

2025 IN-DEPTH AND NSTM INSPECTION REPORT

BRIDGE NO. HAM-75-0022R

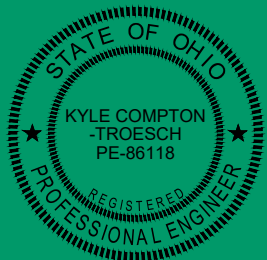
SFN: 3108805

PID No.: 109780

Cincinnati, Ohio



Submitted to ODOT, District 8
November 17, 2025



Prepared by

AECOM

Prepared for



OHIO DEPARTMENT OF
TRANSPORTATION

TABLE OF CONTENTS

1	INTRODUCTION	3
1.1	Bridge Description.....	3
1.2	Recent Maintenance and Construction History.....	4
1.3	Inspection Method.....	4
1.4	Condition Descriptions and Ratings.....	4
2	COMPONENT CONDITION RATING	6
2.1	Item B.C.01 - Deck	6
2.2	Item B.C.01.01 - Wearing Surface	11
2.3	Item B.C.02 - Superstructure	13
2.4	Item B.C.02.01 - Protective Coating System	16
2.5	Item B.C.03 - Substructure.....	16
2.5.1	Item B.C.14 - NSTM Inspection Condition	24
2.6	Item B.C.05 - Bridge Railing	33
2.7	Item B.C.06 - Bridge Railing Transition	35
2.8	Item B.C.07 - Bridge Bearings	35
2.9	Item B.C.08 - Bridge Joints	39
2.10	Other Bridge Elements.....	39
2.11	Approach.....	40
2.12	Signs and Utilities Overview	41
2.13	Item B.C.13.01 - General Appraisal.....	42
3	RECOMMENDATIONS.....	43
	Appendix A - Selected Plan Sheets.....	44
	Appendix B - AssetWise Bridge Inspection Report	45

1 INTRODUCTION

1.1 Bridge Description

HAM-75-0022R (SFN 3108805) is a 14-span structure that carries three lanes of I-75 northbound traffic over West 3rd Street, a Norfolk Southern railroad bridge, and US 50 and I-75 ramps. The original structure was constructed in 1963 and consists of a variable-width reinforced concrete deck on continuous steel plate girders (five girders in Spans 16C to 26C and six girders in Spans 27C to 29C) supported by reinforced concrete substructure units. The substructure consists of nine multi-column pier bents, five hammerhead piers, and a cantilever abutment, all with concrete pile foundations. Steel cross frames are welded to the transverse stiffeners of the girders. The structure is 1187' long with a maximum span of 117'-0". Selected sheets from the design plans are attached in Appendix A.

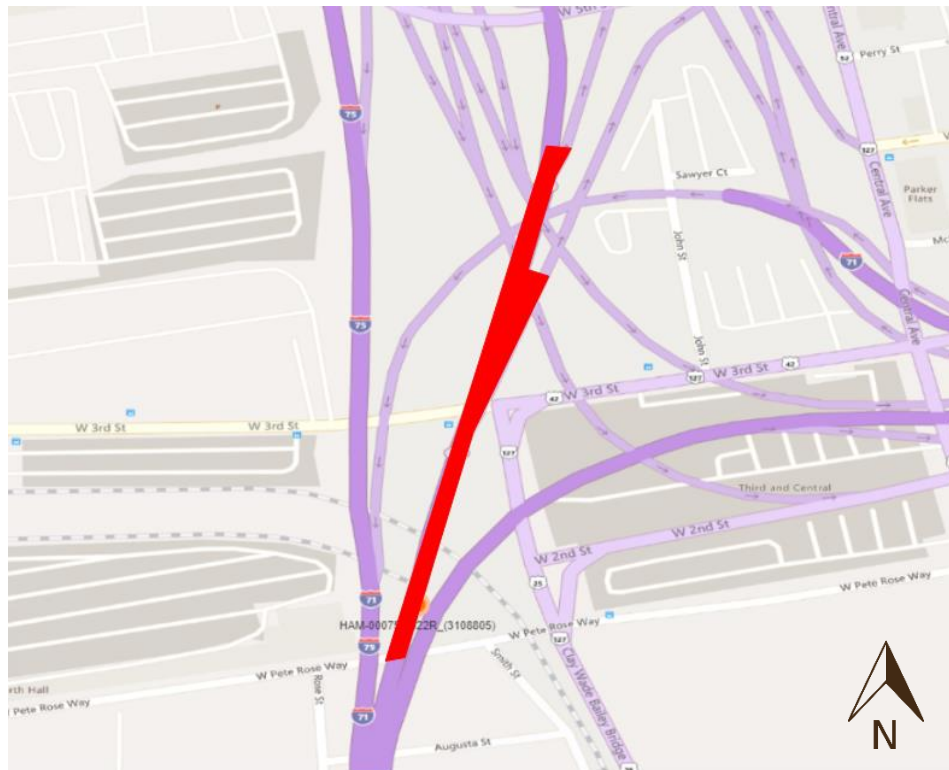


Figure 1: Location Map

In 2000, the bridge was partially reconstructed, which included widening the east side of the bridge in Spans 21C through 29C to connect to a new offramp to West 5th Street. New steel beams, crossframes, and reinforced concrete piers were added, as well as a new fracture-critical steel box pier cap at Pier 25J. The original Pier 26C was replaced with a widened pier with a fracture-critical steel box pier cap. The nomenclature for this bridge follows the convention set in the design plans with spans, substructure units, and cross frames labeled from south to north and original girders labeled A through F from west to east. The retrofit beams are labeled B1 through B4 from east to west. The original substructure units are numbered from Pier 15C to Abutment C, and the retrofit substructure units are labeled from Pier 22J to Pier 26C/J. Pier 26 is referred to as 26C/J, as it carries portions of both original girders and retrofit beams. Original spans are numbered from Span 16C to Span 29C, and retrofit spans are numbered Span 23J to Span 26J.

1.2 Recent Maintenance and Construction History

2000 Retrofit

- Widened the east side of the structure from Pier 21C to Pier 26C.
- Constructed one concrete hammerhead pier at Pier 22J.
- Constructed two concrete pier bents at Piers 23J and Pier 24J.
- Constructed two steel box pier caps at Pier 25J and Pier 26C/J.

2009 Rehabilitation

- Placed micro-silica concrete overlay to deck.

2017 Rehabilitation

- Concrete patching at piers and fiber-reinforced polymer (FRP) wrapping at Piers 15C, 18C, and 23C.
- Replacement of deck joints at Piers 15C, 18C, 23C, 26C, and Abutment C.
- Repaired drainage and downspouts.
- Replaced existing rocker bearings with elastomeric bearings at Piers 15C, 18C, 23C, and 26C.
- Replaced crossframes below expansion joints at Piers 15C, 18C, 23C, and 26C with jacking diaphragms.
- Spot painted steel box pier caps at Piers 25J and 26J.
- Cleaned and painted all steel members below the expansion joints at Piers 15C, 18C, 23C, and 26C.

1.3 Inspection Method

AECOM performed the NSTM inspection of Bridge HAM-75-0022R between September 4, 2025 and September 10, 2025. The NSTM consist of the steel box caps at Piers 25J and 26C/J. The interiors of caps were inspected in accordance with OSHA confined space regulations by a trained inspector on September 9. The pier cap hatches were opened with keys obtained from ODOT personnel and were locked after the inspection. The exterior portions of the caps over the I-75 SB Ramp to 2nd Street were inspected from a 135' boom lift during nighttime lane closures on September 4. The superstructure and piers were inspected using a 135' boom lift. Areas inaccessible from the boom lift were inspected from the ground. The wearing surface was visually inspected from the boom lift. The span over the railroad was inspected from both sides of the tracks without extending the boom lift over the railroad or otherwise fouling the tracks. Visual inspection of non-NSTM elements was supplemented with a drone. The inspection was performed in accordance with the Consultant Bridge Inspection Scope of Services.

AECOM Inspection Team:

Travis Baker P.E.: Team Leader, Project Manager
Kyle Compton-Troesch, P.E.: Team Leader
Prateek Nepal, E.I.: Team Member
Matt Kish, E.I.: Team Member

1.4 Condition Descriptions and Ratings

State and federal guidelines for evaluating the condition of bridges have been developed to promote uniformity in the inspections performed by different teams and at different times. Condition ratings are used to describe the existing, in-place bridge as compared to the as-built condition. The following table (Table 7-2 of the ODOT Bridge Inspection Manual) is a general guide in evaluating the condition of the various members of the bridge. More in-depth tables and figures can be found in Chapter 7 in the 2025 ODOT Bridge Inspection Manual.

Condition		Defect Severity				Strength or Performance Affected?
		Inherent	Minor	Moderate	Major	
9	Excellent	Isolated				No
8	Very Good	Some				No
7	Good		Some			No
6	Satisfactory		Widespread	Isolated		No
5	Fair			Some	Isolated	AND No
4	Poor			Widespread	Isolated	AND Yes – advanced deterioration to structure. Repairs are necessary.
3	Serious				≥ Isolated	Yes – local failures possible. Urgent repairs are necessary.
2	Critical				≥ Isolated	Yes – severe loss of strength. Emergency repairs are required.
1	Imminent Failure					Yes – bridge is closed pending major repairs or rehabilitation.
0	Failed					Yes – bridge is closed and beyond repair

Table 1: Condition Rating Guidelines

2 COMPONENT CONDITION RATING

2.1 Item B.C.01 - Deck

Element 12 - Reinforced Concrete Deck

The reinforced concrete deck is in **SATISFACTORY CONDITION (6)**. In all spans, the underside of the deck typically exhibits transverse hairline and moderate-width cracks with efflorescence spaced about 3' apart (Photo 1) and numerous isolated spalls with exposed rebar. The top of the deck is covered by a Super Plasticized Dense Concrete overlay.

Isolated map cracking is observed throughout the deck, with heavier cracking and efflorescence in Span 18C. The underside of the deck above the railroad tracks is stained with a dark layer of soot. Concrete patches adjacent to deck drains, expansion joints, and other locations are in good condition, though several are covered with plywood formwork (Photo 2). Cracking with efflorescence and isolated spalls are typical throughout the deck overhang and fascia.

The spalls in the underside of the deck include:

- There are multiple isolated spalls up to 1 1/2" deep with exposed rebar throughout.
- Two spalls up to 4 square feet x 3" deep with exposed rebar in Span 16C.
- A 6'L x 2'W x 5" deep spall with exposed rebar at the east overhang on Span 17C (Photo 3).
- A continuous set of spalls up to 1" deep are present in the east overhang of Span 19C (Photo 4).
- A 1' x 6" x 3" deep spall in the west overhang of Span 22C.
- A 3' x 2' x 4" deep spall in the west overhang of Span 22C (Photo 5).
- A 1' x 6" x 2" deep spall in the west overhang of Span 23C.
- A 2' x 1' x 3" deep spall with exposed rebar in the west overhang of Span 24C.
- Several 4' x 4' full depth patches at drainage downspout locations are partially delaminated and have exposed reinforcement.
- A 1'L x 2'W x 3" deep spall in west overhang of Span 26C near Pier 25C.
- Three spalls up to 1' diameter x 2" deep in the west overhang of Span 26C (Photo 6).
- A 1' diameter spall in the east overhang at the joint at Pier 26C/J.
- A 2' x 1' x 2" deep spall with exposed rebar in Span 27C, Bay 5 .
- Two spalls up to 2' diameter x 2" deep in the west overhang of Span 27C (Photo 7).
- Four spalls up to 2" deep with exposed rebar, totaling 16SF in Span 29C (Photo 8).



Photo 1: Typical transverse crack with efflorescence (Span 16C shown)



Photo 2: Typical concrete patch in deck covered with plywood in Bay 4 (Span 19C)



Photo 3: 6'L x 2'W x 5" deep spall with exposed rebar in east overhang (Span 17C)



Photo 4: Continuous set of spalls up to 1" deep in the east overhang (Span 19C)



Photo 5: 3' x 2' x 4" deep spall with exposed rebar in west overhang (Span 22C)



Photo 6: 3 spalls up to 1' dia. x 2" deep in west overhang (Span 26C)



Photo 7: 3 square foot spall with exposed rebar in Bay 5 (Span 27C)



Photo 8: 2'L x 1'W x 2" deep spall with exposed rebar in Bay 5 (Span 29C)

2.2 Item B.C.01.01 - Wearing Surface

Element 510 - Wearing Surface

The wearing surface consists of a Super Plasticized Dense Concrete overlay and is in **SATISFACTORY CONDITION (6)**. The wearing surface was inspected visually from the boom lift. Isolated hairline longitudinal and transverse cracks are present throughout the wearing surface in all spans. There are potholes patched with asphalt (Photo 9) in Spans 19C, 20C, 21C, 22C, and 27C. There are concrete patches in good condition (Photo 10) in Spans 17C, 18C, 19C, 20C and 27C. There are concrete patches showing wear or cracking in Spans 20C, 22C, and 27C. There are isolated spalls located throughout.

The spalls in the wearing surface include:

- A 6" diameter x 1/2" deep spall in the left lane of Span 21C.
- A 6" diameter spall forming in the center lane of Span 22C (Photo 11).
- A 6" diameter x 1/2" deep spall in the right lane of Span 25C.
- A 1' long x 6" wide x 2" deep spall in the center lane of Span 25C (Photo 12).



Photo 9: Typical asphalt patch (Span 22C shown)



Photo 10: Typical concrete patch in good condition (Span 17C shown)

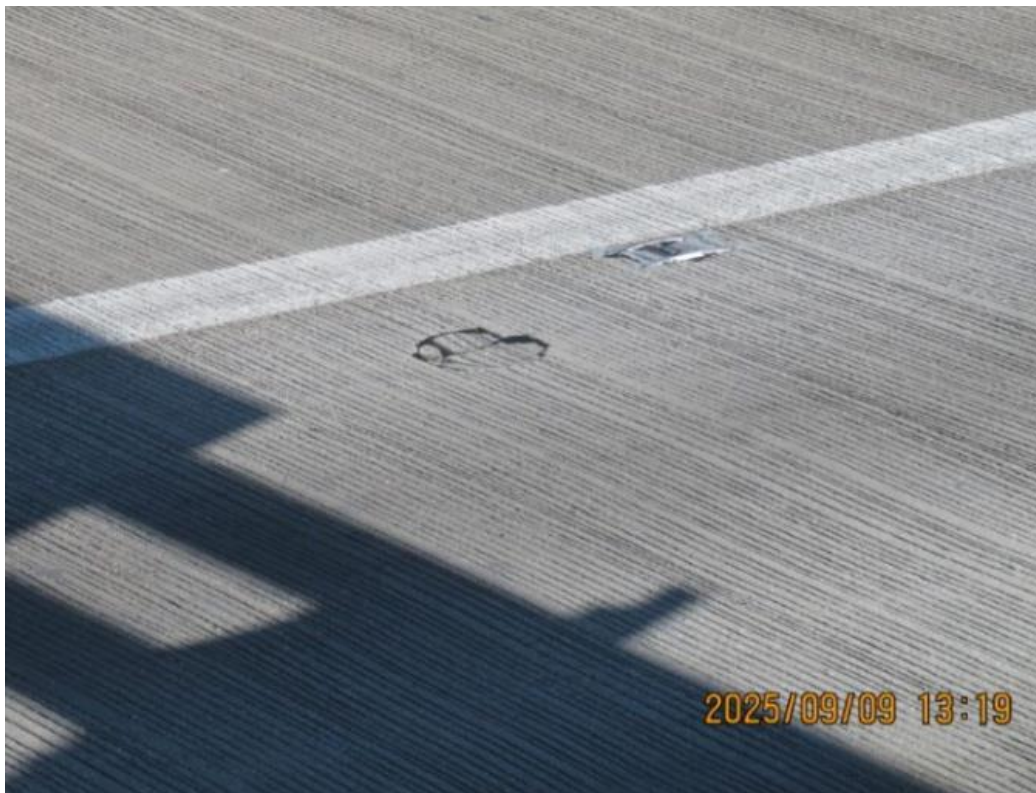


Photo 11: 6" diameter spall forming in the center lane (Span 22C)

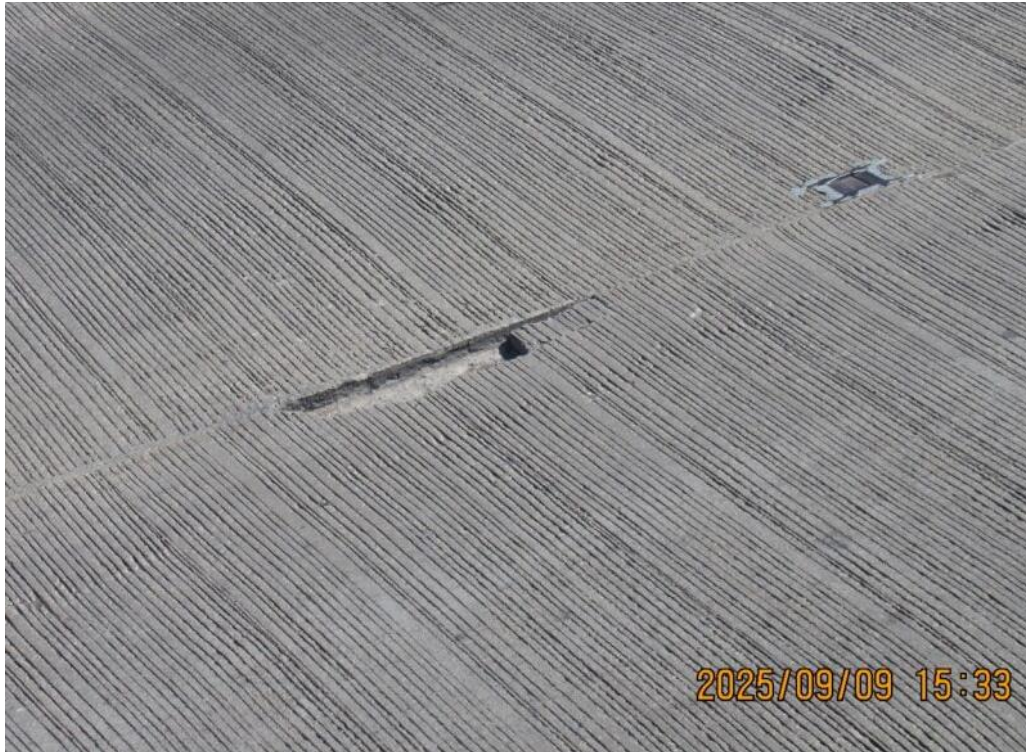


Photo 12: 1' x 6" x 2" deep spall in center lane (Span 25C)

2.3 Item B.C.02 - Superstructure

Element 107 - Steel Open Beam/Girders

The steel beams and girders are in **FAIR CONDITION (5)** overall. There is widespread freckling and minor surface corrosion throughout all original girders, most prominently on the fascia girders. The top of the bottom flange of Girder A in Spans 16C through 23C exhibits laminating corrosion with moderate section loss up to 1/4" deep, typically near the transverse stiffeners (Photo 14). The most significant area of section loss is Girder A in Span 17C at midspan with bottom flange section loss of 8" wide x 1/4" deep from an original section of 16" wide x 1 3/8" deep (9% loss) (Photo 15). There is isolated pitting in the web and transverse stiffeners of Girder A. Painted-over gouges up to 5" long x 1/8" deep are present in the bottom flange of Girder D in Span 16C near Pier 15C (Photo 16). There is painted-over pitting on the web and stiffeners behind the bearings of the girders at Pier 18C. Laminating corrosion is initiating in the bottom flanges of Girders A-F in Span 28C with negligible section loss at this time. There is evidence of fire damage on the Span 29C girders in Bay 3 at Abutment C.

The retrofit beams in Spans 23J through 26J are in good condition with isolated areas of freckling and minor surface corrosion.



Photo 13: Typical framing plan (Span 22C shown)



Photo 14: Laminating corrosion on bottom flange with section loss up to 9"L x 4"W x 3/16" deep (Girder A, Span 20C)



Photo 15: Laminating corrosion with section loss up to 8"W x 1/4" deep near midspan (Girder A, Span 17C)



Photo 16: Gouges up to 5" long and 1/8" deep on bottom flange (Girder D, Span 16C)

2.4 Item B.C.02.01 - Protective Coating System

Element 515 - Steel Protective Coating System

The steel protective coating system is paint and is in **SERIOUS CONDITION (3)** overall. The paint on the retrofit beams is in good condition, with isolated areas of freckling and minor surface corrosion. The ends of the original girders near the expansion joints at Piers 15C, 18C, 23C and 26C were cleaned and painted in 2018; the paint in these areas is in good condition. Elsewhere, the paint on the original girders has failed or is of limited effectiveness (Photo 17). Exposed steel with surface corrosion is widespread throughout the structure, most significantly on the bottom flange and lower web of the fascia girders. Where the paint has not failed, there is widespread chalking with complete loss of pigment, dulling, peeling and flaking. Paint failures with surface corrosion are typical throughout the original steel bearings and are present in isolated areas on the retrofit bearings at Piers 22J-26J. There is evidence of fire and paint damage to the beams in Span 29, Bay 3.



Photo 17: Typical original girder paint condition (Span 17C shown)

2.5 Item B.C.03 - Substructure

The substructure is in **FAIR CONDITION (5)** overall. The substructure consists of ten reinforced concrete cap-and-column piers (Piers 15C, 21C-25C, 27C, 28C, 23J, 24J), six reinforced concrete hammerhead piers (Piers 16C-20C, 22J), two NSTM steel box pier caps on reinforced concrete columns (Piers 25J, 26C/J), and a reinforced concrete cantilever abutment. Minor hairline vertical and map cracks are typical throughout the concrete piers.

For the purposes of this report:

- Element 205 - Reinforced Concrete Column refers to cap-and-column
- Element 210 - Reinforced Concrete Pier Wall refers to hammerhead piers.

As part of the 2017 rehabilitation, concrete patching and FRP wrapping were applied to spalls and delaminations on Piers 15C, 18C, and 23C.

Element 205 - Reinforced Concrete Column

The reinforced concrete pier columns are in **FAIR CONDITION (5)** with minor isolated spalls and hairline cracking typical throughout. Some notable defects include:

- Spalling around corner armor on Columns 1 and 2 of Pier 15C and Pier 23J (Photo 18).
- Moderate width vertical crack on the south face on Column 1 of Pier 15C (Photo 19).
- There is a 4'H x 1"D spall on the northeast corner on Column 2, Pier 21C due to vehicular impacts.
- There is a 4'H x 1'W x 2" deep spall with exposed rebar on Column 2 of Pier 23C (Photo 20).
- Cracking and peeling FRP wrap on Column 2, Pier 23C (Photo 21).
- There is a 16"H x 6" W x 1/2" deep spall on the corner of Column 1 of Pier 27C.



Photo 18: Typical spalling around corner armor (Pier 15C)



Photo 19: Moderate-width vertical crack on Column 1 (Pier 15C)



Photo 20: 4'H x 1'W x 2" deep spall with exposed rebar and delamination on Column 2 (Pier 23C)



Photo 21: Cracking and peeling FRP protective coating on Column 2 (Pier 23C)

Element 210 - Reinforced Concrete Pier Wall

The reinforced concrete pier walls are in **SATISFACTORY CONDITION (6)** with hairline map cracking typical throughout. A shallow spall around the corner armor is present at the base of Pier 16C. Vertical hairline cracks are present on Pier 18C. Concrete patching and FRP wrap were applied to Pier Wall 18C as part of the 2017 rehabilitation. There is a 10" W x 4"H section of FRP that is peeling and cracking on the south face of Pier 18C. Several shallow spalls with exposed reinforcing bars are present on the south and west faces of Pier 19C due to shallow cover (Photo 23).



Photo 22: Typical concrete pier wall (Pier 17C)



Photo 23: Exposed rebar due to shallow cover (Pier 19C)

Element 215 - Reinforced Concrete Abutment

The reinforced concrete abutment wall is in **SATISFACTORY CONDITION (6)** with isolated vertical cracks. There is a 20"W x 24"H X 1" deep spall and delamination below Bearing E (Photo 24). Debris build up has occurred almost fully covering Bearing A. Use caution during future inspections, as several hypodermic needles were found near Abutment C.



Photo 24: Spall and delamination below Bearing E (Abutment C)

Element 830 - Abutment Backwall

The Abutment C backwall is in **FAIR CONDITION (5)**. Isolated hairline width cracks are present throughout the backwall. The patch in Bay 4 is beginning to map crack. There is 2' long x 6" wide x 6" deep spall in the backwall at Bay 2, near Girder C, under the joint.

Wingwalls

The wingwalls at Abutment C are in satisfactory condition. Diagonal hairline cracking is typical throughout the wingwalls. Cracking with efflorescence and delaminations are present at the bottom of the west wingwall.

Slope Protection

The slope protection at Abutment C is in good condition without any significant deficiencies noted.

Embankment

The embankment at Abutment C is in good condition without any significant deficiencies noted.

Element 234 - Reinforced Concrete Pier Cap

The reinforced concrete pier caps are in **SATISFACTORY CONDITION (6)**. The original pier caps have horizontal hairline and moderate width cracks near the top of most caps (Photo 25) and vertical hairline width cracks developing from the horizontal cracks. There is map cracking and moderate width vertical cracks near the bottom of Pier Cap 15C (Photo 26). There is 16"H x 6"W x 1 1/2" deep spall on the south face of Pier Cap 18C (Photo 27). On Pier Cap 21C, there is map cracking 5'W x 5'H on the south face of the east cantilever and map cracking 12'W x 3'H on the north face. There is map cracking and a minor spall on the west face of Pier Cap 23C (Photo 28). The protective coating for the FRP is cracking and peeling on the south face of Pier Cap 23C. There is a small spall at the east end of Pier Cap 28C.



Photo 25: Typical moderate width horizontal crack near top of pier cap (Pier 15C)



Photo 26: Moderate width vertical cracks and map cracking (Pier 15C)



Photo 27: 16"H x 6"W x 1 1/2" deep spall on the south face (Pier Cap 18C)



Photo 28: Map cracking with spall on west face (Pier Cap 23C)

2.5.1 Item B.C.14 - NSTM Inspection Condition

Element 231 - Steel Pier Cap

The NSTM pier caps at Piers 25J and 26C/J are in **FAIR CONDITION (5)** overall.

Pier Cap 25J

The NSTM box pier cap at Pier 25J is in **GOOD CONDITION (7)** condition overall.

Pier Cap 25J Exterior

The pier cap exterior is in **GOOD CONDITION (7)**. There are areas of surface corrosion scattered throughout the pier cap exterior, particularly on the top flange at the east end and along the edges of both flanges. There are minor scrapes with surface corrosion in the bottom flange (Photo 30) over the U.S. 50 ramp to 2nd Street. The bottom flange bearing plates at both columns exhibit minor surface corrosion (Photo 31).

The exterior steel protective coating is paint and is in **POOR CONDITION (4)** with isolated areas of surface corrosion and minor peeling. There is little to no paint remaining on the bearing plates over the columns.



Photo 29: Pier Cap 25J looking south



Photo 30: Scrapes with minor surface corrosion (Pier Cap 25J)



Photo 31: Surface corrosion on the underside of the west bearing (east bearing similar, Pier Cap 25J)

Pier Cap 25J Interior

The interior of steel pier cap 25J is in **GOOD CONDITION (7)**. Transverse diaphragms are numbered 1 to 7, from west to east. During the inspection, the interior of the pier cap was dry with no indications of moisture infiltration. There are minor deformations in the top flange backer bars on both webs. The top flange backer rod at the east end has deflected 1/8" on the south web (Photo 32). There is freckling and minor surface corrosion on Diaphragms 1, 2, and 7, and at both hatch openings. The interior steel protective coating is paint and is in **SATISFACTORY CONDITION (6)** with isolated cracking of the topcoat along the bottom of the web plates (Photo 33). Debris was present inside the pier cap (Photo 34).



Photo 32: Top flange backer bar deflected 1/8" at east end (South Web, Pier Cap 25J)



Photo 33: Typical cracking paint (Pier 25J)



Photo 34: Debris inside pier cap (Pier Cap 25J)

Pier Cap 25J Fatigue Prone Details

The fatigue prone details of steel pier cap 25J are in **GOOD CONDITION (7)** with no significant deficiencies noted. The fatigue prone details present include fatigue category C' and E'. Category C': Typical interior transverse diaphragm fillet weld connection to pier cap webs and flanges. Category E: Steel bearing pedestal to top flange fillet weld connection with length $L > 4$ in. and a thickness $t > 1.0$ in. parallel or transverse to the direction of primary stress.



Photo 35: Fatigue detail (Pier 25J)

Pier Cap 26C/J

The NSTM box pier cap at Pier 26C/J is in **SATISFACTORY CONDITION (6)** with surface corrosion and isolated areas of minor section loss. This pier cap also supports part of the adjacent Bridge HAM-75-0030.

Pier Cap 26C/J Exterior

The exterior of steel pier cap 26C/J is in **SATISFACTORY CONDITION (6)**. There is minor surface corrosion throughout the exterior of the pier cap, particularly on the top flange at the ends, and along the edges of both flanges. There is 6" x 6" x 3/16" deep section loss in top flange at west end (Photo 37). There is laminating corrosion with section loss less than 1/16" deep on the undersides of the bearing plates at all columns (Photo 38). On the bottom flange at the openings there is section loss up to 1/16" (Photo 39).

The exterior steel protective coating is paint and is in **POOR CONDITION (4)** with isolated areas of peeling on the top coat along the bottom of the web plates. There is little to no paint remaining on the bearing plates over the columns.



Photo 36: Pier Cap 26C/J looking south



Photo 37: 6" x 6" x 3/16" deep section loss in top flange at west end (Pier Cap 26C/J)



Photo 38: Laminating corrosion on bearing plate at Column 2 (Pier Cap 26C/J)



Photo 39: 1/16" deep section loss in bottom flange at west opening (Pier Cap 26C/J)

Pier Cap 26C/J Interior

The interior of steel pier cap 26C/J is in **SATISFACTORY CONDITION (6)**. Transverse diaphragms are numbered 1 to 18, from west to east. At the time of the inspection, there were signs of moisture inside the pier cap near the east and west hatches, due to inadequate hatch seals. The gasket on the west hatch is pulled away from the hatch, allowing moisture to enter the pier cap. There are small rust spots on most diaphragms throughout the pier cap. There are multiple areas of corrosion and section loss within the pier cap, which are summarized in Table 2.

The interior steel protective coating is paint and is in **FAIR CONDITION (5)** with isolated areas of exposed steel, section loss, paint failure, and peeling.

Location	Defect	Stress Region
Between West Hatch and Diaphragm 1	Bottom flange, lower 3" of webs and diaphragm: Surface corrosion, pitting less than 1/16" deep	N/A (outside bearing)
Diaphragm 1, NE Corner	Bottom flange: 5" diameter surface corrosion, pitting less than 1/16" deep	Tension
Diaphragm 17, SW Corner	Web: 2" diameter surface corrosion with pitting less than 1/16" deep Bottom Flange" 4" diameter surface corrosion with pitting less than 1/16" deep	Tension
Diaphragm 17, NW Corner	Web: 2" diameter surface corrosion	Tension
Between East Hatch and Diaphragm 18	Bottom flange, lower 3" of webs and diaphragm: Laminating corrosion with section loss up to 1/8" deep	N/A (outside bearing)

Table 2: Loss of Section Summary



Photo 40: Surface corrosion with pitting less than 1/16" deep at west end (Pier Cap 26C/J)



Photo 41: Laminating corrosion with section loss up to 1/8" deep at east end (Pier Cap 26C/J)



Photo 42: Minor surface corrosion at top corners of Diaphragm 17 sealed with silicone (Pier Cap 26C/J)

Pier Cap 26C/J Fatigue Prone Details

The fatigue prone details of steel pier cap 26C/J are in **SATISFACTORY CONDITION (6)**, with no significant deficiencies noted. The fatigue prone details present include C', D, and E' fatigue categories.

- Category C': Typical interior transverse diaphragm fillet weld connection to pier cap webs and flanges.
- Category D: Hole in north web plate in Bay 17 filled with a non-high strength bolt.
- Category E': Bearing plate to top flange fillet weld connection with length $L > 4$ in. and at thickness $t \geq 1.0$ in. parallel or transverse to the direction of primary stress.

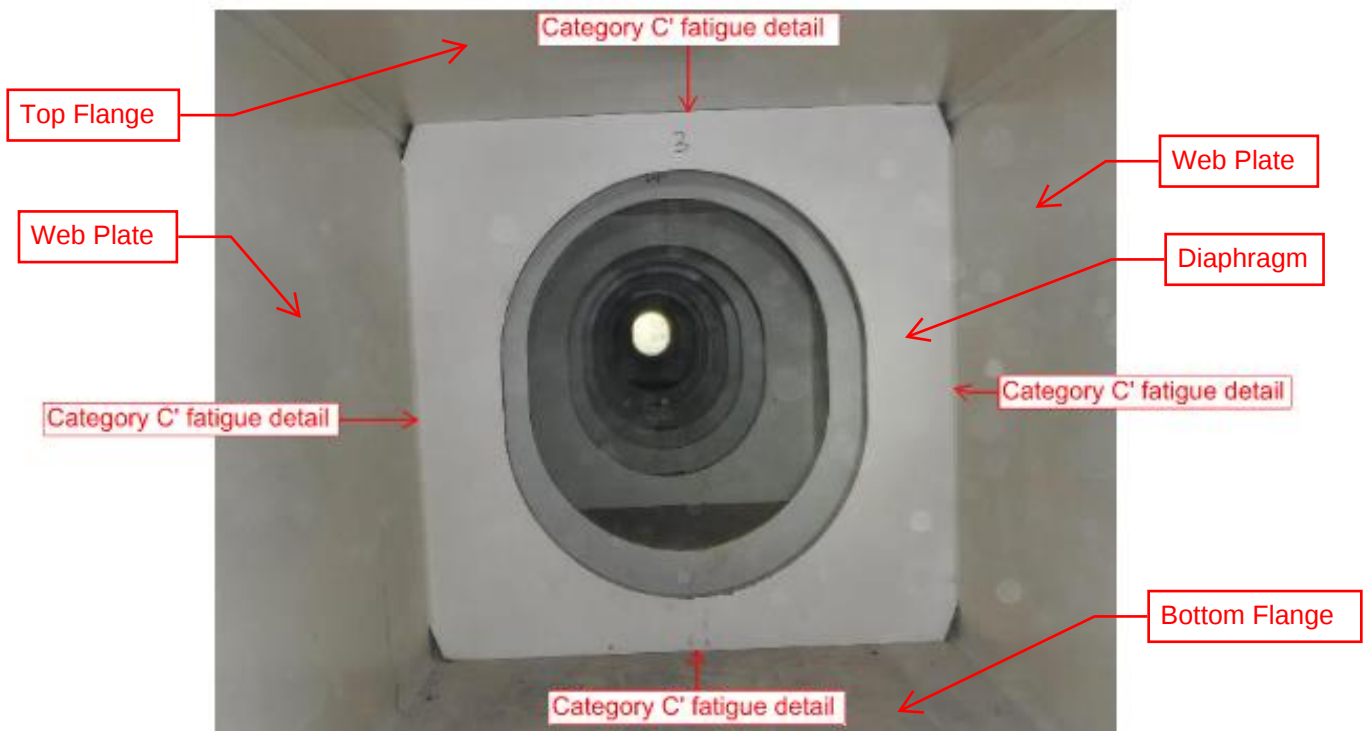


Photo 43: Category C' fatigue detail - Diaphragm fillet welds to webs and flanges

2.6 Item B.C.05 - Bridge Railing

Element 331 - Reinforced Concrete Bridge Railing

The reinforced concrete bridge railings are in **SATISFACTORY CONDITION (6)** overall. Vertical and transverse hairline cracks with efflorescence as well as isolated small spalls are typical throughout the railings (Photo 44). A horizontal crack is present in the east railing near the light post in Span 20C. There is a map cracking in the top of the west railing near Piers 23C and 25C (Photo 45). There is impact damage to the attenuator at Span 16C (Photo 46).



Photo 44: Typical vertical cracks in west railing (Span 16C shown)



Photo 45: Map cracking in west rail above Pier 25C



Photo 46: Impact damage to attenuator (Span 16C)

2.7 Item B.C.06 - Bridge Railing Transition

Approach Guardrail

The approach guardrail is in **GOOD CONDITION (7)** with minor scrapes in isolated locations.

2.8 Item B.C.07 - Bridge Bearings

Bearing Summary - Elements 310, 311, 313

The bearings are in **FAIR CONDITION (5)** overall.

Element 310 - Elastomeric Bearing

The elastomeric bearings are in **SATISFACTORY CONDITION (6)** overall.

The new elastomeric bearings installed at Pier 15C, 18C, 23C, and 26C are in good condition. The restraining rods of the Span 18C bearings at Pier 18C are bent slightly.

The Pier Cap 25C bearings consist of one elastomeric pad at each column and each pad is fixed with two anchor bolts connected with nuts on the pier cap interior. The bearings have no significant deficiencies observed on the pads or anchors. No issues were noted with the anchor rods.

The Pier Cap 26C/J bearings consist of one elastomeric pad at each column and each pad is fixed with two anchor bolts connected with nuts on the pier cap interior.

- The south anchor bolt at the west column bearing is broken; no issues were noted with the remaining anchor bolts (Photo 47).
- The cap appears stable with no excessive or unanticipated movements under live load.

- A slight gap was observed below the south end of the west bearing as well as a slight buldge in the north side of the west bearing.
- The new elastomeric bearings installed at Piers 15C, 18C, 23C and 26C have minor isolated surface corrosion and laminating corrosion on the steel bearing plates.



Photo 47: Broken south anchor bolt at the west column bearing (Pier 26C/J)

Element 311 - Movable Bearing

The movable bearings are in **FAIR CONDITION (5)** overall.

- The movable bearings typically exhibit surface corrosion with minor section loss. Corrosion is more prominent on the fascia bearings.
- There is pack rust between the rocker and the masonry plate of Bearing A at Pier 17C, Bearing A and E at Pier 19C, Bearing E at Pier 20C, Bearing A and E at Pier 21C (Photo 48), Bearings A and E at Pier 22C and Bearing E at Pier 25C with no indication of uplift or restriction of movement.
- Minor fretting corrosion is present on Bearings at Pier 23J (Photo 49).
- Bearing G at Pier 22J was rotated south (contracted) 4° at 75°F. This alignment is inconsistent with temperature conditions and adjacent bearings, but is within tolerable limits.
- Bearing G at Pier 26C/J was rotated north (expanded) 6° at 55°F (Photo 50). This alignment is inconsistent with temperature conditions and adjacent bearings, but is within tolerable limits.
- Bearing A at Abutment C has been covered with fill.



Photo 48: Pack rust under Bearing E (Pier 21C)



Photo 49: Minor fretting corrosion on Bearing G (Pier 23J)



Photo 50: Bearing G expanded 6° at 55°F (Pier 26C/J)

Element 313 - Fixed Bearing

The fixed bearings are in **SATISFACTORY CONDITION (6)** overall. The fixed bearings exhibit surface corrosion with no measurable section loss, with the corrosion more prominent on the fascia bearings (Photo 51).



Photo 51: Typical surface corrosion on fascia bearing (Pier 20C)

2.9 Item B.C.08 - Bridge Joints

Element 300 - Strip Seal Expansion Joint

The expansion joints are in **POOR CONDITION (4)** overall. Expansion joints are located at Piers 15C, 18C, 23C, 26C and Abutment C. The expansion joints were visibly inspected from the boom lift. Loosely-packed debris was noted in the expansion joint at Piers 18C and 26C. A 6' long section of the joint seal has pulled out between Beams E and B3 at Pier 23C and water free flows on to the pier at this location (Photo 52).



Photo 52: Failed joint seal (Pier 23C)

2.10 Other Bridge Elements

Deck

Element 815 - Drainage

The bridge deck drainage is in satisfactory condition. At the deck level, scuppers were visibly inspected from the boom lift. Vegetation/debris accumulation was observed in a scupper in Span 16C (Photo 53). The drain at Pier 16C was noted to be leaking onto the substructure during a previous inspection.



Photo 53: Vegetation/debris accumulation in a scupper (Span 16C)

Superstructure

Crossframes and Diaphragms

The crossframes and diaphragms are in good condition with minor surface corrosion and paint failure throughout the structure.

Alignment

Alignment is in good condition without any problems in vertical or horizontal alignment noted through visual inspection.

Fatigue

The superstructure fatigue elements are in good condition with no deficiencies noted.

2.11 Approach

The north approach is in good condition. As the south end of this bridge connects to HAM-71-0000R, there is no south approach for this structure.

Element 321 - Reinforced Concrete Approach Slabs

The north approach slab is in good condition and is covered with an asphalt wearing surface.



Photo 54: North approach slab looking east

Approach Wearing Surface

The asphalt approach wearing surface was partially repaved since the last inspection and is in good condition.

Embankment

The north approach embankment is good condition with no significant deficiencies noted.

2.12 Signs and Utilities Overview

Signs

There is one overhead sign support mounted to the railings near Pier 23C. The sign support is in good condition with no significant deficiencies noted for the support structure or the anchorage to the railings. Detailed inspection of the overhead sign structure was outside the scope of this inspection.



Photo 55: Overhead sign support mounted to railings near Pier 23C

Utilities

The structure-mounted utilities consist of an electrical conduit attached to Pier 27C and Girder F in Span 27C, as well as several light poles mounted to the railings at deck level. All utilities are in good condition. A missing utility cover was noted on a light pole in Span 16C.

2.13 Item B.C.13.01 - General Appraisal

Based on the 2025 In-Depth Inspection, the HAM-75-0022R bridge is in **FAIR CONDITION (5)**. The overall rating is controlled by the conditions of the substructure and superstructure. The AssetWise Bridge Inspection Report reflecting the element level condition ratings can be found in Appendix B.

3 RECOMMENDATIONS

The recommendations below are provided for the HAM-75-0022L bridge with respect to its remaining service life of approximately 5 years.

Deck

- Repair the section of failed joint at Pier 23C.
- Repair spalls and delaminations in concrete wearing surface.

Superstructure

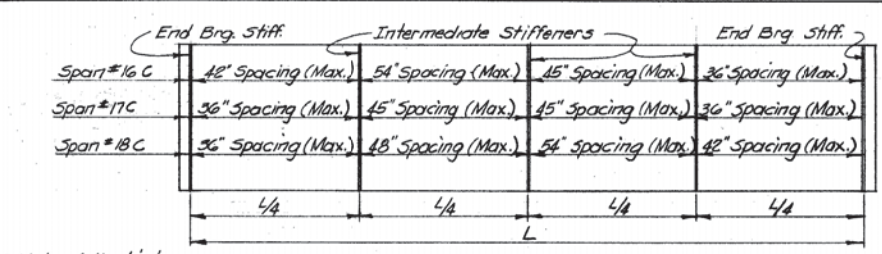
- None

Substructure

- None

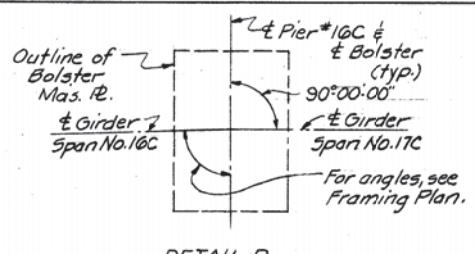
Appendix A- Selected Plan Sheets

HAM-25-0.04

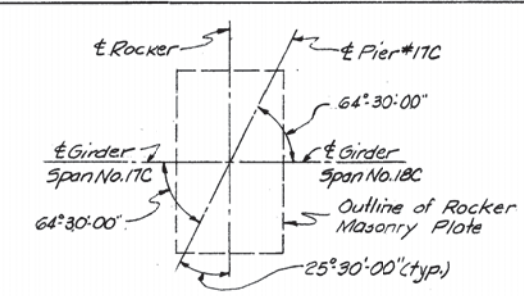


Note: Adjust intermediate stiffener spacing to conform to intermediate crossframe spacing

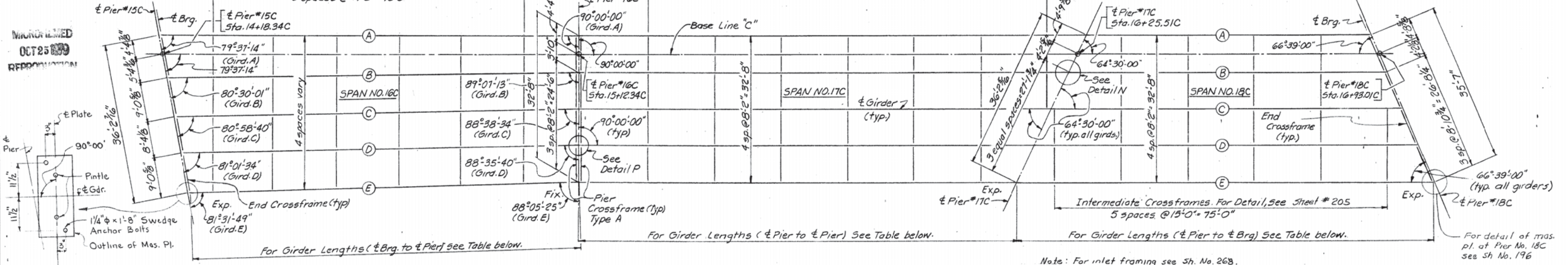
INTERMEDIATE STIFFENER SPACING



DETAIL P



DETAIL N



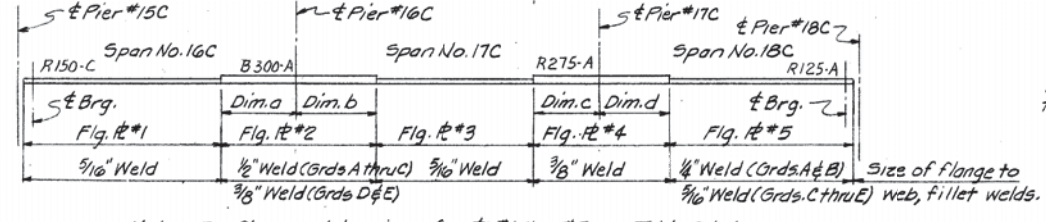
DETAIL OF MASONRY PLATE AT PIER 15C

Notes: All web plates are 5/8" x 3/8". All intermediate stiffeners are 4" x 3/8". End bearing stiffeners are as follows: Piers #15C, 17C & 18C = 7 1/2" x 1/2" PEs. Pier #16C = 7 1/2" x 1/4" PEs.

FRAMING PLAN UNIT NO. 14 (Spans No. 16C thru 18C)

TABLE P (See Detail at right.)

Girder	Dim. a	Dim. b	Dim. c	Dim. d
A	17'-9"	16'-3"	8'-6"	24'-0"
B	17'-9"	16'-3"	8'-6"	24'-0"
C	15'-6"	16'-0"	11'-3"	18'-6"
D	13'-0"	16'-6"	14'-0"	13'-0"
E	13'-0"	16'-6"	14'-0"	13'-0"



Notes: For flange plate sizes for PEs #1 thru #5, see Table O, below. For dimensions a thru d, see Table P, left.

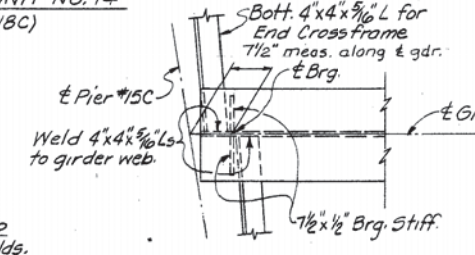
DETAIL OF FLANGE PLATES AND WELDS

TABLE O (See Detail above)

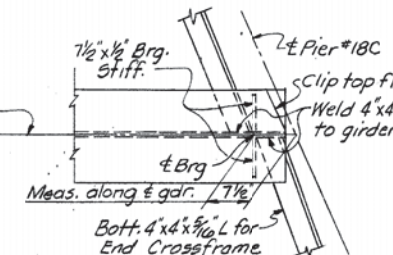
Girder	Flg. P#1	Flg. P#2	Flg. P#3	Flg. P#4	Flg. P#5
A	16' x 1 3/8"	16' x 2 3/8"	16' x 1 3/8"	16' x 1 3/4"	16' x 3/4"
B	do	do	16' x 1 3/8"	do	16' x 3/4"
C	do	16' x 2 3/8"	16' x 1 1/4"	16' x 1 3/4"	16' x 1"
D	do	16' x 2 1/8"	16' x 1 1/8"	16' x 1 1/8"	16' x 1 1/4"
E	16' x 1 3/8"	16' x 2 1/8"	16' x 1 1/8"	16' x 1 1/8"	16' x 1 1/4"

TABLE OF GIRDER LENGTHS

Girder	Span No. 16C	Span No. 17C	Span No. 18C
A	74'-2"	115'-2 3/16"	62'-11 1/4"
B	92'-5 1/16"	111'-4 1/8"	70'-4 1/16"
C	90'-9 1/16"	107'-5 3/8"	77'-9 3/8"
D	89'-3 3/8"	103'-6 3/8"	85'-2 3/8"
E	87'-8 3/8"	99'-7 1/8"	92'-1 1/16"



DETAIL OF END CROSSFRAME CONNECTION AT PIER #15C



DETAIL OF END CROSSFRAME CONNECTION AT PIER #18C

Note: Work these details with Plan of Expansion Joint, Sheet No. 215

TABLE Q

Dim. to raise girders for welding.

Girder	Span #16C	Span #18C
A	3 3/8"	1 3/4"
B	3"	1 1/8"
C	2 3/4"	2 1/8"
D	2 1/2"	2 1/4"
E	2 1/4"	2 3/8"

Note: Convexity includes variations due to vertical curvature, superelevation and horizontal curvature.

DEFLECTION AND CAMBER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
SPAN	SPAN NO. 16C															SPAN NO. 17C								SPAN NO. 18C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
GIRDER	A					B					C					D					E					A					B					C					D					E																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
LOCATION	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼

Girder web plates shall be cut to a parabolic crown.

GIRDER SPLICE WELDING PROCEDURE

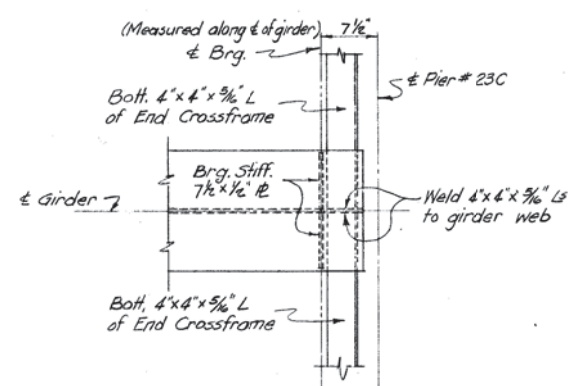
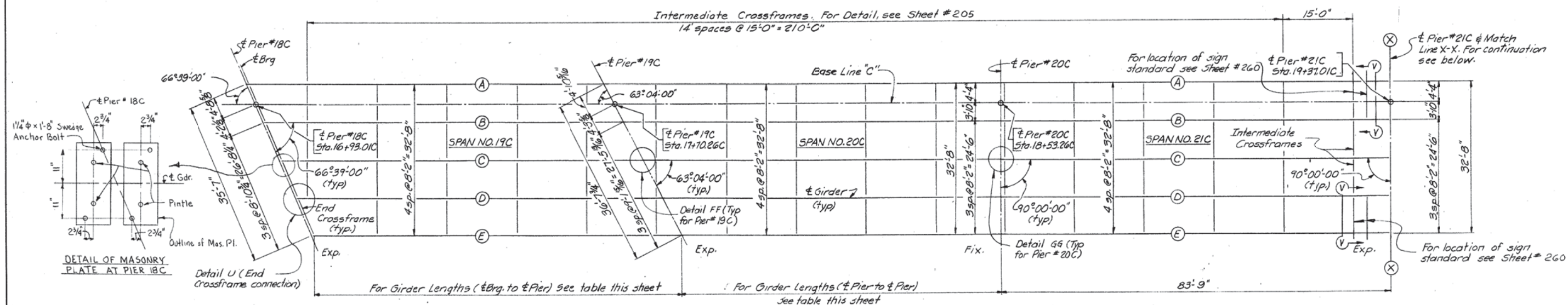
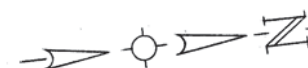
1. Raise the ends of girders of Span #16C at Pier #15C, and ends of girders of Span #18C at Pier #18C; the dimensions shown for each span in Table Q.
2. Butt-weld girder flanges and webs at Piers #16C & 17C, using the following welding sequence:
Make two passes on each flange, then two on the web; repeat using one pass at each location until welds are completed.
3. Weld all Pier Crossframes at Pier #16C into place.
4. Lower the girders of Spans #16C & 18C into final positions.

Notes:
For Details of End Crossframes see Sheet # 215
For Details of Pier Crossframes, see Sheet # 205
For Details of Intermediate ± Barring Stiffeners, see Sheet # 205
For Rocker & Bolster Details, see Sheet # 206
For Typical Girder Elevation, see Sheet # 205

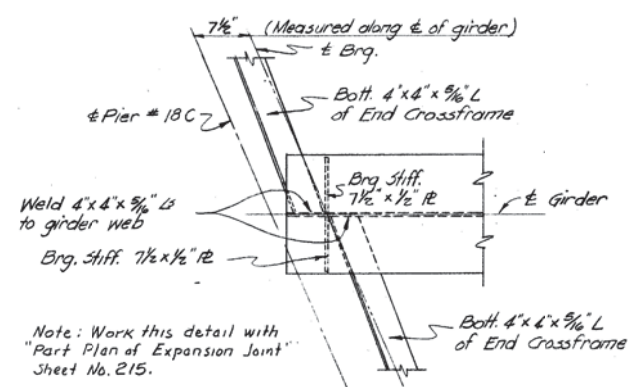
HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT NO. 14.

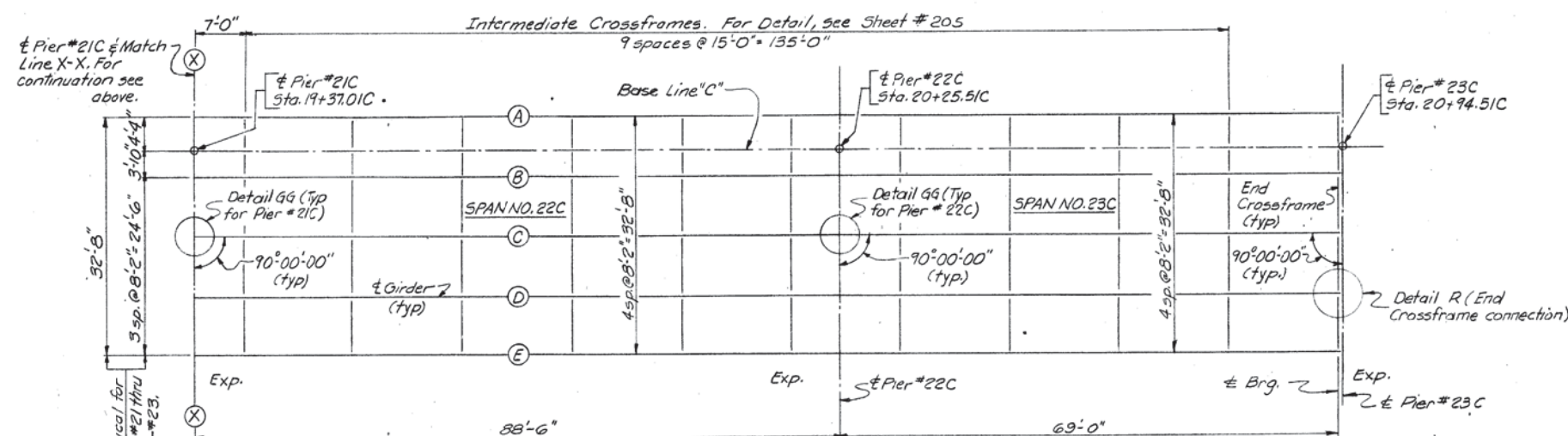
DESIGNED REL	DRAWN REL	TRACED JHO	CHECKED JHO	REVIEWED DATE 11-14-60	REVISED
-----------------	--------------	---------------	----------------	---------------------------	---------



DETAIL R
(End Crossframe connection
@ Pier # 23C, Span 23C)



DETAIL U
(End Crossframe connection
@ Pier # 18C, Span # 19C)



FRAMING PLAN - UNIT NO.15
(Spans No.19C thru 23C)

This diagram shows the elevation of the bridge deck with the following details:

- Piers:** Pier #18C, Pier #19C, Pier #20C, Pier #21C, Pier #22C, and Pier #23C.
- Spans:** Span #19C, Span #20C, Span #21C, Span #22C, and Span #23C.
- Girders:**
 - Span #19C: R125-E Gdr. A, R125-F Gdr. B, R125-G Gdrs. C & E, R125-H Gdr. D.
 - Span #20C: R225-A, B225-B.
 - Span #21C: R225-A.
 - Span #22C: R225-A.
 - Span #23C: R100-U Gdrs. A to D, R100-V Gdr. E.
- Dimensions:**
 - Span #19C: 16" x 1 1/4" (16'-0" + 13'-0" = 29'-0").
 - Span #20C: 16" x 1 3/8" (12'-0" + 10'-0" = 22'-0").
 - Span #21C: 16" x 1" (11'-6" + 11'-6" = 23'-0").
 - Span #22C: 16" x 1" (10'-0" + 11'-6" = 21'-6").
 - Span #23C: 16" x 1" (16'-0" = 16'-0").
- Welds:** 5/16" Weld at the ends of the spans.
- Other Labels:** "Flg. R's Girders A thru E (Top & Both)", "Flg. to Web Weld (Top & Both)", and "± Brg." (Bridge).

TABLE OF FLANGE PLATES AND WELD SIZE

GIRDER LENGTHS		
Girder	Span #19C	Span #20
A	76'-3 1/2"	85'-2 1/4"
B	76'-11"	81'-0 5/8"
C	77'-6 1/2"	76'-10 1/4"
D	78'-2"	72'-9"
E	78'-9 1/2"	68'-7 1/4"

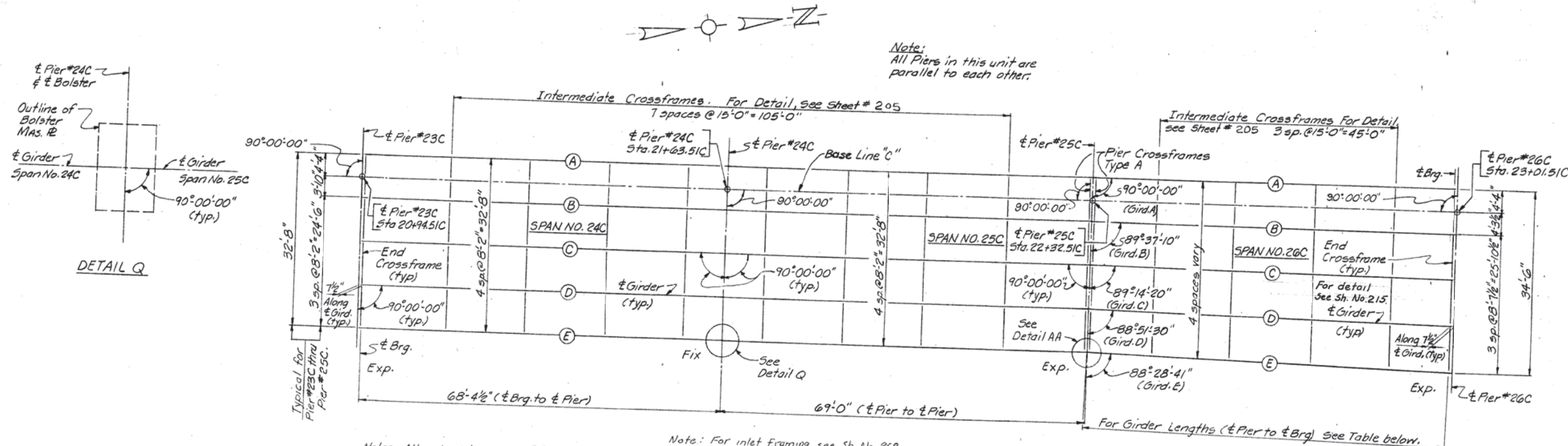
HAM-75-0022R
SPANS 19C-23C

Work this sheet with Sheet No. 197

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT NO. 15.

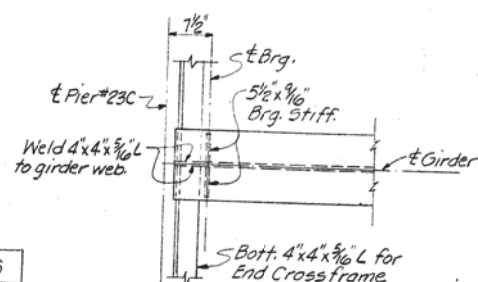
DESIGNED RCF	DRAWN REL	TRACED	CHECKED JHO 8/1/60	REVIEWED DATE 8-1-60	REVIEWED BY
-----------------	--------------	--------	--------------------------	-------------------------	-------------



Notes: All web plates are 48"x3/8".
All intermediate stiffeners are 4"x3/8".
All end bearing stiffeners are 5 1/2"x3/8\".

Note: For inlet framing see Sh. No. 268

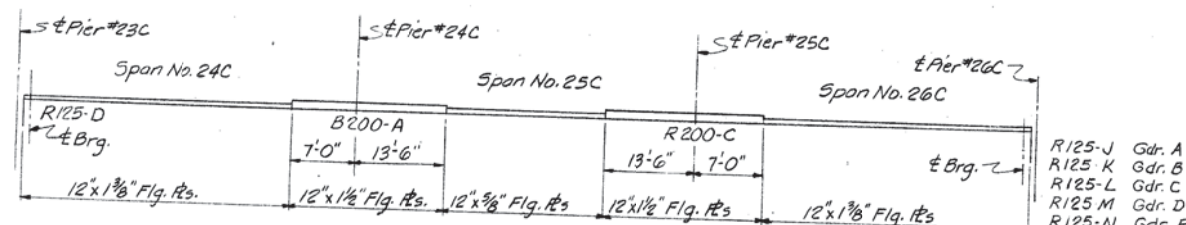
FRAMING PLAN - UNIT NO. 16
(Spans No. 24C thru 26C)



DETAIL OF END CROSSFRAME
CONNECTION AT PIER #23C

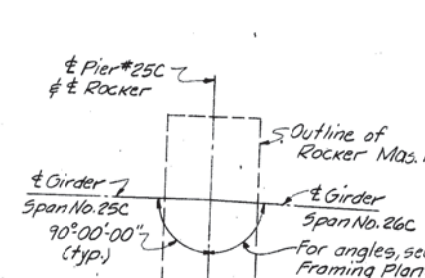
Note: Work this detail with "Part Plan of Expansion Joint", Sheet No. 215.

GIRDER LENGTHS	
SPAN NO. 26C	
Girder	Length
A	68'-4 1/2"
B	68'-4 1/2"
C	68'-4 1/2"
D	68'-4 1/2"
E	68'-4 1/2"

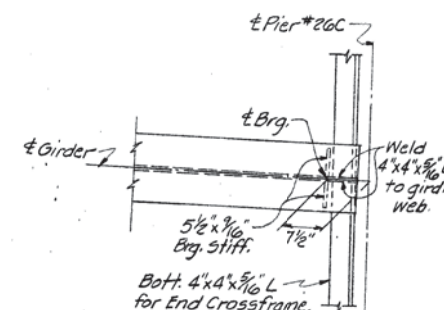


Note: Flange to web welds are 5/16" fillet welds throughout.

DETAIL OF FLANGE PLATES AND DIMENSIONS



DETAIL A A



DETAIL OF END CROSSFRAME
CONNECTION AT PIER #26C

Note: Work this detail with "Part Plan of Expansion Joint", Sheet No. 215

HAM-75-0022R SPANS 24C-26C

Notes:
For Details of Crossframes, see Sheet # 205
For Details of Intermediate & Bearing Stiffeners, see Sheet # 205
For Rocker & Bolster Details, see Sheet # 206
For Typical Girder Elevations, see Sheet # 205
For Details of End Crossframes, see Sheet # 215

HAZELT & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT NO. 16

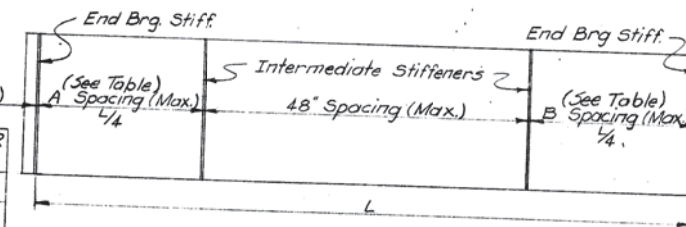
DESIGNED: RCF DRAWN: DFI TRACED: CHECKED: REVIEWED: DATE: REVISION:

GIRDER SPLICE WELDING PROCEDURE

1. Raise the ends of girders of Span #26C at Pier #26C 1" and ends of girders of Span #24C at Pier #23C-1".
2. Butt-weld girder flanges and webs at Piers #24C & 25C, using the following welding sequence:
Make two passes on each flange, then two on the web; repeat using one pass at each location until welds are completed.
3. Weld all Pier Crossframes at Pier #25C into place.
4. Lower the girders of Spans #24C & 26C into final positions.

All girders (Unit #16)

INTERMEDIATE STIFFENER SPACING		
Span	A	B
24 C	42"	39"
25 C	42"	42"
26 C	39"	42"



Note: Adjust intermediate stiffener spacing to conform to intermediate crossframe spacing.

INTERMEDIATE STIFFENER SPACING

DEFLECTION AND CAMBER									
SPAN	SPAN NO. 24C			SPAN NO. 25C			SPAN NO. 26C		
GIRDER	A thru E			A thru E			A thru E		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	1/16	1/8	1/16	0	0	0	1/16	1/8	1/16
Deflection due to remaining Dead Load	5/16	5/16	3/16	1/16	1/8	1/16	3/16	5/16	5/16

Girders for Unit #16 shall not be cambered

Note: $\pm$ Pier #27C, $\pm$ Pier #28C & $\pm$ Brg. N. Abut. are parallel to each other.

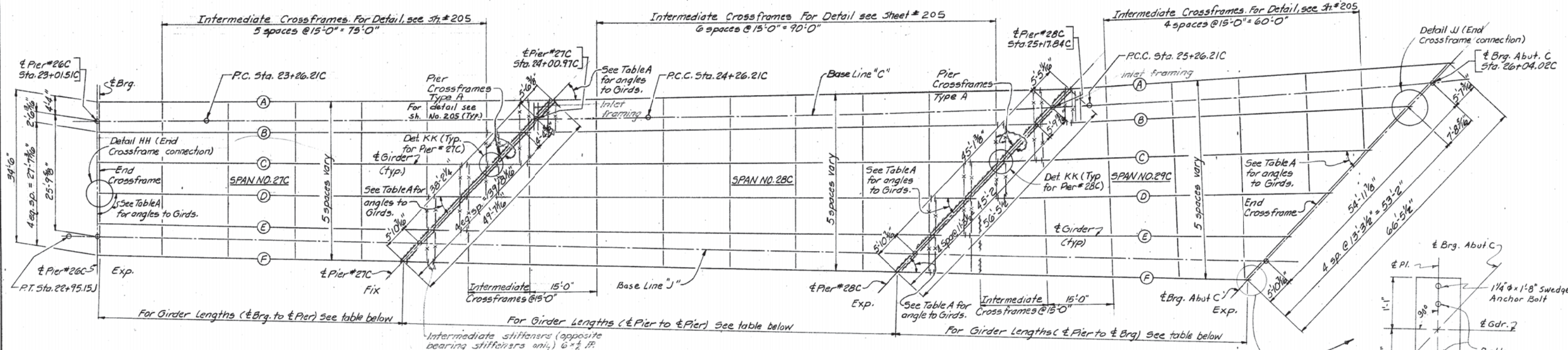


TABLE A (Angles from $\pm$ Piers or $\pm$ Brgs. to $\pm$ Girders) See Plan.

Girder	Pier #26C	Pier #27C	Pier #28C	Abut. C
A	89°56'-20"	46°42'-12"	45°30'-38"	43°04'-31"
B	89°44'-56"	46°53'-29"	45°59'-45"	43°59'-49"
C	89°31'-59"	47°06'-33"	46°29'-18"	44°57'-04"
D	89°16'-41"	47°21'-40"	46°59'-18"	45°56'-15"
E	88°58'-52"	47°39'-36"	47°29'-56"	46°57'-36"
F	88°37'-27"	48°01'-02"	48°01'-02"	48°01'-02"

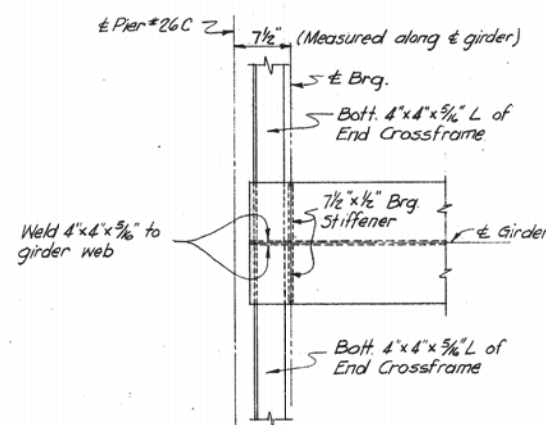
Same as shown for Span #28C @ Pier #27C.
Same as shown for Span #29C @ Pier #28C.

Note: For inlet framing see Sh. No. 268

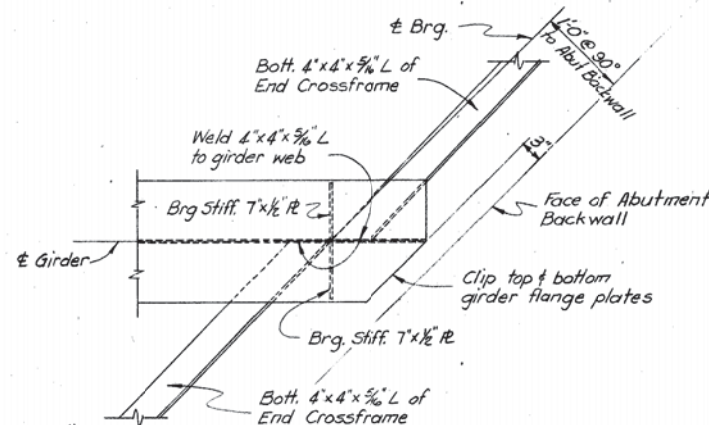
FRAMING PLAN-UNIT NO. 17
(Spans No. 27C thru 29C)

Note: Web R 54"x $\frac{3}{8}$ ". For Flg. R's see table below
Brg. Stiff. 7 $\frac{1}{2}$ "x $\frac{1}{2}$ " R's. Intermediate Stiff. 6"x $\frac{3}{8}$ " R's
For bearing details see Sheet # 206
For detail of End Crossframe see Sheet No. 215
For Typical Girder Elevation see Sheet No. 205
For Detail KK, See Sheet # 200

MASONRY PLATE
AT GDR. F ONLY



DETAIL HH
(End Crossframe connection)
(at Pier #26C, Span 27C)



DETAIL JJ
(End Crossframe connection)
(at Abutment C)

	$\pm$ Pier #26C	$\pm$ Pier #27C	$\pm$ Pier #28C	$\pm$ Brg. Abut. C
Flg. R's Gdrs. A & B (Top & Bot.)	16" x 1 $\frac{3}{8}$ "	16" x 2 $\frac{1}{8}$ "	16" x 1 $\frac{3}{8}$ "	16" x 1 $\frac{1}{2}$ "
Flg. R's Gdrs. C & D	16" x 1 $\frac{3}{8}$ "	16" x 2"	16" x 1 $\frac{3}{8}$ "	16" x 1 $\frac{1}{2}$ "
Flg. R's Gdrs. E & F	16" x $\frac{3}{4}$ "	16" x 1 $\frac{3}{8}$ "	16" x 1 $\frac{3}{8}$ "	16" x 1 $\frac{1}{2}$ "
Flg. to Web Weld Size (Typ. all girders)	$\frac{5}{16}$ " weld	$\frac{3}{8}$ " weld	$\frac{5}{16}$ " weld	$\frac{3}{8}$ " weld

TABLE OF FLANGE PLATES AND WELD SIZES

GIRDER LENGTHS

Girder	Span #27C	Span #28C	Span #29C
A	102'-7 $\frac{3}{8}$ "	116'-9 $\frac{1}{8}$ "	86'-3 $\frac{3}{8}$ "
B	95'-9 $\frac{1}{8}$ "	115'-10 $\frac{3}{8}$ "	84'-9 $\frac{1}{8}$ "
C	89'-0 $\frac{3}{8}$ "	114'-10 $\frac{3}{8}$ "	83'-4 $\frac{1}{8}$ "
D	82'-2 $\frac{3}{8}$ "	113'-11 $\frac{3}{8}$ "	81'-11 $\frac{3}{8}$ "
E	75'-4 $\frac{3}{8}$ "	113'-0 $\frac{1}{8}$ "	80'-7 $\frac{1}{4}$ "
F	68'-7 $\frac{1}{8}$ "	112'-1 $\frac{3}{8}$ "	79'-3 $\frac{1}{8}$ "

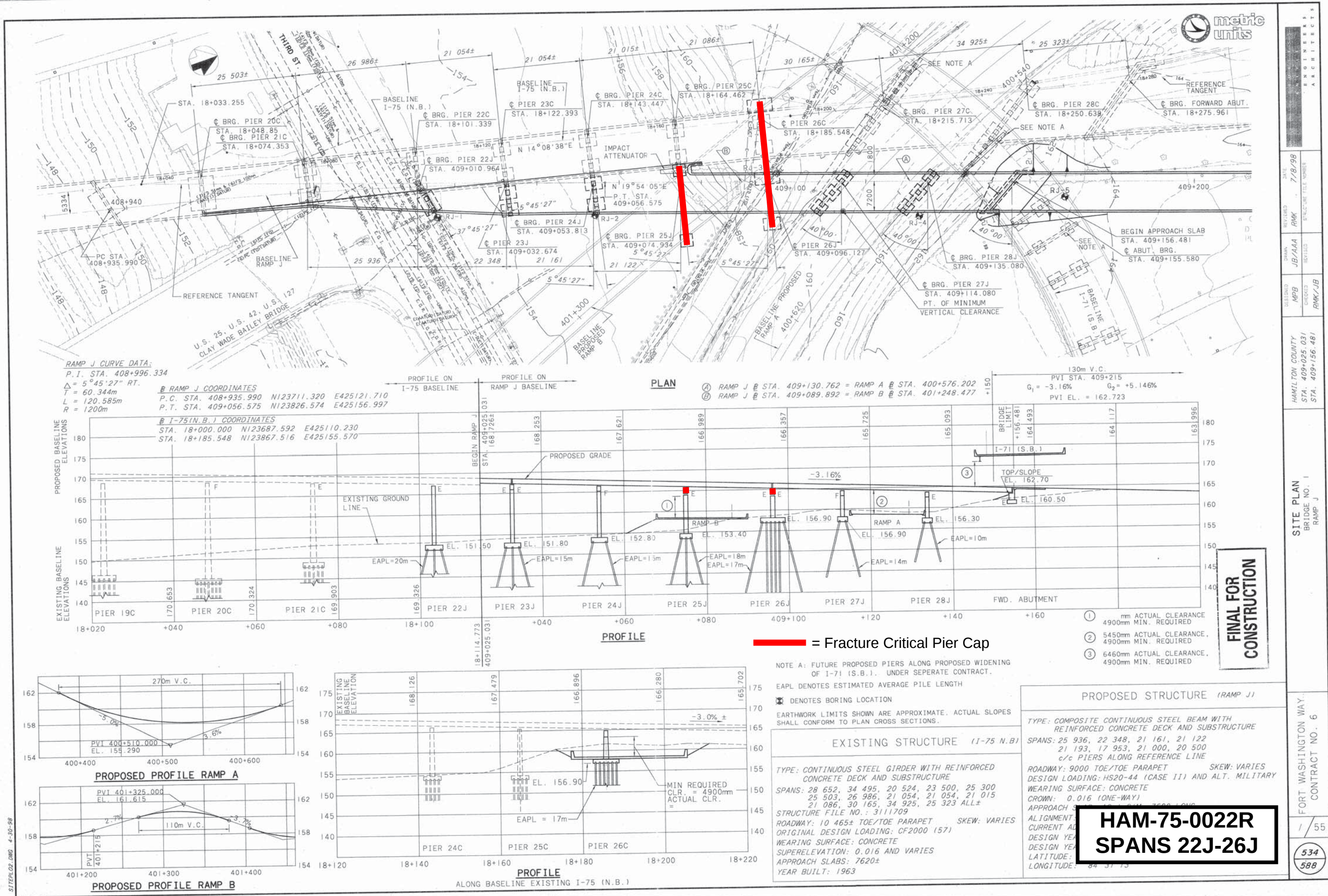
HAM-75-0022R
SPANS 27C-29C

Work this sheet with Sheet #200

HAZELET & EBDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT NO. 17.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISION
RCF	REL/JC 7/13/60		JHO 8/11/60	10-14-60	5-61



Appendix B- AssetWise Bridge Inspection Report

Inspector: Compton-Troesch,Kyle

Inspection Date: 09/10/2025

Structure Number: 3108805

Facility Carried: NB IR 75

Ohio Bridge Inspection Summary Report

HAM-00075-0022R (3108805)

B.L.04: District District 0815000 - CINCINNATI (HAM county)

B.CL.02: Major Maint 01 - State Highway Agency /

225 Routine Main A/B 01 - State Highway Agency /

221 Inspection A/B 01 - State Highway Agency /

5A: Inventory Route 1 00075

7: Facility On NB IR 75

6: Feature Ints 2RR;TH ST*E;US42D;US50*E

9: Location .2 MI N OF OH-KY LINE
Lat, Lon 39.096 ,-84.52205

Condition

B.C.01: Deck 6

58.01: Wearing Surface 6

B.C.08: Joint 4

B.C.02: Superstructure 5

59.01: Paint & PCS 3

B.C.03: Substructure 5

B.C.09: Channel N

B.C.11: Scour N

B.C.10: Channel Prot. N

B.C.05: Bridge Railing 6

B.C.06: Transitions 7

B.C.07: Bearings 5

B.C.04: Culverts N

Ohio GA 5

Appraisal

B.AP.03: Scour Vul. Not over Waterway

Geometric

48: Max Span Length (ft) 117.0

49: Structure Length (ft) 1187.0

52: Deck Width, Out-To-Out (ft) 36.0

424: Deck Area (sf) 42732

32: Appr Roadway Width (ft) 30.0

51: Road Width, Curb-Curb (ft) 33.0

50A: Curb/SW Width: Left (ft) 0

50A: Curb/SW Width: Right (ft) 0

34: Skew (deg) 48

33: Bridge Median 0 - No median

54B: Min Vert Underclearance (ft) 14.5

336A: Min Vert Clrnce IR Cardinal (ft) 15.833

336B: Min V Clr IR Non-Cardinal (ft) 0

578: Culvert Length (ft) 0

Load Posting

41: Op/Post/Closed A - Open

70: Posting 5 - Equal to or above legal loads

70.01: Date

70.02: Sign Type

734: Percent Legal (%) 100

704: Analysis Date 07/01/2013

63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Structure Type

43: Bridge Type 4 - Steel continuous
02 - Stringer/Multi-beam or Girder
N- Not Applicable

45: Spans Main / Approach 14 / 0

107: Deck Type 1 - Concrete Cast-in-Place

408: Composite Deck U - Unknown

414A Joint Type 1 8 - Elastomeric Strip Seal

414B: Joint Type 2 N - None

108A: Wearing Surface 2 - Integral Concrete (separate non-modified layer of concrete added to structural deck)
1 - Super Plasticized Dense Concrete (SDC)

422: WS Date 07/01/2007

423: WS Thick (in) 2.8

482: Protective Coating 4 - Paint System B

483: PCS Date 01/01/1977

453: Bearing Type 1 2 - Rockers & Bolsters

455: Bearing Type 2 C - Elastomeric (laminated)

528: Foundn: Abut Fwd 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)

533: Foundn: Abut Rear N - None (such as most Culverts)

536: Foundn: Pier 1 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)

539: Foundn: Pier 2 A - Cast-in-Place Reinforced Concrete Piles (12" diameter)

Age and Service

27: Year Built/ 106 Rehab 1963 / 0000

42A: Service On 1 - Highway

42B: Service Under 4 - Highway - railroad

28A: Lanes on 03

28B: Lanes Under 06

19: Bypass Length 0

29: ADT 40554

109: % Trucks (%) 16

Inspections

B.IE.03 Routine Insp. Months 12

B.IE.03: NSTM Insp. Y 24 09/09/2025

B.IE.03: UW Insp. 0

B.IE.03: Special Insp.

UBIT Insp. N 0

Drone Insp. N 0

Inspector Compton-Troesch,Kyle

Compton-Troesch, Kyle
09/10/2025

Structure Number: 3108805
Facility Carried: NB IR 75

[illegible]

Compton-Troesch, Kyle

09/10/2025

3108805

NB IR 75

[illegible]

Structure Number: 3108805
Facility Carried: NB IR 75

[illegible]

Structure Number: 3108805

Facility Carried: NB IR 75

[illegible]

Inspection Date: 09/10/2025

Structure Number: 3108805

Facility Carried: NB IR 75

[illegible]

Inspector: Compton-Troesch,Kyle

Structure Number: 3108805

Inspection Date: 09/10/2025

Facility Carried: NB IR 75

ODOT District: District 08

HAM-00075-0022R_(3108805)

Date Built: 07/01/1963

Major Maint: 01 - State Highway Agency

Facility Carried: NB IR 75

Traffic On: 1 - Highway

Rehab Date:

Routine Maint: 01 - State Highway Agency

Feature Inters: 2RR;TH ST*E;US42D;US50*E

Traffic Under: 4 - Highway - railroad

Insp. Resp A: 01 - State Highway Agency

FIPS Code: 15000 - CINCINNATI (HAM county)

Location: DISTRICT 08

.2 MI N OF OH-KY LINE

Insp
Resp B:

Inspector

Compton-Troesch,Kyle

Inspection Date 09/10/2025

Reviewer Not Approved

Inspector Comments - Deck and Approach

Deck, Wearing Surface, Joints, Railing

Bridge Wearing Surface

Bridge wearing surface was visually inspected from the boom lift.

Bridge Railing

Bridge railings were visually inspected from the boom lift.

Expansion Joint

The expansion joints were inspected visually from the boom lift.

Approach

Approach Wearing Surface

The north approach wearing surface was repaved in 2022.

Approach Embankment

No significant problems were noted.

Approach Guardrail

Surface rust and minor scrapes were noted in isolated locations on approach guardrail.

Inspector Comments - General Appraisal

Superstructure, Bearings

Diaphragm/X-Frames

Minor surface corrosion, freckled rust and paint failures typical throughout original crossframe members. Crossframe 6 between girders C and D in Span 21C and Crossframe 1 between Girders A and B over Pier 28C exhibit up to 1 1/2" downward deformation of bottom strut angle. Crossframes at expansion joint locations were replaced with jacking frames.

Bearing Devices

Original steel rocker bearings were replaced with elastomeric bearings at Piers 15C, 18C, 23C, and on the original structure portion of Pier cap 26J.

Fatigue

No deficiencies noted.

Signs

Inspector: Compton-Troesch,Kyle

Structure Number: 3108805

Inspection Date: 09/10/2025

Facility Carried: NB IR 75

There is one overhead sign support mounted to the railings near Pier 23C. No significant deficiencies noted for the support structure or the anchorage to the railings. Complete inspection of overhead sign structure was outside the scope of this inspection.

Utilities

The structure-mounted utilities consist of an electrical conduit attached to Pier 27C and Girder F in Span 27C, as well as several light poles mounted to the railings at deck level. There is a missing cover on a light pole at the east barrier, Span 16C.

Substructure

Reinforced Concrete Abutment Walls

Use caution during future inspections, as several needles were found Abutment C.

Reinforced Concrete Pier Caps

The protective coating for the FRP is cracking and peeling on the south face of Pier Cap 23C.

Reinforced Concrete Pier Columns/Bents

The protective coating for the FRP on the columns of Piers 23C is peeling.

Wingwalls

Diagonal hairline cracking is typical throughout the wingwalls. Cracking with efflorescence and delaminations are present at the bottom of the west wingwall.

Slope Protection

No significant problems noted.

Culvert

N/A

Inspector Comments - Waterway

Channel Protection

N/A

Channel

N/A

Scour

N/A