATTACHMENT



C SECTION THROUGH END POST
AT PORTAL FENCE ATTACHMENT



B SECTION THROUGH DECK AT
END POST FENCE ATTACHMENT



E FENCING
ATTACHMENT DETAIL

D PLAN OF SPlicing
FENCE ATTACHMENT

SHEET NOTES:

1. DETAILS ARE FOR THE PLACEMENT AND ATTACHMENT OF THE 5/16" GALVANIZED CABLE. THE ACTUAL FENCE WILL ATTACH TO THE CABLES WITH FENCING CLIPS AS REQUIRED IN SHOP TO KEEP IT SECURED.

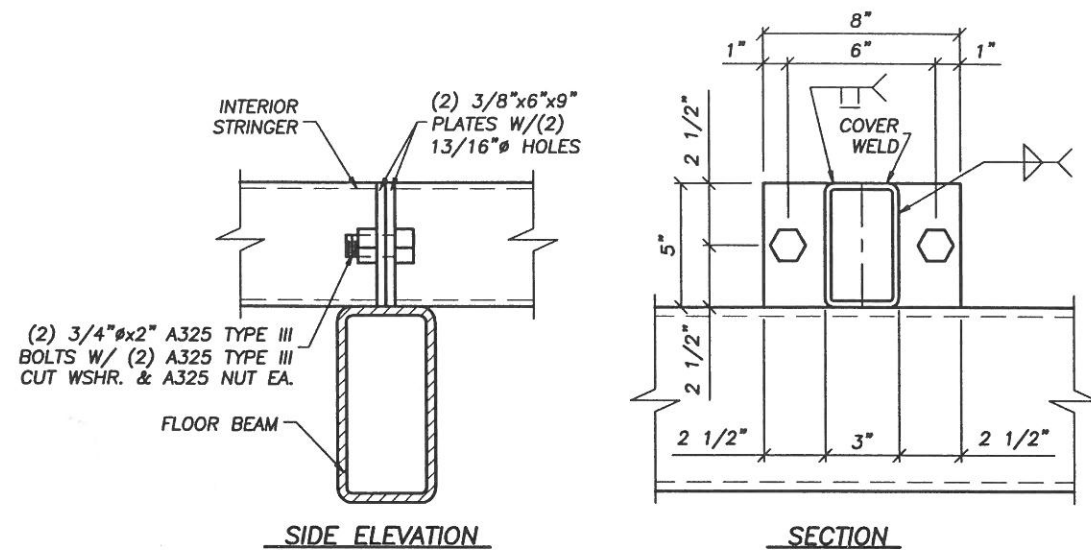
SHEET TITLE:

FENCE ATTACHMENT DETAILS
103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
LINCOLN WAY PEDESTRIAN BRIDGE
STARK COUNTY, OHIO

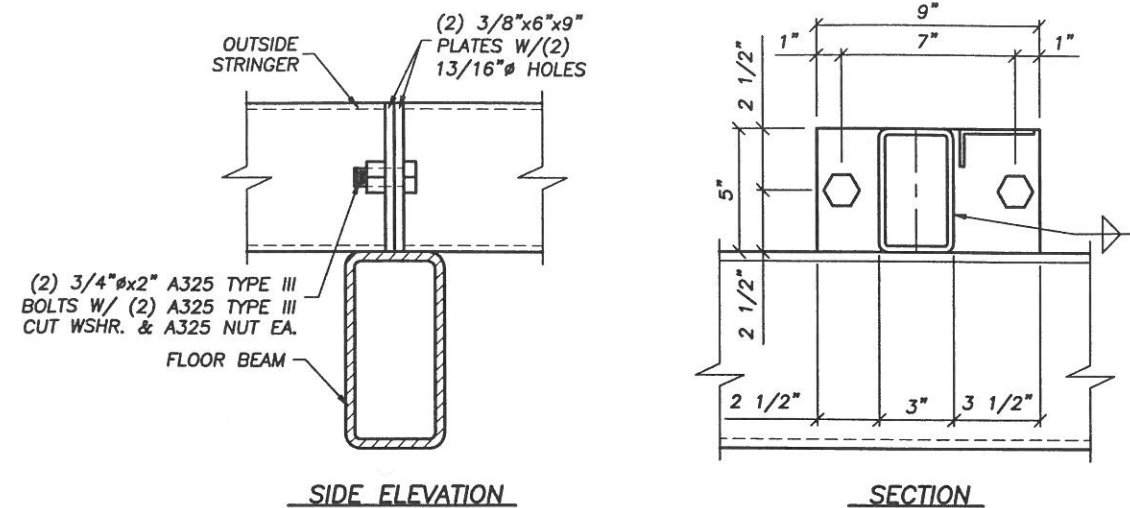


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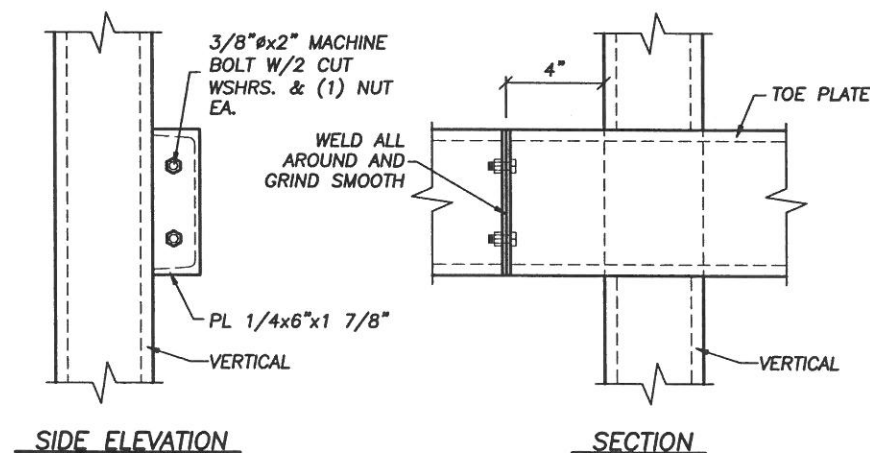
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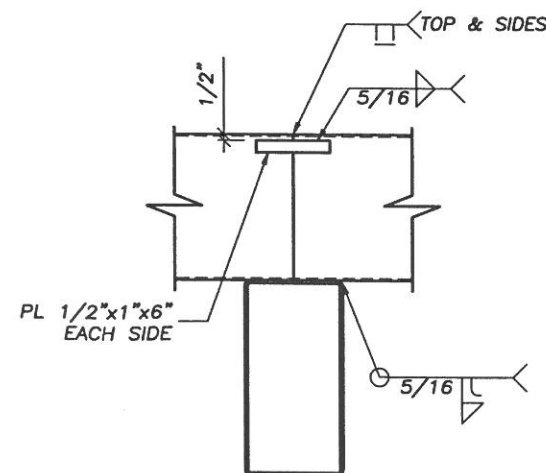
**(A) INTERIOR STRINGER
SPLICE DETAIL**



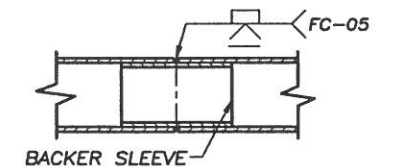
**(B) FASCIA STRINGER
SPLICE DETAIL**



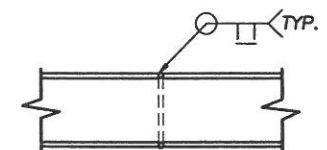
**(C) TOE PLATE
SPLICE DETAIL**



**(D) CONTINUOUS STRINGER
SPLICE DETAIL**
SHALL BE USED WHEN STRINGER
IS NOT CONTINUOUS OVER
MINIMUM OF TWO BAYS



**(E) TYPICAL SHOP SPLICE
WITH BACKER SLEEVE**



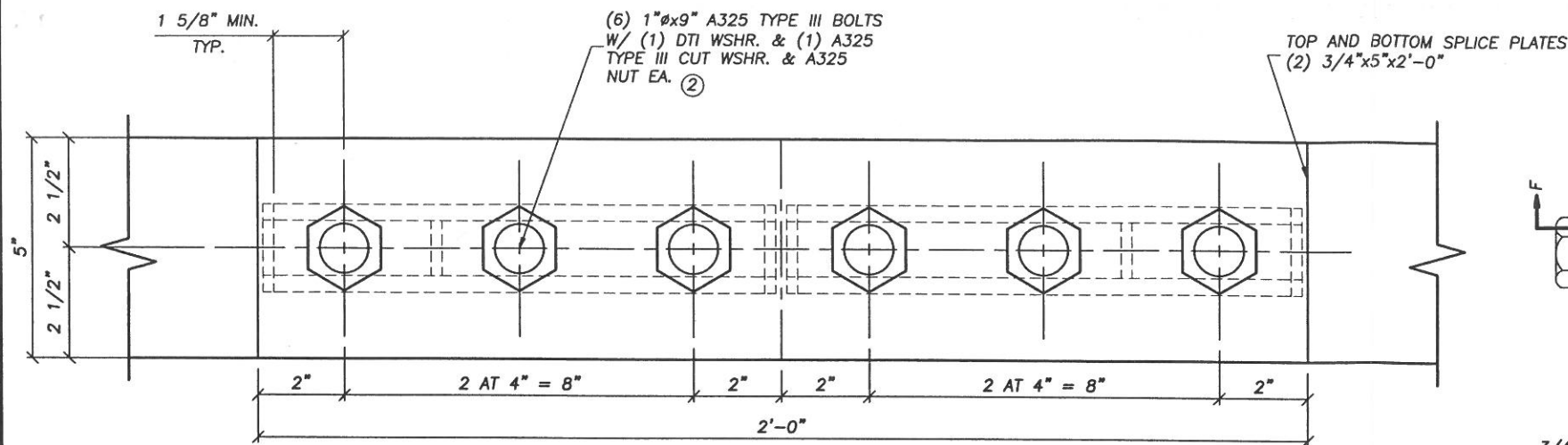
**(F) TYPICAL SHOP SPLICE
WITHOUT BACKER SLEEVE STRINGERS ONLY**

SHEET TITLE:
SPLICE DETAILS
103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
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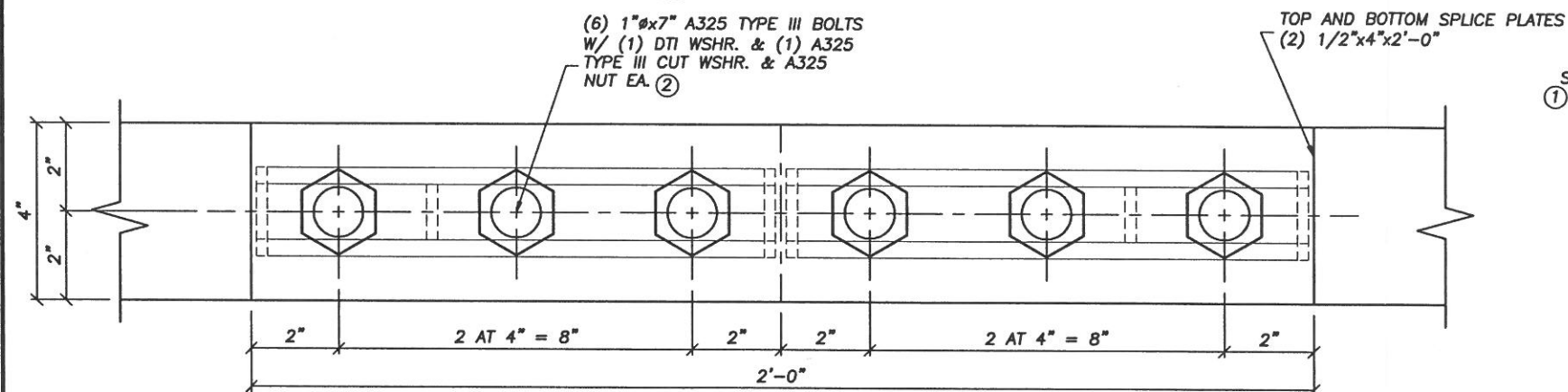


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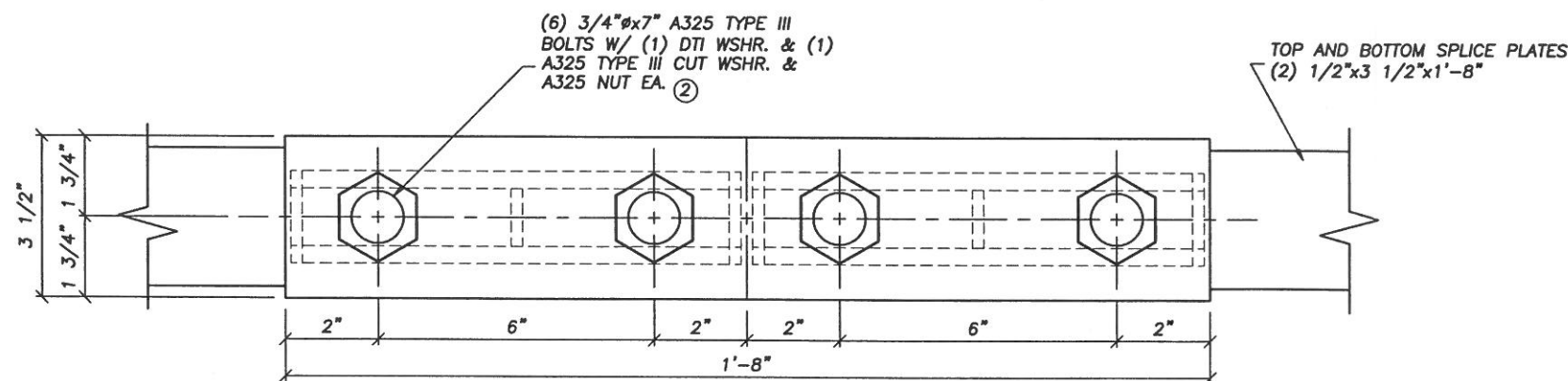
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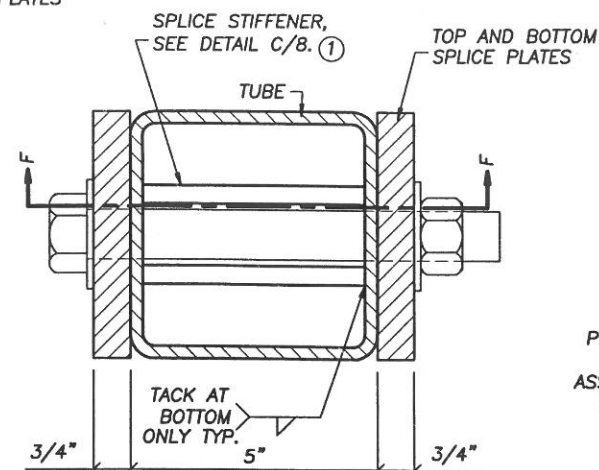
**A TOP CHORD
PLAN SPLICE DETAIL**
(2 LOCATIONS)



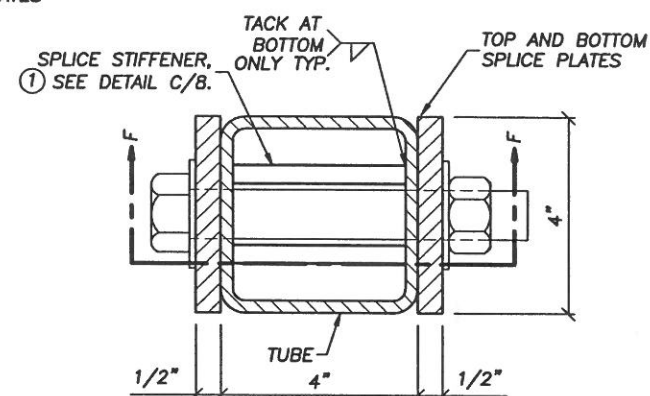
**D BOTTOM CHORD & DIAGONAL
PLAN SPLICE DETAIL**
(2 LOCATIONS BOTTOM CHORD)
(2 LOCATIONS DIAGONAL)



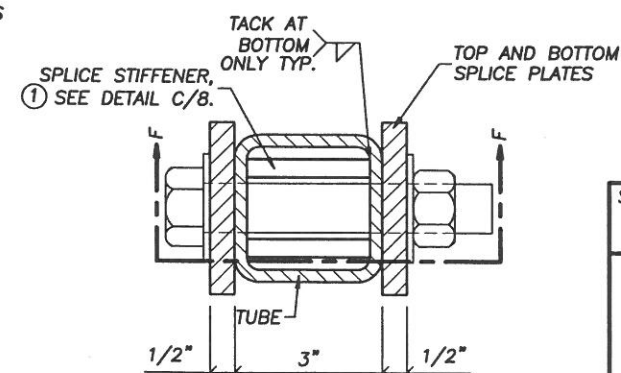
**D WIND BRACE
PLAN SPLICE DETAIL**
(1 LOCATION LOWER WIND BRACE)
(1 LOCATION UPPER WIND BRACE)



**B TOP CHORD
END SPLICE DETAIL**



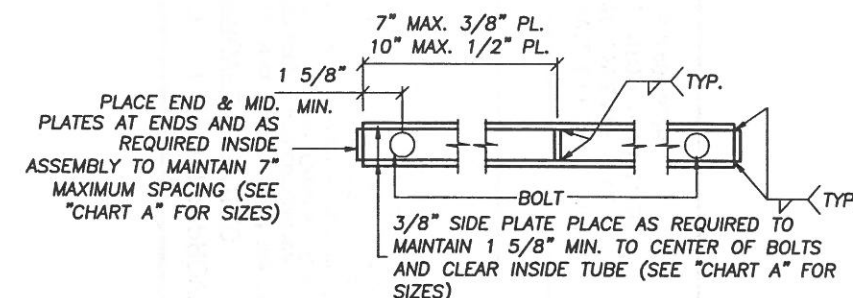
**E BOTTOM CHORD & DIAGONAL
END SPLICE DETAIL**



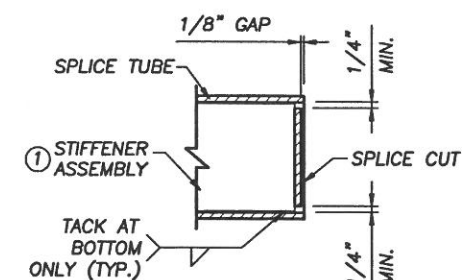
**E WIND BRACE
END SPLICE DETAIL**

CHART A - TUBE SPLICE STIFFENERS

MEMBER	END & MID PLATE SIZE	SIDE PLATE SIZE
TOP CHORD	1/4"x1 1/4"x0'-4"	3/8"x4 7/16"x11 1/4"
BOTTOM CHORD	1/4"x1 1/4"x0'-3"	3/8"x3 7/16"x11 1/4"
DIAGONAL	1/4"x1 1/4"x0'-3"	3/8"x3 7/16"x11 1/4"
WIND BRACE	1/4"x1 1/4"x0'-2"	3/8"x2 7/16"x9 1/4"



**C STIFFENER ASSEMBLY
PLAN SPLICE DETAIL**
①



**F STIFFENER ASSEMBLY
ELEVATION SPLICE DETAIL**

SHEET NOTES:

- DIRECT TENSION INDICATING WASHER (DTI WASHER) SHALL BE INSTALLED UNDER BOLT HEAD ONLY AND INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND AASHTO.

KEY NOTES:

- HEIGHT OF STIFFENER TO BE ADJUSTED ± AT TIME OF FABRICATION BASED ON ACTUAL INSIDE TUBE DIMS AND TOLERANCE OF WALL THICKNESS.
- ALL HOLES IN TUBE STEEL TO BE 1/8"Ø LARGER THAN BOLT SIZE, AND ALL HOLES IN SPLICE PLATES TO BE 1/16"Ø LARGER THAN BOLT SIZE.

SHEET TITLE:

SPLICE DETAILS
103'-9" PEDESTRIAN BRIDGE
8'-0" CLEAR WALKWAY
LINCOLN WAY PEDESTRIAN BRIDGE
STARK COUNTY, OHIO



WHEELER CONSOLIDATED
3340 REPUBLIC AVE
ST. LOUIS PARK, MN 55426

DATE: 6/03/02	TRACKING NO. T9994	SHEET NO.
CHK: PME	DWN: MJP	ORDER NO. 08793
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