CONRAIL

UNDERGRADE BRIDGE 13.70
STRENGTHEN PILES

LIST OF DRAWINGS:

GENERAL NOTES:

1. GENERAL SPECIFICATIONS AS PER AREMA SPECIFICATIONS.
2. STRUCTURAL STEEL AS PER ASTM A709, GRADE 50.
3. HIGH STRENGTH BOLT, NUT, AND WASHER MATERIAL SHALL BE ASTM A325. INSTALLATION TO BE IN ACCORDANCE WITH AREMA SPECS. FOR STEEL STRUCTURES. FURNISH HEAVY DUTY HEX NUTS, HIGH STRENGTH BOLTS $\frac{7}{8}$ INCH DIA. OPEN HOLES $\frac{15}{16}$ INCH DIA., UNLESS OTHERWISE SHOWN.
4. WELDING TO BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE D1.5 CURRENT ISSUE. ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE SHOWN. ALL WELDERS TO BE QUALIFIED IN ACCORDANCE WITH A.W.S. STRUCTURAL WELDING CODE OR OTHER REGULATIONS MEETING WITH THE APPROVAL OF THE ENGINEER. ALL FIELD WELDS TO BE MADE WITH E-70XX LOW HYDROGEN ELECTRODE HEATING UNITS PER CURRENT A.W.S. SPECS. ELECTRODE WITH ON-SITE PROTECTION AND USE OF
5. STRUCTURAL STEEL TO BE THOROUGHLY CLEANED AS PER SSPC-SP1.

REVIEW PLANS 10-6-09

PREPARED BY:
JE JACOBS CIVIL INC.
30 SOUTH 15th ST
SUITE 1100
PHILADELPHIA, PA 19102

DATE: _____

NO.	DATE	BY	DESCRIPTION:
			REVISIONS:

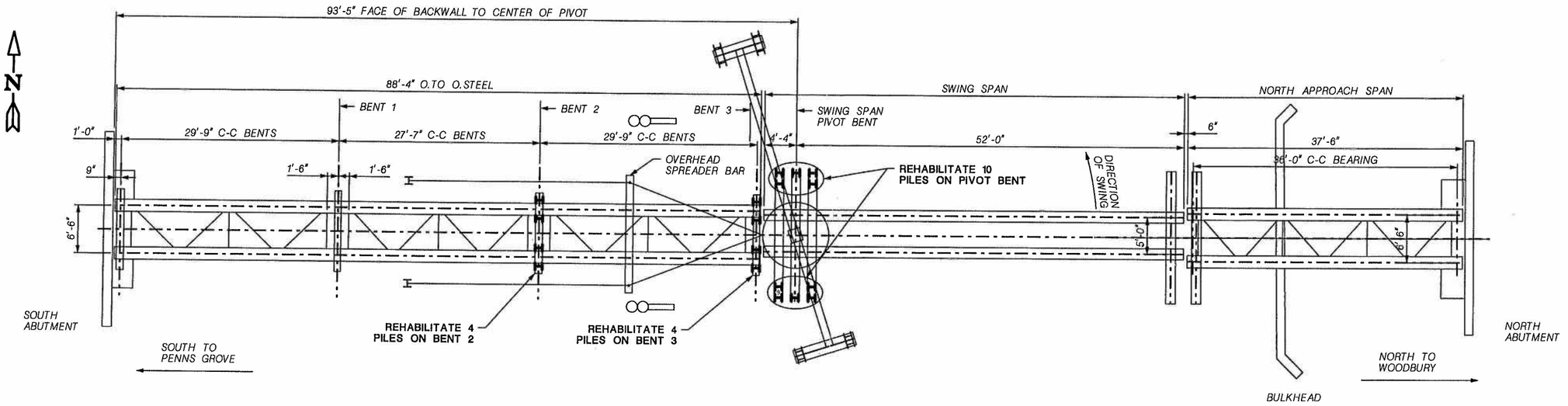
DES. | DR. | TR. | CH.

CONRAIL
OFFICE OF CHIEF ENGINEER
1000 HOWARD BOULEVARD
MT. LAUREL, N.J. 08054-2355

CONRAIL U.G BRIDGE 13.70

GENERAL NOTES

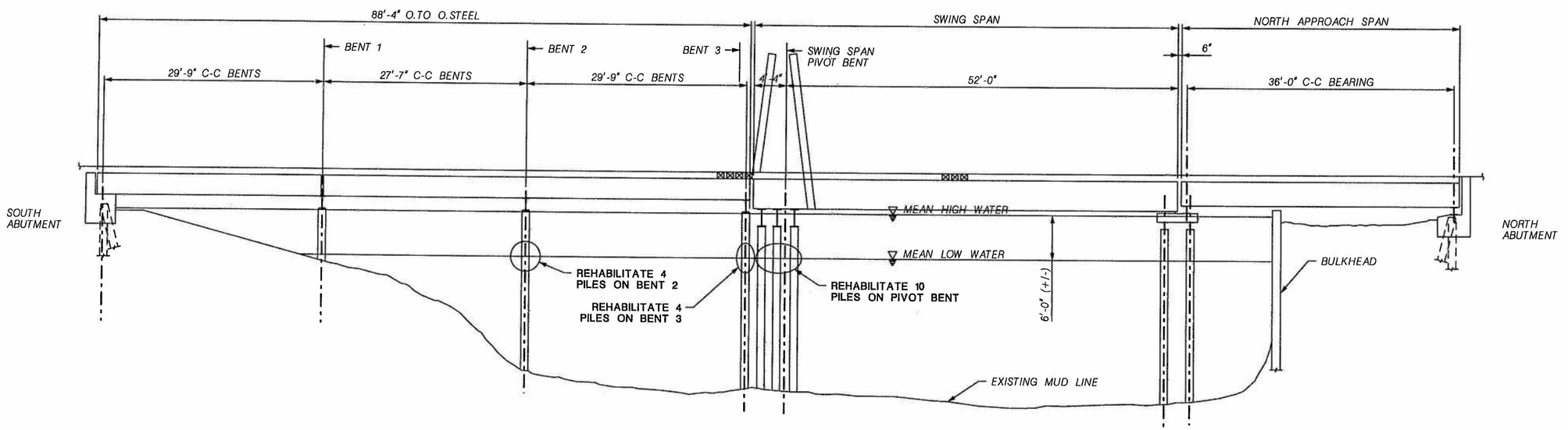
APPROVED:
APPROVED:
SCALE:
DATE: SEPT, 2009
SHEET: 1 OF 7
DRAWING NO.



PLAN

SCALE: ⅛" = 1'-0"

4 0 2 4 8



ELEVATION

SCALE: ⅛" = 1'-0"

4 0 2 4 8

REVIEW PLANS 10-6-09

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30 SOUTH 15th ST
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PHILADELPHIA, PA 19102

DATE:

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GENERAL PLAN AND ELEVATION

APPROVED:

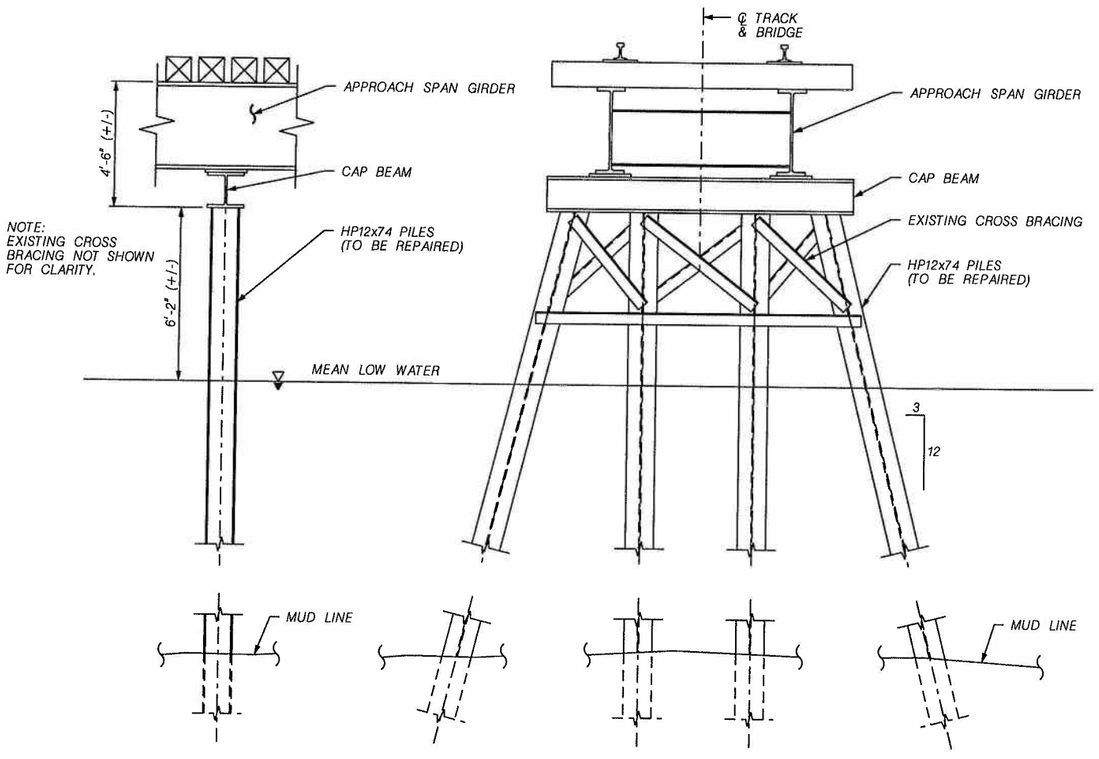
APPROVED:

SCALE:

DATE: SEPT, 2009

SHEET: 2 OF 7

DRAWING NO.

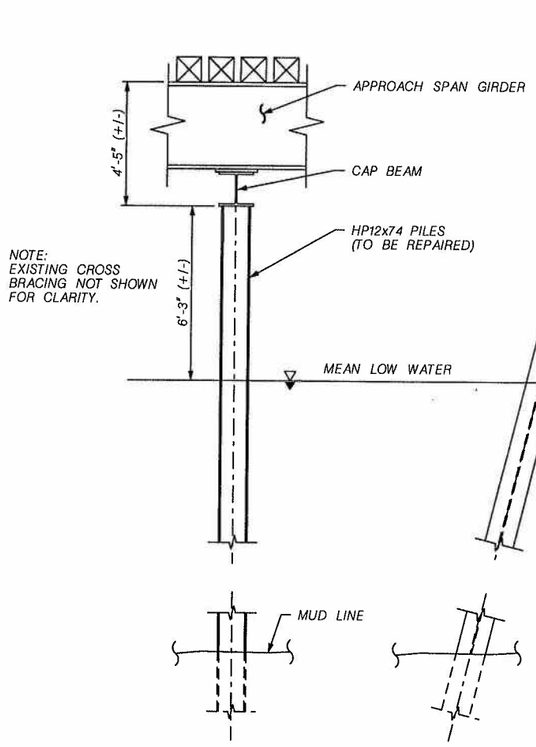


PARTIAL ELEVATION
EXISTING CONDITION (BENT 2)

SCALE: ⅜" = 1'-0"

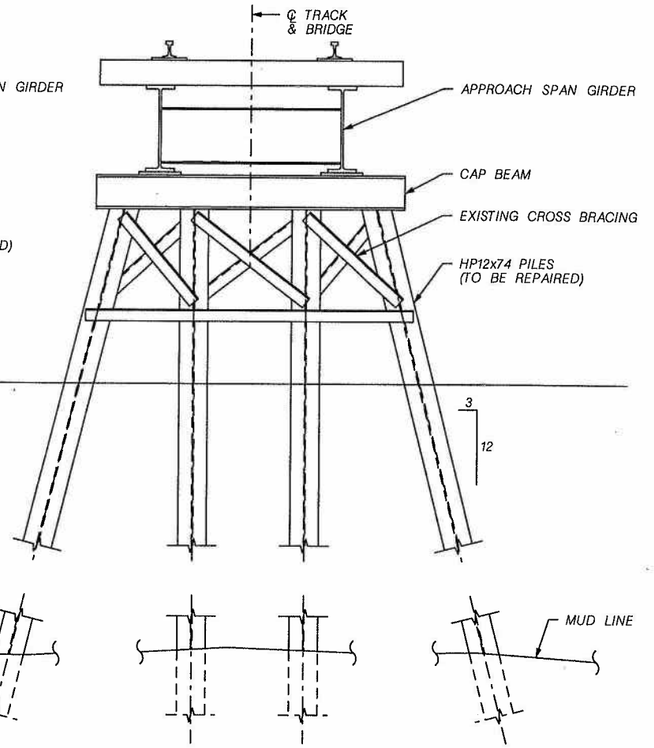
SECTION
EXISTING CONDITION (BENT 2)

SCALE: ⅜" = 1'-0"



PARTIAL ELEVATION
EXISTING CONDITION (BENT 3)

SCALE: ⅜" = 1'-0"



SECTION
EXISTING CONDITION (BENT 3)

SCALE: ⅜" = 1'-0"

REVIEW PLANS 10-6-09

PREPARED BY:
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SUITE 1100
PHILADELPHIA, PA 19102

DATE:

NO.	DATE	BY	DESCRIPTION:
REVISIONS:			

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CONRAIL U.G BRIDGE 13.70

EXISTNG TYPICAL SECTIONS - 1

APPROVED:

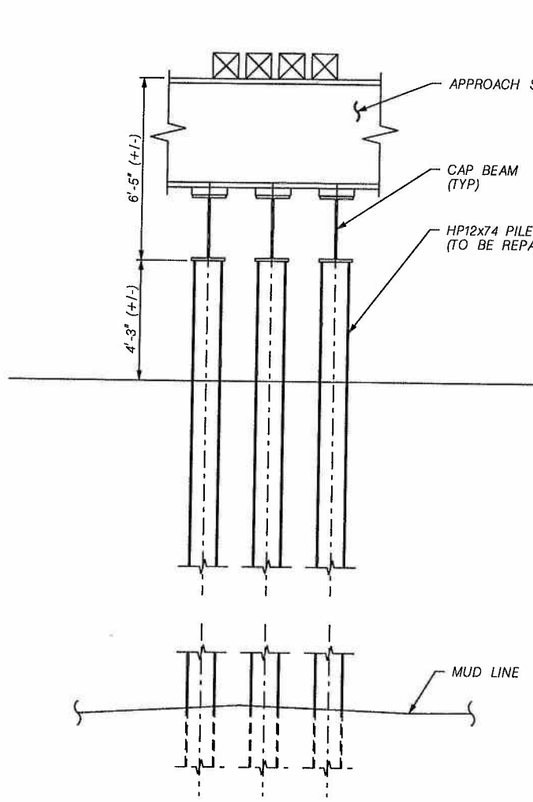
APPROVED:

SCALE:

DATE: SEPT, 2009

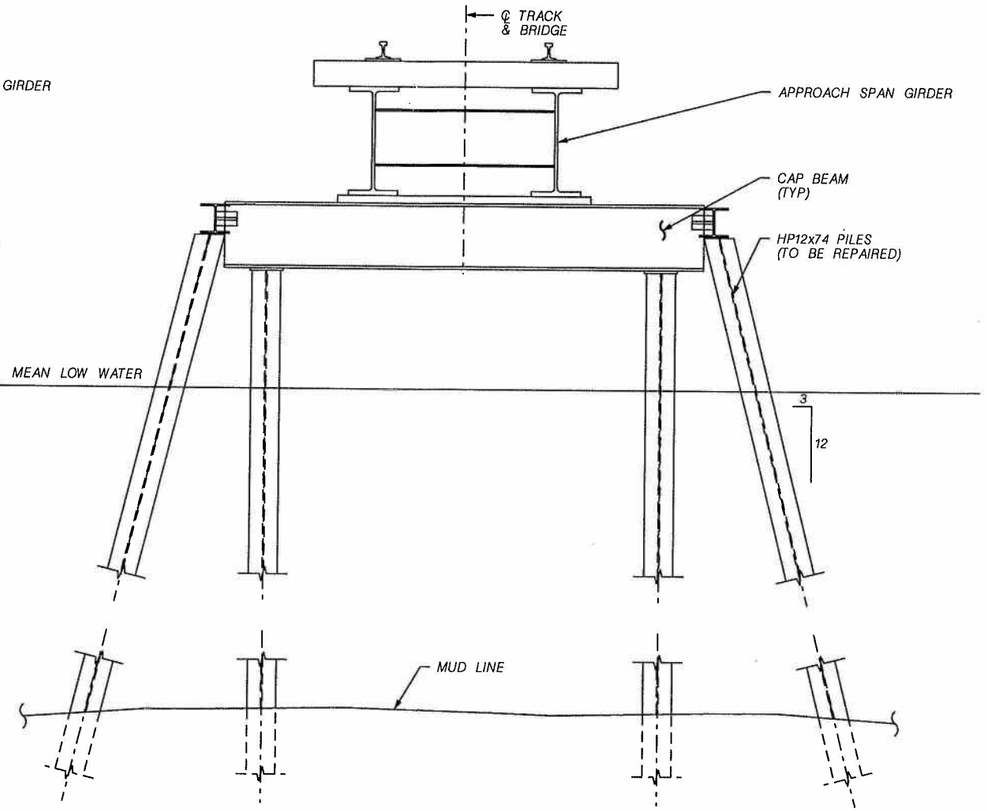
SHEET: 3 OF 7

DRAWING NO.



PARTIAL ELEVATION
EXISTING CONDITION (PIVOT BENT)

SCALE: ⅜" = 1'-0"



SECTION
EXISTING CONDITION (PIVOT BENT)

SCALE: ⅜" = 1'-0"

REVIEW PLANS 10-6-09

PREPARED BY:
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DATE:

NO.	DATE	BY	DESCRIPTION:

REVISIONS:
DES. DR. TR. CH.

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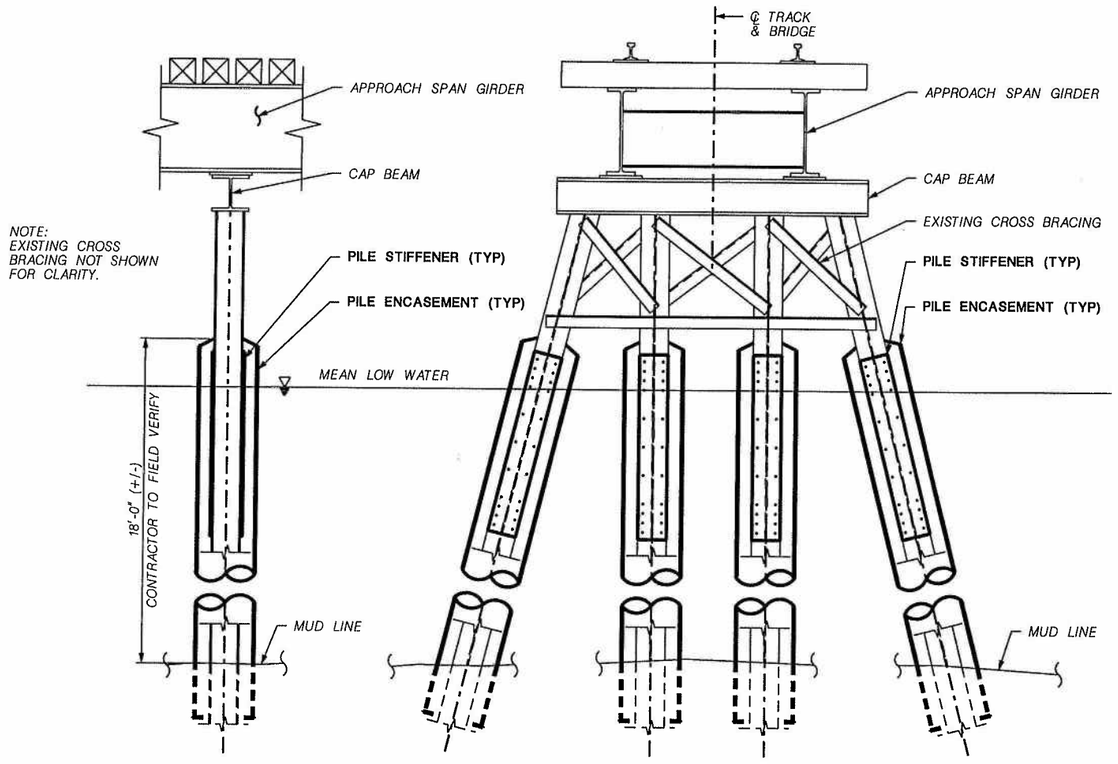
EXISTNG TYPICAL SECTIONS - 2

APPROVED:
APPROVED:
SCALE:
DATE: SEPT, 2009
SHEET: 4 OF 7
DRAWING NO.

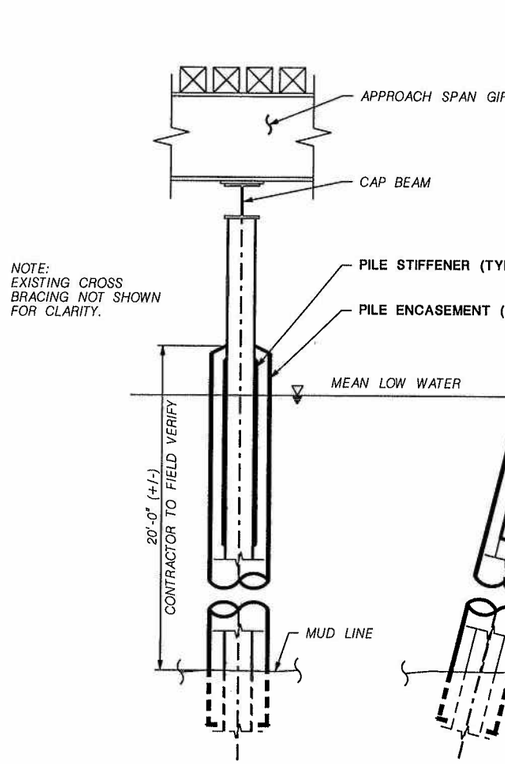


PARTIAL ELEVATION
PROPOSED CONDITION (BENT 2)

SCALE: 3/8" = 1'-0"

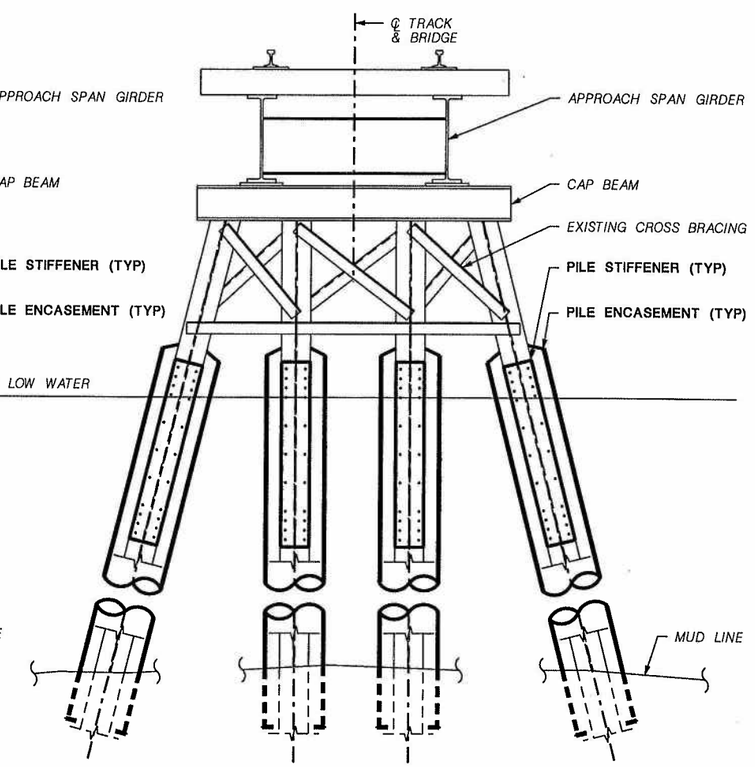
SECTION
PROPOSED CONDITION (BENT 2)

SCALE: 3/8" = 1'-0"



PARTIAL ELEVATION
PROPOSED CONDITION (BENT 3)

SCALE: 3/8" = 1'-0"



SECTION
PROPOSED CONDITION (BENT 3)

SCALE: 3/8" = 1'-0"

REVIEW PLANS 10-6-09

PREPARED BY:
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PHILADELPHIA, PA 19102

DATE:

NO.	DATE	BY	DESCRIPTION

REVISIONS:
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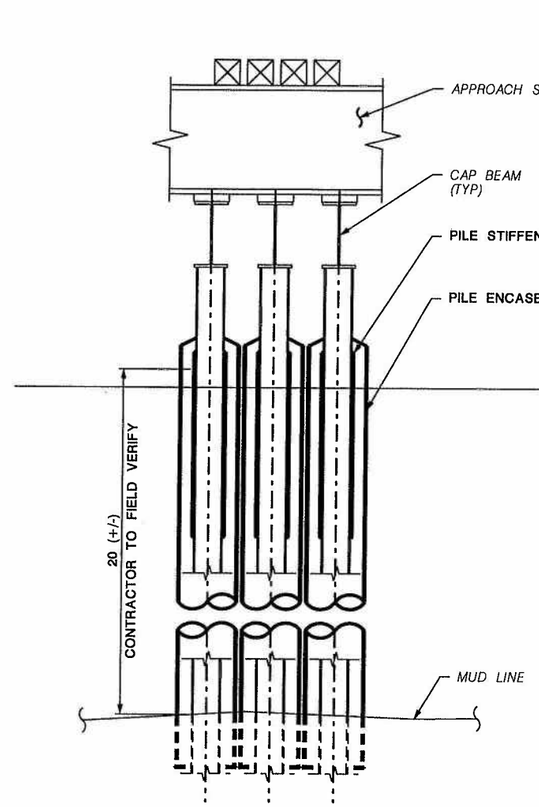
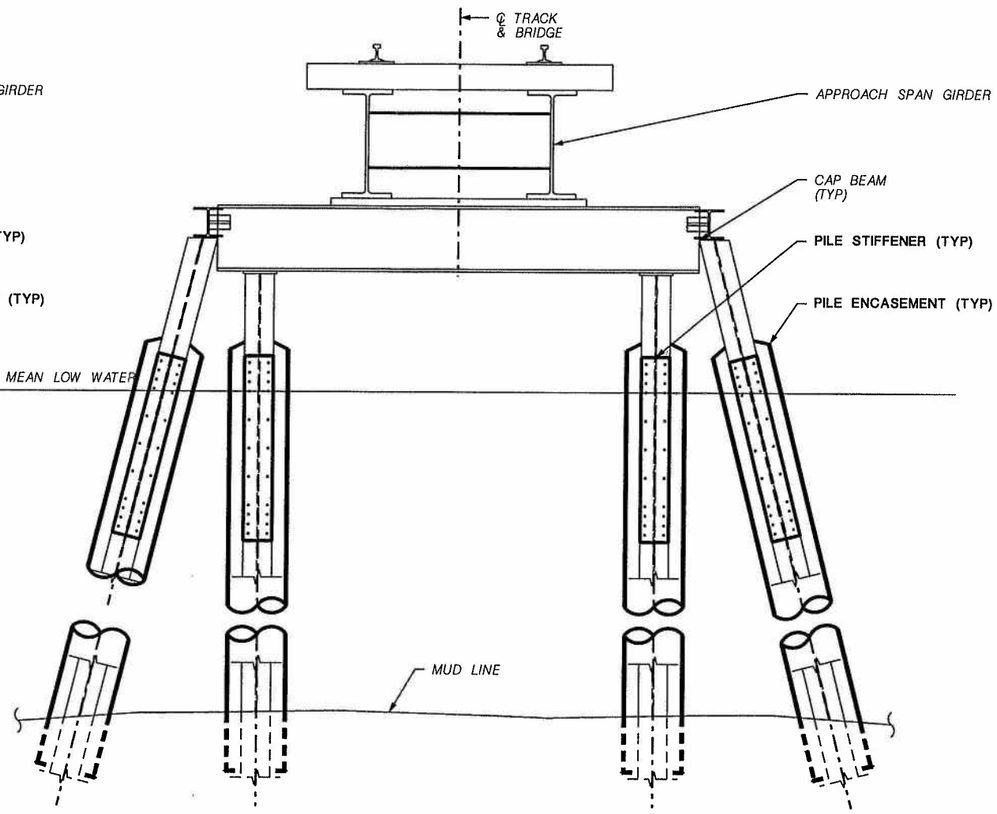
PROPOSED SECTIONS - 1

APPROVED:
APPROVED:
SCALE:
DATE: SEPT, 2009
SHEET: 5 OF 7
DRAWING NO.



PARTIAL ELEVATION
PROPOSED CONDITION (PIVOT BENT)

SCALE: 3/8" = 1'-0"
2 0 1 2 4



SECTION
PROPOSED CONDITION (PIVOT BENT)

SCALE: 3/8" = 1'-0"
2 0 1 2 4

REVIEW PLANS 10-6-09

PREPARED BY:
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PHILADELPHIA, PA 19102

DATE:

NO.	DATE	BY	DESCRIPTION
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PROPOSED SECTIONS - 2

APPROVED:

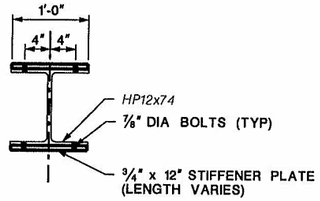
APPROVED:

SCALE:

DATE: SEPT, 2009

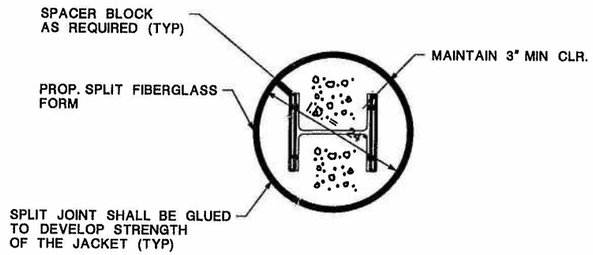
SHEET: 6 OF 7

DRAWING NO.



SECTION A-A

SCALE: 1" = 1'-0"
6" 0 6" 1

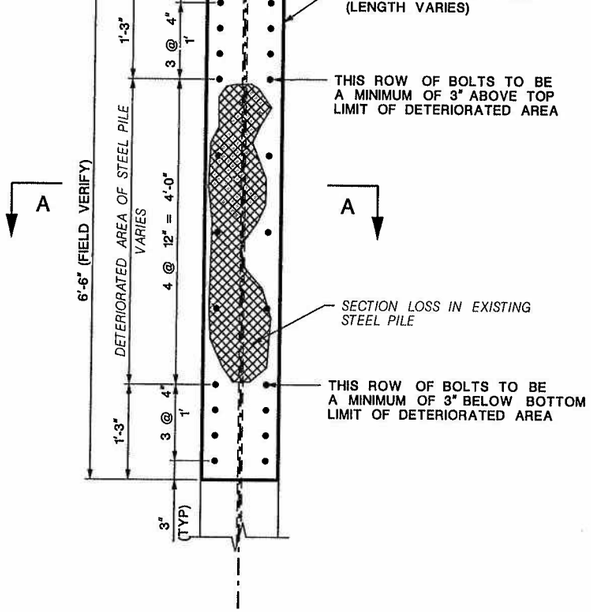


PILE ENCASEMENT PLAN

SCALE: 1" = 1'-0"
6" 0 6" 1

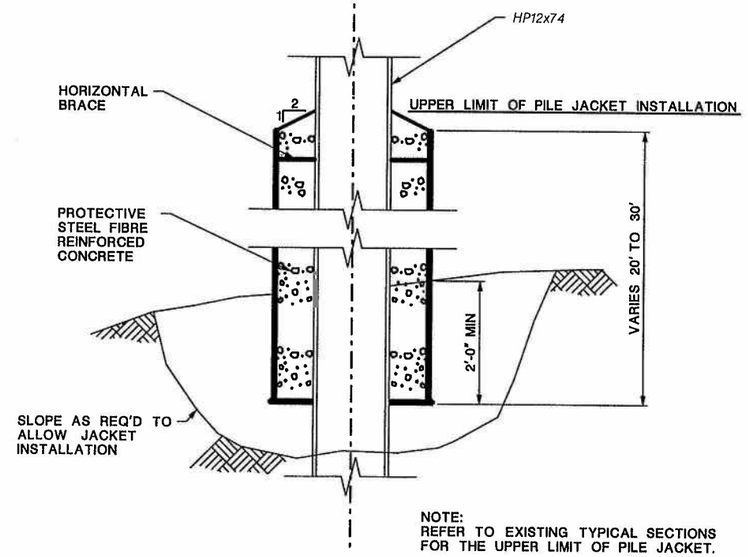
PILE STIFFENER INSTALLATION:

1. TRACK TO REMAIN IN SERVICE DURING CONSTRUCTION PROCEDURE.
2. CONTRACTOR TO COORDINATE WORK AROUND TRAIN SCHEDULE.
3. ALL HOLES TO BE DRILLED. NO TORCH CUTTING ALLOWED.
4. REMOVAL OF THE EXISTING BRACING COMPONENTS MAY BE REQUIRED. IF EXISTING BRACING IS REMOVED, RESTORE BRACING ONCE ALL THE PILES FOR A BENT HAVE BEEN REPAIRED.
5. DETERMINE THE DETERIORATION LIMITS FOR THE EXISTING PILE TO BE REPAIRED.
6. FABRICATE PILE STIFFENERS AS SHOWN ON PLANS AND BASED ON DETERIORATION LIMITS.
7. CLAMP PILE STIFFENER TO EXISTING PILE AND USED AS A TEMPLATE TO DRILL HOLES INTO EXISTING PILE.
8. INSTALL BOLTS.
9. REPEAT PROCEDURE FOR THE NEXT REQUIRED LOCATION.



PILE STIFFENER DETAILS

SCALE: 1" = 1'-0"
6" 0 6" 1



NOTE:
REFER TO EXISTING TYPICAL SECTIONS FOR THE UPPER LIMIT OF PILE JACKET.

PILE ENCASEMENT SECTION

SCALE: 1" = 1'-0"
6" 0 6" 1

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DETAILS

APPROVED:

APPROVED:

SCALE:

DATE: SEPT, 2009

SHEET: 7 OF 7

DRAWING NO.