

## MEMORANDUM

TO: Programs, Projects, and Operations Subcommittee  
FROM: Eric Williams, Natural Resources Planner  
SUBJECT: Lied Pedestrian Bridge Substructure Repair Bids  
DATE: November 6, 2020

The Papio-Missouri River NRD (District) collaborated with the Lower Platte South NRD (LPSNRD) to construct the MoPac Trail along the former Missouri Pacific Railroad line, including construction of a trail over the bridge across the Platte River. This bridge is commonly referred to as the Lied Bridge, and normal operations and maintenance for the bridge and connecting trail segments is carried out by the Nebraska Game and Parks Commission (NGPC). During the catastrophic flooding event in March 2019, debris from the river caused damage to the ice breaker structures on the upstream side of the piers.

On October 29, 2020, the District opened bids for repair to three (3) of the ice breakers, and reconstruction of one (1) ice breaker which was completely dislodged from the pier during the flood. Two (2) bids were received ranging from \$132,074.18 to \$147,850.00, the bid tab is attached. The apparent low bid was from JJK Construction. The bids were reviewed by Schemmer, the engineer for this project, and a recommendation letter to accept the bid from JJK Construction is attached. Completion for this work is scheduled by February 28, 2021.

Per an agreement with LPSNRD, any cost for the combined work on the Lied Bridge (previously completed superstructure repair, and current substructure repair) will be split between the two NRDs. The current estimated reimbursement from FEMA is \$130,000 and the estimated total cost for all work is \$216,000, leaving the expected cost for each NRD around \$43,000. Final costs will be submitted to FEMA for review and approval after the work is complete and the local contribution to the project could decrease. LPSNRD has reviewed this information and agrees with the recommendation to award the contract for these repairs.

- **Management recommends that the Subcommittee recommend to the Board of Directors that the General Manager be authorized to execute a contract with JJK Construction in the amount of \$132,074.18 for the Lied Bridge Substructure Repair Project, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.**



Design with Purpose. Build with Confidence.

October 29, 2020

Mr. Eric Williams  
Papio-Missouri River NRD  
8901 S. 154th St.  
Omaha, NE 68138

Re: LIED Bridge Substructure Repair Bid Review  
P-MRNRD Project No. 20200825

Dear Mr. Williams:

Letting documents and engineering plans for the above referenced project were made available to bidding contractors on October 12, 2020. The documents were available for electronic download from the website QuestCDN, at the office of the Engineer, and at the office of the P-MRNRD.

Two bids were received by the cut-off date of October 29, 2020, 2:00pm.

CONTRACTOR	TOTAL BID
JJK Construction	\$132,074.18
MC Wells	\$147,850.00

I have reviewed all bids received and find them to be complete and accurate. The low bid received from JJK Construction is higher than the Engineers Estimate of \$90,000. After review of the Engineers Estimate I present the following as potential issues leading to higher bids received:

- Eng. Est. did not include the costs associated to the bid item Bridge Closure
- Short response time to begin/complete work
- Unknowns involving water surface elevations and impacts to work
- Winter conditions
- Large equipment restrictions on the bridge

I have no known reason to withhold extending a contract to JJK Construction based on terms of their ability to complete the work or performance issues. Therefore, I recommend JJK Construction for selection to contract on this project.

Sincerely,

THE SCHEMMER ASSOCIATES INC.  
Architects – Engineers

Darin G. Brown, P.E.  
Bridge Group Manager  
Shareholder

PHONE 402.493.4800  
FAX 402.493.7951

1044 North 115th Street, Suite 300  
Omaha, Nebraska 68154-4436

SCHEMMER.COM

Project: Lied Bridge Substructure Repair



Company	Bond	Total Bid
JJK Construction	✓	\$ 132,074.18
MC Wells	✓	\$ 147,850.00

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### **ARTICLE 5 – BASIS OF BID**

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	MOBILIZATION	LS	1	\$10,341.56	\$10,341.56
2	PIER 13 ICE BREAKER RESTRAINT	LS	1	\$24,948.64	\$24,948.64
3	PIER 14 ICE BREAKER REPLACEMENT	LS	1	\$41,857.41	\$41,857.41
4	PIER 15 ICE BREAKER RESTRAINT	LS	1	\$24,767.26	\$24,767.26
5	PIER 18 ICE BREAKER RESTRAINT	LS	1	\$24,948.64	\$24,948.64
6	BRIDGE CLOSURE	LS	1	\$5,210.67	\$5,210.67
<b>Total of All Unit Price Bid Items</b>					<b>\$132,074.18</b>

Bidder acknowledges that (1) each Bid Unit Price and Item Lump Sum includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

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#### **ARTICLE 6 – TIME OF COMPLETION**

- 6.1 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.2 Bidder accepts the provisions of the Agreement as to liquidated damages.

#### **ARTICLE 7 – ATTACHMENTS TO THIS BID**

- 7.1 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security; and
  - B. List of Proposed Subcontractors.

#### **ARTICLE 8 – DEFINED TERMS**

- 8.1 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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1	MOBILIZATION	LS	1	36,950 <sup>-</sup>	36,950 <sup>-</sup>
2	PIER 13 ICE BREAKER RESTRAINT	LS	1	12,985 <sup>-</sup>	12,985 <sup>-</sup>
3	PIER 14 ICE BREAKER REPLACEMENT	LS	1	63,960 <sup>-</sup>	63,960 <sup>-</sup>
4	PIER 15 ICE BREAKER RESTRAINT	LS	1	11,995 <sup>-</sup>	11,995 <sup>-</sup>
5	PIER 18 ICE BREAKER RESTRAINT	LS	1	12,985 <sup>-</sup>	12,985 <sup>-</sup>
6	BRIDGE CLOSURE	LS	1	8,975 <sup>-</sup>	8,975 <sup>-</sup>
Total of All Unit Price Bid Items					\$147,850 <sup>-</sup>

Bidder acknowledges that (1) each Bid Unit Price and Item Lump Sum includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

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PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT

PLANS FOR CONSTRUCTION

LIED PEDESTRIAN BRIDGE  
SUBSTRUCTURE REPAIR

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL OVERVIEW
3	ICE BREAKER RESTRAINT PIER 15
4	ICE BREAKER RESTRAINT PIERS 13 & 18
5	ICE BREAKER REPLACEMENT

BID ITEMS

MOBILIZATION	_____	1	LS
PIER 13 ICE BREAKER RESTRAINT	_____	1	LS
PIER 14 ICE BREAKER REPLACEMENT	_____	1	LS
PIER 15 ICE BREAKER RESTRAINT	_____	1	LS
PIER 18 ICE BREAKER RESTRAINT	_____	1	LS
BRIDGE CLOSURE	_____	1	LS



ENGINEER CONTACT INFORMATION:

THE SCHEMMER ASSOCIATES, INC.  
1044 N 115TH, SUITE 300  
OMAHA, NE 68154  
(402) 493-4800

REVIEWED FOR CONSTRUCTION:

PAPIO-MISSOURI RIVER NRD  
8901 S. 154TH ST  
OMAHA, NE 68138  
PHONE (402) 444-6222

MARLIN PETERMANN P.E.  
ASSISTANT GENERAL MANAGER

SHEET NO. 1

PROJECT NUMBER 20200825

STRUCTURE NO. LIED BRIDGE

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT (PAPIO NRD)

TITLE AND QUANTITY SHEET

DESIGNED BY DGB  
CHECKED BY CIF  
DATE OCTOBER 2020

LIED BRIDGE SUBSTRUCTURE REPAIR

SCHEMMER

1/5



GENERAL NOTES:

Contractor shall close off the bridge to all access upon start of construction.

Contractor access to the bridge shall be from the west side (Cass County). No access from the east side (Sarpy County). Contractor shall maintain both east and west access points remain closed and secure when not actively working.

All repairs are to be made from the concrete deck. No work platforms or equipment will be allowed in the water. Any materials that fall into the water shall be removed at the end of each day.

The designated laydown area may be used for equipment storage and/or repair work area. Any damage to rock trail or grass shall be restored to preexisting conditions.

The west entrance to the bridge shall be secured each night to block all access to pedestrians. The existing wood gates and locks shall be maintained.

Construction vehicles on the bridge are limited to a maximum of 50,000 lbs. gross weight.

All threaded anchor rods affixing the channels to the existing substructure shall conform to ASTM F1554 Grade 55.

REQUIRED SHOP DRAWINGS:

CHANNEL RESTRAINTS  
HSS TUBING SPACER  
NOSE ARMOR ANGLE

SPECIFICATIONS SUBMITTALS:

COLD WEATHER EPOXY GROUT

PAY ITEM NOTES:

**PIER 13, 15, & 18 ICE BREAKER RESTRAINT**  
Each pier location to receive 4 - C5x6.7 Channel bracing on the open gap side. The channels shall be galvanized in accordance with ASTM A123. All nuts and threaded anchor rod material used to anchor the channel shall be galvanized in accordance with ASTM A153.

Epoxy required for installing the connector threaded rod into the concrete pier shall conform to established specifications for cold weather epoxy. Contractor shall submit a copy of the epoxy specifications to the Engineer prior to use for review and approval.

The bid item "PIER 13 ICE BREAKER RESTRAINT" includes all labor, materials and equipment to install the channels to the face of the Pier 13 as detailed on sheet 4.

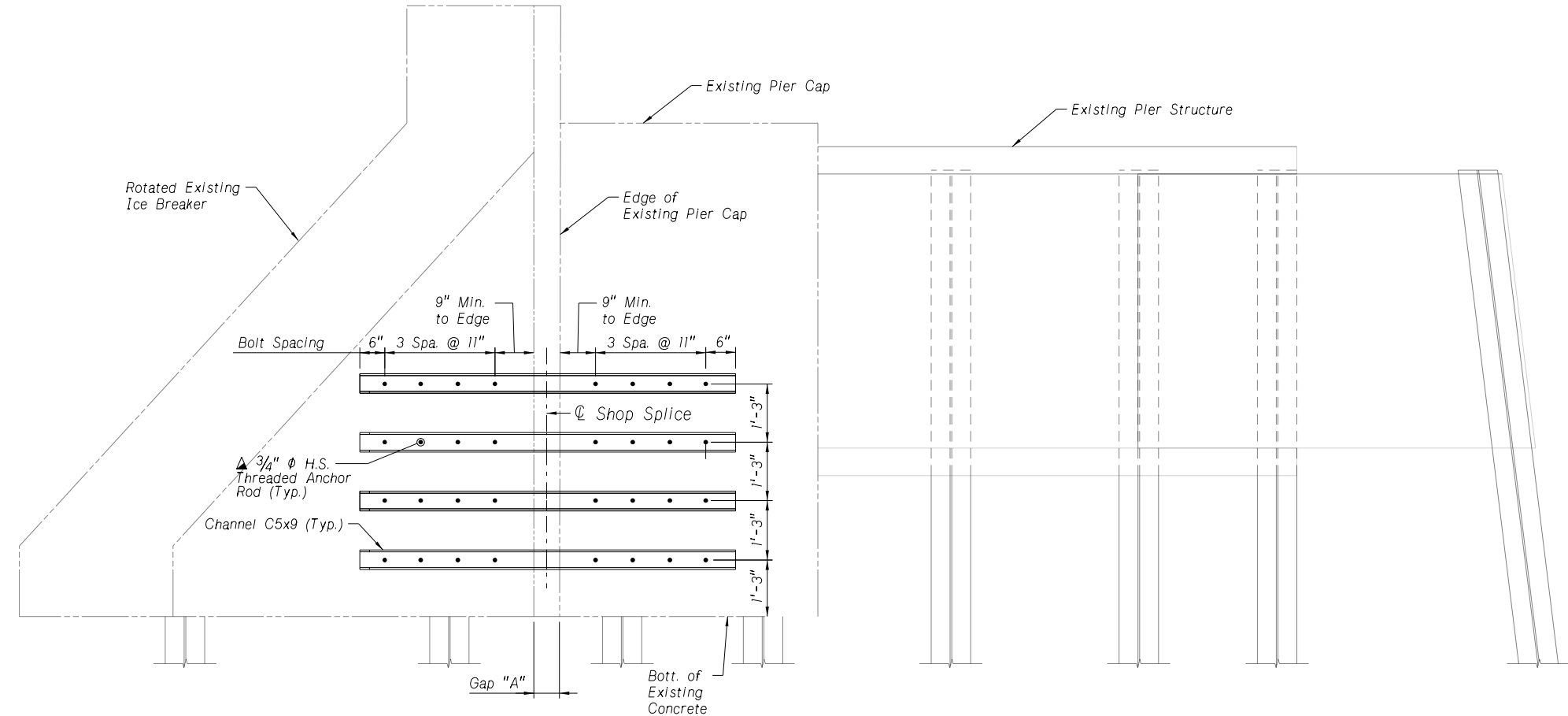
The bid item "PIER 15 ICE BREAKER RESTRAINT" includes all labor, materials and equipment to install the channels to the face of the Pier 15 as detailed on sheet 3.

The bid item "PIER 18 ICE BREAKER RESTRAINT" includes all labor, materials and equipment to install the channels to the face of the Pier 18 as detailed on sheet 4.

**PIER 14 ICE BREAKER REPLACEMENT**  
Epoxy required for installing the epoxy coated #6 bars into the concrete pier shall conform to established specifications for cold weather epoxy. Contractor shall submit a copy of the epoxy specifications to the Engineer prior to use for review and approval.

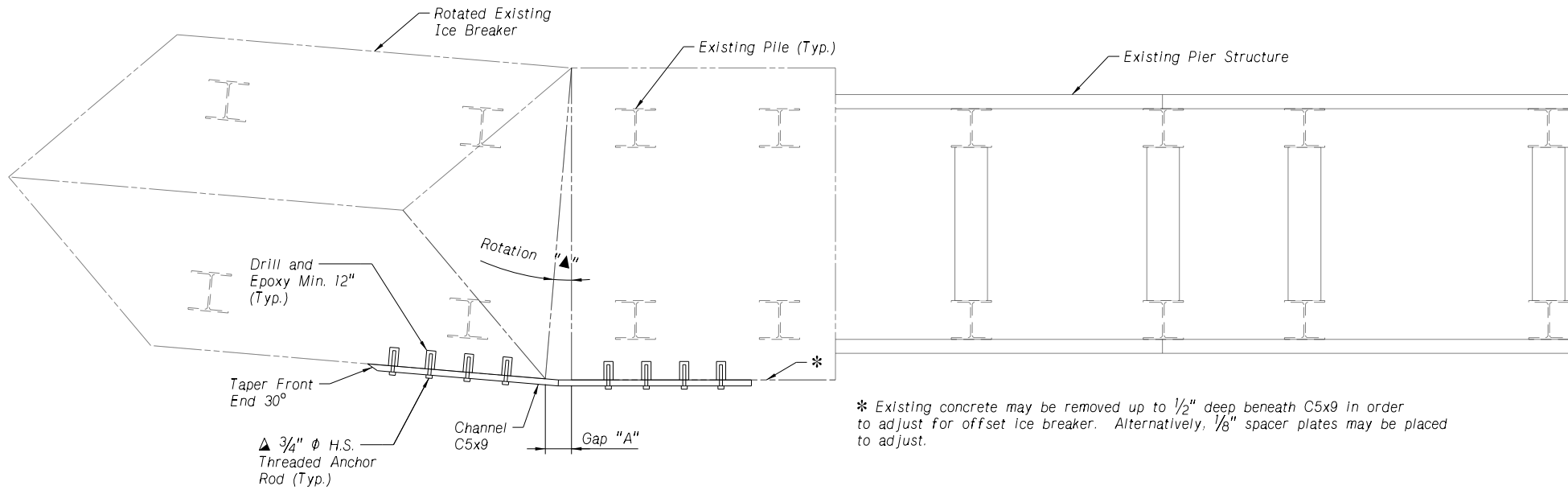
The bid item "PIER 14 ICE BREAKER REPLACEMENT" includes all labor, materials, and equipment to perform work of installing new ice breaker as detailed on plan sheet 5. Includes all materials, labor, and costs associated with forming the new ice breaker and the subsequent insulation protection of the pour during the curing period.

**BRIDGE CLOSURE**  
Includes cost of providing 2 Type III baricades at the west end of the bridge along with sign "Bridge Closed" mounted on the barricades for the duration of the construction. Includes all labor, materials, and equipment to reinstall the wood framed security wall at the west access point of the bridge.



▲ Contractor shall submit cold weather epoxy specifications to engineer for review prior to installation.

PIER 15 PROFILE VIEW  
(Looking East)  
Not to Scale

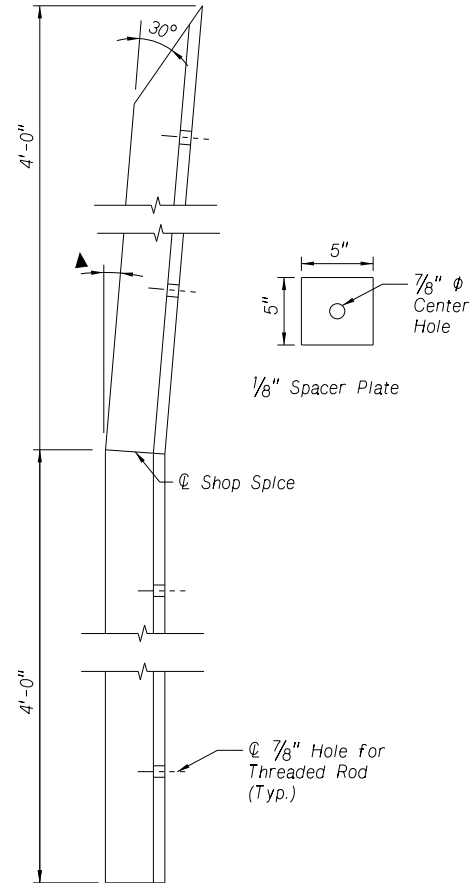


\* Existing concrete may be removed up to 1/2" deep beneath C5x9 in order to adjust for offset ice breaker. Alternatively, 1/8" spacer plates may be placed to adjust.

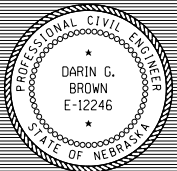
PIER 15 PLAN VIEW  
Not to Scale

DIMENSION TABLE		
Location	"A" (in.)	▲
Pier 15	8	4.4°

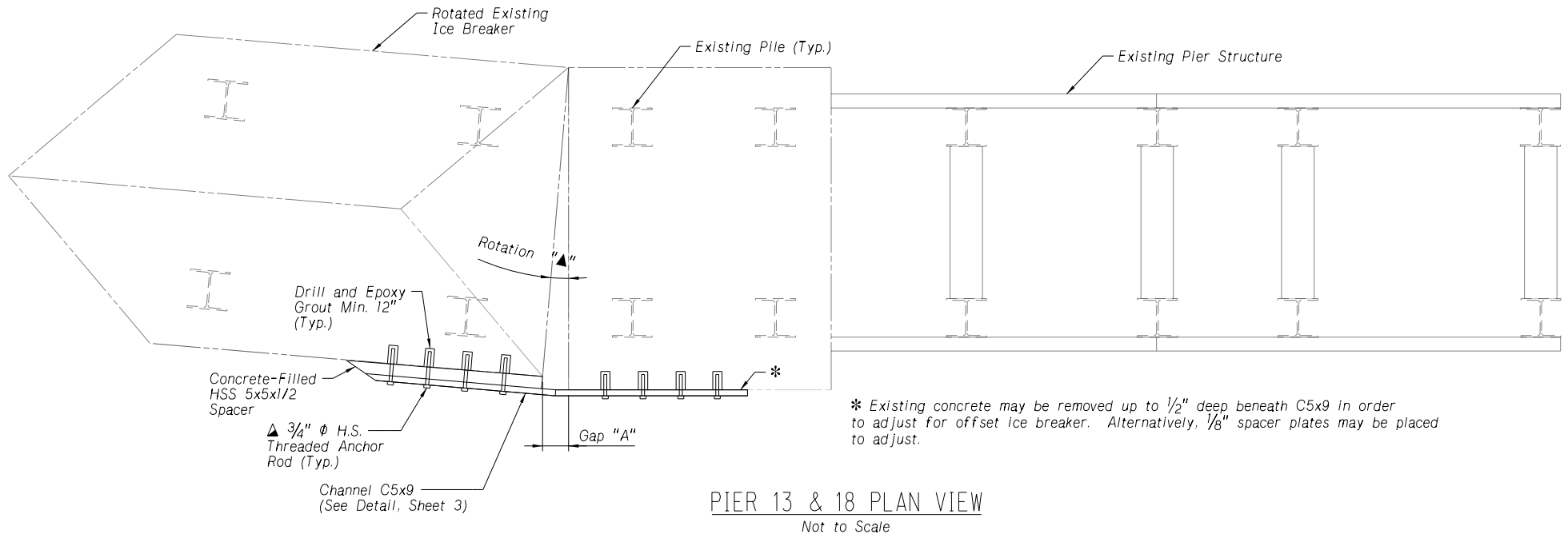
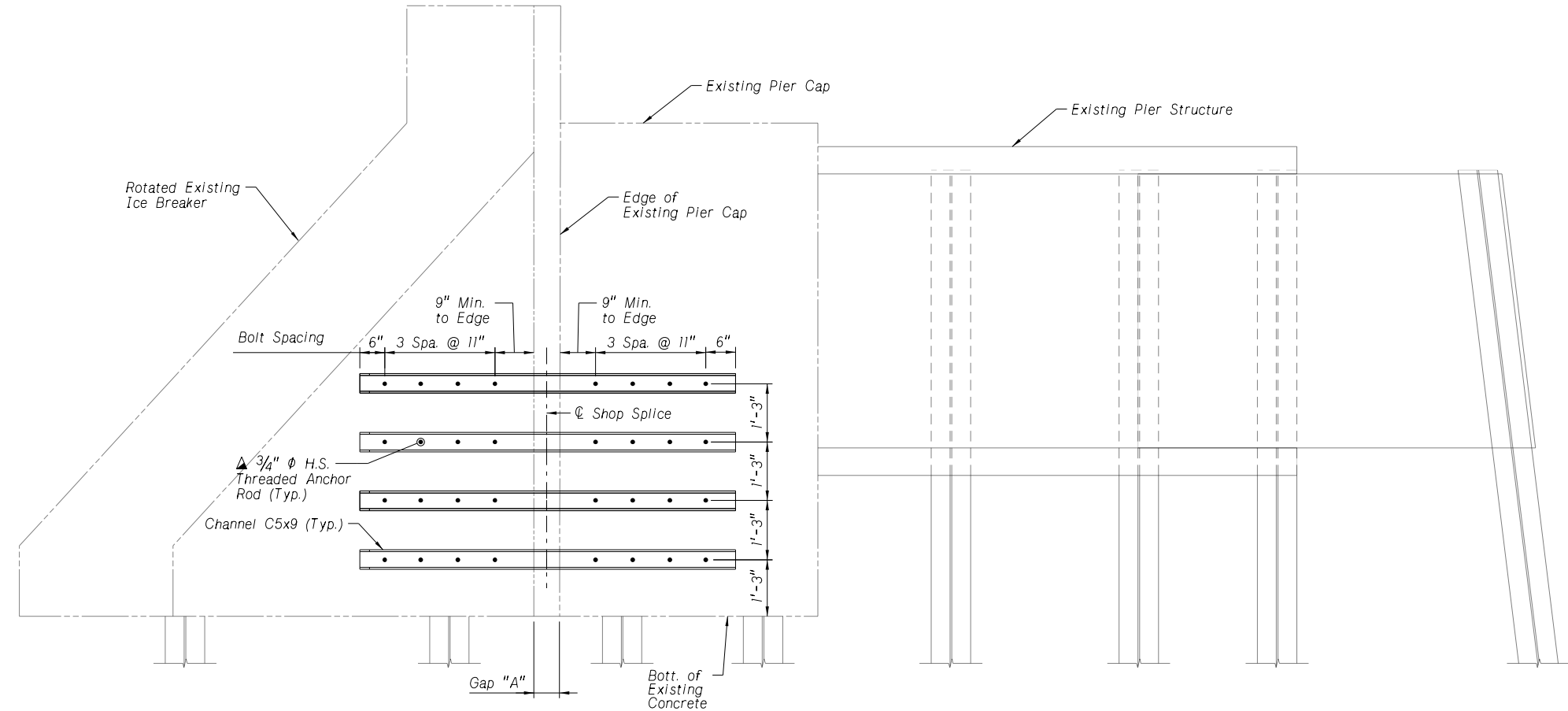
Note: Contractor shall field verify gap distance "A" and corresponding angle "▲" prior to fabrication of channel restraints.



CHANNEL C5X9 DETAIL  
Not to Scale



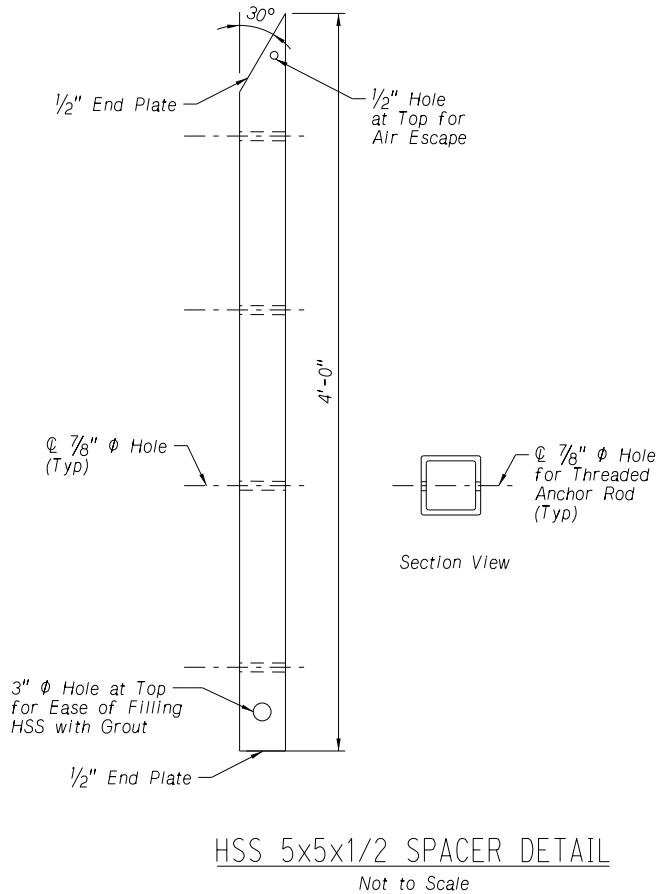




\* Existing concrete may be removed up to 1/2" deep beneath C5x9 in order to adjust for offset ice breaker. Alternatively, 1/8" spacer plates may be placed to adjust.

DIMENSION TABLE		
Location	"A" (in.)	$\Delta$
Pier 13	3	2.2°
Pier 18	6	5.9°

Note: Contractor shall field verify gap distance "A" and corresponding angle " $\Delta$ " prior to fabrication of channel restraints. Size of HSS spacer shall be adjusted based upon field measurements to minimize need for shims.



SHEET NO. 4

PROJECT NUMBER 20200825

STRUCTURE NO. LIED BRIDGE

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT (PAPIO NRD)

ICE BREAKER RESTRAINT - PIERS 13 & 18

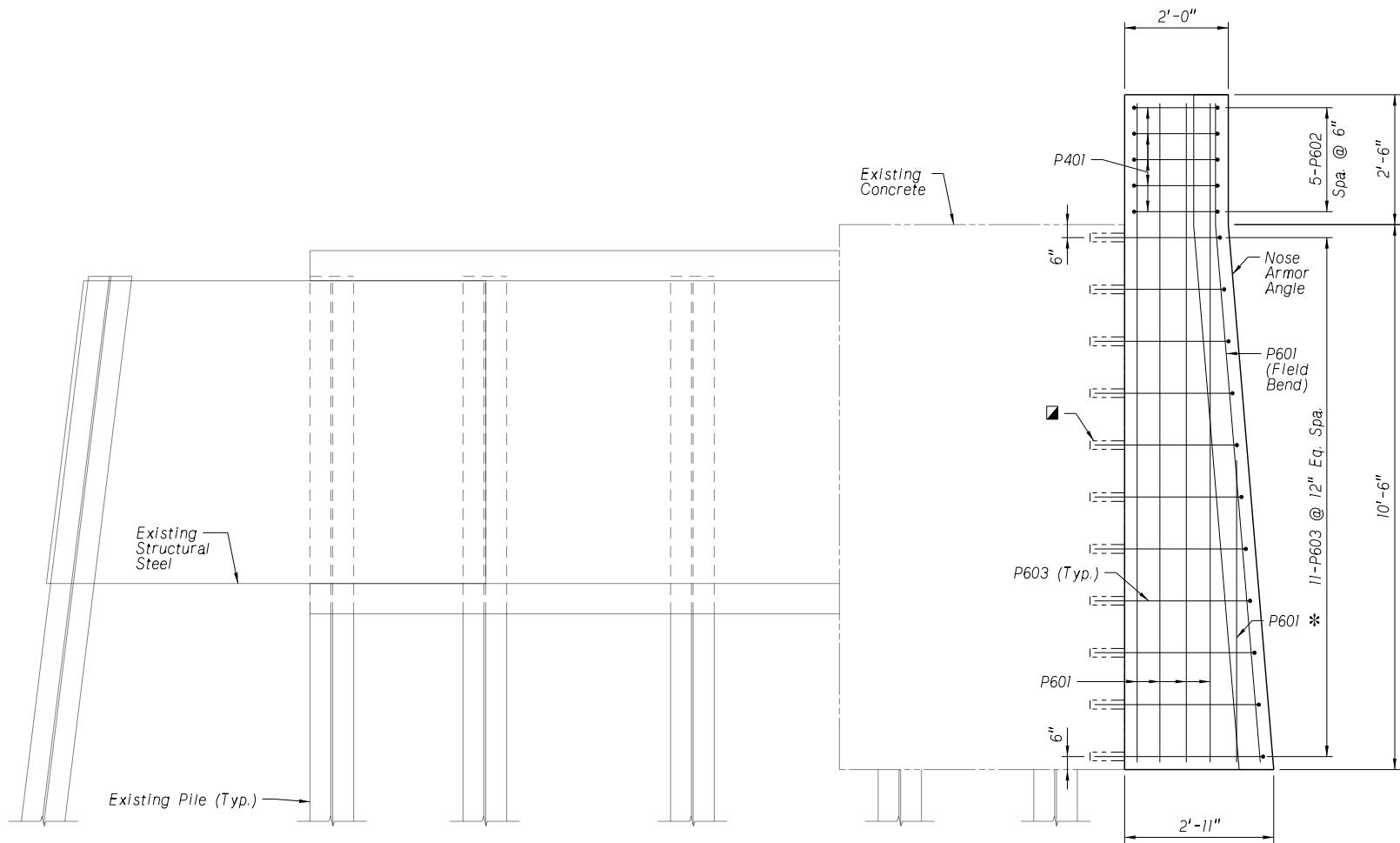
DESIGNED BY DGB    DETAILED BY CIF    CHECKED BY ITP    DATE OCTOBER 2020

LIED BRIDGE SUBSTRUCTURE REPAIR

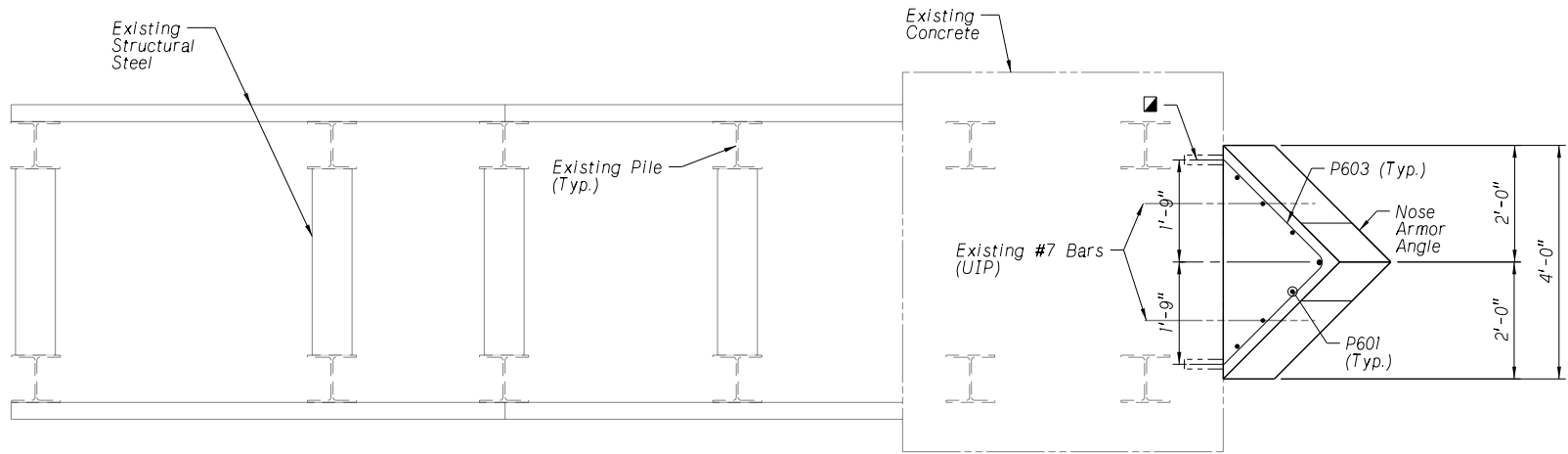
**SCHEMMER**

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PIER 14 PROFILE VIEW  
Not to Scale



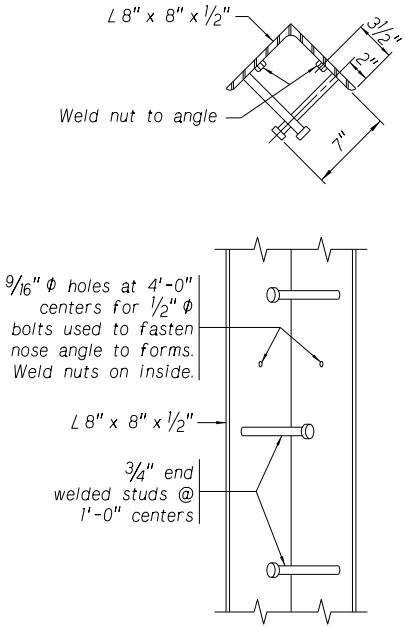
PIER 14 PLAN VIEW  
Not to Scale

B I L L O F B A R S													WEIGHT
													LB
MARK	NO.	LENGTH	TYPE	"A"	"B"	"C"	"D"	"E"	"F"		PIN	HOOK	
P601	11	12'-6"	STR										207
P603	11	8'-4"	122	2'-0" ▲	2'-2"	2'-2"	1'-9"	1'-9"			4 1/2"		138
P401	5	10'-10"	102	3'-3"	2'-2"	2'-2"					2"		36
TOTAL =													381 LB

- \* Field Cut As Needed
- ▲ Trim "A" Leg of P603 Bars To Fit
- Drill and Epoxy Grout Min. 12"

QUANTITIES		
ITEM	UNIT	TOTAL
CONCRETE	CY	3.0
REINFORCING STEEL	LB	381

(For Reference Only)



NOSE ARMOR ANGLE DETAILS  
Not to Scale

B E N D I N G   D I A G R A M S									
ALL DIMENSIONS ARE OUT TO OUT & NOT TO SCALE ALL REINFORCING STEEL SHALL BE EPOXY COATED									
STANDARD HOOK LENGTH					PIN DIAMETER				
PRIMARY STRESS BARS			STIRRUPS & TIES			PRIMARY STRESS		STIRRUPS & TIES	
BAR SIZE	HOOK H		BAR SIZE	HOOK H		BAR SIZE	Dp	BAR SIZE	Dp
	90°	180°		90°	135°				
4	8"	6"	3	4"	4"	4	3"	3	1 1/2"
5	10"	7"	4	4 1/2"	4 1/2"	5	3 3/4"	4	2"
6	12"	8"	5	6"	5 1/2"	6	4 1/2"	5	2 1/2"
7	15"	10"	6	12"	8"	7	5 1/4"	6	4 1/2"
8	17"	11"	7	14"	9"	8	6"	7	5 1/4"
9	19"	15"	8	16"	10 1/2"	9	9 1/2"	8	6"
10	23"	17"	d = BAR SIZE Dp = PIN DIAMETER			10	11"		
11	24"	19"				11	12"		
						DETAILING HOOK			
						DIMENSION		H	90°
						DIMENSION		H	135°
						DIMENSION		H	180°

SHEET NO. 5

PROJECT NUMBER 20200825

STRUCTURE NO. LIED BRIDGE

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT (PAPIO NRD)

ICE BREAKER REPLACEMENT

LIED BRIDGE SUBSTRUCTURE REPAIR

DESIGNED BY DGB

DETAILED BY CIF

CHECKED BY ITP

DATE OCTOBER 2020

PROFESSIONAL CIVIL ENGINEER

DARIN G. BROWN

E-12246

STATE OF NEBRASKA

SCHEMMER

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