

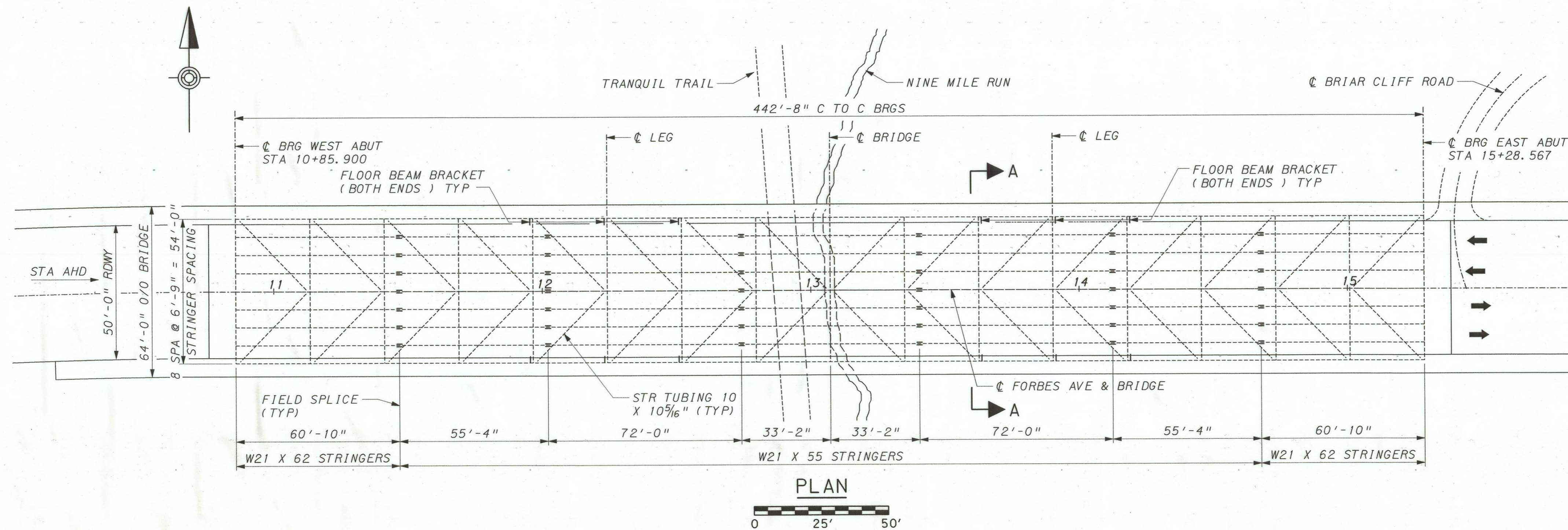


2009 Rehabilitation Plans

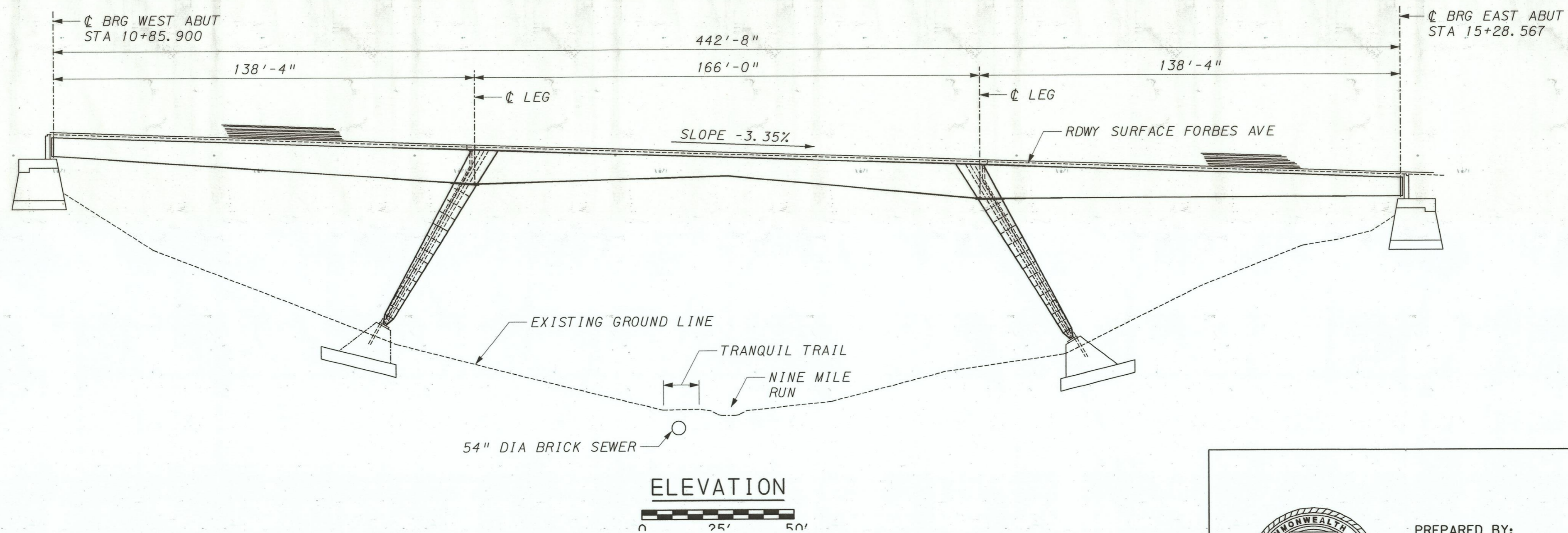
Pittsburgh, PA

HWY22MH003

(6 pages)



PLAN
0 25' 50'



ELEVATION
0 25' 50'

INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN AND ELEVATION
2	GENERAL NOTES AND APPROXIMATE QUANTITIES
3	TYPICAL SECTION AND KNEE BRACE REPAIR
4	FRAME LEGS AND BRACING RETROFIT
5	DOWNPOUT REPAIRS

NOTES:

SHOP DRAWINGS MUST INDICATE THAT EXISTING DIMENSIONS THAT RELATE TO THE AFFECTED WORK HAVE BEEN FIELD VERIFIED BEFORE SHOP DRAWINGS CAN BE APPROVED. NO PAYMENT OR APPROVAL WILL BE GIVEN UNTIL ALL DIMENSIONS ARE FIELD VERIFIED.

FOR SECTION A-A, SEE SHEET 3.

STRUCTURE NO. 02730100003033

B. T. E. PROJECT NO. 07300-5

CITY OF PITTSBURGH
DEPARTMENT OF PUBLIC WORKS
BUREAU OF TRANSPORTATION AND ENGINEERING
FORBES AVENUE BRIDGE OVER FERN HOLLOW
AND NINE MILE CREEK, FRICK PARK

BRIDGE REHABILITATION
GENERAL PLAN AND ELEVATION



PREPARED BY:
MICHAEL BAKER JR. INC.
AIRSIDE BUSINESS PARK
100 AIRSIDE DRIVE
MOON TOWNSHIP, PA 15108

Ronald S. Capp 10/10/08

DESIGNED BY	GRL
CHECKED BY	RSC
DRAWN BY	RJK
CHECKED BY	GRL

SCALE: AS NOTED	SHEET NO. 1 OF 5	ACCESSION NO. F-9200A
DATE: April 2009		CASE NO. E-8-3

DESIGN-FILE-NAME

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GENERAL NOTES

MATERIALS AND WORKMANSHIP

PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH SPECIFICATIONS PUBLICATION 408/2003, ANSI/AASHTO/AWS/D1.5-95 BRIDGE WELDING CODE, 2002, AND CONTRACT SPECIAL PROVISIONS.

STRANDS FOR RETROFITTED CROSS BRACING DESIGNED FOR 50 PSF AS PER AASHTO STANDARD SPECIFICATIONS 15TH EDITION (1994).

GENERAL

SUPERSTRUCTURE DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES F.

ALL DIMENSIONS ARE HORIZONTAL EXCEPT AS NOTED.

USE CARE WHEN REMOVING PORTIONS OF THE EXISTING STRUCTURE TO PREVENT DAMAGE TO THE REMAINING PORTIONS. REPAIR OR REPLACE ANY REMAINING COMPONENTS DAMAGED BY REMOVAL OPERATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.

VERIFY ALL DIMENSIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION PRIOR TO FABRICATION. ADJUST NEW STEEL MEMBERS ACCORDINGLY FOR PROPER FIT IF REQUIRED.

STRUCTURAL STEEL

PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50 DESIGNATION EXCEPT WHERE NOTED OTHERWISE.

DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

THE CONTRACTOR IS RESPONSIBLE FOR SAFE ERECTION OF STEEL ITEMS. PROVIDE ALL NECESSARY BRACING FOR STRUCTURAL STEEL ELEMENTS UNTIL THE ELEMENTS ARE IN A STABLE (FINAL) ERECTED CONDITION. SUBMIT AN ERECTION PLAN TO THE ENGINEER FOR APPROVAL A MINIMUM OF 30 DAYS PRIOR TO ERECTION.

FOR RETROFITTED CROSS BRACING USE 7/8"Ø ZINC-COATED STRUCTURAL STRANDS CLASS A COATING E=24000 KSI WITH A BREAKING STRENGTH OF 46.0 TONS AS MANUFACTURED BY WILLIAMSPORT WIREROPE WORKS 100 MARYLAND STREET WILLIAMSPORT, PA 17701, OR EQUAL.

PROVIDE GALVANIZED 1 3/4"Ø THREADED RODS 60 KSI TENSILE STRENGTH, ASTM A307 FOR STRANDS LOWER END CONNECTIONS AND ADJUSTMENTS IN TENSION.

FASTENERS

FASTENERS ARE 7/8" DIAMETER MECHANICALLY GALVANIZED HIGH STRENGTH BOLTS, ASTM A325, EXCEPT AS NOTED.

USE NEW HIGH STRENGTH BOLTS FOR ALL WORK REQUIRING BOLTED CONNECTIONS. RE-USE OF EXISTING FASTENERS IS NOT PERMITTED.

FIELD CONDITIONS MAY DIFFER FROM THOSE INDICATED BY THE DESIGNATIONS FOR EXISTING BOLTS SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF STEEL, AS INDICATED OR SPECIFIED, REGARDLESS OF FASTENER TYPE. REMOVAL OF EXISTING FASTENERS IS INCIDENTAL TO OR INCLUDED IN THE ITEMS OF WORK.

WELDING NOTES

REMOVE BY APPLICATION OF HEAT ANY MOISTURE PRESENT AT POINT OF WELD. PROVIDE WINDBREAKS FOR PROTECTION FROM DIRECT WIND.

PRIOR TO PLACING THE WELD, THOROUGHLY BLAST OR POWER TOOL CLEAN ALL PORTIONS OF NEW AND EXISTING SURFACES TO RECEIVE WELDS OF ALL FOREIGN MATTER, INCLUDING PAINT FILM, FOR A DISTANCE OF 2 INCHES FROM EACH SIDE OF THE OUTSIDE LINES OF THE WELD.

BRIDGE REHABILITATION NOTES

DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.

THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED. THE EXISTING BRIDGE REFERENCE DRAWINGS ARE AS FOLLOWS:

ORIGINAL DESIGN PLANS:

RECONSTRUCTION OF FORBES AVENUE BRIDGE
OVER FERN HOLLOW AND APPROACHES
(30 SHEETS) NOVEMBER 1970

CONN FABRICATING & ENGINEERING CO.
NEW CASTLE, PA
SHOP DRAWINGS (27 SHEETS)
JUNE 27, 1972

DRAINAGE DETAILS (SHEETS 32 & 33)
APRIL 18, 1973
DEPARTMENT OF PUBLIC WORKS
BUREAU OF TRANSPORTATION AND ENGINEERING
CITY-COUNTY BUILDING
414 GRANT STREET
PITTSBURGH, PA 15219-2455

CONSTRUCTION SITE ACCESS

BE ADVISED THAT THERE IS LIMITED ACCESS TO THE BRIDGE SITE FROM UNDERNEATH. FRICK PARK HAS A PEDESTRIAN TRAIL (TRANQUIL TRAIL) THAT RUNS UNDER THE STRUCTURE.

UTILITY NOTES

COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2003 SECTIONS 105.06 AND 107.12.

PRIOR TO ANY EXCAVATION OR DEMOLITION WORK, CONTACT THE PA ONE CALL SYSTEM, INC. AT 1-800-242-1776 AND COMPLY WITH THE PROVISIONS OF PA ACT 287 OF 1994 AS AMENDED BY ACT 187 OF 1996. IDENTIFY ALL OVERHEAD LINES AND NOTIFY AND COMPLY WITH THE APPLICABLE UTILITY COMPANY'S CLEARANCE REQUIREMENTS. DESIGNER'S SERIAL NUMBER FOR THE CITY OF PITTSBURGH IS #0180500.

SUMMARY OF REHABILITATION ITEMS

1. DRAINAGE SYSTEM

REMOVAL OF EXISTING AND INSTALLATION OF DOWNSPOUTING PIPES AND BRACKETS. THESE EXTEND FROM THE BRIDGE DECK SCUPPERS AND CONNECT TO THE EXISTING UNDERGROUND DRAINAGE SYSTEM. THIS WORK WILL ALSO INCLUDE CLEANING OF THE EXISTING SCUPPERS AS WELL AS CLEANING OF THE UNDERGROUND DRAINAGE PIPE SYSTEM INTO WHICH THE DOWNSPOUTING WILL BE RECONNECTED.

2. CRACK IN KNEE BRACE OF FLOORBEAM #6 AT NORTH GIRDER

REPAIRS TO THIS CRACK WILL CONSIST ONLY OF DRILLING A HOLE AT THE END OF THE CRACK, INTENDED TO ARREST FURTHER PROPAGATION OF THE CRACK. THIS WORK WILL INCLUDE PERFORMANCE OF A MAGNETIC PARTICLE INSPECTION OR DYE PENETRANT TEST TO VERIFY THE END OF THE CRACK.

3. CROSS BRACING RETOFIT

RETROFITTING OF THE CROSS BRACING BY THE ADDITION OF ZINC COATED STRUCTURAL WIRE ROPE ATTACHED TO THE TOP AND BOTTOM FOR BOTH THE EAST AND WEST LEGS.

APPROXIMATE QUANTITIES

DESCRIPTION	UNIT	TOTAL
DOWNSPOUTING	LF	272
CROSS BRACING RETROFIT	LS	1
FABRICATED STRUCTURAL STEEL	LBS	850
CRACK REPAIR	EA	1

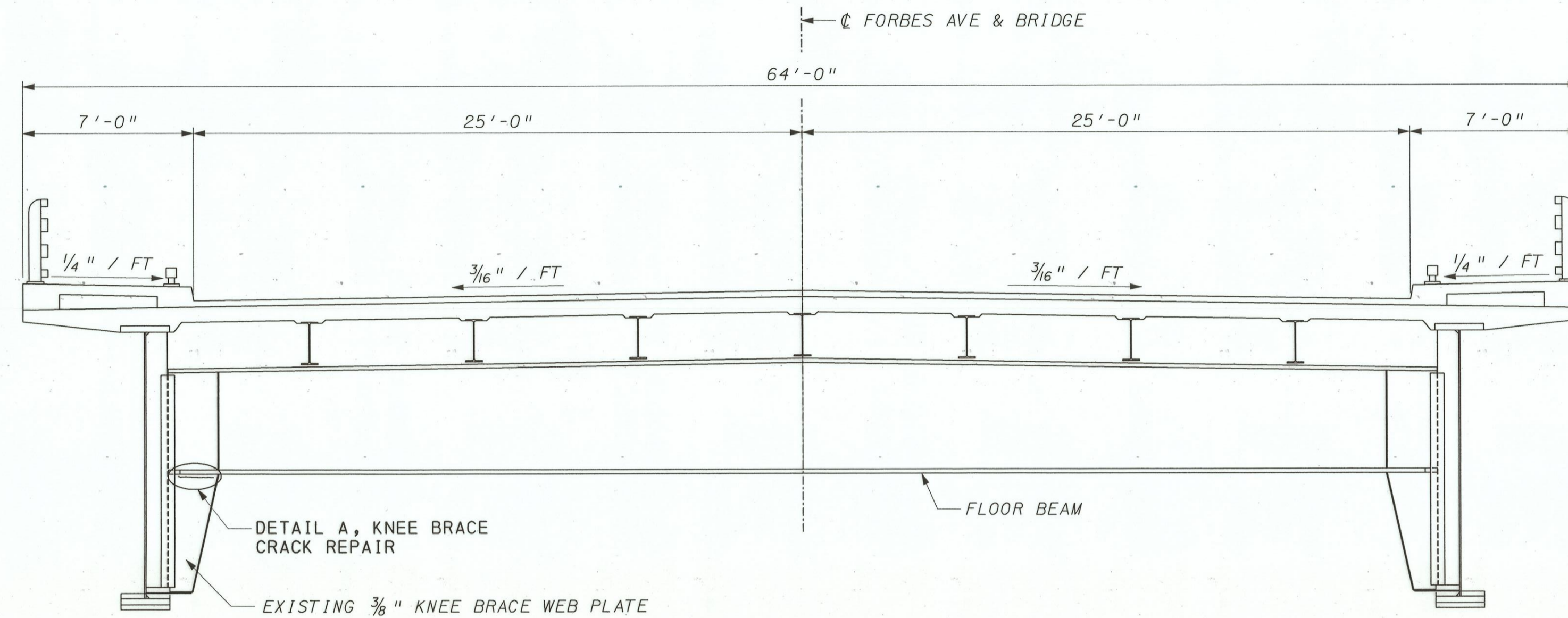
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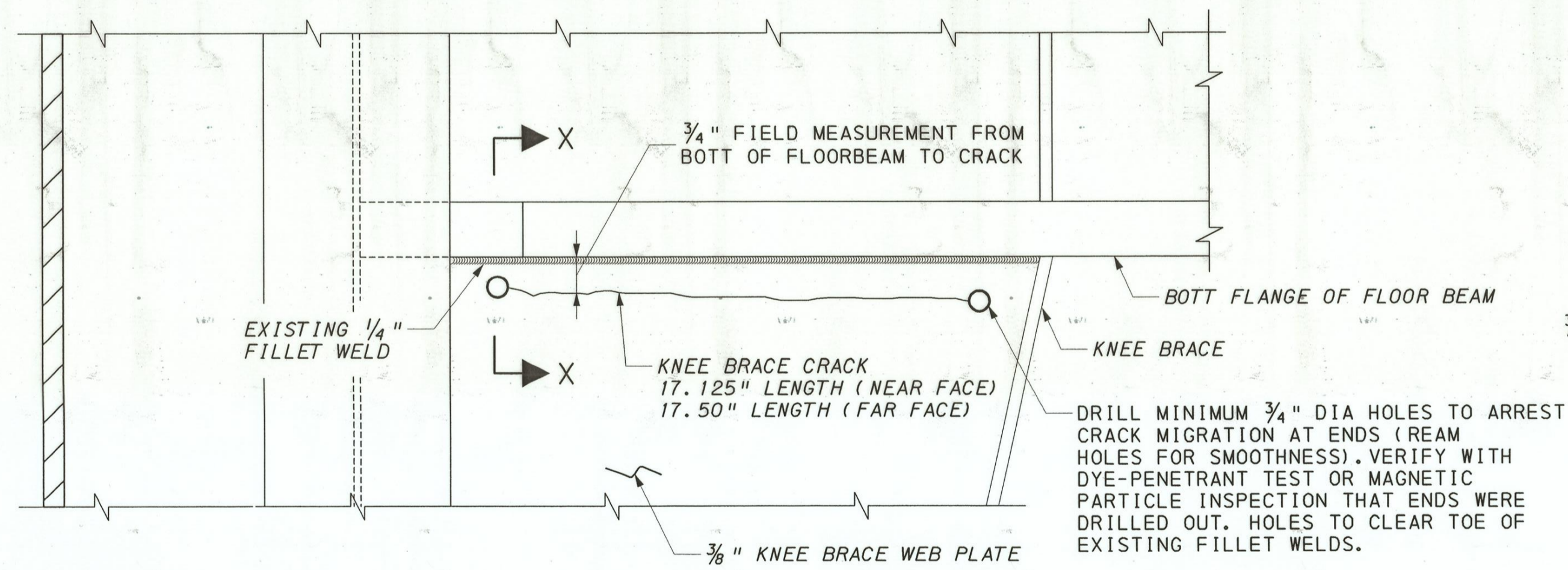
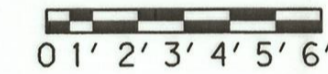


STRUCTURE NO. 02730100003033		
B.T.E. PROJECT NO. 07300-5		
CITY OF PITTSBURGH DEPARTMENT OF PUBLIC WORKS BUREAU OF TRANSPORTATION AND ENGINEERING FORBES AVENUE BRIDGE OVER FERN HOLLOW AND NINE MILE CREEK, FRICK PARK		
BRIDGE REHABILITATION GENERAL NOTES AND APPROXIMATE QUANTITIES		
SCALE: AS NOTED	SHEET NO. 2 OF 5	ACCESSION NO. F-9200B
DATE: April 2009		CASE NO. E-8-3

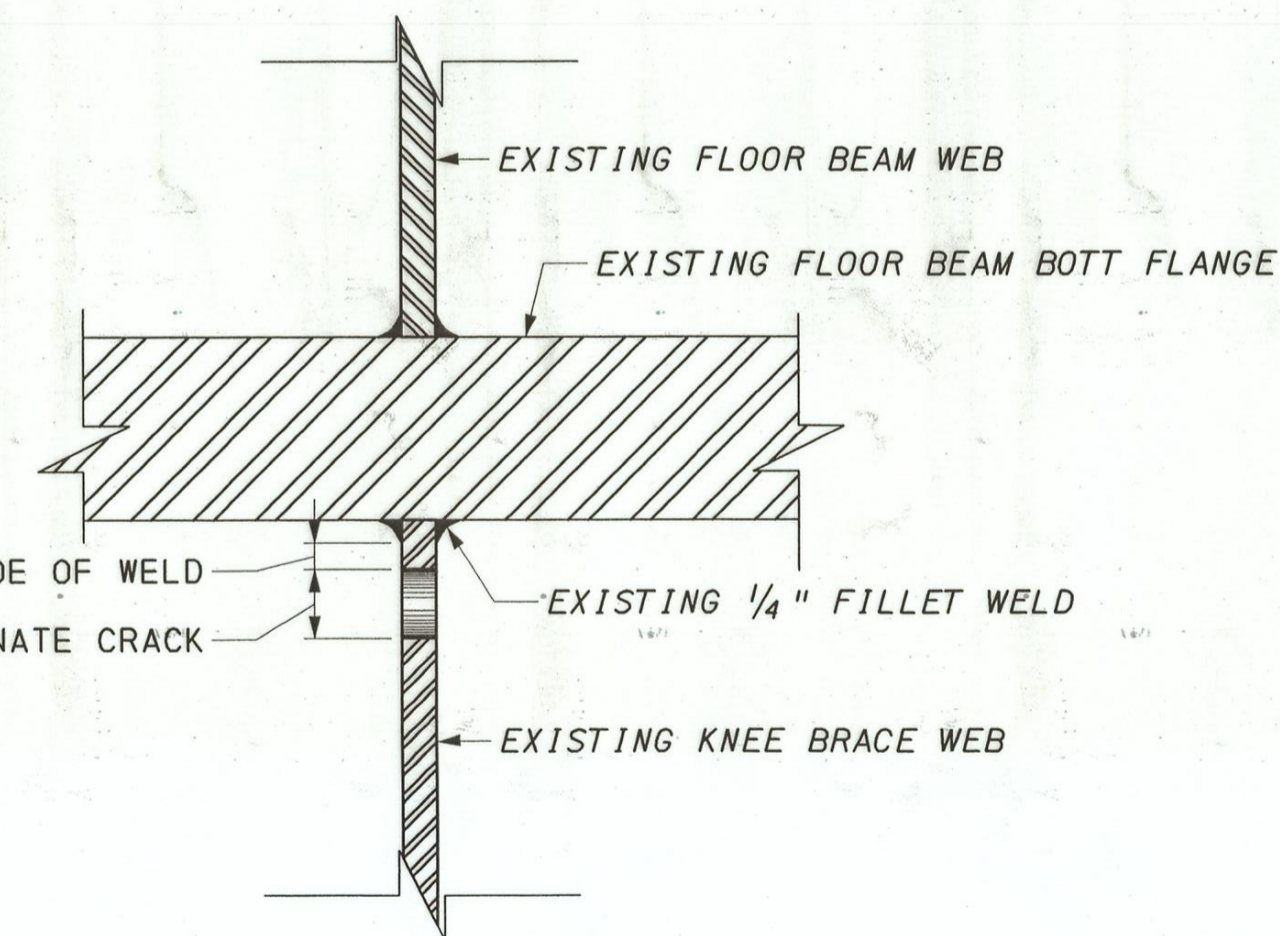
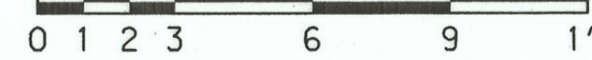
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SECTION A-A



DETAIL A
KNEE BRACE REPAIR



SECTION X-X
NO SCALE

NOTES:

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STRUCTURE NO. 02730100003033

B.T.E. PROJECT NO. 07300-5

CITY OF PITTSBURGH
DEPARTMENT OF PUBLIC WORKS
BUREAU OF TRANSPORTATION AND ENGINEERING
FORBES AVENUE BRIDGE OVER FERN HOLLOW
AND NINE MILE CREEK, FRICK PARK

BRIDGE REHABILITATION
TYPICAL SECTION & KNEE BRACE REPAIR

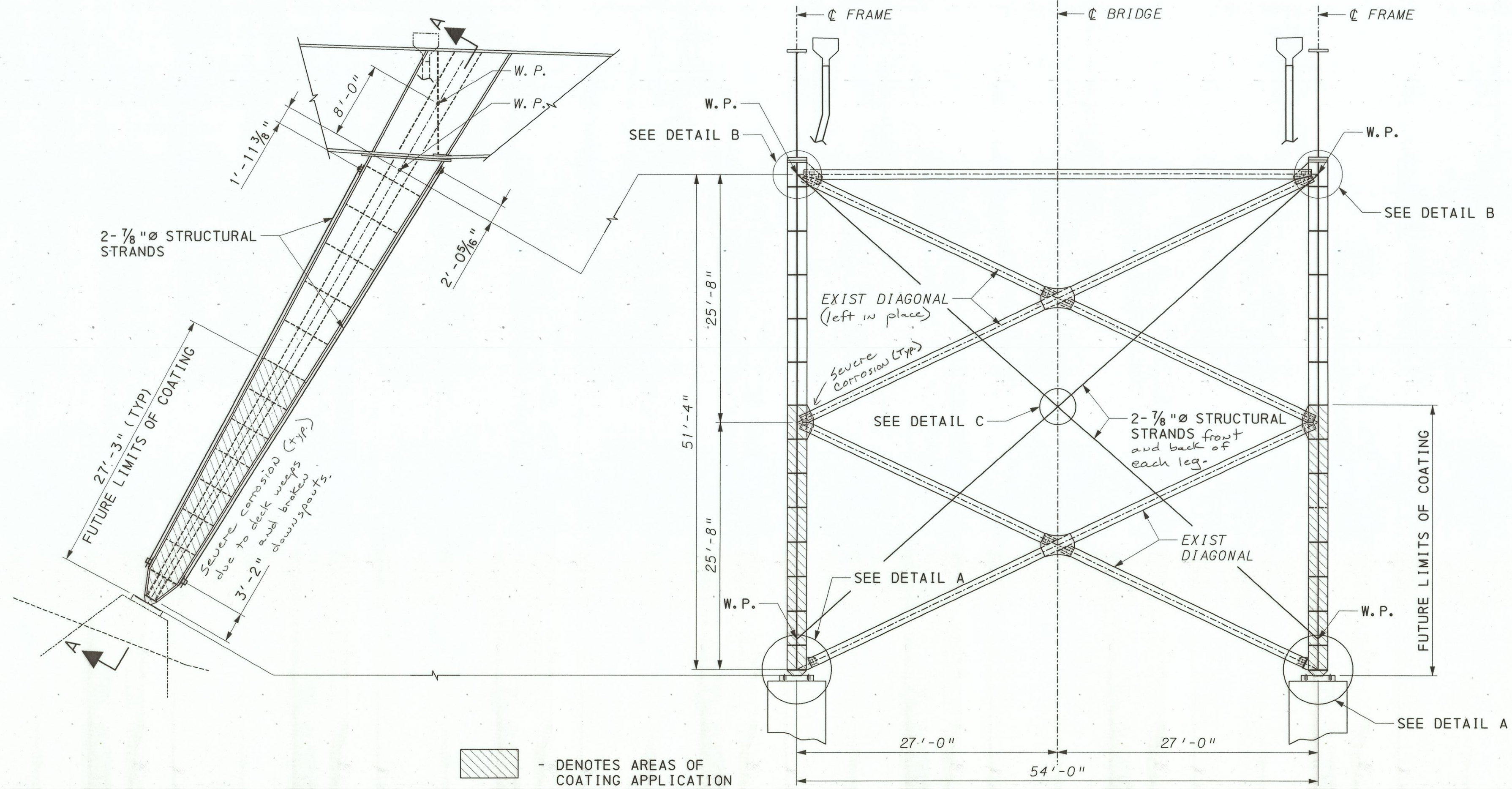
SCALE: AS NOTED SHEET NO. 3 OF 5 ACCESSION NO. F-9200c
DATE: April 2009 CASE NO. E-8-3



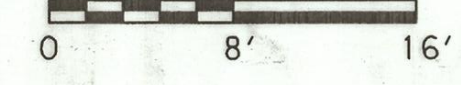
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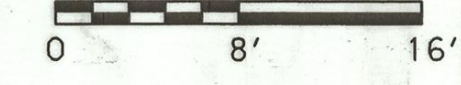
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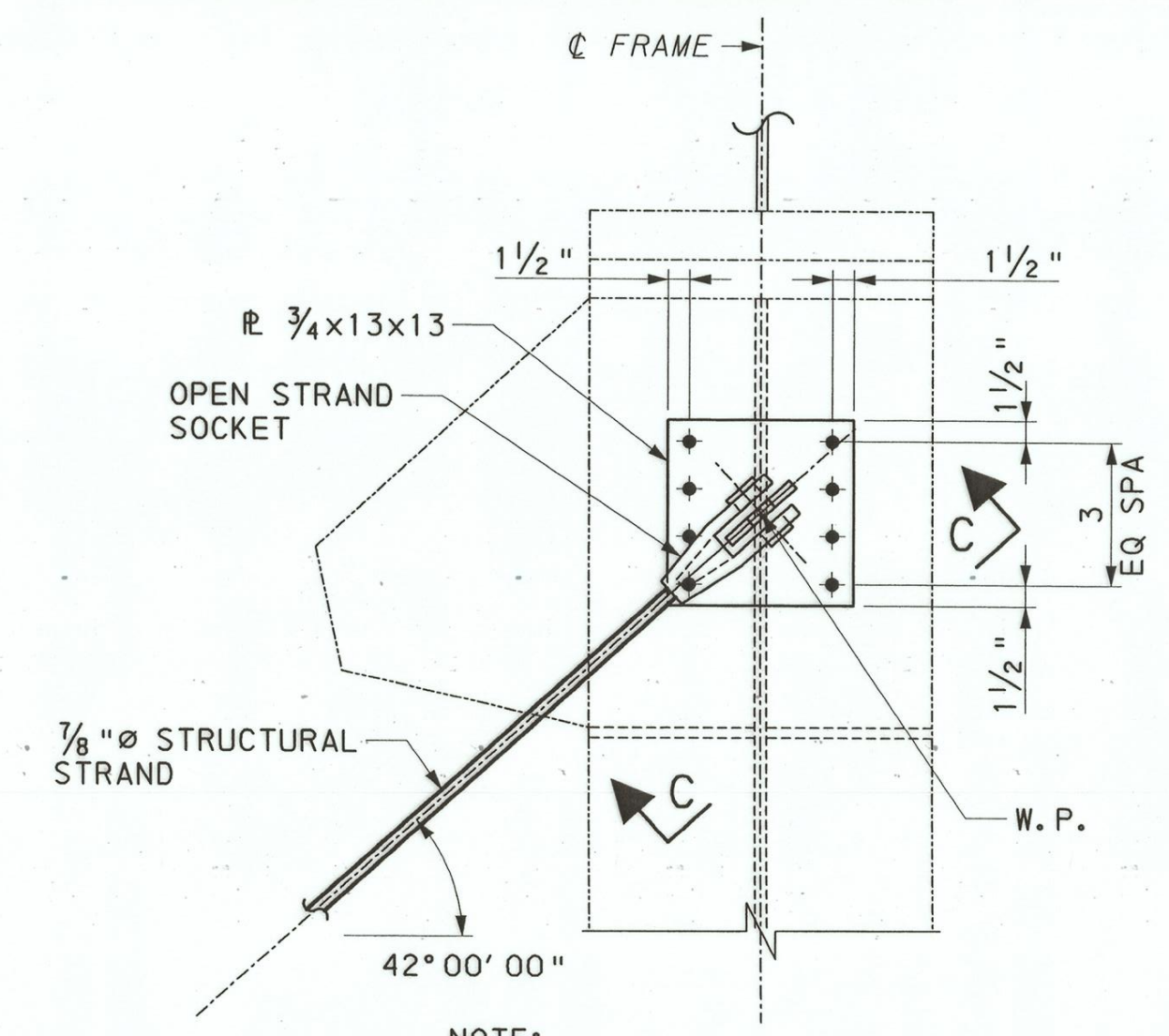
TYPICAL FRAME LEG ELEVATION



ELEVATION A-A

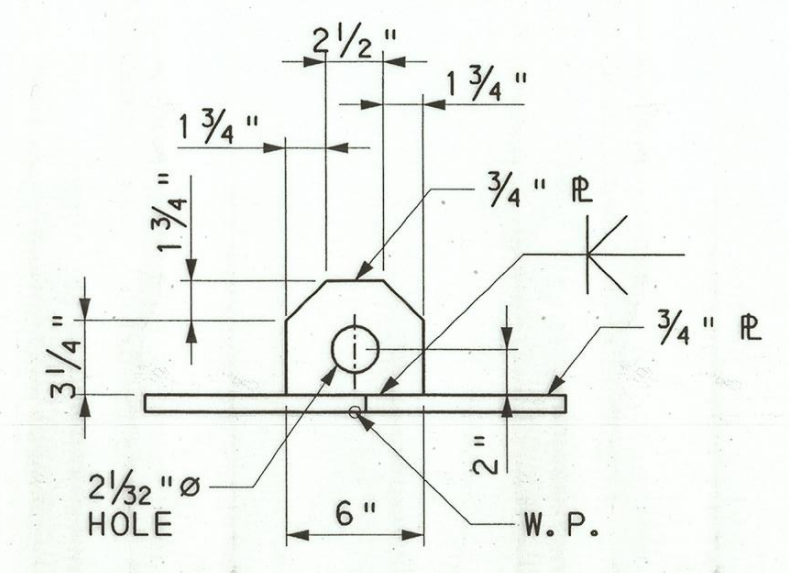
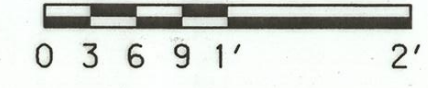


▨ - DENOTES AREAS OF COATING APPLICATION was not cleaned and painted after work was completed.



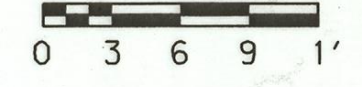
NOTE: HORIZONTAL AND DIAGONAL BRACING NOT SHOWN FOR CLARITY.

DETAIL B

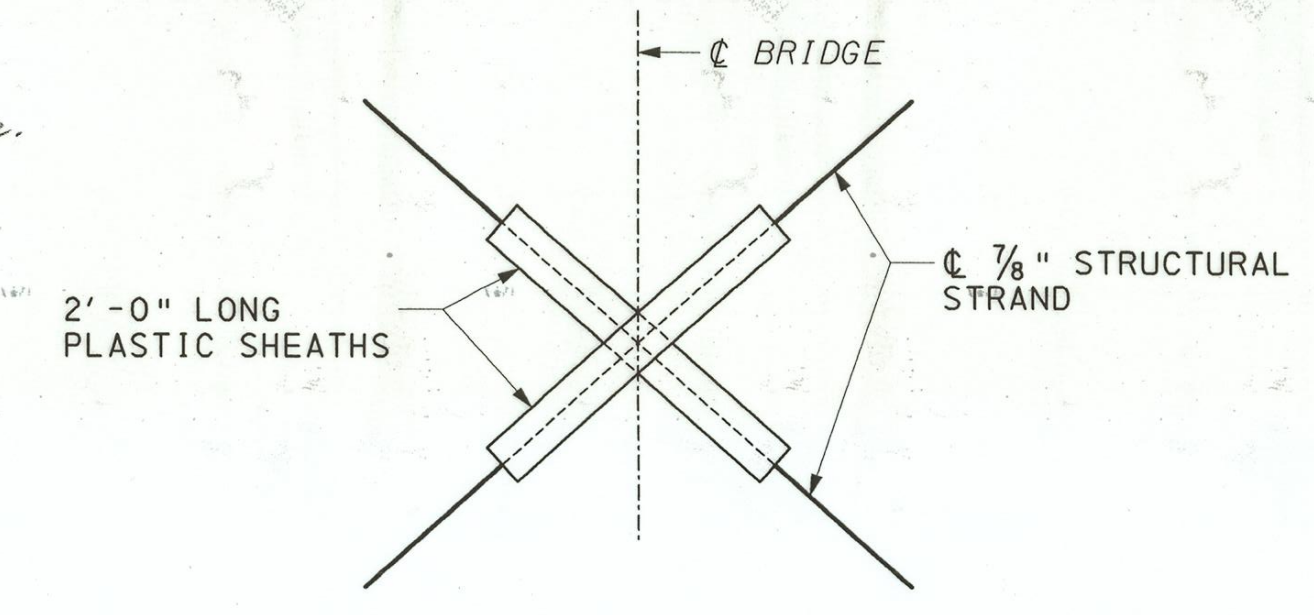


NOTE: OPEN STRAND SOCKET NOT SHOWN FOR CLARITY.

SECTION C-C

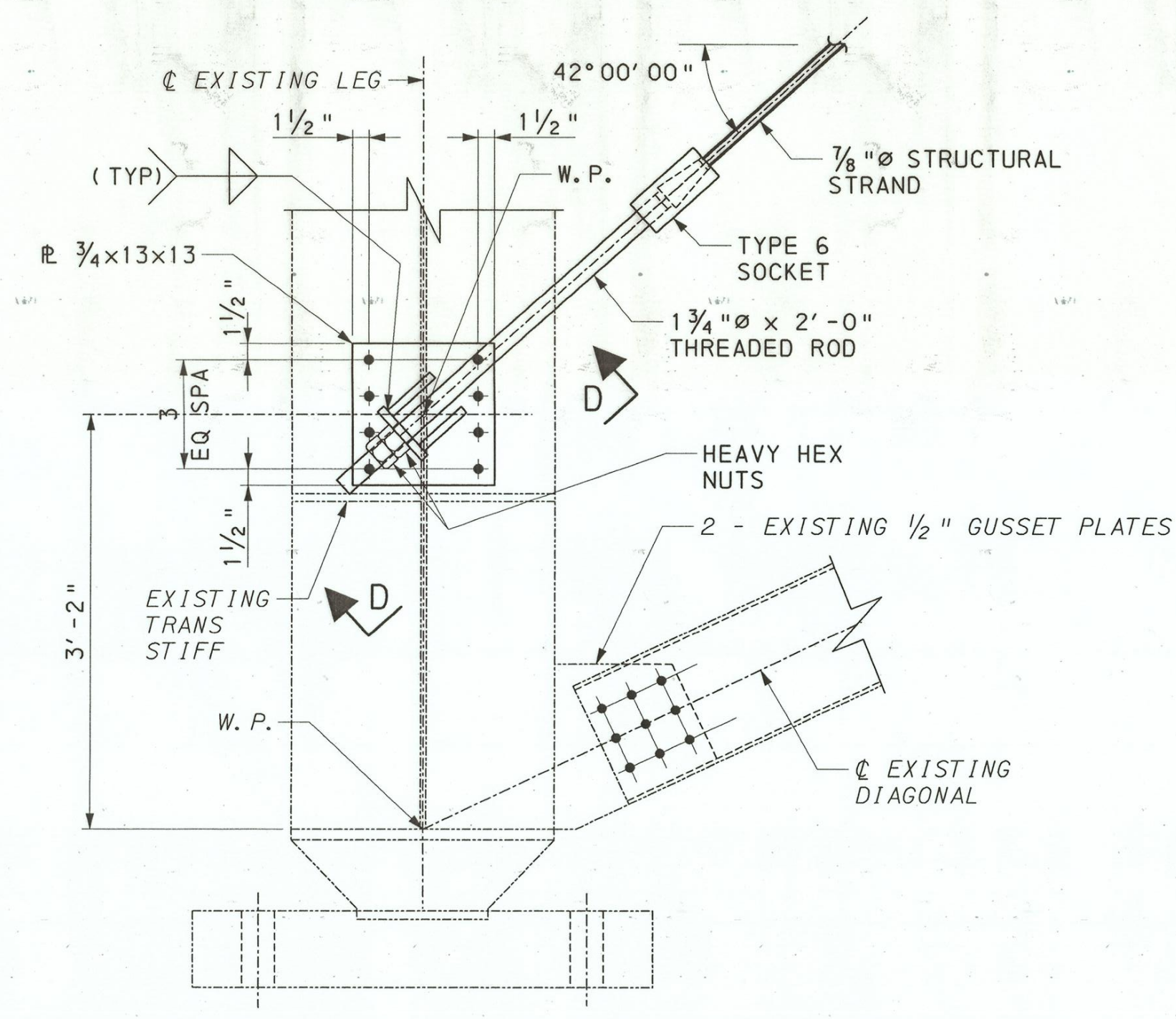


work done April 13, 2009 to July 29, 2009. Downspout repairs blew out at bottom of legs causing deep gullies. Brackets were added at the bottom of the downspouts to keep blow outs from happening in the future; gullies were filled with stone.

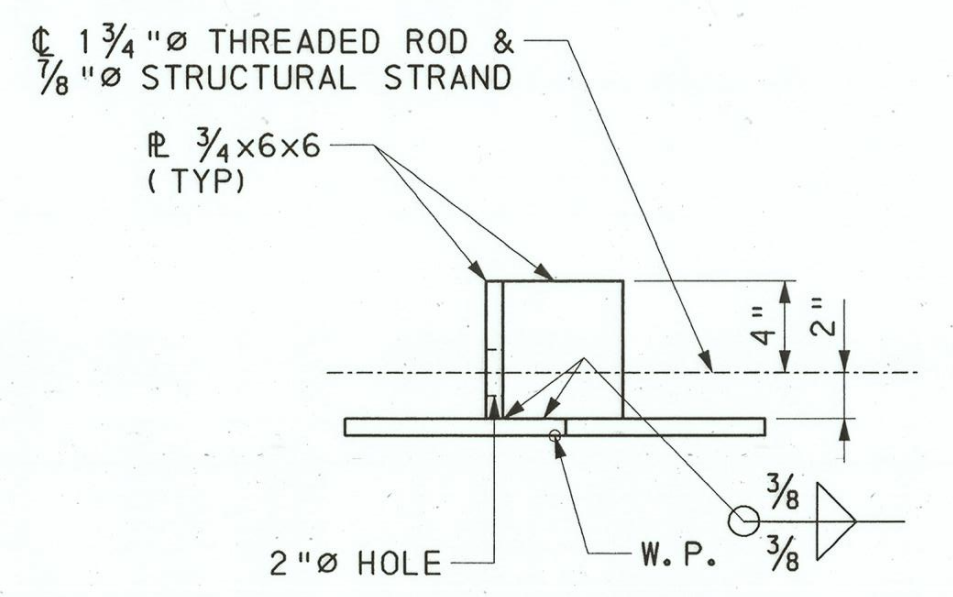
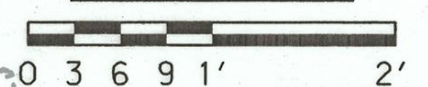


NOTE: FASTEN SHEATHS TO STRANDS AS PER MANUFACTURER RECOMMENDATIONS

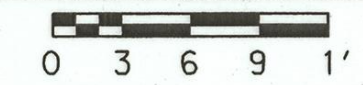
DETAIL C
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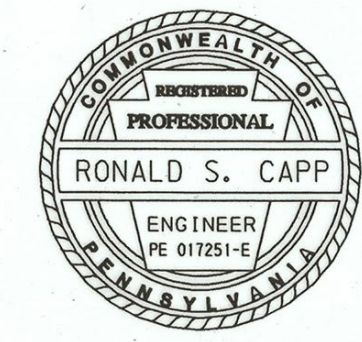
DETAIL A



SECTION D-D



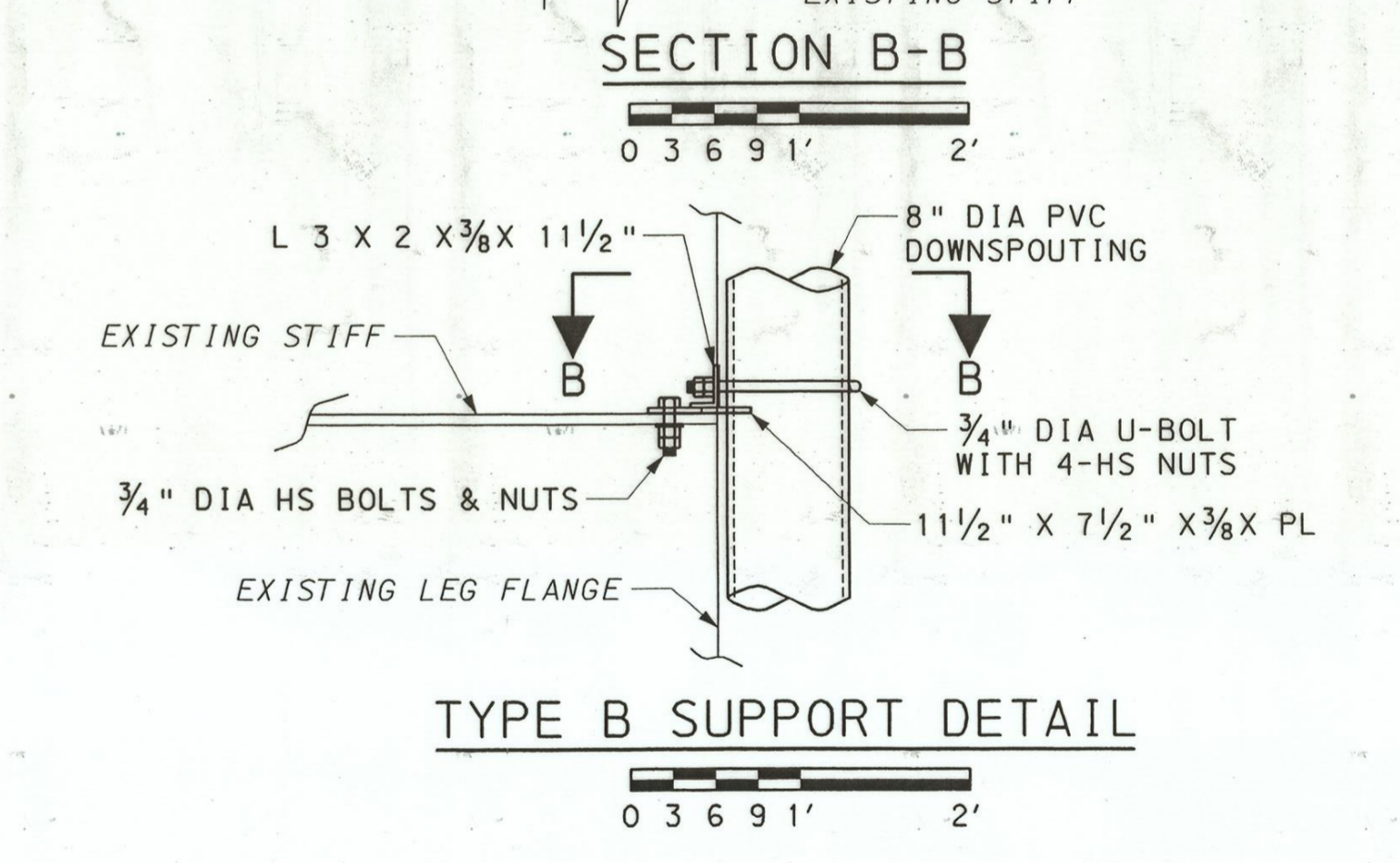
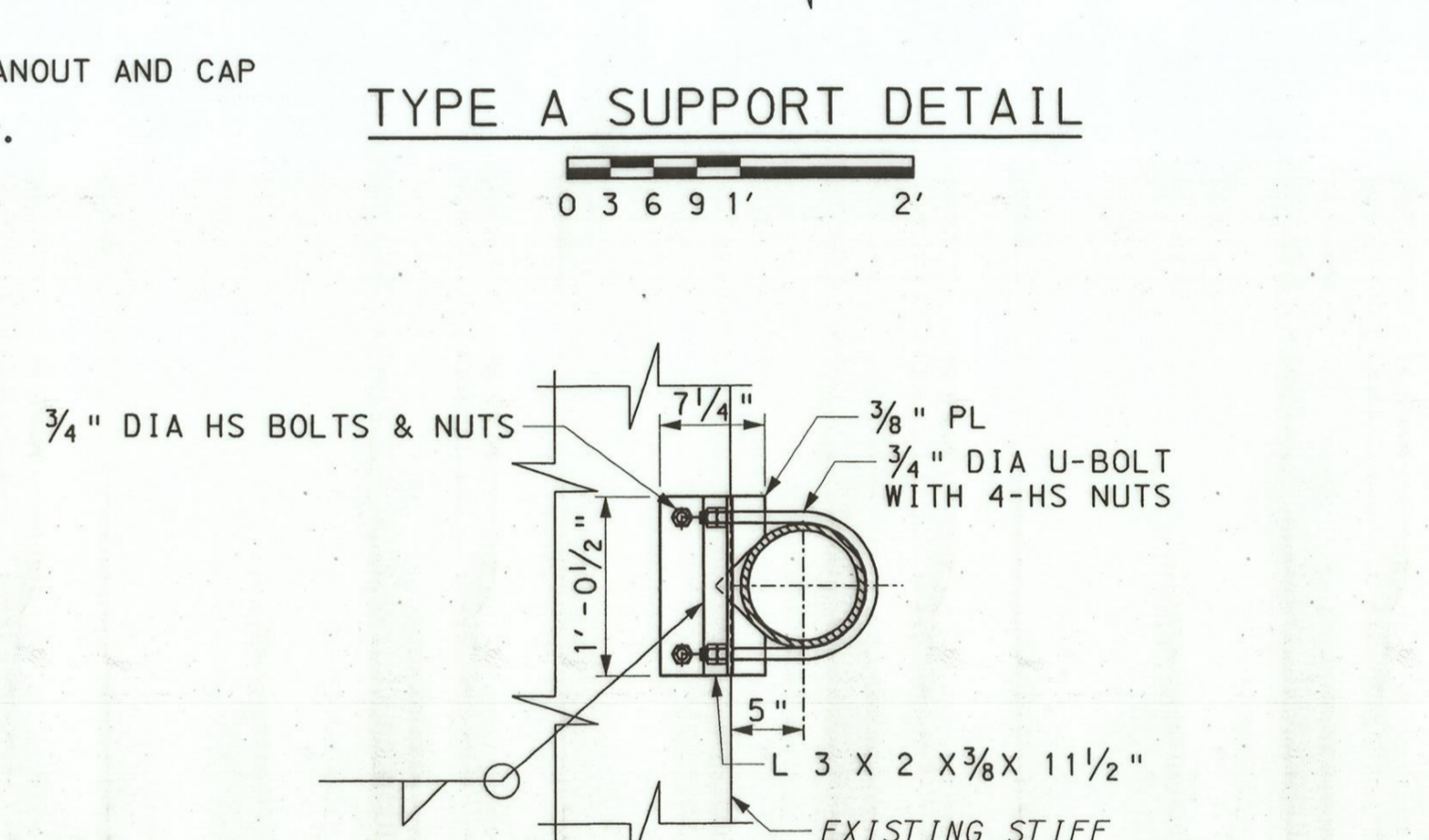
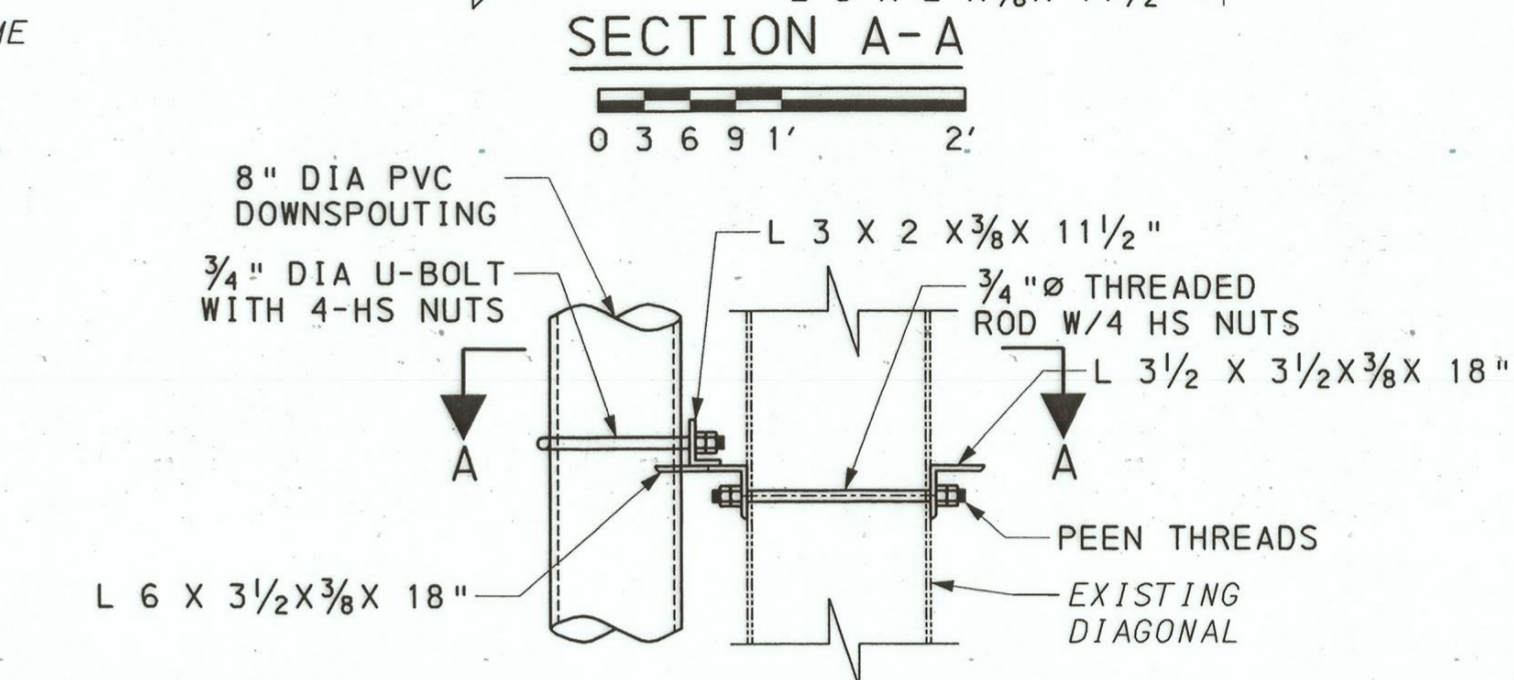
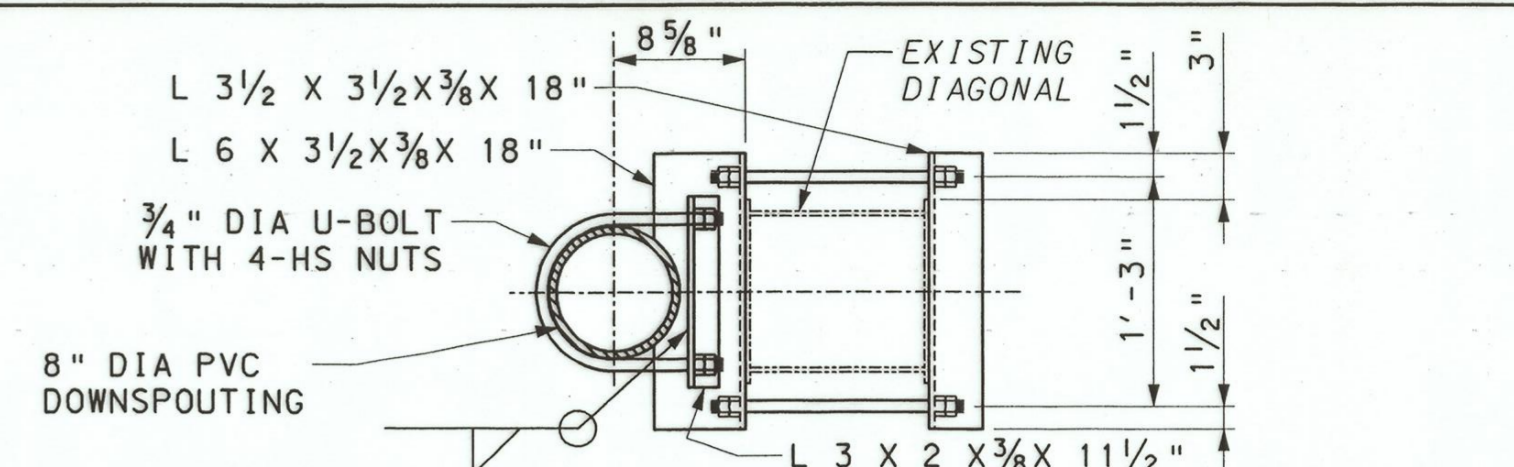
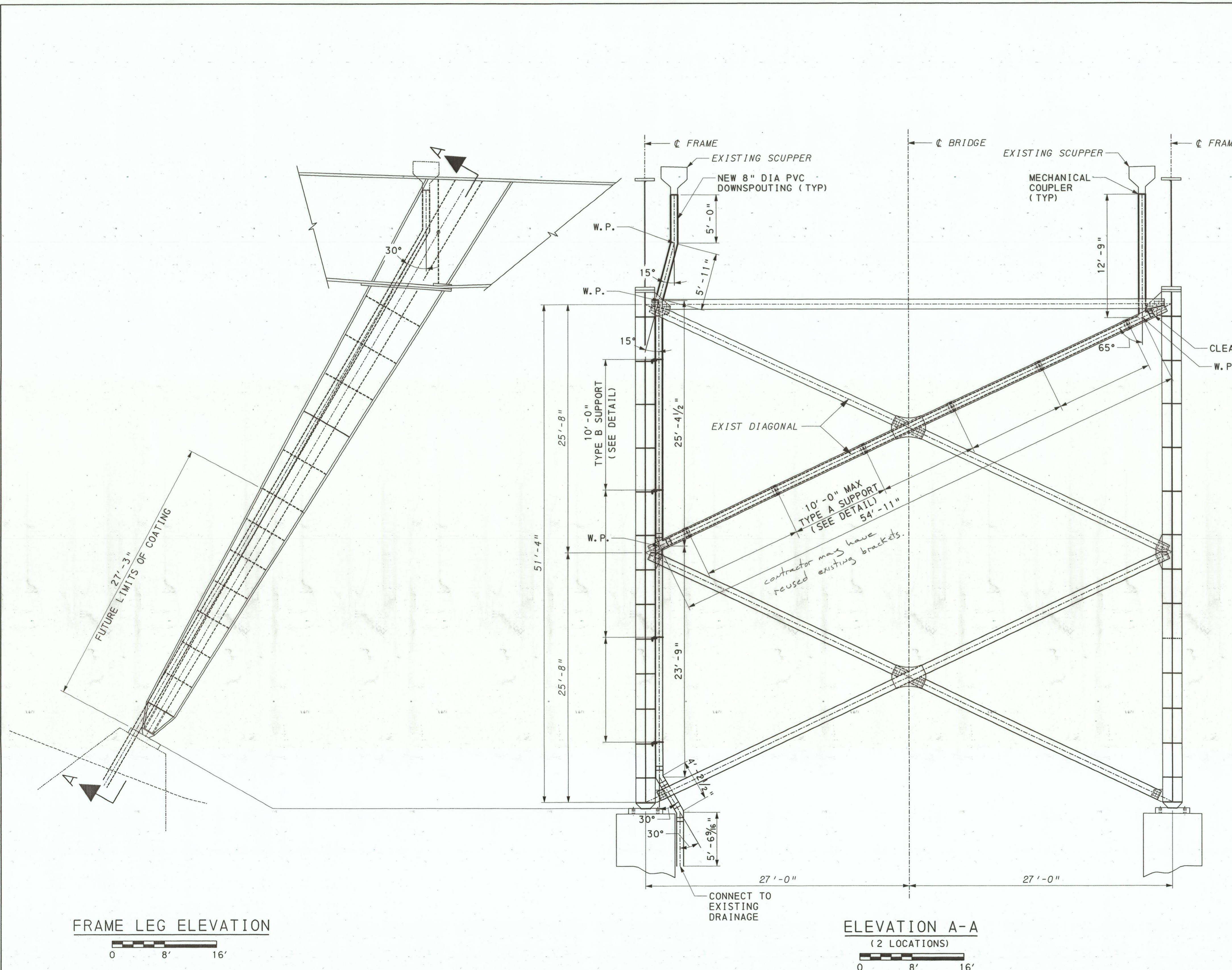
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B.T.E. PROJECT NO. 07300-5
 CITY OF PITTSBURGH
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 FORBES AVENUE BRIDGE OVER FERN HOLLOW AND NINE MILE CREEK, FRICK PARK
 BRIDGE REHABILITATION
 FRAME LEGS AND BRACING RETROFIT

SCALE: AS NOTED	SHEET NO. 4 OF 5	ACCESSION NO. E-2009-000003033
DATE: April 2009		CASE NO. E-B-3

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NOTES:

ALL NEW DOWNSPOUTING AND FITTINGS SHALL BE PVC IN ACCORDANCE WITH PENNDOT PUBLICATION 408 1051.2.

SEE PENNDOT STANDARD DRAWING BC-751M FOR DETAILS NOT SHOWN.

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