

CONTRACT NO. XXXX-XX

CITY OF DEER PARK, TEXAS

BATTLEGROUND HISTORIC BRIDGE REPAIR

CITY MANAGER
JAMES J. (JAY) STOKES

ASSISTANT CITY MANAGER
GARY M. JACKSON

PUBLIC WORKS DIRECTOR
W.R. (BILL) PEDERSEN, P.E.

CITY SECRETARY
SHANNON BENNETT



MAYOR
JERRY MOUTON, JR.

COUNCIL MEMBERS
POSITION NO. 1 - SHERRY GARRISON
POSITION NO. 2 - THANE HARRISON
POSITION NO. 3 - TOMMY GINN
POSITION NO. 4 - BILL PATTERSON
POSITION NO. 5 - RON MARTIN
POSITION NO. 6 - RAE A. SINOR

INDEX OF DRAWINGS

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710 E. SAN AUGUSTINE STREET
DEER PARK, TX 77536

OCTOBER 2018

PRELIMINARY

SUBMITTED FOR INTERIM REVIEW
Under the authority of:

JONATHAN GRIFFIN, P.E. No. 116876
DATE: OCTOBER 2018, IT IS NOT
TO BE USED FOR CONSTRUCTION,
BIDDING OR PERMIT PURPOSES

RPS

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SUGGESTED SEQUENCE OF WORK:

1. CONTRACT MOBILIZATION.
2. ABRASSIVE BLAST AND CLEAN METAL TRUSS STRUCTURE.
3. PROVIDE TEMPORARY BRACING.
4. REMOVE AND REPLACE EXISTING TRUSS MEMBERS AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
5. REPAIR SECTION LOSS IN METAL TRUSS MEMBERS.
6. CLEAN AND PAINT TRUSS MEMBERS.
7. REMOVE DEBRIS AND MATERIALS. PERFORM RESTORATION OF DAMAGED GROUNDS IF NEEDED.

GENERAL NOTES:

1. MATERIAL AND CONSTRUCTION SPECIFICATIONS: CURRENT TXDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
2. THE CONTRACTOR SHALL COORDINATE HIS/HER CONSTRUCTION SCHEDULE WITH THE OWNER PRIOR TO COMMENCING WORK. THE GOLF CART PATH AND BRIDGE SHALL REMAIN CLOSED DURING CONSTRUCTION.
3. CONDITION OF THE FACILITIES, UPON COMPLETION OF JOB, SHALL BE GOOD AS THE CONDITION PRIOR TO STARTING WORK. THE CONTRACTOR SHALL RESTORE ALL GRADES AND LANDSCAPING TO PRE- CONSTRUCTION CONDITIONS AND RE-ESTABLISH TURF AREAS DAMAGED BY THE CONSTRUCTION ACTIVITIES AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL CONDUCT HIS/HER OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER VEHICLES DO NOT CREATE A DIRT NUISANCE OR SAFETY HAZARD. CLEAN UP HAS NO SEPARATE PAY ITEM AND SHALL BE PERFORMED DAILY BY THE CONTRACTOR AT HIS/HER EXPENSE.
5. ANY AREA OF GRASS WHICH IS DISTURBED OR DAMAGED DURING THE CONSTRUCTION SHALL BE REPAIRED OR REPLACED. LANDSCAPED AREAS SHALL BE RESTORED TO AS GOOD CONDITION AS THE EXISTING CONDITION. ALL GRASS AND LANDSCAPING WORK HAS NO SEPARATE PAY ITEM AND SHALL BE PERFORMED BY THE CONTRACTOR AT HIS/HER EXPENSE.
6. EXISTING PAVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION HAS NO SEPARATE PAY ITEM AND SHALL BE REPLACED BY THE CONTRACTOR AT HIS/HER EXPENSE.
7. EXISTING PAVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION HAS NO SEPARATE PAY ITEM AND SHALL BE REPLACED BY THE CONTRACTOR AT HIS/HER EXPENSE.
8. ALL DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR AT HIS/HER EXPENSE. ALL CHANGES ARE TO BE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ALLOW SEVEN DAYS FOR THE ENGINEER TO REVIEW PROPOSED CHANGES.
9. THE LOCATION OF SHOWN UTILITIES IS APPROXIMATE ONLY. THE CONTRACTOR SHALL REQUEST THE EXACT LOCATION OF THESE AND ALL UNDERGROUND FACILITIES AT LEAST 48 HOURS BEFORE COMMENCING WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS/HER FAILURE TO REQUEST THE LOCATION AND PRESERVATION OF THESE UNDERGROUND FACILITIES. ALL REPAIRS SHALL BE PERFORMED BY THE CONTRACTOR AT HIS/HER EXPENSE.
- 10.ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNING AUTHORITY BY THE CONTRACTOR AT HIS/HER EXPENSE.
- 11.THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS.
- 12.THE CONTRACTOR SHALL REMOVE ALL TRASH, EXCESS MATERIAL, DEBRIS, ETC. FROM THE SITE UPON COMPLETION OF THE PROJECT PRIOR TO FINAL INSPECTION AND APPROVAL BY THE APPROVING AGENCIES.
- 13.INSTALL AND MAINTAIN TEMPORARY FENCING DURING CONSTRUCTION WHERE SECURITY OR PUBLIC SAFETY IS A CONCERN. THERE IS NO SEPARATE PAY ITEM AND SHALL BE PERFORMED BY THE CONTRACTOR AT HIS/HER EXPENSE.
- 14.THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AN UPDATED REDLINED "AS- BUILT" SET OF CONSTRUCTION DRAWINGS ON SITE FOR INSPECTION BY THE ENGINEER.
- 15.CONTRACTOR SHALL SUPPLY COLOR SAMPLES (MINIMUM 4 COLORS) FOR THE METAL TRUSS STRUCTURE AND FINAL APPEARANCE PAINT COAT TO THE OWNER. OWNER WILL CHOOSE COLORS TO BE USED.
- 16.MATERIALS USED FOR FILLING VOIDS SHALL BE BELZONE 1111, OR APPROVED EQUAL. THE PRODUCT WILL BE APPLIED PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHAPES AND PLATES SHALL BE PER ASTM A36. STRUCTURAL STEEL BOLTS AND NUTS SHALL BE PER ASTM A307. STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2. THE CONTRACTOR SHALL PROVIDE AND STOCKPILE STRUCTURAL STEEL ANGLES AND PLATES FOR REPLACEMENT OF EXISTING TRUSS MEMBERS INDICATED IN THE CONSTRUCTION DOCUMENTS. IN ADDITION TO PROVIDING ANGLES AND PLATES WITH PRE-DRILLED HOLES FOR 1/2" DIAMETER BOLTS, THE CONTRACTOR SHALL PROVIDE ALL 1/2" BOLTS TO REPLACE THE NUMBER OF RIVETS AT EACH MEMBER AND ALL LATTICE PLATES WITH PRE-DRILLED HOLES FOR 1/2" BOLTS (SEE AS-BUILT PLANS).
3. CONTRACTOR SHALL COORDINATE STRUCTURAL STEEL MEMBERS, SIZES, NUMBER AND LOCATIONS WITH ENGINEER. CONTRACTOR SHALL FIELD VERIFY ALL STRUCTURAL STEEL MEMBER DIMENSIONS AND HOLE LOCATIONS AND SUBMIT TO THE ENGINEER FOR APPROVAL BEFORE OBTAINING STRUCTURAL STEEL. FIELD MEASUREMENT, COORDINATION AND SUBMITTAL COSTS HAVE NO SEPARATE PAY ITEM AND SHALL BE INCLUDED IN THE BID ITEM FOR REPLACE STEEL MEMBER CONNECTIONS AND REPAIR SECTION LOSS WITH STEEL MEMBER.
4. CONTRACTOR SHALL REMOVE EXISTING TRUSS MEMBERS AND EXISTING RIVETS. THE CONTRACTOR SHALL COORDINATE AND SUBMIT FOR APPROVAL BY THE ENGINEER ALL REMOVAL MEMBERS. REMOVAL OF STRUCTURAL STEEL HAS NO SEPARATE PAY ITEM AND COST TO BE INCLUDED IN BID ITEM 3.
5. EXISTING TRUSS MEMBERS SHALL BE REMOVED AND REPLACED ONE MEMBER AT A TIME. PRIOR TO STRUCTURAL STEEL REMOVAL, CONTRACTOR SHALL RESTRAIN THE STRUCTURE FROM MOVING VERTICALLY OR Laterally. ALL TEMPORARY BRACING HAS NO SEPARATE PAY ITEM AND COSTS SHALL BE INCLUDED IN BID ITEM FOR REPLACE STEEL MEMBER CONNECTIONS.
6. NEW STRUCTURAL STEEL SHALL HOT DIPPED GALVANIZED PER TXDOT SPECIFICATION 445, GALVANIZING.

SPECIAL NOTE:

THE CONTRACTOR WILL NEED TO ACCESS THE WORK AT TIMES BY THE BATTLEGROUND GOLF COURSE LAKE. THE LAKE CANNOT BE DRAINED. ALL DEBRIS AND MATERIALS SHALL REMAIN OUT OF THE WATER.



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HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE

CITY OF
DEER PARK

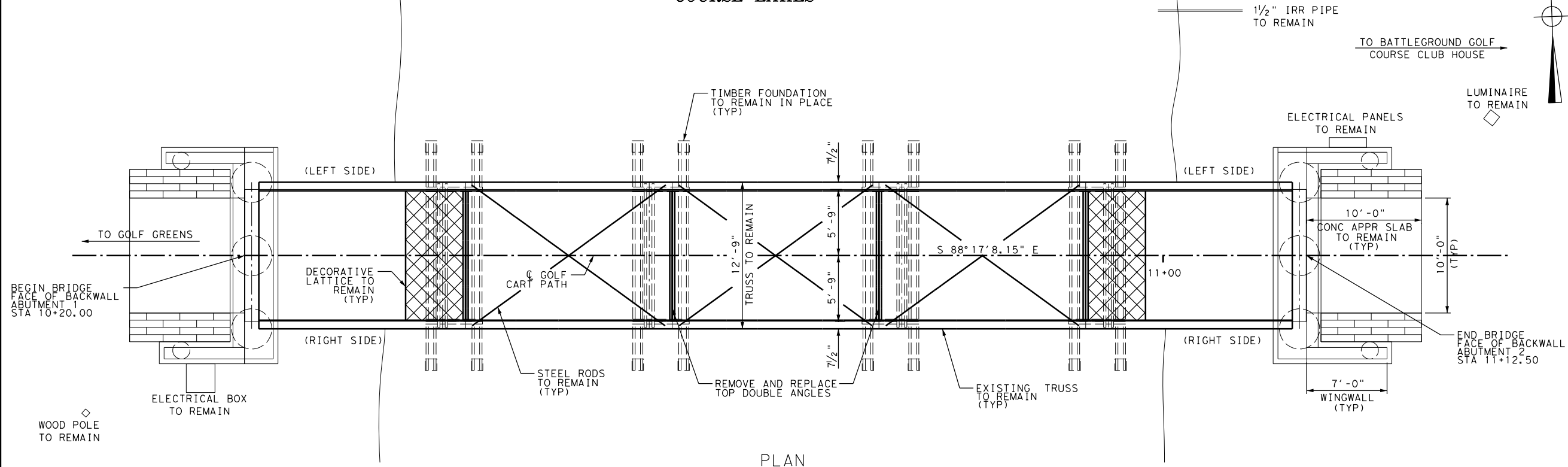
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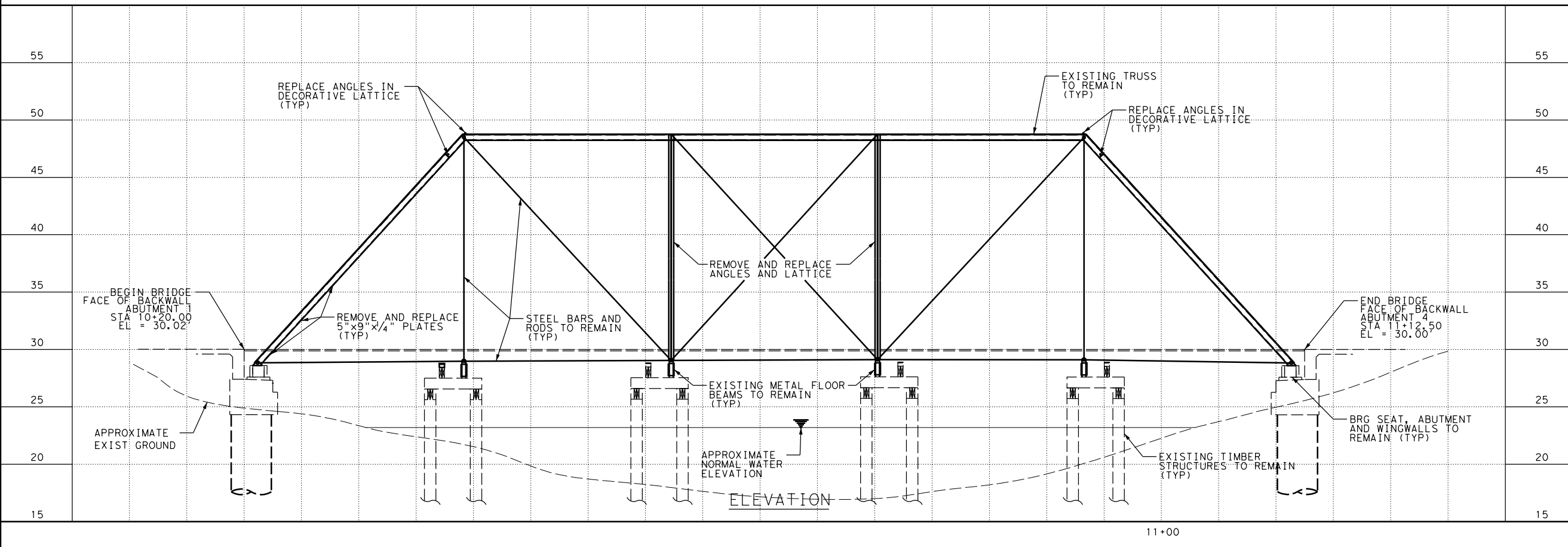
GENERAL NOTES

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BATTLEGROUND GOLF
COURSE LAKES



PLAN



ELEVATION

HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE

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 2. THE GOLF CART PATH AND BRIDGE WILL REMAIN CLOSED DURING CONSTRUCTION.
 3. THE CONTRACTOR WILL COORDINATE WITH THE OWNER A LOCATION TO STOCKPILE REQUIRED MATERIALS FOR CONSTRUCTION.
 4. CONDITIONS OF THE FACILITIES, UPON COMPLETION OF THE JOB, WILL BE AS GOOD AS THE CONDITION PRIOR TO STARTING WORK.
 5. MATERIAL AND CONSTRUCTION METHODS WILL BE PER THE CURRENT TXDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

SCALE: 1" = 10' (H)
SCALE: 1" = 10' (V)

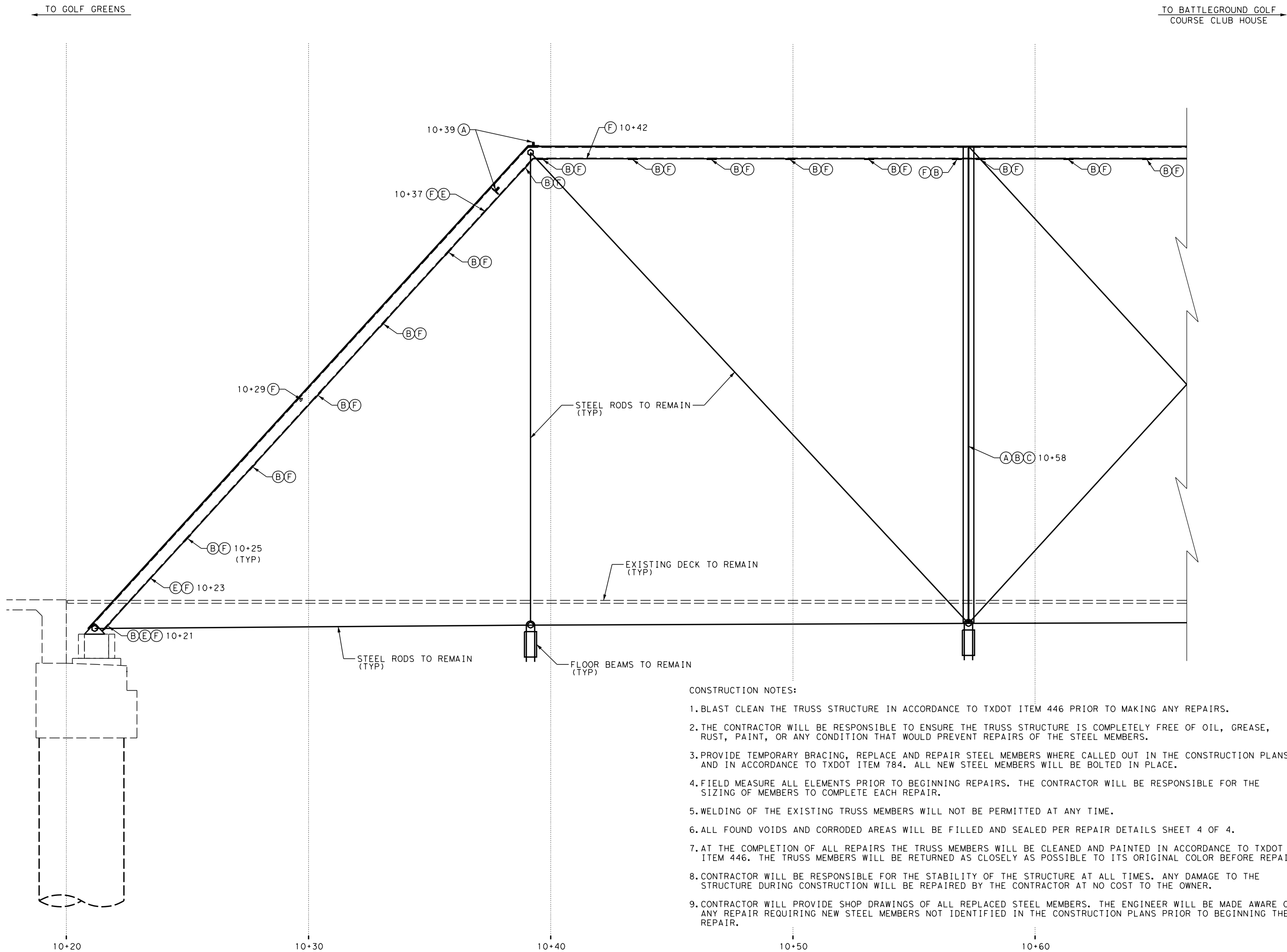
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HISTORIC BRIDGE REPAIR
PLAN & PROFILE

RPS Project No. 007737			
Drawn By	FC	Checked By	JMG
Scale	AS SHOWN	Date	OCT. 2018
DWG No.	3	Sheet	1 Of 1

Jonathan Griffin
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- CONSTRUCTION NOTES:
1. BLAST CLEAN THE TRUSS STRUCTURE IN ACCORDANCE TO TXDOT ITEM 446 PRIOR TO MAKING ANY REPAIRS.
 2. THE CONTRACTOR WILL BE RESPONSIBLE TO ENSURE THE TRUSS STRUCTURE IS COMPLETELY FREE OF OIL, GREASE, RUST, PAINT, OR ANY CONDITION THAT WOULD PREVENT REPAIRS OF THE STEEL MEMBERS.
 3. PROVIDE TEMPORARY BRACING, REPLACE AND REPAIR STEEL MEMBERS WHERE CALLED OUT IN THE CONSTRUCTION PLANS, AND IN ACCORDANCE TO TXDOT ITEM 784. ALL NEW STEEL MEMBERS WILL BE BOLTED IN PLACE.
 4. FIELD MEASURE ALL ELEMENTS PRIOR TO BEGINNING REPAIRS. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE SIZING OF MEMBERS TO COMPLETE EACH REPAIR.
 5. WELDING OF THE EXISTING TRUSS MEMBERS WILL NOT BE PERMITTED AT ANY TIME.
 6. ALL FOUND VOIDS AND CORRODED AREAS WILL BE FILLED AND SEALED PER REPAIR DETAILS SHEET 4 OF 4.
 7. AT THE COMPLETION OF ALL REPAIRS THE TRUSS MEMBERS WILL BE CLEANED AND PAINTED IN ACCORDANCE TO TXDOT ITEM 446. THE TRUSS MEMBERS WILL BE RETURNED AS CLOSELY AS POSSIBLE TO ITS ORIGINAL COLOR BEFORE REPAIRS.
 8. CONTRACTOR WILL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE AT ALL TIMES. ANY DAMAGE TO THE STRUCTURE DURING CONSTRUCTION WILL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
 9. CONTRACTOR WILL PROVIDE SHOP DRAWINGS OF ALL REPLACED STEEL MEMBERS. THE ENGINEER WILL BE MADE AWARE OF ANY REPAIR REQUIRING NEW STEEL MEMBERS NOT IDENTIFIED IN THE CONSTRUCTION PLANS PRIOR TO BEGINNING THE REPAIR.

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**HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE**

**CITY OF
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- LEGEND:
- (A) REPLACE ANGLES
 - (B) REPLACE PLATE
 - (C) REPLACE LATTICE
 - (D) REPAIR SECTION LOSS WITH STEEL PLATE
 - (E) REPAIR SECTION LOSS WITH STEEL ANGLE
 - (F) FILL VOID

SCALE: 1" = 4'
2 0 2

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**HISTORIC BRIDGE
REPAIR LOCATIONS
(RIGHT SIDE)**

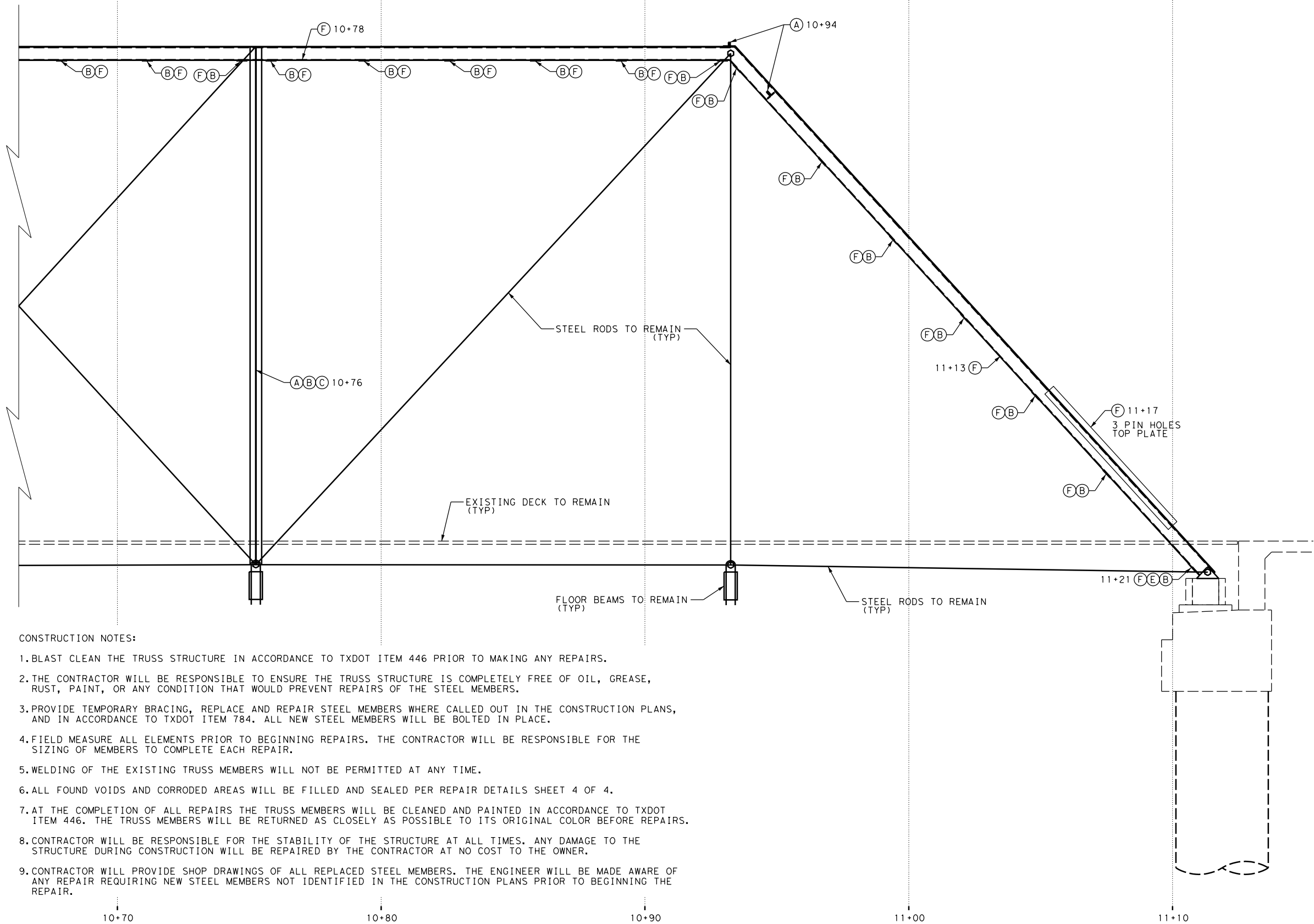
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Scale AS SHOWN	Date OCT. 2018		
DWG No 4	Sheet 1 Of 4		

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Jonathan Griffin
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← TO GOLF GREENS

TO BATTLEGROUND GOLF
COURSE CLUB HOUSE →



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SCALE: 1" = 4'
2 0 2

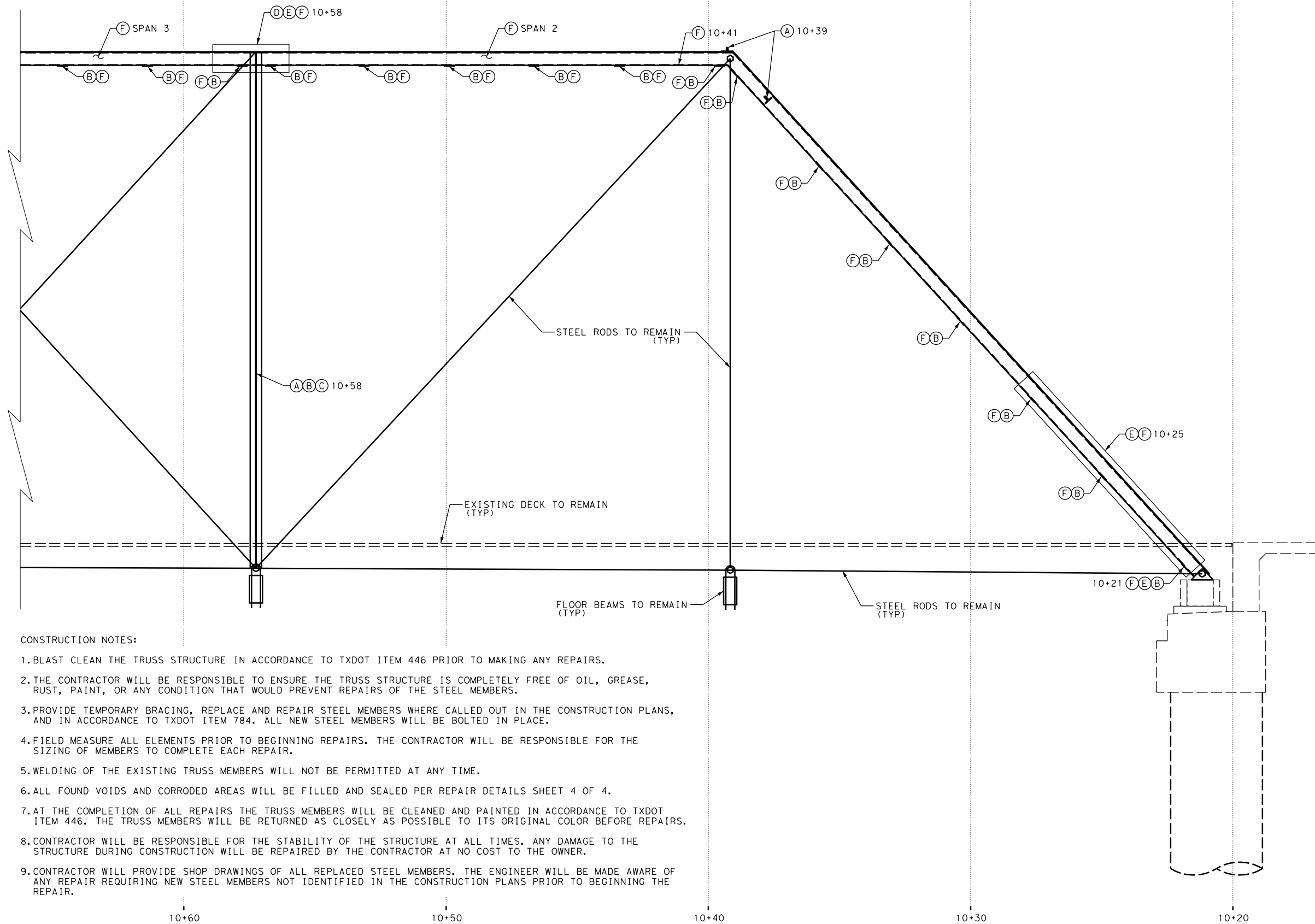
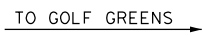
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HISTORIC BRIDGE
REPAIR LOCATIONS
(RIGHT SIDE)

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DWG No	5	Sheet	2 Of 4

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HISTORIC BRIDGE REPAIR ON BATTLEGROUND GOLF COURSE

CITY OF
DEER PARK

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- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

SCALE: 1" = 4'

A horizontal scale bar with alternating black and white segments. Below the bar, the numbers 2, 0, and 2 are written, indicating a total length of 4 feet.

REV	DESCRIPTION	BY	DATE

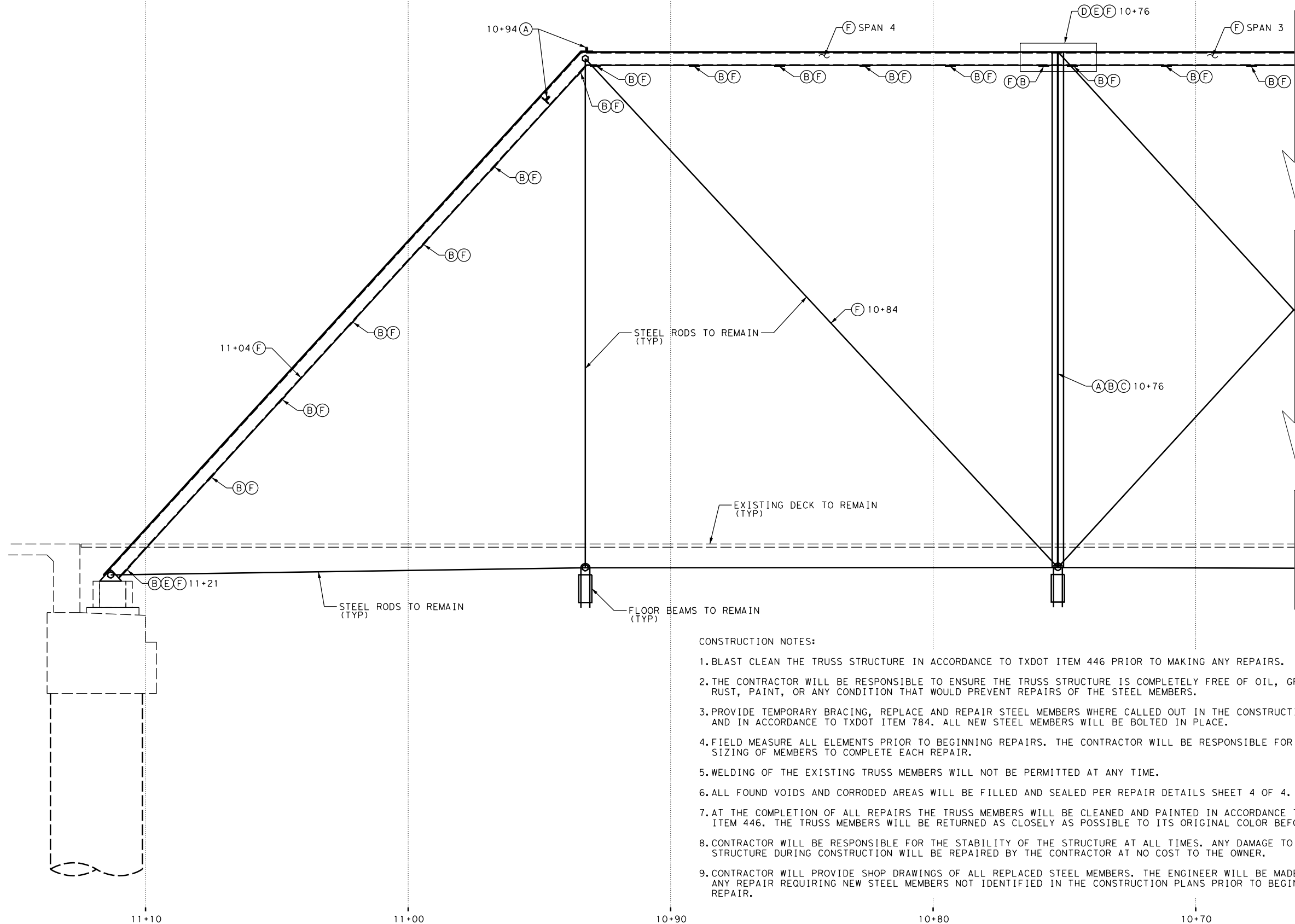
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HISTORIC BRIDGE
REPAIR LOCATIONS
(LEFT SIDE)

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Scale AS SHOWN	Date OCT. 2018
DWG No 6	Sheet 3 Of 4

← TO BATTLEGROUND GOLF
COURSE CLUB HOUSE

TO GOLF GREENS →



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- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

SCALE: 1" = 4'
2 0 2

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HISTORIC BRIDGE
REPAIR LOCATIONS
(LEFT SIDE)

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DWG No 7	Sheet 4	Of 4	



BEGIN STRUCTURE - 10+20.00



END STRUCTURE - 11+12.50



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2. REFER TO REPAIR DETAILS SHEETS FOR GENERAL REPAIRS.
3. REPAIR AREAS IDENTIFIED ON THESE SHEETS ARE CONSIDERED TYPICAL, AND THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR AREAS NOT SPECIFICALLY IDENTIFIED.

LEGEND:

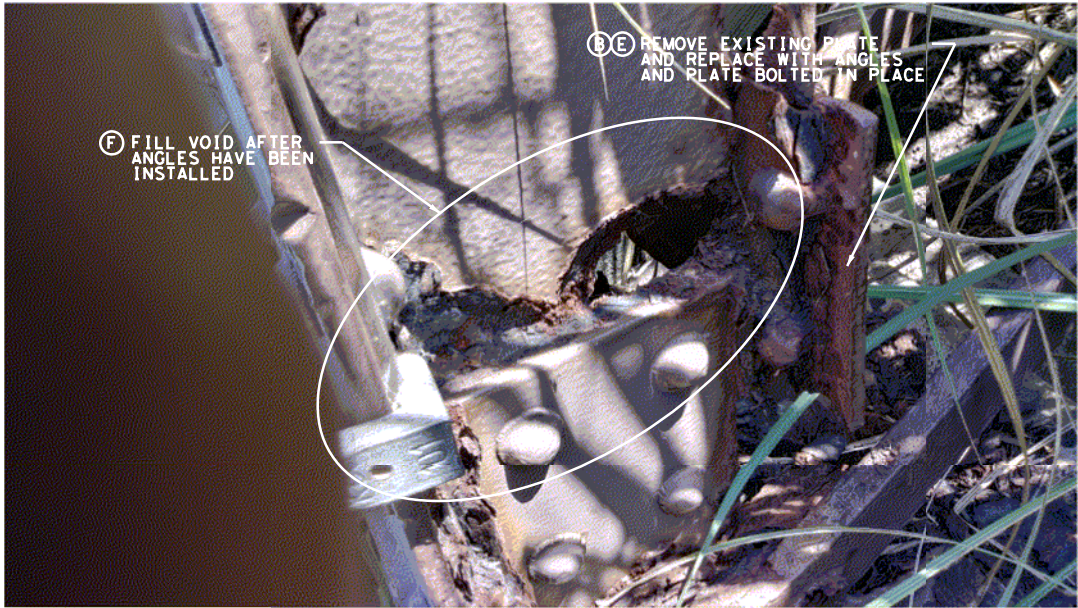
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FIELD OBSERVATIONS

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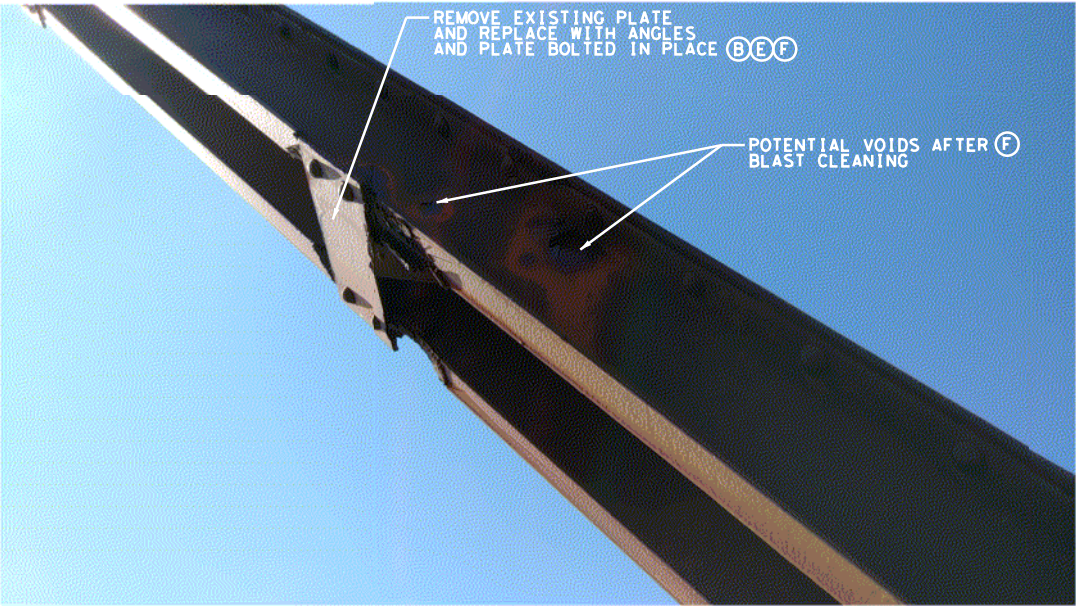
10+21 - REPAIR SECTION LOSS AT BEARING



10+23 - REPAIR SECTION LOSS



10+25 - REPLACE PLATE (TYP)



10+29 - FILL VOID



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Texas PE Firm Reg. #F-929

**HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE**

**CITY OF
DEER PARK**

NOTES:

1. REFER TO AS-BUILT PLANS FOR EXISTING TRUSS DETAILS.
2. REFER TO REPAIR DETAILS SHEETS FOR GENERAL REPAIRS.
3. REPAIR AREAS IDENTIFIED ON THESE SHEETS ARE CONSIDERED TYPICAL, AND THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR AREAS NOT SPECIFICALLY IDENTIFIED.

LEGEND:

- (A) REPLACE ANGLES
- (B) REPLACE PLATE
- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

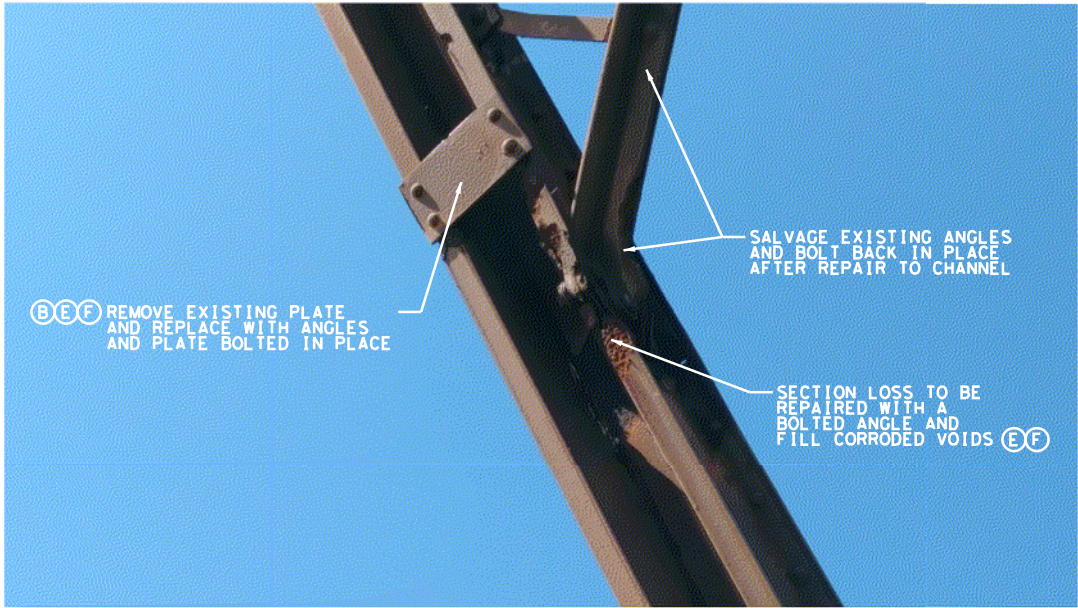
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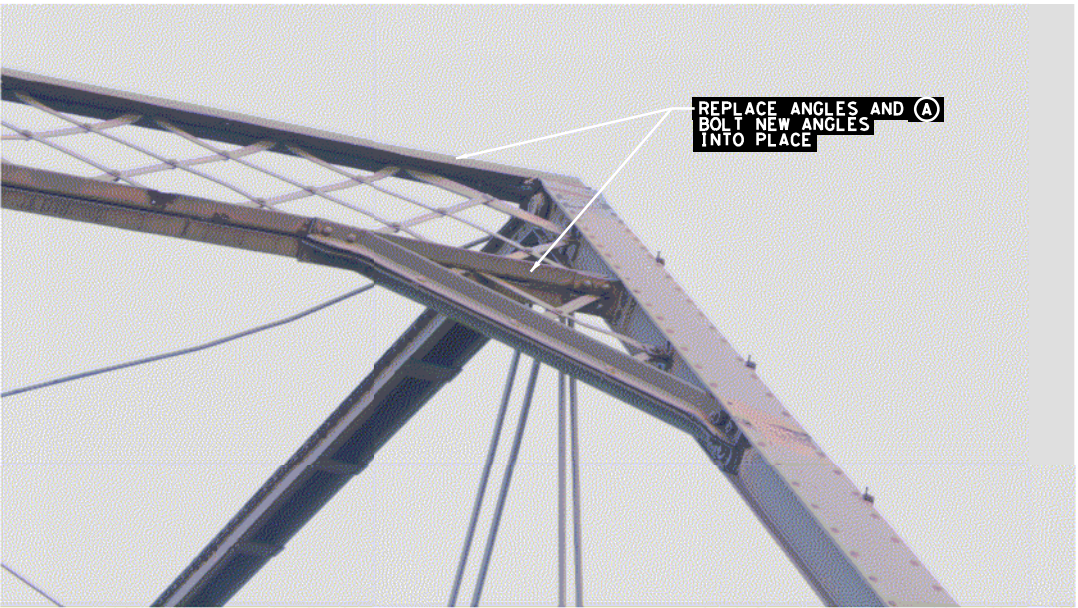
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ENGINEER: JONATHAN GRIFFIN
ENGR. REG. No.: 116876
DATE: OCTOBER 2018

**FIELD OBSERVATIONS
(RIGHT SIDE)**

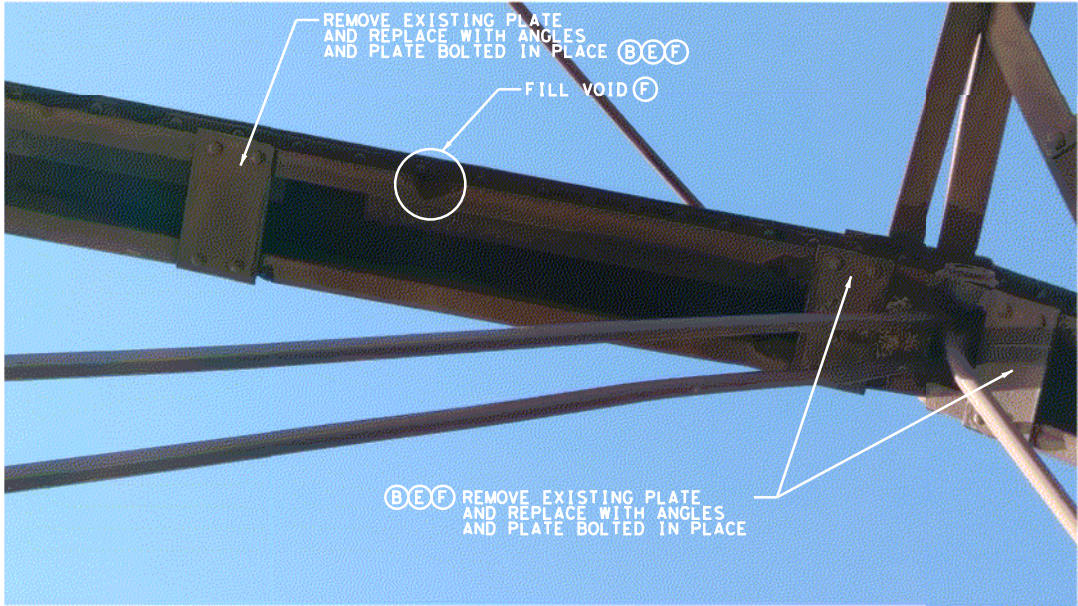
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Scale	AS SHOWN	Date	OCT. 2018
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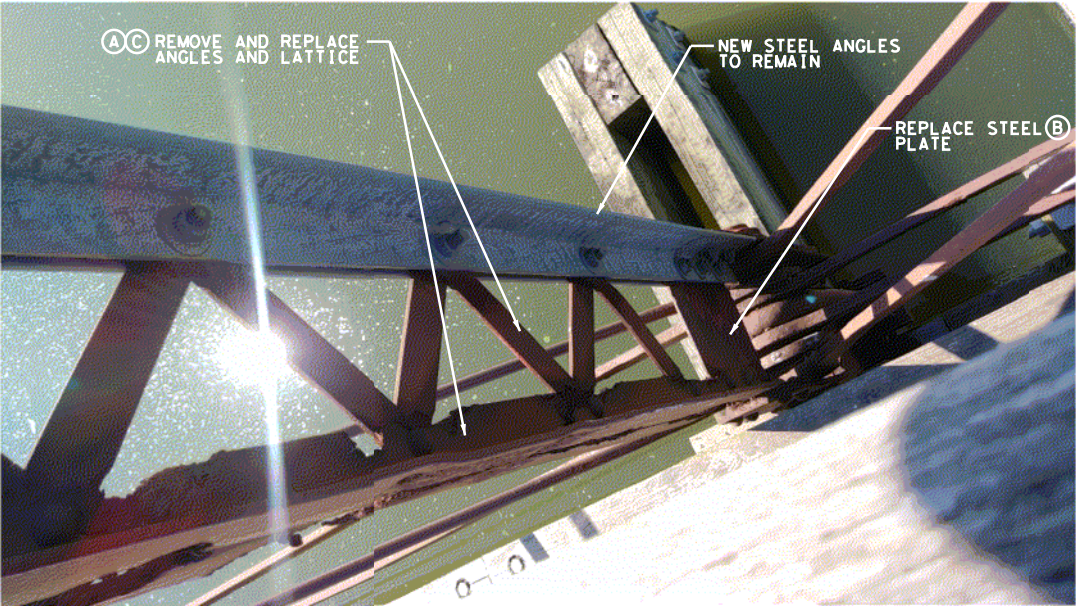
10+37 - REPAIR SECTION LOSS



10+39 - REPLACE ANGLES IN DECORATIVE LATTICE



10+42 - FILL VOID



10+58 - REPLACE VERTICAL ANGLES/LATTICE (BOTT)



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LEGEND:

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- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

N. T. S.

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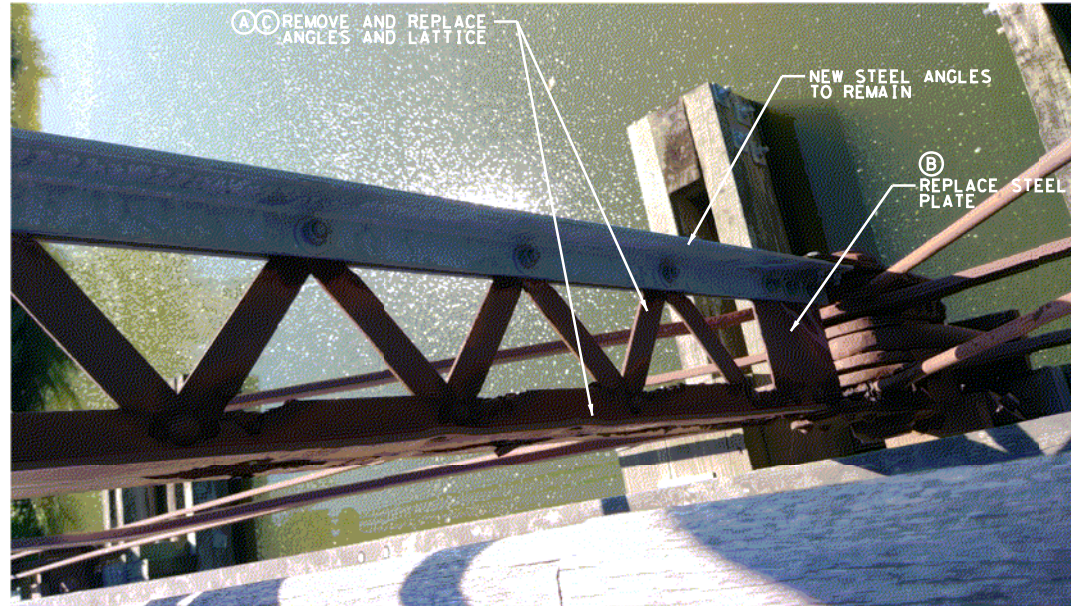
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FIELD OBSERVATIONS
(RIGHT SIDE)

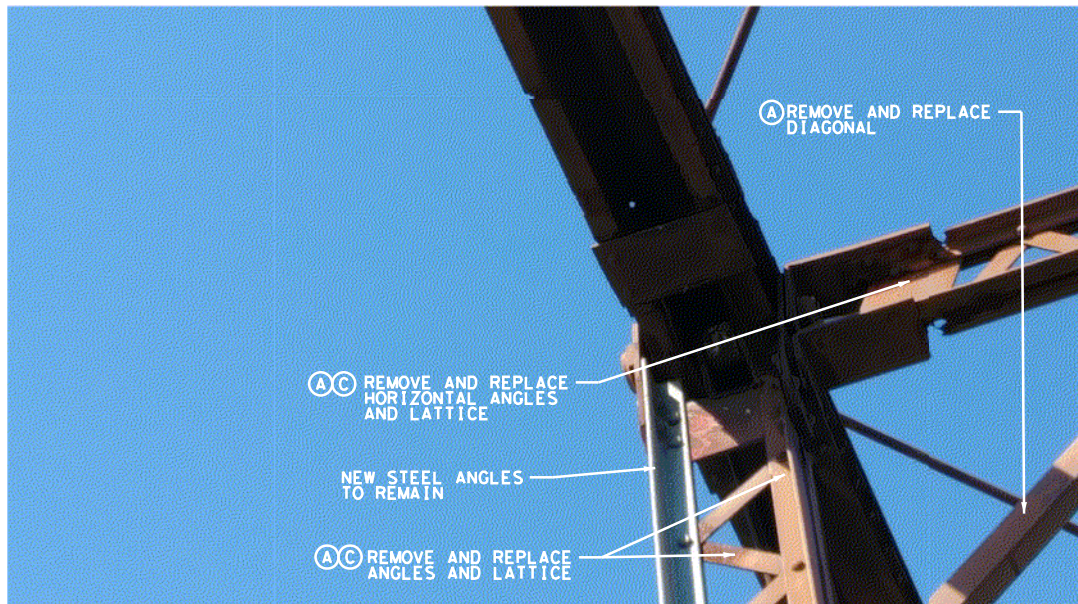
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DWG No	10	Sheet	3 Of 11



10+58 - REPLACE VERTICAL ANGLES/LATTICE (TOP)



10+76 - REPLACE VERTICAL ANGLES/LATTICE (BOTT)



10+76 - REPLACE VERTICAL ANGLES/LATTICE (TOP)



10+94 - REPLACE ANGLES IN DECORATIVE LATTICE



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CITY OF DEER PARK

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LEGEND:

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- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

N. T. S.

REV	DESCRIPTION	BY	DATE

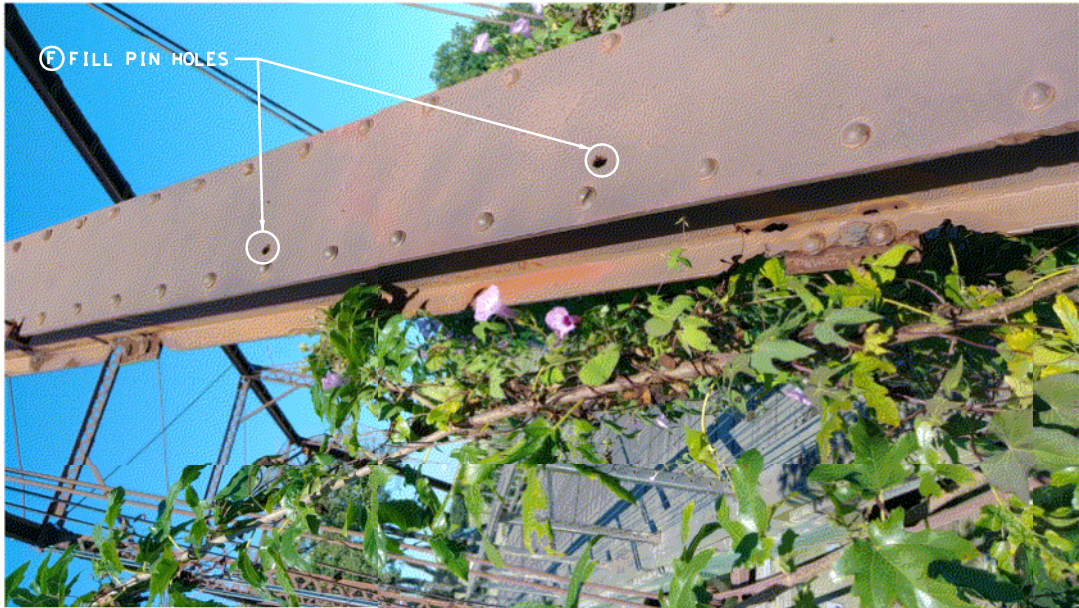
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FIELD OBSERVATIONS (RIGHT SIDE)

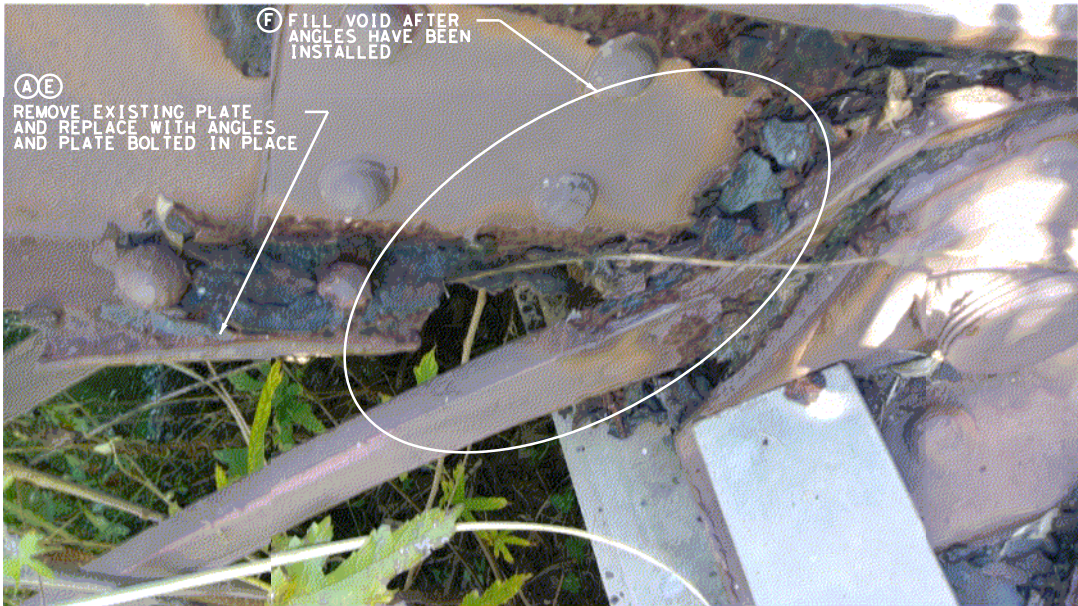
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11+13 - FILL VOIDS



11+17 - FILL VOIDS



11+21 - REPAIR SECTION LOSS AT BEARING



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- NOTES:
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- LEGEND:
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 - Ⓑ REPLACE PLATE
 - Ⓒ REPLACE LATTICE
 - Ⓓ REPAIR SECTION LOSS WITH STEEL PLATE
 - Ⓔ REPAIR SECTION LOSS WITH STEEL ANGLE
 - Ⓕ FILL VOID

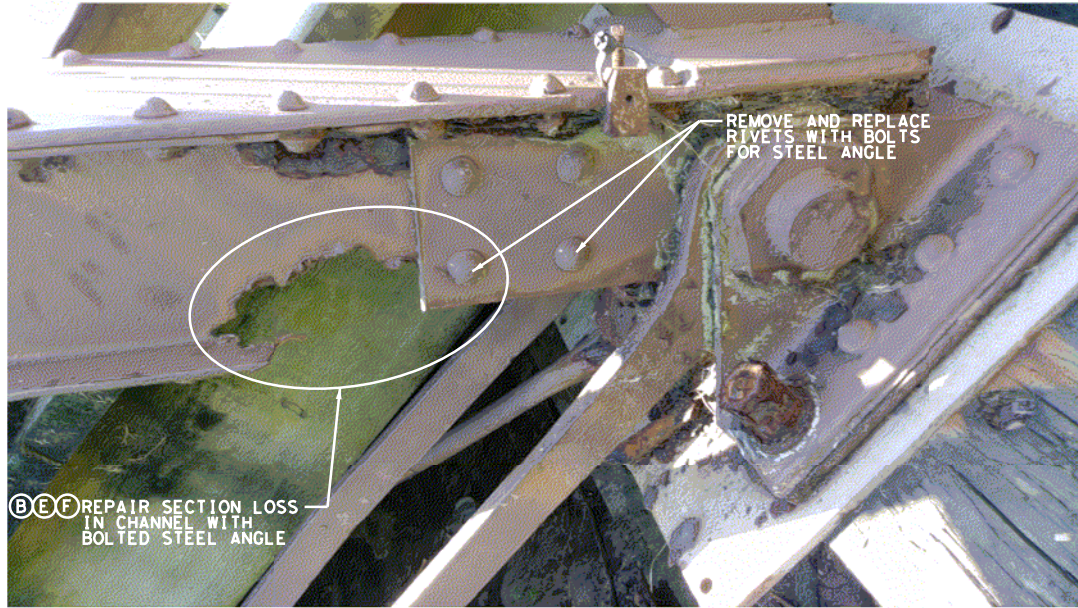
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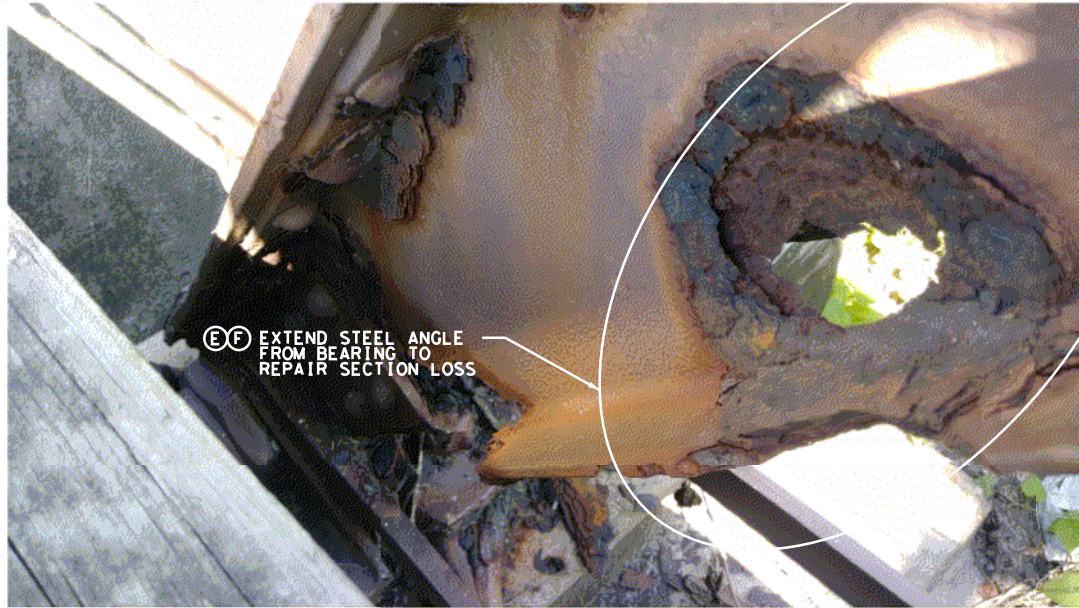
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FIELD OBSERVATIONS
(RIGHT SIDE)

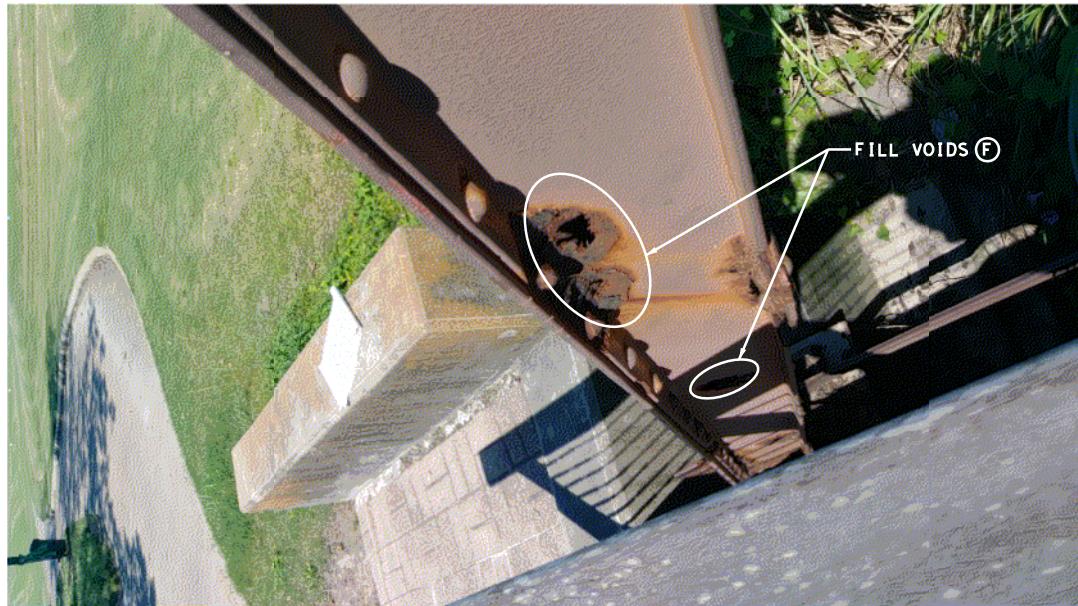
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Scale	AS SHOWN	Date	OCT. 2018
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10+21 - REPAIR SECTION LOSS AT BEARING (OUTSIDE CHANNEL)



10+21 - REPAIR SECTION LOSS AT BEARING (INSIDE CHANNEL)



10+25 - FILL VOIDS (PIC 1)



10+25 - FILL VOIDS (PIC 2)



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- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

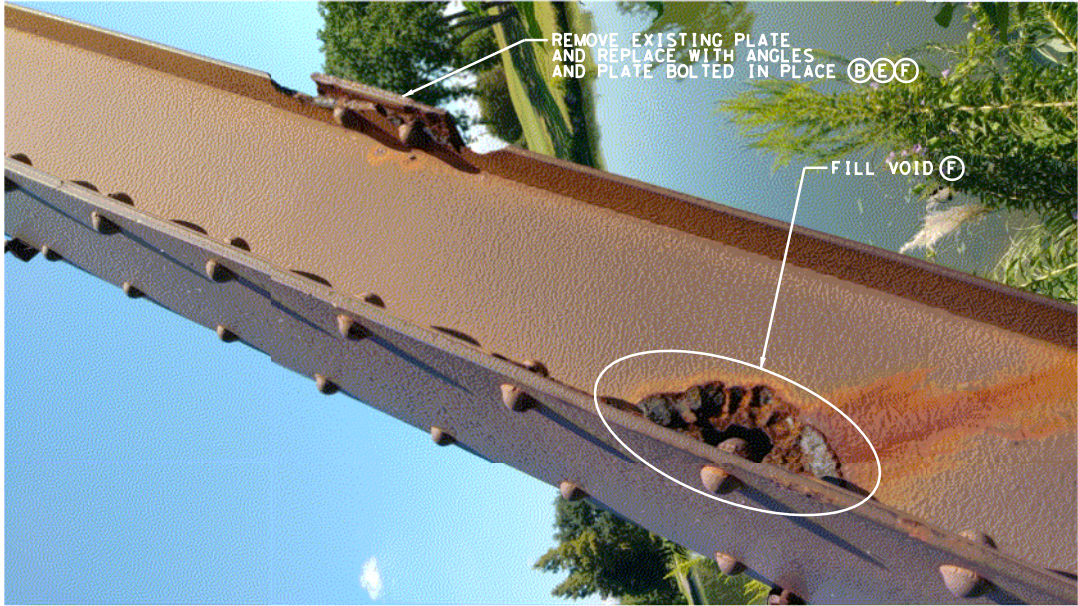
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FIELD OBSERVATIONS
(LEFT SIDE)

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DWG No	13	Sheet	6 Of 11



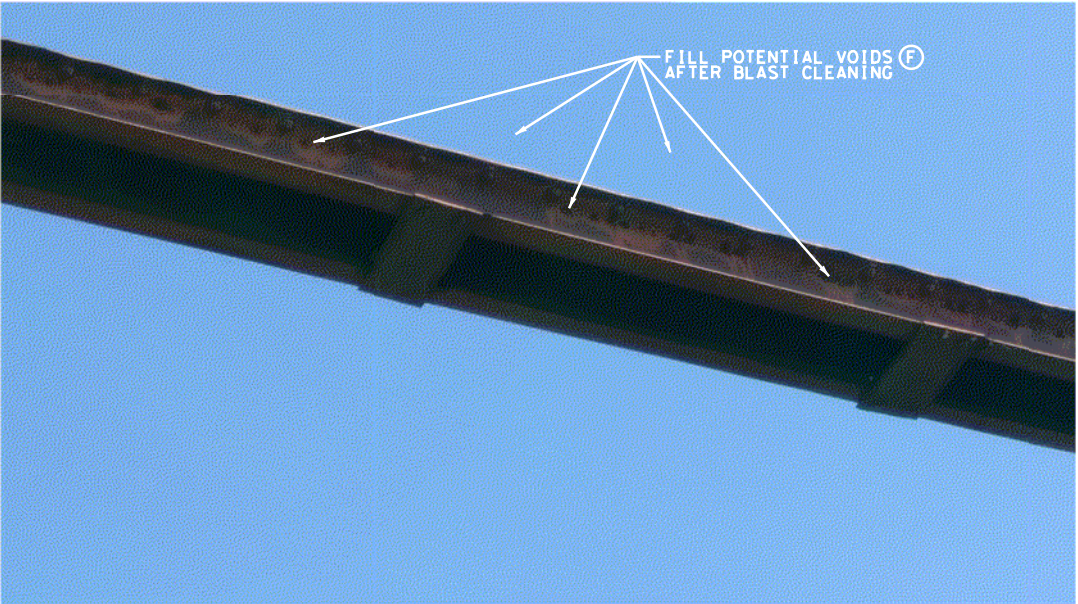
10+25 - REPAIR SECTION LOSS/VOIDS (PIC 3)



10+39 - REPLACE ANGLES IN DECORATIVE LATTICE



10+41 - FILL VOID



SPAN 2 - FILL VOID(S)



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- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

N. T. S.

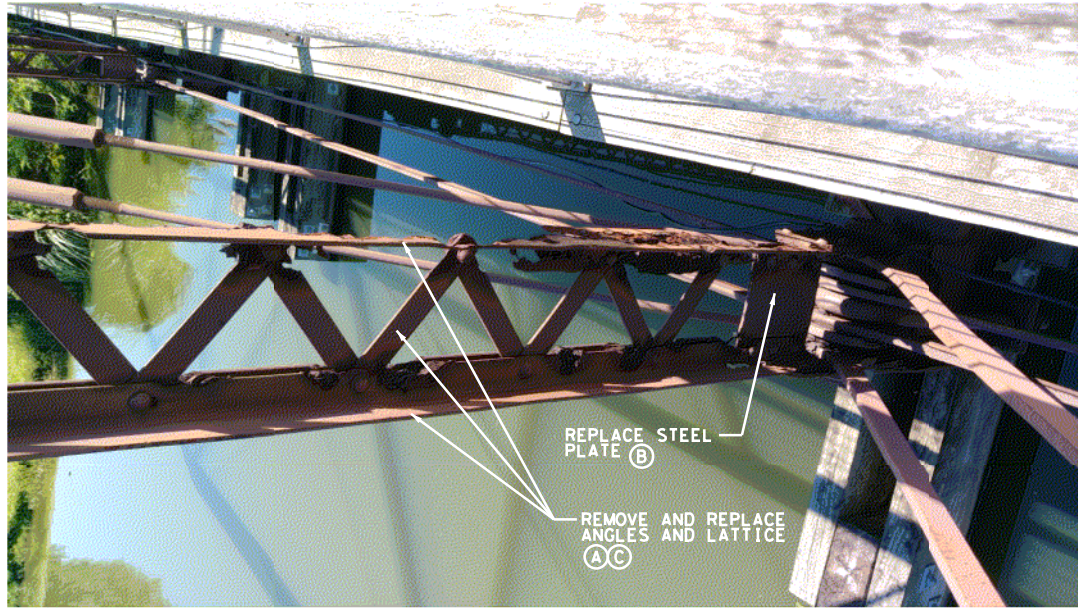
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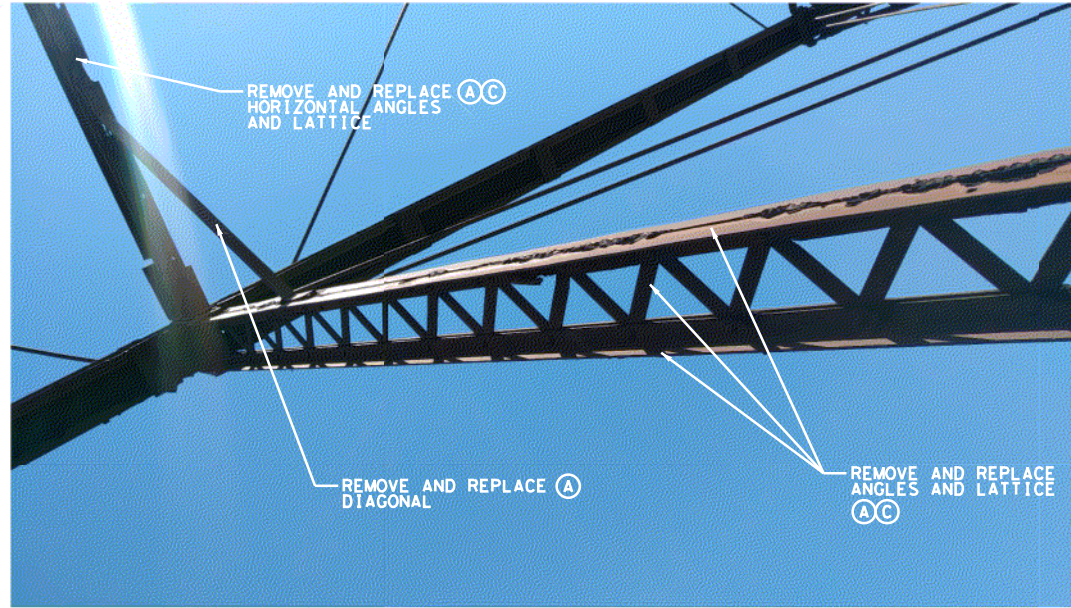
FIELD OBSERVATIONS
(LEFT SIDE)

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DWG No	14	Sheet	7 Of 11

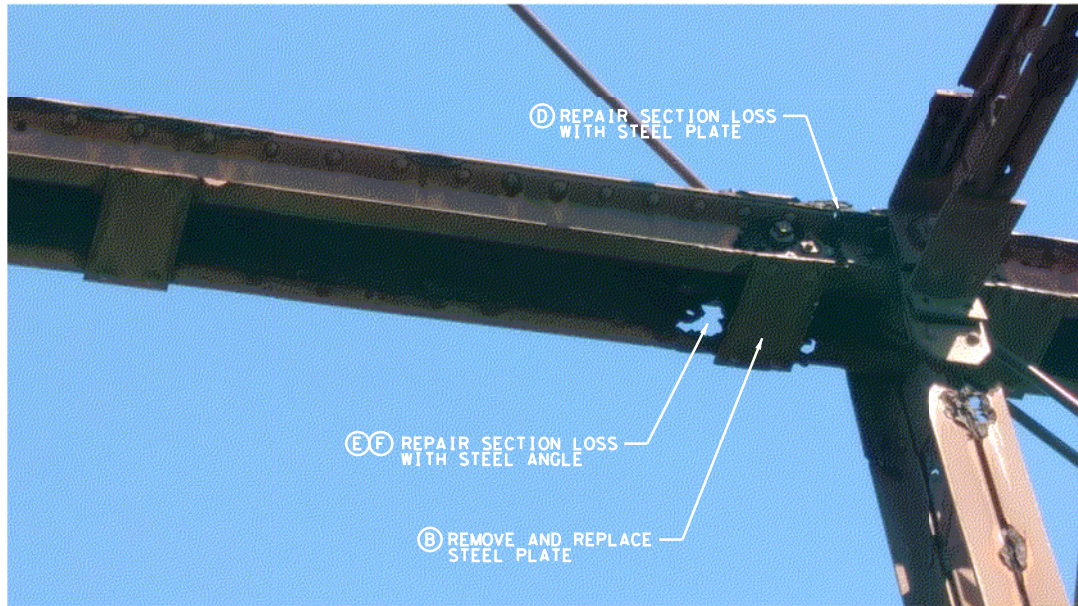
jonathan.griffin
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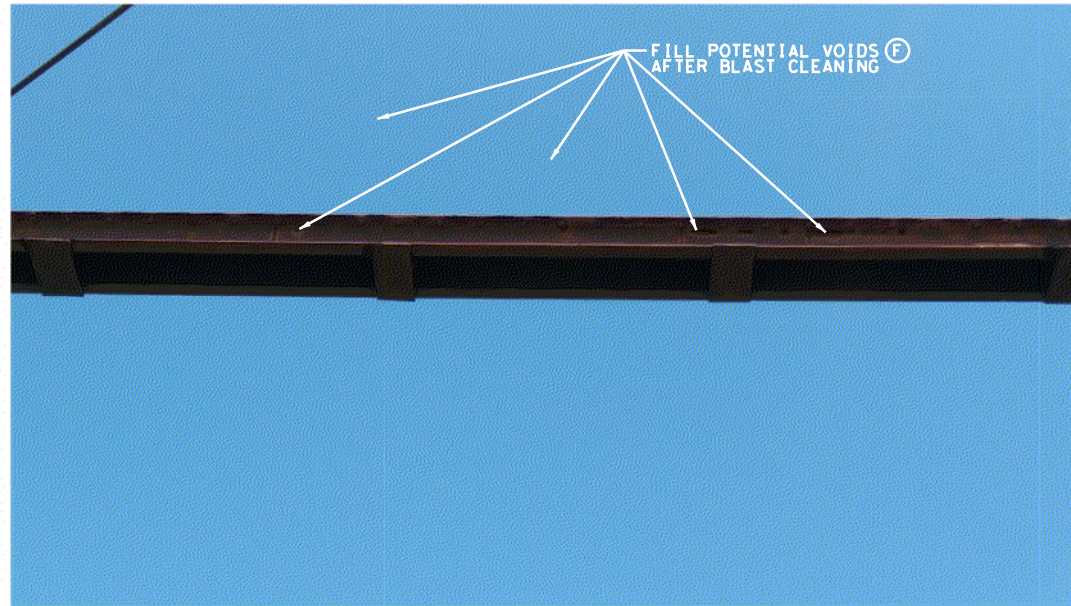
10+58 - REPLACE VERTICAL ANGLES/LATTICE (BOTT)



10+58 - REPLACE VERTICAL ANGLES/LATTICE (TOP)



10+58 - REPAIR SECTION LOSS



SPAN 3 - FILL VOIDS

**HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE**

**CITY OF
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LEGEND:

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- (B) REPLACE PLATE
- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

N. T. S.

REV	DESCRIPTION	BY	DATE

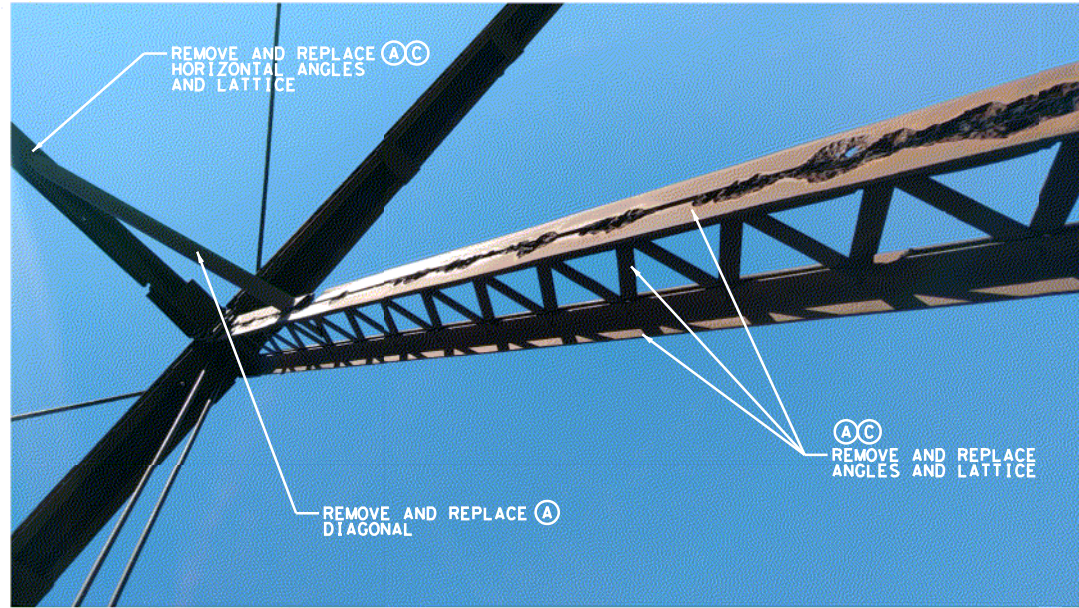
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**FIELD OBSERVATIONS
(LEFT SIDE)**

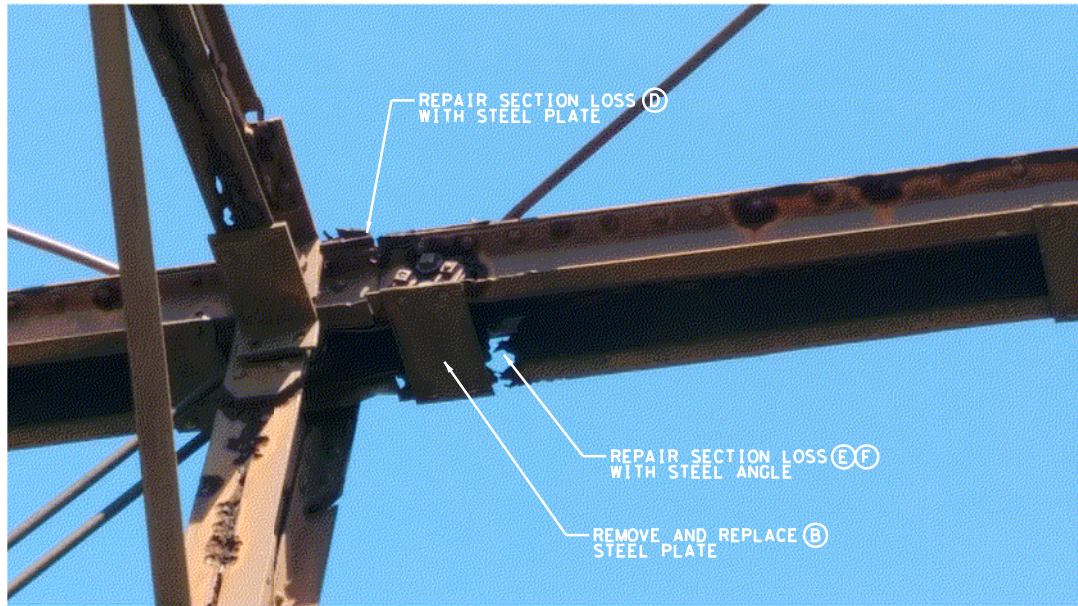
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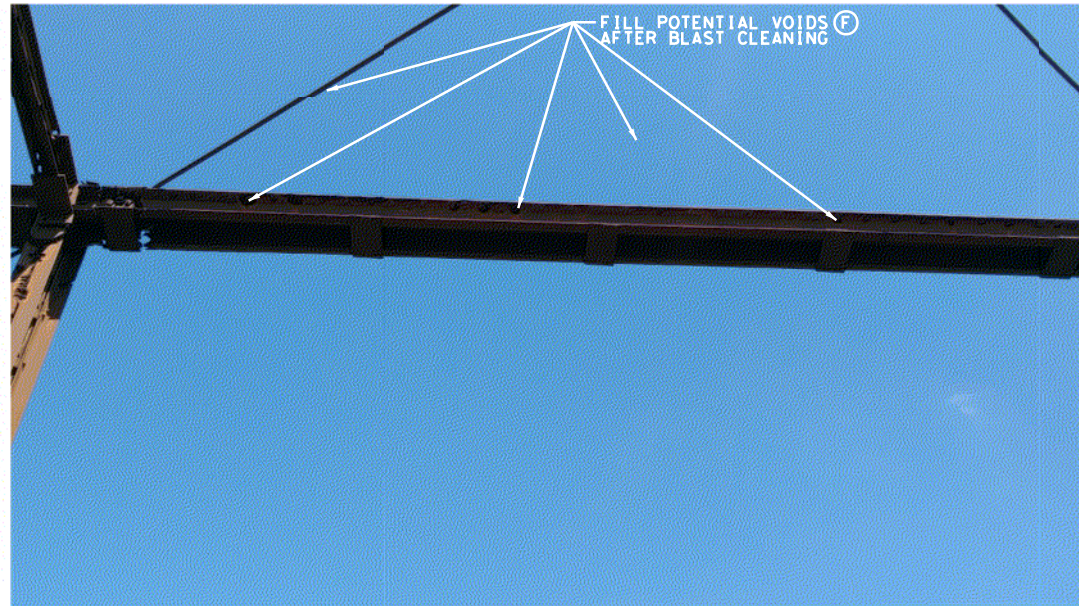
10+76 - REPLACE VERTICAL ANGLES/LATTICE (BOTT)



10+76 - REPLACE VERTICAL ANGLES/LATTICE (TOP)



10+76 - REPAIR SECTION LOSS



SPAN 4 - FILL VOIDS



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CITY OF DEER PARK

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LEGEND:

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- (B) REPLACE PLATE
- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

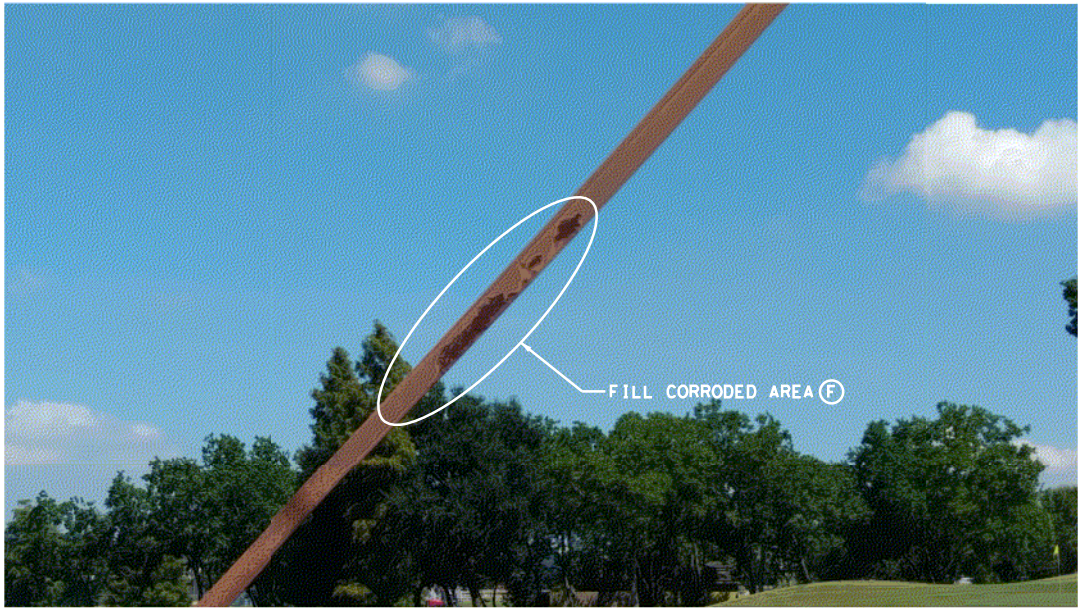
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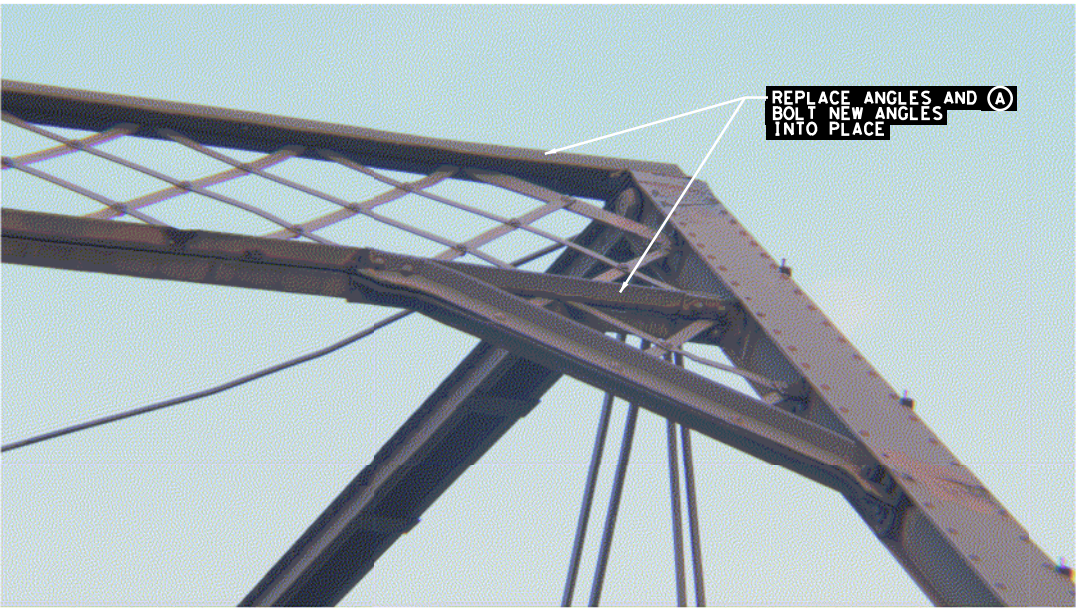
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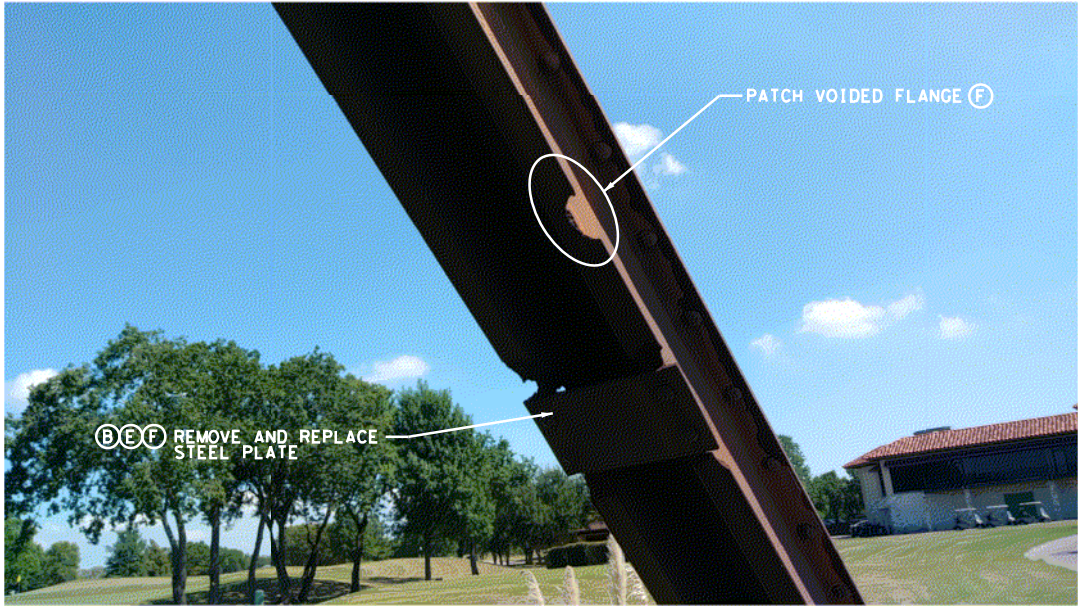
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Scale	AS SHOWN	Date	OCT. 2018
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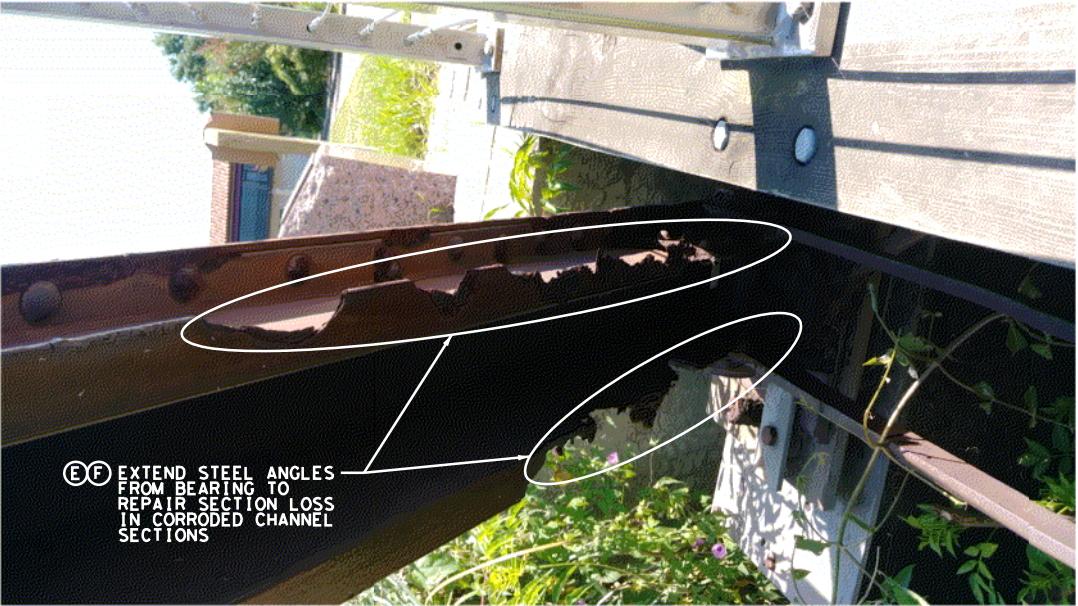
10+84 - FILL VOID



10+94 - REPLACE ANGLES IN DECORATIVE LATTICE



11+04 - FILL VOID



11+21 - REPAIR SECTION LOSS



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- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

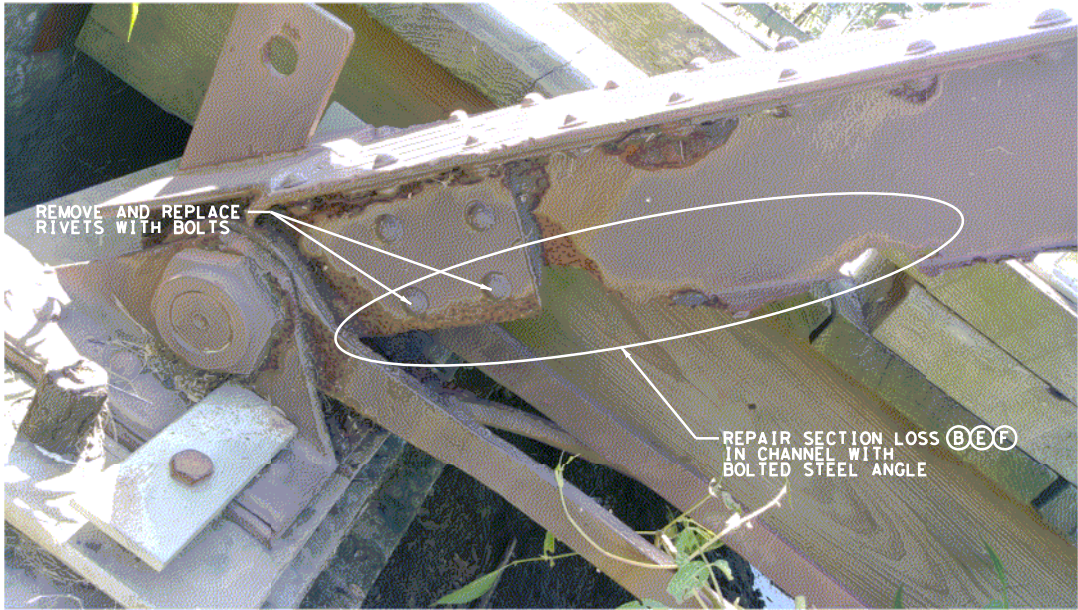
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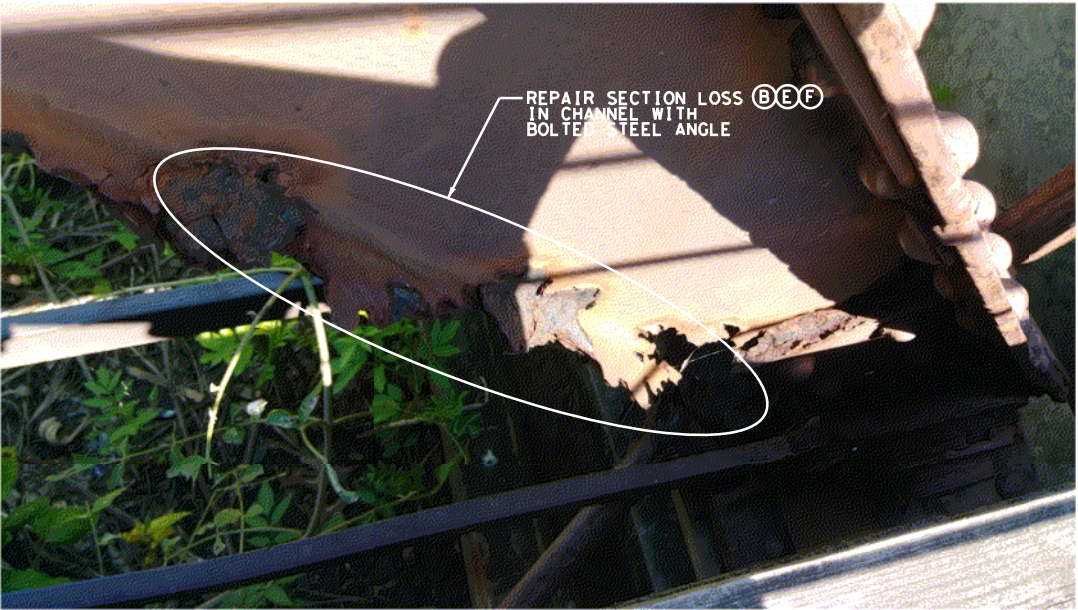
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FIELD OBSERVATIONS
(LEFT SIDE)

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11+21 - REPAIR SECTION LOSS (OUTSIDE CHANNEL)



11+21 - REPAIR SECTION LOSS (INSIDE CHANNEL)

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LEGEND:

(A) REPLACE ANGLES

(B) REPLACE PLATE

(C) REPLACE LATTICE

(D) REPAIR SECTION LOSS WITH STEEL PLATE

(E) REPAIR SECTION LOSS WITH STEEL ANGLE

(F) FILL VOID

N. T. S.

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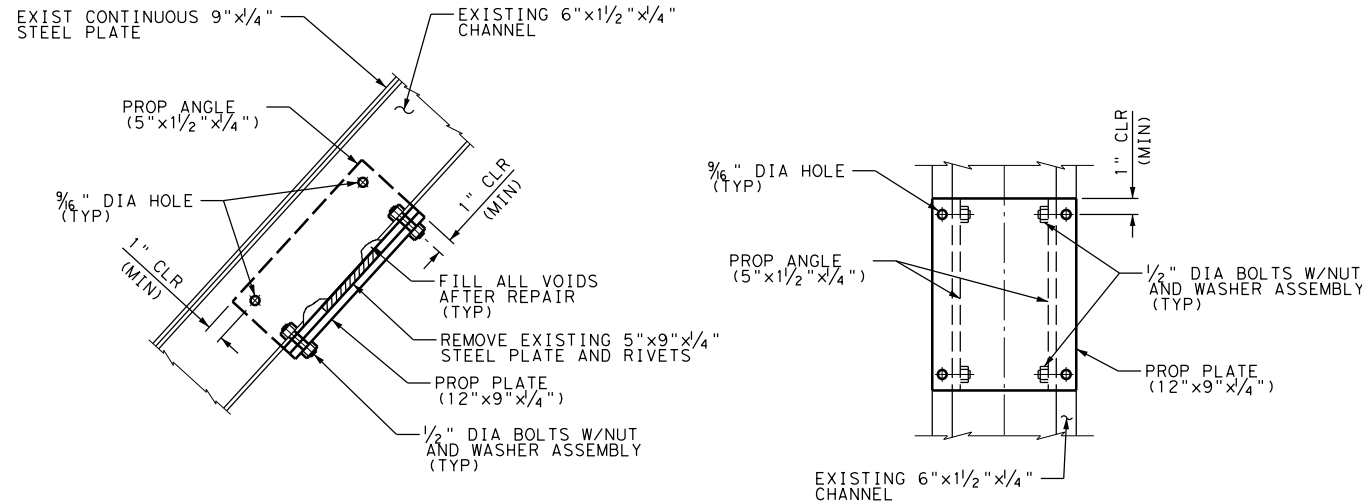
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Scale	AS SHOWN	Date	OCT. 2018
DWG No	18	Sheet	11 Of 11

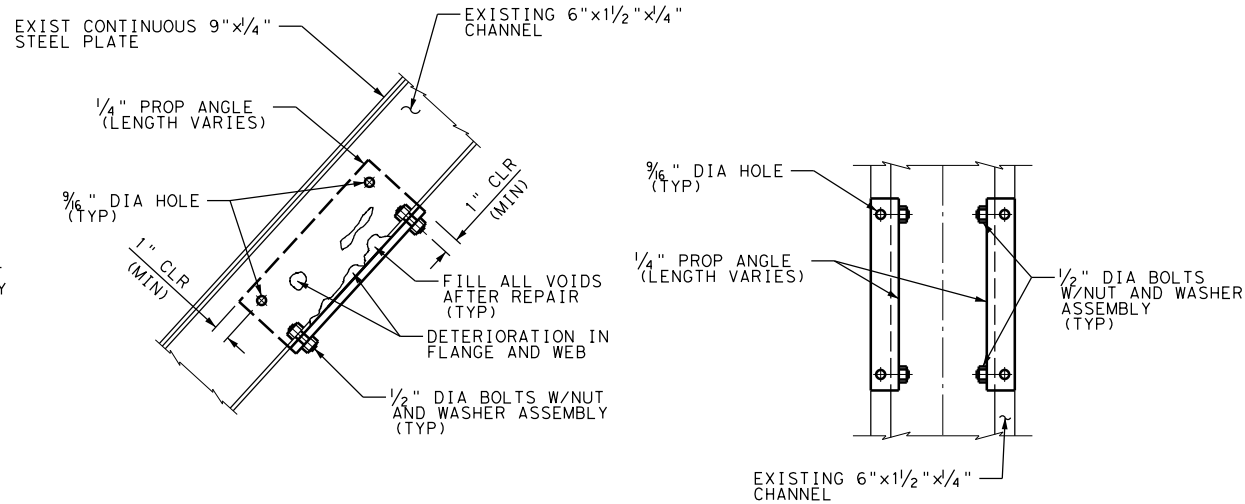
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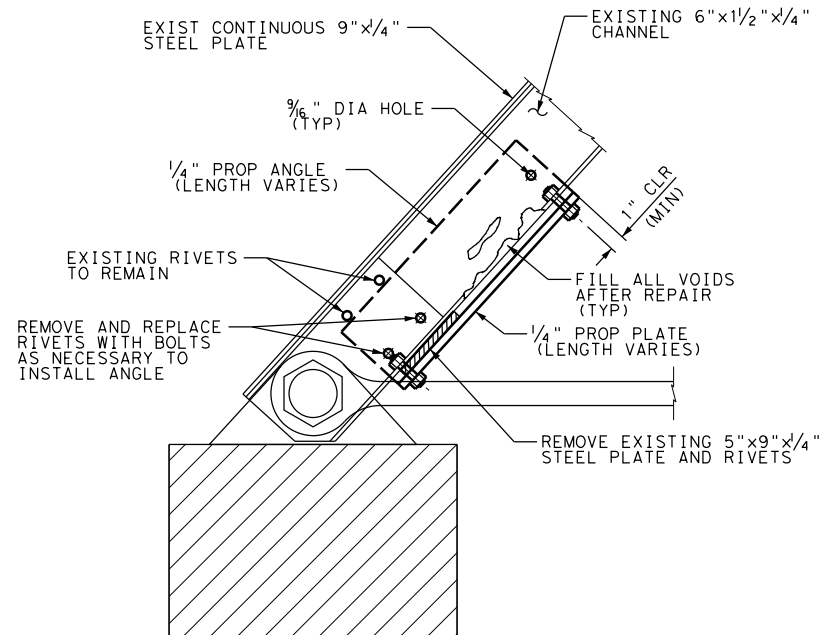
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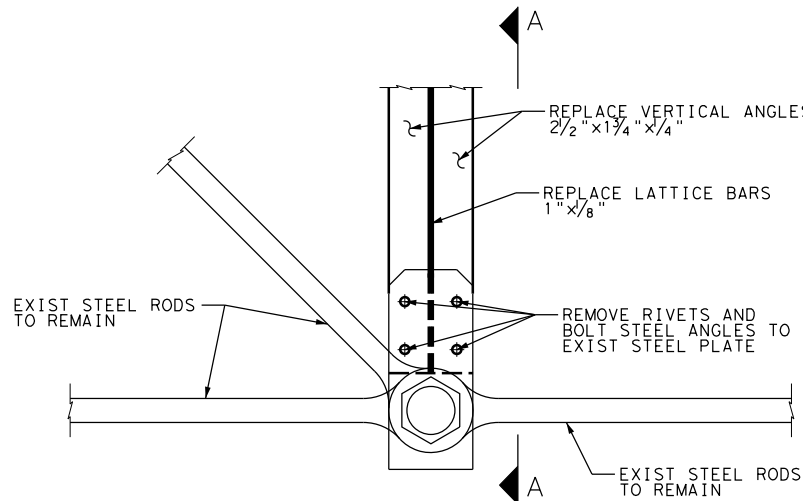
REPLACE PLATE (B)(E)(F)



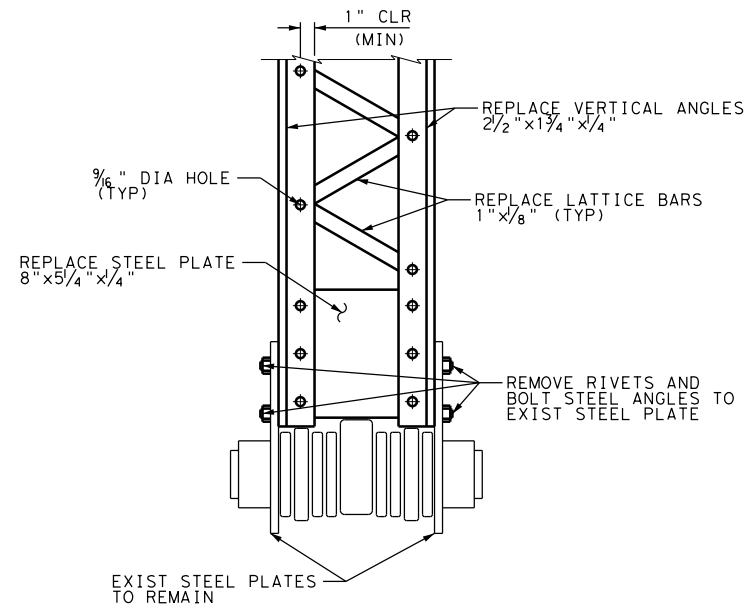
REPAIR SECTION LOSS USING ANGLES (E)(F)



REPAIR SECTION LOSS AT BEARING LOCATIONS (B)(E)(F)



REPLACE VERTICAL ANGLES/LATTICE (BOTT) (A)(C)



SECTION A-A (A)(B)(C)

HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE

CITY OF
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- NOTES:
1. REFER TO AS-BUILT PLANS FOR EXISTING TRUSS DETAILS.
 2. ALL NEW STEEL MEMBERS WILL BE BOLTED IN PLACE PER TXDOT ITEM 447, STRUCTURAL BOLTING.
 3. ALL STEEL PLATES, ANGLES, BOLTS, ETC. WILL CONFORM TO TXDOT ITEM 442, METAL FOR STRUCTURES.
 4. ALL STEEL WILL BE HOT DIPPED GALVANIZED AND PAINTED TO MATCH THE EXISTING TRUSS STRUCTURE AS CLOSELY AS POSSIBLE IN ACCORDANCE TO TXDOT ITEM 445, GALVANIZING.
 5. FILL VOIDS PER REPAIR DETAILS SHEET 4 OF 4.

LEGEND:

- (A) REPLACE ANGLES
(B) REPLACE PLATE
(C) REPLACE LATTICE
(D) REPAIR SECTION LOSS WITH STEEL PLATE
(E) REPAIR SECTION LOSS WITH STEEL ANGLE
(F) FILL VOID

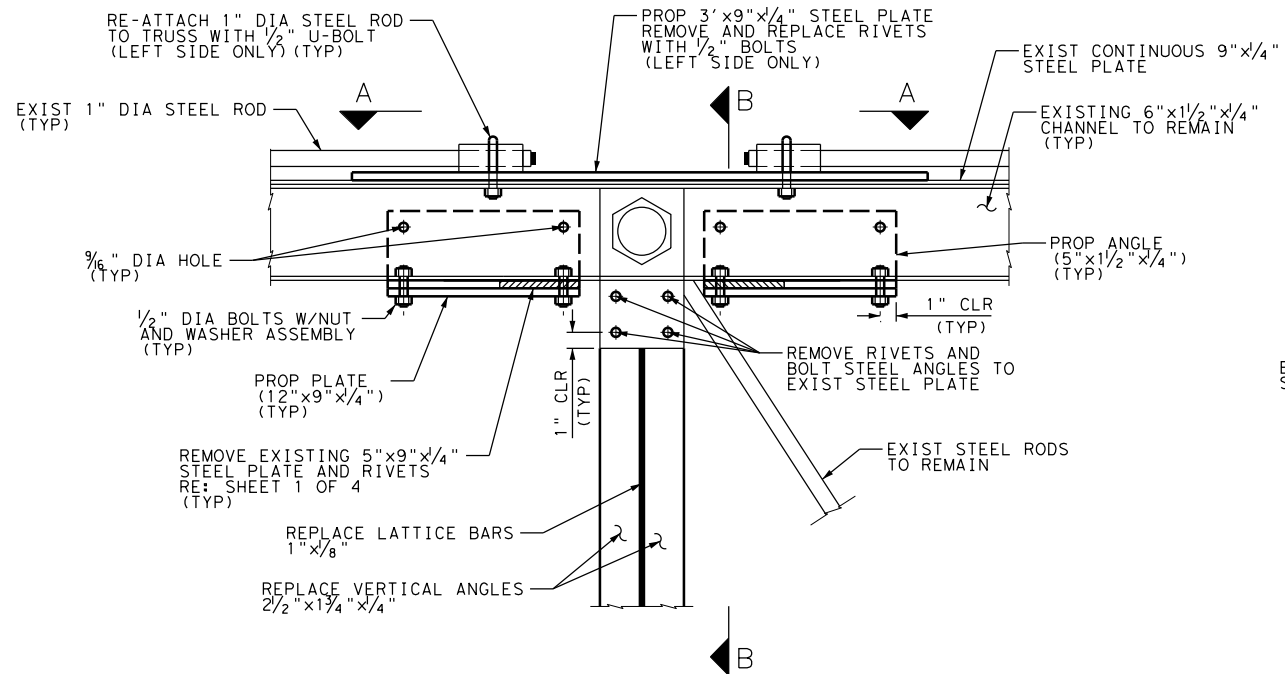
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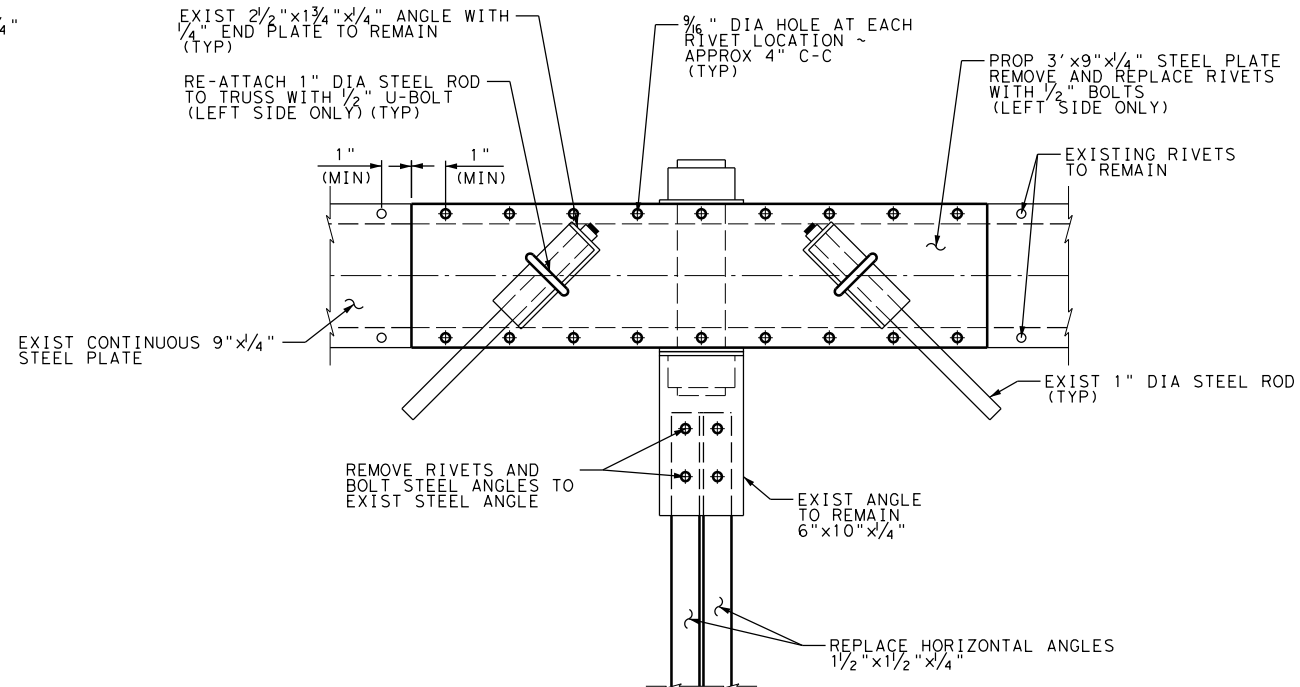
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REPAIR DETAILS

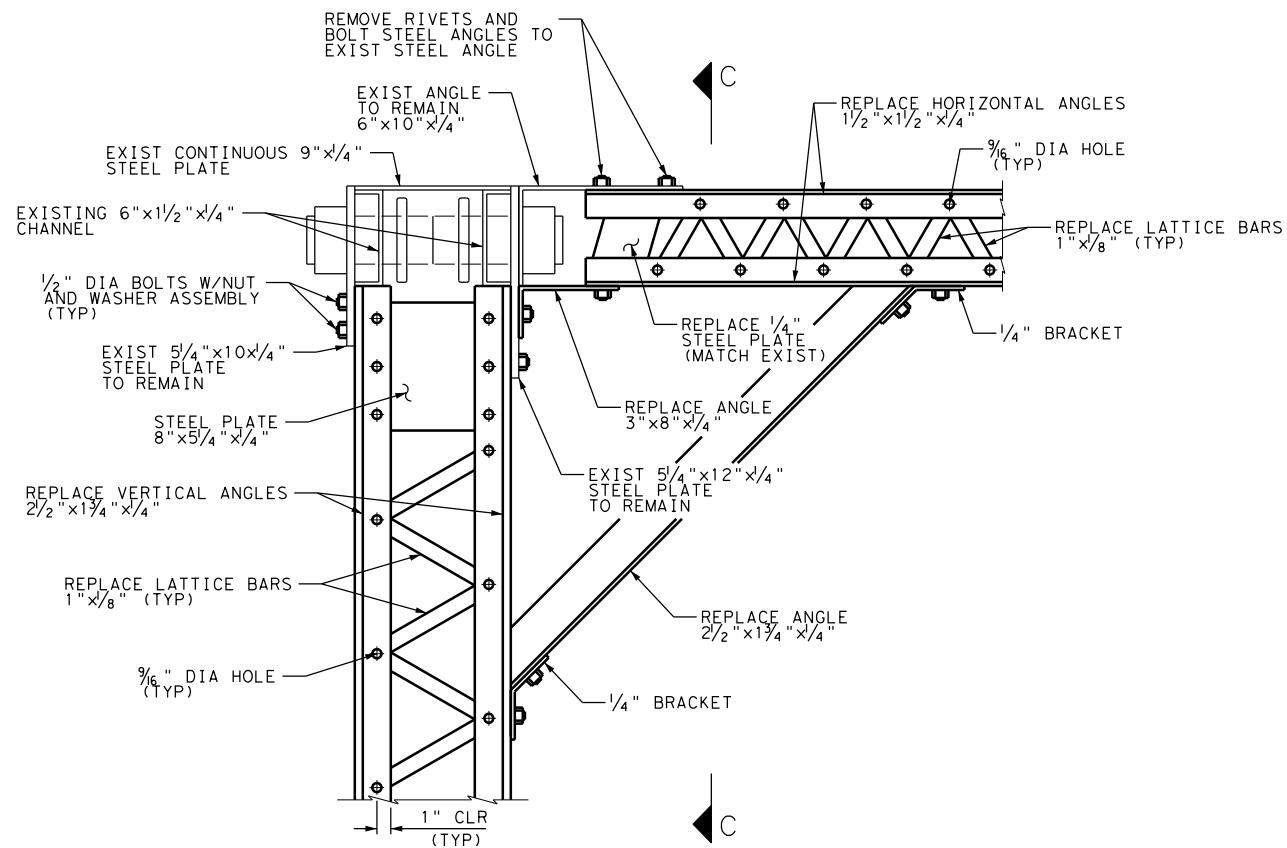
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Drawn By	FC	Checked By	JMG
Scale	AS SHOWN	Date	OCT. 2018
DWG No	19	Sheet	1 Of 4



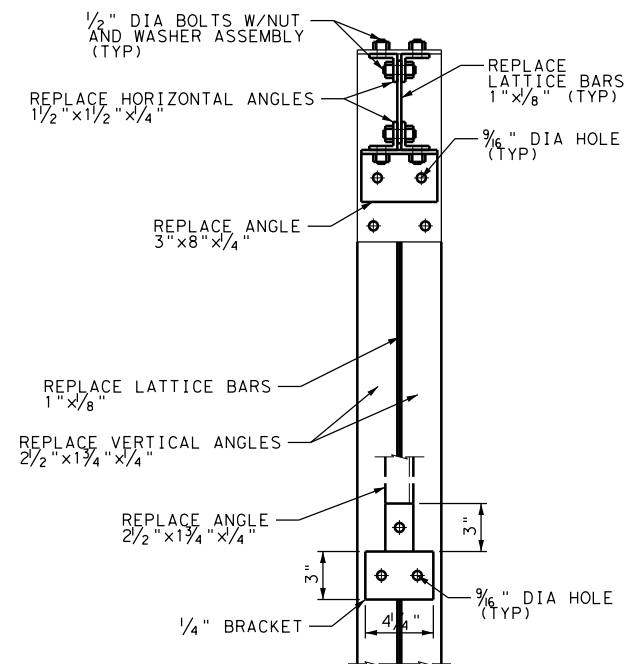
REPLACE VERTICAL ANGLES/LATTICE (TOP) (A)(D)(E)(F)



SECTION A-A (A)(D)



SECTION B-B (A)(B)(C)



SECTION C-C (A)(C)

HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE

CITY OF
DEER PARK

- NOTES:
1. REFER TO AS-BUILT PLANS FOR EXISTING TRUSS DETAILS.
 2. ALL NEW STEEL MEMBERS WILL BE BOLTED IN PLACE PER TXDOT ITEM 447, STRUCTURAL BOLTING.
 3. ALL STEEL PLATES, ANGLES, BOLTS, ETC. WILL CONFORM TO TXDOT ITEM 442, METAL FOR STRUCTURES.
 4. ALL STEEL WILL BE HOT DIPPED GALVANIZED AND PAINTED TO MATCH THE EXISTING TRUSS STRUCTURE AS CLOSELY AS POSSIBLE IN ACCORDANCE TO TXDOT ITEM 445, GALVANIZING.
 5. FILL VOIDS PER REPAIR DETAILS SHEET 4 OF 4.

- LEGEND:
- (A) REPLACE ANGLES
 - (B) REPLACE PLATE
 - (C) REPLACE LATTICE
 - (D) REPAIR SECTION LOSS WITH STEEL PLATE
 - (E) REPAIR SECTION LOSS WITH STEEL ANGLE
 - (F) FILL VOID

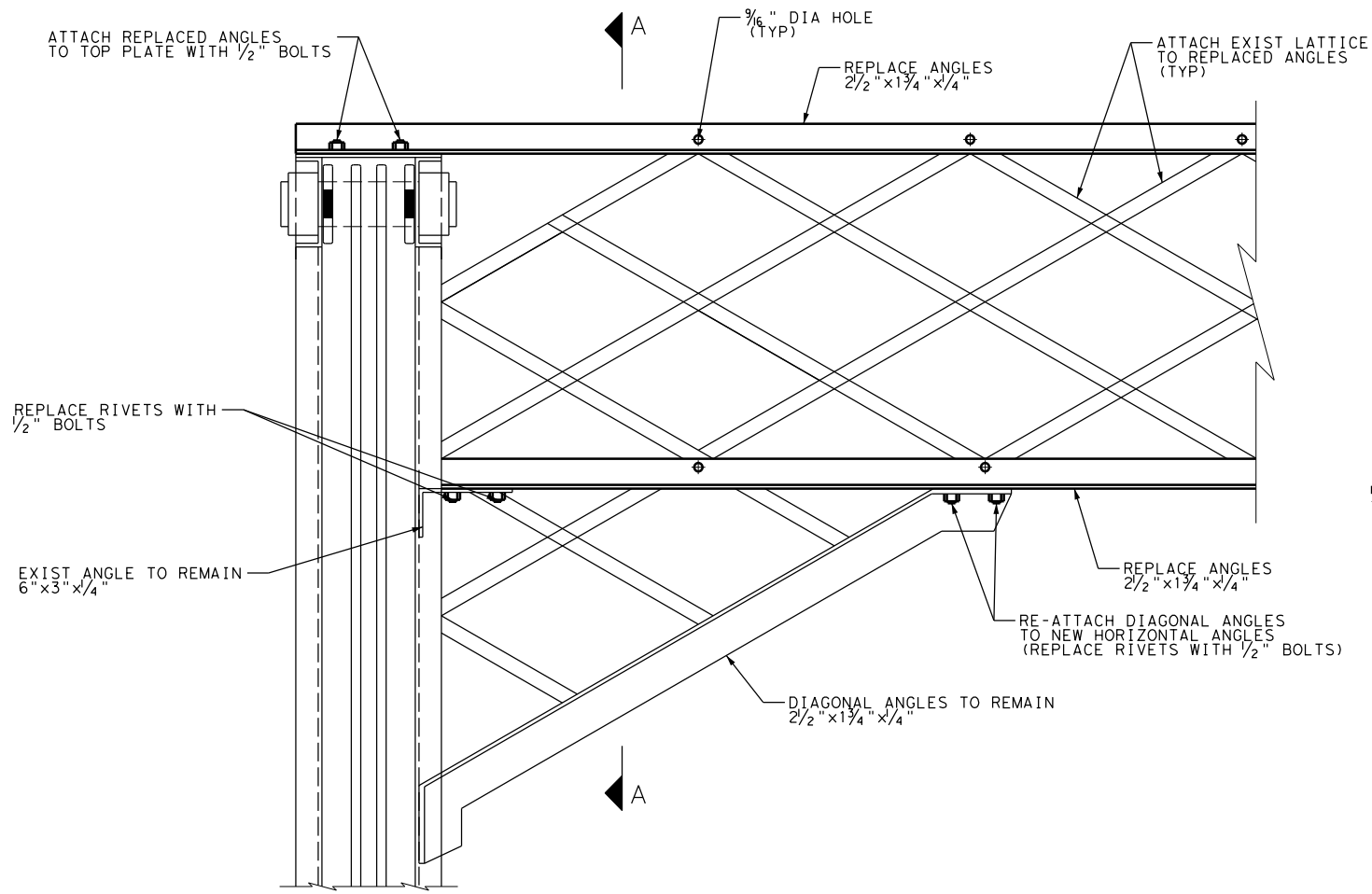
N. T. S.			
REV	DESCRIPTION	BY	DATE

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ENGINEER: JONATHAN GRIFFIN
ENGR. REG. No.: 116876
DATE: OCTOBER 2018

REPAIR DETAILS

RPS Project No 007737			
Drawn By FC	Checked By JMG		
Scale AS SHOWN	Date OCT. 2018		
DWG No 20	Sheet 2 Of 4		

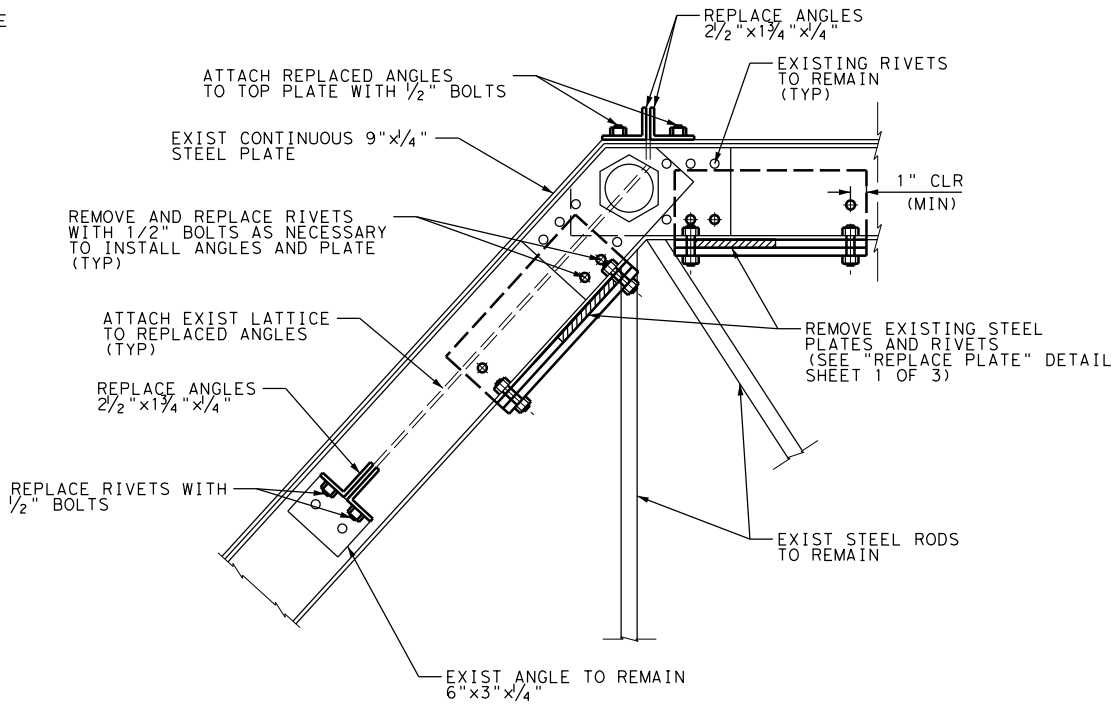
jonathan.griffin
PDF-B&W-Hor Size.plt



DECORATIVE LATTICE (BEGIN/END BRIDGE) (A)

* ESTIMATE OF STEEL QUANTITIES	
ELEMENT	WEIGHT LB
L2.5x1.75x1/4	1,118
L1.5x1.5x1/4	206
L5x1.5x1/4	575
1/4" PLATE	590
1/8" PLATE	85
TOTAL	2,575

*FOR CONTRACTOR'S INFORMATION ONLY. ESTIMATE INCLUDES STEEL REQUIRED FOR THE ENTIRE STRUCTURE.



SECTION A-A (A)(B)(E)(F)

**HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE**

**CITY OF
DEER PARK**

NOTES:

1. REFER TO AS-BUILT PLANS FOR EXISTING TRUSS DETAILS.
2. ALL NEW STEEL MEMBERS WILL BE BOLTED IN PLACE PER TXDOT ITEM 447, STRUCTURAL BOLTING.
3. ALL STEEL PLATES, ANGLES, BOLTS, ETC. WILL CONFORM TO TXDOT ITEM 442, METAL FOR STRUCTURES.
4. ALL STEEL WILL BE HOT DIPPED GALVANIZED AND PAINTED TO MATCH THE EXISTING TRUSS STRUCTURE AS CLOSELY AS POSSIBLE IN ACCORDANCE TO TXDOT ITEM 445, GALVANIZING.
5. FILL VOIDS PER REPAIR DETAILS SHEET 4 OF 4.

LEGEND:

- (A) REPLACE ANGLES
- (B) REPLACE PLATE
- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

N. T. S.

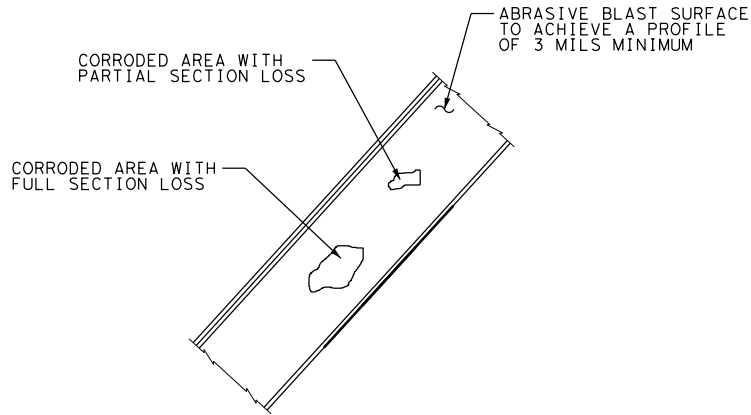
REV	DESCRIPTION	BY	DATE

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BIDDING, OR CONSTRUCTION.
ENGINEER: JONATHAN GRIFFIN
ENGR. REG. No.: 116876
DATE: OCTOBER 2018

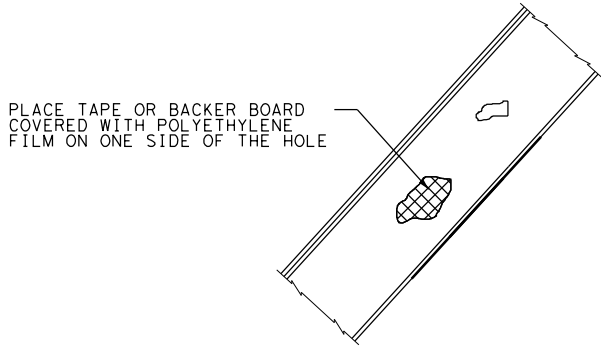
REPAIR DETAILS

RPS Project No **007737**

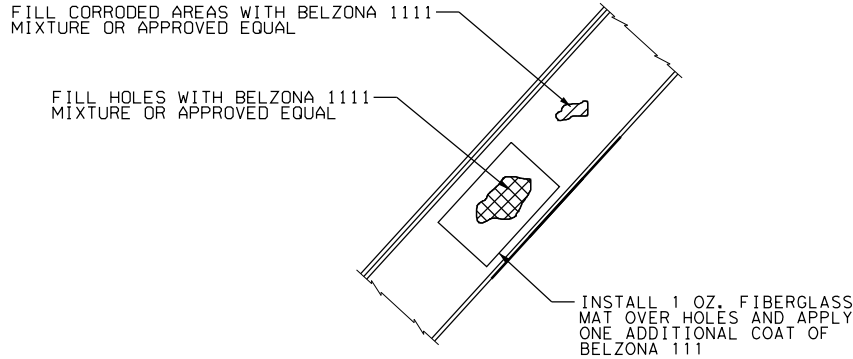
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Scale	AS SHOWN	Date	OCT. 2018
DWG No	21	Sheet	3 Of 4



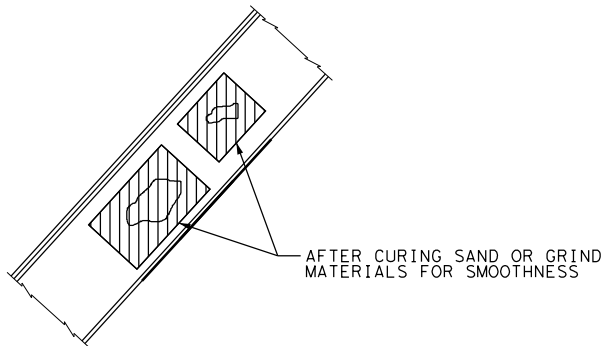
FILL VOIDS - STEP 1 (F)



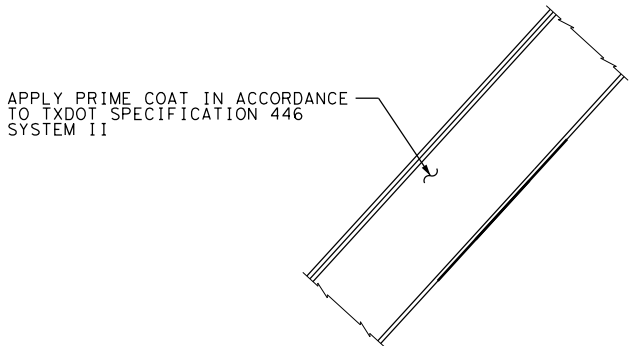
FILL VOIDS - STEP 2 (F)



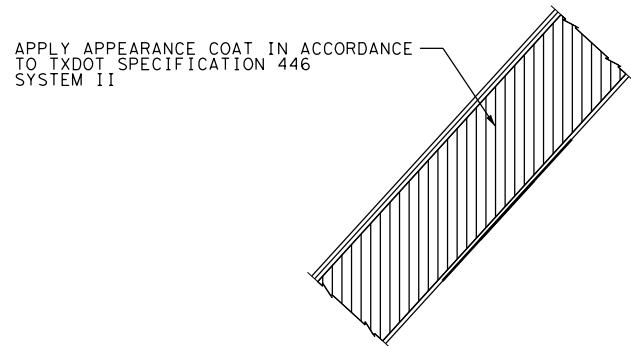
FILL VOIDS - STEP 3 (F)



FILL VOIDS - STEP 4 (F)



FILL VOIDS - STEP 5 (F)



FILL VOIDS - STEP 6 (F)

SEQUENCE OF REPAIR NOTES:

- 1.ABRASIVE BLAST THE ENTIRE STRUCTURE TO SSPC SP10 NEAR WHITE CONDITION. USE A SHARP BLAST MEDIA TO GET AT LEAST A 3 MIL PROFILE.
- 2.TO FILL HOLES, PLACE TAPE OR A BACKER BOARD COVERED WITH POLYETHYLENE FILM ON ONE SIDE OF THE HOLE.
- 3.MIX BELZONA 1111 PER MANUFACTURER'S RECOMMENDATIONS. TROWEL APPLY THE MIXTURE TO FILL VOIDED AREAS. FOR HOLES APPLY AN ADDITIONAL LAYER OF BELZONA 1111 OVER A 1 OZ. FIBERGLASS MAT.
- 4.AFTER CURING, USE THE BELZONA 1111 MIXTURE ON THE REVERSE SIDE OF THE PATCHED HOLE AS NEEDED TO CREATE A SMOOTH FINISH.
- 5.SAND THE MATERIALS AFTER CURING TO CREATE A SMOOTH FINISH.
- 6.REPEAT AS NECESSARY TO FILL ALL VOIDS FOUND IN THE TRUSS STRUCTURE.
- 7.APPLY PRIME COAT TO THE ENTIRE STRUCTURE PER TXDOT SPECIFICATION 446, PAINTING AND CLEANING EXISTING STEEL.
- 8.APPLY AN APPEARANCE COAT TO THE ENTIRE STRUCTURE WITH CUSTOMIZED COLOR TO MAINTAIN THE ORIGINAL COLOR. APPEARANCE COAT WILL BE IN ACCORDANCE TO TXDOT SPECIFICATION 446, PAINTING AND CLEANING EXISTING STEEL.

QUANTITY OF FILLER REQUIRED

ASSUME:
5% SECTION LOSS IN CONT. PLATE
25% SECTION LOSS IN CHANNEL

CONTINUOUS PLATE 27 LBS
CHANNEL: 265 LBS

TOTAL = 292 LBS



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T 281.589.7257
USInfrastructure@rpsgroup.com
Formerly Klotz Associates, Inc.
Texas PE Firm Reg. #F-929

HISTORIC BRIDGE REPAIR
ON BATTLEGROUND GOLF COURSE

CITY OF
DEER PARK

NOTES:

- 1.REFER TO AS-BUILT PLANS FOR EXISTING TRUSS DETAILS.
- 2.ALL FOUND VOIDS WILL BE FILLED AFTER STEEL MEMBERS HAVE BEEN PLACED.
- 3.MATERIAL TO FILL VOIDS WILL BE BELZONA 1111, OR APPROVED EQUAL.
- 4.ABRASIVE BLASTING, PAINTING, SANDING, ETC. WILL CONFORM TO TXDOT ITEM 446, FIELD CLEANING AND PAINTING STEEL.

LEGEND:

- (A) REPLACE ANGLES
- (B) REPLACE PLATE
- (C) REPLACE LATTICE
- (D) REPAIR SECTION LOSS WITH STEEL PLATE
- (E) REPAIR SECTION LOSS WITH STEEL ANGLE
- (F) FILL VOID

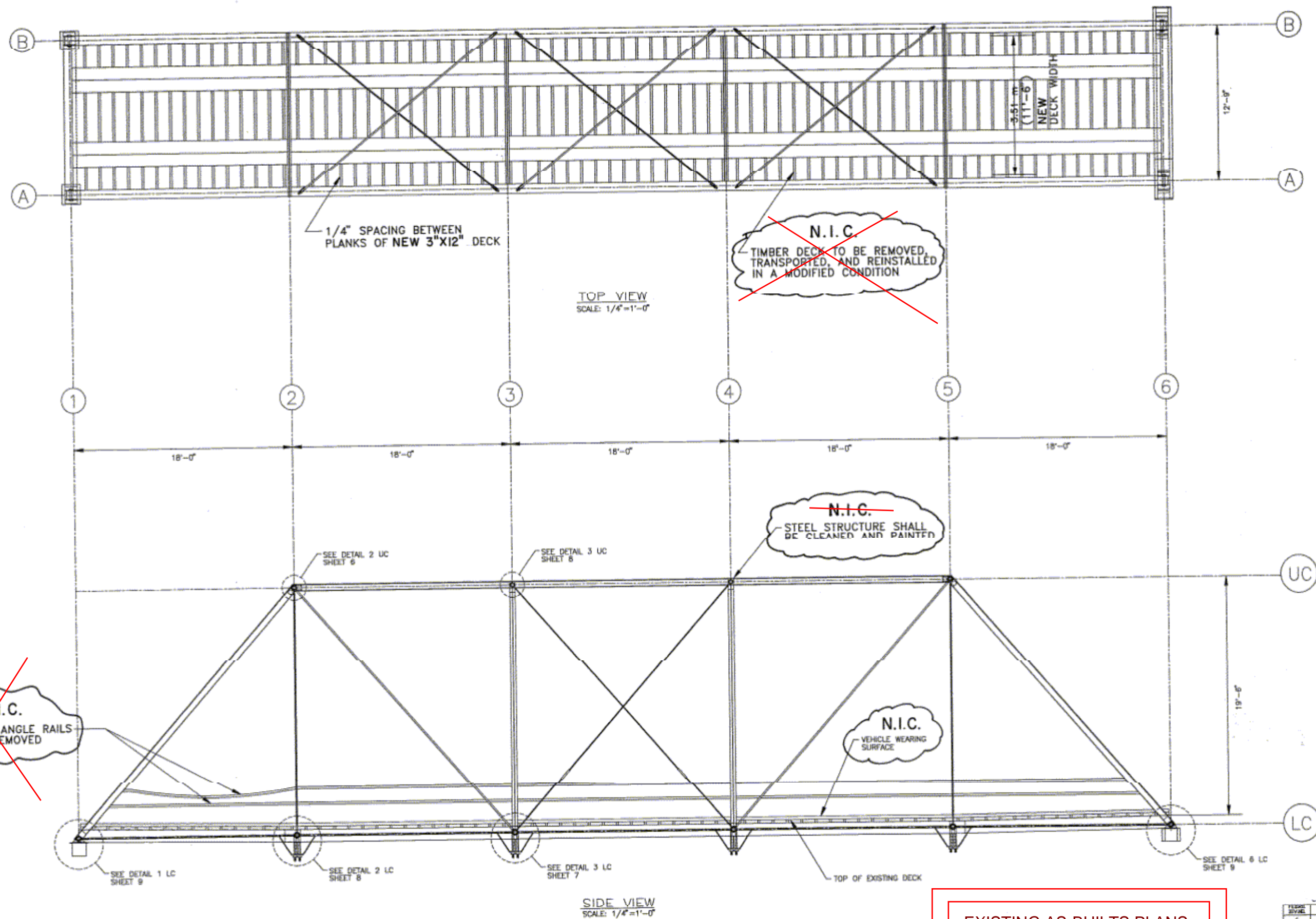
N. T. S.

REV	DESCRIPTION	BY	DATE

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ENGINEER: JONATHAN GRIFFIN
ENGR. REG. No.: 116876
DATE: OCTOBER 2018

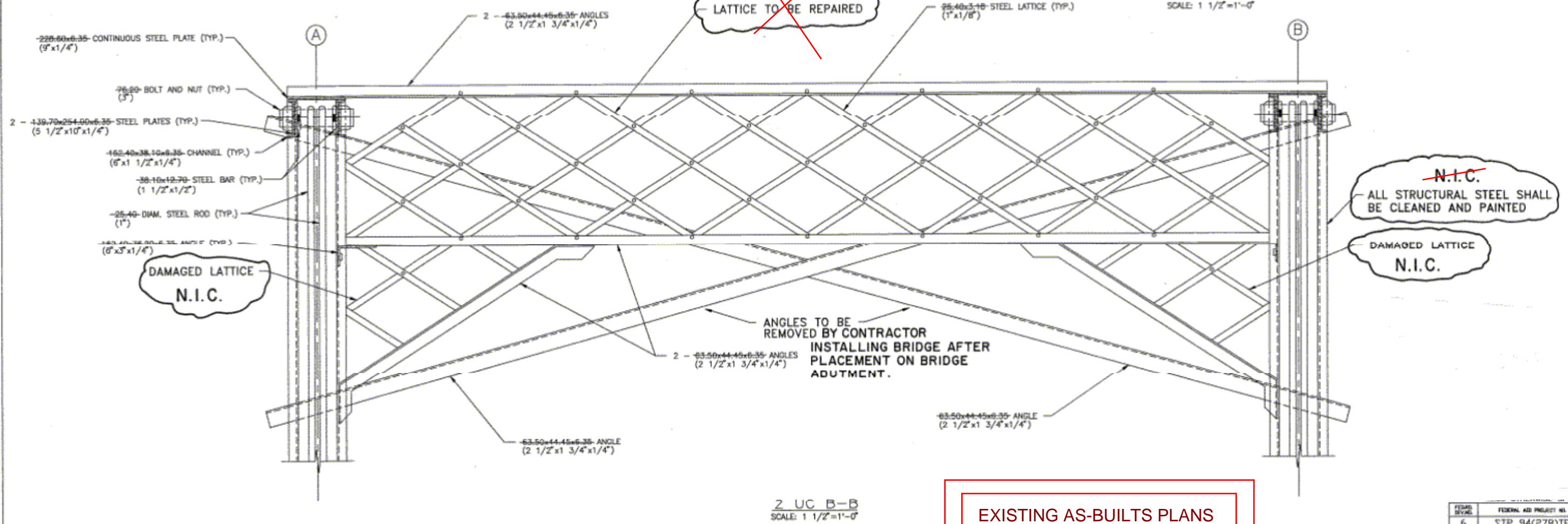
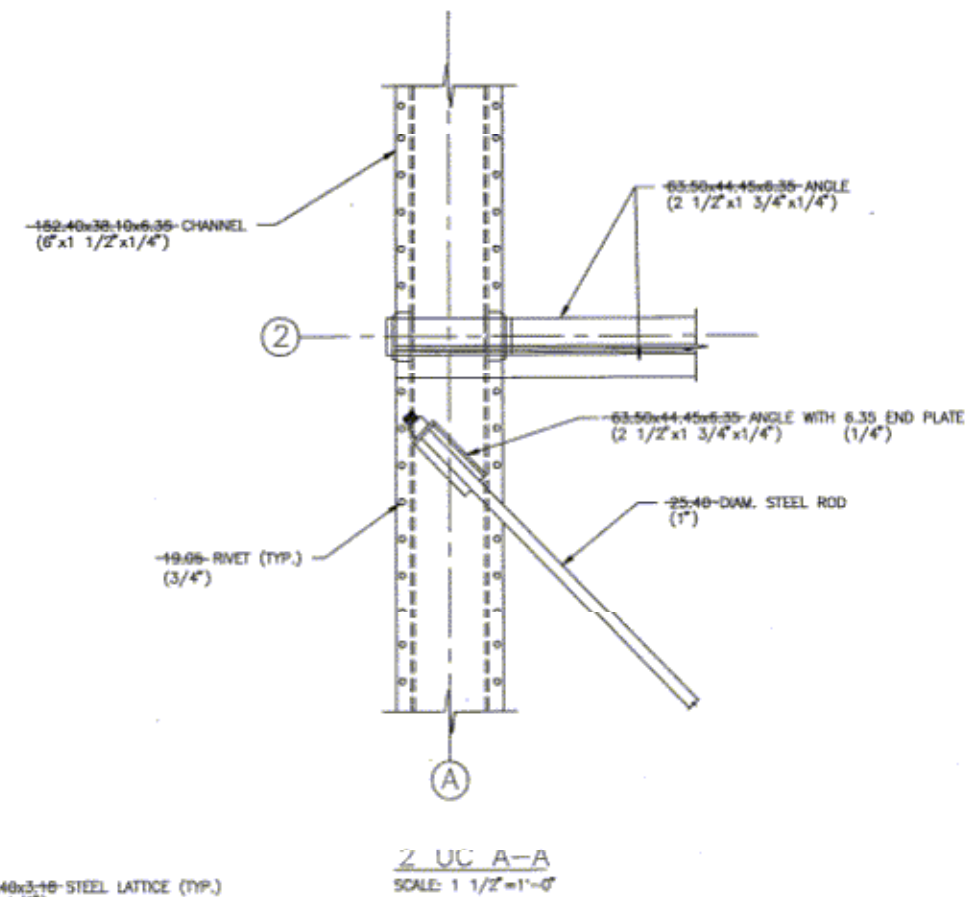
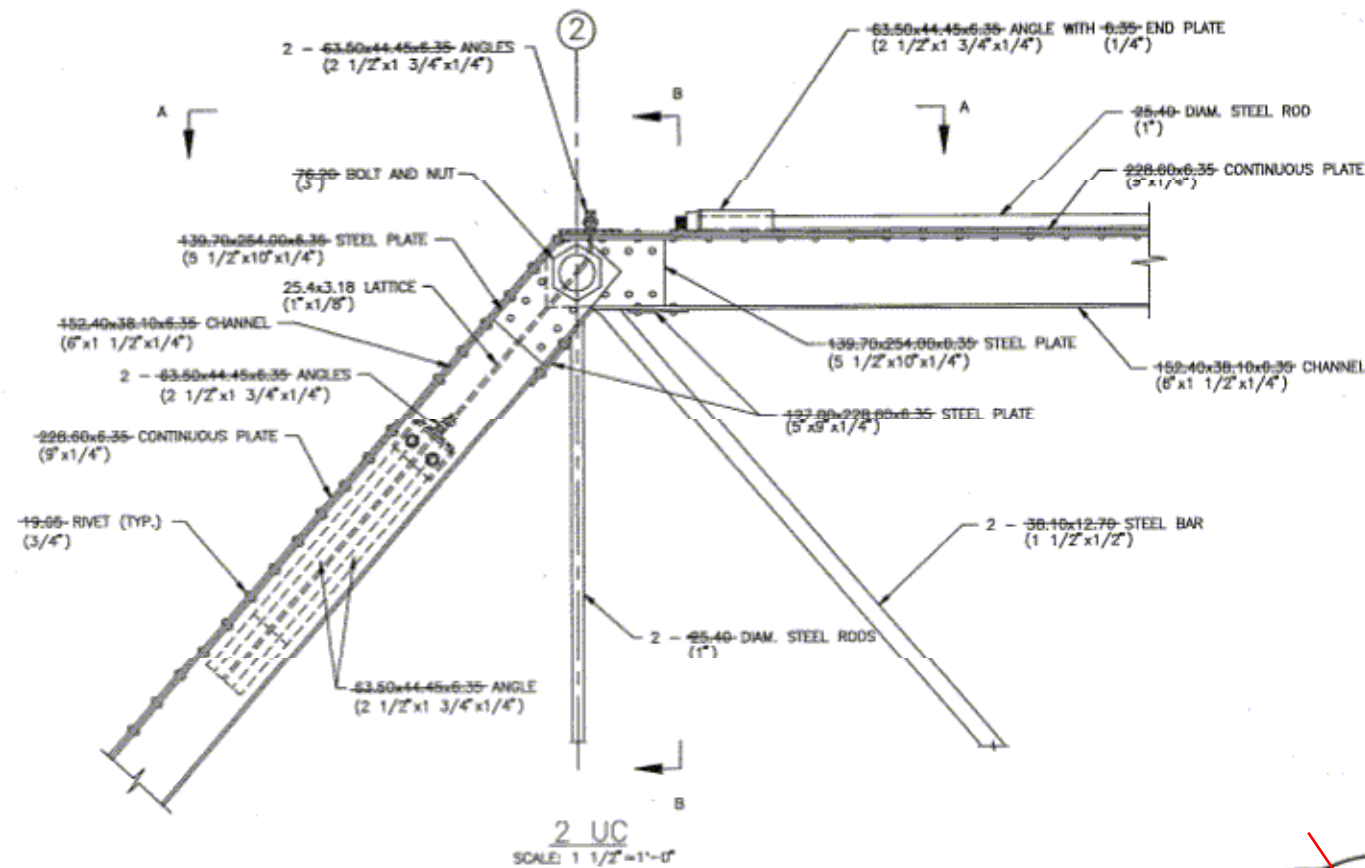
REPAIR DETAILS

RPS Project No 007737			
Drawn By	FC	Checked By	JMG
Scale	AS SHOWN	Date	OCT. 2018
DWG No	22	Sheet	4 Of 4



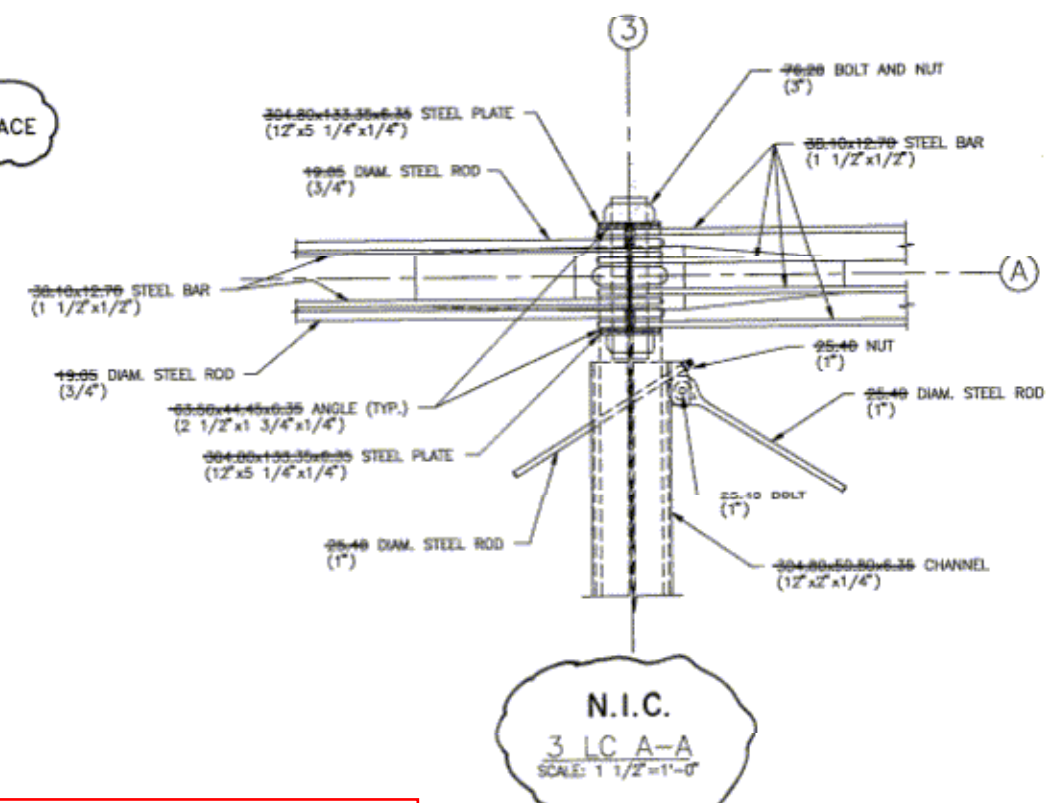
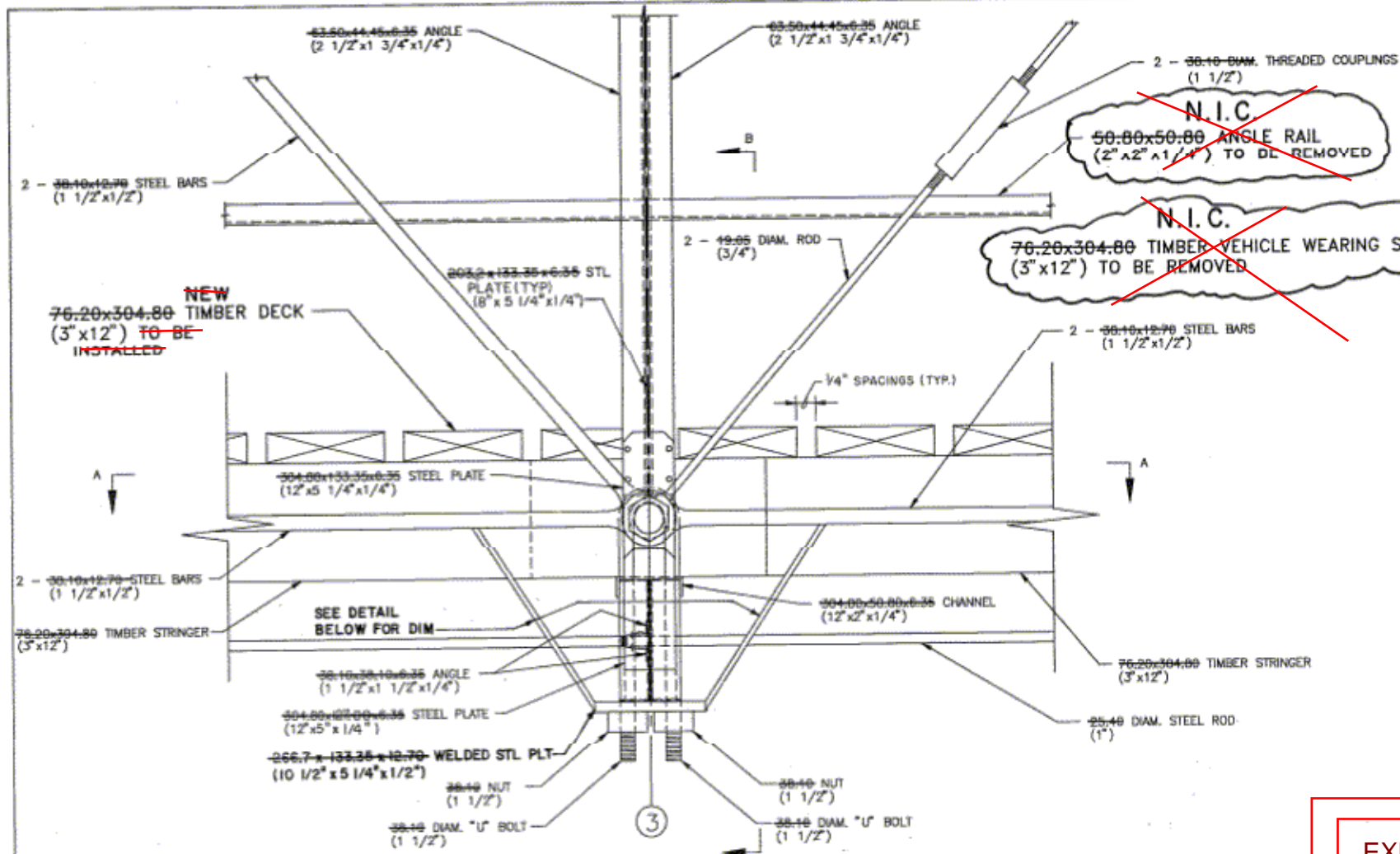
EXISTING AS-BUILT PLANS
FOR REFERENCE ONLY

FEDERAL AID PROJECT NO.	STP 94(27B)TE ?	SHEET NO.	11
STATE	TEXAS	COUNTY	HARRIS
CONTRACT	0912	SECTION	71
SECTION	438	SECTION	VA

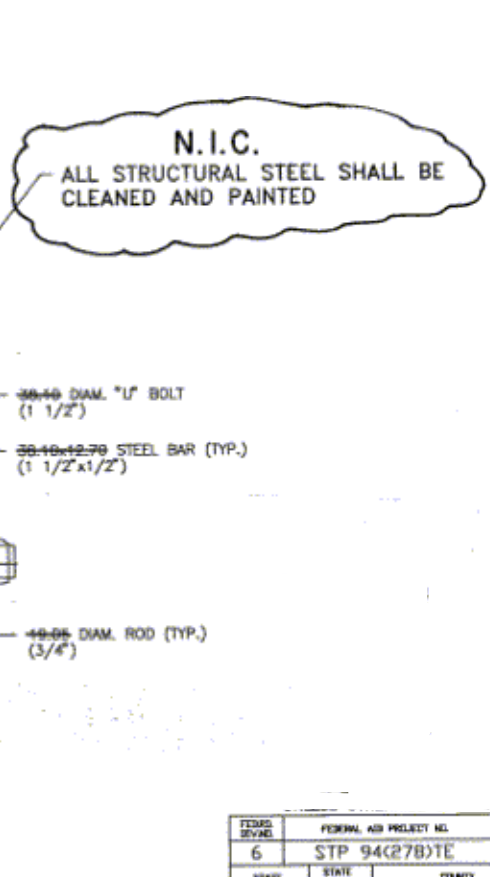
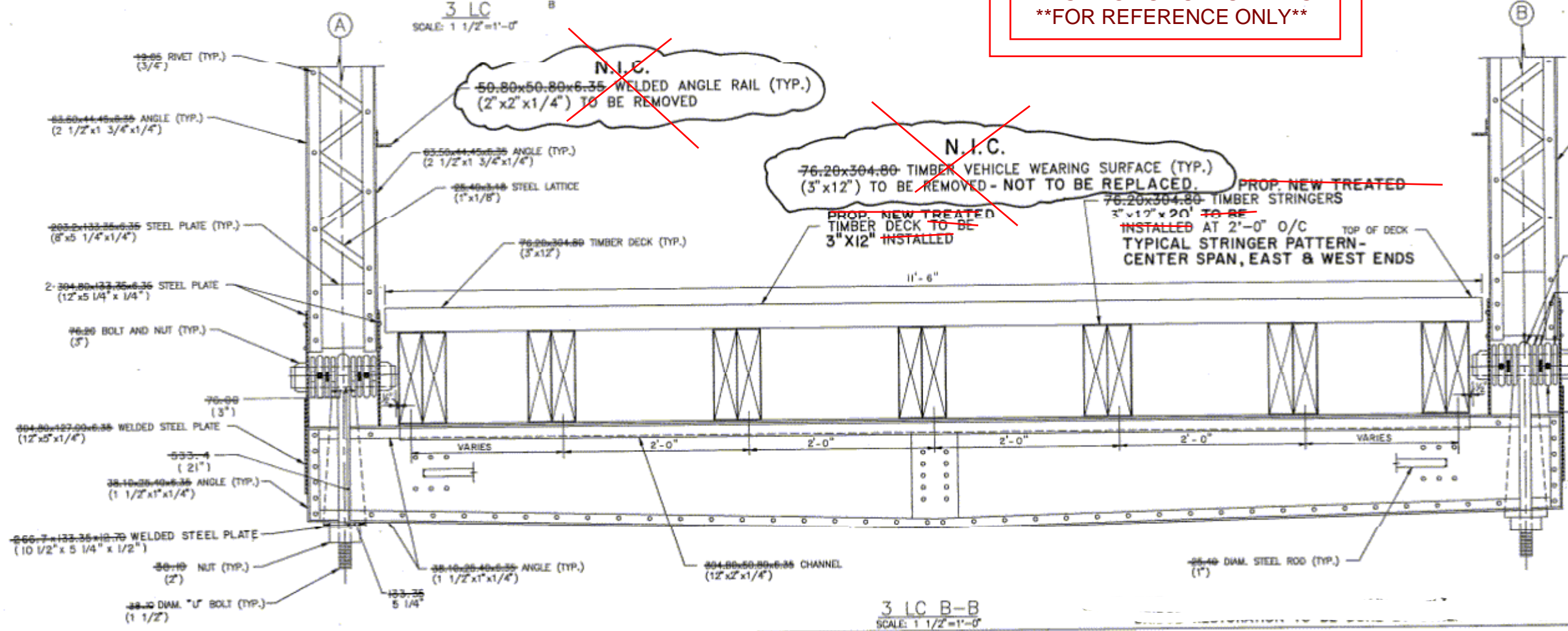


EXISTING AS-BUILTS PLANS
FOR REFERENCE ONLY

FED. DIST.	FED. AID PROJECT NO.	SHEET NO.
6	STP 94(278)TE	12
STATE	COUNTY	
TEXAS	HARRIS	
CON.	DIST.	SECTION
0912	71	438



EXISTING AS-BUILTS PLANS
FOR REFERENCE ONLY



FEEDS	FEDERAL AID PROJECT NO.	SHEET NO.
6	STP 94(278)TE	13
STATE	COUNTY	
TEXAS	HARRIS	
CON.	SHEET	JOB
0912	71	438
ROADWAY NO.		
VA		

~~76-20x304-80 TIMBER VEHICLE WEARING SURFACE
(3"x12") TO BE REMOVED - NOT TO BE
REPLACED.~~

PROP NEW
76.20x304.80 TIMBER DECK
(3'x12") TO BE
INSTALLED

2 - 38.10x12.70 STEEL BARS
(1 1/2" x 1/2")

25.40 (3") BOLT AND NUT

25.40 (1") STEEL ROD

304.80x50.80x6.35 CHANNEL
(12" x 2" x 1/4")

266.70x133.35x12.70 STL PLATE
(10 1/2" x 5 1/4" x 1/2")

98.10x50.10x6.35 ANGLE
(1 1/2" x 1 1/2" x 1/4")

38.10 NUT (1 1/2")

38.10 (1 1/2") U BOLT

76.20x304.80 TIMBER STRINGER
(3" x 12")

25.40 (1") STEEL ROD

SEE DETAIL 2 LC A-A FOR DIMENSIONS

2 LC
SCALE: 1 1/2" = 1'-0"

222-60-6-35 CONTINUOUS STEEL PLATE
(9'x1/4")

63-50-14-15-6-35 ANGLE WITH 6-35 END PLATE
(2 1/2"x1 3/4"x1/4") (1/4")

25-40 DIAM. STEEL ROD (1")

127-00-228-50-6-35 STEEL PLATE (5'x5"x1/4")

63-50-14-15-6-35 ANGLE (2 1/2"x1 3/4"x1/4")

25-40 DIAM. STEEL ROD (1")

152-40-35-18-6-35 CHANNEL (6'x1 1/2"x1/4")

127-00-228-50-6-35 STEEL PLATE (5'x5"x1/4")

2 - 40-05 DIAM. STEEL RODS (3/4")

N.I.C.

3 UC

SCALE: 1 1/2" = 1'-0"

ALL STRUCTURE CLEANED

N.I.C.
3 UC
SCALE: 1 1/2"=1'-0"

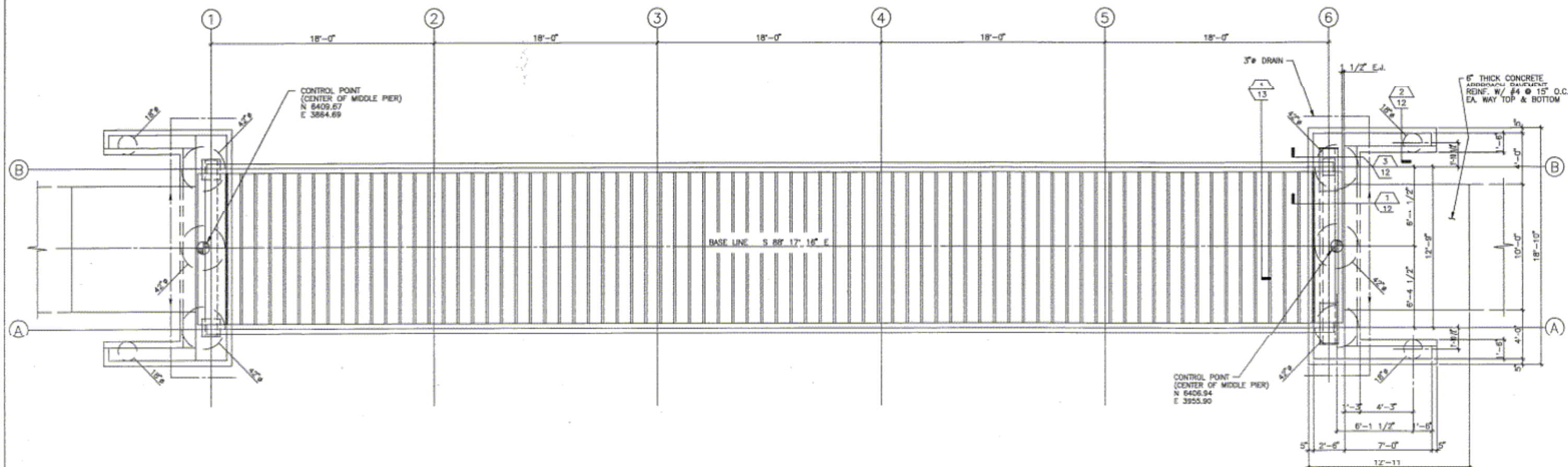
N.I.C.
ALL STRUCTURAL STEEL SHALL BE
CLEANED AND PAINTED

3 UC A-A
SCALE: 1 1/2"=1'-0"

2 LC A-A
SCALE: 1 1/2"=1'-0"

N.I.C.
3 UC B-B
SCALE: 1 1/2"=1'-0"

FEEDS DIVISION	FEEDING AND PROJECT NO.			SHEET NO.
6	STP 94(278)TE			14
STATE	STATE DIST.	COUNTY		
TEXAS	12	HARRIS		
CONTRACT	SHEET	JOB	HIGHWAY NO.	
0912	71	438	VA	



WEST ABUTMENT
FIXED BEARING

SCALE: 1/4" = 1'-0"

- NOTES, SIZES, AND DIMENSIONS FOR WEST ABUTMENT ARE THE SAME AS THAT OF THE EAST ABUTMENT. SECTIONS NOTED ON EAST ABUTMENT ARE THE SAME FOR WEST ABUTMENT, EXCEPT FOR BRIDGE BEARINGS. BRIDGE BEARINGS ARE AS FOLLOWS: EAST ABUTMENT - SLIDE BEARING; WEST ABUTMENT - FIXED BEARING.

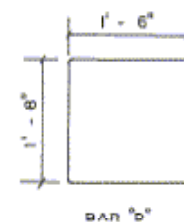
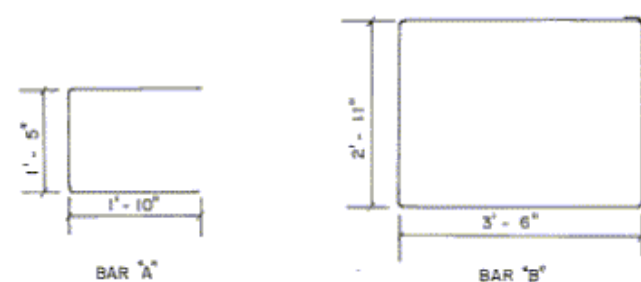
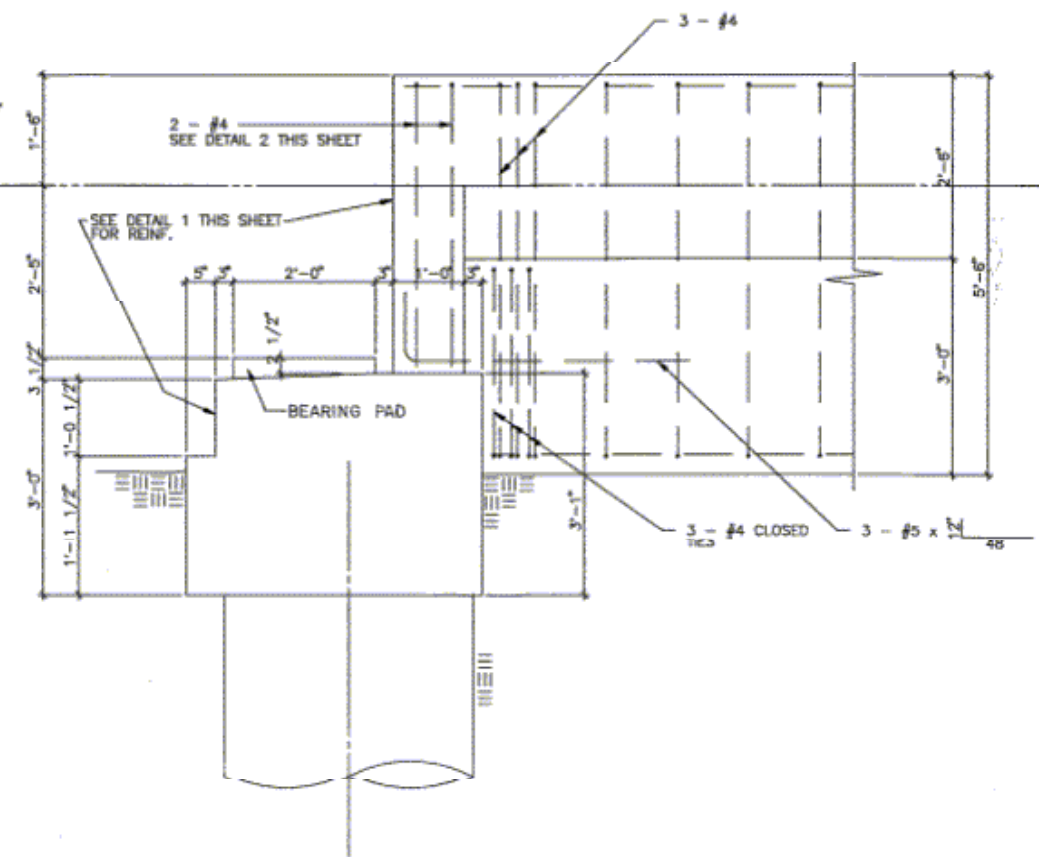
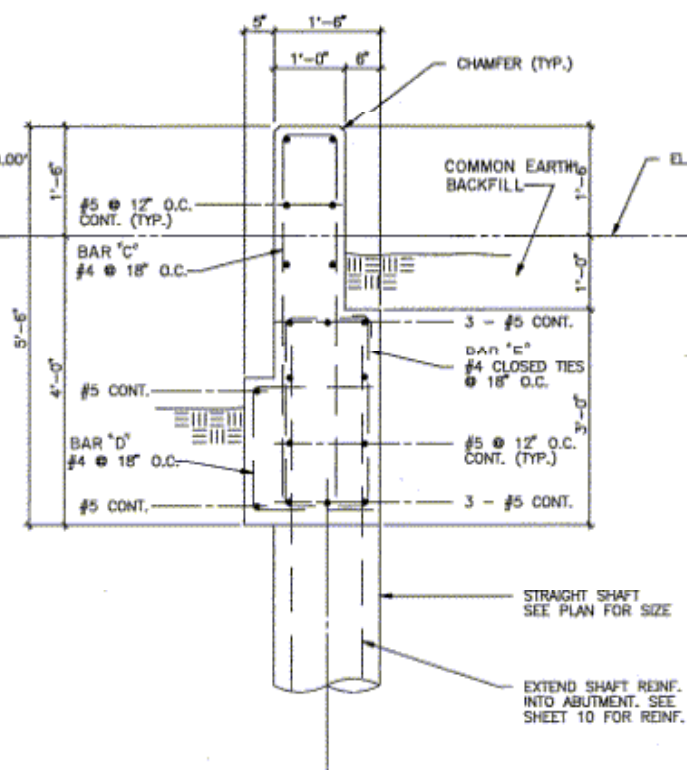
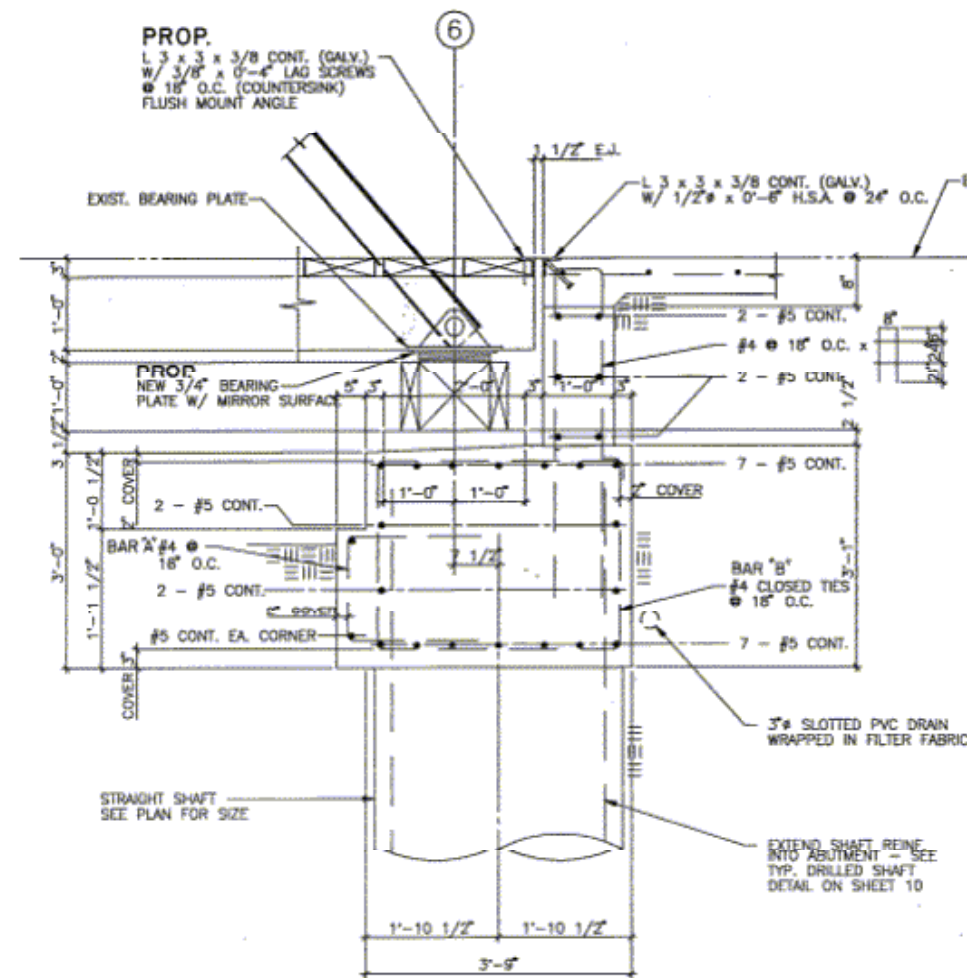
- NOTE: CONTROL POINTS SHALL BE FIELD VERIFIED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OF PIERS. POINTS MAY REQUIRE ADJUSTMENT ALONG BASE LINE DEPENDENT UPON LOCATION OF EDGE OF WATER.

EAST ABUTMENT
SLIDE BEARING

N.I.C.
BRIDGE ABUTMENT
FOUNDATION PLAN

EXISTING AS-BUILTS PLANS
FOR REFERENCE ONLY

FED. PROJ. NO.	FED. PROJ. NO.	SHEET NO.
6	STP 94(278)TE	16
STATE	STATE	COUNTY
TEXAS	12	HARRIS
CONTRACT	SECTION	JOB
0912	71	438
HAZARD NO.	HAZARD NO.	HAZARD NO.
VA	VA	VA

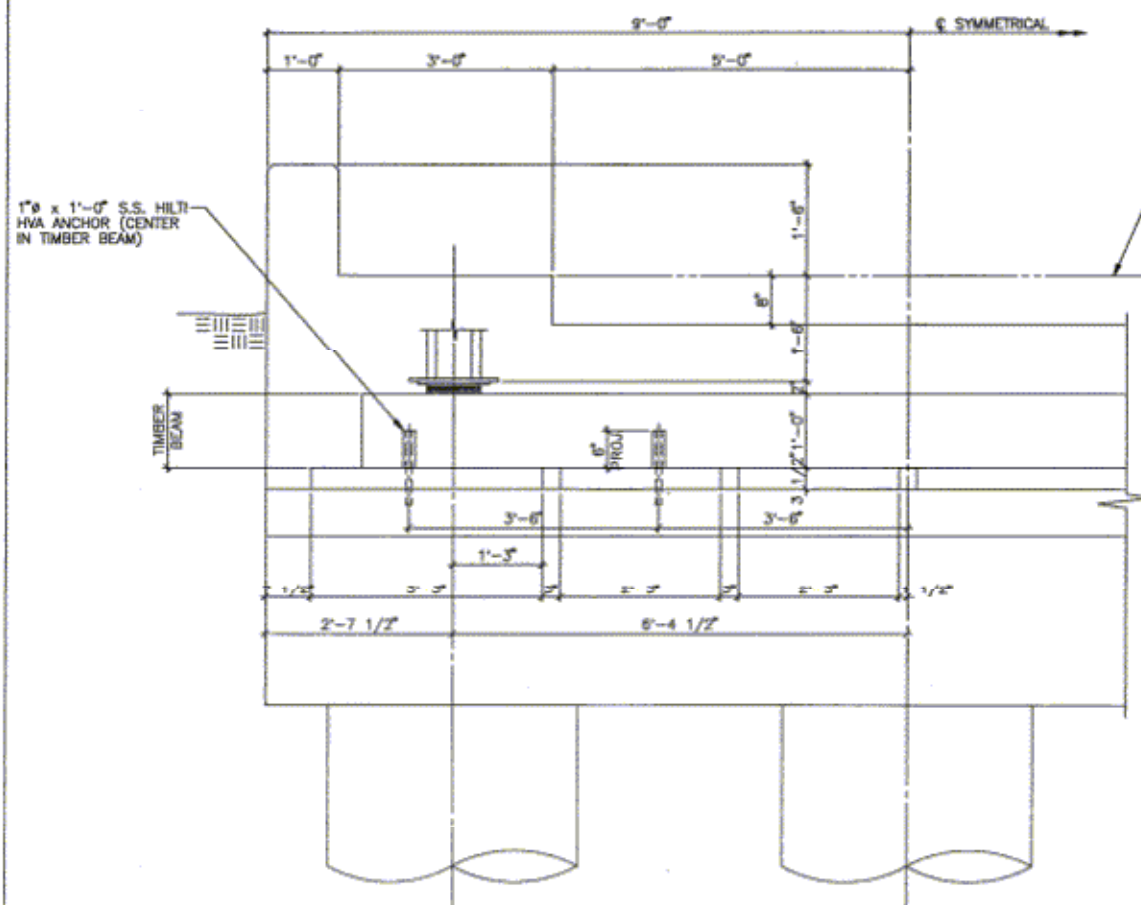


BAR DETAILS
N.T.S.

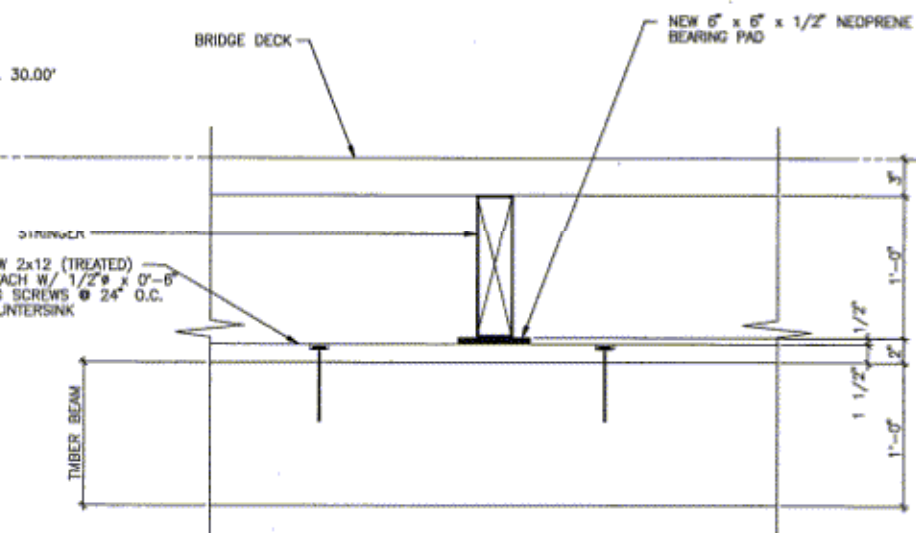
N.I.C.
STRUCTURAL DETAILS

EXISTING AS-BUILTS PLANS
****FOR REFERENCE ONLY****

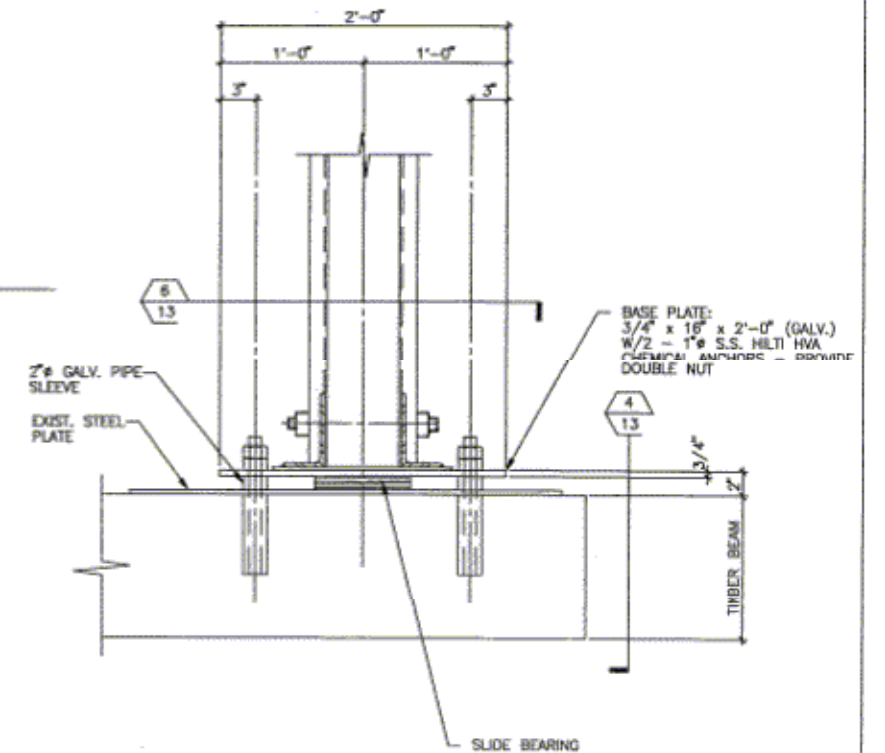
FED. AID PROJ. NO.	STATE	COUNTY	SHEET NO.
6	TEXAS	HARRIS	17
STP 94(27B)TE	12		
0912	71	438	VA



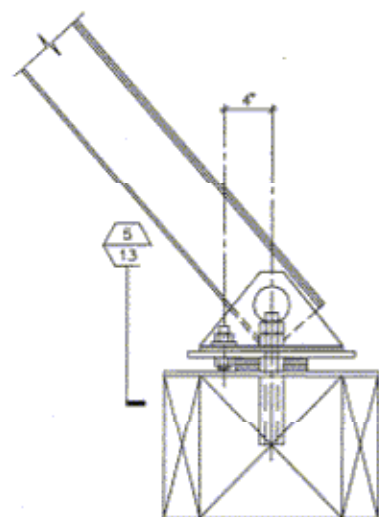
1 ABUTMENT ELEVATION
SCALE: 3/4" = 1'-0"



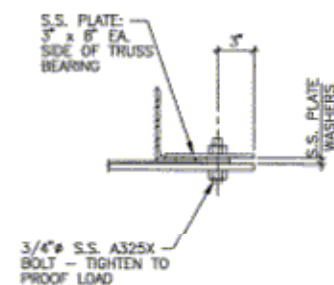
2 TYPICAL STRINGER BEARING - EAST ABUTMENT
SCALE: 1 1/2" = 1'-0"



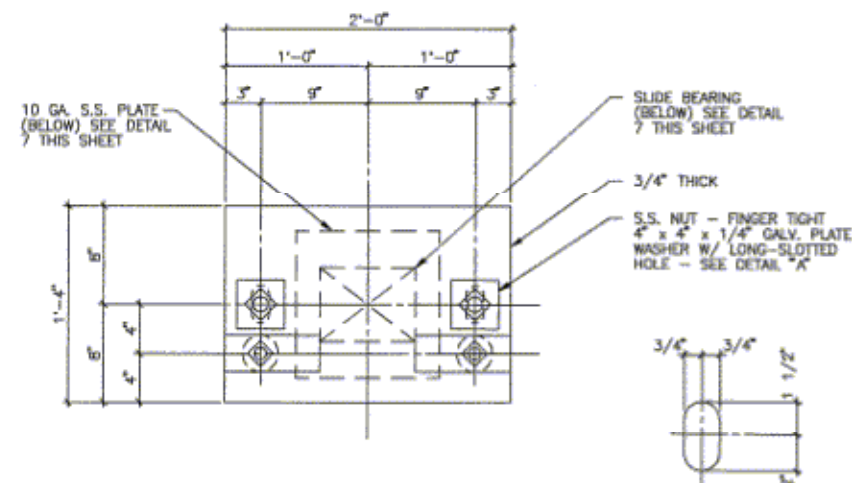
3 BEARING DETAIL - EAST ABUTMENT
SCALE: 1 1/2" = 1'-0"



4 SCALE: 1 1/2" = 1'-0"

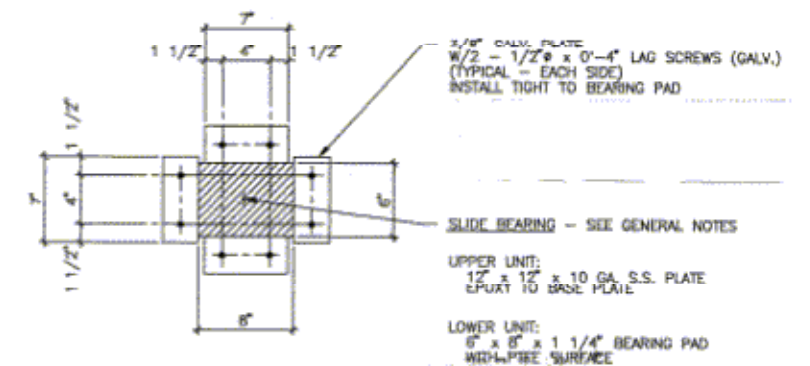


5 SCALE: 1 1/2" = 1'-0"



6 BASE PLATE
SCALE: 1 1/2" = 1'-0"

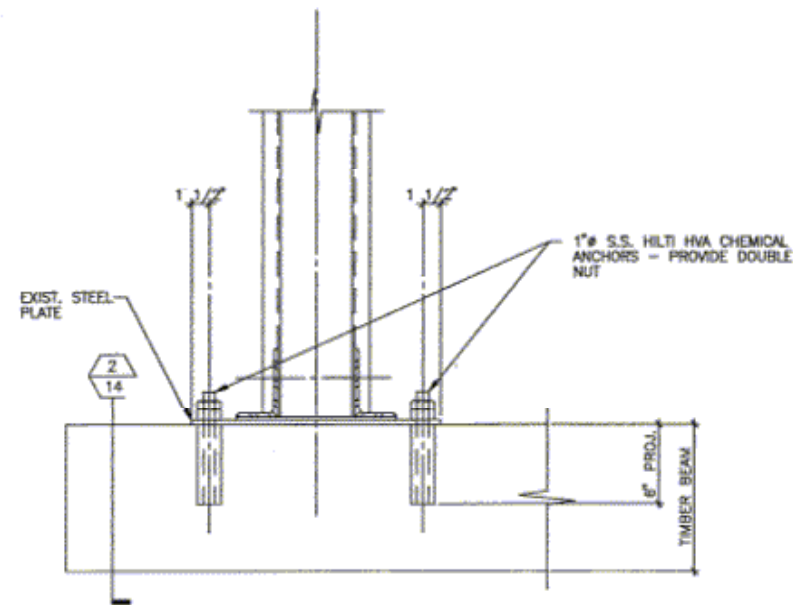
A LONG-SLOTTED HOLE
SCALE: 3" = 1'-0"



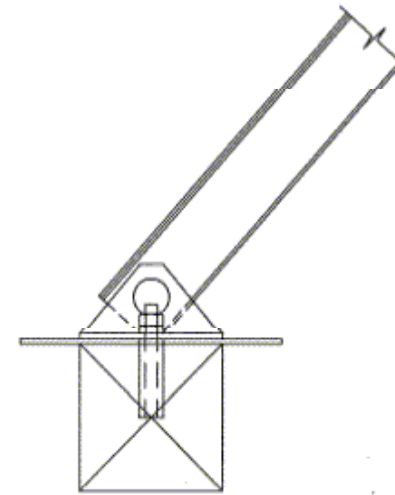
7 BEARING PAD CONFINEMENT
SCALE: 1 1/2" = 1'-0"

EXISTING AS-BUILTS PLANS
FOR REFERENCE ONLY

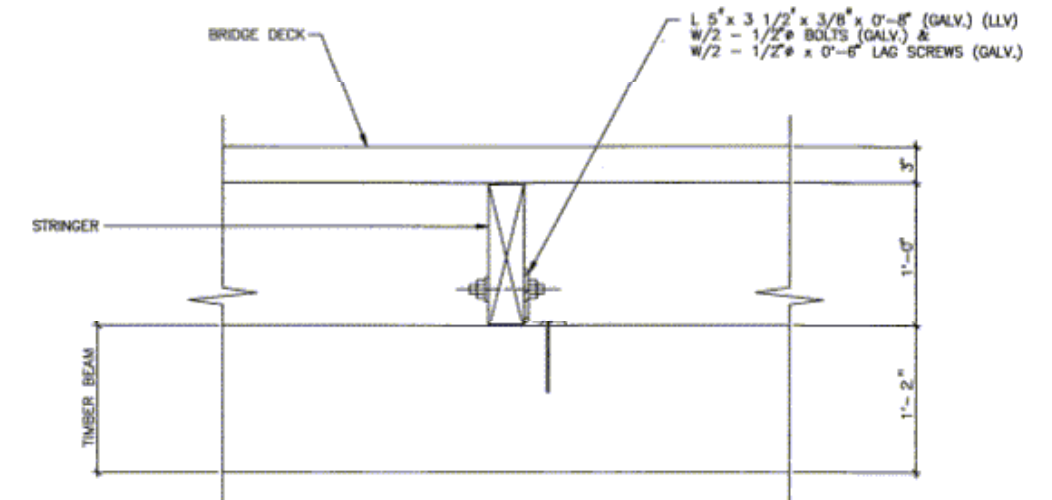
FEEDBACK	FORMAL AND PROJECT NO.	SHEET NO.
6	STP 94(278)TE	18
STATE	STATE	COUNTY
TEXAS	12	HARRIS
CONTRACT	NO.	JOB
0912	71	438
		VA



1 **PROPOSED**
BRIDGE BEARING - WEST ABUTMENT
SCALE: 1 1/2" = 1'-0"

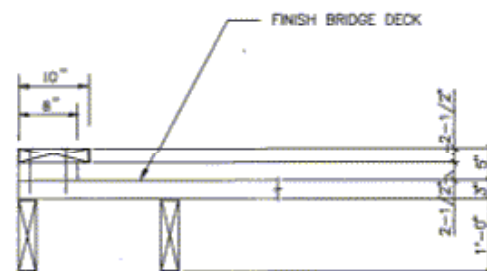


2 SCALE: 1 1/2" = 1'-0"

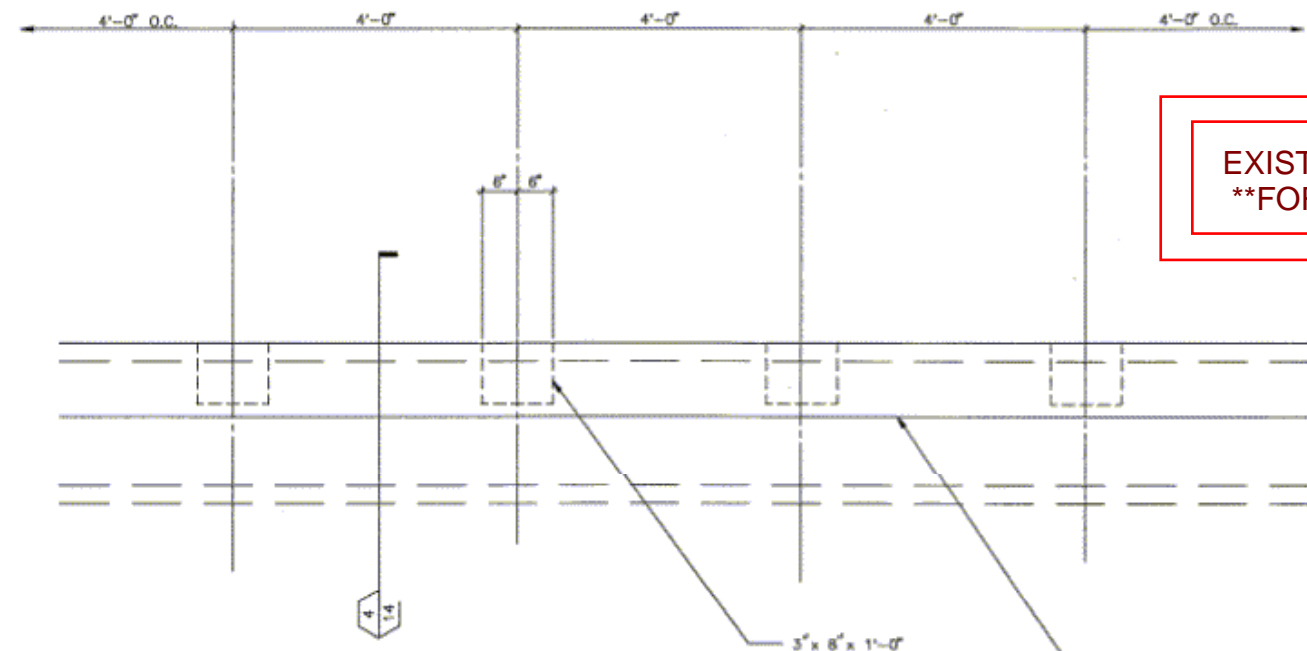


3 **PROPOSED**
TYPICAL STRINGER BEARING - WEST ABUTMENT
SCALE: 1 1/2" = 1'-0"

NOTE:
1. UNLESS NOTED, HOT-DIP GALVANIZE ALL STRUCTURAL STEEL SHAPES, PLATES, CONNECTIONS, ETC.
2. USE TREATED LUMBER ONLY. SUBMIT PRESERVATIVE TREATMENT INFORMATION FOR APPROVAL.



4 **N.I.C.**
TYPICAL CURB DETAIL
3/4" = 1'-0"



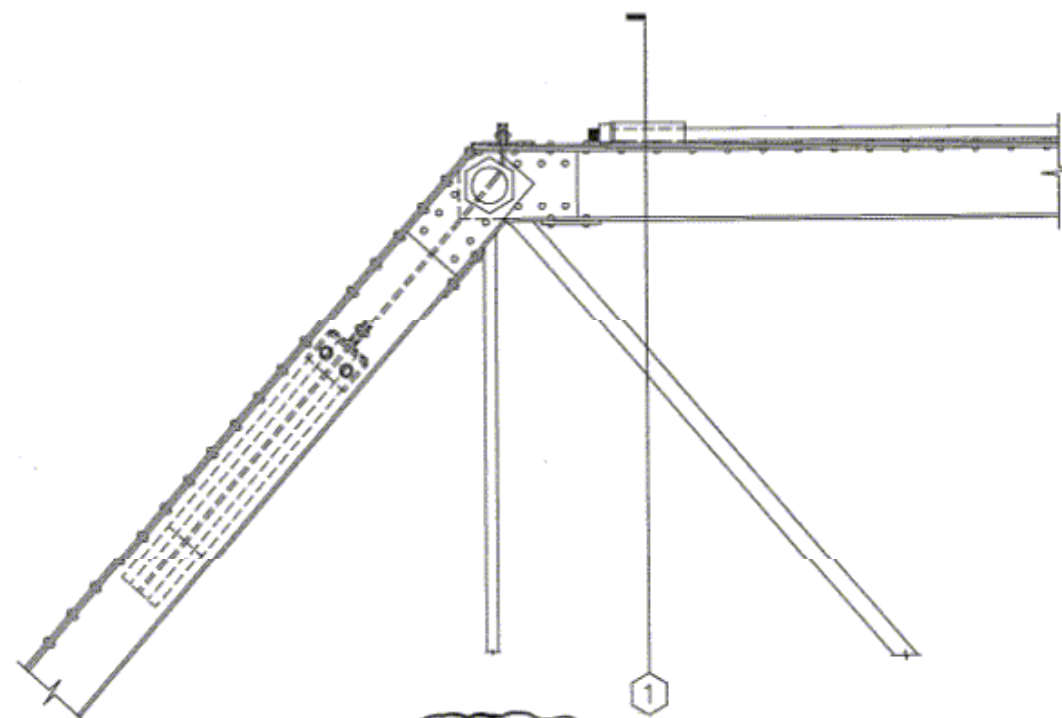
5 **N.I.C.**
PARTIAL FRAMING PLAN - CURB
3/4" = 1'-0"

EXISTING AS-BUILTS PLANS
FOR REFERENCE ONLY

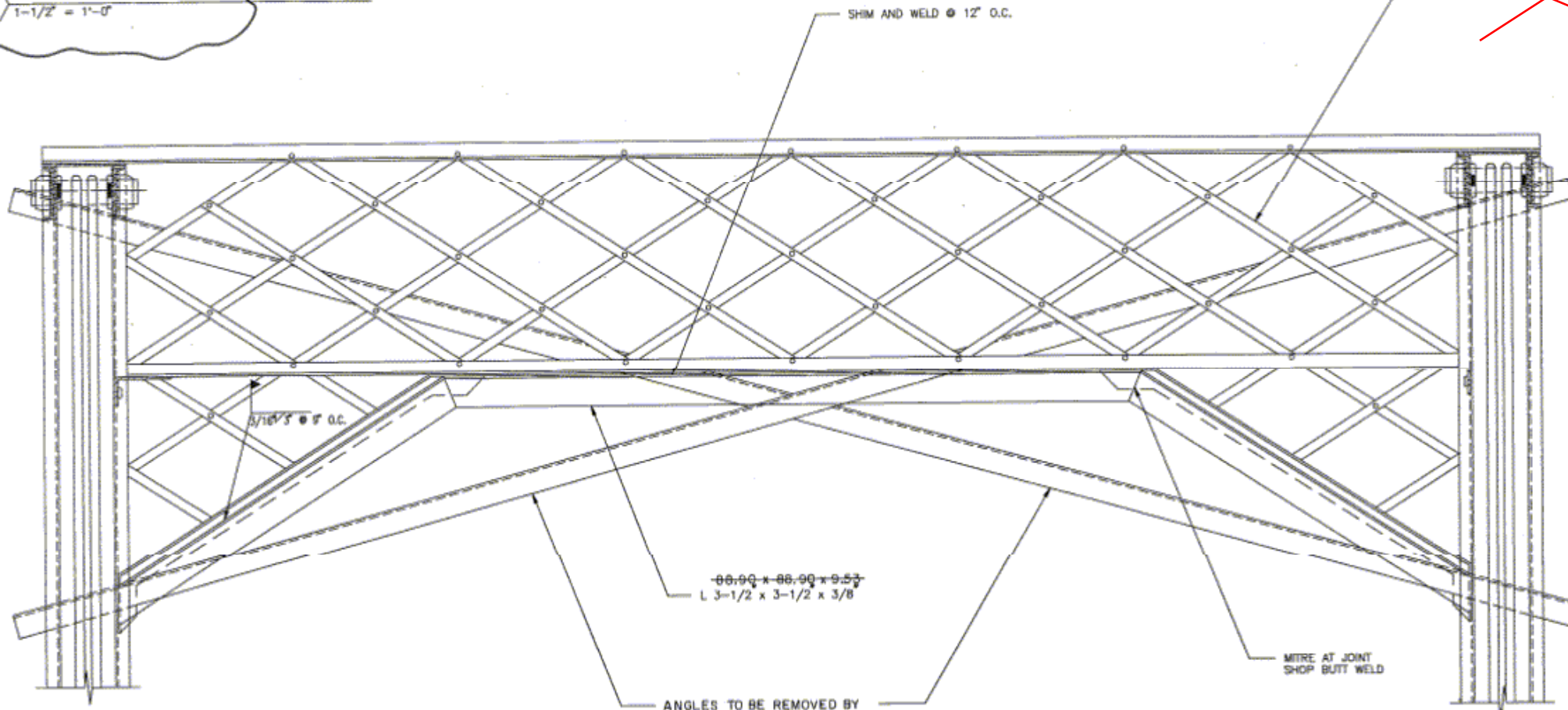
FIGURE	FEDERAL AID PROJECT NO.		SHEET NO.
6	STP 94(278)TE		19
STATE	STATE DIST.	COUNTY	
TEXAS	12	HARRIS	
CONTRACT	SECT.	JOB	ROADWAY NO.
0912	71	438	VA

NOTE:

1. MAKE A SURVEY OF THE STRUCTURAL MEMBERS OF THE BRIDGE. NOTE ALL MEMBERS, SUCH AS PINS, NUTS, BOLTS, LACING, PLATES, STRAPS, ETC., WHICH ARE DAMAGED.
2. REPAIR OR REPLACE ALL DAMAGED MEMBERS WITH MEMBERS EQUIVALENT IN SIZE AND STRENGTH.



N.I.C.
2 1-1/2' = 1'-0'



REPAIR ALL DAMAGED LATTICE PIECES AND CONNECTIONS

N.I.C.
STRUCTURAL DETAILS

1 PORTAL BRACING - EACH END OF BRIDGE
1-1/2' = 1'-0'

ANGLES TO BE REMOVED BY CONTRACTOR INSTALLING BRIDGE AFTER PLACEMENT ON BRIDGE ABUTMENT.

EXISTING AS-BUILTS PLANS
FOR REFERENCE ONLY

FEDERAL AID PROJECT NO.	SHEET NO.		
6	STP 94(278)TE		
20			
STATE	STATE DIST.	COUNTY	
TEXAS	12	HARRIS	
CONTRACT	SECT.	JOB	HIGHWAY NO.
0912	71	43B	VA

6 GOLF COURSE
HARRIS BRIDGE