

2025 PRE-INSPECTION REPORT

BRIDGES NO. HAM-75-0022 L AND R

SFN: 3108791 AND 3108805

PID No.: 109780

City of Cincinnati



Submitted to ODOT District 8
July 2025

Prepared by
AECOM



Department of
Transportation

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1 INTRODUCTION

1.1 Inspection Details

Bridge no.:	HAM-75-0022L HAM-75-0022R
Features intersected:	I-71 Southbound, CSX Railroad, Local Parking Lots, 3 rd Street, US 42 Ramp, US 50 Ramps
Locations to Inspect:	HAM-75-0022L: In-Depth Element Level Inspection HAM-75-0022R: In-Depth Element Level (Entire Structure) NSTM (Piers 25J and 26J)
No. of Inspection Days:	Anticipated 4 days for both structures
No. of Pier Caps to Inspect:	2
Inspection Dates:	Days: September 2, 2025 - September 12, 2025
Inspection Hours:	Day: 7:00 AM to 5:00 PM Night: 11:30 PM to 4:30 AM (for interstate/ramp closures).
Inspection Access Equipment:	46-foot bucket truck, 125-foot lift, and ladders

1.2 NSTM Inspection Requirements

The inspection will consist of an In-Depth “Arms-Reach” inspection, performed in accordance with the guidelines of the current FHWA National Bridge Inspection Standards for NSTM. To perform an effective NSTM Inspection, the following tasks must be performed:

1. Determine Resource Requirements.
(Identify qualified inspection staff, use appropriate inspection access and inspection equipment).
2. Identify the NSTM.
3. Develop the Inspection Procedure.
(Procedure contained in this document)
4. Prepare Follow-up Procedure.
(Recommendations will be made as part of this current project)
5. Provide Quality Control/Quality Assurance for the inspection and report.
(Procedure contained in this document)
6. Develop a Periodic Inspection Plan
(Already in place with the Ohio Department of Transportation, District 8)

1.3 Bridge Description

HAM-75-0022L

The Brent Spence Approach Bridge (HAM-75-0022L) consists of a six-span welded steel plate girder structure that carries two lanes of I-75 southbound traffic over West 3rd Street. The structure was constructed in 1963 and consists of a reinforced concrete deck that varies in width and bears directly on five continuous, welded, built-up steel girders supported by reinforced concrete piers. Crossframe angles spanning the width of the bays between the

girders are welded to the transverse stiffeners of the girders. The structure is 428'-0" long and the longest spans (Spans 21A through 24A) are each 78'-0" in length.

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 girders labeled from west to east. The substructure units are numbered from Pier 19A to Abutment A, spans are numbered from Span 20A to Span 25A, and girders are labeled from A to E.

HAM-75-0022R

The Brent Spence Approach Bridge (HAM-75-0022R) is a 14-span structure that carries three lanes of I-75 northbound traffic over West 3rd Street, a railroad, and US 50 and I-75 Ramps. The structure was constructed in 1963. The original structure consists of a reinforced concrete deck that varies in width and bears directly on up to six (6) continuous, welded, built-up steel girders supported by reinforced concrete piers. Crossframe angles which span the width of the bays between the girders are welded to the transverse stiffeners of the girders.

A retrofit of the bridge was performed in 2000 and included the widening of the east side of the bridge. Steel beams, crossframes, and concrete piers were added to the structure along with two NSTM steel pier caps at Piers 25J and 26J. The structure is approximately 1,187 feet long and the longest span (Span 28C) is approximately 117 feet in length. The nomenclature of this bridge will follow the convention set in the design plans and retrofit plans with spans, substructure units and crossframes labeled from south to north, original girders labeled A through F from west to east, and retrofit beams labeled B1 through B4 from east to west. The substructure units are numbered from Pier 15C to Abutment C on the original structure and from Pier 22J to Pier 26J on the retrofit substructure units. Spans are numbered from Span 16C to 29C.

1.4 NSTM Locations

Bridge HAM-75-0022R contains NSTM steel pier caps at Piers 25J and 26J.

PIER 25J - FATIGUE PRONE DETAILS

The fatigue prone details found on Pier Cap 25J include Category C'. Refer to the Appendix D for locations of fatigue details.

- a. Detail 1: Typical interior transverse diaphragm connection to the pier cap flanges and webs with fillet welds (Category C').

PIER 26J - FATIGUE PRONE DETAILS

The fatigue prone details found on Pier Cap 26J include Categories C', D, and E'. Refer to the Appendix D for locations of fatigue details.

- b. Detail 2: Typical interior transverse diaphragm connection to the pier cap flanges and webs with fillet welds (Category C').
- c. Detail 3: Hole in the north web plate in Bay 17 filled with a non-high strength bolt (Category D).
- d. Detail 4: Welded bearing plate attachment to the top flange of the plate cap with a length L in the direction of primary stress and a thickness t attached by fillet welds ($L > 4$ in. and $t > 1.0$ in.) (Category E').

2 INSPECTION METHODS & PLAN

The AECOM Team will perform inspections as defined by the Scope of Services. The inspection will adhere to the Confined Space Entry Procedures defined herein, and in the relevant AECOM safety procedures. Traffic control will be provided by Intech Contracting according to the traffic control plans and standards shown in Appendix B.

2.1 Field Coordination Contacts

The following entities will be involved in coordinating and performing all field work associated with the inspection of these structures.

AECOM - Field Team Contacts:

Travis Baker, P.E.: Team Leader, Project Manager	C: 513-266-9344
Kyle Compton, P.E.: Team Leader	C: 513-255-7862

ODOT - Project and Permitting Contacts:

(A right of entry permit through ODOT District 8 is required. See Appendix A.)

Brandon Collett: Project Manager brandon.collett@dot.ohio.gov	O: 513-933-6643
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Scott Kraus: District Work Zone Traffic Manager scott.kraus@dot.ohio.gov	O: 513-933-6519
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Chris Bass: Right-of-Way Use Permits christopher.bass@dot.ohio.gov	O: 513-933-6577
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City of Cincinnati - Permitting Contacts:

(No work will be performed within the City right-of-way; therefore, no right-of-way permit is required. Work performed on City owned property will be done so within ODOT easements therefore no right-of-entry permit is required.)

DOT Permit & License Center row.permits@cincinnati-oh.gov	O: 513-352-3463 F: 513-352-5397
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Intech Contracting (Intech) - Traffic Control Team Contacts:

(Intech will be the traffic control subcontractor for this inspection. Refer to Appendix B for the proposed maintenance of traffic schemes.)

Andrea Ohlson: Bridge Inspection Support Services Coordinator	O: 859-272-0352 ext. 14
Bill Debord: Bridge Inspection Support Services Foreman	C: 606-669-2223

2.2 Traffic Control

Intech will be responsible for the installation of traffic control devices for the maintenance of traffic for partial-width closures on the ramp from I-75 southbound and US 50 eastbound to US 42 and West Second Street. The planned closures are briefly described below:

Ramp for I-75 southbound and US 50 eastbound to US 42 and West Second street - Alternating lanes and shoulders of the ramp from I-75 southbound/US 50 eastbound to US 42/West Second Street will be temporarily closed underneath the I-75 Northbound bridge during night work. The lanes will be closed from 11:00 PM to 5:00 AM.

2.3 Confined Space Entry Procedure

The inspection of the steel caps on HAM-75-0022R requires entering the steel pier caps which are considered a non-permit confined space. The entry of confined spaces by field personnel is governed by the OSHA standard for confined spaces, 29 CFR 1910.146, The ODOT Manual of Bridge Inspection, and AECOM Confined Spaces Procedures (Procedure No. S2AM-301-PR1). The ODOT MBE states that “Employees must follow the protocols established by their employer when working in and around confined spaces”. Based on the AECOM Type of Confined Space Decision Flow Chart (Procedure No. S3AM-301-ATT1), the pier caps are considered a non-permit required space and the following requirements will be met:

- Training will be provided to employees.
- Immediately dangerous to life or health (IDLH) situations will be prevented and corrected.
- Entrants will be able to escape unaided.
- Necessary PPE for the hazards will be provided.
- Proper equipment will be used.
- Atmospheric testing and or continuous monitoring will be provided.
- Emergency rescue services will be made immediately available.

The condition inspection of the two-steel box girder pier caps on HAM-71-0022R will require 1-2 days and 1 night of field work to completely inspect both the interior and exterior of the pier caps. The exterior of the pier caps will be inspected from a 46-ft bucket truck and ladders. The interior of the pier caps will be inspected by entering the box girder following the procedure outlined below. A three-man inspection team will perform the confined space inspection of the interior of the pier caps. Entry into the pier caps will generally be limited to one person at a time, and there will always be at least one person serving as an attendant outside of the pier caps.

The pier cap interiors are accessed via locked hatches. The keys to the hatches will be obtained from ODOT prior to the inspection. To ventilate the interior space of the pier caps, AECOM personnel will open the hatch at each end of the pier cap one hour prior to entry. Prior to the start of the inspection, the inspection team will meet at the site for a safety meeting and to review the details of this inspection plan.

Entry of the pier caps will be performed in accordance with the Non-Permit Required Confined Space (NPRCS) entry procedure from AECOM Confined Spaces - Americas (Procedure No. S3AM-301-PR1). This will include the use of an entry permit system, pre-entry air monitoring, continuous air monitoring, and the designation of qualified entrants, attendants, and supervisor(s). The Health and Safety Plan will outline the safety procedures and contain contact information for local EMS services and for the identified nearest hospital emergency room.

Prior to the inspection and prior to entering the pier caps, initial air monitoring for O₂, %LEL, CO, and H₂S will be performed by one designated certified entrant. The entrant will climb the length of the steel box girder and take air monitoring readings. The certified attendant

will document the readings every 25 feet. Radios will be used for team communication during the inspection. At the conclusion of the initial entry and air monitoring, the confined space air readings will be evaluated and if no hazards exist, the space will be designated a non-permit required confined space. Members of the inspection team entering the confined space will continuously monitor the air quality, and the attendant will document the air monitor readings every 30 minutes for the duration of the work inside the confined space.

If the monitor alarms go off during the initial entry indicating that unsafe atmospheric conditions exist, the entrant will immediately exit the steel box girder. If unsafe atmospheric conditions continue to exist, further ventilation will continue, and the initial air monitoring will be performed again after proper ventilation. If necessary, a blower and generator will be used to provide proper ventilation in the pier cap. If the atmospheric hazards cannot be removed from the confined space, the pier cap will NOT be entered and the District's Project Manager will be notified, and further instructions will be requested.

2.4 Follow-up Procedures for Inspection Findings

NSTM inspection findings shall be documented in the final inspection report. Upon closing the pier cap hatches after the inspection, the perimeter of the hatches will be sealed with a silicon based all-weather sealant and the hatch keys will be returned to ODOT.

2.5 Quality Control and Quality Assurance

AECOM's Technical Quality Review Procedure - DCS (Procedure No. Q2[DCS]-351-PR1) will be followed. The team leaders for this inspection were chosen to ensure that inspector qualifications are met. The team leaders have completed the course FHWA-NHI-130078, "Bridge Inspection Techniques for Nonredundant Steel Tension Members (NSTM)."

2.6 Special Considerations

Based on the items discussed during the scoping meeting and in the previous inspection reports, the following will receive special consideration:

- Nuts backing off anchor bolts inside of the pier caps.
- Leakage inside of the pier caps and the performance of the previous repairs for leakage.
- On HAM-75-0022L, magnetic particle testing can be completed at select cracks on the girder flange/web/stiffener welds, but most cracks have been drilled and testing is not required on all cracks. Close attention shall be given to similar details on the bridge.
- Unauthorized/excessive material storage around substructure units.
- Unsanitary conditions around substructure units.
- Any small delaminations found over public areas during inspections shall be removed on-site with a hammer. ODOT shall be notified of larger spalls and may remove them during the inspection.

Appendix A:

Right of Entry Permit Applications

APPLICATION INFORMATION

Application ID	25-16133
District	District 08
Application Status	Submitted
Application Received Date	05/14/2025
Application Received Time	06:10 PM
Permit Type	Lane Closure
Description of Work	Alternating lanes and shoulders of the ramp from I-75 SB/US 50 EB to US 42/West Second Street will be temporarily closed beneath the I-75 NB bridge for completion of bridge inspection work.
Anticipated Start Date	09/08/2025
Anticipated End Date	09/12/2025

APPLICANT INFORMATION

Company Name	AECOM Technical Services, Inc.
Address 1	525 Vine St.
Address 2	Ste. 1800
City	Cincinnati
State	OH
Zip	45202
Phone	513-419-3404
Alternate Phone	513-266-9344
eMail	travis.baker@aecom.com

ATTACHED DOCUMENTS

Maintenance of Traffic

GIS LOCATION DATA

Point 1 - County	Hamilton
Point 1 - Route	IR71
Point 1 - SLM	0.33-0.45
Point 1 - Municipality	CINCINNATI
Point 1 - Latitude	39.0985450
Point 1 - Longitude	-84.5215670
Point 2 - County	Hamilton
Point 2 - Route	IR71
Point 2 - SLM	0.33-0.45
Point 2 - Municipality	CINCINNATI
Point 2 - Latitude	39.0976840
Point 2 - Longitude	-84.5211750

Appendix B:

Traffic Control Details

MR 509
Permit No. 25-16133

Office Use Only

State of Ohio
Department of Transportation
Permit

County or Jurisdiction HAM
Rte IR71
Log Pt 0.33-0.45
Acc Cat

[1] Subject to all terms, conditions, and restrictions printed, written below and on the reverse side hereof, or attached,

Name: AECOM Technical Services, Inc.
Address: 525 Vine St. Ste. 1800 Cincinnati OH 45202
Company Phone: 513-419-3404

is hereby granted a permit under Section 5515.01 and 5515.02 of Ohio Revised Code, and permission to perform work necessary in the manner described and at the location indicated in the following or attached to this permit.

Lane Closure - (see attached sheets)

Description of Work: Alternating lanes and shoulders of the ramp from I-75 SB/US 50 EB to US 42/West Second Street will be temporarily closed beneath the I-75 NB bridge for completion of bridge inspection work.

The permit MOT is acceptable as noted:

- On page 3/5; relocate the arrow board 440' to the north so it is at the back of the I-75 exit gore.
- * Short-term shoulder closures are NOT permitted from 6 am to 9 am or from 3 pm to 7 pm, Monday through Friday.
- * Permitted lane closure between hours of 10:30 pm - 4:30am
- * Lane closures are NOT permitted 2 hours before to 2 hours after events at Great American Ball Park, Paul Brown Stadium, or Heritage Bank Center. This restriction also applies to any other local venue generating an event attendance of 15,000 or more.
- * Must give a 5 day notice to notify public relations

[2] This permit shall be in the possession of employees /agents of permittee on site at all times who are in charge of the work and shall be shown, upon request, to any employee of the Department of Transportation.

Contact ODOT Representative 3 days before work begins, also contact ODOT Representative when work is completed for final inspection.

Failure to notify the ODOT Representative could result in work stoppage!

[3] No work authorized by this permit shall begin until the permittee has contacted and received instructions from

ODOT Representative	Kathy Mullins
Phone	513-207-0428
Email Address:	kathy.mullins@dot.ohio.gov
(Authorized ODOT Employee)	

NOTE: Any work performed by the permittee may be stopped if this requirement is not met.

[4] Prior to any excavation in the highway right-of-way, the Ohio811, <https://www.oups.org/excavators>, must be contacted in accordance with ORC Section 3781.25 to 3781.32. Ohio811 can be reached at 1-800-362-2764 or 811.

[5] If your utility is above ground in any way, you must mark your utility with a fluorescent colored marker that corresponds with the universal OUPS color code. The marker must be no shorter than six feet in height and you must maintain the marker. Guide wires must be marked a fluorescent yellow. Failure to mark as described, will result in the Department of Transportation being held harmless and no reimbursement for damage to your property.

[6] All work requiring persons or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Uniform Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[7] The permittee accepts the conditions, terms, and requirements printed, written on, or attached to this permit and understands that failure to comply fully with those conditions, terms, and requirements or any change in the use of the permit inconsistent with its terms and conditions

will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation at the permittee's expense.

[8] Performance Bond Required? ☐ Yes ☐ No Company _____
Effective Date _____ Expiration Date _____ Amount \$ _____

[9] This permit shall be void if the work described herein does not comply with the conditions, terms, and requirements applicable to this permit, and if the work is not completed by 12/31/2025

Dated 06/30/2025

Rev 5/6/2021
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General Provisions Applicable to All Permits
(Sections 5515.01 and 5515.02 of O.R.C.)

- [1] This permit is not a substitute for satisfying the rights or obligations of any other party who may have an interest in the underlying fee interest.
- [2] The granting of this permit does not convey to the permittee or to the property served any rights, title, or interest in state highway rights of way or in the design or operation of the state highway; or in any way abridge the right of the Director of the Department of Transportation in his jurisdiction over state highways. If, in the process of any future work or for the benefit of the traveling public, it becomes necessary, in the opinion of the Director of Transportation to order the removal, reconstruction, relocation, or repair of any of the fixtures, or work performed under this permit, said removal, reconstruction, relocation, or repair shall be wholly at the expense of the owners thereof or the permittee and be made as directed by the Director of Transportation and within the time determined by the Director. Such changes in the state highway design or operation, necessary for improved safety and operation or for the benefit of the traveling public, shall not require a permit modification since the permit confers no private rights to the permittee over the control of the state highway.
- [3] The District Deputy Director acts for and on behalf of the Director in issuing and carrying out the provisions of all permits. The District Deputy Director has full authority to ensure that all provisions of the permit are met and to reject any materials, design, and workmanship that do not meet applicable Department standards. The District Deputy Director, at his/her discretion, may require a performance bond or certified check as a prerequisite to the issuance of a permit.
- [4] Failure on the part of the permittee to comply fully with the provisions and conditions of the permit will be cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Departmental action. By accepting the permit, the permittee agrees to comply with all conditions, terms, and restrictions printed or written on or attached to the permit. If the permittee or its agent performs any work contrary to the conditions of the permit or to the instructions of the District Deputy Director and, after due notice, fails to correct the problem, the Department of Transportation may, with or without notice, correct or remove such work and the permittee shall reimburse the Department for the costs and shall hold the Department harmless for all results of such work.
- [5] The permittee shall indemnify and hold harmless the State of Ohio, Department of Transportation, its officers, representatives and assigns, from any and all loss, liability, damages, litigation costs, and claims for injury or death to any person, property, or business caused by or resulting from any act, omission, event, consequence, or occurrence, negligent or otherwise of the permittee, its employees, agents, or assigns as a result of the issuance of this permit.
- [6] All work authorized under the permit shall be performed to the Department's satisfaction, and the entire expense shall be borne by the permittee. No work shall be performed until the permittee has contacted the Department's appointed representative named on the permit and received instructions. The Department's representative may inspect all work covered by the permit, or the Department reserves the right, during the time any or all of the work is being performed, to appoint an inspector over the work who shall represent the interest of the State on the work and any compensation arranged for shall be paid wholly by the permit holder. Work not in compliance shall be halted and the District Deputy Director shall be notified of the cause. The permittee shall be notified of the Department's determination and given an opportunity to correct the problem. If the problem is not corrected timely or to the satisfaction of the Department, this permit will be revoked.
- [7] Failure to complete all work within the time specified on the permit shall void the permit, thereby making the permit illegal and subject to appropriate Departmental action. The permittee may request an extension in writing from the District Office, explaining why the extension is necessary and when the work is expected to be completed.
- [8] All work infringing on the pavement or shoulders shall comply with applicable standards and requirements regarding traffic control devices. Failure to comply will be cause for revocation or suspension of the permit. Any closure of lanes or shoulders shall be described in terms of location, duration, time of day, etc. Such work shall not begin until all traffic control devices are in place.

[9] If any grading, sidewalk, or other work allowed by a permit interferes with the drainage of the highway in any way, such catch basins and outlets as necessary shall be constructed to take proper care of said drainage and any materials such as pipes and tiles damaged during any installation or repair by the permittee or its employees or agents shall be repaired immediately at the sole cost of the permittee. Permittee shall timely notify the Department of any such damage and repairs thereto. Failure of the permittee to immediately repair the damage after it is discovered shall result in the Department performing the repair and the permittee shall reimburse the Department for the costs and shall hold the Department harmless for all the results of such work which may include removal of the permittee's facilities.

[10] Any damage to ODOT or another's property caused by the work shall be repaired by the permittee or permittee's agent or contractor in a timely manner and at the sole cost of permittee. If any emergency repairs to ODOT property are needed that cannot be performed by the permittee or permittee's agent or contractor, ODOT shall cause the repairs to be performed at the sole cost of permittee.

[11] Upon completion of the work, the permittee shall leave the highway clean of all rubbish, excess materials, temporary structures and equipment, and all parts of the highway shall be left in a condition acceptable to the Department. Upon satisfactory completion of the work authorized by the permit, the Department's appointed representative shall complete the Permit Inspection Certificate, Form No. MR 678 certifying that the permittee has complied with the terms of the permit.

[12] Except as herein authorized, no excavation shall be made or obstacle placed within the limits of the highway so as to interfere with the travel over the road.

[13] All pole lines are to be built in accordance with Rule 4901:3-1-03 of Ohio Administrative Code promulgated and enforced by the Public Utilities Commission of Ohio.

[14] All underground utilities shall be installed at a depth and horizontal distance from the road surface and any appurtenances in accordance with state and national safety standards and as pre-approved by the Department. After installation, the exact location of the utility shall be provided to the Department. The Department shall be held harmless for any damage to utilities due to insufficient or inaccurate installation or identification and all repairs shall be at the sole cost of the permittee.

[15] The permittee shall comply with the Air Pollution requirements of Rule 3745-17-08 of the Ohio Administrative Code promulgated and enforced by the Ohio Environmental Protection Agency.

[16] The permittee certifies that he or she is fully authorized to sign this permit. This permit shall apply to and be binding upon the permittee and any successors in interest. No change in ownership of the underlying property or of the facility owned by permittee shall in any way alter the permittee's obligations under this permit.

[17] The permittee(s) for herself/himself/themselves/itself, her/his/their/its personal representatives, and her/his/their/its successors in interest and assigns, as a part of the consideration hereof, do/does hereby covenant and agree that:

(1) No person on the grounds of race, color, or national origin, shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of the utility/facilities/ services of the permittee.

(2) In the construction of any improvements on, over, or under the above described property and the furnishing of services thereon, no person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination.

(3) The above described property shall be used in a manner that at all times is in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. DOT, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. DOT — Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

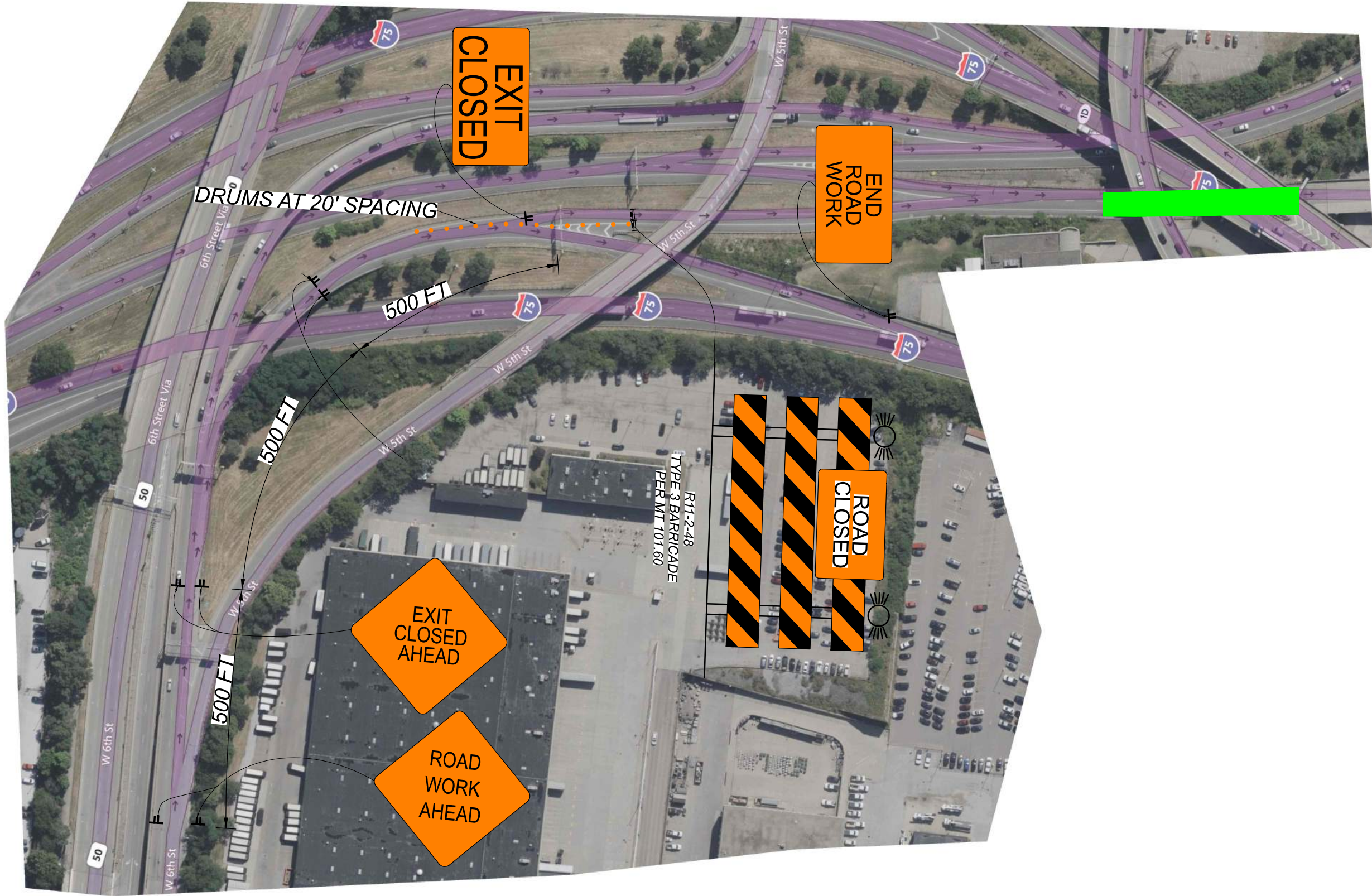
(4) In the event that this instrument grants a lease, license, or permit and any of the above non-discrimination covenants is breached, then the State of Ohio, Department of Transportation, shall have the unfettered right to terminate the lease, license or permit and to re-enter and repossess the above-described property and hold the same as if said lease, license or permit had never been made or issued.

This permit is granted subject to the following attached conditions:

The permit MOT is acceptable as noted:

- On page 3/5; relocate the arrow board 440' to the north so it is at the back of the I-75 exit gore.
- * Short-term shoulder closures are NOT permitted from 6 am to 9 am or from 3 pm to 7 pm, Monday through Friday.
- * Permitted lane closure between hours of 10:30 pm - 4:30am
- * Lane closures are NOT permitted 2 hours before to 2 hours after events at Great American Ball Park, Paul Brown Stadium, or Heritage Bank Center. This restriction also applies to any other local venue generating an event attendance of 15,000 or more.
- * Must give a 5 day notice to notify public relations

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LEGEND



WORK ZONE AREA

DESIGN DATA
SPEED LIMIT 50 MPH
LANE WIDTH 12'

CLOSURE 1- EASTBOUND W 6TH ST. TO W 2ND ST.



MATCHLINE

LEGEND

 WORK ZONE AREA

DESIGN DATA
SPEED LIMIT 55 MPH
LANE WIDTH 12'
MERGING TAPER RATE 55:1
SHOULDER TAPER RATE 19:1

CLOSURE 2- I75 SB TO W 2ND ST. (SHEET 1)





LEGEND



WORK ZONE AREA

DETOUR 1- EASTBOUND W 6TH ST. TO W 2ND ST.

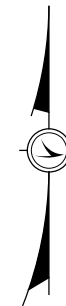
LEGEND



WORK ZONE AREA



DETOUR 2- I-75 SB TO WEST 2ND ST.



Appendix C:

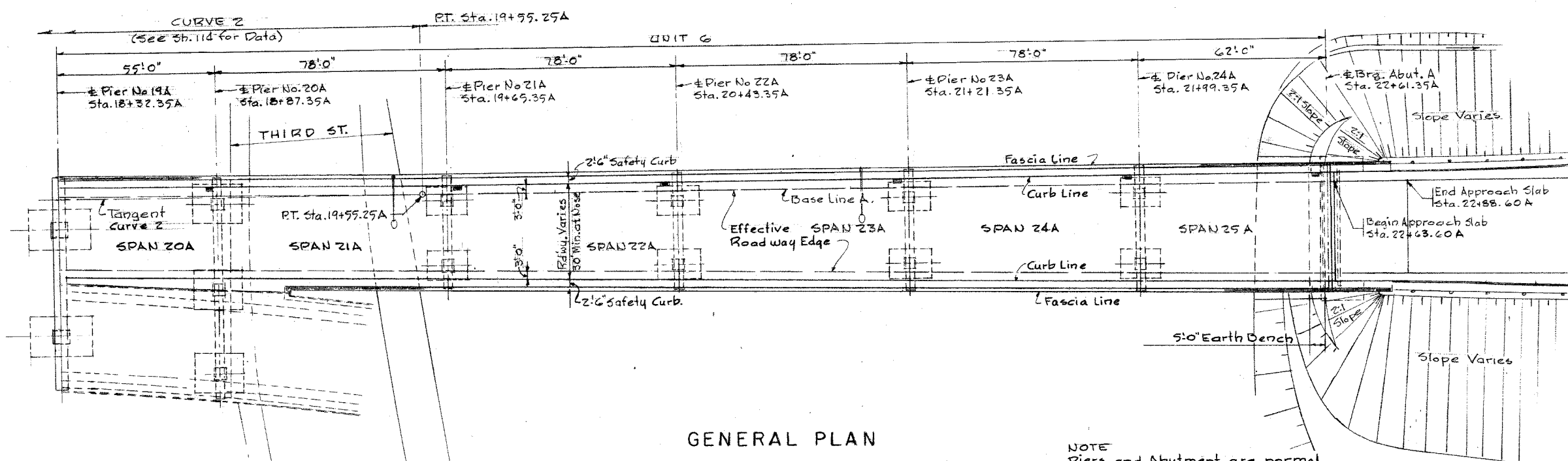
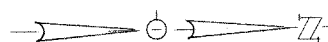
Plans for HAM-75-0022L

NOTED
OCT 24 1959
REPRODUCTION

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

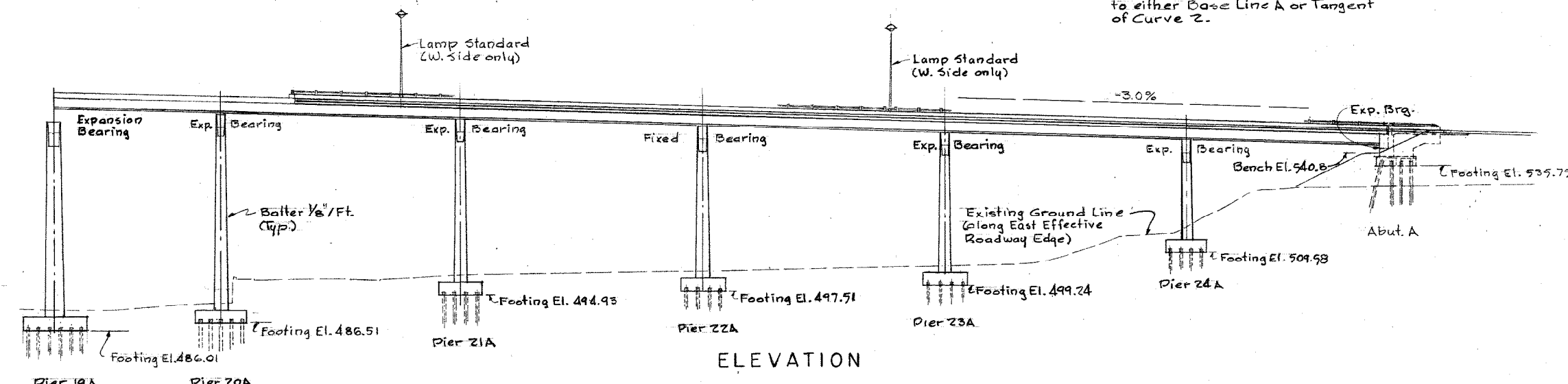
HAM-25-0.04

88



GENERAL PLAN

NOTE
Piers and Abutment are normal
to either Base Line A or Tangent
of Curve 2.



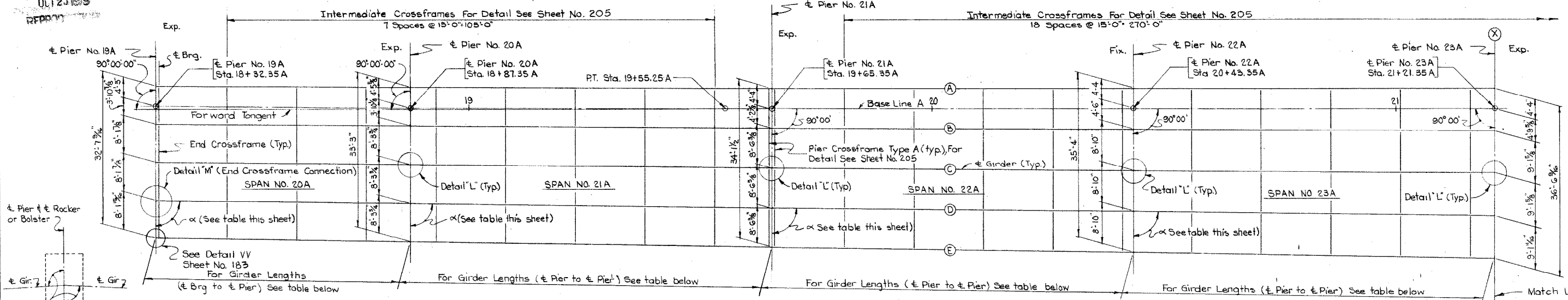
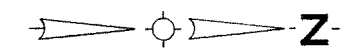
ELEVATION

For Railing & Lighting Details See Sh. 255
For General Notes See Sh. 97
For Estimate of Quantities See Sh. 97

HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO				
GENERAL PLAN & ELEVATION UNIT 6				
DESIGNED J.C.D. 6-9-59	DRAWN J.C.D. 6-9-59	TRACED G.J.T. 9-23-60	CHECKED G.J.T. 9-23-60	REVIEWED DATE 10-13-60

HAM-75-0022L

HAM-25-0.04



Girder	Span No. 20A	Span No. 21A thru No. 24A	Span No. 25A
A, B & C	54'-4 1/2"	78'-0"	62'-0"
D	54'-4 1/2"	78'-0 1/2"	62'-0 1/2"
E	54'-4 3/4"	78'-0 1/8"	62'-0 1/8"

GIRDER SPLICE WELDING PROCEDURE

Raise the ends of girders in Span No. 21A, at Pier No. 20A, 1 1/2" and the ends of girders in Span No. 23A, at Pier No. 23A, 1 1/2".

Butt weld girder flanges and webs, at Piers No. 21A & 22A, using the sequence outlined in Note 'A' Sheet No. 181.

Weld all pier crossframes at Pier No. 21A into place.

Lower girders to their final positions.

Raise the ends of girders in Span No. 20A, at Pier No. 19A, 3/4" and the ends of girders in Span No. 24A, at Pier No. 24A, 1 3/4".

Butt weld girder flanges and webs, at Piers No. 20A & 23A, using the sequence outlined in Note 'A' Sheet No. 181.

Lower girders to their final positions.

Raise the ends of girders in Span No. 25A, at N. Abut., 1/4".

Butt weld girder flanges and webs at Pier No. 24A, using the sequence outlined in Note 'A' Sheet No. 181.

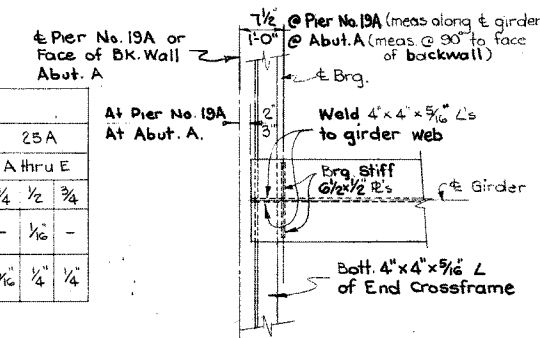
Lower girders to their final positions.

Girder	Angle	α
A	89° 45' 07"	90° 00' 00"
B	89° 35' 29"	89° 46' 38"
C	89° 25' 51"	89° 33' 18"
D	89° 16' 12"	89° 19' 57"
E	89° 06' 36"	89° 06' 36"

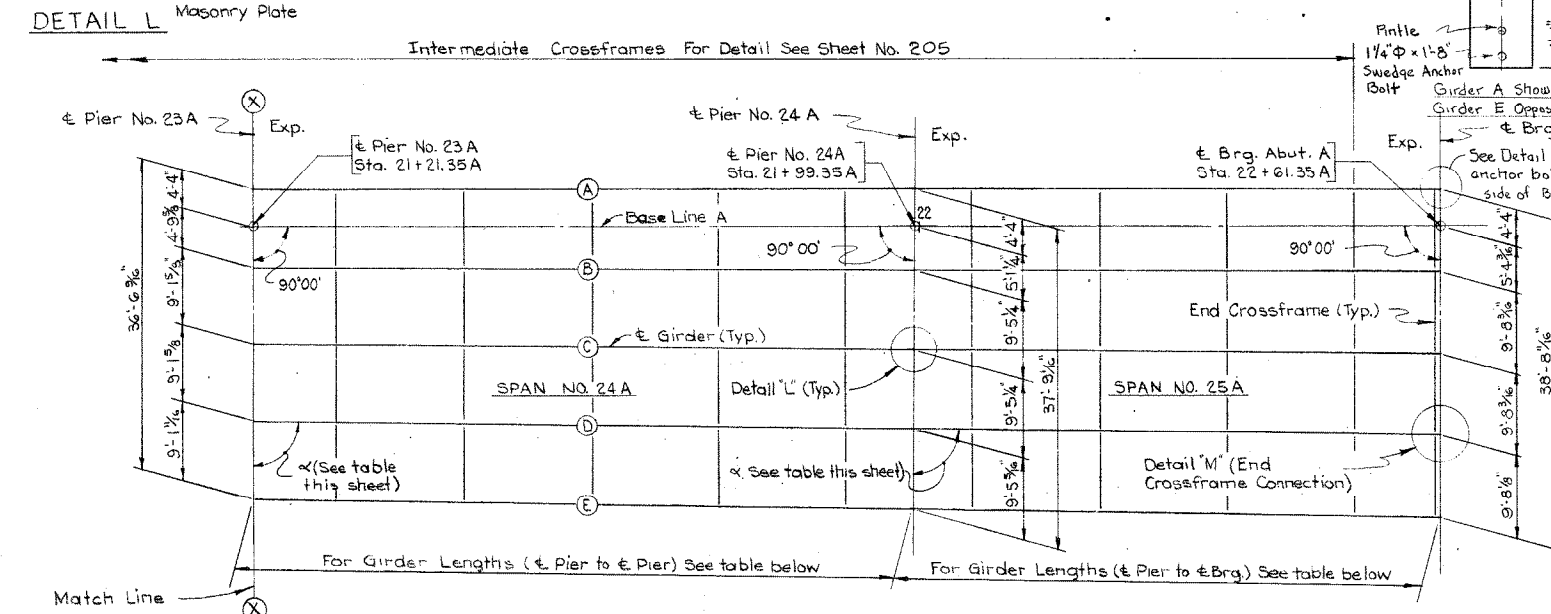
Note: E's of Piers No. 19A thru 24A and E Brg. Abut. A are parallel.

DEAD LOAD DEFLECTIONS																		
Span No.	20A			21A			22A			23A			24A			25A		
Girder	A thru E			A thru E			A thru E			A thru E			A thru E			A thru E		
Location	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to weight of steel	-	-	-	-	⅛	-	-	⅛	-	-	⅛	-	-	⅛	-	-	⅛	-
Deflection due to remaining Dead Load	⅛	⅛	⅛	¼	⅜	¼	⅜	⅝	⅜	⅜	⅝	⅜	⅝	⅝	⅝	⅝	⅝	¼

Girders for Unit No. 6 shall not be combered.



DETAIL 'M'
(End Crossframe connection at Pier No. 19A, Span No. 20A)
(Rotate thru 180° for connection at Abut. A, Span No. 25A)



FRAMING PLAN UNIT NO. 6
(Spans No. 24A thru 25A)

	Pier No. 19A	Pier No. 20A	Pier No. 21A	Pier No. 22A	Pier No. 23A	Pier No. 24A	Pier No. 25A
Span No. 20A							
Span No. 21A							
Span No. 22A							
Span No. 23A							
Span No. 24A							
Span No. 25A							
Flg R's Girders A thru E (Top & Both)	14" x 3/4"	14" x 1 1/4"	14" x 1"	14" x 1 1/8"	14" x 1"	14" x 1 1/8"	14" x 1 1/8"
Flg to Web Weld (Top & Both)	1/4" Weld	5/16" Weld	3/8" Weld	5/16" Weld	3/8" Weld	5/16" Weld	5/16" Weld

TABLE OF FLANGE PLATES AND WELD SIZES

	End Brg. Stiff.	Intermediate Stiffeners	End Brg. Stiff.
Span No. 20A	45" Spacing (Max.)	48" Spacing (Max.)	42" Spacing (Max.)
Span No. 21A thru No. 24A	36" Spacing (Max.)	45" Spacing (Max.)	36" Spacing (Max.)
Span No. 25A	36" Spacing (Max.)	48" Spacing (Max.)	42" Spacing (Max.)

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

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT NO. 6.

DESIGNED M.K.K.	DRAWN J.C.	TRACED	CHECKED J.H.D.	REVIEWED DATE 10-14-60	REVIEWED
2-15-60	5-1-60		1/27/60		

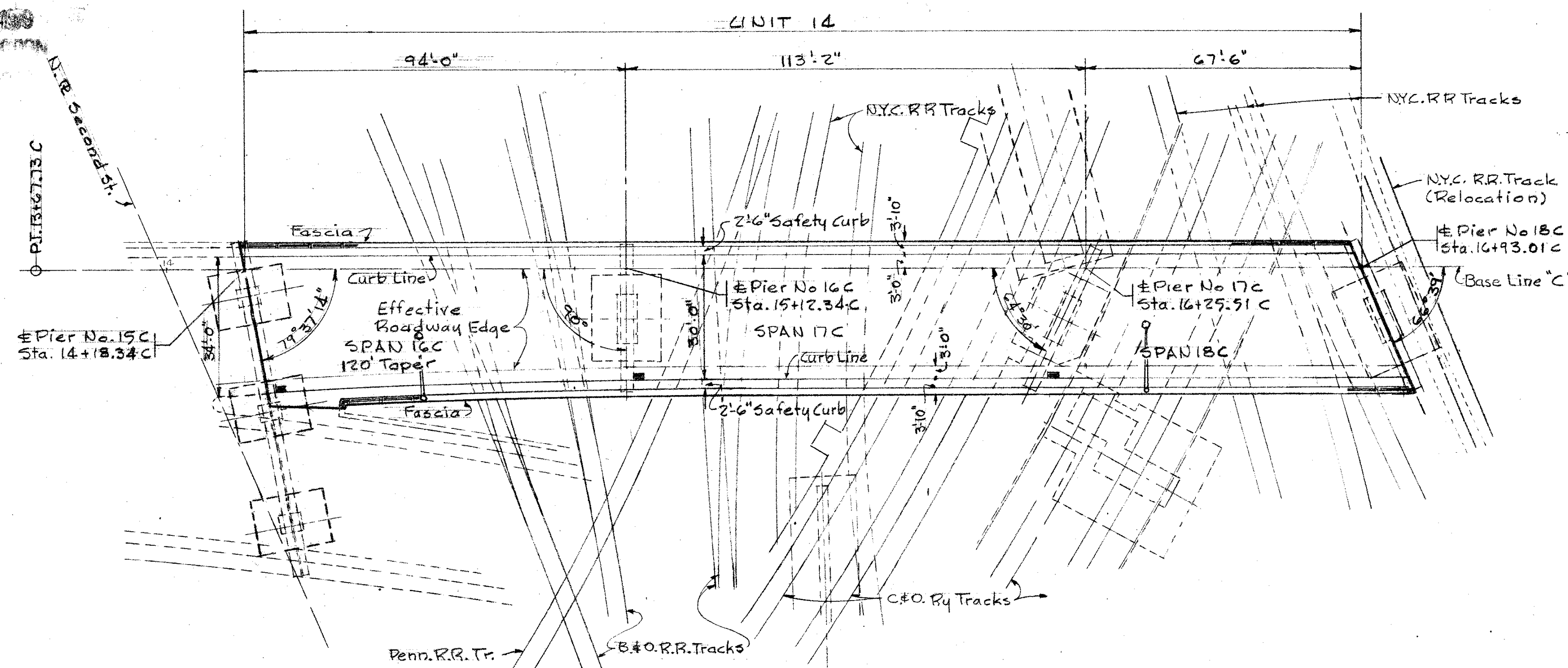
Appendix D:

Plans for HAM-75-0022R

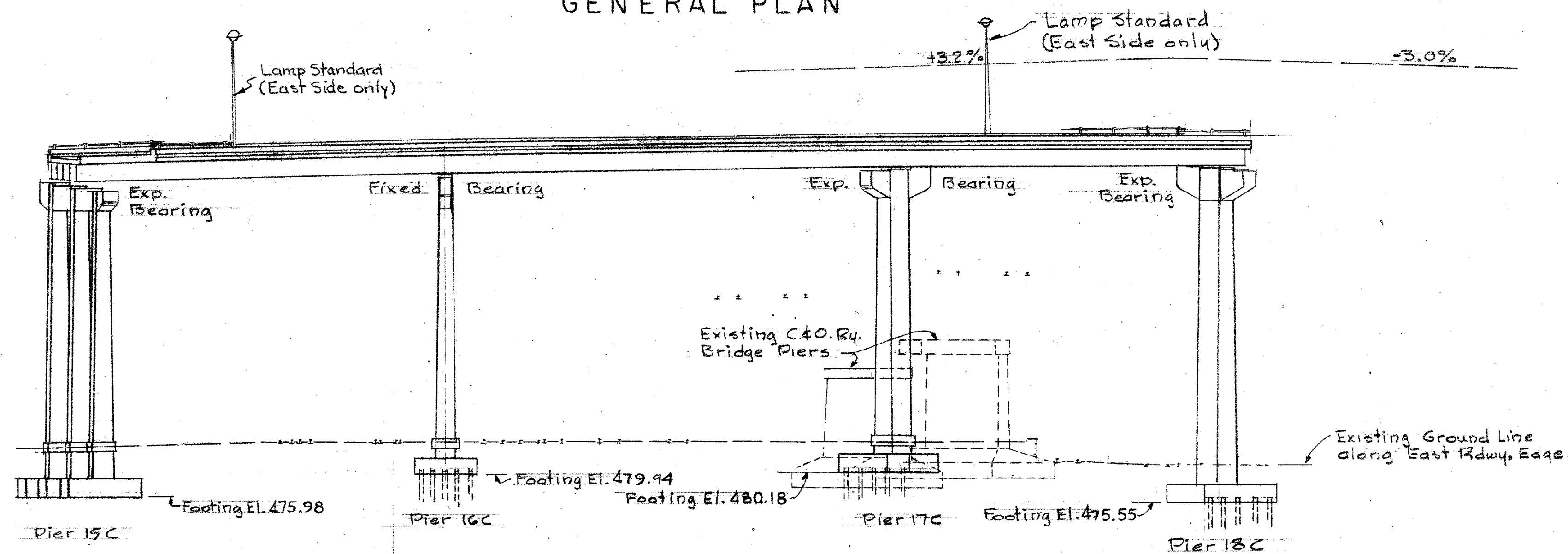
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-25-0.04

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GENERAL PLAN



ELEVATION

For Railing & Lighting Details See Sht. No. 260
For General Notes see Sheet No. 97
For Estimate of Quantities see Sheet No. 97

HAM-75-0022R
SPANS 16C-18C

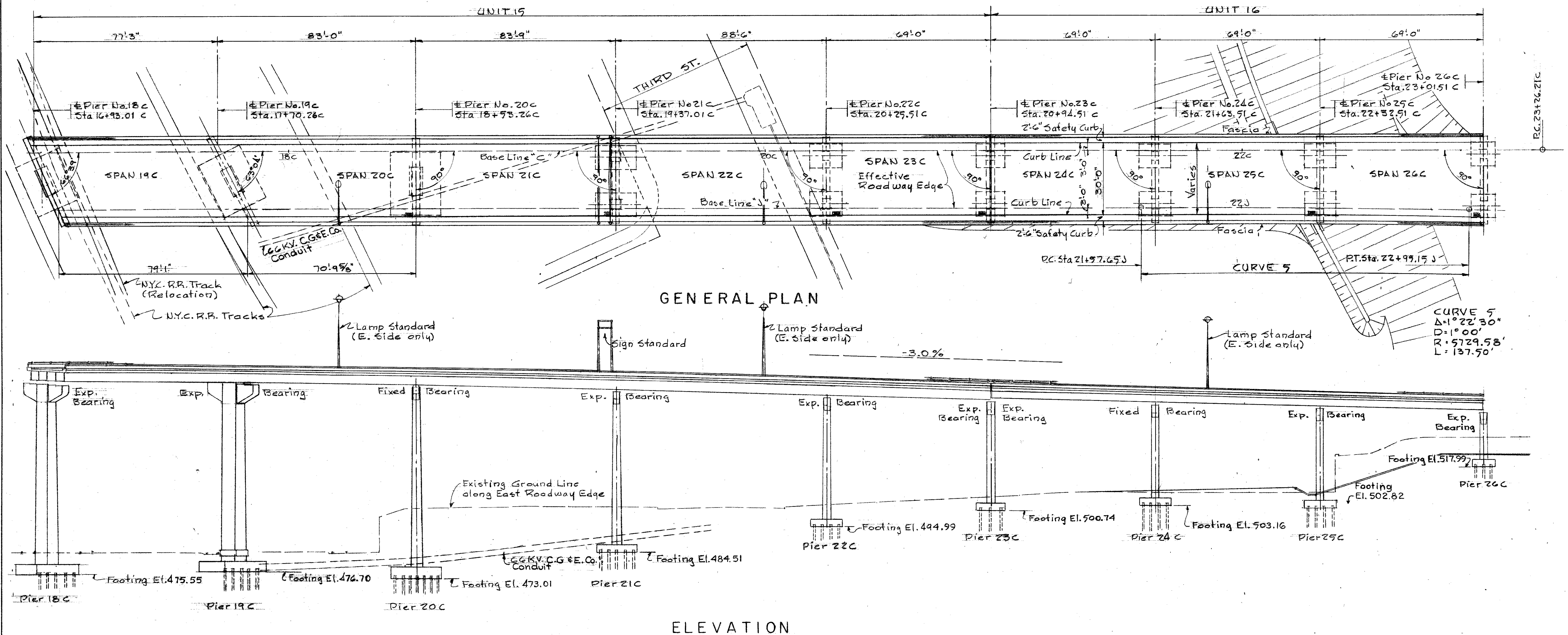
HAZELET & EROAL CONSULTING ENGINEERS CINCINNATI, OHIO					
GENERAL PLAN & ELEVATION UNIT 14					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.C.D.		G.W.T.	11-1-60	
	9-4-59		9-23-60	10-13-60	

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FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-25-0.04

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For Railing & Lighting Details See Sheets 260 & 261
For General Notes See Sheet 97
For Estimate of Quantities See Sheet 97

HAM-75-0022R
SPANS 19C-26C

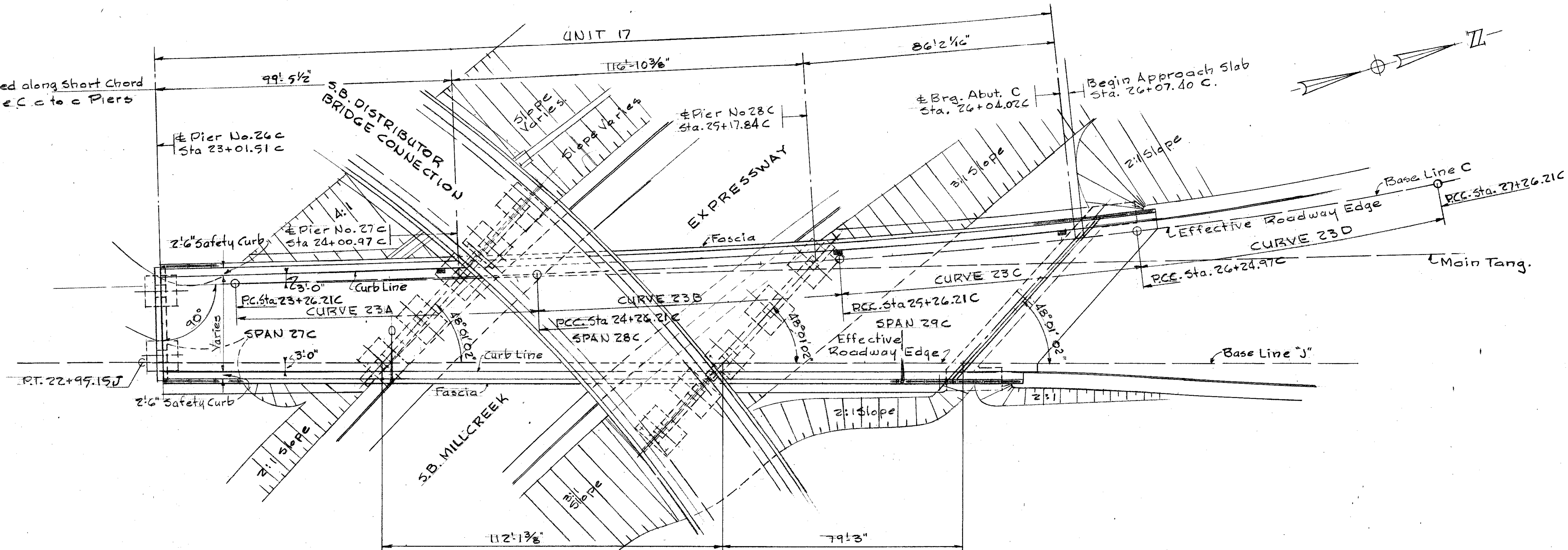
HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO					
GENERAL PLAN & ELEVATION UNITS 15 & 16					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.C.D.	J.C.D.		G.J.T.	10-13-60	
9-8-59			9-23-60		

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OCT 24 1959
REPRODUCTION

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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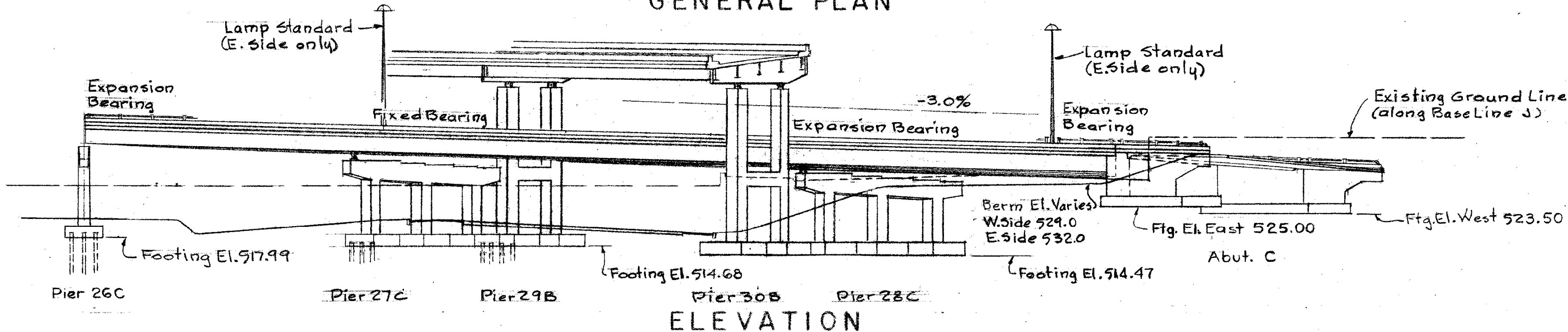
HAM-25-0.04



CURVE 23A	CURVE 23B
$\Delta = 0^\circ 29'$	$\Delta = 2^\circ 04' 34''$
$D = 0^\circ 25'$	$D = 2^\circ 04' 34''$
$R = 13,750.99'$	$R = 2759.77'$
$L = 100.0'$	$L = 100.0'$

CURVE 23C	CURVE 23D
$\Delta = 2^\circ 53' 04''$	$\Delta = 4^\circ 37' 22''$
$D = 2^\circ 55' 14''$	$D = 4^\circ 33' 58''$
$R = 1,961.81'$	$R = 1,254.81'$
$L = 98.76'$	$L = 101.24'$

ALIGNMENT NOTE
See Sheet 85

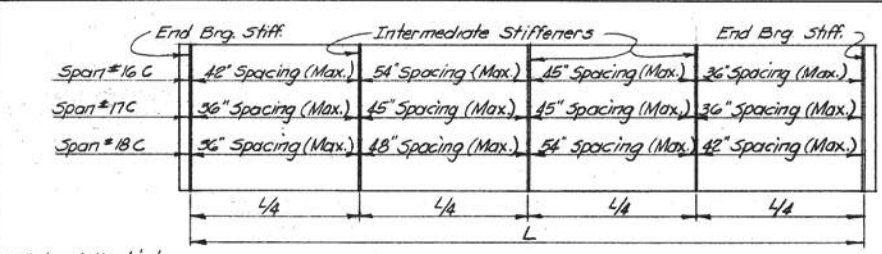


For Railing & Lighting Details See Sheet No. 261.
For General Notes See Sheet No. 97.
For Estimate of Quantities See Sheet No. 97.

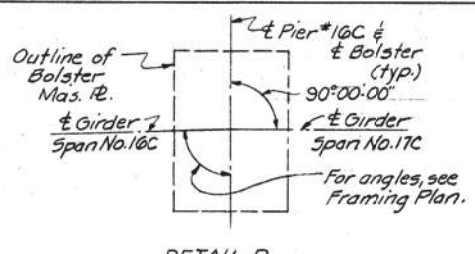
HAM-75-0022R
SPANS 27C-29C

HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO					
GENERAL PLAN & ELEVATION UNIT 17					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVIEWED
	J.C.D. 9-16-59		G.J.T. 9-26-60	N.A.F. 10-13-60	

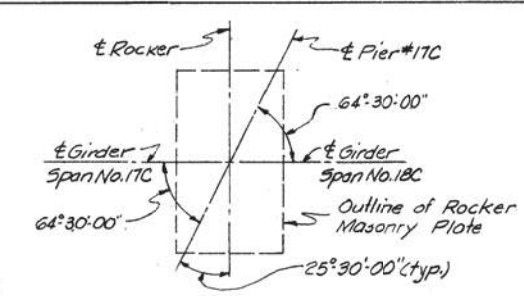
HAM-25-0.04



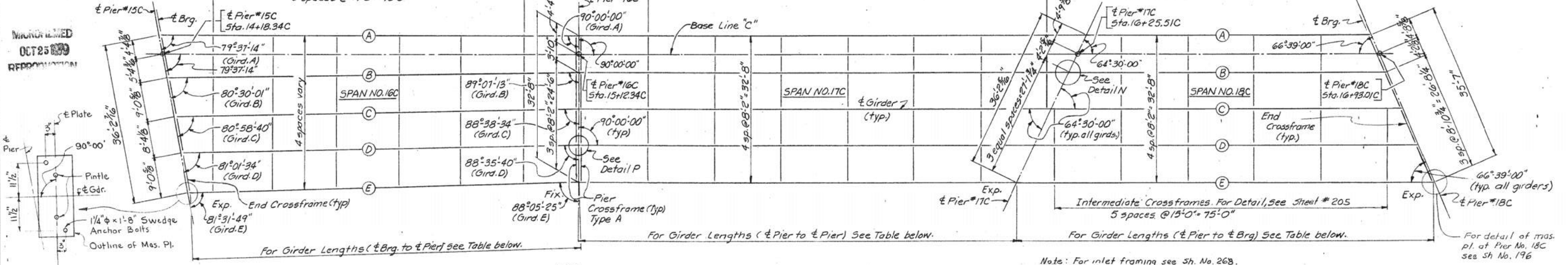
Note: Adjust intermediate stiffener spacing to conform to intermediate crossframe spacing



DETAIL P



DETAIL N



DETAIL OF MASONRY PLATE AT PIER 15C

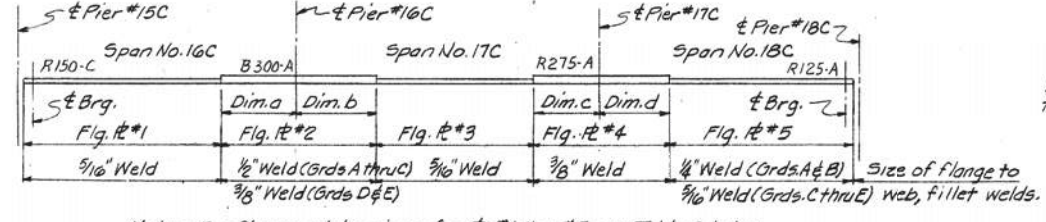
Notes: All web plates are 5/8" x 3/8". All intermediate stiffeners are 4" x 3/8". End bearing stiffeners are as follows: Piers 15C, 17C & 18C = 7 1/2" x 1/2" Pls. Pier 16C = 7 1/2" x 3/8" Pls.

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

Note: For inlet framing see Sh. No. 268.

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 Piers 1 thru 5, see Table Q, below. For dimensions a thru d, see Table P, left.

DETAIL OF FLANGE PLATES AND WELDS

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"

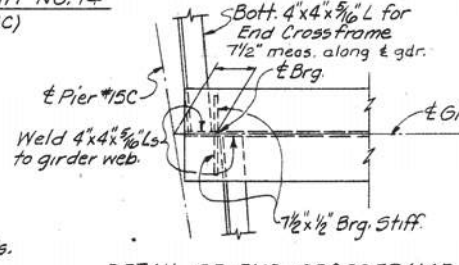
Note: Convexity includes variations due to vertical curvature, superelevation and horizontal curvature.

TABLE O (See Detail above)

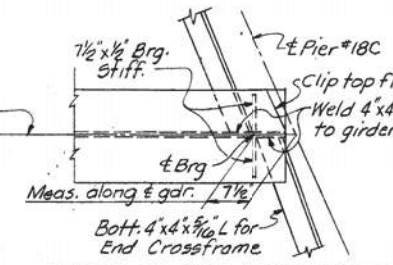
Girder	Flg. Pl. #1	Flg. Pl. #2	Flg. Pl. #3	Flg. Pl. #4	Flg. Pl. #5
A	16" x 1 3/8"	16" x 2 3/8"	16" x 1 3/8"	16" x 1 3/4"	16" x 3/4"
B	do	do	16" x 1 3/8"	do	16" x 3/4"
C	do	16" x 2 3/8"	16" x 1 1/4"	16" x 1 3/4"	16" x 1"
D	do	16" x 2 1/8"	16" x 1 1/8"	16" x 1 1/8"	16" x 1 1/4"
E	16" x 1 3/8"	16" x 2 1/8"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

HAM-75-0022R SPANS 16C-18C

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

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.

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	1/4	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	1/4	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
Deflection due to weight of steel	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
Deflection due to remaining Dead Load	1/2	5/8	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4
Convexity (See note above)	1	1 1/8	1	1	1 1/8	1	1 1/8	1 1/4	1 1/2	1 3/4	1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/8	2 1/4	2 1/2	2 3/4
Sum of deflection and convexity	1 1/8	2 1/8	1 1/8	1 1/8	2	1 1/8	1 1/8	1 1/2	1 1/4	1 1/4	2 1/8	2 1/8	2 1/4	2 1/2	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4
Required Camber	2 1/8		2 1/8		2 1/8		2 1/8		2 1/8		3 1/8		2 1/8		2 5/8		2 1/4		2	
	1		1		1 3/8		1 3/4		1 3/4		1		1		1 3/8		1 3/4		2 1/4	

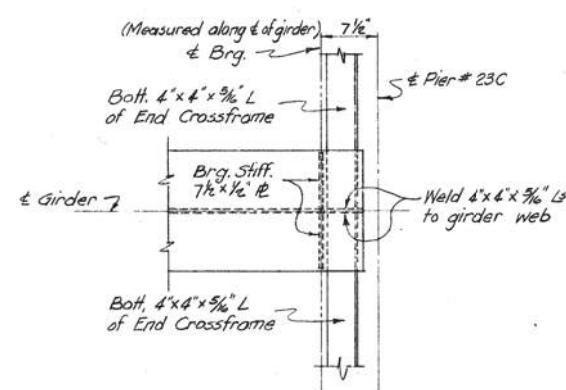
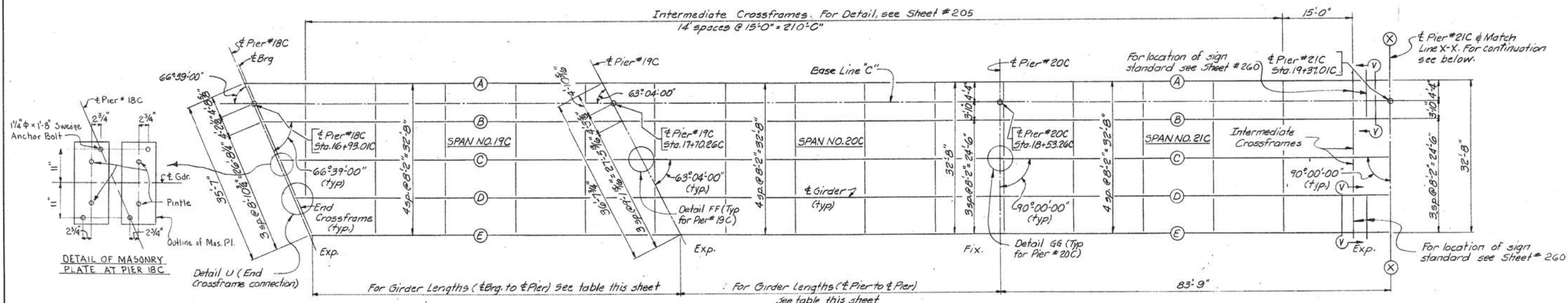
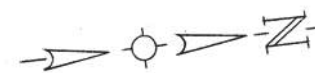
Girder web plates shall be cut to a parabolic crown.

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CONSULTING ENGINEERS
CINCINNATI, OHIO

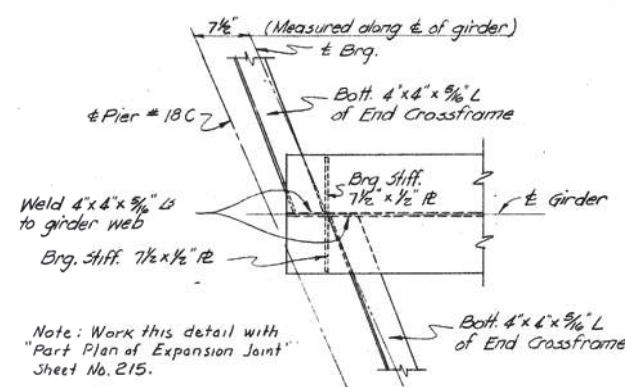
STRUCTURAL STEEL DETAILS
UNIT NO. 14.

DESIGNED REL	DRAWN REL	TRACED JHO	CHECKED JHO	REVISOR N.A.G.	REVISION 10-14-60
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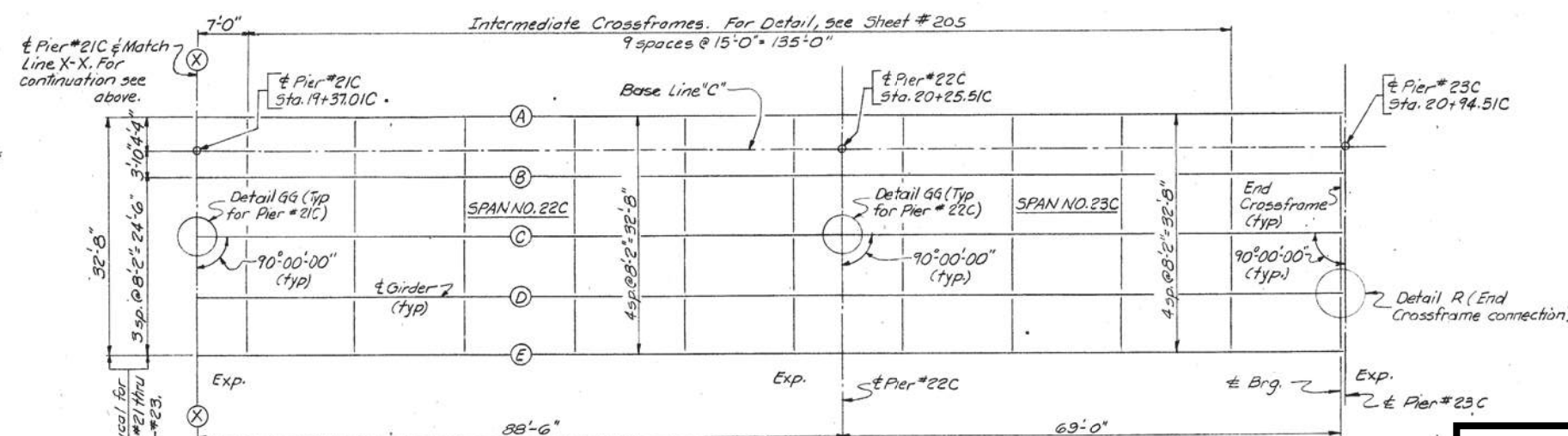
REPRODUCTION
OCT 25 1960



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



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



Note: Web R 48"x 3/8" For Fig. R's see table below
Brg. Stiff. 7 1/2" x 1/2" R's. Intermediate Stiff. 6" x 3/8" R's
For bearing details see Sheet No. 206
For Typical Girder Elevation see Sheet No. 205
For End Crossframe detail see Sheet No. 215
For Detail GG, See Sheet No. 197

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

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

Pier # 18C	Pier # 19C	Pier # 20C	Pier # 21C	Pier # 22C	Pier # 23C
Span # 19C	Span # 20C	Span # 21C	Span # 22C	Span # 23C	
R125-E Gdr. A R125-F Gdr. B R125-G Gdrs. C & E R125-H Gdr. D 16" x 1 1/4"	R225-A 16" x 1 1/2"	B225-B 16" x 1 3/8"	R225-A 16" x 1 3/8"	R225-A 16" x 1 1/2"	R100-U Gdrs. A to D R100-V Gdr. E 16" x 1"
Fig. R's Girders A thru E (Top & Bot.)	Fig. R's Girders A thru E (Top & Bot.)	Fig. R's Girders A thru E (Top & Bot.)	Fig. R's Girders A thru E (Top & Bot.)	Fig. R's Girders A thru E (Top & Bot.)	Fig. R's Girders A thru E (Top & Bot.)
8'-6"	13'-0"	12'-0"	10'-0"	11'-6"	11'-6"
5/16" Weld	5/16" Weld	5/16" Weld	5/16" Weld	5/16" Weld	5/16" Weld

TABLE OF FLANGE PLATES AND WELD SIZE

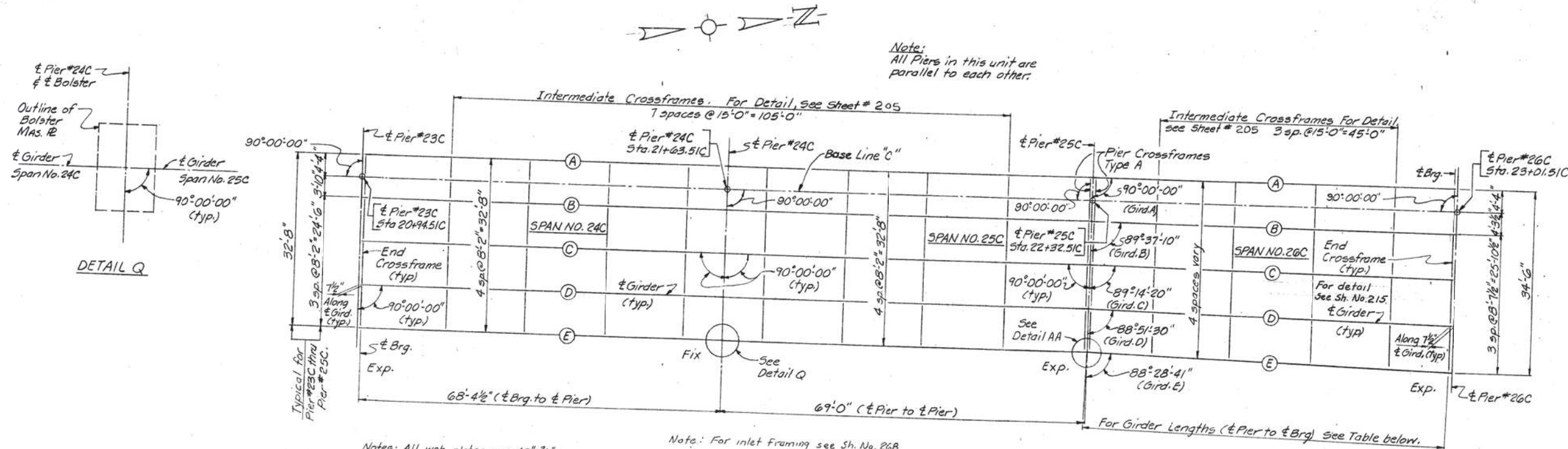
HAM-75-0022R
SPANS 19C-23C

Work this sheet with Sheet No. 197

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT NO. 15.

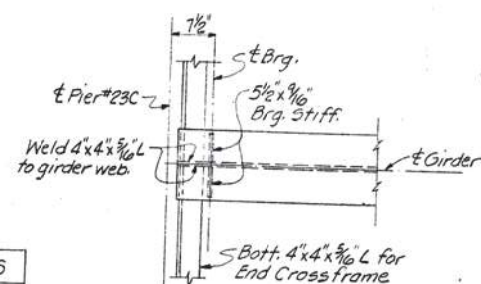
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RCF	REL		JHO 8/1/60	10-14-60	



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

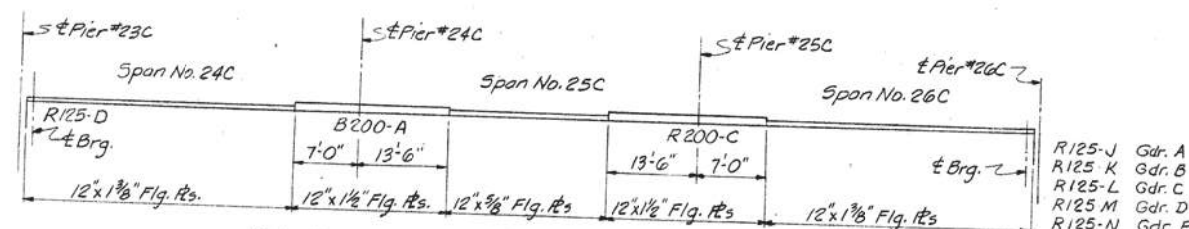
FRAMING PLAN - UNIT NO. 16
(Spans No. 24C thru 26C)



DETAIL OF END CROSSFRAME
CONNECTION AT PIER#23C

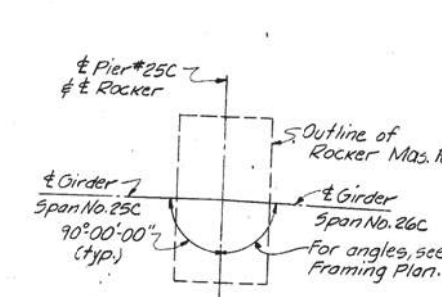
Note: Work this detail with "Part Plan of Expansion Joint," Sheet No. 215.

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"

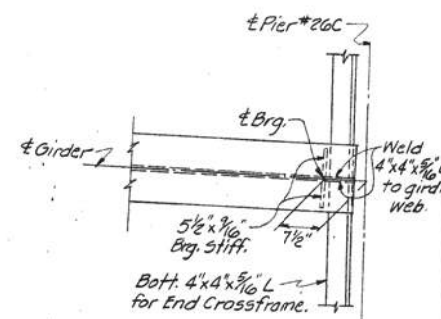


DETAIL OF FLANGE PLATES AND DIMENSIONS

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



DETAIL A A



DETAIL OF END CROSSFRAME
CONNECTION AT PIER#26C

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

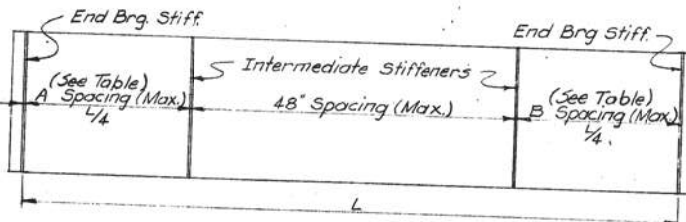
HAM-75-0022R SPANS 24C-26C

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
Deflection due to weight of steel	1/16	1/8	1/16
Deflection due to remaining Dead Load	5/16	5/16	5/16

Girders for Unit #16 shall not be cambered

- 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.

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

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

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

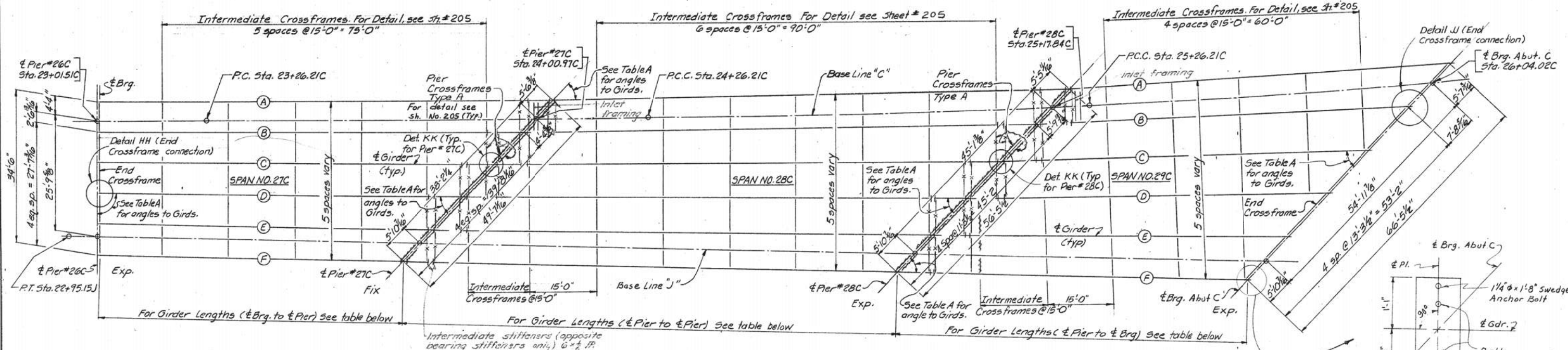


TABLE A (Angles from $\pm$ Piers or $\pm$ Brgs. to $\pm$ Girders) See Plan.

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°51'04"
D	89°16'41"	47°21'40"	46°59'18"	45°56'15"
E	88°58'52"	47°39'36"	47°29'56"	46°51'36"
F	88°31'27"	48°01'02"	48°01'02"	48°01'02"

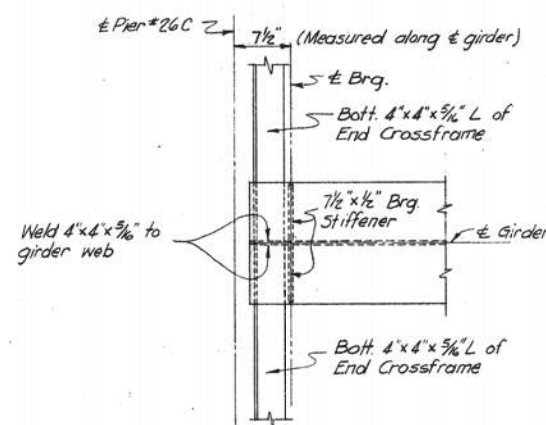
Same as shown for Span #28C @ Pier #27C.
Same as shown for Span #29C @ Pier #28C.

Note: For inlet framing see Sh. No. 268

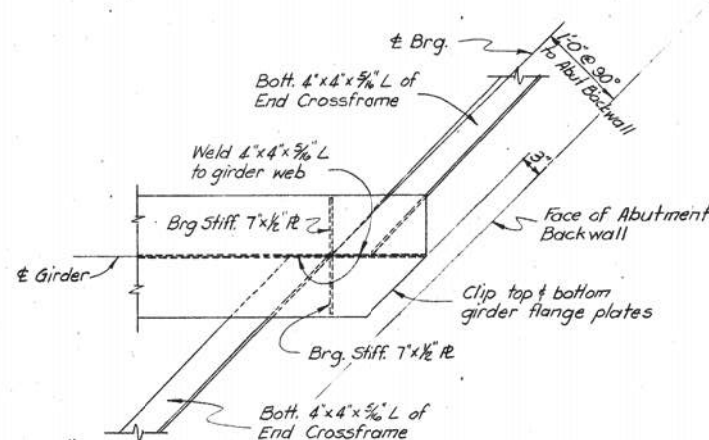
FRAMING PLAN-UNIT NO. 17
(Spans No. 27C thru 29C)

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"x1 $\frac{3}{8}$ "	16"x2 $\frac{1}{8}$ "	16"x1 $\frac{3}{8}$ "	16"x1 $\frac{3}{8}$ "
Flg. R's Gdrs. C & D	16"x1 $\frac{3}{8}$ "	16"x2"	16"x1 $\frac{3}{8}$ "	16"x1 $\frac{3}{8}$ "
Flg. R's Gdrs. E & F	16"x $\frac{3}{4}$ "	16"x1 $\frac{3}{8}$ "	16"x1 $\frac{3}{8}$ "	16"x1 $\frac{3}{8}$ "
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 $\frac{3}{8}$ "	80'-7 $\frac{1}{4}$ "
F	68'-7 $\frac{3}{8}$ "	112'-1 $\frac{3}{8}$ "	79'-

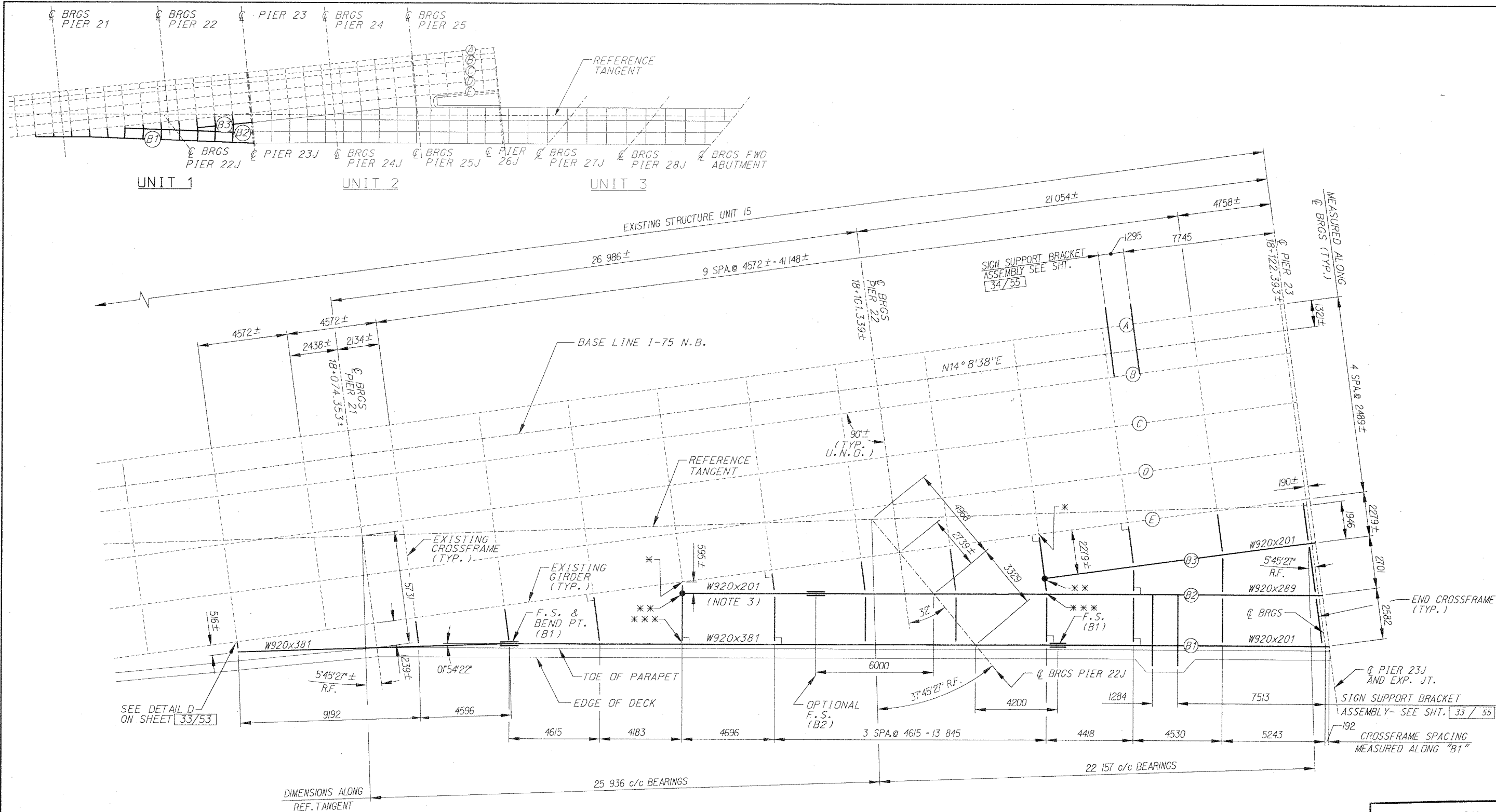
HAM-75-0022R
SPANS 27C-29C

Work this sheet with Sheet #200

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT NO. 17.

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



FRAMING PLAN
(UNIT 1)

HAM-75-0022R
SPANS 22C-23J

**FINAL FOR
CONSTRUCTION**

ROCKER BEARINGS			
BEAM	PIER 21	PIER 22J	PIER 23J
B3	-	-	R575A
B2	-	R1100	R575B
B1	R1000	R1100	R575C

- * = SEE DIAPHRAGM CONNECTION DETAIL C ON SHEET 32/55
- ** = SEE DIAPHRAGM CONNECTION DETAIL B ON SHEET 32/55
- *** = SEE DIAPHRAGM CONNECTION DETAIL A ON SHEET 32/55

- NOTES:
- STRUCTURAL STEEL SHALL BE ASTM A572, LEVEL 3 FABRICATION.
 - SEE SHEET 48/55 FOR BEARING DETAILS.
 - USE W920x289 FULL LENGTH OF "B2" IF OPTIONAL FIELD SPLICE IS NOT USED.

- LEGEND:
- F.S. = FIELD SPLICE
 - BRGS = BEARINGS
 - ⊗ = BEAM LINE DESIGNATION
 - U.N.O. = UNLESS NOTED OTHERWISE
 - ⬢ = BEAM SUPPORT DIAPHRAGM

P:\PRJ\1442\CD\2002\BRGS\SH31.DGN



ROCKER & BOLSTER BEARINGS					
BEAM	PIER 23 J	PIER 24 J	PIER 25 J	PIER 26 J	
B4	R575	B1000	R1000A	R675A	
B3	---	B775	R1225A	R675B	
B2	R675	B1225	R1225B	R675C	
B1	R675	B1225	R1225	R675D	

* = SEE DIAPHRAGM CONNECTION
DETAIL B ON SHEET 32/55.

** = SEE DIAPHRAGM CONNECTION
DETAIL A ON SHEET 32/55.

1. STRUCTURAL STEEL SHALL BE ASTM A572M LEVEL 3 FABRICATION.
2. SEE SHEET 48/55 FOR BEARING DETAILS.
3. CROSSFRAMES IN THIS BAY SHALL NOT BE WELDED UNTIL AFTER STAGE 1 DECK PLACEMENT.

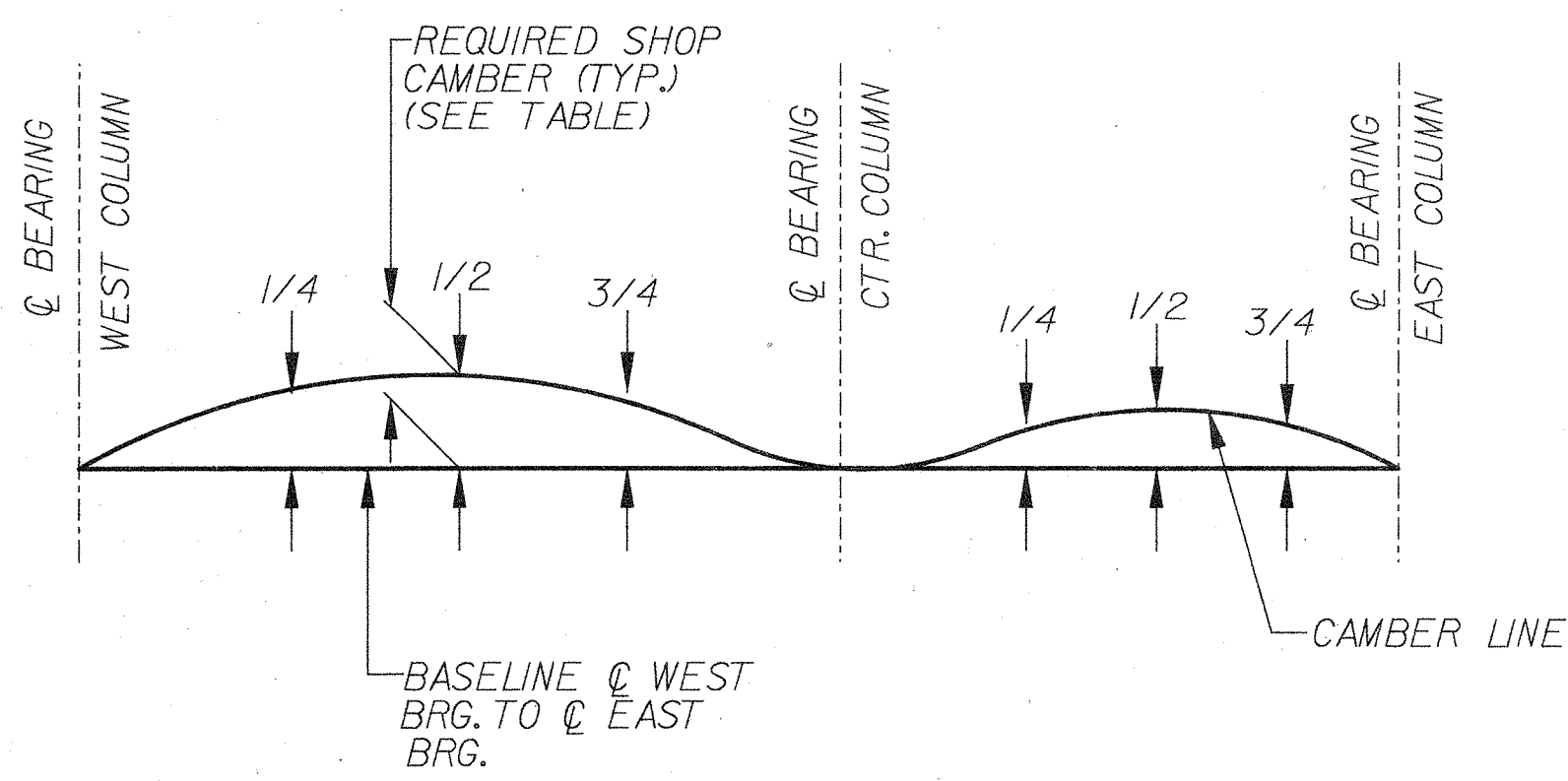
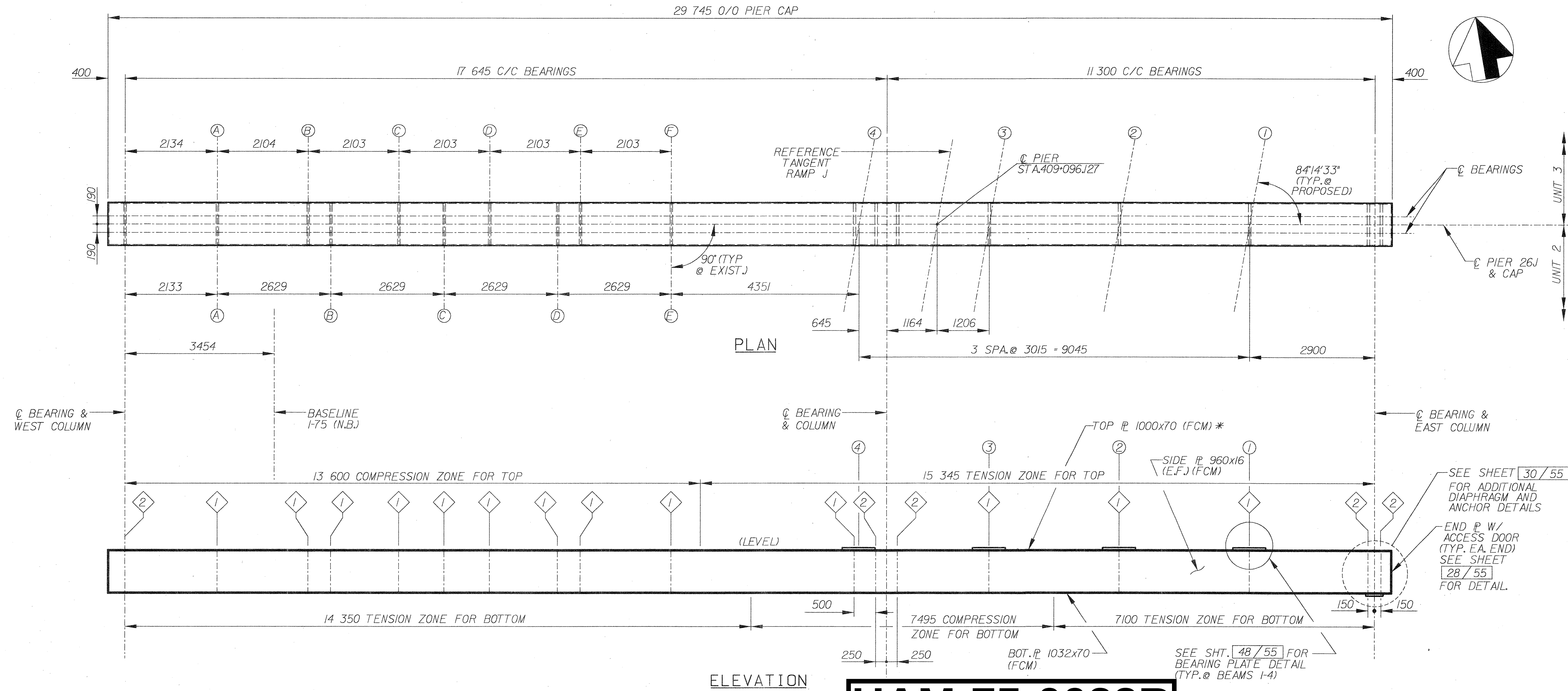
F.S. = FIELD SPLICE
BRGS. = BEARINGS
(X) = BEAM LINE DESIGNATION
U.N.O. = UNLESS NOTED OTHERWISE
● = BEAM SUPPORT DIAPHRAGM

**FINAL FOR
CONSTRUCTION**

FORT WASHINGTON WAY
CONTRACT NO. 6

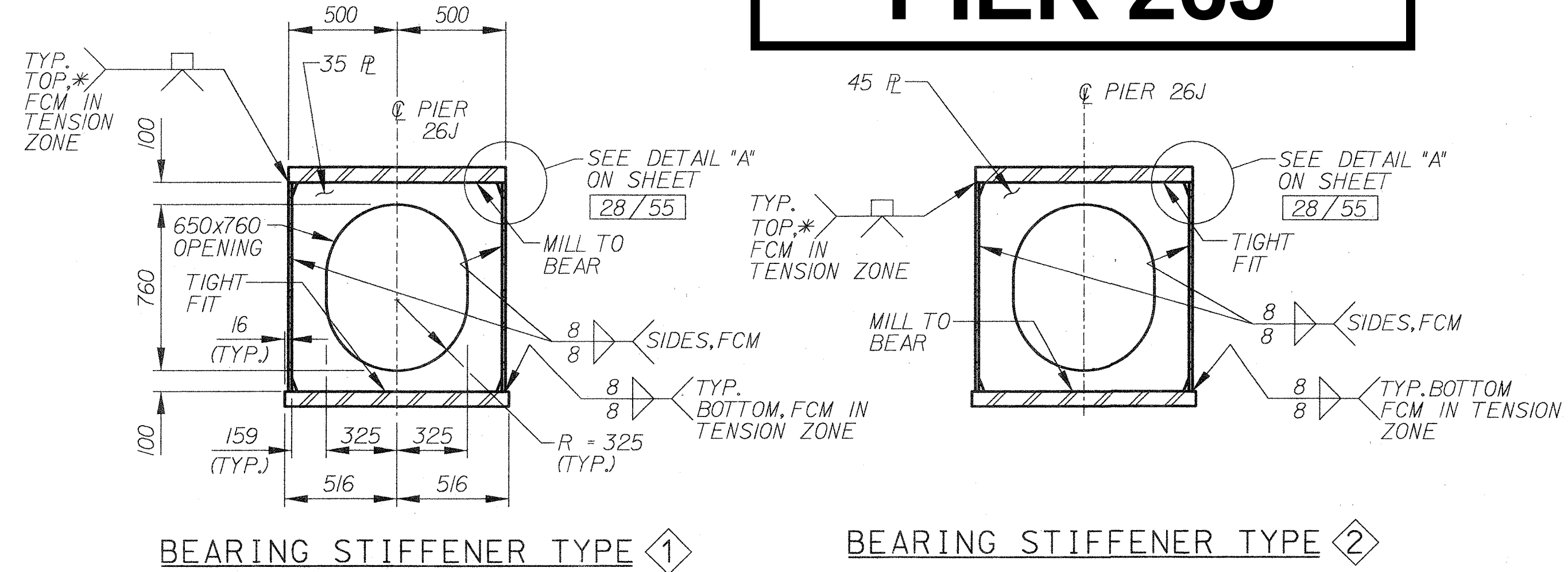
DESIGNED	DRAWN	REVIEWED	DATE
JCS	AAA	RMK	7/8/98
CHECKED	REVISED	STRUCTURE FILE NUMBER	

B U R G E S
& N I P L E
E N G I N E E R S



CAMBER AND BLOCKING DIAGRAM

DEFLECTION AND CAMBER (mm)						
STEEL CAP		SPAN 1			SPAN 2	
POINT		1/4	1/2	3/4	1/4	1/2
DEFLECTION DUE TO WEIGHT OF CAP		1	1	1	0	0
DEFLECTION DUE TO REMAINING D.L.		13	16	9	1	1
REQUIRED SHOP CAMBER		14	17	10	1	0

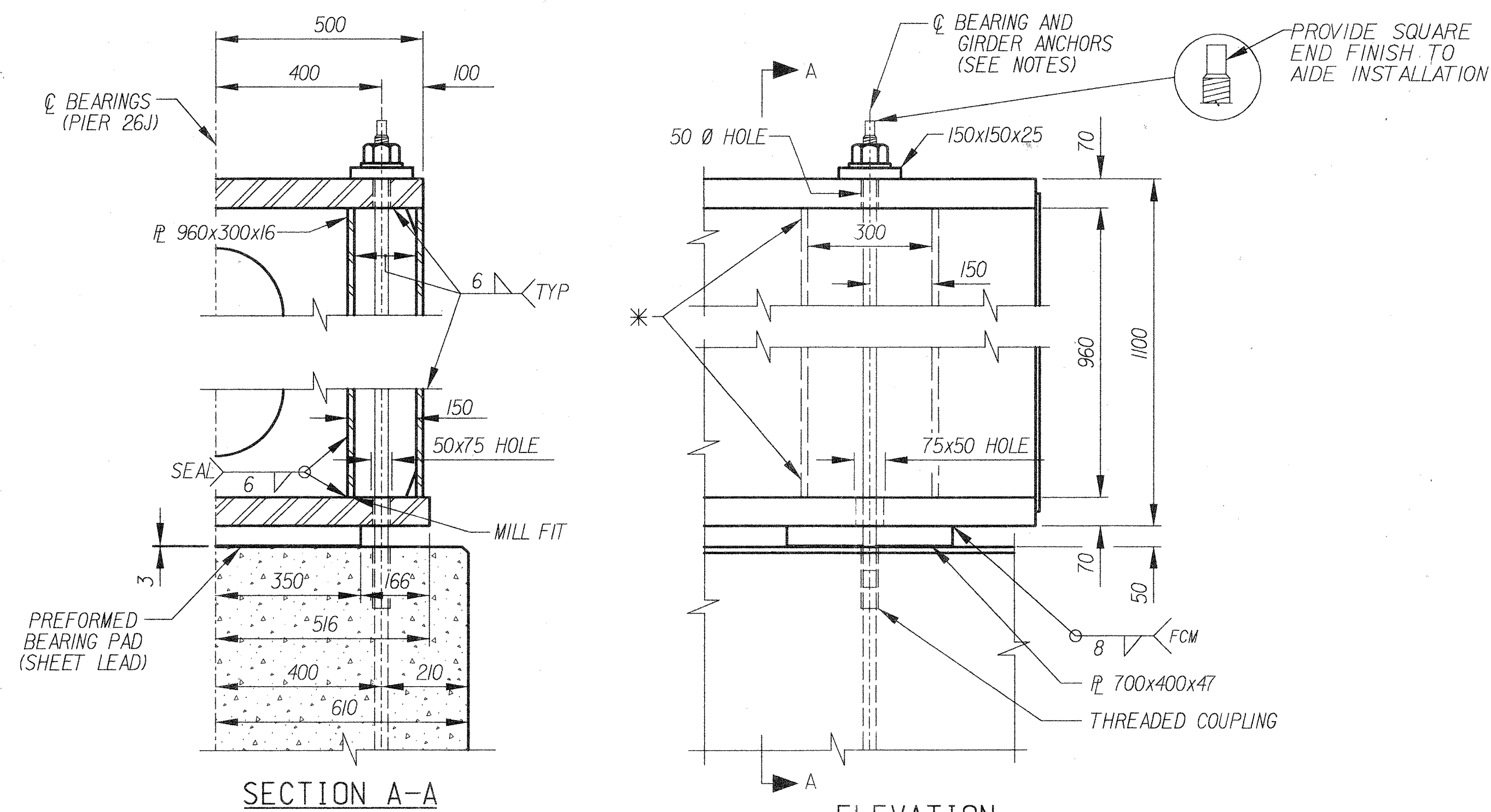


* - FABRICATOR MAY SUBSTITUTE 1032mm WIDE TOP PLATE ATTACHED TO WEBS WITH DOUBLE 8mm FILLET WELDS AT EACH WEB R IN PLACE OF 1000mm WIDE TOP PLATE WITH FULL PENETRATION WELDS AND BACKING BAR.

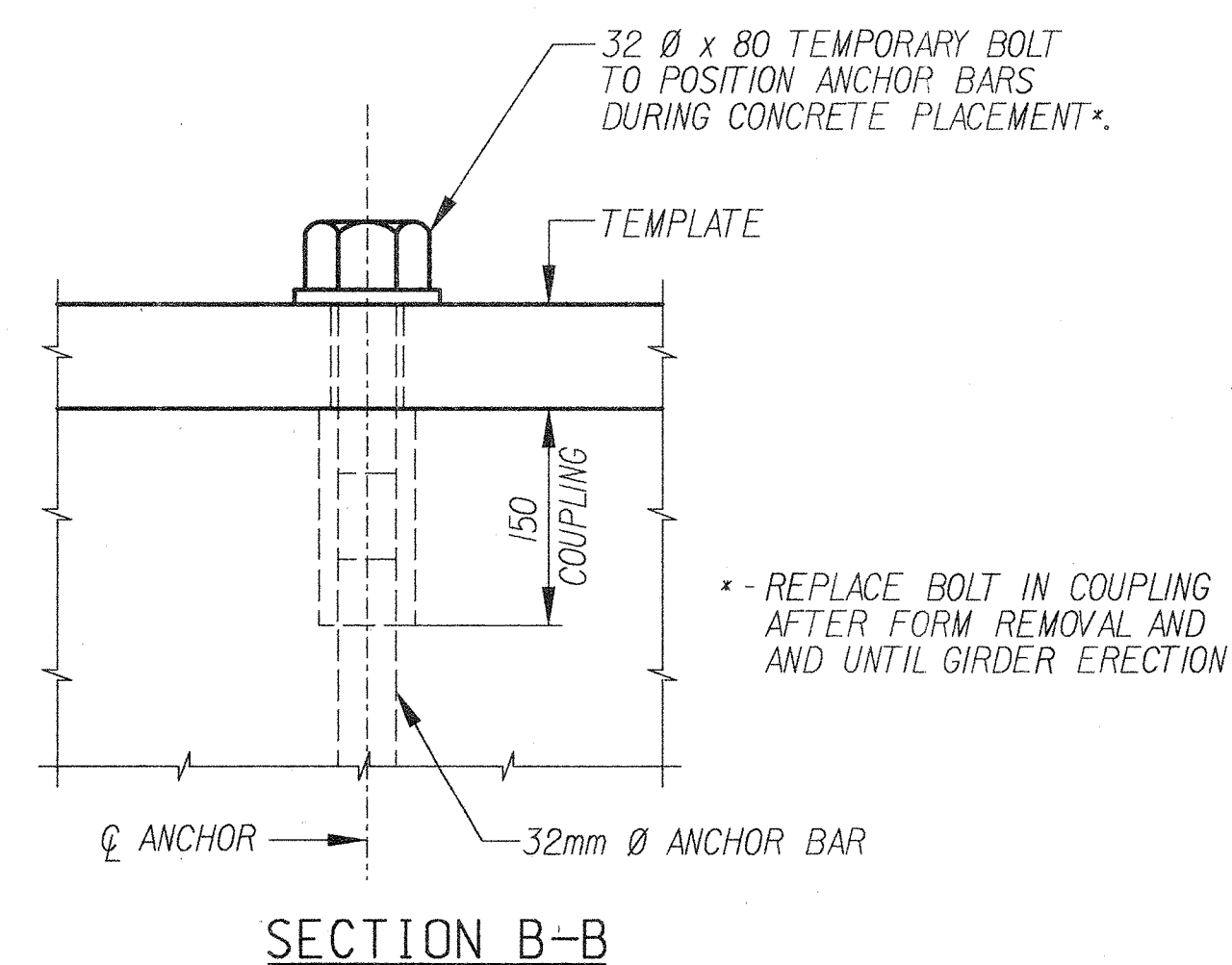
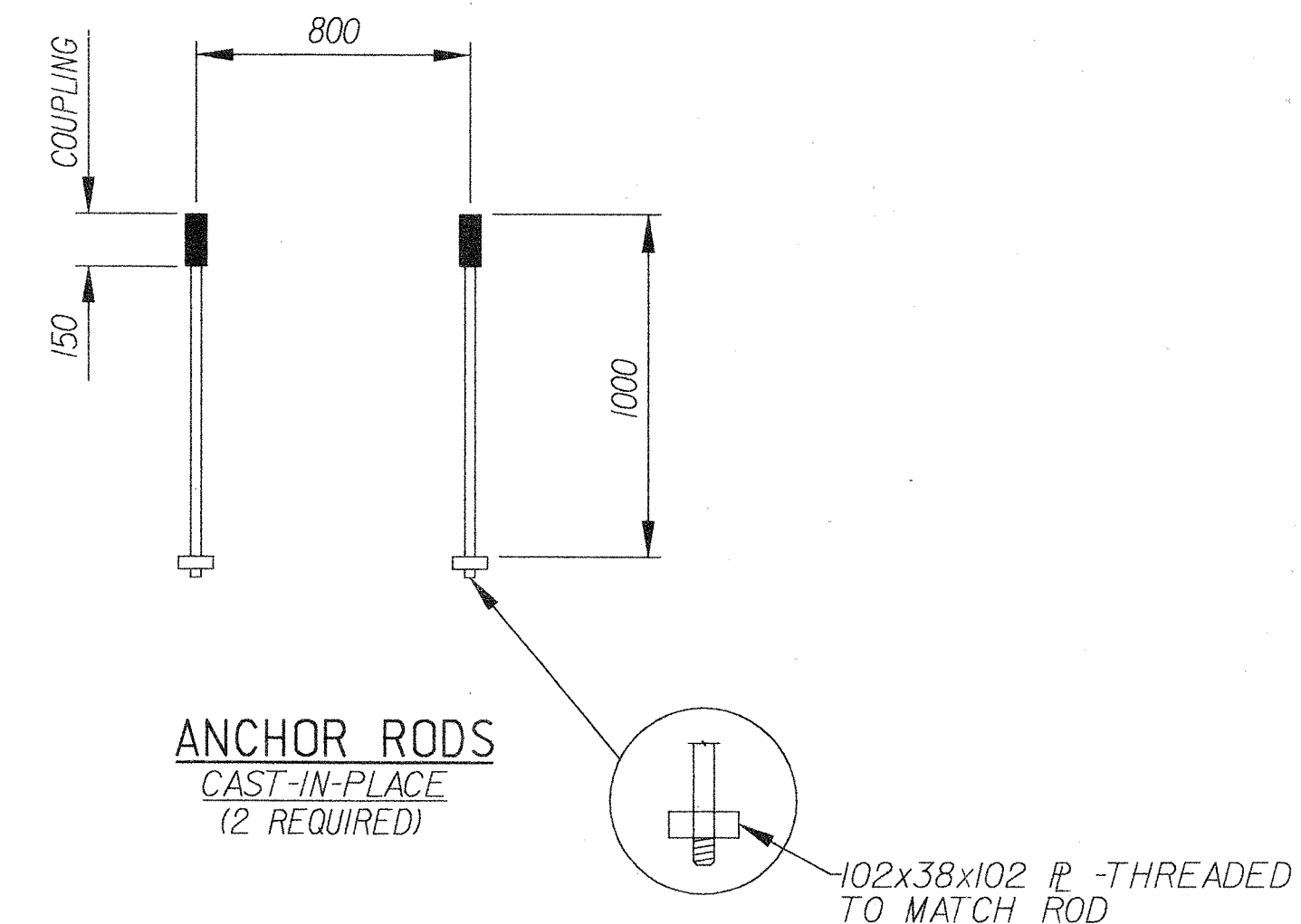
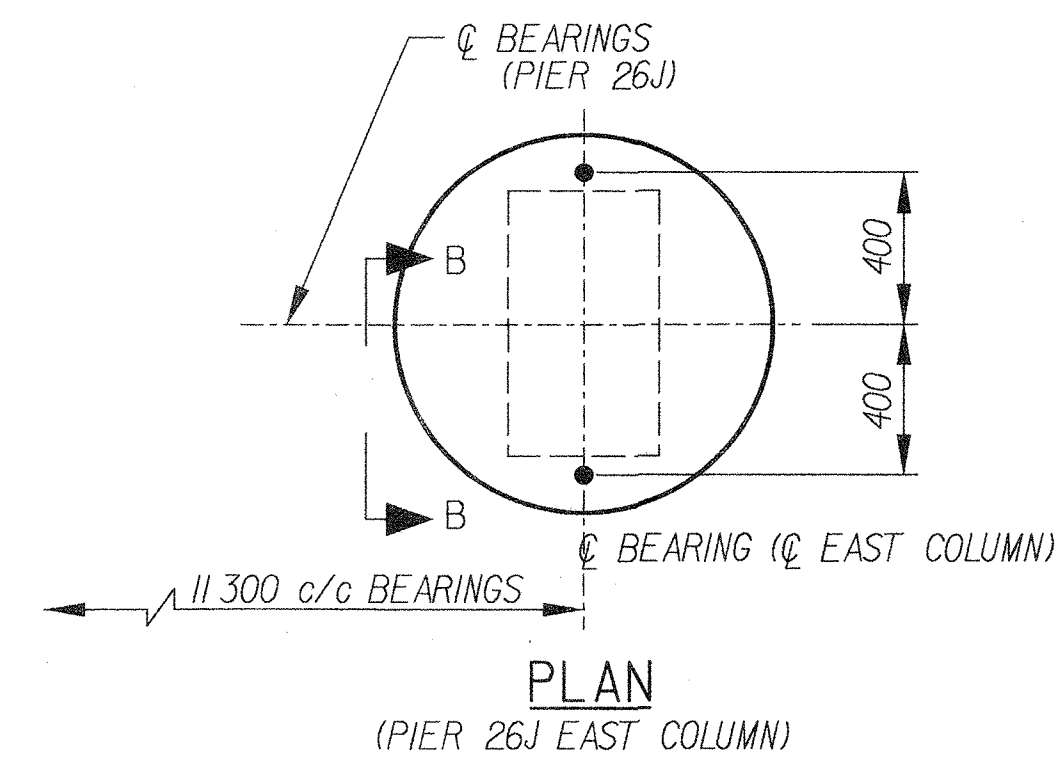
FOR DETAILS SHOWN BUT NOT NOTED, SEE TYPE 1 STIFFENER DETAIL.

- LEGEND:**
- (X) = BEAM LINE DESIGNATION
 - (X) = INDICATES BEARING STIFFENER TYPE
 - FCM = FRACTURE CRITICAL MEMBER
- NOTES:**
- ALL STRUCTURAL STEEL THIS SHEET SHALL BE ASTM A36M, LEVEL 6 FABRICATION UNLESS OTHERWISE NOTED.
 - CAP TOP, BOTTOM & SIDE PLATES ARE FRACTURE CRITICAL COMPONENTS AND SHALL CONFORM TO THE PROVISIONS OF CHAPTER 12 OF ANSI/AASHTO/AWS D15 BRIDGE WELDING CODE AND THE WELDING REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 863.23. CHARPY V-NOTCH IMPACT TEST REQUIREMENTS SHALL MEET OR EXCEED THE FCM VALUES FOR ZONE 2.
 - INTERIOR SURFACES OF BOX SHALL BE PRIME PAINTED WITH WHITE PAINT PRIOR TO WELDING OF FINAL BOX FLANGE.

FINAL FOR CONSTRUCTION



ELEVATION
EAST COLUMN GIRDER ANCHOR
* - SEAL CORNER CLIPS WITH SEALANT
PER FED.SPEC.TT-S-00230C,
TYPE 2 (TYP)

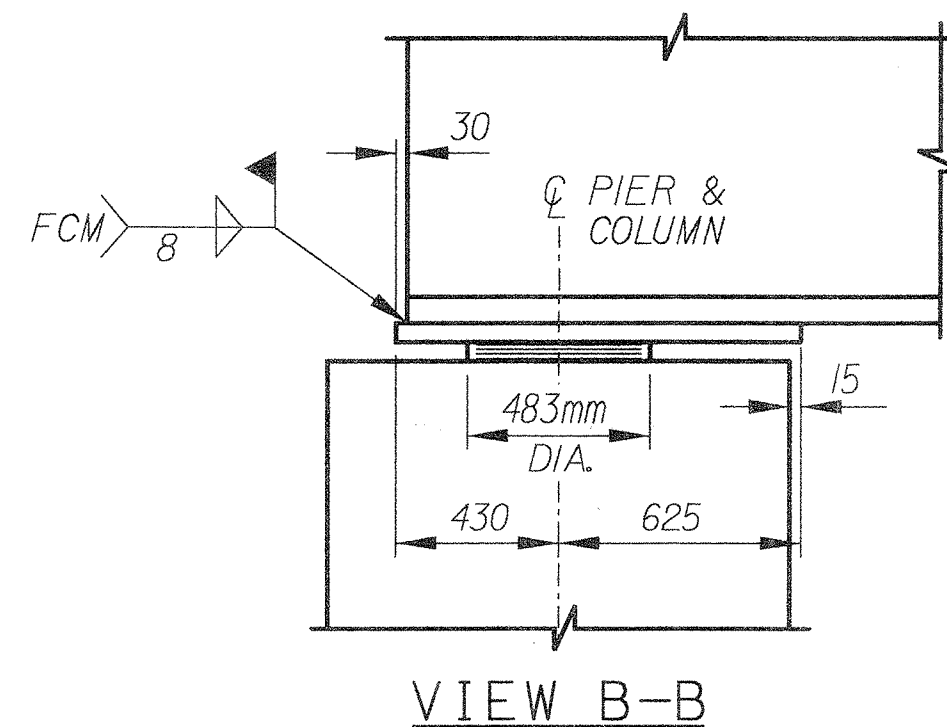
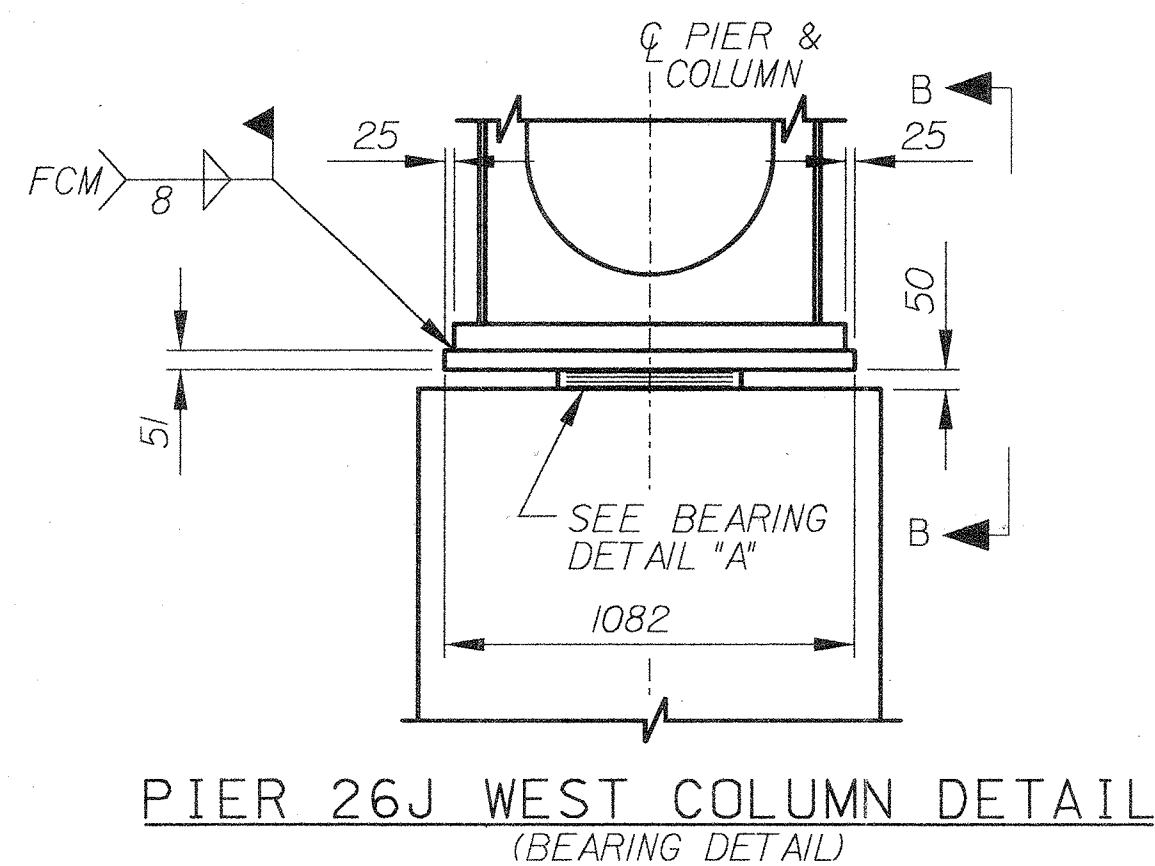
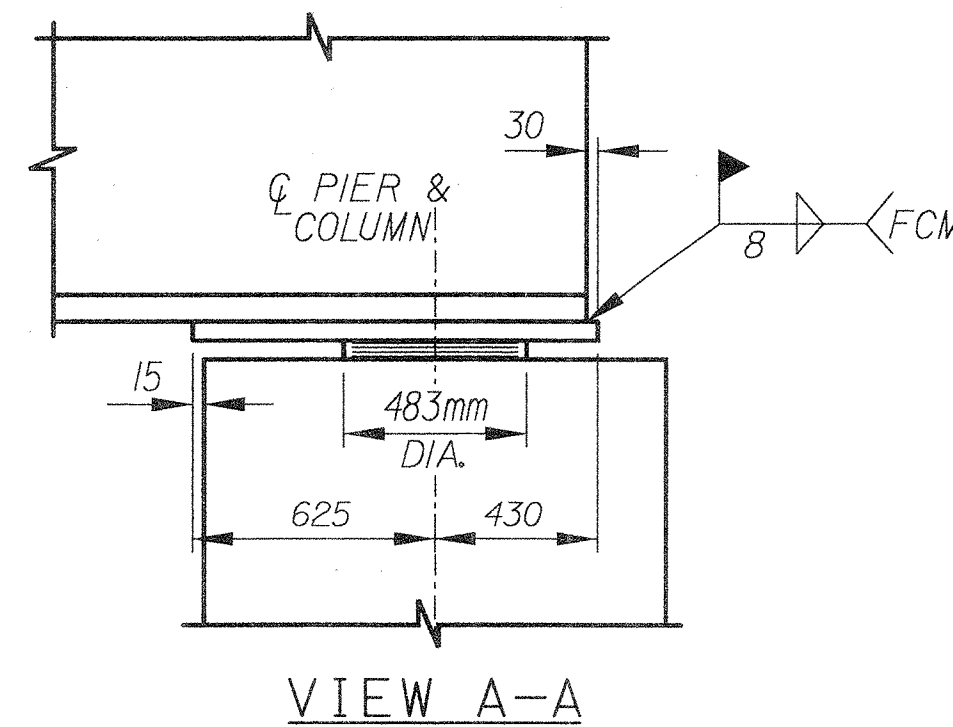
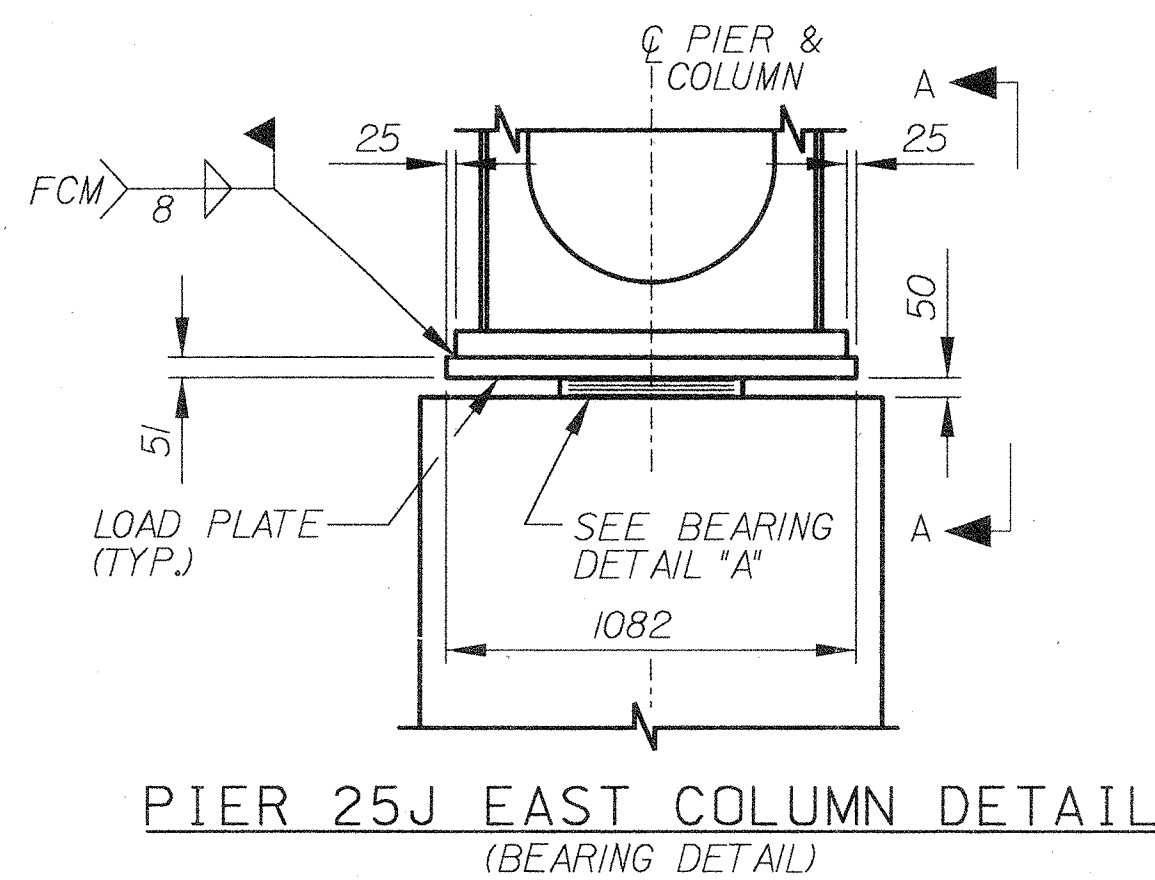


HAM-75-0022R **PIER 26J**

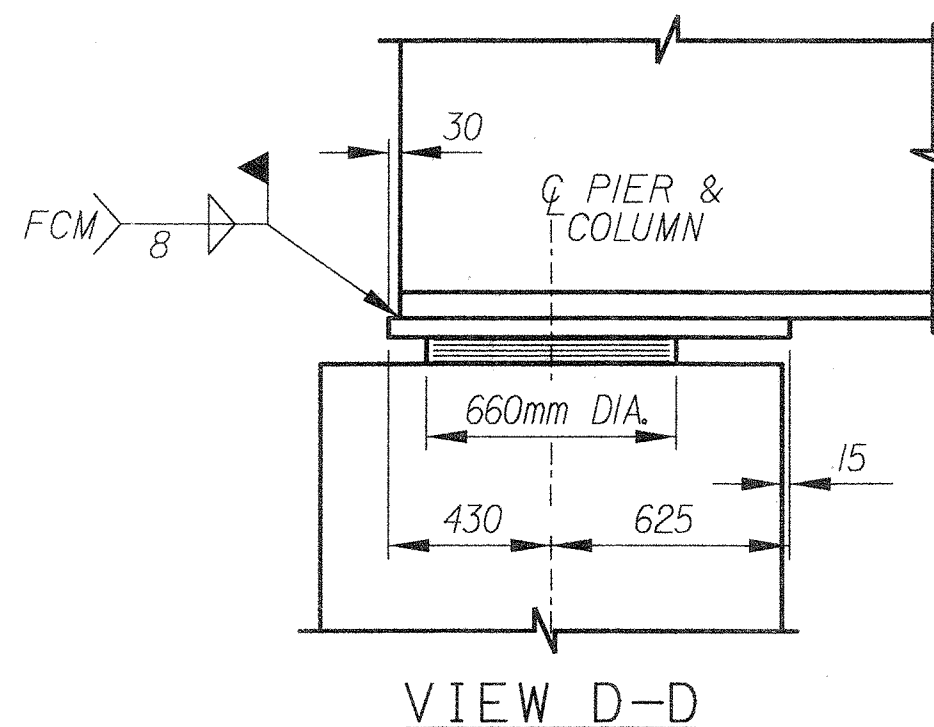
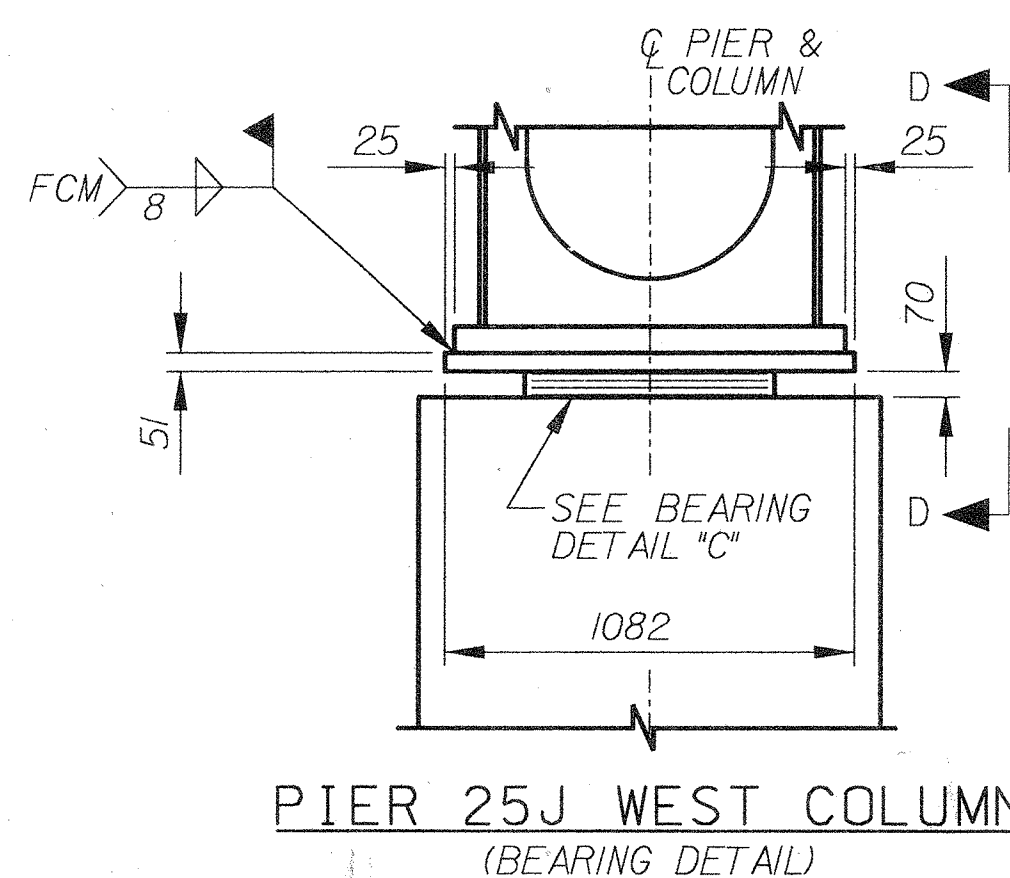
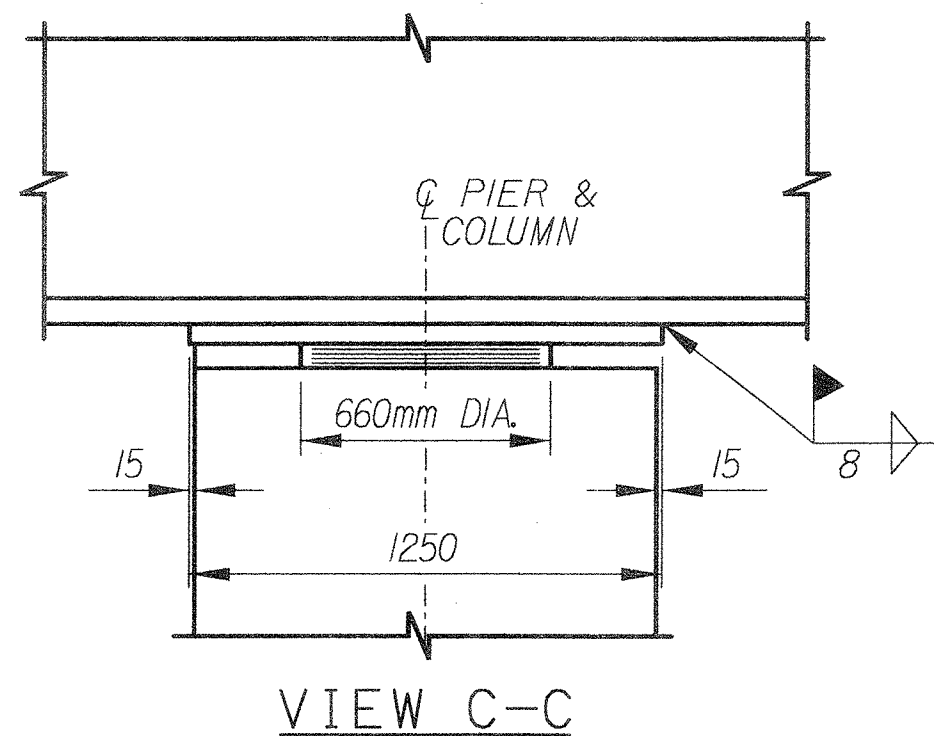
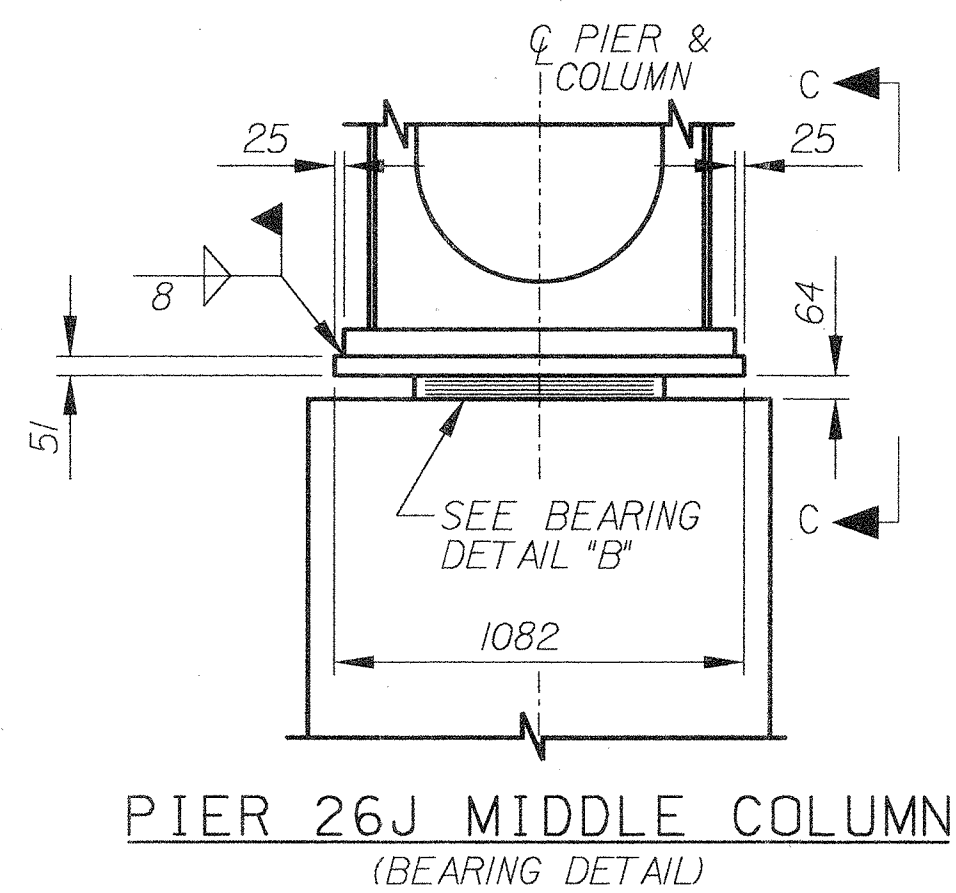
**FINAL FOR
CONSTRUCTION**

NOTE

GIRDER ANCHORS: PROVIDE 2-32mm Ø ANCHOR RODS FOR THE EAST COLUMN OF PIER 26J. THESE ANCHORS INCLUDE 2-150x150x25 SQUARE WASHERS, 2 ROUND WASHERS, 2-THREADED COUPLINGS WITH 2-32mm Ø CAST-IN-PLACE ANCHOR RODS AND 2-32x80 TEMPORARY BOLTS TO SECURE CAST-IN-PLACE ANCHOR RODS IN POSITION DURING PLACEMENT OF CONCRETE. MATERIALS FOR ANCHORS AND HARDWARE SHALL CONFORM TO ASTM A325M, TYPE 3 SPECIFICATIONS. COUPLING SHALL BE SUITABLE TO DEVELOP THE FULL STRENGTH OF THE ANCHOR BOLTS. USE FORM TEMPLATE TO POSITION ANCHOR BAR IN PROPER POSITION DURING CONCRETE PLACEMENT. AFTER REMOVAL OF TEMPLATE, PLACE TEMPORARY BOLTS INTO EXPOSED COUPLINGS UNTIL THEY ARE REPLACED BY PERMANENT ANCHOR BARS DURING GIRDER ERECTION. AFTER GIRDER ERECTION AND BEFORE RELEASING AND REMOVING TEMPORARY SUPPORTS UNDER THE EXISTING STRUCTURE, BOLTS SHOULD BE TIGHTENED. TO TIGHTEN, TURN NUTS UNTIL STEEL IS FULLY COMPACTED IN BEARING PLATE. THEN TURN NUTS 2/3 TURN RELATIVE TO ROD. INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT TO PLACE AND STRESS GIRDER ANCHORS WITH STRUCTURE LUMP SUM BID PAYMENT. ANCHORS AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH CMS 711.02.



HAM-75-0022R
PIERS 25J-26J



ELASTOMERIC BEARINGS:

ELASTOMERIC BEARINGS SHALL COMPLY WITH 516 AND ARTICLES 18.4.5J THROUGH 18.5.6.2 OF SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. BEARINGS SHALL BE GRADE 3, 60 DUROMETER ELASTOMER, AND SHALL BE SUBJECT TO THE LOAD TESTING REQUIREMENTS OF ARTICLE 18.7.4.5 CORRESPONDING TO DESIGN BY ARTICLE 14.6.5. PAYMENT FOR TESTING SHALL BE INCLUDED IN THE STRUCTURE LUMP SUM BID.

BEARING REPOSITIONING:

IF STEEL PIER CAPS ARE PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 27°C OR LOWER THAN 4°C, AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 15°C ± 5°C, THE STEEL PIER CAPS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 15°C ± 5°C.

LOAD PLATE:

THE STEEL LOAD PLATE SHALL BE THE SAME MATERIAL AS THE ATTACHED STRUCTURAL STEEL AND BE SIMILARLY CLEANED AND COATED. PAINTING SHALL BE DONE IN THE SHOP, EXCEPT THE EDGES TO BE WELDED SHALL BE MASKED OFF. PAINTING SHALL BE INCLUDED IN THE PRICE BID FOR THE BEARINGS.

THE STEEL PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 150°C AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

DESIGN LOADING:

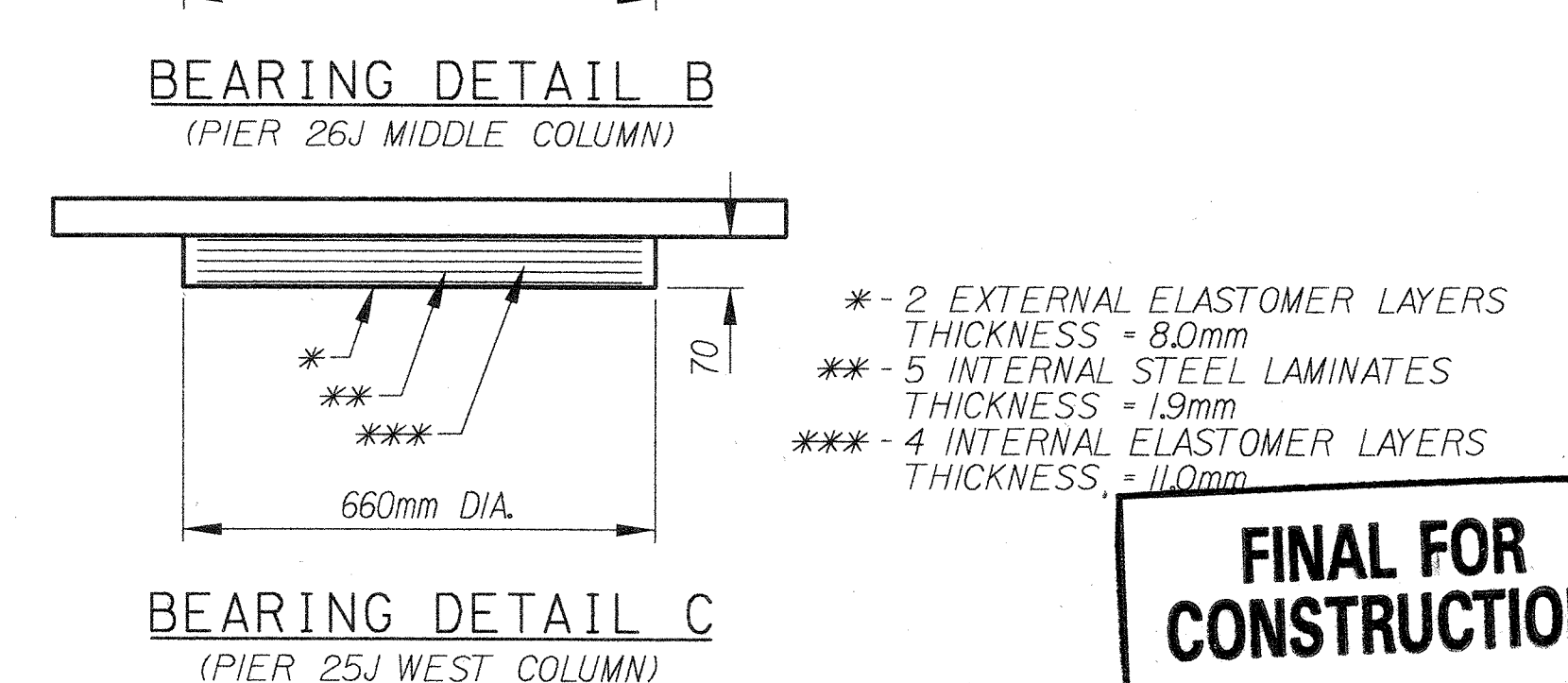
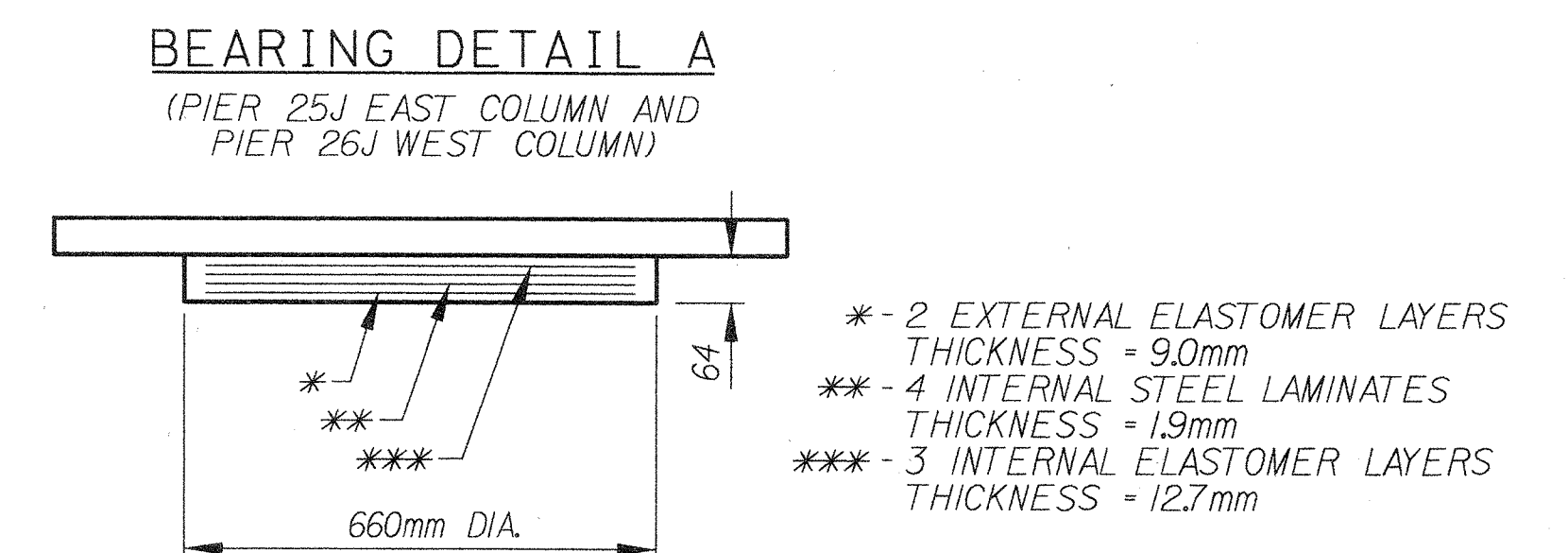
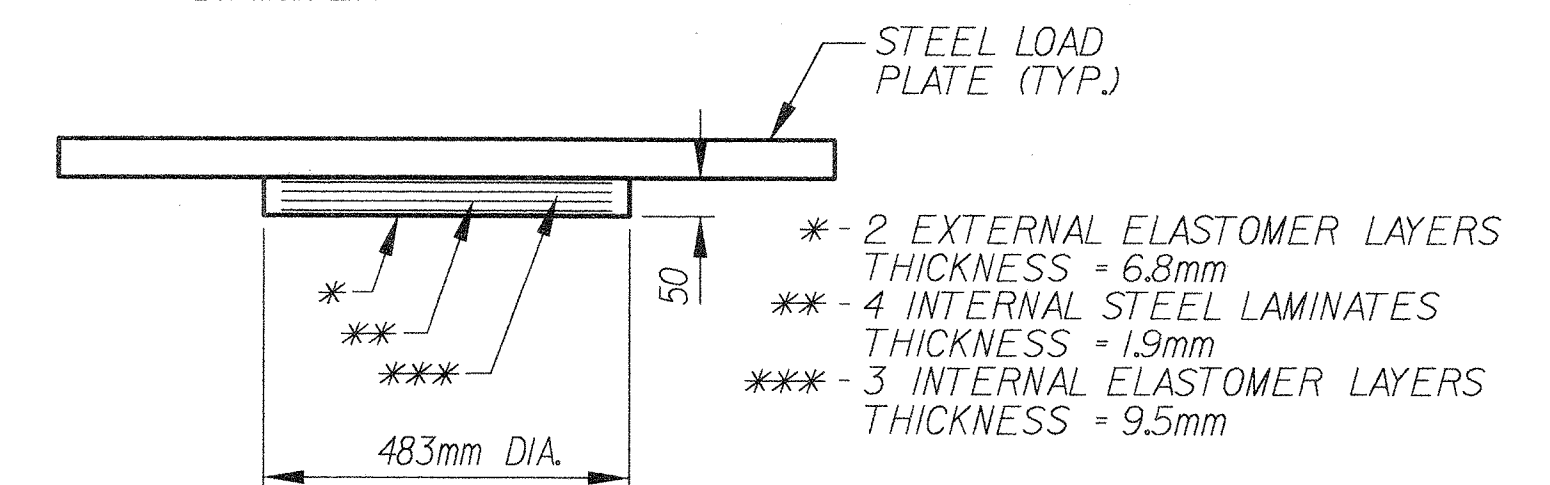
BEARINGS ARE DESIGNED FOR THE FOLLOWING LOADS:

PIER NO.	PIER 25J		PIER 26J	
COLUMN LOCATION	WEST	EAST	WEST	MIDDLE
DEAD LOAD (kN)	2015	979	1112	2831
LIVE LOAD w/o IMPACT (kN)	512	334	535	728
TOTAL DESIGN LOAD (kN)	2527	1313	1647	3559

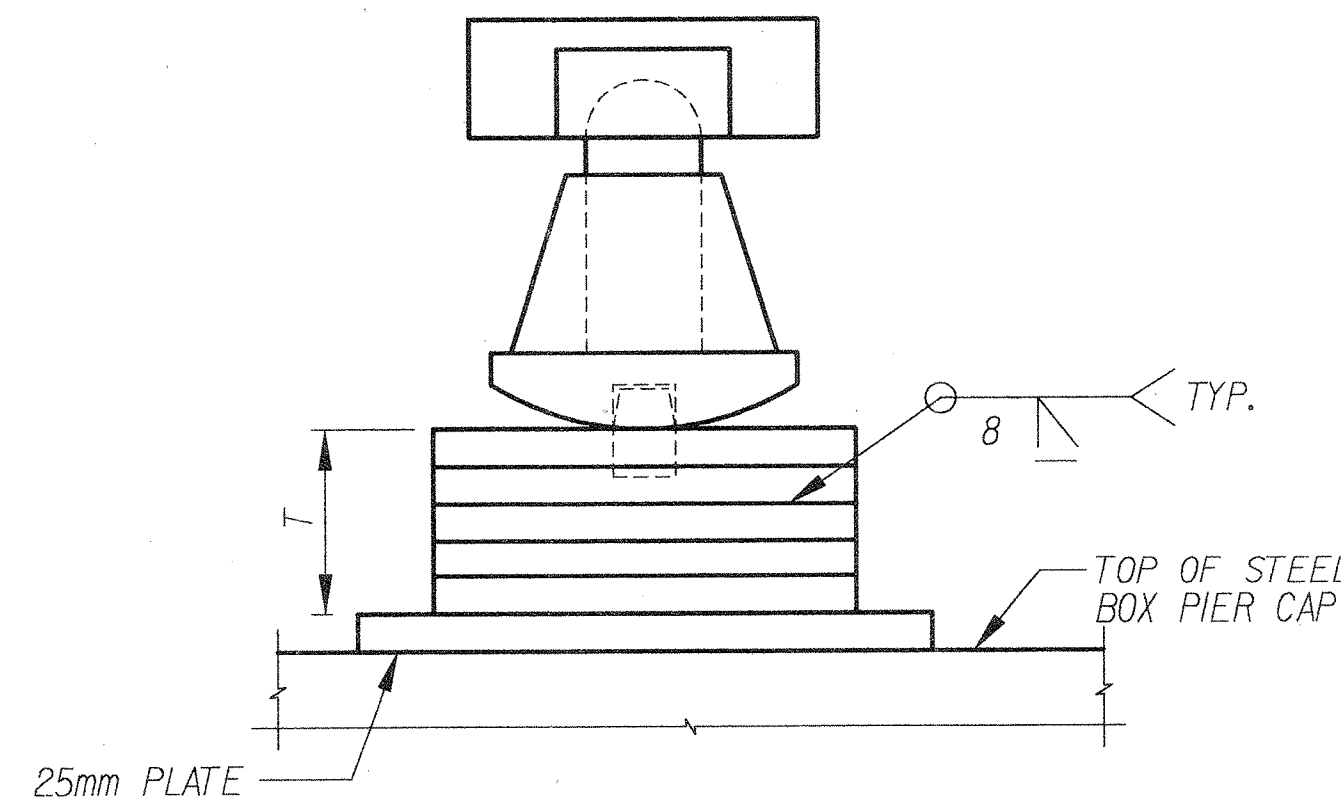
BEARING LOCATIONS (25 W, 26 M, TYP) SHALL BE CLEARLY MARKED ON THE BEARINGS PRIOR TO SHIPMENT.

LEGEND:

DIA. = DIAMETER

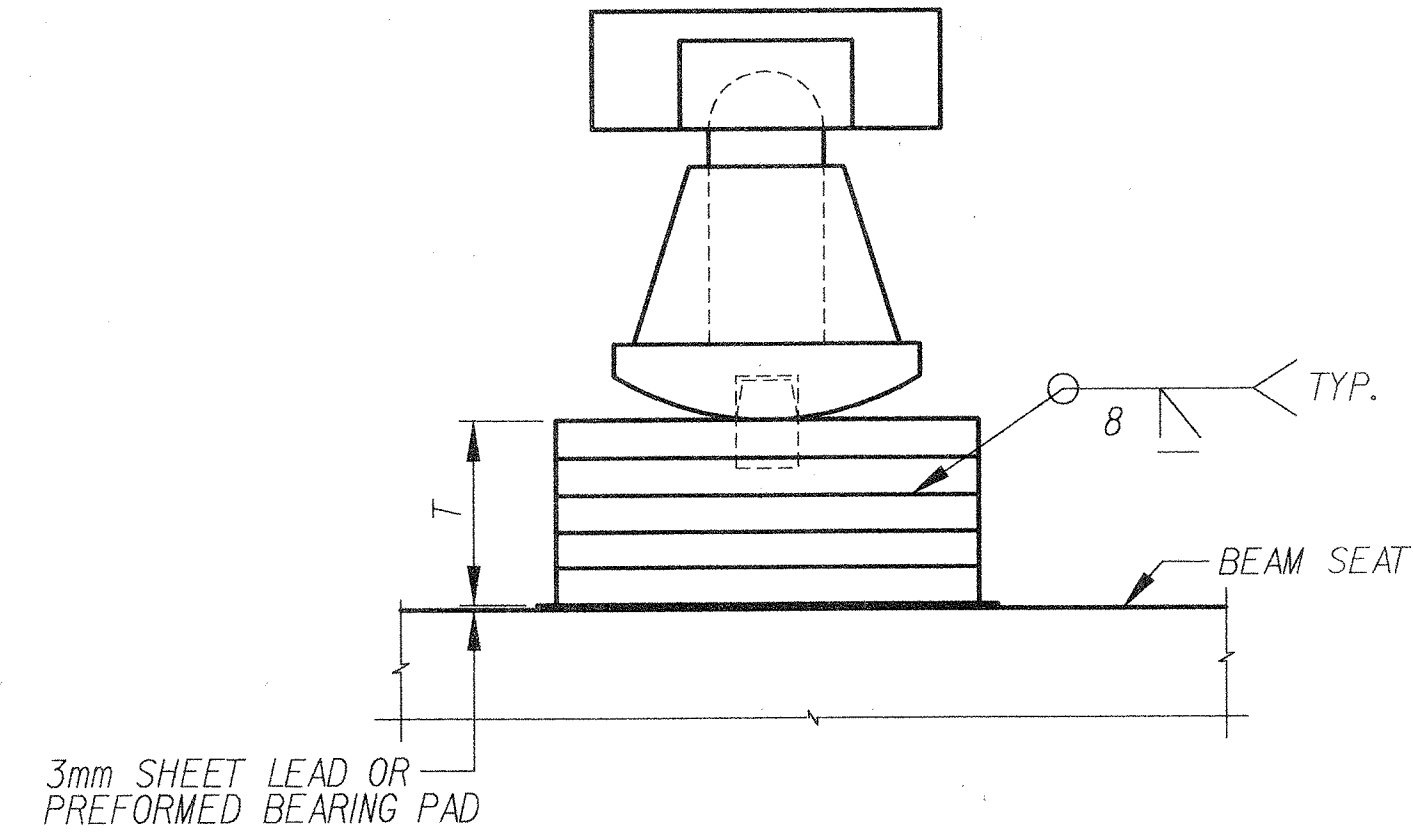


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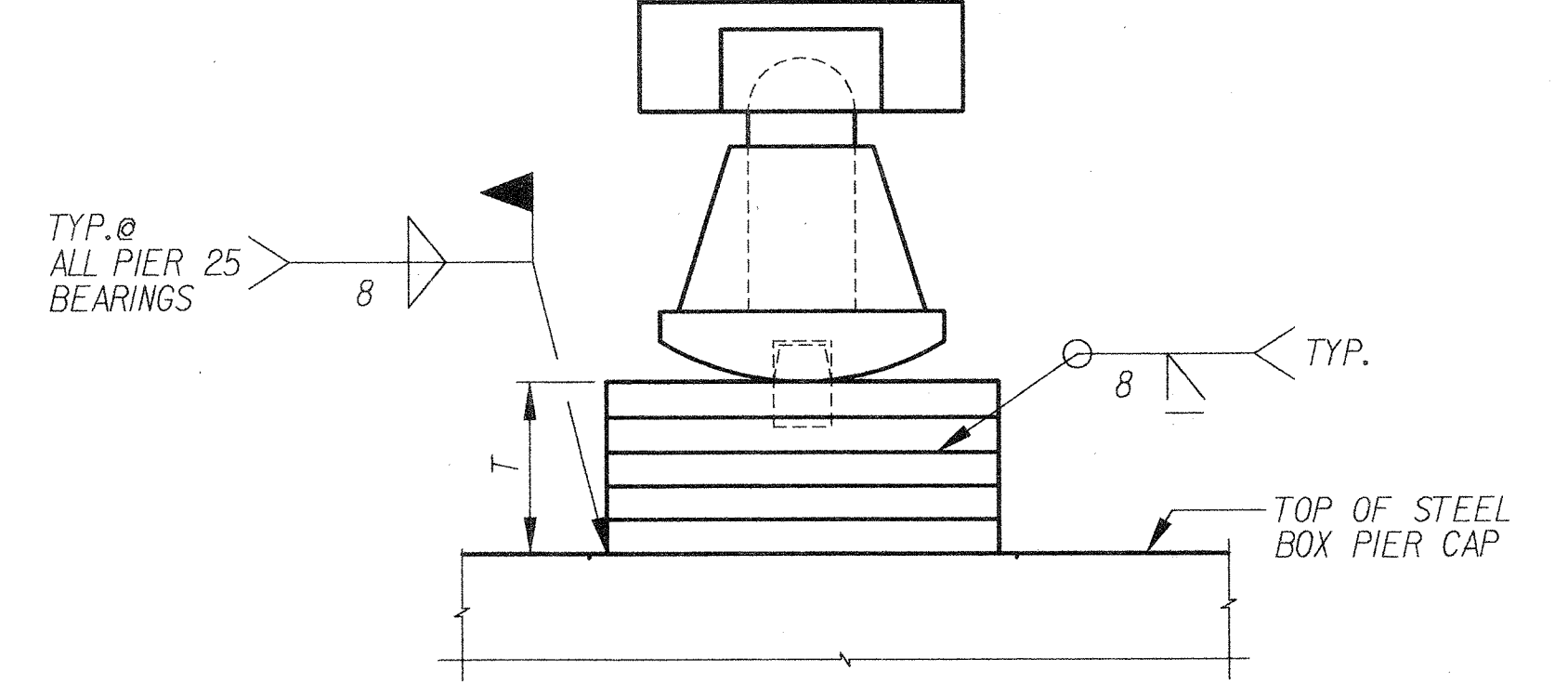
BASE PLATE THICKNESS DETAIL
(PIER 26J)

BEARING	R575D	R575E	R575F	R575G
DIMENSION "T"	282	224	171	113
BEARING	R675A	R675B	R675C	R675D
DIMENSION "T"	218	180	103	45



BASE PLATE THICKNESS DETAIL
(PIER 23)

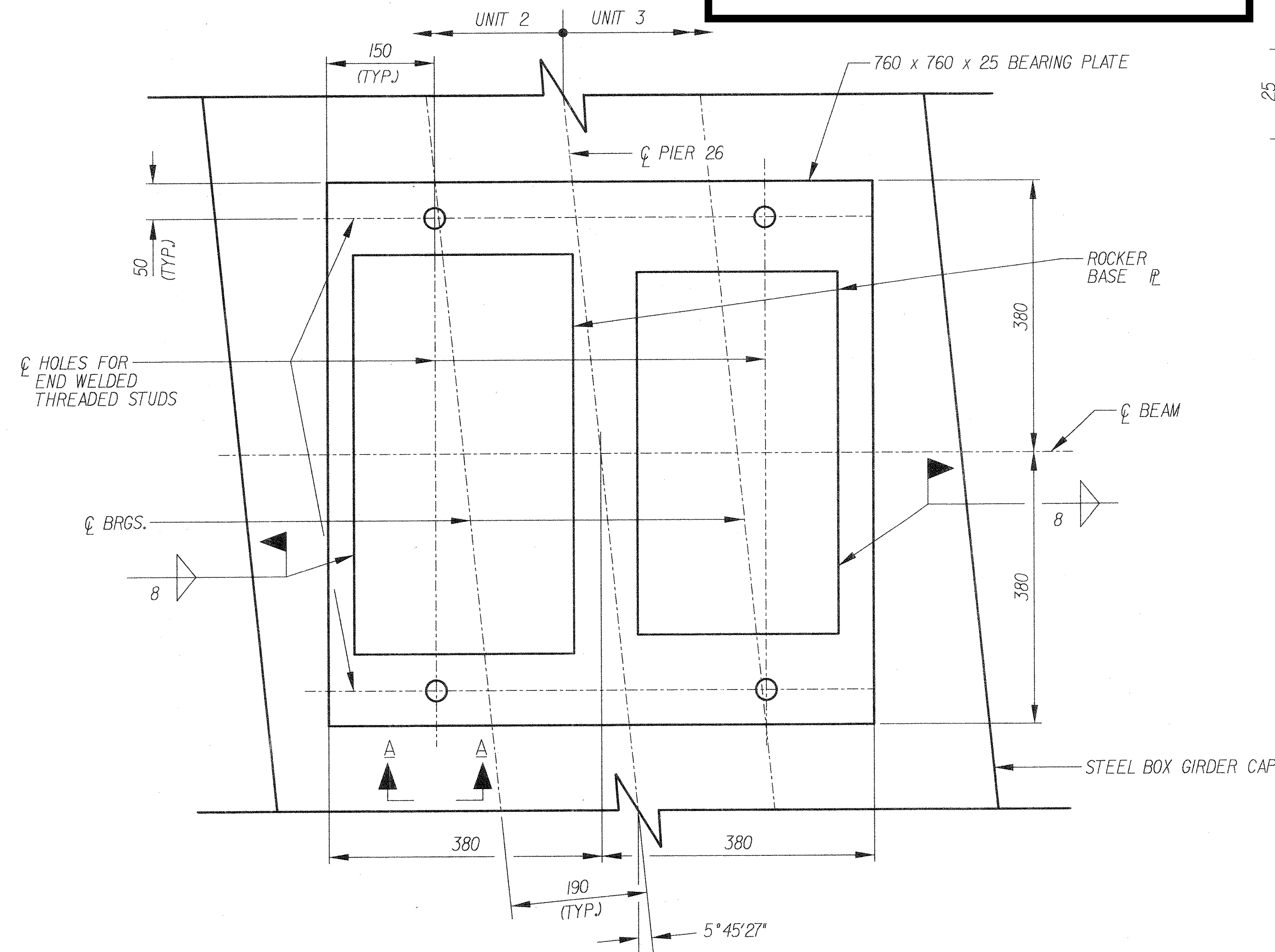
BEARING	R575A	R575B	R575C
DIMENSION "T"	78	79	87



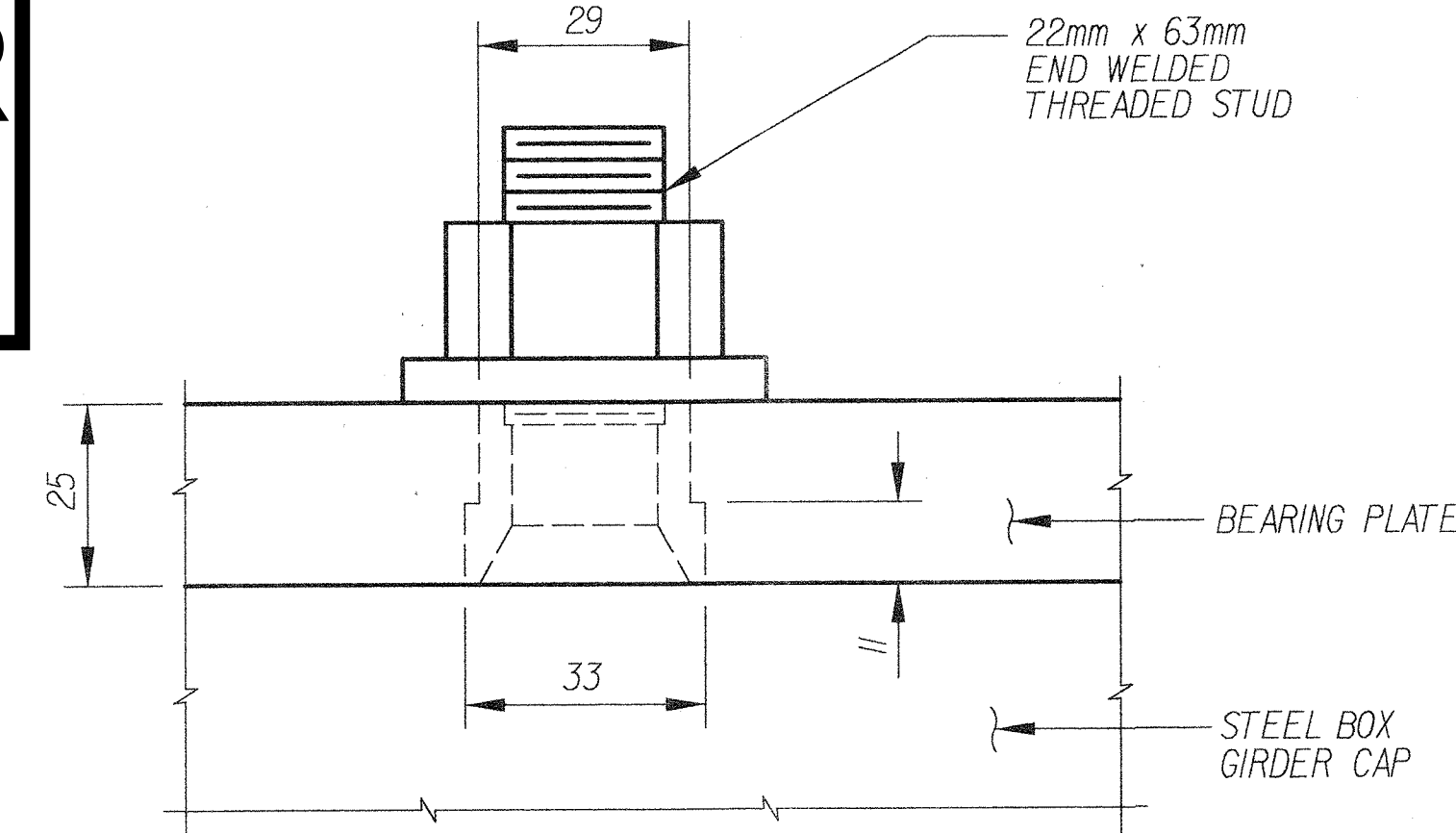
BASE PLATE THICKNESS DETAIL
(PIER 25)

BEARING	R1000A	R1225A	R1225B
DIMENSION "T"	298	205	127

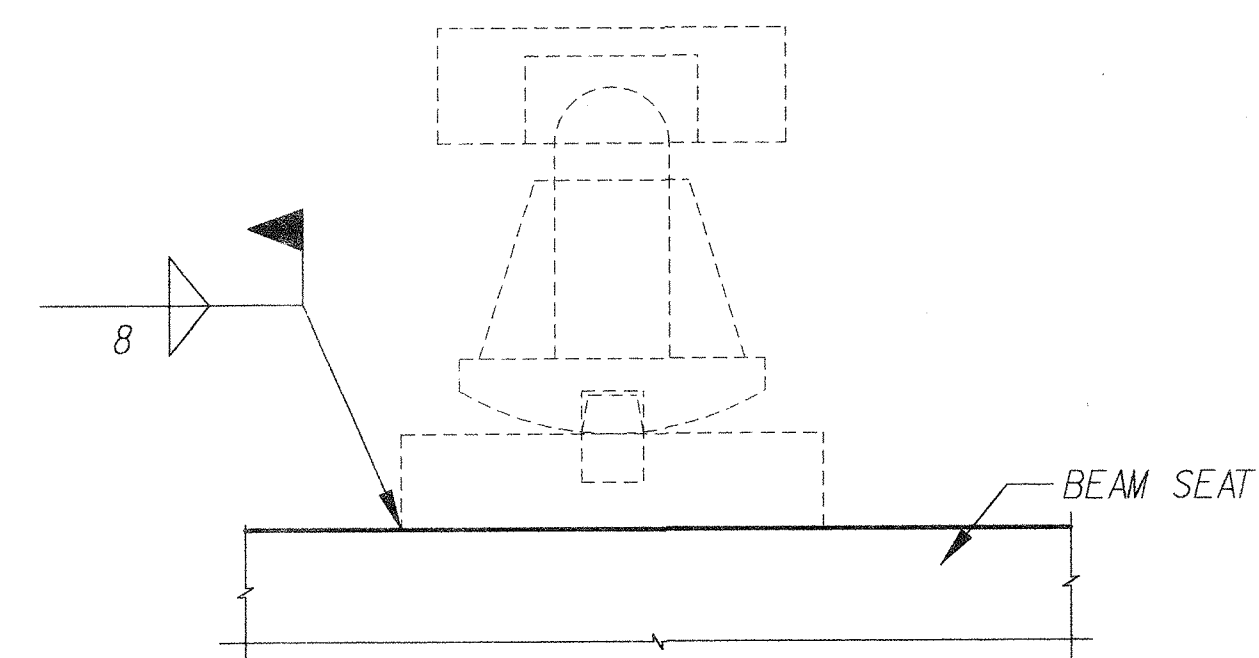
HAM-75-0022R PIER 26J



BEARING PLATE DETAIL
(PIER 26J)
(4 REQUIRED)



VIEW A

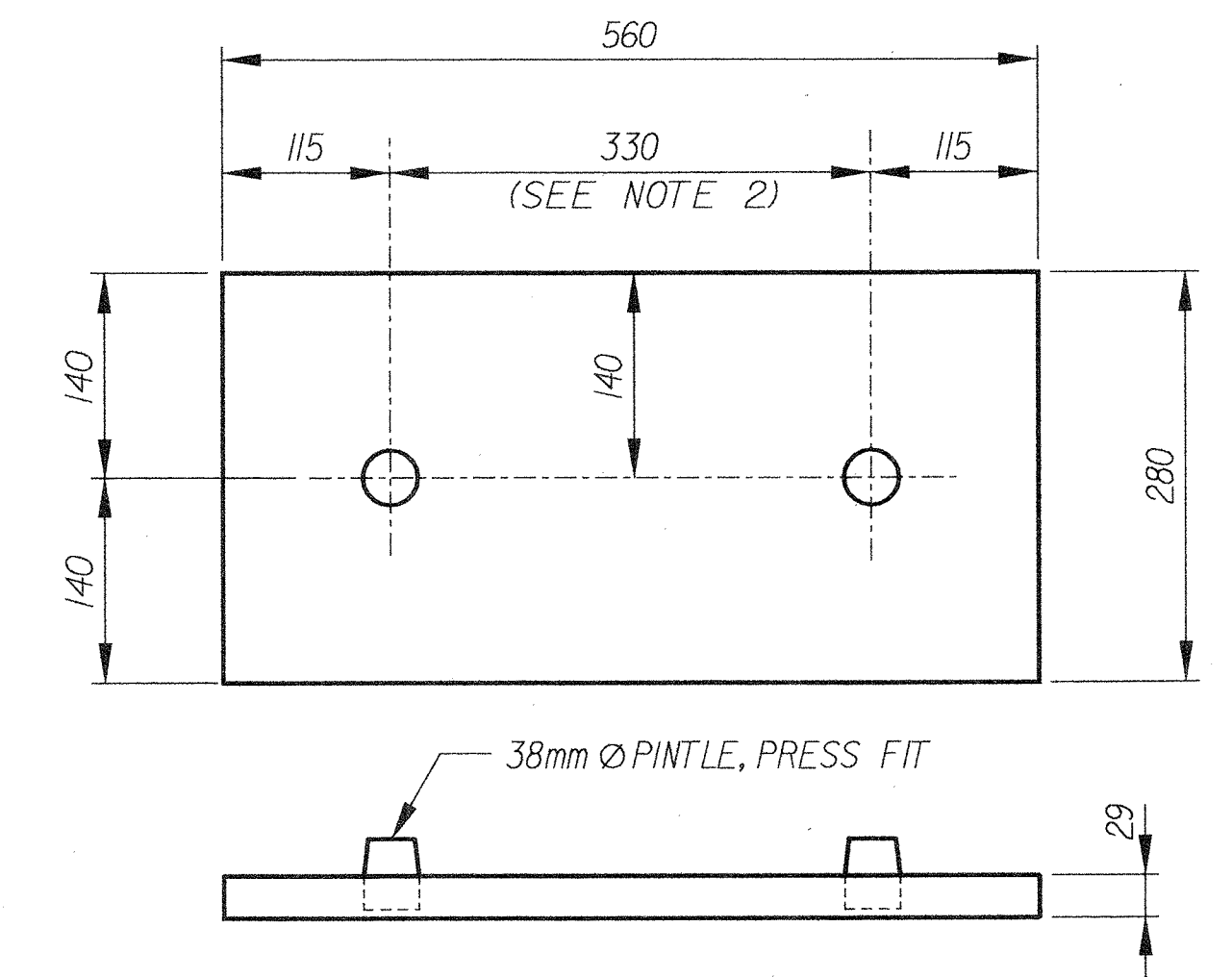


BASE PLATE WELDING DETAIL
(EXISTING GIRDERS @ PIER 26)

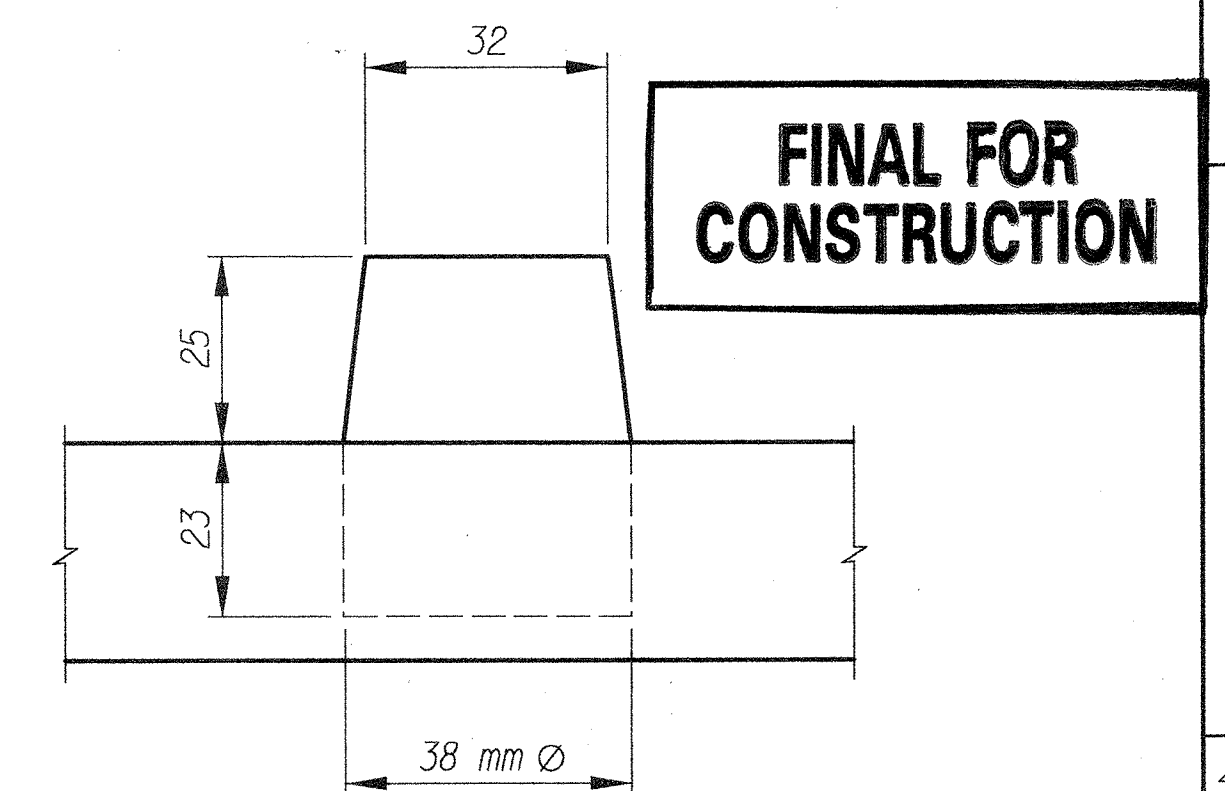
NOTES:

1. ROCKERS AND BOLSTERS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING RB-155M, EXCEPT THAT DIMENSION "T" SHALL BE AS SHOWN IN THE TABLE ON THIS SHEET FOR BEARING DESIGNATIONS WITH A LETTER SUFFIX. BASE PLATES MAY BE ONE SINGLE PLATE OR MULTIPLE LAYERS WELDED TOGETHER AS SHOWN.

2. CONTRACTOR SHALL VERIFY EXISTING PINTLE SPACING PRIOR TO FABRICATION OF REPLACEMENT BASE PLATE.



BASE PLATE
(FOR EXISTING BEARINGS AT GIRDER A,
PIER 26, 2 REQUIRED)

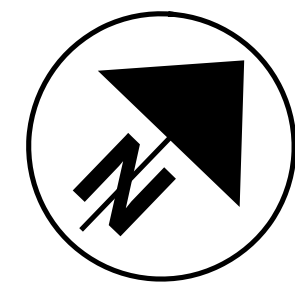


PINTLE DETAIL

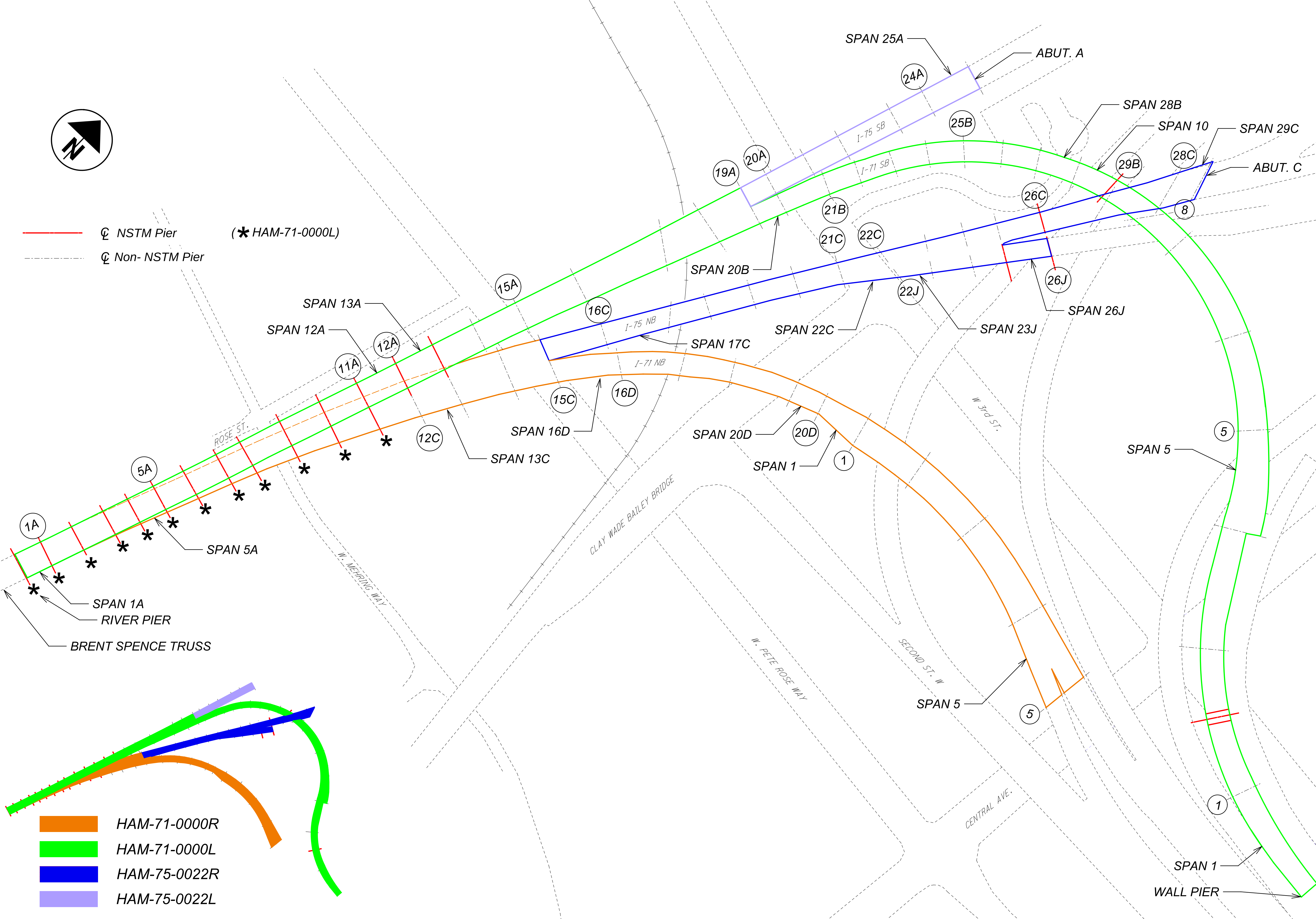
Appendix E:

HAM-71/75 General Plan

C:\Users\John.corley\Desktop\Spenc\08 Bridges\dgn Untitled Sheet 5/3/2021 7:35:44 AM John.corley



-  $\odot$ NSTM Pier
 -  $\odot$ Non- NSTM Pier
- (* HAM-71-0000L)



-  HAM-71-0000R
-  HAM-71-0000L
-  HAM-75-0022R
-  HAM-75-0022L

DESIGN AGENCY		525 VINE ST., SUITE 1800 CINCINNATI, OHIO 45202 PH. (513) 651-3440			
AECOM					
DESIGNED	DRAWN	REVIEWED	DATE		
CHECKED	REVISED	STRUCTURE FILE NUMBER			
GENERAL PLAN					
HAM-71/75					
1/1					
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1	1				