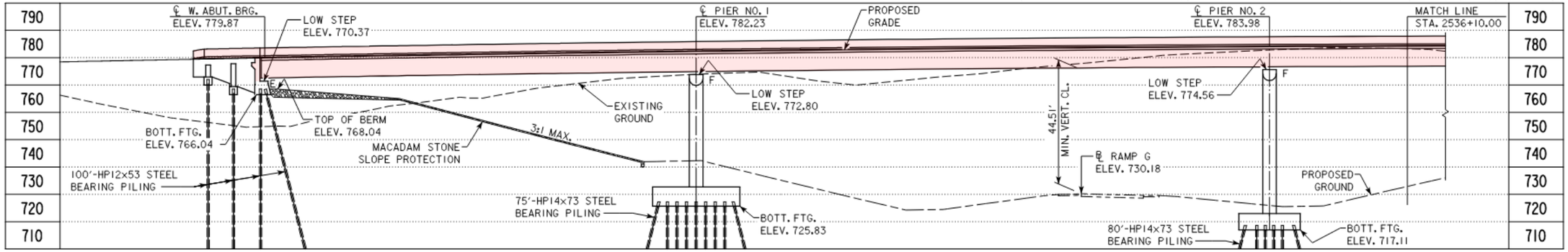
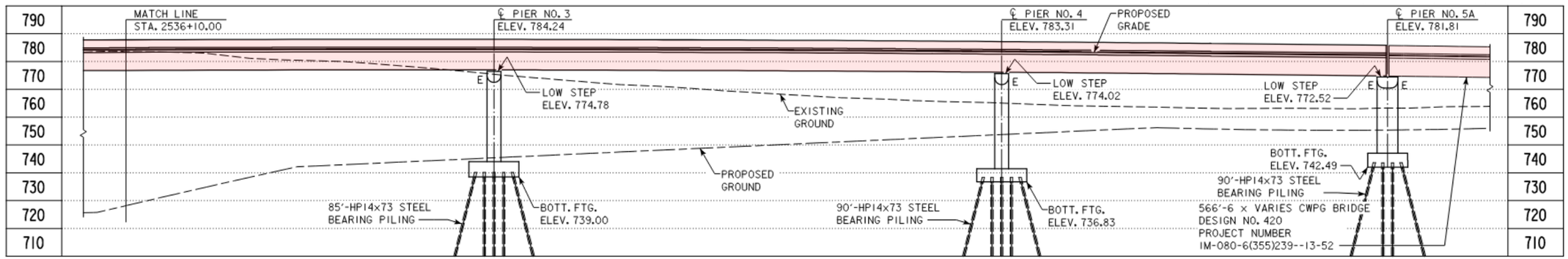


LONGITUDINAL SECTION ALONG ℄ RAMP B



LONGITUDINAL SECTION ALONG ℄ RAMP B

NOTES:

1. All superstructure elements within the highlighted regions are part of the L3-Br03-Superstructure02 unit test including bearings, girders, diaphragms, deck, deck joints, deck drain, sign and lighting supports, and barrier railing. For superstructure details, see sheets 38-90 of Br3-Steel and Concrete-Iowa DOT.pdf.

2. Use specifications from L1-Br03-Deck02, L1-Br03-DeckDrain01, L1-Br03-DeckJoint02, L1-Br03-BarrierRail02, L1-Br03-SignLightSupport01, L1-Br03-Girder02, L1-Br03-Diaphragm03, L1-Br03-Diaphragm04, L1-Br03-Diaphragm05, L1-Br03-Bearing02, L2-Br03-Girders02, and L2-Br03-Conduits01 for similar elements.

3. For the full plan set and additional structure information, see Br3-Steel and Concrete-Iowa DOT.pdf.

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Unit Test Description: Level 3 Superstructure

Unit Test / Sheet No.: L3-Br03 Superstructure02 / 01

Drawn By: AMN

Reviewed By: MJY

SUPERSTRUCTURE NOTES:

THE BRIDGE DECK AS SHOWN INCLUDES $\frac{1}{2}$" INTEGRAL WEARING SURFACE.

FORMS FOR THE BRIDGE DECK AND BARRIER RAIL ARE TO BE SUPPORTED BY THE GIRDERS.

CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

TOP TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND $2\frac{1}{2}$" CLEAR BELOW TOP OF DECK. BOTTOM TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND 1" CLEAR ABOVE BOTTOM OF DECK. TOP AND BOTTOM REINFORCING STEEL IS TO BE SUPPORTED BY INDIVIDUAL BAR CHAIRS SPACED AT NOT MORE THAN 3'-0 CENTERS LONGITUDINALLY AND TRANSVERSELY, OR BY CONTINUOUS ROWS OF BAR HIGH CHAIRS OR DECK BOLSTERS SPACED 4'-0 APART. I.M. 451.01 REQUIREMENTS SHALL APPLY FOR BAR CHAIRS, HIGH BAR CHAIRS, AND DECK BOLSTERS.

ALL FIELD CONNECTIONS ARE TO BE BOLTED USING "HIGH STRENGTH BOLTS". UNLESS OTHERWISE NOTED, ALL OPEN HOLES ARE TO BE $\frac{15}{16}$"Φ AND ALL BOLTS ARE TO BE $\frac{7}{8}$"Φ.

BOTTOM FLANGES ARE TO BE PERPENDICULAR TO WEBS AT THE REACTION POINTS.

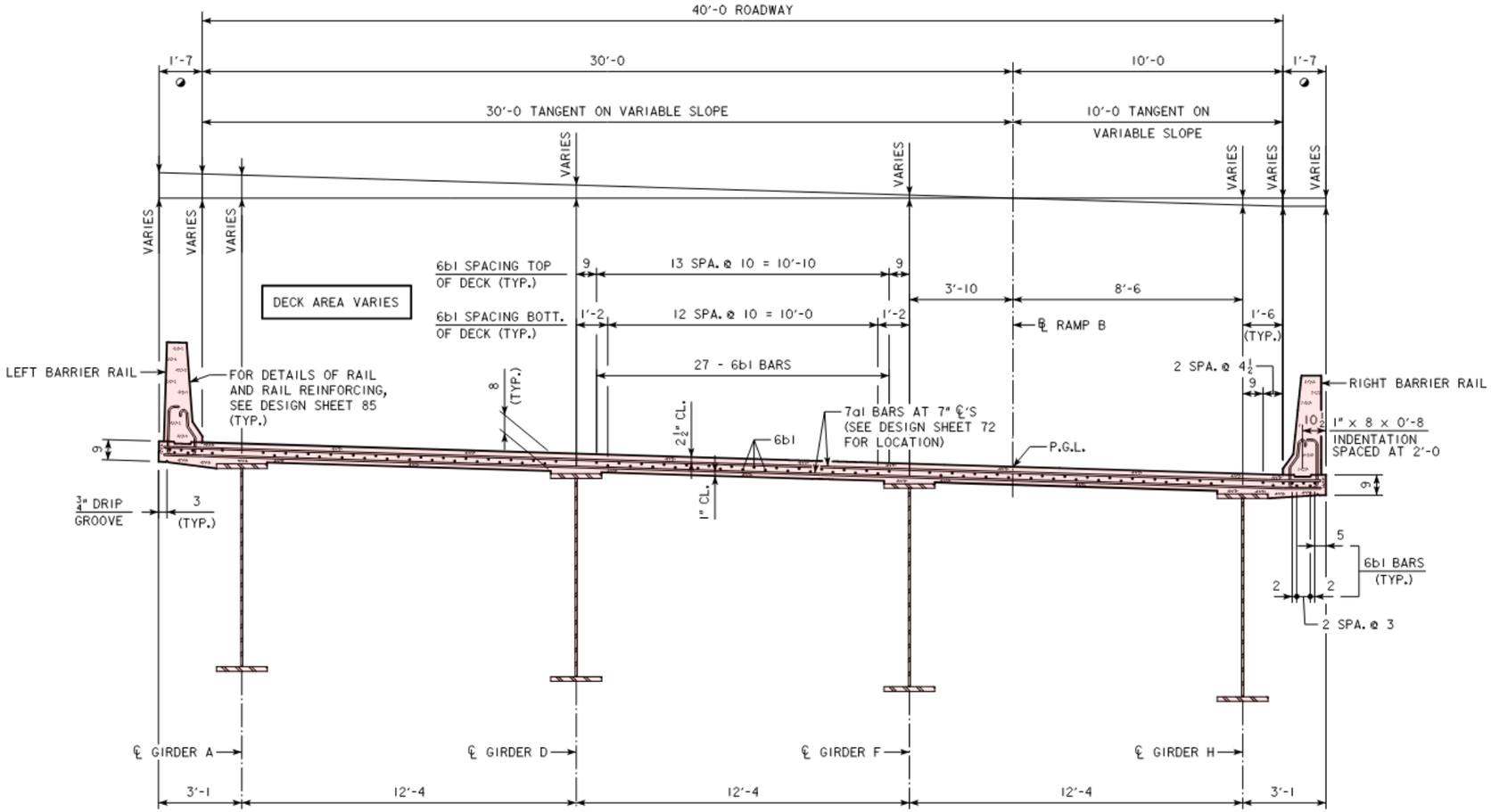
FILL ℙ THICKNESSES SHOWN ON PLANS ARE BASED ON NOMINAL GIRDER DIMENSIONS. THESE THICKNESSES ARE TO BE VERIFIED OR ADJUSTED DURING FABRICATION TO SECURE A CLOSE FIT. EACH FILL PLATE SHALL FIT TO THE NEAREST $\frac{1}{16}$" IN THICKNESS AND SINGLE PLATES ARE REQUIRED AT EACH FILL LOCATION. GIRDERS ARE TO BE TRULY SQUARE AT SPLICE POINTS WITH FLANGES PERPENDICULAR TO WEBS.

THE DESIGN DRAWINGS INDICATE AWS PREQUALIFIED WELDED JOINTS. ALTERNATE JOINT DETAILS MAY BE SUBMITTED FOR APPROVAL.

MAGNETIC PARTICLE INSPECTION OF WELDS, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, WILL BE REQUIRED.

SHOP WELDED FLANGE SPLICES SHALL BE A MINIMUM OF 6 INCHES FROM A STIFFENER, 6 INCHES FROM A WEB SPLICE, AND 4 INCHES FROM A SHEAR CONNECTOR. WEB SPLICES SHALL BE A MINIMUM OF 6 INCHES FROM A STIFFENER. SPLICES SHALL NOT INTERFERE WITH ANY OTHER BRIDGE COMPONENTS. ALL SHOP WELDED BUTT SPLICES SHALL BE SHOWN ON THE SHOP DRAWINGS AND SUBJECT TO APPROVAL BY THE ENGINEER.

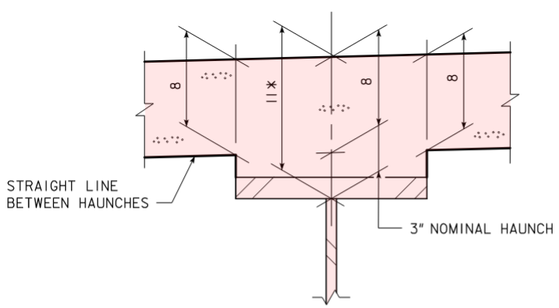
LONGITUDINAL CONSTRUCTION JOINTS ARE NOT ALLOWED (U.N.O.).



TYPICAL SECTION NEAR PIER NO. 1

(LOOKING AHEAD STATION)

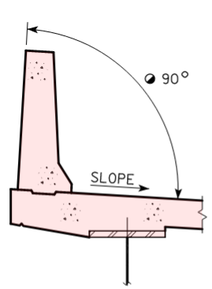
(CROSS FRAMES AND INSPECTION WALKWAYS NOT SHOWN FOR CLARITY)



TYP. DECK & HAUNCH DETAIL

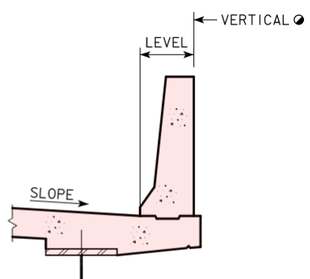
* DIMENSION SHOWN IS MEASURED FROM TOP OF DECK TO TOP OF WEB. THEORETICALLY THIS IS A CONSTANT DIMENSION ALONG THE GIRDER AND IS USED BY THE DESIGNER TO SET BRIDGE SEAT ELEVATIONS AND ESTIMATE CONCRETE QUANTITIES. REFER TO THE FIELD HAUNCH DATA DETAIL SHEET FOR ADDITIONAL INFORMATION TO AID THE CONTRACTOR IN SETTING THE FIELD HAUNCHES REQUIRED FOR CONSTRUCTION.

THE MAXIMUM EMBEDMENT OF THE EDGE OF THE TOP FLANGE IN THE DECK SHALL BE $\frac{1}{2}$ INCH. SHEAR STUDS ARE TO HAVE A MINIMUM PENETRATION OF 2 INCHES INTO THE DECK AND BE AT LEAST $2\frac{1}{2}$ INCHES CLEAR OF THE TOP OF THE DECK. THESE REQUIREMENTS WERE USED IN SETTING THE MAXIMUM AND MINIMUM ALLOWABLE FIELD HAUNCH VALUES SHOWN IN THE "MISCELLANEOUS DATA TABLE" ON DESIGN SHEETS 56 & 57.



BARRIER RAIL ORIENTATION DETAIL

(SHOWING "DECK SLOPES AWAY FROM THE BARRIER RAIL")



BARRIER RAIL ORIENTATION DETAIL

(SHOWING "DECK SLOPES TOWARDS THE BARRIER RAIL")

WHERE THE DECK SLOPES TOWARDS THE BARRIER RAIL, THE DECK UNDER THE BARRIER RAIL SHALL BE PLACED LEVEL AND THE BARRIER RAIL SHALL BE PLACED VERTICAL. WHERE THE DECK SLOPES AWAY FROM THE BARRIER RAIL, THE DECK UNDER THE BARRIER RAIL SHALL BE PLACED ALONG THE SAME CROSS SLOPE AS THE DECK AND THE BARRIER RAIL SHALL BE PLACED PERPENDICULAR TO THE TOP OF THE DECK. SEE BARRIER RAIL ORIENTATION DETAILS, THIS SHEET.

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Unit Test Description: Level 3 Superstructure

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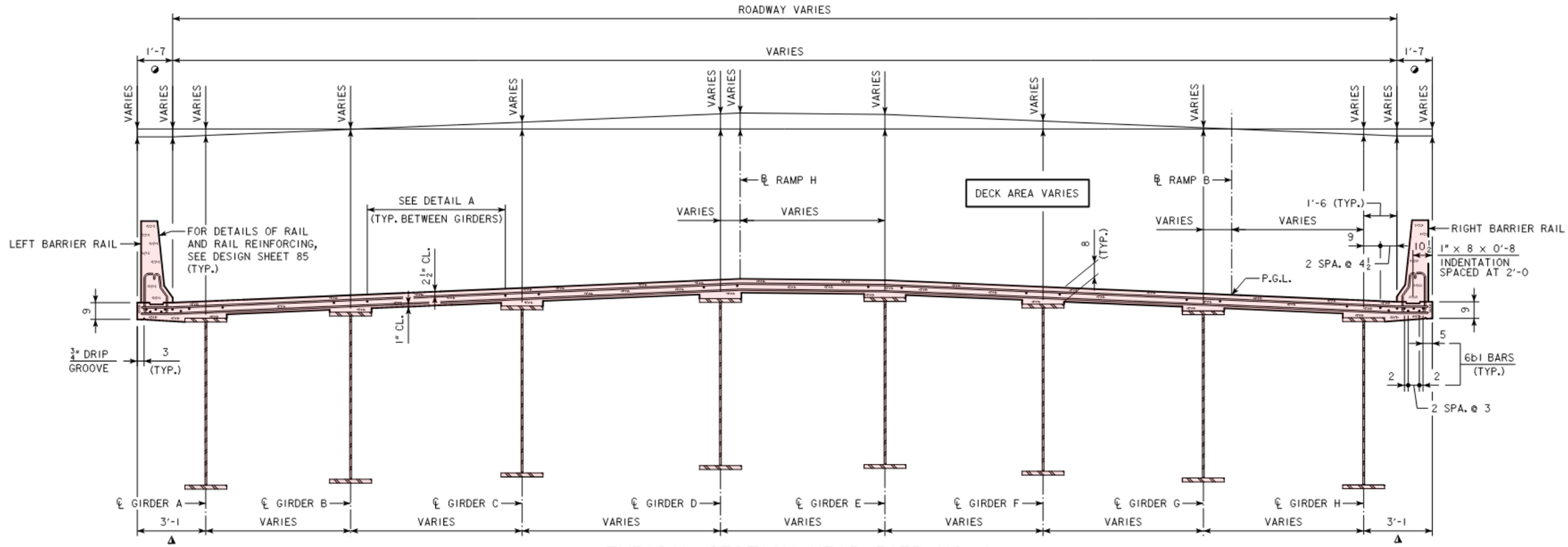
Drawn By: AMN

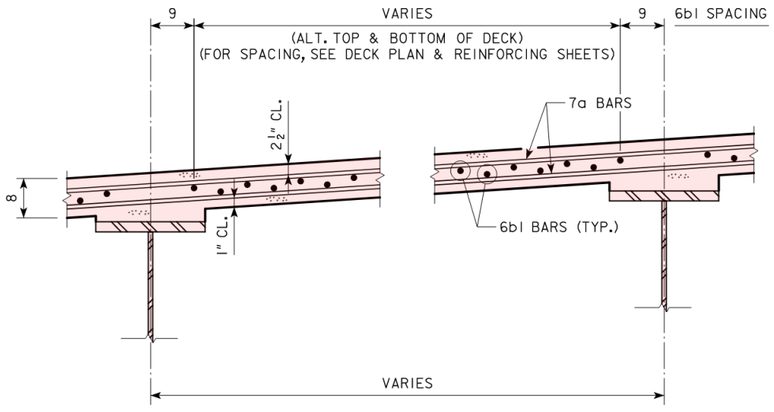
Reviewed By: MJY



TYPICAL SECTION NEAR PIER NO. 4

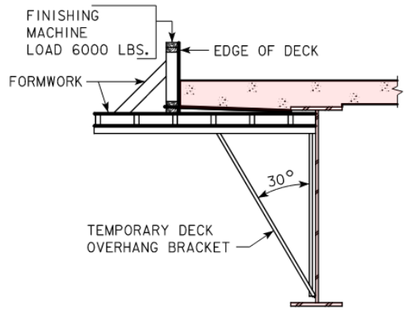
(LOOKING AHEAD STATION)

(CROSS FRAMES AND INSPECTION WALKWAYS NOT SHOWN FOR CLARITY)



DETAIL A

(SHOWING DECK REINFORCING)



TEMPORARY DECK OVERHANG BRACKET DETAIL

A MAXIMUM FINISHING MACHINE LOAD AND THE ANGLE OF THE DIAGONAL MEMBER OF THE OVERHANG BRACKET SHOWN WERE ASSUMED BY THE DESIGNER. THESE ASSUMPTIONS, IN ADDITION TO OTHER CONSTRUCTION LOADINGS, WERE USED TO CHECK THE STRENGTH OF THE EXTERIOR GIRDER DURING CRITICAL STAGES OF CONSTRUCTION. IF THE FINISHING MACHINE LOAD OR ANGLE OF THE DIAGONAL MEMBER OF THE OVERHANG BRACKET DEVIATE SIGNIFICANTLY FROM VALUES SHOWN, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THIS INFORMATION ON PROPOSED CONSTRUCTION EQUIPMENT TO BE USED.

IF THE VERTICAL HEIGHT OF THE OVERHANG BRACKET IS ADJUSTABLE, THE BASE OF THE BRACKET IS TO BE LOCATED AS CLOSE AS POSSIBLE TO THE BOTTOM FLANGE OF THE GIRDER.

◕ FOR BARRIER RAIL ORIENTATION DETAILS SEE DESIGN L3-Br03-Superstructure02

◭ ALL OVERHANG DIMENSIONS ARE MEASURED PERPENDICULAR

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Reviewed By: MJY