

SCOPE OF WORK

THE SCOPE OF WORK TO BE PERFORMED SHALL BE EXECUTED IN STAGES AS SHOWN AND INCLUDES:

BRIDGE NO. HAM-50-1903 L/R

WORK REQUIRED:

1. APPLY A 2" ASPHALT OVERLAY TO DECK AND APPROACH SLABS. REMOVE PORTIONS OF THE DELAMINATED CONCRETE OVERLAY AND FILL WITH ASPHALT PRIOR TO PLACEMENT OF ASPHALT OVERLAY.
2. CLEAN BRIDGE DRAINAGE SYSTEM.
3. REPAIR PRESSURE RELIEF JOINTS AT FORWARD END OF BRIDGE. (SEE ROADWAY PLANS)
4. INSPECT, TEST, AND REPAIR STEEL BEAM CRACKS.

BRIDGE NO. HAM-50-1954 L/R

WORK REQUIRED:

1. APPLY A 2" ASPHALT OVERLAY TO DECK AND APPROACH SLABS. REMOVE PORTIONS OF THE DELAMINATED CONCRETE OVERLAY AND FILL WITH ASPHALT PRIOR TO PLACEMENT OF ASPHALT OVERLAY.
2. CLEAN BRIDGE DRAINAGE SYSTEM.
3. REPAIR PRESSURE RELIEF JOINTS AT FORWARD END OF BRIDGE. (SEE ROADWAY PLANS)
4. INSPECT, TEST, AND REPAIR STEEL BEAM WEBS AT SPLICES OVER PIERS.

BRIDGE NO. HAM-50-1961 L/R

WORK REQUIRED:

1. APPLY A 2" ASPHALT OVERLAY TO DECK AND APPROACH SLABS. REMOVE PORTIONS OF THE DELAMINATED CONCRETE OVERLAY AND FILL WITH ASPHALT PRIOR TO PLACEMENT OF ASPHALT OVERLAY.
2. CLEAN BRIDGE DRAINAGE SYSTEM.
3. REPAIR PRESSURE RELIEF JOINTS AT FORWARD END OF BRIDGE. (SEE ROADWAY PLANS)
4. INSPECT, TEST, AND REPAIR STEEL BEAM WEBS AT SPLICES OVER PIERS.

BRIDGE NO. HAM-50-1976

WORK REQUIRED:

1. SEAL DECK WITH GRAVITY FED RESIN PER ITEM 512.06.
2. CLEAN BRIDGE DRAINAGE SYSTEM.
3. INSPECT, TEST AND REPAIR STEEL BEAM COVER PLATE WELD CRACKS.

BRIDGE NO. HAM-50-1980 L/R

WORK REQUIRED:

1. PATCH/REPAIR DECK (100 SQ. FT.).
2. SEAL DECK WITH GRAVITY FED RESIN PER 512.06.
3. CLEAN BRIDGE DRAINAGE SYSTEM.

BRIDGE NO. HAM-50-2013 L/R

WORK REQUIRED:

1. SEAL DECK WITH GRAVITY FED RESIN PER ITEM 512.06.
2. CLEAN DRAINAGE THROUGHOUT.
3. REPAIR HOLE IN PAVEMENT 400' WEST OF LEFT REAR ABUTMENT (SEE ROADWAY PLANS).
4. RE-CONNECT DOWNSPOUT DRAINS TO STORM SEWER.

BRIDGE NO. HAM-50-2028 L

WORK REQUIRED:

1. SEAL DECK WITH SRS PER ITEM 512.05.
2. REPAIR DRAINAGE SYSTEM AT PIER 2. CLEAN DRAINAGE THROUGHOUT.

BRIDGE NO. HAM-50-2028

WORK REQUIRED:

1. SEAL DECK WITH SRS PER ITEM 512.05.
2. CONCRETE PATCH / REPAIR 150 SQ. FT. AT END OF FWD. APPROACH SLAB.
3. REPAIR ATTENUATOR NEAR REAR ABUTMENT. (SEE ROADWAY PLAN)
4. REPAIR EROSION BEYOND FORWARD ABUTMENT. (SEE ROADWAY PLAN)
5. CLEAN DRAINAGE SYSTEM.

BRIDGE NO. HAM-50-2028 R

1. SEAL DECK WITH GRAVITY FED RESIN PER ITEM 512.05.
2. CLEAN DRAINAGE SYSTEM.
3. REPAIR EROSION BEYOND FORWARD ABUTMENT. (SEE ROADWAY PLANS)
4. PAVE RIGHT SHOULDER TO FACE OF GUARDRAIL. (SEE ROADWAY PLANS)

BRIDGE NO. HAM-50-2065

WORK REQUIRED:

1. SEAL DECK WITH SRS PER ITEM 512.05.
2. CLEAN DRAINAGE SYSTEM.

BRIDGE NO. HAM-264-1636 R

WORK REQUIRED:

1. SEAL DECK WITH SRS PER ITEM 512.05.
2. PATCH NORTH END OF PIER CAP AND NORTH COLUMN ON PIER 4.
3. WRAP NORTH END OF PIER CAP AND COLUMN WITH SHEET TYPE FIBER REINFORCED POLYMER (FRP) WRAP.
4. SEAL VOID IN EXPANSION JOINT ON NORTH SIDE ABOVE PIER 4 WITH A COMPRESSION SEAL.
5. REFURBISH BOTH NORTH EXTERIOR BEARINGS ON PIER 4.
6. SEAL PIER CONCRETE WITH EPOXY URETHANE.
7. CLEAN DRAINAGE SYSTEM.

GENERAL NOTES:

REFERENCE: SHALL BE MADE TO SUPPLEMENTAL SPECIFICATIONS: 847 DATED 4-15-05

DESIGN STRESSES

CONCRETE COMPRESSIVE STRENGTH
CLASS C - 4,000 PSI
REINFORCING STEEL - ASTM A615, A616, A617
MINIMUM YIELD STRENGTH
GRADE 60 - 60,000 PSI

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 FROM 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.

PLANS FOR EXISTING BRIDGE

PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE FOR REFERENCE AT THE ODOT DISTRICT EIGHT OFFICE.

ITEM 519 PATCHING CONCRETE BRIDGE DECK - TYPE B

SHALL BE USED FOR REPAIR OF BOTH THE CONCRETE BRIDGE DECKS AND APPROACH SLABS.

ITEM 623- CONSTRUCTION LAYOUT STAKES, AS PER PLAN

PRIOR TO THE START OF ROADWAY OPERATIONS, THE CONTRACTOR SHALL REFERENCE THE LENGTH OF THE PROJECT ON BOTH SIDES OF THE ROADWAY, IN A MANNER SATISFACTORY TO THE ENGINEER. THE PAVEMENT SHALL BE REFERENCED IN 100 FEET INCREMENTS, OR IN INCREMENTS ACCEPTABLE TO THE ENGINEER, IN A SEMIPERMANENT CONDITION.

COUNTY	ROUTE	BRIDGE NUMBER	STRUCTURE FILE NUMBER	INTERSECTED FEATURE	EXISTING PLANS BRIDGE NUMBER
HAM	US 50	1903 L	3102807	CSRR; NSRR; MILL CREEK; PRIV. DR.	HAM-50-1936 L
HAM	US 50	1903 R	3102815	CSRR; NSRR; MILL CREEK; PRIV. DR.	HAM-50-1936 R
HAM	US 50	1954 L	3102874	HARRIET ST.	HAM-50-1986 L
HAM	US 50	1954 R	3102882	HARRIET ST.	HAM-50-1986 R
HAM	US 50	1961 L	3102912	NORFOLK SOUTHERN RR	HAM-50-1992 L
HAM	US 50	1961 R	3102920	NORFOLK SOUTHERN RR	HAM-50-1992 R
HAM	US 50	1976	3102971	FREEMAN AVE.	HAM-50-2007
HAM	US 50	1980 L	3103005	CSRR; NSRR; LINN ST.	HAM-50-2011 L
HAM	US 50	1980 R	3103064	CSRR; NSRR; LINN ST.	HAM-50-2011 R
HAM	US 50	2013 L	3103099	GEST ST.; US 50 WEST RAMP	HAM-50-2013 L
HAM	50	2013 R	3103129	GEST ST.; US 50 WEST RAMP	HAM-50-2013 R
HAM	50	2028 L	3103153	US50 W RAMP OVER I-75	HAM-25-0064
HAM	50	2028 M	3103161	US50 RAMP A OVER I-75	BRIDGE NO. 24
HAM	50	2028 R	3103188	US50 RAMP AA OVER I-75	HAM-25-0068
HAM	50	2065	3103293	US50 RAMP A OVER CENTRAL AVE.; 3RD. ST.	RAMP A
HAM	SR 264	1636 R	3111644	SR 264 OVER I-75 S; USR-IR RAMP; US 50	HAM-25-0057 + BRIDGE NO. 25

BRIDGE NUMBER	LENGTH (FEET)	WIDTH O/O (FEET)	DECK AREA (SQUARE FEET)
HAM-50-1903 L	1,049	47	49,321
HAM-50-1903 R	1,047	54	56,453
HAM-50-1954 L	152	64.6	9,817
HAM-50-1954 R	152	51.6	7,847
HAM-50-1961 L	223	65.5	14,607
HAM-50-1961 R	223	63.6	14,187
HAM-50-1976	706	69.1	48,782
HAM-50-1980 L	795	52.2	41,474
HAM-50-1980 R	784	52.2	40,903
HAM-50-2013 L	227	67.2	15,253
HAM-50-2013 R	205	57.2	11,722
HAM-50-2028 L	524	81	42,442
HAM-50-2028 M	494.9	32.5	16,081
HAM-50-2028 R	182	42.9	7,815
HAM-50-2065	916.9	44.7	40,957
HAM-264-1636 R	516	28.2	14,551

DESIGN AGENCY: BURGESS & NIPLE
 DATE: 02-01-06
 REVIEWED: JSB
 DRAWN: KWL
 DESIGNED: SJA
 CHECKED: XAC
 STRUCTURE GENERAL NOTES 01
 HAM-50-19.03
 PID No. 24691
 32/40

ITEM 513 - STRUCTURAL STEEL, MISC.: STEEL PREP., INSPECTION, NDT, AND PRIME COAT

THIS ITEM CONSISTS OF REMOVING THE EXISTING PAINT COATING, INSPECTING OF EXISTING WELDS AND APPLYING A 708.02 ORGANIC ZINC PRIME COAT TO THE UNCOATED STEEL. CMS 514.06 THROUGH 514.08 APPLY. REMOVE EXISTING PAINT COATING TO THE CONTRACT LIMITS ACCORDING TO SSPC-SP11, POWER AND HAND TOOL CLEANING, AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS 3. THE ENGINEER WILL USE THE SSPC-VIS 3 TO DETERMINE THE ACCEPTANCE OF THE POWER TOOL CLEANING. CONTAIN AND DISPOSE OF WASTE GENERATED BY THE CLEANING ACCORDING TO CMS 514.11.D.

1. CLEAN THE SUSPECTED CRACK AREA FROM THE SURFACE OF THE PLATES AND ADJACENT WELDS IN ACCORDING TO SSPC-SP11 FROM PAINT AND/OR RUST OR AS DESIGNATED IN THE PLANS, TO A MINIMUM DISTANCE OF 6" FROM ANY POINT OF THE CRACK.

2. THE ENGINEER SHALL CAREFULLY VISUALLY INSPECT THE CLEANED AREA. GRINDING MAY BE DIRECTED BY THE ENGINEER TO ENHANCE 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 AREA USING MAGNETIC PARTICLE EXAMINATION AND/OR DYE PENETRANT SO THAT THE ENGINEER MAY FURTHER INSPECT FOR CRACKS. CONTRACTOR'S PERSONNEL PERFORMING NDT SHALL BE QUALIFIED AS PER 513.25 OF THE CMS.

4. ALL CRACKS, CRACK TIPS AND CRACKED TACK WELDS SHALL BE REMOVED ACCORDING TO AND PAID FOR UNDER ITEM SPECIAL - DRILLING STRUCTURAL STEEL, AND ANY CRACKS INACCESSIBLE TO DRILLING SHALL BE REMOVED BY CAREFULLY ENLARGING THE DRILLED HOLES BY GRINDING.

5. PERFORM STEPS 1 THROUGH 4 ON THE OTHER SIDE OF THIS LOCATION.

6. PRIME UNCOATED STEEL.

THE ACCEPTED NUMBER OF NDT LOCATIONS AS DESCRIBED IN THIS NOTE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LOCATION, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO CLEAN, GRIND, AND PERFORM NDT ON BOTH SIDES OF THE SUSPECTED CRACK LOCATION. THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER PRIOR TO THE START OF THE WORK THAT HE CAN SATISFACTORILY CLEAN THE METAL IN ACCORDANCE WITH SSPC-SP11.

NOTE: THE PROJECT ENGINEER SHALL INSPECT EACH LOCATION DESIGNATED ON THE PLANS VISUALLY FOR CRACKS BEFORE ANY WORK AT THAT LOCATION BEGINS. THE CONTRACTOR SHALL PROVIDE A SAFE AND SUITABLE MEANS OF ACCESS TO ALL AREAS FOR INSPECTION PURPOSES IN ACCORDANCE WITH 105.11 OF THE CMS.

PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID UNDER ITEM 513 - STRUCTURAL STEEL, MISC.: STEEL PREP., INSPECTION, NDT, AND PRIME COAT.

ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL

THIS WORK SHALL CONSIST OF DRILLING CRACKS AND ENDS OF CRACKS GRINDING AND NON-DESTRUCTIVE TESTING AS DIRECTED BY THE ENGINEER. NO HOLES SHALL BE DRILLED WITHOUT APPROVAL OF THE ENGINEER.

HOLES SHALL BE DRILLED TO REMOVE ENTIRE CRACKS OR THE APPARENT ENDS OF THE CRACKS REVEALED BY THE NDT OF SUSPECTED CRACKS DETAILED IN THESE PLANS UNDER ITEM 513 - STRUCTURAL STEEL, MISC. STEEL PREP., INSPECTION, NDT, AND PRIME COAT. THE EXPOSED CIRCUMFERENCE OF EACH DRILLED HOLE SHALL BE GROUND SMOOTH PER 513.12 TO MEET THE REQUIREMENTS FOR PIN HOLES AND CAREFULLY INSPECTED FOR CRACKS USING MAGNETIC PARTICLE EXAMINATION AND DYE PENETRANT. DRILLING, GRINDING, AND TESTING SHALL CONTINUE UNTIL ALL CRACK ENDS ARE REMOVED. WHEN NO CRACKS ARE DETECTED AT A LOCATION, NO HOLES SHALL BE DRILLED UNDER THIS ITEM

THE CENTER OF THE HOLE SHALL BE POSITIONED BEYOND THE VISIBLE END OF THE CRACK SO THAT THE EDGE OF THE HOLE COINCIDES WITH THE END OF THE CRACK. IF THE CRACK ON ONE SIDE OF THE MEMBER IS LONGER THAN ON THE OTHER SIDE, THE HOLE SHALL BE POSITIONED RELATIVE TO THE LONGEST CRACK. FLAME CUTTING OF HOLES IS NOT PERMITTED UNDER ANY CIRCUMSTANCES.

SINCE ANY OF THESE CRACKS COULD PROPAGATE INTO THE TENSION ZONES, REMOVING THEIR END IS IMPERATIVE. CRACKS LESS THAN 2" LONG, CRACKED AREAS OR DEFECTS LESS THAN 2" IN DIAMETER SHALL BE REMOVED BY A SINGLE 2" HOLE WHEN PRACTICAL. ENDS OF CRACKS LONGER THAN 2" SHALL BE END DRILLED WITH 2" DIAMETER HOLES. HOLES SHALL BE CAREFULLY EXAMINED FOR CRACKS IN THE PLANE OF THE PLATE. 2 1/2" DIAMETER HOLES MAY BE DRILLED WHERE THE PROXIMITY OF THE CRACK AND THE ADJACENT STEEL PRECLUDES DRILLING A 2" DIAMETER HOLE.

THE LOCATION OF ALL HOLES SHALL BE DETERMINED BY THE ENGINEER AND DRILLED UNDER HIS DIRECTION. CARE SHALL BE TAKEN NOT TO GRIND INTO THE BEAM FLANGE. BEFORE ANY DRILLING TAKES PLACE, THE DISTRICT BRIDGE MAINTENANCE ENGINEER SHALL BE NOTIFIED AND HIS CONSENT GIVEN.

THE ACCEPTED NUMBER OF HOLES DRILLED IN THE STRUCTURAL STEEL AS DETAILED ABOVE WILL BE PAID FOR AT THE CONTRACT BID PRICE PER EACH HOLE, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY FOR DRILLING HOLES, GRINDING, AND NON-DESTRUCTIVE TESTING. PAYMENTS WILL BE MADE UNDER: ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL

ITEM 518 - STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM, AS PER PLAN

THIS ITEM CONSISTS OF REMOVING ALL DIRT AND DEBRIS FROM THE ROADWAY DECK NEAR THE CURB AND MEDIAN, SIDEWALK AREAS, SCUPPERS, CROSS DRAINS, DRAINAGE TROUGHS, COLLECTION BOXES, HOPPERS, HORIZONTAL CONDUCTORS, DOWNSPOTS, UNDERGROUND STORM SEWERS AND MANHOLES TO THE CITY STORM SEWERS OR PIPE OUTLET. AFTER THE DIRT AND DEBRIS ARE REMOVED, THE ENTIRE SYSTEM SHALL BE FLUSHED OUT WITH THE CLEAN WATER MAKING CERTAIN THE WATER FLOWS SMOOTHLY TO ITS OUTLET.

CONTRACTOR SHALL DETERMINE THE EXTENT OF WORK REQUIRED FOR THIS ITEM BY EXAMINATION OF EXISTING BRIDGE PLANS AND BY FIELD INVESTIGATION.

THE CONTRACTOR SHALL PROVIDE NECESSARY EQUIPMENT FOR THE PURPOSE OF EXAMINING THE EXISTING BRIDGE DRAINAGE SYSTEMS. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING A DETAILED EXAMINATION PRIOR TO BEGINNING WORK AND AGAIN AT THE COMPLETION OF THE WORK. NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR TO COVER ANY COSTS OF THIS EXAMINATION.

ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE BRIDGE SITE AND PROPERLY DISPOSED OF.

THE CLEANOUTS OF THE BRIDGE DRAINAGE SYSTEM SHALL NOT BEGIN UNTIL ALL OTHER WORK UNDER THIS CONTRACT IS COMPLETED, INCLUDING PAINTING.

THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE CLEANOUT OF THE BRIDGE DRAINAGE SYSTEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL-CLEANING BRIDGE DRAINAGE SYSTEM, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL, MISC.: GRINDING COPE HOLES

GRIND THE EDGES OF EACH COPE HOLE TO A SURFACE SMOOTHNESS PER 513.12 TO MEET THE REQUIREMENTS FOR PIN HOLES. HOLES SHALL BE WITHIN 1/16" OF THE INTENDED ROUND SHAPE. PERFORM THE GRINDING PRIOR TO NDT. APPROXIMATELY 1/16" THICKNESS SHALL BE REMOVED FROM THE EDGE OF EACH HOLE TO REMOVE FLAME CUT RIDGES AND TEARS. ADDITIONAL GRINDING MAY BE REQUIRED AS DIRECTED BY THE ENGINEER TO COMPLETELY REMOVE FLAME CUT EDGE DEFECTS.

CARE SHALL BE TAKEN NOT TO GRIND INTO THE BEAM FLANGE.

CARE SHALL BE TAKEN TO PROTECT PEDESTRIAN AND VEHICULAR TRAFFIC FROM FALLING DEBRIS. COST FOR PROTECTING TRAFFIC SHALL BE INCLUDED WITH ITEM 614 - MAINTAINING TRAFFIC.

ITEM 516 - PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN

THIS JOINT WILL CONSIST OF THE MODEL 50FW JEENE EXPANSION JOINT SYSTEM BY WATSON BOWMAN ACME CORP., MODEL J-200 SERIES BY THE D.S. BROWN COMPANY OR APPROVED EQUAL.

SPALLED CONCRETE SHALL BE REMOVED AND PATCHED PER ITEM 519 PRIOR TO INSTALLATION OF EXPANSION JOINT SEAL. SEAL SHALL EXTEND 1/2" BEYOND THE EXISTING VERTICAL STEEL CURB PLATES OF THE EXISTING EXPANSION JOINT. JOINT SYSTEM SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS,

WATSON BOWMAN ACME CORP.
95 PINEVIEW DRIVE
AMHERST, NY 14228
PHONE: 716-691-7566

D.S. BROWN COMPANY
300 EASH CHERRY STREET
NORTH BALTIMORE, OHIO 45872
PHONE: 419-257-3561

ITEM 448, ASPHALT CONCRETE, MISC.: PATCHING WEARING SURFACE

PRIOR TO PLACING THE FIRST COURSE OF ASPHALT, THE ENGINEER SHALL MARK AREAS OF THE WEARING SURFACE THAT ARE VISIBLY LOOSE OR PREVIOUSLY PATCHED WITH ASPHALT. THESE AREAS SHALL BE REMOVED PRIOR TO PAVING AND TO THE SATISFACTION OF THE ENGINEER. THESE AREAS AND OTHER VOIDED AREAS (POTHOLE) SHALL BE FILLED WITH ITEM 448 ASPHALT CONCRETE PRIOR TO THE PLACEMENT OF THE FIRST COURSE OF ASPHALT PAVEMENT. FILLING THE VOIDS WITH ASPHALT SHALL BE INCLUDED IN THIS ITEM.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE SHALL BE PERFORMED IN SUCH A MANNER AS TO PREVENT DEBRIS FROM FALLING ONTO THE ROADWAY BELOW. ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. REMOVAL SHALL FOLLOW THE SPECIFICATIONS OF ITEM 847 WITH THE FOLLOWING EXCEPTION:

REMOVE THE DELAMINATED AND DETERIORATED PORTIONS OF THE EXISTING CONCRETE OVERLAY ONLY, DO NOT REMOVE AN ADDITIONAL 1/4" OF SOUND CONCRETE PER 847.18. ONLY THE VISIBLY LOOSE OR PREVIOUSLY PATCHED AREAS AS NOTED IN ITEM 448 SHALL BE REMOVED UNDER THIS ITEM. ENGINEER SHALL DETERMINE LIMITS OF OVERLAY REPAIR REQUIRED.

DESIGN AGENCY BURGESS & NIPLE	
DATE 02-01-06	REVIEWED JSB
STRUCTURE FILE NUMBER	REVISION
DRAWN KML	CHECKED XAC
DESIGNED SJA	DATE 02-01-06
STRUCTURE GENERAL NOTES 02	
HAM-50-19.03 PID No. 24691	
2 / 9	
33 40	

ITEM 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 CAP AND 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 5.5" 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.

A MINIMUM E x A VALUE FOR THE INSTALLED GFRC SYSTEM IS 600 KIPS/INCH WIDTH OF INSTALLED GFRC SYSTEM FOR THE COLUMN AND HORIZONTAL PIER CAP SECTIONS. A MINIMUM OF 300 KIPS/INCH WIDTH IS REQUIRED AS TRANSVERSE REINFORCING FOR THE PIER CAP.

MATERIALS

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

THE PROPOSED GFRC SHALL HAVE BEEN TESTED BY AN INDEPENDENT AGENCY FOR DELAMINATED COLUMNS DEMONSTRATING THAT THE REPAIRED COLUMN RESTORES THE ORIGINAL AXIAL STRENGTH AND INCREASES DUCTILITY.

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 PRIMED 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. 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) THE URETHANE TOP COAT SHALL THEN BE APPLIED TO THE FINAL EPOXY COAT.

MEASUREMENT AND PAYMENT

THIS ITEM WILL BE PAID FOR BY (SQUARE FOOTAGE COVERED x NUMBER OF LAYERS) AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP

MATERIALS MANUFACTURER

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

TYFO FIBRWRAP
COMPOSITE SYSTEM AS SUPPLIED BY R.J. WATSON, INC.
P.O. BOX 85, EAST
AMHERST, NEW YORK 14051 (PHONE 716-691-3301)

MBRACE SYSTEM
SUPPLIED BY DEGUSSA BUILDING SYSTEMS
889 VALLEY PARK DRIVE
SHAKOPEE, MN 55379 (PHONE 800-443-9517)

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

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 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

DESIGN AGENCY: **BURGESS & NIPLE**
 397 Park Street, 2nd Floor, Cleveland, Ohio 44115
 DATE: 02-01-06
 REVIEWED: JSB
 STRUCTURE FILE NUMBER:
 DRAWN: KML
 REVISION:
 DESIGNED: SJA
 CHECKED: XAC
 STRUCTURE GENERAL NOTES 03
 HAM-50-19.03
 PID No. 24691
 3 / 9
 34 / 40

ITEM SPECIAL - URETHANE TOP COAT SEALER

THIS ITEM SHALL CONSIST OF THE APPLICATION OF A URETHANE TOP COAT SEALER OVER CONCRETE AREAS PREVIOUSLY COATED WITH FIBER

BE DRY AND FREE FROM DUST, DIRT, OIL, WAX, CURING COMPOUNDS, EFFLORESCENCE, LAITANCE AND OTHER FOREIGN MATERIALS WITH THE EXCEPTION OF THE FIBER WRAP.

THE URETHANE TOP COAT SHALL BE APPLIED ACCORDING TO CMS 512. THE URETHANE TOP COAT SHALL BE APPLIED BY BRUSH OR ROLLER AS DIRECTED BY THE ENGINEER.

THE COATING SHALL BE APPLIED BEFORE THE FINAL THICKENED EPOXY LAYER HAS BEEN ALLOWED TO CURE (AS DETERMINED BY THE MANUFACTURER) TO BETTER ADHERE TO THE GFRC COMPOSITE SYSTEM.

IF THE INSTALLED GFRC IS ALLOWED TO COMPLETELY CURE PRIOR TO THE APPLICATION OF THE FINAL COATING, THE SURFACE GLOSS MUST BE BROKEN BY HAND SANDING OR LIGHT ABRASIVE BLASTING FOR PROPER ADHERENCE OF THE FINAL COATING.

THE COATING SYSTEM SHALL CONSIST OF THE APPLICATION OF A URETHANE TOP COAT SEALER OVER THE INSTALLED GFRC SYSTEM. THE COLOR SHALL BE FEDERAL COLOR STANDARD NO. 17778 (LIGHT NEUTRAL) AND THE MATERIAL AND APPLICATION SHALL CONFORM TO CMS 512.

THE COATING MATERIAL SUPPLIER MUST PROVIDE A LETTER VERIFYING THAT THE FINAL COATING SYSTEM IS COMPATIBLE WITH THE INSTALLED GFRC SYSTEM.

THE CERTIFIED AND EXPERIENCED INSTALLER SHALL SUBMIT A QUALITY CONTROL AND QUALITY ASSURANCE PLAN FOR THE GFRC INSTALLATION.

THE GFRC SYSTEM SHALL BE INSTALLED UNDER THE DIRECT SUPERVISION OF A MANUFACTURER QUALIFIED TECHNICIAN UNTIL THE INSTALLER HAS DEMONSTRATED HIS ABILITY TO PERFORM THE INSTALLATION TO SATISFACTION OF THE ENGINEER AND THE MANUFACTURER.

THE COST OF ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO ACCOMPLISH THIS ITEM OF WORK SHALL BE PAID FOR UNDER:

<u>ITEM</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
SPECIAL	SQ. YD.	URETHANE TOP COAT SEALER

ITEM 516 - JACKING & TEMPORARY SUPPORT OF SUPERSTRUCTURE:

THE ENDS OF THE BEAMS SHALL BE JACKED AND THE BEAMS SUPPORTED SO BEARINGS MAY BE REMOVED. PRIOR TO JACKING, THE CONTRACTOR SHALL SUBMIT HIS JACKING PLAN TO THE ENGINEER FOR APPROVAL.

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), INSTALLATION OF ANY NECESSARY STEEL SHIMS IF NECESSARY, PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD 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° 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" 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.

DESIGN AGENCY
BURNESS & NIPLE
307 Park Street, 2nd Floor
Concord, Ohio 43022

DATE 02-01-06
REVIEWED JSB
STRUCTURE FILE NUMBER

DRAWN KML
REVISED

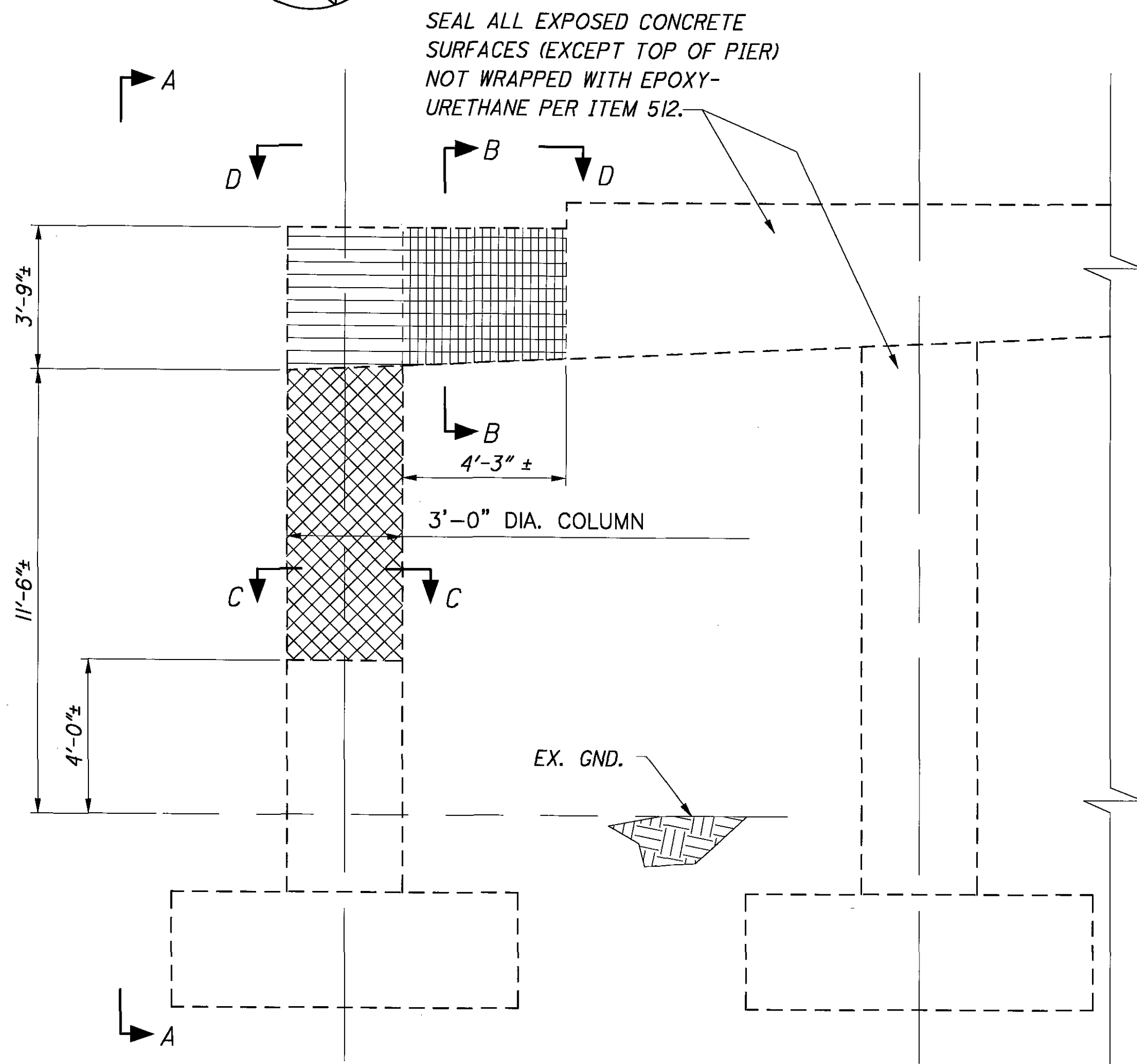
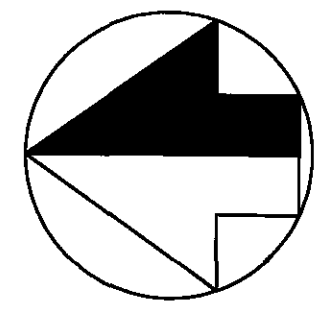
DESIGNED SJA
CHECKED XAC

STRUCTURE GENERAL NOTES 04

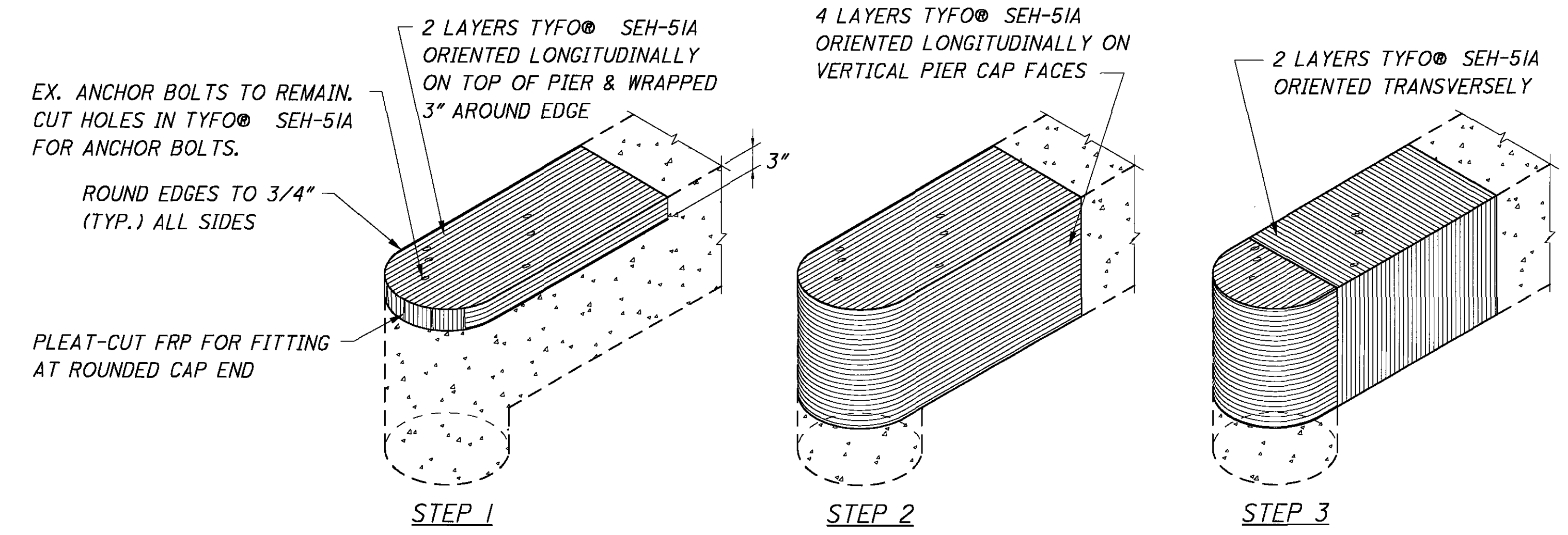
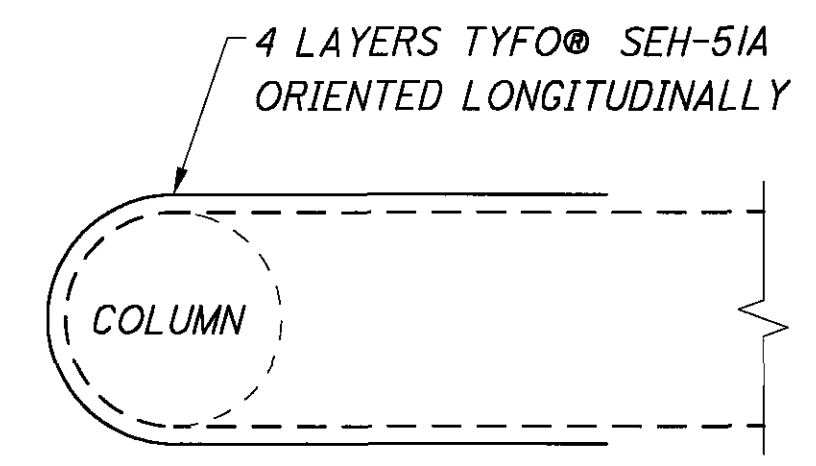
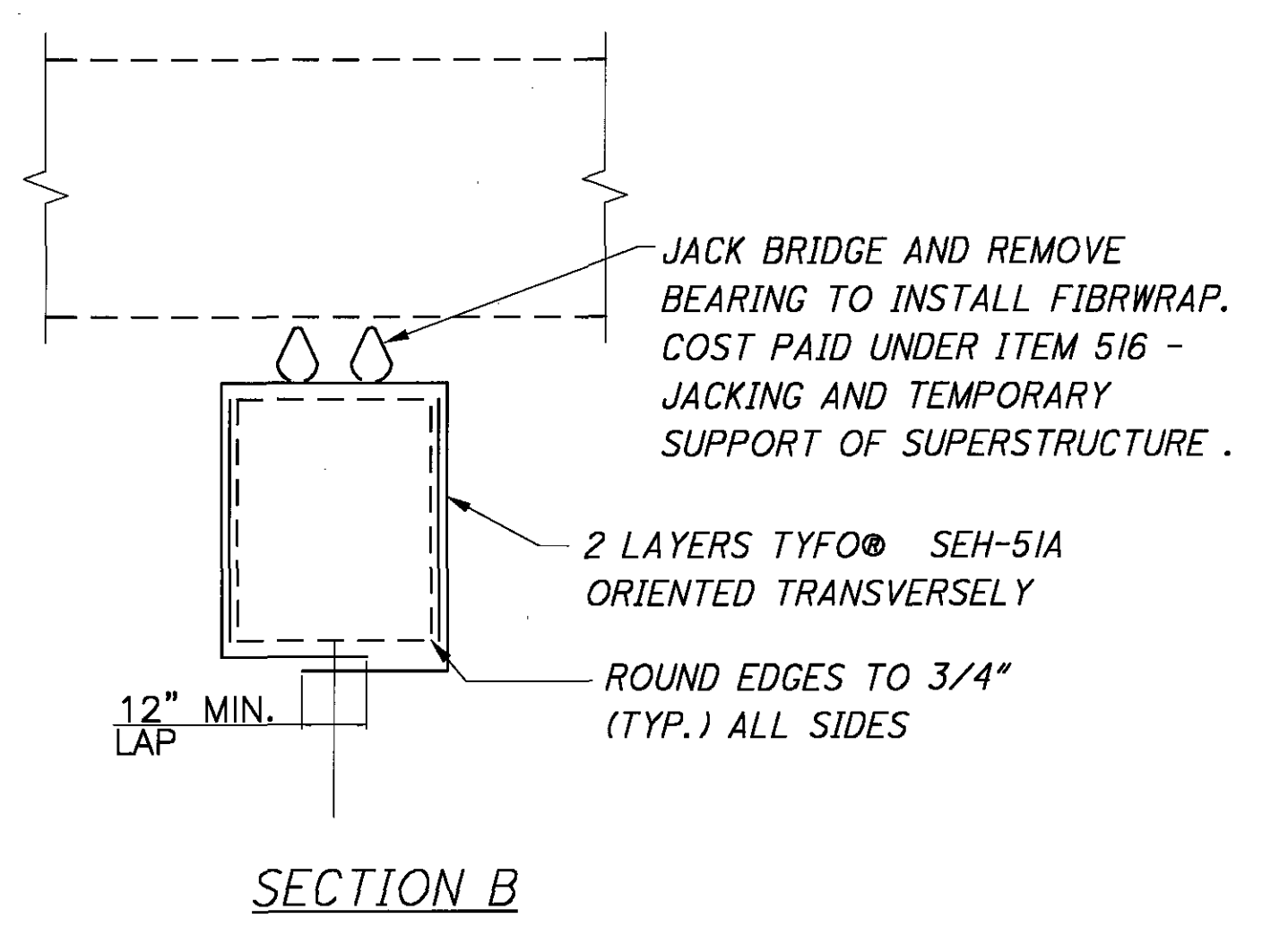
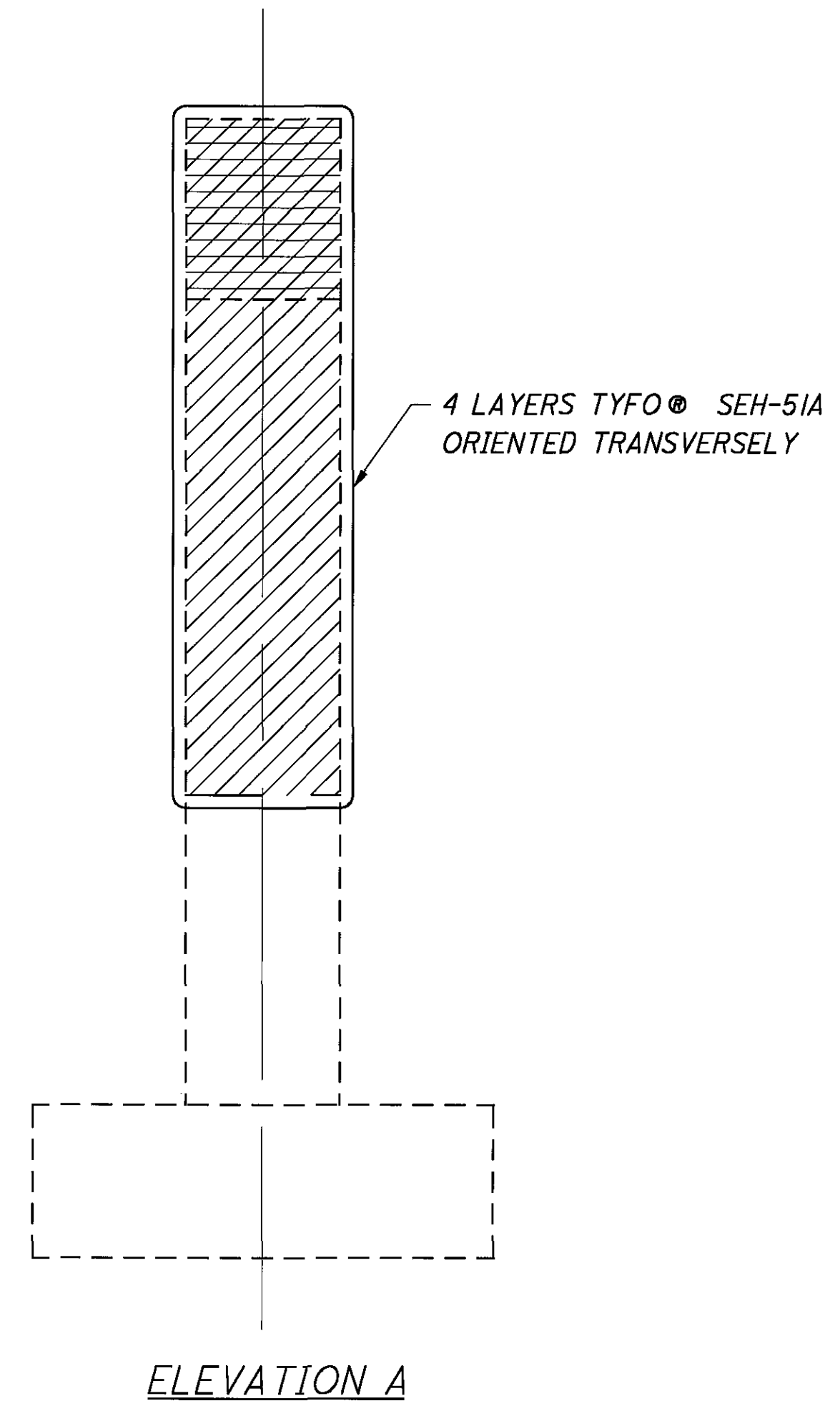
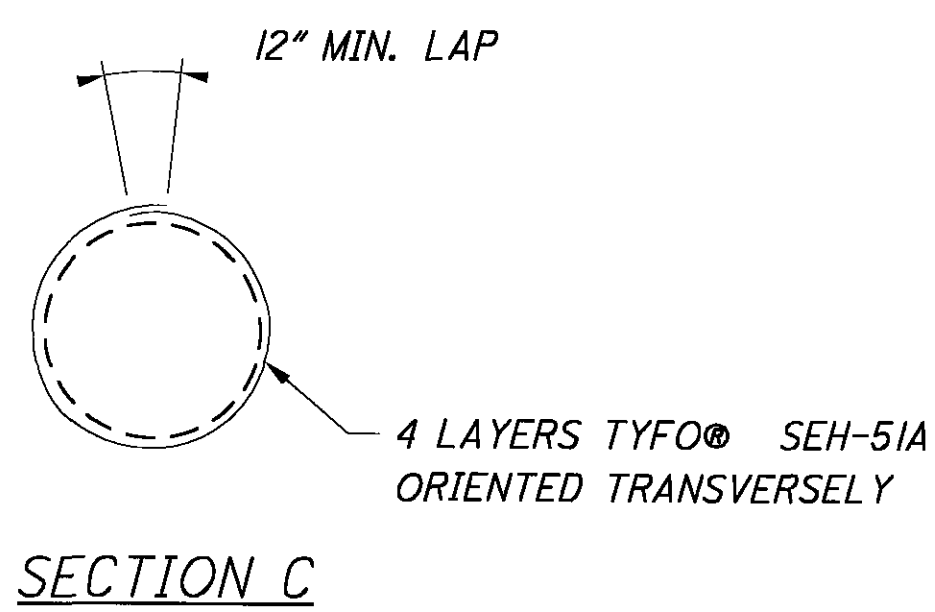
HAM-50-19.03
PID No. 24691

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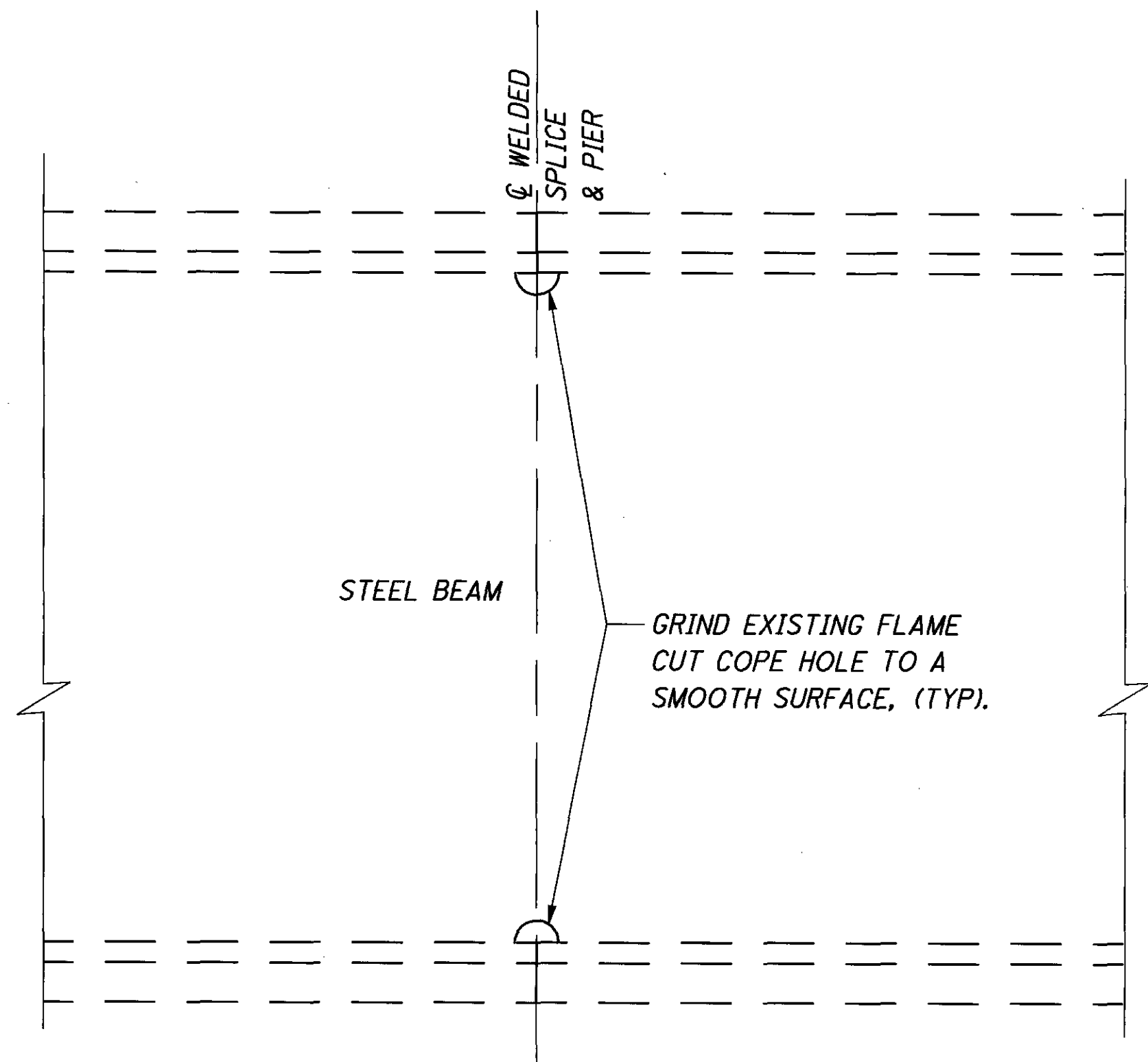
NORTH END PIER 4 CAP & COLUMN ELEV.
BRIDGE NO. 264-1636R



VIEW D - PIER CAP STRENGTHENING

DATE	02-01-06
REVIEWED	JSB
STRUCTURE FILE NUMBER	311644
DRAWN	KML
DESIGNED	SJA
CHECKED	XAC
REVISED	

COMPOSITE PIER WRAP DETAILS



GRINDING COPE HOLE DETAIL

WORK REQUIRED:

GRIND COPE HOLE TO A SMOOTH RADIUS. INSPECT INSIDE OF COPE HOLE USING DYE PENETRANT. IF CRACKS ARE FOUND CORRECT USING CRACK REPAIR PROCEDURES UNDER SEPERATE PAY ITEMS.

PAINT DAMAGED AREAS USING SYSTEM OZEU (PRIMER ONLY.)

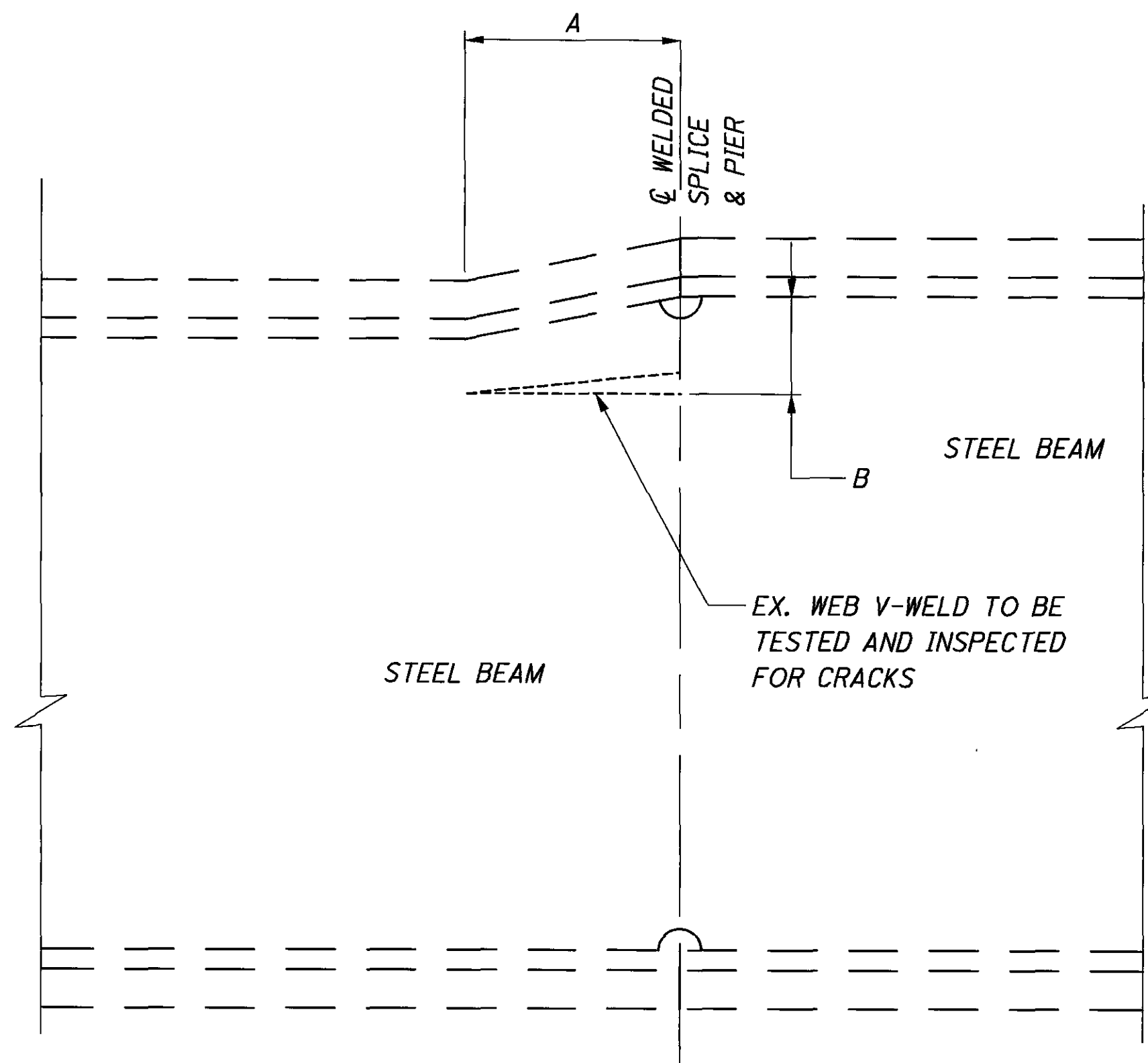
SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.

PAYMENT FOR PAINTING IS INCLUDED WITH GRINDING COPE HOLES FOR PAYMENT.

PAYMENT MADE UNDER:

ITEM 513 - STRUCTURAL STEEL, MICS.: GRINDING COPE HOLES

COPE HOLE GRINDING LOCATIONS	
BRIDGE NO.	NUMBER OF LOCATIONS
HAM-50-1954 L	36
HAM-50-1954 R	32
HAM-50-1961 L	72
HAM-50-1961 R	64
HAM-50-2013 L	32
HAM-50-2013 R	28



WEB TESTING AND INSPECTION DETAIL V-WELD

WORK REQUIRED:

LOCATE WEB V-WELDS AND PERFORM STEEL PREP., INSPECTION, NDT, AND PRIME COAT SO THAT WEB CAN BE TESTED AND INSPECTED FOR CRACKS.

TEST WEB WELD LOCATION USING NDT PER 513.25. (DYE PENETRANT MAY BE USED IN ADDITION TO 513.25 A, B, OR C.)

PROJECT ENGINEER SHALL VISUALLY INSPECT EACH LOCATION.

IF CRACKS ARE FOUND THEY ARE TO BE REPAIRED UNDER SEPERATE PAY ITEMS FOR DRILLING STRUCTURAL STEEL.

PAINT DAMAGED AREAS USING SYSTEM OZEU (PRIMER ONLY.)

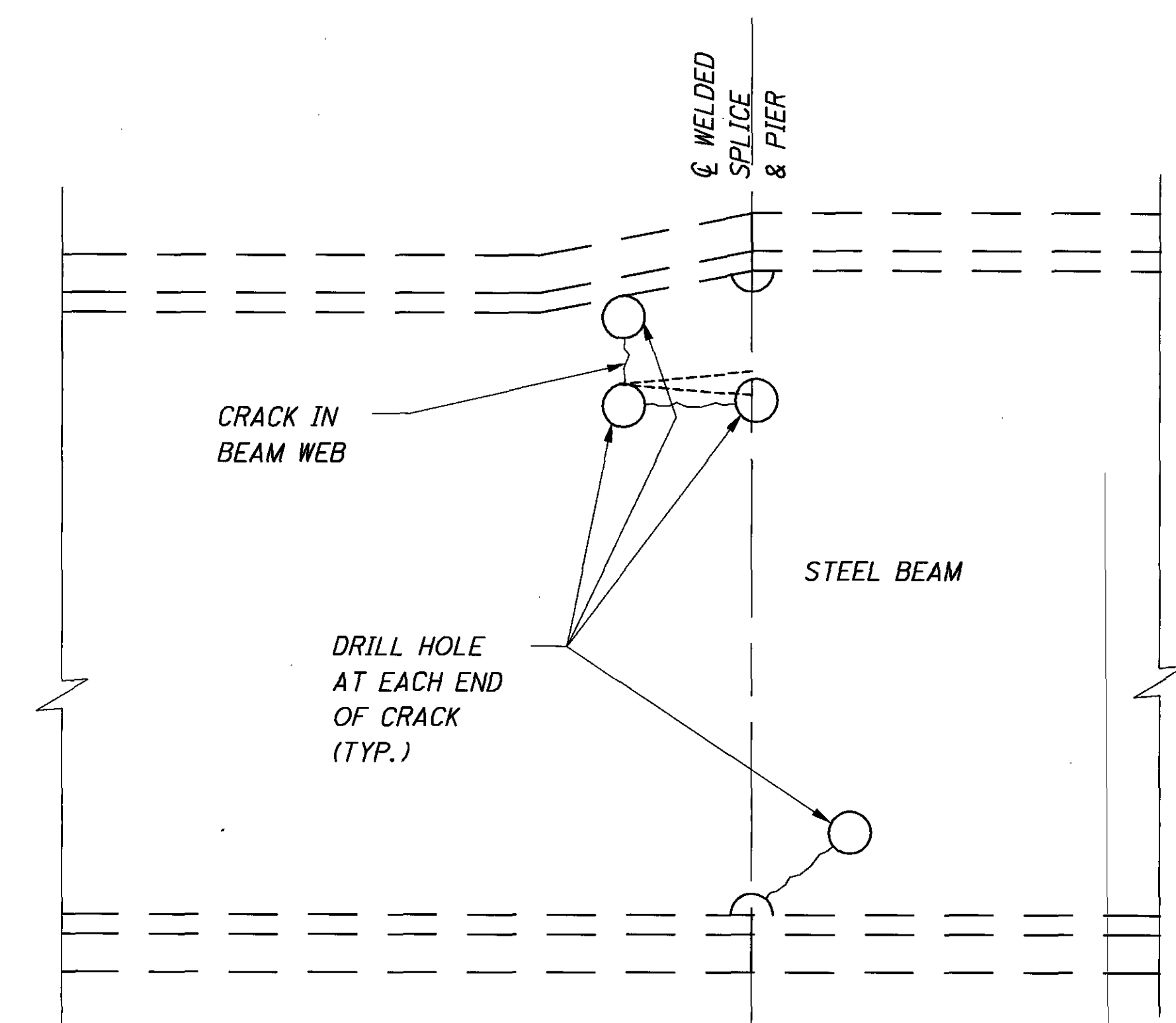
PAINTING IS INCLUDED WITH STEEL PREP., INSPECTION, NDT, AND PRIME COAT

SEE GENERAL NOTES FOR ADDITIONAL INFORMATION

PAYMENT MADE UNDER:

513 - STRUCTURAL STEEL, MICS.: STEEL PREP., INSPECTION, NDT, AND PRIME COAT.ITEM

WEB TESTING AND INSPECTION LOCATIONS			DIMENSION	
BRIDGE NO.	NUMBER	LOCATIONS	A	B
HAM-50-1954 L	19	PIERS 1 & 2	6"	1 5/8"
HAM-50-1954 R	17	PIERS 1 & 2	6"	1 5/8"
HAM-50-1961 L	10	PIER 3	8"	1 3/4"
HAM-50-1961 R	8	PIER 1	8"	1 3/4"
HAM-50-1961 R	8	PIER 3	1'-8"	2 1/8"



CRACK REPAIR DETAIL AT V-WELD

WORK REQUIRED:

LOCATE END OF CRACK BY PERFORMING STEEL PREP., INSPECTION, NDT, AND PRIME COAT.

DRILL HOLE AT EACH END OF CRACK. SIZE OF HOLE TO BE DETERMINED BY LENGTH OF CRACK.

TEST INSIDE OF HOLE WITH DYE PENETRANT AND/OR OTHER NDT METHODS PER 513.25.

PAINT DAMAGED AREAS USING SYSTEM OZEU (PRIMER ONLY.)

PAINTING IS INCLUDED WITH STEEL PREP., INSPECTION, NDT, AND PRIME COAT.

SEE GENERAL NOTES FOR ADDITIONAL INFORMATION

PAYMENT MADE UNDER:

ITEM 513 - STRUCTURAL STEEL, MICS.: STEEL PREP., INSPECTION, NDT, AND PRIME COAT

ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL

CRACK REPAIR LOCATIONS		
BRIDGE NO.	NUMBER	LOCATIONS
HAM-50-1954 L	17	PIERS 1 & 2 TOP WEB V-WELD
HAM-50-1954 R	17	PIERS 1 & 2 TOP WEB V-WELD
HAM-50-1961 L	6	PIER 2 & 3 TOP WEB V-WELD
HAM-50-1961 R	5	PIERS 1 & 2 TOP WEB V-WELD
HAM-50-2013 R	1	PIER 2 BOTTOM WEB COPE

DESIGN AGENCY
BURGESS & NIPLE
387 Main Street, 2nd Floor
Cincinnati, Ohio 45202

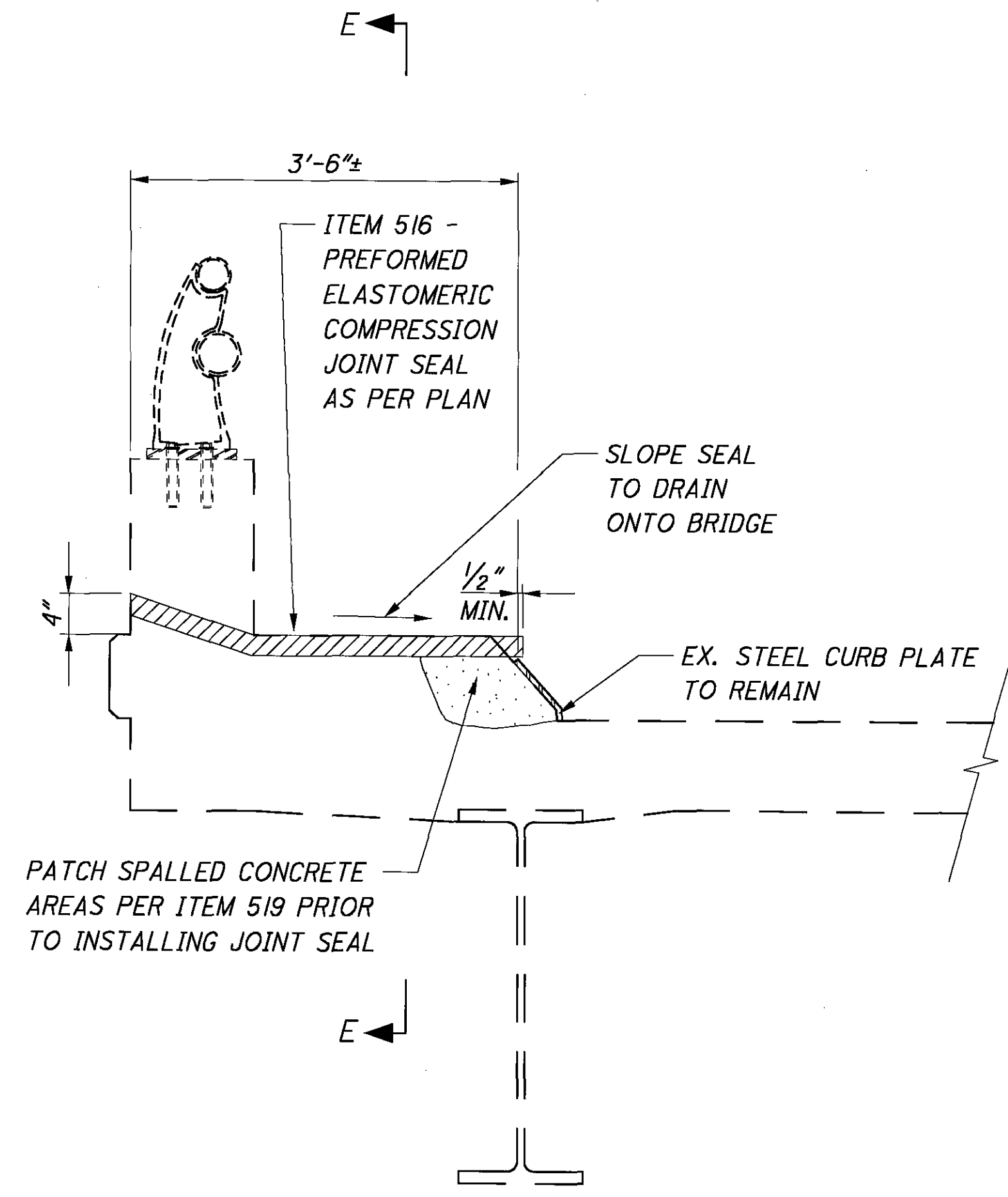
DESIGNED SJA	CHECKED XAC	DRAWN KML	REVISED
REVIEWED JSB	DATE 02-01-06	STRUCTURE FILE NUMBER	

BEAM TESTING AND REPAIR DETAILS

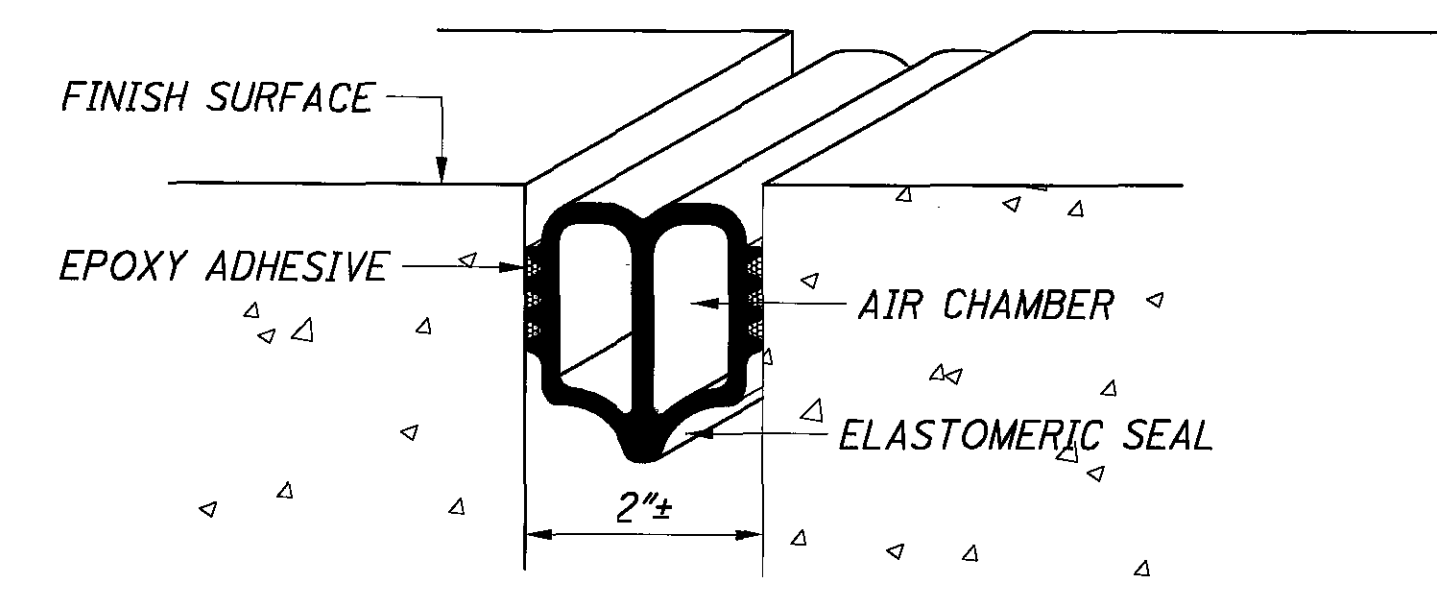
HAM-50-19.03
PID No. 24691

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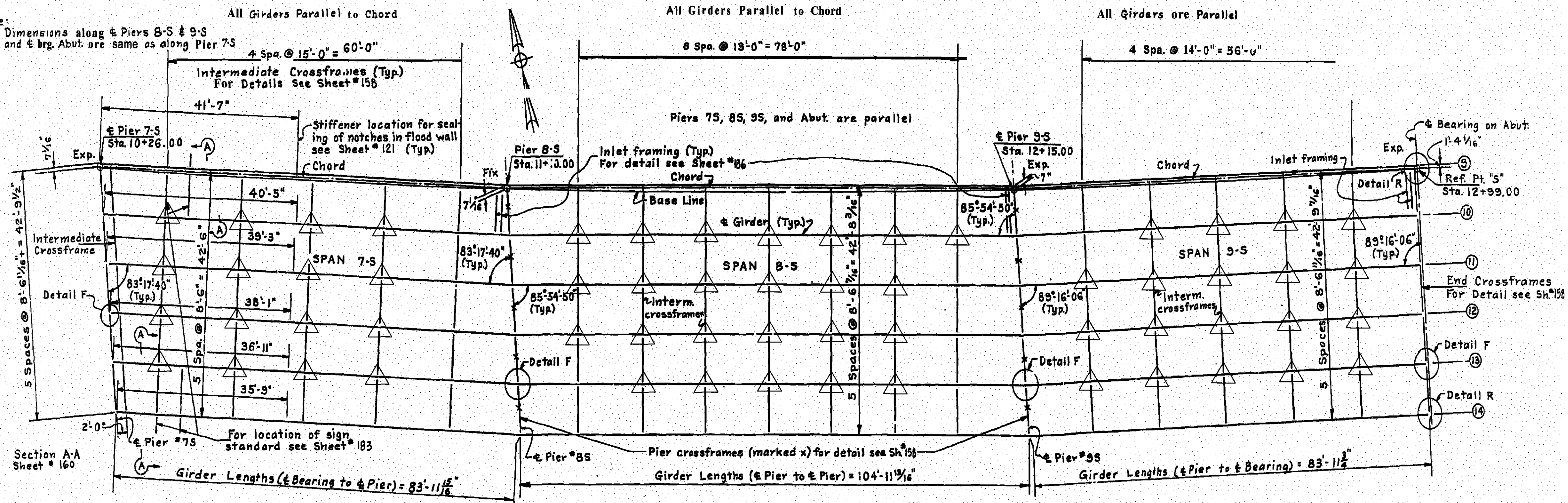
SECTION
HAM-264-1636R
(JOINT REPAIR OVER NORTH SIDE OF PIER 4)



SECTION E-E
HAM-264-1636R

DESIGN AGENCY BURGESS & NIPLE	
DATE 02-01-06	REVIEWED JSB
STRUCTURE FILE NUMBER	DRAWN KML
CHECKED XAC	REVISED
REPAIR DETAILS	
HAM-50-19.03	
PID No. 24691	
7 / 9	
38	40

Note: Dimensions along & Piers 8-S & 9-S and & brg. Abut. are same as along Pier 7-S

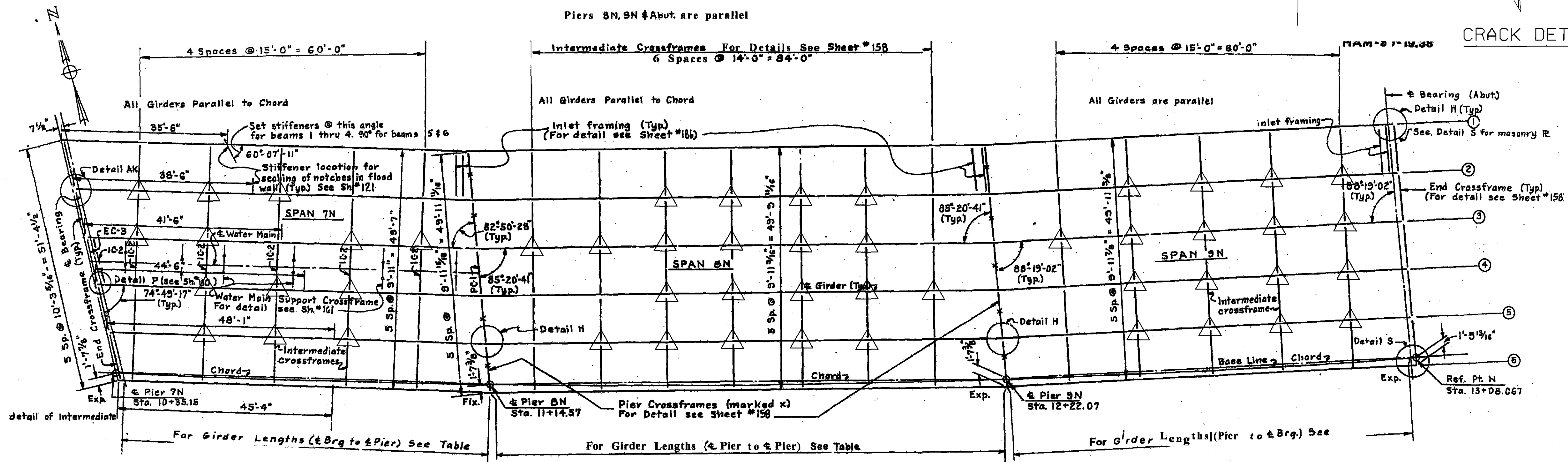
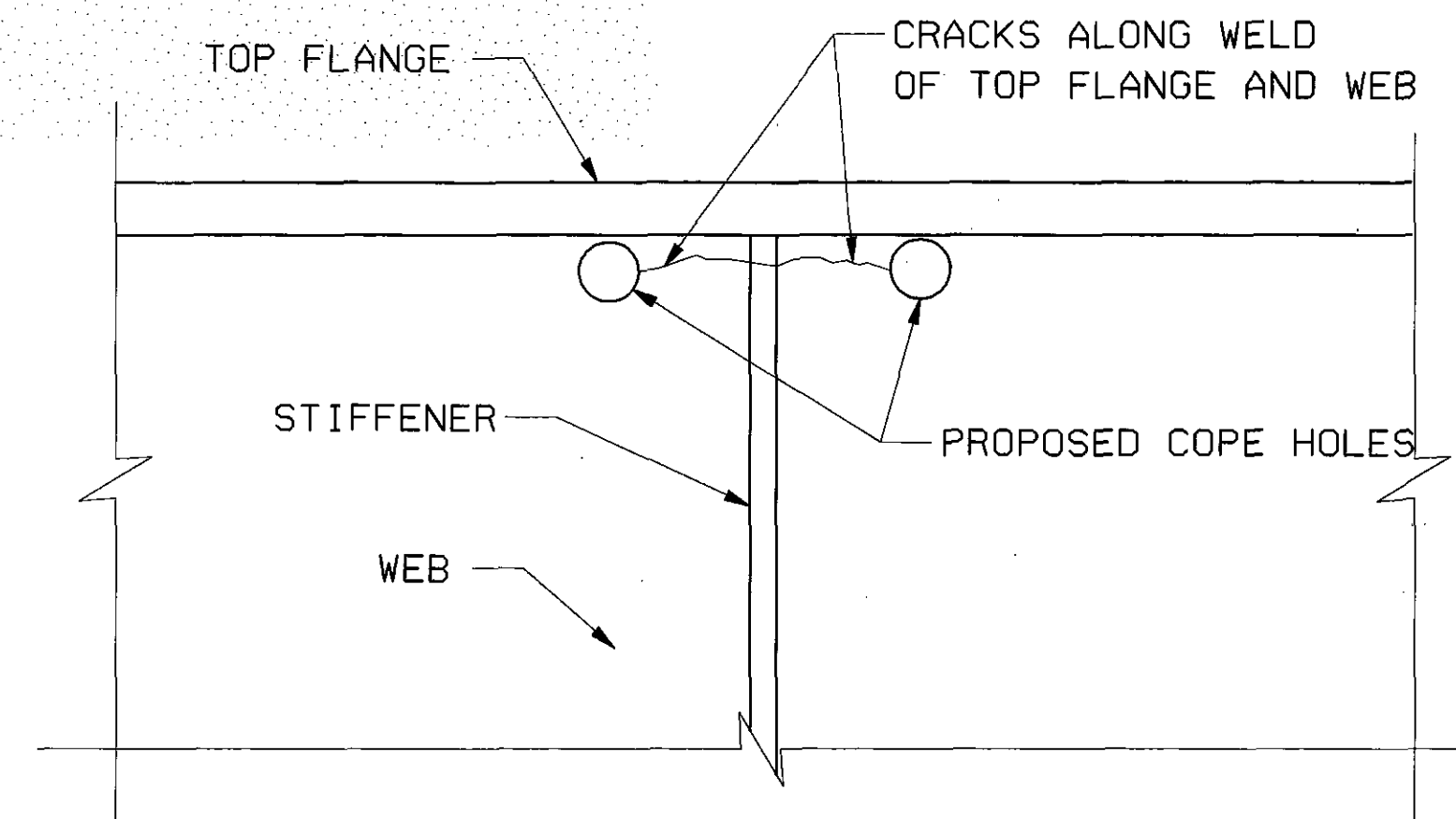


STEEL FRAMING PLAN
HAM-50-1903 R
(FOR INFORMATION ONLY SEE NOTE)

LEGEND:

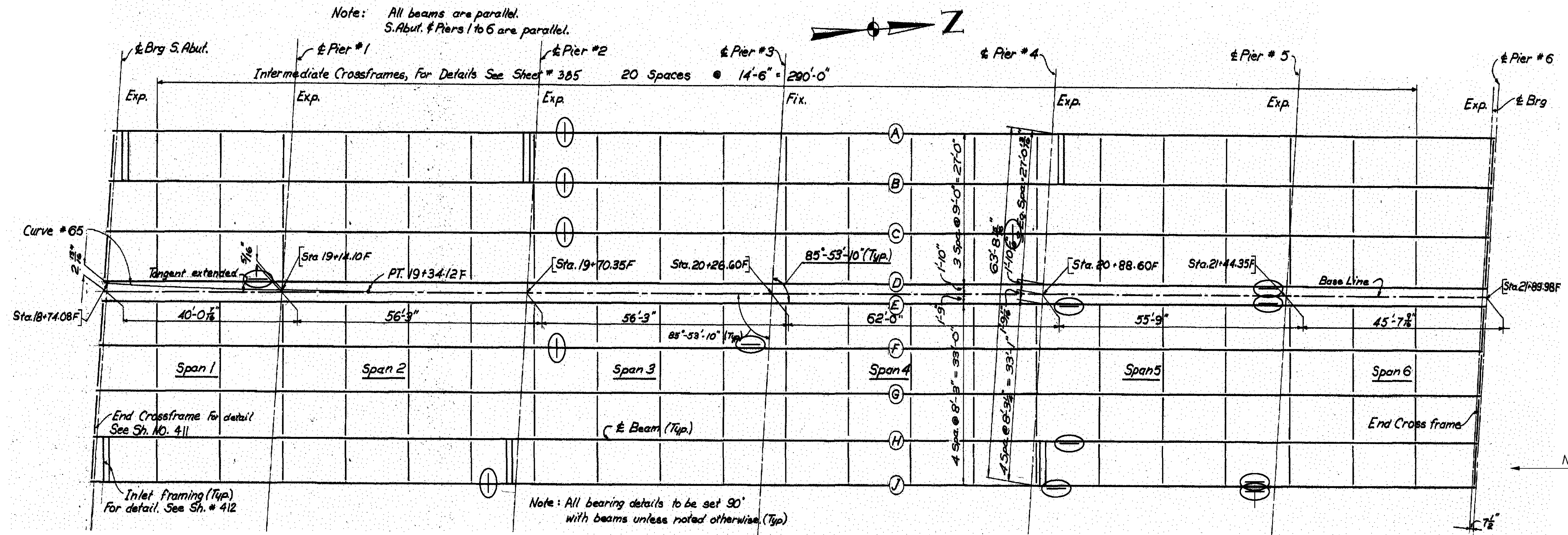
△ - DENOTES AREAS TO BE DRILLED FOR OUT OF PLANE BENDING CRACKS.

NOTE: FRAMING PLANS ARE SCANNED FROM ORIGINAL CONSTRUCTION DRAWINGS AND ARE PROVIDED HERE FOR GENERAL REFERENCE. DIMENSIONAL ACCURACY IS NOT VERIFIED.



STEEL FRAMING PLAN
HAM-50-1903 L
(FOR INFORMATION ONLY SEE NOTE)

DESIGN AGENCY: BURGESS & NIPLE
 DATE: 02-01-06
 REVIEWED: JSB
 DRAWN: KML
 DESIGNED: SJA
 CHECKED: XAC
 STRUCTURE FILE NUMBER: 312 PUM STREET, 12TH FLOOR, CINCINNATI, OHIO 45202
BEAM TESTING AND REPAIR DETAILS
 HAM-50-19-03
 PID NO. 24691
 8 / 9
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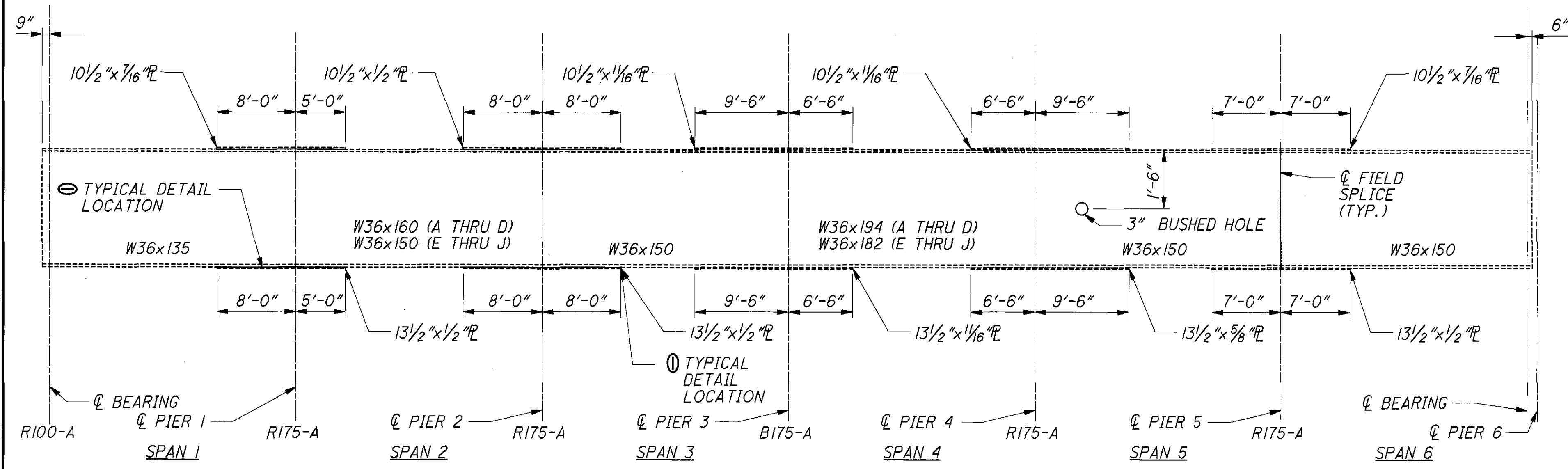


LEGEND:

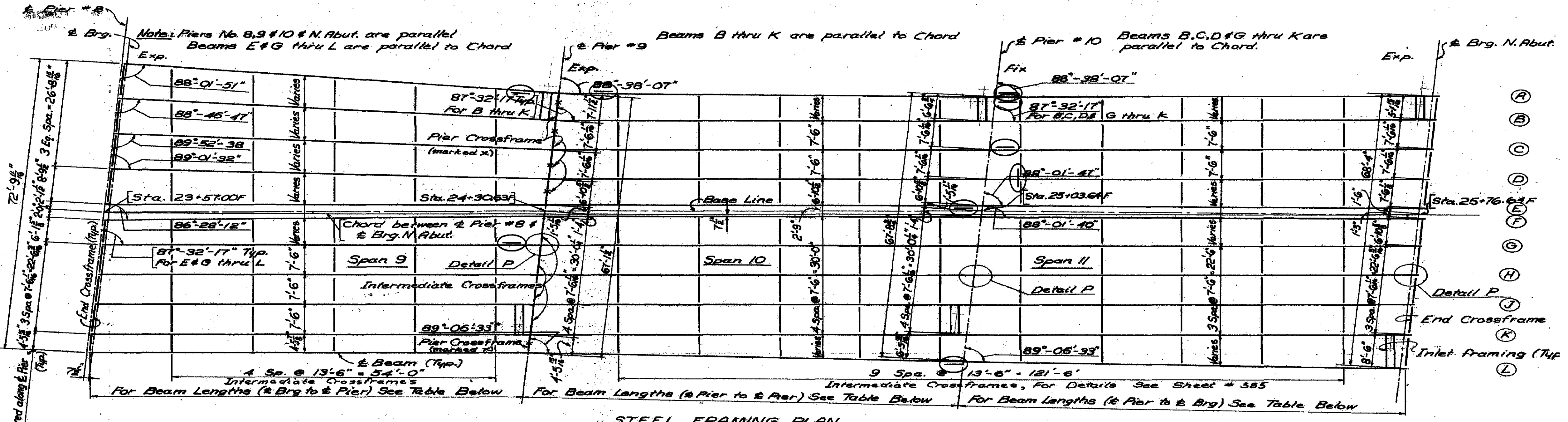
- ⊖ - DENOTES CRACK FOUND PARALLEL TO BEAM BETWEEN COVER PLATE AND BOTTOM FLANGE
- ⊙ - DENOTES CRACK FOUND PERPENDICULAR TO BEAM BETWEEN COVER PLATE END AND BOTTOM FLANGE

NOTE:
 FRAMING PLANS ARE SCANNED FROM ORIGINAL CONSTRUCTION DRAWINGS AND ARE PROVIDED HERE FOR GENERAL REFERENCE. DIMENSIONAL ACCURACY IS NOT VERIFIED.

WORK REQUIRED: SEE SHEET 9a/9



SIZE OF BEAMS AND COVER PLATES



STEEL FRAMING PLAN

HAM-50-1976
(FOR INFORMATION ONLY SEE NOTE)

LEGEND:

- ⊖ - DENOTES CRACK FOUND PARALLEL TO BEAM BETWEEN COVER PLATE AND BOTTOM FLANGE
- ⊕ - DENOTES CRACK FOUND PERPENDICULAR TO BEAM BETWEEN COVER PLATE END AND BOTTOM FLANGE

NOTE:
FRAMING PLANS ARE SCANNED FROM ORIGINAL CONSTRUCTION DRAWINGS AND ARE PROVIDED HERE FOR GENERAL REFERENCE. DIMENSIONAL ACCURACY IS NOT VERIFIED.

HAM-50-1976 WORK REQUIRED:

⊖ CRACK FOUND PARALLEL TO BEAM BETWEEN COVER PLATE AND BOTTOM FLANGE:

CRACKS PARALLEL TO THE BEAM BETWEEN COVER PLATE AND BOTTOM FLANGE AS IDENTIFIED IN THESE PLANS SHALL BE TESTED USING NON-DESTRUCTIVE TESTING (NDT) METHODS TO LOCATE THE ENDS OF THE CRACK(S). ONCE CRACK ENDS HAVE BEEN LOCATED, THE CRACKED PORTION OF THE WELD SHALL BE REMOVED. THE AREA SHALL BE RETESTED USING NDT METHODS TO ENSURE THE EXTENT OF THE CRACK HAS BEEN REMOVED. REWELD AREA WITH A 5/16" FILLET WELD.

SEE GENERAL NOTES FOR ADDITIONAL INFORMATION

PAYMENT MADE UNDER:

16 EACH ITEM 513 - STRUCTURAL STEEL, MISC.: STEEL PREP., INSPECTION, NDT, AND PRIME COAT
16 EACH ITEM 513 - STRUCTURAL STEEL, MISC.: REMOVE LONGITUDINAL COVER PLATE WELD CRACKS AND REWELD AREA

⊕ CRACK FOUND PERPENDICULAR TO BEAM BETWEEN COVER PLATE END AND BOTTOM FLANGE:

END COVERPLATE TOE WELDS TO BE REMOVED, GROUND SMOOTH AND CAULKED WITH POLYURETHANE CAULK.

LOCATE END OF CRACK BY PERFORMING STEEL PREP., INSPECTION AND NDT.

DRILL HOLE AT END OF CRACK. SIZE OF HOLE TO BE DETERMINED BY LENGTH OF CRACK.

TEST INSIDE OF HOLE WITH DYE PENETRANT AND/OR OTHER NDT METHODS PER 513.25.

PAINT DAMAGED AREAS USING SYSTEM OZEU (PRIMER ONLY.)

SEE GENERAL NOTES FOR ADDITIONAL INFORMATION

PAYMENT MADE UNDER:

6 EACH ITEM 513 - STRUCTURAL STEEL, MISC.: STEEL PREP., INSPECTION, NDT, AND PRIME COAT
6 EACH ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL
6 EACH ITEM 513 - STRUCTURAL STEEL MISC.: REMOVE WELD AND SEAL COVERPLATE ENDS

DESIGNED SJA	DRAWN KML	REVIEWED JSB	DATE 02-01-06	DESIGN AGENCY BURGESS & NIPLÉ
CHECKED XAC	STRUCTURE FILE NUMBER			38 Pine Street, 21st Floor Connecticut, 06102
BEAM TESTING AND REPAIR DETAILS				
HAM-50-19.03				
PID No. 24691				
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