

REFERENCES:

REFERENCE SHALL BE MADE TO THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED JANUARY 1, 2013.

REFERENCE SHALL BE MADE TO SPECIAL PROVISION FOR: ULTRASONIC IMPACT TREATMENT DATED 6-22-2004.

DESIGN DATA:

STRUCTURAL STEEL - ASTM A709, GRADE 50-YIELD STRENGTH
CONCRETE CLASS S - 4000 PSI COMPRESSIVE STRENGTH (PATCHING)

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. IT IS THE INTENT OF THESE PLANS THAT THE PROPOSED ADDITIONS TO THESE STRUCTURES MATCH EXISTING CONDITIONS. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

SCOPE OF WORK:

THE SCOPE OF WORK TO BE PERFORMED INCLUDES:

1. APPLY ULTRASONIC IMPACT TREATMENT TO THE INTERIOR AND EXTERIOR TIE PLATE TO CAP WEB WELDS ON PIERS 4EB, 5, 6, 7, 8, AND 9.
2. CLEAN AND RECAULK EXISTING SAW CUTS AND REPLUG THE STRESS RELIEF HOLES WITH NEW EXPANSION PLUGS.
3. GRIND THE CRACKED WELD, CLIP THE LONGITUDINAL STIFFENER AND PLACE STRESS RELIEF HOLE ON PIER 4EB.
4. REPLACE THE EXISTING WELDED BRACKET CONNECTIONS AT THE CAP WEBS WITH A BOLTED CONNECTION ON PIERS 5 & 6 AND GRIND WELDS SMOOTH AND FLUSH WITH WEB.
5. GRIND OUT THE EXISTING TACK WELDS ALONG THE BACKER BARS IN THE TENSION ZONE OF THE CAPS ON PIERS 7, 8, AND 9.
6. REMOVE THE ABANDONED ANGLE ATTACHMENTS AND GRIND WELDS SMOOTH ON THE EAST AND WEST WEB PLATE EXTERIORS AT PIER 8.
7. CLEAN, PATCH, AND PLACE GFRC WRAP ON THE SOUTH CONCRETE COLUMN OF PIER 9 ABOVE THE CRASHWALL AND SEAL CONCRETE SURFACES.
8. RESEAL SOUTH ACCESS HATCH OF PIER 4EB WITH NEW NEOPRENE GASKET.
9. REPLACE 7 MISSING BOLTS AND THE NEOPRENE GASKET AT THE SOUTH ACCESS HATCH OF PIER 6.
10. REFURBISH ABUTMENT BEARINGS.
11. CLEAN AND PAINT INTERIOR AND EXTERIOR SURFACES OF STEEL PIERCAPS, HINGES AND STRUCTURAL STEEL TO THE LIMITS SHOWN IN THE PLANS.

ITEM 512 SPECIAL - URETHANE TOP COAT SEALER:

THIS ITEM INCLUDES THE APPLICATION OF URETHANE TOP COAT SEALER ACCORDING TO ITEM 512.03. MATERIALS SHALL MEET THE REQUIREMENTS OF 512.02.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO COMPLETE THE WORK UNDER ITEM SPECIAL- URETHANE TOP COAT SEALER. PAYMENT SHALL BE AT THE BID PRICE PER SQUARE YARD.

ITEM 513 STRUCTURAL STEEL, MISC.: GRINDING PER FOOT:

THIS ITEM INCLUDES GRINDING MISCELLANEOUS TACK WELDS AS DIRECTED BY THE ENGINEER, GRINDING THE INTERMITTENT TACK WELDS AT BACKER BARS BETWEEN THE PIER CAP WEB AND PIER CAP BOTTOM FLANGE PLATES, AND GRINDING AND REMOVING ABANDONED DRAIN BRACKETS AND OTHER ATTACHMENTS AS SHOWN ON THE PLANS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK AND WHERE NOT INCIDENTAL TO THE COMPLETION OF OTHER WORK PAID FOR UNDER THIS CONTRACT. PAYMENT SHALL BE MADE AT THE BID PRICE PER FOOT.

ITEM 513 STRUCTURAL STEEL, MISC.: STRUCTURAL STEEL REHABILITATION

THIS ITEM INCLUDES THE WORK NECESSARY TO RETROFIT THE WELDED CONNECTIONS AND DRAINAGE BRACKETS TO THE STEEL PIER CAP BY PROVIDING A NEW BOLTED CONNECTION AT THE SPECIFIED LOCATIONS ON THE PLANS. THIS ITEM ALSO INCLUDES GRINDING THE CONNECTION WELDS SMOOTH AT THESE LOCATIONS ON THE PIER CAP.

STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE PROJECT ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED TO THE ENGINEER, IF REQUESTED, BY THE OFFICE OF STRUCTURAL ENGINEERING. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.06. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE OFFICE OF STRUCTURAL ENGINEERING FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CMS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIALS AND LABOR NECESSARY TO PERFORM THIS TASK, INCLUDING THE TEMPORARY SUPPORT OF THE EXISTING DOWNSPOUTS AND CONDUITS. PAYMENT FOR WELDING, CUTTING, GRINDING, DRILLING AND BOLTING SHALL BE DEEMED TO BE INCLUDED FOR PAYMENT UNDER THIS ITEM. PAYMENT FOR FIELD DRILLING HOLES IN EXISTING MATERIAL IN-SITU AS PART OF THE REPAIR SHALL ALSO BE INCLUDED FOR PAYMENT UNDER THIS ITEM. PAYMENT SHALL BE MADE AT A UNIT BID PRICE OF POUNDS.

ITEM 690 SPECIAL MISC.: 1" RUBBER EXPANSION PLUGS

THIS ITEM INCLUDES PLACING NEW PLUGS INTO EXISTING 1"± DIAMETER HOLES AT THE WEB SOFTENING RETROFITS TO THE GIRDER TIE PLATES AT PIERS 4EB, 5, 6, 7, 8 AND 9 AND TO THE WEB SOFTENING RETROFITS TO THE LONGITUDINAL STIFFENERS AT PIERS 4EB, 5, 6 AND 7.

THIS ITEM ALSO INCLUDES THE CLEANING AND RE-CAULKING OF THE SAW CUTS BETWEEN THE HOLES. THE REMOVAL OF THE EXISTING CAULKING INCLUDES A THOROUGH CLEANING OF THE SAW CUTS AND HOLES TO REMOVE ANY DIRT, RUST AND CAULK RESIDUE.

THE NEW PLUGS FOR THE EXISTING HOLES SHALL BE 1" QUICK SEAL RUBBER EXPANSION PLUGS, ITEM NUMBER 10227, AS MANUFACTURED BY:

DORMAN PRODUCTS
CENTRAL DISTRIBUTION FACILITY
25 DORMAN DRIVE
WARSAW, KENTUCKY 410985

OR AN EQUAL PRODUCT APPROVED BY THE ENGINEER. THE CAULK SHALL BE AN EXTERIOR GRADE SILICON BASED CAULKING.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE BID PRICE FOR EACH HOLE.

ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING AND NON-DESTRUCTIVE TESTING

THIS ITEM INCLUDES THE FOLLOWING SEQUENCE OF OPERATIONS PERFORMED AT LOCATIONS SPECIFIED IN THE PLANS AND DIRECTED BY THE ENGINEER.

1. CLEAN THE AREAS BY PENCIL ABRASIVE BLASTING TO REMOVE PAINT, RUST AND ANY OTHER FOREIGN MATERIAL FROM THE SURFACE OF THE PLATES AND ADJACENT WELDS, OR AS DESIGNATED IN THE PLANS.
2. THE ENGINEER SHALL CAREFULLY VISUALLY INSPECT THE CLEANED AREA. GRINDING MAY BE DIRECTED BY THE ENGINEER TO ENHANCE THE INVESTIGATION FOR CRACK PRESENCE. ALL GRINDING MUST BE DONE CAUTIOUSLY ESPECIALLY IN TENSION ZONES.
3. THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING (NDT) IN THE AREAS USING MAGNETIC PARTICLE EXAMINATION OR DYE PENETRANT SO THAT THE ENGINEER MAY FURTHER INSPECT FOR CRACKS. CONTRACTORS' PERSONNEL PERFORMING NDT SHALL BE QUALIFIED AS PER 513.25 OF THE CMS.

THE PENCIL ABRASIVE BLASTING SHALL CONFORM TO THE FOLLOWING:

THE DESIGNATED NDT AREAS SHALL BE CLEANED TO A SURFACE QUALITY EQUAL TO PREPARATION GRADE SA 2 1/2. SINCE INTENT OF THE PENCIL BLASTING IS TO ENHANCE THE VISUAL AND NDT DETECTION, A GENTLE BLAST SHALL BE USED SUCH THAT THE SURFACE IS NOT PEENED OR OTHERWISE COLD WORKED. SILICA SAND SHALL NOT BE USED. THE BLASTING SHALL BE PERFORMED USING A MAXIMUM COMPRESSED AIR PRESSURE OF 100 PSI, A HOSE NOZZLE DIAMETER OF 1/4" ± 1/16" AND A GRADE 30/60 COAL SLAG ABRASIVE OR EQUIVALENT. BLASTERS USED FOR SURFACE PREPARATION OF STRUCTURAL STEEL PAINTING SHALL NOT BE USED FOR PENCIL BLASTING. AFTER ABRASIVE BLASTING IS COMPLETE, THE CLEANED AREA SHALL BE AIR BLOWN CLEAN.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER PRIOR TO THE START OF THE WORK THAT HE CAN SATISFACTORILY PERFORM PENCIL ABRASIVE BLASTING ACCORDING TO THESE SPECIFICATIONS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE ON A LUMP SUM BASIS.

ITEM 513 STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT

THIS ITEM CONSISTS OF INSPECTING THE EXISTING AND NEWLY PLACED WELDS AT THE GIRDER TIE PLATE CONNECTIONS TO THE PIER CAP WEBS, AND PERFORMING THE ULTRASONIC IMPACT TREATMENT IN ACCORDANCE WITH THE SPECIAL PROVISION AT THE LOCATIONS SHOWN ON THE PLANS.

ITEM 513 STRUCTURAL STEEL, MISC.: 1/2" STRESS RELIEF HOLE RETROFIT:

THIS ITEM INCLUDES THE DRILLING OF A 1/2" DIAMETER HOLE IN THE WEST WEB OF PIER 4EB AT THE ENDS OF THE CRACK, THE CLIPPING OF THE ADJACENT LONGITUDINAL STIFFENER AND GRINDING THE EXISTING WELDS AS SHOWN IN THE PLANS. THE ENDS OF THE CRACK SHALL BE LOCATED AS DESCRIBED IN ITEM 516 STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING AND NDT. THE WEB CRACK SHALL BE TREATED BY REMOVING THE CRACK TIP BY DRILLING THE 1/2" DIAMETER HOLE LOCATED AS DETERMINED BY AND UNDER THE DIRECTION OF THE ENGINEER. THIS ITEM ALSO INCLUDES THE PLUGGING AND CAULKING OF THE STRESS RELIEF HOLE WITH 1 1/2" QUICK SEAL RUBBER EXPANSION PLUGS, ITEM NUMBER 10231, AS MANUFACTURED BY:

DORMAN PRODUCTS
CENTRAL DISTRIBUTION FACILITY
25 DORMAN DRIVE
WARSAW, KENTUCKY 410985

OR AN EQUAL PRODUCT APPROVED BY THE ENGINEER. THE CAULK SHALL BE AN EXTERIOR GRADE SILICON BASED CAULKING.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE BID PRICE FOR EACH RETROFIT.

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". IN ADDITION, ALL SHIMS ARE TO BE WELDED ALONG THEIR FULL PERIMETERS TO THE BEARING. AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

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DRAWN	KGJ	REVISED	
REVIEWED	WRW	STRUCTURE FILE NUMBER	3113914
DATE	02/26/13		

STRUCTURE GENERAL NOTES
BRIDGE NO. HAM-562-0147
SR-562 OVER ROSS AVENUE AND CENTRAL RAILROAD OF INDIANA

HAM-562-0147
PID No. 93100

ITEM 516 JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

GENERAL:
THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS. HOLES WILL NOT BE ALLOWED TO BE PLACED IN THE FACE OF THE ABUTMENTS OR PIERS AS PART OF THE JACKING OPERATION.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 514 FIELD PAINTING OF EXISTING STRUCTURAL STEEL

THIS ITEM INCLUDES ALL AREAS SPECIFIED TO BE PAINTED EXCEPT THE INTERIORS OF THE PIER CAPS, INCLUDING AREAS OF DAMAGED PAINT DUE TO RETROFIT WORK. THE PAINT SYSTEM SHALL BE ORGANIC ZINC EPOXY URETHANE (OZEU).

THE CONTRACTOR SHALL MATCH THE EXISTING COLOR OF THE GIRDERS TO BE PAINTED TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR THIS ITEM SHALL BE AT THE BID PRICE PER SQUARE FOOT.

ITEM 514 FIELD PAINTING, MISC.: FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU)

THIS ITEM INCLUDES THE STEEL PIER CAP INTERIORS BEING RETROFITTED AS SHOWN IN THE PLANS.

THE INTERIOR OF EACH PIER CAP IS CONSIDERED AS A CONFINED SPACE AND MAY REQUIRE EXTRA PRECAUTIONS TO

ACCOMPLISH THE CONTRACT WORK. THIS MAY INCLUDE SPECIAL METHODS OF VENTILATION, PAINT REMOVAL, PAINT APPLICATION AND/OR OTHER PRECAUTIONS DEEMED NECESSARY BY THE CONTRACTOR. ANY SPECIAL EQUIPMENT OR PROCEDURES NECESSARY TO COMPLETE THIS WORK SHALL BE AT NO ADDITIONAL COST TO THE STATE AND SHALL BE INCLUDED IN THE APPROPRIATE BID ITEMS. THE PAINT MAY BE APPLIED TO THE INTERIOR SURFACES BY BRUSHES OR ROLLERS. AIRLESS SPRAY IS ALLOWED ONLY IF OVERSPRAY IS CONTAINED BY END CLOSURES.

INTERIOR PAINT AT THE EXISTING STEEL PIER CAPS SHALL BE PAINTED WHITE, FEDERAL COLOR NUMBER 27295 AS SHOWN IN THE PLANS.

THIS ITEM SHALL CONSIST OF:

1. A COMPLETE WASHDOWN OF ALL STEEL USING A POWER WASHER WITH 7,000 PSI MINIMUM AT NOZZLE WITH A FLOW RATE OF 3-4 GAL/MIN. THE NOZZLE IS TO BE HELD PERPENDICULAR TO AND NO MORE THAN 12" FROM THE STEEL SURFACE.
2. SOLVENT CLEANING AS NEEDED.
3. SPOT CLEANING TO REMOVE ALL RUST, MILL SCALE, UNSOUND PAINT, ETC., USING POWER TOOLS SUCH AS: NEEDLE GUNS, DESCALERS, ABRASIVE WHEELS, DISCS, ROTARY IMPACT FLAPS, WIRE BRUSHES, ETC. (SEE SSPC-SP 11) THE APPEARANCES OF THE SURFACE AFTER POWER TOOL CLEANING SHALL CORRESPOND TO THE PICTORIAL STANDARDS OF SSPC-SP 11.
4. A TEST SECTION TO VERIFY COMPATIBILITY OF PRIMER WITH EXISTING PAINT.
5. A FULL PRIME (5 MILS MIN.) USING EPOXY MASTIC OVER ALL AREAS OF THE BRIDGE INCLUDING OVER THE SPOT PRIME. SPOT PRIME OR FULL PRIME SHALL BE TINTED TO CONTRAST WITH PREVIOUS COAT.
6. A COMPLETE TOP COAT USING A URETHANE (3 MILS MIN.).
7. ALL PROVISIONS OF OZEU PROPOSAL NOTE WILL APPLY TO THIS PROJECT, EXCEPT THOSE WHICH DIRECTLY CONFLICT WITH THIS NOTE.
8. THE FOLLOWING EXCEPTIONS APPLY TO THIS PROJECT:
 - a. AREAS OF RUST, UNSOUND (I.E., PEELING, FLAKING) PAINT, ETC. SHALL BE REMOVED BY HAND TOOL OR POWER TOOL CLEANING. THE REMOVAL SHALL EXTEND OUT ADEQUATELY TO LEAVE ONLY SOUND, WELL-BONDED EXISTING PAINT, AND SHALL BE FEATHER-EDGED 2" MINIMUM FROM THE BARE STEEL TO THE SOUND TOP COAT AROUND THE PERIMETER OF EACH SPOT CLEANED.

THE INTENT OF THIS SPECIFICATION IS TO PROVIDE FOR CLEANING AND PAINTING OF THE CAP INTERIORS WITHOUT THE USE OF ABRASIVE BLASTING. THE CONTRACTOR MAY CHOOSE TO USE SELECTIVE ABRASIVE BLASTING ON THIS PROJECT IN CONJUNCTION WITH HAND TOOL CLEANING. HOWEVER, ANY ABRASIVE BLASTING MUST BE ACCOMPANIED WITH CONTAINMENT, COLLECTION, STORAGE, TESTING, AND DISPOSAL OF ALL BLASTING DEBRIS IN ACCORDANCE WITH THE PROVISIONS OF OZEU AND WASTE CONTROL PROPOSAL NOTES, EXCEPT NO SEPARATE PAYMENT WILL BE MADE FOR WASTE CONTROL. VACUUM BLASTING WILL ALSO BE CONSIDERED ACCEPTABLE, PROVIDING ALL ABRASIVE MATERIAL IS RECYCLED.

b. MINIMUM MIL THICKNESS OF EACH COAT OF PAINT SHALL BE VERIFIED WITH A POSITECTOR.

PAINT COMPATIBILITY TEST SECTION:

BEFORE ANY PAINTING CAN BEGIN ON THIS BRIDGE (AND AT LEAST 24 HOURS PRIOR TO PAINTING), A 2' x 2' SECTION OF EXISTING SOUND PAINT SHALL BE REMOVED DOWN TO BARE METAL. THE PRIMER TO BE USED SHALL BE APPLIED TO THE TEST SECTION MAKING SURE THAT PRIMER OVERLAPS EXPOSED EDGES OF SOUND PAINT. ANY LIFTING, WRINKLING, OR OTHER DETRIMENTAL EFFECTS ON THE SURROUNDING SOUND PAINT WITHIN THE FIRST 24 HOURS SHALL BE GROUNDS FOR DISAPPROVAL OF THE SELECTED PRIMER AND ANOTHER PRIMER SHALL BE SELECTED FOLLOWED BY ANOTHER TEST SECTION. THE COST OF THESE SECTIONS SHALL BE INCLUDED FOR PAYMENT WITH SURFACE PREPARATION.

COATINGS WHICH WILL BE ACCEPTABLE (PENDING ACCEPTABILITY OF TEST SECTIONS) ARE:

THE CARBOLINE CO.
350 HANLEY INDUSTRIAL CT.
ST. LOUIS, MO 63144
(314) 644-1000

PRIMER - CARBOMASTIC 15
TOP COAT - CARBOTHANE 134 HS

AMERON PROTECTIVE LINING DIV.
201 N BERRY STREET
BREA, CA 92821
(714) 256-9344

PRIMER - AMERLOCK 400 OR 400 AL
TOP COAT - AMERCOAT 450 HS

POLY-CARB, INC.
33095 BAINBRIDGE ROAD
SOLON, OH 44139
(440) 248-1223

PRIMER - MARK 60.1: ULTRAPOX 11
TOP COAT - MARK 73: ULTRAKOTE

VALSPAR CORP.
901 NORTH GREENWOOD AVE.
KANKAKEE, IL 60901
(815) 933-5561

PRIMER - ALUMAPOXY V75A1
TOP COAT - V40 SERIES URETHANE

THE SHERWIN - WILLIAMS CO.
101 PROSPECT AVENUE NW
CLEVELAND, OH 44115
(216) 566-2000

PRIMER - EPOXY MASTIC ALUMINUM II
B62S100/B60V100
TOP COAT - POLYURETHANE B65 SERIES/B60 V2

PRIMER AND TOP COAT MUST BE BY SAME MANUFACTURER.

BASIS OF PAYMENT:

ITEM	UNIT	DESCRIPTION
514	SQUARE FOOT	FIELD PAINTING, MISC.: SURFACE PREPARATION (EEU)

514 SQUARE FOOT FIELD PAINTING, MISC.: FULL PRIME (EPOXY)

514 SQUARE FOOT FIELD PAINTING, MISC.: COMPLETE COAT FINISH (URETHANE)

ITEM 530 SPECIAL - STRUCTURE, MISC.: STEEL PIER CAP SEAL, AS PER PLAN

SEAL PIER CAP HATCH COVER PLATE USING 1/4" NEOPRENE SHEET, ATTACHED TO INSIDE OF COVER PLATE. SIZE TO FIT COVER PLATE AND SECURE TO INSIDE FACE OF COVER PLATE, USING NEOPRENE MANUFACTURER APPROVED ADHESIVE.

THE NEOPRENE SHEETING SHALL BE 1/4" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D 751	0.25 ±0.01
BREAKING STRENGTH, GRAB, LBS., MINIMUM (LONG. X TRANS.)	D 751	700 X 700
BURST STRENGTH, PSI, MINIMUM	D 751	1400
HEAT AGING 70 HR, 212°F, 180°BEND WITHOUT CRACKING	D 2136	NO CRACKING OF COATING
LOW TEMPERATURE BRITTLENESS, 1 HR, D2136 -40°F, BEND AROUND 1/4" MANDREL	D 2136	NO CRACKING OF COATING
NEOPRENE TO BE APPLIED AFTER OZEU PAINT HAS BEEN APPLIED AND PAINT HAS HAD ADEQUATE CURE TIME.		
REPLACE SEVEN MISSING BOLTS ON THE SOUTH ACCESS HATCH ON PIER 6.		
AFTER PIER CAP HATCH COVER PLATE HAS BEEN REINSTALLED TO PIER CAP, THE HATCH COVER SHALL BE SEALED USING A BEAD OF 100% SILICONE SEALANT TO PREVENT WATER FROM ENTERING PIER CAP.		
THIS ITEM SHALL INCLUDE ALL MATERIALS, INCLUDING THE SEVEN BOLTS, ADHESIVE AND WORK NECESSARY TO INSTALL THE SEAL AND SILICONE.		

DEMOLITION AND RENOVATION

THE CONTRACTOR SHALL COMPLETE AN OEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS TO THE OHIO EPA AT LEAST TEN (10) WORKING DAYS BEFORE OPERATIONS BEGIN.

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DESIGN AGENCY: **Trail Systems**
 95 PUBLIC SQUARE, SUITE 1900
 CLEVELAND, OHIO 44113
 DATE: 02/26/13
 REVIEWED: WRW
 DRAWN: KCJ
 DESIGNED: NBR
 CHECKED: CTG
 STRUCTURE GENERAL NOTES
 BRIDGE NO. HAM-562-0147
 SR-562 OVER ROSS AVENUE AND CENTRAL RAILROAD OF INDIANA
 HAM-562-0147
 PID No. 93100
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**ITEM 530 - SPECIAL - STRUCTURE, MISC.:
COMPOSITE FIBER WRAP SYSTEM**

DESCRIPTION:

THIS WORK SHALL CONSIST OF PROVIDING A GLASS FIBER REINFORCED COMPOSITE (GFRC) STRENGTHENING AND PROTECTION SYSTEM. THE GFRC SYSTEM IS TO BE APPLIED TO THE PIER COLUMN AS DESIGNATED BY THE PROJECT DRAWINGS.

THE CONCRETE IS TO BE PATCHED PER ITEM 519, THEN CLEANED AND PREPARED TO THE INSTALLERS SATISFACTION PRIOR TO THE INSTALLATION OF THE GFRC SYSTEM.

DESIGN:

THE GFRC SHALL BE DESIGNED TO PROVIDE EQUIVALENT STRENGTH PERFORMANCE TO A #4 SPIRAL REBAR AT 4.5" PITCH OVER THE HEIGHT OF THE REPAIRS. STRENGTH EQUIVALENCE CALCULATIONS ARE BASED ON 40 KSI REINFORCING STEEL AND A DESIGN STRAIN NO LARGER THAN 0.004 FOR THE GFRC SYSTEM.

MATERIALS:

3000-HOUR DURABILITY TESTS FOR 140° F FOR WATER, SALT WATER, ALKALINE SOIL, OZONE, EFFERVESCENCE AND OTHER FACTORS (REFER TO TABLE).

TO BE AN APPROVED EQUAL THE INSTALLER MUST PROVIDE A HISTORY OF A MINIMUM OF 50 INSTALLATIONS COMPLETED IN THE LAST 5 YEARS, DURABILITY TESTING, INDEPENDENT LABORATORY TESTING FOR CORRODED COLUMN REPAIRS, DESIGN EQUIVALENCE TO THE SPECIFIED SYSTEM, AND ALL PROPOSED MATERIAL DATA.

POLYESTER OR OTHER RESINS WILL NOT BE ALLOWED AS A SUBSTITUTE TO EPOXY RESINS. CARBON COMPOSITE SYSTEMS WILL NOT BE ALLOWED AS A SUBSTITUTE TO GLASS COMPOSITE SYSTEMS.

SURFACE PREPARATION:

THE REPAIRED CONCRETE SURFACES SHALL BE ALLOWED TO CURE A MINIMUM OF 14 DAYS. THE SURFACES SHALL BE CLEAN AND FREE OF FINS, DEPRESSIONS, OR OTHER CONDITIONS THAT MAY AFFECT THE INTENDED PERFORMANCE OF THE GFRC SYSTEM.

CORNERS PERPENDICULAR TO THE STRONG FIBER DIRECTION SHALL BE ROUNDED TO A MINIMUM RADIUS OF 3/4".

THE CERTIFIED AND EXPERIENCED INSTALLER RESPONSIBLE SHALL VERIFY THAT ALL REQUIRED SURFACE PREPARATION HAS BEEN COMPLETED PROPERLY AND THAT THE GFRC SYSTEM IS CLEARED FOR INSTALLATION.

COMPOSITE APPLICATION:

THE GFRC COMPOSITE SYSTEM SHALL ONLY BE INSTALLED BY INDIVIDUALS CERTIFIED IN WRITING BY THE MATERIAL SUPPLIER. THE CERTIFIED INSTALLER SHALL HAVE COMPLETED A MINIMUM OF 15 PROJECTS IN THE PAST 2 YEARS. REFERENCES OF THESE INSTALLATIONS INCLUDING DESCRIPTIONS AND CONTACT INFORMATION WILL BE REVIEWED. INSTALLERS WITHOUT THE PROPER CERTIFICATIONS, EXPERIENCE, AND REFERENCES WILL NOT BE ALLOWED TO COMPLETE THIS WORK.

TEMPERATURES OF THE SUBSTRATE TO RECEIVE THE COMPOSITE, AMBIENT TEMPERATURES, AND THE TEMPERATURE OF THE GFRC MATERIALS SHALL BE BETWEEN 55°F AND 95°F AT THE TIME OF MIXING OF EPOXY. THE GFRC SYSTEM SHALL BE APPLIED WHEN THE RELATIVE HUMIDITY IS LESS THAN 85% AND THE SUBSTRATE TEMPERATURE IS MORE THAN 5°F ABOVE THE DEW POINT. APPLICATION OF THE GFRC SHALL BEGIN WITHIN ONE HOUR OF THE MIXING OF EPOXIES.

THE MANUFACTURER SHALL DESIGNATE THE PROPER MIXING PROCEDURE FOR THE EPOXY RESINS.

APPLY A PRIMER COATING OF EPOXY TO SURFACES OF THE SUBSTRATE TO RECEIVE THE GFRC SYSTEM.

SATURATE THE GLASS FIBER IN A DOCUMENTED SUCCESSFUL MANNER THAT ENSURES FULL SATURATION OF THE GLASS FIBER PRIOR TO THE INSTALLATION OF THE GFRC. SATURATION OF THE GLASS FIBER IN PLACE IS NOT ALLOWED. APPLY THE GFRC TO THE PREPARED AND PRIMERED SUBSTRATE USING METHODS THAT PROVIDE A UNIFORM TENSILE FORCE OVER THE WIDTH OF THE SATURATED GLASS FABRIC. STRONG FIBERS SHALL NOT DEVIATE FROM THE INTENDED FIBER DIRECTION MORE THAN 1/2" PER 12" LENGTH OF COMPOSITE. INSPECTION OF THE INSTALLED COMPOSITE SHALL BE COMPLETED PRIOR TO THE CURING OF THE GFRC TO ENSURE THAT ALL EDGES, SEAMS, AND OTHER AREAS ARE PROPERLY ADHERED. DURING THIS INSPECTION PROCESS, RELEASING OF ENTRAPPED AIR AND OTHER IDENTIFIED DEFICIENCIES SHALL BE ADDRESSED.

AFTER THE GFRC SYSTEM HAS BEEN INSTALLED, USE THICKENED EPOXY TO DETAIL ALL EDGES AND SEAMS TO PROVIDE A SMOOTH FINISH. APPLY A FINAL LAYER OF THICKENED EPOXY TO THE INSTALLED GFRC SYSTEM FOR PROTECTION.

COATING SYSTEM APPLICATION:

AREAS AFTER THE EPOXY SETS, YET PRIOR TO THE APPLICATION OF THE URETHANE TOP COAT SEALER AND ALL DEFECTS (INCLUDING BUBBLES, DELAMINATIONS, AND FABRIC TEARS) MORE THAN 1 SQUARE INCH OF THE SURFACE AREA, OR AS SPECIFIED BY THE PROJECT ENGINEER, SHALL BE REPAIRED AS SUCH:

1) SMALL DEFECTS (ON THE ORDER OF 6" DIAMETER) SHALL BE INJECTED OR BACK FILLED WITH EPOXY.

2) BUBBLES LESS THAN 12" IN DIAMETER SHALL BE REPAIRED BY INJECTING WITH EPOXY. TWO HOLES SHALL BE DRILLED INTO THE BUBBLE TO ALLOW INJECTION OF THE EPOXY AND ESCAPE OF ENTRAPPED AIR.

3) BUBBLES, DELAMINATIONS AND FABRIC TEARS GREATER THAN 12" IN DIAMETER SHALL BE REPAIRED BY REMOVING AND REAPPLYING THE REQUIRED NUMBER OF LAYERS OF THE COMPOSITE AND THE REQUIRED FINISH COATINGS. ALL REPAIRS SHALL BE APPROVED BY THE PROJECT ENGINEER.

4) ONCE THE SURFACE IS FREE OF DUST, DIRT, OIL, WAX, CURING COMPOUNDS, EFFLORESCENCE, LAITANCE AND OTHER FOREIGN MATERIALS THE URETHANE TOP COAT SEALER SHALL THEN BE APPLIED TO THE FINAL EPOXY COAT.

MATERIALS MANUFACTURER:

ONE MANUFACTURER SHALL SUPPLY ALL MATERIALS REQUIRED FOR THE GFRC SYSTEM. THE MANUFACTURER SHALL BE ONE OF THE TWO LISTED BELOW OR AN APPROVED EQUAL FOR THE GLASS FIBER REINFORCED COMPOSITE (GFRC) STRENGTHENING AND PROTECTION SYSTEM.

TYFO FIBERWRAP COMPOSITE SYSTEM

SUPPLIED BY:
R.J. WATSON, INC.
11035 WALDEN AVENUE
ALDEN, NY 14004
(716) 901-7020

MANUFACTURER:
FYFE COMPANY, LLC
8380 MIRALANI DRIVE
SAN DIEGO, CA 92126
(858) 642-0694

MBRACE SYSTEM

SUPPLIED BY:
DEGUSSA BUILDING SYSTEMS, LLC
889 VALLEY PARK DRIVE
SHAKOPEE, MN 55379
(952) 496-6000

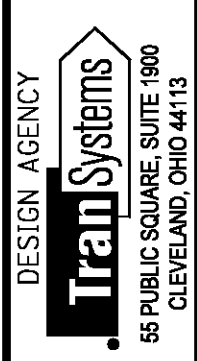
THE GFRC MATERIAL SUPPLIER SHALL HAVE A HISTORY OF AT LEAST 5 YEARS FOR SUPPLYING THE SPECIFIED MATERIALS.

MEASUREMENT AND PAYMENT:

THIS ITEM WILL BE PAID FOR BY (SQUARE FEET x NUMBER OF LAYERS) AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNDER ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM

PROPERTY	REQUIREMENT	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH, PSI, MIN. IN PRIMARY FIBER DIRECTION,	60,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK .01" PER MIN. TESTING SPEED.
ULTIMATE TENSILE STRENGTH, PSI, MIN. IN ORTHOGONAL FIBER DIRECTION,	3,000 PSI	1" BY 10" NORMALIZED TO 0.80" THICK .01" PER MIN. TESTING SPEED.
1000 HOURS EXPOSURE TO 100% HUMIDITY	60,000 PSI	C 581
TENSILE STRENGTH(MIN AFTER TEST) 1000 HOURS EXPOSURE TO OZONE	60,000 PSI	D 1149 EXCEPT NOT UNDER STRESS DURING OZONE EXPOSURE
TENSILE STRENGTH(MIN AFTER TEST) 1000 HOURS EXPOSURE TO ALKALI	60,000 PSI	D 3083 USING SOIL BURIAL - WATER CONTENT
TENSILE STRENGTH(MIN AFTER TEST) 1000 HOURS EXPOSURE TO SALT	60,000 PSI	C 581 AND D 1141 OMITTING ADDITION OF HEAVY METAL
TENSILE STRENGTH(MIN AFTER TEST) 1000 HOURS EXPOSURE AT 140 DEGREES F.	60,000 PSI	D 3045
TENSILE STRENGTH(MIN AFTER TEST) ULTRAVIOLET (UV) EXPOSURE	60,000 PSI	G 53 USING FS 40 UV-B BULBS FOR A MINIMUM 38 CYCLES. THE CYCLE SHALL BE 4 HOURS OF CONDENSATE EXPOSURE AT 40 DEGREES C
ELONGATION PERCENT, MIN PERCENT, MAX	1.7% 5.0%	
TENSILE MODULUS, PSI MIN. OF PRIMARY FIBERS	3,000,000	
VISUAL DEFECTS	ACCEPTANCE LEVEL III	D 2563
COEFFICIENT OF THERMAL EXPANSION IN PRIMARY DIRECTION	4,300,000 PPM/DEG. F (+ 15%)	E 1142

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DESIGN AGENCY
DATE 02/26/13
REVIEWED WRW
STRUCTURE FILE NUMBER 3113914

DRAWN KGJ
CHECKED CTG
REVISED

STRUCTURE GENERAL NOTES
BRIDGE NO. HAM-562-0147
SR-562 OVER ROSS AVENUE AND CENTRAL RAILROAD OF INDIANA

HAM-562-0147
PID No. 93100

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MADE BY: KGJ		DATE: 9/25/2012		ESTIMATED QUANTITIES		
CHKED BY: CTG		DATE: 2/5/2013				
ITEM	TOTAL	UNIT	DESCRIPTION	PIER CAPS	ABUT.	SHEET #
512	144	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	144		5
SPECIAL	30	SQ YD	URETHANE TOP COAT SEALER	30		1 , 5
513	66	POUND	STRUCTURAL STEEL, MISC.: STRUCTURAL STEEL REHABILITATION	66		6 - 7
513	305	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT	305		6 - 7
513	LUMP		STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING AND NON-DESTRUCTIVE TESTING	LUMP		6 - 7
513	LUMP		STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT	LUMP		6 - 7
513	1	EACH	STRUCTURAL STEEL, MISC.: 1-1/2" STRESS RELIEF HOLE RETROFIT	1		6
514	15,500	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	15,500		2
514	15,500	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	15,500		2
514	15,500	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	15,500		2
514	15,500	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	15,500		2
514	42	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	42		
514	13	EACH	FINAL INSPECTION REPAIR	13		
514	11,050	SQ FT	FIELD PAINTING, MISC.: SURFACE PREPARATION (EEU)	11,050		2
514	11,050	SQ FT	FIELD PAINTING, MISC.: FULL PRIME (EPOXY)	11,050		2
514	11,050	SQ FT	FIELD PAINTING, MISC.: COMPLETE COAT FINISH (URETHANE)	11,050		2
516	21	EACH	REFURBISH BEARING DEVICE, AS PER PLAN		21	9
516	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN		LUMP	9
519	110	SQ FT	PATCHING CONCRETE STRUCTURE	110		5
SPECIAL	2	EACH	STRUCTURE, MISC.: STEEL PIER CAP SEAL	2		6
SPECIAL	1056	SQ FT	STRUCTURE, MISC.: COMPOSITE FIBER WRAP	1056		5
SPECIAL	762	EACH	MISC.: 1" RUBBER EXPANSION PLUGS	762		6 - 7



DESIGNED: KGJ
 CHECKED: CTG
 DRAWN: KGJ
 REVISED:
 REVIEWED: WRW
 DATE: 02/26/13
 STRUCTURE FILE NUMBER: 3113914

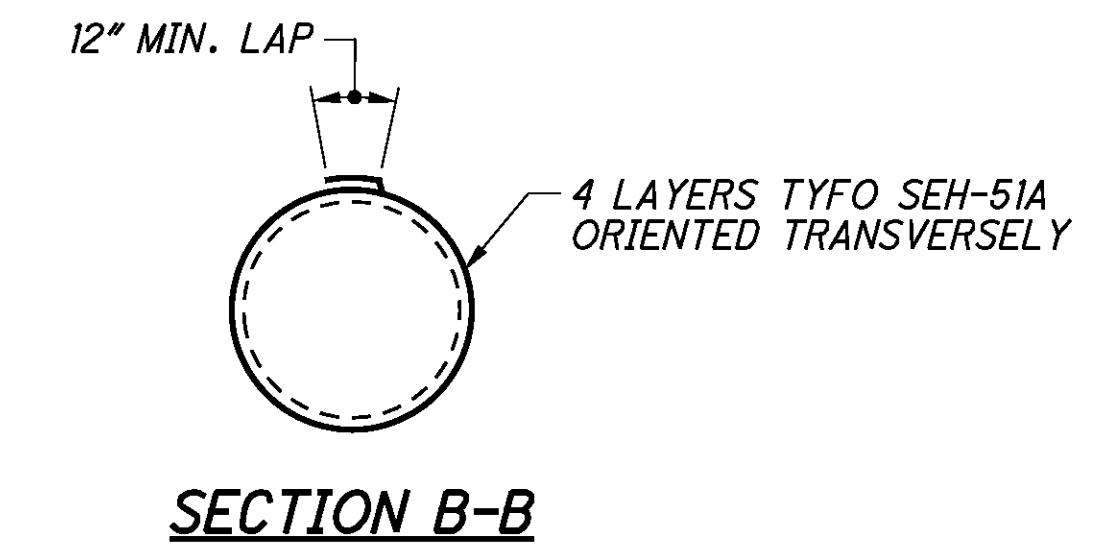
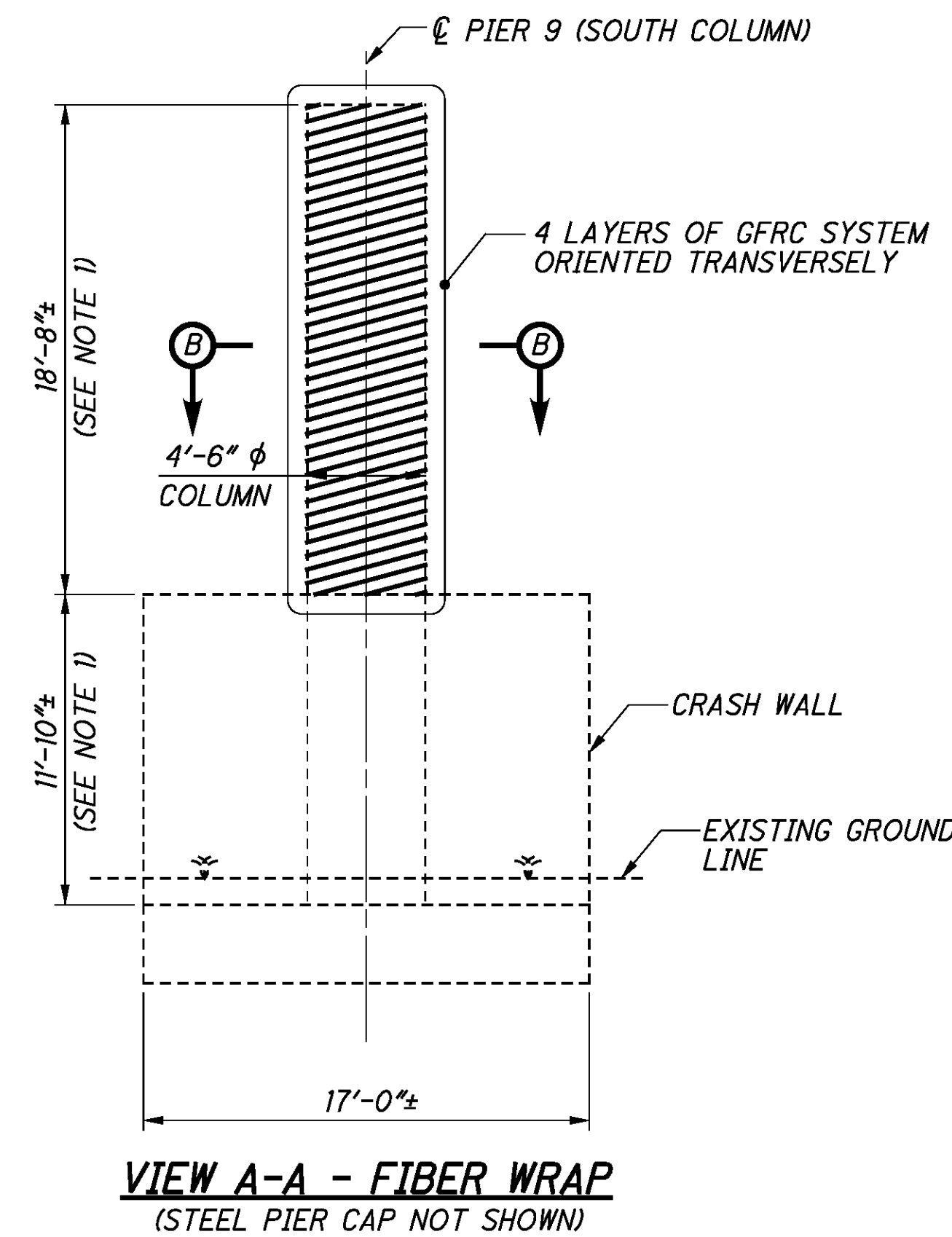
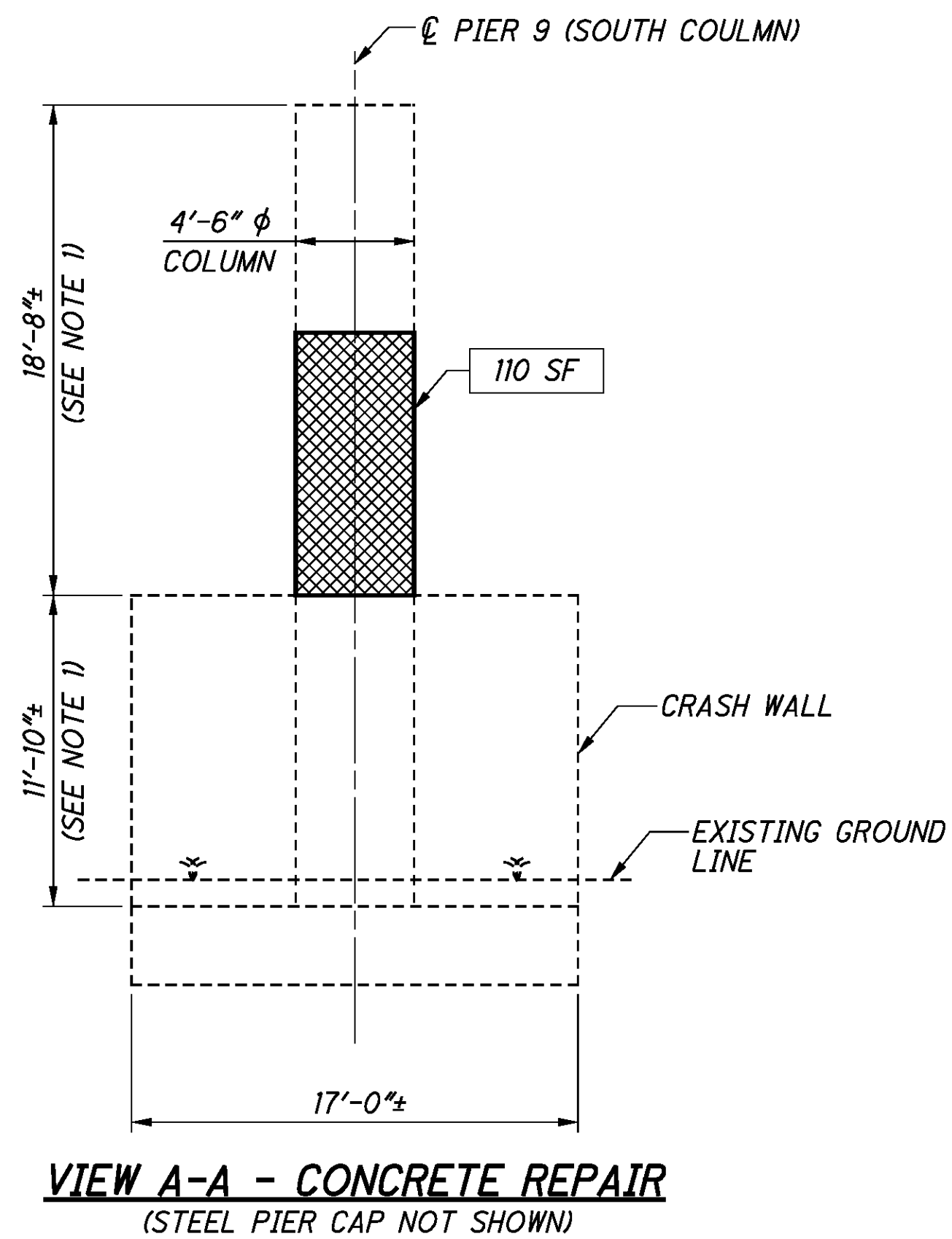
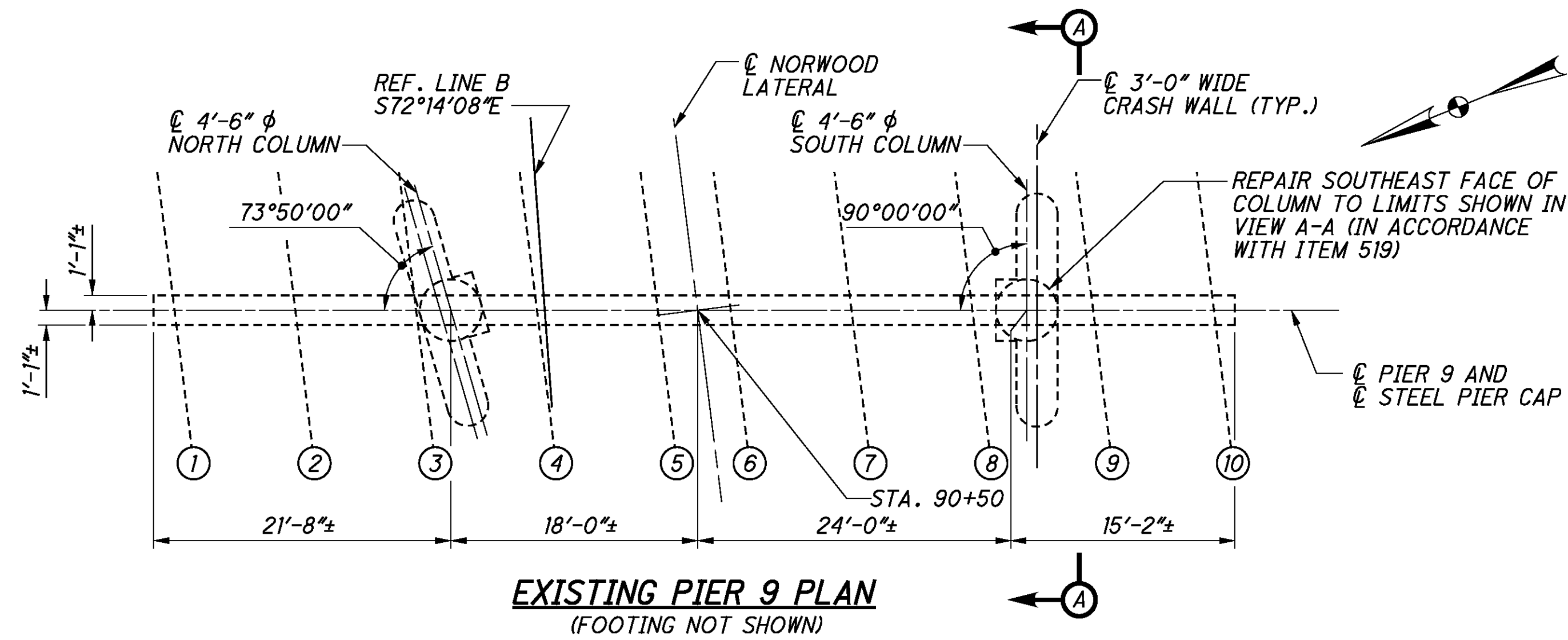
ESTIMATED QUANTITIES
 BRIDGE NO. HAM-562-0147
 SR-562 OVER ROSS AVENUE AND CENTRAL RAILROAD OF INDIANA

HAM-562-0147
PID No. 93100

4 / 16

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31

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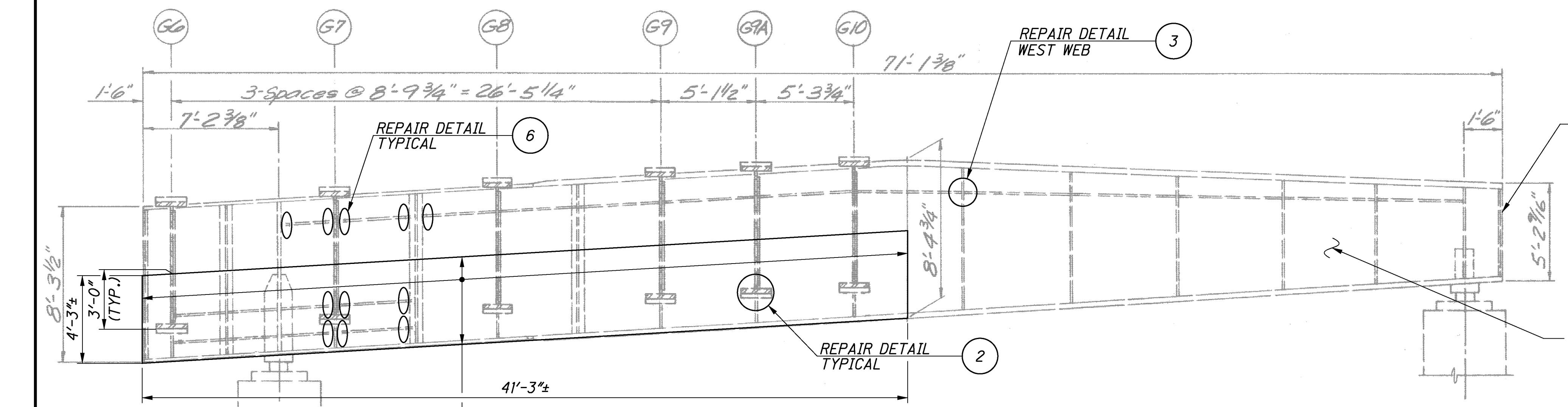


NOTES:

1. ALL AREAS TO BE WRAPPED WITH FIBER REINFORCED POLYMER SHALL BE SEALED WITH ITEM 512-URETHANE TOP COAT SEALER. ALL OTHER EXPOSED AREAS OF PIER 9 (EXCEPT THE EXPOSED TOP OF THE COLUMNS) SHALL BE SEALED WITH ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).
2. THE COLOR OF THE URETHANE TOP COAT SEALER SHALL CLOSELY MATCH THE EXISTING STRUCTURE COLOR. THE FINAL COLOR SELECTED SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE APPLICATION TO PIER 9.

LEGEND:

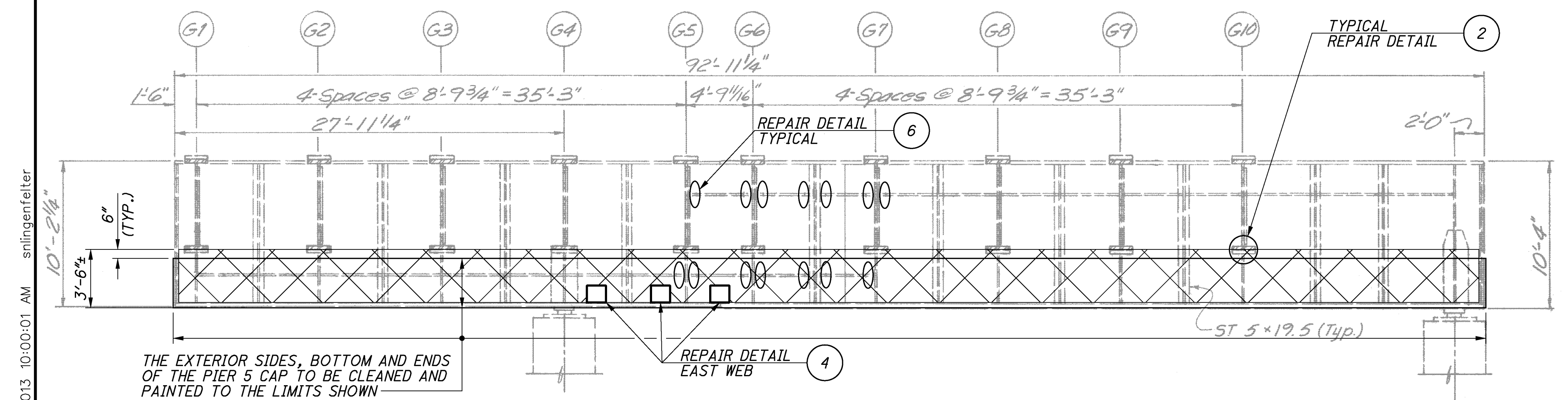
- AREAS OF DETEIORATED CONCRETE TO BE PATCHED PER ITEM 519
- PATCHING QUANTITY, INCLUDING A 50% INCREASE



WEST ELEVATION OF CAP, PIER NO. 4 E.B.
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)

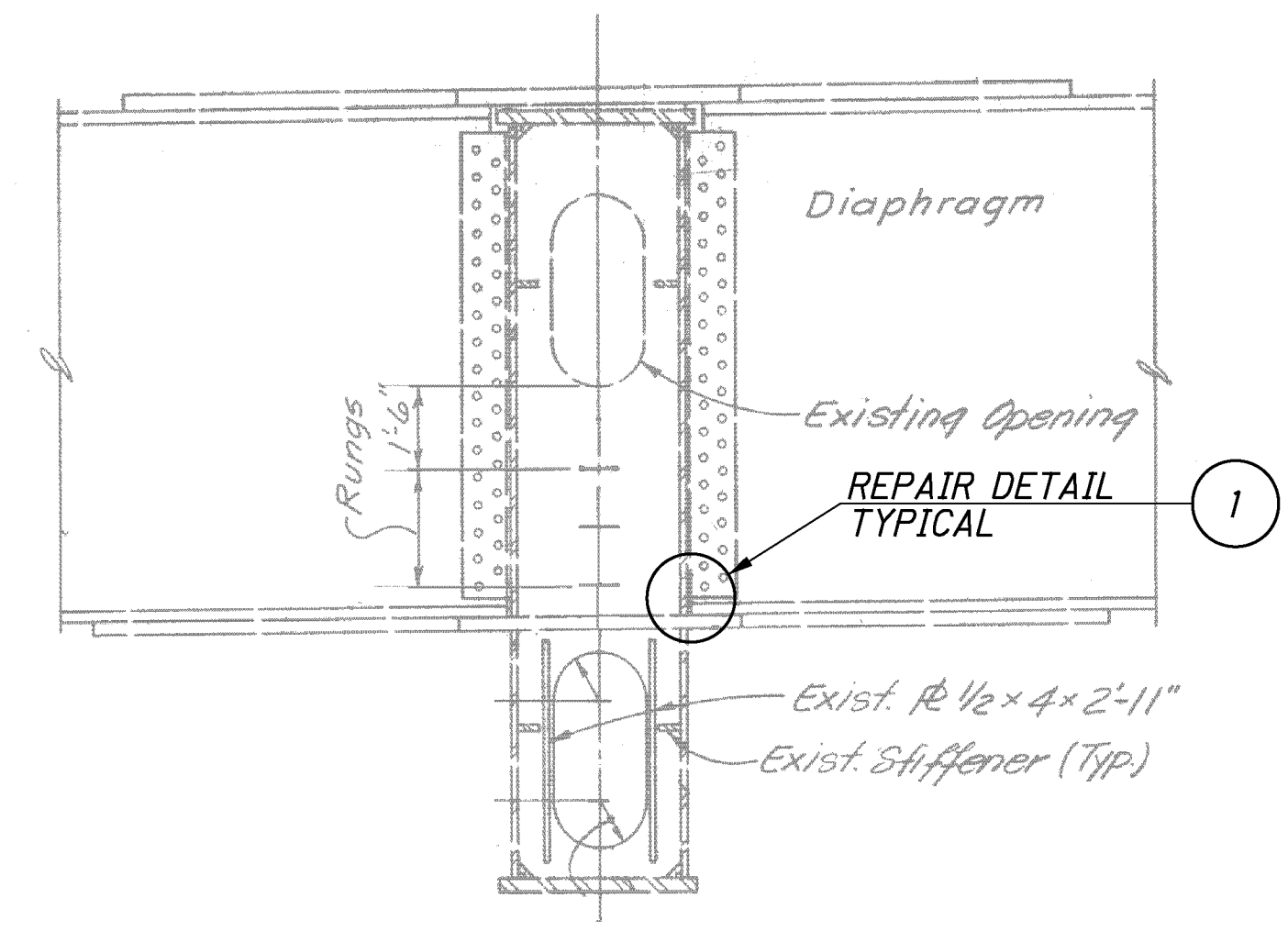
THE EXTERIOR SIDES, BOTTOM AND END OF THE PIER 4 E.B. CAP TO BE CLEANED AND PAINTED TO THE LIMITS SHOWN

REPAIR DETAIL WEST WEB 3
RESEAL SOUTH ACCESS HATCH WITH NEW NEOPRENE GASKET
THE ENTIRE INTERIOR SURFACE AREA OF PIER 4 E.B. CAP TO BE CLEANED AND PAINTED USING THE EEU PAINT SYSTEM.

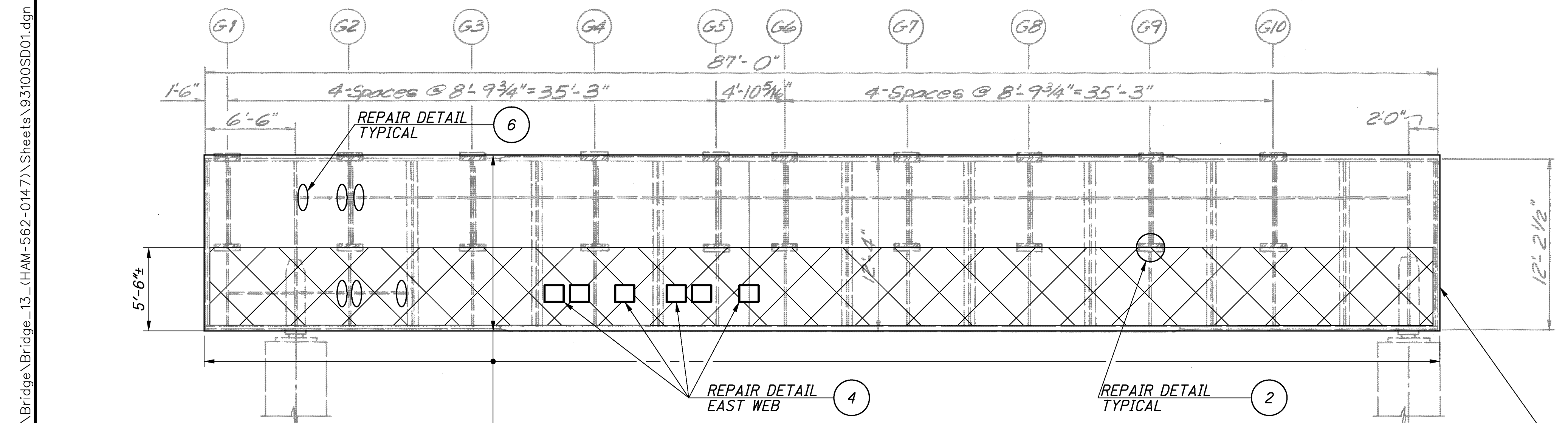


WEST ELEVATION OF CAP, PIER NO. 5
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)

THE EXTERIOR SIDES, BOTTOM AND ENDS OF THE PIER 5 CAP TO BE CLEANED AND PAINTED TO THE LIMITS SHOWN



TYPICAL SECTION
PIERS 5, 6 AND 7 SHOWN
PIERS 4 E.B., 8 AND 9 SIMILAR
(SECTION TAKEN FROM 1991 REHAB. DRAWINGS)

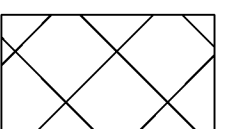




WEST ELEVATION OF CAP, PIER NO. 6
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)

THE EXTERIOR EASTERN SIDE AND BOTTOM OF THE PIER 6 CAP TO BE CLEANED AND PAINTED TO THE LIMITS SHOWN

RESEAL SOUTH ACCESS HATCH WITH NEW NEOPRENE GASKET. REPLACE 7 MISSING BOLTS AT SOUTH WHICH SHALL BE INCIDENTAL TO THE STEEL PIER CAP SEAL, AS PER PLAN.

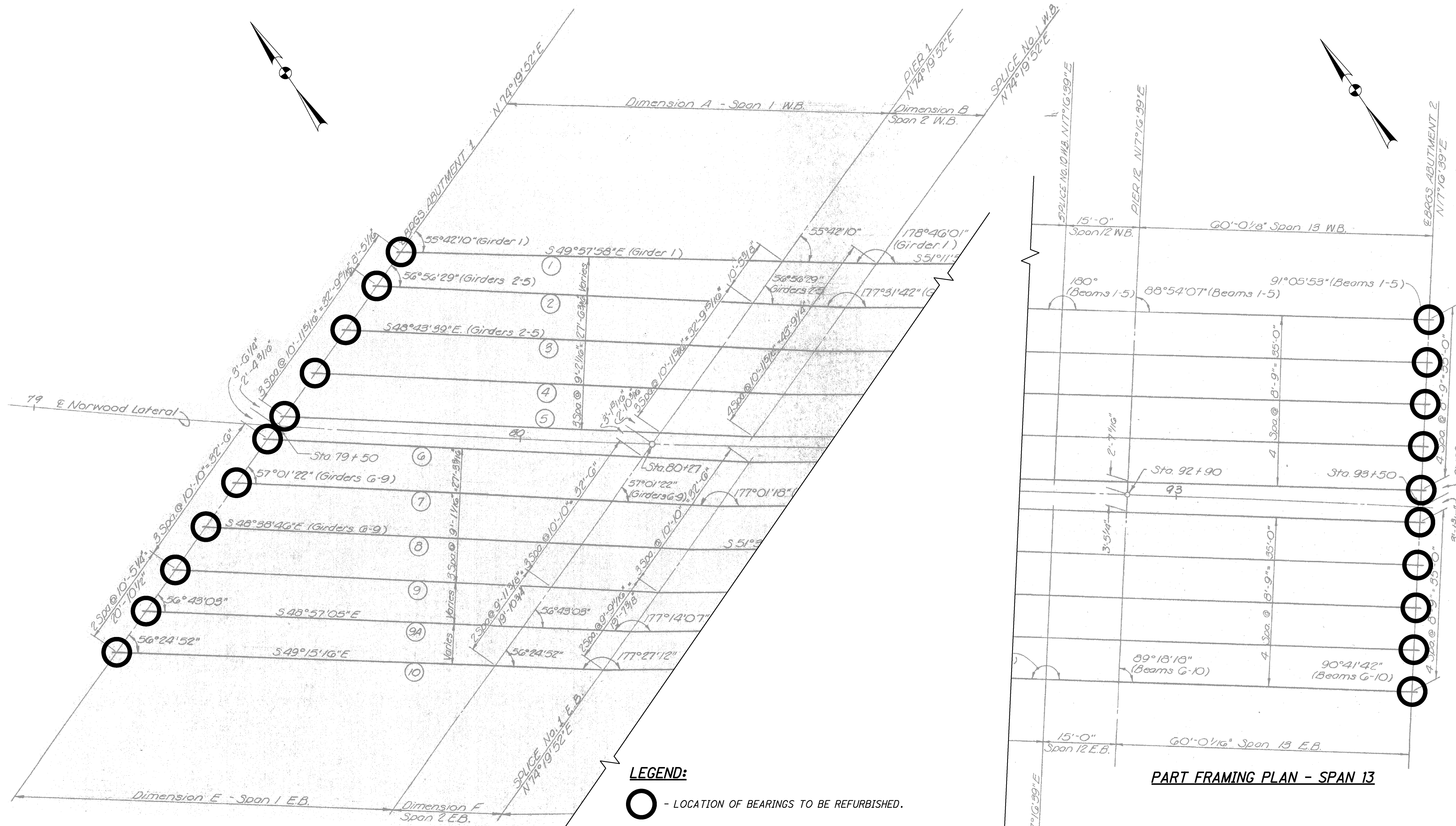
LEGEND:

-  - INDICATES THE LIMITS OF INTERIOR ZONE PAINTING USING THE EEU PAINT SYSTEM AT PIERS 5 AND 6 ONLY (FOR LIMITS OF INTERIOR PAINTING AT PIER 4 E.B., SEE WEST ELEVATION OF CAP, PIER NO. 4 E.B.). CLEAN AND PAINT ALL SURFACES (DIAPHRAGMS, WEBS, STIFFENERS, ETC) FROM THE TOP OF THE TIE PLATES TO AND INCLUDING THE BOTTOM FLANGE.
-  - INDICATES REPAIR DETAIL 4
-  - INDICATES REPAIR DETAIL 6

NOTES:

1. FOR DETAILS AND PAYMENT FOR REPAIR DETAILS 1 THRU 4 AND 6, SEE SHEET 8/16.
2. SEALING THE ACCESS HATCHES WITH NEW NEOPRENE GASKETS IS INCLUDED FOR PAYMENT UNDER ITEM SPECIAL STRUCTURE MISC.: STEEL PIER CAP SEAL. SEE THE STRUCTURE GENERAL NOTES ON SHEET 2/16.
3. FOR NOTES AND PAYMENT INFORMATION ON THE EEU PAINT SYSTEM, SEE SHEET 2/16. ANY PAINT DISTURBED BY THE INTERIOR REPAIRS PERFORMED OUTSIDE OF THE ZONE PAINTING SHALL BE REPAIRED AND PAID FOR UNDER THE EEU PAINT SYSTEM PAY ITEMS.

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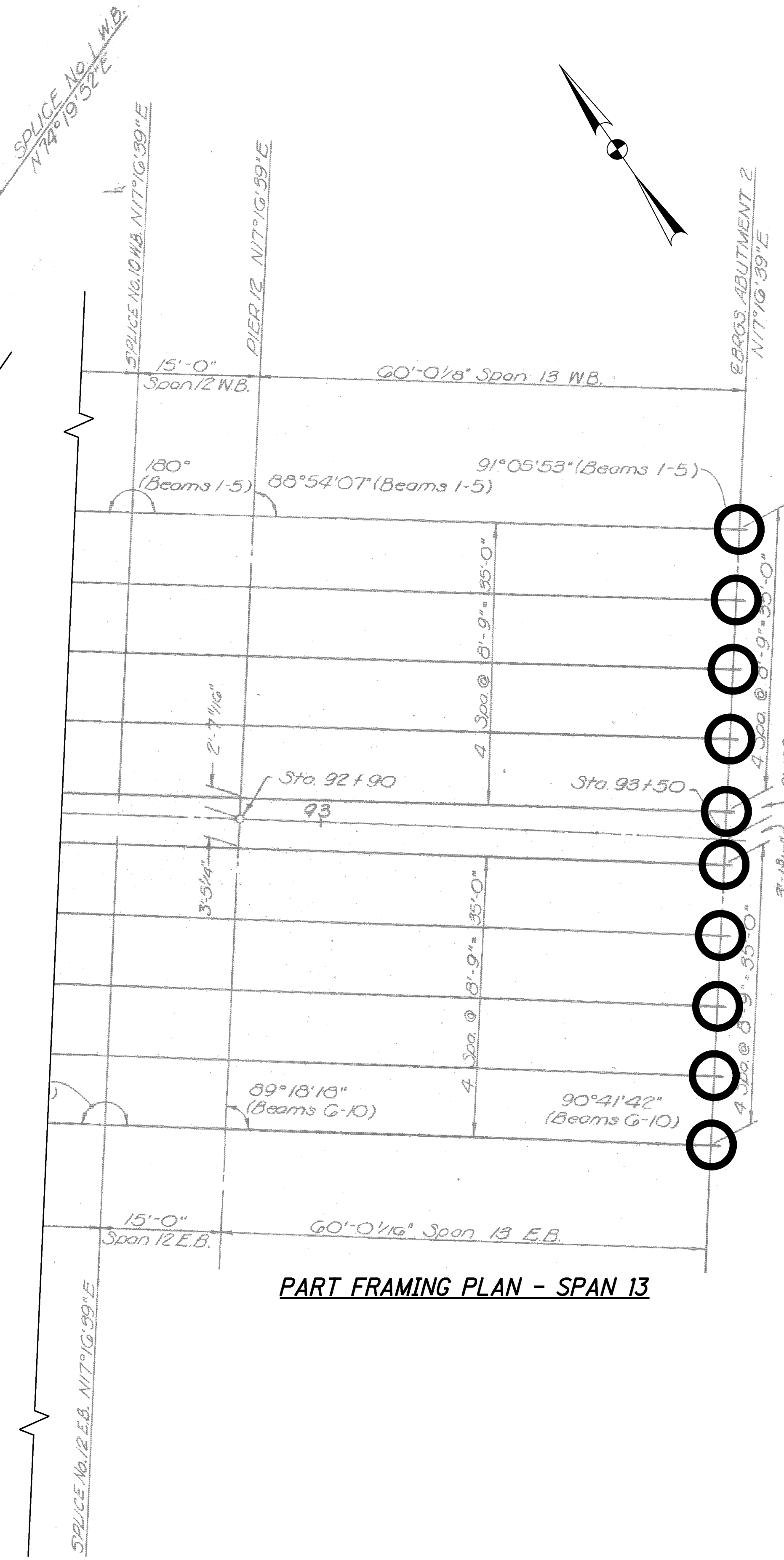
PART FRAMING PLAN - SPAN 1

LEGEND:

○ - LOCATION OF BEARINGS TO BE REFURBISHED.

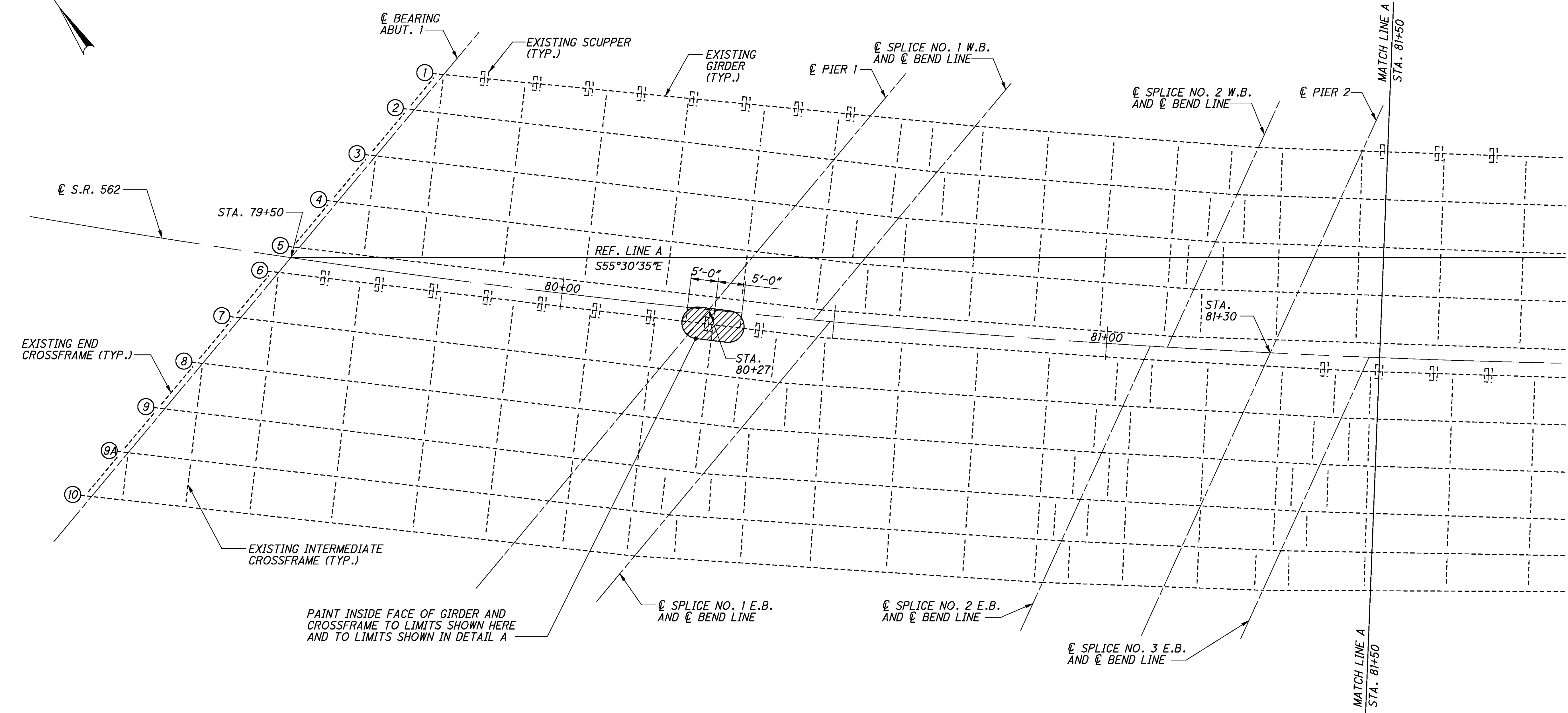
NOTES:

- FRAMING PLAN IS TAKEN FROM THE ORIGINAL 1969 DRAWINGS, SHEETS 253 AND 261 OF 353, FRAMING PLAN GEOMETRY, NORWOOD LATERAL OVER ROSS AVE. AND CENTRAL RAILROAD OF INDIANA. BR. No. HAM-562-0147.
- FOR NOTES ON REFURBISHING THE BEARINGS AND THE TEMPORARY SUPPORT OF THE SUPERSTRUCTURE, SEE THE STRUCTURE GENERAL NOTES, SHEETS [1/16] AND [2/16].



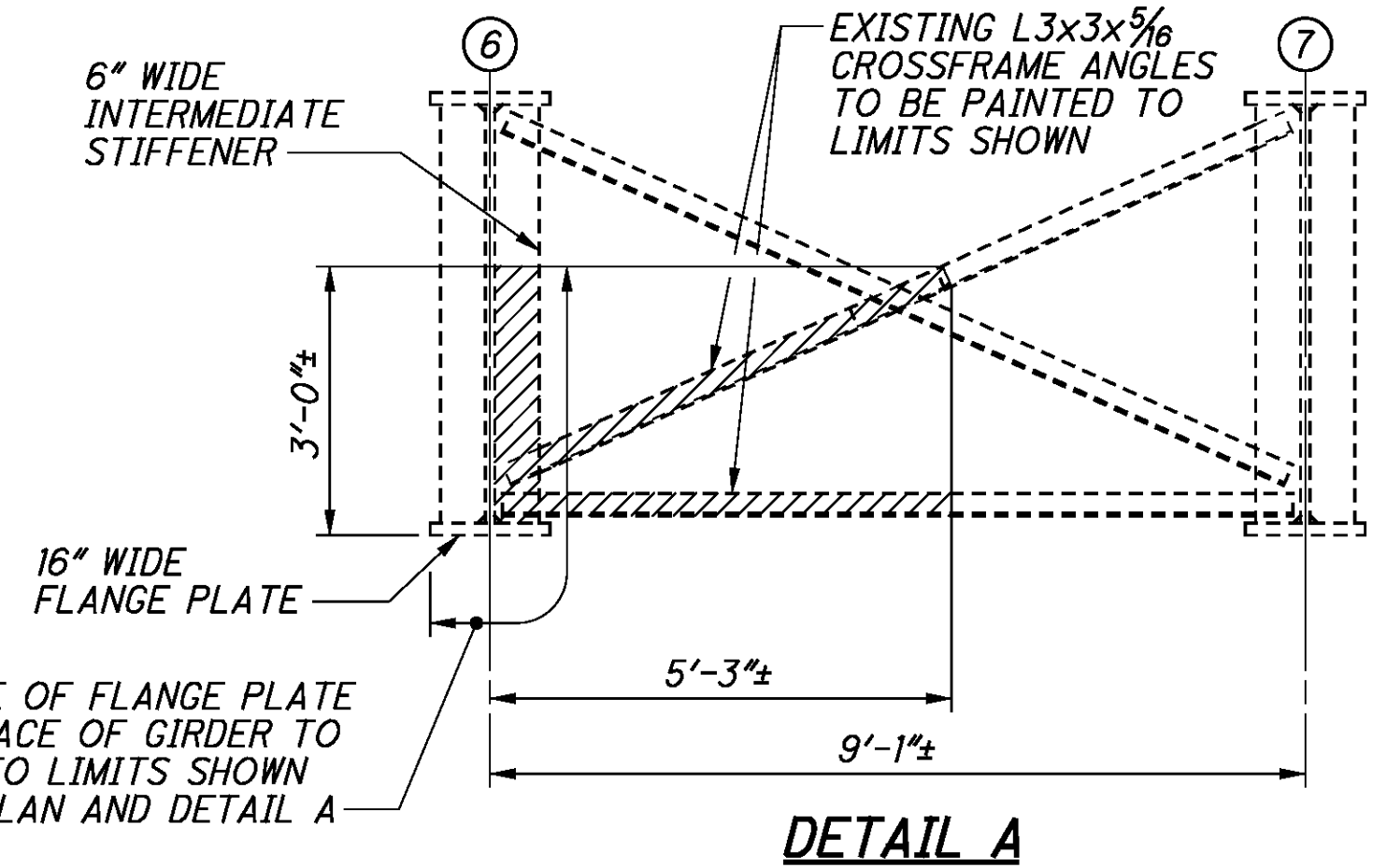
PART FRAMING PLAN - SPAN 13

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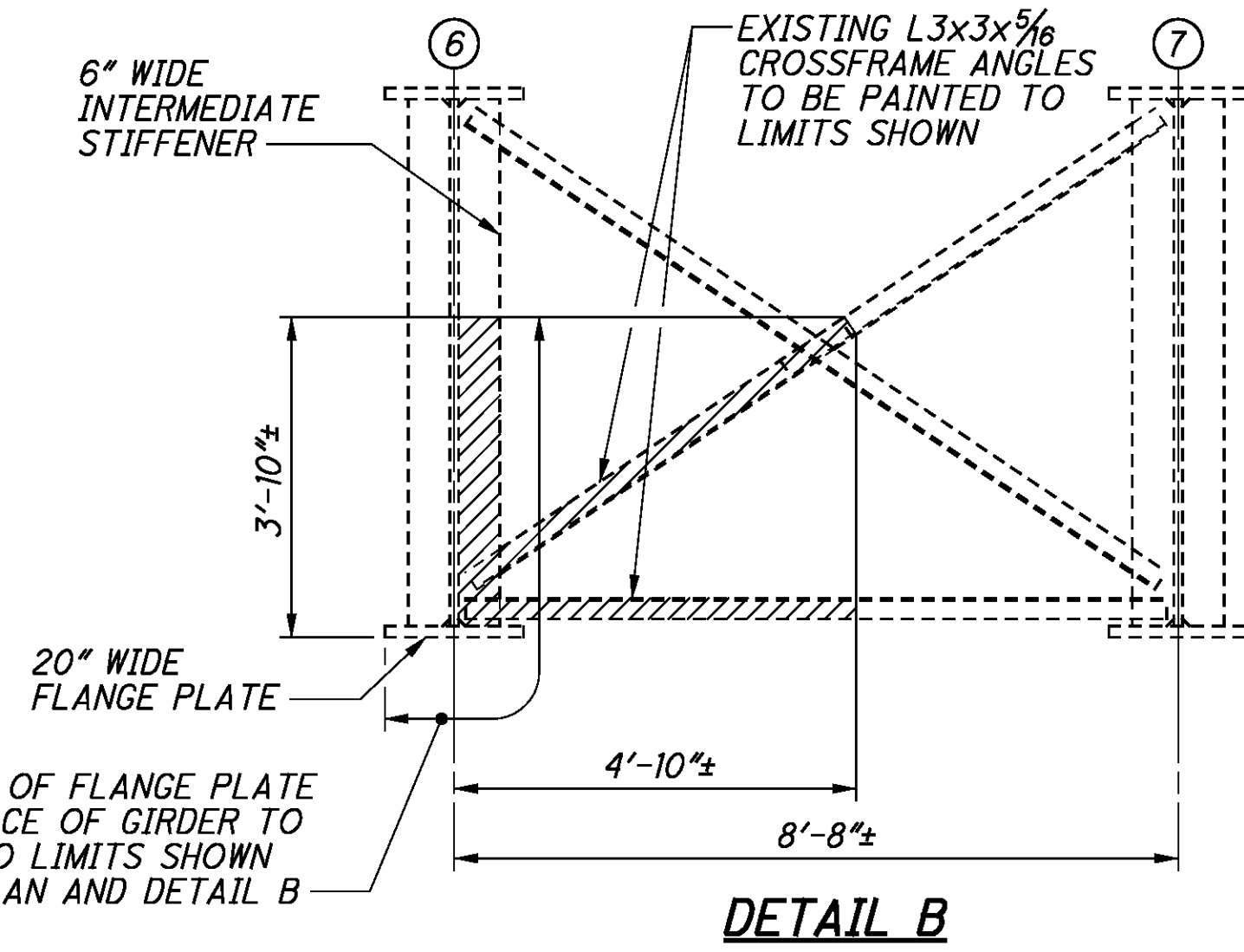
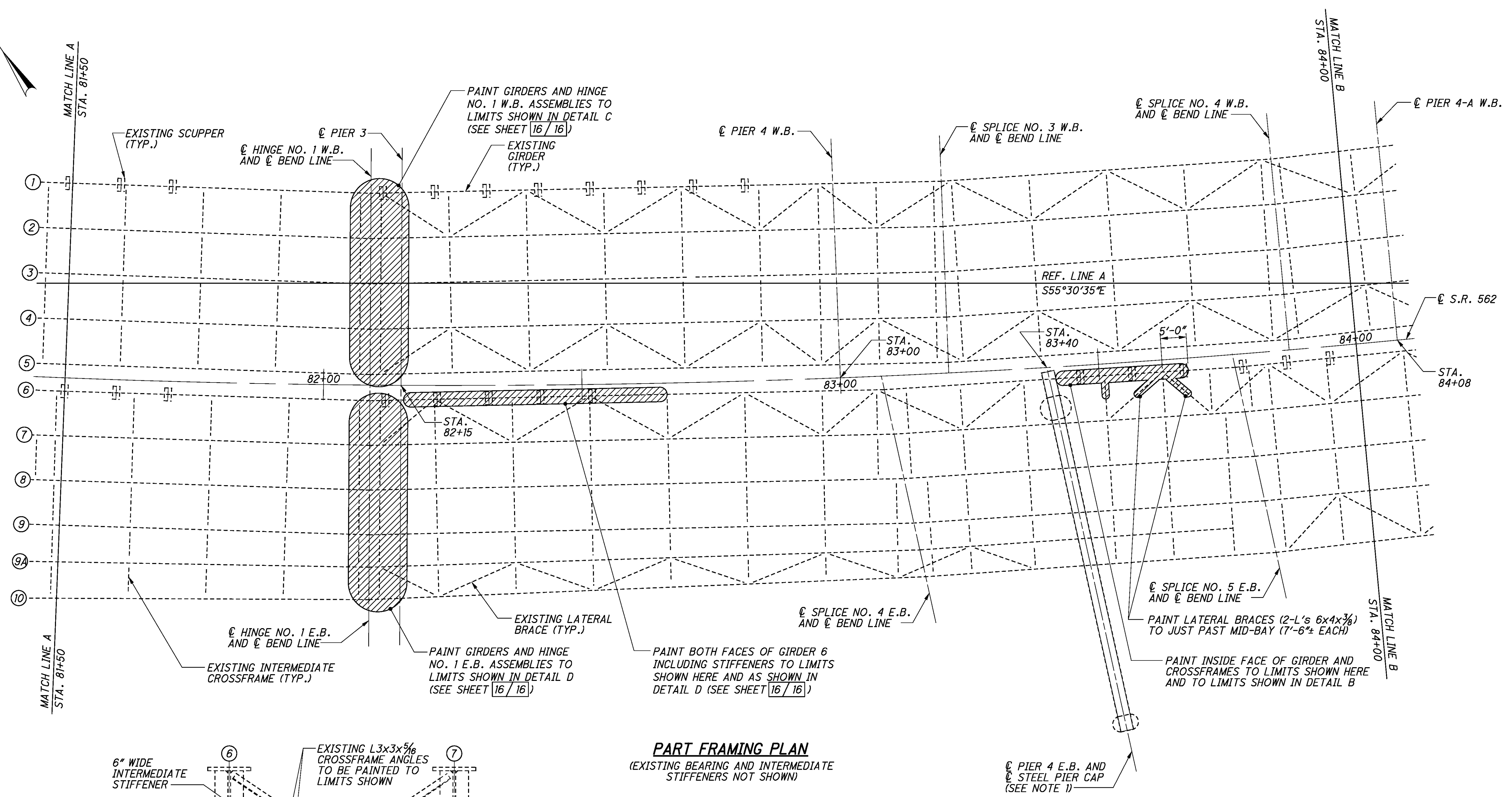
PAINIT INSIDE FACE OF GIRDER AND CROSSFRAME TO LIMITS SHOWN HERE AND TO LIMITS SHOWN IN DETAIL A

PART FRAMING PLAN
(EXISTING BEARING AND INTERMEDIATE STIFFENERS NOT SHOWN)



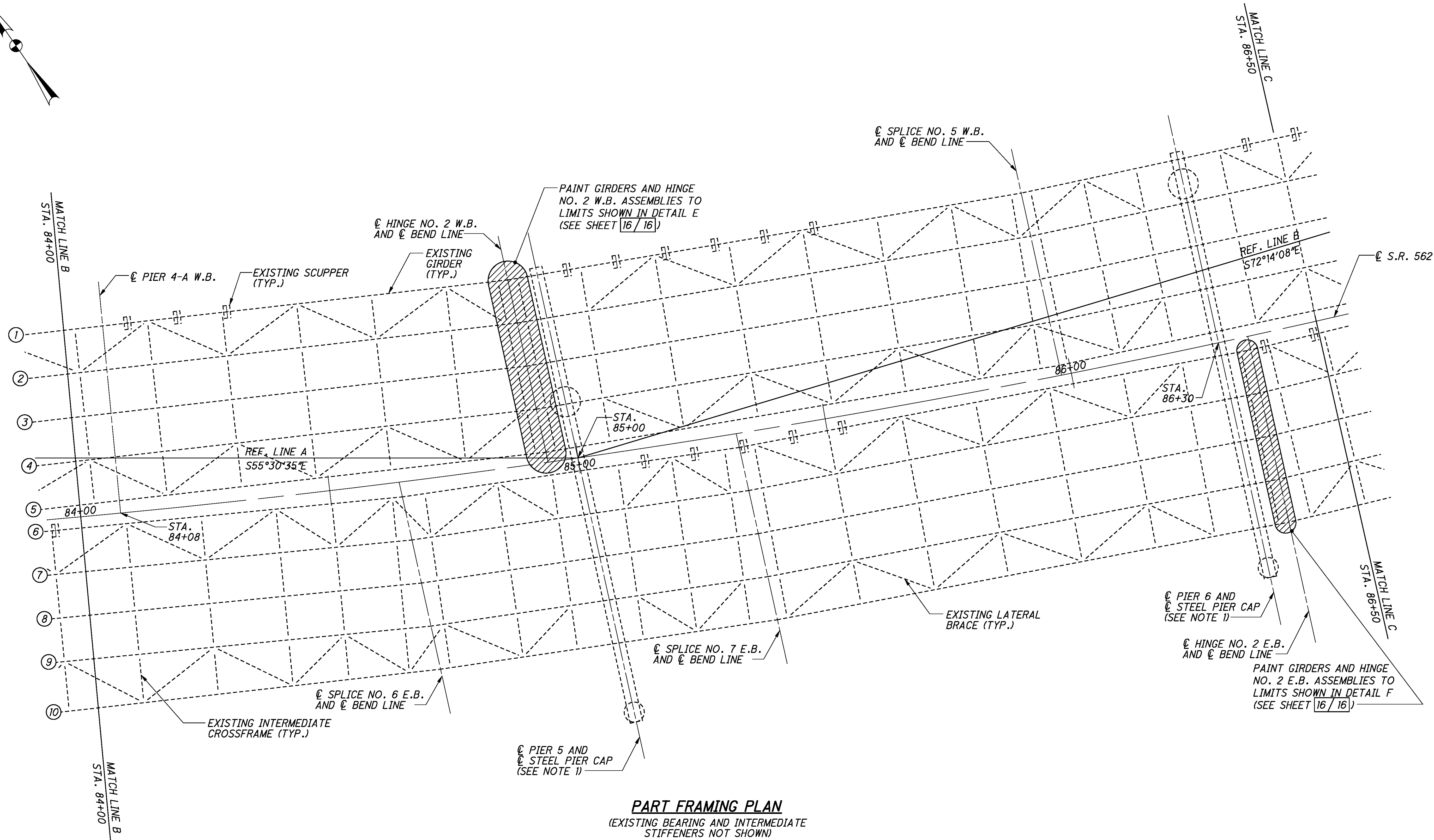
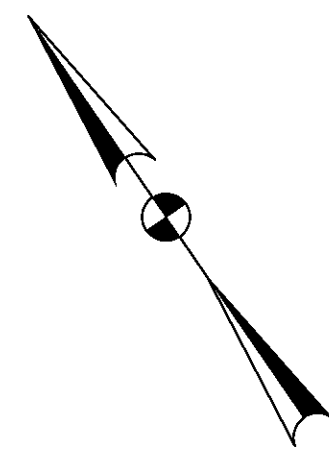
LEGEND:
 INDICATES AREAS OF STRUCTURAL STEEL TO BE CLEANED AND PAINTED

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- LEGEND:**
 INDICATES AREAS OF STRUCTURAL STEEL TO BE CLEANED AND PAINTED
- NOTES:**
 1. FOR THE PIER 4 E.B. STEEL PIER CAP PAINTING LIMITS, SEE SHEET 6 / 16.

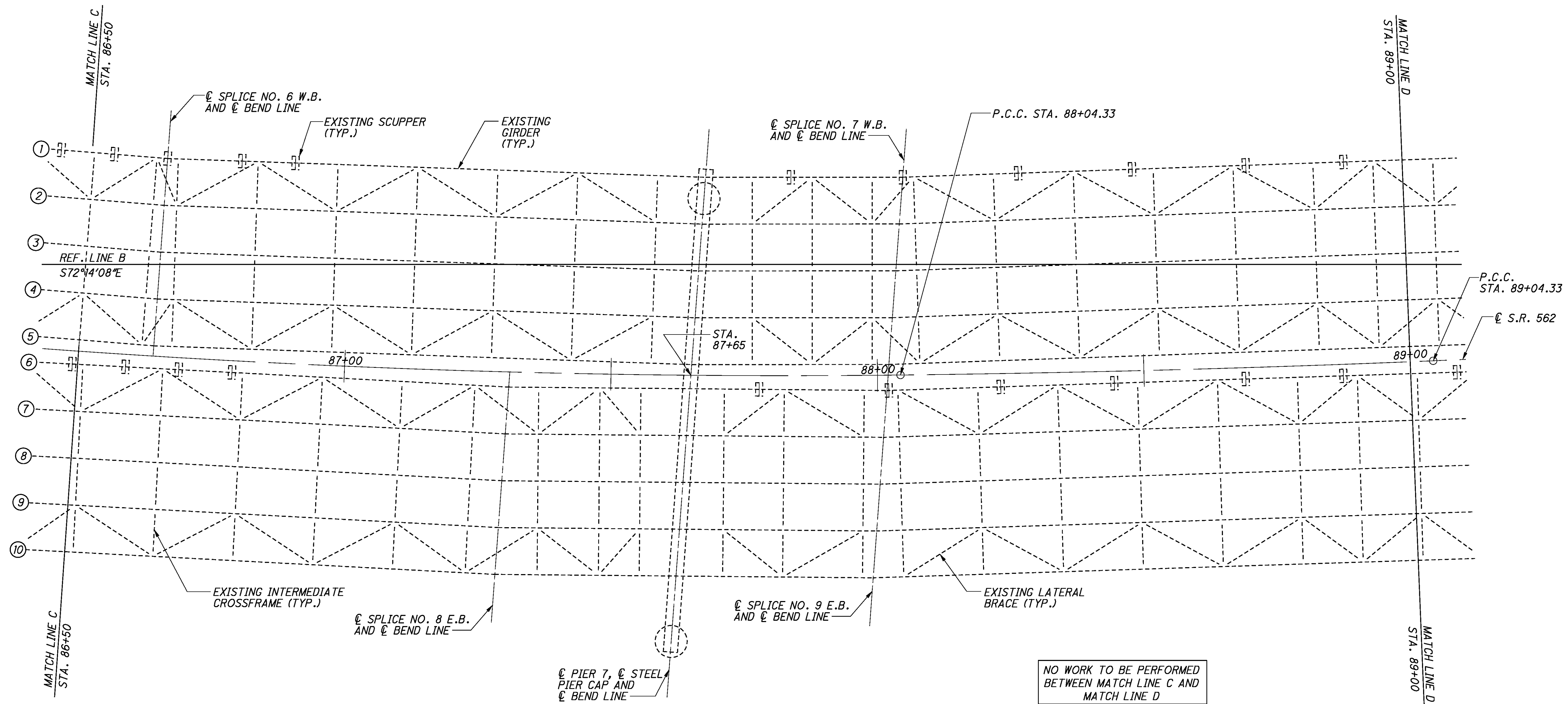
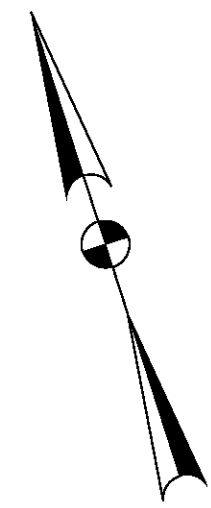
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PART FRAMING PLAN
(EXISTING BEARING AND INTERMEDIATE STIFFENERS NOT SHOWN)

NOTES:
1. FOR THE PIER 5 AND 6 STEEL PIER CAP PAINTING LIMITS, SEE SHEET 6 / 16.

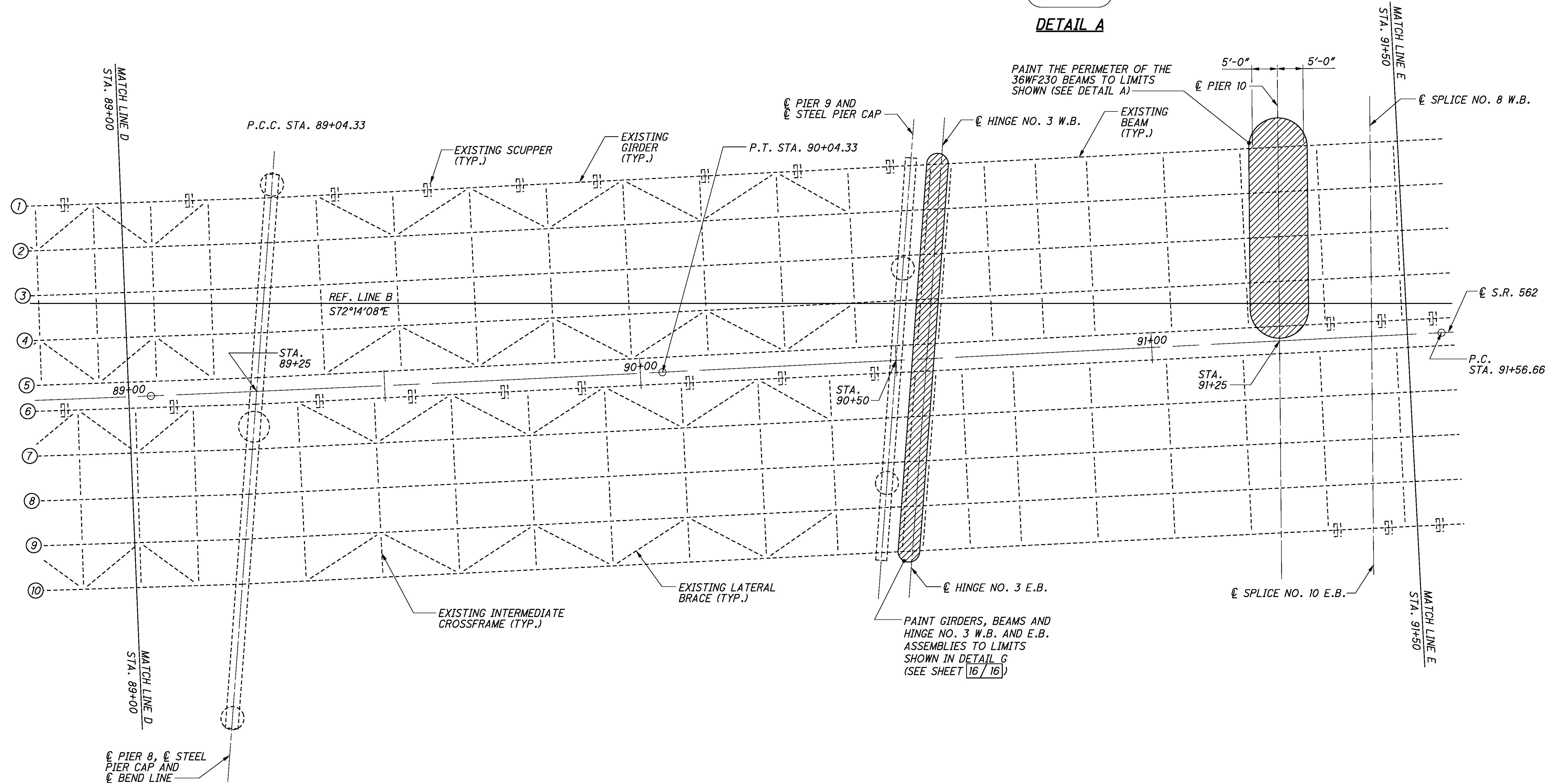
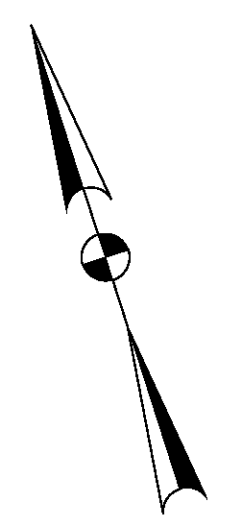
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NO WORK TO BE PERFORMED
BETWEEN MATCH LINE C AND
MATCH LINE D

PART FRAMING PLAN
(EXISTING BEARING AND INTERMEDIATE
STIFFENERS NOT SHOWN)

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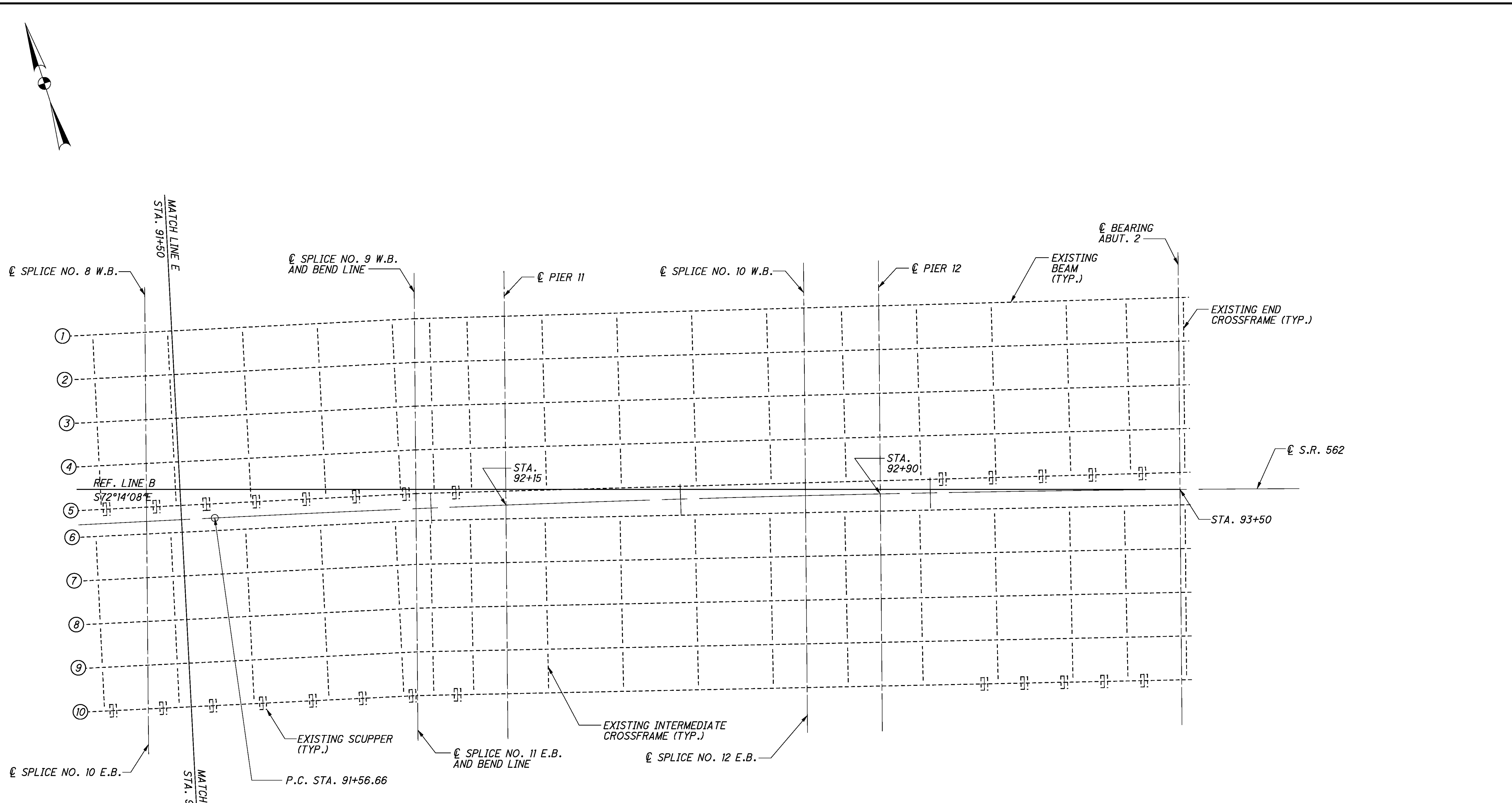


PART FRAMING PLAN
(EXISTING BEARING AND INTERMEDIATE STIFFENERS NOT SHOWN)

NOTES:
1. FOR THE PIER 9 STEEL PIER CAP PAINTING LIMITS, SEE SHEET 7/16.

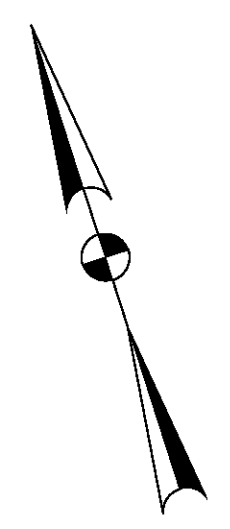
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	Trail Systems 65 PUBLIC SQUARE, SUITE 1900 CLEVELAND, OHIO 44113	02/26/13	WRW	JLV	NBR
			STRUCTURE FILE NUMBER	REVISED	CHECKED
			3113914		CTG
EXISTING FRAMING PLAN - 5 OF 6					
BRIDGE HAM-562-0147					
SR-562 OVER ROSS AVENUE AND CENTRAL RAILROAD OF INDIANA					
HAM-562-0147					
PID No. 93100					
14/16					
29/31					

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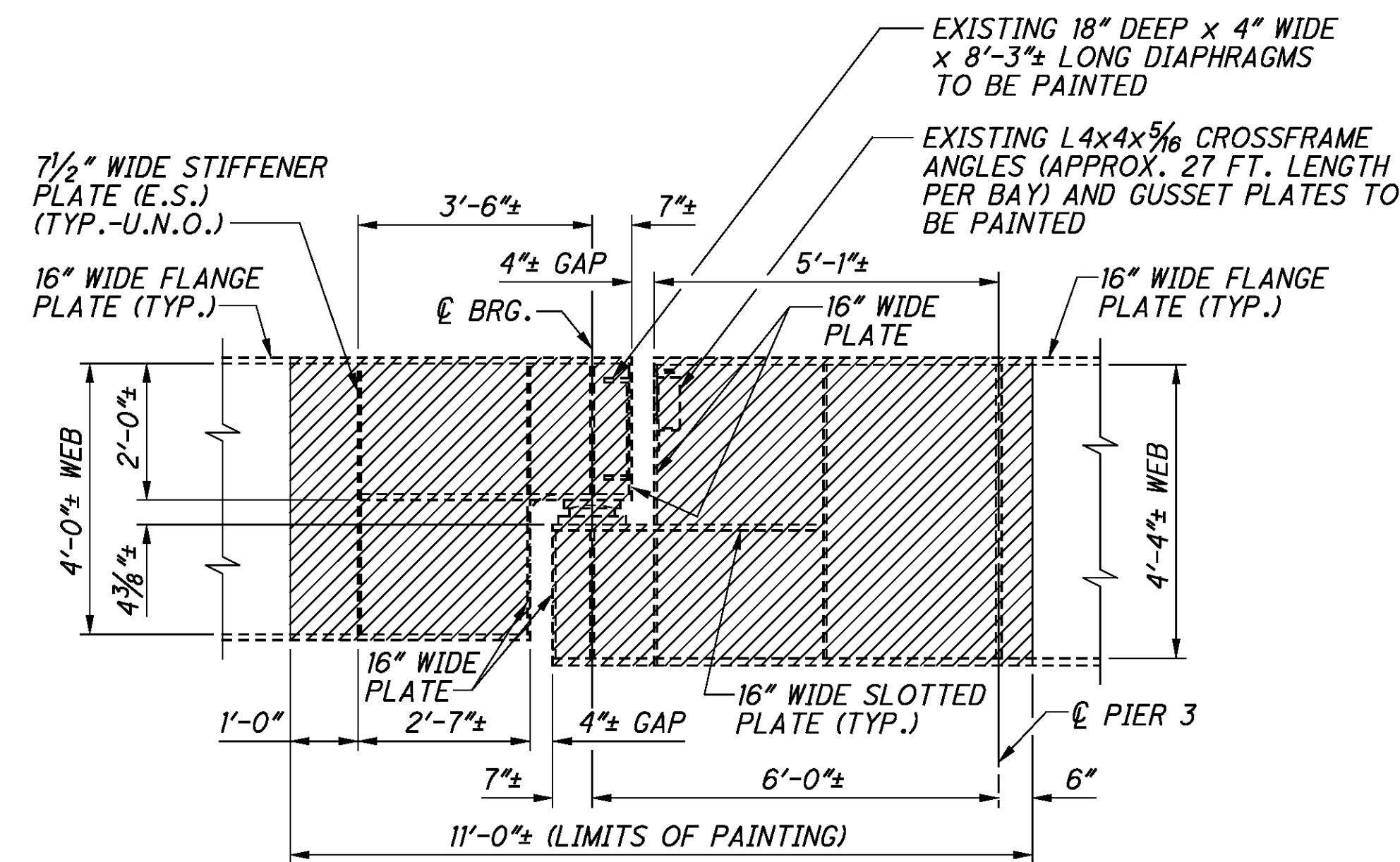


PART FRAMING PLAN
 (EXISTING BEARING AND INTERMEDIATE STIFFENERS NOT SHOWN)

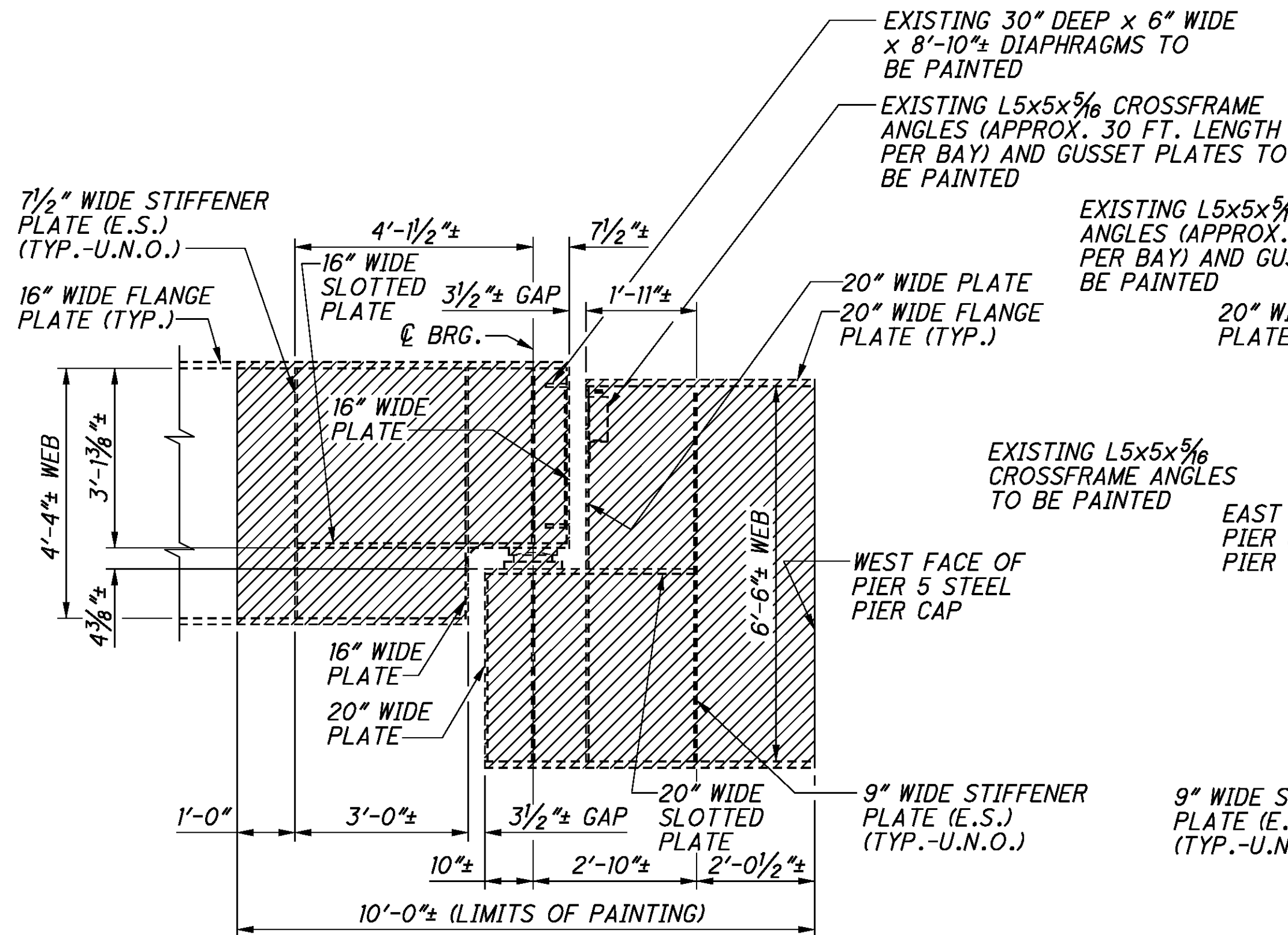
NO WORK TO BE PERFORMED
 BETWEEN MATCH LINE E AND
 ABUTMENT 2



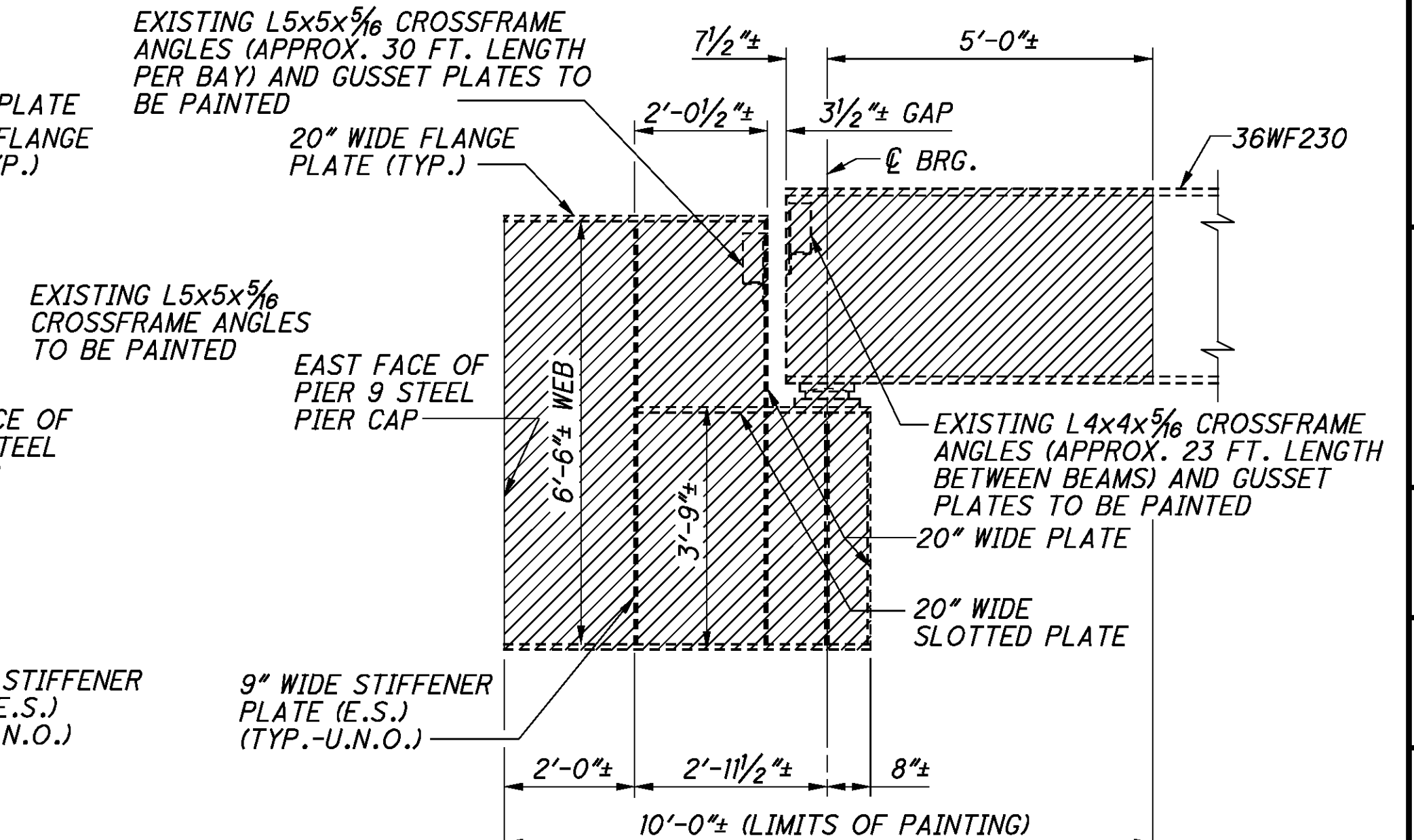
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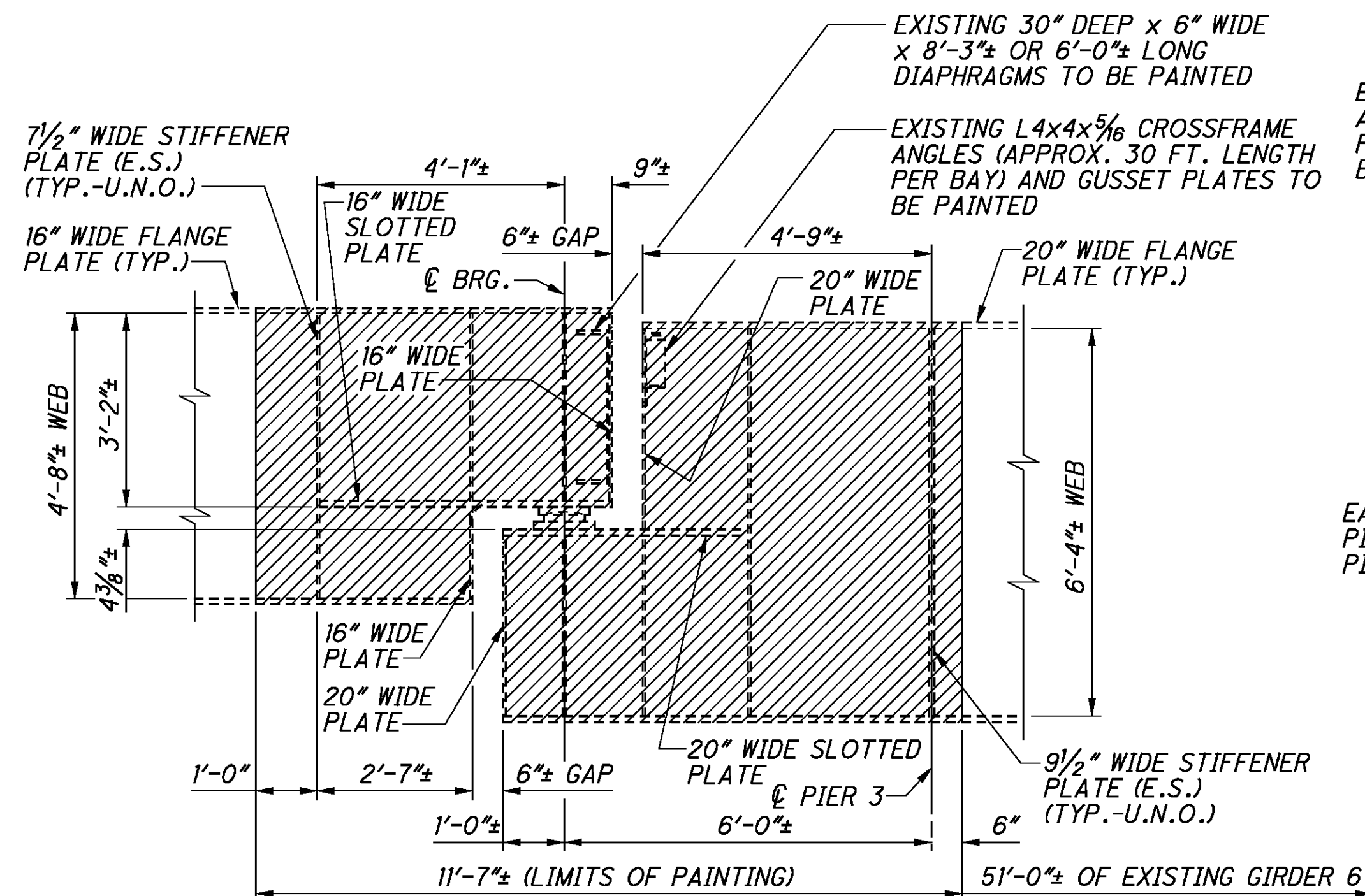
DETAIL C - HINGE NO. 1 W.B.
(DECK SLAB AND EXPANSION JOINT NOT SHOWN)



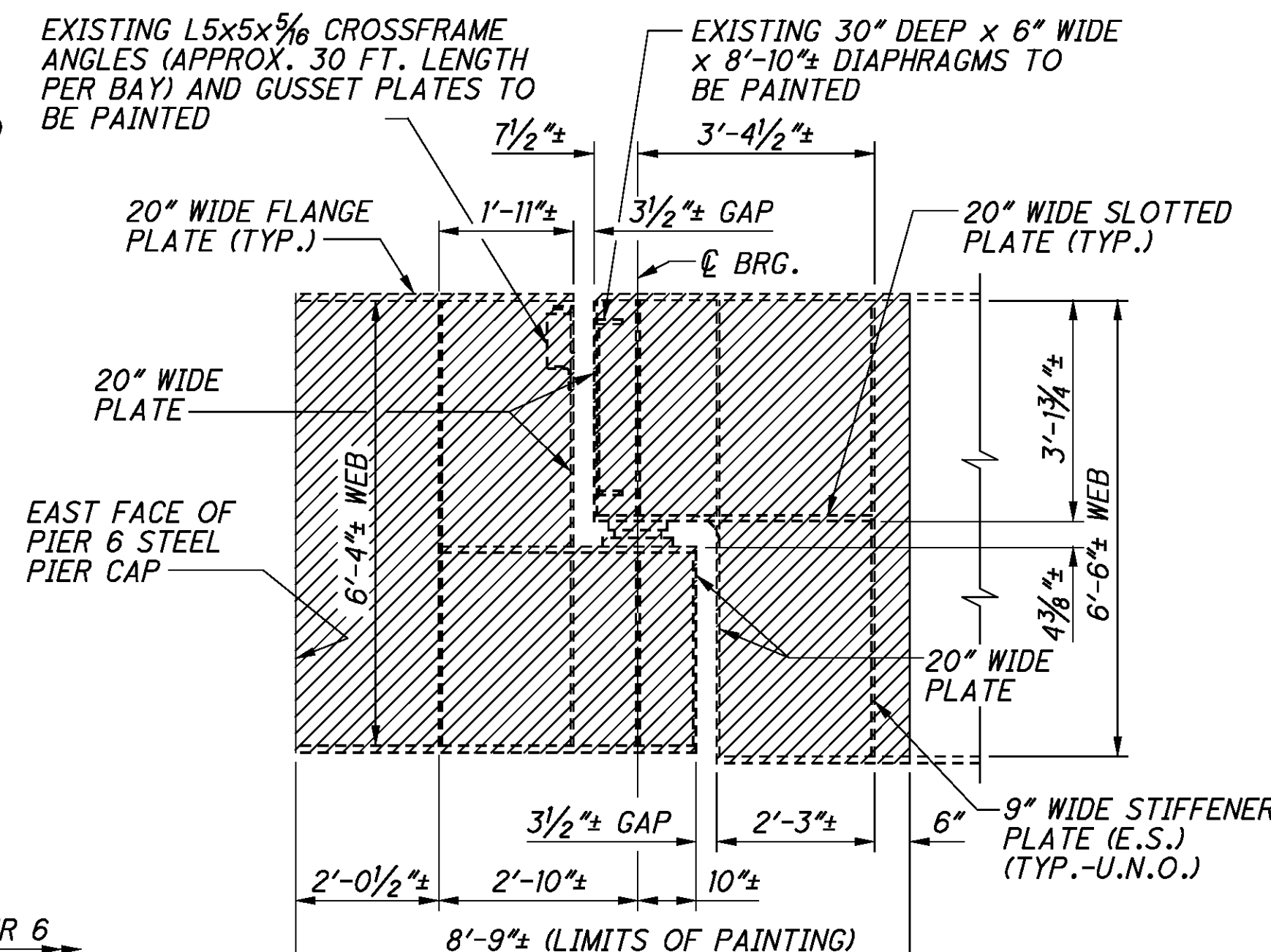
DETAIL E - HINGE NO. 2 W.B.
(DECK SLAB AND EXPANSION JOINT NOT SHOWN)



DETAIL G - HINGE NO. 3 W.B. AND E.B.
(DECK SLAB AND EXPANSION JOINT NOT SHOWN)



DETAIL D - HINGE NO. 1 E.B.
(DECK SLAB AND EXPANSION JOINT NOT SHOWN)



DETAIL F - HINGE NO. 2 E.B.
(DECK SLAB AND EXPANSION JOINT NOT SHOWN)

LEGEND:

INDICATES AREAS OF STRUCTURAL STEEL TO BE CLEANED AND PAINTED

NOTES:

1. FOR LOCATION OF DETAILS C THRU G, SEE SHEETS 11/16 THRU 14/16.