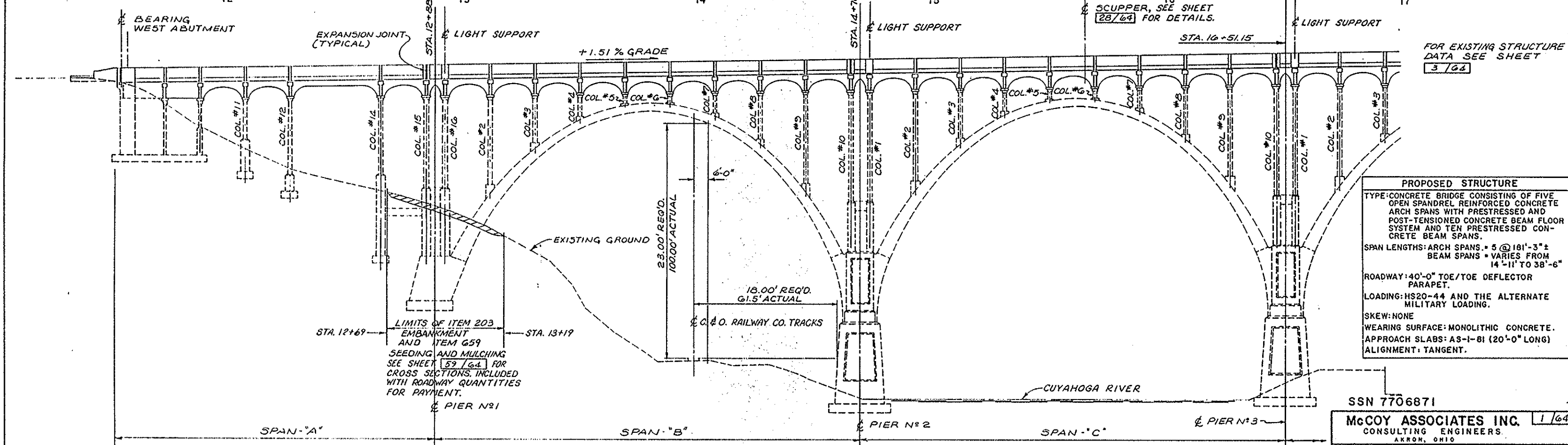
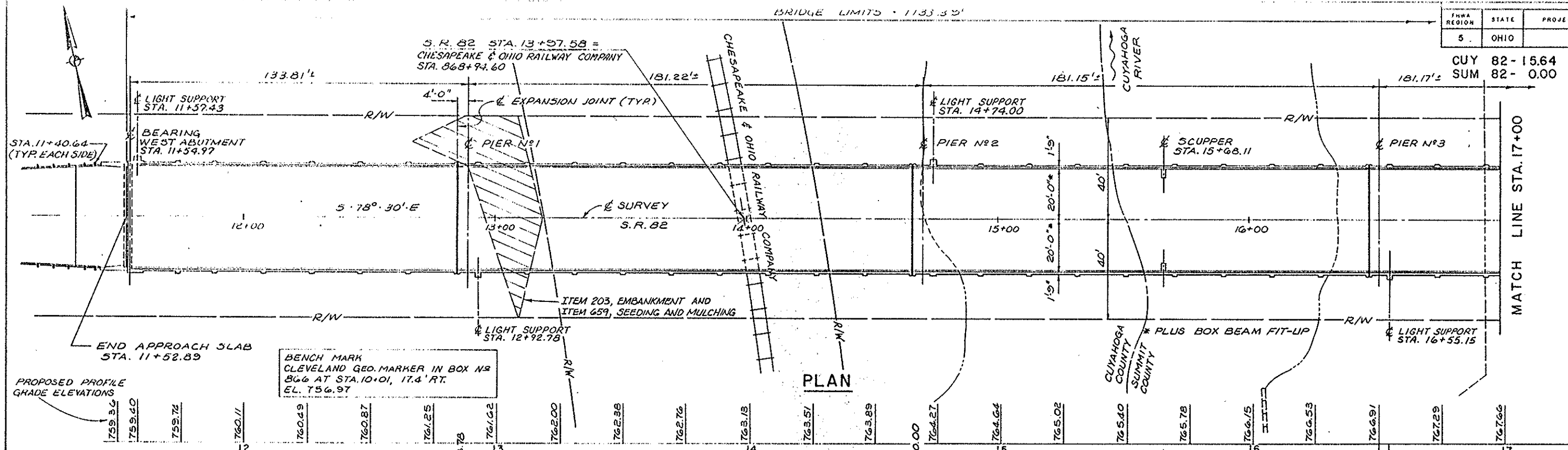


CUY 82-1564
SUM 82-000



PROPOSED STRUCTURE

TYPE: CONCRETE BRIDGE CONSISTING OF FIVE OPEN SPANDREL REINFORCED CONCRETE ARCH SPANS WITH PRESTRESSED AND POST-TENSIONED CONCRETE BEAM FLOOR SYSTEM AND TEN PRESTRESSED CONCRETE BEAM SPANS.

SPAN LENGTHS: ARCH SPANS = 5 @ 181'-3" ±
BEAM SPANS = VARIES FROM 14'-11" TO 38'-6"

ROADWAY: 40'-0" TOE/TOE DEFLECTOR PARAPET.

LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING.

SKEW: NONE

WEARING SURFACE: MONOLITHIC CONCRETE.

APPROACH SLABS: A3-I-81 (20'-0" LONG)

ALIGNMENT: TANGENT.

SSN 7706871

McCOY ASSOCIATES INC.
CONSULTING ENGINEERS.
AKRON, OHIO

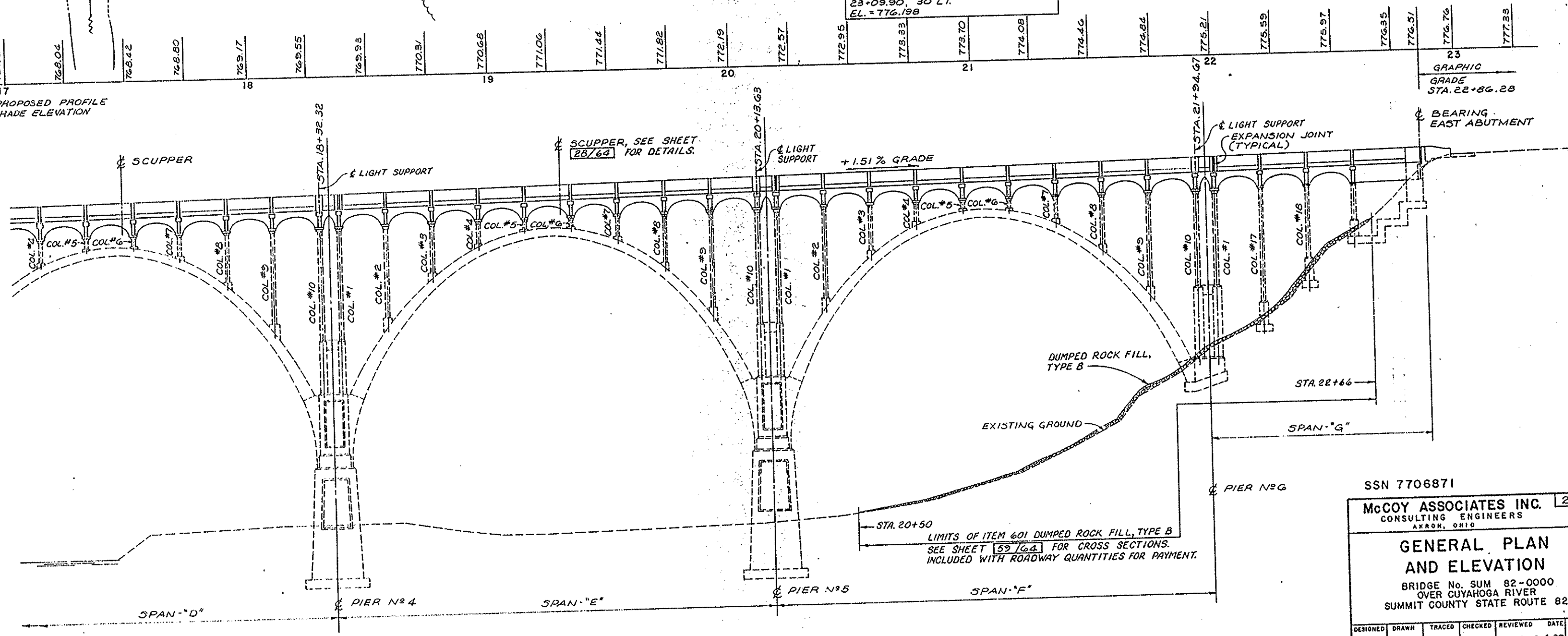
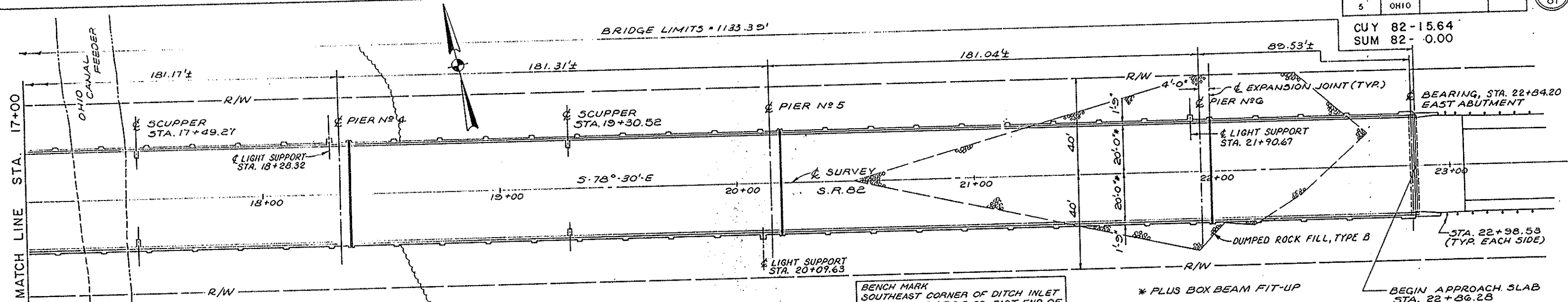
GENERAL PLAN AND ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

REVIEWED BY BURGESS & NIPLE, LTD

MPB. 10/2/87

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.B.H.	J.O.P.		M.S.C.	M.S.C.	6-4-87	



SSN 7706871

McCOY ASSOCIATES INC.
CONSULTING ENGINEERS
AKRON, OHIO

**GENERAL PLAN
AND ELEVATION**

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	RC
J.B.H.	J.D.P.		M.S.C.	M.S.C.	6-4-87	

STRUCTURAL GENERAL NOTES

REGION	STATE	PROJECT	20
5	OHIO		81

CUY 82-15.64
SUM 82-.000

EXISTING STRUCTURE

STRUCTURE FILE NO. 7706871.
TYPE: REINFORCED CONCRETE BRIDGE CONSISTING OF FIVE OPEN SPANDREL ARCH SPANS AND ELEVEN CONCRETE BEAM SPANS.
SPAN LENGTHS: ARCH SPANS = 5 @ 181'-3".
BEAM SPANS = 19'-6"±, 14'-11", 19'-3", 38'-6", 19'-3", 19'-3", 19'-3", 19'-3", 8'-11"±.
ROADWAY: 30'-0" F/F CURBS; 3'-6" SIDEWALK EACH SIDE.
LOADING: H-20.
SKEW: NONE.
WEARING SURFACE: ASPHALT.
APPROACH SLABS: WEST = 25'-0"± LONG; EAST = 11'-0"± LONG.
ALIGNMENT: TANGENT.
CONDITION: POOR.
DATE BUILT: 1931.

PROPOSED STRUCTURE

TYPE: CONCRETE BRIDGE CONSISTING OF FIVE OPEN SPANDREL REINFORCED CONCRETE ARCH SPANS WITH PRESTRESSED AND POST-TENSIONED CONCRETE BEAM FLOOR SYSTEM AND TEN PRESTRESSED CONCRETE BEAM SPANS.
SPAN LENGTHS: ARCH SPANS = 5 @ 181'-3"±
BEAM SPANS = VARIES FROM 14'-11" TO 38'-6".
ROADWAY: 40'-0" TOE/TOE DEFLECTOR PARAPET.
LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING.
SKEW: NONE
WEARING SURFACE: MONOLITHIC CONCRETE.
APPROACH SLABS: AS-1-81 (20'-0" LONG).
ALIGNMENT: TANGENT.

REFERENCES

REFERENCE SHALL BE MADE TO:

STANDARD DRAWINGS:	SUPPLEMENTAL SPECIFICATIONS:
AS-1-81 DATED 11-27-81	824 DATED 10-08-82
BR-1 DATED 05-29-79	836 DATED 11-12-85
EXJ-3-82 DATED (REVISED) 08-01-84	849 DATED 12-24-85
PSBD-1-81 DATED 09-18-81	949 DATED 09-26-86

DESIGN SPECIFICATIONS

THE PROPOSED REHABILITATION WORK FOR THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1983, INCLUDING THE 1984 AND 1985 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA

DESIGN LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING
30 PSF FUTURE WEARING SURFACE
CONCRETE CLASS S: COMPRESSIVE STRENGTH 4500 PSI (DECK JOINTS AND SUPERSTRUCTURE)
CONCRETE CLASS C: UNIT STRESS 1333 PSI (SUBSTRUCTURE)
REINFORCING STEEL: ASTM A615, A616, OR A617 - GRADE 60
UNIT STRESS 24,000 PSI
UNIT STRESS 20,000 PSI FOR PRESTRESSED BOX BEAMS ONLY, GRADE 40
CONCRETE FOR PRESTRESSED BOX BEAMS: UNIT STRESSES COMPRESSION 2200 PSI
TENSION 444 PSI
PRESTRESSING STRANDS: ASTM A416, F's = 270,000 PSI, INITIAL STRESS = 0.70 F's

CONCRETE FOR PRESTRESSED FLOOR BEAMS AND PRECAST FASCIA BEAMS:

CLASS S: F'c = 5500 PSI
F'ci = 4000 PSI
PRESTRESSING STRANDS: ASTM A416
F's = 270,000 PSI (LOW RELAXATION)
INITIAL STRESS = 0.70 F's
K = 0.0002 // = 0.25
ANCHOR SET = 3/8"
JACKING STRESS = 0.75 F's
5/8" DIAMETER P/S BARS: ASTM A722, TYPE II, MINIMUM
ULTIMATE STRENGTH = 150,000 PSI
INITIAL STRESS = 0.70 F's (MAXIMUM)
K = 0.002 // = 0.15
ANCHOR SET = 1/16"
JACKING STRESS = 0.75 F's
3/4" DIAMETER THREADBARS: ASTM A615 - GRADE 60, MINIMUM
YIELD STRENGTH = 60,000 PSI
REINFORCING STEEL: ASTM A615 - GRADE 60, MINIMUM
YIELD STRENGTH = 60,000 PSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL, 3" CONCRETE COVER AND SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES TO BE 1" THICK.

EXISTING PLANS

EXISTING PLANS MAY BE INSPECTED AT THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN IN COLUMBUS, OHIO OR IN THE DISTRICT OFFICE IN RAVENNA, OHIO.

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. THE CONTRACTOR IS REFERRED TO CHS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

UTILITY LINES

ALL EXPENSE INVOLVED IN INSTALLING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNERS. THE CONTRACTOR AND OWNERS ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

CONTRACTOR'S PLAN OF OPERATION

PRIOR TO STARTING ANY WORK ON THIS STRUCTURE, THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR FOR REVIEW AND APPROVAL (THREE COPIES) A DETAIL PROCEDURE FOR ACCOMPLISHING THE WORK WITHOUT DAMAGING OR ADVERSELY STRESSING THE PORTIONS OF THE EXISTING STRUCTURE WHICH ARE TO REMAIN IN PLACE. THIS PROCEDURE SHALL INCLUDE A NUMERICAL ARCH ANALYSIS BY A REGISTERED PROFESSIONAL ENGINEER QUALIFIED FOR SUCH WORK BY THE DEPARTMENT FOR THE MAJOR CONSTRUCTION LOADS. THE CONTRACTOR'S DEMOLITION AND RECONSTRUCTION SHALL BE PERFORMED IN SUCH A MANNER

AS TO MAINTAIN SYMMETRICAL LOADINGS ON THE ARCH SPANS AT ALL TIMES. UNSYMMETRICAL LOADINGS MAY CAUSE DAMAGE TO THE ARCHES, THEREFORE THEY SHALL BE HELD TO A MINIMUM DURING ALL OPERATIONS. ANY PORTION OF THE STRUCTURE DAMAGED DURING DEMOLITION AND CONSTRUCTION BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

ERECTION SEQUENCE

THE ERECTION SEQUENCE AND PROCEDURES AS DEFINED ON SHEET 10 / 64 FOR THE PROPOSED FLOORBEAMS AND FASCIA BEAMS MAY BE MODIFIED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER IF SUCH CHANGES AS THE CONTRACTOR PROPOSES ACCOMPLISHES ESSENTIALLY THE SAME RESULTS WITHOUT ADVERSE CONSEQUENCES.

POST TENSIONING INSPECTION PROCEDURES

PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO PROVIDE FOR SAMPLING, INSPECTION AND APPROVAL OF STRESSING STEEL AND HARDWARE BY THE ENGINEER AND LABORATORY. PRIOR TO THE START OF ANY POST TENSIONING PROCEDURES BY THE FABRICATOR, THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR FOR REVIEW AND APPROVAL (THREE COPIES) DETAIL PROCEDURES FOR ALL POST TENSIONING TO BE PERFORMED ON THE PROJECT. ALSO THE CONTRACTOR SHALL PROVIDE A QUALIFIED TECHNICAL REPRESENTATIVE(S) FROM THE MANUFACTURER(S) OF THE STRESSING STEEL AND HARDWARE. THE INDIVIDUAL(S) SHALL BE PRESENT DURING PRELIMINARY POST TENSIONING (BOTH SHOP AND FIELD) TO ENSURE THAT THE EQUIPMENT IS APPROPRIATELY USED, THE STRESSING OPERATION IS PROPERLY ACCOMPLISHED AND MONITORED, AND THAT ALL PERSONNEL INVOLVED IN THE PERFORMANCE AND INSPECTION OF THE WORK ARE FAMILIAR WITH THE EQUIPMENT AND PROJECT REQUIREMENTS.

TEMPORARY BRACING

THE CONTRACTOR SHALL SUBMIT PLANS TO THE DIRECTOR FOR REVIEW AND APPROVAL (THREE COPIES) FOR TEMPORARY LONGITUDINAL BRACING OF THE EXISTING SPANDREL COLUMNS TO PREVENT DAMAGE TO THE COLUMNS DURING REMOVAL OF THE EXISTING SUPERSTRUCTURE AND COLUMN CAPS AND DURING ERECTION OF THE NEW CAPS AND SUPERSTRUCTURE.

SIZE AND TYPE OF EQUIPMENT USED IN REMOVAL OPERATIONS SHALL BE LIMITED TO PREVENT DAMAGE.

ATTACHMENT OF TEMPORARY BRACING TO THE EXISTING ARCHES OR COLUMNS BY MEANS OF EXPANSION BOLTS OR OTHER MEANS INVOLVING DRILLING INTO THE CONCRETE WILL NOT BE PERMITTED.

COST OF TEMPORARY BRACING SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURES REMOVED, FOR PAYMENT.

PROPOSED WORK

THE MAJOR PORTIONS OF THIS WORK INCLUDE:

1. REMOVING EXISTING DECK AND SUPERSTRUCTURE ABOVE TOPS OF COLUMNS INCLUDING THE TOP PORTION OF THE COLUMN CAPS
2. REMOVING PORTIONS OF ABUTMENTS, ABUTMENT SIDEWALLS AND APPROACH SLABS
3. CONSTRUCTING NEW CAPS ON COLUMNS
4. CONSTRUCTING TRANSVERSE BEAMS, FASCIA BEAMS AND LONGITUDINAL BEAMS ABOVE TOP OF COLUMNS
5. CONSTRUCTING COMPOSITE SLAB AND PARAPETS
6. PATCHING DESIGNATED CONCRETE SURFACES ON THE PIERS, ABUTMENTS AND SUPERSTRUCTURE
7. DISPOSING REMOVED MATERIALS AWAY FROM THE BRIDGE SITE.

SSN 7706871

McCOY ASSOCIATES INC. 31
CONSULTING ENGINEERS
AKRON, OHIO

STRUCTURAL GENERAL NOTES

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	RE
JBH			MSC	MSC	6-4-87	

STRUCTURAL GENERAL NOTES

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5	OHIO		

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PORTIONS OF STRUCTURES REMOVED

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, PORTIONS OF THE EXISTING STRUCTURE SHALL BE REMOVED AND BE REPLACED OR REPAIRED. THIS ITEM INCLUDES THE REMOVAL OF PORTIONS OF THE SUPERSTRUCTURE, ABUTMENTS, APPROACH SLABS, AND ALL OTHER REMOVAL THAT IS NECESSARY TO MODIFY THE STRUCTURE ACCORDING TO THE PLANS. REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT HIS COST.

ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF KORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 1000 POUNDS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE.

CONSTRUCTION CLEARANCE

CONSTRUCTION CLEARANCE OF 8 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 23 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AND 6 FEET FROM THE CENTER OF TRACKS, SHALL BE MAINTAINED AT ALL TIMES.

PATCHING CONCRETE STRUCTURES

FOR LIMITS OF PATCHING, SEE SHEETS 29 / 64 THRU 54 / 64. OTHER DISINTEGRATED SURFACES NOT DESIGNATED HEREIN BUT DELINEATED BY THE ENGINEER AFTER FIELD EXAMINATION SHALL BE PATCHED AS DIRECTED. PREPARATION SHALL INCLUDE ABRASIVE BLASTING OF ALL SURFACES TO BE PATCHED INCLUDING ALL EXPOSED REINFORCING STEEL (STEEL CLEANED TO SA-1 QUALITY).

THE ESTIMATED QUANTITIES GIVEN ON SHEET 4 / 64 FOR ITEM 519, PATCHING CONCRETE STRUCTURES, HAVE BEEN INCREASED BY 0 PERCENT TO ALLOW FOR ADDITIONAL DETERIORATION WHICH HAS OCCURRED DURING THE TIME BETWEEN THE ORIGINAL INSPECTION AND A SUBSEQUENT INSPECTION PERFORMED BY THE STATE.

MORTAR FOR SHEAR KEYS

THE MORTAR AS DESCRIBED HEREIN SHALL BE USED IN LIEU OF THE MORTAR DESCRIBED ON SHEET 1 OF 4 IN PSBD-1-81 STANDARD DRAWING.

NON-SHRINKING MORTAR

MORTAR OR GROUT FOR KEYWAYS BETWEEN PRESTRESSED CONCRETE BOX BEAMS, FOR TIE ROD RECESSES, FOR ANCHOR DOWEL HOLES AND FOR SCUPPER RECESSES SHALL BE A NON-SHRINKING NON-METALLIC MORTAR HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 P.S.I., ACCORDING TO THE CORPS OF ENGINEERS SPECIFICATION CRD-C621-83 WHEN PREPARED TO A MODERATE FLUIDITY (124-145% FLOW TABLE FLOW). THE MORTAR OR GROUT SHALL ALSO MEET ALL OTHER REQUIREMENTS OF SPECIFICATION CRD-C621-83. THE MORTAR SHALL BE PREPARED, PLACED AND CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AGAINST SURFACES AS SPECIFIED BELOW.

PREPARATION OF CONCRETE SURFACES IN CONTACT WITH NON-SHRINKING MORTAR

THE KEYWAY SURFACES SHALL BE GIVEN A MEDIUM SANDBLAST AT THE PLANT WITHIN FOUR DAYS BEFORE THE BEAMS LEAVE THE PLANT. BEFORE MORTARING, THE KEYWAYS SHALL BE THOROUGHLY CLEAN OF ALL DIRT, DUST AND OTHER FOREIGN MATTER. THE KEYWAY SURFACES SHALL BE WETTED, BUT NO FREE WATER SHALL BE ALLOWED TO REMAIN IN THE KEYWAYS.

PRESTRESSED BOX BEAM WIDTHS

FABRICATOR MAY ALTER WIDTH OF BEAMS ON THE BRIDGE, IF THERE IS SOME ADVANTAGE IN DOING SO, HOWEVER, THE BRIDGE WIDTH MUST REMAIN THE SAME. BEARINGS WILL BE REDESIGNED BY A PROFESSIONAL ENGINEER AT NO COST TO THE STATE AND REVISED PLANS MUST BE SUBMITTED FOR APPROVAL BY THE DIRECTOR.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES

SPECIFIED CONCRETE SURFACES SHALL BE SEALED USING A CONCRETE SEALER. SEE THE "PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES."

THE SEALANT SHALL BE APPLIED TO THE FOLLOWING AREAS:

- BRIDGE PARAPET: INSIDE FACES, TOPS, OUTSIDE FACES AND BOTTOM SURFACES OUTSIDE OF EXTERIOR BOX BEAMS FOR THE FULL LENGTH OF THE BRIDGE.
- EXTERIOR BOX BEAMS: OUTSIDE EDGES AND BOTTOMS FOR A DISTANCE OF 18" FROM OUTSIDE EDGES FOR THE FULL LENGTH OF THE BRIDGE.
- BOX BEAMS AND TRANSVERSE BEAMS AT EXPANSION JOINTS: BOX BEAM ENDS AND BOTTOMS FOR A DISTANCE OF 36" FROM EXPANSION JOINTS, TRANSVERSE BEAM TOPS, SIDES, ENDS AND BOTTOMS OF BEAM CAPS (30" WIDE PORTION) FOR THE FULL LENGTH OF THE BEAM.
- BOX BEAMS AT ABUTMENTS: BOX BEAM ENDS AND BOTTOMS FOR A DISTANCE OF 36" FROM END OF BEAM.
- TRANSVERSE BEAMS: TOPS, SIDES, BOTTOMS AND ENDS FOR A DISTANCE OF 18" FROM EACH END OF BEAMS EXCEPT FOR BEAMS UNDER EXPANSION JOINTS.
- ABUTMENTS: FRONT FACE OF BACKWALL, HORIZONTAL BEAM SEATS AND 2'-6" BELOW BEAM SEATS FOR THE LENGTH OF ABUTMENTS.
- APPROACH SLAB PARAPETS: INSIDE FACES, TOPS AND OUTSIDE FACES.

STREAM PROTECTION

CONSTRUCTION EQUIPMENT AND TEMPORARY FILL WILL NOT BE PERMITTED IN THE RIVER OR THE CANAL FEEDER. THE CONTRACTOR SHALL EXERCISE ALL REASONABLE EFFORTS TO PREVENT DEBRIS FROM ENTERING THE RIVER OR THE CANAL FEEDER. THE CONTRACTOR SHALL REMOVE ANY DEBRIS WHICH FALLS INTO THE RIVER.

ITEM 518 - DRAINAGE

THE DRAINAGE SYSTEM FOR THIS STRUCTURE SHALL BE ACCORDING TO ITEM 518 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS WITH THE FOLLOWING EXCEPTIONS:

MATERIALS

STEEL PIPE SHALL MEET THE REQUIREMENTS OF 707.08 AND SHALL BE GALVANIZED. PLASTIC PIPE (707.19) AS LISTED IN 518.02 WILL NOT BE ALLOWED ON THIS PROJECT.

PIPE SPECIALS SHALL BE ASTM A234 AND SHALL BE GALVANIZED.

SCUPPERS, AS DETAILED IN THE PLANS, SHALL CONFORM TO CMS SECTION 711.12.

MEASUREMENT AND PAYMENT

MEASUREMENT AND PAYMENT SHALL BE AS NOTED HEREIN AND IN ITEM 518. ALL PIPE SUPPORTS SHALL BE INCLUDED FOR PAYMENT WITH THE 8" STEEL PIPE. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR 8" DIAMETER DOWNSPOUTS, GALVANIZED STEEL 707.08, INCLUDING SPECIALS.

REMOVAL OF THE EXISTING DRAINAGE SYSTEM SHALL BE INCLUDED IN THE COST OF ITEM 202 - PORTIONS OF STRUCTURES REMOVED.

STRUCTURAL STEEL ARMOR FOR SEALED EXPANSION JOINTS

ITEM 516, SHALL INCLUDE ALL LABOR, MATERIAL, TOOLS, AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT IN PLACE INCLUDING THE ELASTOMERIC COMPRESSION SEAL, JOINT ARMOR, PAINTING, AND ANCHORS. THE 5/8" THREADED RODS, NUTS AND SUPPORT PLATE C (STANDARD DRAWING EXJ-3-82) SHALL BE INCLUDED IN ITEM 515, PRESTRESSED CONCRETE BRIDGE MEMBERS FOR PAYMENT. PAINTING OF EXPOSED STRUCTURAL STEEL SHALL BE SYSTEM B.

ATTACHMENT OF GUARDRAIL TO CONCRETE PARAPETS

CONCRETE INSERT ANCHOR ASSEMBLIES PER STANDARD CONSTRUCTION DRAWINGS GR-1 AND GR-3 SHALL BE PLACED DURING PARAPET CONSTRUCTION.

MEMORIAL PLAQUE

THE MEMORIAL PLAQUES LOCATED ON THE EXISTING RAILINGS AT THE SOUTHWEST AND NORTHEAST CORNERS OF THE BRIDGE SHALL BE REMOVED AND GIVEN TO THE OHIO DEPARTMENT OF TRANSPORTATION FOR CLEANING AND POLISHING BEFORE THEY ARE REMOUNTED. ADEQUATE TIME SHALL BE ALLOWED FOR THIS.

THE PLAQUES SHALL BE REMOUNTED AT THE SAME CORNERS ON THE INTERIOR FACE OF THE PROPOSED PARAPETS. FOR LOCATION DETAILS SEE SHEET 26 / 64.

COST OF REMOVING AND REPLACING THE MEMORIAL PLAQUES SHALL BE INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED.

PRECAST CONCRETE FLOOR BEAMS AND FASCIA BEAMS

DESCRIPTION

THIS WORK CONSISTS OF MANUFACTURING PRECAST CONCRETE FLOORBEAMS AND FASCIA BEAMS AND ERECTING THE BEAMS ON EXISTING CONCRETE COLUMNS AFTER REMOVAL OF THE EXISTING FLOOR SYSTEM, ALL AS SHOWN ON THE PLANS AND SPECIFIED HEREIN.

AS SHOWN ON THE PLANS, FLOORBEAMS SHALL BE POST-TENSIONED AT THE PRECASTING PLANT. FLOORBEAMS AND FASCIA BEAMS SHALL BE SECURELY SUPPORTED IN THE VERTICAL POSITION DURING STORAGE, HANDLING, SHIPPING, AND ERECTING, UNTIL PLACED IN FINAL POSITION IN THE BRIDGE. THE FASCIA BEAMS AT ERECTION SHALL BE ASSEMBLED WITH THE FLOORBEAMS AND CONNECTED BY MEANS OF A POST-TENSIONING STEEL BAR TENDON AND THREADBAR REINFORCING. DUCTS AND ANCHORAGE BLOCK OUTS FOR TENDONS AND THREADBARS SHALL BE GROUTED AFTER THE POST-TENSIONING OPERATION IS COMPLETED AND ACCEPTED.

MATERIALS

PRECAST CONCRETE MEMBERS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 515 EXCEPT AS SPECIFIED HEREIN.

PRESTRESSING STEEL STRANDS SHALL MEET THE REQUIREMENTS OF SECTION 711.27.

PRESTRESSING STEEL BARS SHALL MEET THE REQUIREMENTS OF ASTM A 722, TYPE 11, INCLUDING SUPPLEMENTAL REQUIREMENT S1 REGARDING BENDING PROPERTIES. COUPLINGS SHALL MEET THE REQUIREMENTS OF ASTM A 722 SUPPLEMENTAL REQUIREMENT S2. SAMPLING AND INSPECTION SHALL BE AS DIRECTED BY THE LABORATORY.

SSN 7706871

McCOY ASSOCIATES INC. 34 / 64 CONSULTING ENGINEERS AKRON, OHIO						
STRUCTURAL GENERAL NOTES						
BRIDGE No. SUM 82-0000 OVER CUYAHOGA RIVER SUMMIT COUNTY STATE ROUTE 82						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH			MSC	MBC	6-4-87	

STRUCTURAL GENERAL NOTES

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5	OHIO		



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ALL PRESTRESSING STEEL SHALL BE PROTECTED AGAINST PHYSICAL DAMAGE AND RUST OR OTHER RESULTS OF CORROSION AT ALL TIMES FROM MANUFACTURE TO GROUTING. PRESTRESSING STEEL THAT IS FOUND AT ANY TIME TO HAVE SUSTAINED PHYSICAL DAMAGE SUCH AS NICKS, PITS, OR THER LOSS OF CROSS SECTION SHALL BE REJECTED.

PRESTRESSING STEEL SHALL BE PACKAGED IN CONTAINERS OR SHIPPING FORMS FOR THE PROTECTION OF STEEL AGAINST PHYSICAL DAMAGE AND CORROSION DURING SHIPPING AND STORAGE. A CORROSION INHIBITOR THAT PROTECTS AGAINST RUST OR OTHER RESULTS OF CORROSION SHALL BE PLACED IN EACH PACKAGE OR FORM. SHALL BE INCORPORATED IN A CORROSION-INHIBITOR, CARRIER-TYPE PACKAGING MATERIAL, OR MAY BE APPLIED DIRECTLY TO THE STEEL. THE CORROSION INHIBITOR SHALL HAVE NO DELETERIOUS EFFECT ON THE STEEL OR GROUT OR BOND SIRENGTH OF STEEL TO GROUT. PACKAGING OR FORMS DAMAGED FROM ANY CAUSE SHALL BE IMMEDIATELY REPLACED OR RESTORED TO ORIGINAL CONDITION.

THE SHIPPING PACKAGE OR FORM SHALL BE CLEARLY MARKED WITH A STATEMENT THAT THE PACKAGE CONTAINS HIGH-STRENGTH PRESTRESSING STEEL. THE CARE TO BE USED IN HANDLING, AND THE TYPE, KIND, AND AMOUNT OF CORROSION INHIBITOR USED INCLUDING THE DATE WHEN PLACED, SAFETY ORDERS, AND INSTRUCTIONS FOR USE.

THE DEVELOPMENT OF RUST OR OTHER RESULTS OF CORROSION MAY BE CAUSE FOR REJECTION AS DESCRIBED BELOW.

IF, WHEN THE PACKAGE IS OPENED, THERE IS AN EVEN COATING OF RUST OR RUST FILM OVEN THE ENTIRE "PAK", THE ENTIRE "PAK" SHALL BE REJECTED.

ANY LENGTH OF STRAND THAT CONTAINS CLINGING RUST, PITS, OR OTHER FAULTS SHALL BE REJECTED.

RUST FILM THAT CAN BE REMOVED BY LIGHT RUBBING, LEAVING ONLY LIGHT STREAKS OR SPOTS BUT NOT PITTING, WILL NOT BE CAUSE FOR REJECTION.

THREADBARS SHALL MEET THE REQUIREMENTS OF ASTM A 615. DEFORMATIONS SHALL BE ROLLED THREADS AND BARS SHALL BE FURNISHED WITH MATCHING HEX NUTS AND PLATE ANCHORS AS REQUIRED FOR THE APPLICATIONS SHOWN ON THE PLANS. THREADBARS, NUTS, AND ANCHOR PLATES SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A 123 OR ASTM A 153, AS APPROPRIATE.

BENT PLATES, ANGLES, SHIMS, RODS, AND OTHER MISCELLANEOUS STEEL SHALL MEET ASTM A 36 REQUIREMENTS AND SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A 123 OR ASTM A 153, AS APPROPRIATE.

ANCHORS FOR PRESTRESSING STEEL TENDONS SHALL MEET THE REQUIREMENTS OF THE TENDON MANUFACTURER.

CERTIFIED MILL TEST REPORTS SHALL BE FURNISHED AND APPROVED FOR ALL PRESTRESSING STEEL AND ANCHOR DEVICES PRIOR TO THEIR BEING INCORPORATED IN THE WORK.

DUCTS FOR PRESTRESSING STEEL TENDONS AND THREADBARS SHALL BE GALVANIZED FERROUS METAL OR HIGH DENSITY POLYETHYLENE. MORTAR TIGHT AND CAPABLE OF WITHSTANDING CONCRETE PRESSURE DURING CASTING WITHOUT DEFORMING. DUCTS SHALL BE CORRUGATED WITH INTERIOR AREA AT LEAST TWICE THE AREA OF THE TENDON FOR STEEL STRAND TENDONS AND AT LEAST 1/4 INCH LARGER IN DIAMETER THAN THE BAR FOR STEEL BAR TENDONS. DUCTS SHALL BE FURNISHED WITHOUT SPLICES FULL LENGTH OF EACH BEAM. DUCTS SHALL BE PROVIDED WITH GROUT OPENINGS AT EACH END AND DRAINS AT LOW POINTS. GROUT OPENINGS AND DRAINS SHALL BE PROVIDED WITH VALVES FOR CLOSURE DURING GROUTING OPERATIONS.

GROUT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, ARTICLE 4.33.9, 1983 EDITION. ADMIXTURES SHALL BE USED TO PROVIDE 2 TO 10 PERCENT UNRESTRAINED EXPANSION.

MORTAR OR GROUT FOR FILLING JOINTS AND BLOCK OUTS SHALL BE A NON-SHRINKING NON-METALLIC MORTAR HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5,000 PSI ACCORDING TO THE CORPS OF ENGINEERS SPECIFICATION CRD-C621-83 WHEN PREPARED TO A MODERATE FLUIDITY (124-145 PERCENT FLOW TABLE FLOW). THE MORTAR OR GROUT SHALL ALSO MEET ALL OTHER REQUIREMENTS OF SPECIFICATION CRD-C621-83. THE MATERIAL

SHALL BE PREPARED, PLACED, AND CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AGAINST SURFACES AS SPECIFIED HEREIN. GROUT SHALL BE CRYSTEX BY L&M CONSTRUCTION CHEMICALS, MASTERFLOW 713 BY MASTER BUILDERS, OR APPROVED EQUAL.

SHOP DRAWINGS

SHOP DRAWINGS SHALL BE FURNISHED IN ACCORDANCE WITH SUBSECTION 501.05 AND SHALL SHOW COMPLETE INSTALLATION DETAILS OF DUCTS, GROUT VENTS, REINFORCING BARS, AND OTHER EMBEDDED ITEMS. THE SUBMITTAL SHALL INCLUDE DETAILS OF METHODS, MATERIALS, AND EQUIPMENT PROPOSED FOR POST-TENSIONING AND FOR DUCT AND BLOCK OUT GROUTING OPERATIONS. THE CALCULATED FORCES REQUIRED TO STRESS THE TENDONS AND EXPECTED ELONGATIONS SHALL BE GIVEN. DESCRIPTIONS OF DUCTS, TENDONS, GROUT, AND OTHER MATERIALS FOR WHICH A CHOICE IS REQUIRED SHALL BE INCLUDED.

DETAILS OF ANCHORAGES, COUPLINGS, SHIMS, AND OTHER FERROUS METAL PARTS WHICH ARE TO BE EMBEDDED, SHALL BE OF SUCH SIZE AND POSITION WITHIN THE MEMBERS THAT ALL SUCH PARTS WILL HAVE 2-INCH MINIMUM COVER OF CONCRETE OR GROUT, UNLESS OTHERWISE SHOWN ON THE PLANS OR APPROVED.

PRECAST CONCRETE MEMBERS

PRECAST CONCRETE MEMBERS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 515 EXCEPT PRESTRESSING SHALL BE BY POST-TENSIONING. THE MEMBERS SHALL BE CAST SO THAT IMMEDIATELY AFTER FORM REMOVAL THEY WILL MEET THE FOLLOWING TOLERANCES:

THICKNESS	-0", +3/8"
DEPTH OF FLOORBEAMS OR FASCIA BEAM AT COLUMN	-1/8", +1/8"
DEPTH OF FLOORBEAM AT MINIMUM AND AT UNIFORM SECTION	-0", +1/4"
LENGTH OF FLOORBEAM	-1/2", +1/2"
LENGTH OF FASCIA BEAM	-1/4", +3/8"

MEMBERS SHALL BE FREE FROM HONEYCOMB, BROKEN EDGES, EXTENSIVE OR LARGE CRACKS, AND OTHER DEFECTS. WHERE REQUIRED BY THE ENGINEER, HONEYCOMB AREAS SHALL BE PATCHED, CRACKS LARGER THAN 0.005 INCHES SHALL BE REPAIRED BY EPOXY INJECTION, AND OTHER DEFECTS REPAIRED TO THE SATISFACTION OF THE ENGINEER. THE ENGINEER SHALL BE THE SOLE JUDGE AS TO THE REPARABILITY OF ANY MEMBER AND MAY REJECT MEMBERS CONSIDERED NOT REPARABLE INCLUDING MEMBERS UPON WHICH REPAIR ATTEMPTS HAVE BEEN UNSATISFACTIRILY ATTEMPTED.

THE TOP SURFACE OF FLOORBEAMS SHALL BE GIVEN A MEDIUM SANDBLAST FINISH BEFORE THE FLOORBEAMS ARE ERECTED TO PROVIDE ADDED RESISTANCE TO SLIDING OF THE BEARING PADS.

POST-TENSIONING

THE TENSIONING PROCESS SHALL BE CONDUCTED IN SUCH MANNER THAT THE FORCE BEING APPLIED AND THE ELONGATION MAY BE MEASURED AT ALL TIMES. A RECORD SHALL BE KEPT OF GAUGE PRESSURES OR READINGS AND ELONGATIONS AT THE END OF EACH JACKING OPERATION AND SUBMITTED FOR APPROVAL. TENDONS STRESSED WITHOUT DEPARTMENT INSPECTION DURING THE STRESSING OPERATION, SHALL BE REMOVED AND REPLACED. A TENDON ELONGATION AT APPROVED JACKING FORCE SHALL BE WITHIN 8 PERCENT OF THE CALCULATED MEASURABLE ELONGATION, OTHERWISE THE OPERATION AND/OR TENDON SHALL BE RE-EVALUATED AND THE TENDON SHALL BE SUBJECT TO REJECTION.

AFTER STRESSING AND ANCHORING ALL TENDONS AND WHEN APPROVED, PROJECTING TENDONS SHALL BE TRIMMED AS SHOWN ON THE APPROVED WORKING DRAWINGS.

NO WELDS, OR GROUNDS FOR WELDING EQUIPMENT ON OR NEAR THE PRESTRESSING STEEL, WILL BE ALLOWED AT ANY TIME.

CARE MUST BE TAKEN DURING TENDON PREPARATION AND HANDLING TO PREVENT OIL, GREASE, MUD, OR SIMILAR MATERIALS FROM CONTAMINATING THE STRAND. THE TENDONS MAY BE PROTECTED FROM RUST WITH WATER-SOLUBLE OIL.

WHEN FRICTION MUST BE REDUCED ON POST-TENSIONING TENDONS, WATER-SOLUBLE OIL MAY BE USED SUBJECT TO APPROVAL. THIS OIL SHALL BE FLUSHED FROM THE DUCT BY USE OF WATER UNDER PRESSURE PRIOR TO GROUTING.

GROUTING OF TENDON AND THREADBAR DUCTS

GROUTING OF DUCTS AFTER TENDON AND THREADBAR STRESSING SHALL CONFORM TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 4.33.9, ON GROUTING POST-TENSIONED, PRESTRESSED CONCRETE (1983). ALL DUCTS SHALL BE GROUTED FULL. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE GROUT INLETS AND VENTS, WITH VALVES ON ALL VENTS AND INLETS, IN ACCORDANCE WITH THE ABOVE-REFERENCED SECTION OF AASHTO.

INSTALLED TENDONS SHALL NOT BE LEFT UNGROUTED FOR MORE THAN 30 DAYS. PRESTRESSING STEEL INSTALLED, BUT NOT GROUTED WITHIN THE SPECIFIED NUMBER OF DAYS, SHALL BE PROVIDED WITH AN APPROVED TYPE OF CORROSION PROTECTION AND WILL BE SUBJECT TO REJECTION BECAUSE OF RUST. IF DIRECTED, SUCH TENDONS SHALL BE REMOVED BY THE CONTRACTOR FOR EXAMINATION BY THE DIRECTOR FOR POSSIBLE RUST DAMAGE. IF PRESTRESSING AND GROUTING ARE COMPLETED WITHIN 30 CONSECUTIVE DAYS AFTER INSTALLATION OF STEEL STRANDS IN THE DUCTS, A LIGHT RUST FILM THAT MAY FORM DURING THIS TIME WILL NOT BE CAUSE FOR REJECTION OF THE STEEL. PRESTRESSING STEEL INSTALLED, TENSIONED, AND GROUTED WITHIN THE SPECIFIED TIME WILL NOT REQUIRE THE USE OF RUST INHIBITOR IN THE DUCT FOLLOWING INSTALLATION OF THE PRESTRESSING STEEL.

DUCTS SHALL BE IMMEDIATELY WASHED OUT WHENEVER PARTIAL GROUTING OCCURS AND GROUTING CANNOT BE CONTINUED FOR ANY REASON. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROHIBIT ANY FOREIGN MATERIAL FROM ENTERING THE DUCTS. DUCTS SHALL BE CAPPED AND KEPT FREE OF WATER AND FOREIGN MATERIAL UNTIL TENDONS ARE INSTALLED.

ERECTING PRECAST MEMBERS

PRECAST MEMBERS SHALL BE SET ON PREVIOUSLY CONSTRUCTED COLUMN CAPS. IMMEDIATELY BEFORE A FLOORBEAM OR FASCIA BEAM IS SET IN PLACE ON THE PAD, A LAYER OF FRESH GROUT SHALL BE PLACED ON THE PAD SO THAT ALL IRREGULARITIES IN THE INTERFACE OF BEAM AND PAD WILL BE FILLED WITH GROUT. EXCESS GROUT THAT IS SQUEEZED OUT SHALL BE TRIMMED AWAY AND THE EDGES OF THE INTERFACE SHALL BE POINTED FLUSH WITH THE EDGES OF THE BEAM BEARING AREA.

AS FLOORBEAMS ARE SET IN PLACE THE REINFORCING PROJECTING FROM THE EXISTING COLUMNS TO SERVE AS DOWELS, SHALL BE CAREFULLY PROTECTED FROM DAMAGE AND DEBONDING AT THE TOP OF THE PAD. AFTER A FLOORBEAM IS IN PLACE THE BARS SHALL BE STRAIGHTENED AS MAY BE NECESSARY TO PROVIDE 2 INCHES OF COVER AFTER THE FLOORBEAM WEB BLOCK OUTS ARE GROUTED.

GROUTING BLOCK OUTS AND MORTAR JOINTS

BLOCK OUTS IN THE PRECAST CONCRETE BEAMS FOR PRESTRESSING TENDON AND THREADBAR ANCHORAGES, AND FOR DOWEL BARS, AND THE GAPS BETWEEN ENDS OF FASCIA BEAMS AND FLOORBEAMS SHALL BE FILLED WITH NON-SHRINK GROUT. THE CONTACT SURFACES BETWEEN GROUT AND PRECAST CONCRETE SHALL BE GIVEN A MEDIUM SANDBLAST BEFORE THE BEAMS ARE ERECTED AND SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, AND OTHER FOREIGN MATERIAL JUST PRIOR TO PLACING GROUT. THE SURFACES SHALL BE WETTED BUT SHALL HAVE NO FREE WATER WHEN GROUT IS PLACED.

A LIST OF APPROVED NON-SHRINK GROUT MATERIALS IS MAINTAINED BY THE OHIO DEPARTMENT OF TRANSPORTATION TESTING LABORATORY LOCATED AT 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223. OTHER GROUTS MAY BE SUBMITTED FOR TESTING NOT LESS THAN 30 DAYS PRIOR TO THE TIME THEY ARE NEEDED, AND IF APPROVED, MAY BE USED IN THE PROJECT.

SSN 7706871

McCoy Associates Inc. 3B/64
CONSULTING ENGINEERS
AKRON, OHIO

STRUCTURAL GENERAL NOTES

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
UBH			M3C	M3C	6-4-07	

STRUCTURAL GENERAL NOTES

FHWA REGION	STATE	PROJECT
5	OHIO	

21
81

CUY 82-15.64
SUM 82- 0.00

GROUT FOR THE JOINT BETWEEN FASCIA BEAMS AND FLOORBEAMS AND FOR BLOCK OUTS AT THE TOP OF FASCIA BEAMS SHALL BE SUFFICIENTLY FLUID TO FLOW FREELY INTO PLACE AND SHALL BE PLACED IN SUCH MANNER THAT VOIDS AND AIR POCKETS WILL NOT OCCUR IN THE GROUT. MORTAR-TIGHT FORM BOARDS SHALL BE PROVIDED AT THE SIDES OF THE JOINTS AND BLOCK OUTS. IF NECESSARY TO OBTAIN RESULTS SATISFACTORY TO THE ENGINEER, THE GROUT SHALL BE PUMPED INTO THE JOINT FROM THE BOTTOM OF THE BEAMS.

BLOCK OUTS THAT ARE NOT ACCESSIBLE FROM THE TOP AND THAT ARE OPEN TO THE SIDES ONLY, SHALL BE FILLED WITH GROUT BY PUMPING OR POURING A FLUID MIX INTO FORMS, BY THOROUGHLY TAMPING A DRY MIX, OR BY OTHER METHODS THAT WILL PRODUCE RESULTS SATISFACTORY TO THE ENGINEER.

GROUT MATERIALS SHALL BE STORED, HANDLED, MIXED, AND PLACED IN ACCORDANCE WITH THE GROUT MANUFACTURER'S RECOMMENDATIONS. A QUALIFIED TECHNICAL REPRESENTATIVE OF THE GROUT MANUFACTURER SHALL BE AVAILABLE AT THE SITE FOR CONSULTATION AND ADVICE PRIOR TO AND DURING INITIAL GROUTING OPERATIONS AND THEREAFTER WHEN REQUESTED BY THE ENGINEER.

METHOD OF MEASUREMENT

WORK PERFORMED AS SPECIFIED HEREIN FOR FLOOR BEAMS AND FASCIA BEAMS WILL BE MEASURED AS TWO SEPARATE UNITS, ACCEPTABLY PERFORMED.

BASIS OF PAYMENT

THE PRECAST CONCRETE FLOORBEAMS AND PRECAST CONCRETE FASCIA BEAMS, INCLUDING APPURTENANCES, WILL BE PAID FOR AT THE RESPECTIVE CONTRACT LUMP SUM PRICES WHICH SHALL INCLUDE THE COST OF ALL WORK HEREIN DESCRIBED.

CUYAHOGA COUNTY				SUMMIT COUNTY				ESTIMATED QUANTITIES							
SUPER.	ABUTS	PIERS GEN LUMP	TOTAL	SUPER	ABUTS	PIERS GEN LUMP	TOTAL	ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GENERAL
								202	LUMP		PORTIONS OF STRUCTURES REMOVED.				LUMP
	52		52		52		52	503	104	C.Y.	UNCLASSIFIED EXCAVATION.		104		
1906	11,154	250	13,410	3542	9053	650	13,245	509	26,656	LBS.	REINFORCING STEEL, GRADE 60.	5,449	20,207		1,000
51			51	95			95	511	146	C.Y.	CLASS "S" CONCRETE, DECK JOINTS. (SEE PROPOSAL NOTES)	146			
440			440	818			818	511	1258	C.Y.	CLASS "S" CONCRETE, SUPERSTRUCTURE. (SEE PROPOSAL NOTES)	1258			
	87.5		87.5		87.5		87.5	511	175	C.Y.	CLASS "C" CONCRETE, ABUTMENTS. (SEE PROPOSAL NOTES)		175		
22			22	40			40	511	62	C.Y.	CLASS "C" CONCRETE, COLUMNS. (SEE PROPOSAL NOTES)	62			
387			387	718			718	515	1,105	L.F.	PRESTRESSED CONCRETE BRIDGE MEMBERS (17'36"). (SEE PROPOSAL NOTES)	1,105			
3094			3094	5747			5747	515	8,841	L.F.	PRESTRESSED CONCRETE BRIDGE MEMBERS (17'48"). (SEE PROPOSAL NOTES)	8,841			
774			774	1436			1436	515	2,210	L.F.	PRESTRESSED CONCRETE BRIDGE MEMBERS (17'48" MODIFIED) (SEE PROPOSAL NOTES)	2,210			
LUMP			LUMP	LUMP			LUMP	515	LUMP		PRECAST CONCRETE FASCIA BEAMS.	LUMP			
LUMP			LUMP	LUMP			LUMP	515	LUMP		PRECAST CONCRETE FLOOR BEAMS.	LUMP			
724			724	1344			1344	516	2,068	EACH	1 5/8" x 4" x 5" LAMINATED ELASTOMERIC BEARING PAD, 60 DUROMETER.	2,068			
108			108	200			200	516	308	EACH	1 5/8" x 4" x 6" LAMINATED ELASTOMERIC BEARING PAD, 60 DUROMETER.	308			
15			15	29			29	516	44	EACH	1 5/8" x 5" x 6" LAMINATED ELASTOMERIC BEARING PAD, 60 DUROMETER.	44			
8.5			8.5	8.5			8.5	516	17	S.F.	1" PREFORMED EXPANSION JOINT FILLER.		17		
129			129	215			215	516	344	L.F.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC COMPRESSION SEALS.	344			
	30.5		30.5		30.5		30.5	518	61	C.Y.	POROUS BACKFILL, AS PER PLAN.		61		
				6			6	518	6	EACH	SCUPPERS, INCLUDING SUPPORTS.	6			
48			48	90			90	518	138	L.F.	8" Ø DOWNSPOUTS, GALVANIZED STEEL 707.08, INCLUDING SPECIALS.	138			
	44		44		44		44	518	88	L.F.	6" PERFORATED HELICAL CSP, INCLUDING SPECIALS, 707.01.		88		
	13.5		13.5		13.5		13.5	518	27	L.F.	6" NON-PERFORATED HELICAL CSP, INCLUDING SPECIALS, 707.01.		27		
1183	2	799	1984	3157	1	2795	5953	519	7,937	S.F.	PATCHING CONCRETE STRUCTURES.	4340	9	3594	
44,999	86		45,085	83,567	86		83,653	824	128,738	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60.	128,566	172		
1309	29.5		1338.5	2432	29.5		2461.5	SPEC.	3,800	S.Y.	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTES).	3,741	59		

SSN 7706871

McCOY ASSOCIATES, INC. 4/64
CONSULTING ENGINEERS
AKRON, OHIO

STRUCTURAL GENERAL NOTES
AND
ESTIMATED QUANTITIES
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	B.M.R.		MAM TAB	MSC	6-4-87	



①. FOR THREADBAR AND P/S BAR DETAILS,
SEE SHEET 2/64.

②. FOR ADDITIONAL NOTES, SEE SHEET 6/64

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE

SSN 7706871

McCOY ASSOCIATES INC. 5/64
CONSULTING ENGINEERS
AKRON, OHIO

WEST ABUTMENT
DETAILS

BRIDGE No. SUM 82 - 0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

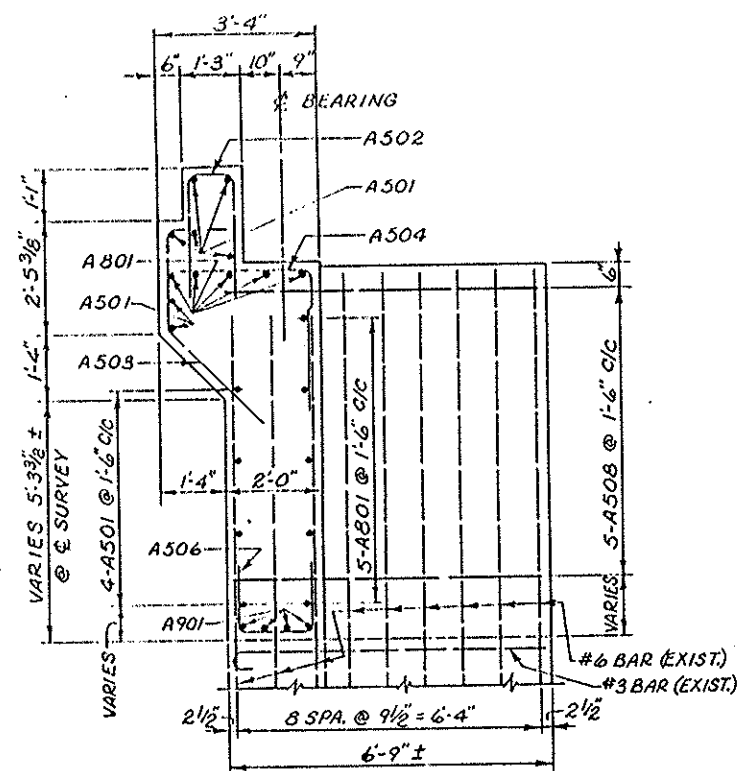
DESIGNED	DRAWN	TRACED	CHECKED TAB RPL	REVIEWED	DATE	REVISE
JBH	B.M.R.			MSC	6-4-87	

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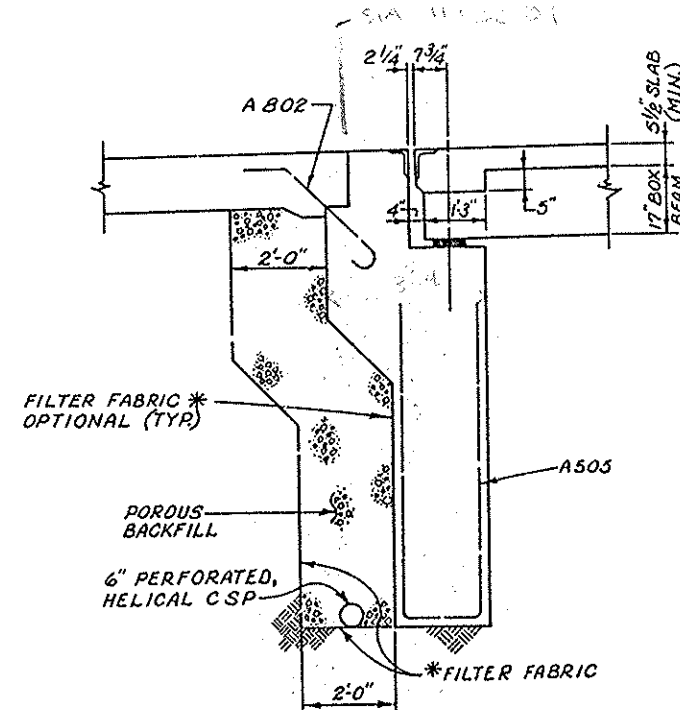
CUY. 82-15.64
SUM. 82- 0.00

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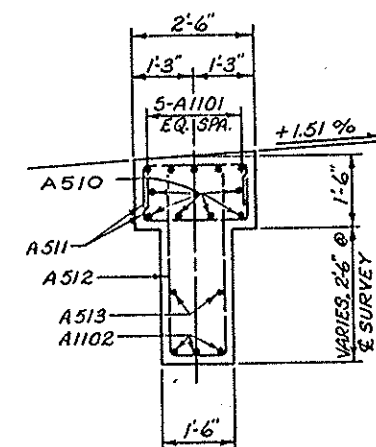
- ① *FILTER FABRIC SHALL CONFORM TO ITEM 712.09, TYPE A AND SHALL BE INCLUDED WITH POROUS BACKFILL FOR PAYMENT.
- ② BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.
- ③ MINIMUM LAP REQUIRED
Nº 5 BARS - 1'-4"
Nº 6 BARS - 1'-5"
Nº 8 BARS - 2'-7"
OR AS SHOWN ON PLANS.
- ④ POROUS BACKFILL, 2 FT. THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND Laterally TO THE ENDS OF THE ABUTMENT BEARING WALLS.



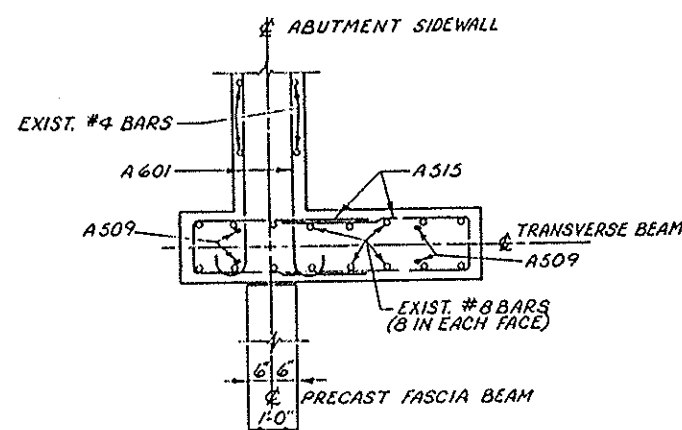
SECTION E-E



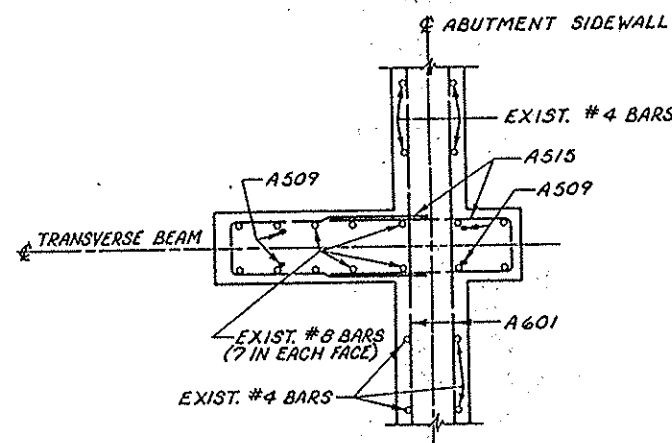
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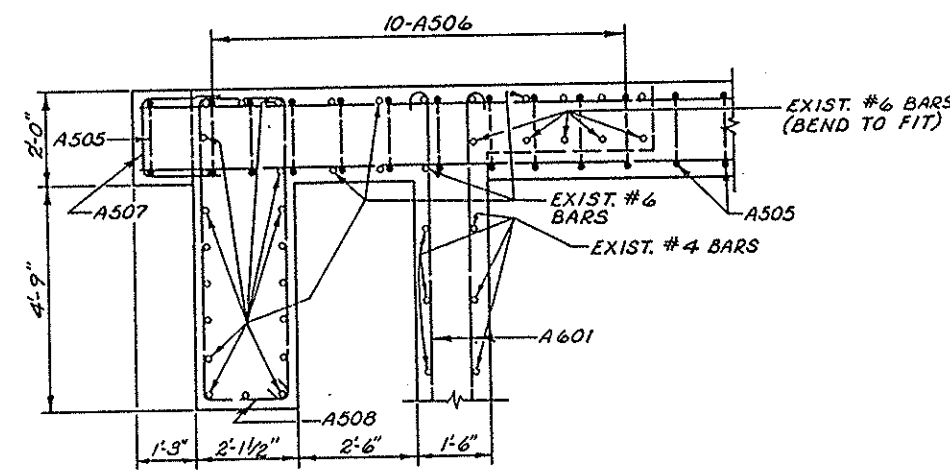
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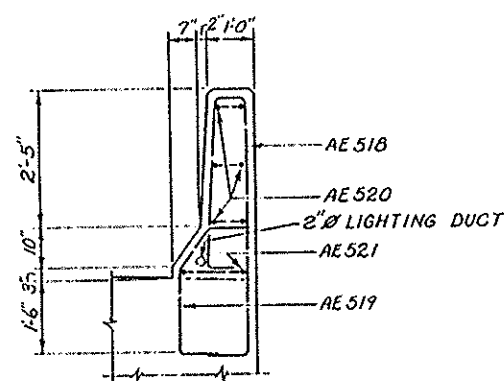
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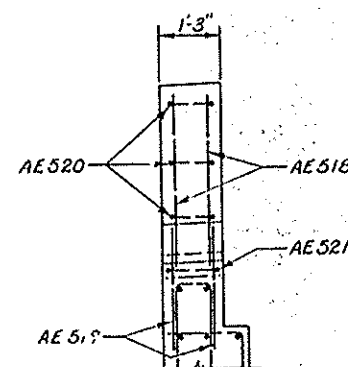
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SECTION K-K



SECTION L-L



SECTION M-M

SSN 7706871

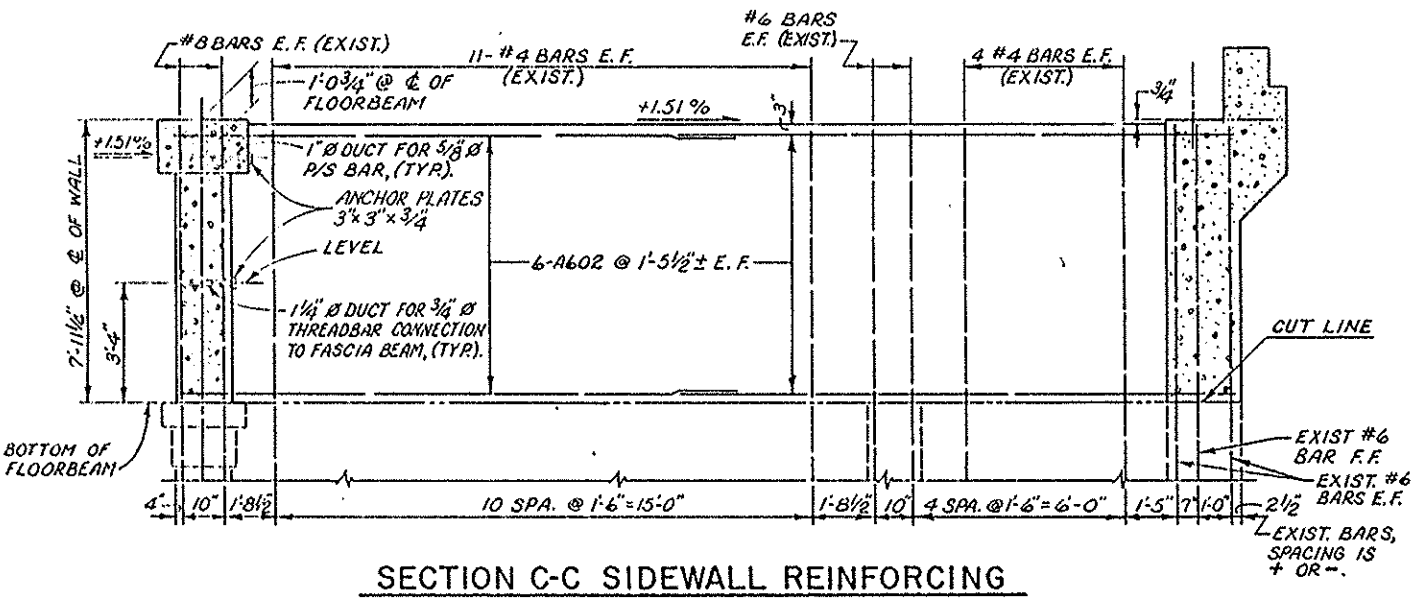
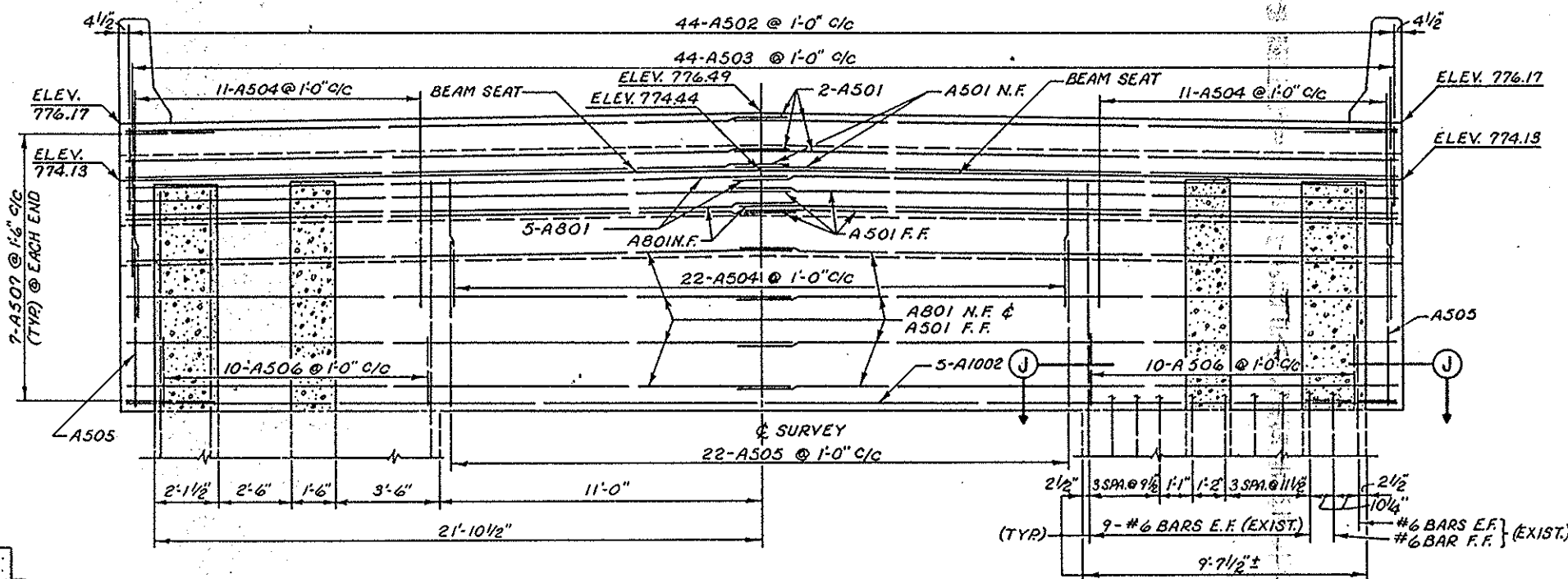
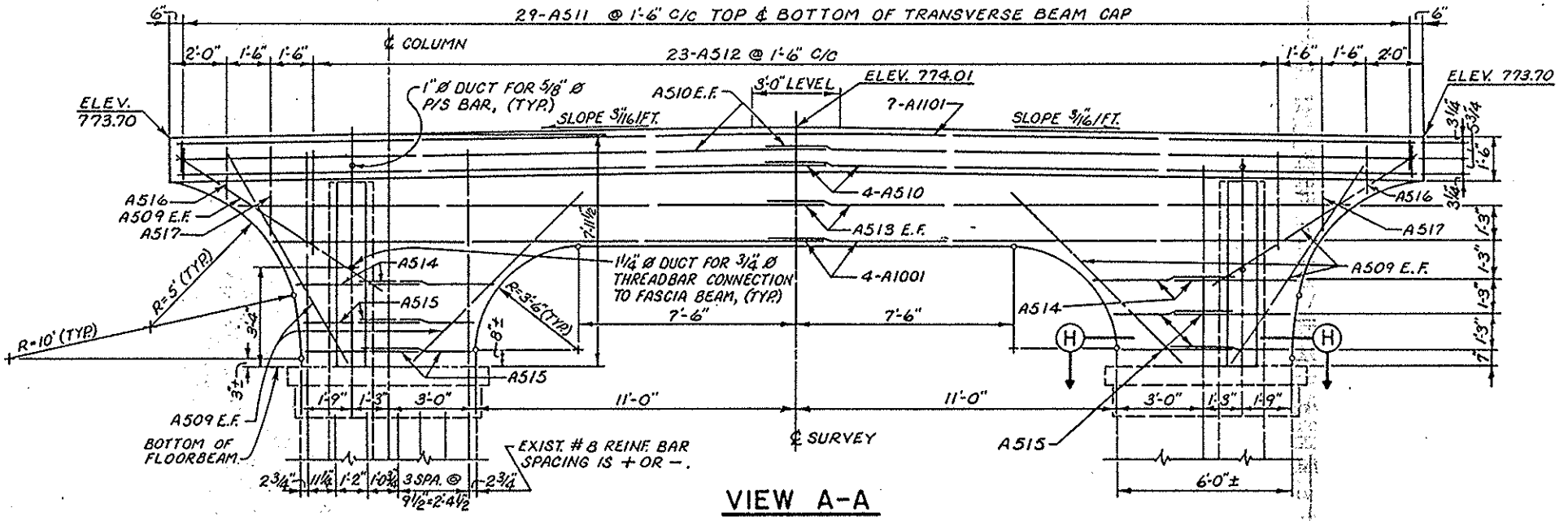
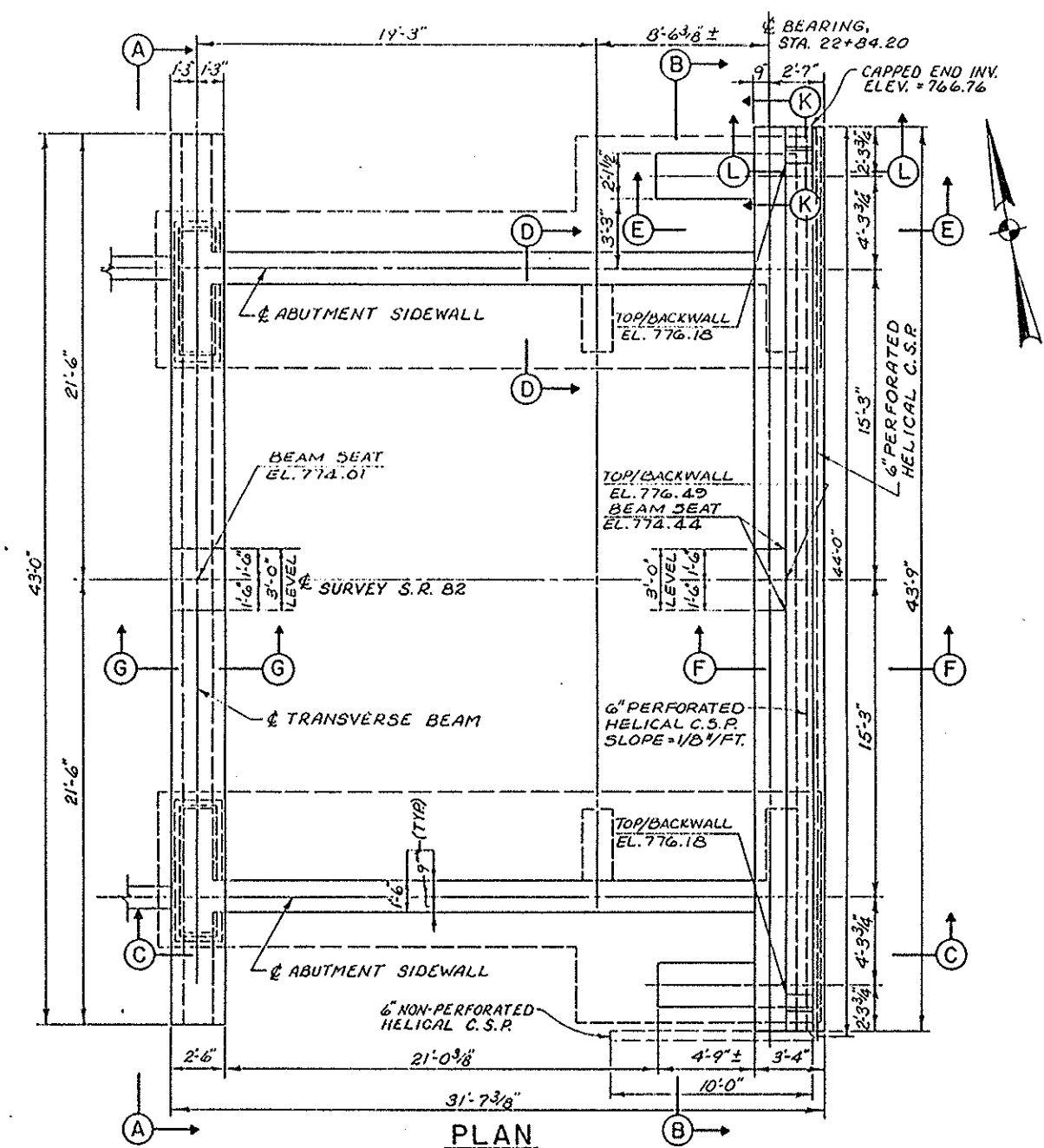
McCOY ASSOCIATES INC. 66
CONSULTING ENGINEERS
AKRON, OHIO

WEST ABUTMENT
DETAILS

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REV
JBH	B.M.R.		TAB RPL	MSC	6-4-87	

CUY 82-15.64
SUM 82- 0.00



NOTES

① FOR THREADBAR AND P/S BAR DETAILS, SEE SHEET 9/64.

② FOR ADDITIONAL NOTES, SEE SHEET 6/64.

LEGEND

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE

SSN 7706871

McCOY ASSOCIATES INC. 7/64
CONSULTING ENGINEERS
AKRON, OHIO

EAST ABUTMENT DETAILS

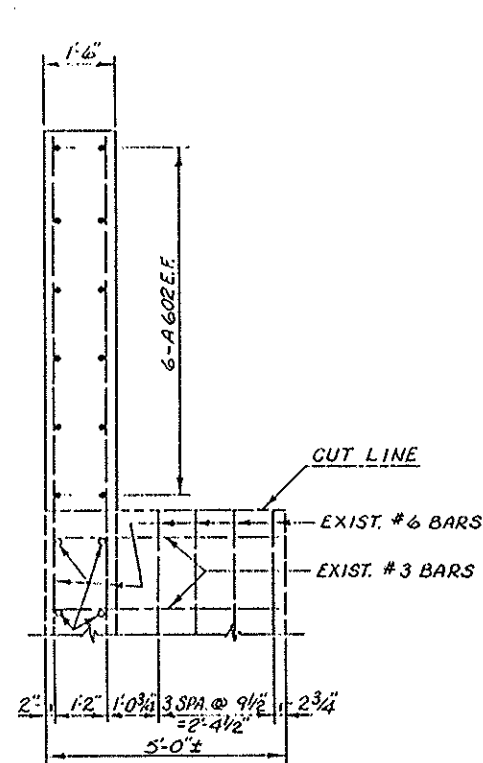
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OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	B.M.R.		RFL	MSC	6-4-87	

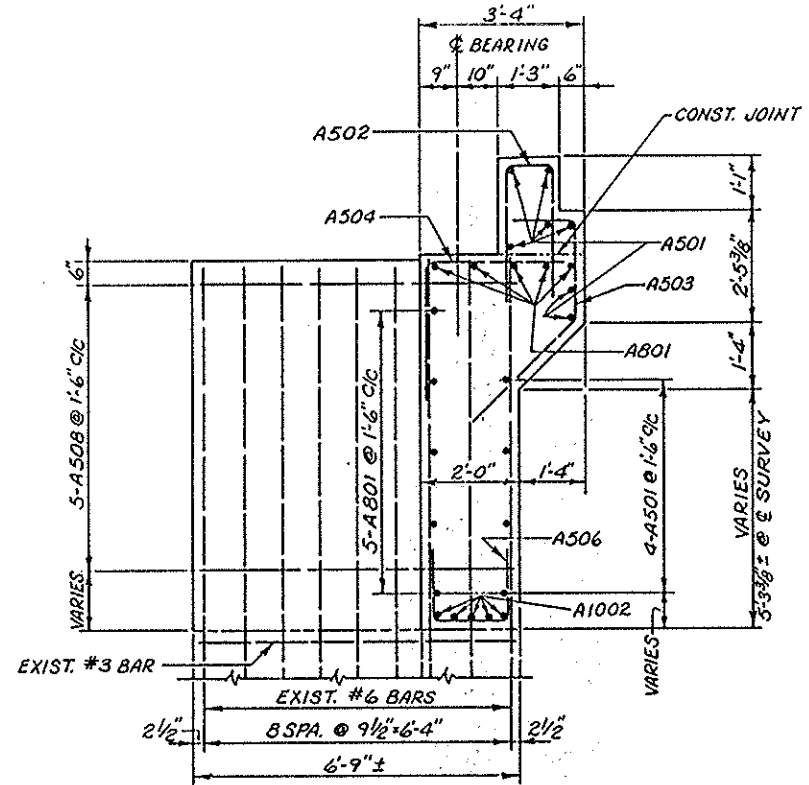
AREA	STATE	PROJECT
5	OHIO	

(25)
81

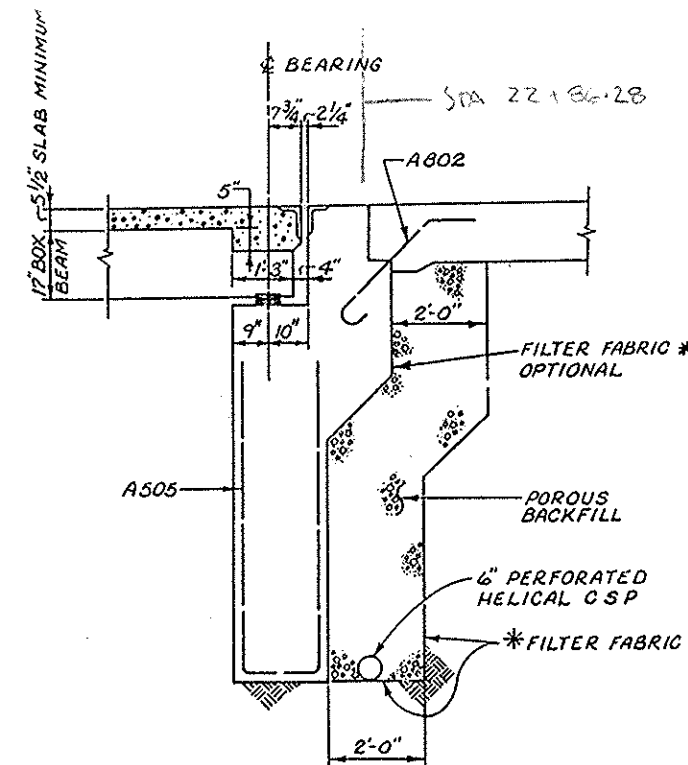
CUY 82-15.64
SUM 82- 0.00



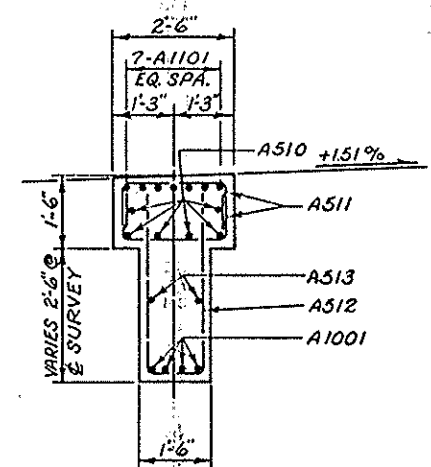
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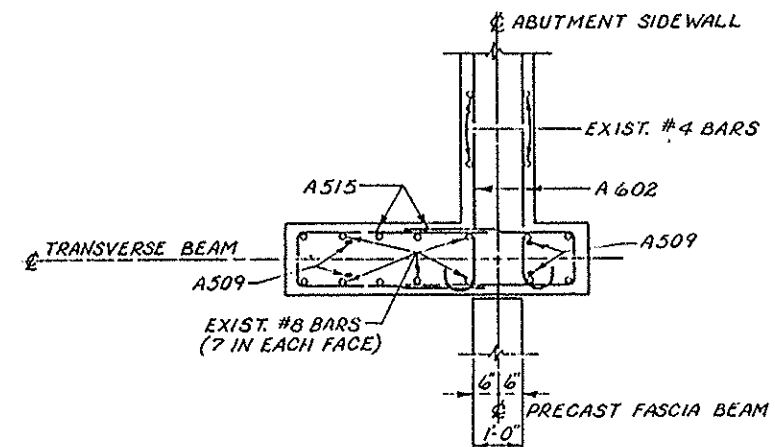
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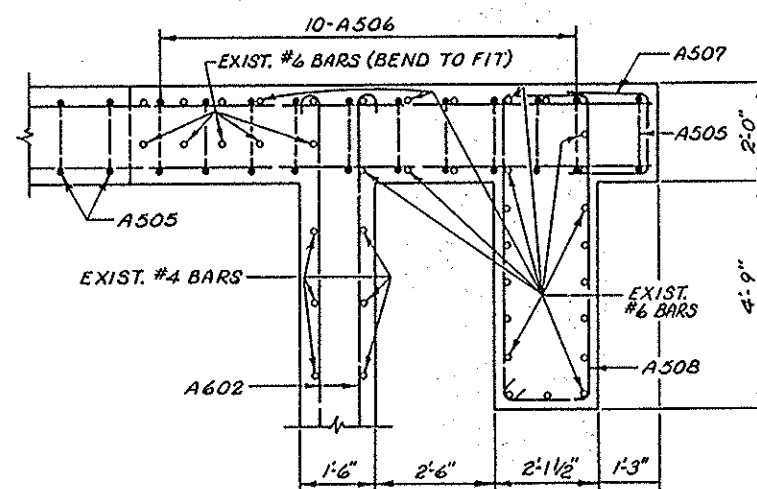
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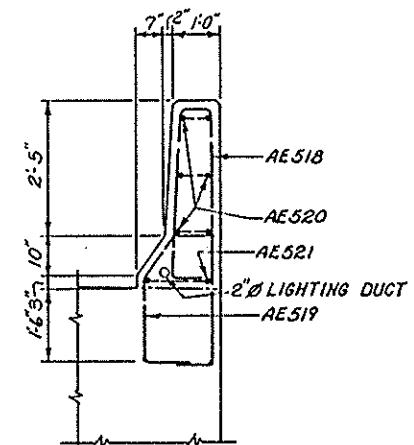
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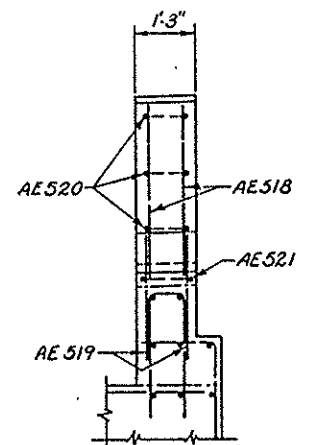
SECTION H-H



SECTION J-J



SECTION K-K



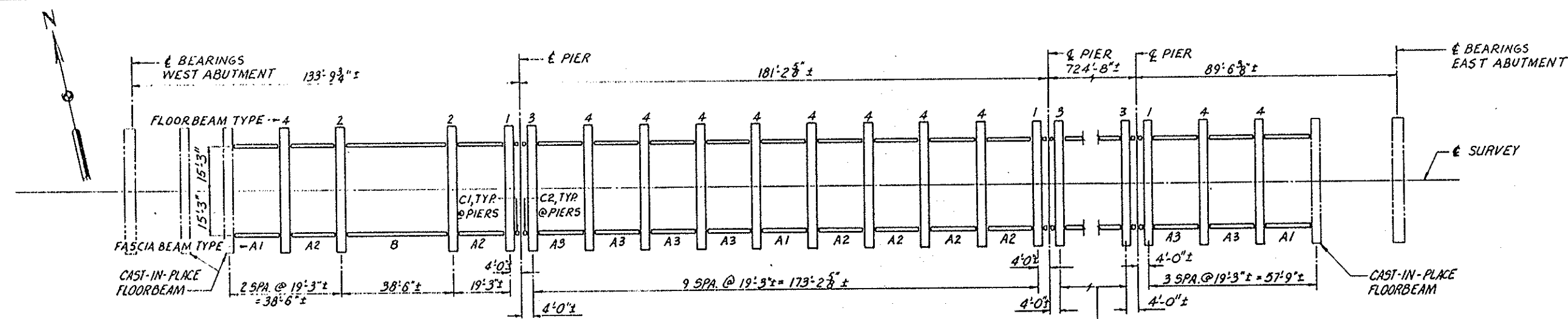
VIEW L-L

NOTES
FOR NOTES, SEE SHEET 6/64

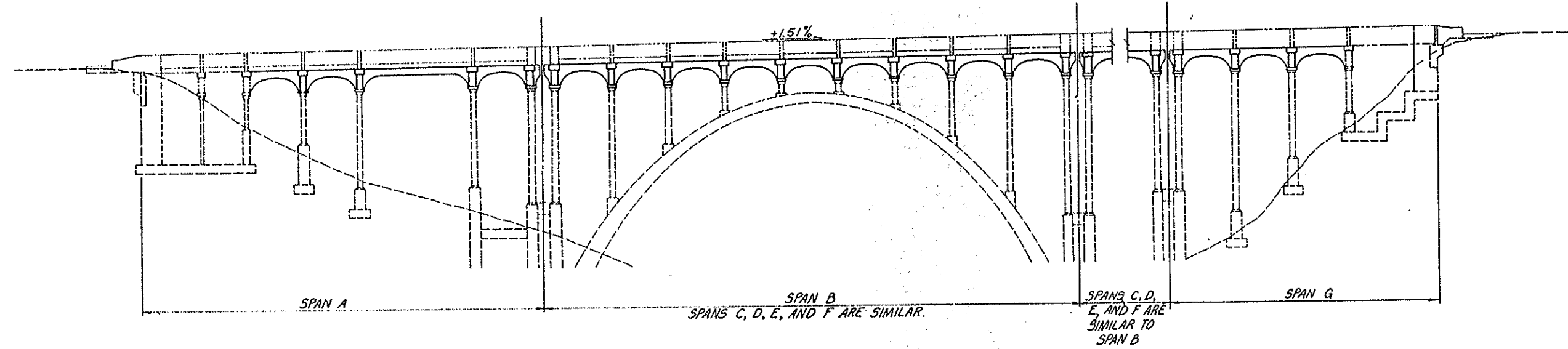
SSN 7706871

McCOY ASSOCIATES INC.				8/64	
CONSULTING ENGINEERS					
AKRON, OHIO					
EAST ABUTMENT DETAILS					
BRIDGE No. SUM 82-0000 OVER CUYAHOGA RIVER SUMMIT COUNTY STATE ROUTE 82					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JBH	AMR		RPL TAB	MSC	6-4-87

CUY 82-15.64
SUM 82-0.00



9 SPA. @ 19'-5" ± = 173'-2 5/8" ±
9 SPA. @ 19'-2 3/8" ± = 173'-1 1/2" ± SPAN C
9 SPA. @ 19'-2 3/8" ± = 173'-2" ± SPAN D
9 SPA. @ 19'-3 3/8" ± = 173'-3 3/8" ± SPAN E
9 SPA. @ 19'-2 3/8" ± = 173'-0 1/2" ± SPAN F



NOTE: FLOORBEAM TYPE 3 IS NOT USED TO CARRY LOAD; BEARING PADS ARE NOT TO BE USED ON FLOORBEAM TYPE 3.

SSN 7706871

HOWARD NEEDLES TAMMEN & BERGENDOFF **HNTB**

DATE 1.1.87 DATE 2-87 CHECKED JEL DATE 4-87

McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
DAYTON, OHIO

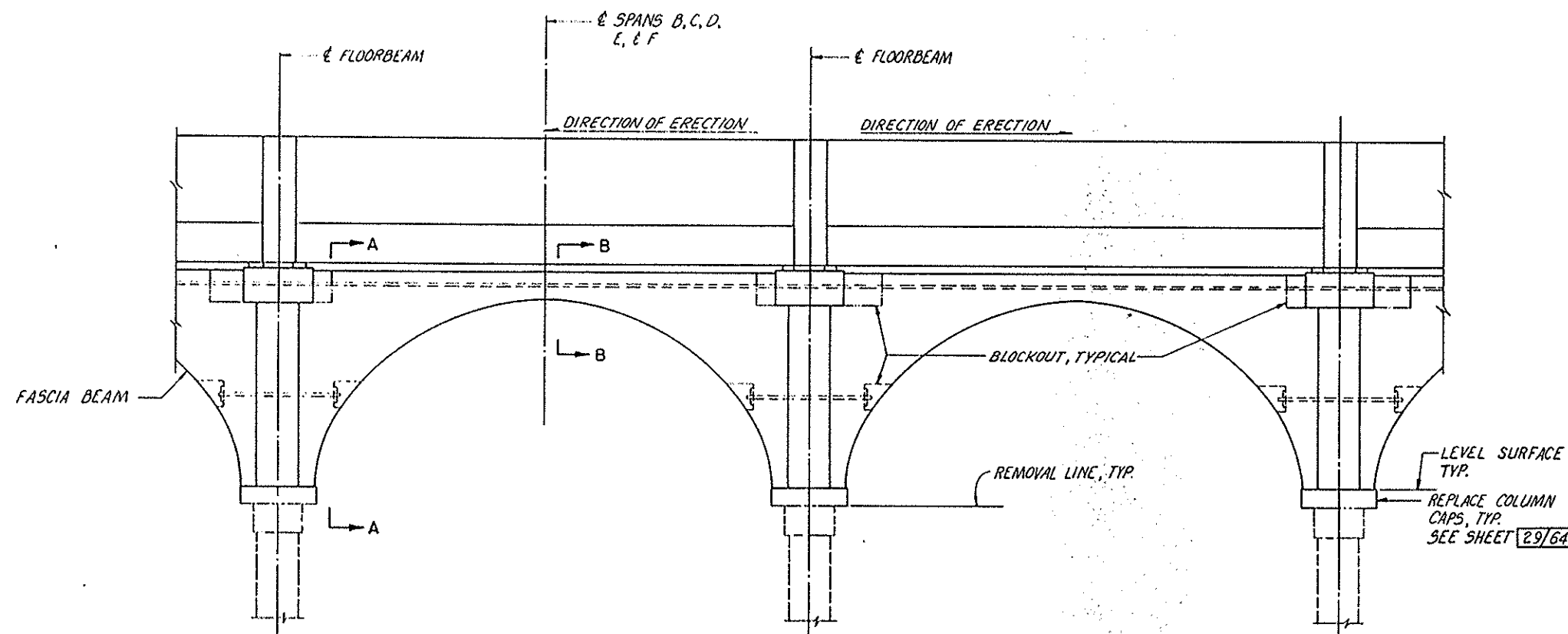
FLOORBEAM AND FASCIA BEAM LAYOUT

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

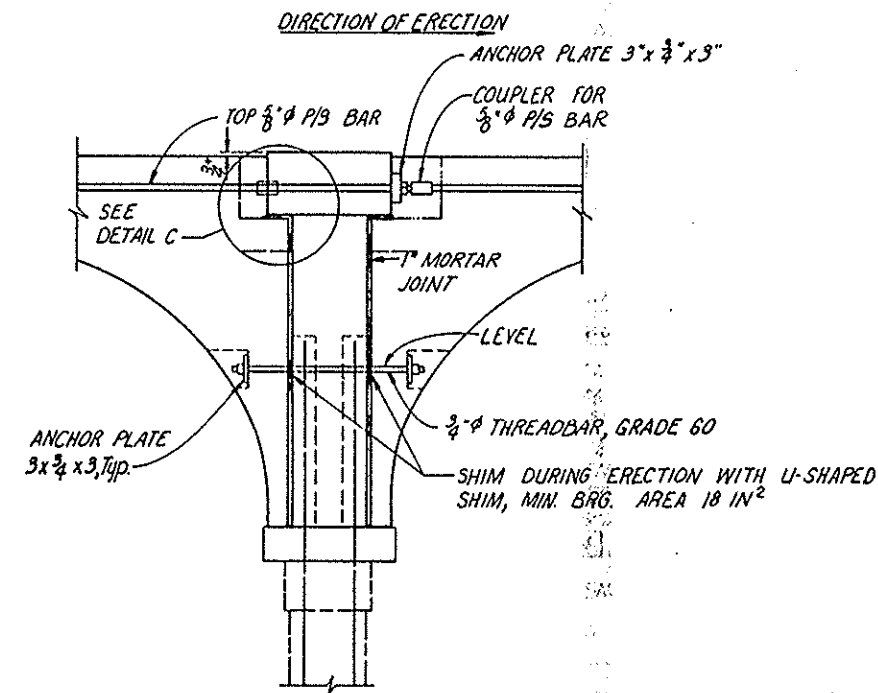
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS

11216-21-02

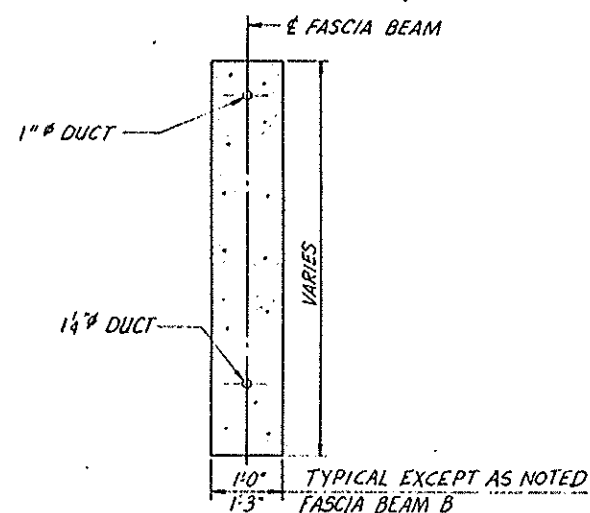
CUY 82-15.64
SUM 82-000



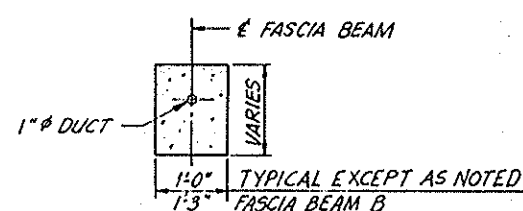
FASCIA BEAM ELEVATION



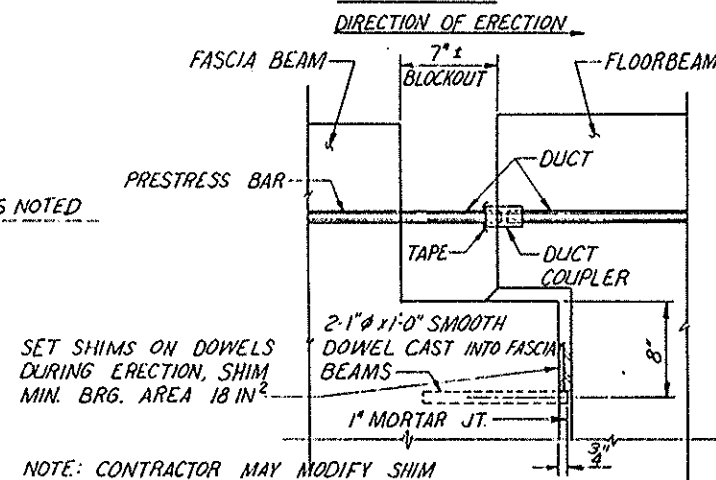
FASCIA BEAM CONNECTION



SECTION A-A



SECTION B-B



DETAIL C

SET SHIMS ON DOWELS DURING ERECTION, SHIM MIN. BRG. AREA 18 IN²

NOTE: CONTRACTOR MAY MODIFY SHIM DETAILS WITH APPROVAL OF THE ENGINEER.

ERECTION SEQUENCE

1. REMOVE EXISTING DECK TO REMOVAL LINE AS SHOWN. SAVE EXISTING COLUMN REINFORCEMENT.
 2. CAST NEW 2'-9" WIDE BY 6'-9" LONG COLUMN CAPS.
 3. PLACE AND SUPPORT THE TWO CENTER FLOORBEAMS.
 - 3a. PLACE AND SUPPORT THE FLOORBEAM ADJACENT TO THE CAST-IN-PLACE FLOORBEAM.
 4. CAST AND CURE FLOORBEAM WEB BLOCKOUTS.
 5. PLACE CONNECTING FASCIA BEAMS BETWEEN FLOORBEAMS. SHIM AND STRESS TOP LONGITUDINAL P/S BAR TO .7 FS (MAXIMUM).
 6. PLACE AND SUPPORT ADJACENT FLOORBEAM.
 7. CAST AND CURE FLOORBEAM WEB BLOCKOUT.
 8. PLACE FASCIA BEAMS BETWEEN FLOORBEAMS. COUPLE TOP BARS, SHIM AND STRESS TOP LONGITUDINAL P/S BARS TO .7 FS (MAXIMUM).
 9. STRESS PRECEDING BOTTOM THREADBARS TO 20 KSI.
 10. CONTINUE ERECTING ALTERNATE FLOORBEAMS AND FASCIA BEAMS FOLLOWING STEPS 6-9.
 11. UPON COMPLETION OF SPAN, PLACE MORTAR JOINTS AND ANCHORAGE BLOCKOUTS.
 12. GROUT TENDONS AND THREADBARS.
- * SPANS B, C, D, E AND F
* SPANS A AND G

NOTES

TOP BARS 3/8" - 150 KSI BARS
BOTTOM BARS 3/4" - GRADE 60 THREADBAR
FOR BEAM IDENTIFICATION SEE FLOORBEAM AND FASCIA BEAM LAYOUT SHEET 9/64
FOR PIER FASCIA BEAM CONNECTIONS SEE SHEET 13/64
CONTRACTOR MAY MODIFY THE PROPOSED ERECTION SEQUENCE WITH THE APPROVAL OF THE ENGINEER.

SSN 7706871

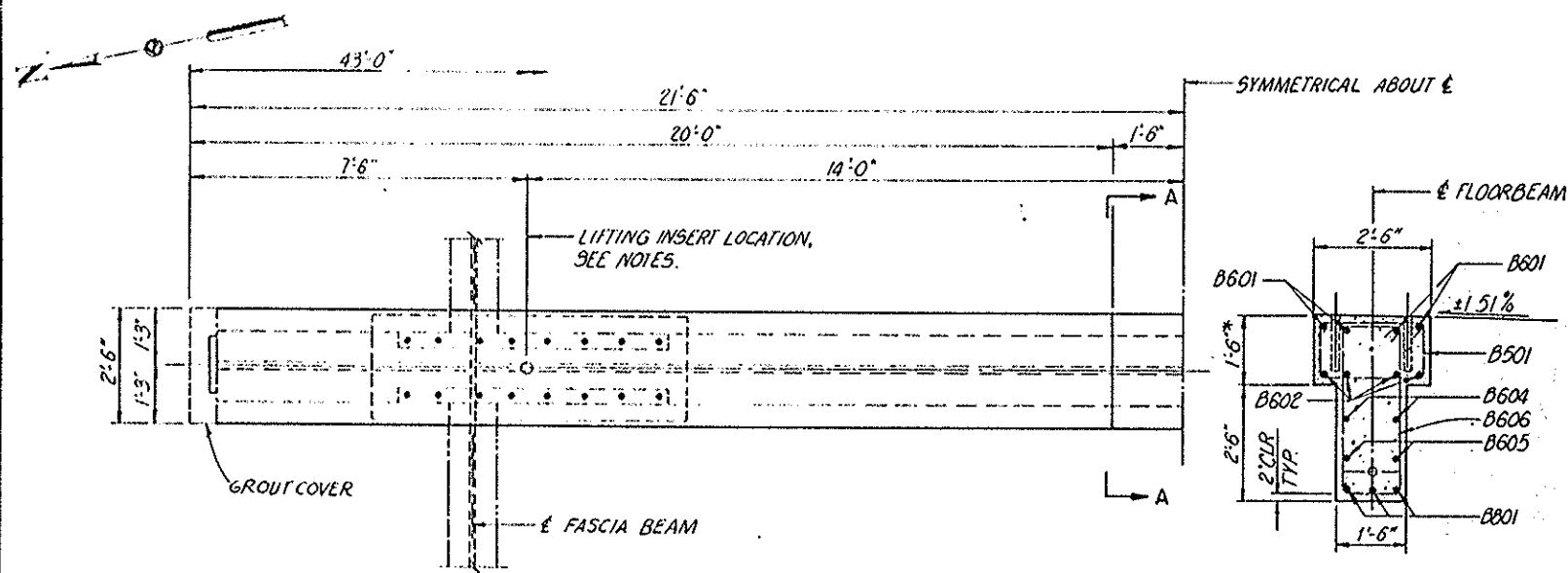
HOWARD NIKLES TAMMEN & BERENSONOFF HNTB
MADE TKT DATE 2-87 CHECKED JEL DATE 4-87
McCOY ASSOCIATES, INC. 10/64
CONSULTING ENGINEERS
AKRON, OHIO

ERECTION DETAILS

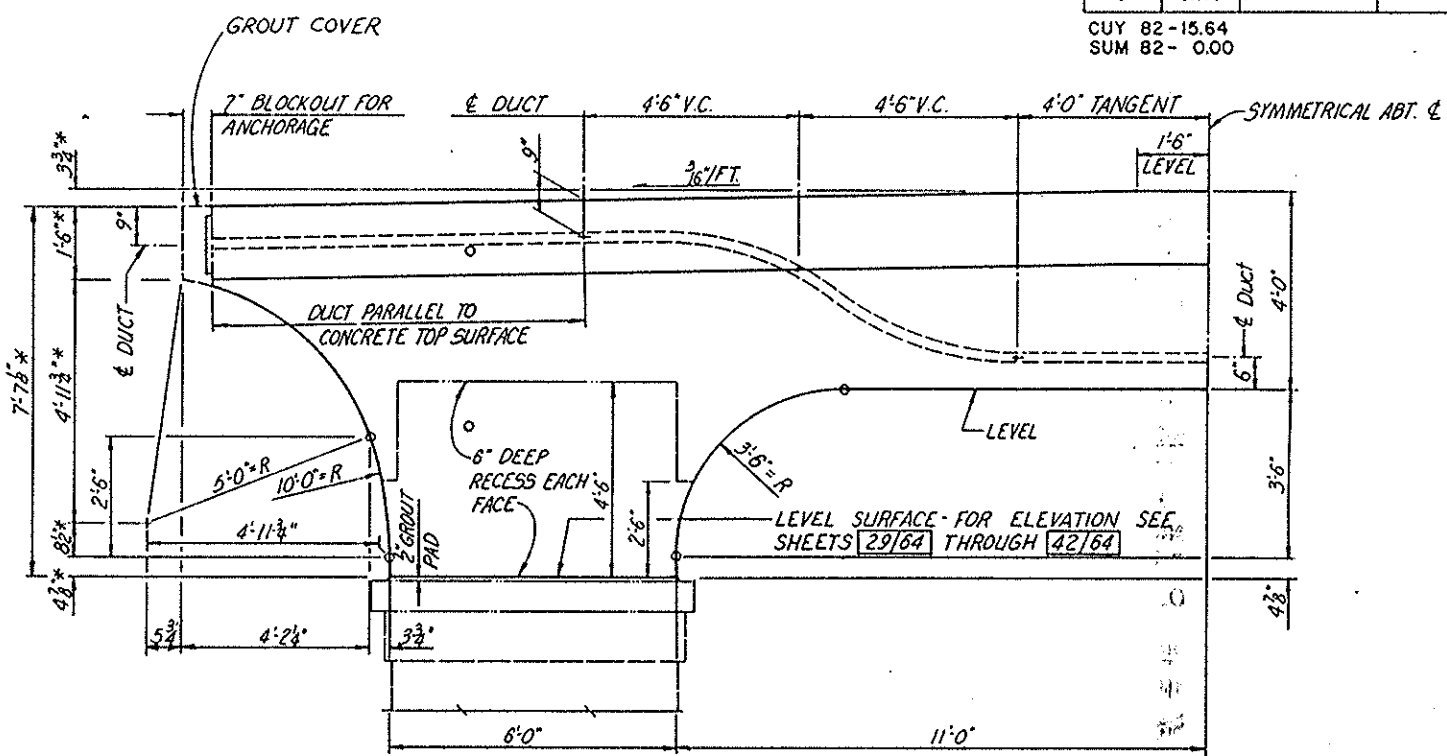
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
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CUY 82-15.64
SUM 82-0.00



SECTION A-A
*MEASURED AT FLOORBEAM



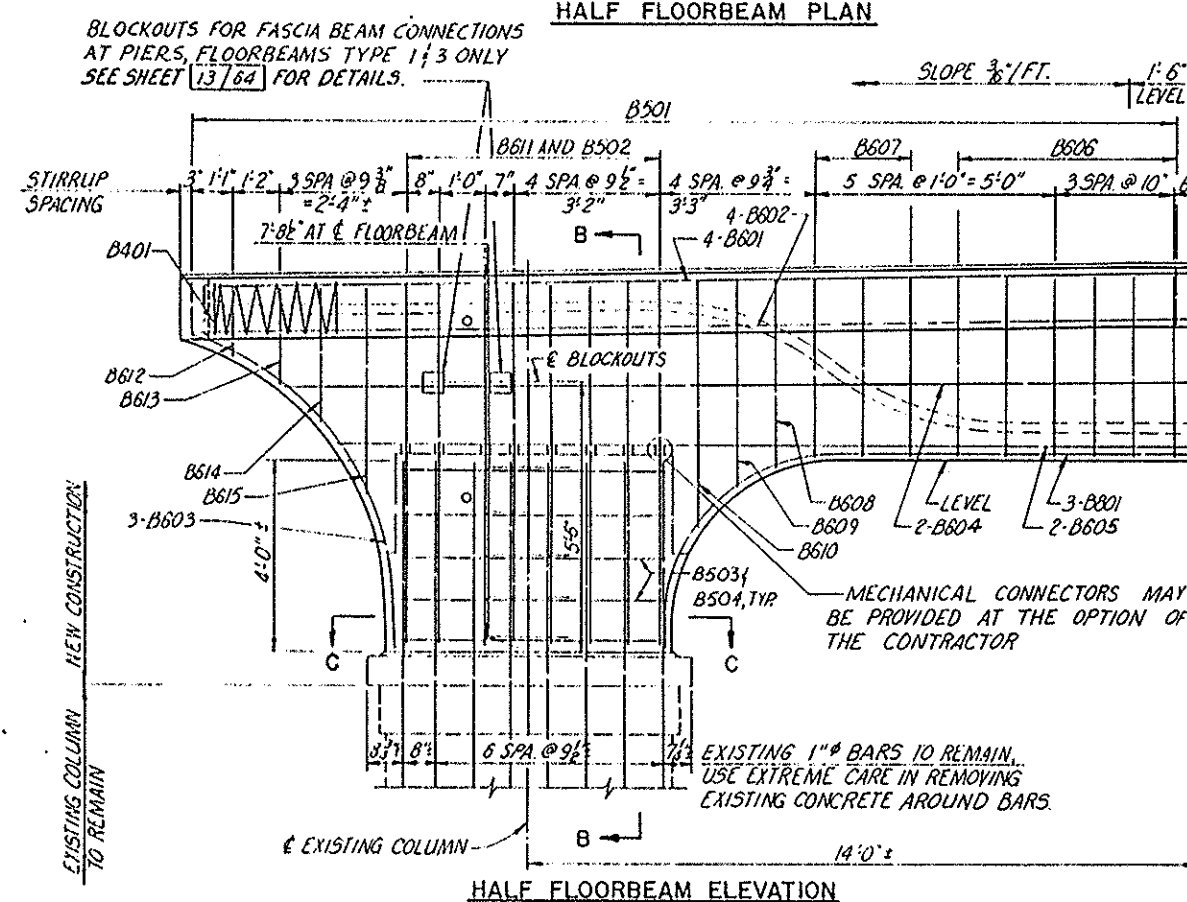
PRESTRESS TENDON LAYOUT

FLOORBEAM TYPE 1 = 12 - 0.6" ϕ STRAND TENDON; ANCHOR PL 13" x 12 1/4" x 1'-0 1/4"
FLOORBEAM TYPE 2 = 14 - 0.6" ϕ STRAND TENDON; ANCHOR PL 24" x 15 3/4" x 1'-3 3/4"
FLOORBEAM TYPE 3 = 4 - 0.6" ϕ STRAND TENDON; ANCHOR PL 13" x 15 3/4" x 1'-3 3/4"
FLOORBEAM TYPE 4 = 10 - 0.6" ϕ STRAND TENDON; ANCHOR PL 13" x 15 3/4" x 1'-3 3/4"
*MEASURED AT FLOORBEAMS

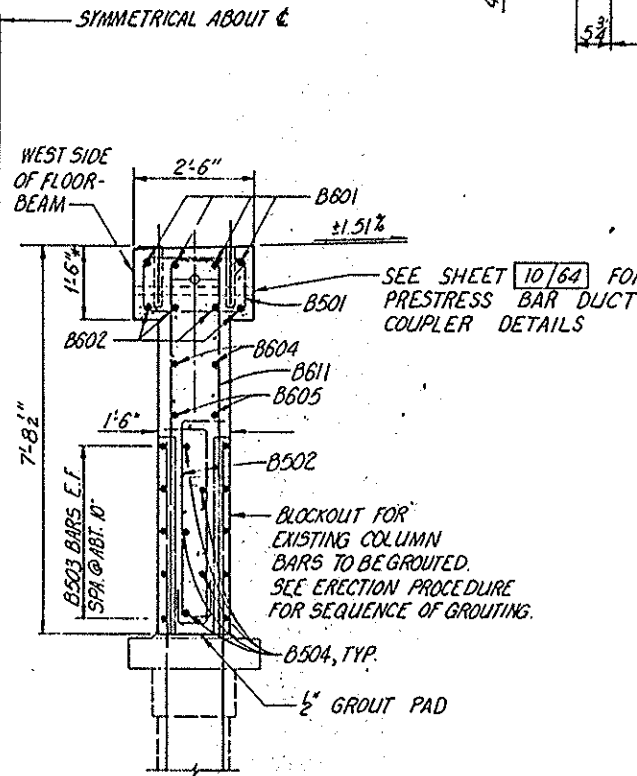
NOTE:
TOP SURFACE OF FLOORBEAMS
TO BE INTENTIONALLY ROUGHENED
PRIOR TO ERECTION. SAND BLASTING
WOULD BE ADEQUATE.

PRESTRESSING NOTES

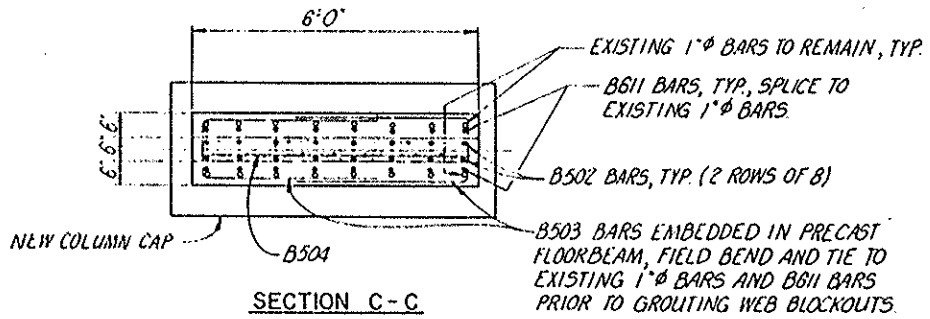
$K = 0.0002$
 $\Delta L = 0.25$
ANCHOR SET = 3/8"
STRANDS - $F_y = 270$ KSI (LOW RELAXATION)
JACKING STRESS = 0.75 F_y
 $F_{ci} = 4000$ psi
 $K = 0.0002$
 $\Delta L = 0.15$
ANCHOR SET = 1/8"
5/8" ϕ P/S BARS - $F_y = 150$ KSI
JACKING STRESS = 0.75 F_y



HALF FLOORBEAM ELEVATION



SECTION B-B



SECTION C-C

NOTES:
LIFTING INSERTS SHALL BE OF CONTRACTOR'S DESIGN AND APPROVED BY THE ENGINEER.
FOR BEAM LAYOUT PLAN SEE SHEET 9/64
SUPPORT LOCATIONS DURING STORAGE AND TRANSPORTATION SHALL BE UNDER THE LIFTING INSERTS. SHIP AND STORE UPRIGHT.
FLOORBEAM STIRRUP REINFORCING SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

SSN 7706871

HOWARD NEEDLES TAMMEN & BERENDSON HNTB

DATE: 2-87 CHECKED: JEL DATE: 4-87

McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
AKRON, OHIO

11/64

FLOORBEAM DETAILS

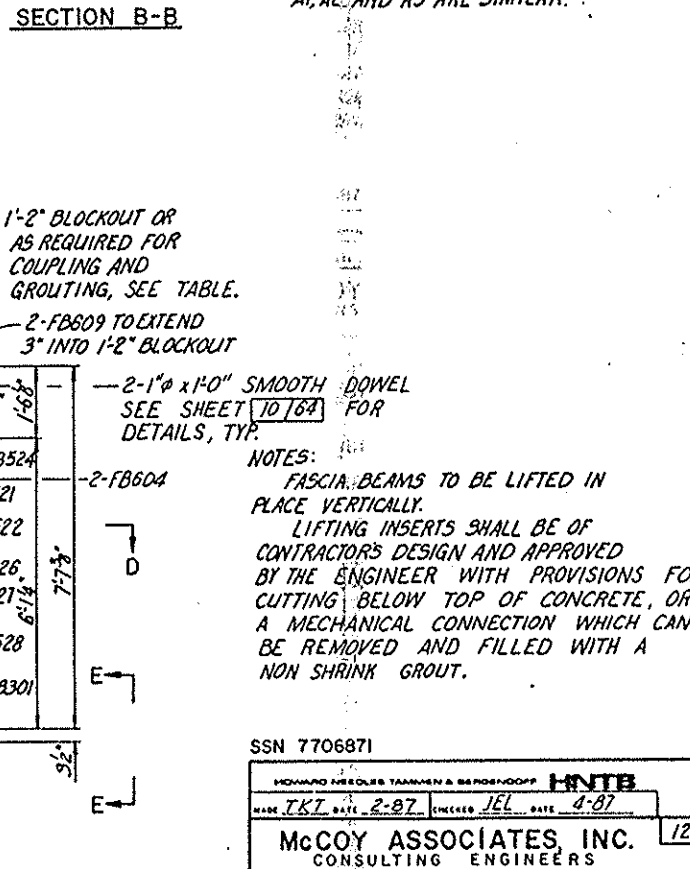
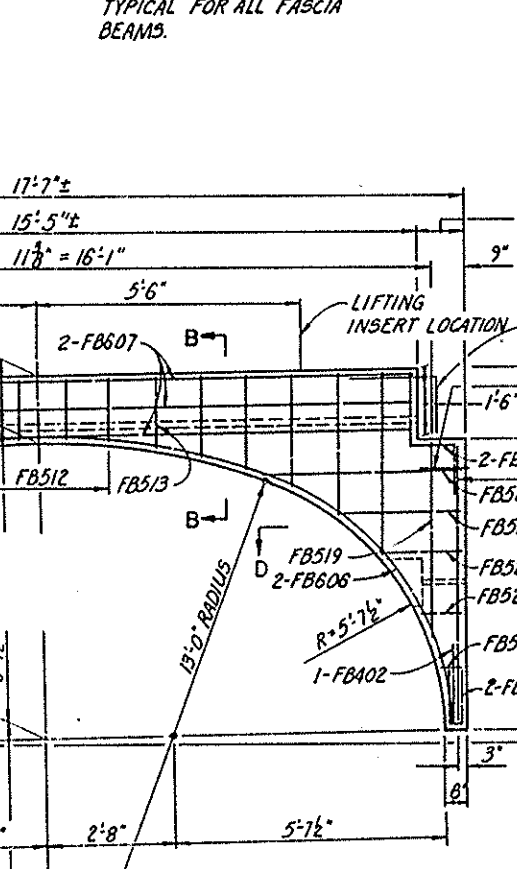
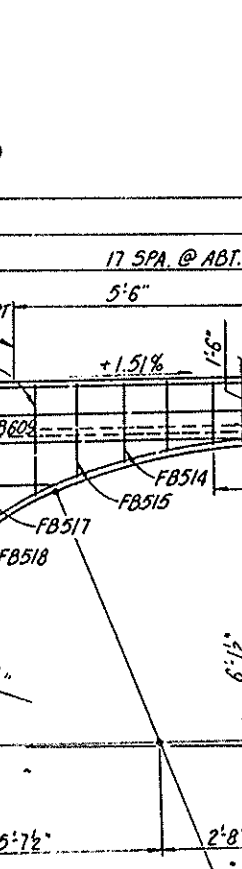
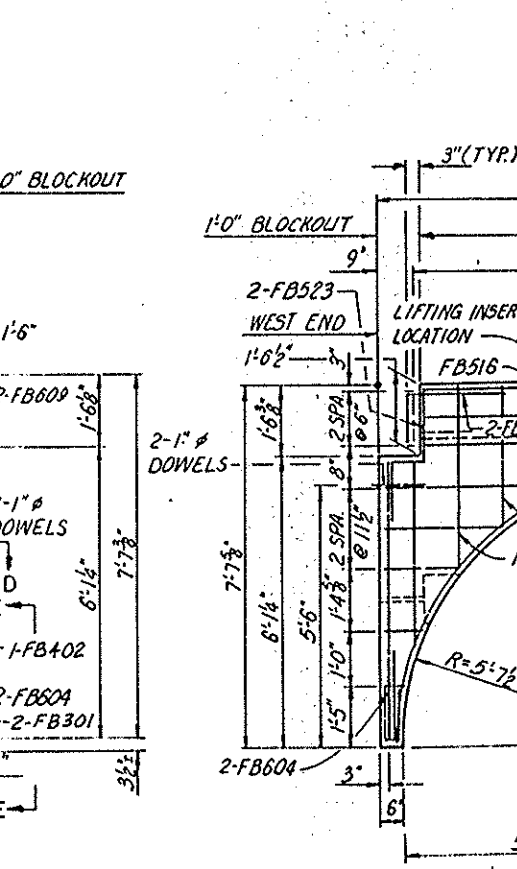
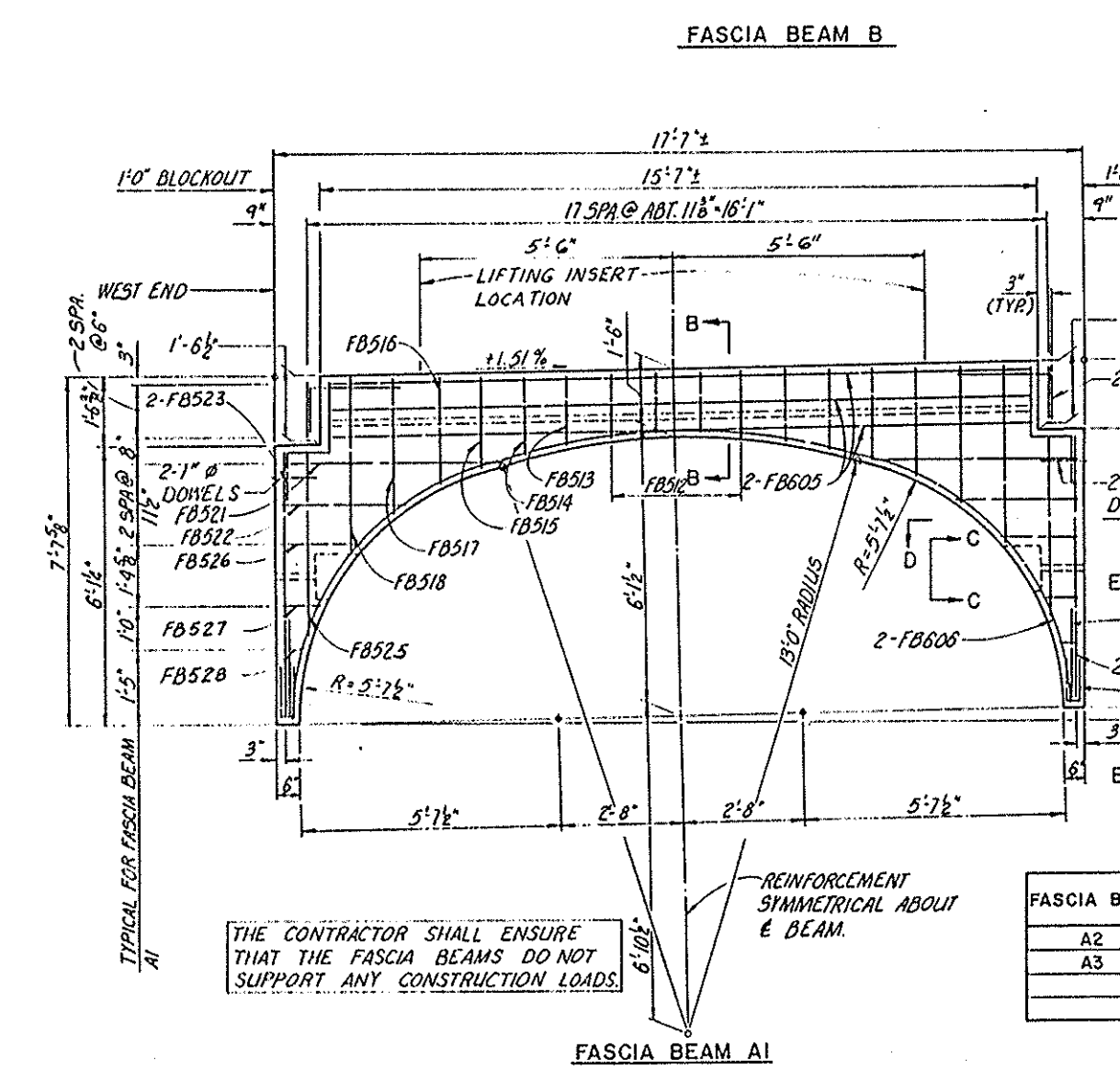
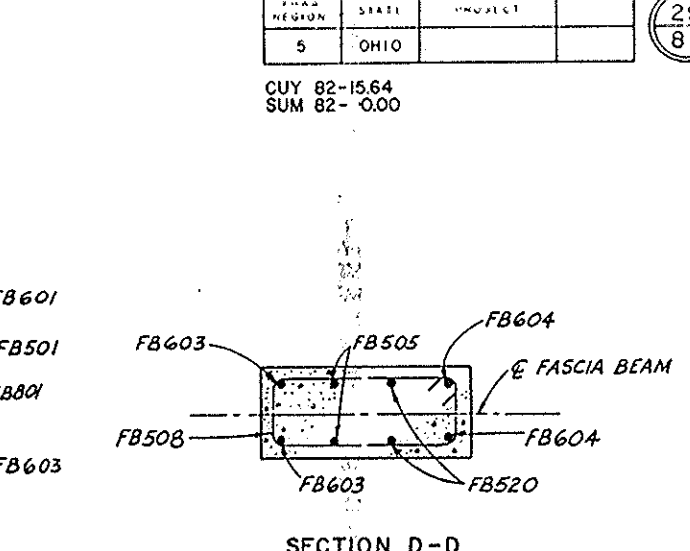
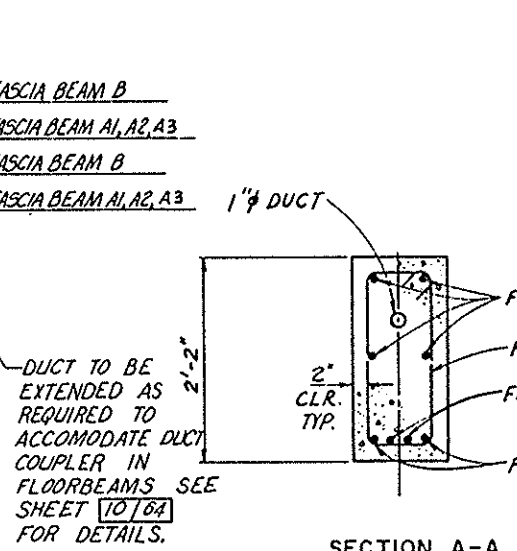
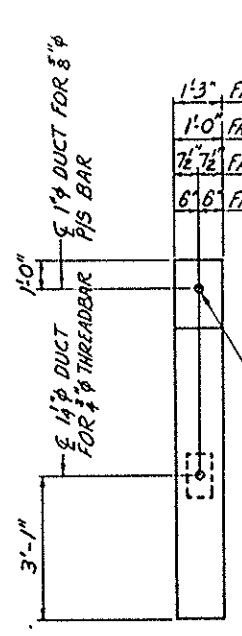
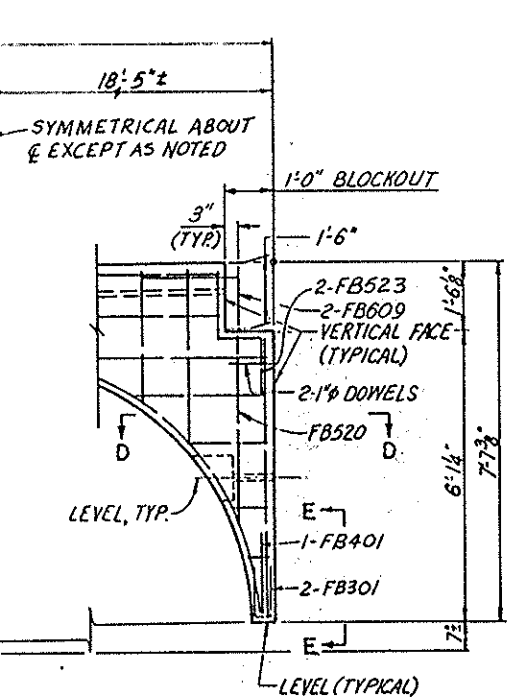
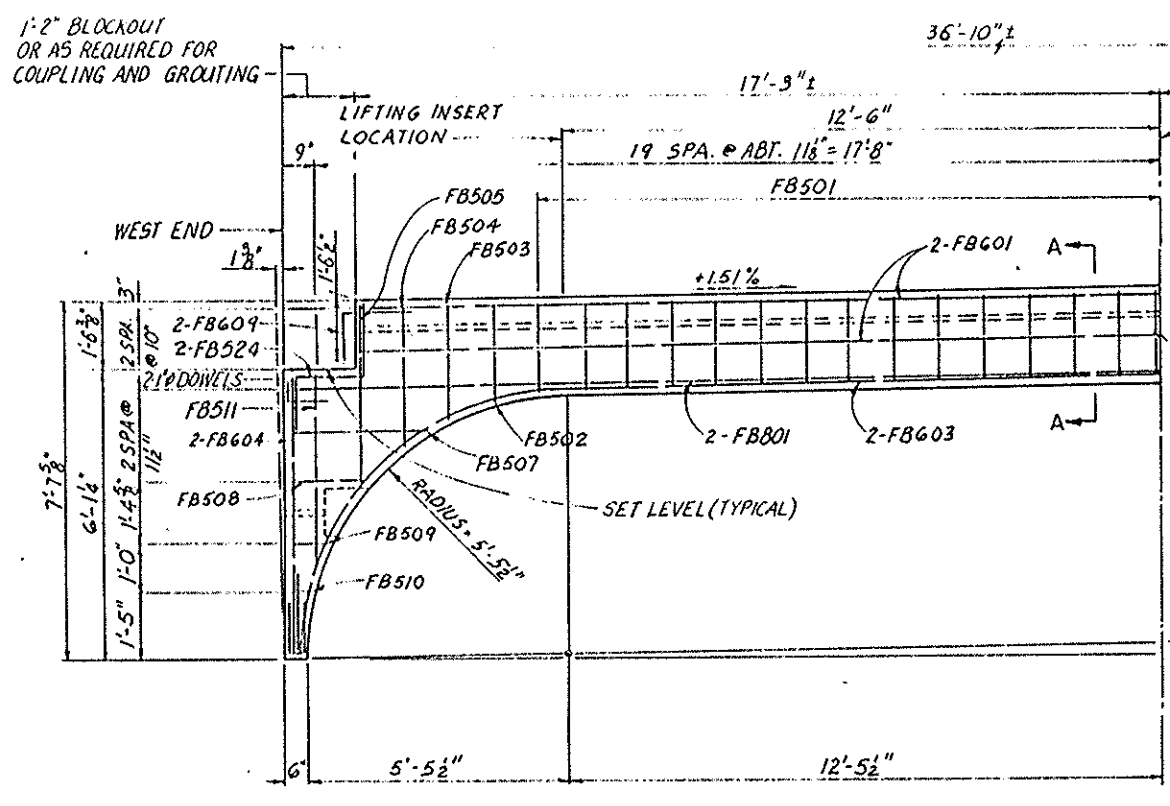
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

11216-21-02

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SUM 82-0.00

1'-2" BLOCKOUT
OR AS REQUIRED FOR
COUPLING AND GROUTING



THE CONTRACTOR SHALL ENSURE
THAT THE FASCIA BEAMS DO NOT
SUPPORT ANY CONSTRUCTION LOADS.

REINFORCEMENT
SYMMETRICAL ABOUT
E BEAM.

FASCIA BEAM	1'-2" BLOCKOUT LOCATION
A2	WEST END
A3	EAST END

REINFORCEMENT SYMMETRICAL
ABOUT E BEAM UNLESS SHOWN
OTHERWISE.

NOTE:
FASCIA BEAM A2, IS SIMILAR.
SEE TABLE FOR BLOCKOUT LOCATION.

NOTES:
FASCIA BEAMS TO BE LIFTED IN
PLACE VERTICALLY.
LIFTING INSERTS SHALL BE OF
CONTRACTOR'S DESIGN AND APPROVED
BY THE ENGINEER WITH PROVISIONS FOR
CUTTING BELOW TOP OF CONCRETE, OR
A MECHANICAL CONNECTION WHICH CAN
BE REMOVED AND FILLED WITH A
NON SHRINK GROUT.

SSN 7706871

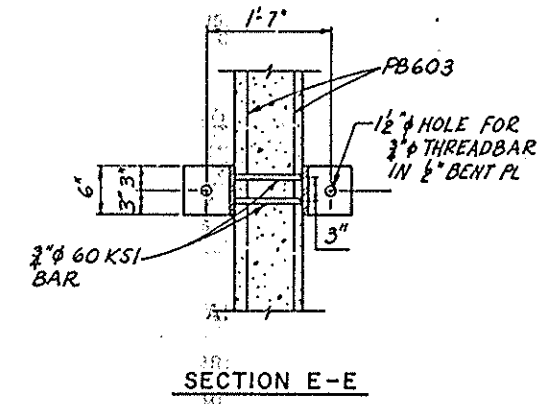
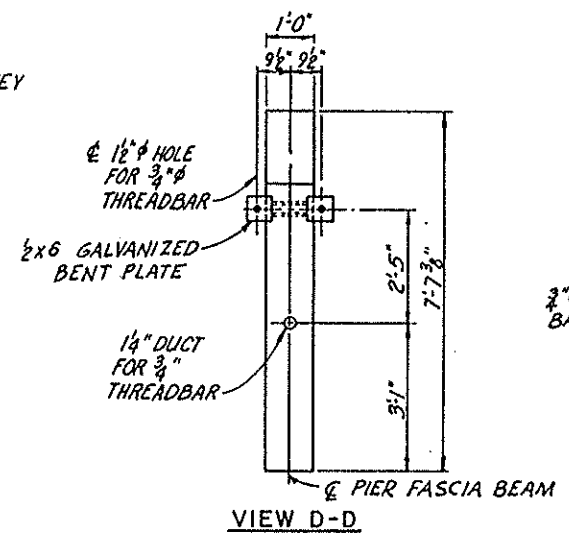
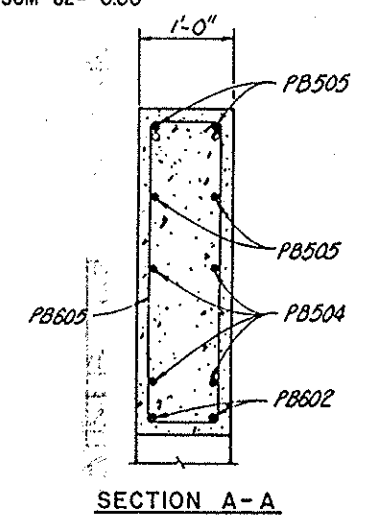
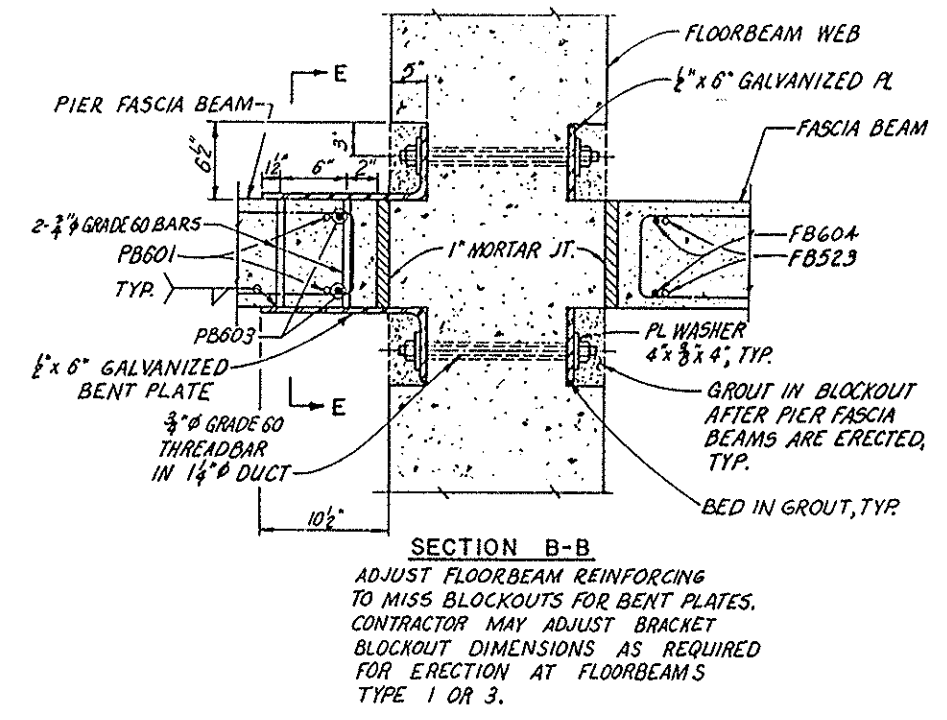
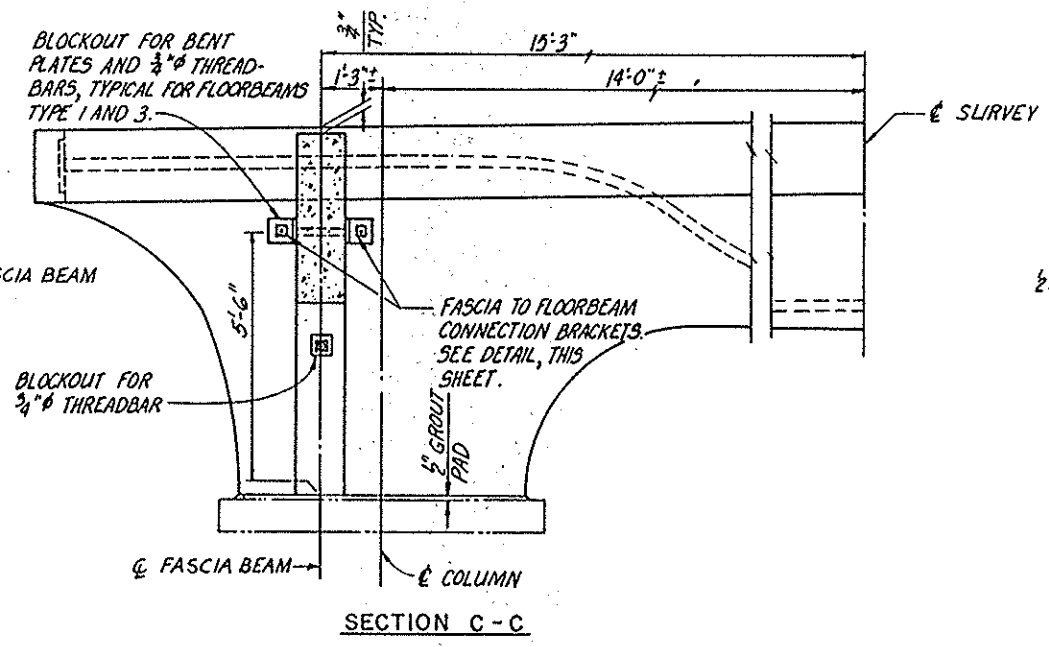
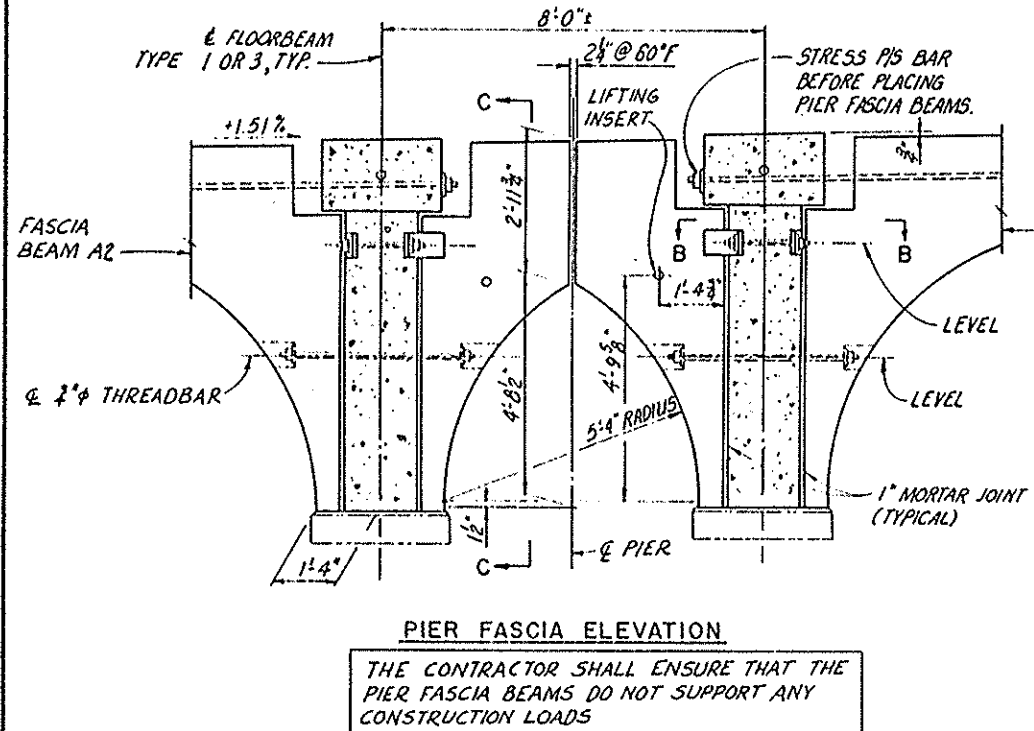
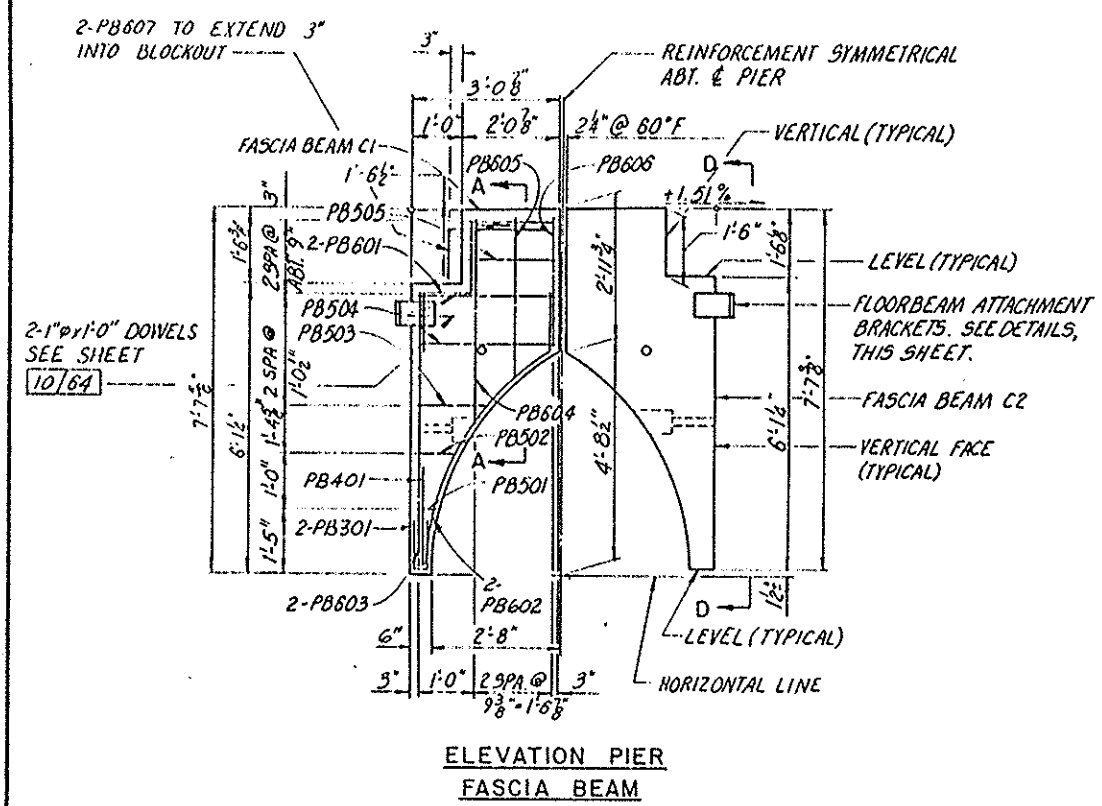
McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
AKRON, OHIO

FASCIA BEAM DETAILS

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE

11216-21-02



SSN 7706871

HOWARD NEEDLES TAMMEN & BERENSON

HNTB

DATE 2/87

CHECKED JEL

DATE 4-87

MADE TKI

13/64

MC COY ASSOCIATES, INC.

CONSULTING ENGINEERS

AKRON, OHIO

FASCIA BEAM DETAILS

BRIDGE No. SUM 82-0000

OVER CUYAHOGA RIVER

SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

11216-21-02

CUY 82 - 15.64

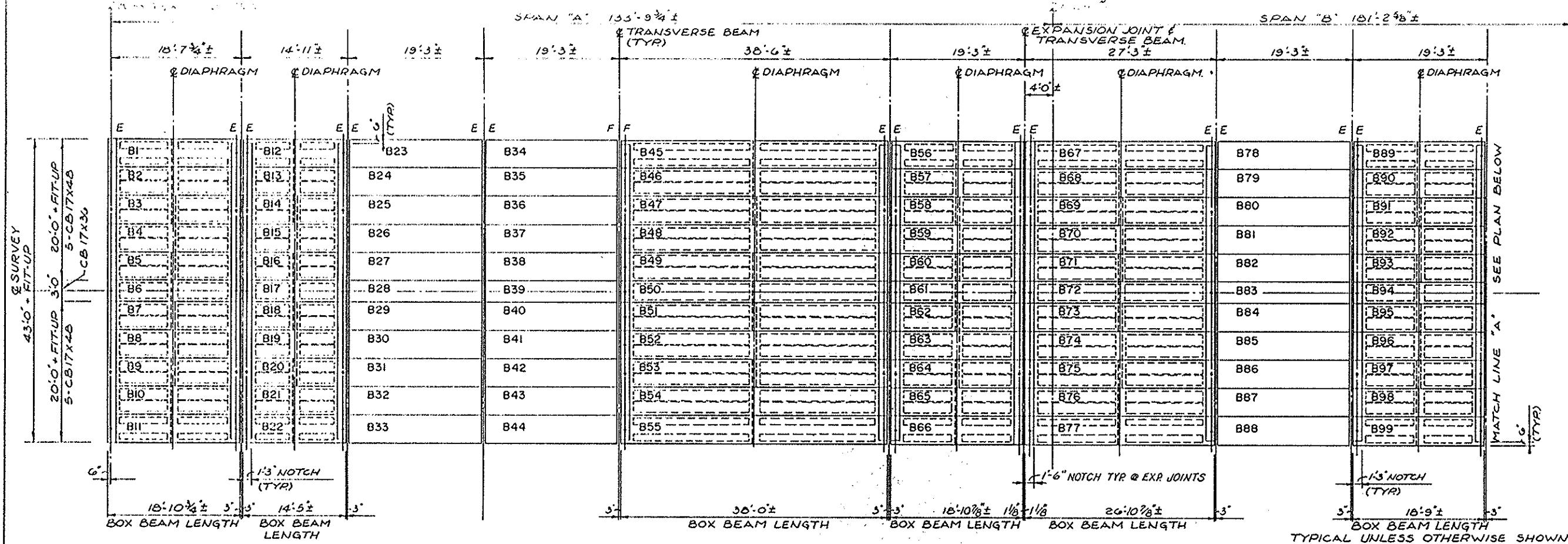
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- NOTES
- ① FOR BOX BEAM DETAILS SEE SHEETS 18/64 AND 19/64.

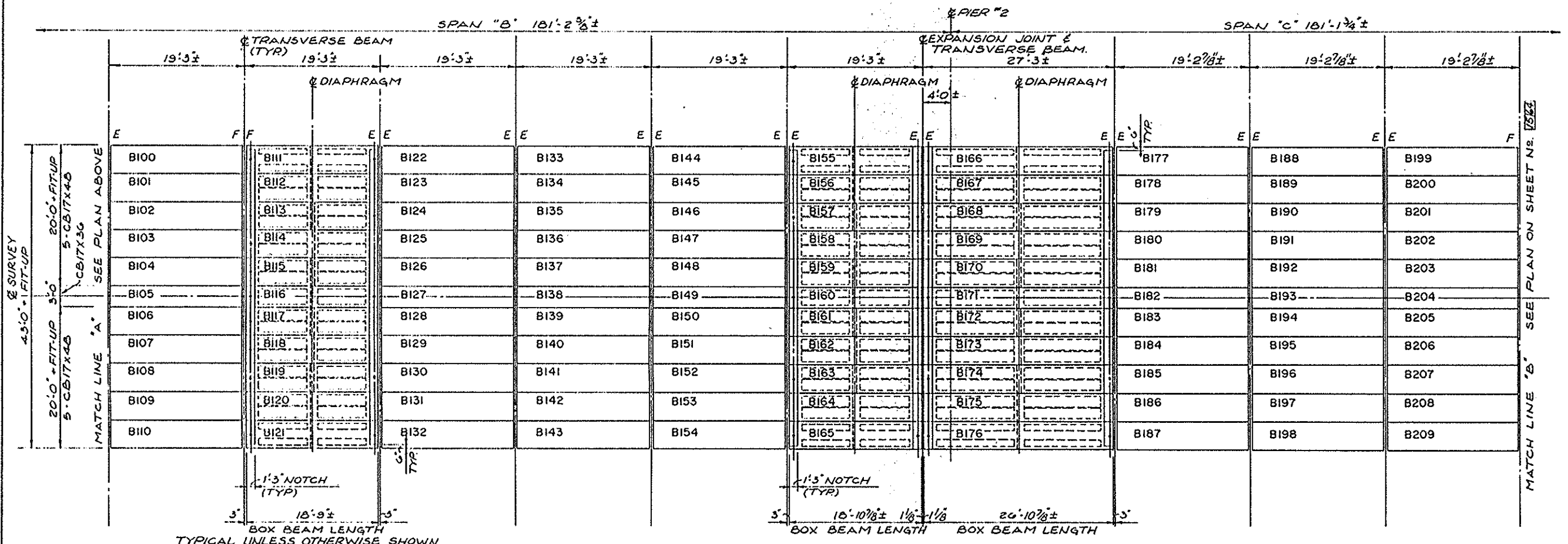
② FOR ADDITIONAL BOX BEAM PLAN DETAILS SEE SHEET 17/64.

③ FOR SUPERSTRUCTURE DETAILS SEE SHEETS 21/64 THRU 23/64.

④ BOX BEAMS SHALL HAVE THE SAME IDENTIFICATION MARKS ON THE SHOP DRAWINGS AS ON THE PROJECT PLANS.



PRESTRESSED CONCRETE BEAM PLAN



PRESTRESSED CONCRETE BEAM PLAN

- LEGEND
- E = EXPANSION ANCHOR DOWEL

F = FIXED ANCHOR DOWEL

SSN 7706871

McCOY ASSOCIATES INC. 14/64
CONSULTING ENGINEERS
AKRON, OHIO

BOX BEAM LAYOUT

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED

DRAWN

TRACED

CHECKED

REVIEWED

DATE

REVISED

JBH

JEK

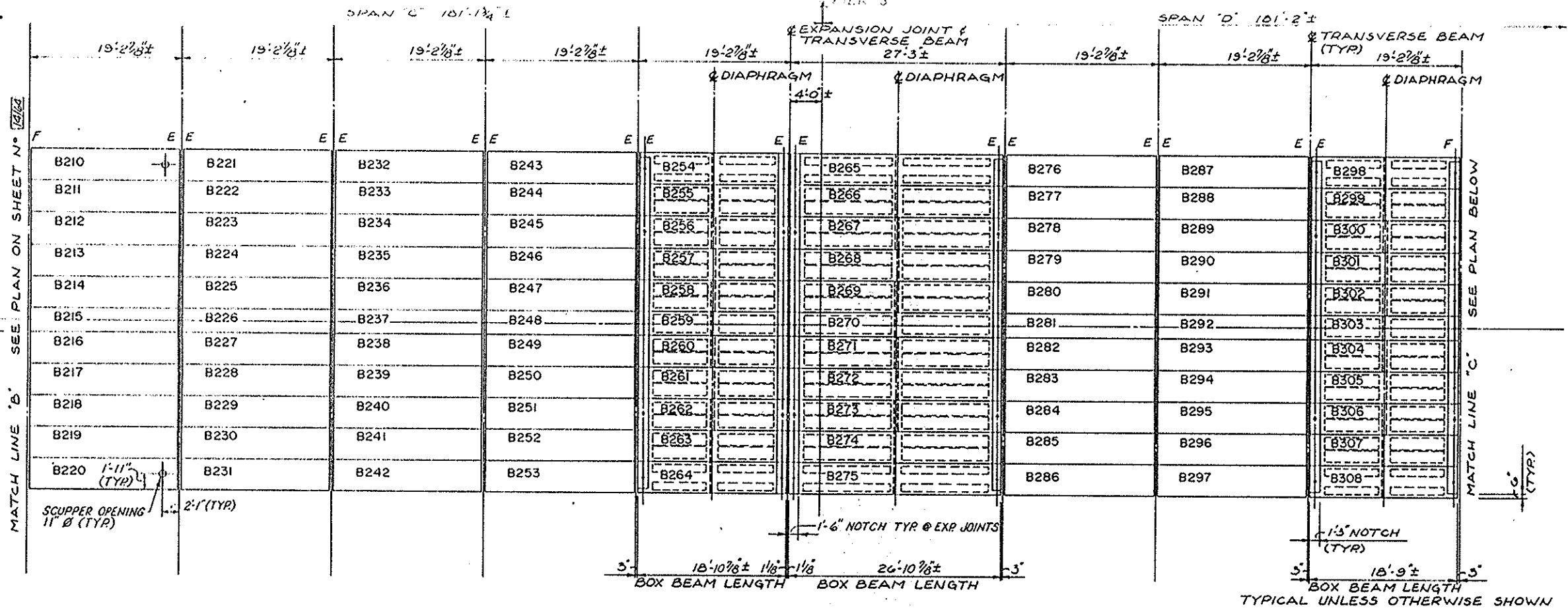
RPL

MSC

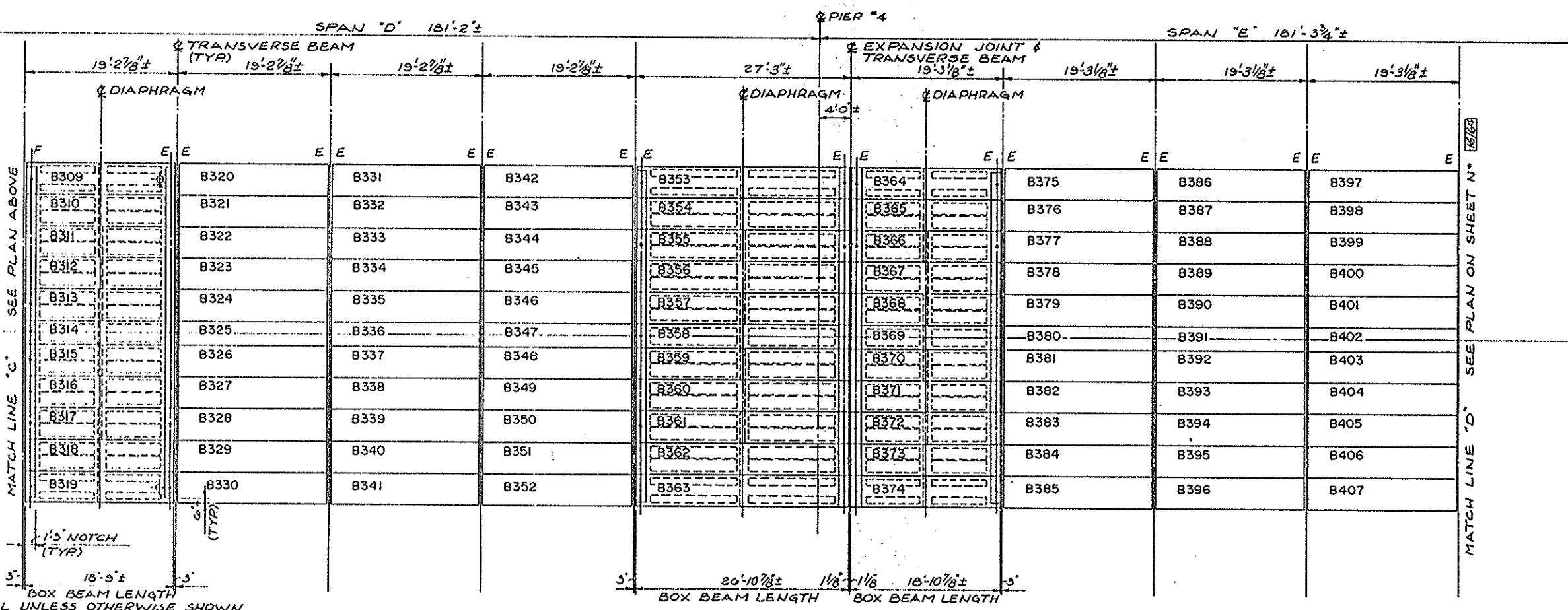
6-4-87

CUY 82 - 15.64
SUM 82 - 0.00

NOTES
① FOR NOTES, SEE SHEET 14/64



PRESTRESSED CONCRETE BEAM PLAN



PRESTRESSED CONCRETE BEAM PLAN

LEGEND

E = EXPANSION ANCHOR DOWEL
F = FIXED ANCHOR DOWEL

SSN 7706871

McCOY ASSOCIATES INC. 15/64
CONSULTING ENGINEERS
AKRON, OHIO

BOX BEAM LAYOUT

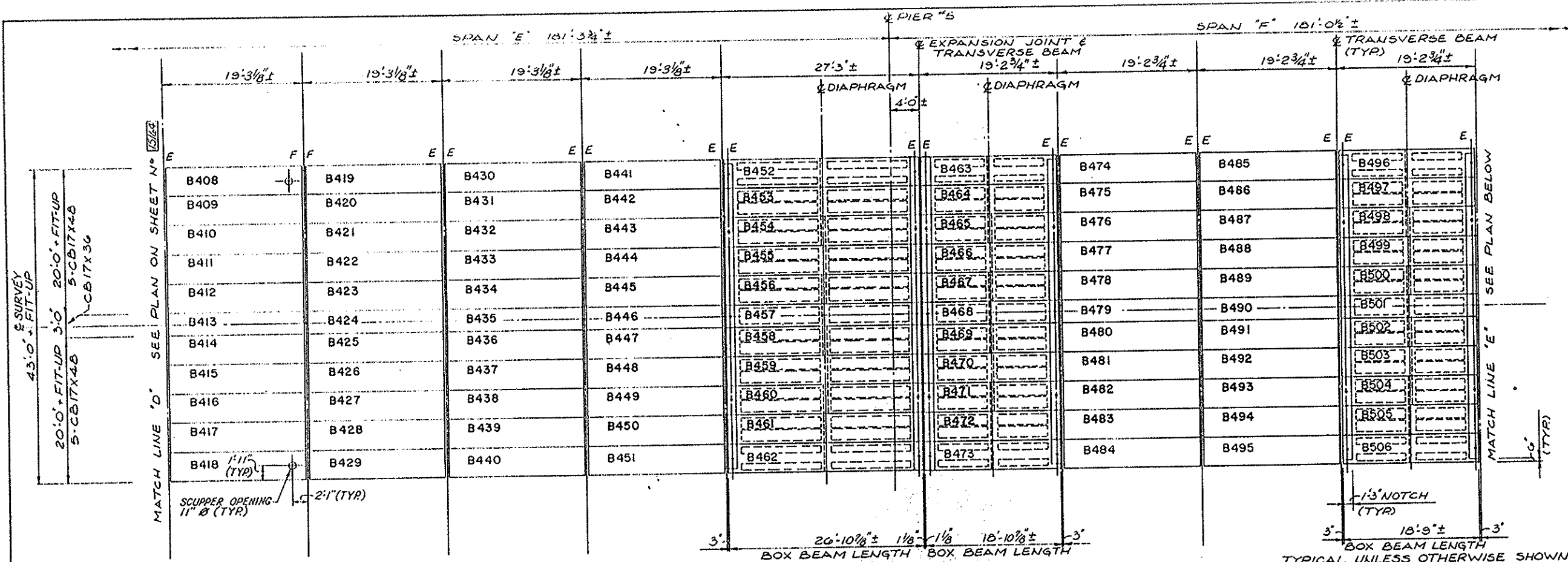
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	JEK		RPL	MSC	6-487	

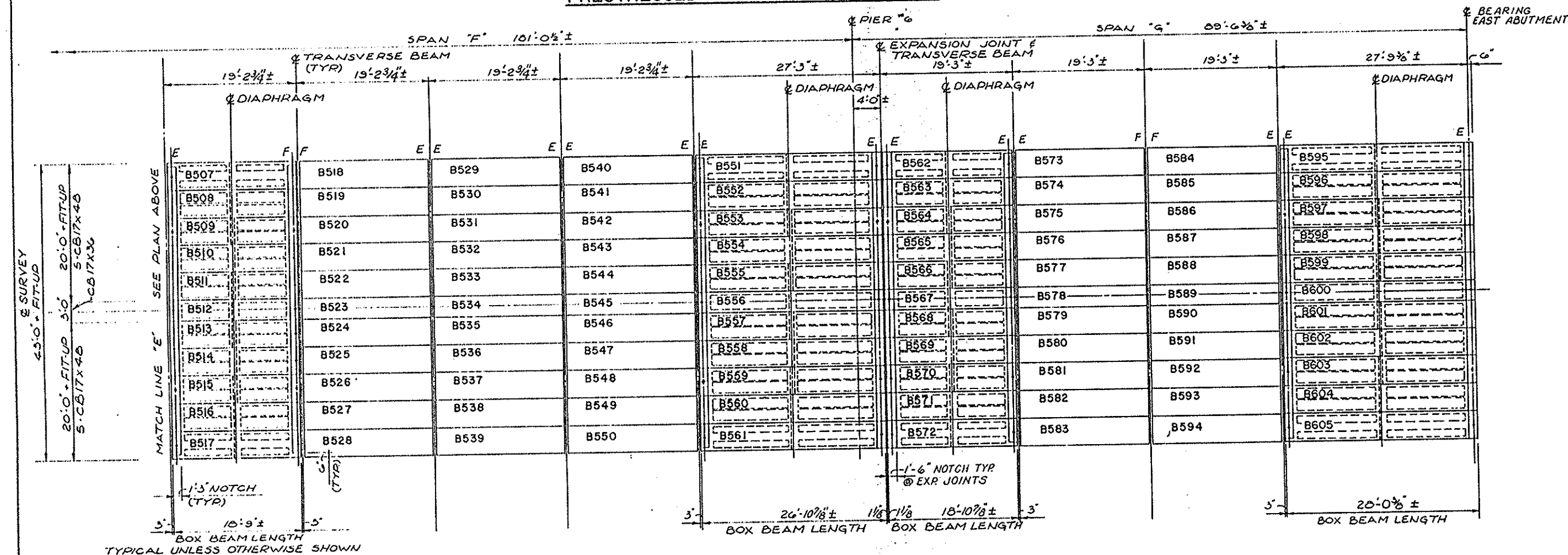
CUY 82 - 15.64
SUM 82 - .000

NOTES

① FOR NOTES SEE SHEET 14/64



PRESTRESSED CONCRETE BEAM PLAN



PRESTRESSED CONCRETE BEAM PLAN

LEGEND

E = EXPANSION ANCHOR DOWEL
F = FIXED ANCHOR DOWEL

SSN 7706871

McCOY ASSOCIATES INC. 16/64
CONSULTING ENGINEERS
AKRON, OHIO

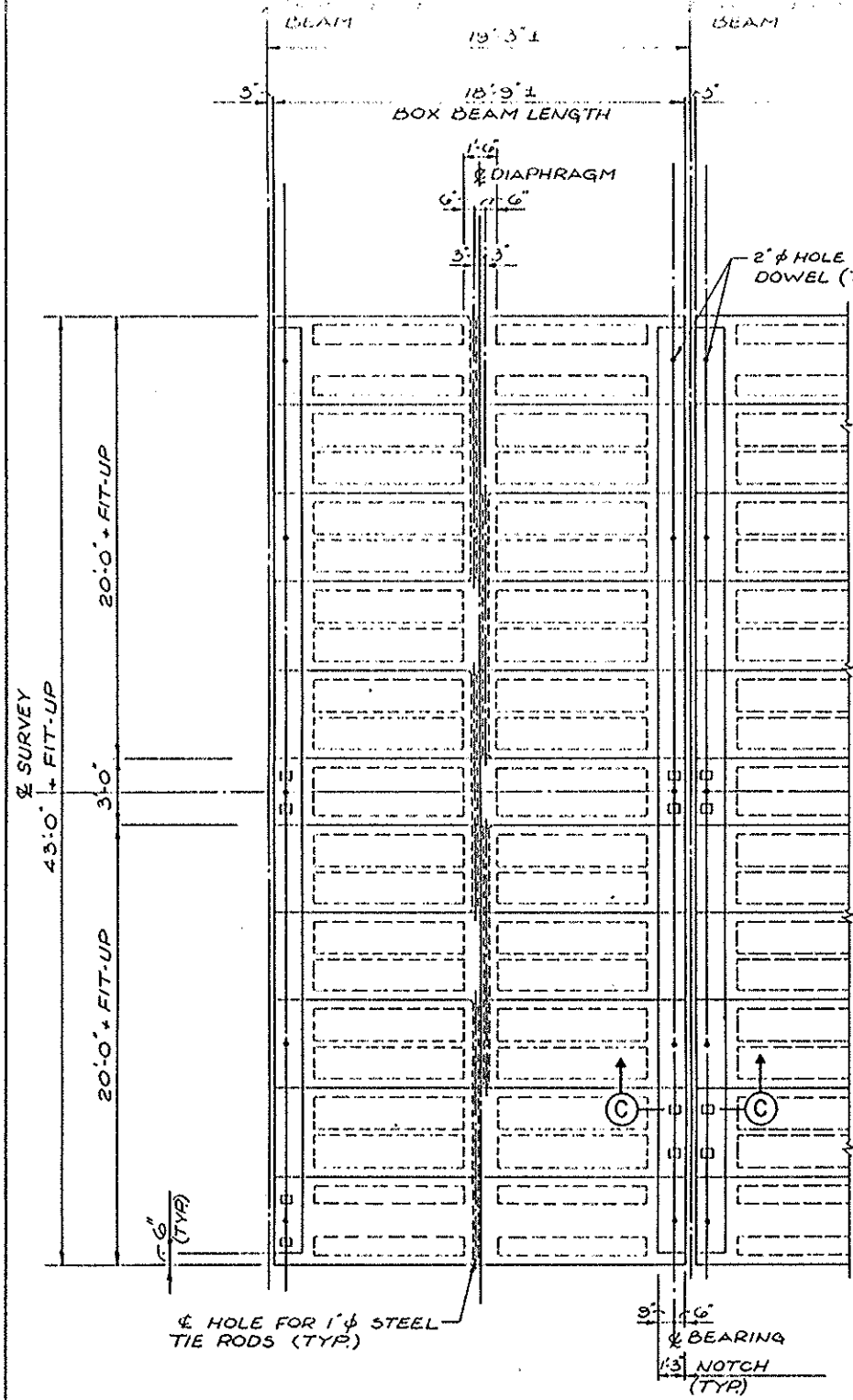
BOX BEAM LAYOUT

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

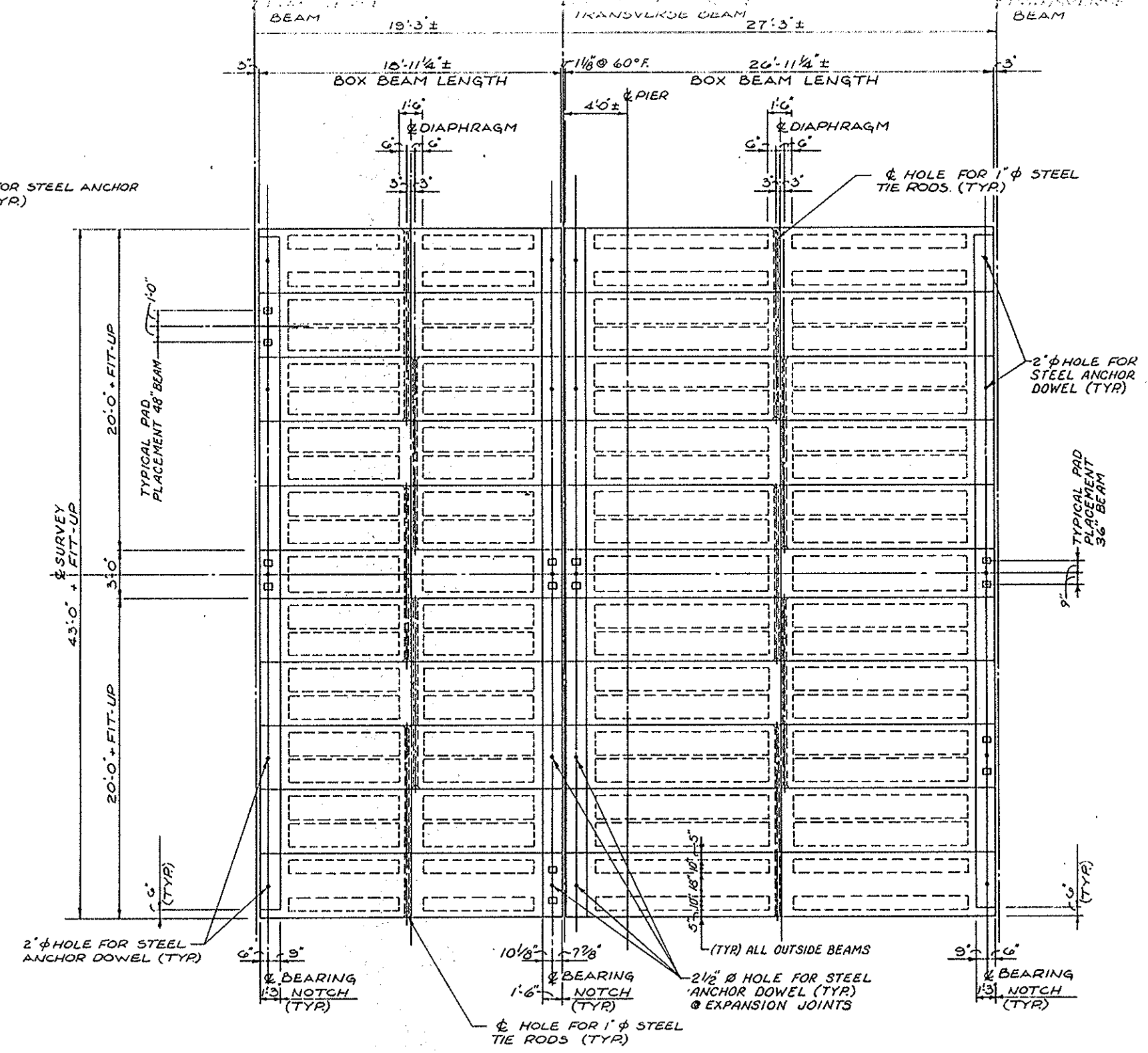
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS
JBH	JEK		RPL	MSC	6-4-87	

CUY 82 - 15.64
SUM 82 - 0.00

NOTES
FOR SECTION C-C (BEAM SPLICE DETAIL),
SEE SHEET 25/64.



TYPICAL AT BEAM SPLICE



TYPICAL AT EXPANSION JOINT

BOX BEAM PLAN DETAILS

SSN 7706871

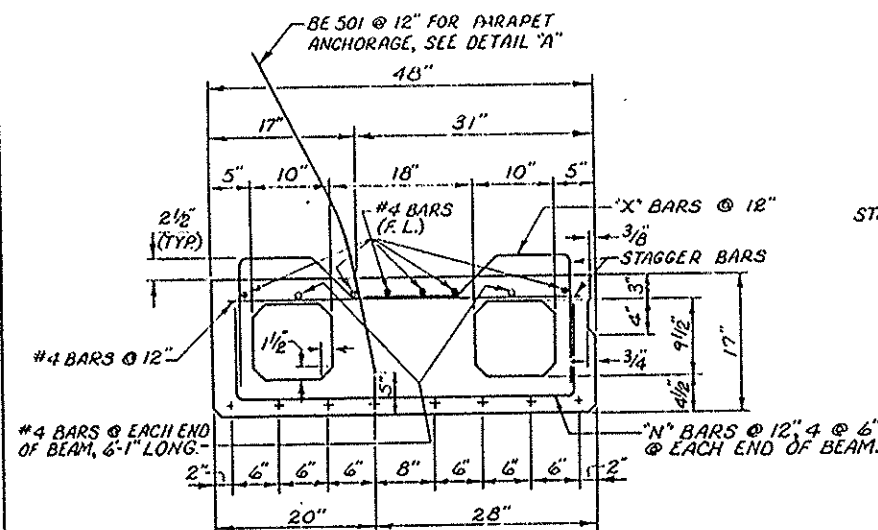
McCOY ASSOCIATES INC. 17/64
CONSULTING ENGINEERS
AKRON, OHIO

BOX BEAM PLAN DETAILS

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

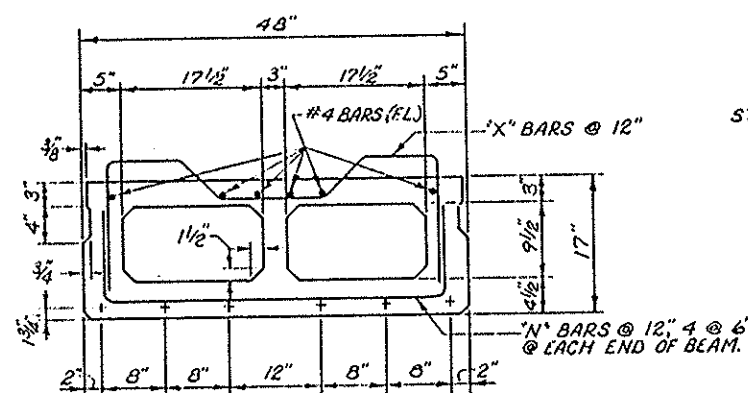
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.B.H.	JEK		RPL	MSC	6-4-87	

CUY 82-15.64
SUM 82-0.00



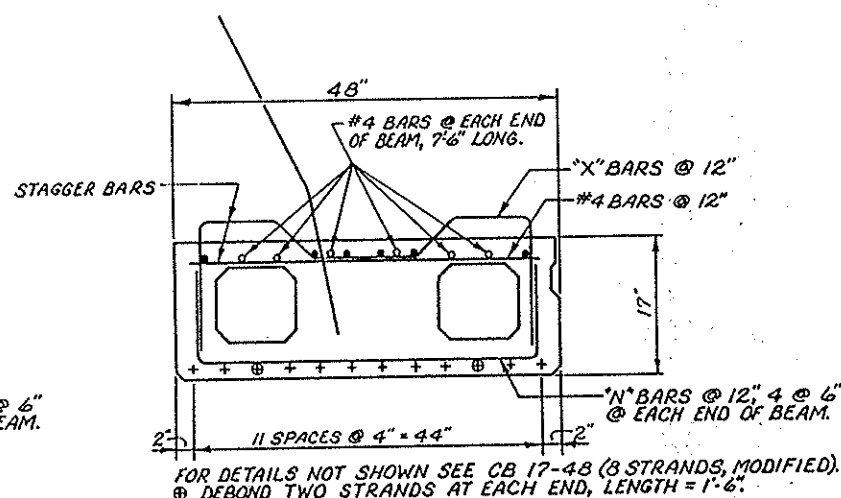
CB 17-48
(8 STRANDS)
(MODIFIED FOR PARAPET ANCHORAGE)

BEAMS B1, B11, B23, B33, B34, B44, B56, B66, B67, B77, B78, B88, B89, B99, B100, B110, B111, B121, B122, B132, B133, B143, B144, B154, B155, B165, B166, B176, B177, B187, B188, B198, B199, B209, B221, B231, B232, B242, B243, B253, B254, B264, B265, B275, B276, B286, B287, B297, B298, B308, B320, B330, B331, B341, B342, B352, B353, B363, B364, B374, B375, B385, B386, B396, B397, B407, B419, B429, B430, B440, B441, B451, B452, B462, B463, B473, B474, B484, B485, B495, B496, B506, B507, B517, B518, B528, B529, B539, B540, B550, B551, B561, B562, B572, B573, B583, B584, B594, B595, B605.



CB 17-48
(6 STRANDS)

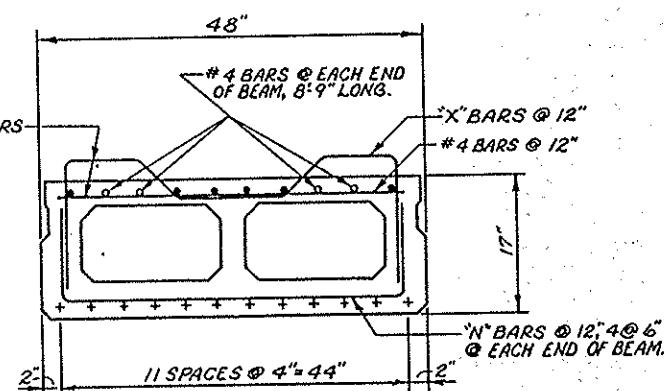
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FOR DETAILS NOT SHOWN SEE CB 17-48 (8 STRANDS, MODIFIED).
DEBOND TWO STRANDS AT EACH END, LENGTH = 1'-6\"/>

CB 17-48
(12 STRANDS)
(MODIFIED FOR PARAPET ANCHORAGE)

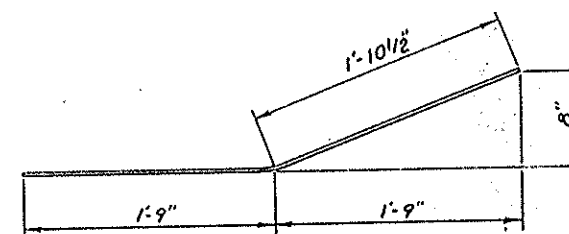
BEAMS B45, B55.



FOR DETAILS NOT SHOWN SEE CB 17-48 (6 STRANDS).

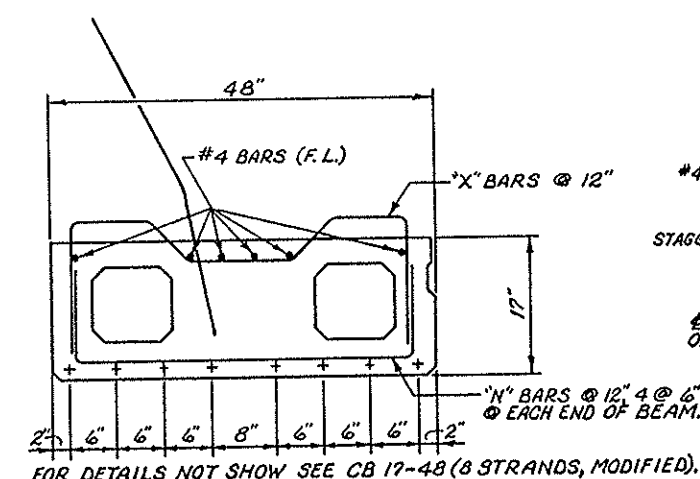
CB 17-48
(12 STRANDS)

BEAMS B46-B49, B51-B54.



#5 BAR FOR PARAPET ANCHORAGE SHALL BE EPOXY COATED. PAYMENT INCLUDED IN ITEM 515.

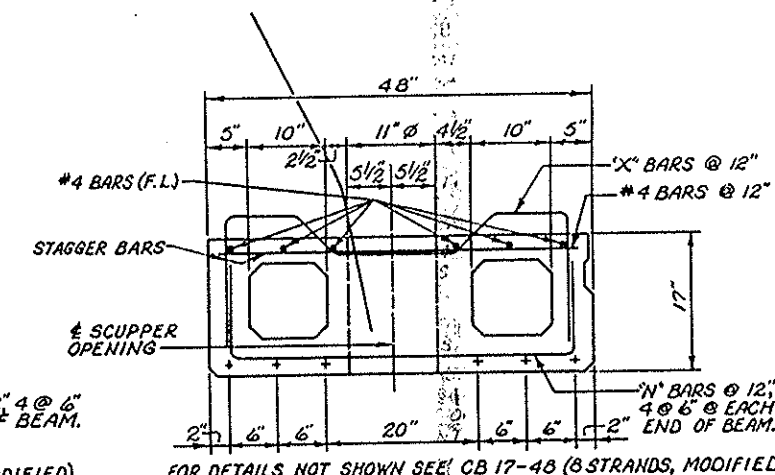
DETAIL "A"



FOR DETAILS NOT SHOWN SEE CB 17-48 (8 STRANDS, MODIFIED).

CB 17-48
(8 STRANDS)
(MODIFIED FOR PARAPET ANCHORAGE)

BEAMS B12, B22.



FOR DETAILS NOT SHOWN SEE CB 17-48 (8 STRANDS, MODIFIED).

CB 17-48
(6 STRANDS)
(MODIFIED FOR PARAPET ANCHORAGE AND SCUPPERS)

BEAMS B210, B220, B309, B319, B408, B418.

NOTES

- FOR ADDITIONAL BEAM DETAILS, SEE STD. DRAWING PSBD-1-81, SHEETS 1, 2, 3 & 4. BOX BEAMS ARE COMPOSITE MEMBERS.
- FOR BEAM NOTCHES AND DOWEL HOLE LOCATIONS SEE SHEETS 14/64 THRU 17/64.
- TOP SURFACE FINISH FOR COMPOSITE MEMBERS-AS PER ITEM 515.06.
- ADJUST SPACING OF "X" BARS & "N" BARS TO ACCOMMODATE SCUPPERS WHERE REQUIRED. ONE SET OF BARS SHALL BE LEFT OUT AND ADJACENT BARS SHALL BE MOVED.
- "X" BARS SHALL BE EPOXY COATED. PAYMENT INCLUDED IN ITEM 515.
- STIRRUP REINFORCING STEEL IN NOTCHED AREAS AT ENDS OF COMPOSITE BEAMS ADJACENT TO EXPANSION JOINTS SHALL NOT PROJECT ABOVE THE TOP OF CONCRETE. SEE SHEETS 14/64 THRU 16/64 FOR LOCATION AND BEAM NUMBERS.

LEGEND

F.L. = FULL LENGTH

SSN 7706871

McCOY ASSOCIATES INC. 18/64
CONSULTING ENGINEERS
AKRON, OHIO

BOX BEAM DETAILS

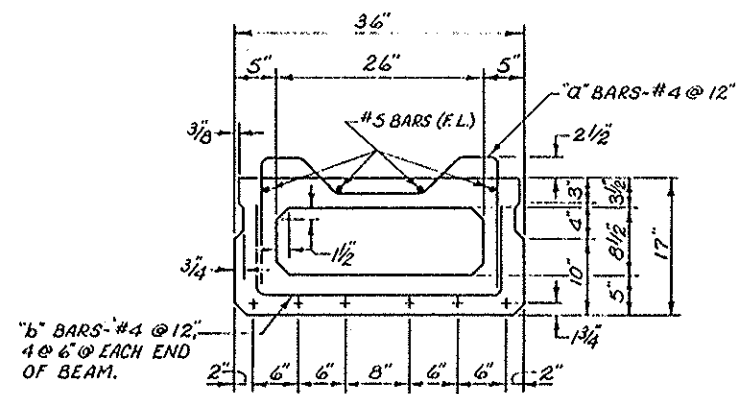
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	B.M.R.		RPL	MBC	6-4-87	

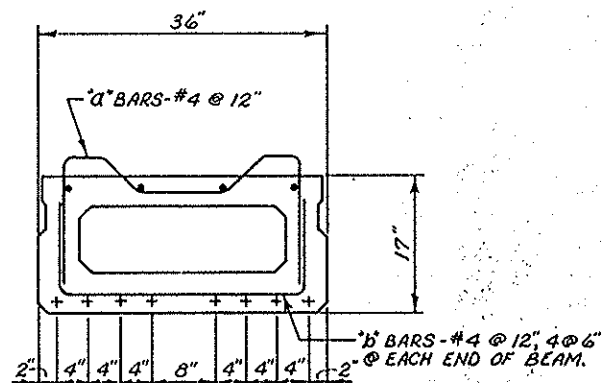
CUY 82-15.64
SUM 82- 0.00

NOTES
FOR NOTES, SEE SHEET 18/64.

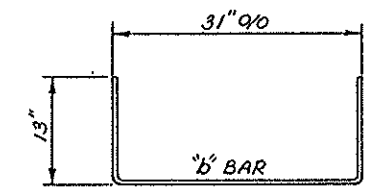
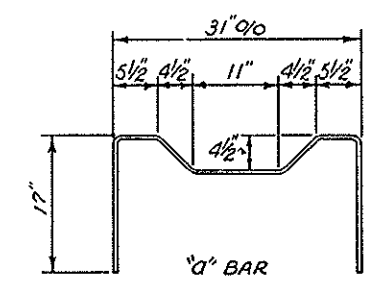
LEGEND
F.L. = FULL LENGTH



B 17-36
(6 STRANDS)
(MODIFIED FOR COMPOSITE CONSTRUCTION)
BEAMS B6, B17, B28, B39, B61, B72, B83, B94, B105, B116, B127, B138, B149, B160, B171, B182, B193, B204, B215, B226, B237, B248, B259, B270, B281, B292, B303, B314, B325, B336, B347, B358, B369, B380, B391, B402, B413, B424, B435, B446, B457, B468, B479, B490, B501, B512, B523, B534, B545, B556, B567, B578, B589, B600.



FOR DETAILS NOT SHOWN SEE B 17-36 (6 STRANDS)
B 17-36
(8 STRANDS)
(MODIFIED FOR COMPOSITE CONSTRUCTION)
BEAM B50.



"a" BARS SHALL BE EPOXY COATED.
PAYMENT INCLUDED IN ITEM 515.

SSN 7706871

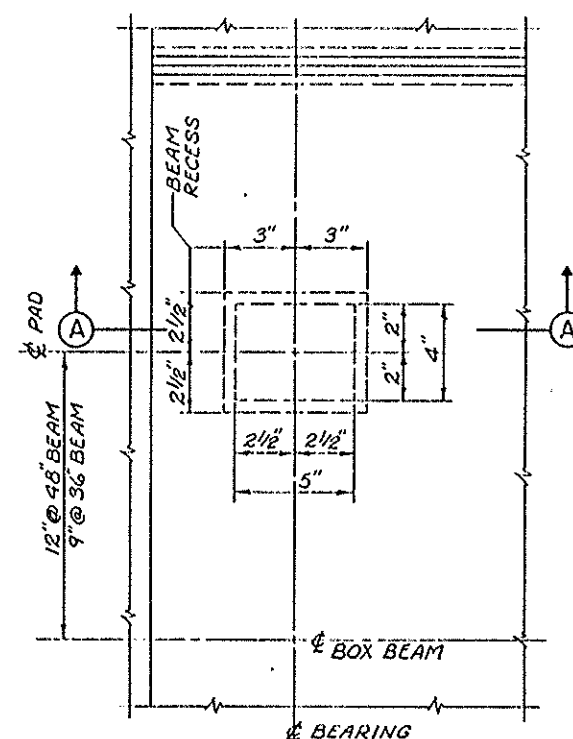
McCOY ASSOCIATES INC. 19/64 CONSULTING ENGINEERS AKRON, OHIO					
BOX BEAM DETAILS					
BRIDGE No. SUM 82-0000 OVER CUYAHOGA RIVER SUMMIT COUNTY STATE ROUTE 82					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.B.H.	B.M.R.		RFL	MSC	6-4-87

CUY 82-15.64
SUM 82-000

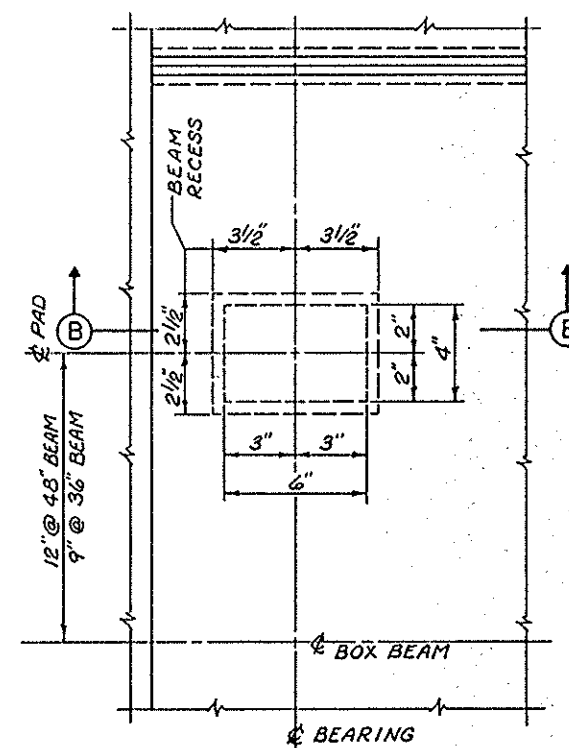
NOTES

TOLERANCES: INDIVIDUAL ELASTOMER LAYER THICKNESS: $\pm 20\%$ OF DESIGN VALUE (NOT TO EXCEED $\pm 1/8"$).
PLAN DIMENSIONS -0, +1/4
DESIGN THICKNESS -0, +1/4
EDGE COVER OF EMBEDDED LAMINATES -0, +1/4

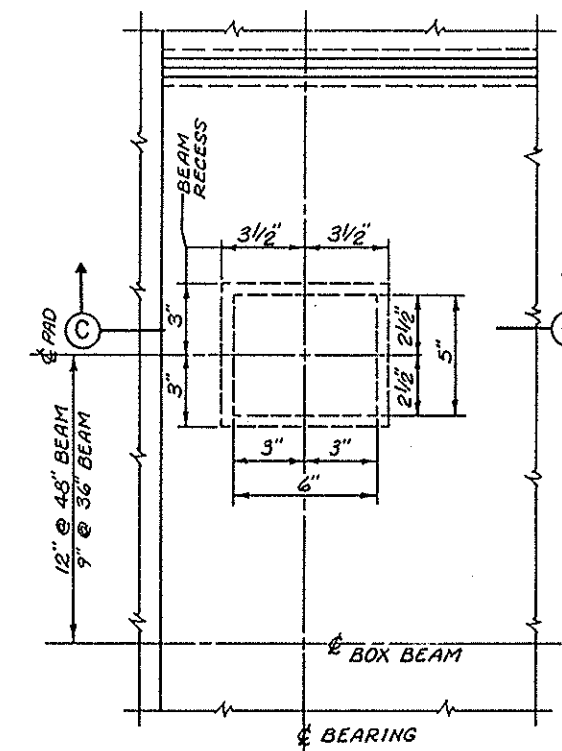
BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARING. EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEI 516, EACH, $15/8" \times 4" \times 5"$ LAMINATED ELASTOMERIC BEARING PADS, $15/8" \times 4" \times 6"$ LAMINATED ELASTOMERIC BEARING PADS, AND $15/8" \times 5" \times 6"$ LAMINATED ELASTOMERIC BEARING PADS.



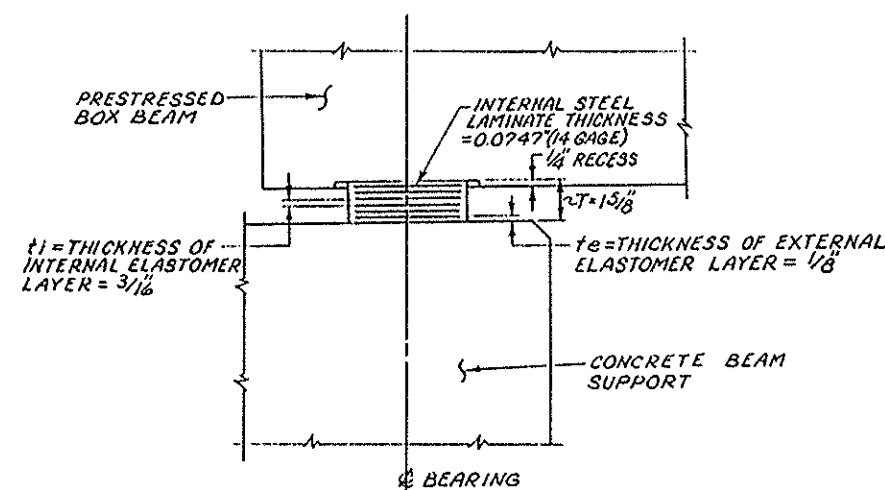
PLAN
DESIGN 1



PLAN
DESIGN 2

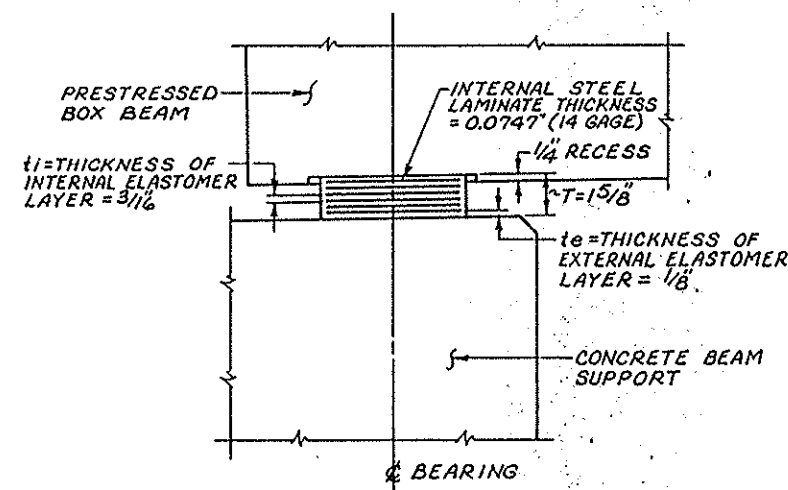


PLAN
DESIGN 3



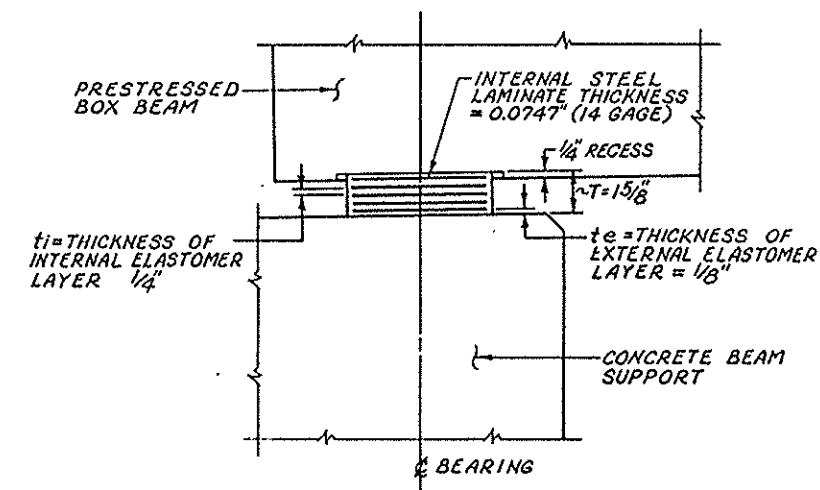
SECTION A-A

BEAMS B1-B44, B56-B66, B78-B165, B177-B264, B276-B352, B364-B451, B463-B550, B562-B594.



SECTION B-B

BEAMS B67-B77, B166-B176, B265-B275, B353-B363, B452-B462, B551-B561, B595-B605.



SECTION C-C

BEAMS B45-B55.

BEARING PAD DATA (60 DUROMETER HARDNESS)									
DESIGN	LENGTH	WIDTH	THICKNESS	te LAYERS	ti LAYERS	NUMBER OF STEEL R.S. 0.0747" THK.	DESIGN LOADS		
							DEAD LOAD	LIVE LOAD	TOTAL
1	5"	4"	15/8"	2 @ 1/8"	5 @ 3/16"	6	5.7K	8.3K	14.0K
2	6"	4"	15/8"	2 @ 1/8"	5 @ 3/16"	6	8.0K	8.5K	16.5K
3	6"	5"	15/8"	2 @ 1/8"	4 @ 1/4"	5	11.3K	9.2K	20.5K

SSN 7706871

McCOY ASSOCIATES INC. 20/6
CONSULTING ENGINEERS
AKRON, OHIO

ELASTOMERIC BEARING PAD DETAILS

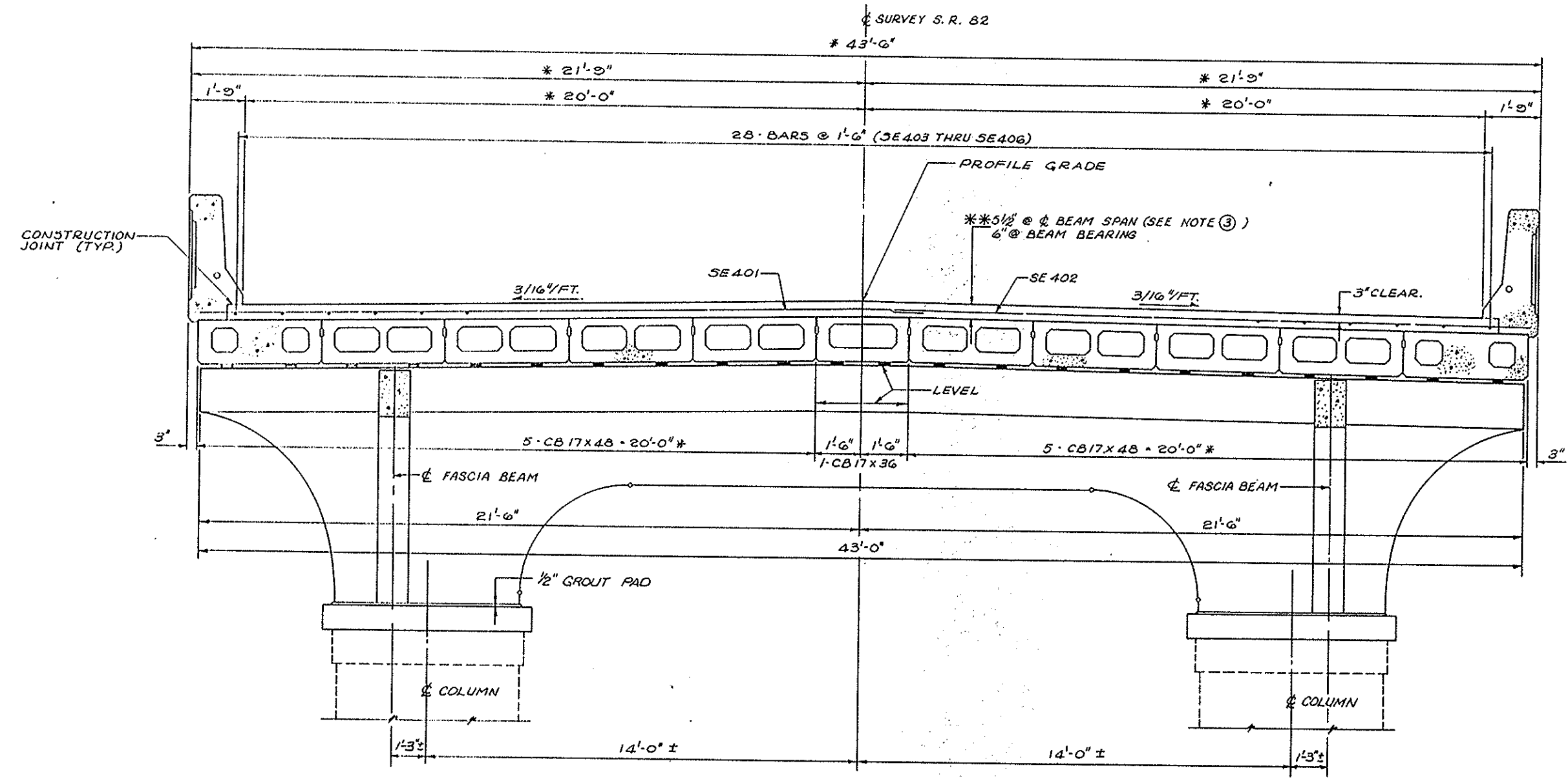
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE
J.S.H.	B.M.R.		RPL	MSC	6-4-87	

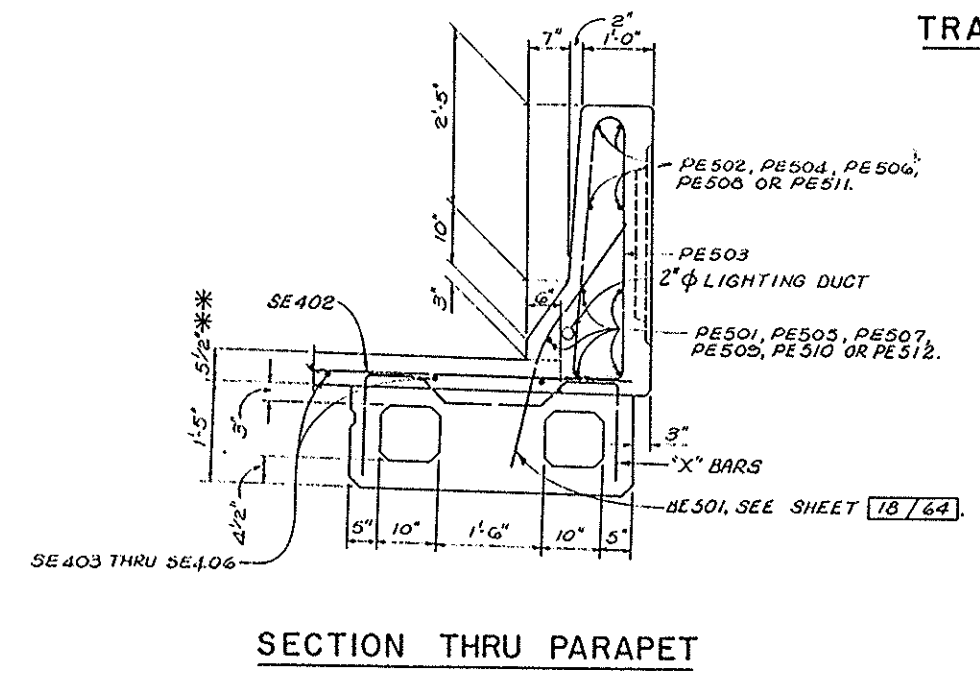
CUY 82 - 15.64
SUM 82 - 0.00

NOTES

- ① *PLUS BOX BEAM FIT-UP.
- ② CALCULATED CAMBER FOR ALL SPANS IS 1/2".
- ③ **THESE ARE THE NOMINAL DIMENSIONS. THE PAY QUANTITY FOR THAT PORTION OF THE DECK CONCRETE OVER THE BEAMS SHALL BE BASED ON THE AVERAGE OF THESE DIMENSIONS EVEN THOUGH DEVIATION FROM THIS AVERAGE MAY OCCUR BECAUSE THE TOP OF THE BEAMS MAY NOT HAVE THE CAMBER ANTICIPATED IN THE DESIGN; I.E., 1/2 INCH. THE CAMBER OF THE BEAMS SHALL BE MEASURED IN THE FIELD BEFORE THE DECK SLAB IS PLACED. THE ACTUAL DEPTH AT MIDSPAN SHALL BE EQUAL TO THE NOMINAL DIMENSIONS, 5 - 1/2 INCHES, WITH A TOLERANCE OF +1/4 INCH AND -1/8 INCH. IF NECESSARY, THE PROFILE GRADE ELEVATIONS SHALL BE RAISED TO ACHIEVE THIS REQUIREMENT. HOWEVER, THE CONCRETE PAY QUANTITY SHALL BE BASED ON THE NOMINAL DIMENSIONS.



TRANSVERSE DECK SECTION



SECTION THRU PARAPET

SSN 7706871

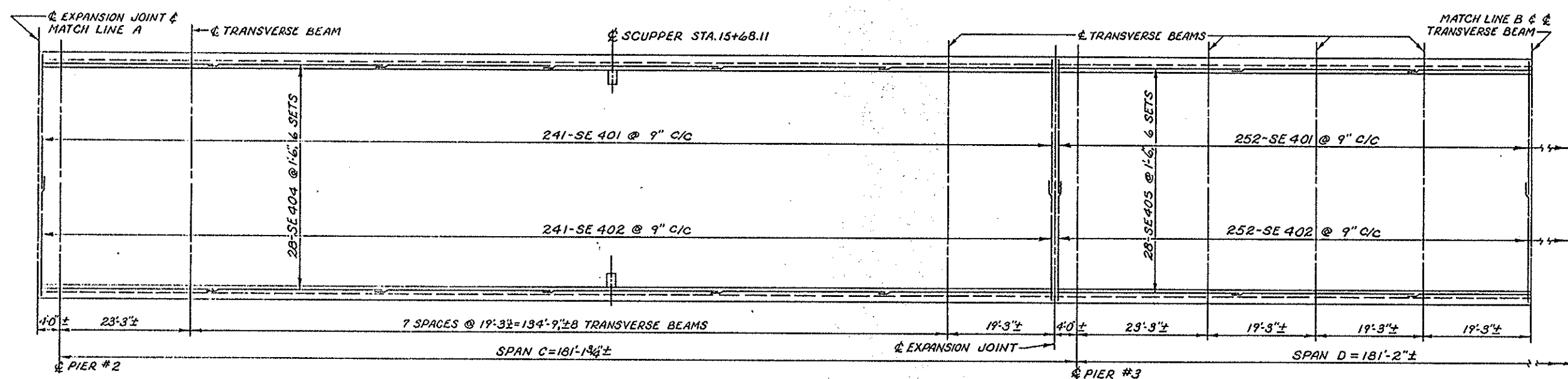
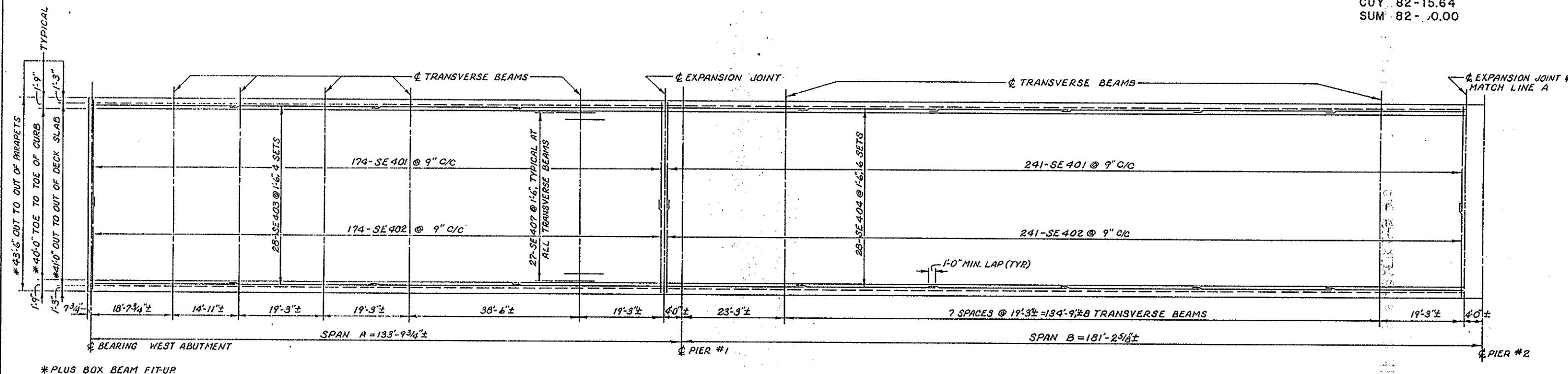
McCOY ASSOCIATES INC. 21/64
CONSULTING ENGINEERS
AKRON, OHIO

SUPERSTRUCTURE
DETAILS

BRIDGE N° SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

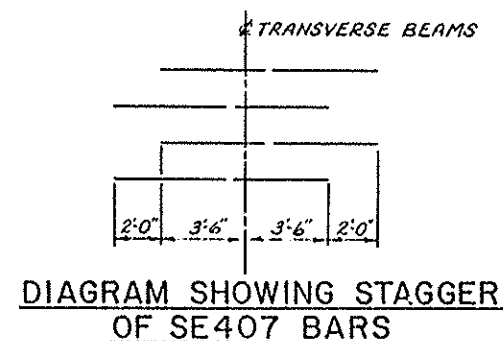
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	J.O.P.		TAB	MSC	6-487	

CUY 82-15.64
SUM 82-.000



- NOTES**
- ① FIELD CUT REINFORCING STEEL AT SCUPPERS.
 - ② FOR TRANSVERSE BEAM PLAN, SEE SHEET 9/64.
 - ③ FOR BOX BEAM LAYOUT, SEE SHEETS 14/64 THRU 16/64.
 - ④ FOR ADDITIONAL DETAILS, SEE SHEET 21/64.

SLAB REINFORCING STEEL PLAN
(PARAPET STEEL NOT SHOWN; SEE SHEETS 21/64 & 29/64 THRU 42/64.)



SSN 7706871

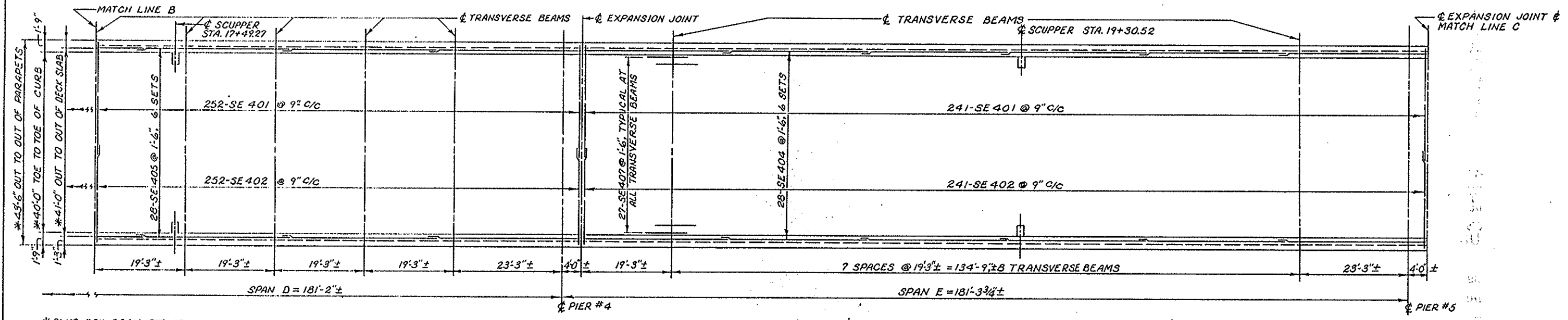
McCOY ASSOCIATES INC. 22/64
CONSULTING ENGINEERS
AKRON, OHIO

SUPERSTRUCTURE DETAILS

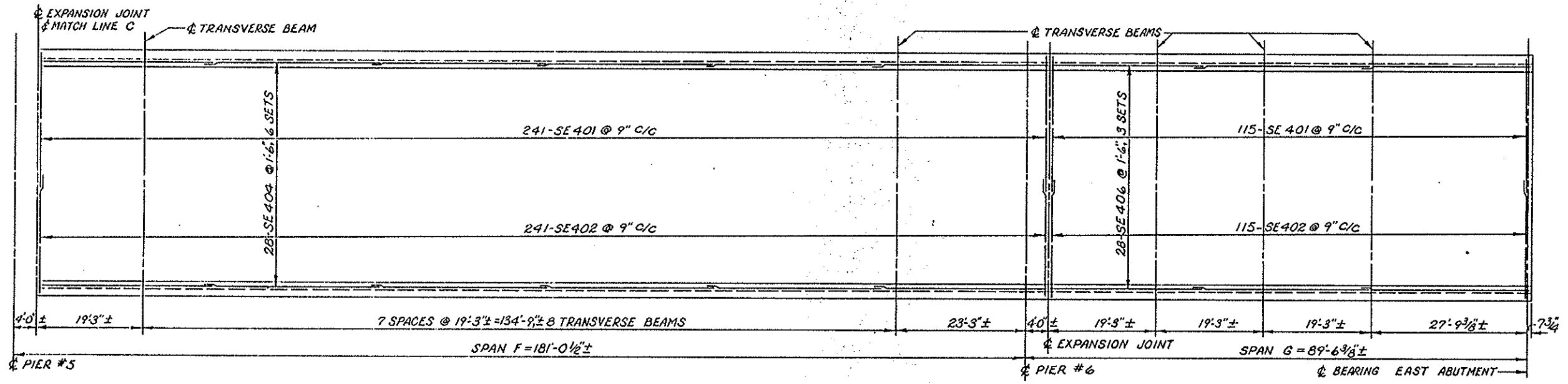
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	B.M.R.		TAB	MSC	6-4-87	

CUY 82-15.64
SUM 82-10.00



*PLUS BOX BEAM FIT-UP



NOTES
FOR NOTES SEE SHEET 22/64

SLAB REINFORCING STEEL PLAN
(PARAPET STEEL NOT SHOWN; SEE SHEETS 21/64 & 29/64 THRU 42/64)

SSN 7706871

McCOY ASSOCIATES INC.
 CONSULTING ENGINEERS
 AKRON, OHIO

23/64

**SUPERSTRUCTURE
DETAILS**

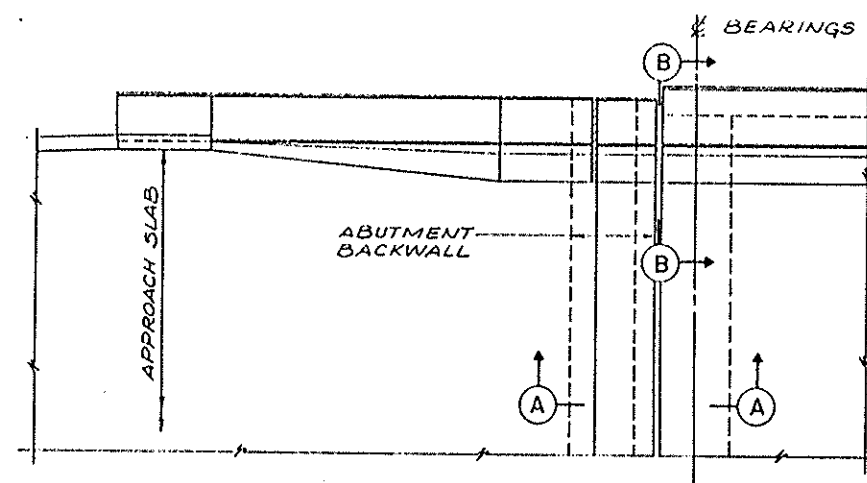
BRIDGE No. SUM 82-0000
 OVER CUYAHOGA RIVER
 SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.B.H.	B.M.R.		T.A.B.	M.B.C.	6-4-87	

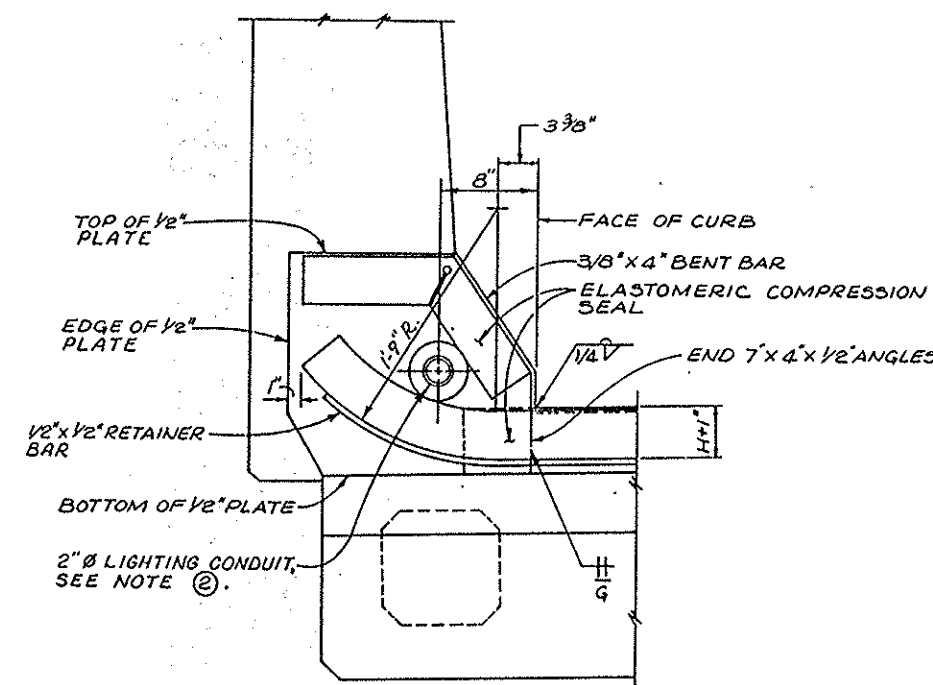
CUY 82-15.64
SUM 82-00.00

NOTES

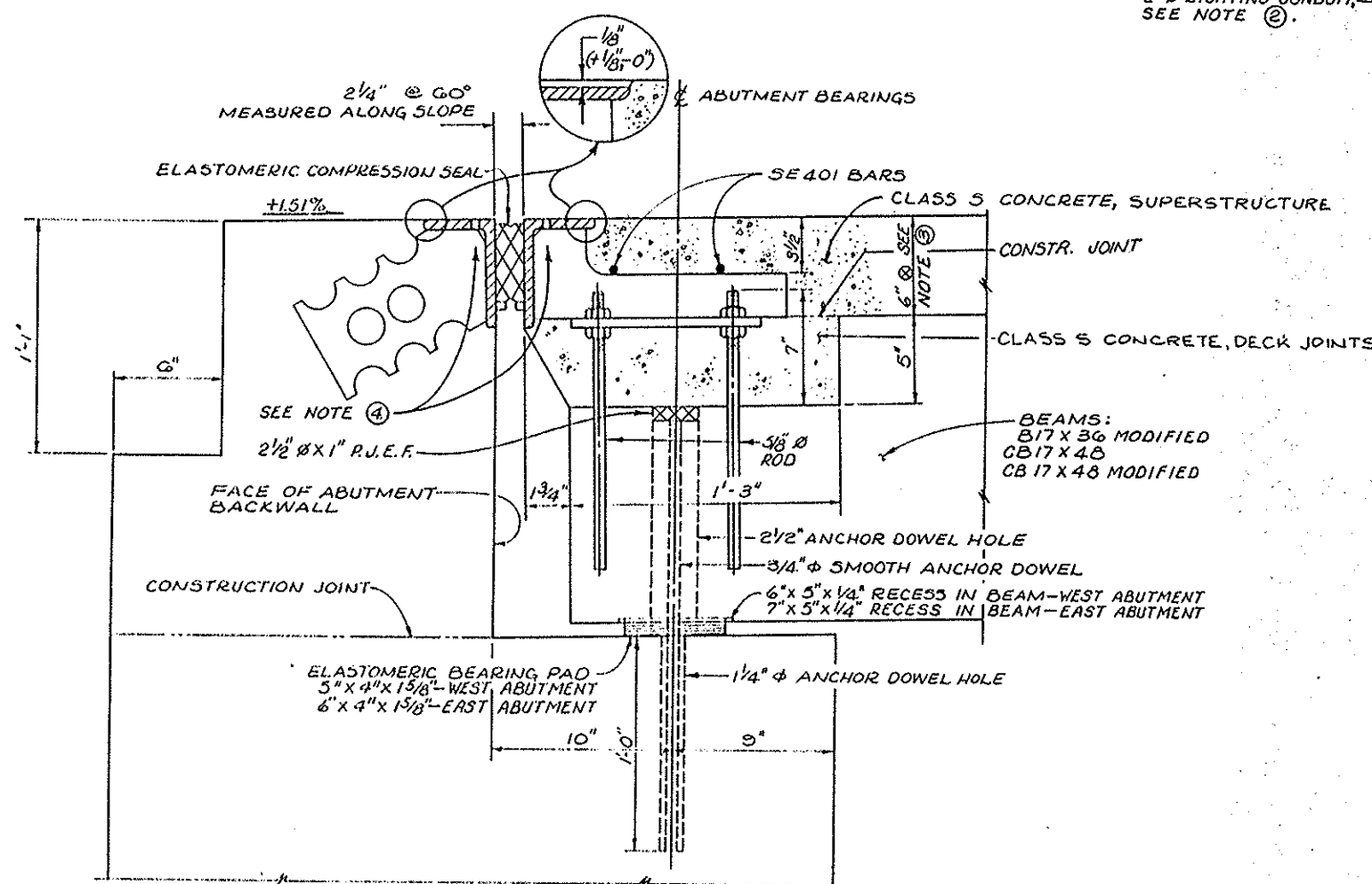
- FOR ADDITIONAL DETAILS SEE STANDARD DRAWINGS EXJ-3-82 AND PSBD-1-81.
- PROVIDE 5" Ø OPENING IN PLATE FOR LIGHTING CONDUIT AND EXPANSION COUPLING. ADJUST CONDUIT IN THE FIELD TO AVOID INTERFERENCE WITH COMPRESSION SEALS.
- SLAB THICKNESS AT SUPPORTS = 6" NOMINAL THICKNESS = 5 1/2"
- CARE SHALL BE TAKEN TO ENSURE THAT NO VOIDS ARE LEFT BELOW THE JOINT EDGE ARMOR ANGLES. HAND PACK CONCRETE UNDER ANGLES IF NECESSARY.
- DUE TO BOX BEAM FIT-UP TRANSVERSELY ACROSS THE BRIDGE, THE EXACT DIMENSION FOR THE LENGTH OF THE JOINT ARMOR IS NOT KNOWN. THE JOINT ARMOR SHALL BE PROVIDED IN TWO SEPARATE PIECES AND WELDED IN EACH 7"x4"x1/4" ANGLE ASSEMBLY SHALL BE PROVIDED WITH A LENGTH THAT IS 2" (INCHES) LONGER THAN THE CENTERLINE OF BRIDGE TO THE TOE SHALL BE CUT TO FIT AND GROUND SMOOTH IN THE FIELD WELDED AS SHOWN ON THIS SHEET.



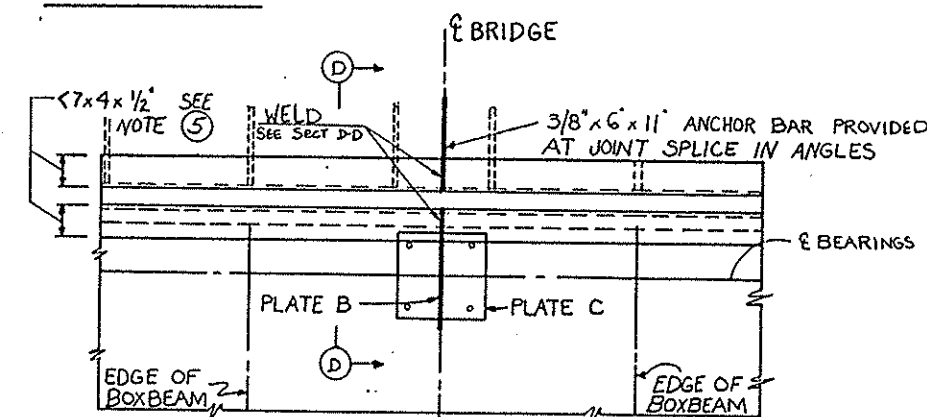
ABUTMENT EXPANSION JOINT PART PLAN



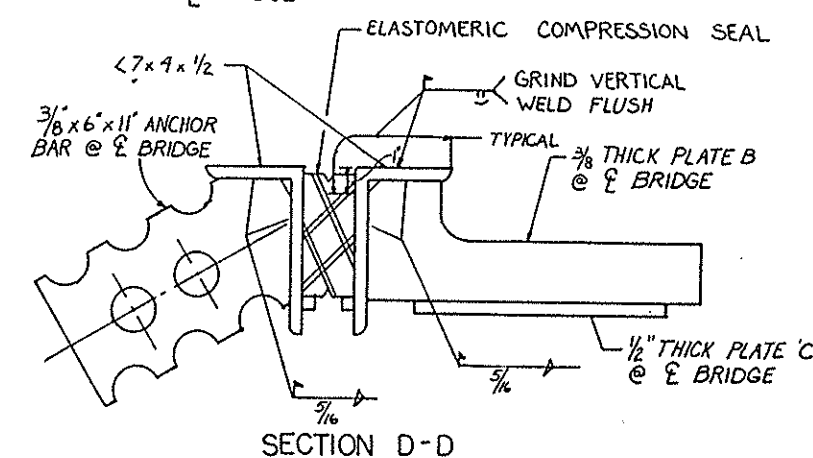
SECTION B-B



SECTION A-A
REAR ABUTMENT SHOWN
FORWARD ABUTMENT SIMILAR



DECK JOINT PLAN
AT E BRIDGE



SECTION D-D

JOINT ARMOR SHOWN FOR ABUTMENTS ONLY, INTERMEDIATE EXPANSION JOINTS SIMILAR. FOR ANCHOR PLATE WELDS AT OTHER LOCATIONS, SEE STANDARD DRAWING EXJ-3-82.

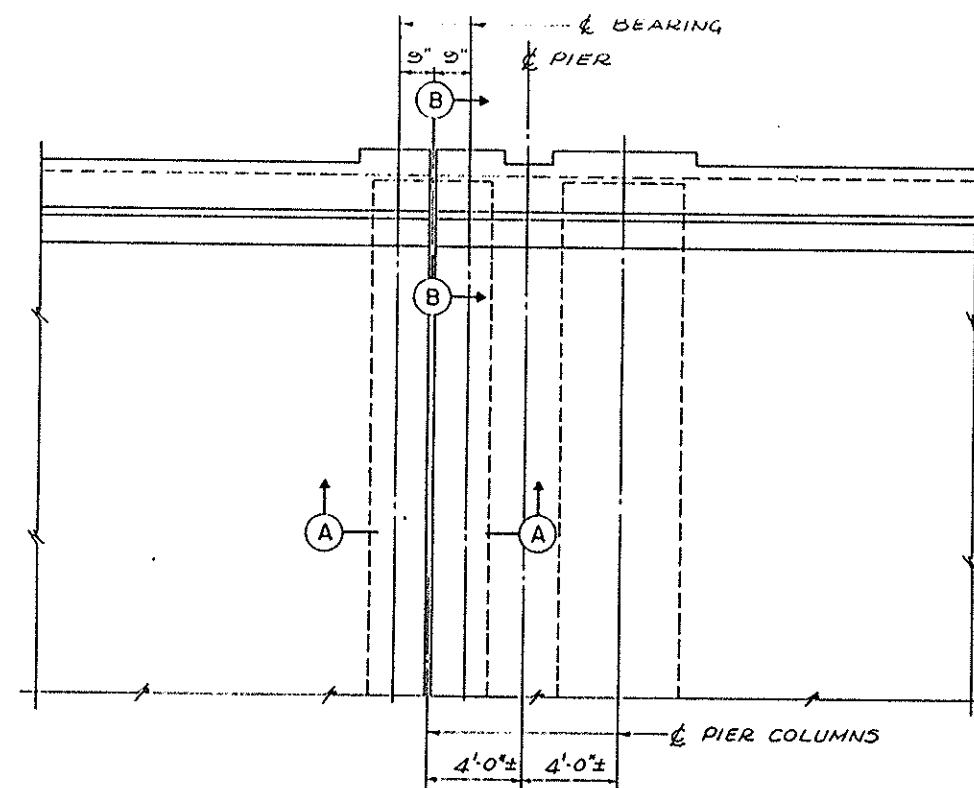
SSN 7706871

McCOY ASSOCIATES INC. 24/64
CONSULTING ENGINEERS
AKRON, OHIO

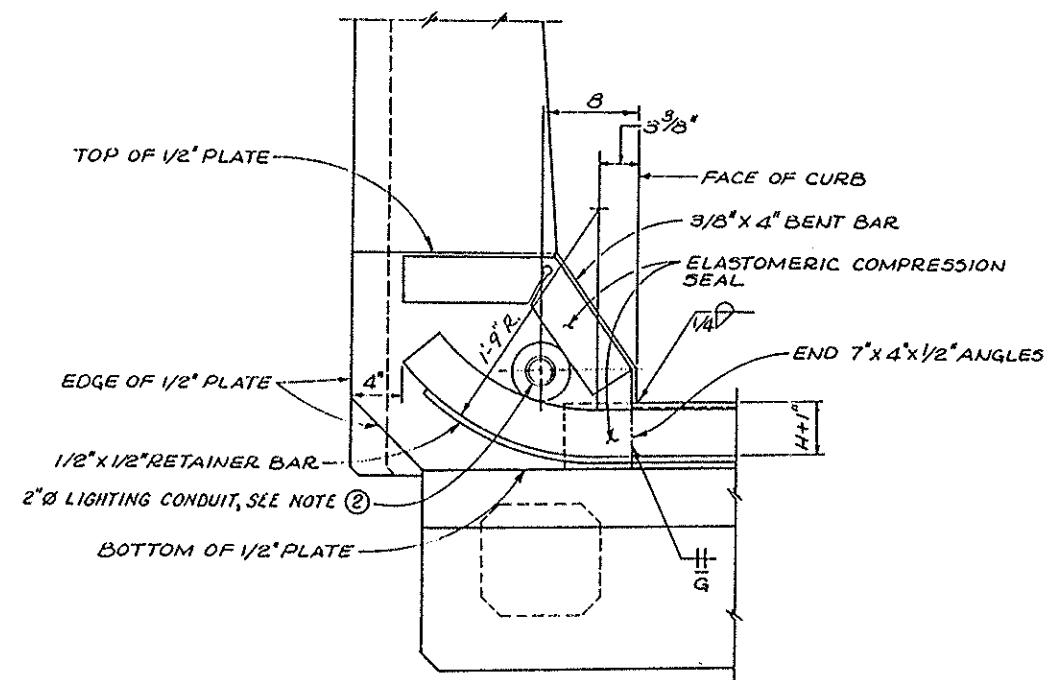
SUPERSTRUCTURE JOINT DETAILS

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

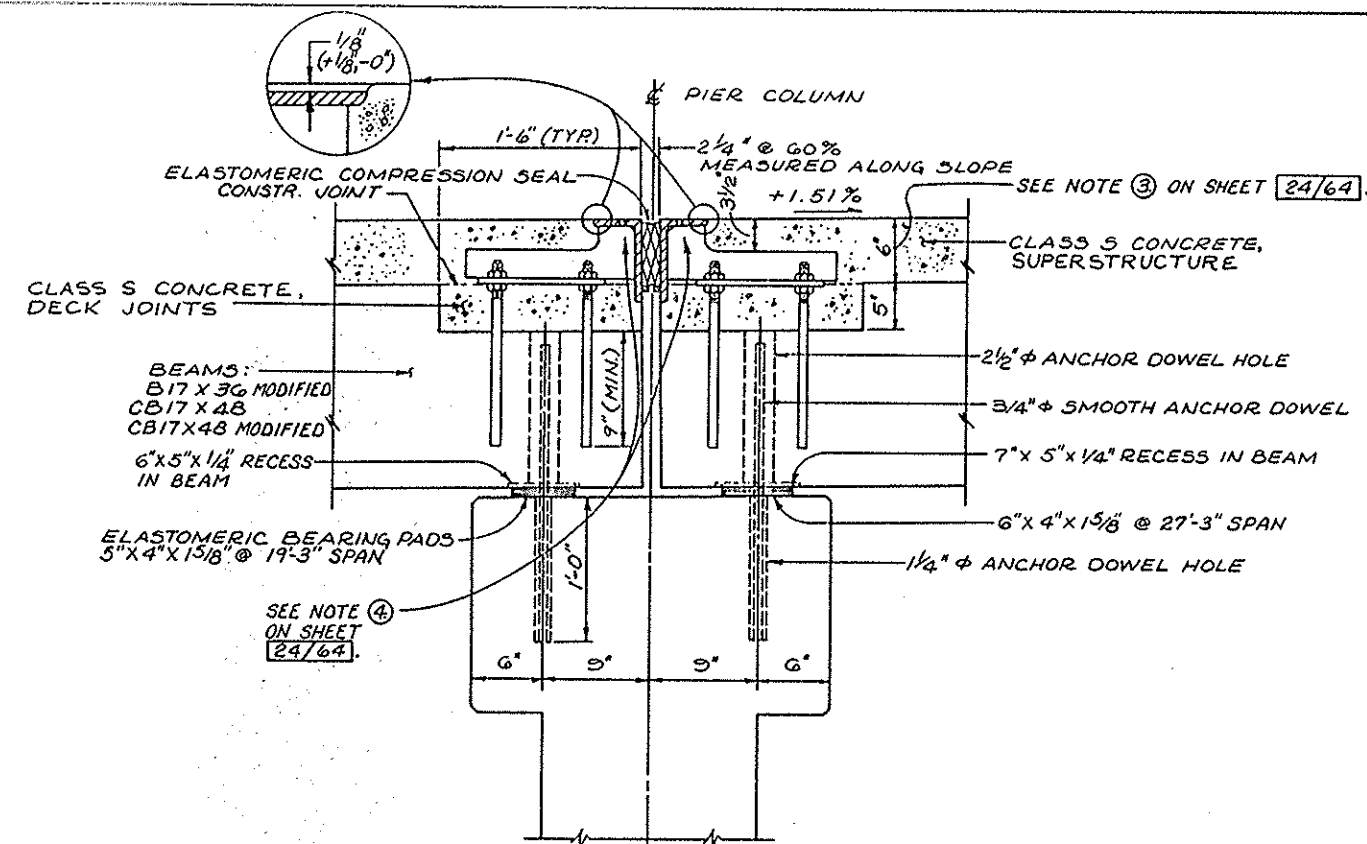
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.B.H.	J.O.P.		TAB	MBC	6-4-87	7-19-88



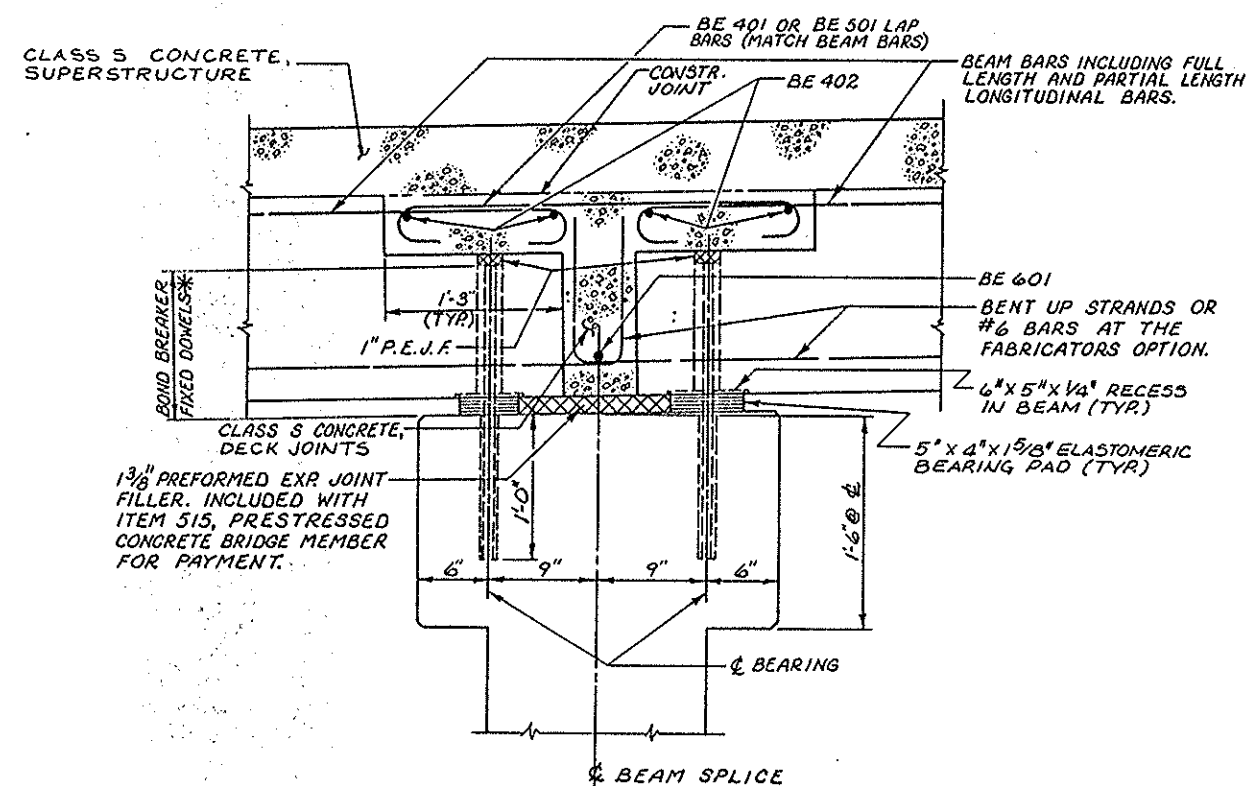
INTERMEDIATE EXPANSION JOINT PART PLAN



SECTION B-B



SECTION A-A



SECTION C-C

FHWA REGION	STATE	PROJECT	
5	OHIO		

CUY 82-15.64
SUM 82-00.00

42
81

NOTES

- ① FOR ADDITIONAL DETAILS SEE STANDARD DRAWINGS EXJ-3-82 AND PSBD-1-81 AND SHEET 24/64.
- ② PROVIDE 5" Ø OPENING IN PLATE FOR LIGHTING CONDUIT AND EXPANSION COUPLING. ADJUST CONDUIT IN THE FIELD TO AVOID INTERFERENCE WITH COMPRESSION SEALS.
- ③ FOR BEAM SPLICE PLAN (SECTION C-C), SEE SHEET 17/64.
- * ④ FOR FIXED DOWELS, APPLY A BOND BREAKER ABOVE THE BRIDGE SEAT, FILL DOWEL HOLES WITH A NON-SHRINKING GROUT OR MORTAR (SEE NON-SHRINKING MORTAR NOTE ON SHEET 37/64).
- * ⑤ FOR EXPANSION DOWELS, FILL DOWEL HOLES WITH 705.04 JOINT SEALER.

* SEE SHEET 14/64 THRU 16/64 FOR LOCATION OF FIXED (F) AND EXPANSION (E) DOWELS.

SSN 7706871

McCOY ASSOCIATES INC. 25/64
CONSULTING ENGINEERS
AKRON, OHIO

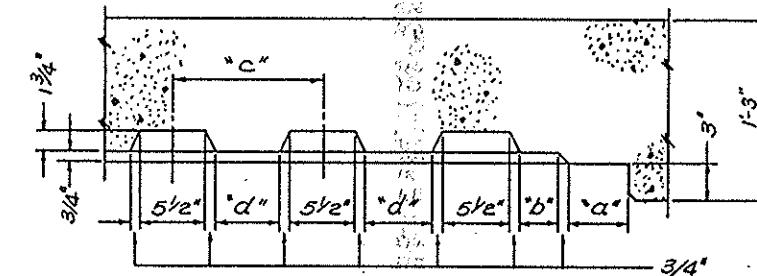
SUPERSTRUCTURE JOINT DETAILS

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	J.D.P.		TAB	MSC	6-4-87	7-19-88 mfc

CUY 82-15.64
SUM 82-0.00

PANEL	LENGTH	NO PANELS (SEE NOTE 5)	FIGURES PER PANEL	"a"	"b"	"c"	"d"
A	12'-5 1/8"	1	12	5"	4 1/8"	11 1/8"	4 1/8"
B	13'-9"	1	13	5"	4 1/4"	11 1/2"	4 1/2"
C	18'-1"	41	18	5"	4 3/4"	11 1/8"	4 1/8"
D	17'-2"	12	16	5"	4 3/4"	11 1/8"	4 1/8"
E	5'-0"	6	4	5"	4"	11 1/8"	4 1/8"
F	21'-6 3/4"	1	21	5"	5 1/8"	11 1/2"	4 1/2"



SECTION D-D

NOTES:

1. * - PREFORMED EXPANSION JOINT FILLER IN THE PARAPET DEFLECTION JOINTS MAY BE EITHER 1/4" GRAY SPONGE RUBBER OR 1/4" GRAY CELLULAR POLYVINYL CHLORIDE (PVC) SPONGE. IF RUBBER IS USED IT SHALL MEET THE REQUIREMENTS OF AASHTO M-153.
2. OPTIONAL JOINT: SAWCUT DEFLECTION JOINTS USING A MECHANICAL GUIDE (1" DEEP), IN LIEU OF PREFORMED EXPANSION JOINT FILLER.
3. FOR LOCATIONS OF PANELS (A) THRU (F) SEE SHEETS 29164 THRU 42164.
4. NORTHWEST CORNER CONTAINS LIGHT PILASTER. FOR DETAILS SEE SHEET 27164.
5. NUMBER OF PANELS IN TABLE ABOVE IS FOR ONE SIDE OF THE BRIDGE, TOTAL NUMBER REQUIRED IS DOUBLE THE ABOVE NUMBERS.
6. REINFORCING DETAILS SHOWN ON SHEETS 29164 THRU 42164.
7. PARAPET CONCRETE INCLUDED IN ITEM 511, CLASS 5 CONCRETE, SUPERSTRUCTURE FOR PAYMENT.

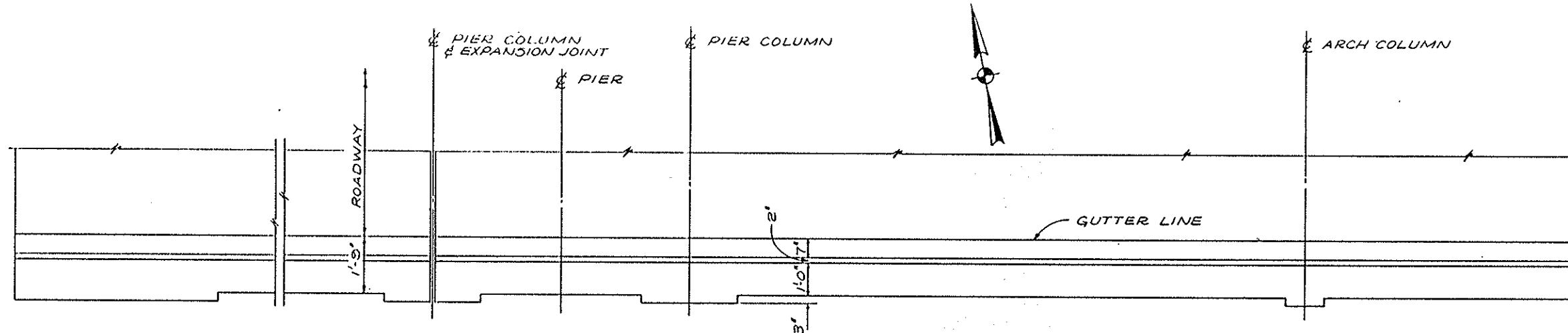
SSN 7706871

McCOY ASSOCIATES INC. 26164
CONSULTING ENGINEERS
AKRON, OHIO

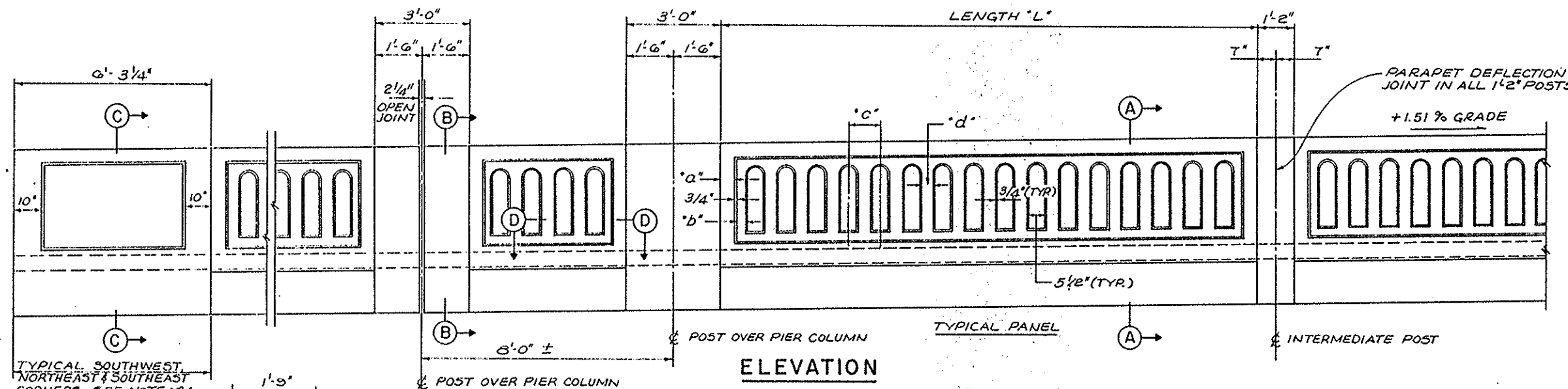
PARAPET DETAILS

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.B.H.	J.O.P.		TAB	MSC	6-4-87	

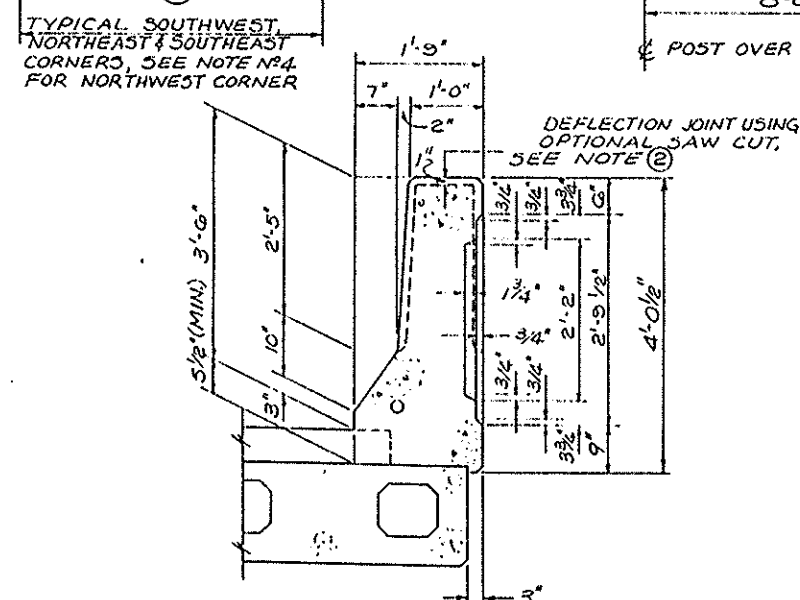


PLAN

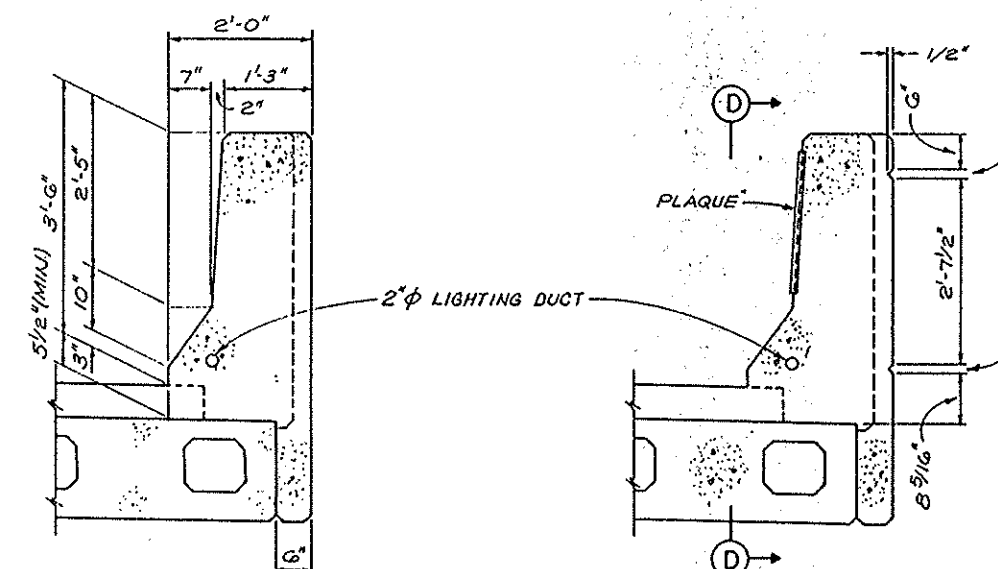


ELEVATION

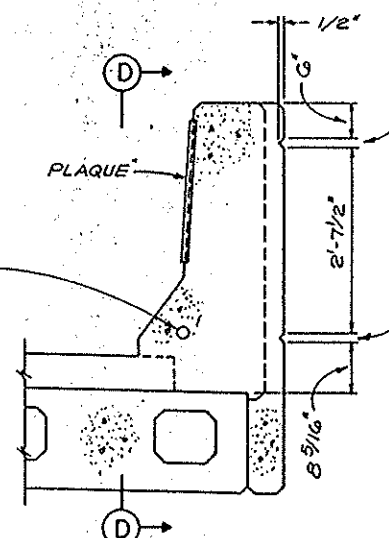
SOUTH PARAPET SHOWN, NORTH
PARAPET SIMILAR EXCEPT NORTHWEST
CORNER, SEE NOTE N° 4.



SECTION A-A

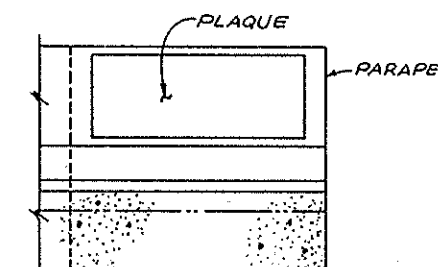


SECTION B-B



SECTION C-C

1/4" PREFORMED EXPANSION JOINT
FILLER (INCLUDED WITH SUPER-
STRUCTURE CONCRETE FOR PAYMENT *),
SEE NOTES (1) AND (2).



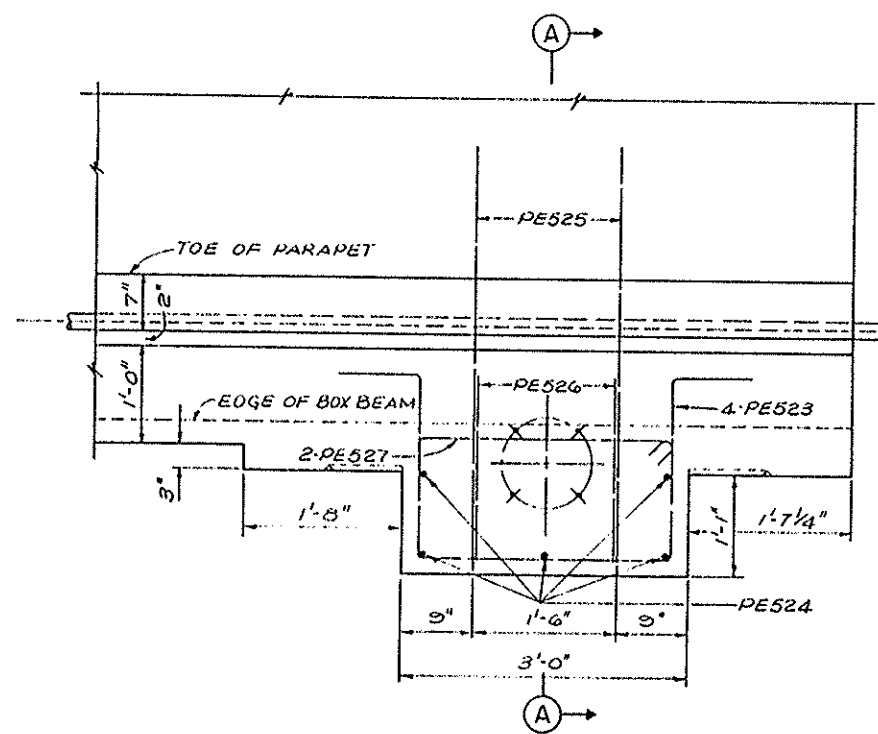
VIEW D-D

LOCATION OF PLAQUES AT
SOUTH WEST AND NORTHEAST
CORNERS OF BRIDGE.

SECTION THRU
DEFLECTION JOINT

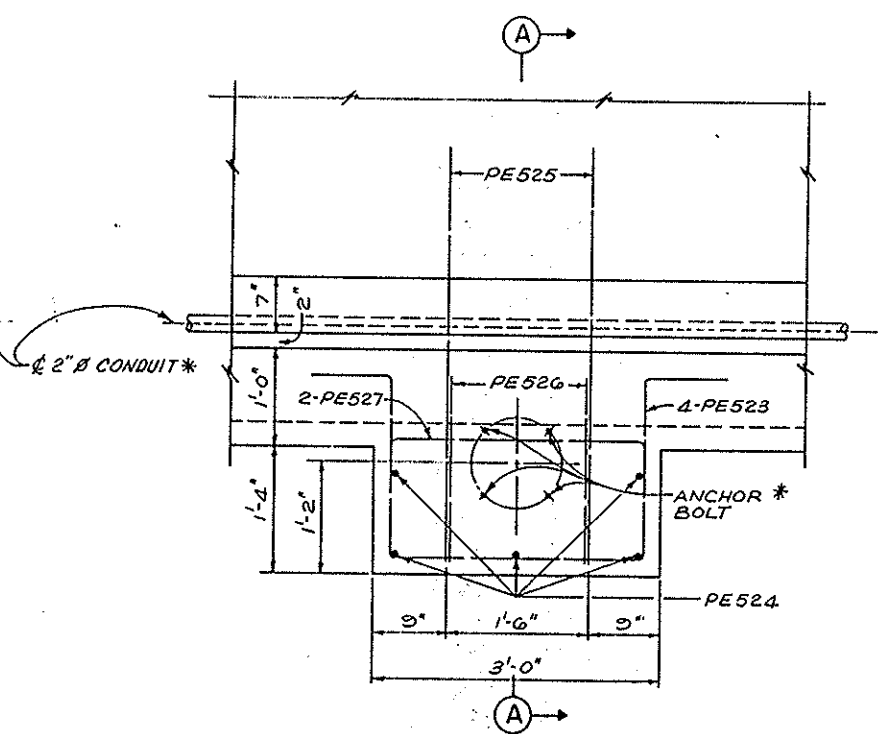
CUY 82-15.64

SUM 82- 0.00



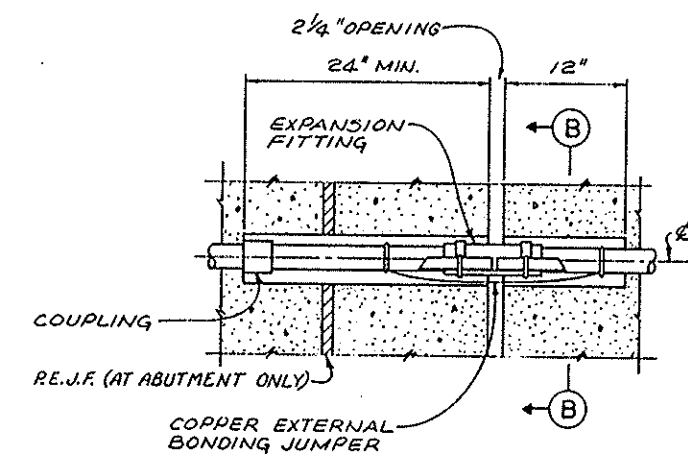
LIGHT PILASTER PLAN

AT NORTHWEST CORNER, END PANEL,
STA. 11+57.43.

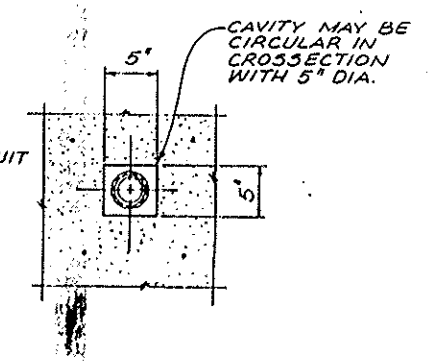


LIGHT PILASTER PLAN

AT NORMAL 3' POST



DETAIL - A



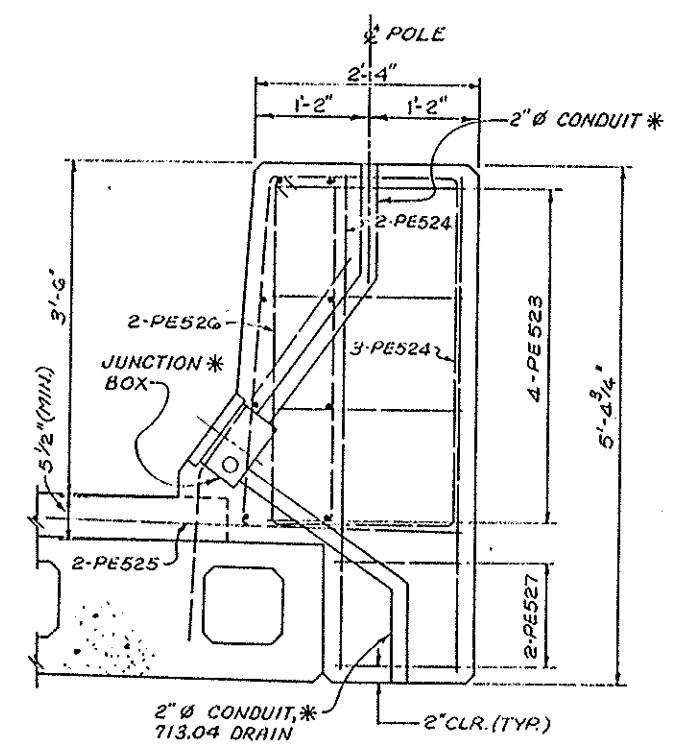
SECTION B-B

NOTES:

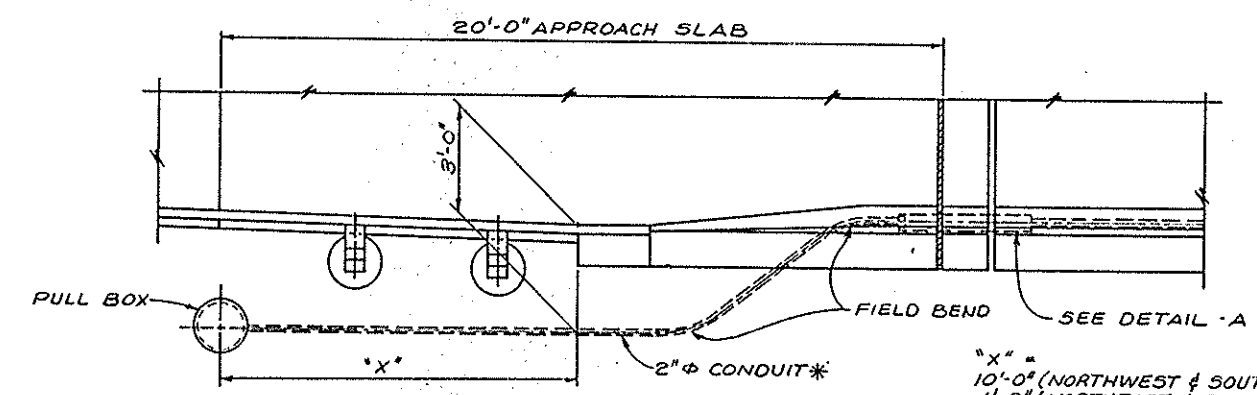
1. FOR ADDITIONAL NOTES AND DETAILS SEE SHEET 26/64.
- * 2. JUNCTION BOXES, CONDUIT AND ANCHOR BOLTS ARE INCLUDED WITH LIGHTING QUANTITIES FOR PAYMENT, SEE SHEET 15/87.
3. PAYMENT FOR PILASTER REINFORCING STEEL AND CONCRETE SHALL BE INCLUDED IN ITEMS 509 AND 511 FOR THE SUPER-STRUCTURE.
4. FOR LIGHT SUPPORT LOCATIONS, SEE SHEETS 1/64 AND 2/64.
5. DETAIL A ALSO APPLICABLE AT INTER-MEDIATE EXPANSION JOINTS, (P.E.J.F. AT ABUTMENTS ONLY)

LEGEND

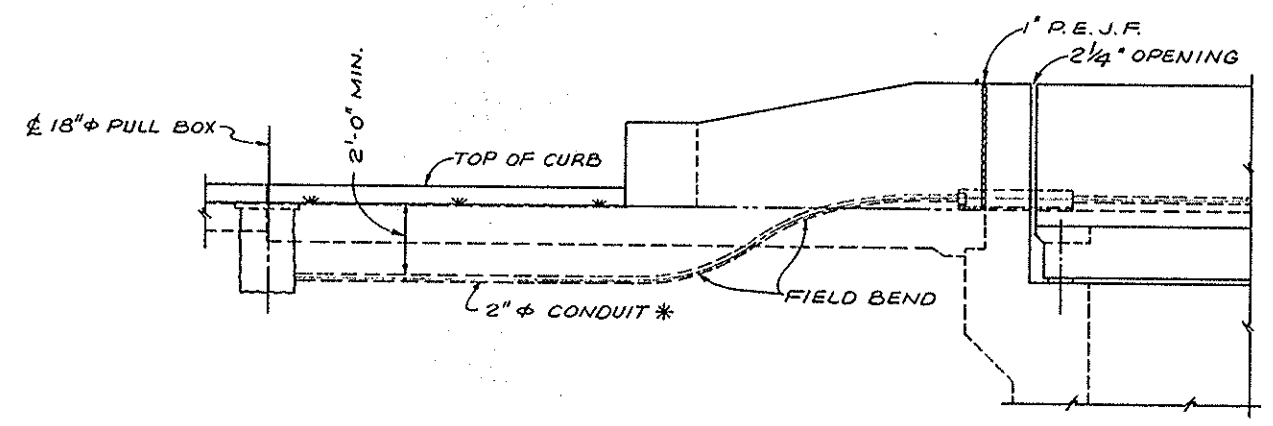
P.E.J.F. = PREFORMED EXPANSION JOINT FILLER.



SECTION A-A



PLAN



CONDUIT DETAILS

SSN 7706871

McCOY ASSOCIATES INC.

CONSULTING ENGINEERS

AKRON, OHIO

LIGHTING SUPPORT

DETAILS

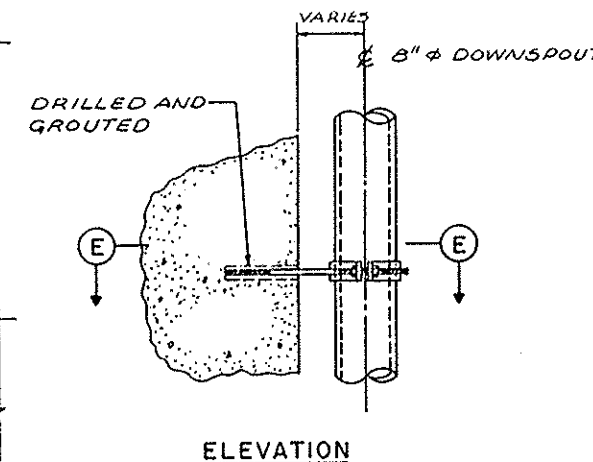
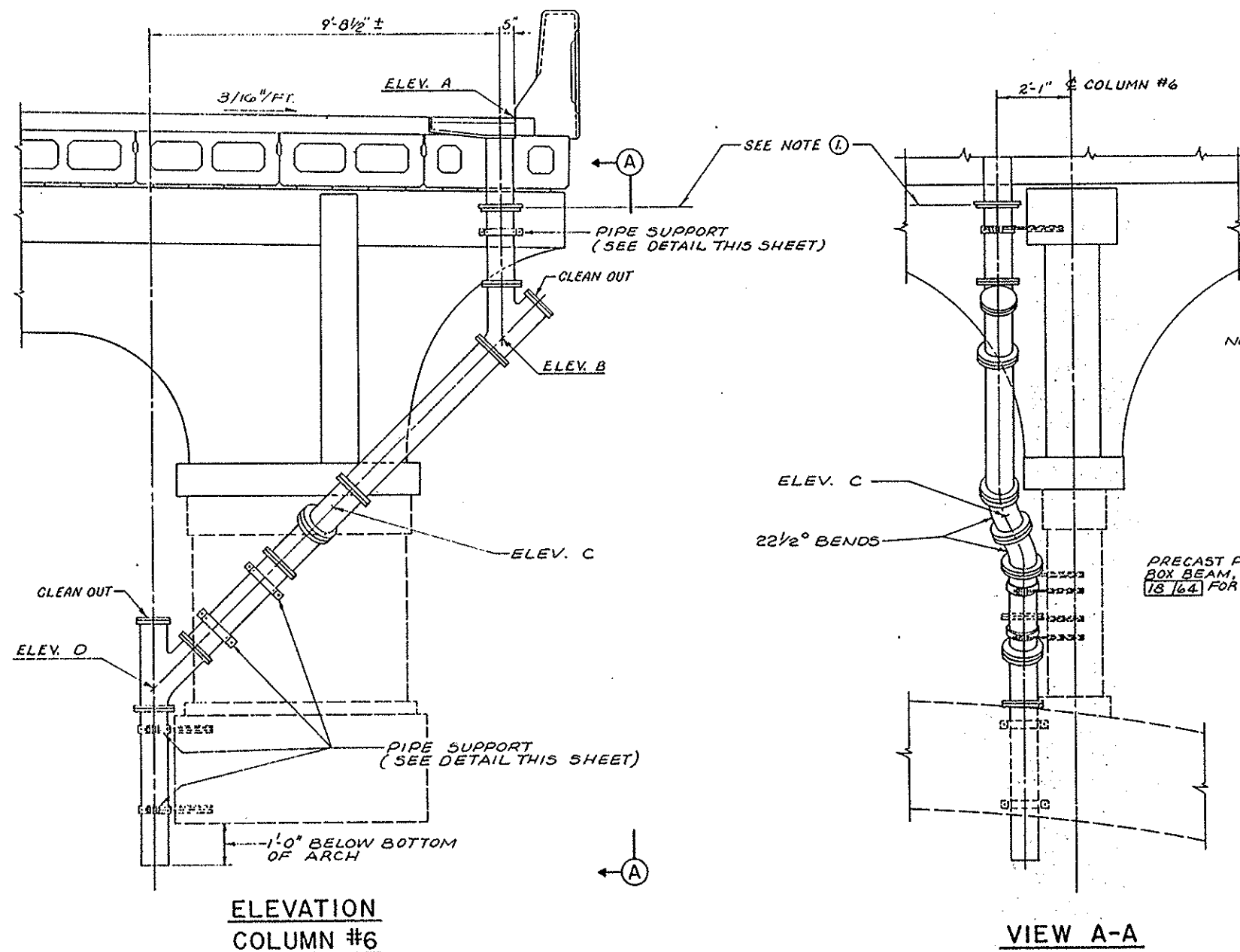
BRIDGE No. SUM 82-0000

OVER CUYAHOGA RIVER

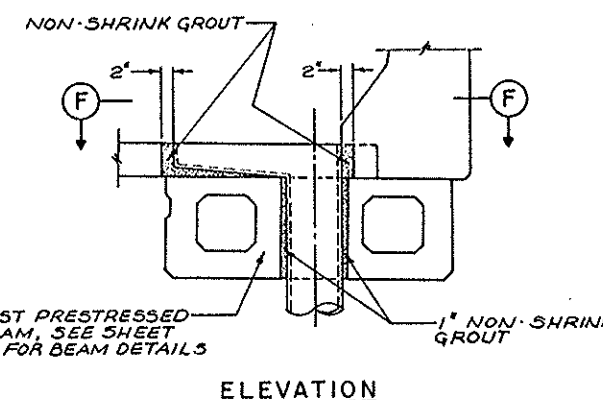
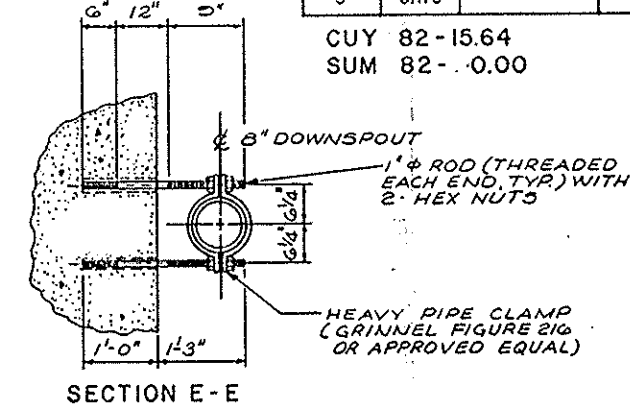
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	J.D.P.		J.B.H.	M.S.C.	6-4-87	

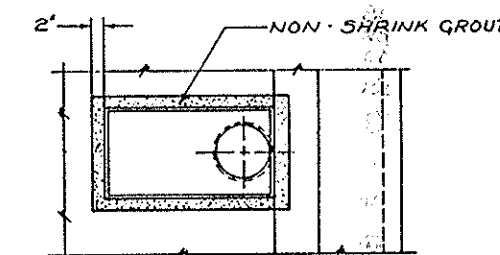
CUY 82-15.64
SUM 82-.000



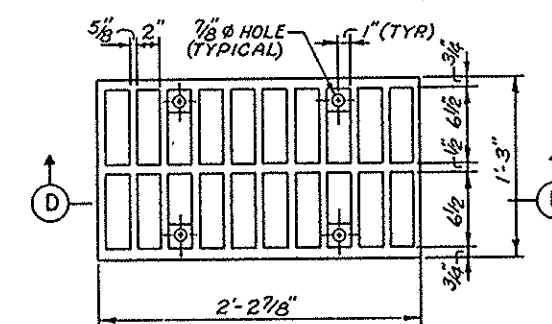
PIPE SUPPORT



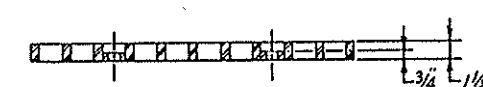
SCUPPER INSTALLATION DETAIL



SECTION F-F



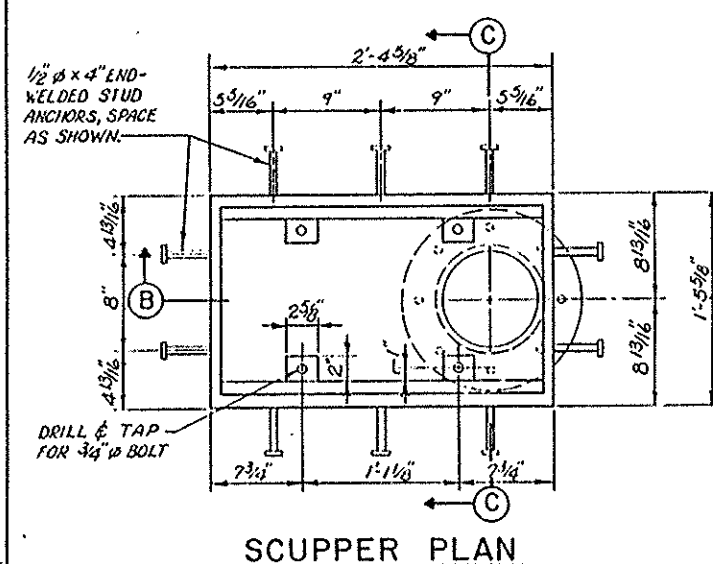
GRATE PLAN



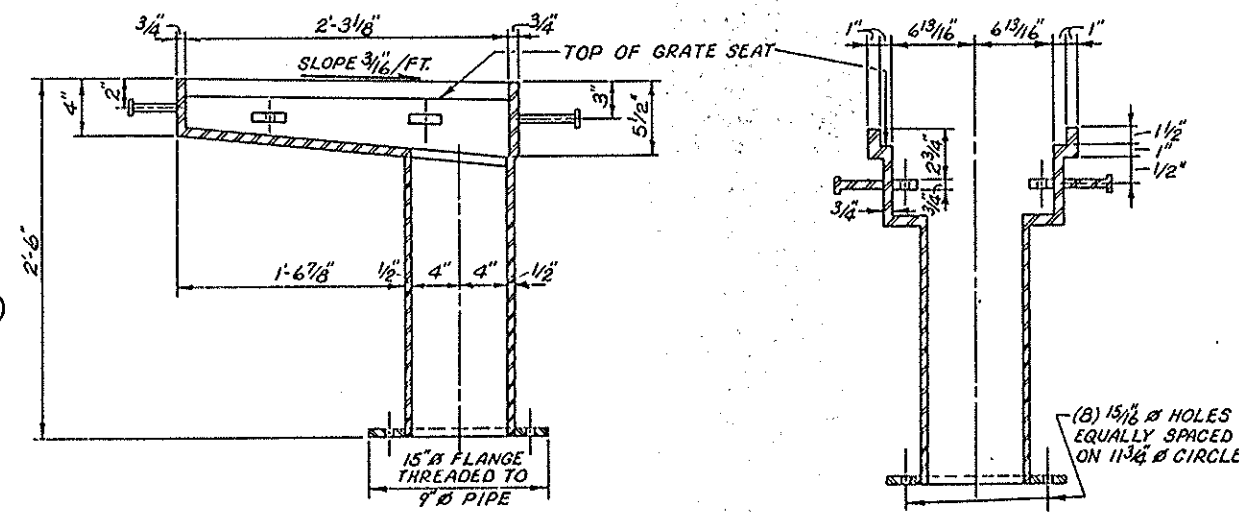
SECTION D-D

NOTES:

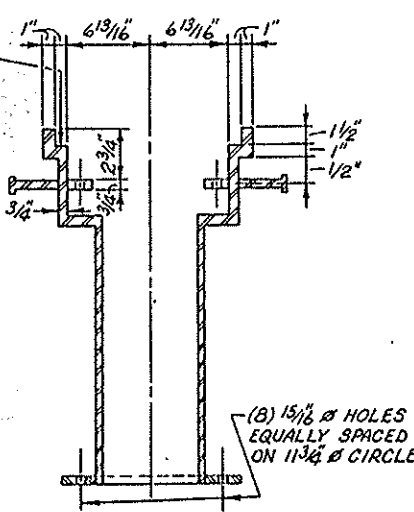
- 8" ϕ PIPE AND SPECIALS BELOW THIS POINT TO BE INCLUDED WITH ITEM 518, 8" ϕ DOWNSPOUT, GALVANIZED STEEL 70708 INCLUDING SPECIALS.
- ALL STATION LOCATIONS ARE $\pm$.



SCUPPER PLAN



SECTION B-B



SECTION C-C

ELEVATION TABLE					
SCUPPER NUMBER	STATION	ELEV. A	ELEV. B	ELEV. C	ELEV. D
1	15+68.11(R)	765.35	759.15	754.65	749.44
2	15+68.11(L)	765.35	759.15	754.65	749.44
3	17+49.27(R)	768.09	761.89	757.39	752.18
4	17+49.27(L)	768.09	761.89	757.39	752.18
5	19+30.52(R)	770.83	764.63	760.13	754.92
6	19+30.52(L)	770.83	764.63	760.13	754.92

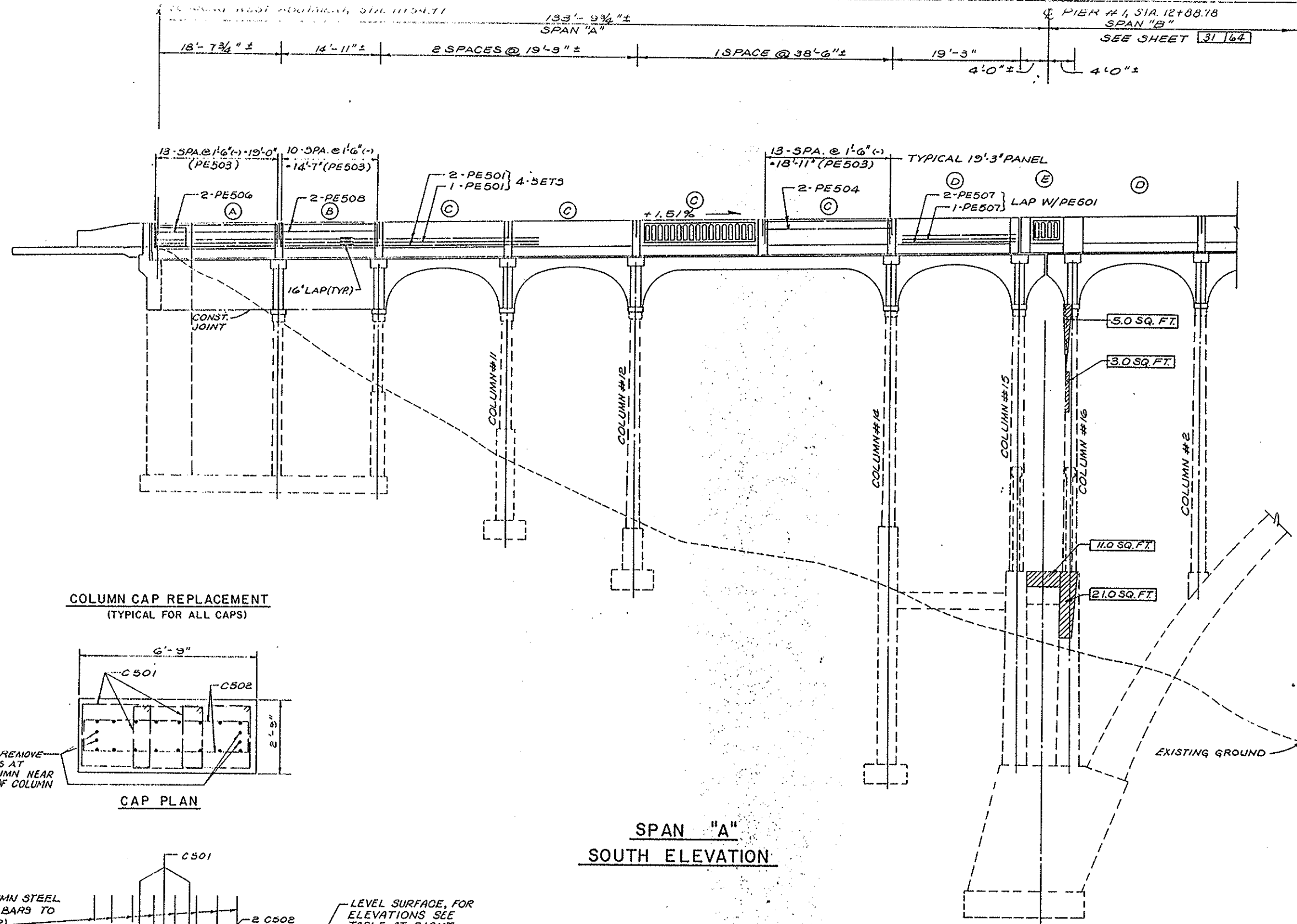
SSN 7706871

McCOY ASSOCIATES INC. 28/64
CONSULTING ENGINEERS
AKRON, OHIO

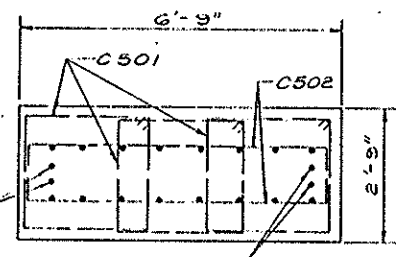
DRAINAGE AND
SCUPPER DETAILS

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

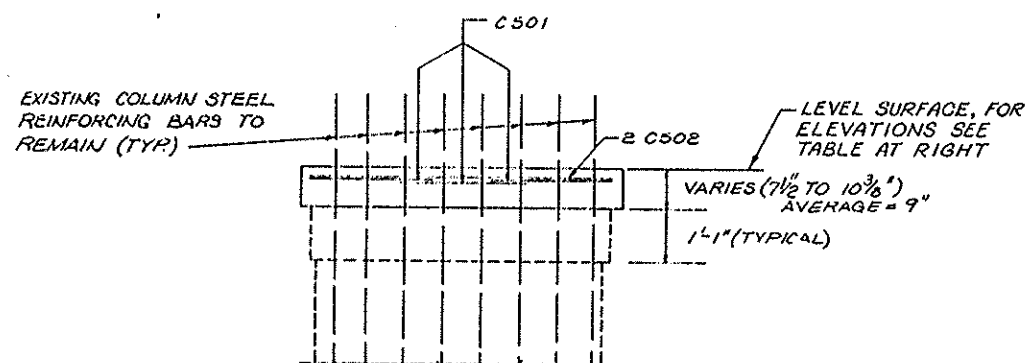
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	B.M.R. J.D.P.		J.B.H.	M.S.C.	6-4-87	



COLUMN CAP REPLACEMENT
(TYPICAL FOR ALL CAPS)



CAP PLAN



CAP ELEVATION

SPAN "A"
SOUTH ELEVATION

SOUTH PIER #1
SOUTH FACE

PROPOSED TOP OF CAP ELEVATION				
COLUMN NUMBER	11	12	14	15
ELEVATION	750.23	750.52	751.10	751.40

FHWA REGION	STATE	PROJECT	
5	OHIO		

46
81

CUY 82-15.64
SUM 82-.000

NOTES:

- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64.
- FOR PARAPET DETAILS ON APPROACH SLAB, SEE SHEET 55/64.

LEGEND

- ITEM 519-PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 205 SQ. FT.)
- NEAR SIDE
- FAR SIDE
- PARAPET PANEL DESIGNATION

SSN 7706871

McCOY ASSOCIATES INC. 29/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "A"
SOUTH ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RPL	DAK		JBH	MBC	6-4-87	

SEE SHEET [32/64]

133'-9 3/4" ±
SPAN "A"

BEARING WEST
ABUTMENT
STA. 11+54.97

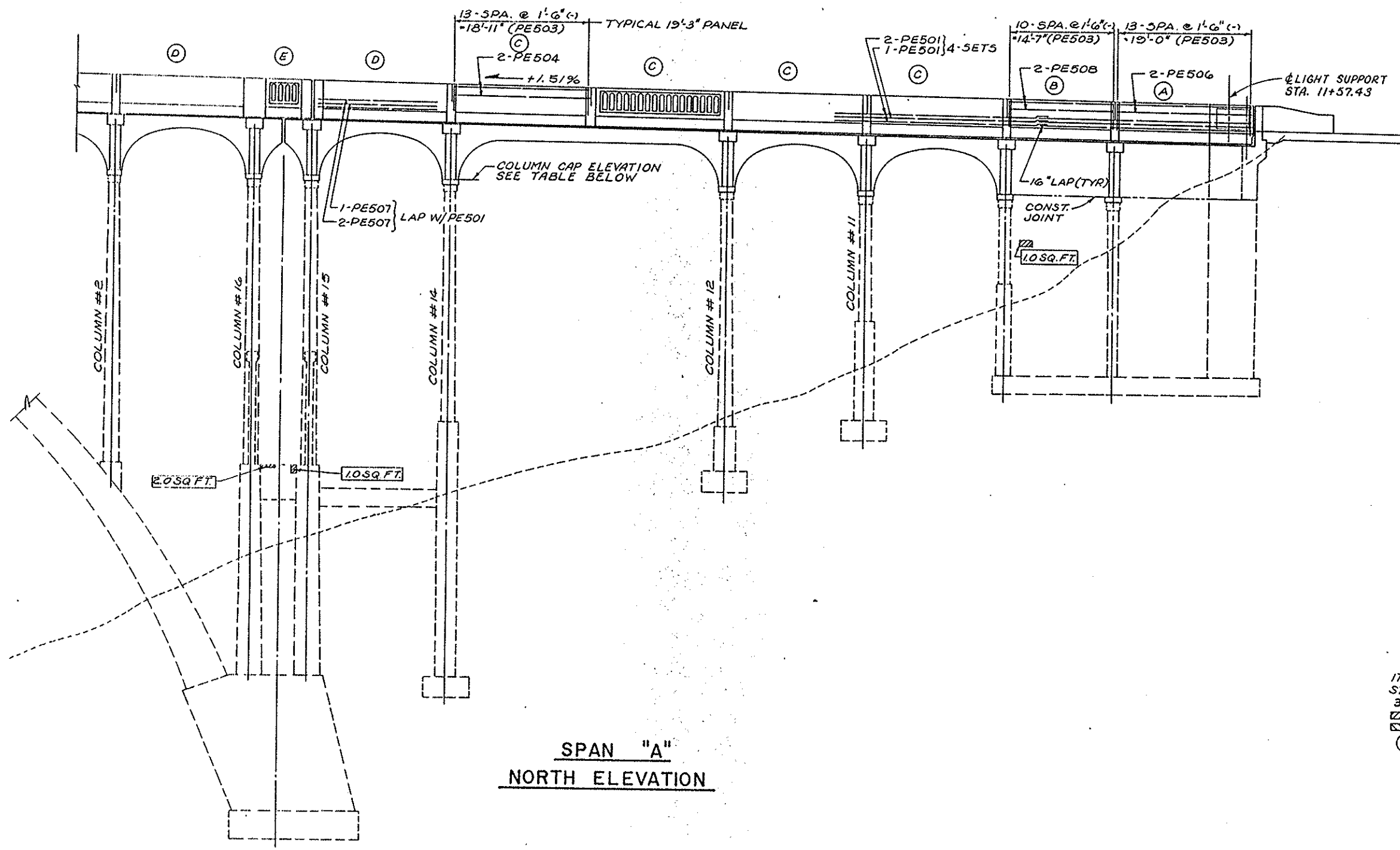
FHWA REGION	STATE	PROJECT
5	OHIO	

47
81

CUY 82-15.64
SUM 82-00.00

NOTES:

- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET [26/64].
- FOR LIGHT SUPPORT DETAILS, SEE SHEET [27/64].
- FOR PARAPET DETAILS ON APPROACH SLAB, SEE SHEET [55/64].



SPAN "A"
NORTH ELEVATION

NORTH PIER #1
NORTH FACE

LEGEND

- ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 35 SQ. FT.)
- NEAR SIDE
- FAR SIDE
- PARAPET PANEL DESIGNATION

PROPOSED TOP OF CAP ELEVATION				
COLUMN NUMBER	(13)	(14)	(12)	(11)
ELEVATION	751.40	751.10	750.52	750.23

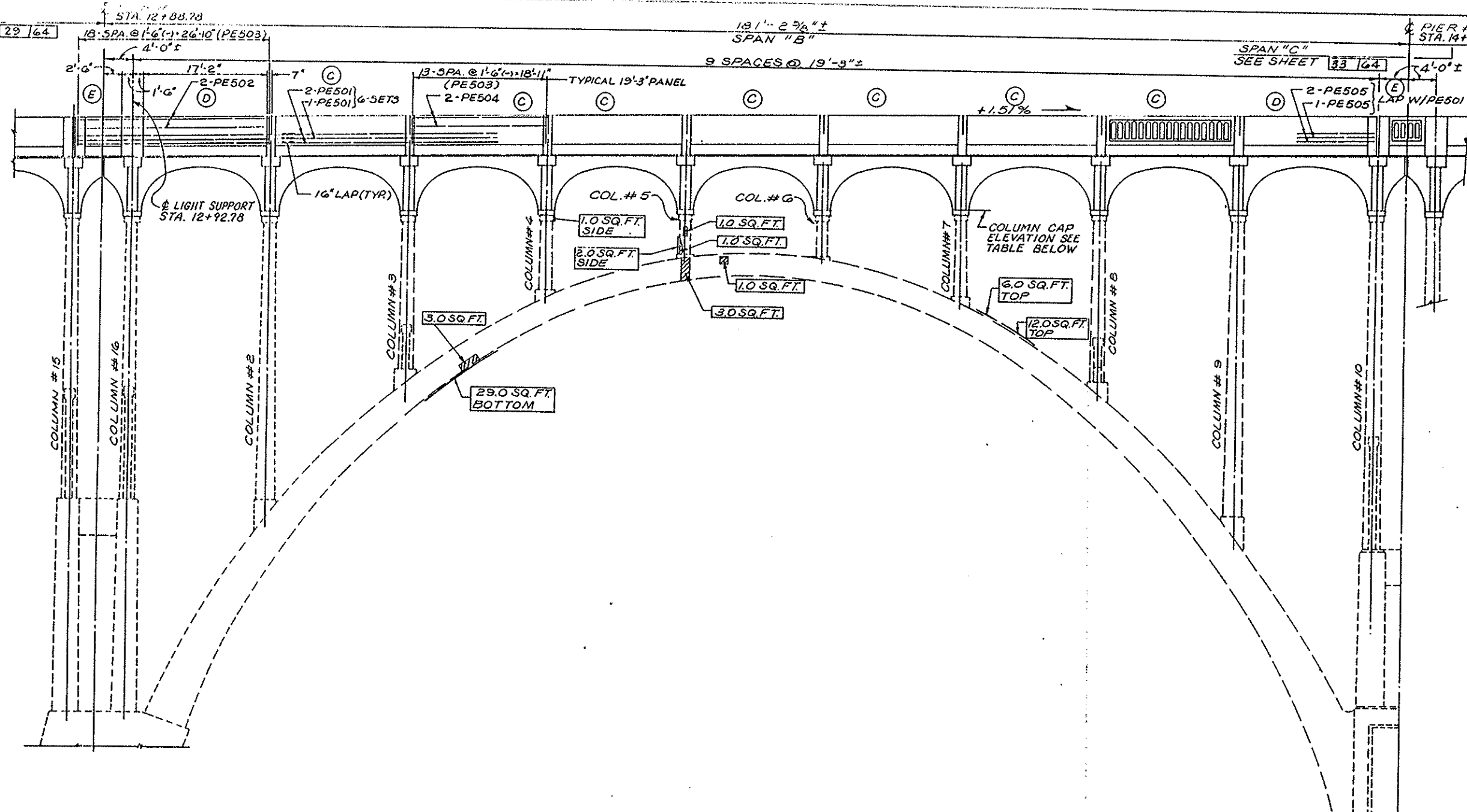
SSN 7706871

McCOY ASSOCIATES INC. 30/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "A"
NORTH ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RPL	DAK		JBH	MBC	6-4-87	



SPAN "B"
SOUTH ELEVATION

FHWA REGION	STATE	PROJECT
5	OHIO	

CUY 82-15.64
SUM 82- 0.00

- NOTES:
- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64
 - FOR LIGHT SUPPORT DETAILS, SEE SHEET 27/64.

- LEGEND**
- ITEM 519-PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 96 SQ. FT.)
- NEAR SIDE
- FAR SIDE
- PARAPET PANEL DESIGNATION

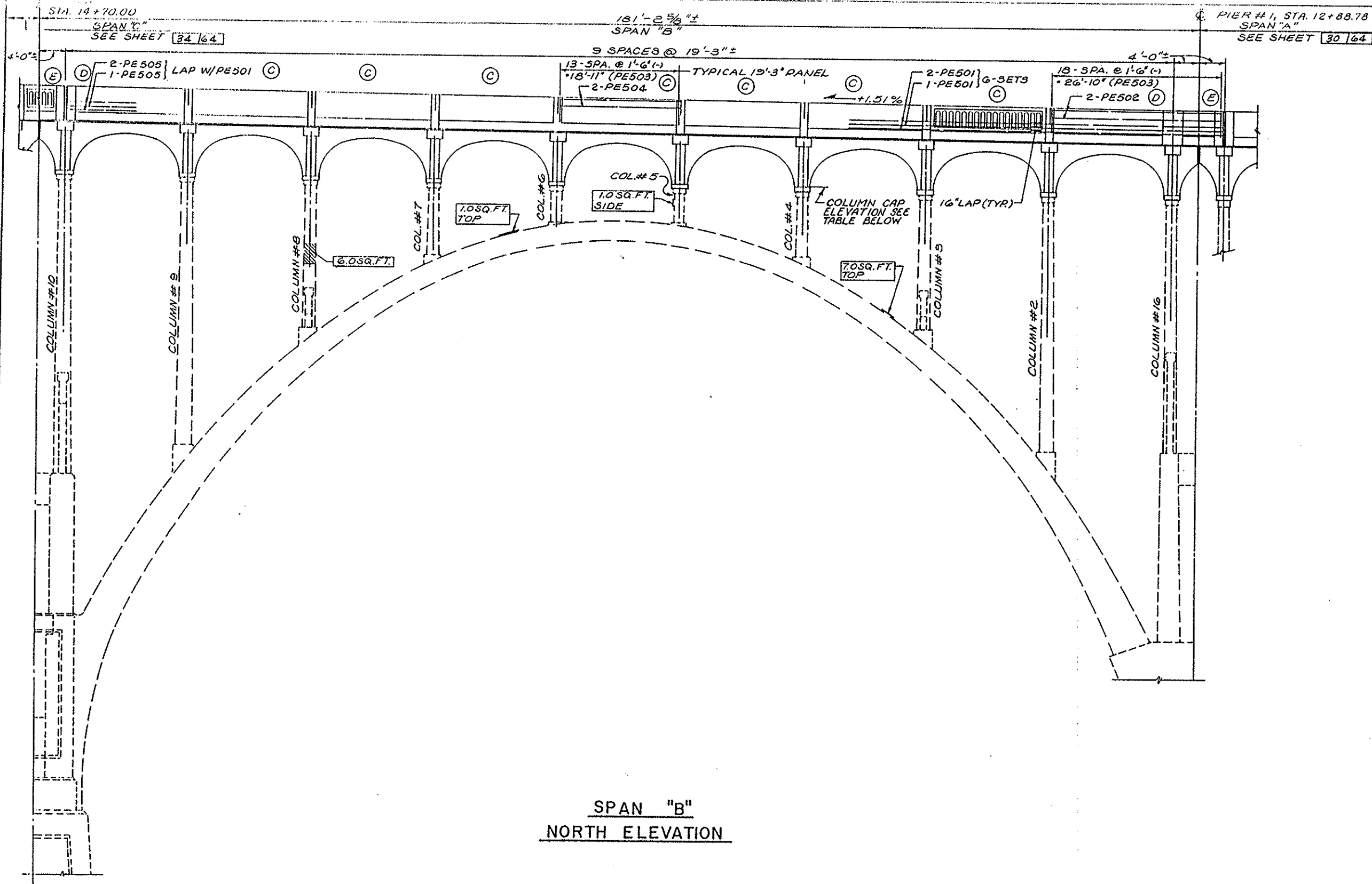
PROPOSED TOP OF COLUMN CAP ELEVATION										
COLUMN NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ELEVATION	751.52	751.81	752.10	752.39	752.68	752.97	753.26	753.55	753.84	754.13

SSN 7706871

McCOY ASSOCIATES INC. 31/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "B"
SOUTH ELEVATION
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RPL	DAK		JBH	MSC	6-4-87	



SPAN "B"
NORTH ELEVATION

FHWA REGION	STATE	PROJECT
5	OHIO	

CUY 82-15.64
SUM 82- 0.00

NOTES:

- (1) FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64

LEGEND

ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 61 SQ. FT.)
 [Hatched pattern] NEAR SIDE
 [Cross-hatched pattern] FAR SIDE
 (E) PARAPET PANEL DESIGNATION

PROPOSED TOP OF COLUMN CAP ELEVATION										COLUMN NUMBER
(10)	(9)	(8)	(7)	(6)	(5)	(4)	(3)	(2)	(1)	
754.13	753.84	753.55	753.26	752.97	752.68	752.39	752.10	751.81	751.52	ELEVATION

SSN 7706871

McCOY ASSOCIATES INC. 32/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "B"
NORTH ELEVATION
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RTL	DAK		JBH	MSC	6-4-87	

SPAN "B", SEE SHEET 31/64

PIER # 2, STA. 14+70.00

131'-1 3/4" (SPAN "C")
9 SPACES @ 19'-9" ±

PIER # 3
STA. 16+51.15

THRA REGION	STATE	PROJECT
5	OHIO	

50
81

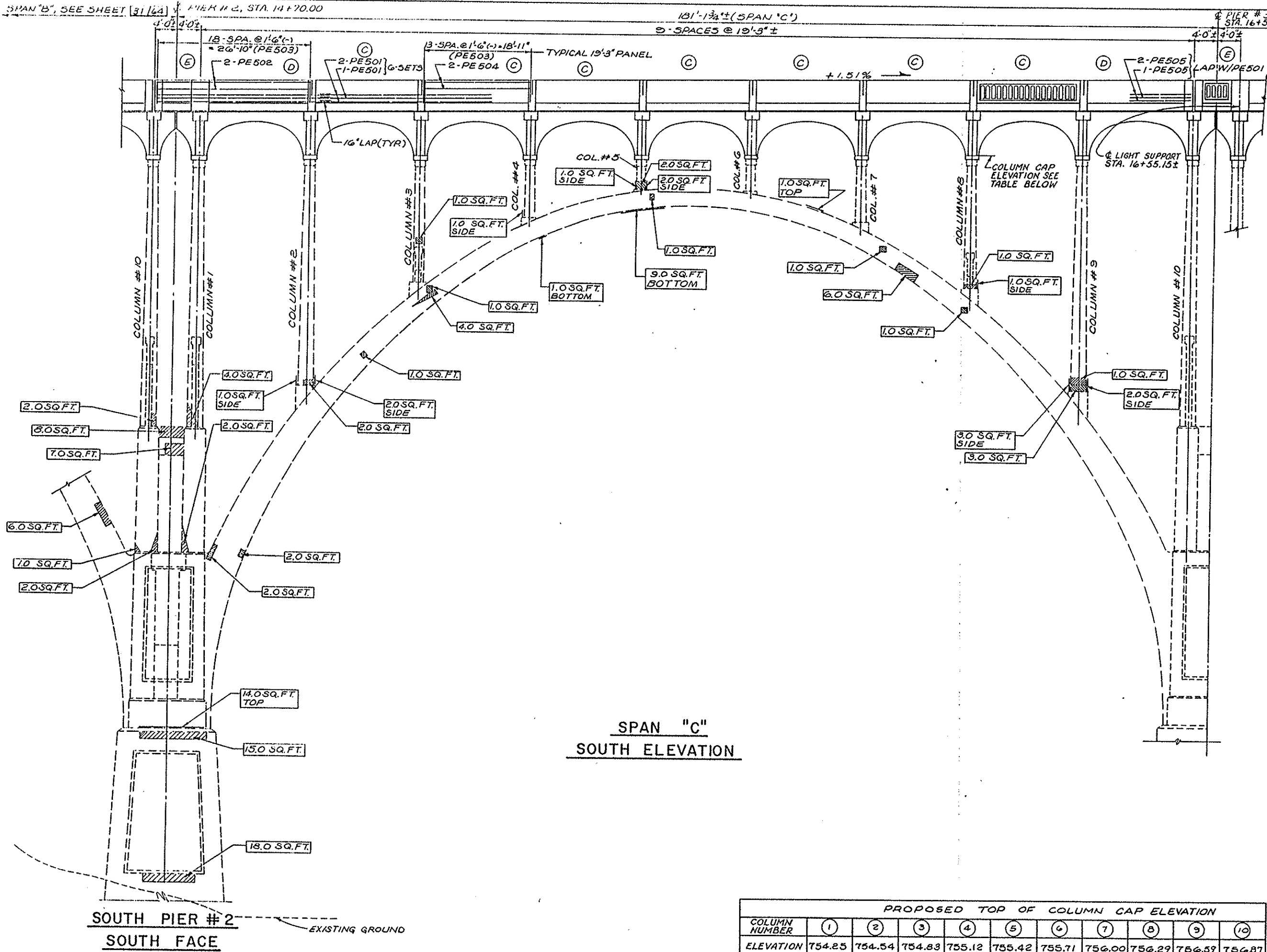
CUY 82-15.64
SUM 82-0.00

SPAN "D", SEE SHEET 35/64

NOTES:

- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64
- FOR LIGHT SUPPORT DETAILS, SEE SHEET 27/64

CUYAHOGA/SUMMIT COUNTY
LINE 13 AT STA 15+50.00



SPAN "C"
SOUTH ELEVATION

LEGEND

- ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 630 SQ. FT.)
- NEAR SIDE
- FAR SIDE
- PARAPET PANEL DESIGNATION

SSN 7706871

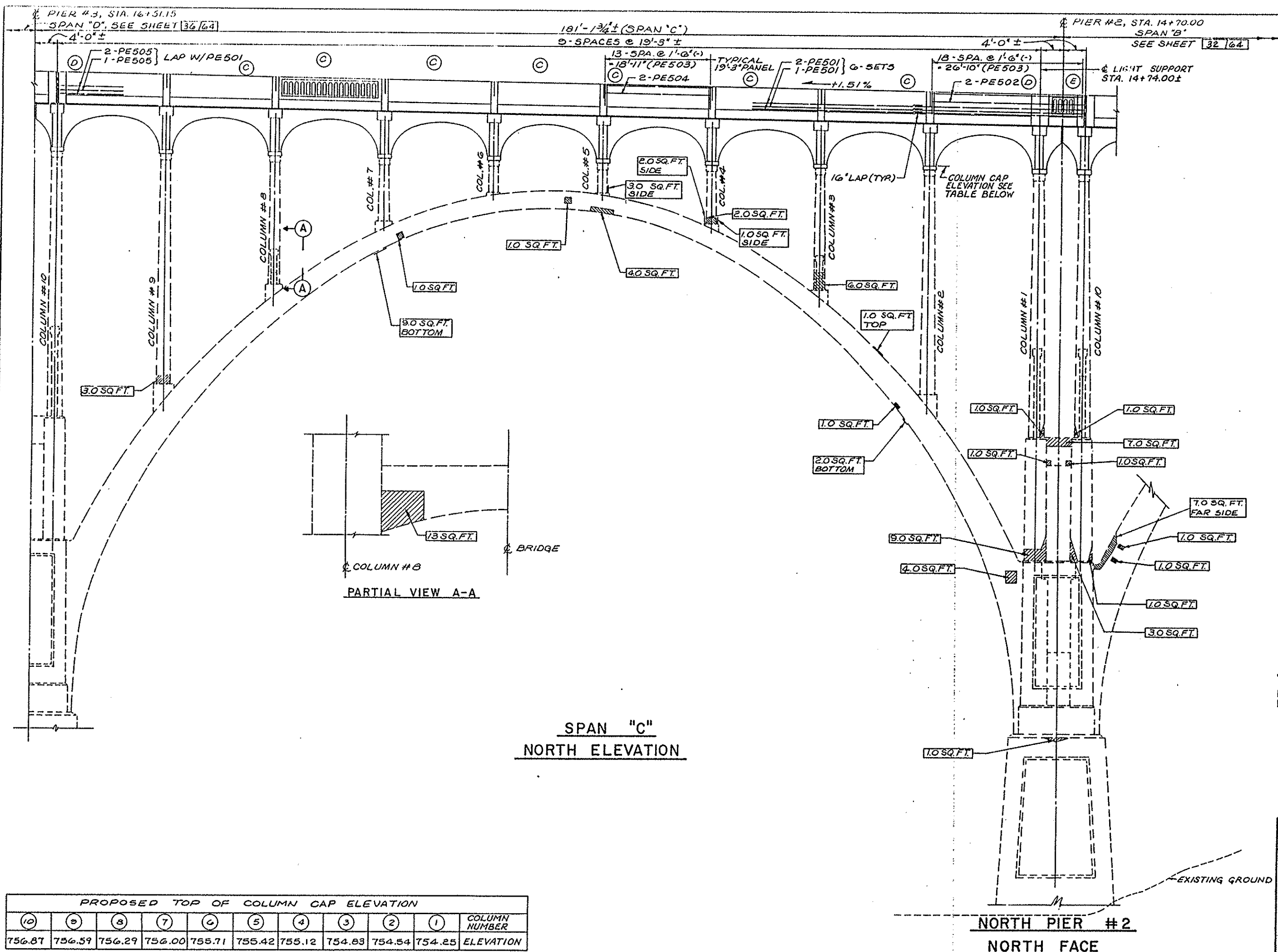
McCOY ASSOCIATES INC. 33/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "C"
SOUTH ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

PROPOSED TOP OF COLUMN CAP ELEVATION										
COLUMN NUMBER	1	2	3	4	5	6	7	8	9	10
ELEVATION	754.25	754.54	754.83	755.12	755.42	755.71	756.00	756.29	756.59	756.87

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RPL	DAK		JBH	MSC	6-4-87	



PMWA REGION	STATE	PROJECT	
5	OHIO		

CUY 82-15.64
SUM 82- 0.00

- NOTES:
- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64
 - FOR LIGHT SUPPORT DETAILS, SEE SHEET 27/64.

CUYAHOGA/SUMMIT COUNTY
LINE IS AT STA 15+50.00

- LEGEND
- ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 430 SQ. FT.)
- NEAR SIDE
- FAR SIDE
- PARAPET PANEL DESIGNATION

PROPOSED TOP OF COLUMN CAP ELEVATION										COLUMN NUMBER
10	9	8	7	6	5	4	3	2	1	
756.87	756.59	756.29	756.00	755.71	755.42	755.12	754.83	754.54	754.25	ELEVATION

SSN 7706871

McCOY ASSOCIATES INC. 34/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "C"
NORTH ELEVATION
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RTL	DAK		JBH	MBC	6-4-87	

SPAN "C", SEE SHEET [33/64] STA. 16+51.15

101'-2"± (SPAN "D")

9 SPACES @ 19'-3"±

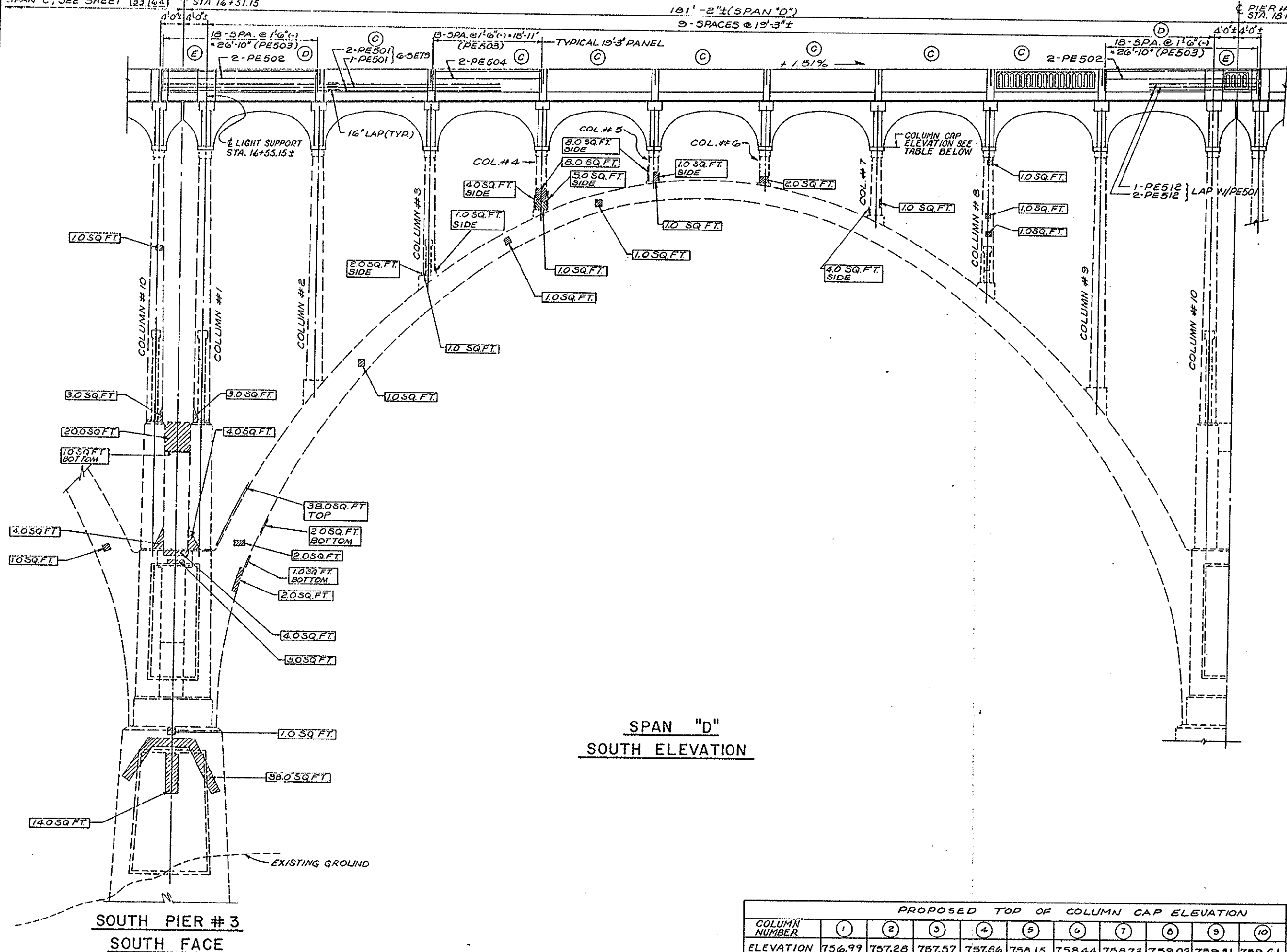
FHWA REGION	STATE	PROJECT
5	OHIO	

52
81

CUY 82-15.64
SUM 82- 0.00

SPAN "E", SEE SHEET [37/64]

- NOTES:
- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET [26/64]
 - FOR LIGHT SUPPORT DETAILS, SEE SHEET [27/64]



- LEGEND
- ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 806 SQ. FT.)
- NEAR SIDE
- FAR SIDE
- PARAPET PANEL DESIGNATION

SPAN "D"
SOUTH ELEVATION

PROPOSED TOP OF COLUMN CAP ELEVATION										
COLUMN NUMBER	1	2	3	4	5	6	7	8	9	10
ELEVATION	756.99	757.28	757.57	757.86	758.15	758.44	758.73	759.02	759.31	759.61

SSN 7706871

McCOY ASSOCIATES INC. 35/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "D"
SOUTH ELEVATION
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DAK	DAK	JBH	MSC	G-4-87		

SPAN "D", SEE SHEET [35/64]

STA. 19+32.32

181'-5 3/4" (SPAN "E")

9 - SPACES @ 19'-3" ±

PIER # 5
STA. 20+13.63

FHWA REGION	STATE	PROJECT
5	OHIO	

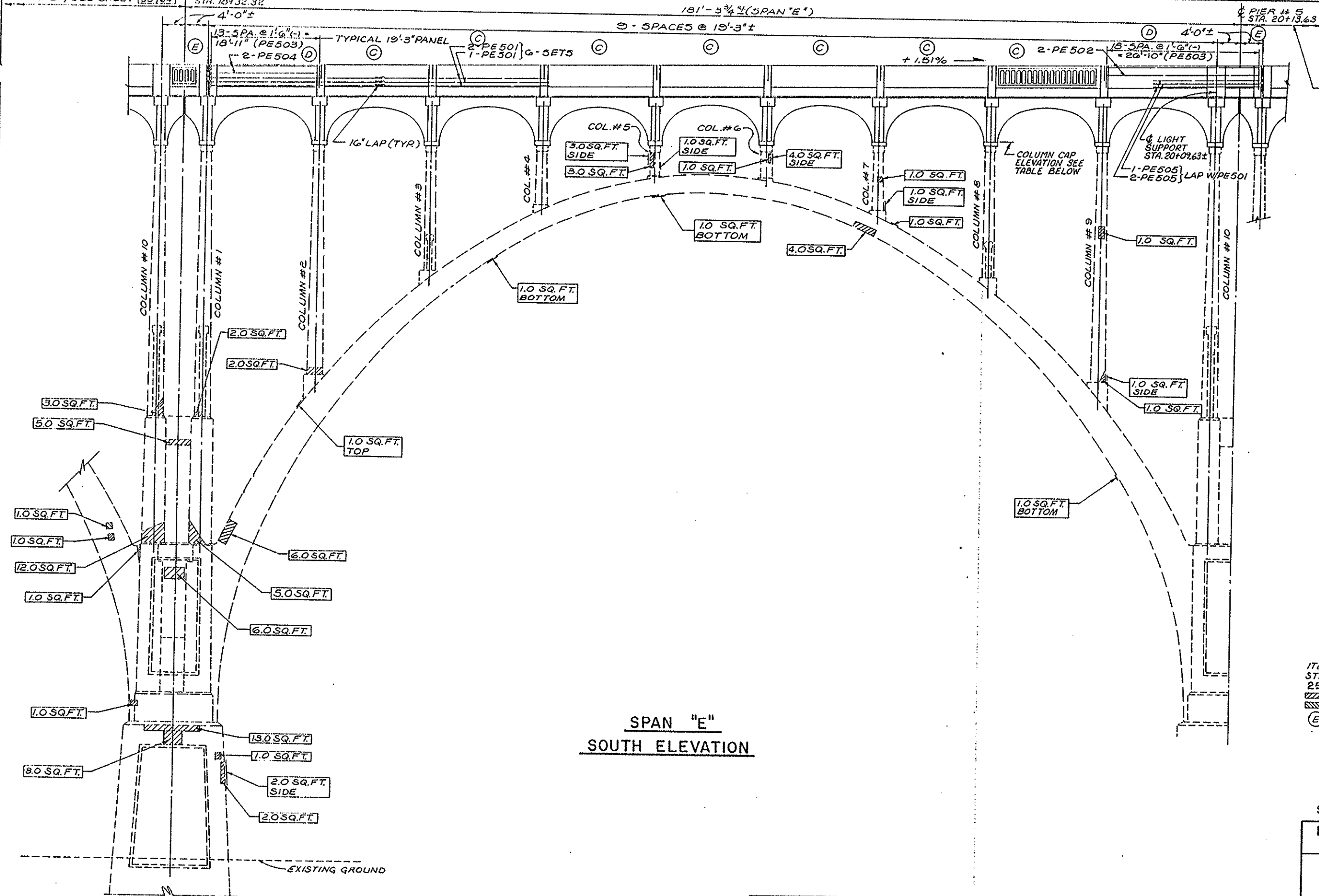
54
81

CUY 82-15.64
SUM 82- 0.00

SPAN "F", SEE SHEET [39/64]

NOTES:

- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET [26/64]
- FOR LIGHT SUPPORT DETAILS, SEE SHEET [27/64]



SPAN "E"
SOUTH ELEVATION

LEGEND

- ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 257 SQ. FT.)
- NEAR SIDE
 - FAR SIDE
 - PARAPET PANEL DESIGNATION

SOUTH PIER # 4
SOUTH FACE

PROPOSED TOP OF COLUMN CAP ELEVATION										
COLUMN NUMBER	1	2	3	4	5	6	7	8	9	10
ELEVATION	759.73	760.02	760.31	760.60	760.89	761.18	761.47	761.76	762.05	762.34

SSN 7706871

McCOY ASSOCIATES INC. [37/64]
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "E"
SOUTH ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RL	DAK		JBH	MSC	6-4-87	

SPAN "E", SEE SHEET 37/64

STA. 20+13.63

181'-0 1/2" (SPAN "F")
9 SPACES @ 19'-3 1/2"

PIER #6
STA. 21+94.67

FHWA REGION	STATE	PROJECT
5	OHIO	

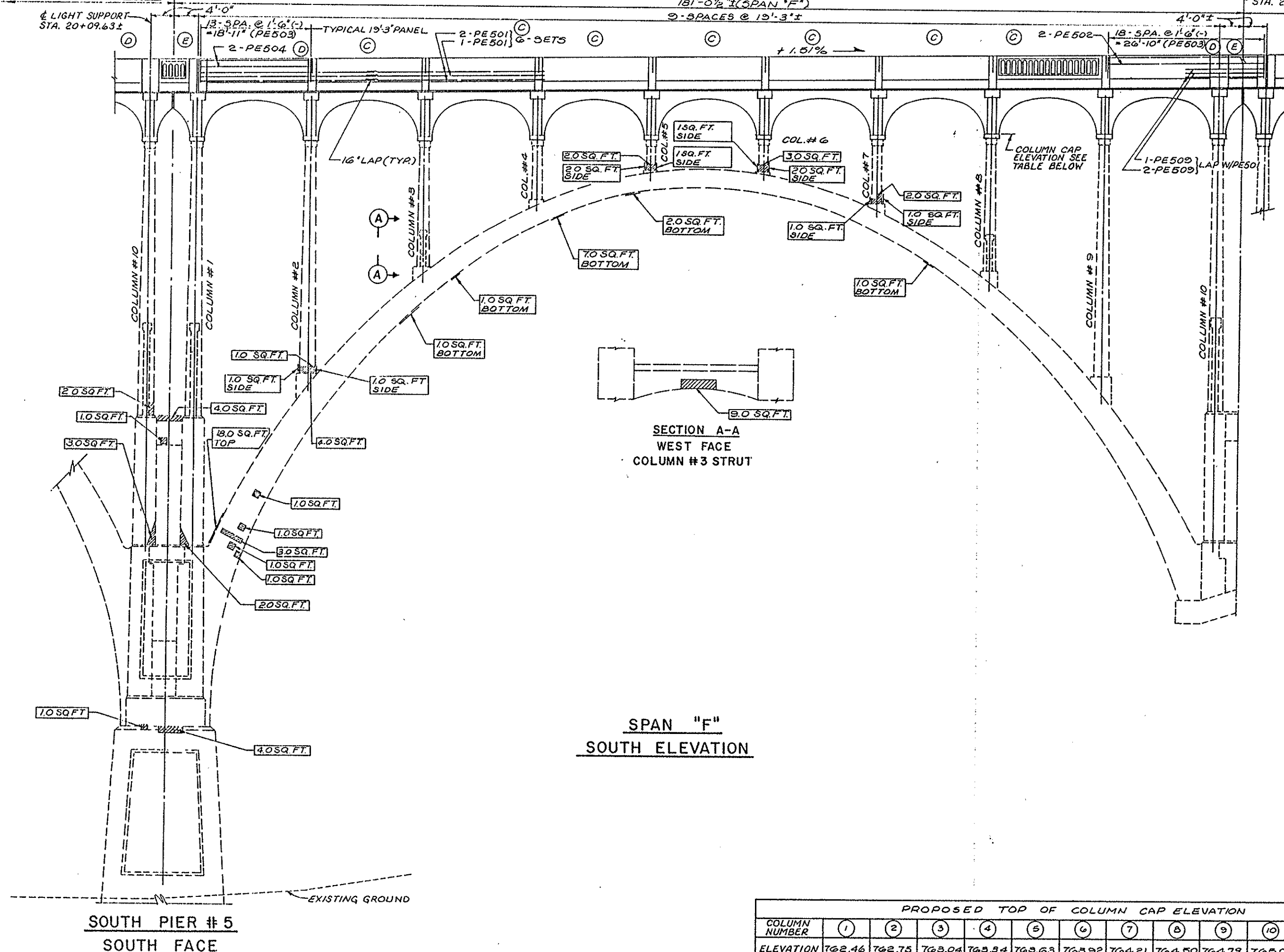
56
81

CUY 82-15.64
SUM 82-000

SPAN "G", SEE SHEET 41/64

NOTES:

- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64
- FOR LIGHT SUPPORT DETAILS, SEE SHEET 27/64



SPAN "F"
SOUTH ELEVATION

LEGEND

- ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 340 SQ. FT.)
 NEAR SIDE
 FAR SIDE
 PARAPET PANEL DESIGNATION

SSN 7706871

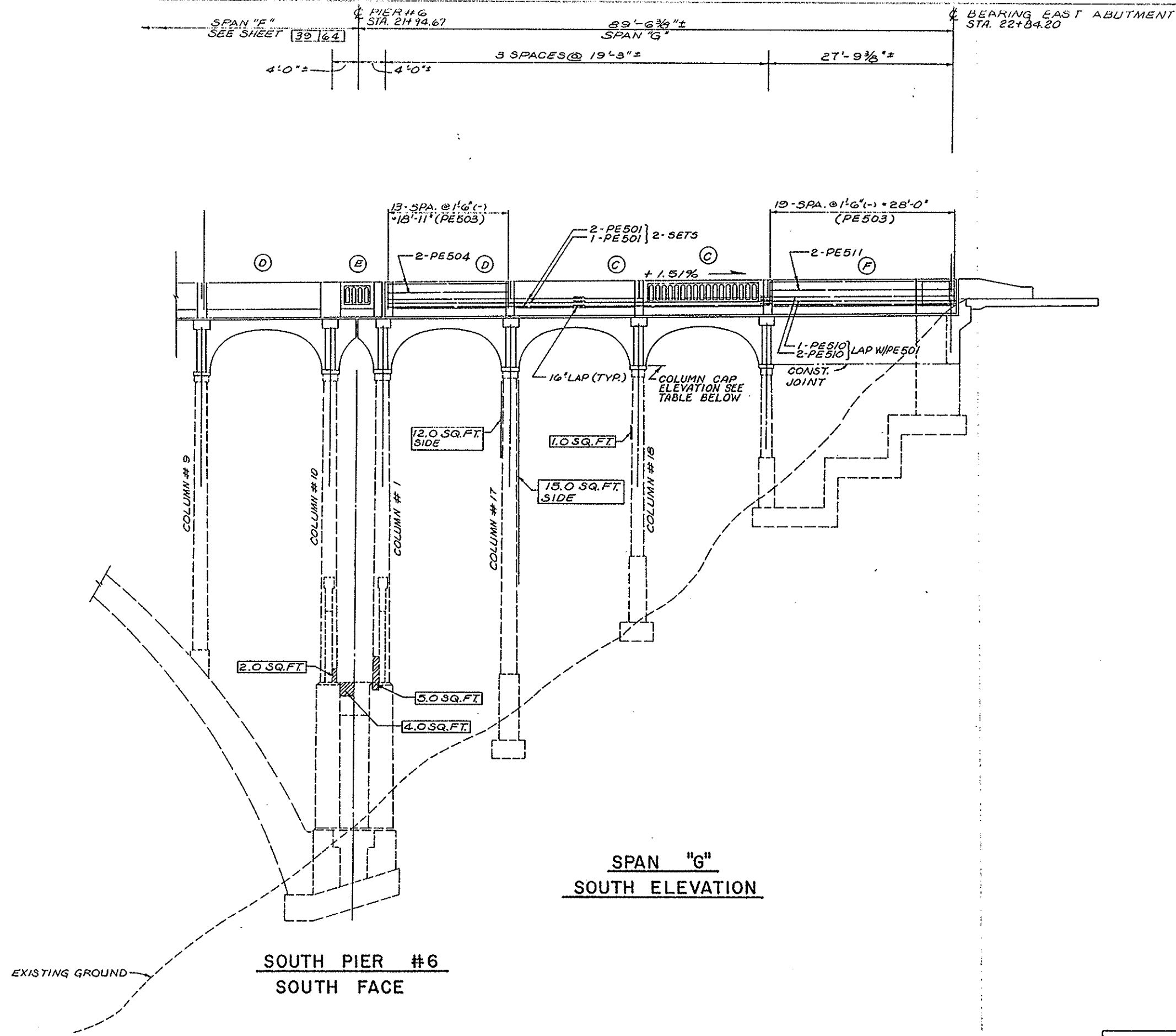
McCOY ASSOCIATES INC. 39/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "F"
SOUTH ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RPL	DAK		JBH	MSC	6-4-87	

PROPOSED TOP OF COLUMN CAP ELEVATION										
COLUMN NUMBER	1	2	3	4	5	6	7	8	9	10
ELEVATION	762.46	762.75	763.04	763.34	763.63	763.92	764.21	764.50	764.79	765.08



FHWA REGION	STATE	PROJECT	
5	OHIO		

CUY 82-15.64
SUM 82-00.00

NOTES:

- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64.
- FOR PARAPET DETAILS ON APPROACH SLAB SEE SHEET 56/64.

LEGEND

ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 173 SQ. FT.)
 NEAR SIDE
 FAR SIDE
 PARAPET PANEL DESIGNATION

SSN 7706871

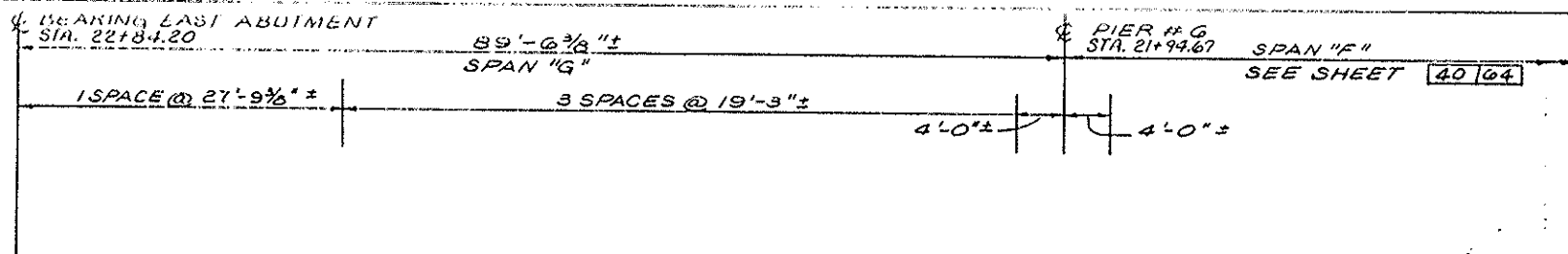
McCOY ASSOCIATES INC. 41/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "G" SOUTH ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

PROPOSED TOP OF CAP ELEVATION			
COLUMN NUMBER	(1)	(17)	(18)
ELEVATION	765.20	765.49	765.78

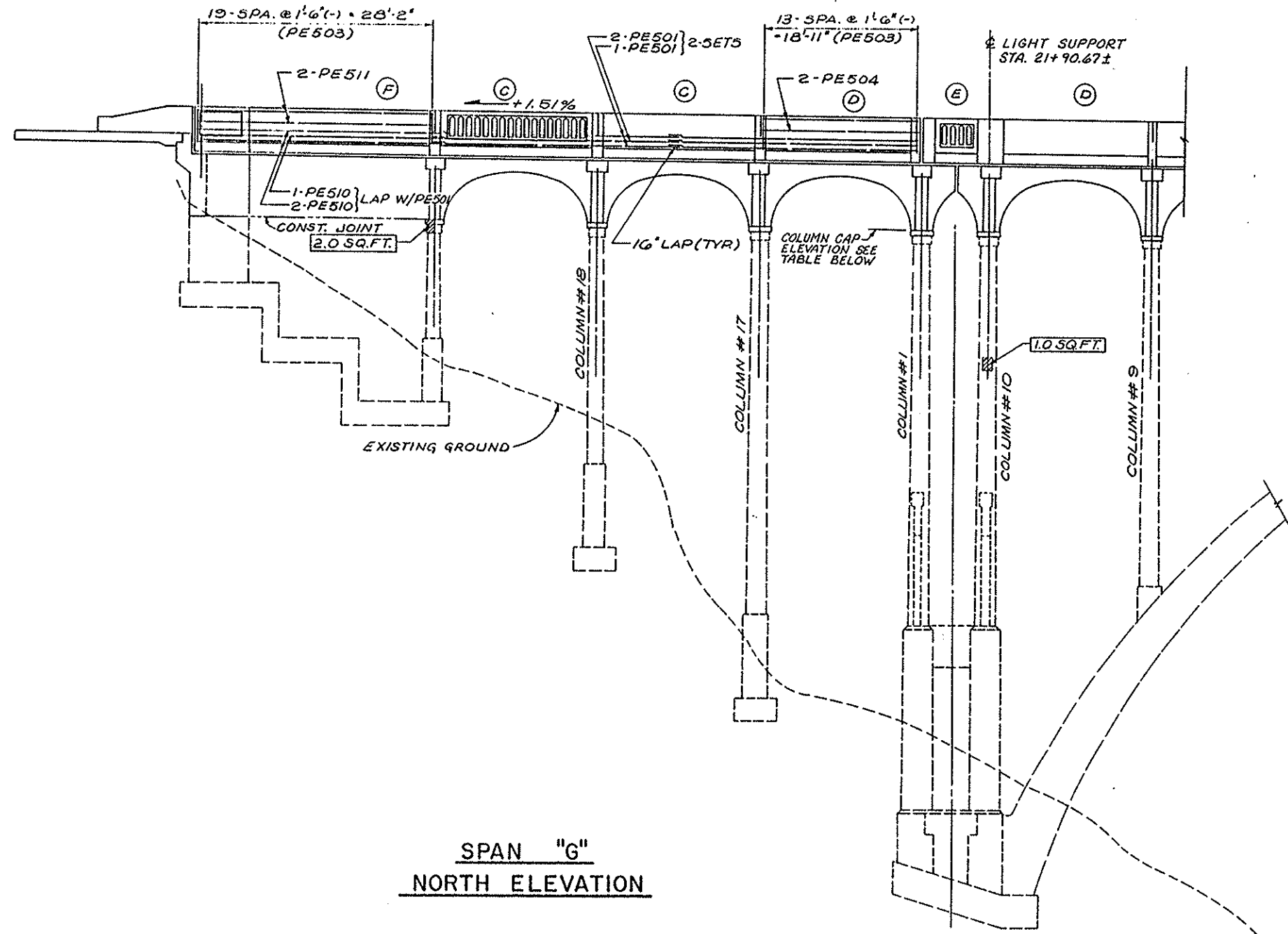
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RPL	DAK		JBH	MSC	6-4-87	



FHWA REGION	STATE	PROJECT	
5	OHIO		

CUY 82-15.64
SUM 82-00.00

- NOTES:
- FOR ADDITIONAL PARAPET PANEL DETAILS, SEE SHEET 26/64.
 - FOR LIGHT SUPPORT DETAILS, SEE SHEET 27/64.
 - FOR PARAPET DETAILS ON APPROACH SLAB, SEE SHEET 56/64.



SPAN "G"
NORTH ELEVATION

NORTH PIER #6
NORTH FACE

- LEGEND
- ITEM 519 - PATCHING CONCRETE STRUCTURES. (TOTAL THIS SHEET 83 SQ.FT.)
- NEAR SIDE
- FAR SIDE
- PARAPET PANEL DESIGNATION

PROPOSED TOP OF CAP ELEVATION			
(18)	(17)	(1)	COLUMN NUMBER
765.78	765.49	765.20	ELEVATION

SSN 7706871

McCOY ASSOCIATES INC. 42/64
CONSULTING ENGINEERS
AKRON, OHIO

SPAN "G"
NORTH ELEVATION

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

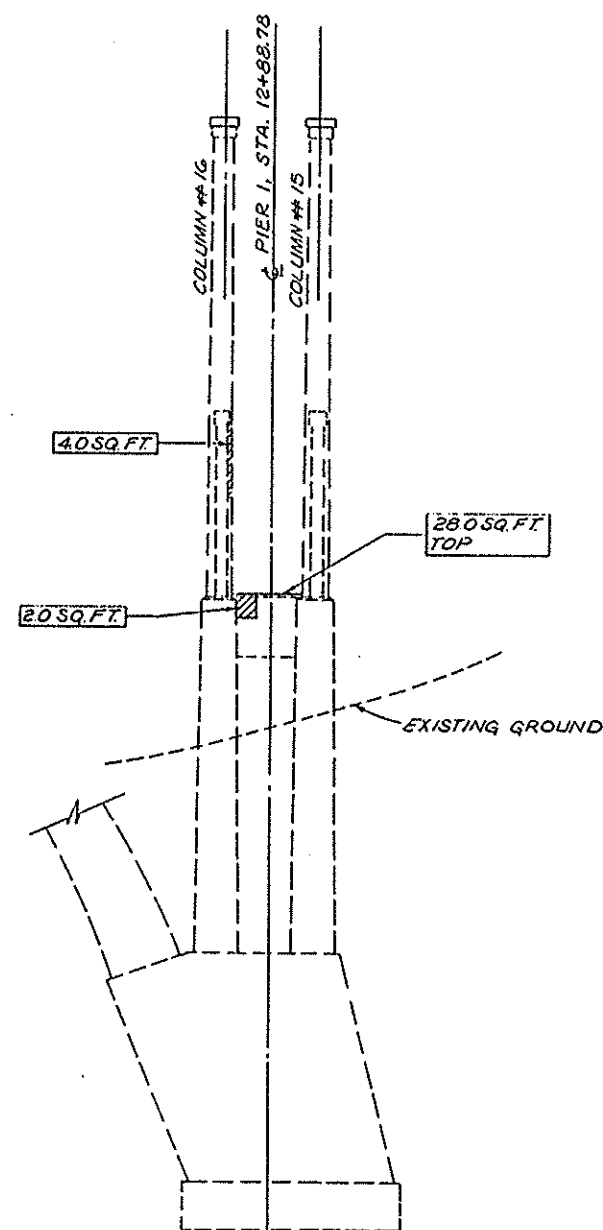
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RFL	DAK		JBH	MSC	6-4-87	

FHWA REGION	STATE	PROJECT	
5	OHIO		

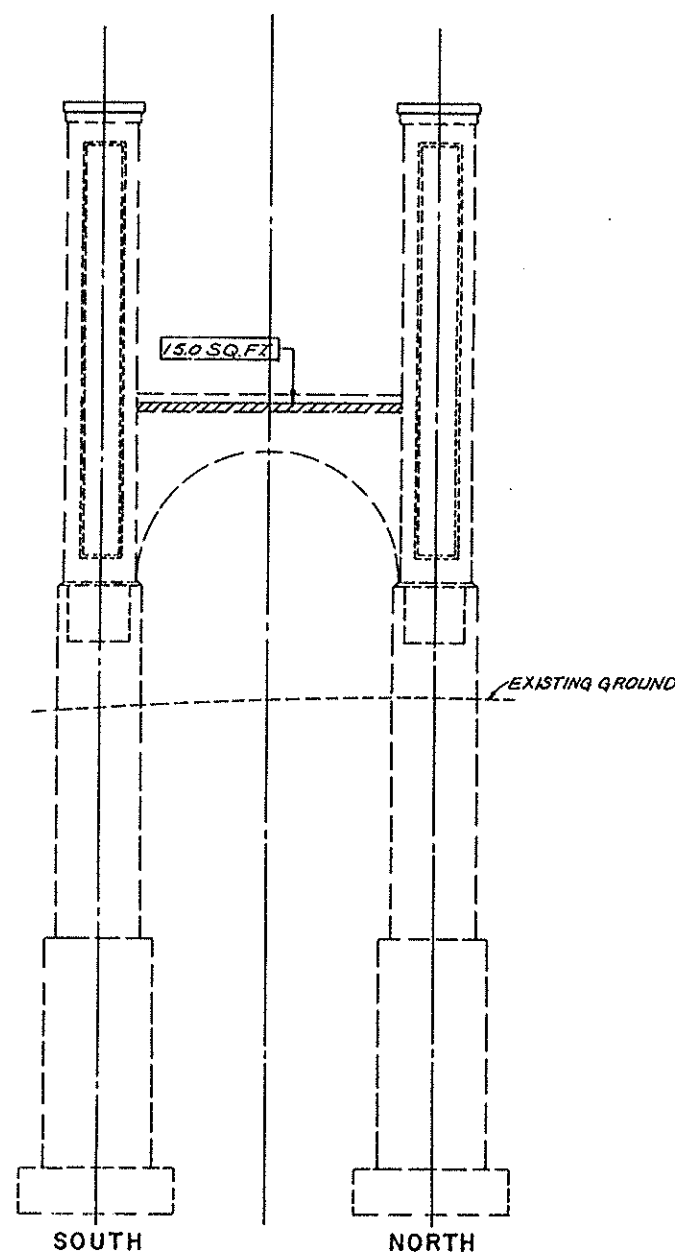
60
81

CUY 82-15.64
SUM 82-0.00

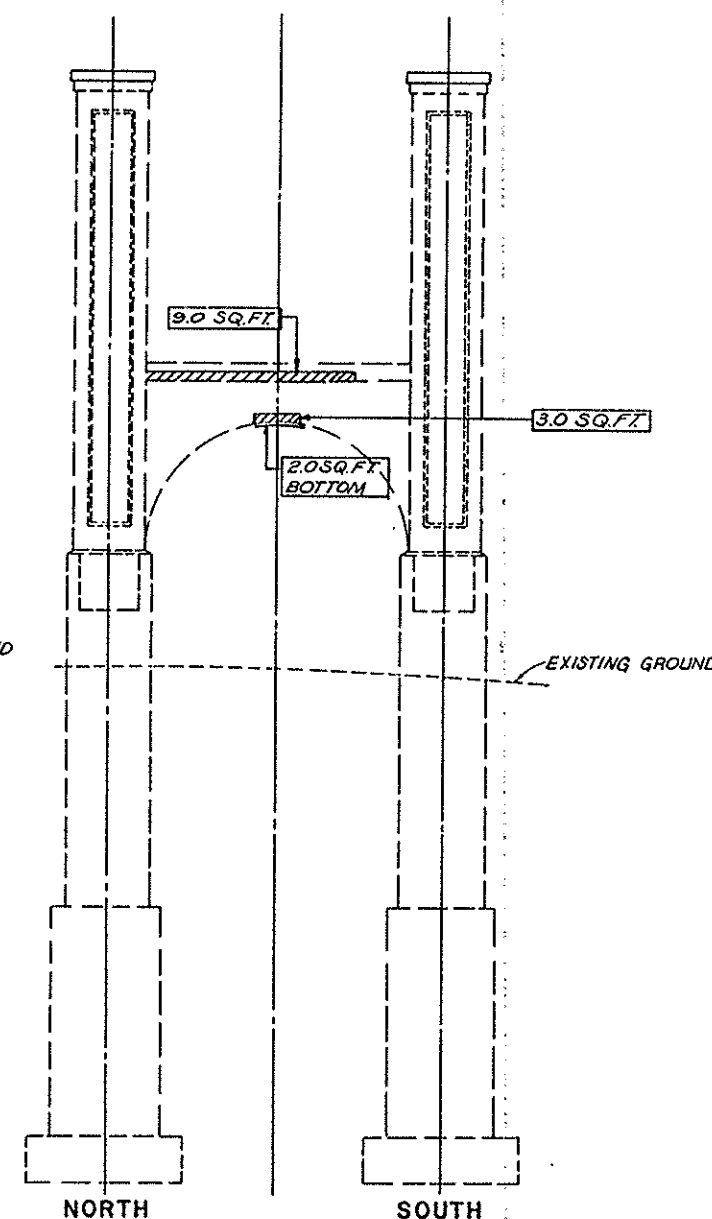
NOTES:
FOR SOUTH PIER #1 SOUTH FACE,
SEE SHEET 29/64.



SOUTH PIER #1
NORTH FACE



PIER #1
EAST FACE
COLUMN 15S & 15N



PIER #1
WEST FACE
COLUMN 15N & 15S

LEGEND
ITEM 519 - PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
427 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 43/64
CONSULTING ENGINEERS
AKRON, OHIO

SOUTH PIER #1
NORTH FACE

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

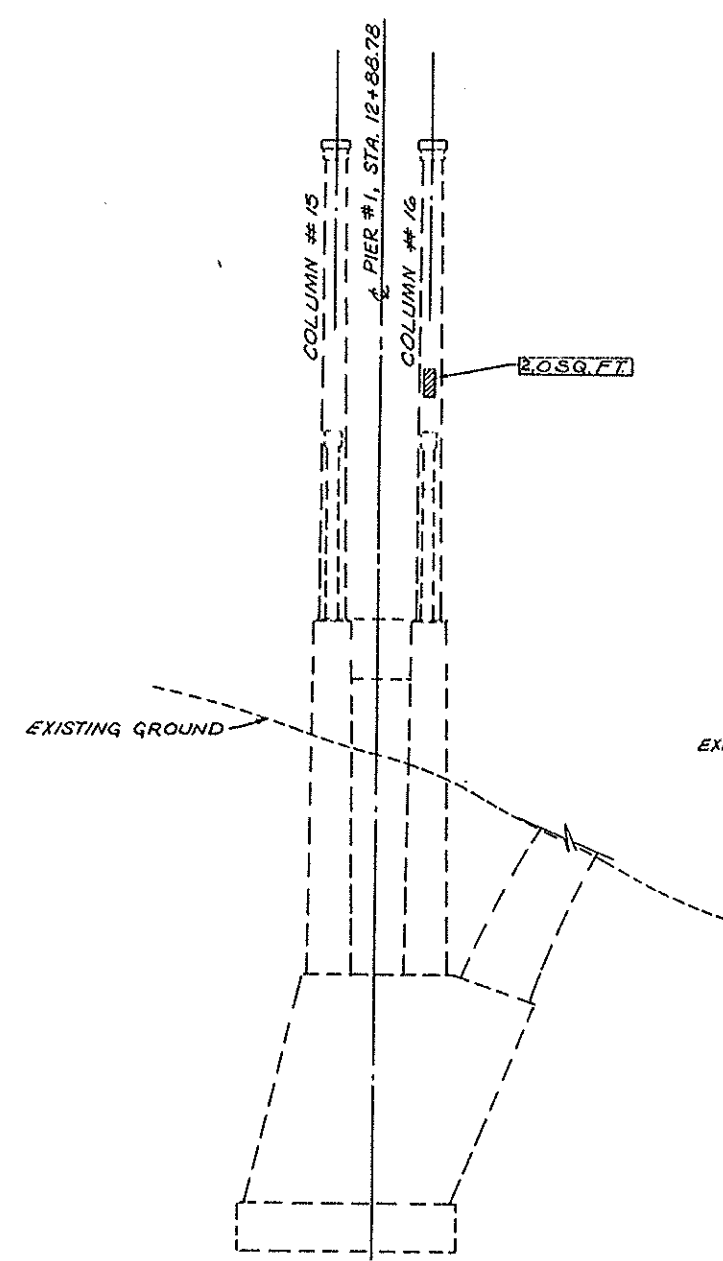
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBH	MSC	6-4-87	

FHWA REGION	STATE	PROJECT	
5	OHIO		

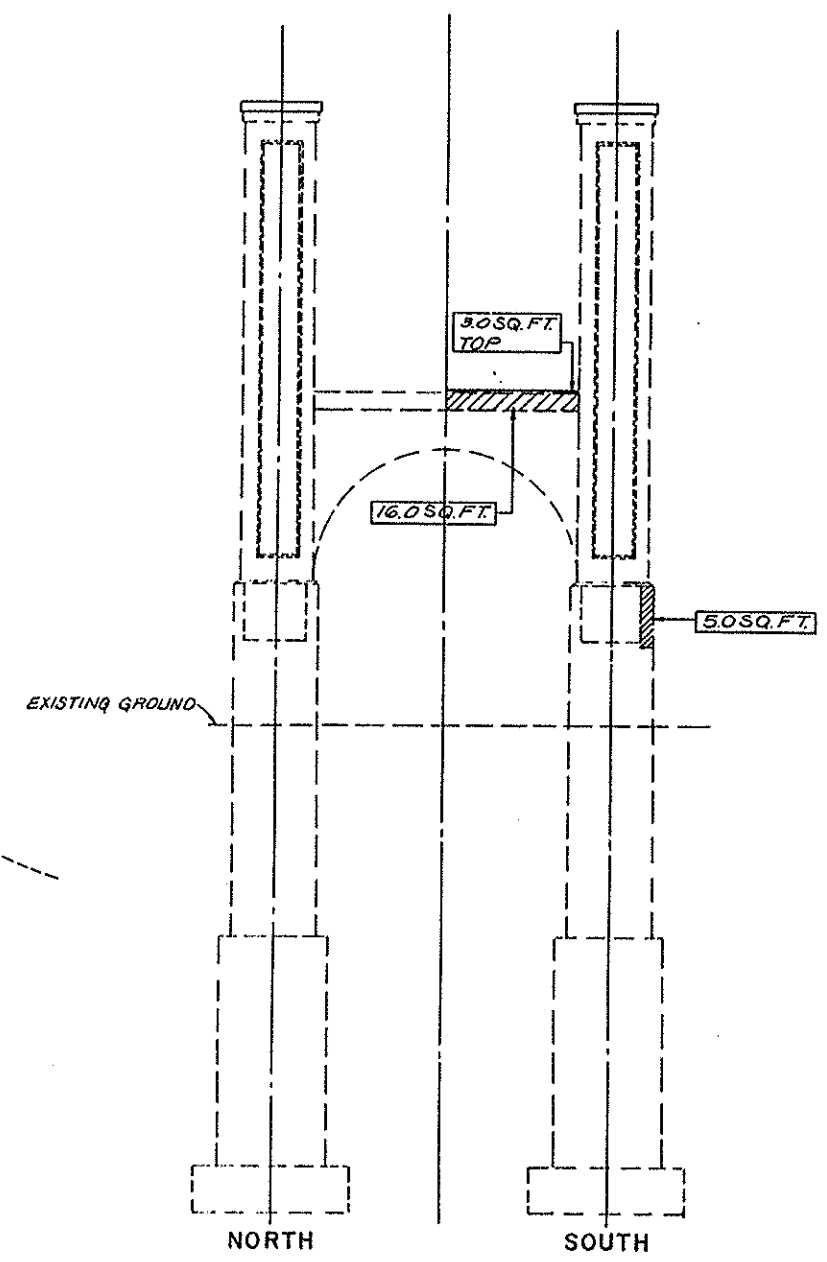
61
81

CUY 82-15.64
SUM 82--0.00

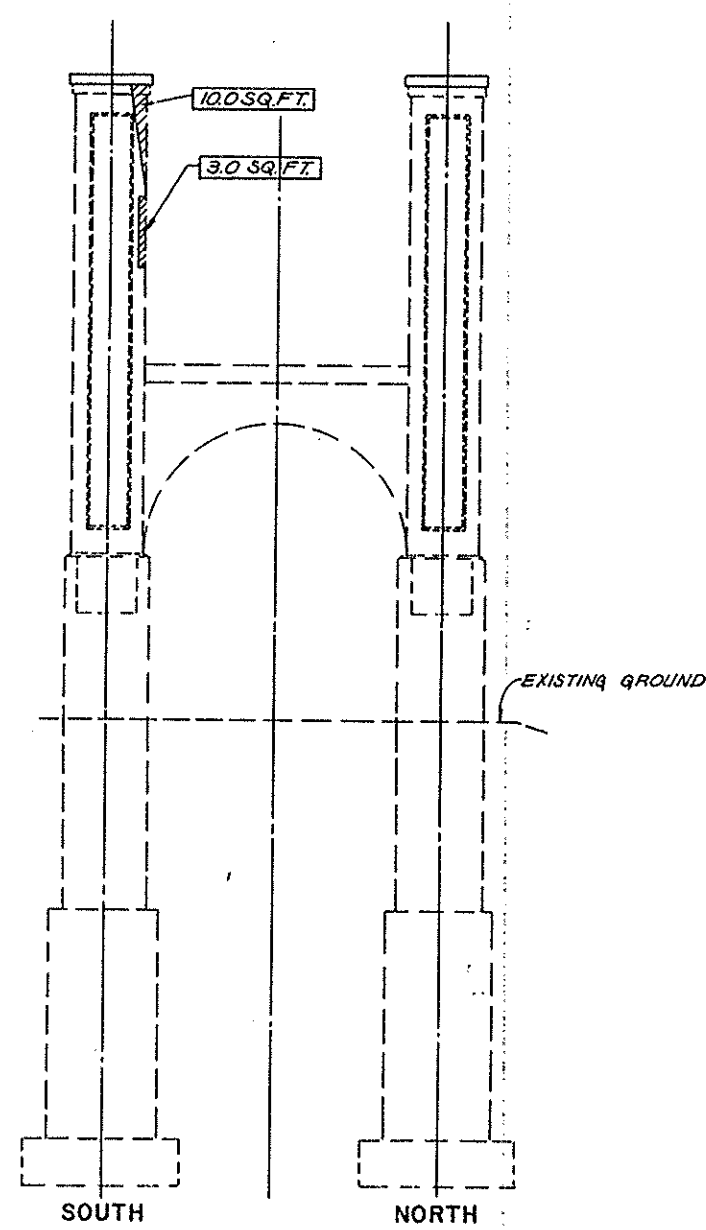
NOTES:
FOR NORTH PIER #1 NORTH FACE,
SEE SHEET 30/64.



NORTH PIER #1
SOUTH FACE



PIER #1
WEST FACE
COLUMNS 16N & 16S



PIER #1
EAST FACE
COLUMNS 16S & 16N

LEGEND
ITEM 519 - PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
99 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 44/64
CONSULTING ENGINEERS
AKRON, OHIO

NORTH PIER #1
SOUTH FACE

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

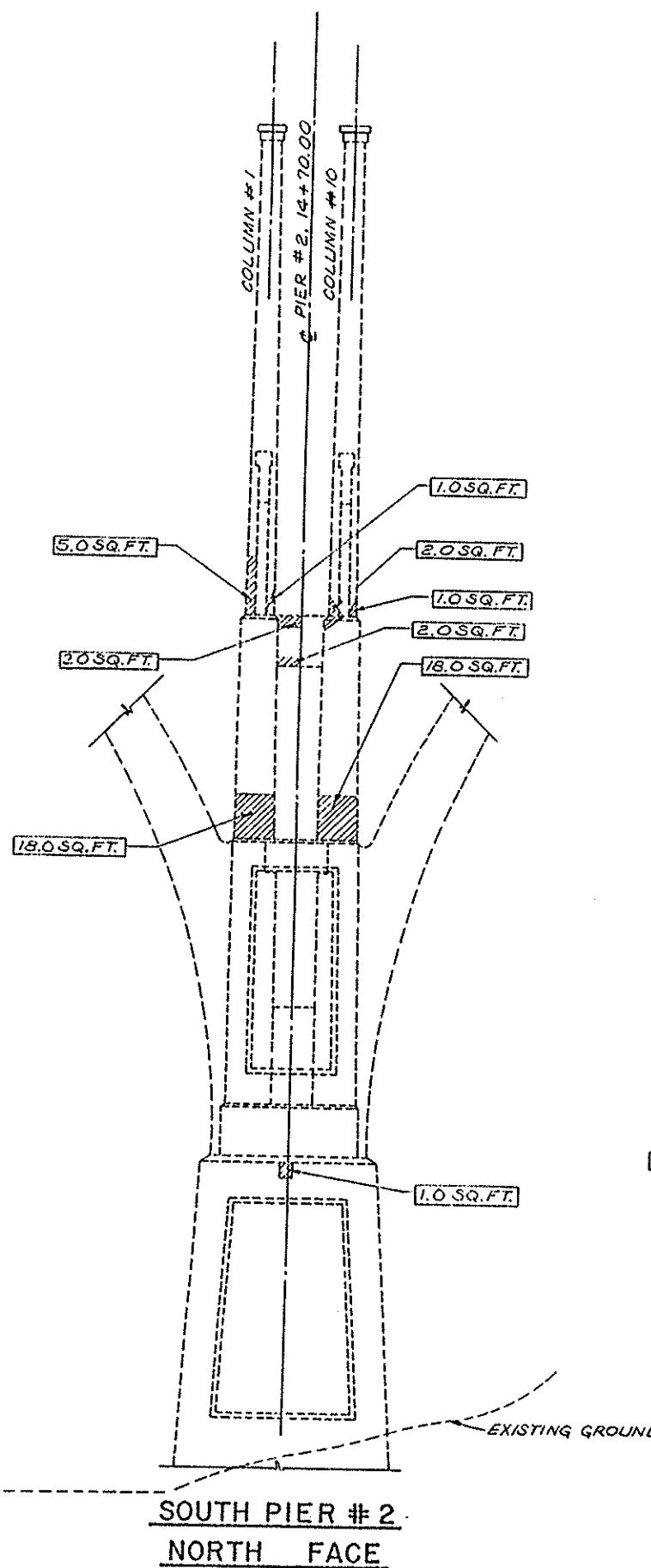
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBH	MSC	6-4-87	

FHWA REGION	STATE	PROJECT	
5	OHIO		

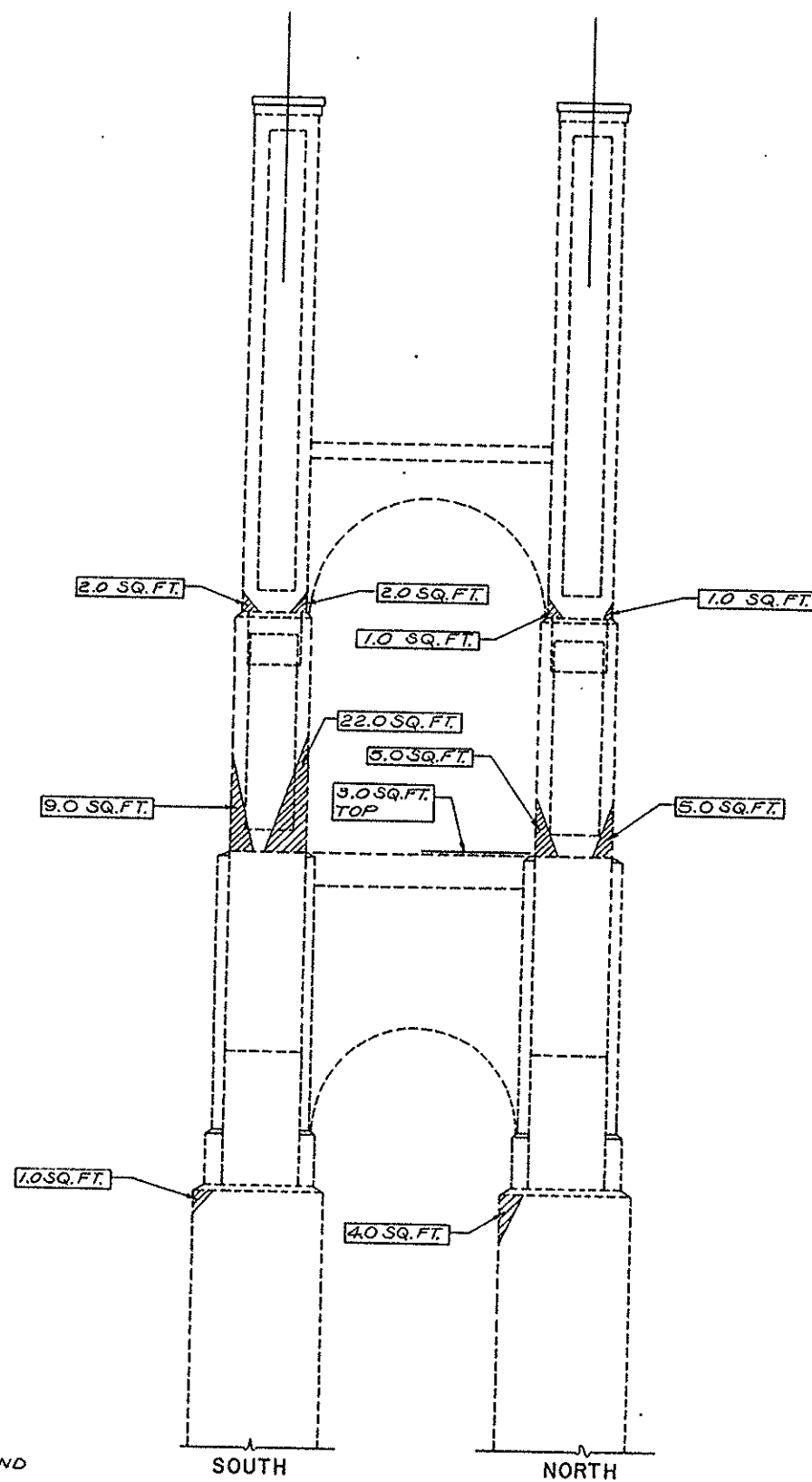
62
81

CUY 82- 15.64
SUM 82- 0.00

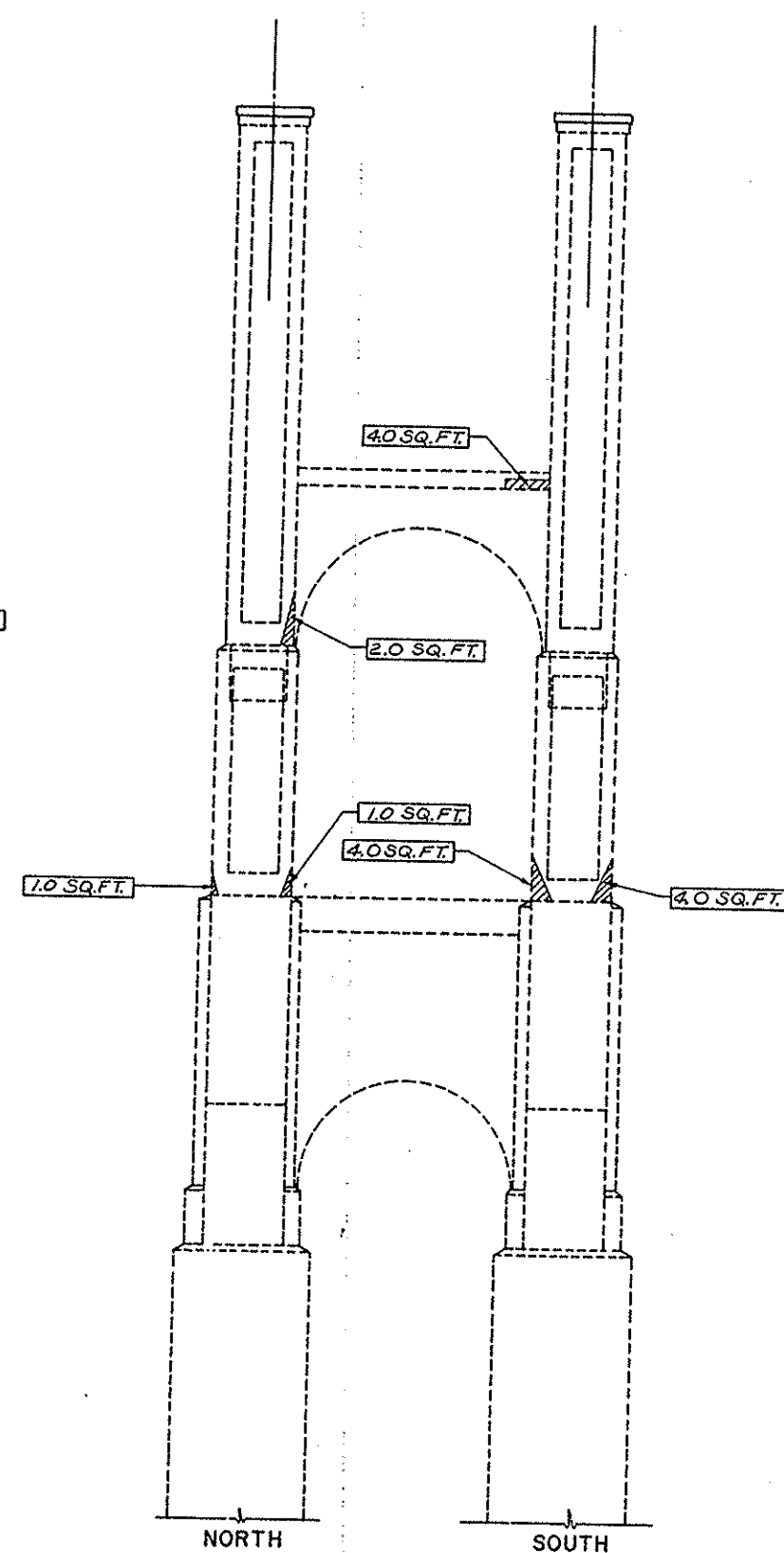
NOTES:
FOR SOUTH PIER #2 SOUTH FACE,
SEE SHEET 33/64.



SOUTH PIER #2
NORTH FACE



PIER #2
EAST FACE
COLUMN 10S & 10N



PIER #2
WEST FACE
COLUMN 10N & 10S

LEGEND
ITEM 519 - PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
585 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 45/64
CONSULTING ENGINEERS
AKRON, OHIO

SOUTH PIER #2
NORTH FACE
BRIDGE No. SUM - 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

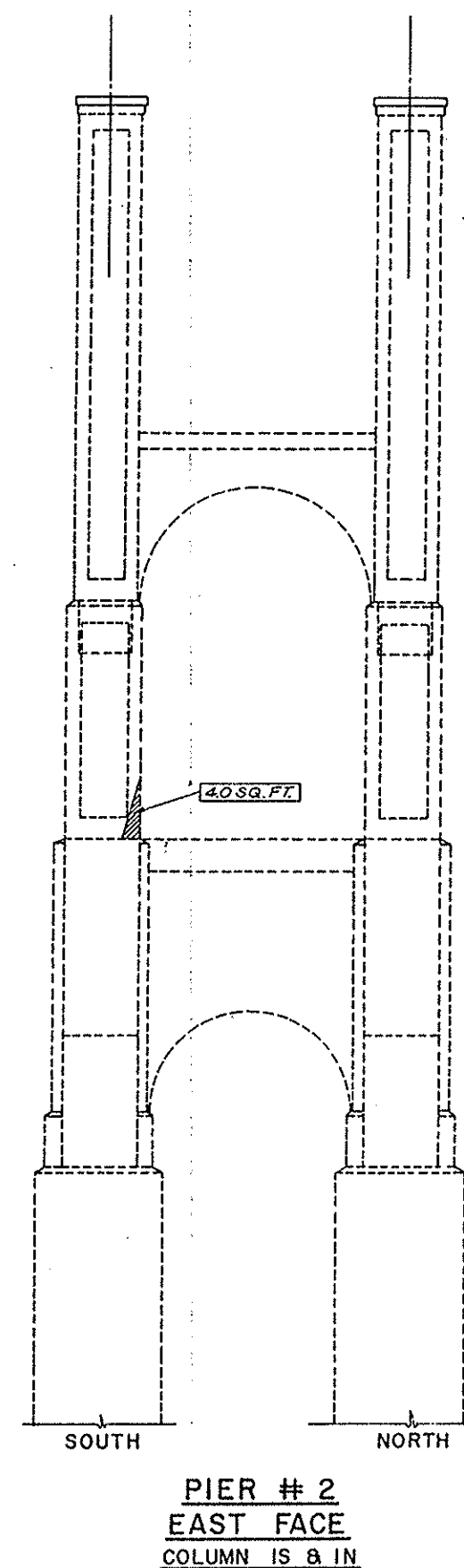
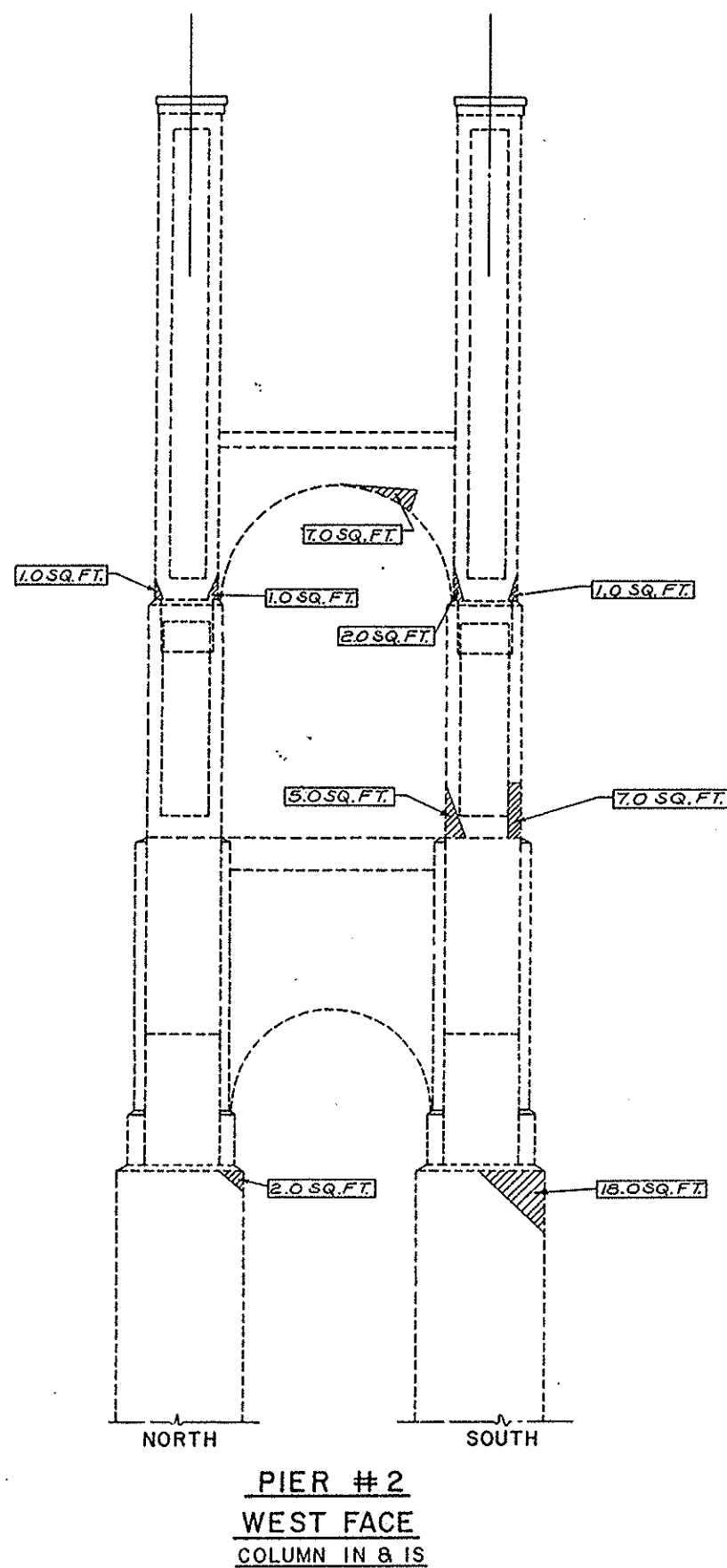
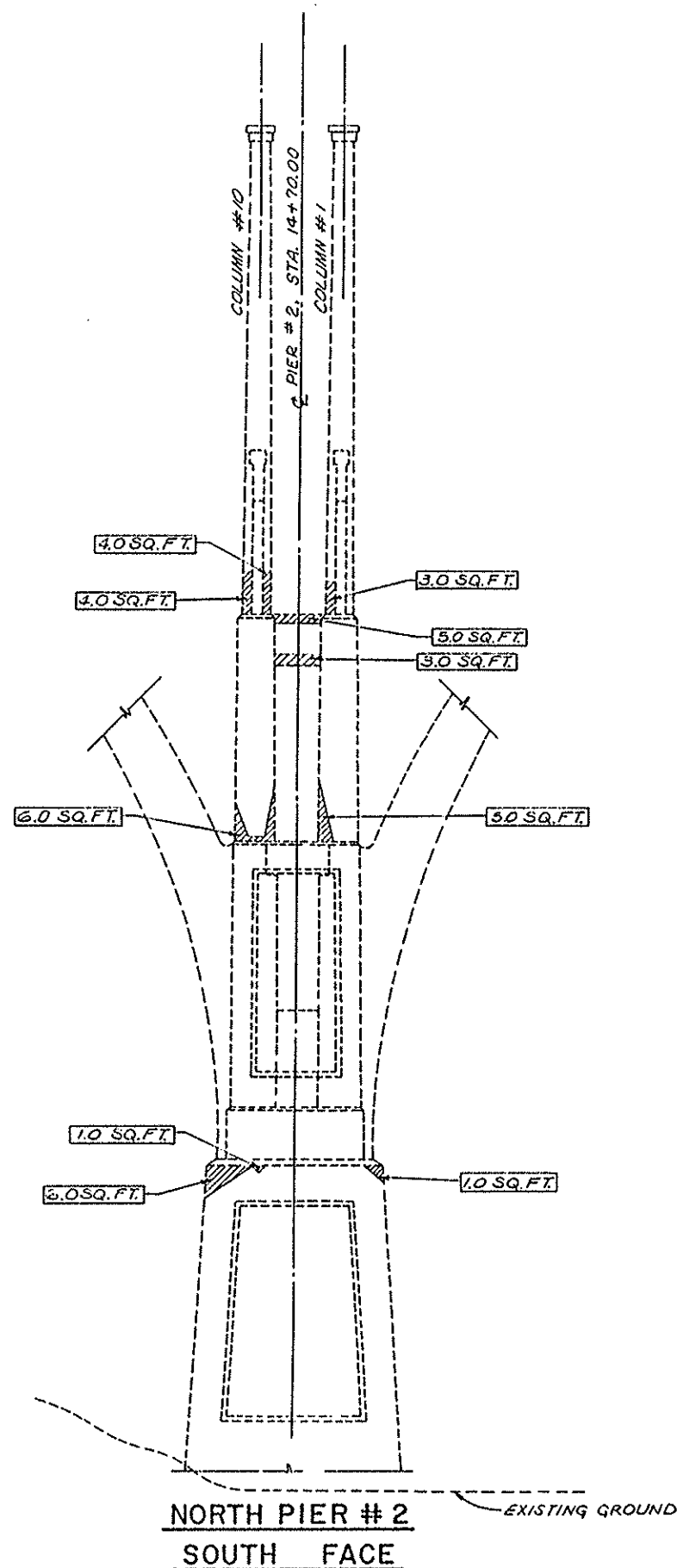
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBH	MSC	6-4-87	

FHWA REGION	STATE	PROJECT
5	OHIO	

63
81

CUY 82-15.64
SUM 82-0.00

NOTES:
FOR NORTH PIER #2 NORTH FACE,
SEE SHEET 34/64.



LEGEND
ITEM 519-PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
89 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 46/64
CONSULTING ENGINEERS
AKRON, OHIO

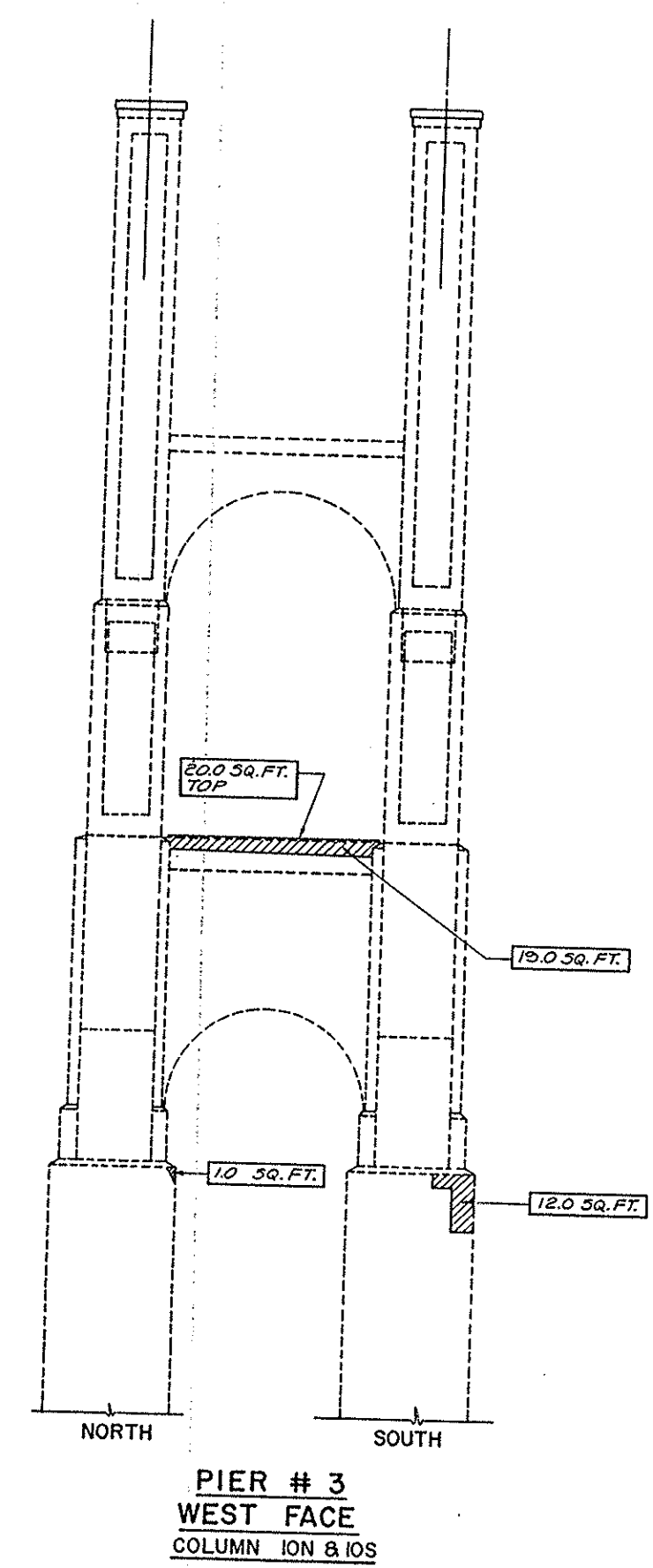
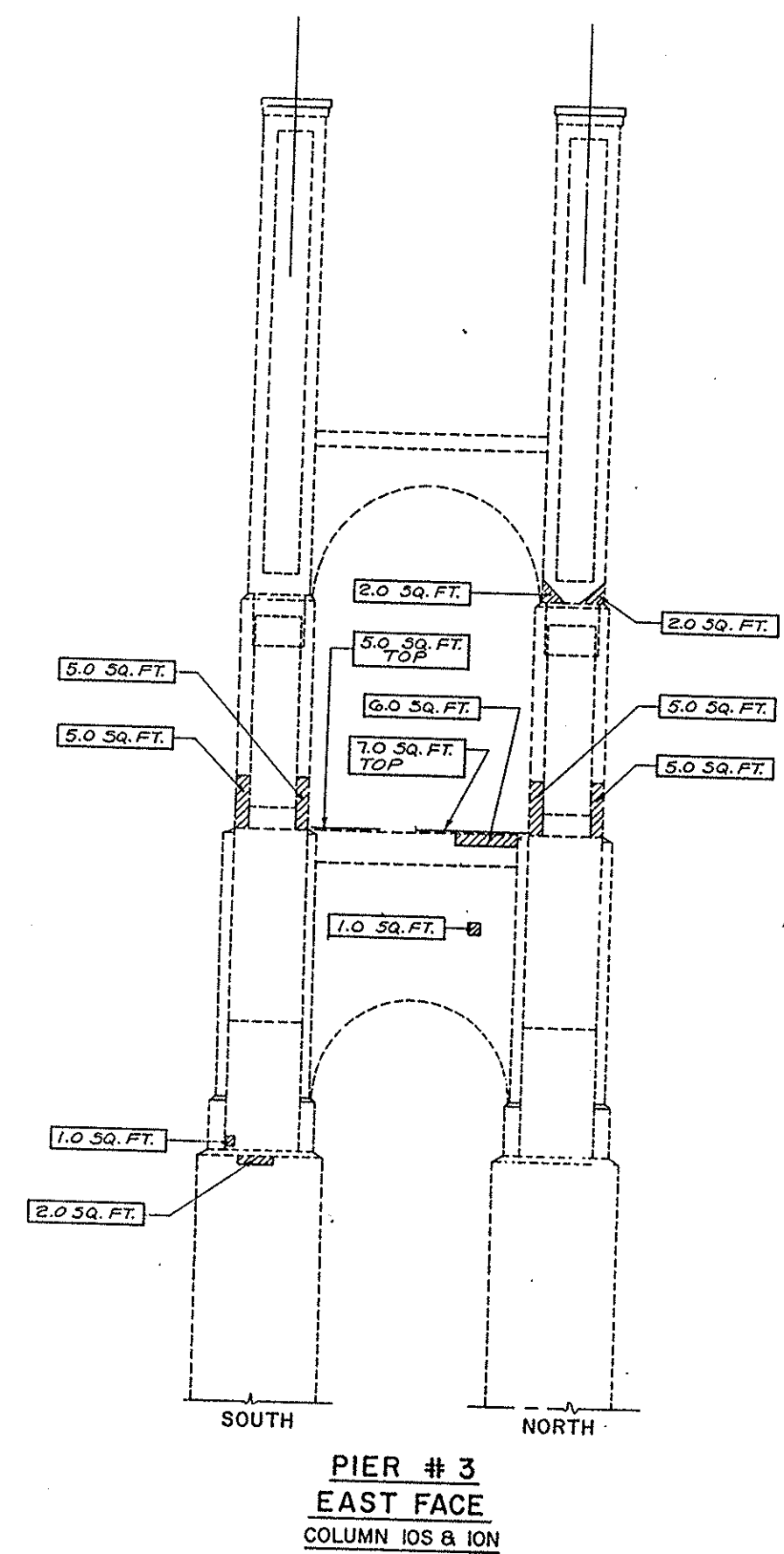
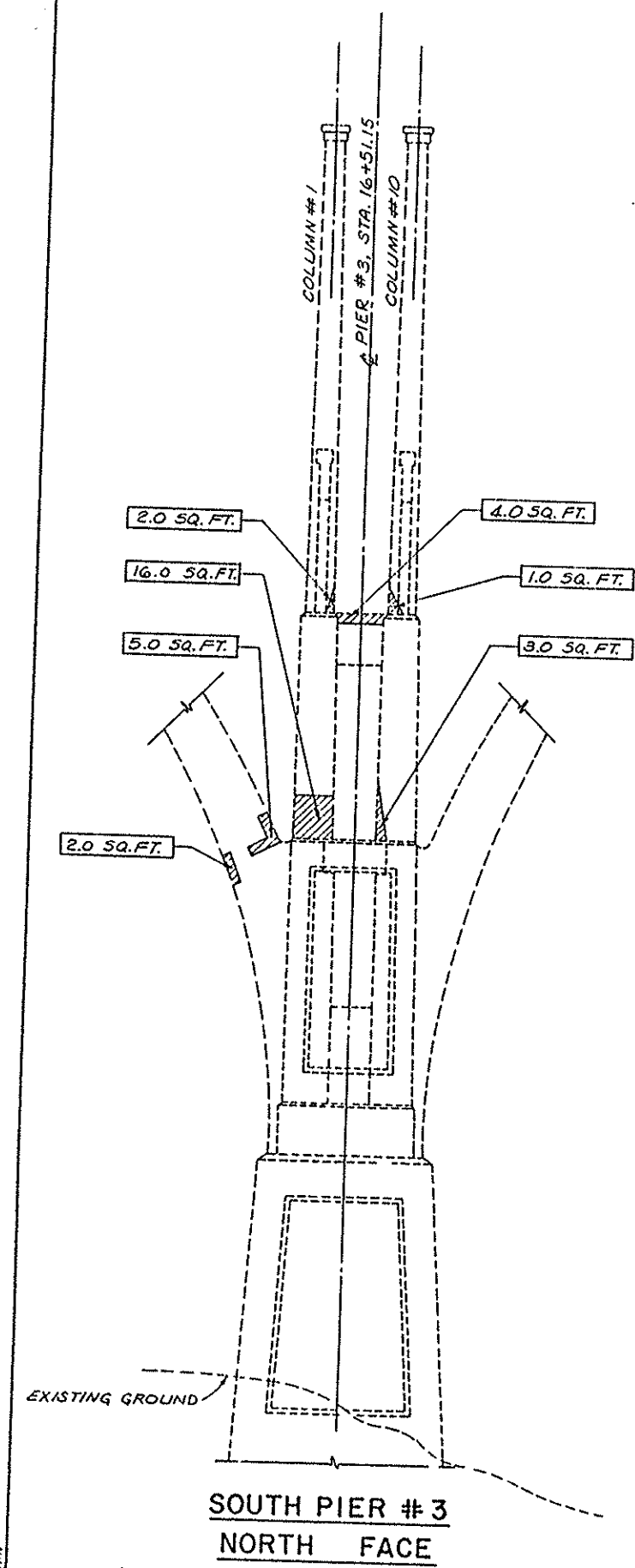
NORTH PIER #2
SOUTH FACE

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBH	MSC	6-4-87	

CUY 82- 15.64
 SUM 82- 0.00

NOTES:
 FOR SOUTH PIER #3 SOUTH FACE,
 SEE SHEET 35/64.



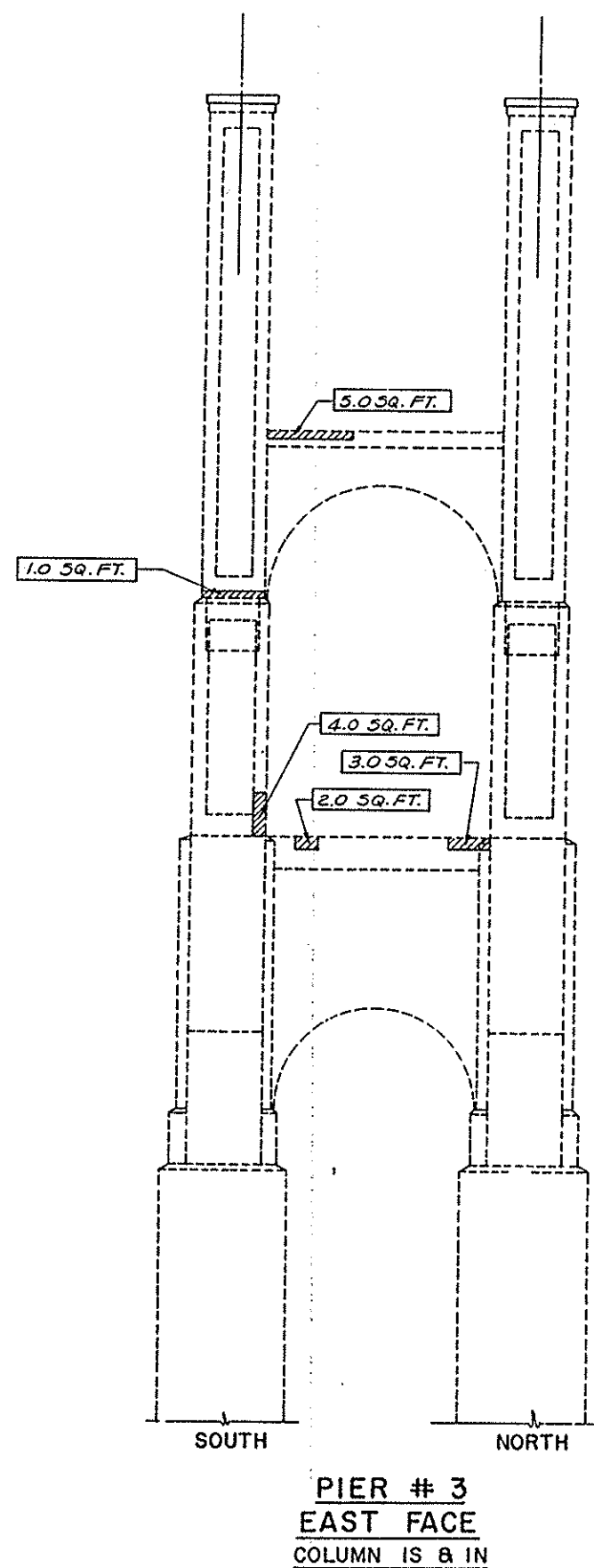
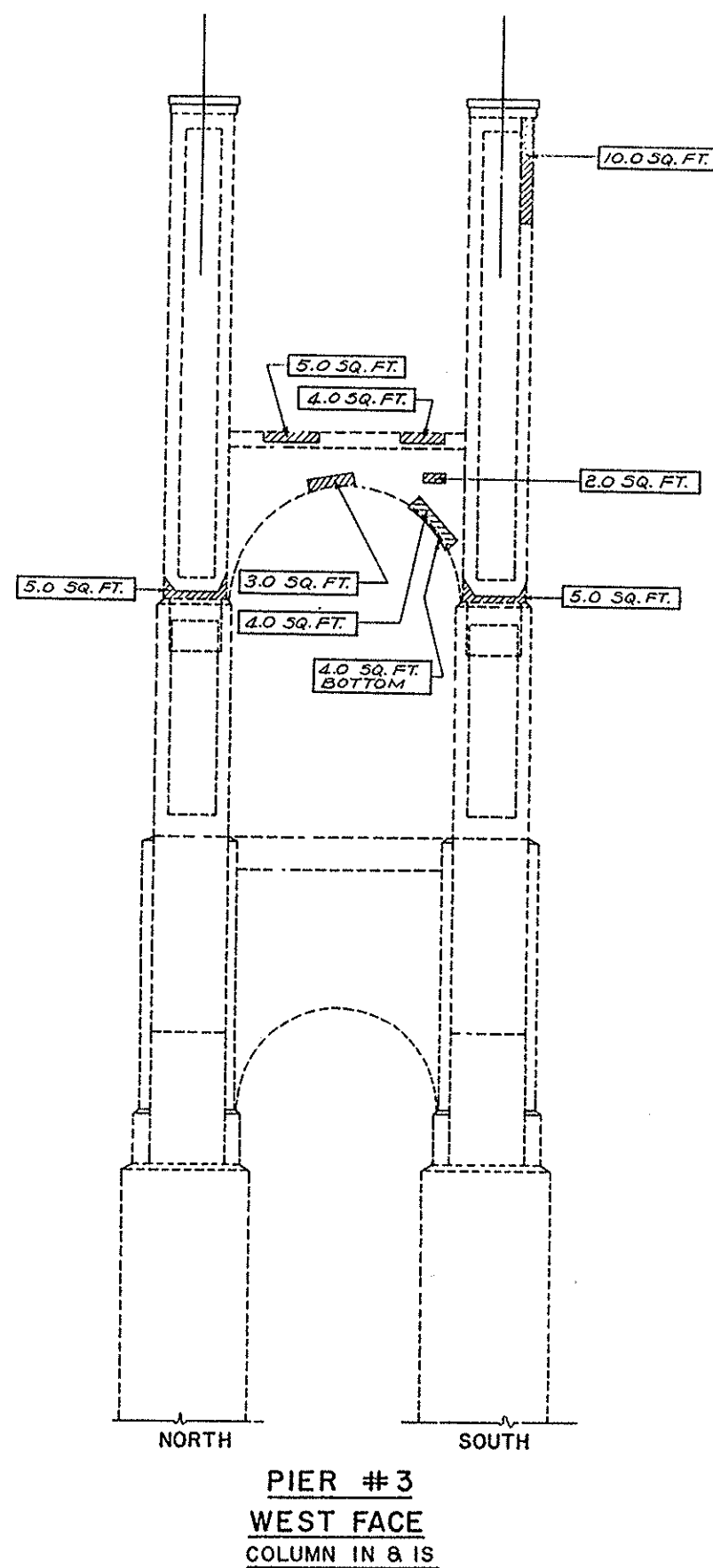
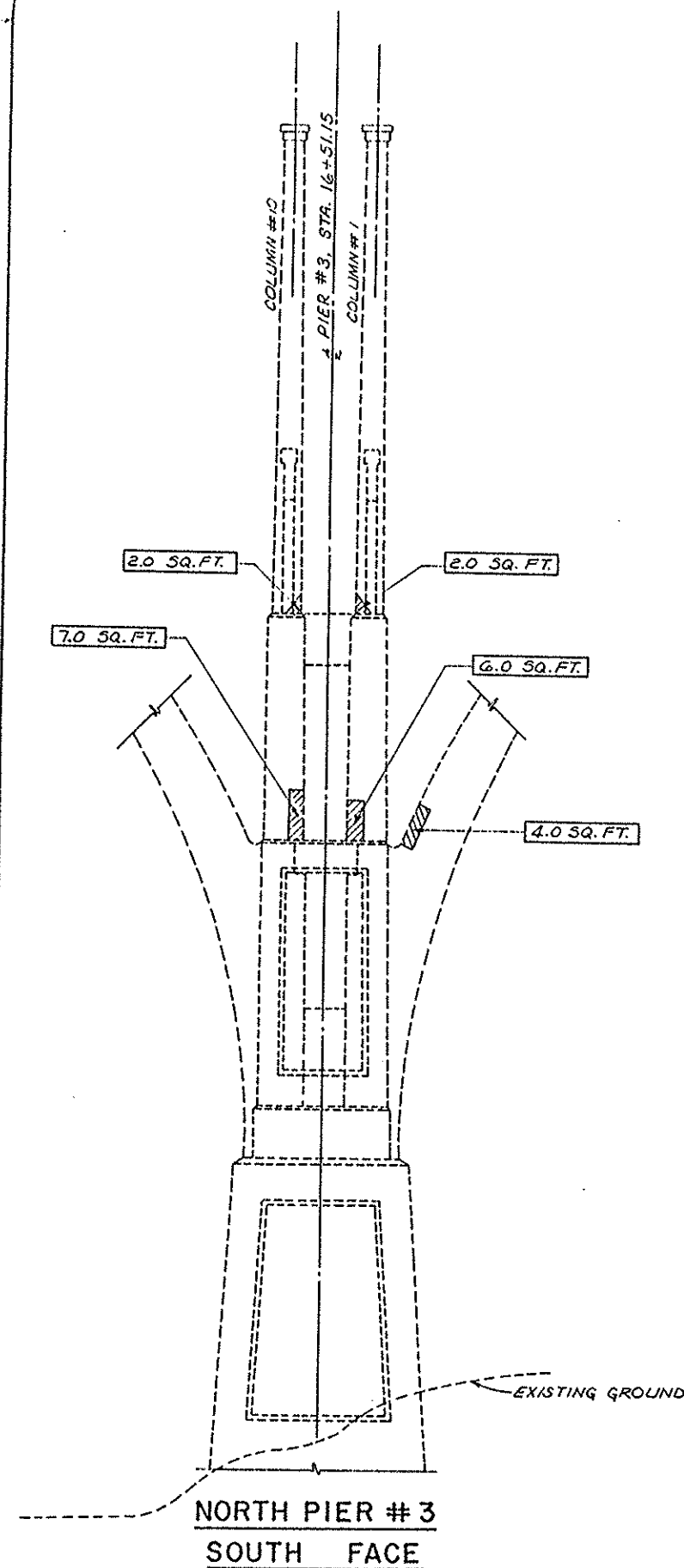
LEGEND
 ITEM 519, PATCHING CONCRETE
 STRUCTURES (TOTAL THIS SHEET
 540 SQ. FT.)
 NEAR SIDE
 FAR SIDE

FHWA REGION	STATE	PROJECT	
5	OHIO		

65
81

CUY 82- 15.64
SUM 82- 0.00

NOTES:
FOR NORTH PIER #3 NORTH FACE,
SEE SHEET 36/64.



LEGEND

ITEM 519 - PATCHING CONCRETE
STRUCTURES (TOTAL THIS SHEET
181 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 48/64
CONSULTING ENGINEERS
AKRON, OHIO

NORTH PIER #3

SOUTH FACE

BRIDGE No. SUM - 82 - 0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

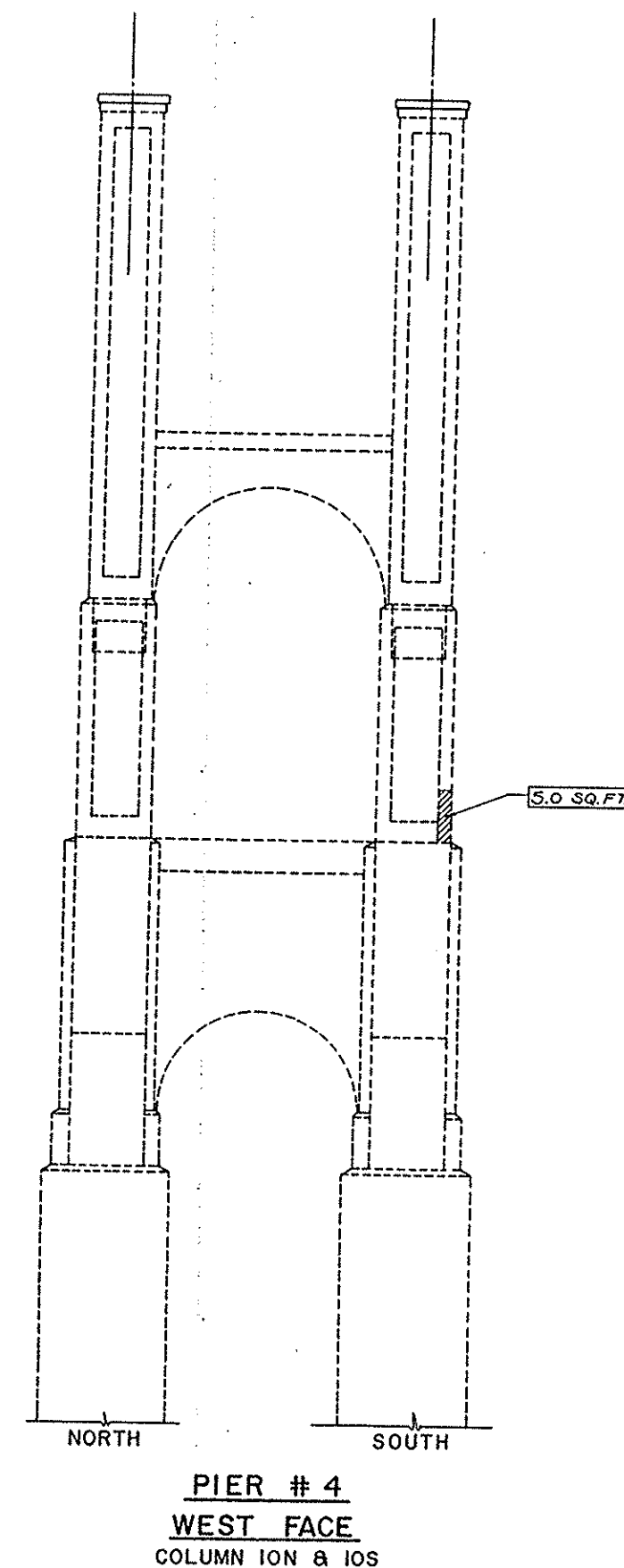
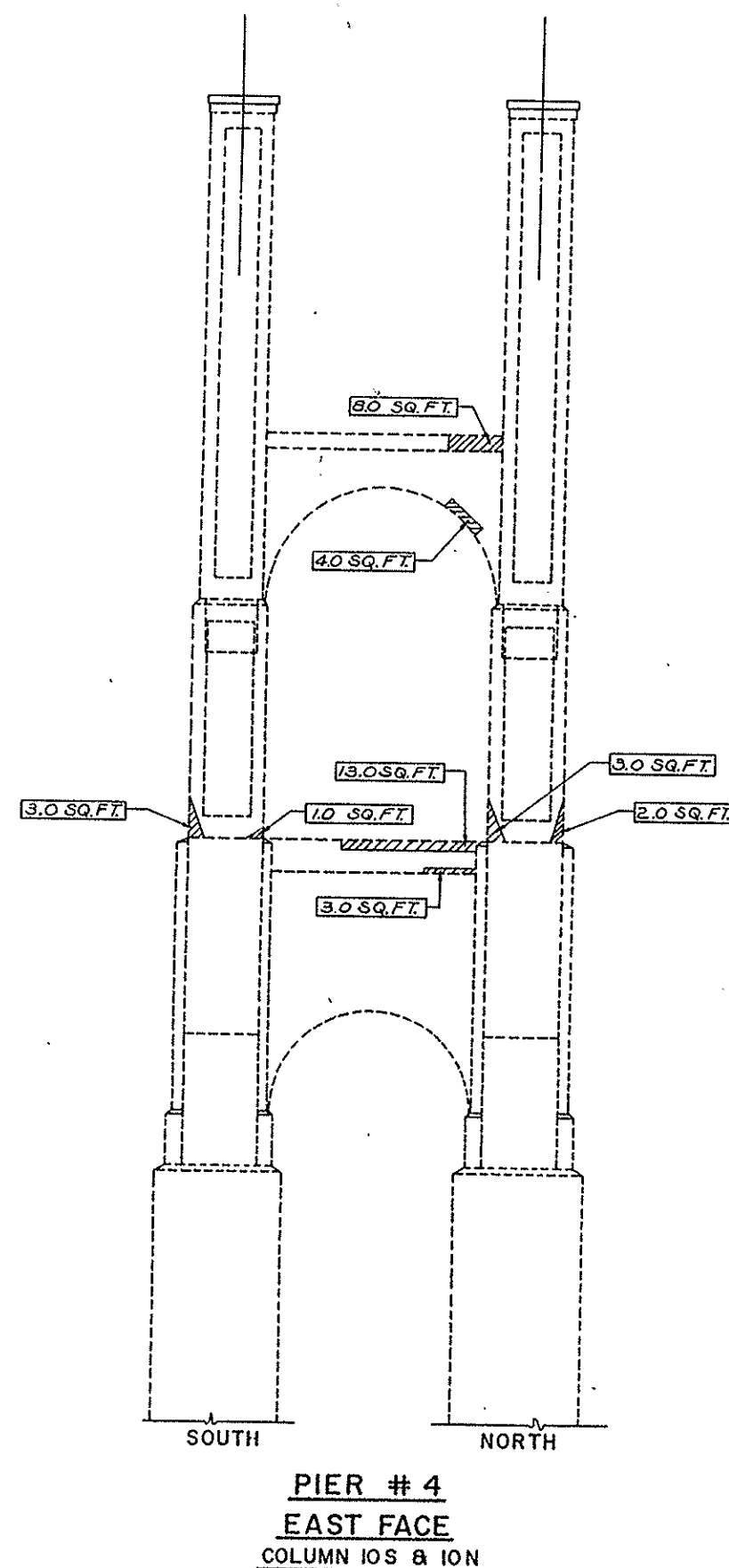
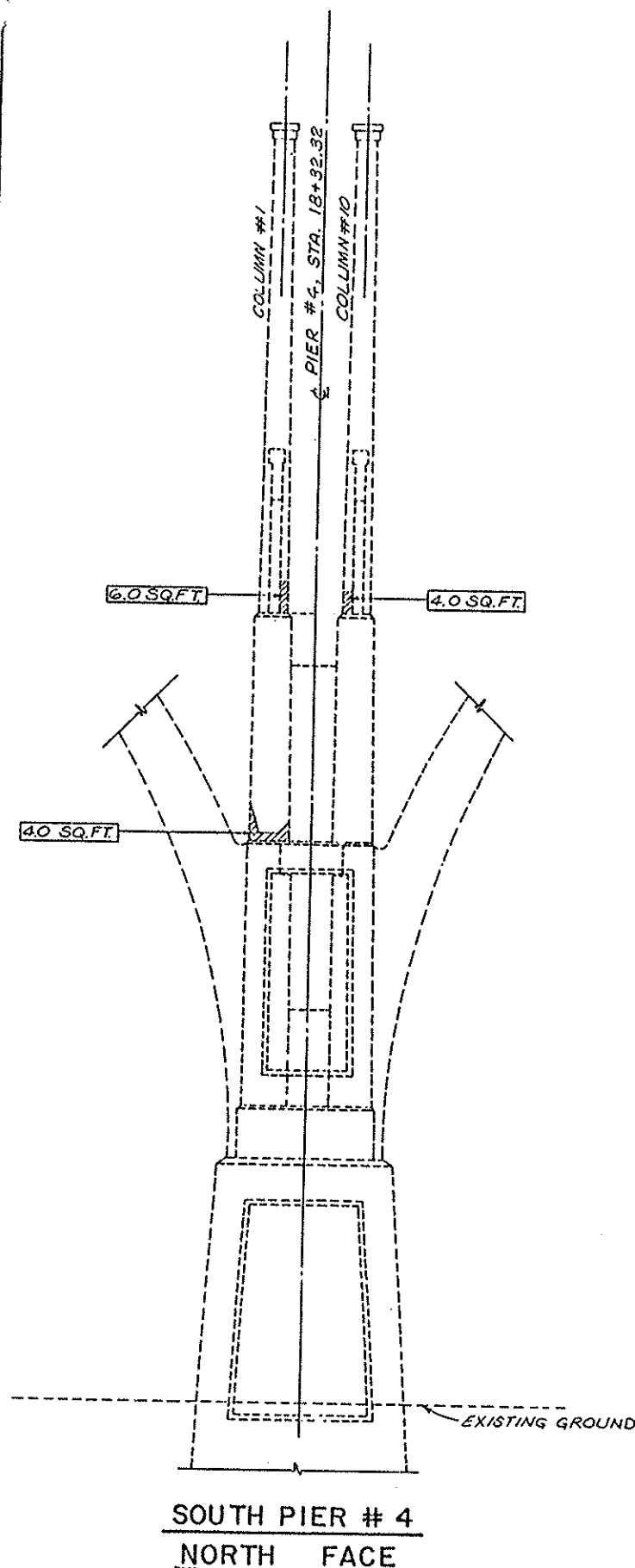
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.R.L.	J.D.R.		J.B.H.	M.S.C.	6-4-87	

FHWA REGION	STATE	PROJECT	
5	OHIO		

66
81

CUY 82- 15.64
SUM 82- 0.00

NOTES:
FOR SOUTH PIER # 4 SOUTH FACE,
SEE SHEET 37/64.



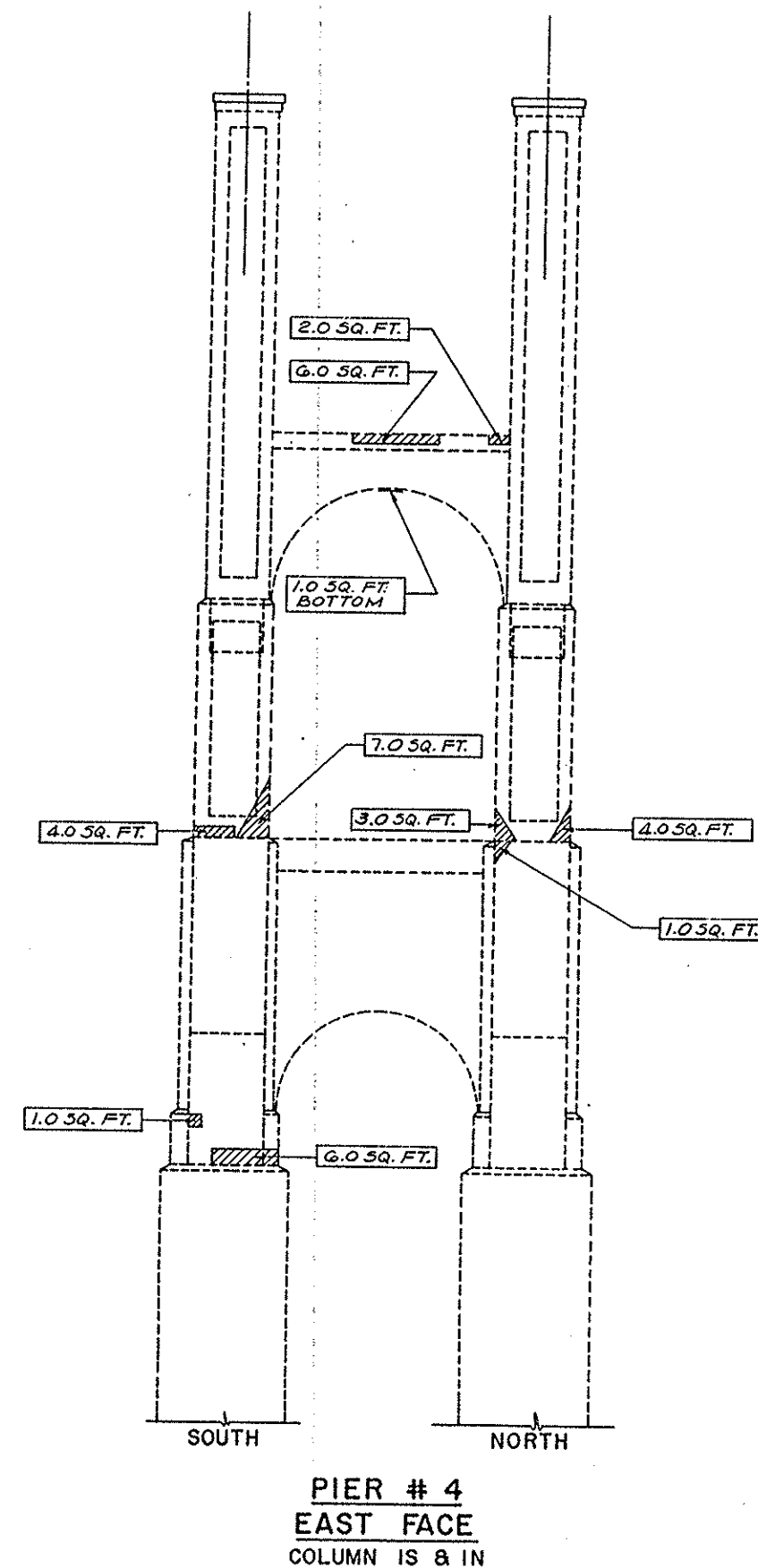
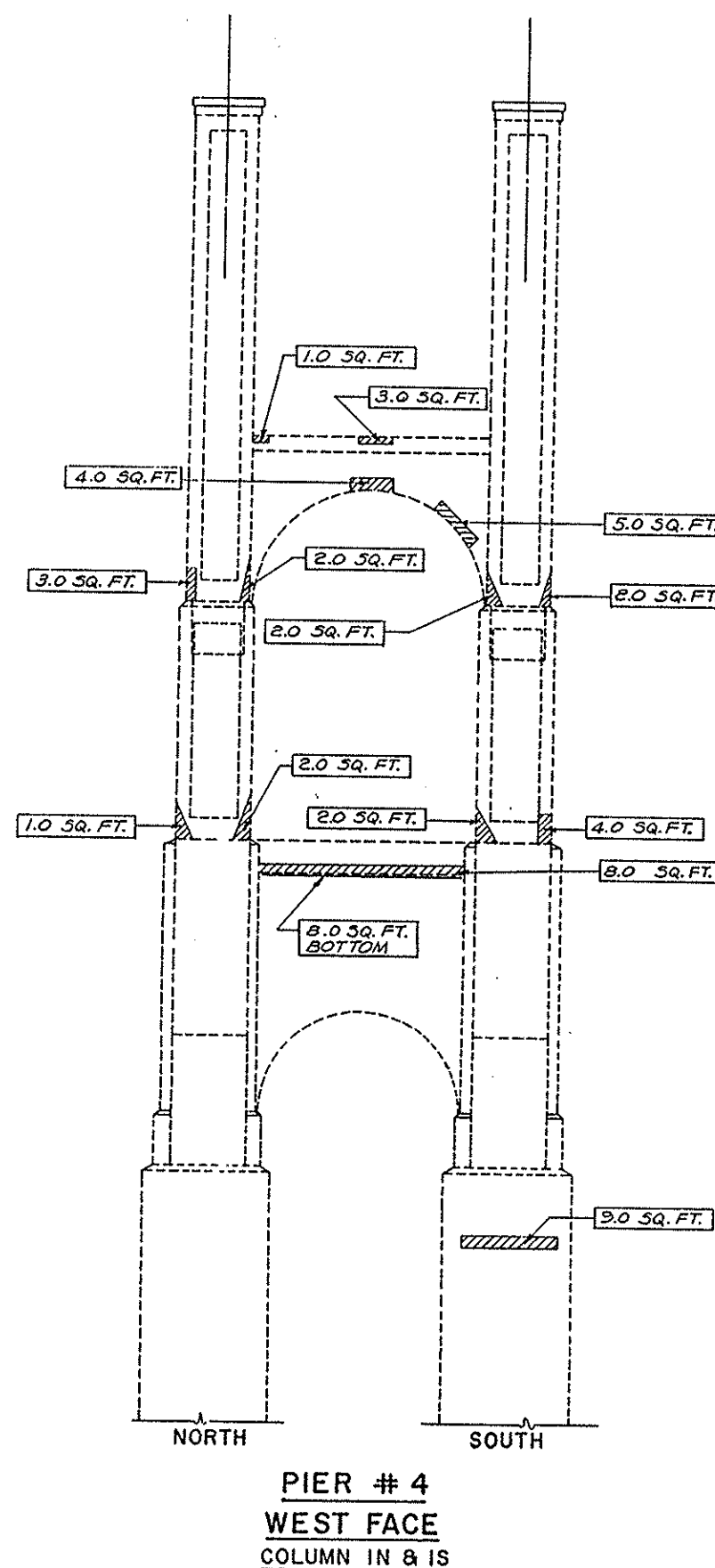
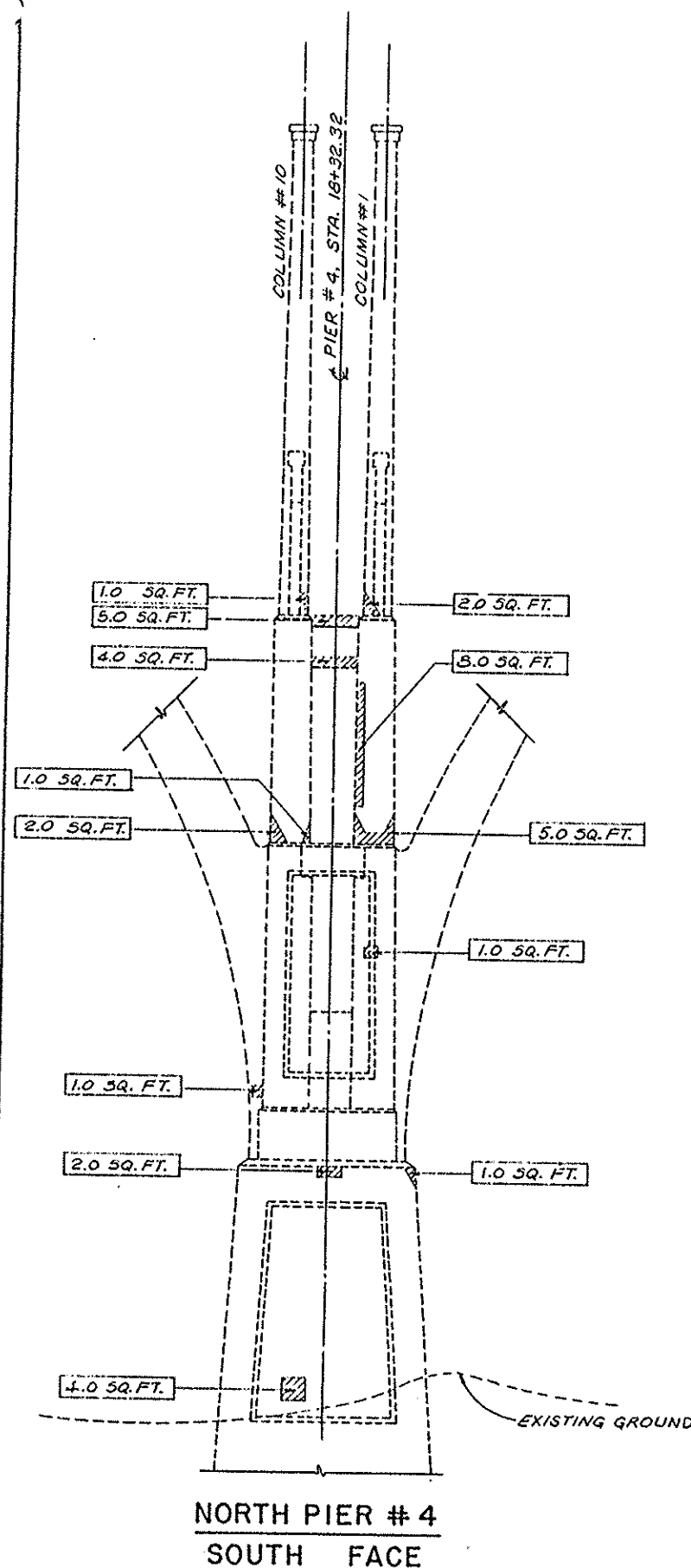
LEGEND

ITEM 519-PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
358 SQ.FT.)
NEAR SIDE
FAR SIDE

SSN 7706871					
McCOY ASSOCIATES INC. 49/64 CONSULTING ENGINEERS AKRON, OHIO					
SOUTH PIER # 4 NORTH FACE BRIDGE No. SUM 82-0000 OVER CUYAHOGA RIVER SUMMIT COUNTY STATE ROUTE 82					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
TAB	DAK		JBH	MSC	6-4-87

CUY 82-15.64
SUM 82- 0.00

NOTES:
FOR NORTH PIER #4 NORTH FACE,
SEE SHEET 38/64.



LEGEND

ITEM-519, PATCHING CONCRETE
STRUCTURES (TOTAL THIS SHEET
287 SQ. FT.)

NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 50/64
CONSULTING ENGINEERS
AKRON, OHIO

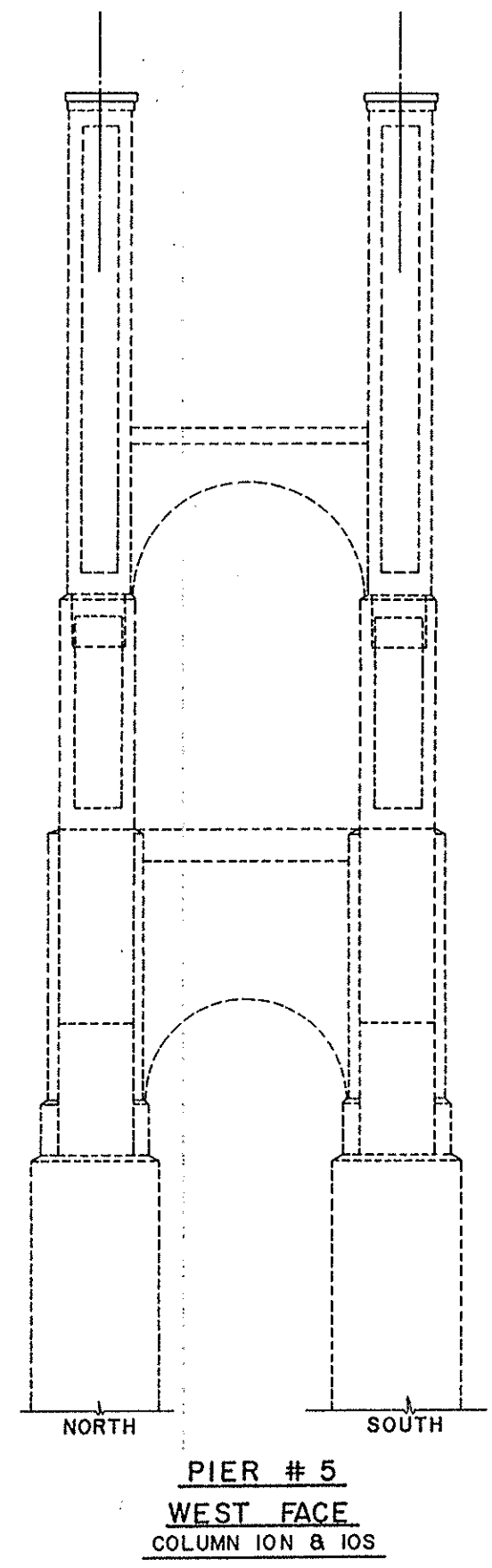
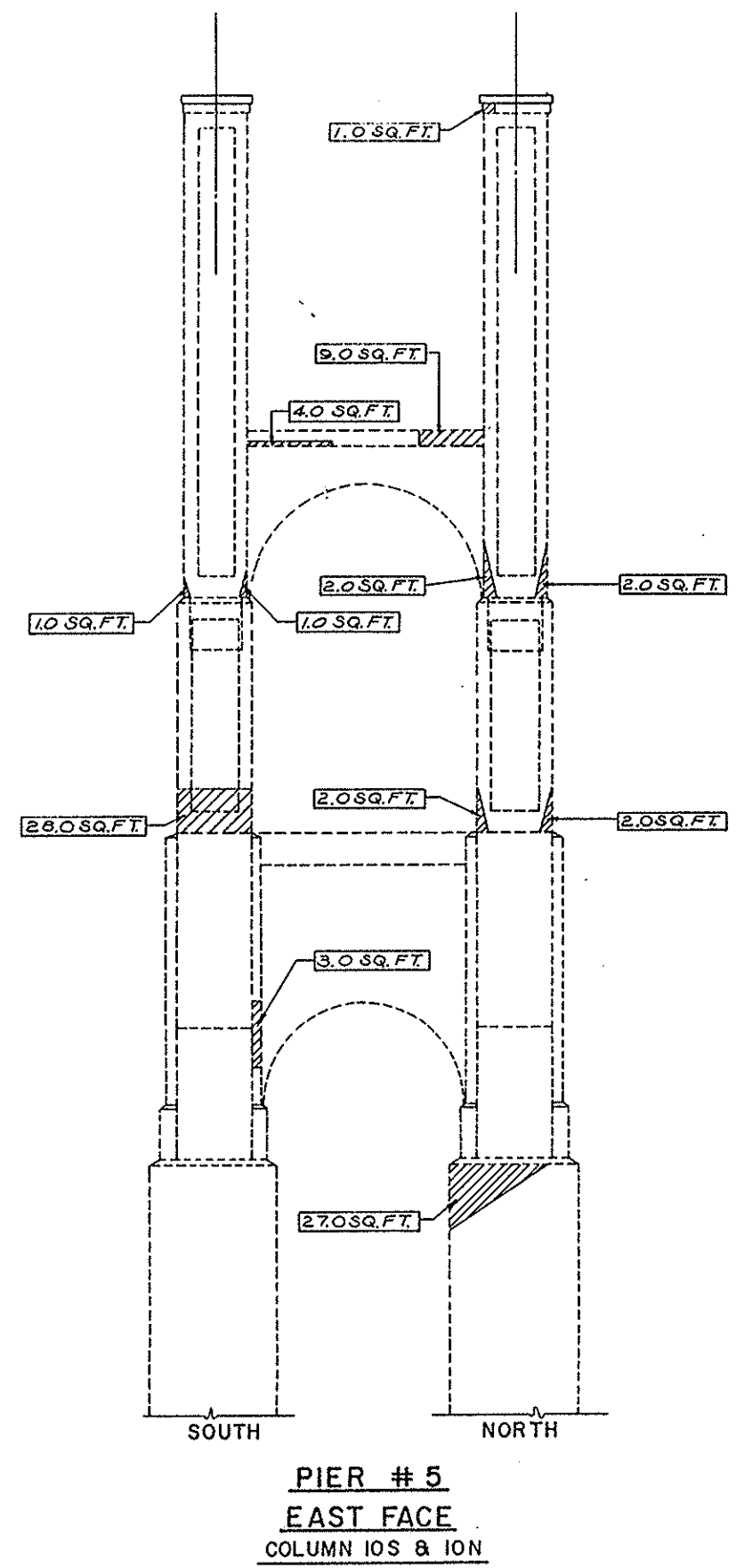
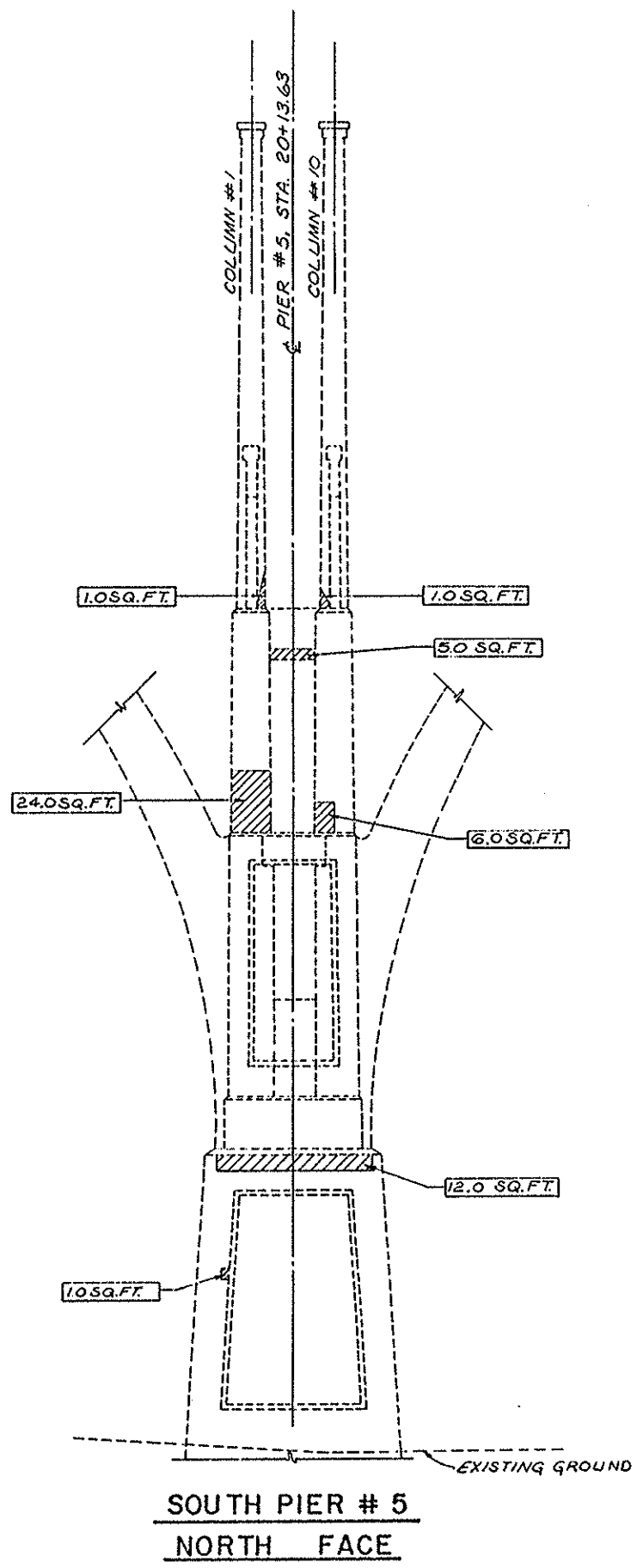
**NORTH PIER #4
SOUTH FACE**

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	J.D.R.		J.B.H.	MSC	6-4-87	

CUY 82-15.64
SUM 82- 0.00

NOTES:
FOR SOUTH PIER #5 SOUTH FACE,
SEE SHEET 39/64.



LEGEND
ITEM 519-PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
555 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

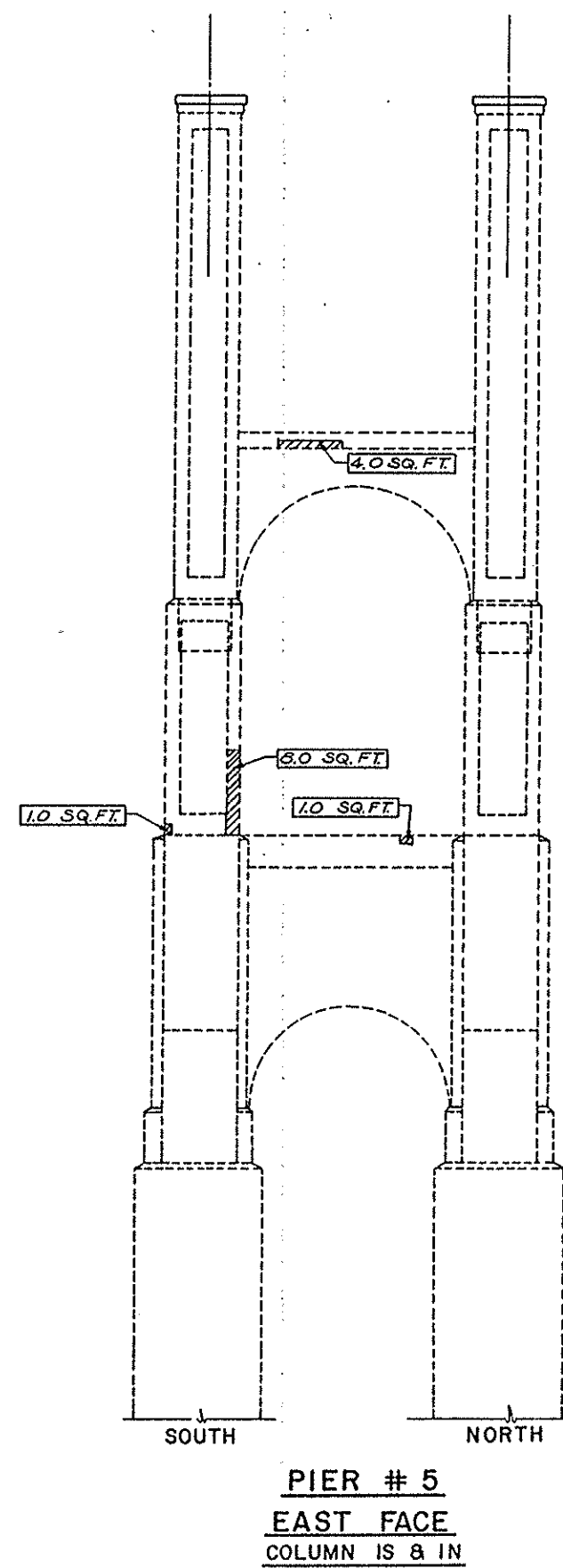
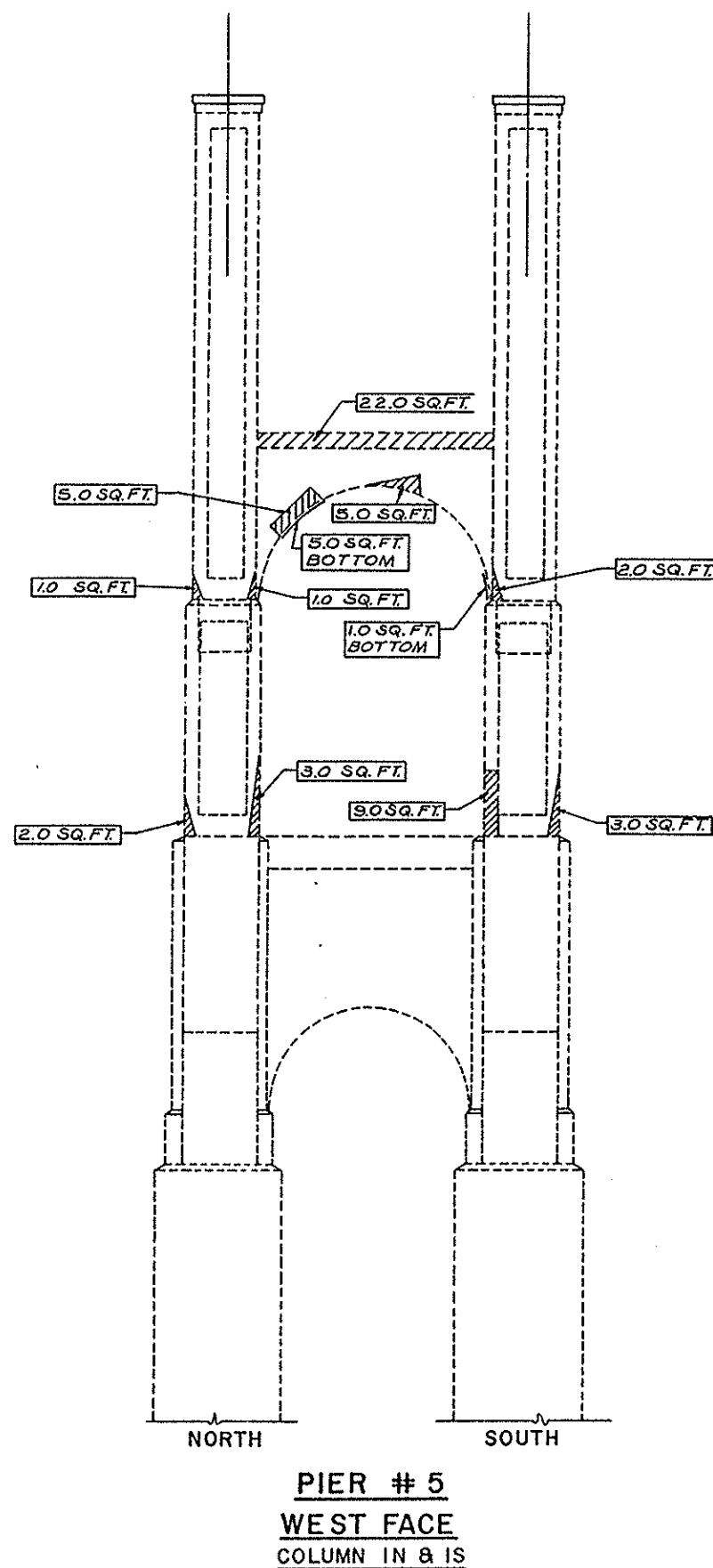
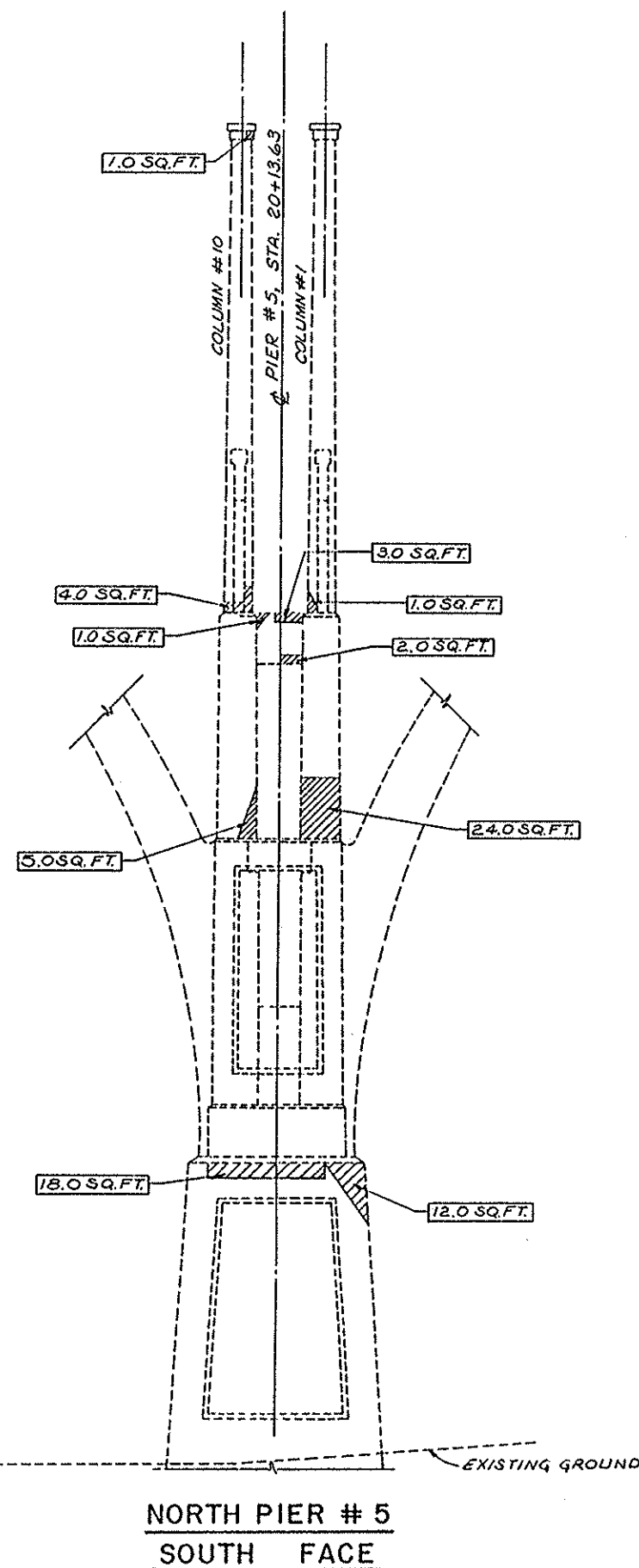
McCOY ASSOCIATES INC. 51/64
CONSULTING ENGINEERS
AKRON, OHIO

**SOUTH PIER # 5
NORTH FACE**
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBH	MSC	6-4-87	

CUY 82- 15.64
SUM 82- 0.00

NOTES:
FOR NORTH PIER #5 NORTH FACE,
SEE SHEET 40/64.



LEGEND

ITEM 519-PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
188 SQ. FT.)

NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 52/64
CONSULTING ENGINEERS
AKRON, OHIO

**NORTH PIER # 5
SOUTH FACE**

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBH	MSC	6-4-87	

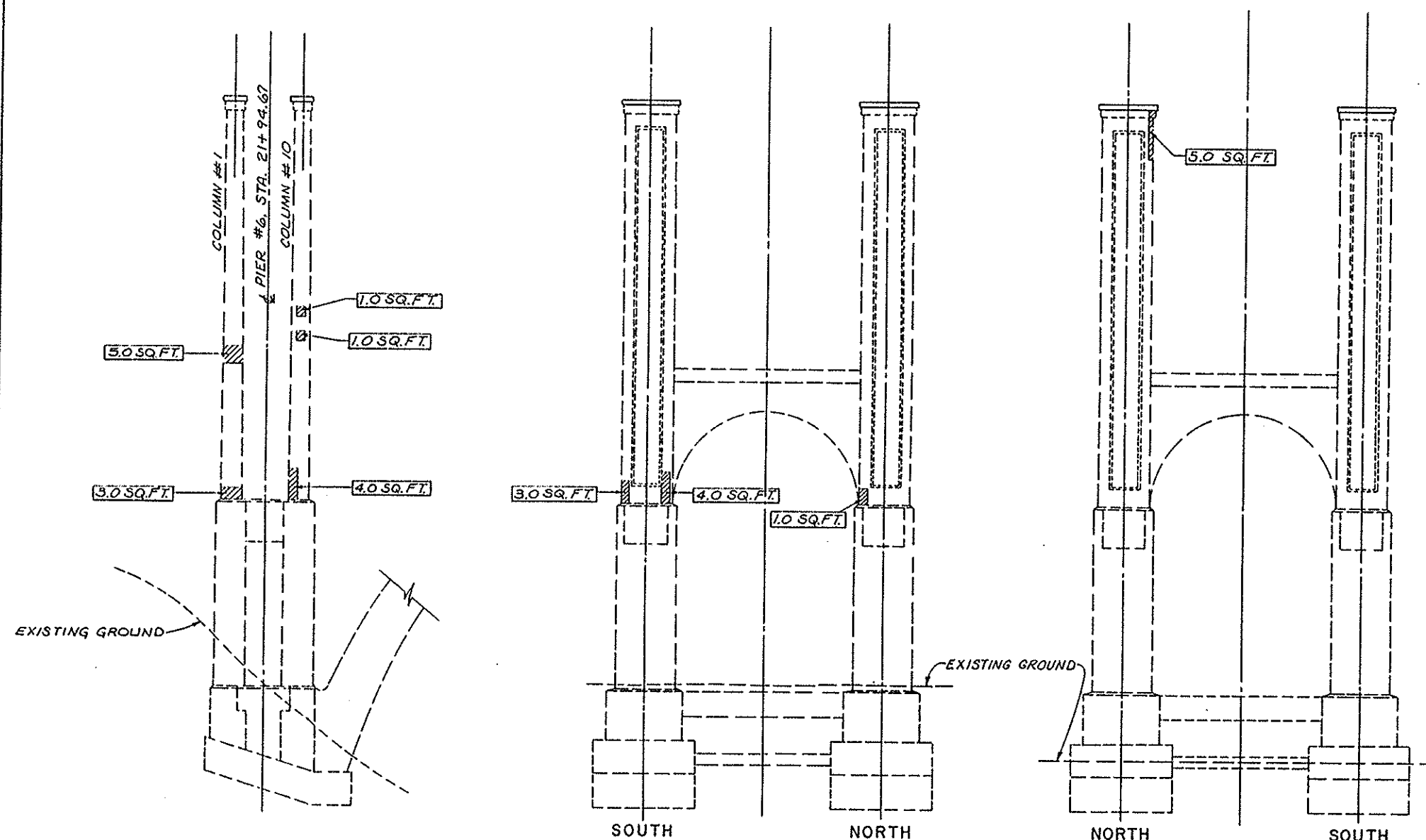
FHWA REGION	STATE	PROJECT	
5	OHIO		

70
81

CUY 82-15.64
SUM 82-0.00

NOTES:

FOR SOUTH PIER #6 SOUTH FACE,
SEE SHEET 41/64.



LEGEND

ITEM 519 - PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
357 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 53/64
CONSULTING ENGINEERS
AKRON, OHIO

SOUTH PIER # 6
NORTH FACE

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBN	MSC	6-4-87	

SOUTH PIER # 6
NORTH FACE

PIER # 6
EAST FACE
COLUMNS 10S & 10N

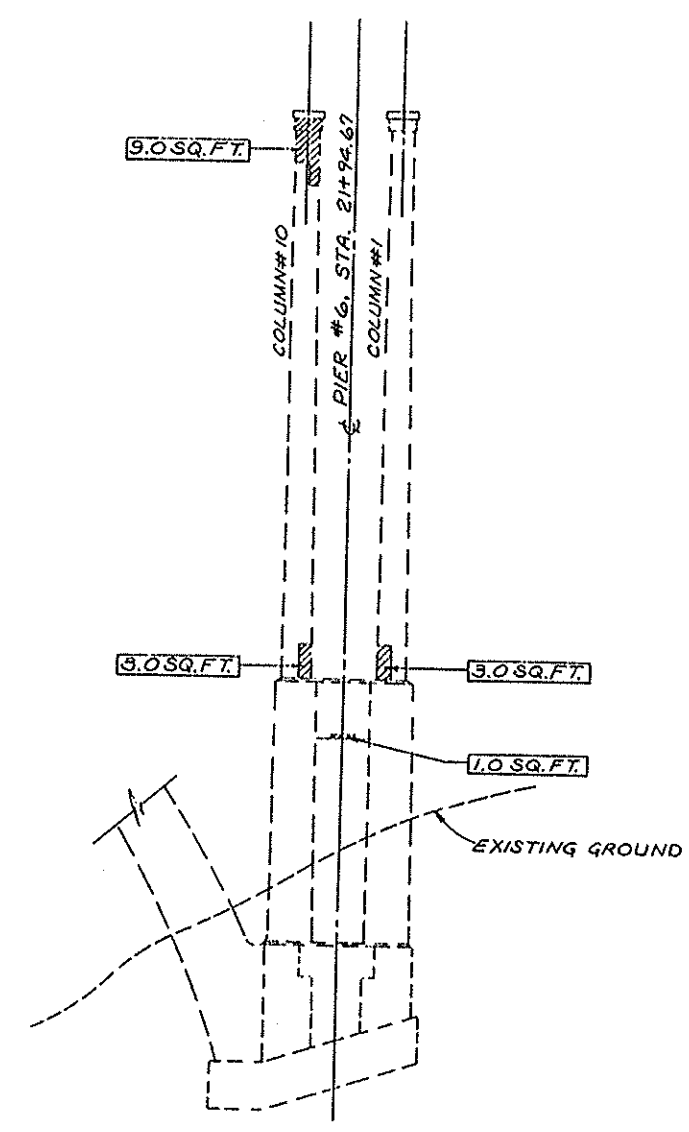
PIER # 6
WEST FACE
COLUMNS 10N & 10S

FHWA REGION	STATE	PROJECT	
5	OHIO		

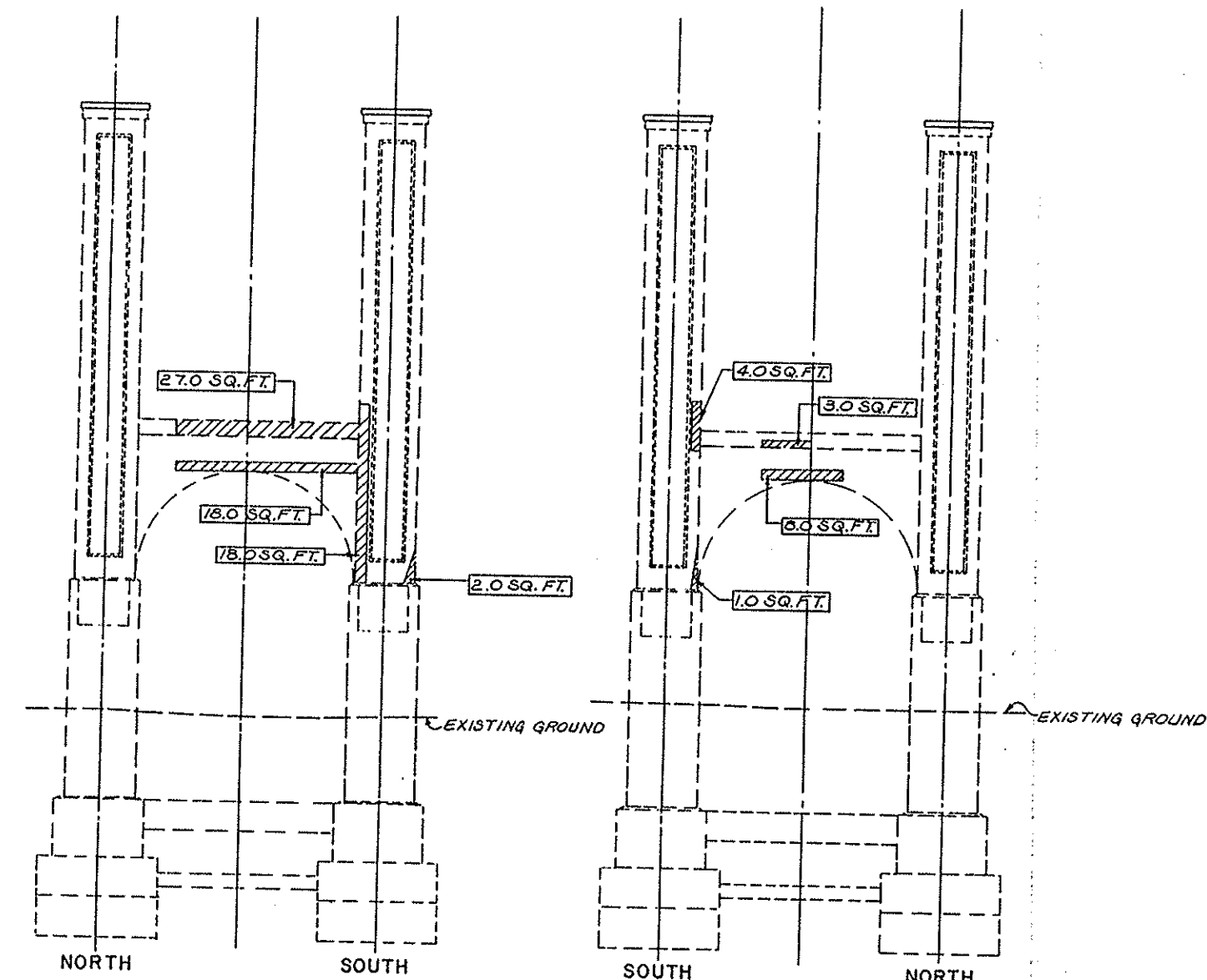
71
81

CUY 82-1564
SUM 82-000

NOTES:
FOR NORTH PIER #6 NORTH FACE,
SEE SHEET 42/64.



NORTH PIER # 6
SOUTH FACE



PIER # 6
WEST FACE
COLUMN IN & IS

PIER # 6
EAST FACE
COLUMN IS & IN

LEGEND
ITEM 519 - PATCHING CONCRETE
STRUCTURES. (TOTAL THIS SHEET
267 SQ. FT.)
NEAR SIDE
FAR SIDE

SSN 7706871

McCOY ASSOCIATES INC. 54/64
CONSULTING ENGINEERS
AKRON, OHIO

NORTH PIER # 6
SOUTH FACE

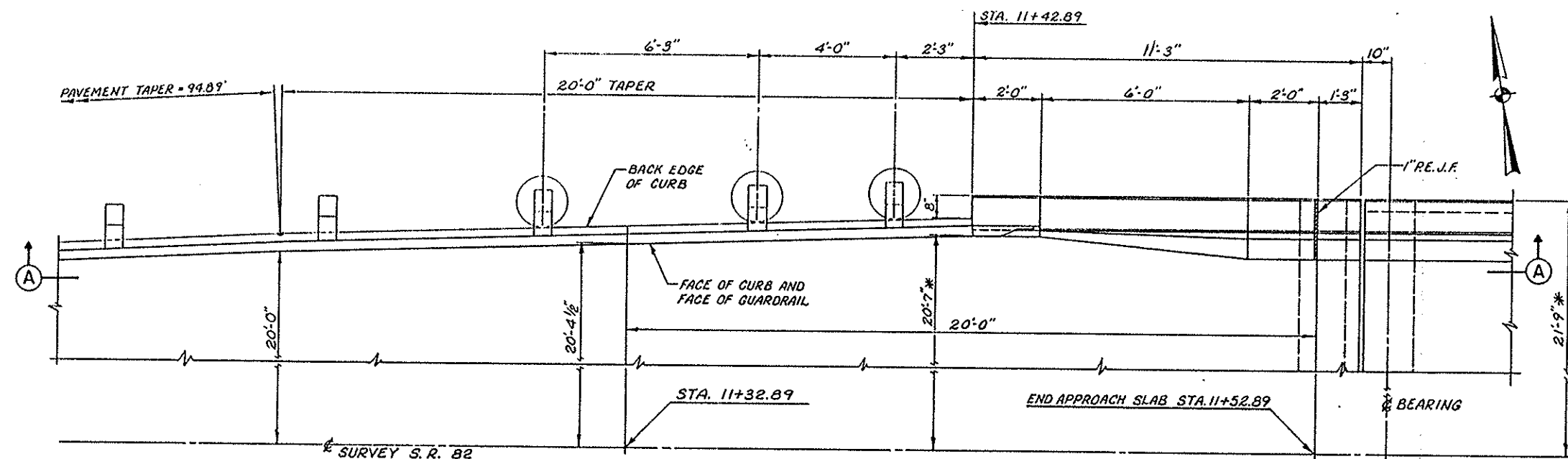
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	DAK		JBH	MBC	6-4-87	

FHWA REGION	STATE	PROJECT
5	OHIO	

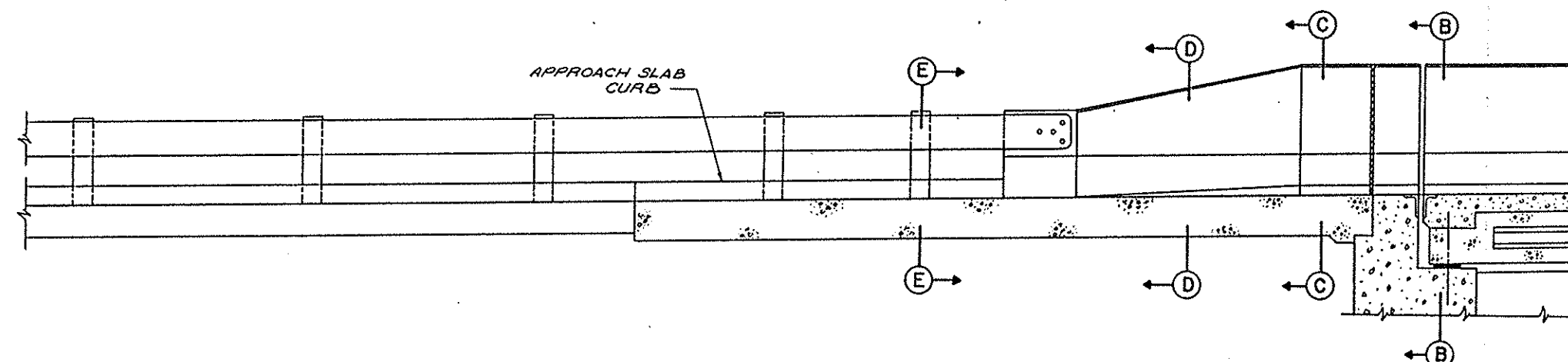
72
81

CUY 82-15.64
SUM 82- 0.00

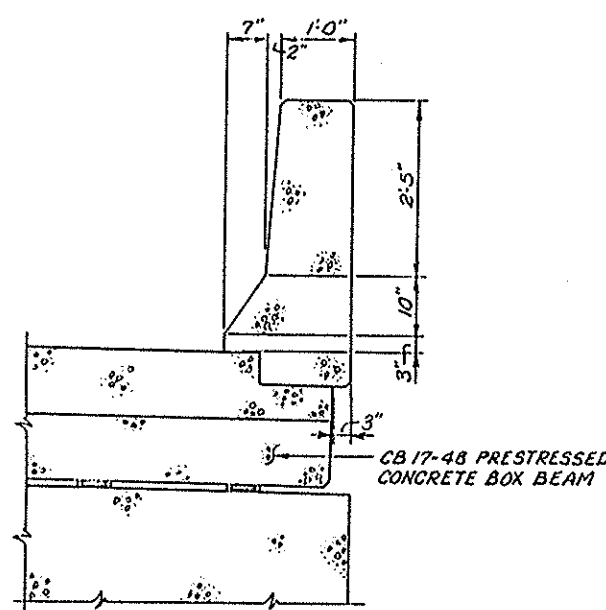


PART PLAN AT ABUTMENT, WEST APPROACH, NORTH PARAPET
WEST APPROACH, SOUTH PARAPET SIMILAR

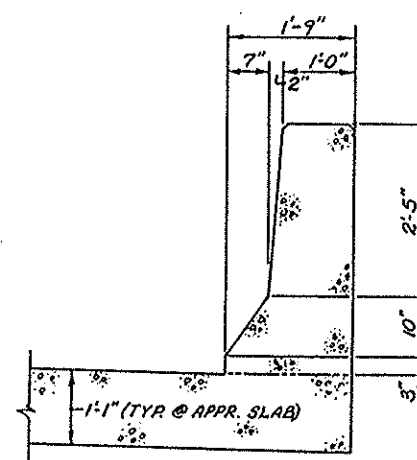
- NOTES**
- REFERENCE: FOR ADDITIONAL DETAILS AND DETAILS NOT SHOWN, SEE STANDARD DRAWINGS AS-1-81, BR-1, GR-1, GR-2B, GR-3 AND GR-7.
 - PAYMENT: CONCRETE AND REINFORCEMENT FOR PARAPETS ATTACHED TO THE APPROACH SLAB, INCLUDING BARS EXTENDING FROM APPROACH SLAB INTO PARAPET, SHALL BE INCLUDED WITH SUPERSTRUCTURE FOR PAYMENT.
 - REINFORCING STEEL: FOR REINFORCING BAR DETAILS SEE SHEET 57/64 & 63A/64.
 - * = PLUS BOX BEAM FIT-UP.



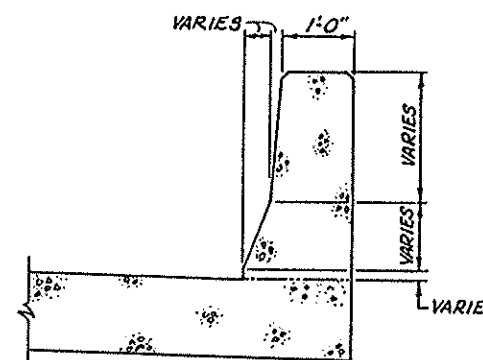
SECTION A-A



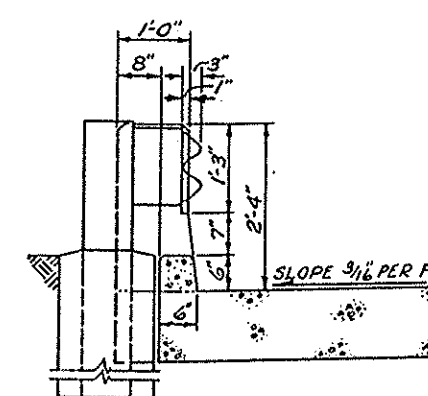
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

SSN 7706871

McCOY ASSOCIATES INC. 55/64
CONSULTING ENGINEERS
AKRON, OHIO

**BRIDGE PARAPET TRANSITION
WEST APPROACH**

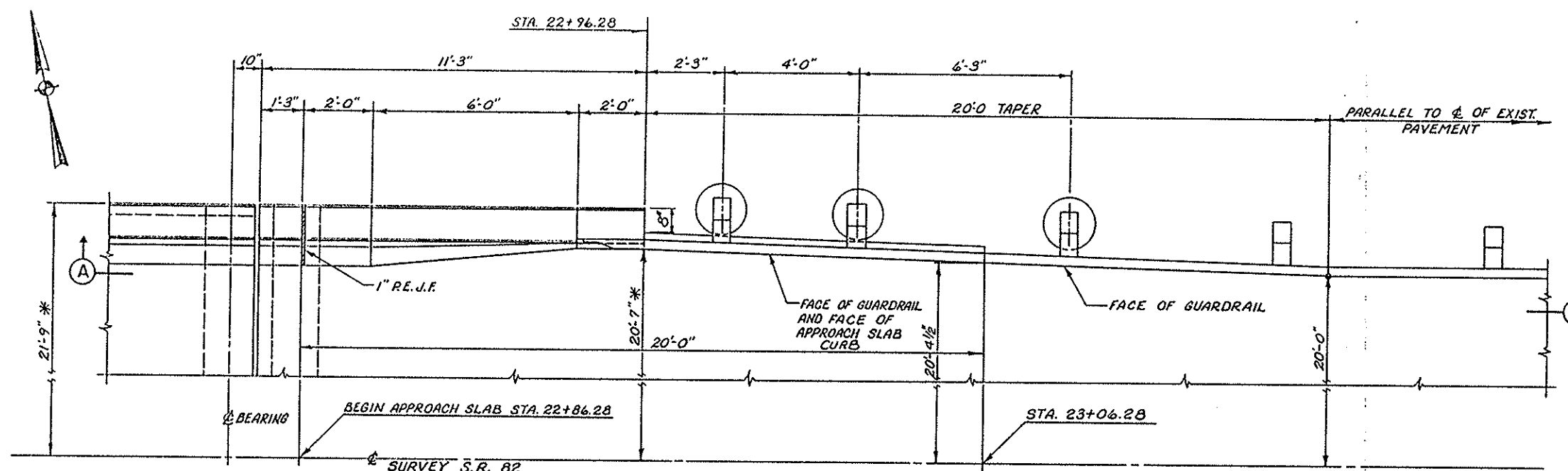
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.B.H.	B.M.R.		TAB	MSC	6-4-87	

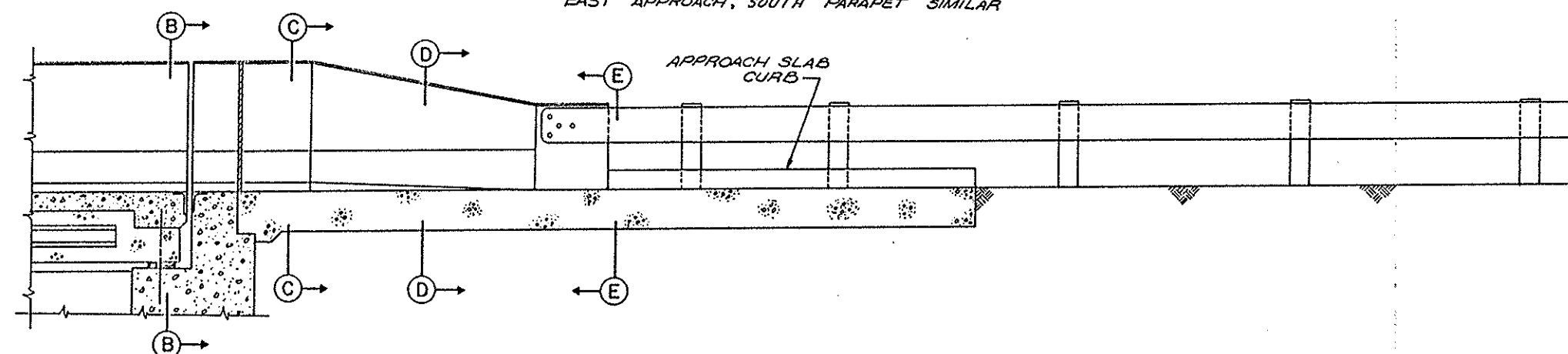
FHWA REGION	STATE	PROJECT	
5	OHIO		

CUY 82-15.64
SUM 82- 0.00

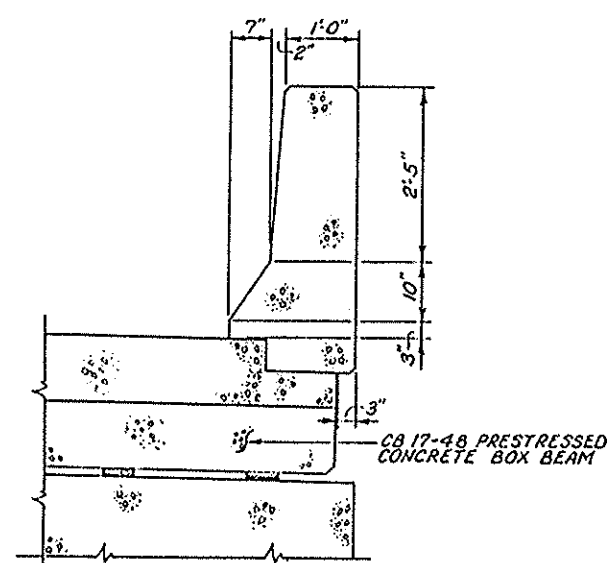
73
81



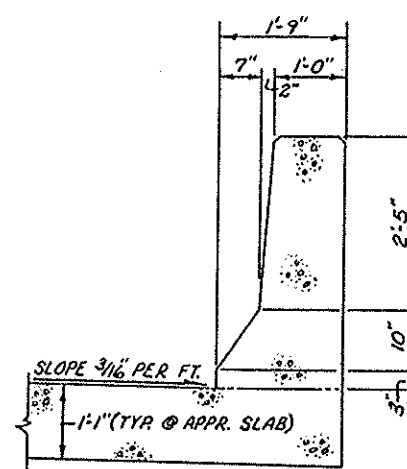
PART PLAN AT ABUTMENT, EAST APPROACH, NORTH PARAPET
EAST APPROACH, SOUTH PARAPET SIMILAR



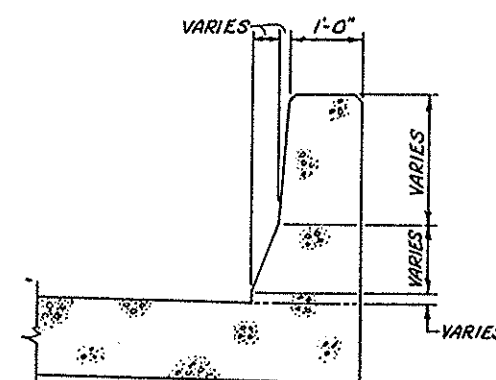
SECTION A-A



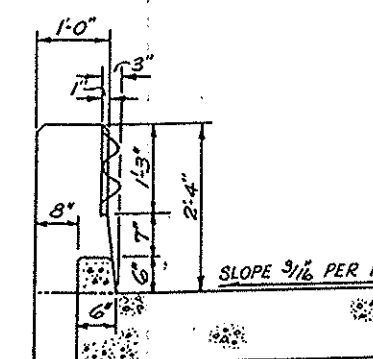
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

- NOTES**
- FOR REINFORCING BAR DETAILS, SEE SHEET 58/64 & 63A/64.
 - * = PLUS BOX BEAM FIT-UP.
 - FOR ADDITIONAL NOTES, SEE SHEET 55/64.

SSN 7706871

McCOY ASSOCIATES INC. 56/64
CONSULTING ENGINEERS
AKRON, OHIO

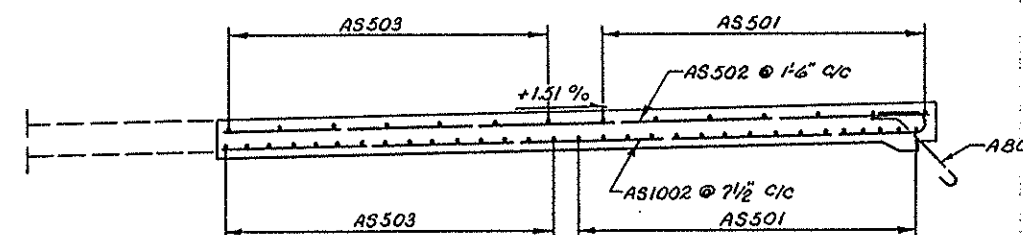
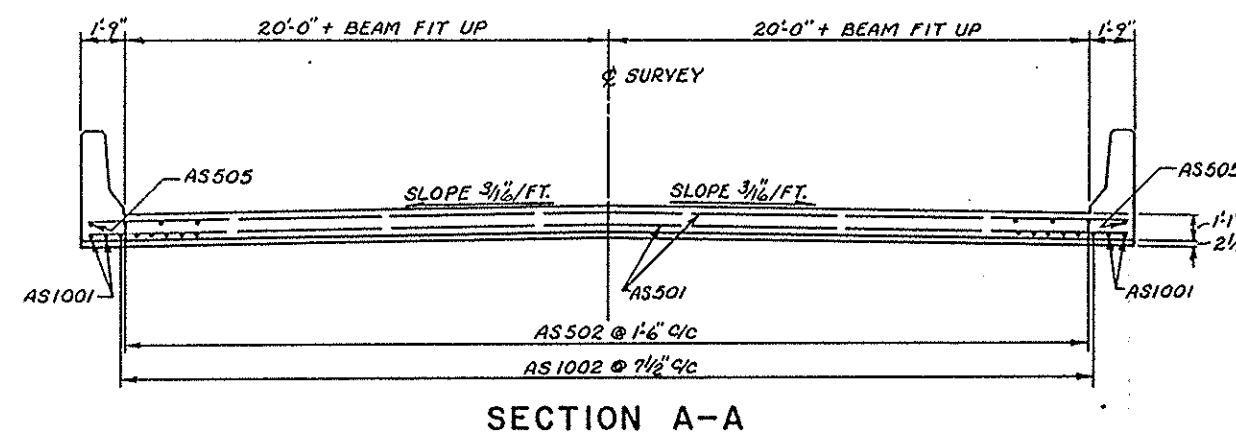
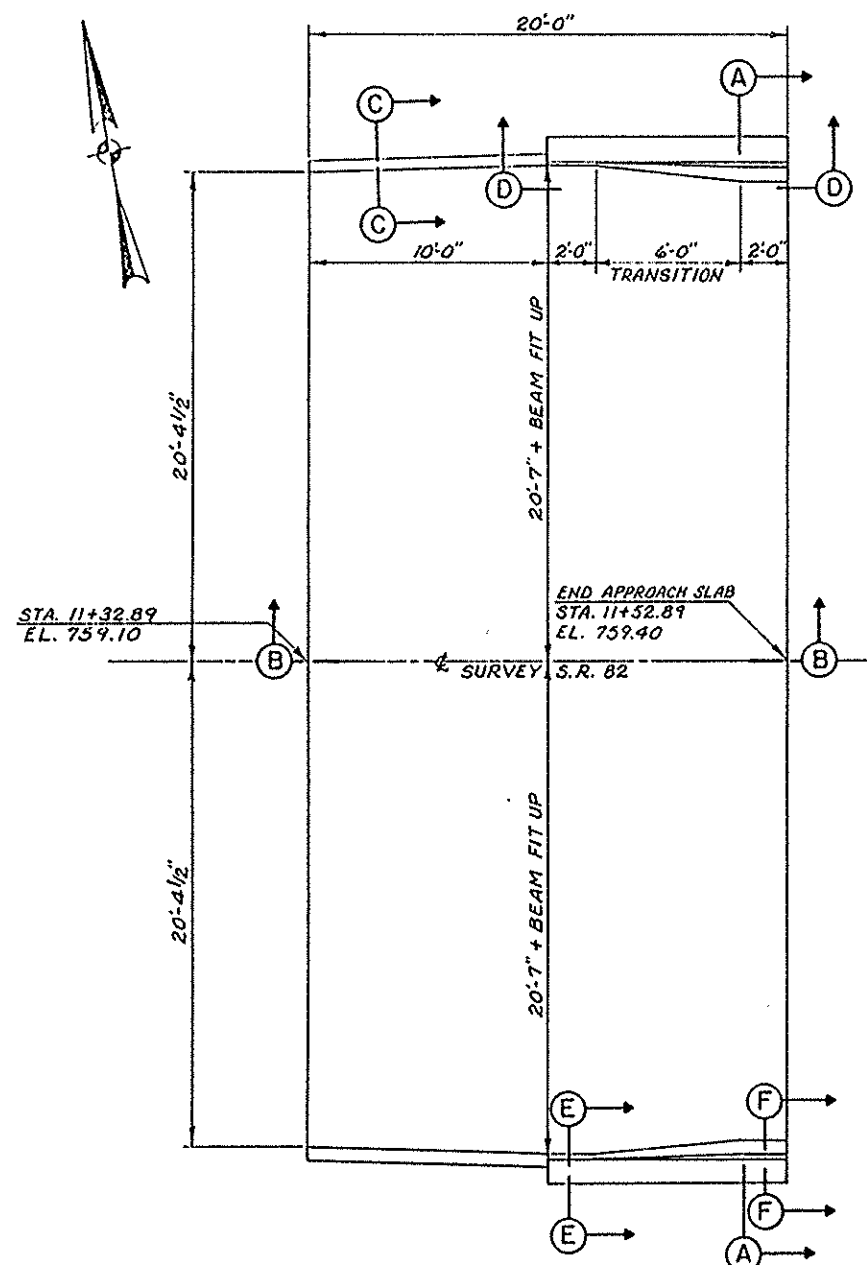
**BRIDGE PARAPET TRANSITION
EAST APPROACH**

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

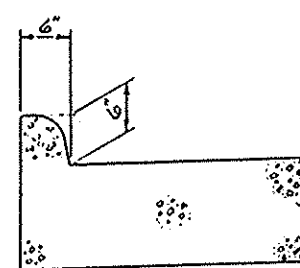
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.B.H.	B.M.R.		TAB	MSC	6-4-87	

NOTES

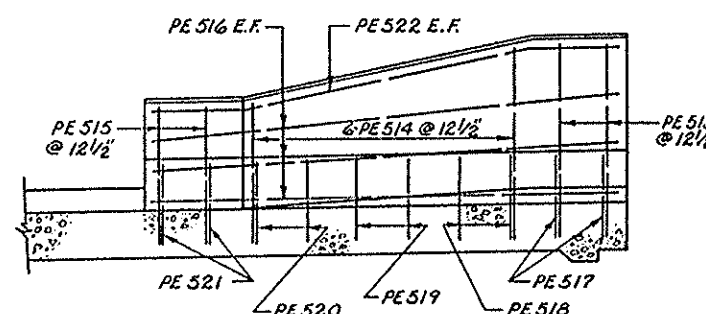
- FOR ADDITIONAL DETAILS AND DETAILS NOT SHOWN, SEE STANDARD DRAWING AS-1-81.
- FOR ADDITIONAL PARAPET TRANSITION DETAILS SEE SHEET 55/64.



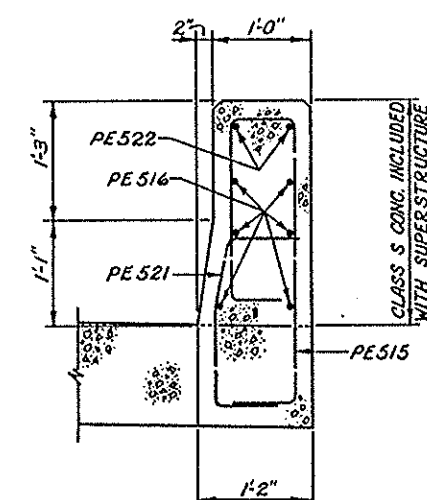
SECTION B-B



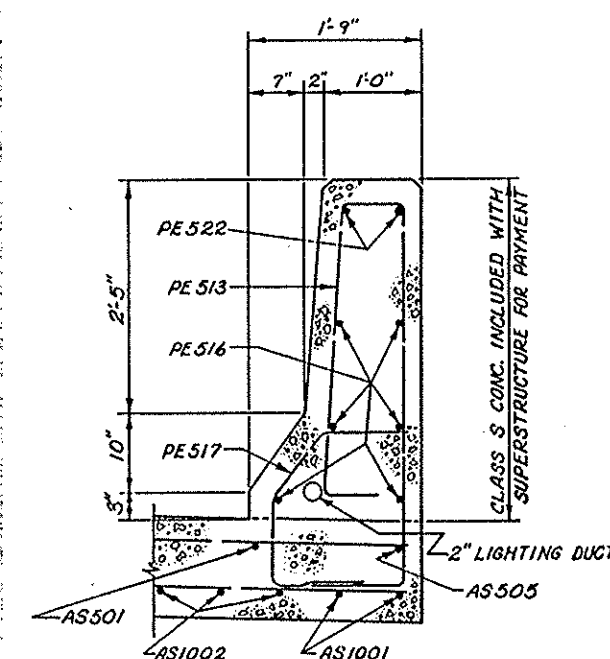
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

SSN 7706871

McCOY ASSOCIATES INC. 57/64
CONSULTING ENGINEERS
AKRON, OHIO

WEST APPROACH SLAB

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	B.M.R.		TAB	MSC	6-4-87	

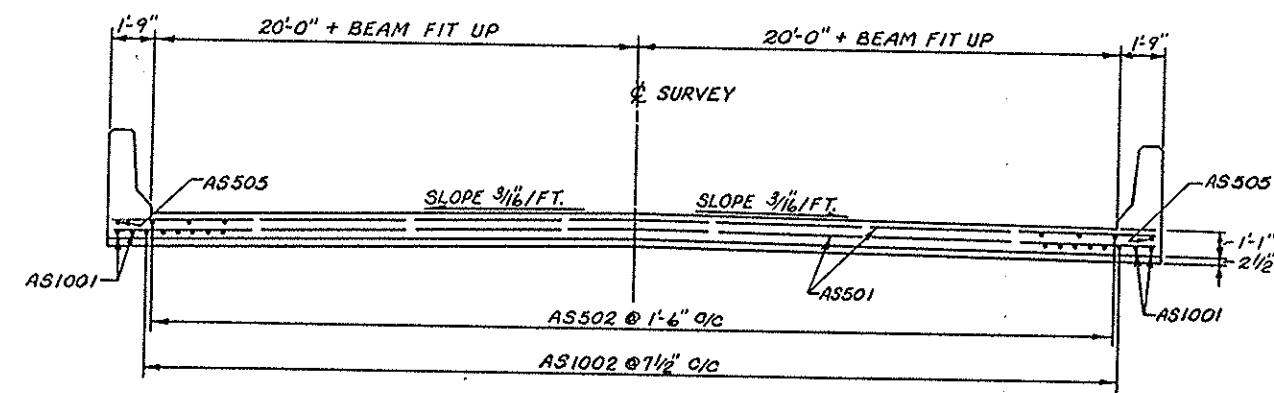
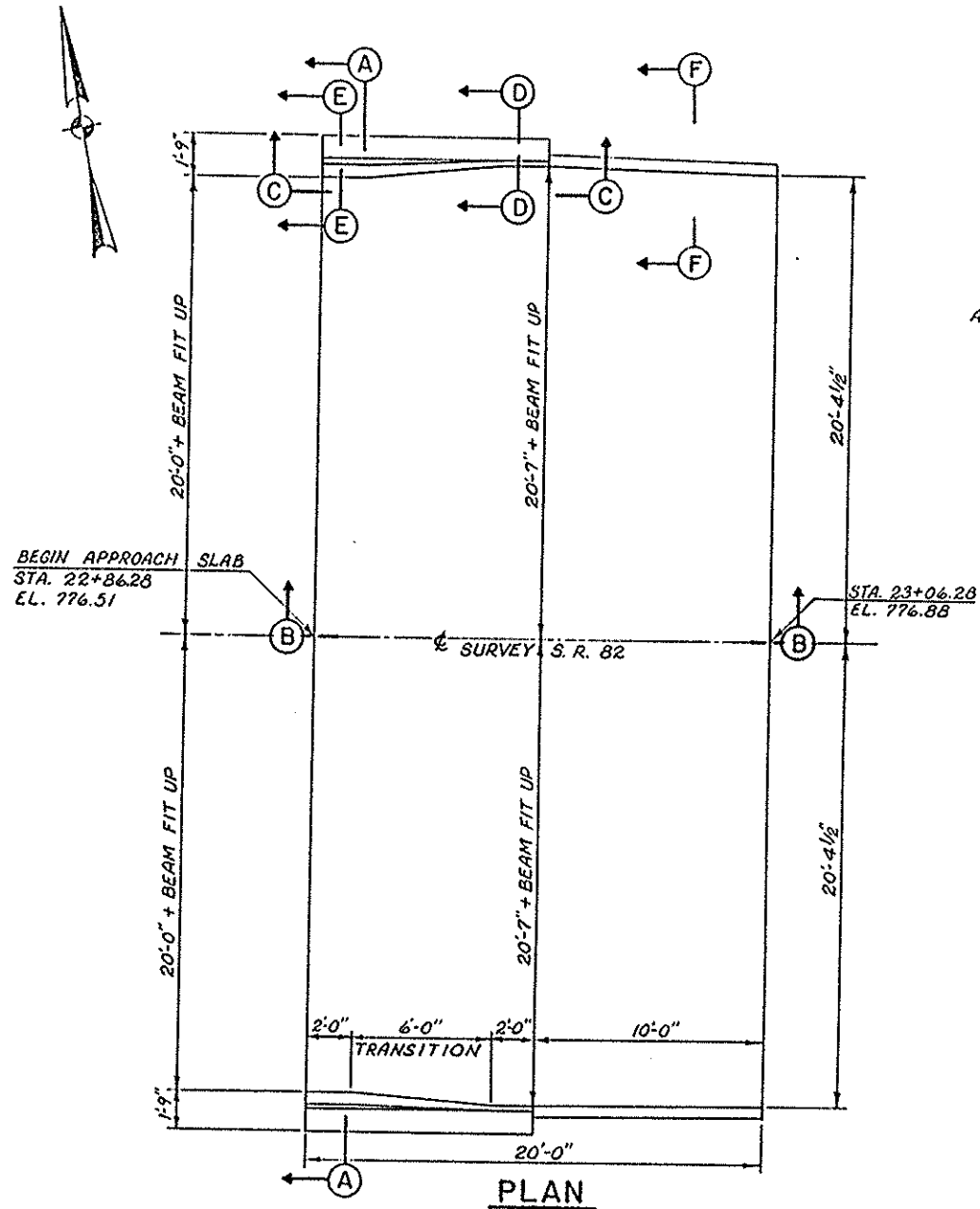
FHWA REGION	STATE	PROJECT
5	OHIO	

75
81

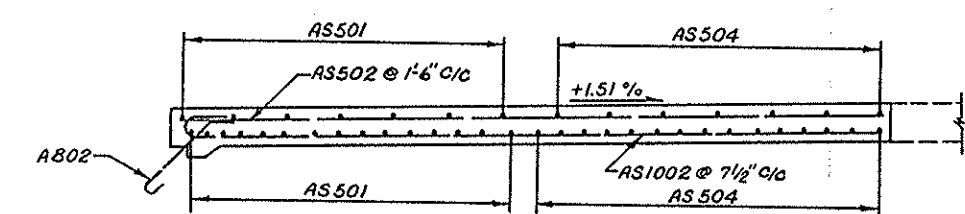
CUY 82-15.64
SUM 82-10.00

NOTES

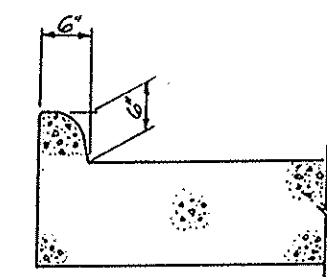
- FOR ADDITIONAL DETAILS AND DETAILS NOT SHOWN, SEE STANDARD DRAWING AS-1-81, SHEET 1.
- FOR ADDITIONAL PARAPET DETAILS, SEE SHEET 56/64.



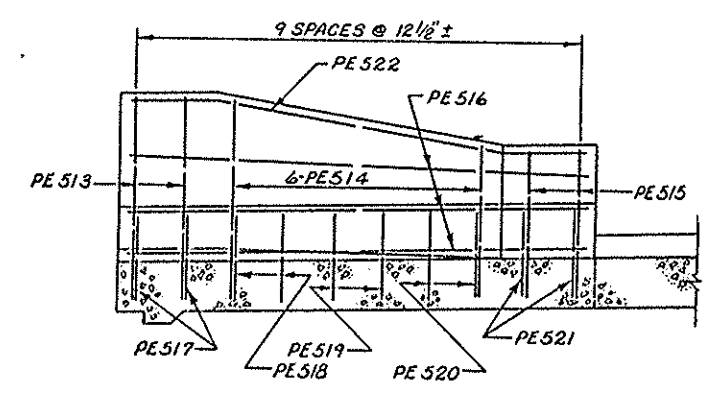
SECTION A-A



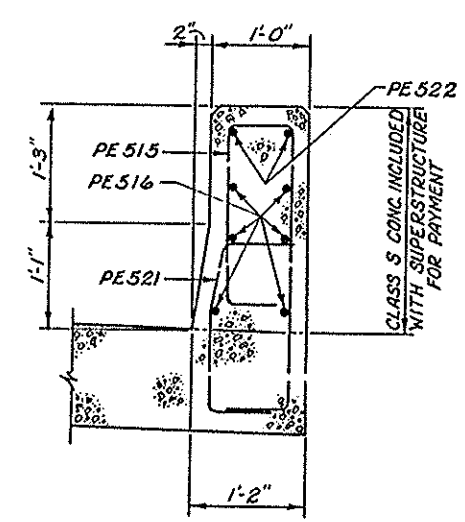
SECTION B-B



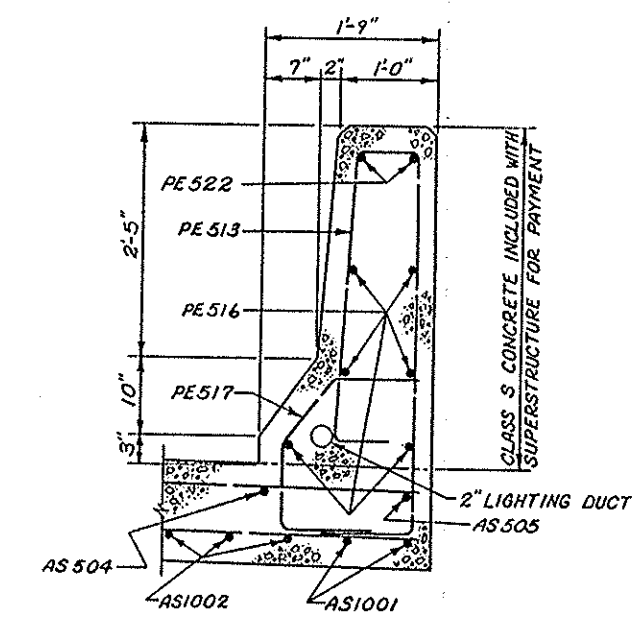
SECTION F-F



SECTION C-C



SECTION D-D



SECTION E-E

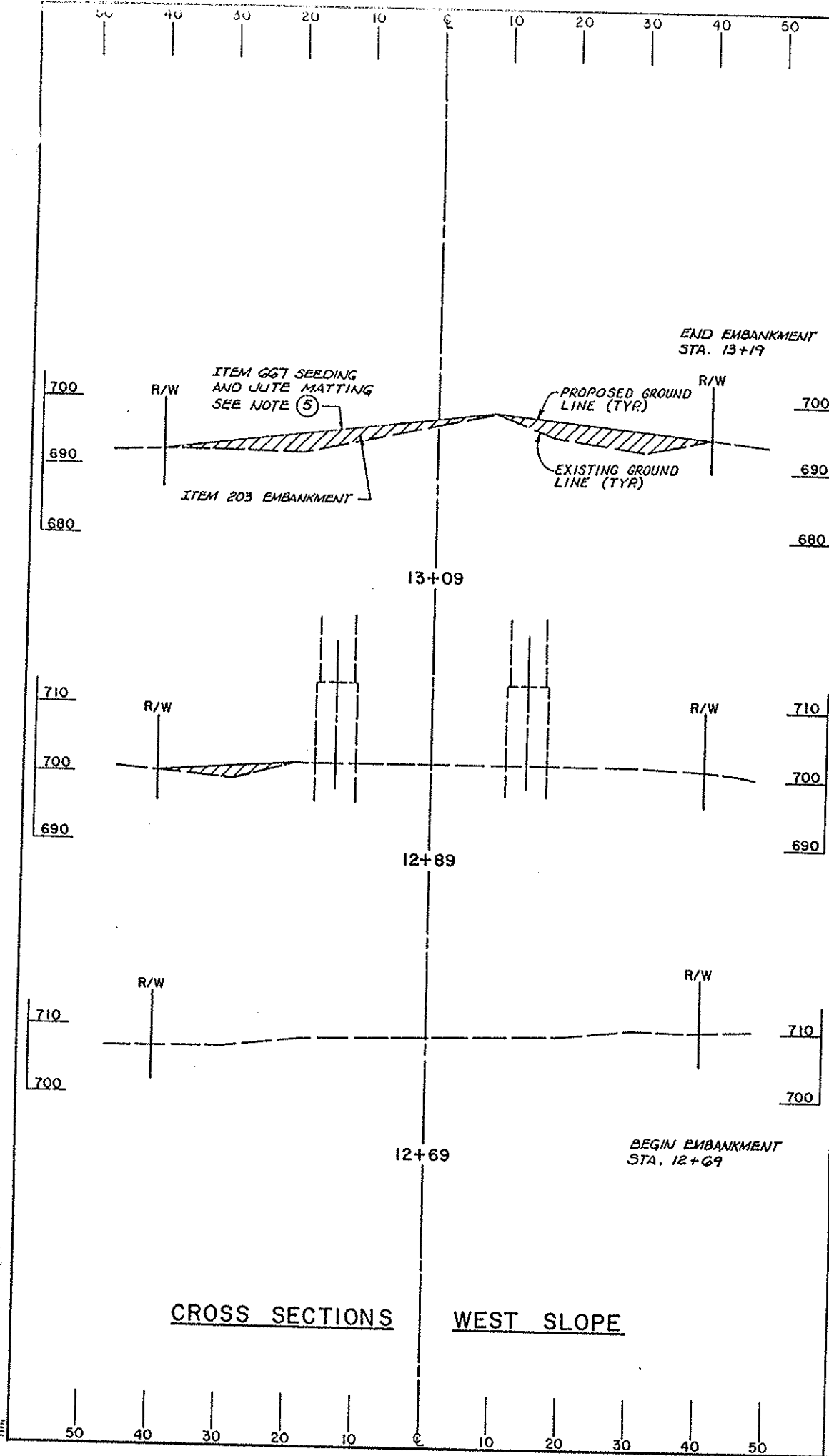
SSN 7706871

McCOY ASSOCIATES INC. 58/64
CONSULTING ENGINEERS
AKRON, OHIO

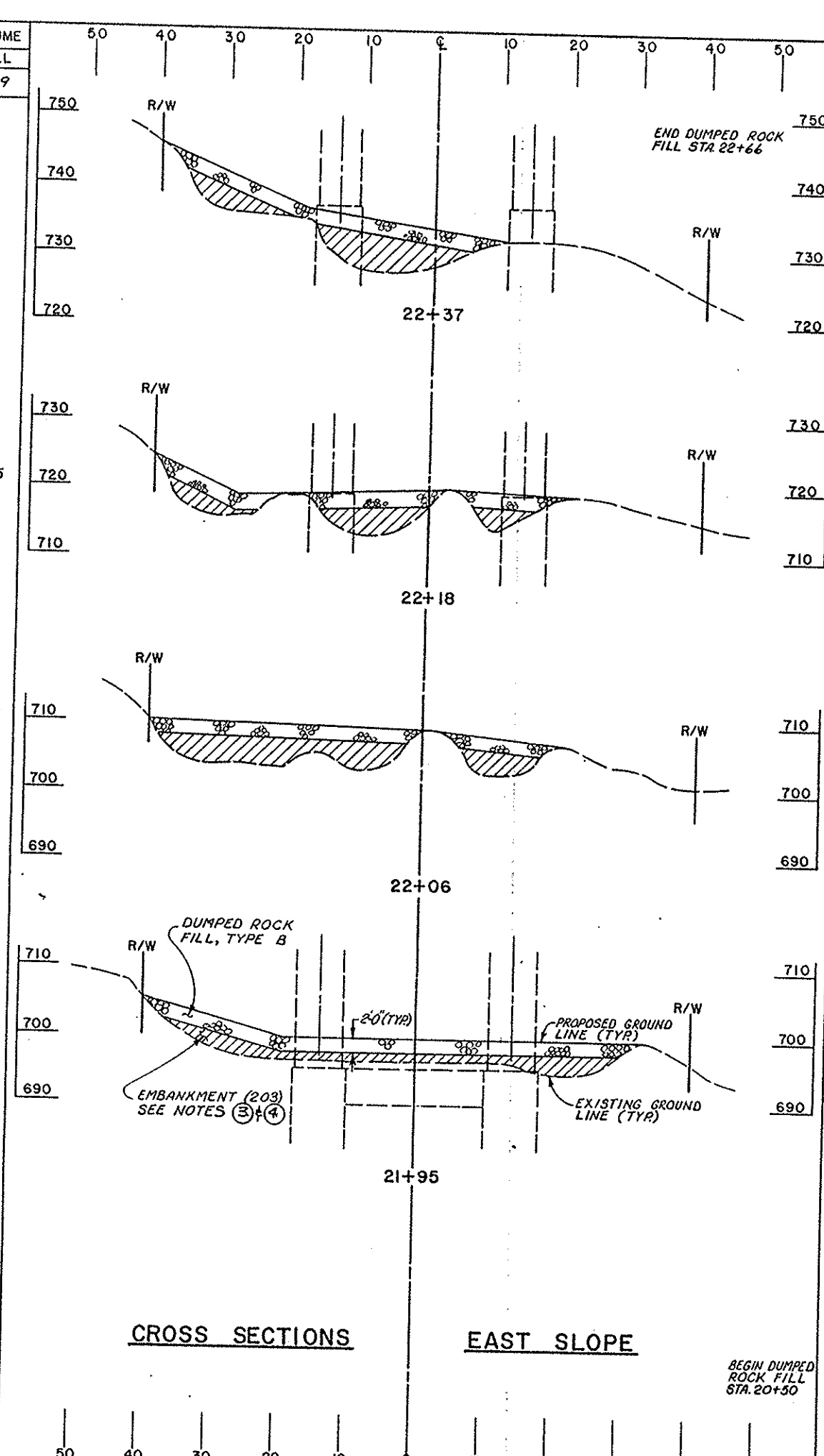
EAST APPROACH SLAB

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	B.M.R.		TAB	MSC	6-4-87	



END AREA	VOLUME
FILL	FILL
SUB TOTAL	89
0	
133	
20	
0	



END AREA	VOLUME
FILL	FILL
GRAND TOTAL	674
SUB TOTAL	585
0	
54	
101	
65	
84	
41	
100	
49	
140	
376	
0	

FHWA REGION	STATE	PROJECT
5	OHIO	

CUY 82-15.64
SUM 82-0000

NOTES

- FOR LIMITS OF ITEM 203 EMBANKMENT SEE SHEET 1/64.
- FOR LIMITS OF DUMPED ROCK FILL, SEE SHEET 2/64.
- ALL EARTHWORK REQUIRED FOR INSTALLATION OF SLOPE PROTECTION AT ABUTMENT SLOPES SHALL BE INCIDENTAL TO ITEM 601, DUMPED ROCK FILL, TYPE B AND NO ADDITIONAL PAYMENT SHALL BE MADE.
- AT HIS OPTION, THE CONTRACTOR MAY USE BROKEN CONCRETE FROM THE BRIDGE SUPER-STRUCTURE DEMOLITION IN LIEU OF ITEM 203 EMBANKMENT AT THE EAST ABUTMENT SLOPE AT NO ADDITIONAL COST TO THE STATE. THE FILL MATERIAL SHALL BE OF A SIZE WHICH WILL PERMIT THE PLACEMENT OF A UNIFORM LAYER OF DUMPED ROCK FILL, TYPE B AS SHOWN ON THE CROSS SECTIONS.
- AN ESTIMATED QUANTITY OF 500 SQUARE YARDS HAS BEEN INCLUDED FOR ITEM 607, SEEDING AND JUTE MATTING FOR THE SLOPE AT THE WEST ABUTMENT.

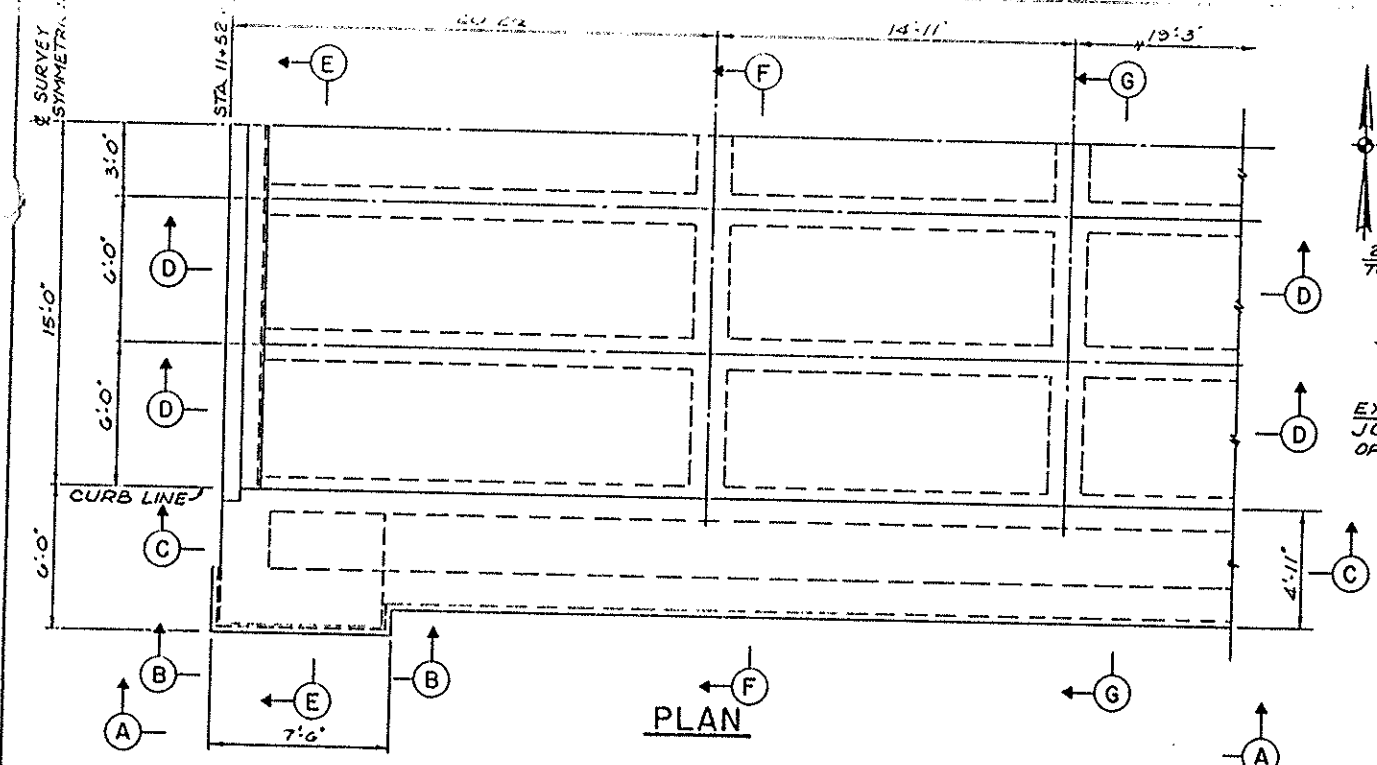
SSN 7706871

McCOY ASSOCIATES INC. 52/64
CONSULTING ENGINEERS
AKRON, OHIO

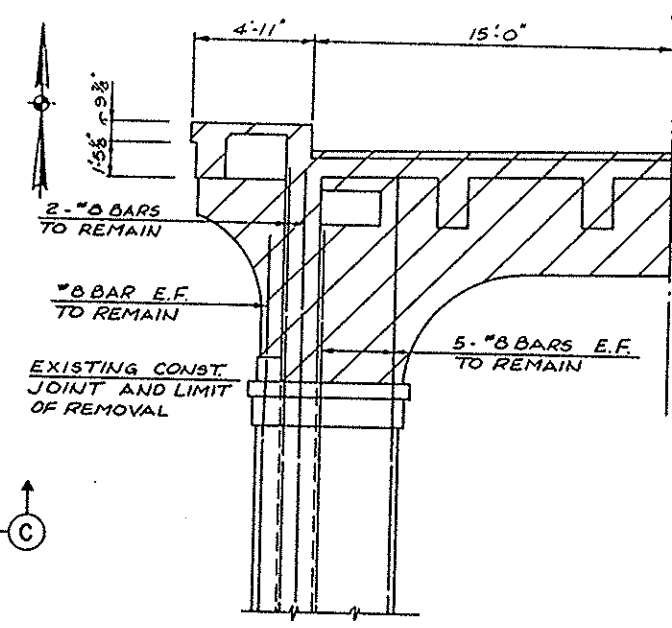
SLOPE PROTECTION CROSS SECTIONS
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TAB	B.M.R.		JBH	MSC	6-4-87	

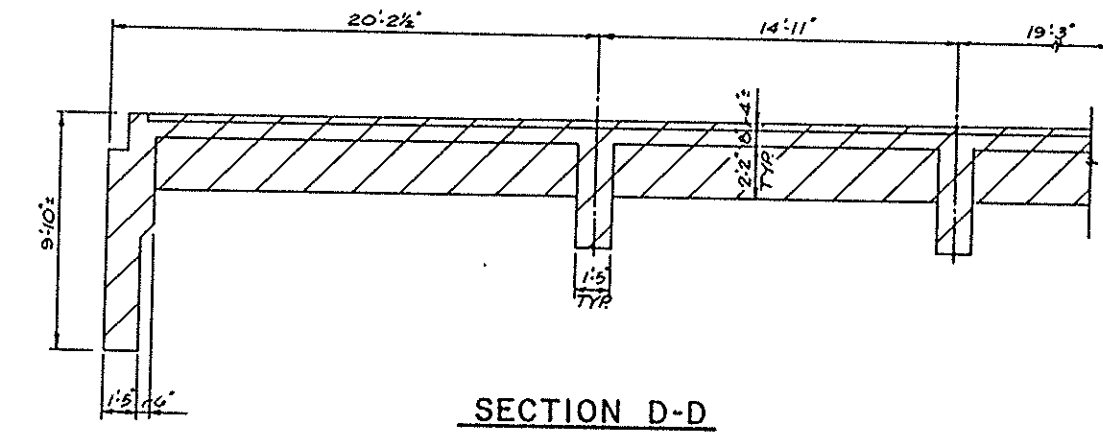
CUY 82-15.64
SUM 82-00.00



PLAN



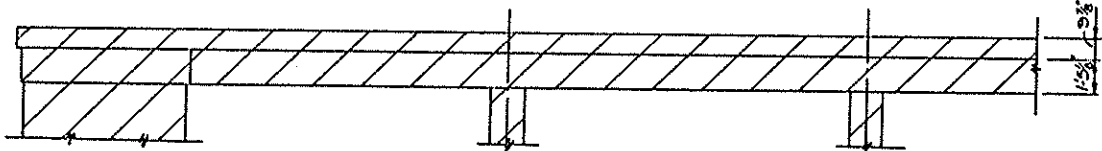
SECTION G-G



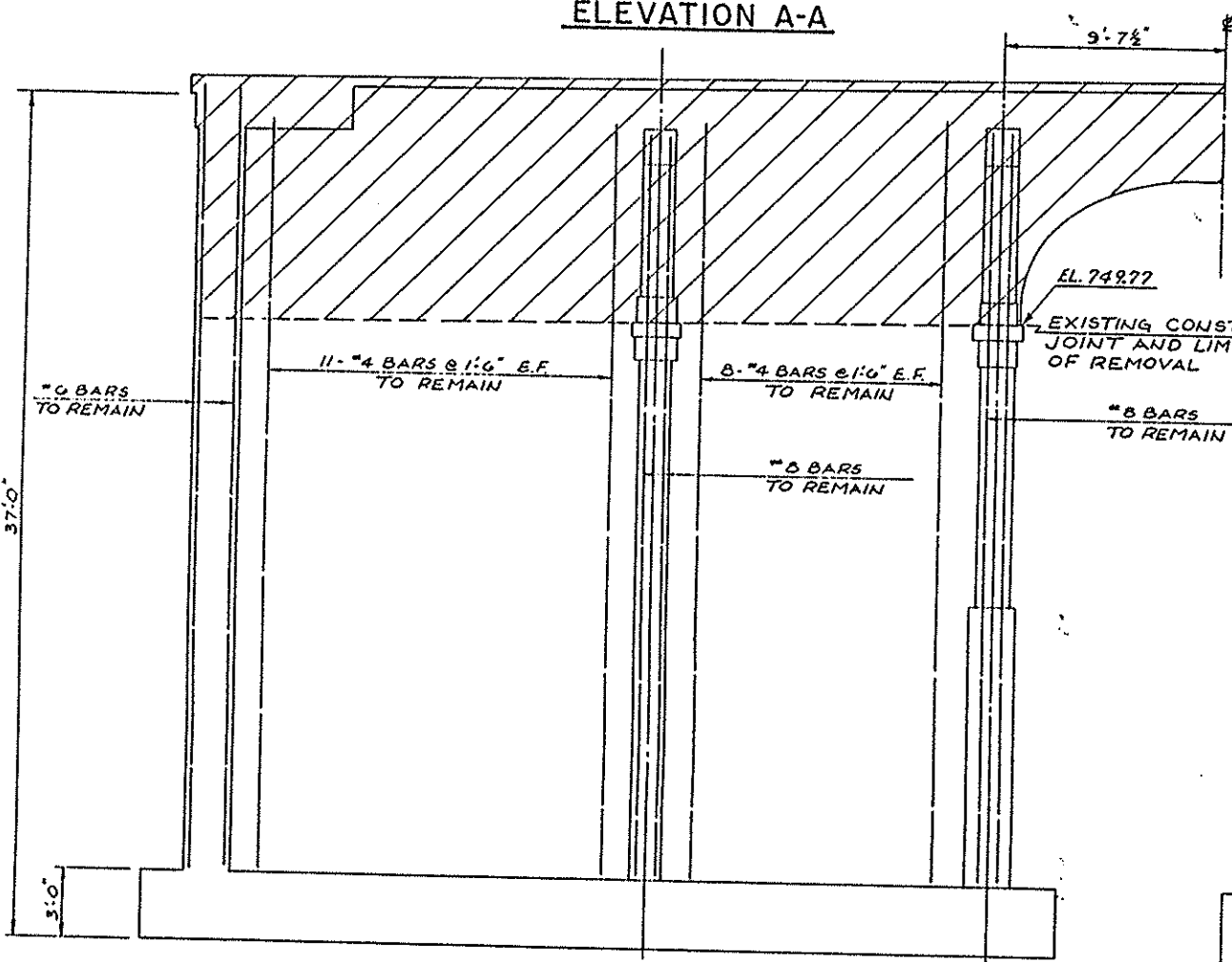
SECTION D-D

NOTES

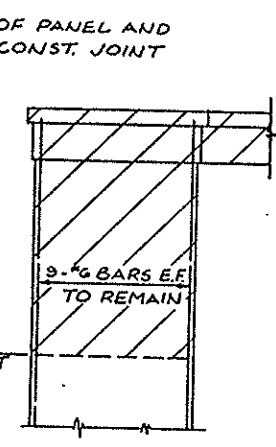
1. RIGHT HALF OF BRIDGE SHOWN, LEFT HALF OF BRIDGE SAME BUT OPPOSITE HAND.
2. ALL DIMENSIONS SHOWN HAVE BEEN TAKEN FROM AS-BUILT DRAWINGS AND ARE ± DIMENSIONS.
3. CONCRETE SHALL BE CAREFULLY REMOVED AROUND ALL BARS DESIGNATED TO REMAIN.



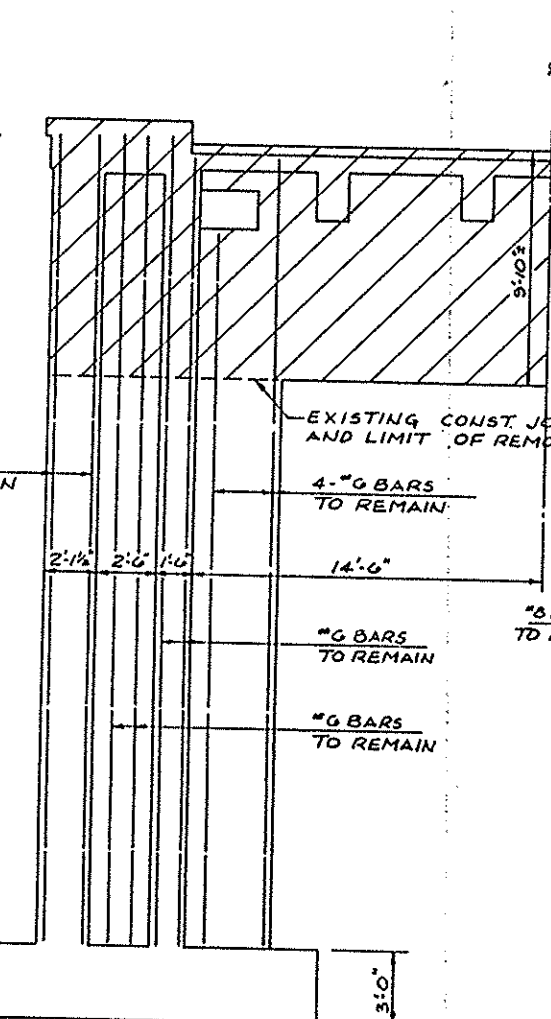
ELEVATION A-A



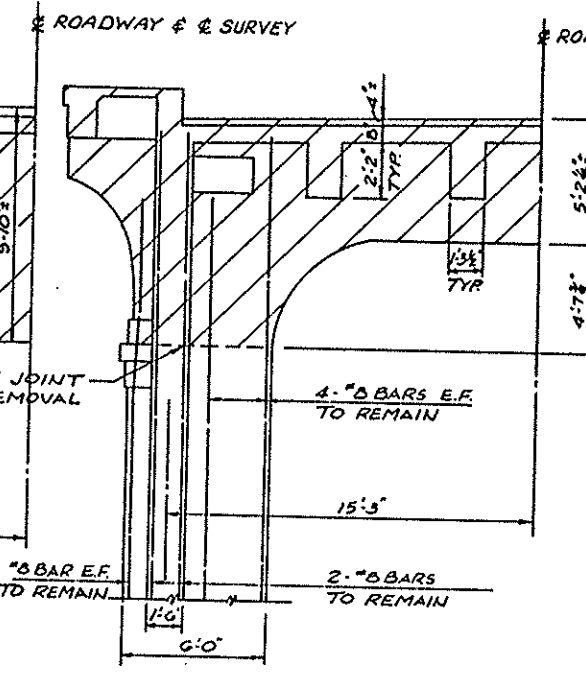
SECTION C-C



ELEVATION B-B



SECTION E-E



SECTION F-F

LEGEND

- INDICATES AREA TO BE REMOVED
- E.F. - EACH FACE

SSN 7706871

McCOY ASSOCIATES INC. 60/64
CONSULTING ENGINEERS
AKRON, OHIO

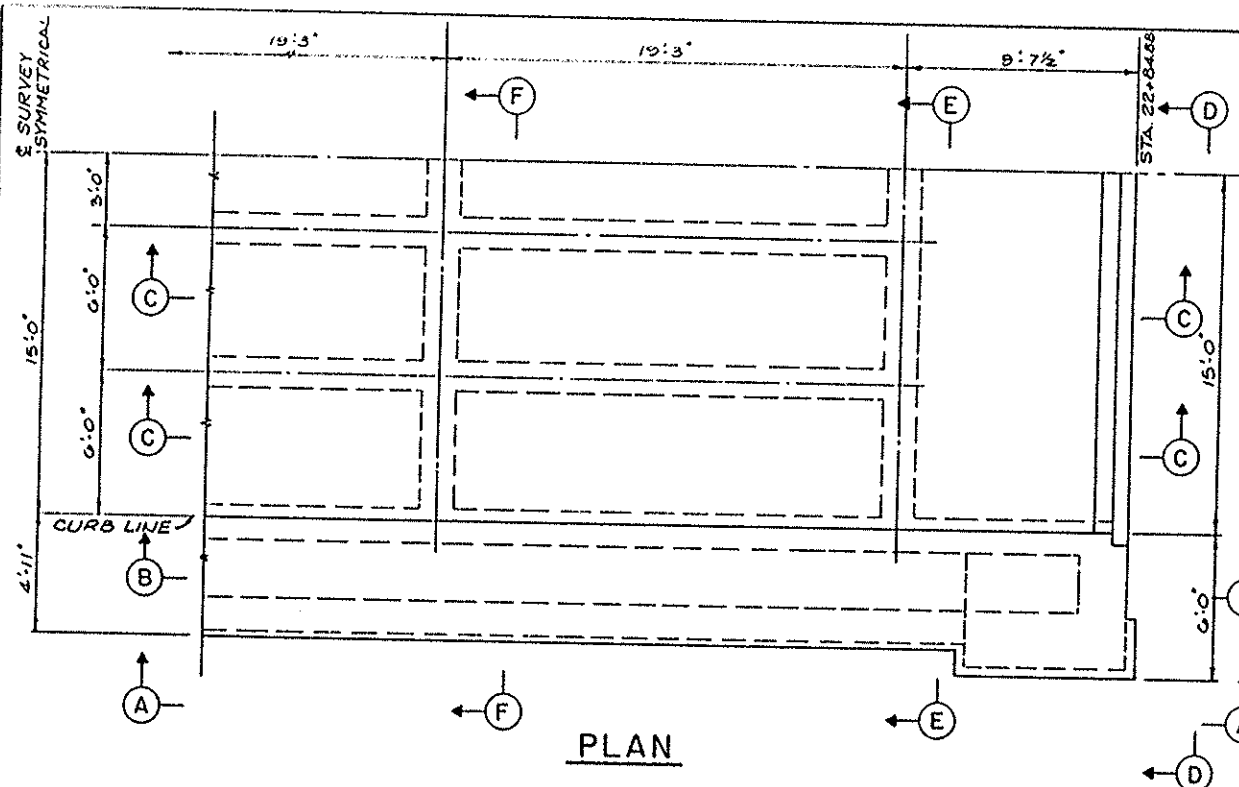
DEMOLITION
WEST ABUTMENT
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	JEK		TAB	MSC	6-4-87	

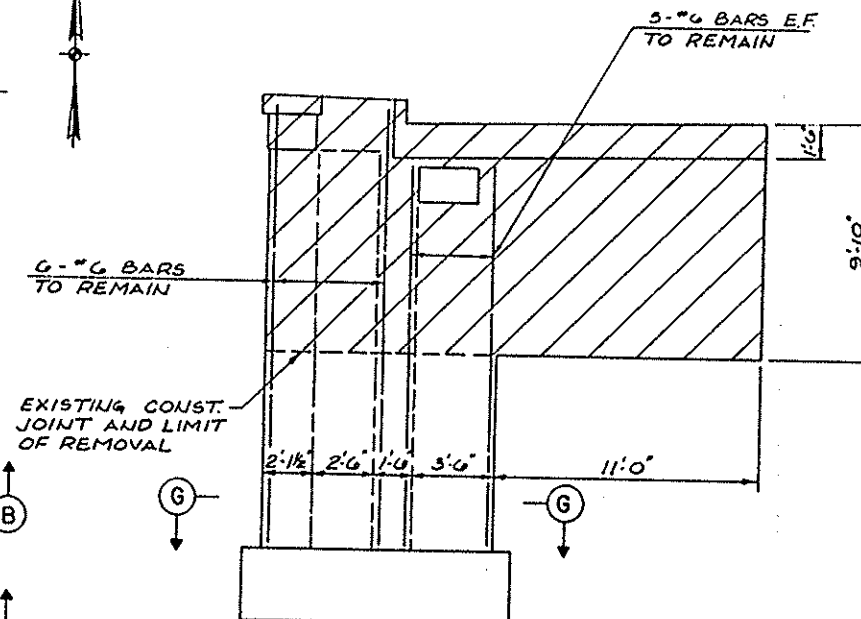
FHWA REGION	STATE	PROJECT
5	OHIO	

78
81

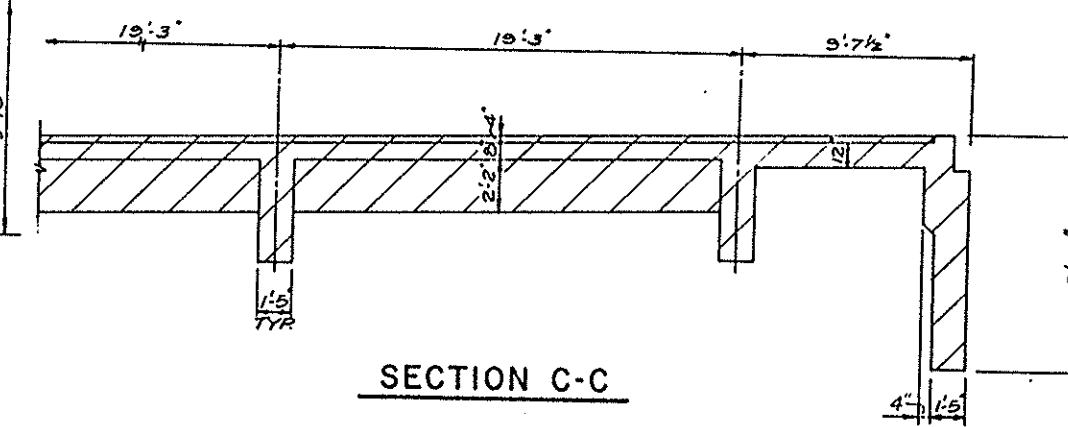
CUY 82-15.64
SUM 82-.000



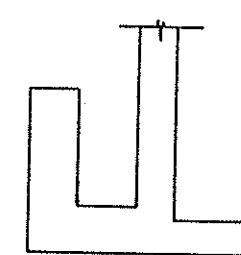
PLAN



ELEVATION D-D



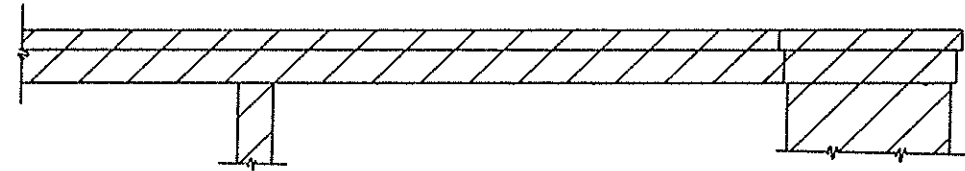
SECTION C-C



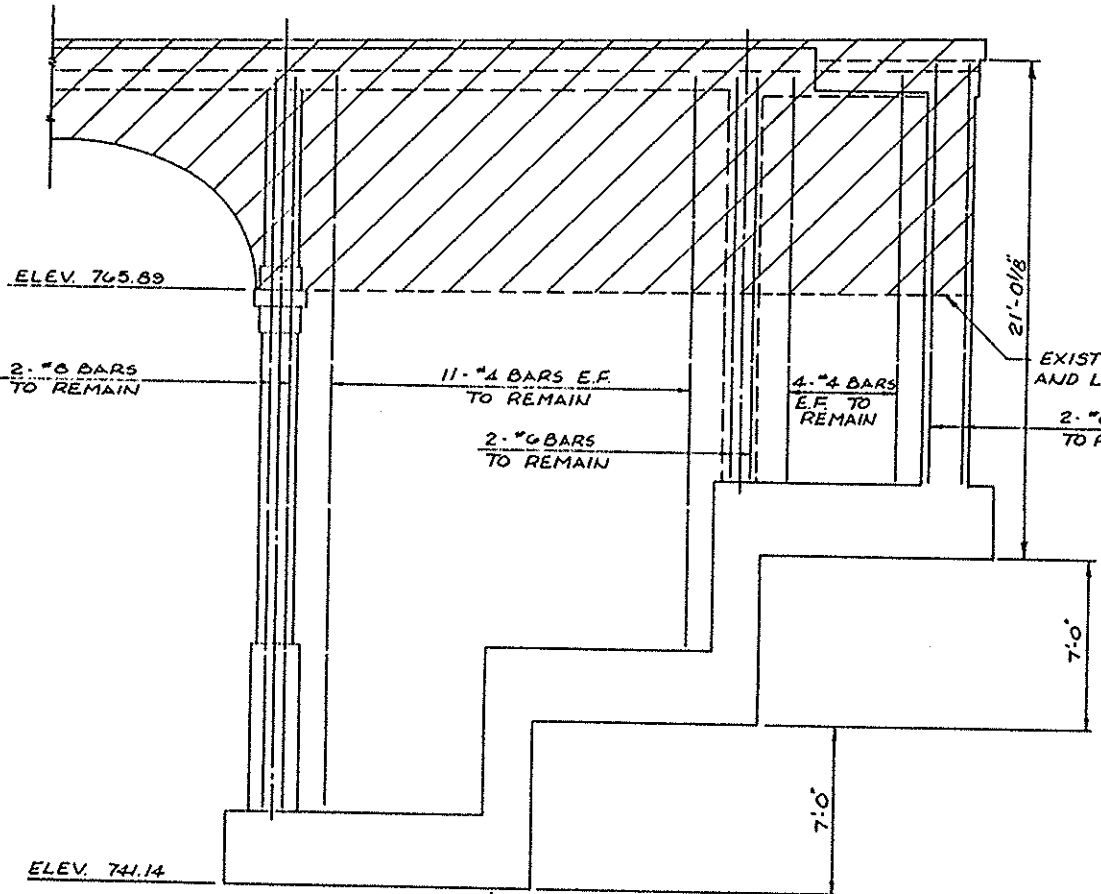
SECTION G-G

NOTES

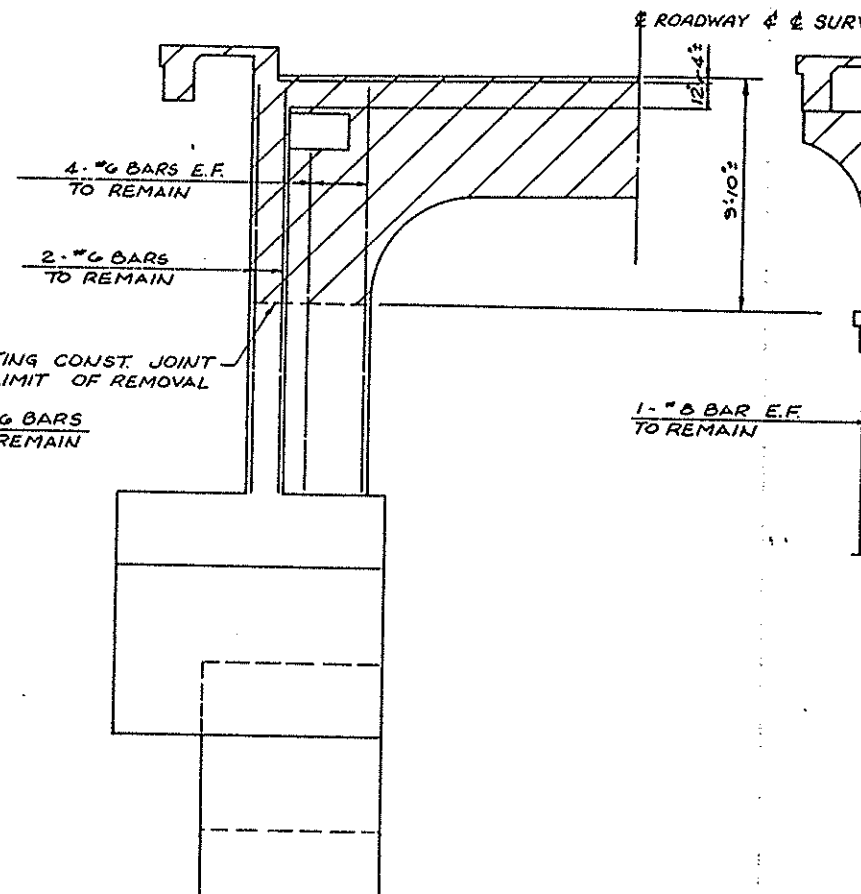
- RIGHT HALF OF BRIDGE SHOWN, LEFT HALF OF BRIDGE SAME BUT OPPOSITE HAND.
- ALL DIMENSIONS SHOWN HAVE BEEN TAKEN FROM AS-BUILT DRAWINGS AND ARE ± DIMENSIONS.
- CONCRETE SHALL BE CAREFULLY REMOVED AROUND ALL BARS DESIGNATED TO REMAIN.



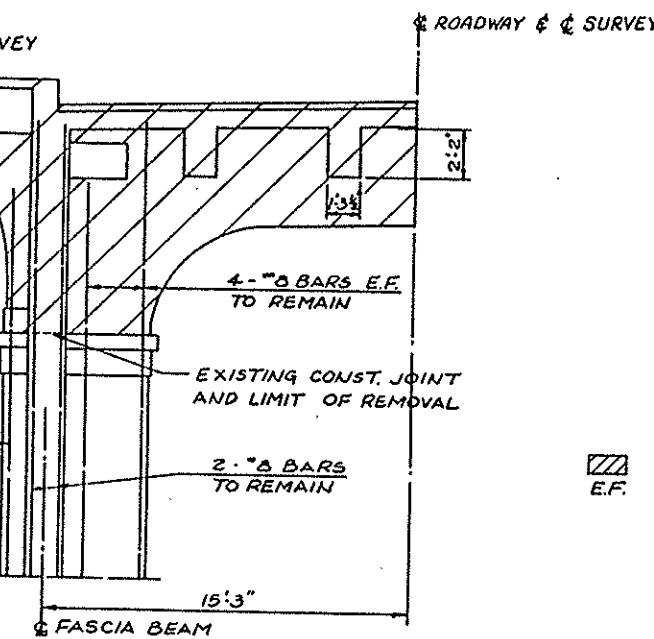
ELEVATION A-A



SECTION B-B



SECTION E-E



SECTION F-F

LEGEND

- INDICATES AREA TO BE REMOVED
- E.F. = EACH FACE

SSN 7706871

McCOY ASSOCIATES INC. 6/1/64
CONSULTING ENGINEERS
AKRON, OHIO

DEMOLITION
EAST ABUTMENT

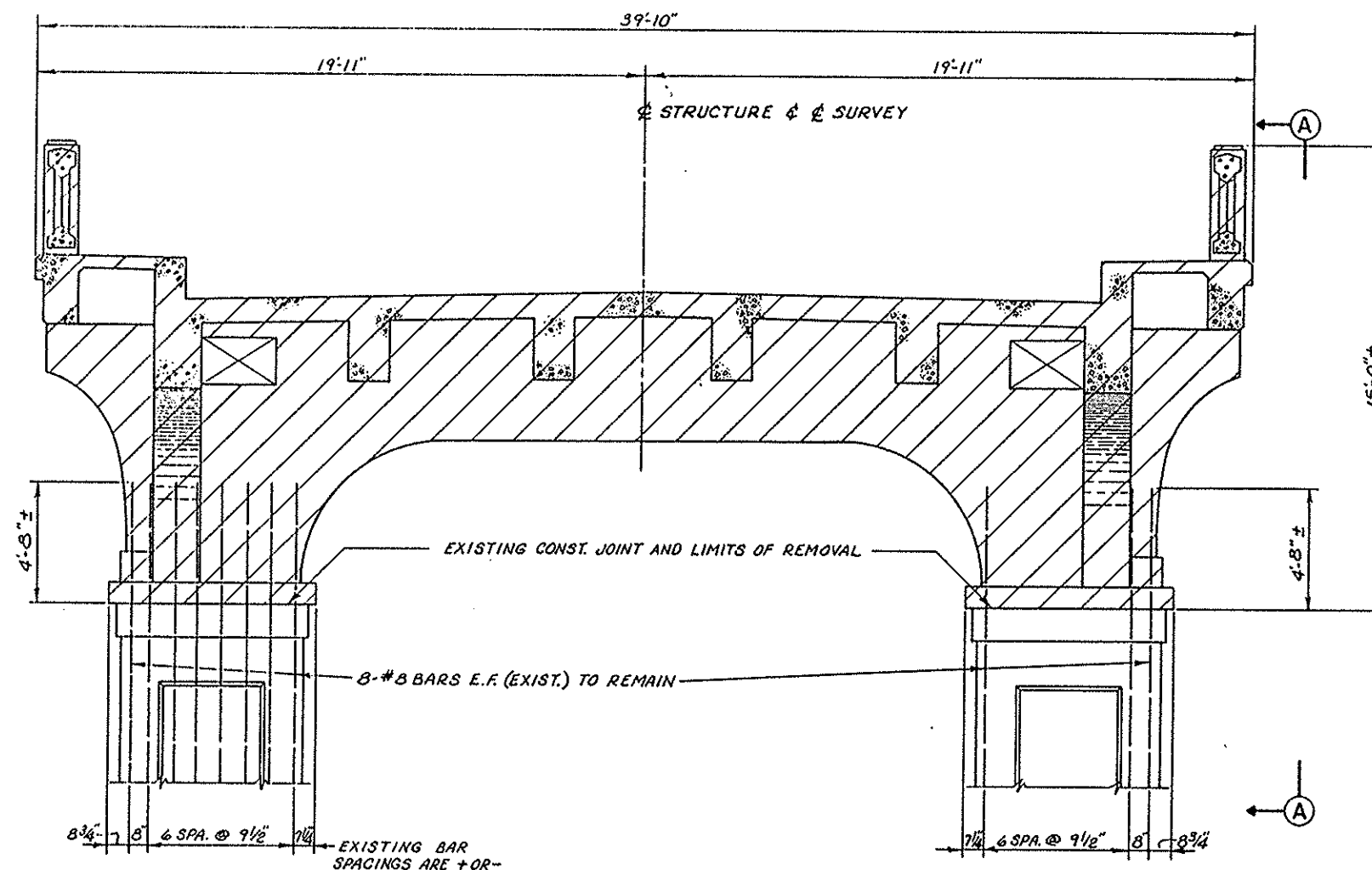
BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	JEK		TAB	MSC	6-4-87	

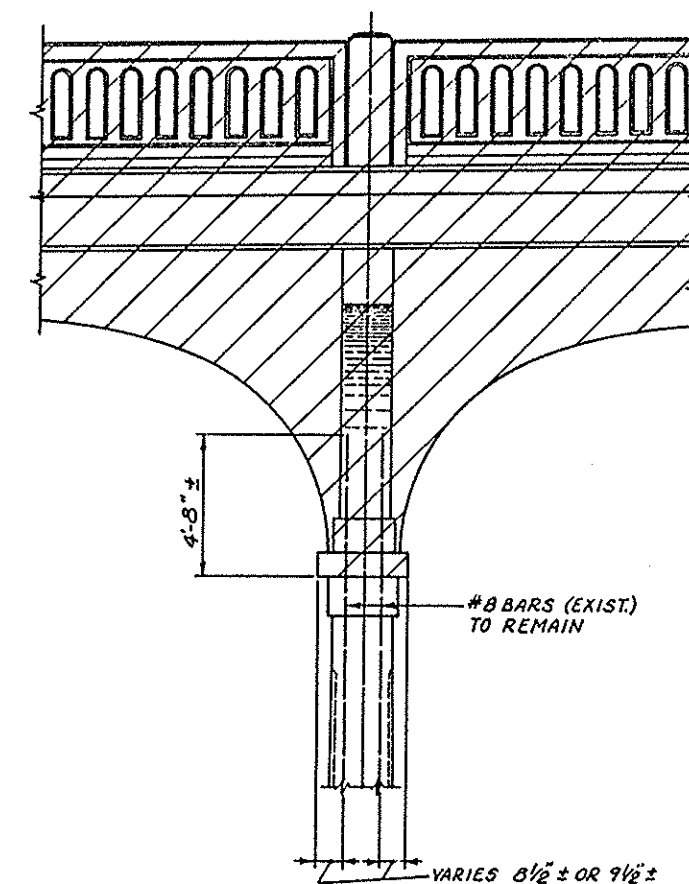
FHWA REGION	STATE	PROJECT
5	OHIO	

79
81

CUY 82-15.64
SUM 82- 0.00



TYPICAL TRANSVERSE SECTION



VIEW A-A

NOTES

- ① ALL DIMENSIONS SHOWN HAVE BEEN TAKEN FROM AS-BUILT DRAWINGS AND ARE ± DIMENSIONS.
- ② CONCRETE SHALL BE CAREFULLY REMOVED AROUND ALL BARS DESIGNATED TO REMAIN.
- ③ THE APPROXIMATE QUANTITY OF CONCRETE TO BE REMOVED INCLUDING ASPHALT SURFACE COURSE IS 3,892 C.Y. THIS QUANTITY HAS BEEN ARRIVED AT USING THE EXISTING STRUCTURE PLANS AND IS GIVEN FOR INFORMATION ONLY AND IS NOT TO BE USED FOR ANY OTHER PURPOSE. IT IS THE CONTRACTORS RESPONSIBILITY TO ARRIVE AT THE REMOVAL QUANTITY TO BE USED TO BASE HIS BID PRICE FOR ITEM 202, PORTIONS OF STRUCTURES REMOVED.

SSN 7706871

LEGEND

▨ - INDICATES AREA TO BE REMOVED
E.F. - EACH FACE

McCOY ASSOCIATES INC. 62/64
CONSULTING ENGINEERS
AKRON, OHIO

**DEMOLITION
SUPERSTRUCTURE**

BRIDGE No. SUM 82-0000
OVER CUYAHOGA RIVER
SUMMIT COUNTY STATE ROUTE 82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBH	B.M.R.		TAB	MSC	6-4-87	