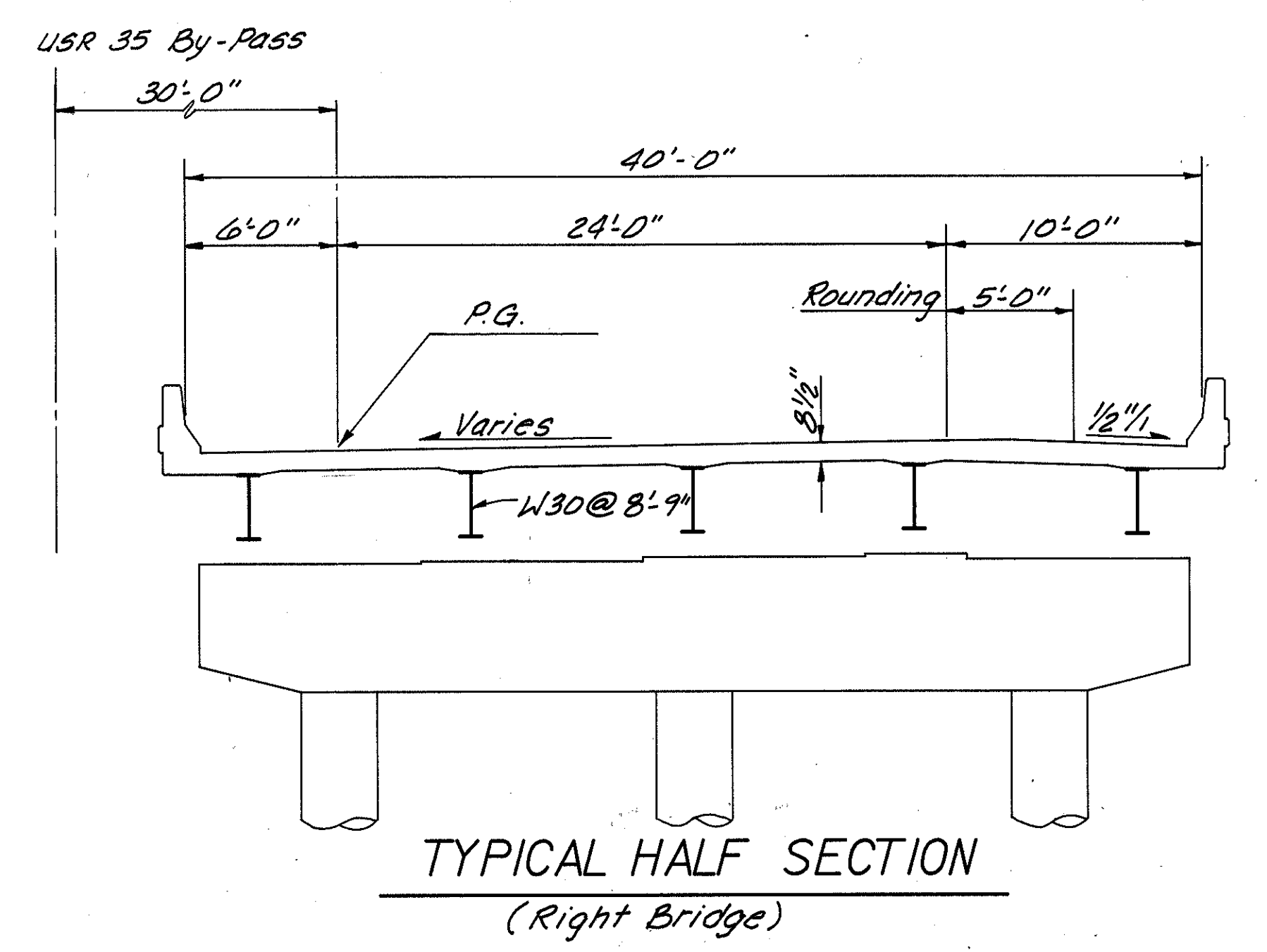
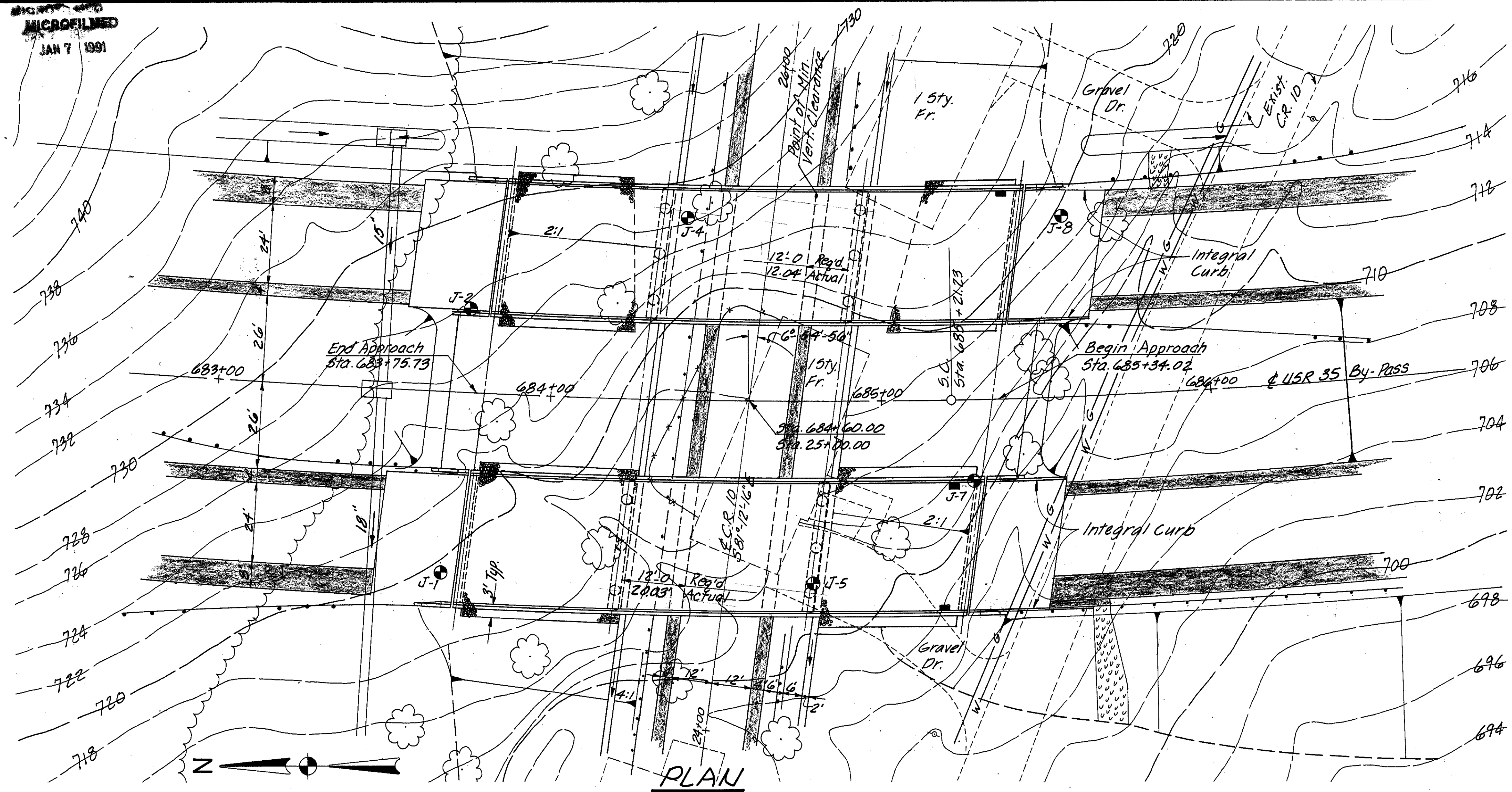


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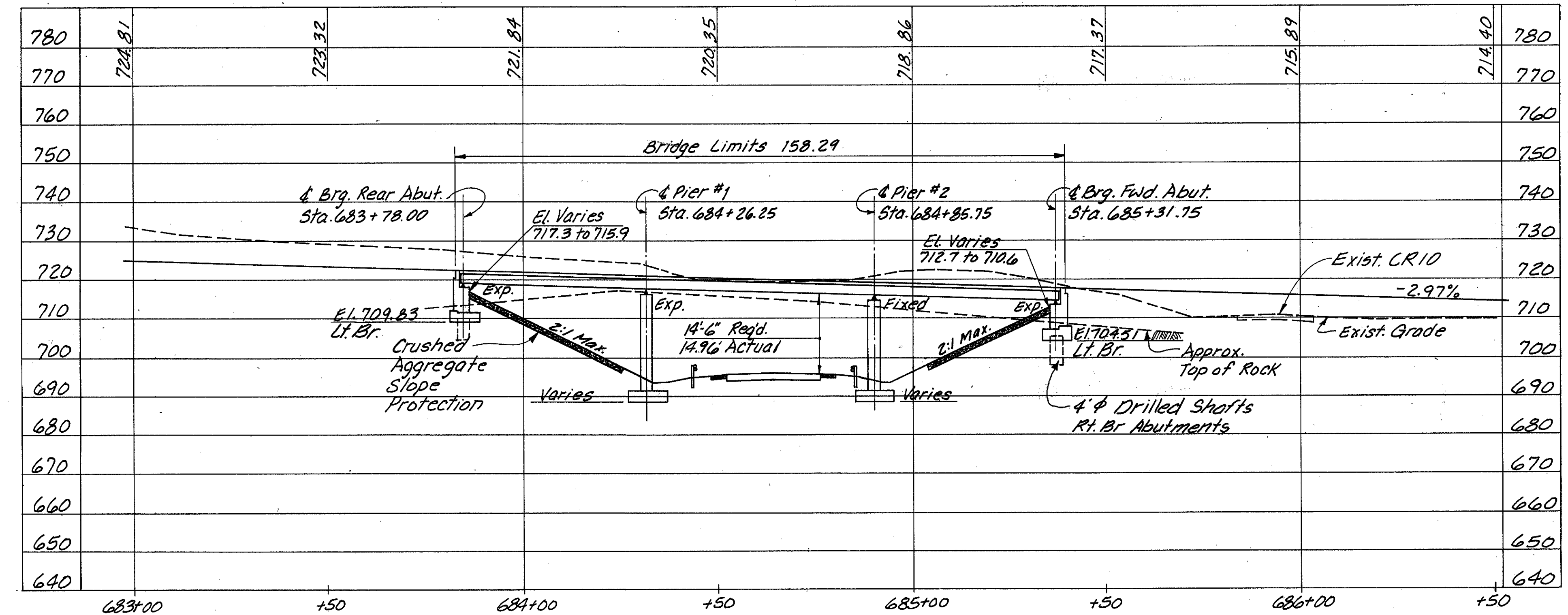
JAC-35-11.46

OHIO
FHWA
REGION 5
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Earthwork Limits shown are
Approximate. Actual Slopes shall
Conform to Plan Cross-sections.

TRAFFIC DATA
Average Daily Traffic
Year 2006 = 8,230
22 % Trucks = 1,820



CURVE DATA

PI. = 690+23.43
Δ = 29° 27' 53"
D = 3° 00' 00"
R = 1909.86'
L = 982.16'
T = 502.20'
E = 64.92'
SC = 685+21.23
CS = 695+03.39
S/E = 0.06

SPIRAL DATA

PI. = 683+88.05
Δ = 6° 00' 00"
D1 = 0° 00' 00"
D2 = 3° 00' 00"
L = 400.00'
T1 = 266.82'
T2 = 133.47'
TS = 681+21.23
SC = 685+21.23

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with Composite Concrete Deck.
SPANS: 48'-3", 59'-6" & 46'-0"
ROADWAY: 2 @ 40' F/F Concrete Parapet.
LOADING: HS20-44 (Case II) and Alternate Military Loading.
SKEW: 6°-54'-46" Left Forward to Chord between Abutments.
ALIGNMENT: Spiral & 3° Curve Lt.
WEARING SURFACE: Monolithic Concrete.
APPROACH SLAB: AS-1-B1 (25' Long)



ARCHITECTS • ENGINEERS • INTERIOR DESIGNERS
111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

SITE PLAN

BRIDGE NO. JAC-35-1297 L/R
OVER COUNTY RD. 10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
WBS	JEB	-	JET	WBS	5/1/86	

AN 7 1991

ESTIMATED QUANTITIES

JAC-35-11.46

OHIO
FHWA
REGION 5

399
442

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE						RIGHT BRIDGE					
				ABUT'S	PIERS	SUPER	GENERAL			ABUT'S	PIERS	SUPER	GENERAL		
503	459	Cu.Yds.	Unclassified Excavation	94						365					
503	302	Cu.Yds.	Rock Excavation	86	108						108				
509	48173	Lbs.	Reinforcing Steel, Grade 60	5353	15614					9963	17243				
511	411	Cu.Yds.	Class 5 Concrete, Superstructure, See Proposal Note			206						205			
511	128	Cu.Yds.	Class C Concrete, Piers above Footings		61						67				
511	229	Cu.Yds.	Class C Concrete, Abutments above Footings	121						108					
511	213	Cu.Yds.	Class C Concrete, Footings	23	54					82	54				
513	201,286	Lbs.	Structural Steel, A588 (AISC Category I)			100,643						100,643			
513	3,630	Each	Welded Stud Shear Connectors			1,815						1,815			
516	41	Lin.Ft.	PVC Waterstops, as Per Plan	21						20					
516	180	Lin.Ft.	Structural Expansion Joint, Including 3" Strip Seal			90						90			
518	91	Cu.Yds.	Porous Backfill	42						49					
518	144	Lin.Ft.	6" Perforated, Helical Corrugated Steel Pipe, 707.01	74						70					
518	100	Lin.Ft.	6" Non-Perforated, Helical Corrugated Steel Pipe, including Specials, 707.01	30						70					
518	3	Each	Scuppers, including Supports			1						2			
601	921	Sq.Yds.	Crushed Aggregate Slope Protection				410						511		
625			See Sheet 292 for Lighting Summary												
824	107,708	Lbs.	Epoxy Coated Reinforcing Steel, Grade 60	5,240		48,628				5,111		48,729			
Special	1,417	Sq.Yds.	Sealing of Concrete Surfaces (Epoxy), See Proposal Note	119	205	369				119	236	369			
Special	44	Lin.Ft.	4' ϕ Drilled Shafts above Bedrock							44					
Special	72	Lin.Ft.	4' ϕ Drilled Shafts in Bedrock							72					

GENERAL NOTES

REFERENCE: SHALL BE MADE TO STANDARD DRAWINGS:
AS-1-81 DATED 11/27/81 SHEETS 1, 2, & 3
BR-1 DATED 5/29/79
FB-1-82 DATED 5/10/82
RB-1-55 REVISED 2/2/59
SD-1-69 DATED 6/12/69 SHEETS 1, 3 & 4
EXJ-2-81 REVISED 4/2/84 SHEETS 1 & 2
ICD-1-82 DATED 8/1/84 SHEET 2
GR-1 DATED 1/11/85
GR-3 DATED 1/21/85
MC-7 DATED 10/15/76
HL-5 DATED 9/6/73
AND TO SUPPLEMENTAL SPECIFICATION:
836 DATED 11/12/85
824 DATED 10/8/82

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

DESIGN LOADING: HS20-44 CASE II AND THE ALTERNATE MILITARY LOADING.

CONCRETE: CLASS S - COMPRESSIVE STRENGTH 4500
CLASS C - COMPRESSIVE STRENGTH 4000

REINFORCING STEEL: ASTM A615, A616 OR A617--GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.
SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615.

STRUCTURAL STEEL: ASTM A588 - YIELD STRENGTH 50,000 P.S.I.

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL, TOP AND BOTTOM MAT.

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

DRILLED SHAFTS CONSTRUCTION CONSTRAINTS: PRIOR TO CONSTRUCTING THE DRILLED SHAFTS AT THE FORWARD ABUTMENT OF THE RIGHT BRIDGE, THE SPILL-THRU SLOPE EMBANKMENT SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE FOR A MINIMUM DISTANCE OF 200 FEET BACK OF THE ABUTMENT. AFTER THE EMBANKMENT IS COMPLETED WITHIN THE ABOVE REQUIRED LIMITS, THE EXCAVATION FOR THE ABUTMENT FOOTING MAY BE MADE AND DRILLED SHAFTS CAN BE CONSTRUCTED.

FOUNDATION BEARING PRESSURE: FOOTINGS, AS DESIGNED, PRODUCE THE FOLLOWING MAXIMUM BEARING PRESSURES.

ABUTMENT LEFT BRIDGE 3.0 TONS PER S.F.
PIERS LEFT AND RIGHT BRIDGE 4.7 TONS PER S.F.

SPREAD FOOTINGS: SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

STRIP SEALS & EXTRUSIONS: FOR EXPANSION JOINT SHALL BE WATSON/BOWMAN/ACME, D.S BROWN, OR APPROVED EQUIVALENT. DRAWINGS OF THE SEALS SHOWING DIMENSIONS, DIMENSIONAL TOLERANCES AND WEIGHT PER FOOT SHALL BE SUBMITTED WITH THE REQUEST FOR DESIGN APPROVAL. SEALS FOR BRIDGE DECK JOINTS SHALL BE FURNISHED IN ONE CONTINUOUS PIECE. SHOP SPLICES SHALL BE MADE BY A VULCANIZED PROCESS.

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

MAINTENANCE OF TRAFFIC: FOR MAINTENANCE OF TRAFFIC AND SEQUENCE OF CONSTRUCTION, SEE ROADWAY GENERAL NOTES.

KZF
INCORPORATED

ARCHITECTS • ENGINEERS • INTERIOR DESIGNERS
111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

ESTIMATED QUANTITIES
& GENERAL NOTES

BRIDGE NO. JAC-35-1297 4/R
OVER COUNTY RD. 10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JET	LEP	—	WBS	MP	5/7/86	

2/22

ITEM SPECIAL - DRILLED SHAFTS

DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING DRILLED SHAFTS OF THE TYPE AND SIZE CALLED FOR BY THE PLANS. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND APPURTENANCES REQUIRED TO COMPLETE THE WORK AS SPECIFIED. THE LENGTH(S) OF THE DRILLED SHAFTS SHOWN IN THESE PLANS HAS BEEN ESTIMATED FROM THE AVAILABLE SUBSURFACE INFORMATION. THE CONTRACTOR IS EXPECTED TO FURNISH THE PROPOSED DRILLED SHAFTS AS PER THESE PLAN REQUIREMENTS WITH THE UNDERSTANDING THAT THE ESTIMATED LENGTH SHOWN ON THE PLANS MAY BE DIFFERENT FROM THE ACTUAL LENGTH DETERMINED TO BE NECESSARY AT THE TIME OF CONSTRUCTING THE DRILLED SHAFTS.

THE LIMITS OF EACH DRILLED SHAFT SHALL BE DEFINED AT THE TOP BY THE PLAN ELEVATION AND AT THE BOTTOM BY THE ELEVATION OF THE BOTTOM OF THE BEDROCK SOCKET.

A CASING MAY BE NECESSARY FOR EACH ABUTMENT DRILLED SHAFT. ABUTMENT DRILLED SHAFT CASINGS MAY BE REMOVED PROVIDED ALL PLAN REQUIREMENTS ARE SATISFIED.

CONTRACTOR QUALIFICATION

THE CONTRACTOR SHALL SUBMIT INFORMATION TO DOCUMENT THAT HIS PERSONNEL ARE EXPERIENCED IN THE CONSTRUCTION OF DRILLED SHAFTS OF THE TYPE AND SIZE DESCRIBED BY THE PLANS. THIS INFORMATION SHALL BE SUBMITTED AT THE PRECONSTRUCTION CONFERENCE.

DEVIATION FROM PLAN

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS INVOLVED WHEN MAKING CORRECTIONS TO HIS UNAUTHORIZED DEVIATIONS FROM THE PLANS. THE DIRECTOR SHALL DECIDE WHEN CORRECTIONS ARE NECESSARY.

IF A DRILLED SHAFT(S) IS CONSTRUCTED OUTSIDE OF THE PLAN TOLERANCES, THE CONTRACTOR MAY BE SUBJECT TO REDUCED PAYMENT AS DETERMINED BY THE DIRECTOR.

CASING

THE CASINGS SHALL BE MADE OF STEEL AND SHALL BE WATER TIGHT AND SHALL BE OF AMPLE STRENGTH TO WITHSTAND HANDLING STRESSES AND EXTERNAL SUBSURFACE PRESSURES. THE CASINGS SHALL BE SEATED INTO THE BEDROCK, THUS ATTEMPTING TO SEAL OFF INCOMING WATER, AND THE CASING LENGTH SHALL BE AS NECESSARY TO CONSTRUCT EACH DRILLED SHAFT.

THE DIAMETER OF THE FURNISHED CASING(S) SHALL BE LARGE ENOUGH TO ALLOW THE CONSTRUCTION OF A BEDROCK SOCKET WHICH HAS A DIAMETER THAT IS EQUAL TO OR GREATER THAN THE PLAN DIAMETER.

EXCAVATION

EXCAVATION FOR THE DRILLED SHAFTS SHALL BE PERFORMED BY ROTARY DRILLING METHODS USING PRACTICAL METHODS AND MACHINERY ACCEPTABLE TO THE ENGINEER. WHEN OBJECTS SUCH AS LARGE BOULDERS ARE ENCOUNTERED, THEY SHALL BE REMOVED. BLASTING METHODS MAY BE USED ONLY AFTER RECEIVING PERMISSION FROM THE ENGINEER AND WHEN USED SHALL BE SO CONDUCTED AS TO AVOID DISTURBANCE OF THE BEDROCK FORMATION BELOW AND OUTSIDE THE LIMITS OF THE PROPOSED DRILLED SHAFT EXCAVATIONS. THE CONTRACTOR SHALL CARRY LIABILITY INSURANCE AND SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS GOVERNING THE USE OF EXPLOSIVES. THE DRILLED SHAFTS SHALL PENETRATE INTO SOLID BEDROCK TO A DEPTH THAT PROVIDES A BEDROCK SOCKET LENGTH THAT IS NOT LESS THAN THE BEDROCK SOCKET LENGTH SHOWN IN THE PLANS. WHEN A CASING IS USED, THE BEDROCK SOCKET SHALL BE MEASURED FROM THE BOTTOM OF THE CASING TO THE BOTTOM OF THE DRILLED BEDROCK EXCAVATION. WHEN THE ENGINEER IS ASSURED THAT A PORTION OF THE METAL CASING IS EMBEDDED IN SOLID BEDROCK, THE EMBEDDED DISTANCE MAY BE INCLUDED AS PART OF THE BEDROCK SOCKET UPON THE DIRECTOR'S CONCURRENCE.

DEWATERING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING ANY INCOMING WATER TO THE EXTENT THAT THE SHAFT EXCAVATION IS MAINTAINED DRY ENOUGH FOR PERFORMANCE OF THE REQUIRED INSPECTION OPERATION. THE PREFERRED METHOD OF CONSTRUCTION IS TO PLACE THE CONCRETE IN A CLEAN DRY EXCAVATION. THE CONTRACTOR IS EXPECTED TO MAKE A REASONABLE ATTEMPT TO SEAL WATER OUT OF THE DRILLED SHAFT EXCAVATION.

BOTTOM CLEANOUT

THE BOTTOM OF THE DRILLED SHAFT EXCAVATION SHALL BE AS CLEAN AS PRACTICABLE (NO MORE THAN ONE QUARTER INCH OF LOOSE MATERIAL ON THE BOTTOM) PRIOR TO CONCRETE PLACEMENT. DRILLING SPOILS THAT ADHERE TO THE VERTICAL SIDES OF THE BEDROCK SOCKET ARE TO BE REMOVED.

APPROVAL BEFORE CONCRETE PLACEMENT

THE CONTRACTOR SHALL SUBMIT TO THE PROJECT ENGINEER A WRITTEN REPORT OF STEPS AND PROCEDURES THAT HE PROPOSES TO FOLLOW WHEN PLACING AND MONITORING THE CONCRETE PLACEMENT. CONCRETE SHALL NOT BE PLACED IN ANY DRILLED SHAFT EXCAVATION WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE DRILLED SHAFT EXCAVATION SHALL BE INSPECTED IMMEDIATELY BEFORE THE CONCRETE IS PLACED. A LIGHT POWERFUL ENOUGH TO THOROUGHLY INSPECT THE SIDES, BOTTOM AND REINFORCING STEEL CAGE OF THE DRILLED SHAFT IS REQUIRED. NO CONCRETE SHALL BE PLACED DURING INCLEMENT WEATHER CONDITIONS WHICH PROHIBIT A THOROUGH INSPECTION.

CONCRETE PLACEMENT

THE CONCRETE FOR THE DRILLED SHAFTS SHALL BE PLACED AS PER 511 EXCEPT AS MODIFIED BY THE PLANS. THE CONCRETE PLACEMENT OPERATION SHOULD BE CONTINUOUS FROM START TO FINISH. THE CONCRETE FOR THE BEDROCK SOCKET SHALL BE PLACED AGAINST THE INSITU BEDROCK AND SHALL BE PLACED PROMPTLY AFTER THE FINAL INSPECTION OF THE SHAFT. IF PRACTICABLE, THE CONCRETE SHALL BE PLACED IN A CLEAN DRY EXCAVATION. CARE SHALL BE TAKEN TO ENSURE THAT CONCRETE IS NOT BEING PLACED IN MOVING WATER. THE CONCRETE CAN BE PLACED IN A DRY DRILLED SHAFT EXCAVATION BY THE FREE FALL METHOD PROVIDED THE CONCRETE FALLS TO ITS FINAL POSITION THROUGH AIR WITHOUT STRIKING THE SIDES OF THE HOLE, THE REINFORCING STEEL CAGE, OR ANY OTHER OBSTRUCTION. THE FREE FALL METHOD ALLOWS THE CONCRETE TO BE DROPPED FROM THE TOP THROUGH A CENTERING CHUTE TO THE CONCRETE'S FINAL POSITION.

IF THE ENGINEER DETERMINES THAT DEWATERING IS NOT PRACTICABLE, THE CONTRACTOR WILL BE GIVEN PERMISSION TO PLACE THE CONCRETE UNDER WATER. TO PLACE CONCRETE UNDER WATER, THE DRILLED SHAFT EXCAVATION SHALL BE FILLED WITH WATER TO SUCH A DEPTH THAT ALL WATER MOTION HAS CEASED. THE CONCRETE SHALL THEN BE PLACED BY MEANS OF A CONCRETE PUMP. THE CONCRETE PUMP PIPE SHALL HAVE A DIAMETER THAT IS NOT LESS THAN 4 INCHES. THE CONCRETE PUMP EQUIPMENT SHALL BE SO ARRANGED THAT NO VIBRATIONS RESULT WHICH MIGHT DAMAGE FRESHLY PLACED CONCRETE. PIPES CARRYING CONCRETE FROM THE PUMP TO THE SHAFT SHOULD BE LAID OUT WITH A MINIMUM NUMBER OF BENDS. THE PIPE USED TO CONVEY THE CONCRETE TO THE BOTTOM OF THE DRILLED SHAFT EXCAVATION SHALL BE ANCHORED TO THE STEEL CASING TO PREVENT THE PIPE FROM UNDULATING DURING THE INITIAL PLACEMENT OF THE CONCRETE.

THE PUMPING EQUIPMENT SHALL BE SUITABLE IN KIND AND ADEQUATE IN CAPACITY FOR THE WORK REQUIRED. THE USE OF ALUMINUM PIPE AS A CONVEYANCE FOR THE CONCRETE WILL NOT BE PERMITTED. AN ADEQUATE QUANTITY OF GROUT MORTAR OR CONCRETE WITH COARSE AGGREGATE OMITTED SHALL BE PUMPED THROUGH THE EQUIPMENT AHEAD OF THE SPECIFICATION CONCRETE TO PROVIDE LUBRICATION TO THE PUMPING SYSTEM. THE CONCRETE USED FOR LUBRICATION SHALL NOT BE PLACED IN THE SHAFT. THE LUBRICATION PROCESS WILL NOT BE REPEATED AS LONG AS THE PUMPING OPERATIONS ARE CONTINUOUS. THE OPERATION OF THE PUMP SHALL BE SUCH THAT A CONTINUOUS STREAM OF CONCRETE WITHOUT AIR POCKETS IS PRODUCED. IN ORDER TO PREVENT THE CONTAMINATION OF THE CONCRETE PLACED INITIALLY AT THE BOTTOM OF SHAFT, THE OUTLET END OF THE THE PUMPING PIPE SHALL BE SEALED WITH A DIAPHRAGM OR PLUG THAT IS FLUSHED OUT WHEN THE HYDROSTATIC PRESSURE FROM THE COLUMN OF CONCRETE EXCEEDS THAT OF THE WATER IN THE SHAFT. THE INITIAL RATE OF CONCRETE PLACEMENT MUST BE CAREFULLY CONTROLLED SO AS NOT TO LIFT OR DISPLACE THE CAGE OF REINFORCING STEEL. THE CONVEYING SYSTEM SHALL BE WATER TIGHT AND THE OUTLET END SHALL ALWAYS REMAIN WELL BELOW THE TOP OF THE FRESHLY PLACED CONCRETE. THE PREFERRED CONCRETE PLACEMENT PROCEDURE IS TO MAINTAIN THE OUTLET END OF THE PUMPING SYSTEM AT APPROXIMATELY 2 FEET BELOW THE TOP OF THE FRESH CONCRETE. WHEN THE CONCRETE REACHES THE TOP OF THE DRILLED SHAFT COLUMN ALL LAITANCE SHALL BE REMOVED.

ALTERNATE CONSTRUCTION METHODS

THE CONTRACTOR MAY PROPOSE ALTERNATE CONSTRUCTION METHODS WHICH WILL BE APPROVED OR REJECTED BY THE DIRECTOR.

TOLERANCES

THE TOP CENTER OF THE ABUTMENT DRILLED SHAFTS SHALL BE LOCATED WITHIN A 3 INCH RADIUS OF THE POSITION INDICATED BY THE PLANS. THE ABUTMENT VERTICAL DRILLED SHAFTS ARE TO BE INSTALLED WITHIN 2.0 PERCENT OF PLUMB FOR THE TOTAL LENGTH OF THE DRILLED SHAFTS.

CONCRETE

CONCRETE FOR ALL DRILLED SHAFTS SHALL BE CLASS S CONCRETE AND SHALL BE IN ACCORDANCE WITH 511, EXCEPT AS MODIFIED AND SUPPLEMENTED HEREIN. THE REQUIRED SLUMP IS SIX (6) INCHES, PLUS OR MINUS ONE-HALF INCH. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.50. IF CONCRETE IS PLACED UNDER WATER, THE REQUIREMENT OF ADDING 10 PERCENT MORE CEMENT TO THE CONCRETE MIX SHALL BE WAIVED. THE TOP 5 FEET OF CONCRETE IN THE DRILLED SHAFTS ARE REQUIRED TO BE VIBRATED. ONLY A MINIMAL VIBRATORY EFFORT IS NECESSARY. SPECIAL CARE SHALL BE TAKEN NOT TO OVER-VIBRATE THE DRILLED SHAFT CONCRETE.

IF THE CASINGS FOR THE DRILLED SHAFTS ARE TO BE WITHDRAWN, THE CONCRETE SHALL NOT BE VIBRATED UNTIL THE CASING IS COMPLETELY RE-AND THE SHAFT TOP IS FORMED TO THE PLAN CROSS-SECTION. THE CONTRACTOR SHALL FURNISH A PRECONSTRUCTED TOP FORM FOR USE IN ACCURATELY CONFINING THE CONCRETE AT THE TOP OF THE DRILLED SHAFT WHEN THE CASING IS REMOVED.

REINFORCING STEEL

REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF 509. THE REINFORCING STEEL SHALL BE GRADE 60. THE REINFORCING STEEL MAY BE COMPLETELY ASSEMBLED PRIOR TO PLACEMENT AND THE LENGTH SHALL BE AS NECESSARY TO CONSTRUCT EACH DRILLED SHAFT. SEE PLAN SHEETS FOR DETAILS OF REINFORCING STEEL. VERTICAL BAR LENGTHS AS IN THE REINFORCING STEEL LIST HAVE BEEN ESTIMATED.

INSPECTION

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SUITABLE MEANS FOR ACCESS AND SAFE DESCENT INTO ALL DRILLED SHAFT EXCAVATIONS THAT ARE PROTECTED BY A CASING AND HAVE A DIAMETER THAT IS LARGE ENOUGH TO ALLOW A PERSON TO SAFELY ENTER AND PERFORM THE REQUIRED INSPECTION. ACCESS CAN BE PROVIDED BY A POSITIVE FORWARD AND REVERSE HYDRAULIC WINCH OR A POWER-UP AND POWER-DOWN HOIST ON A CRANE. THE METHOD CHOSEN FOR ENTERING AND LEAVING THE SHAFT SHALL BE CONVENIENT, SAFE AND NOT UNCOMFORTABLE FOR THE USER. THE CONTRACTOR SHALL ALSO PROVIDE PROTECTIVE CLOTHING FOR USE BY THOSE MAKING AN INSPECTION OF THE SHAFT.

AN INSPECTION RECORD CHART HAS BEEN INCLUDED WITH THE PLANS ON SHEET 4 OF 22 AND SHALL BE COMPLETED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT NEEDED TO OBTAIN THE MEASUREMENTS FOR COMPLETING THE CHART AND THE CONTRACTOR SHALL ASSIST THE ENGINEER IN OBTAINING THESE MEASUREMENTS. MEASUREMENTS SHALL BE OBTAINED PRIOR TO PLACING CONCRETE. WHEN THE INSPECTION RECORD CHART IS COMPLETED, THE PROJECT ENGINEER SHALL SUBMIT A COPY TO THE BUREAU OF BRIDGES. ATTENTION: FOUNDATION ENGINEER.

THE ENGINEER SHOULD OBTAIN PHOTOGRAPHS OF THE CONTRACTOR'S CONSTRUCTION PROCEDURES.

SAFETY PROVISIONS

THE CONTRACTOR SHALL HAVE AT THE JOB SITE ALL EQUIPMENT AND MATERIALS NEEDED TO PROVIDE SAFE CONSTRUCTION AND INSPECTION OF THE DRILLED SHAFTS AS REQUIRED BY CITY, STATE AND FEDERAL SAFETY REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE CONTINUOUS SURVEILLANCE OF ALL PERSONS IN THE ABUTMENT DRILLED SHAFT EXCAVATION. AT ALL TIMES WHEN A PERSON IS IN THE DRILLED SHAFT EXCAVATION, PROVISION SHALL BE MADE FOR PUMPING FRESH AIR TO SAID PERSON. ALL LIGHTING SHALL BE WITH ELECTRIC LIGHTS. MECHANICAL EQUIPMENT USED INSIDE THE SHAFT SHALL BE OPERATED BY AIR OR ELECTRICITY. THE USE OF GASOLINE ENGINES OR OTHER TYPES OF EQUIPMENT PRODUCING FUMES THAT MAY ENTER THE EXCAVATION WILL NOT BE PERMITTED. THE CONTRACTOR SHALL PROVIDE GAS DETECTION AND OXYGEN ANALYZERS, AND SHALL TEST THE DRILLED SHAFT EXCAVATION ATMOSPHERE QUALITATIVELY THROUGHOUT THE COLUMN'S ENTIRE LENGTH AND ASSURE THAT THE QUANTITIES OF GASES AND OXYGEN PRESENT ARE IN SAFE AMOUNT AND SAFE PROPORTIONS PRIOR TO PERMITTING ANY PERSON TO ENTER THE SHAFT.

METHOD OF MEASUREMENT

THE TOTAL LENGTH OF EACH DRILLED SHAFT TO BE PAID FOR SHALL BE THE COMPLETED AND ACCEPTED LENGTH, MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE BOTTOM OF THE BEDROCK SOCKET TO THE PROPOSED TOP ELEVATION, AS PER PLAN. THE REINFORCING STEEL THAT PROJECTS FROM THE DRILLED SHAFT INTO THE ABUTMENT FOOTING AS SPECIFIED BY THE PLANS IS INCLUDED WITH THE DRILLED SHAFT FOR PAYMENT BUT SHALL NOT BE INCLUDED IN THE MEASURED LENGTH OF THE DRILLED SHAFT.

THE TOTAL LENGTH OF EACH DRILLED SHAFT SHALL BE DIVIDED INTO TWO SEGMENTS. THE LENGTH OF THE LOWER SEGMENT IS THE LENGTH OF THE BEDROCK SOCKET AND THE LENGTH OF THE UPPER SEGMENT IS THE LENGTH OF THE DRILLED SHAFT ABOVE THE BEDROCK SOCKET.

BASIS OF PAYMENT

PAYMENT FOR FURNISHING AND INSTALLING DRILLED SHAFTS WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF ACCEPTED SHAFTS AS PER ITEM SPECIAL- DRILLED SHAFTS ABOVE THE BEDROCK SOCKET AND ITEM SPECIAL- DRILLED SHAFTS IN BEDROCK, WHICH SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE ITEM AS SPECIFIED.

DESIGN PARAMETERS

THE CALCULATED DESIGN LOADING FOR AN ABUTMENT DRILLED SHAFT IS 72 TONS. THE ALLOWABLE DESIGN END BEARING PRESSURE IS 30 TONS PER SQUARE FOOT.

FHWA REGION	STATE	PROJECT	
5	OHIO		

400
442

JACKSON COUNTY
JAC-35 -11.46

STATE OF OHIO		3/22	
DEPARTMENT OF TRANSPORTATION BUREAU OF BRIDGES AND STRUCTURAL DESIGN			
DRILLED SHAFT NOTES			
BRIDGE NO. JAC-35 -1297 L/R OVER COUNTY RD. 10			
JACKSON COUNTY			
DESIGNED	DRAWN	TRACED	CHECKED
WBS	REF	CKT	RLE
REVIEWED		DATE	REVISED
2-10 -86			

INSPECTION RECORD FOR DRILLED SHAFTS

401
442

PROJECT NO. _____

GENERAL CONTRACTOR _____

DRILLING CONTRACTOR _____

PROJECT ENGINEER _____

TYPE & MODEL OF DRILLING MACHINERY -----

MAX. CONTINUOUS TORQUE _____ FT.-LB.

CROWD (MAX. CONTINUOUS DOWNWARD FORCE) _____ LBS.

TYPE OF CONCRETE PUMP -----

HOSE DIAMETER _____ INCHES

CAPACITY _____ CU. FT./MIN.

COST PER LINEAL FOOT _____

ABOVE THE BEDROCK SOCKET _____

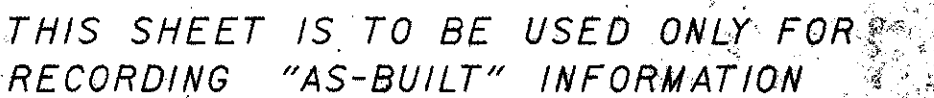
IN BEDROCK SOCKET. _____

TYPE OF ROCK _____

PROJECT ENGINEER COMMENTS

LOCATION AND EXTENT OF CAVITIES

COMMENTS ON WATER CONDITION (I.E. FLOW, VOLUME, HYDROSTATIC HEAD, WHERE
ENCOUNTERED, ETC.)



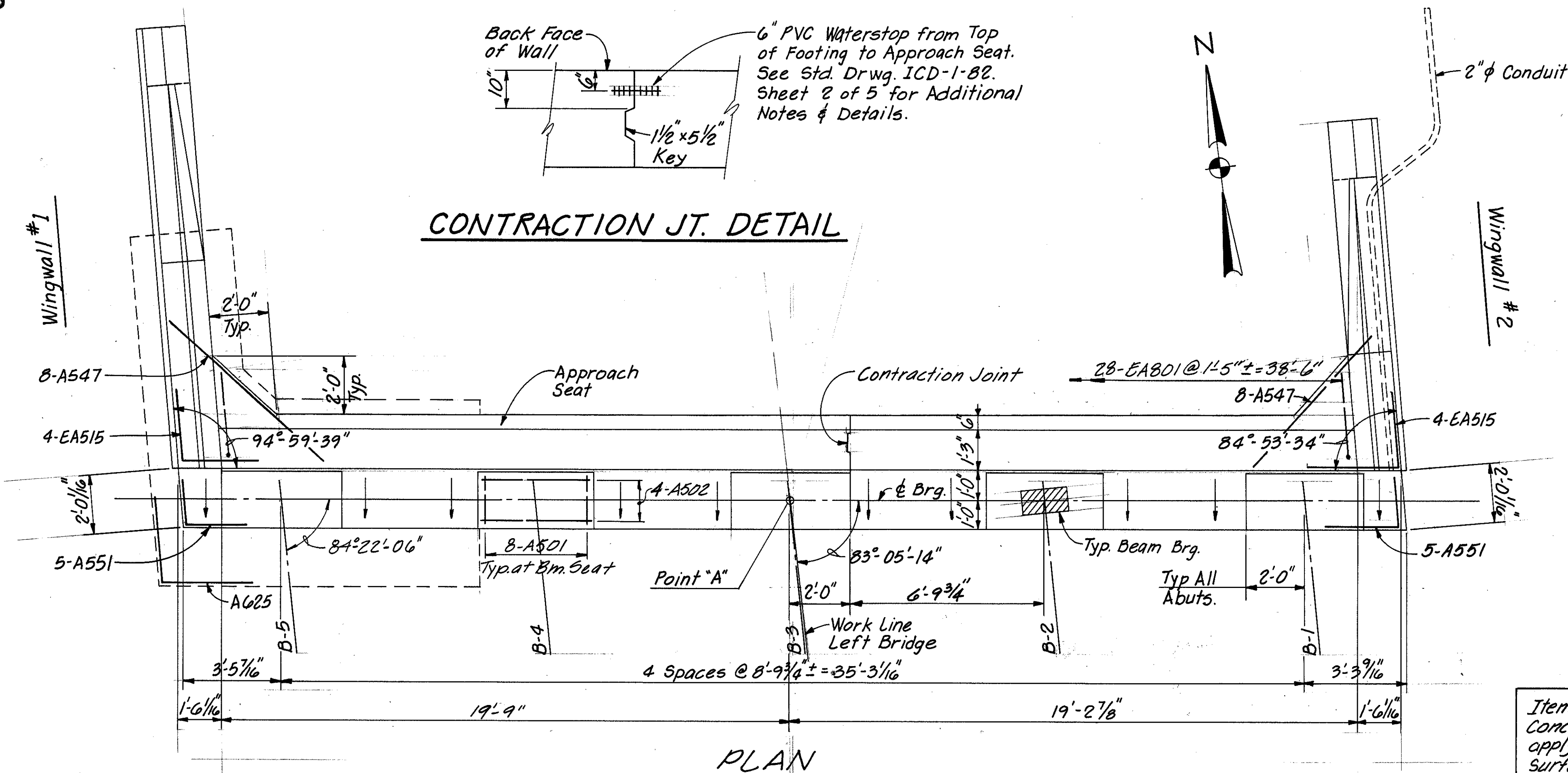
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

DRILLED SHAFTS
INSPECTION RECORD

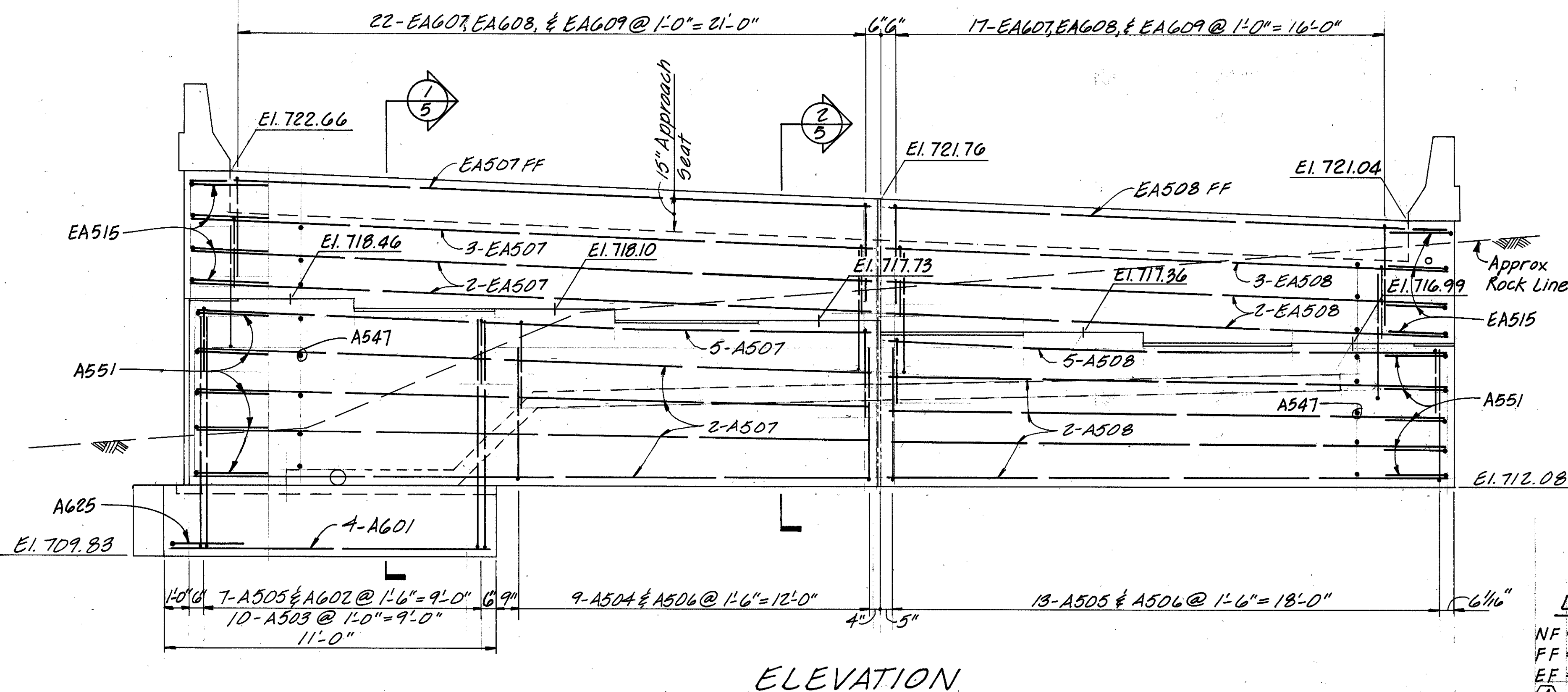
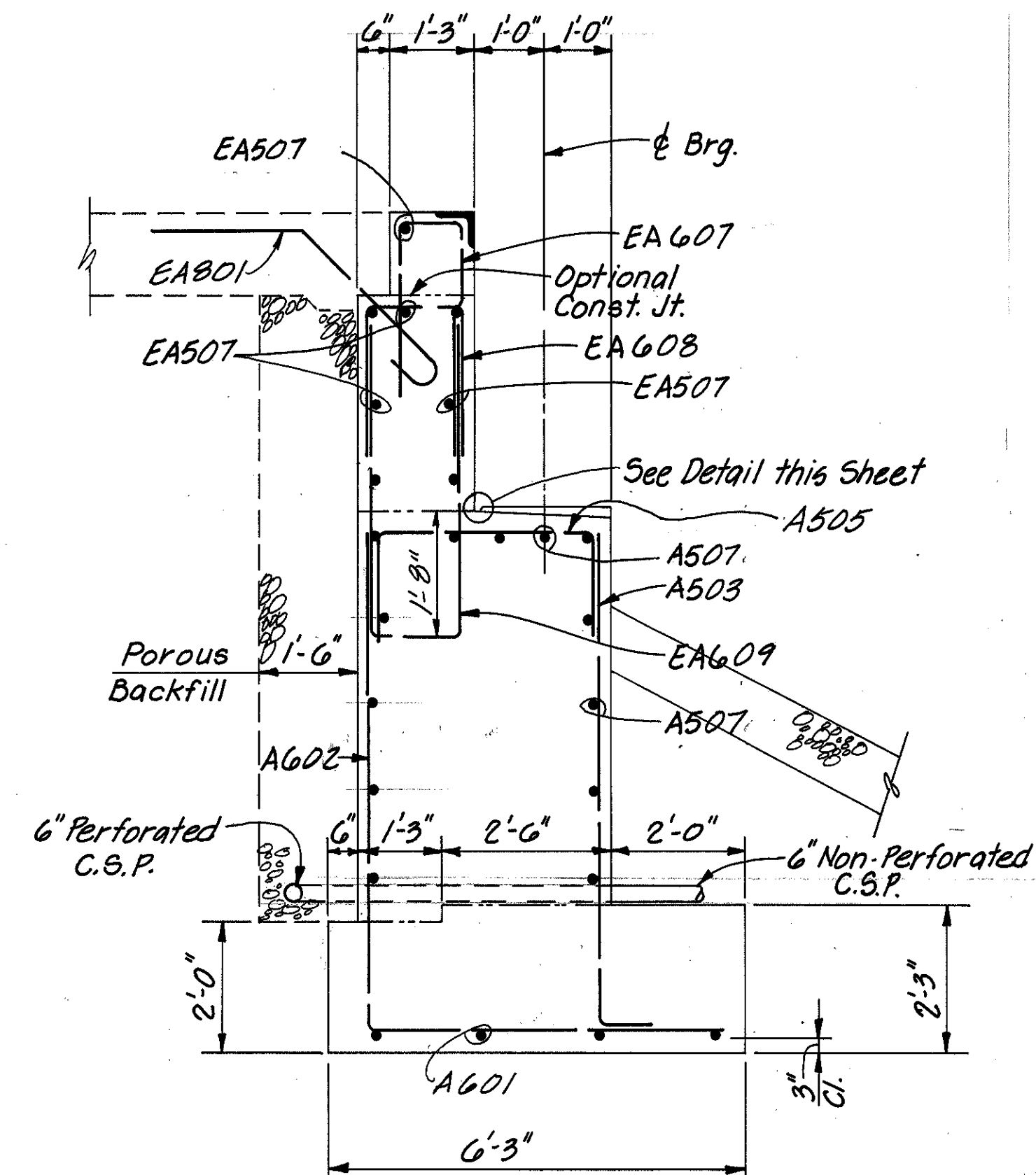
BRIDGE NO. JAC-35 -1297 L/R
OVER
COUNTY RD. 10

JACKSON COUNTY

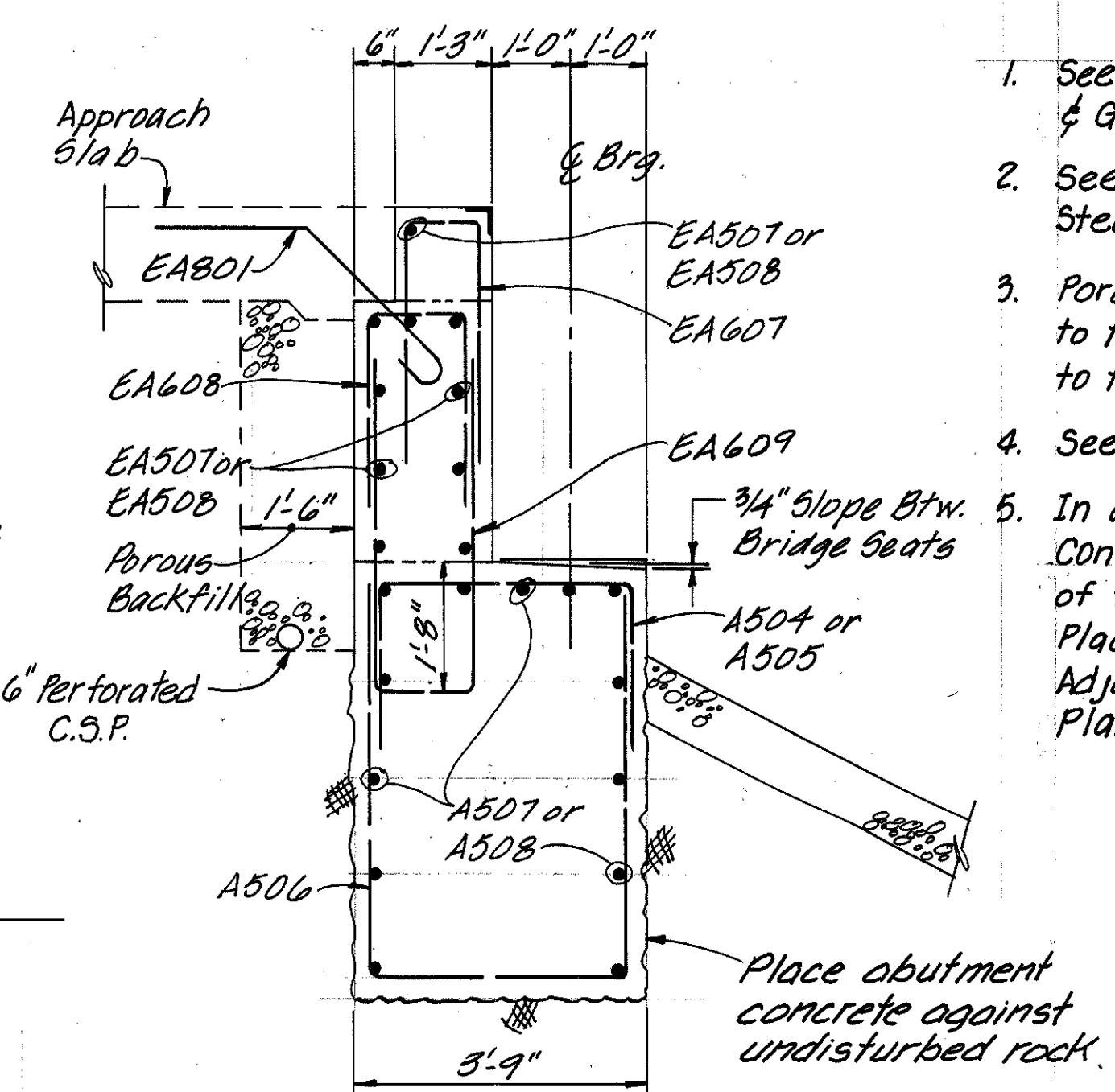
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE
WBS	REF		CKT	RLE	2-10-86	



DETAIL AT BEAM SEAT



Item Special "Sealing of Concrete Surfaces" shall apply to all exposed surfaces of Abutments



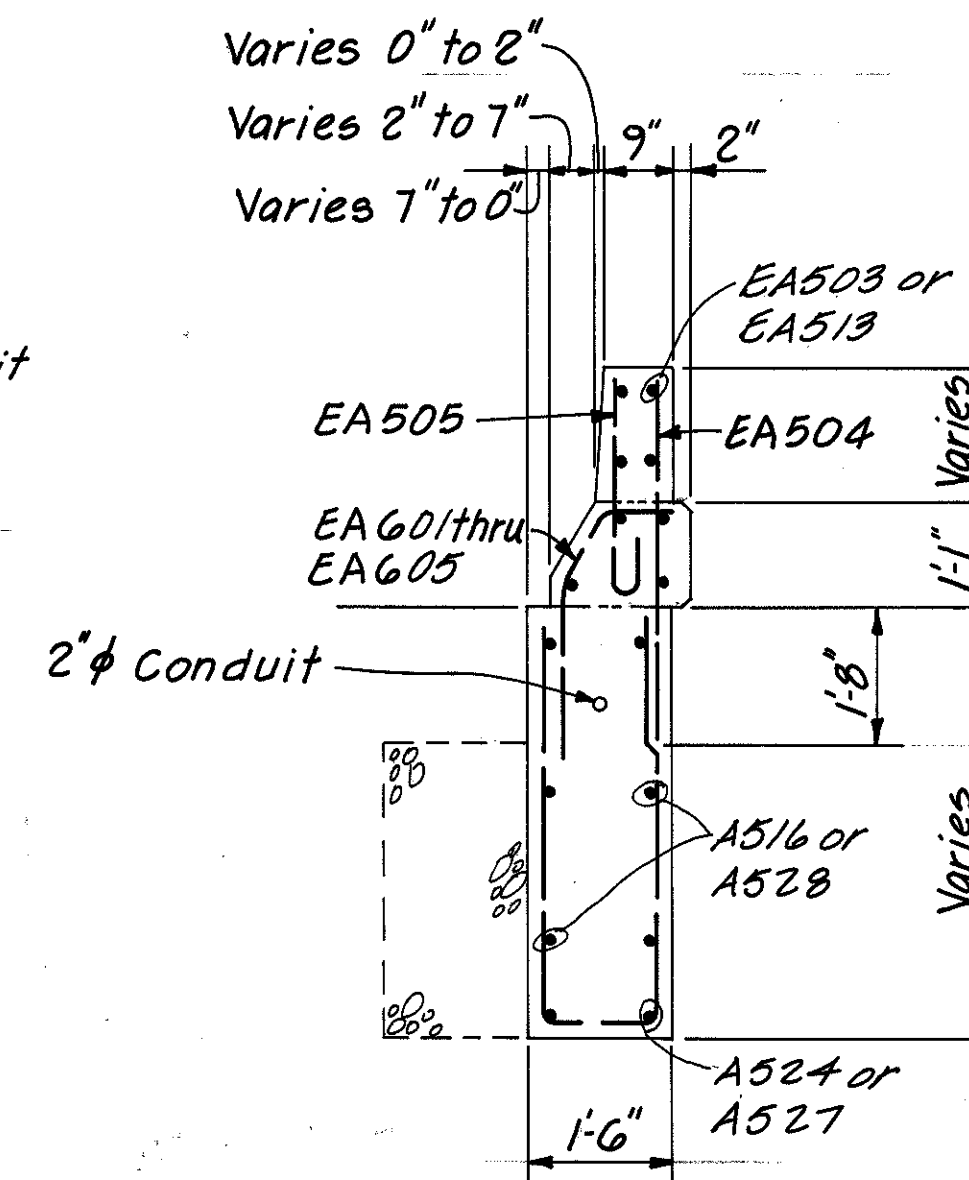
LEGEND
NF = Near Face
FF = Far Face
EE = Each Face
(4) = Drilled Shaft No.

- SECTION 1**
- See Sheet 2/22 for Estimated Quantities & General Notes.
 - See Sheets 19/22 & 20/22 for Reinforcing Steel Details.
 - Porous Backfill, 1.5ft. Thick, shall Extend up to the Plane of the Subgrade & Laterally to the Ends of the Wingwalls.
 - See Sheet 15/22 for Layout Diagram.
 - In addition to the Provisions of 511.08, Backwall Conc. above the optional Construction Joint of the Approach Slab Seat shall not be placed until after the Deck Conc. in the Span Adjacent to the Abutment has been placed.

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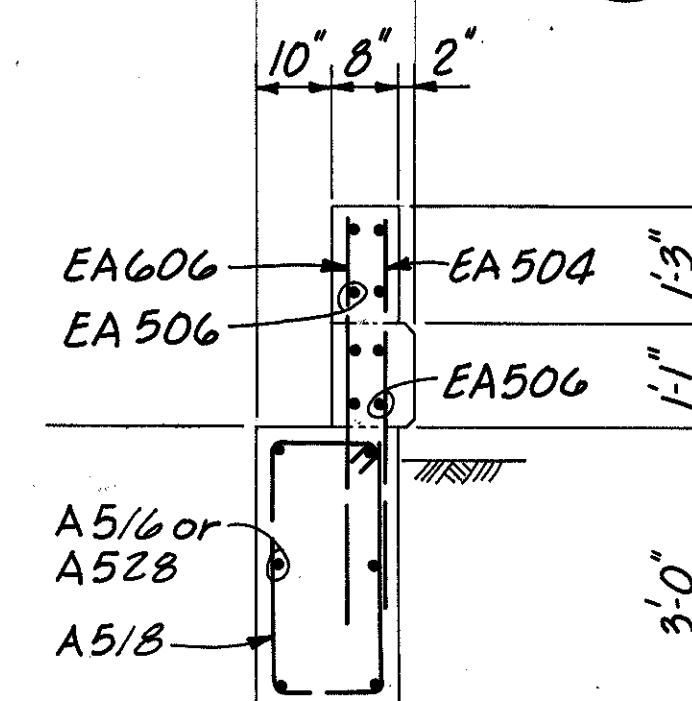
REAR ABUTMENT LEFT BRIDGE
BRIDGE NO. JAC-35-1297 4/R
OVER COUNTY RD. 10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	MHW	—	WBS	JET	5/7/84	

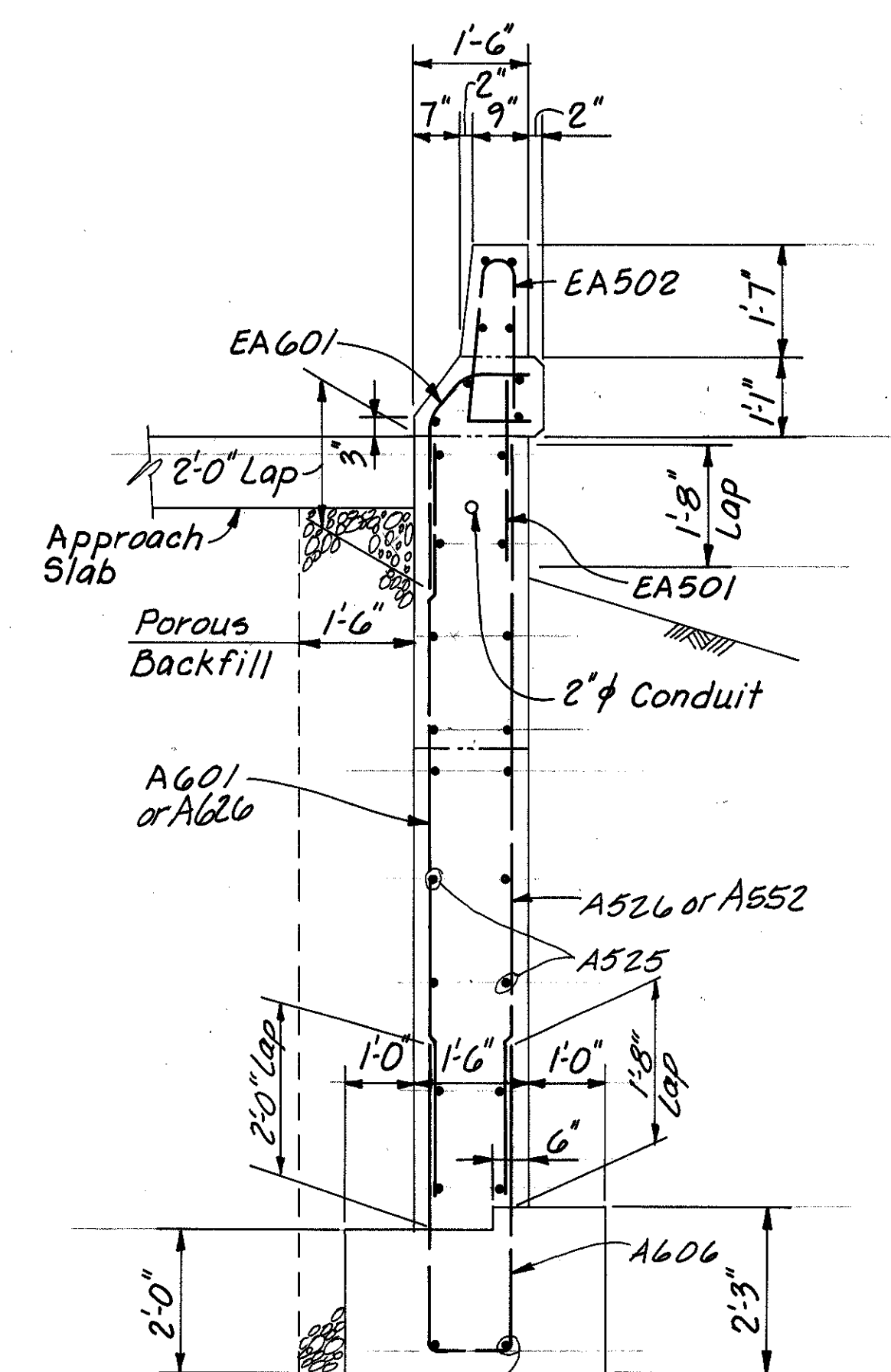


SECTION 11

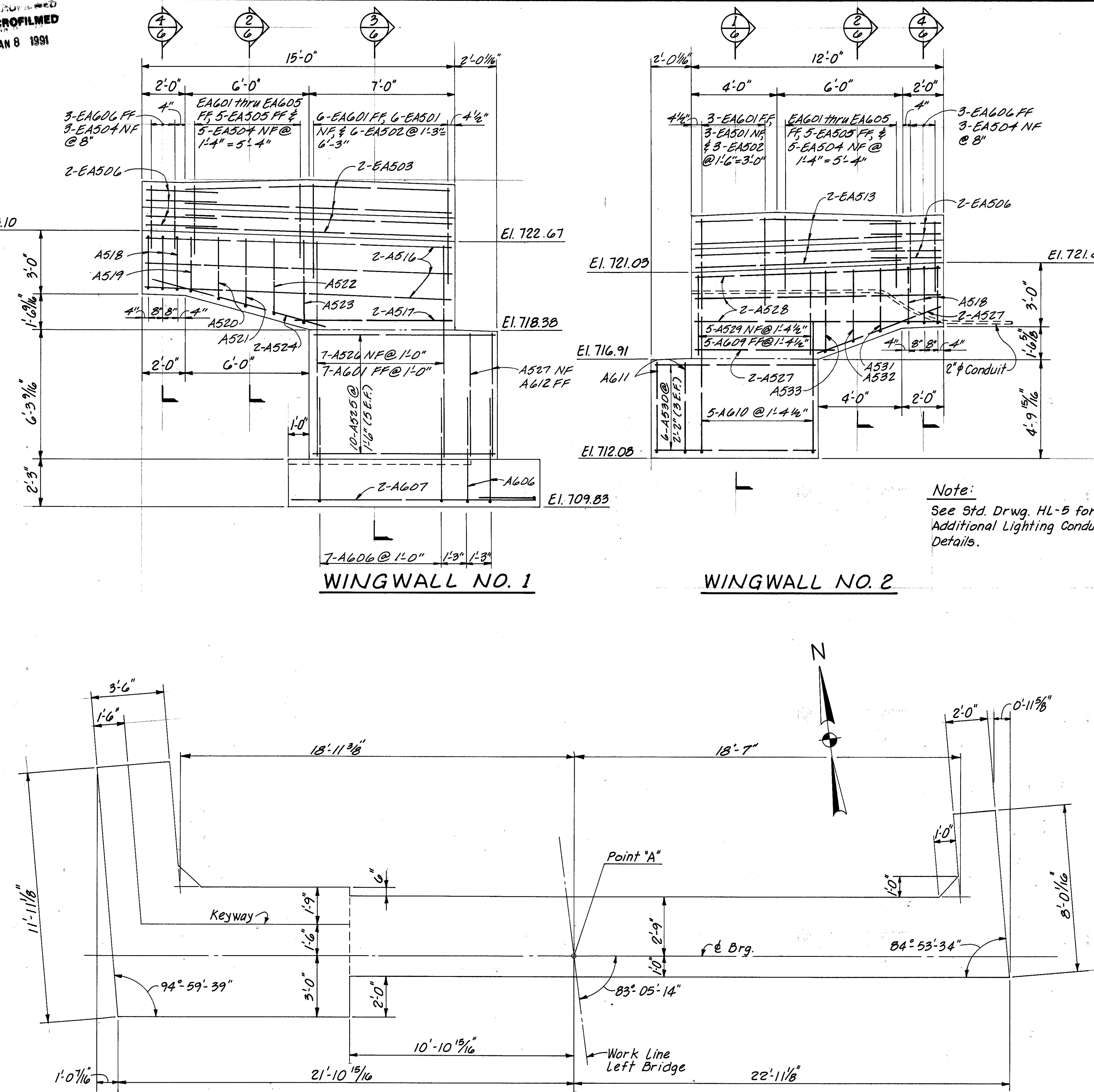
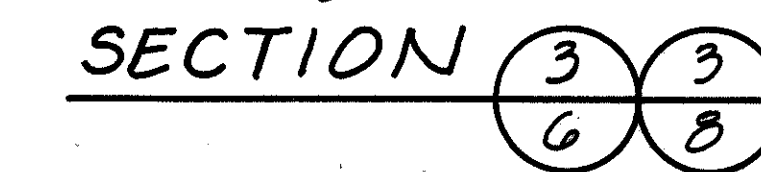
SECTION 26



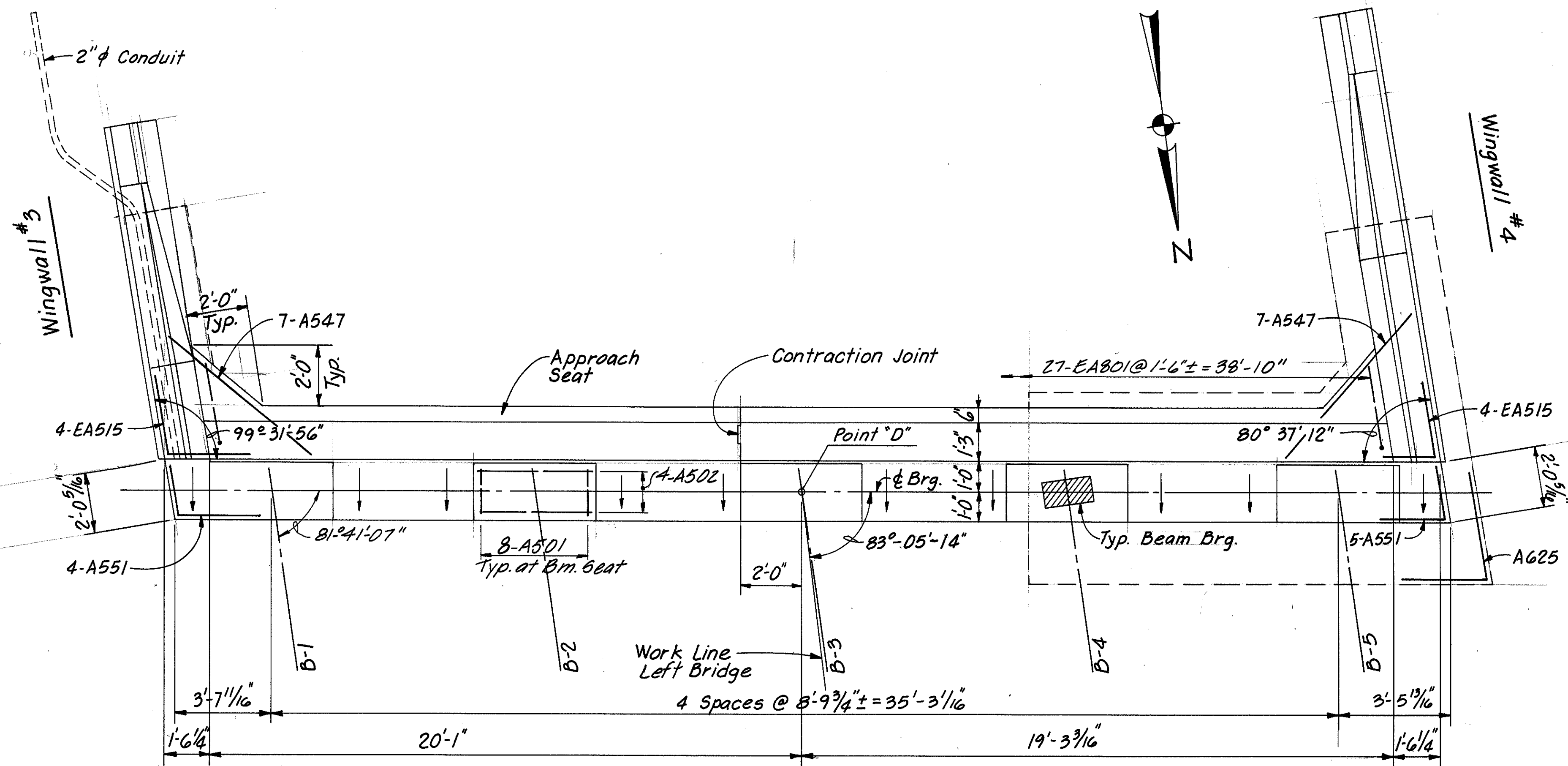
SECTION 4
6



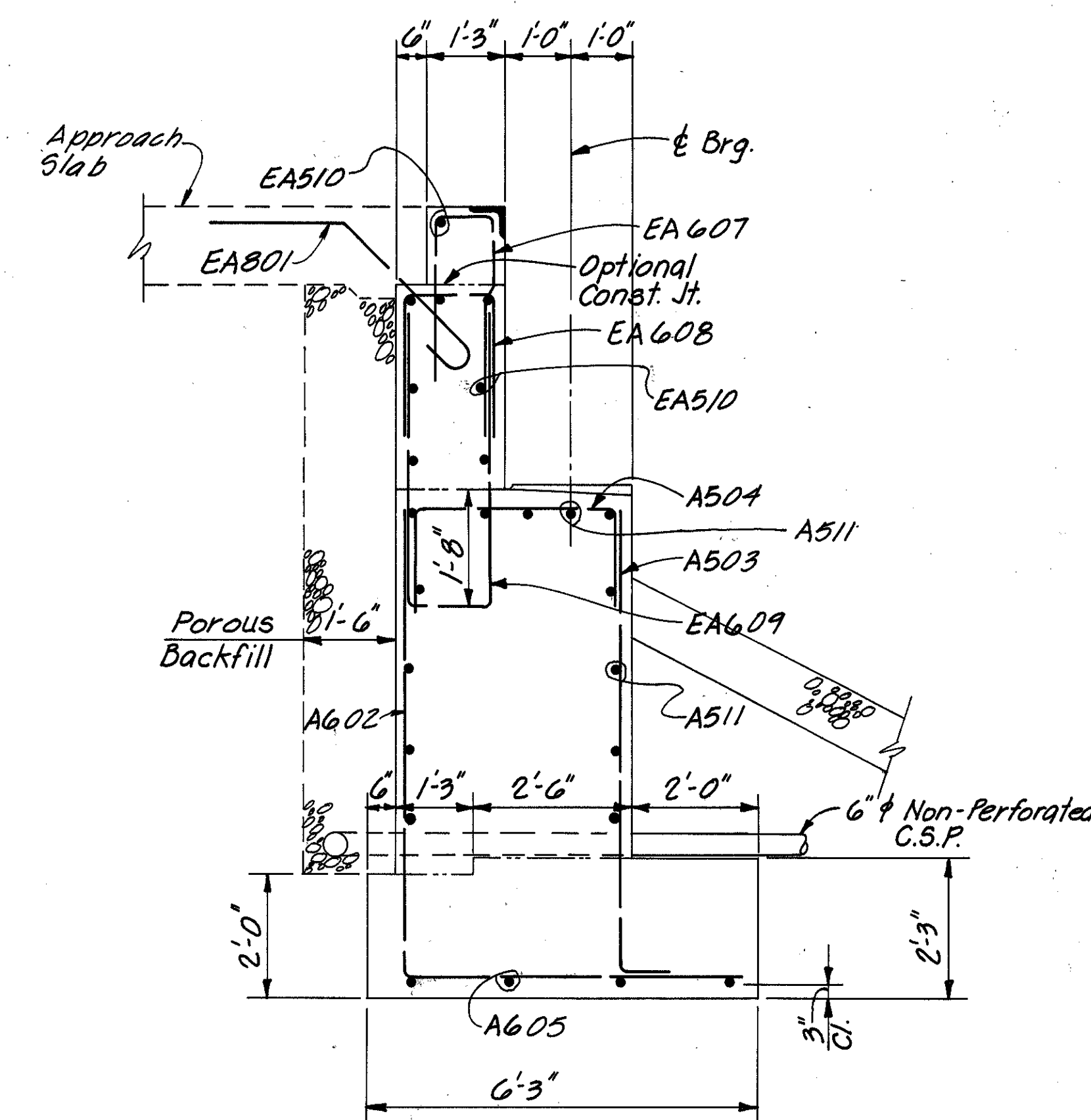
See Std. Drwg. BR-1 for additional details.



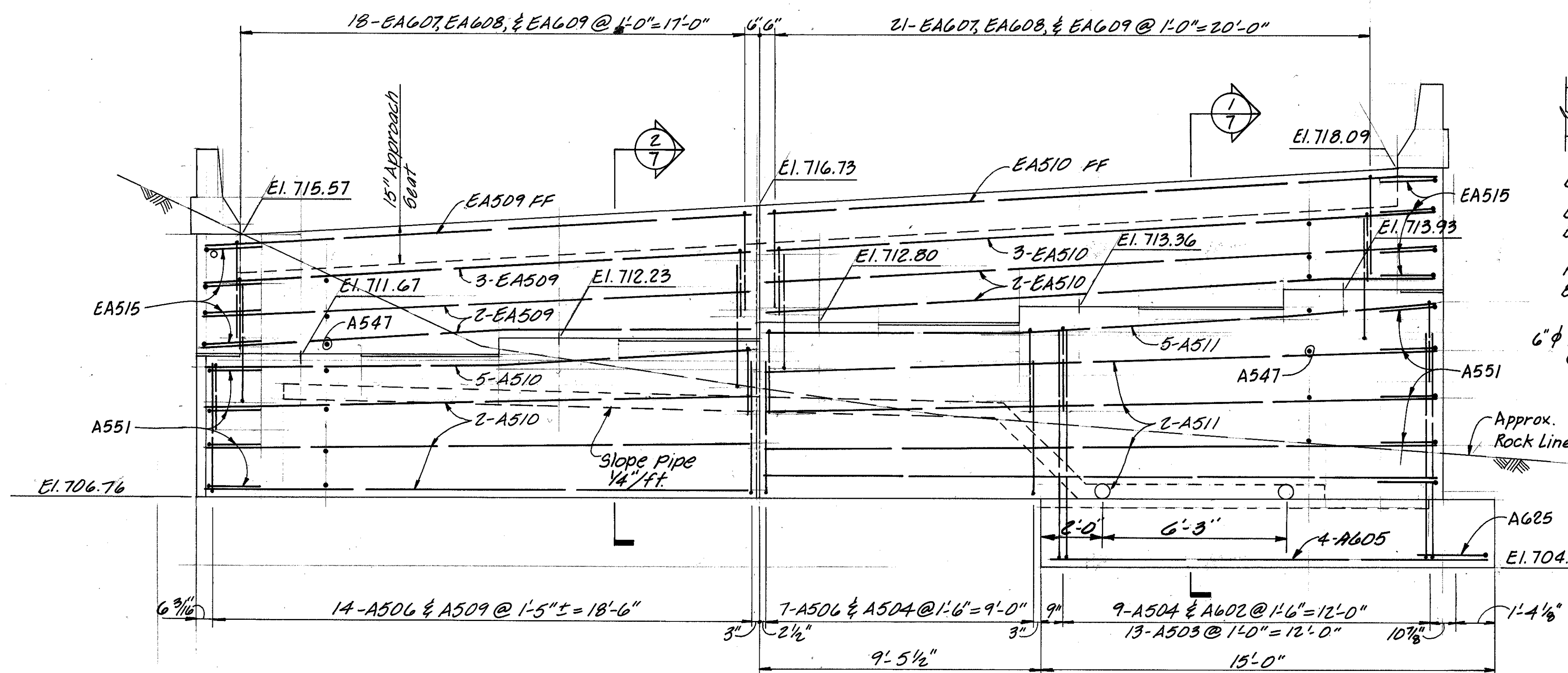
FOOTING PLAN



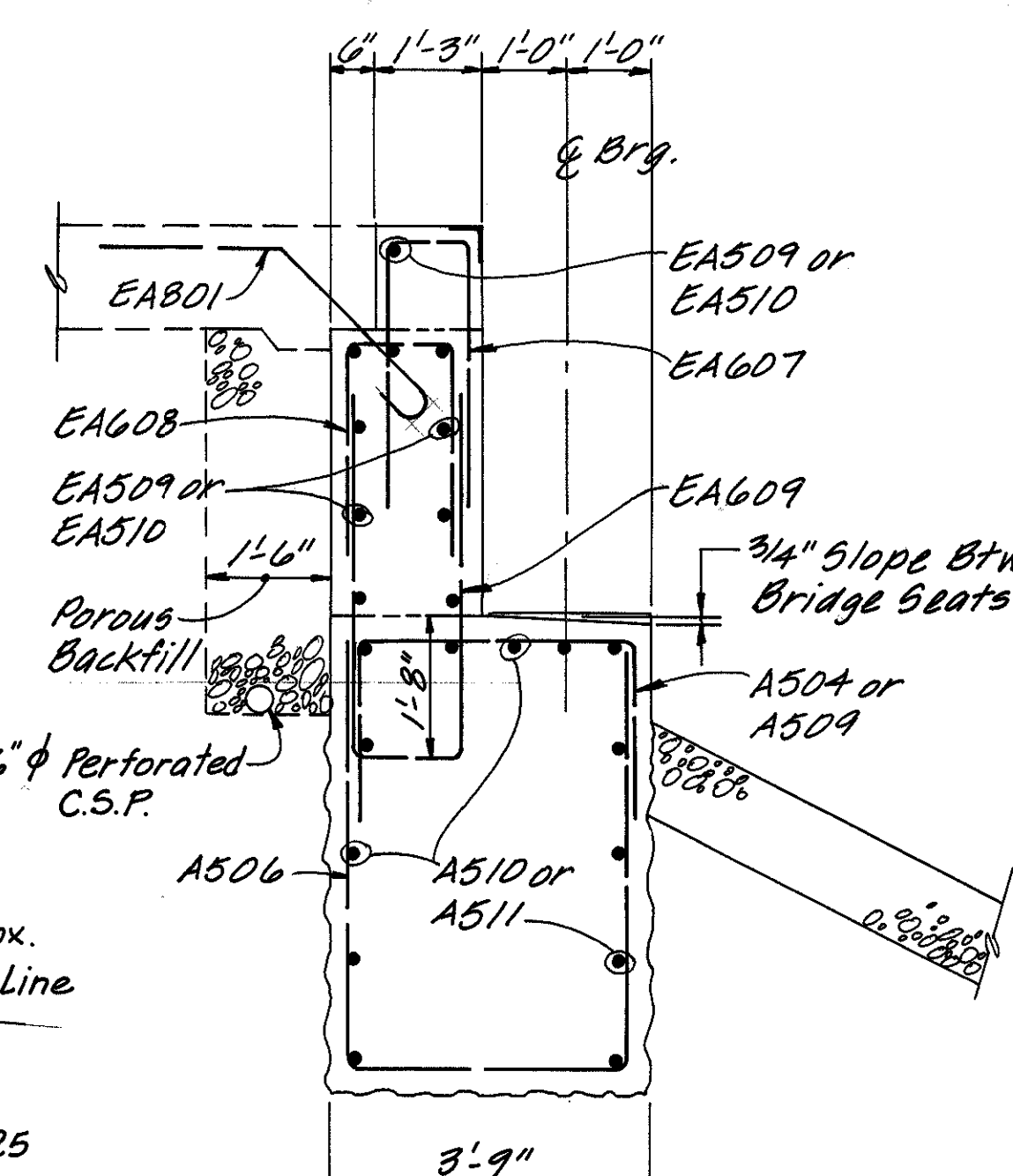
PLAN



SECTION 1

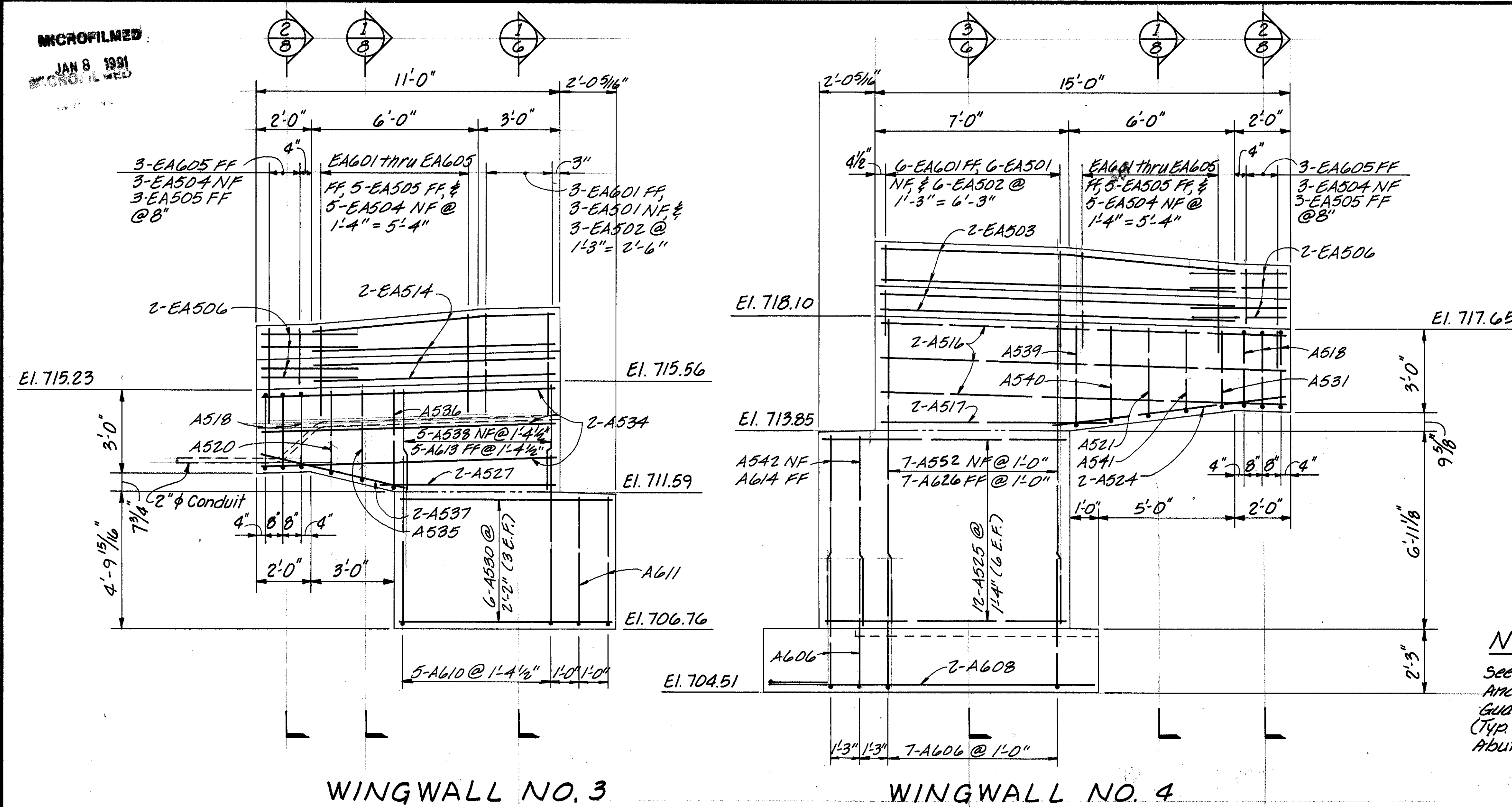


ELEVATION



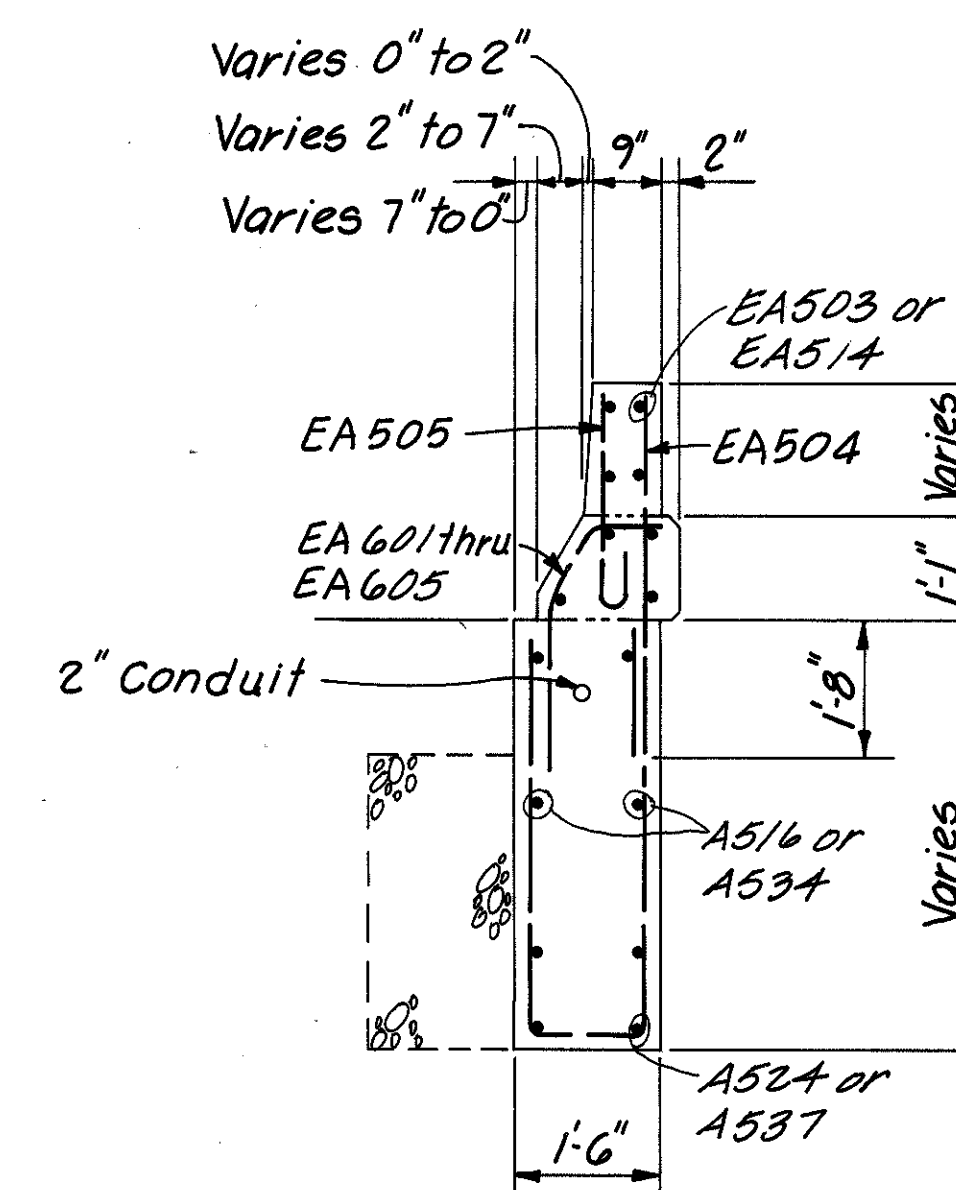
SECTION 2

		7/22	
		ARCHITECTS	ENGINEERS
111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117			
FORWARD ABUTMENT LEFT BRIDGE BRIDGE NO. JAC-35-1297 4/R OVER COUNTY RD. 10			
DESIGNED	DRAWN	TRACED	CHECKED
GTW	LEP	—	WBS
REVIEWED	DATE	REVIS	
—	5/1/86	—	

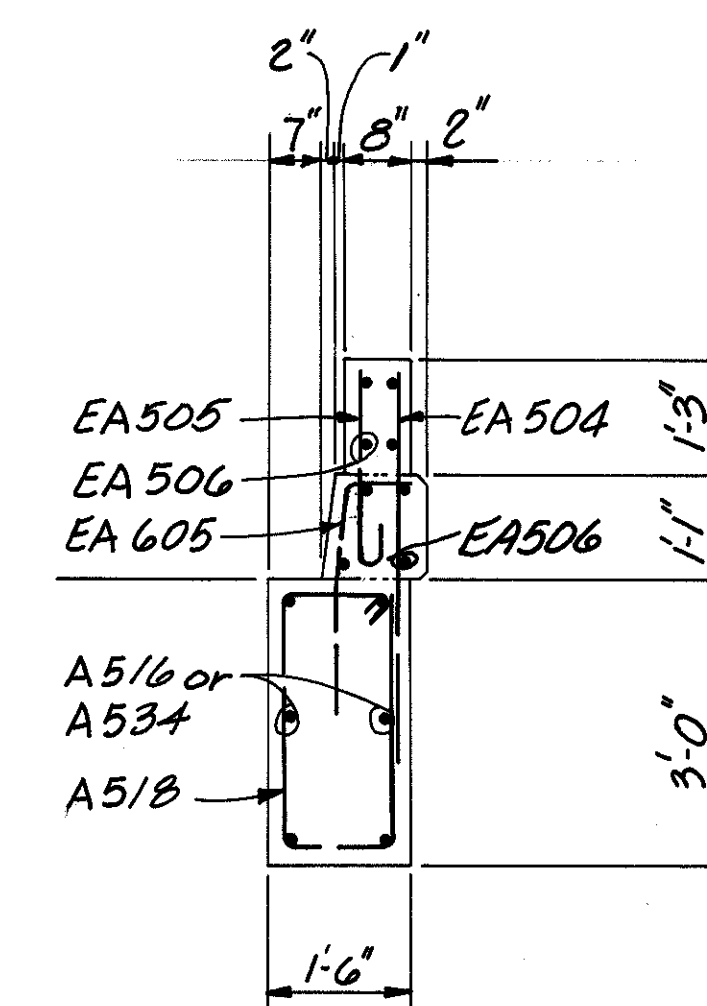


NOTE:

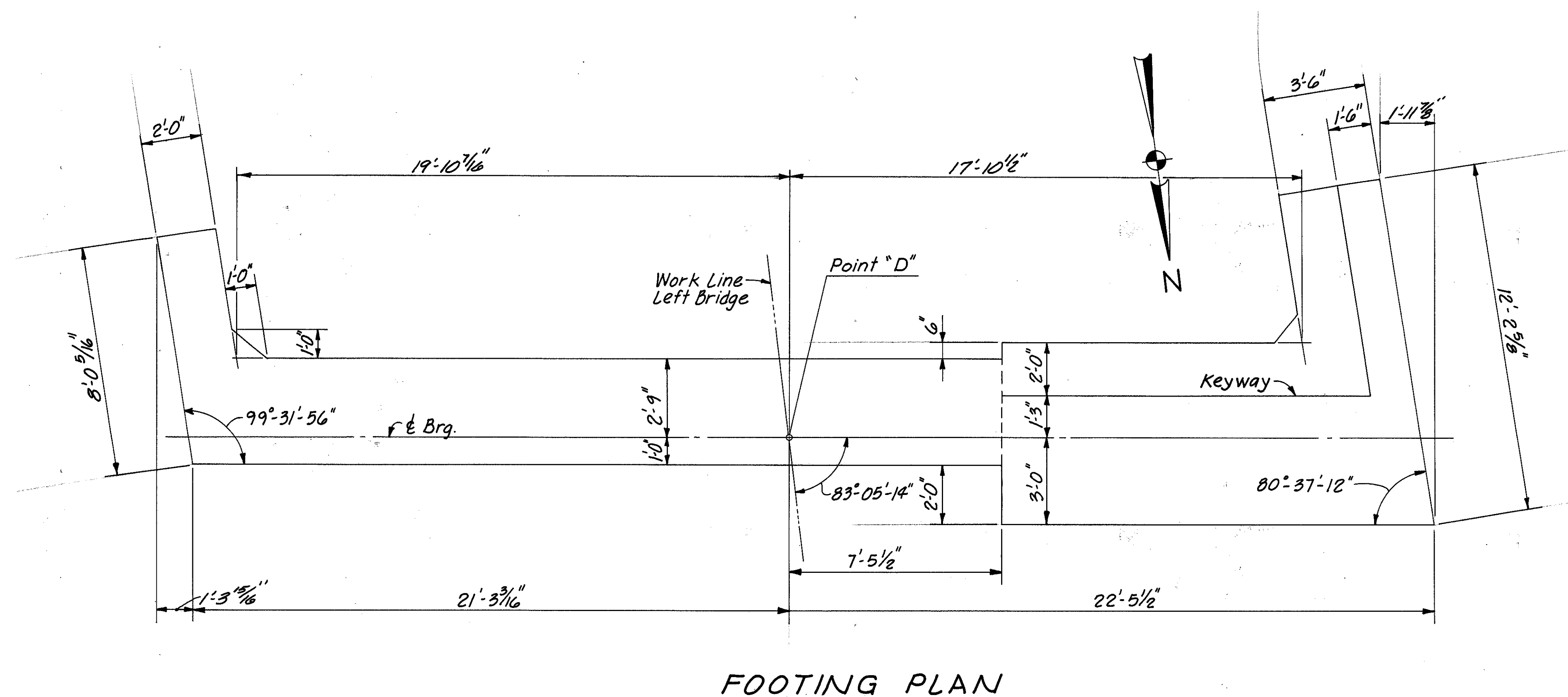
See Std. Drawg. GR-3 for Conc. Insert
Anchor Assembly Req'd. to attach
Guardrails to ends of Bridge Railing.
(Typ. all wingwalls except Left Rear
Abutment)

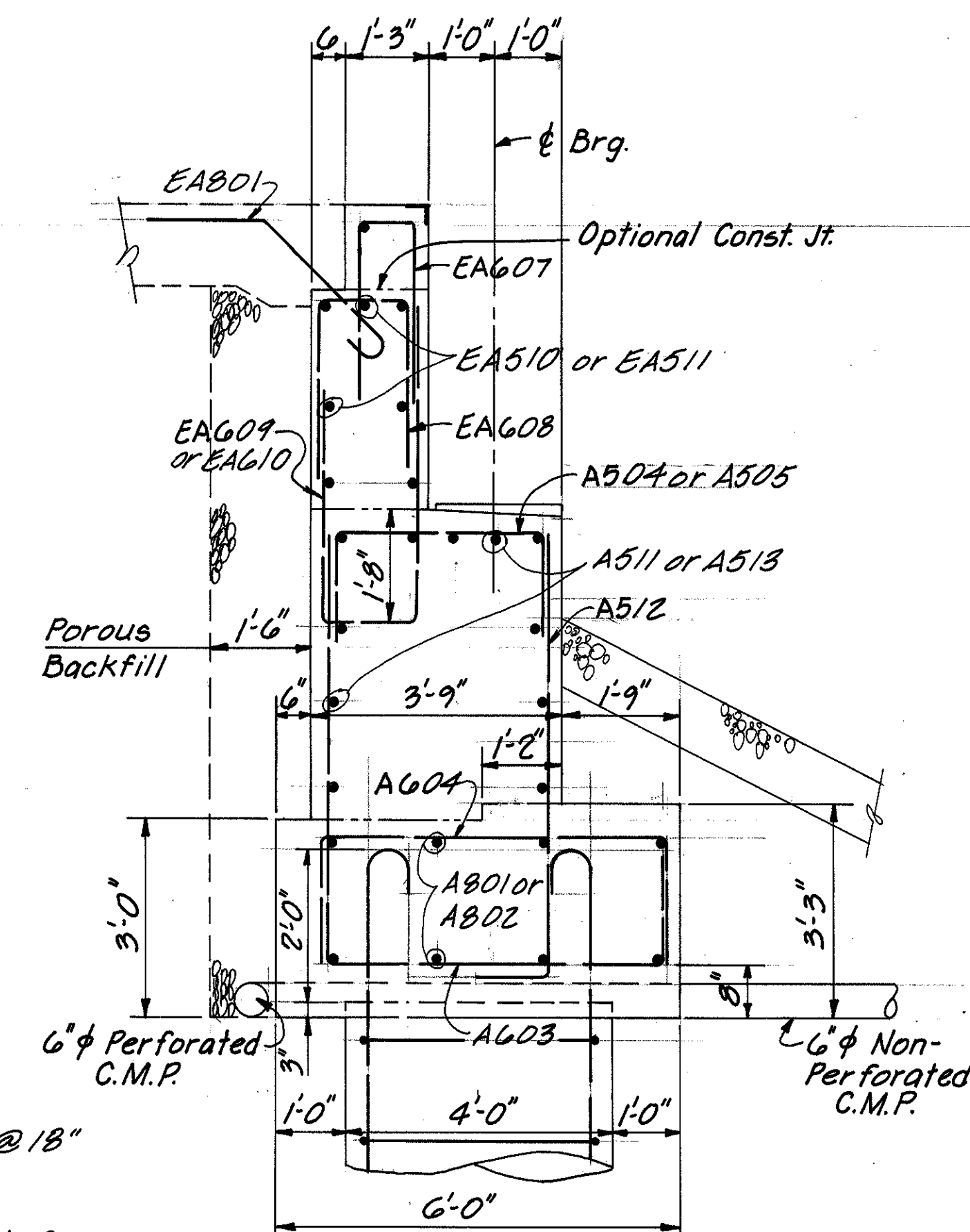


SECTION 1
8

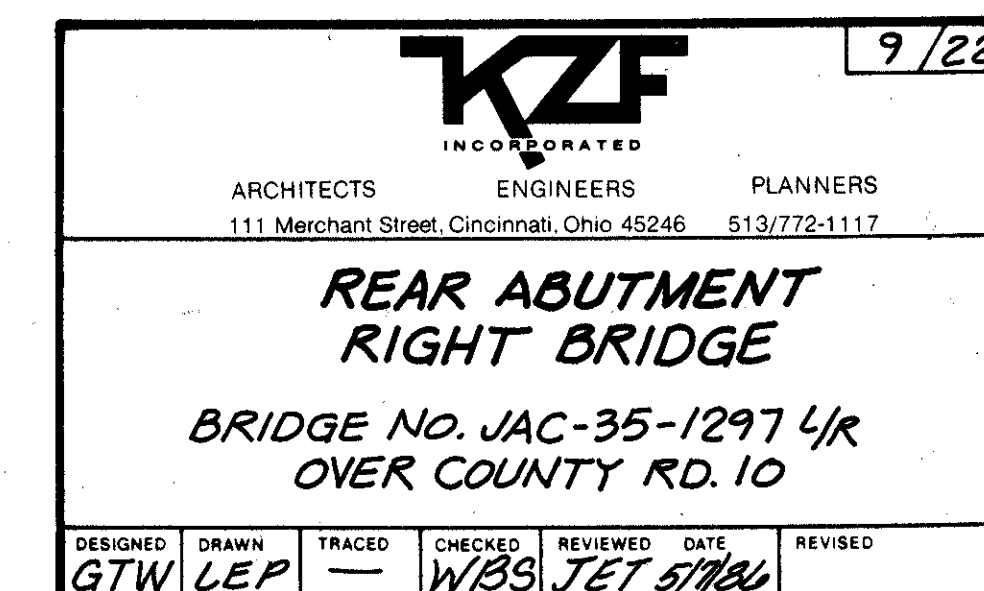
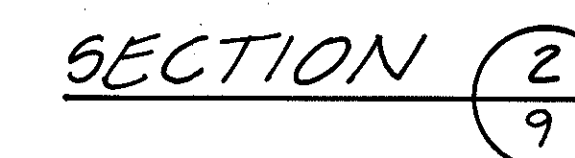


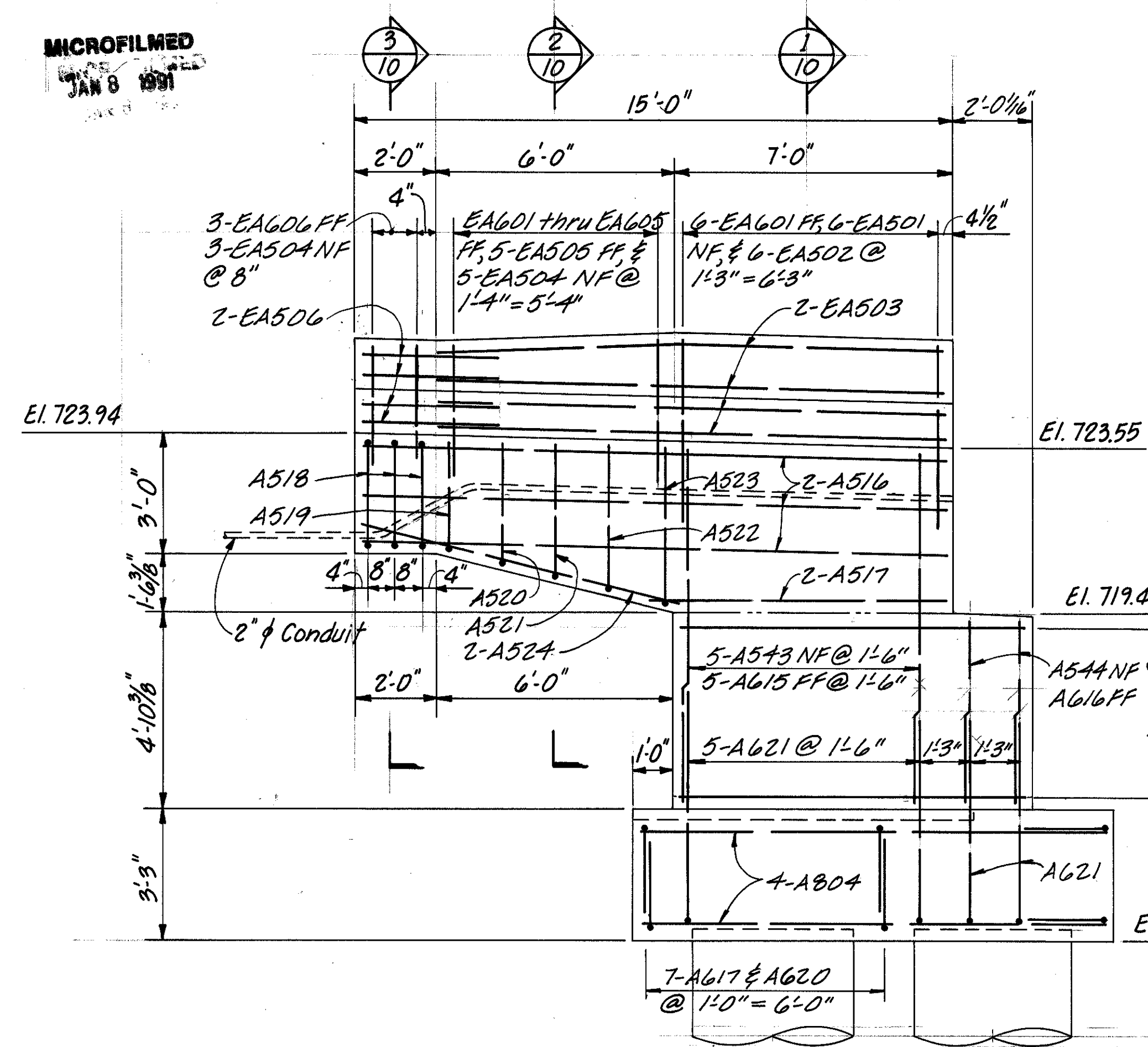
SECTION 2
8



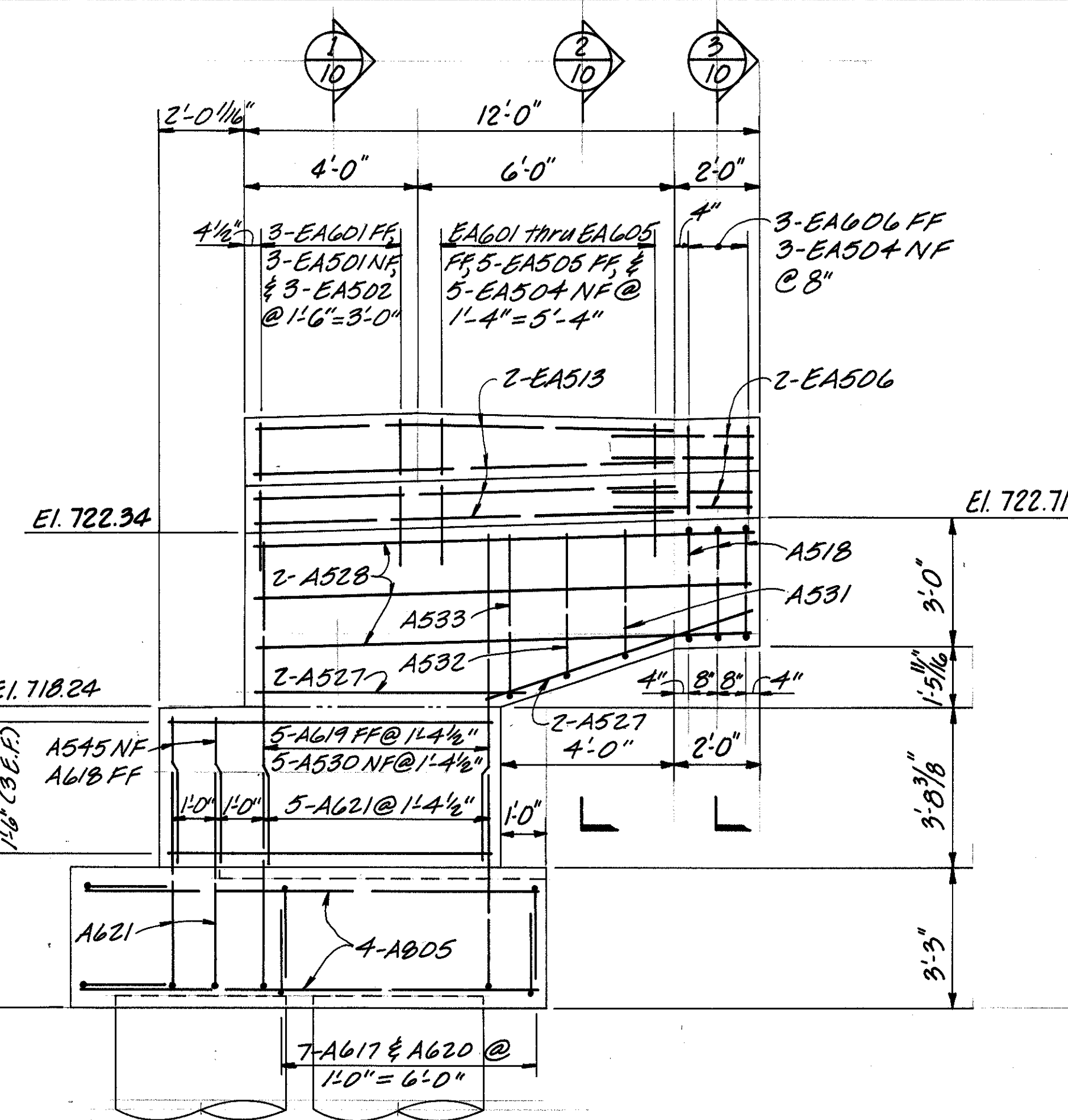


SECTION 1
9

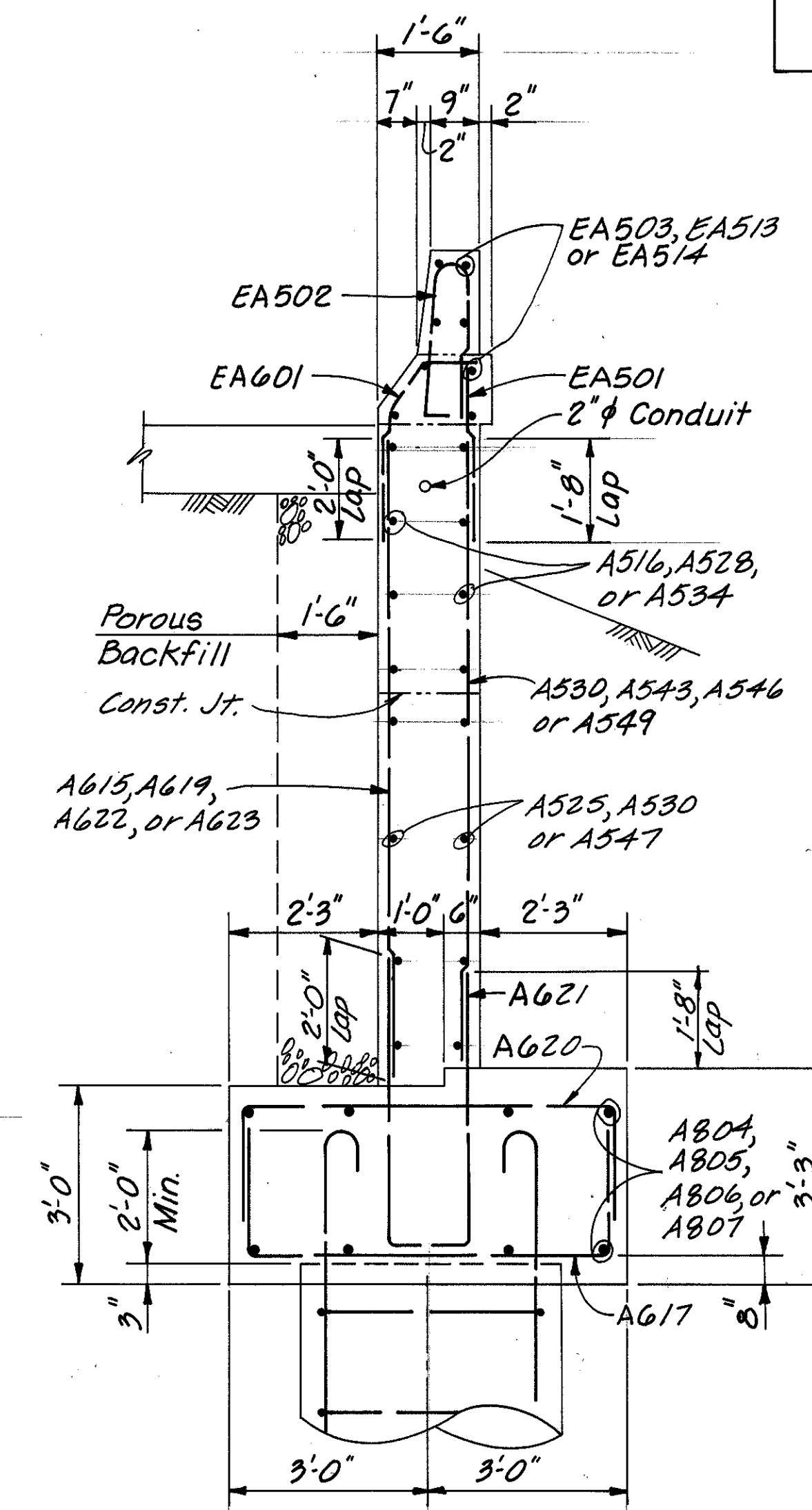




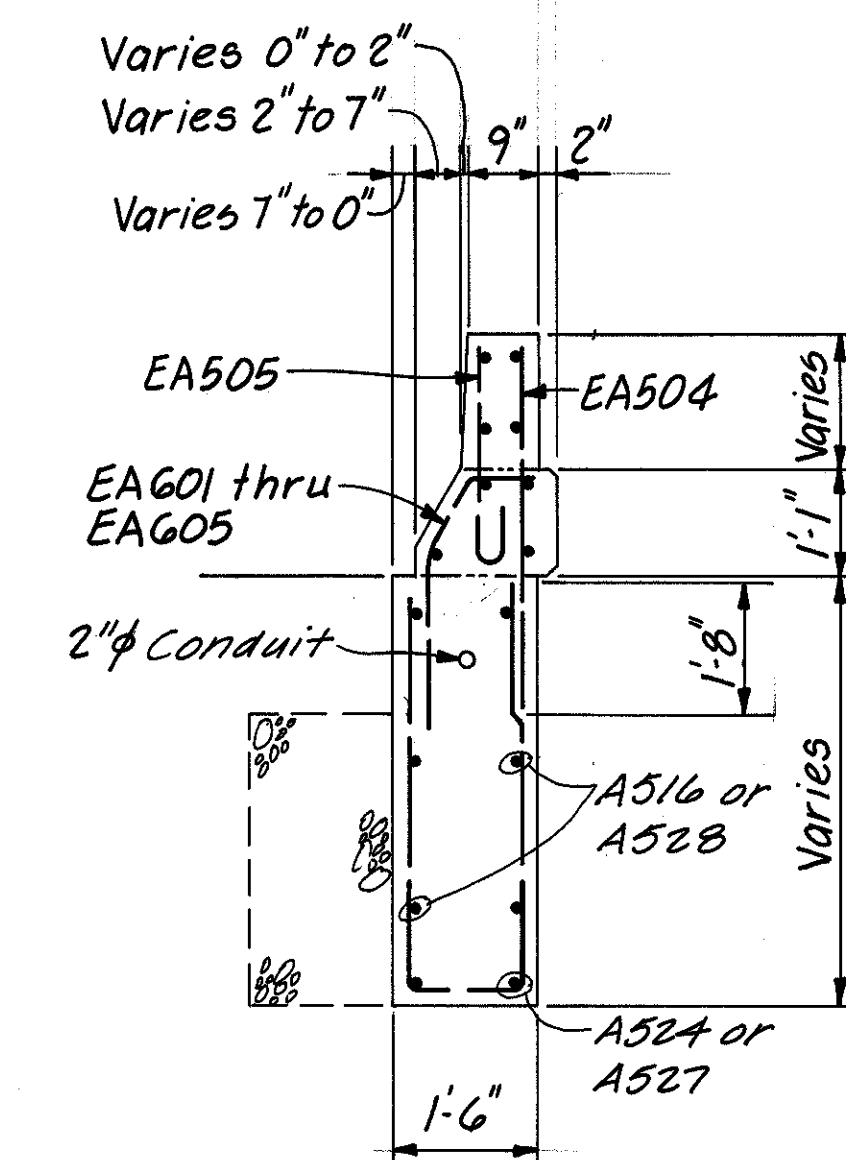
WINGWALL NO. 5



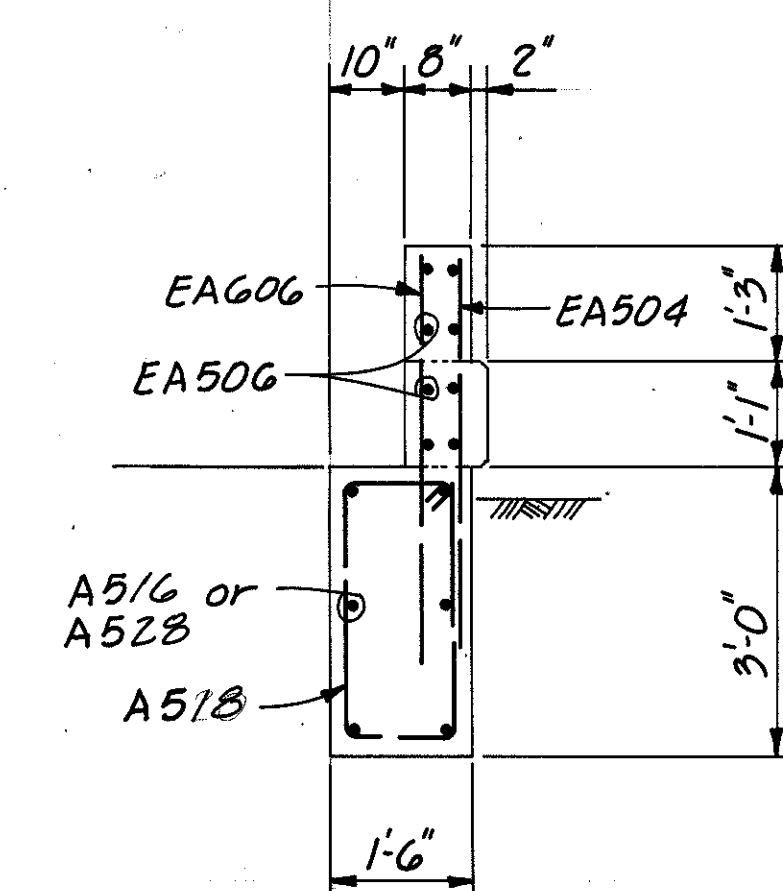
WINGWALL NO. 6



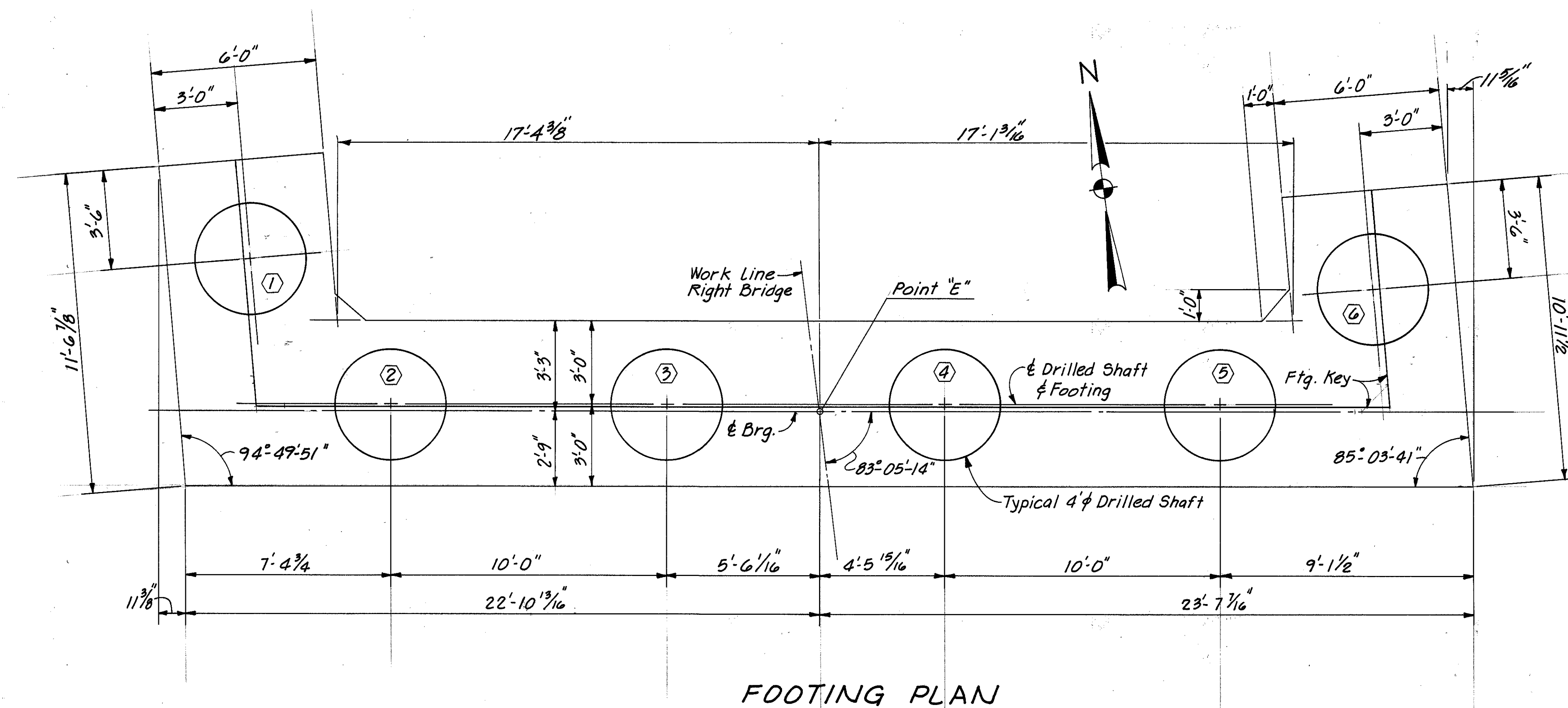
SECTION 11



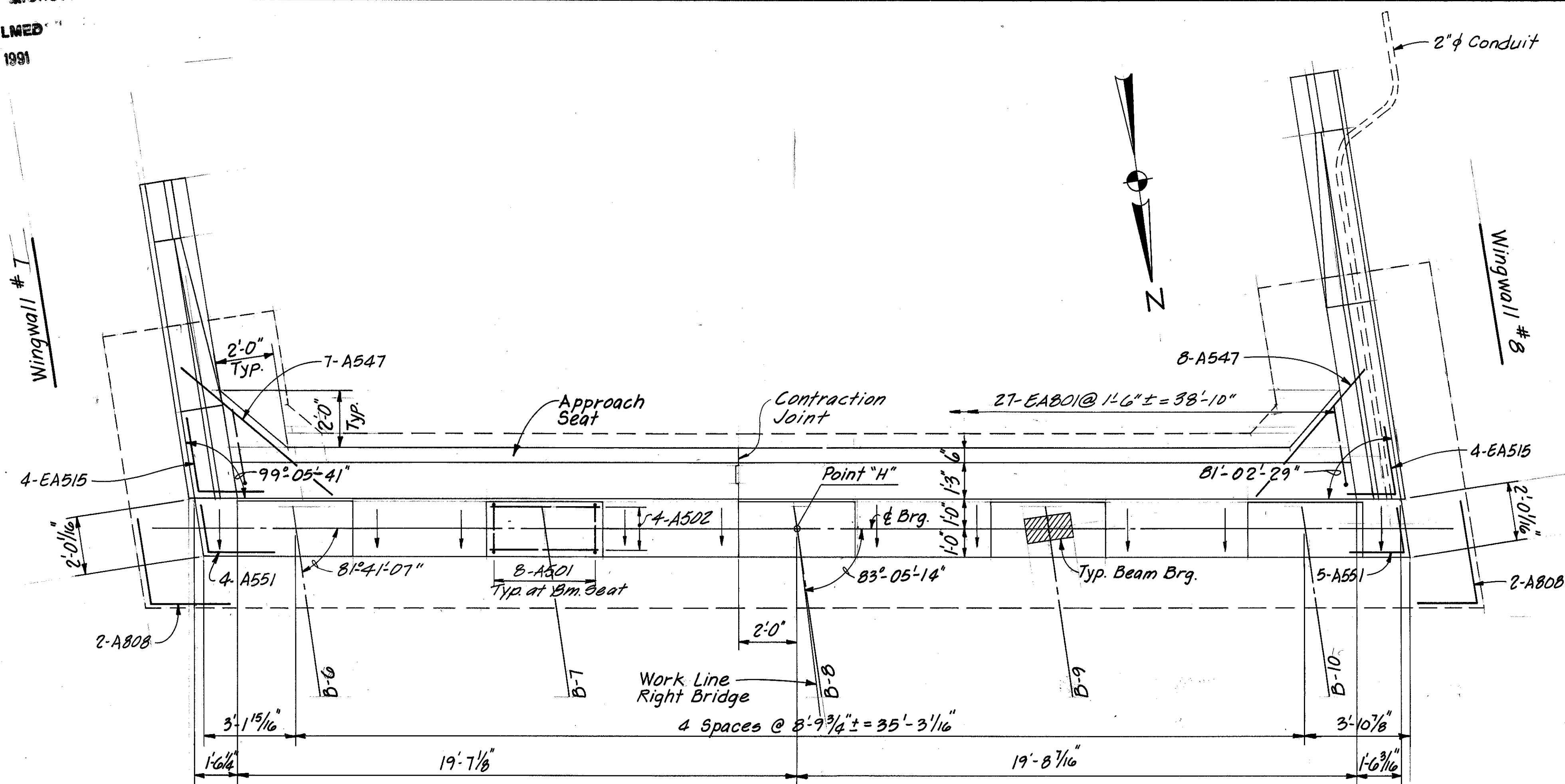
SECTION 2



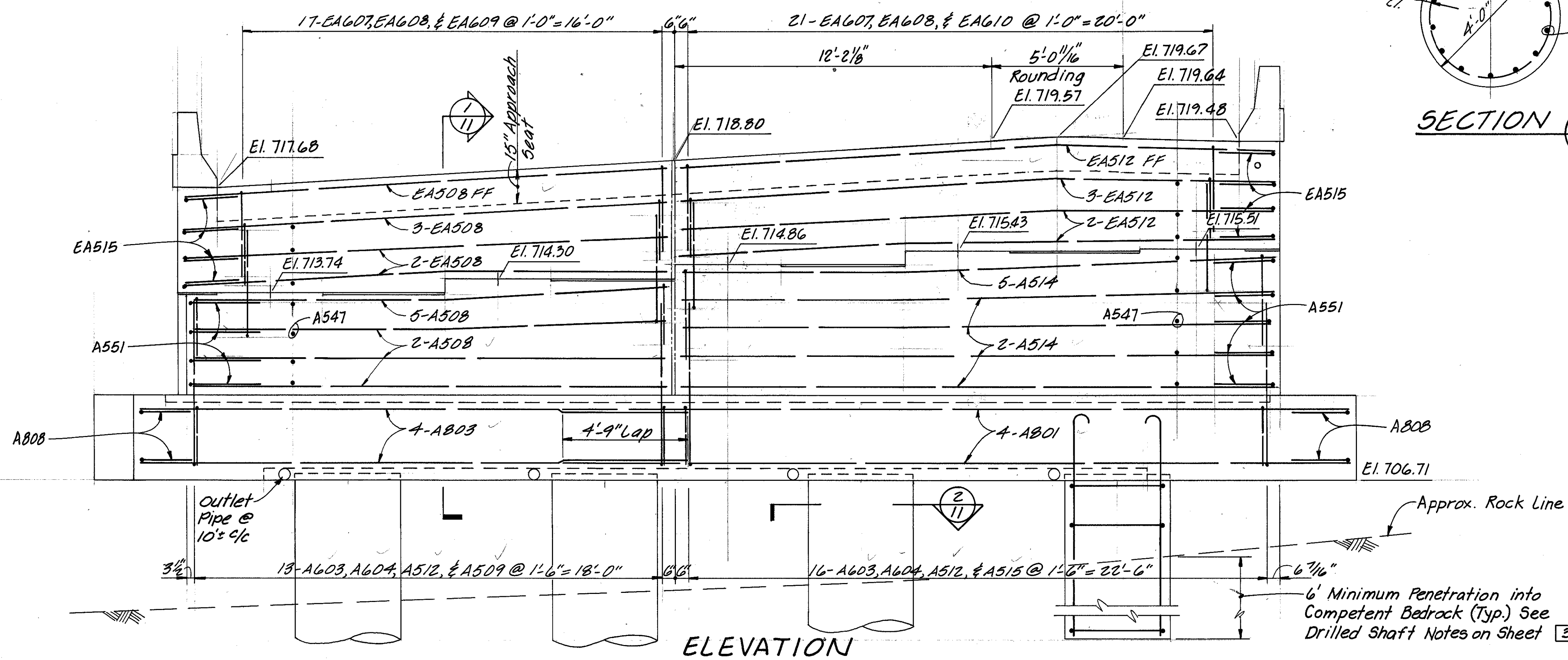
SECTION 3
10



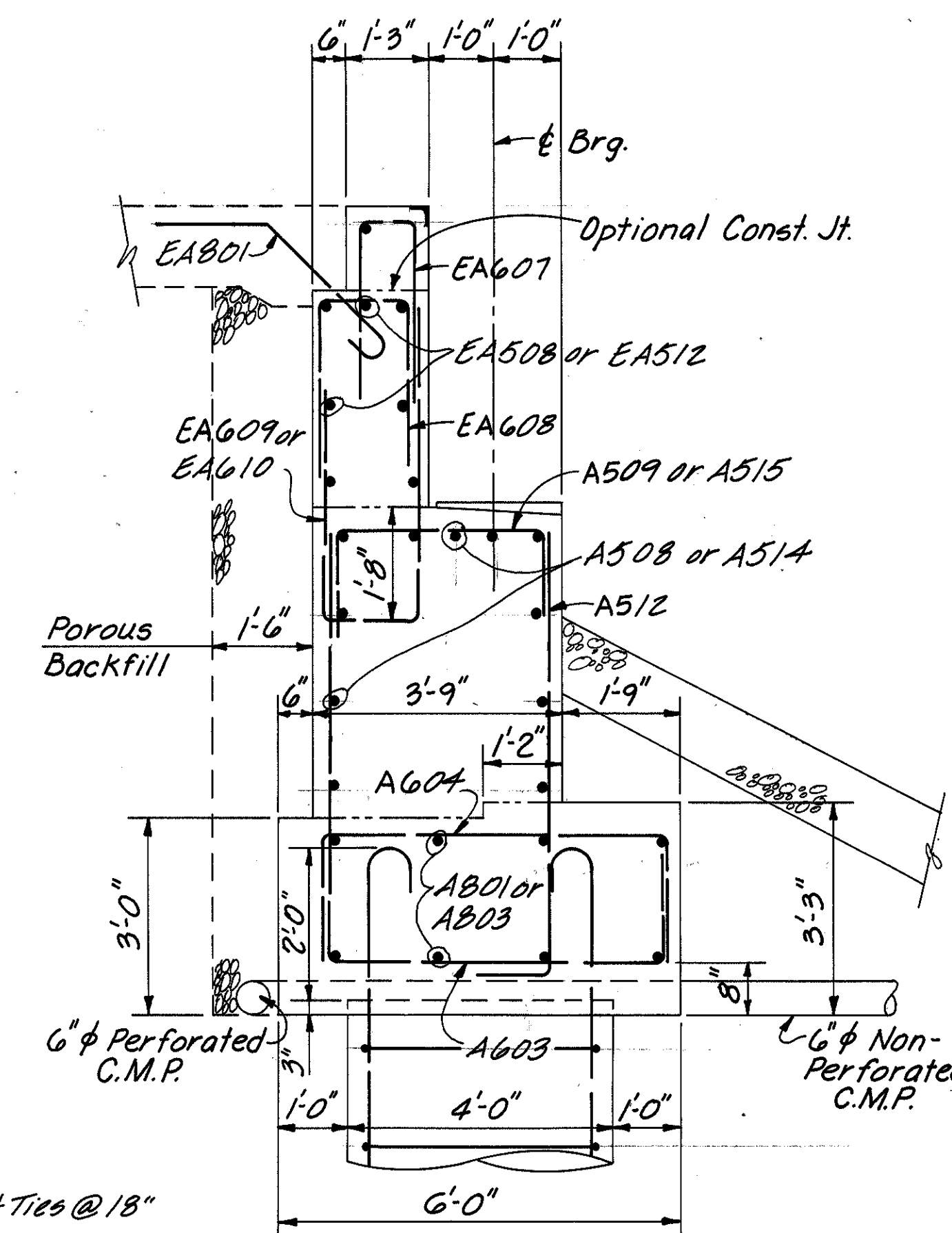
FOOTING PLAN



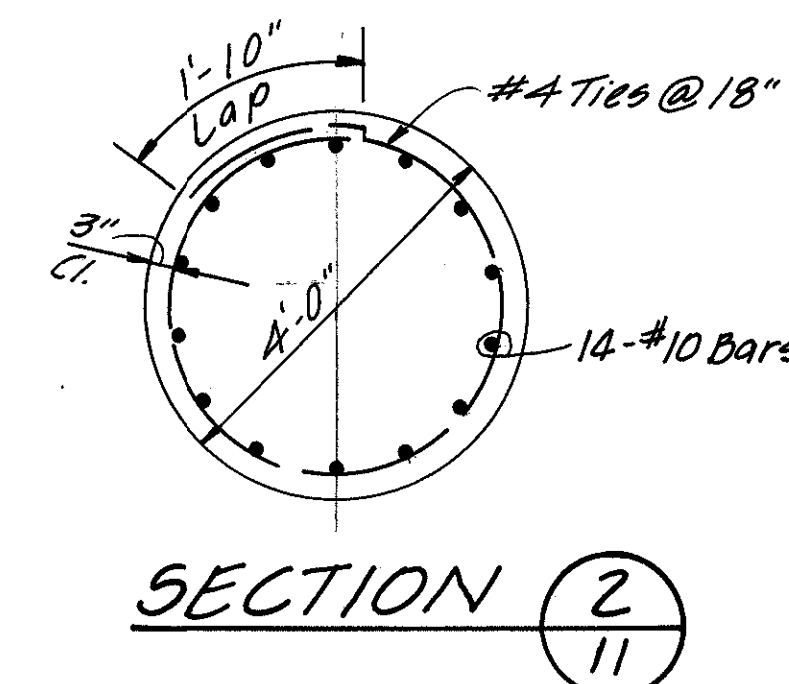
PLAN



ELEVATION



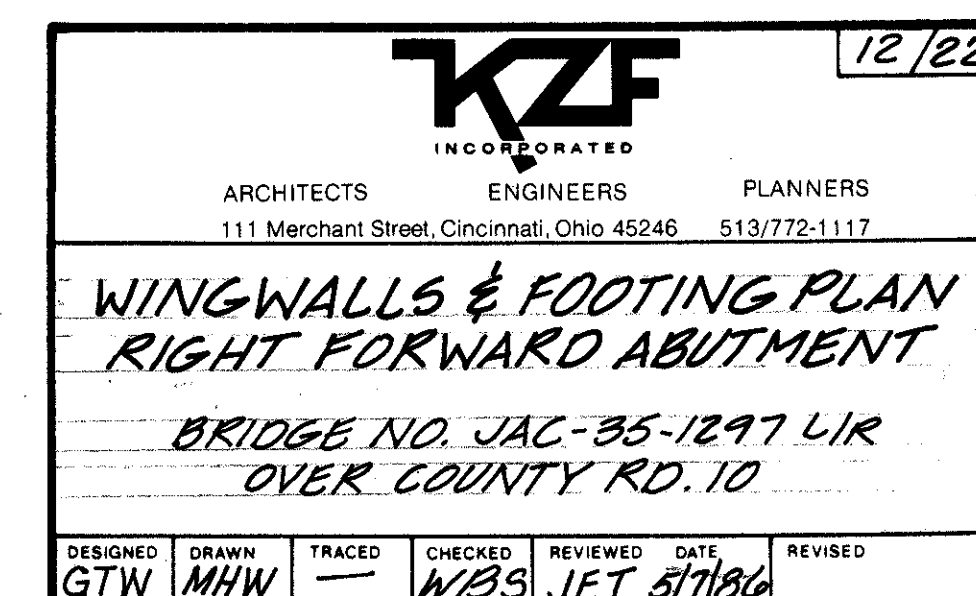
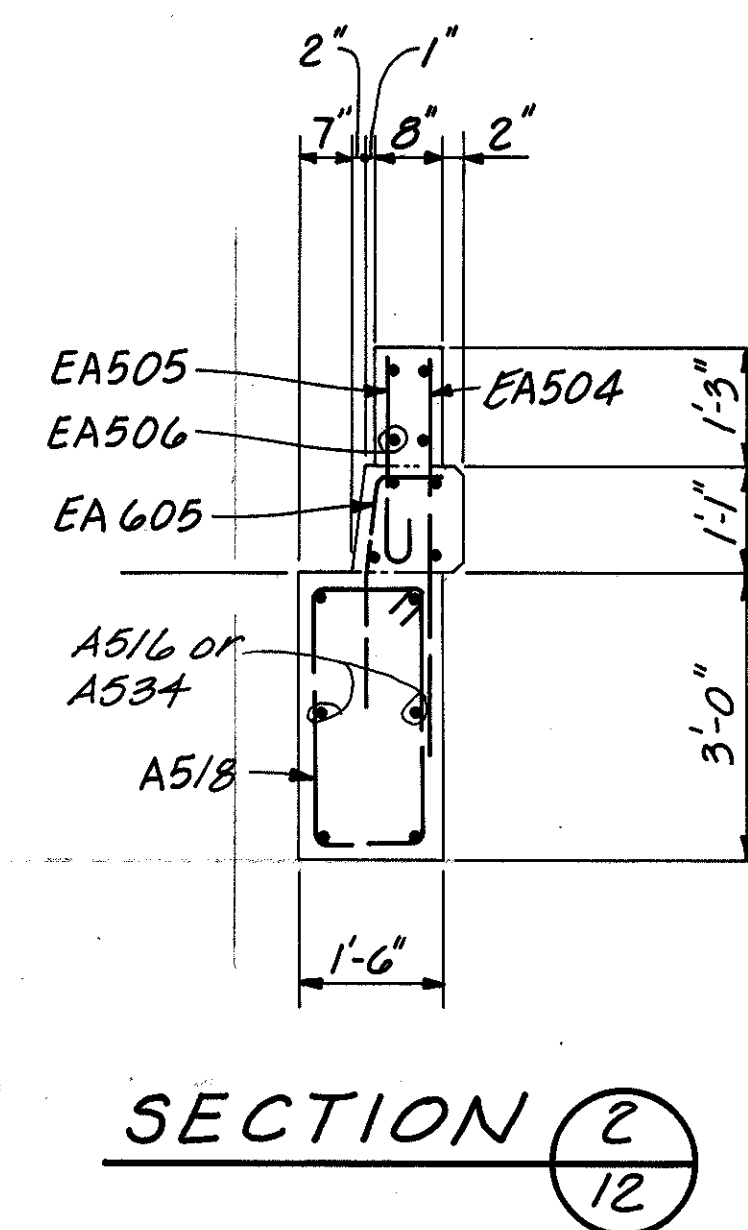
SECTION 1
11



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**FORWARD ABUTMENT
RIGHT BRIDGE**
BRIDGE NO. JAC-35-1297 4/R
OVER COUNTY RD. 10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	LEP		WBS	JET	5/786	



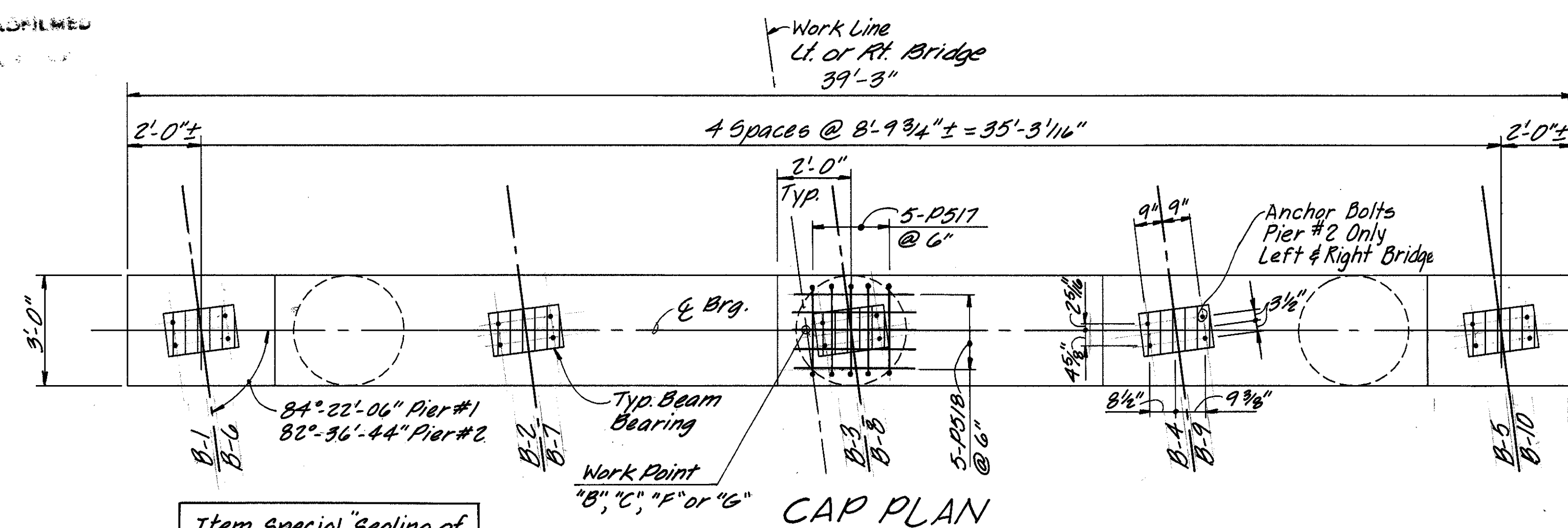
JAN 8 1991

UNCLASSIFIED

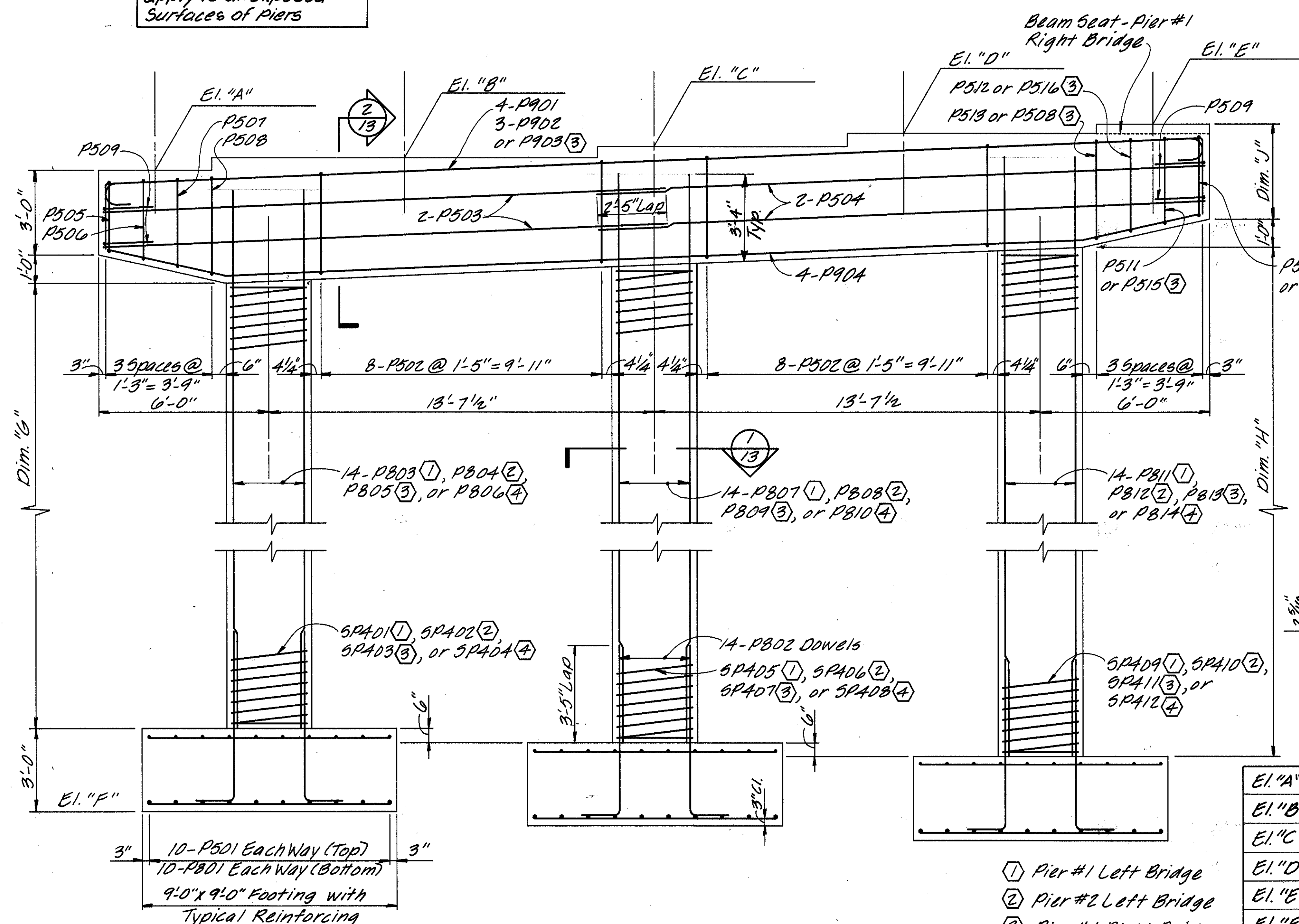
JAC-35-11.46

	OHIO
	FHWA REGION 5

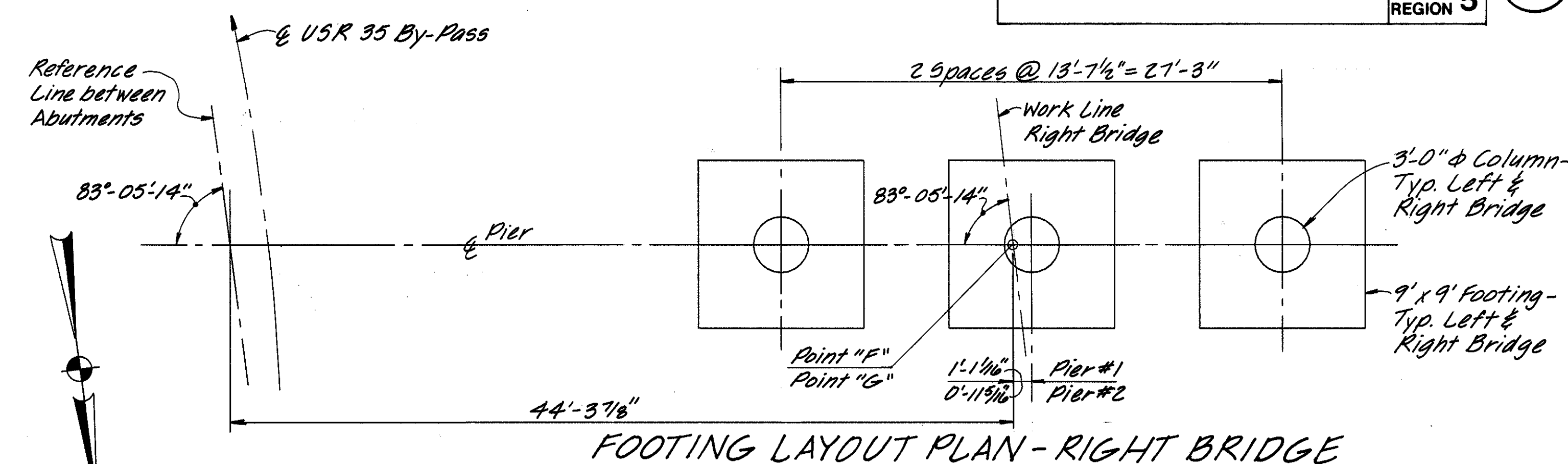
410
442



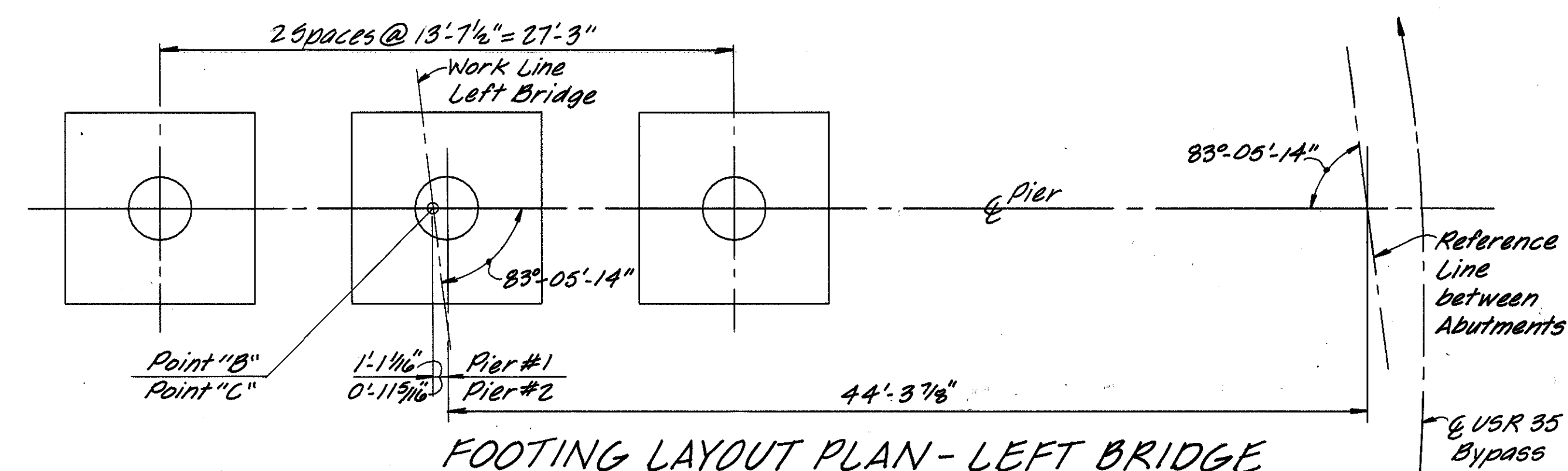
Item Special "Sealing of Concrete Surfaces" shall apply to all exposed surfaces of piers



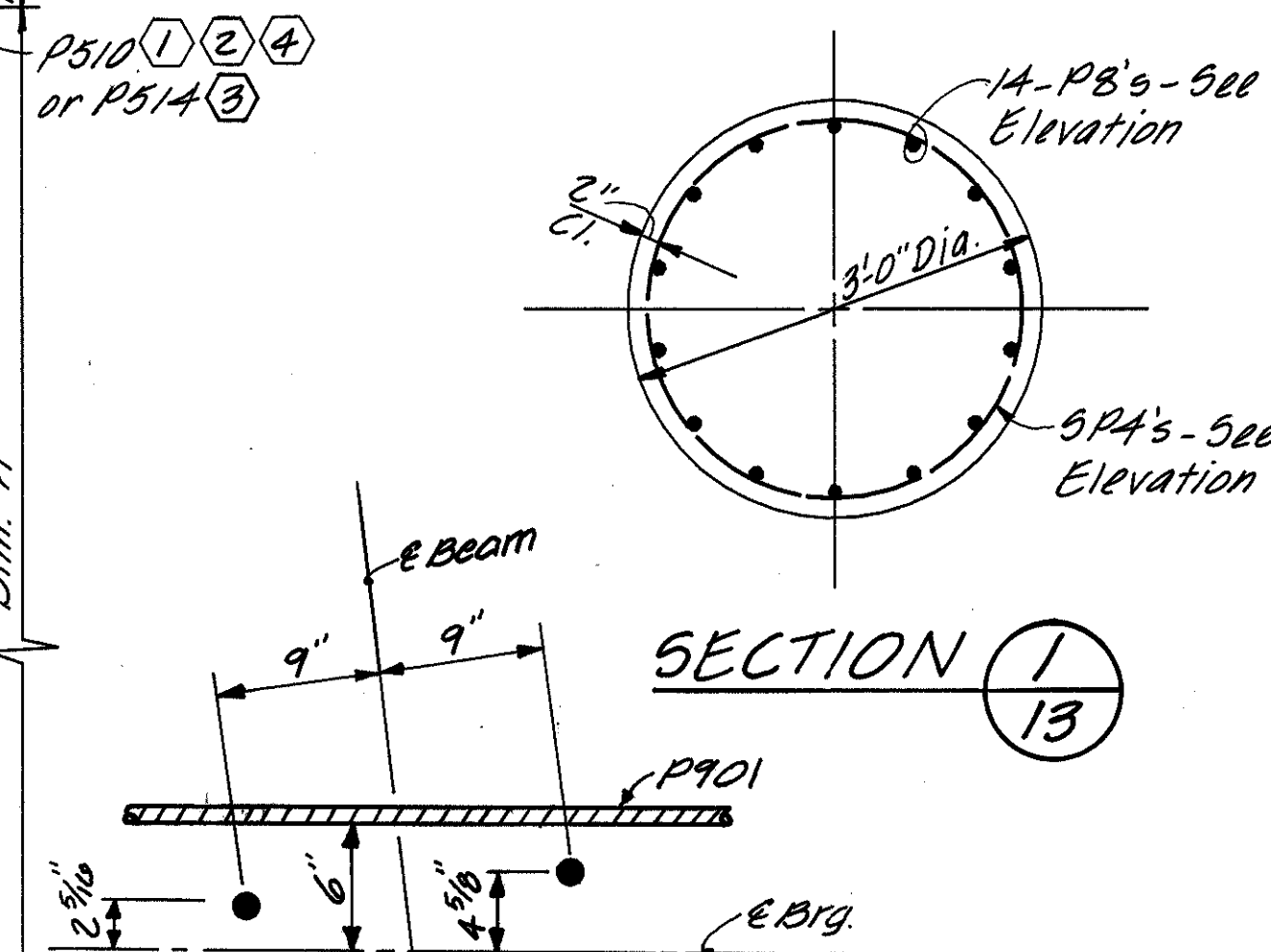
ELEVATION



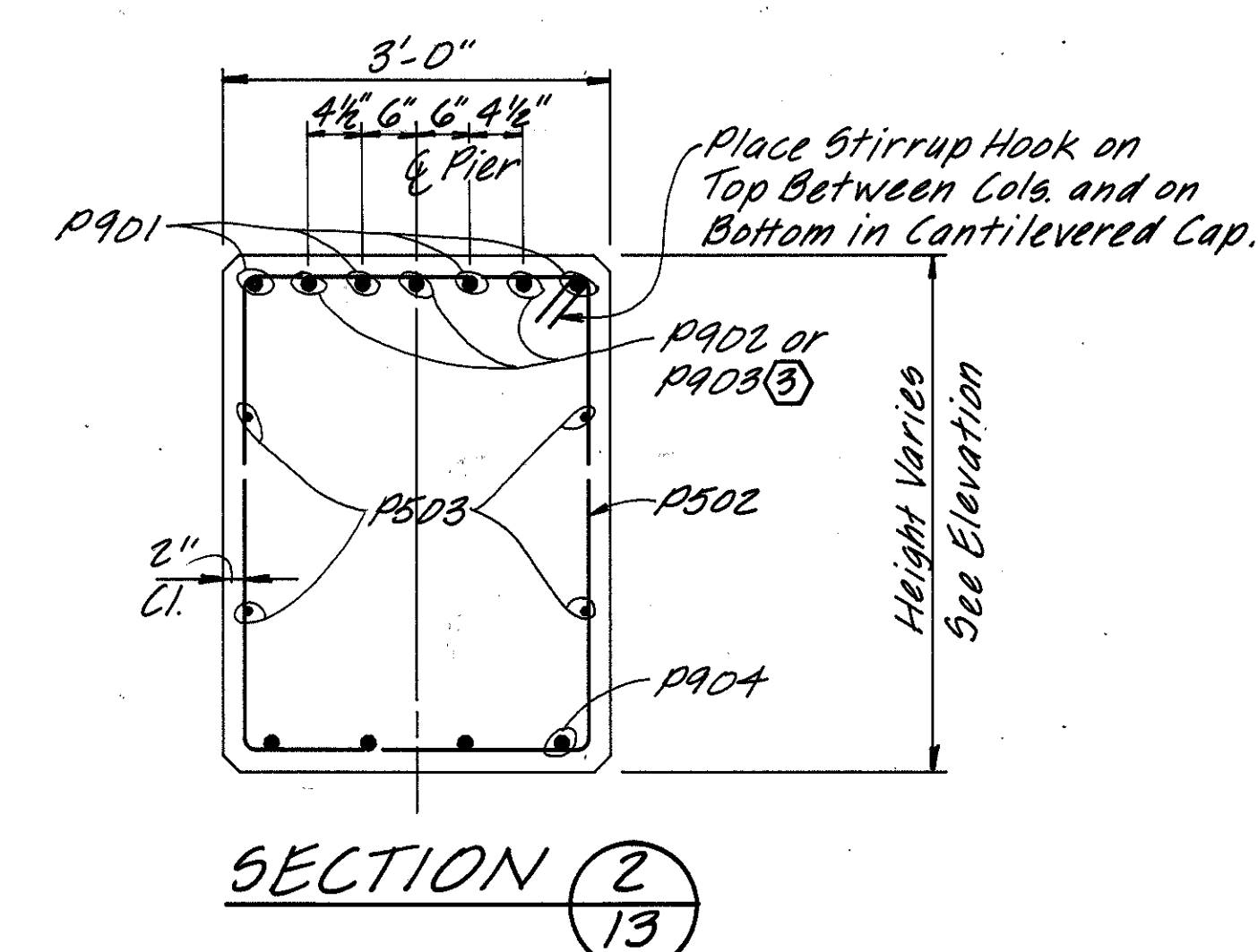
FOOTING LAYOUT PLAN - RIGHT BRIDGE



FOOTING LAYOUT PLAN- LEFT BRIDGE



ANCHOR BOLT LAYOUT



SECTION 2
13

	Left Bridge		Right Bridge	
	Pier #1	Pier #2	Pier #1	Pier #2
E1."A"	714.91	713.41	716.50	715.32
E1."B"	715.35	713.93	716.96	715.84
E1."C"	715.79	714.46	717.41	716.30
E1."D"	716.22	714.98	717.86	716.87
E1."E"	716.66	715.50	717.85	716.93
E1."F"	692.00	694.75	689.00	691.50
Dim."G"	15'-10' ⁵ / ₁₆ "	11'-7' ¹⁵ / ₁₆ "	20'-6"	16'-9' ⁹ / ₁₆ "
Dim."H"	18'-2' ³ / ₁₆ "	13'-11' ³ / ₁₆ "	22'-9' ¹ / ₂ "	19'-1' ¹¹ / ₁₆ "
Dim."J"	3'-5' ⁹ / ₁₆ "	3'-9' ¹⁵ / ₁₆ "	3'-0' ¹⁵ / ₁₆ "	3'-4' ¹ / ₂ "

NOTES:

1. See Sheet 2/22 for General Notes & Quantities.
2. See Sheets 21/22 & 22/22 for Reinforcing Steel Details.
3. See Std. Dwg. FB-1-82 for fixed bearing details.
4. See Sheet 15/22 for Layout Diagram.
5. Reinforcing Steel in the Vicinity of the Bridge Seat Shall be Accurately placed to Avoid Interference with the Drilling of Dowel Holes, or the Pre-Setting of Beam Dowels.
6. At the Option of the Contractor, Beam Dowels (or Formed Holes), Located & Supported by Templates, May be Cast in Place.

JAN 8 1991



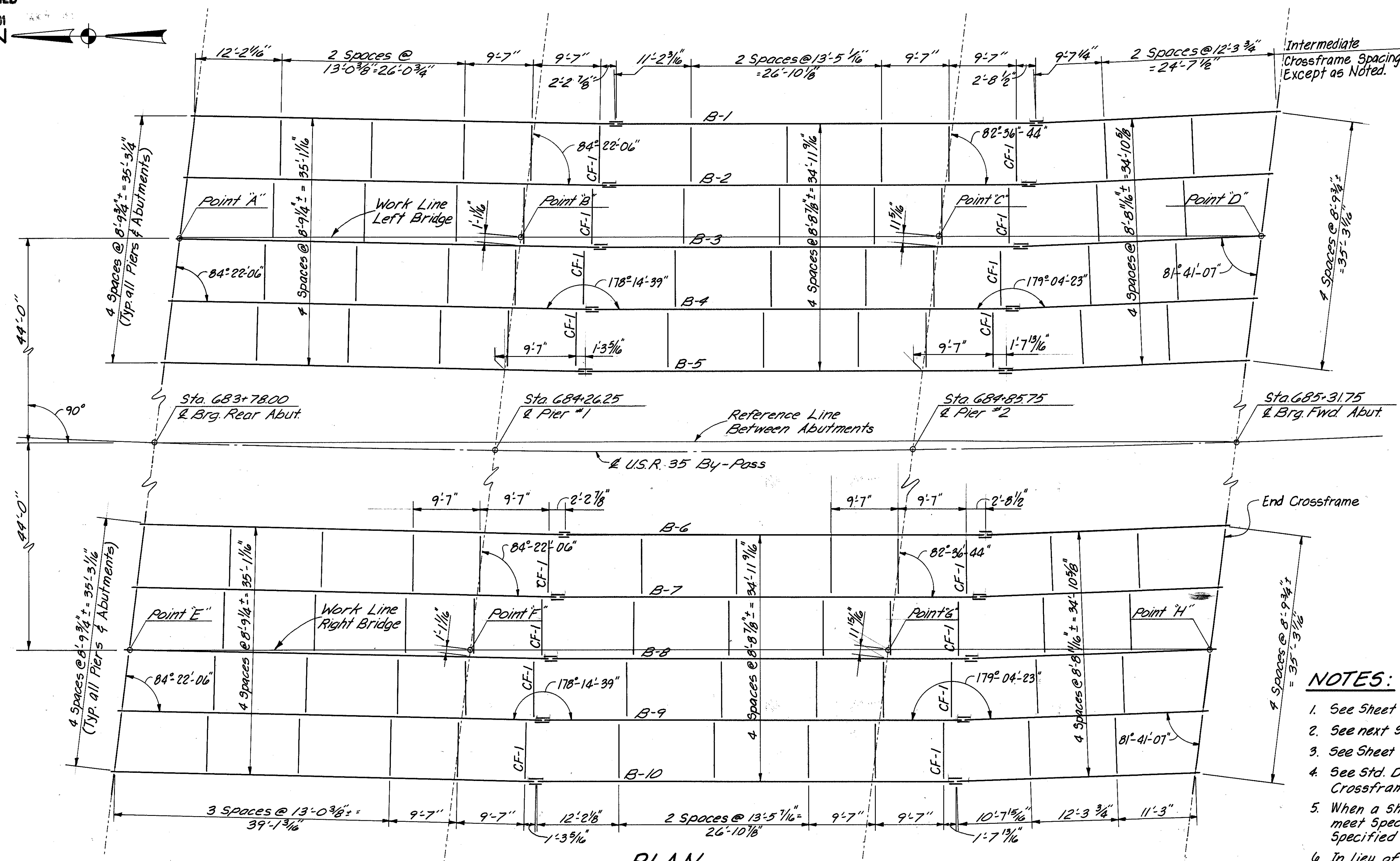
JAC-35-11.46

OHIO

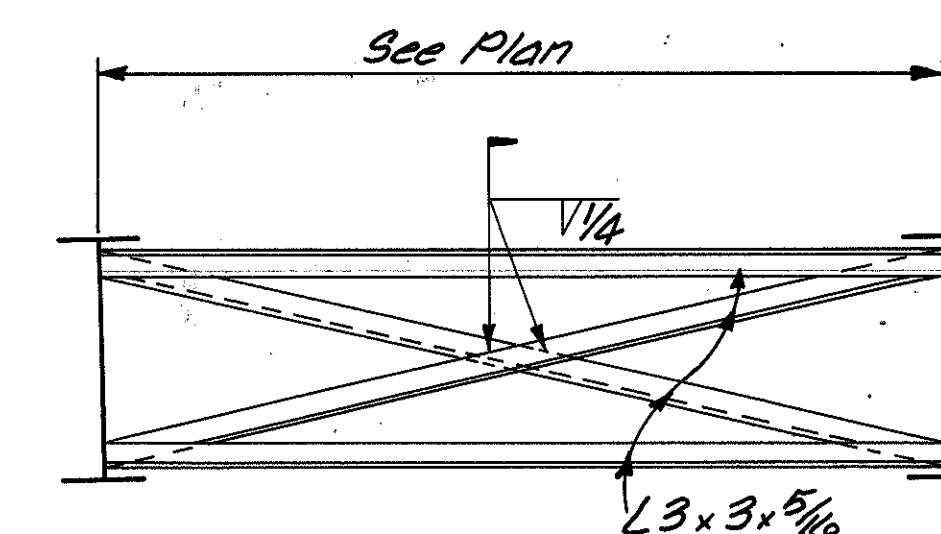
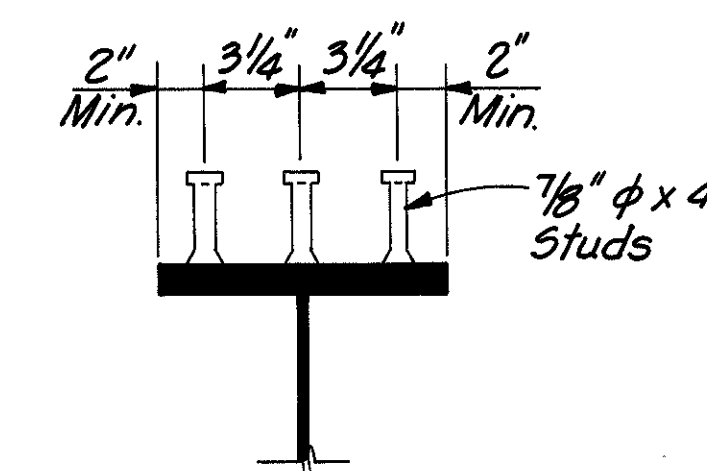
FHWA
REGION 5

411

442



SHEAR CONNECTOR DETAIL



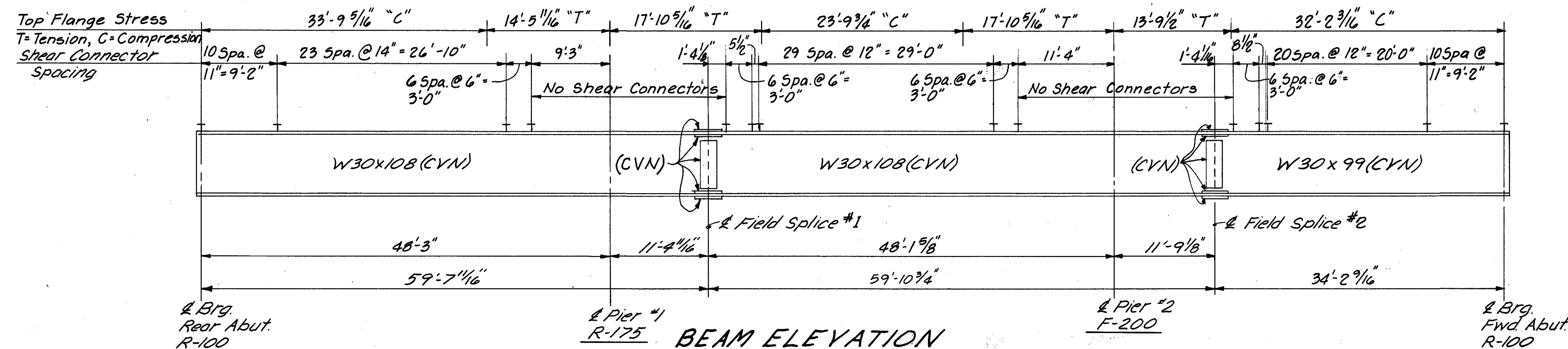
CROSSFRAME CF-1

(See sheet 16/22 for
Welding Angles to Beams.)

NOTES:

1. See Sheet 2/22 for General Notes & Quantities.
2. See next sheet for Additional Details & Layout Diagram.
3. See Sheet 16/22 for Intermediate Crossframes.
4. See Std. Drwg. 5D-1-69 for additional Splice, Scupper, Crossframe & End Dam Details.
5. When a shape or Plate is Designated (CVN) the Material shall meet Specified Minimum Notch Toughness Requirement as Specified in 711.01 of CMS.
6. In Lieu of A588 Steel, A36 Steel, Galvanized, may be Furnished for bearings, except for Upper Plate Element of Bearings. This A36 Steel shall be included with the A588 Steel Quantity for Payment.
7. High Strength Bolts shall be 1" Diameter A325.
8. A588 Steel is to be Left Unpainted. See CMS 513.221 for Cleaning Requirements.
9. All Splice Material to be A588 Steel.

PLAN

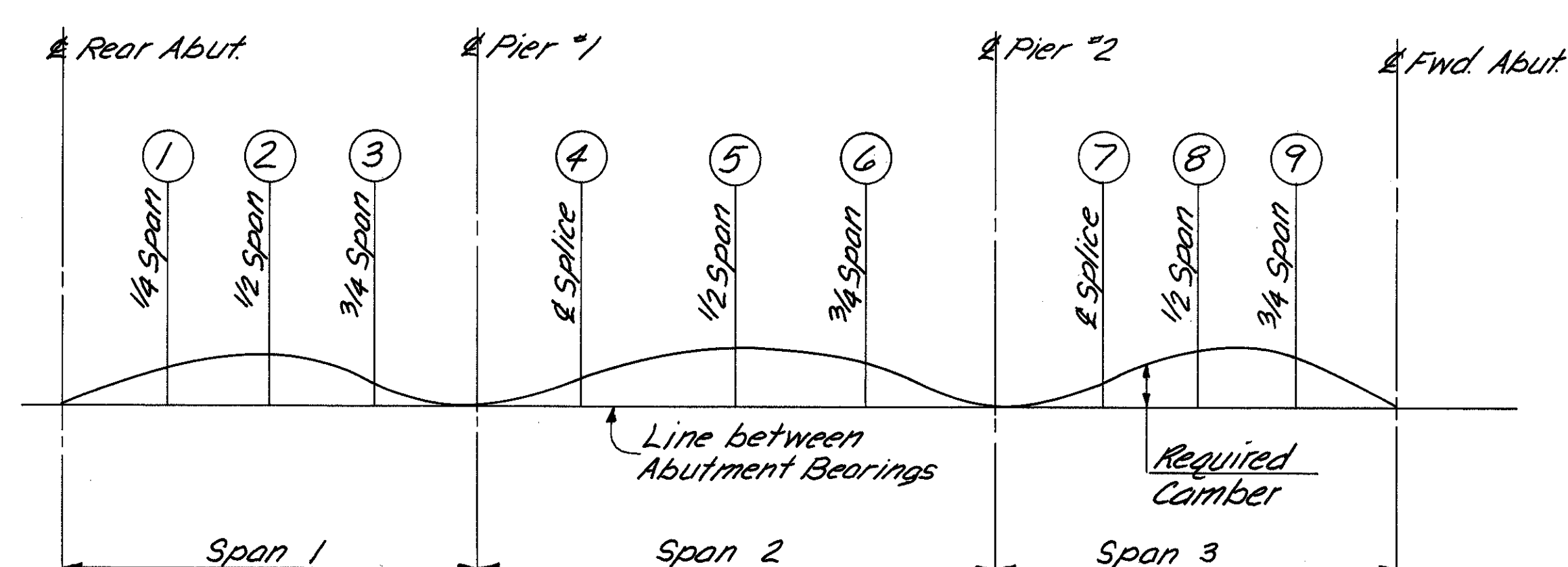
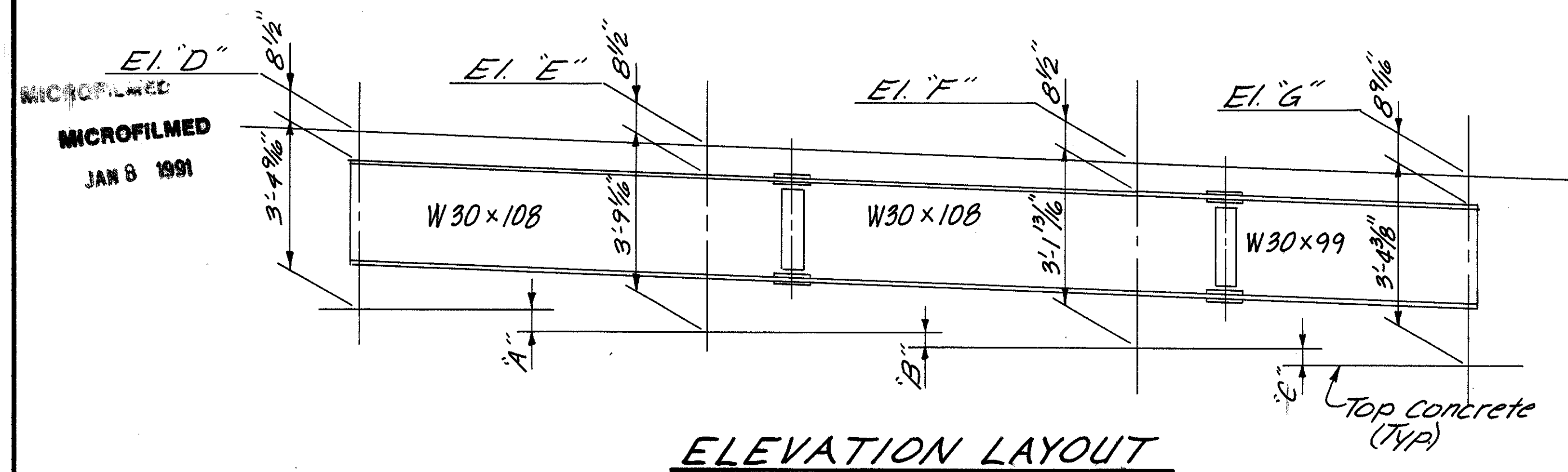
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FRAMING PLAN

BRIDGE NO. JAC-35-1297 4/R
OVER COUNTY RD. 10

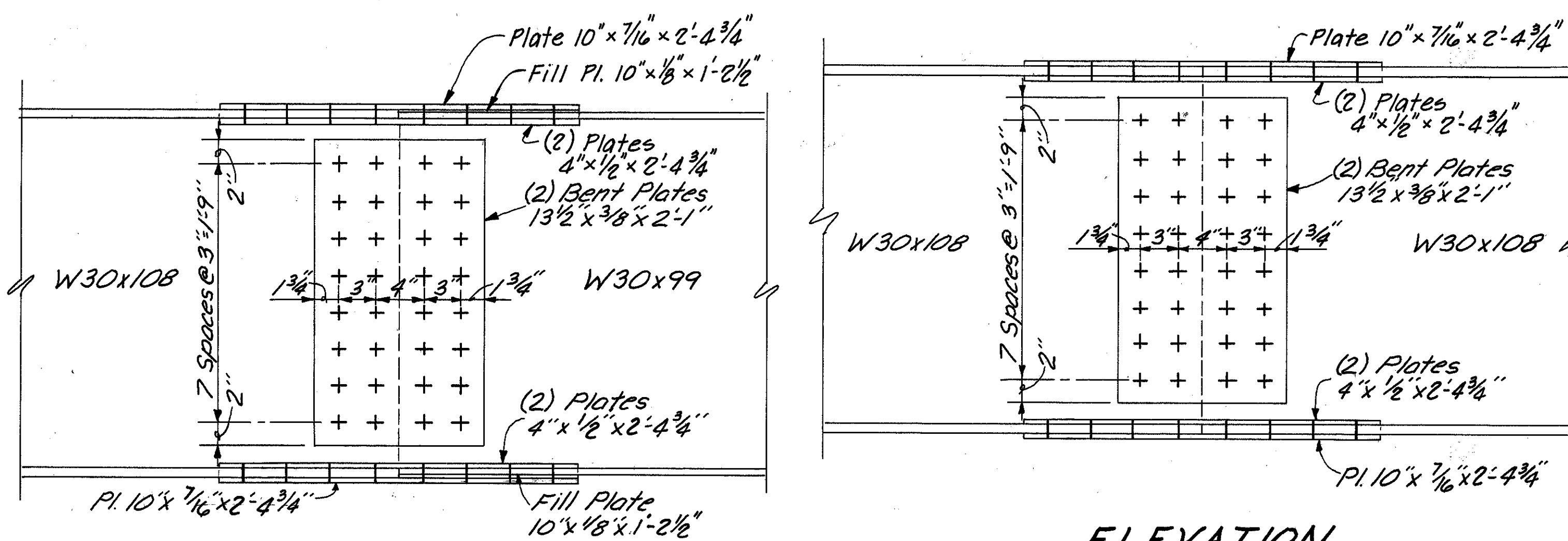
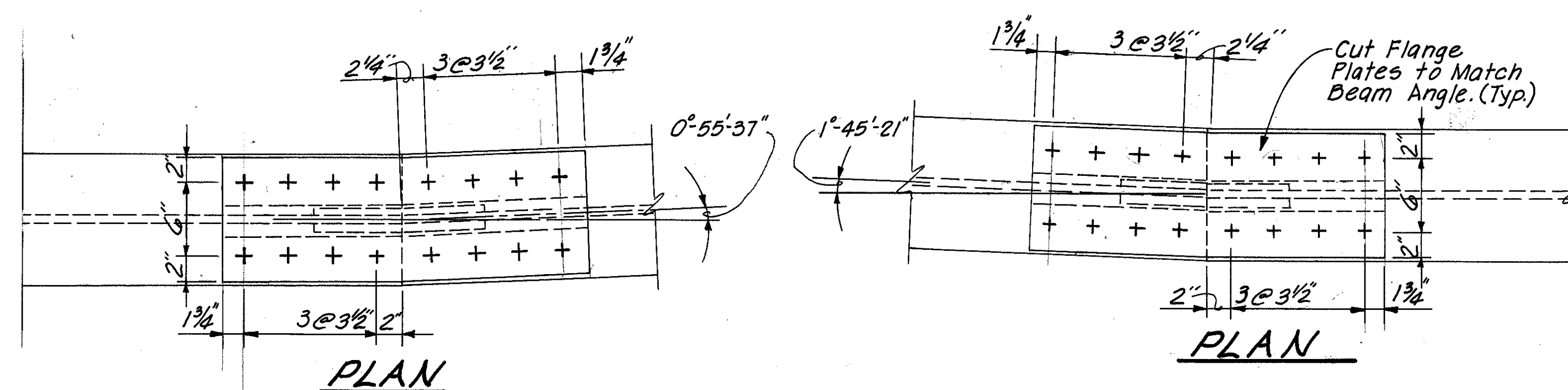
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	KJO	—	WBS	JET	5/7/86	

14/22

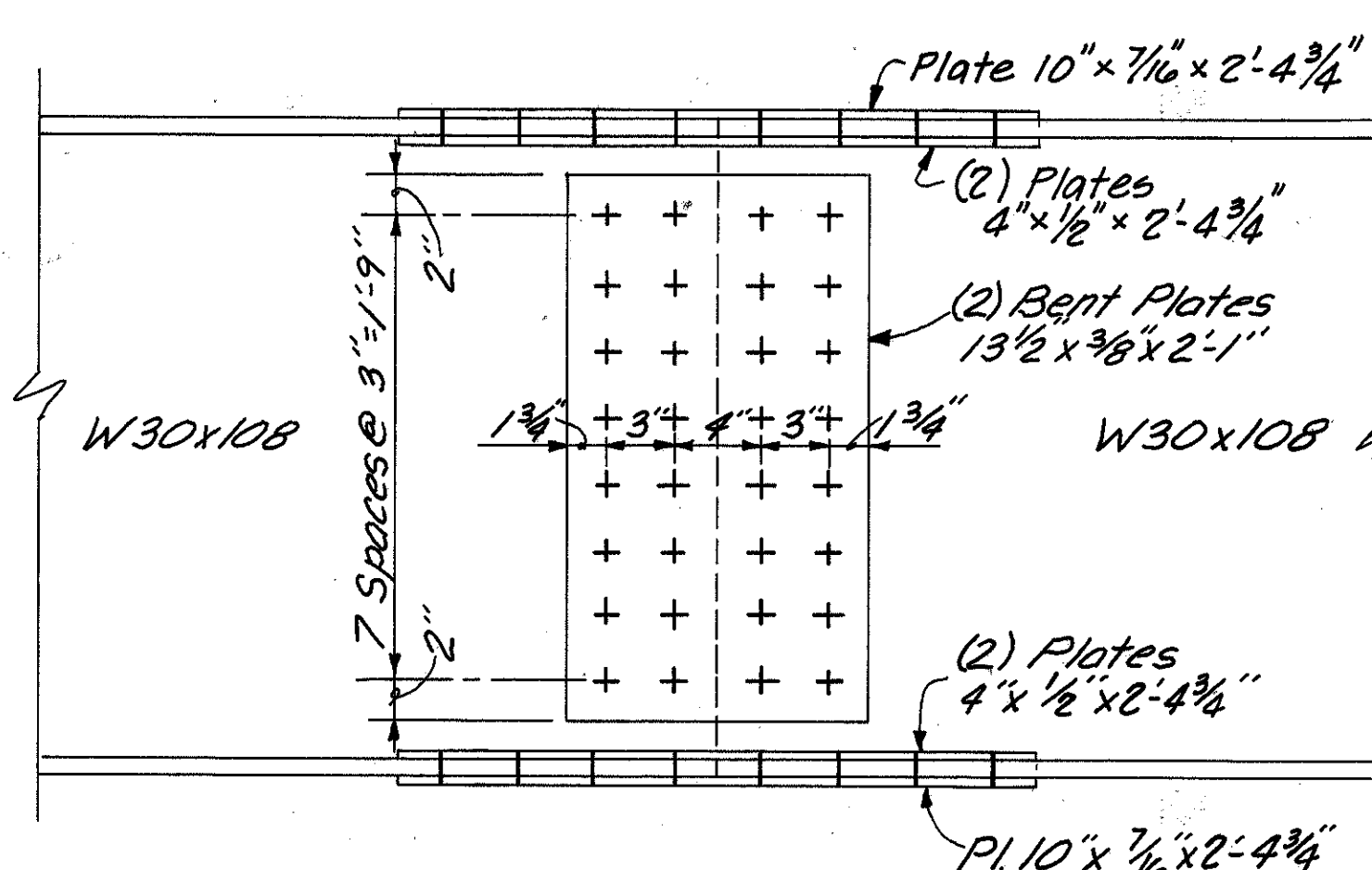


	BEAM	DIM 'A'	DIM 'B'	DIM 'C'	EI 'D'	EI 'E'	EI 'F'	EI 'G'
Left Bridge	B-1	2'-0 1/8"	1'-6"	1'-8 3/8"	721.08	719.38	717.27	715.75
	B-2	2'-0 1/8"	1'-5 1/16"	1'-8 3/8"	721.45	719.82	717.79	716.31
	B-3	1'-11 1/4"	1'-3 1/16"	1'-7 1/16"	721.82	720.26	718.32	716.88
	B-4	1'-10 9/16"	1'-2 1/8"	1'-7 1/16"	722.19	720.69	718.84	717.44
	B-5	1'-9 3/8"	1'-1 1/16"	1'-6 3/16"	722.55	721.13	719.36	718.01
Right Bridge	B-6	1'-9 3/8"	1'-2 3/16"	1'-6 1/16"	722.41	720.97	719.18	717.82
	B-7	1'-9 1/4"	1'-1 1/16"	1'-6 1/8"	722.82	721.43	719.70	718.38
	B-8	1'-8 3/8"	1'-0 5/8"	1'-6"	723.22	721.88	720.22	718.94
	B-9	1'-8 3/16"	0'-11 1/8"	1'-5 1/4"	723.63	722.33	720.73	719.51
	B-10	1'-7 1/16"	0'-11 1/16"	1'-5 1/16"	723.58	722.32	720.79	719.59

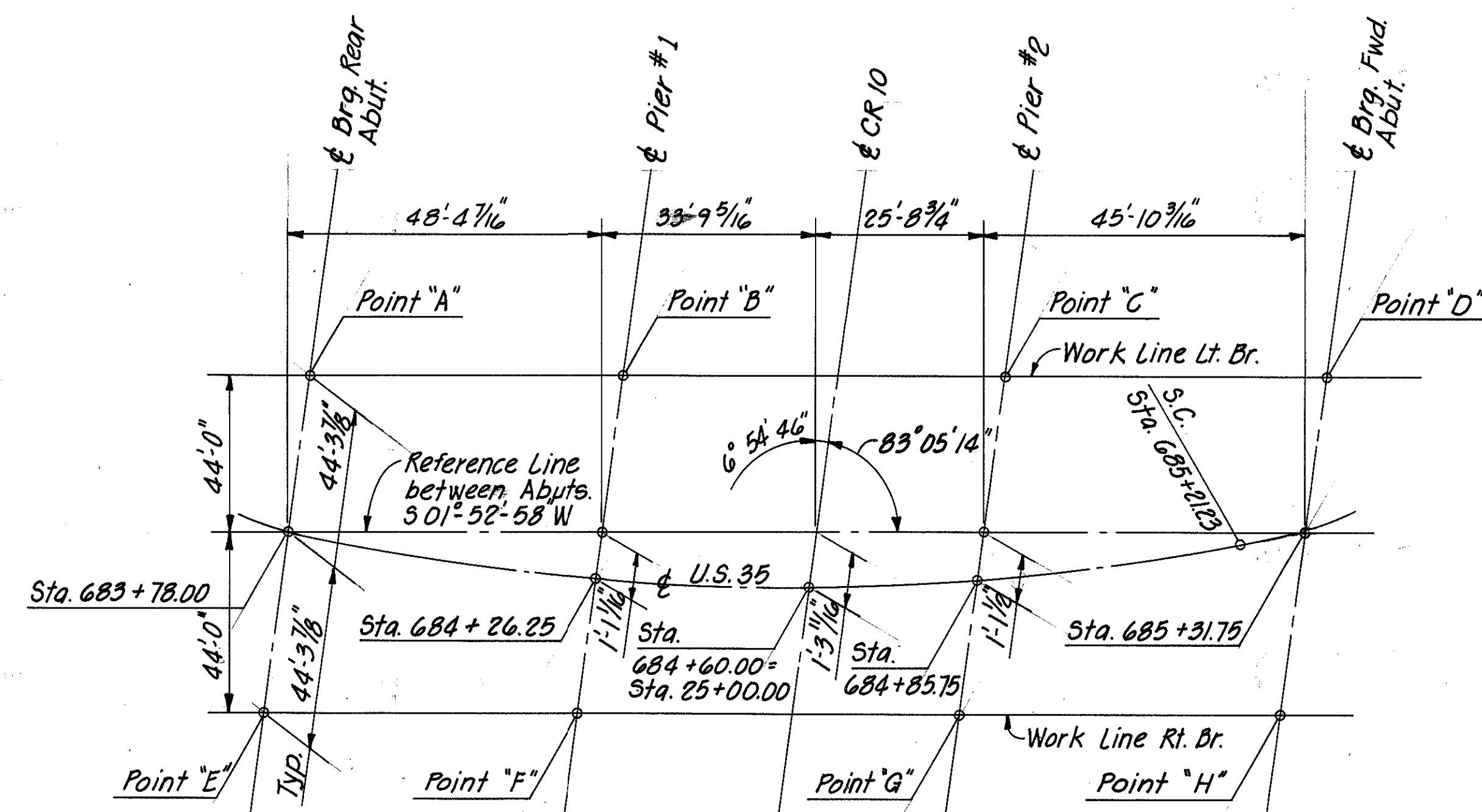
DEFLECTION & CAMBER TABLE										
BEAMS	DESCRIPTION	①	②	③	④	⑤	⑥	⑦	⑧	⑨
B-1 thru B-10	D.L. Steel Beam	1/32	1/32	1/32	1/32	1/16	1/32	1/32	1/32	1/32
	Remaining D.L.	3/8	7/16	3/16	7/32	9/16	11/32	3/16	3/8	5/16
	Total Camber	7/16	1/2	1/4	1/4	5/8	3/8	1/4	7/16	3/8

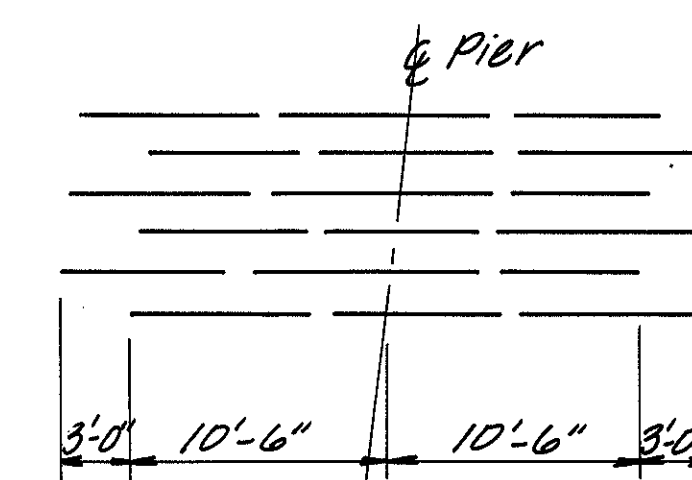
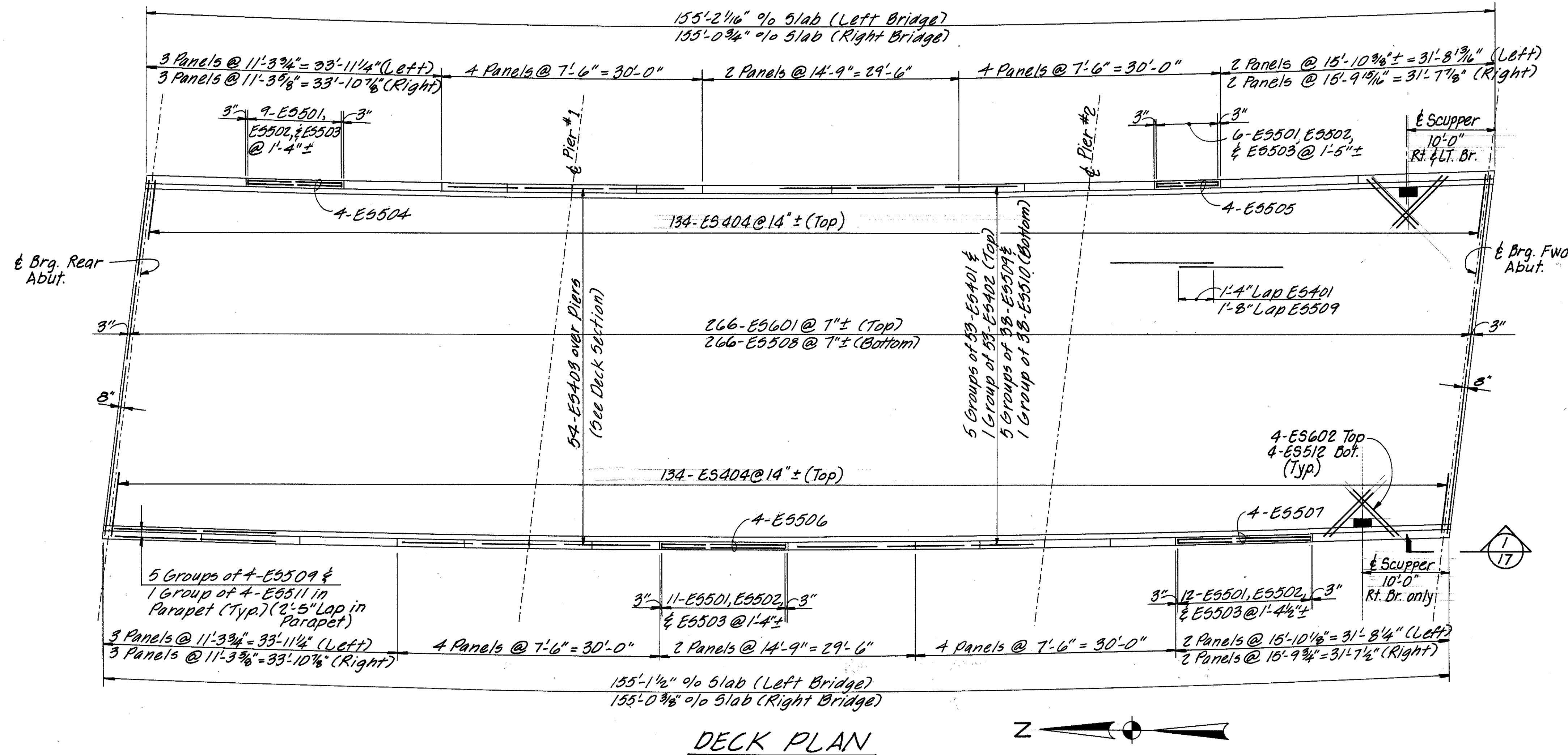


SPLICE DETAIL NO. 2

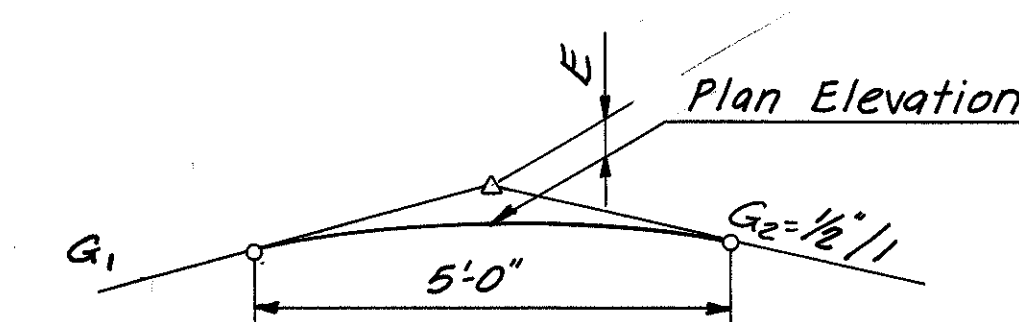


SPLICE DETAIL NO. 1





STAGGER OF E5403
BARS OVER PIERS

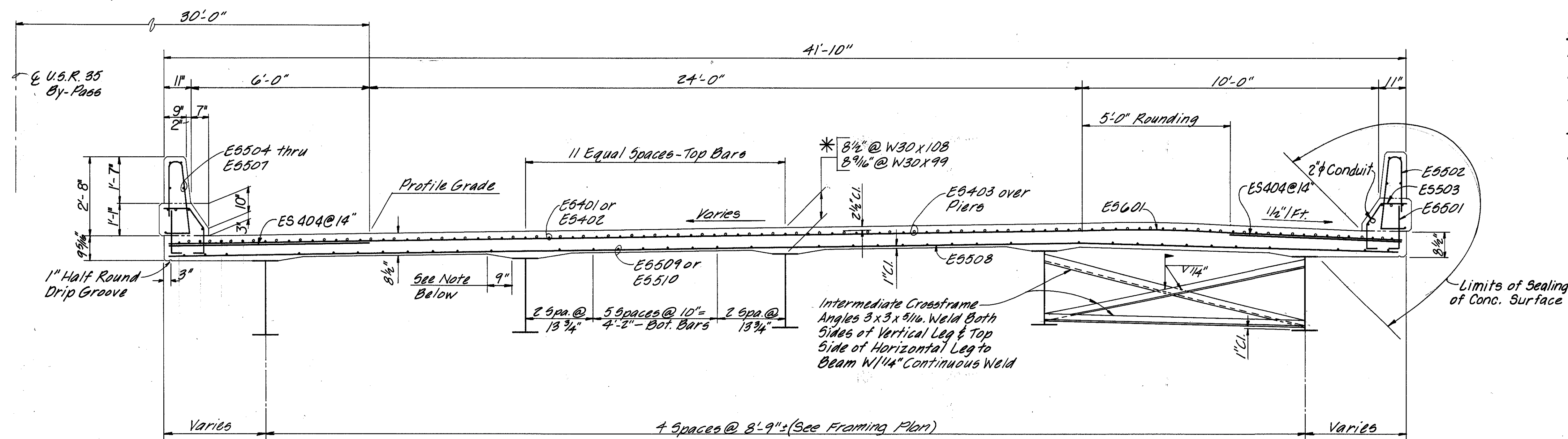


ROUNDING DETAIL

STATION	G ₁	E
683+75	2.17%	1 1/2
685+21	6.00%	3/4
685+34	6.00%	3/4

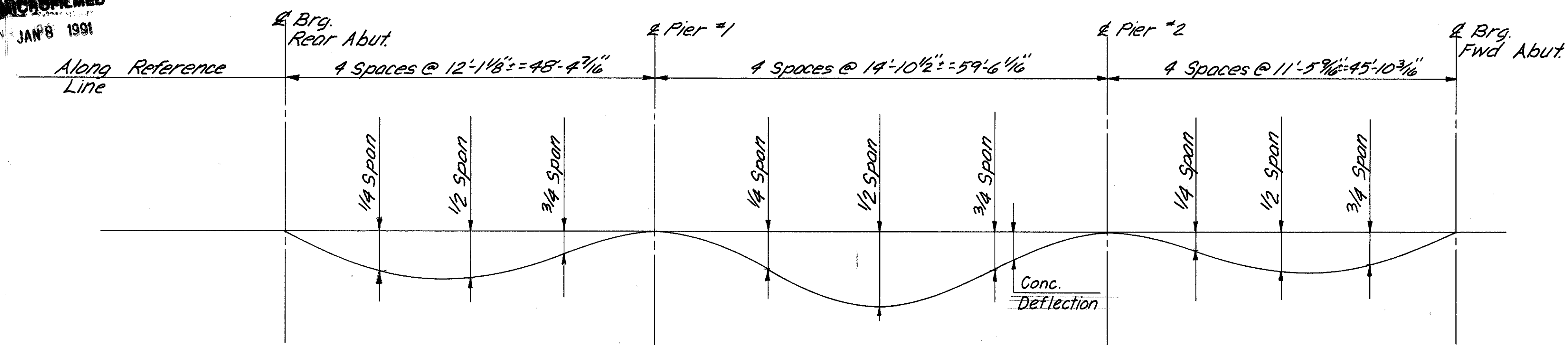
NOTES:

1. See Sheet 2/22 for General Notes & Quantities.
2. See Sheets 21/22 & 22/22 for Rein^d Steel Details.
3. See Std. Dwg. BR-1 for Additional Bridge Railing Details.
4. See Sheet 17/22 for Additional Deck Details.
5. Welded Attachment of Supports for Conc. Deck Finishing Machine May be Made to Areas of the Fascia Stringer Flanges Designated "Compression." Attachments Shall Not be Made to Areas Designated "Tension." Fillet Welds to Compression Flanges Shall be Not Closer than 1" From Edge of Flange, be Not More than 2" long, & be Not Smaller than the Min. Size Req'd. by AASHTO.

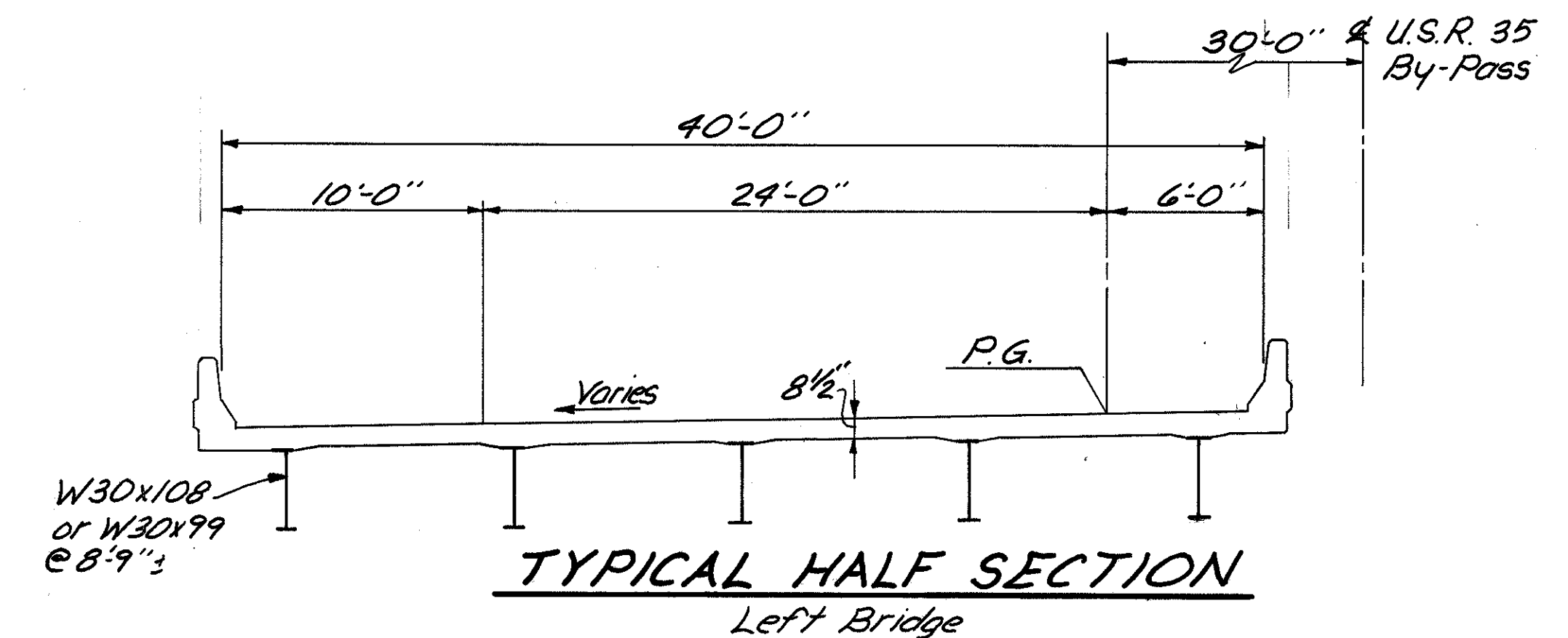


TRANSVERSE DECK SECTION
(Right Bridge Shown)

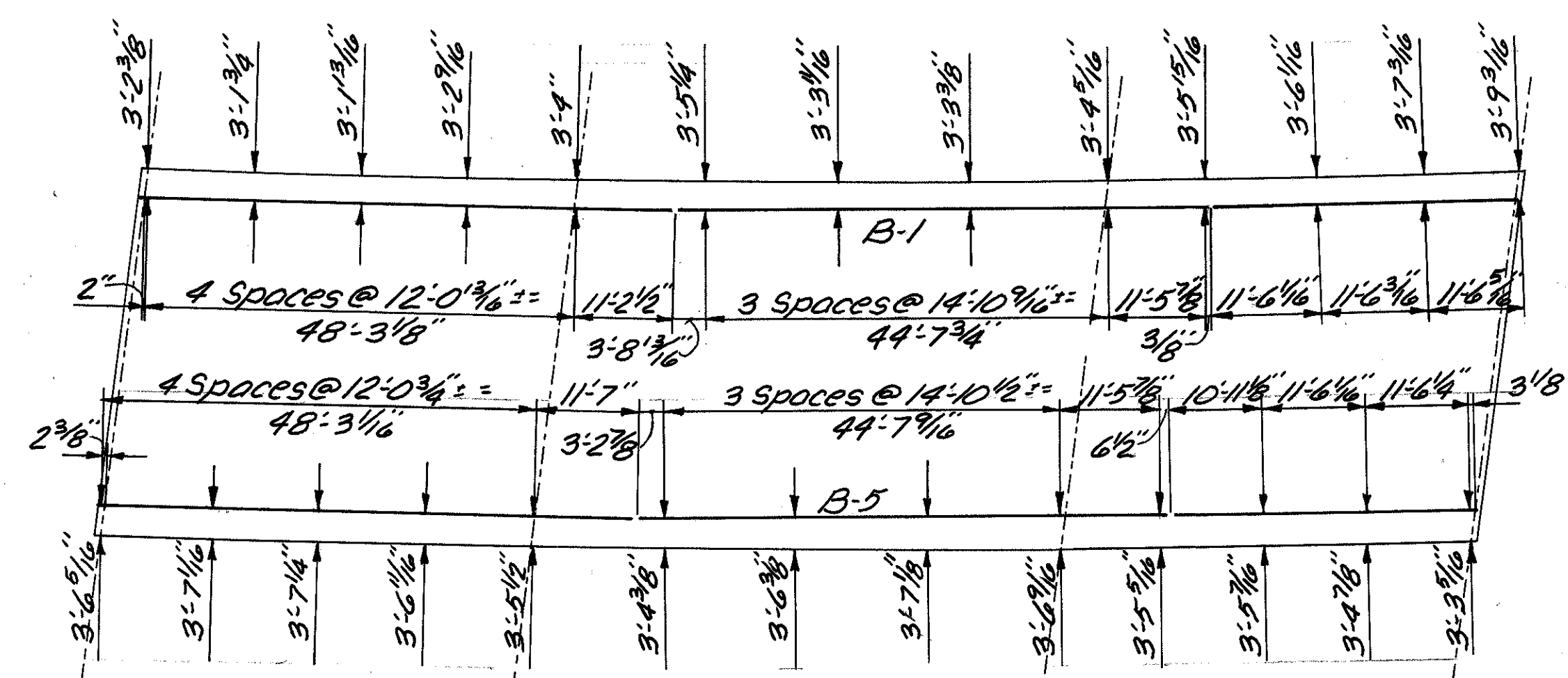
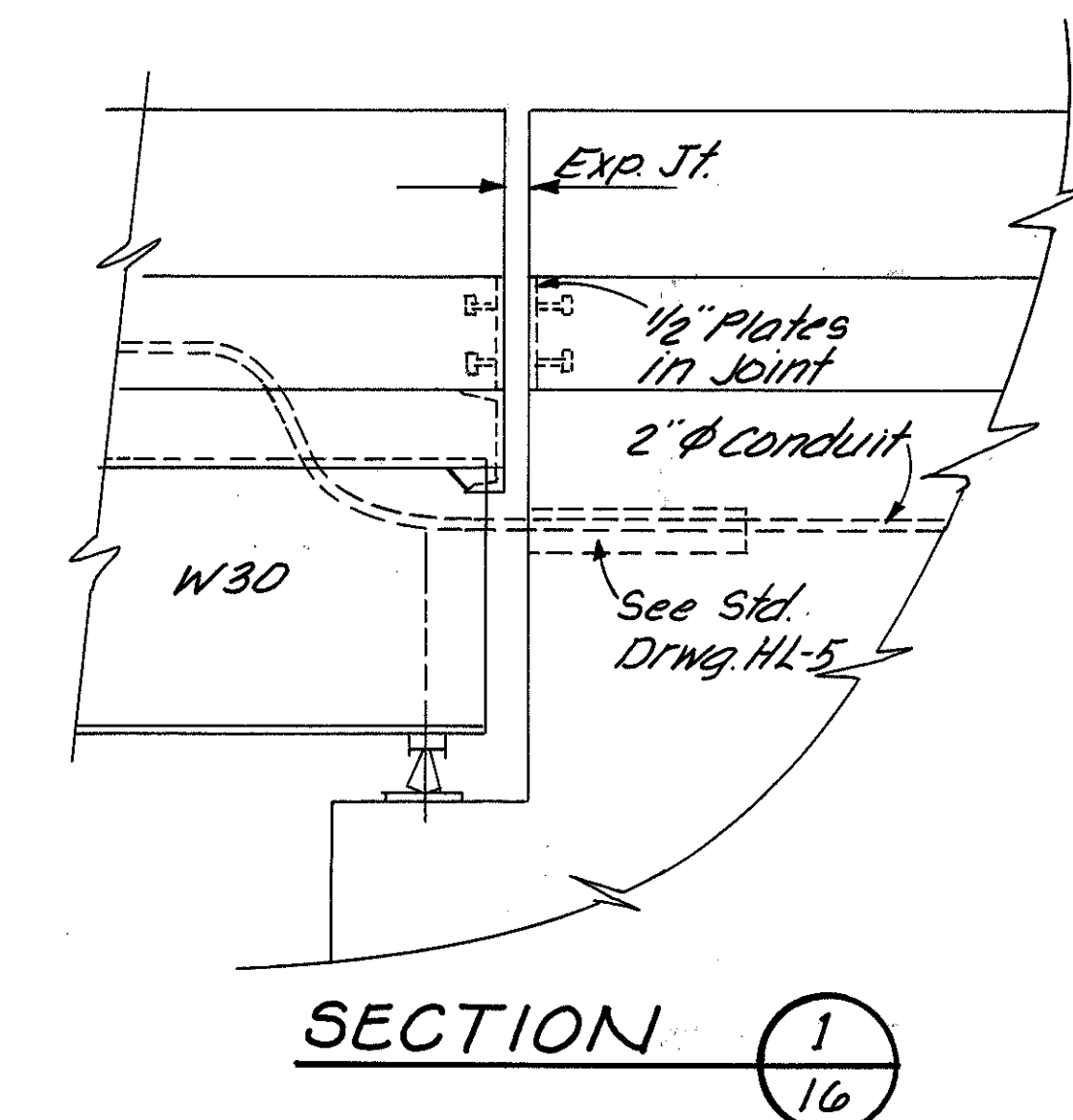
* The Distance Shown from Top of Deck Slab to Top of Steel Beam is the Design Dim. The Quantity of Deck Conc. to be Paid for Shall be Based on this Dim, Even though Deviation from it may be Necessary Because the Top Flange of the Beam May Not Have the Exact Camber or Conformation Req'd. to Place it Parallel to the Finish Grade.



SCREED DIAGRAM & TABLE

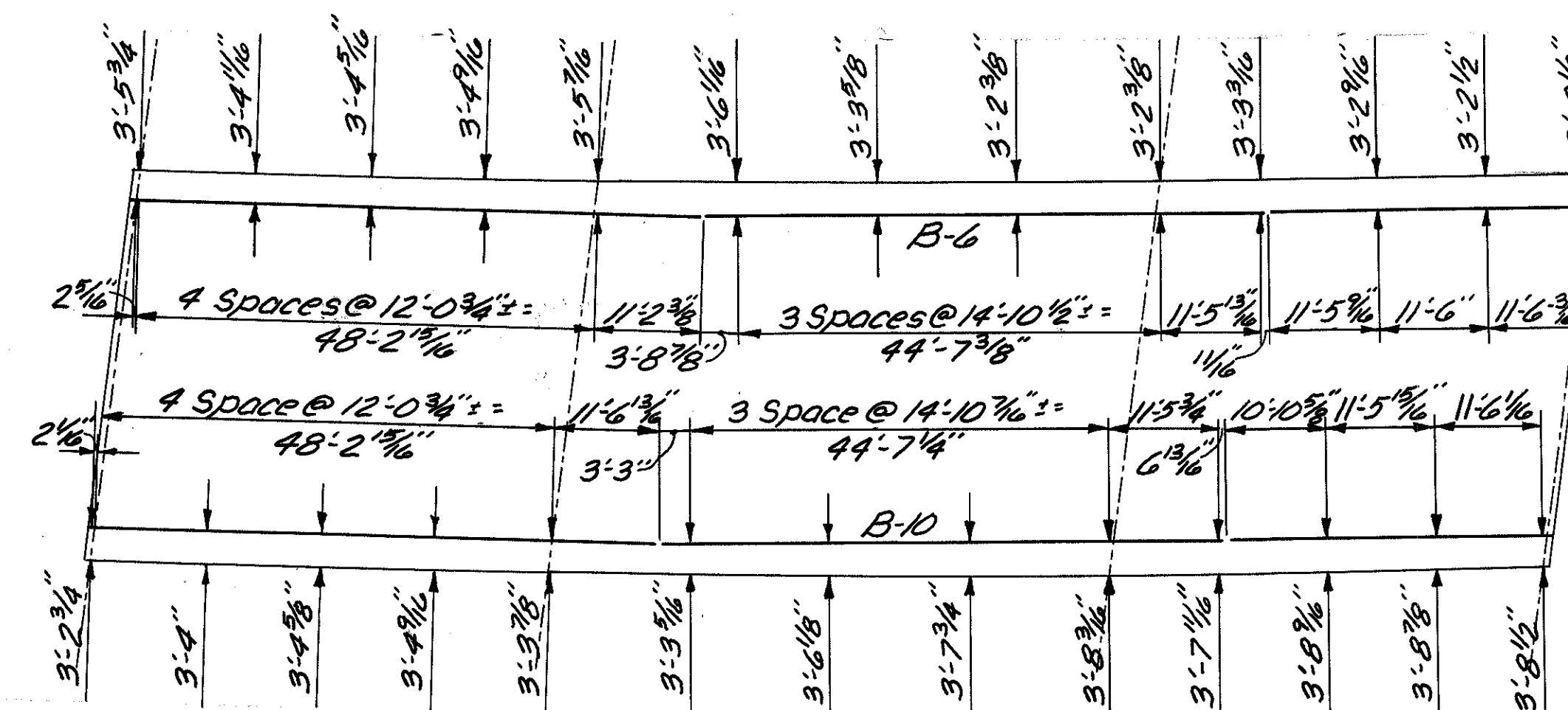


		Location	2 Brg	1/4	1/2	3/4	2 Pier	1/4	1/2	3/4	2 Pier	1/4	1/2	3/4	2 Brg
LEFT BRIDGE	Lt Gutter	Station	683+8382	683+9617	684+0852	684+2089	684+3327	684+4556	684+6386	684+7919	684+9454	685+0640	685+1829	685+3020	685+4210
		Profile Grade	722.316	721.949	721.582	721.214	720.846	720.391	719.936	719.480	719.023	718.670	718.316	717.962	717.600
		Gutter Elevation (63'-5"2ft)	721.003	720.574	720.144	719.714	719.283	718.752	718.219	717.686	717.152	716.740	716.326	715.957	715.600
		Cast-in-Place Conc. Deflection	0	.030	.036	.017	0	.028	.049	.029	0	.013	.031	.026	0
		Screed Elevation	721.00	720.60	720.18	719.73	719.28	718.78	718.27	717.72	717.15	716.75	716.36	715.98	715.60
	Rt Gutter	Station	683+8023	683+9239	684+0457	684+1674	684+2893	684+4296	684+5899	684+7404	684+8909	685+0072	685+1236	685+2402	685+3566
		Profile Grade	722.423	722.062	721.699	721.337	720.975	720.528	720.080	719.633	719.185	718.839	718.493	718.146	717.799
		Gutter Elevation (24'-7"2ft)	722.634	722.282	721.929	721.577	721.225	720.790	720.355	719.919	719.484	719.147	718.810	718.471	718.124
		Cast-in-Place Conc. Deflection	0	.030	.036	.017	0	.028	.049	.029	0	.013	.031	.026	0
		Screed Elevation	722.63	722.31	721.97	721.59	721.23	720.82	720.40	719.95	719.48	719.16	718.84	708.50	718.12
RIGHT BRIDGE	Lt Gutter	Station	683+7581	683+8777	683+9972	684+1168	684+2363	684+3535	684+5307	684+6778	684+8249	684+9384	685+0519	685+1655	685+2794
		Profile Grade	722.555	722.199	721.843	721.488	721.133	720.694	720.257	719.819	719.382	719.044	718.706	718.368	718.030
		Gutter Elevation (24'-7"Rt)	722.319	721.956	721.593	721.230	720.867	720.420	719.973	719.526	719.080	718.735	718.391	718.046	717.702
		Cast-in-Place Conc. Deflection	0	.030	.036	.017	0	.028	.049	.029	0	.013	.031	.026	0
		Screed Elevation	722.32	721.99	721.63	721.25	720.87	720.45	720.02	719.56	719.08	718.75	718.42	718.07	717.71
	Rt Gutter	Station	683+7242	683+8422	683+9602	684+0781	684+1958	684+3408	684+4857	684+6303	684+7748	684+8863	684+9977	685+1091	685+2200
		Profile Grade	722.656	722.305	721.954	721.603	721.253	720.821	720.391	719.960	719.530	719.199	718.867	718.536	718.200
		Gutter Elevation (63'-5"Rt)	723.518	723.201	722.885	722.570	722.254	721.866	721.478	721.090	720.703	720.404	720.106	719.807	719.500
		Cast-in-Place Conc. Deflection	0	.030	.036	.017	0	.028	.049	.029	0	.013	.031	.026	0
		Screed Elevation	723.52	723.23	722.92	722.59	722.25	721.89	721.53	721.12	720.70	720.42	720.14	719.83	719.51



BEAM OFFSETS

Left Bridge

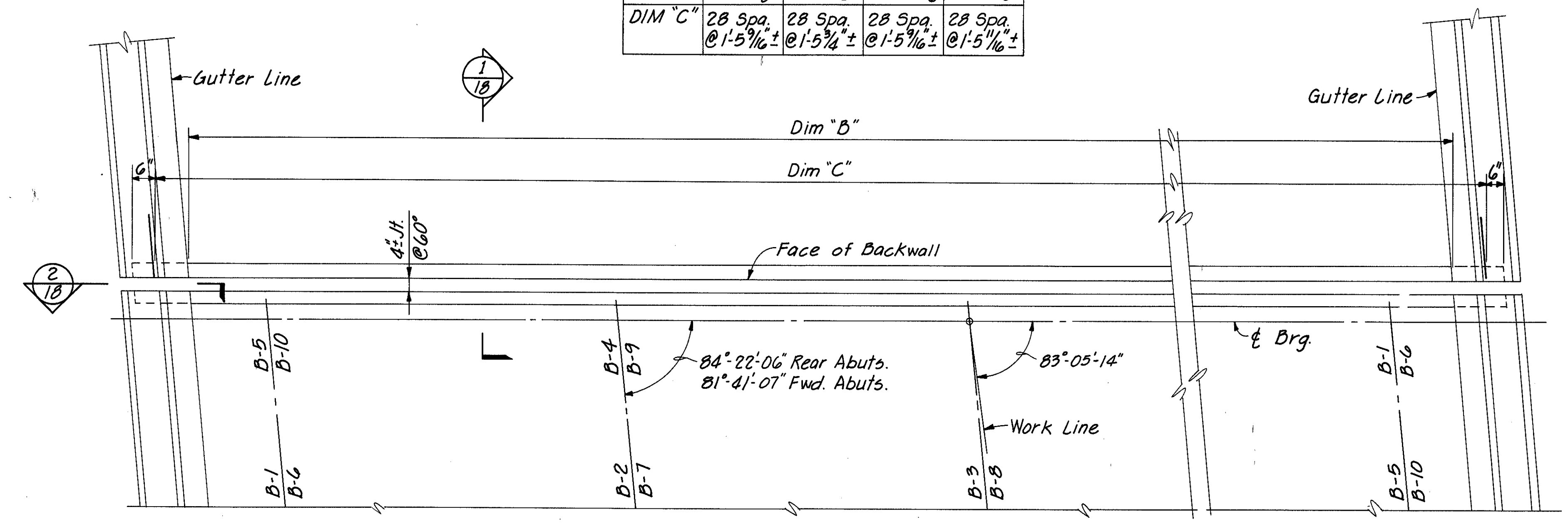


BEAM OFFSETS

STANDARD SHEET
JAN 8 - 1981

JAC-35-11.46

	LEFT		RIGHT	
	REAR	FORWARD	REAR	FORWARD
DIM "B"	38'-11 1/8"	39'-4 3/16"	38'-11 1/8"	39'-3 3/16"
DIM "C"	28 Spa. @ 1'-5 9/16" ±	28 Spa. @ 1'-5 3/4" ±	28 Spa. @ 1'-5 9/16" ±	28 Spa. @ 1'-5 1/16" ±



EXPANSION JOINT PLAN AT ABUTMENTS

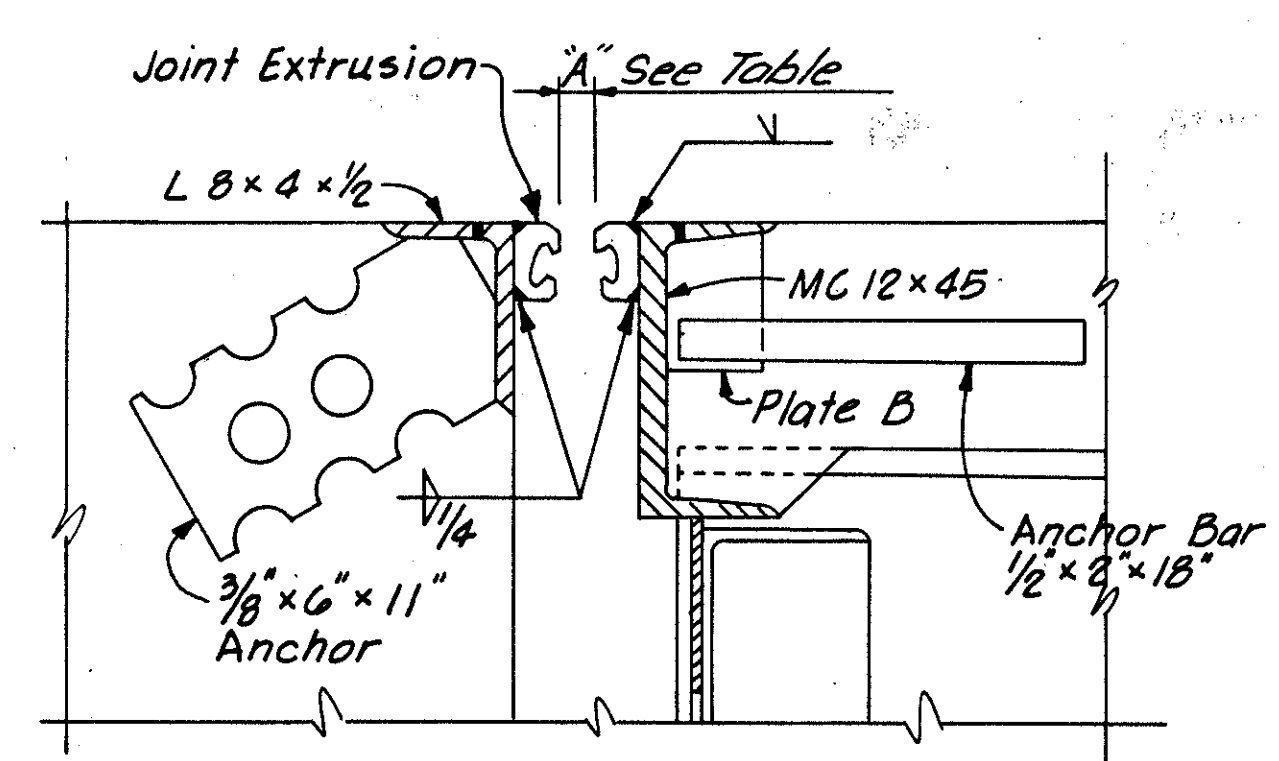
DIMENSION "A"							
Temperature	30°F	40°F	50°F	60°F	70°F	80°F	90°F
Rear Abutment	1 5/16"	1 1/8"	1 3/4"	1 1/16"	1 9/16"	1 1/2"	1 1/16"
Fwd. Abutment	1 11/16"	1 5/8"	1 5/8"	1 1/16"	1 1/2"	1 1/2"	1 1/16"

Do not install strip seal when temperature exceed 80°F.

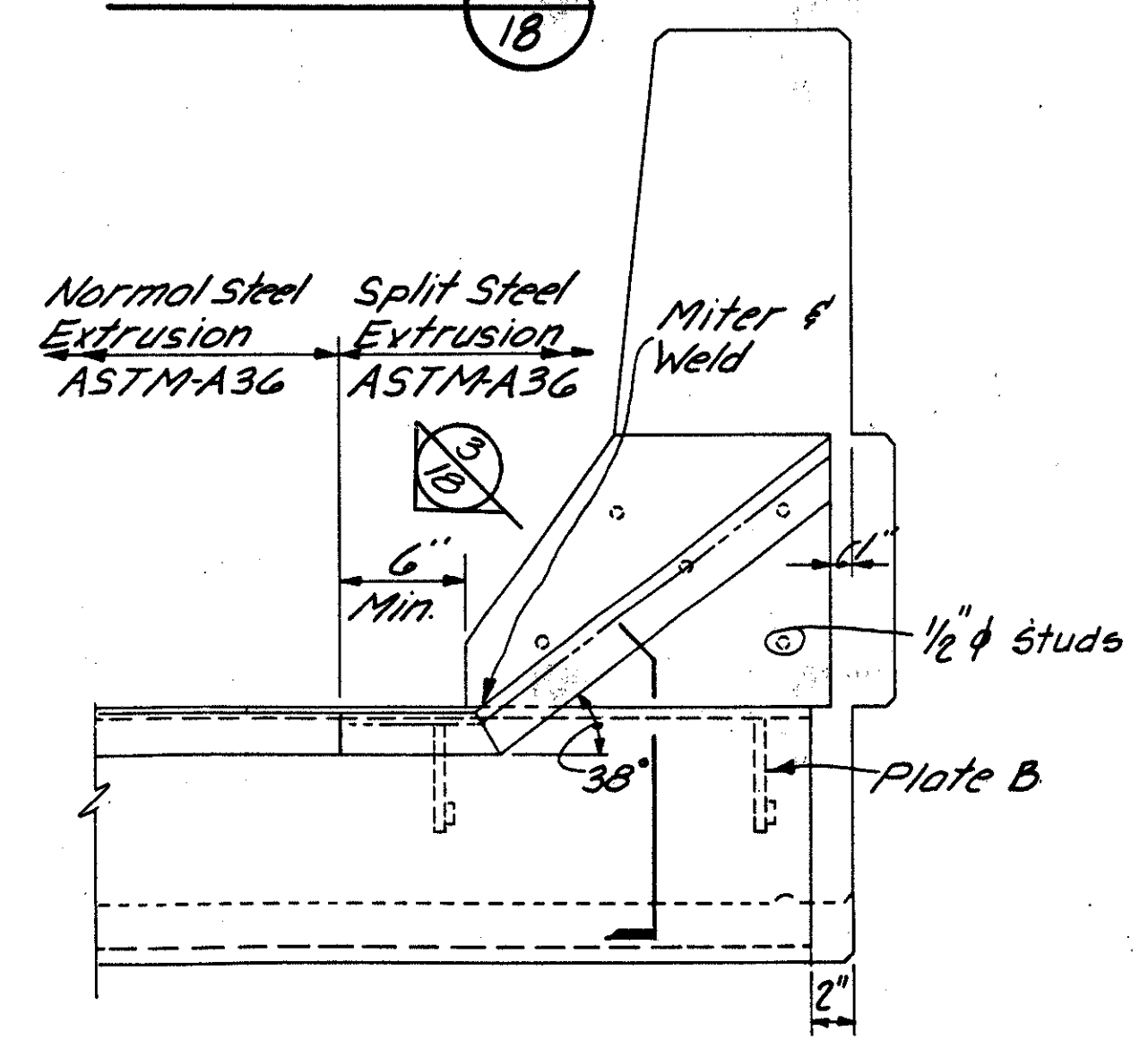
CONSTRUCTION PROCEDURE

1. ABUTMENT BACKWALL CONCRETE SHALL NOT BE PLACED UNTIL AFTER SUPERSTRUCTURE CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.
2. PLACE BACKWALL CONCRETE DURING STABLE OR RISING AMBIENT TEMPERATURES AND CONCLUDE PLACEMENT AT OR IMMEDIATELY BEFORE THE DAY'S PEAK AMBIENT TEMPERATURE.
3. NOT MORE THAN FOUR HOURS PRIOR TO THE DAY'S PEAK AMBIENT TEMPERATURE, SET ABUTMENT EXPANSION JOINT WIDTH TO DIMENSION "A" WHICH SHALL BE DETERMINED FROM TABLE.
4. LOOSEN TEMPORARY JOINT ARMOR BOLTS AFTER INITIAL SET OF CONCRETE, PREFERABLY NOT LATER THAN TWO HOURS AFTER CONCLUSION OF CONCRETE PLACEMENT.

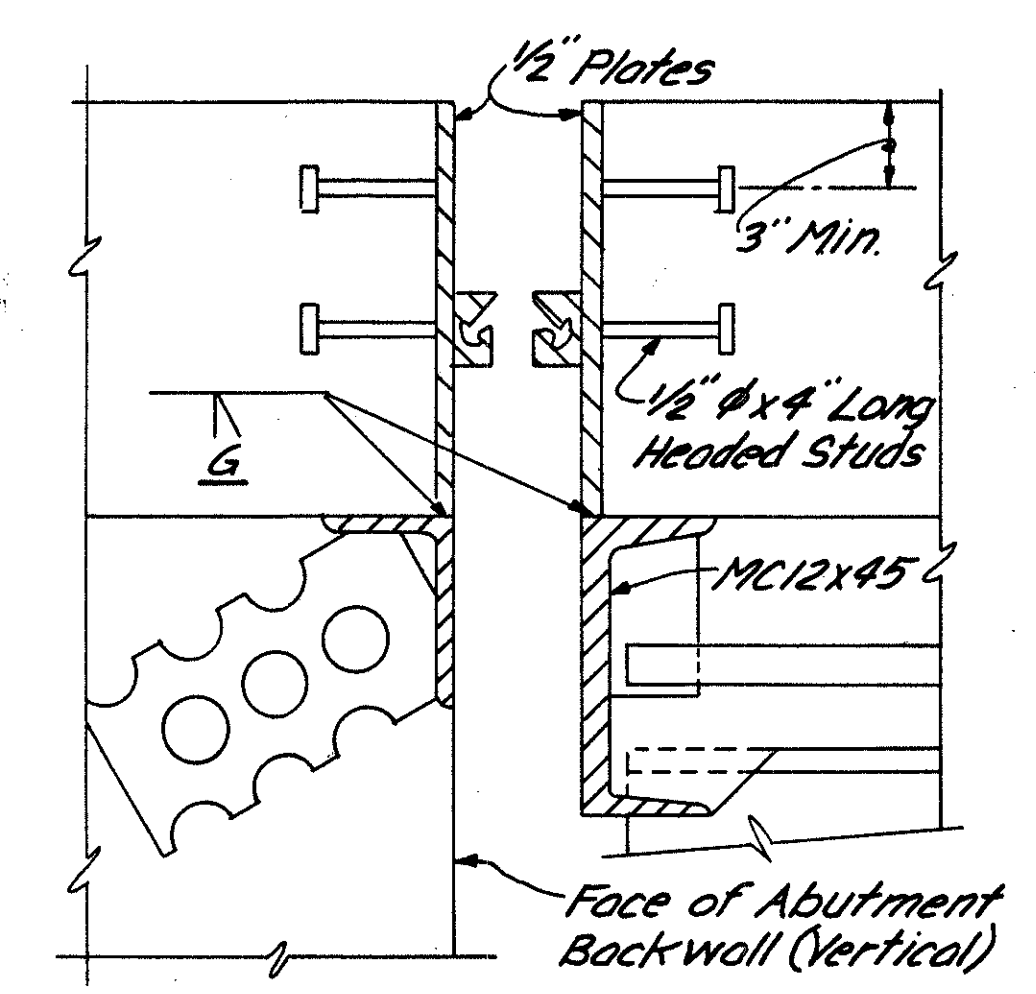
TABLE C (PHYSICAL PROPERTIES OF SEAL ELEMENT)		
PROPERTY	REQUIREMENT	ASTM METHOD
TENSILE STRENGTH, MIN. R.S.L.	2000	D412
ELONGATION AT BREAK, MIN. PERCENT	250	D412
HARDNESS, TYPE A DUROMETER	50 MIN. 65 MAX.	D2240 (MODIFIED)
OVEN AGING, TO HR. AT 212°F TENSILE STRENGTH, LOSS, MAX. ELONGATION, LOSS, MAX. HARDNESS, TYPE A DUROMETER (POINTS CHANGE)	20 PERCENT 20 PERCENT 0 TO +10	D573
OZONE RESISTANCE 20 PERCENT STRAIN, 300 PPHM, IN AIR AT 104°F (WIPE WITH TOLUENE TO REMOVE SURFACE CONTAMINATION)	NO CRACKS	D1149



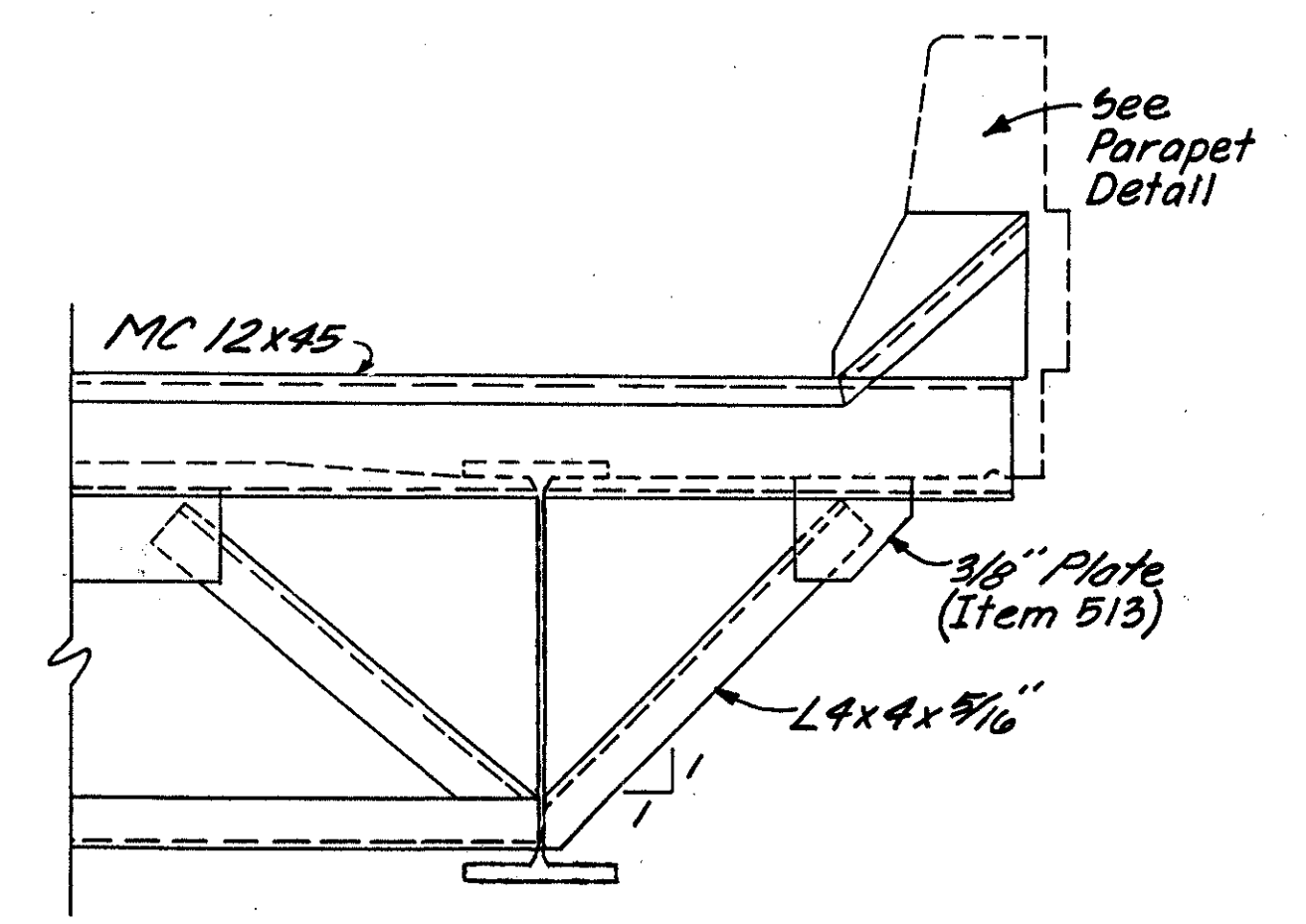
SECTION 1/18



PARAPET DETAIL



SECTION 3/18



SECTION 2/18

STRIP SEAL NOTES

REFERENCE: REFERENCE SHALL BE MADE TO STANDARD DRAWINGS EXJ-2-81 FOR ADDITIONAL DETAILS INCLUDING WELDING REQUIREMENTS AND TEMPORARY SUPPORT BARS.

MATERIALS: STRUCTURAL STEEL FOR THE STRIP SEAL EXPANSION-CONTRACTION JOINT SHALL CONFORM TO ASTM A588 OR A36 WITH SYSTEM B FIELD PAINT ON EXPOSED STEEL SURFACES. FIELD PAINT SHALL CONSIST OF TWO PRIME COATS AND ONE FINISH COAT

THE PREFORMED STRIP SEAL SHALL BE EXTRUDED POLYCHOROPRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM D2628. DUE TO THE CONFIGURATIONS OF THE STRIP SEAL, THE RECOVERY TESTS ARE NOT APPLICABLE. PHYSICAL PROPERTIES SHALL MEET THE REQUIREMENTS SPECIFIED IN TABLE "C" THIS SHEET.

LUBRICANT-ADHESIVE USED TO INSTALL THE PREFORMED STRIP SEALS SHALL BE A POLYURETHANE AND HYDROCARBON SOLVENT MIXTURE AS SPECIFIED BY THE SEAL MANUFACTURER (UNLESS OTHERWISE APPROVED BY THE DIRECTOR). IT SHALL HAVE SUITABLE CONSISTENCY AT THE TEMPERATURE AT WHICH THE SEALS ARE INSTALLED AND SHALL BE COMPATIBLE WITH THE SEALS AND THE STEEL EXTRUSIONS.

PREPARATIONS FOR INSTALLATION: TO AVOID THE SUBSEQUENT CONTAMINATION OF PREPARED SURFACES, ALL SURFACES OF ELASTOMERIC STRIP SEALS SHALL BE CLEANED WITH METHYL ETHYL KETONE (MEK), TOLUENE (T) OR OTHER APPROVED SOLVENT USING CLEAN DISPOSABLE CLOTHS.

THE BONDING SURFACES OF THE STEEL EXTRUSIONS (THE INTERIOR OF THE ANCHOR GROOVES) SHALL BE PREPARED TO GRADE SA 3, ASTM D2200. PREPARATION SHALL BE ACCOMPLISHED NOT MORE THAN 24 HOURS PRIOR TO ADHESIVE BONDING.

INSTALLATION: IMMEDIATELY PRIOR TO APPLICATION OF LUBRICANT-ADHESIVE, BONDING SURFACES SHALL BE CLEAN, DRY AND WARMER THAN -45°F AND THEY SHALL BE MAINTAINED AT OR ABOVE THIS TEMPERATURE UNTIL THE ADHESIVE HAS CURED. LUBRICANT-ADHESIVE SHALL BE APPLIED LIBERALLY TO BOTH STEEL AND ELASTOMERIC BONDING SURFACES USING A STIFF BRUSH IF NECESSARY TO ACHIEVE A COMPLETE AND RELATIVELY UNIFORM COATING. THEN THE BULBED EDGES OF THE ELASTOMERIC SEAL SHALL BE INSERTED INTO THE ANCHOR GROOVES. AFTER INSTALLATION, EXCESS LUBRICANT-ADHESIVE SHALL BE REMOVED FROM THE EXPOSED SEAL SURFACES.

MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE LINEAR FOOT OF SEALED JOINT SYSTEM, MEASURED HORIZONTALLY ALONG THE JOINT CENTERLINES AND BETWEEN THE OUTER LIMITS OF THE FABRICATED JOINT, FURNISHED AND PLACED, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT IN PLACE, WHICH INCLUDES THE JOINT ARMOR, ANCHORING DEVICES, TEMPORARY SUPPORTS AND END CROSSFRAME GUSSET PLATES. PAYMENT SHALL BE MADE PER LINEAR FEET FOR ITEM 516 "STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS."

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INCORPORATED
ARCHITECTS ENGINEERS PLANNERS
111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

18/22

EXPANSION JOINT DETAILS
BRIDGE NO. JAC-35-1297 1/4
OVER COUNTY RD. 10

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE	REVISION
GTW	MHW	---	WBS	GTW 5/7/86	

Mark	Number	Length	Weight	Shape	Left Bridge		Right Bridge	
					Rear	Forward	Rear	Forward
EA801	110	5'-1"	1493	Bt.	28	27	28	27
EA601	44	3'-9"	248	Bt.	11	11	11	11
EA602	8	3'-8"	44	Bt.	2	2	2	2
EA603	8	3'-8"	44	Bt.	2	2	2	2
EA604	8	3'-7"	43	Bt.	2	2	2	2
EA605	20	3'-7"	108	Bt.	2	8	2	8
EA606	12	4'-3"	77	Str.	6		6	
EA607	154	6'-11"	1601	Bt.	39	39	38	38
EA608	154	5'-5"	1254	Bt.	39	39	38	38
EA609	112	9'-1"	1528	Bt.	39	39	17	17
EA610	42	9'-5"	594	Bt.			21	21
EA501	36	3'-0"	113	Str.	9	9	9	9
EA502	36	5'-3"	197	Bt.	9	9	9	9
EA503	32	12'-8"	423	Str.	8	8	8	8
EA504	64	4'-7"	306	Str.	16	16	16	16
EA505	52	2'-8"	145	Bt.	10	16	10	16
EA506	64	4'-4"	289	Str.	16	16	16	16
EA507	8	22'-9"	190	Str.	8			
EA508	16	18'-5"	307	Str.	8			8
EA509	8	18'-11"	158	Str.		8		
EA510	16	22'-6"	375	Str.		8	8	
EA511	8	18'-9"	156	Str.			8	
EA512	8	22'-11"	191	Str.				8
EA513	16	9'-8"	161	Str.	8		8	
EA514	16	8'-8"	145	Str.		8		8
EA515	32	4'-10"	161	Bt.	8	8	8	8
AB01	16	30'-0"	1282	Str.			8	8
AB02	8	20'-9"	443	Str.			8	
AB03	8	21'-2"	452	Str.				8
AB04	8	11'-0"	235	Str.			8	
AB05	8	9'-11"	212	Str.			8	
AB06	8	8'-11"	191	Str.				8
AB07	8	10'-8"	228	Str.				8
AB08	8	6'-7"	141	Bt.			4	4

Mark	Number	Length	Weight	Shape	Left Bridge		Right Bridge	
					Rear	Forward	Rear	Forward
A601	11	10'-8"	176	Str.	11			
A602	16	12'-10"	308	Bt.	7	9		
A603	58	12'-9"	1111	Bt.			29	29
A604	58	8'-10"	769	Bt.			29	29
A605	4	14'-6"	87	Str.		4		
A606	18	8'-4"	225	Bt.	9	9		
A607	2	11'-5"	34	Str.	2			
A608	2	11'-8"	35	Str.		2		
A609	5	3'-8"	28	Str.	5			
A610	10	14'-2"	213	Bt.	5	5		
A611	4	9'-10"	59	Bt.	2	2		
A612	2	6'-0"	18	Str.	2			
A613	5	3'-7"	27	Str.		5		
A614	2	6'-11"	21	Str.		2		
A615	5	8'-11"	67	Str.			5	
A616	2	4'-7"	14	Str.			2	
A617	26	9'-2"	358	Bt.			14	12
A618	4	3'-5"	21	Str.			2	2
A619	5	7'-9"	58	Str.			5	
A620	26	9'-4"	364	Bt.			14	12
A621	27	9'-6"	385	Bt.			14	13
A622	4	7'-6"	45	Str.				4
A623	5	9'-3"	69	Str.				5
A624	2	5'-3"	16	Str.				2
A625	2	3'-10"	12	Bt.	1	1		
A626	7	11'-2"	117	Str.		7		
A501	160	1'-6"	250	Str.	40	40	40	40
A502	80	3'-6"	292	Str.	20	20	20	20
A503	23	8'-4"	200	Bt.	10	13		
A504	41	8'-8"	371	Bt.	9	16	16	
A505	33	7'-2"	245	Bt.	20		13	
A506	43	11'-8"	523	Bt.	22	21		
A507	13	22'-9"	308	Str.	13			
A508	24	18'-5"	461	Str.	13			11
A509	27	7'-6"	211	Bt.		14		13
A510	11	18'-11"	217	Str.		11		
A511	24	22'-6"	563	Str.		13	11	
A512	58	6'-8"	404	Bt.			29	29
A513	11	18'-9"	215	Str.			11	
A514	13	22'-11"	311	Str.				13
A515	16	9'-10"	164	Bt.				16
A516	24	14'-8"	367	Str.	6	6	6	6
A517	6	7'-0"	44	Str.	2	2	2	
A518	24	7'-7"	190	Bt.	6	6	6	6
A519	2	5'-11"	12	Bt.	1		1	
A520	5	6'-7"	35	Bt.	1	1	1	2
A521	4	7'-3"	30	Bt.	1	1	1	1
A522	2	7'-11"	17	Bt.	1		1	
A523	2	8'-7"	18	Bt.	1		1	
A524	8	8'-0"	67	Str.	2	2	2	2
A525	38	8'-6"	337	Str.	10	12	8	8

Mark	Number	Length	Weight	Shape	Left Bridge		Right Bridge	
					Rear	Forward	Rear	Forward
A526	7	10'-5"	76	Str.	7			
A527	12	6'-0"	75	Str.	4	2	4	2
A528	12	11'-8"	146	Str.	6		6	
A529	5	3'-8"	19	Str.	5			
A530	23	7'-6"	180	Str.	6	6	11	
A531	3	6'-5"	20	Bt.	1	1	1	
A532	2	7'-5"	15	Bt.	1		1	
A533	2	8'-5"	18	Bt.	1		1	
A534	12	10'-8"	134	Str.		6		6
A535	2	7'-1"	15	Bt.		1		1
A536	3	7'-7"	24	Bt.		1		2
A537	2	5'-0"	10	Str.		2		
A538	5	3'-7"	19	Str.		5		
A539	1	8'-1"	8	Bt.		1		
A540	1	7'-9"	8	Bt.		1		
A541	2	6'-11"	14	Bt.		1		1
A542	2	6'-11"	14	Str.		2		
A543	5	8'-8"	45	Str.			5	
A544	2	4'-7"	10	Str.			2	
A545	4	3'-5"	14	Str.			2	2
A546	4	7'-3"	30	Str.				4
A547	65	6'-6"	441	Str.	16	14	14	21
A548	1	6'-3"	7	Bt.				1
A549	5	9'-0"	47	Str.				5
A550	2	5'-3"	11	Str.				2
A551	36	4'-4"	163	Bt.	10	9	8	9
A552	7	10'-11"	80	Str.		7		

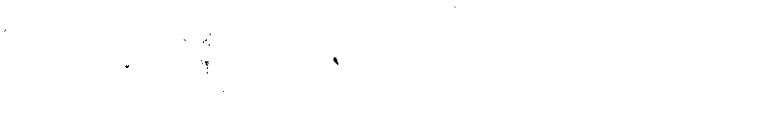
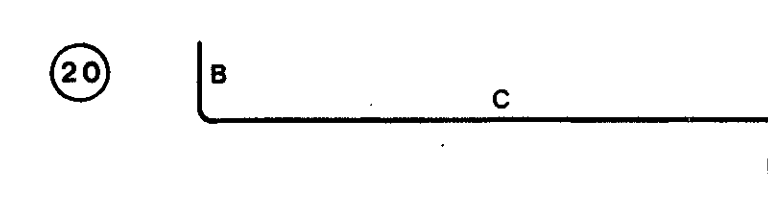
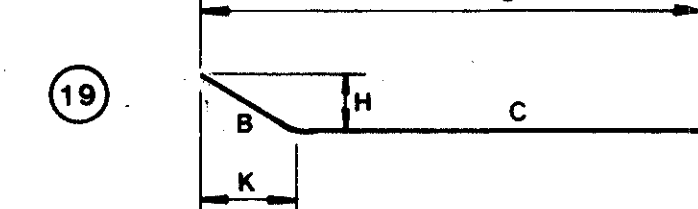
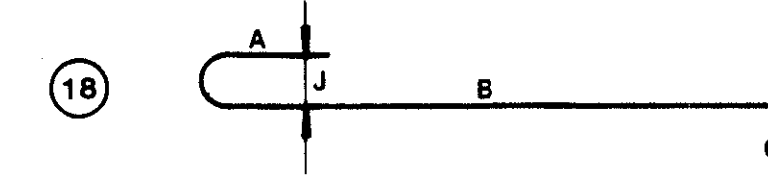
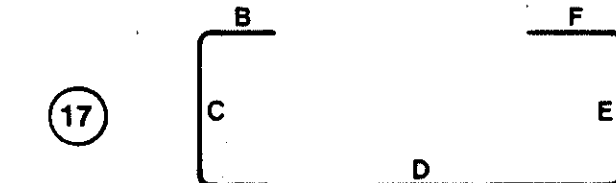
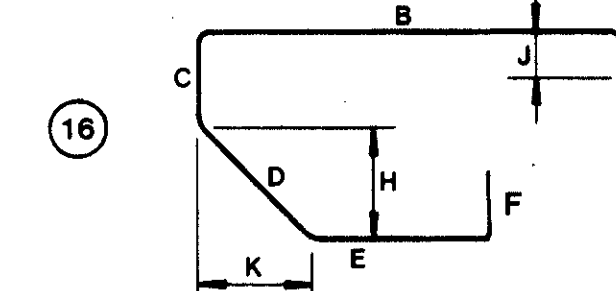
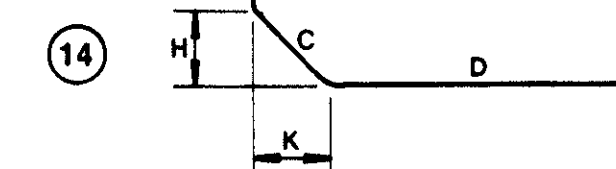
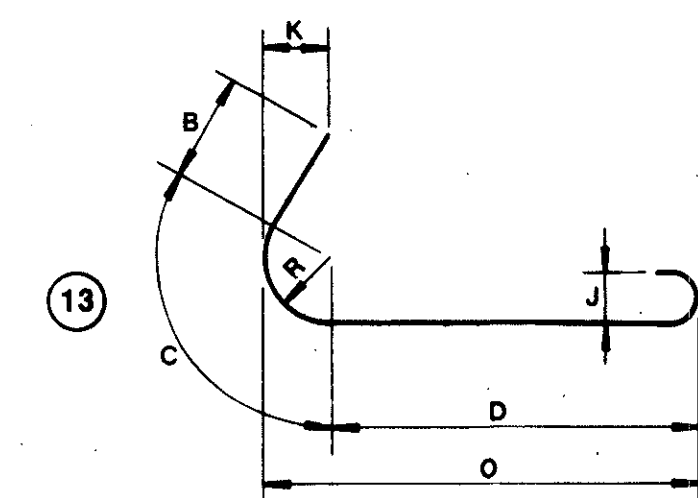
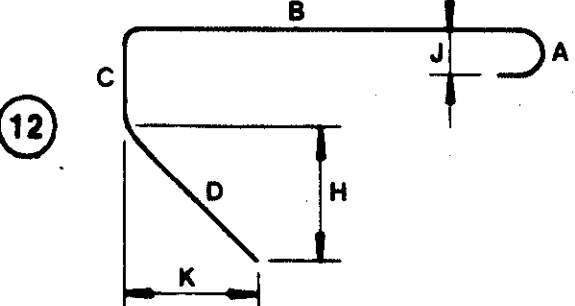
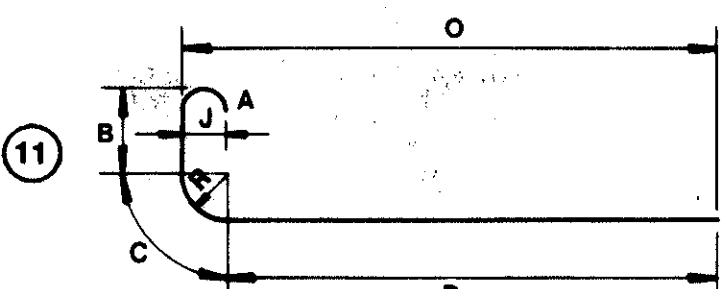
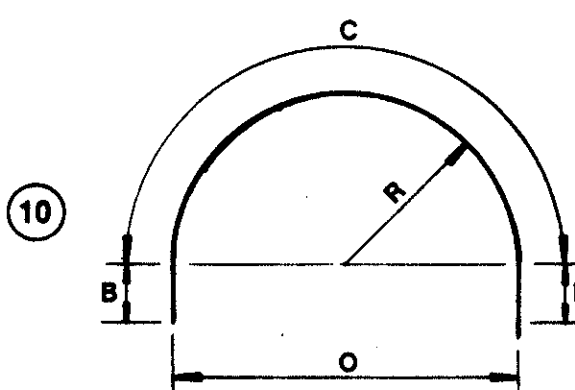
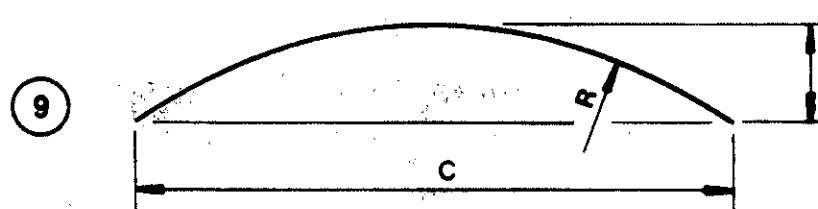
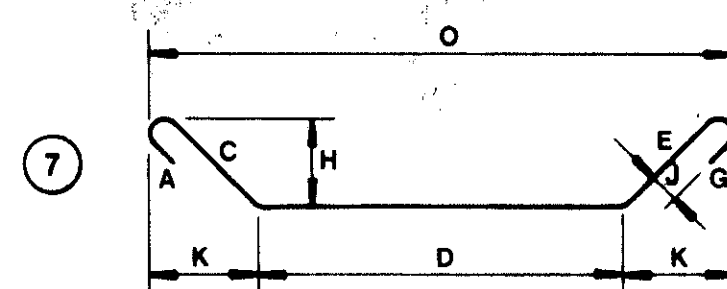
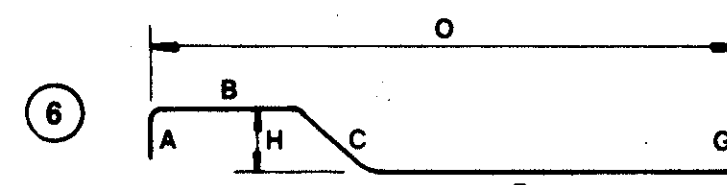
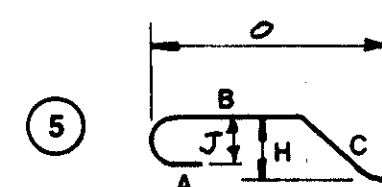
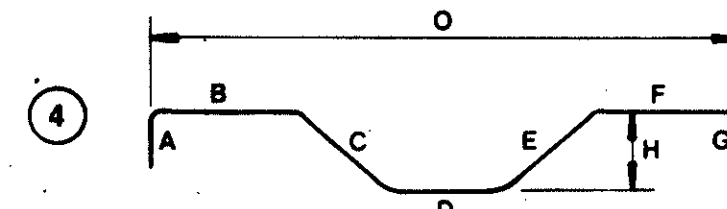
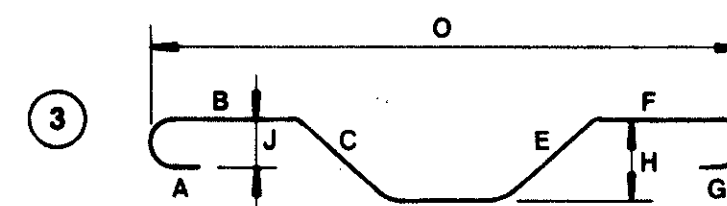
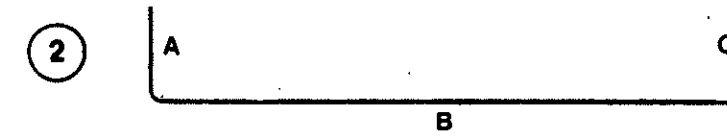
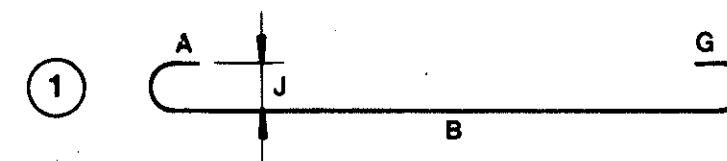
NOTES:

- For Bar Bending Details - See Sheet 20/22
- Refer to CMS Sections 106.03, 700, 709.1 through 709.05 & 709.08. Sufficient additional Reinforcing Steel shall be provided for sampling. Random samples shall be replaced in the structures by the additional steel, spliced in accordance with 509.08
- EA Bars are Epoxy Coated.

KZF		19/22	
INCORPORATED			
ARCHITECTS	ENGINEERS	PLANNERS	
111 Merchant Street, Cincinnati, Ohio 45246		513/772-1117	
REINFORCING STEEL LIST			
BRIDGE NO. JAC-35-1297 L/R			
OVER COUNTY RD. 10			
DESIGNED	DRAWN	TRACED	CHECKED
GTW	MHW	—	WAS
DATE		REVISED	
1/23/86		GTW 5/7/86	

Dimensions For Bending

Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
EA801	5	1'-1"	2'-0"	2'-0"					1'-5"	0'-8"			3'-5"
EA601	14		0'-9"	0'-10"	2'-5"				0'-6"		0'-8 1/2"		3'-1 1/2"
EA602	14		0'-8"	0'-10"	2'-5"				0'-5"		0'-8 1/2"		3'-1 1/2"
EA603	14		0'-8"	0'-9 1/2"	2'-5"				0'-4"		0'-8 1/2"		3'-1 1/2"
EA604	14		0'-7"	0'-9"	2'-5"				0'-3"		0'-8 1/2"		3'-1 1/2"
EA605	14		0'-7"	0'-8 3/4"	2'-5"				0'-2"		0'-8 1/2"		3'-1 1/2"
EA607	S10		3'-3"	0'-9"	3'-3"								
EA608	S10		2'-3"	1'-3"	2'-3"								
EA609	S10		4'-1"	1'-3"	4'-1"								
EA610	S10		4'-3"	1'-3"	4'-3"								
EA502	22												
EA505	1	0'-7"	2'-1"					0		0'-5"			
EA515	2	2'-6"	2'-6"					0					
AB08	12	3'-5"	3'-5"					0					
AG02	2	5'-4"	7'-8"					0					
AG03	S10		6'-0"	5'-0"	2'-1"								
AG04	2	2'-1"	5'-0"					2'-1"					
AG06	S10		3'-9"	1'-2"	3'-9"								
AG10	S10		6'-8"	1'-2"	6'-8"								
AG11	S10		4'-6"	1'-2"	4'-6"								
AG17	2	2'-0"	5'-6"					2'-0"					
AG20	2	2'-1"	5'-6"					2'-1"					
AG21	S10		4'-4"	1'-2"	4'-4"								
AG25	2	2'-0"	2'-0"					0					
AS03	2	0'-10"	7'-8"					0					
AS04	2	2'-10"	3'-3"					2'-10"					
AS05	2	2'-1"	3'-3"					2'-1"					
AS06	S10		4'-4"	3'-3"	4'-4"								
AS09	2	2'-3"	3'-3"					2'-3"					
AS12	2	0'-10"	6'-0"					0					
AS15	S10		3'-5"	3'-3"	3'-5"								
AS18	T1	0'-5 1/2"	1'-0"	2'-6"	1'-0"	2'-6"		0'-5 1/2"					
AS19	S10		2'-7"	1'-0"	2'-7"								
AS20	S10		2'-11"	1'-0"	2'-11"								
AS21	S10		3'-3"	1'-0"	3'-3"								
AS22	S10		3'-7"	1'-0"	3'-7"								
AS23	S10		3'-11"	1'-0"	3'-11"								
AS31	S10		2'-10"	1'-0"	2'-10"								
AS32	S10		3'-4"	1'-0"	3'-4"								
AS33	S10		3'-10"	1'-0"	3'-10"								
AS35	S10		3'-2"	1'-0"	3'-2"								
AS36	S10		3'-5"	1'-0"	3'-5"								
AS39	S10		3'-8"	1'-0"	3'-8"								
AS40	S10		3'-6"	1'-0"	3'-6"								
AS41	S10		3'-1"	1'-0"	3'-1"								
AS48	S10		2'-9"	1'-0"	2'-9"								
AS51	2	2'-0"	2'-6"					0					



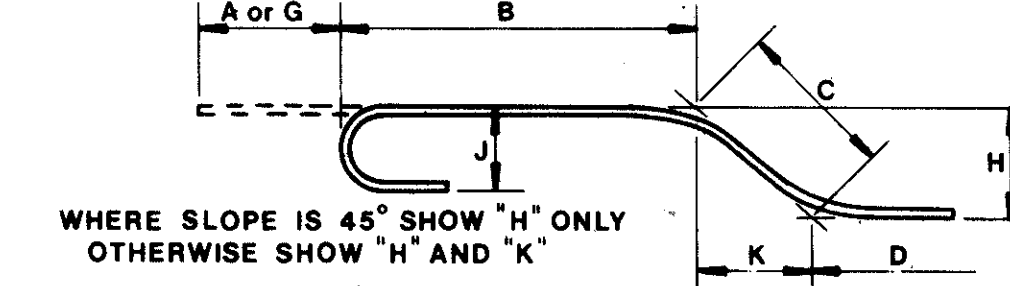
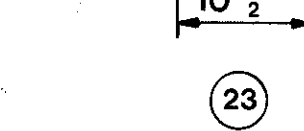
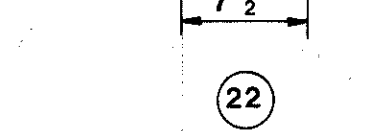
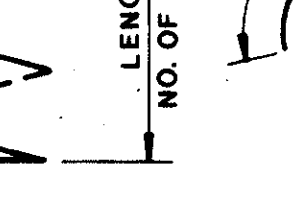
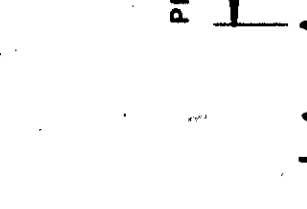
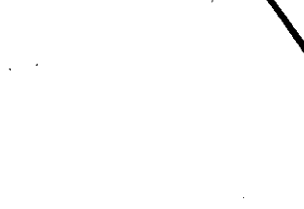
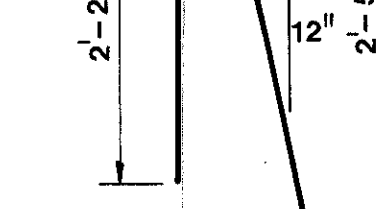
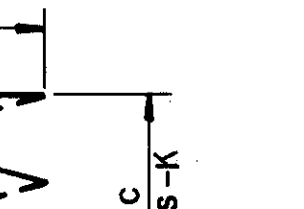
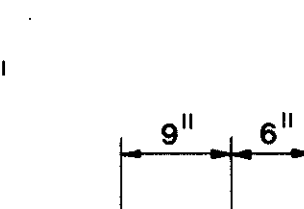
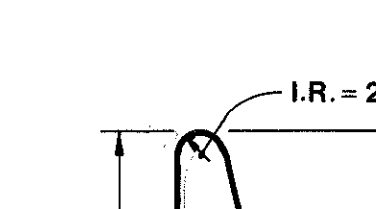
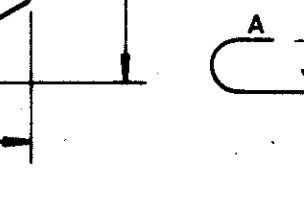
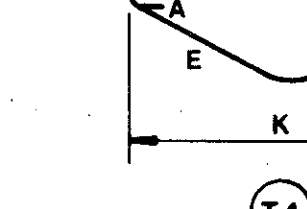
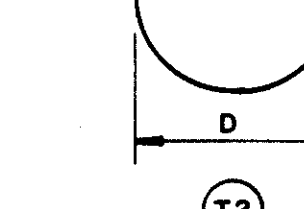
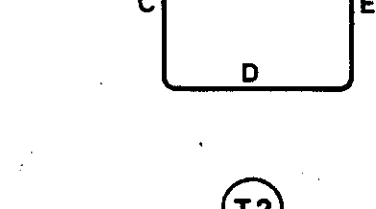
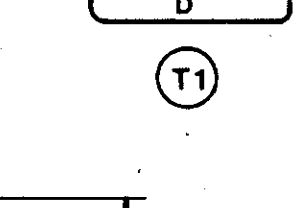
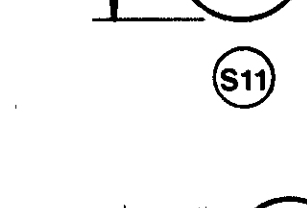
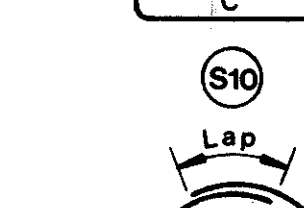
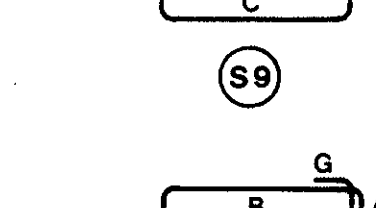
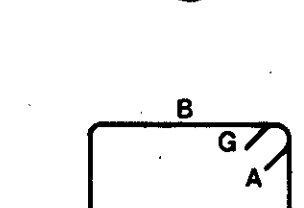
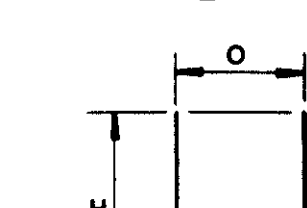
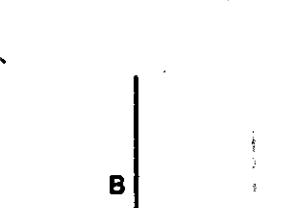
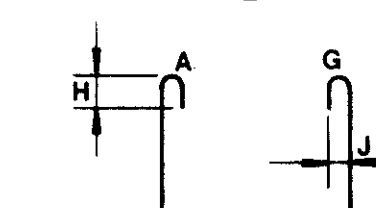
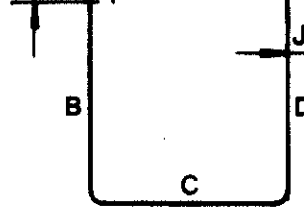
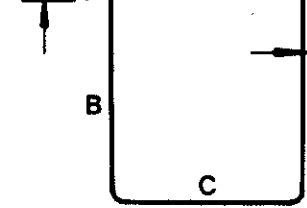
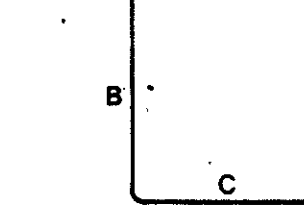
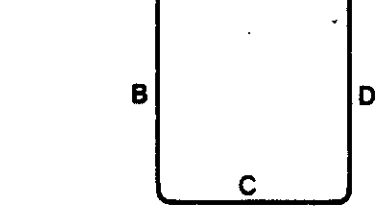
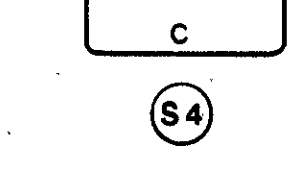
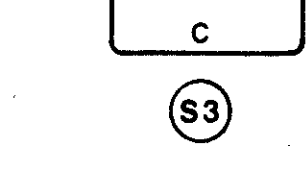
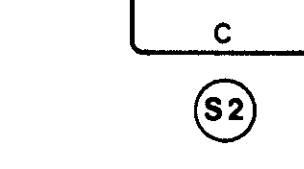
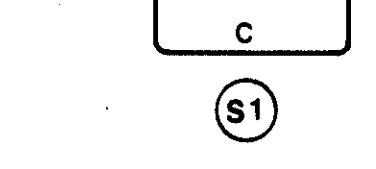
NOTES:

- FIGURES IN CIRCLES SHOW BAR TYPES.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT A & G ON STD. 180° & 135° HOOKS.
- "J" DIMENSION ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN "J" WILL BE KEPT EQUAL TO OR LESS THAN "H". WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
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- RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE LATEST ACI SPECIFICATIONS.
- FOR BAR TYPE SP1, THE NO. OF TURNS "K" IS THE LENGTH "C" DIVIDED BY THE PITCH "B", PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

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(15) NOT USED

ENLARGED VIEW SHOWING
BAR BENDING DETAILSKZF
INCORPORATEDARCHITECTS • ENGINEERS • INTERIOR DESIGNERS
111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

BAR BENDING DETAILS

BRIDGE NO. JAC-35-1297 L/R
OVER COUNTY RD. 10

DESIGNED BY GTW/MHW TRACED BY WBS/GTW 5/7/86

20/22

JAN 8 1991

JAC-35-11.46

[illegible][illegible][illegible]

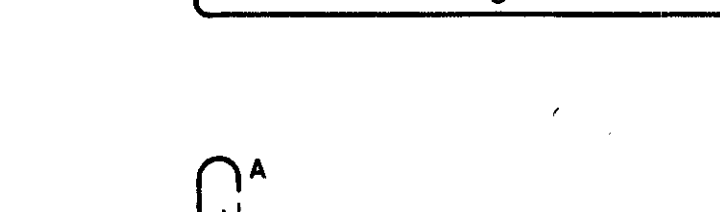
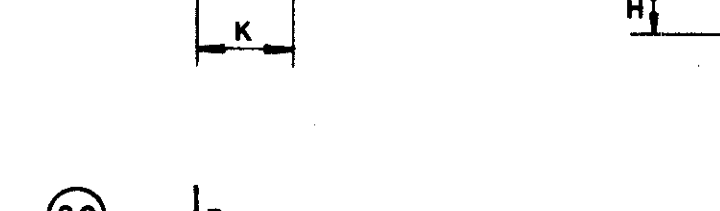
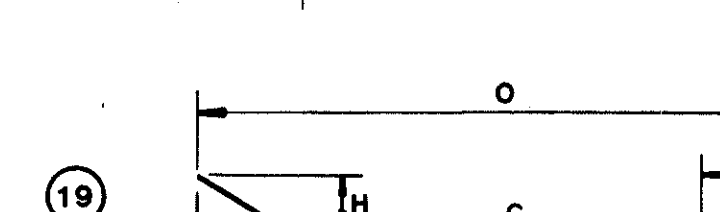
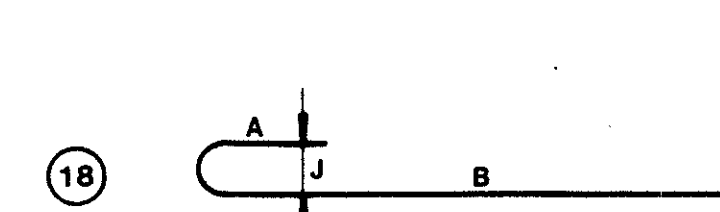
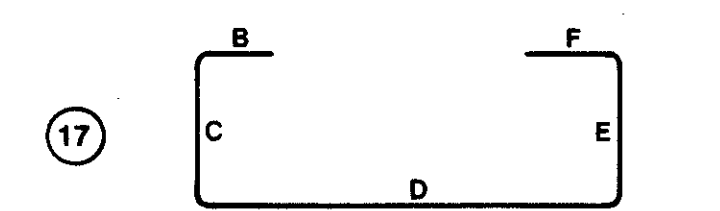
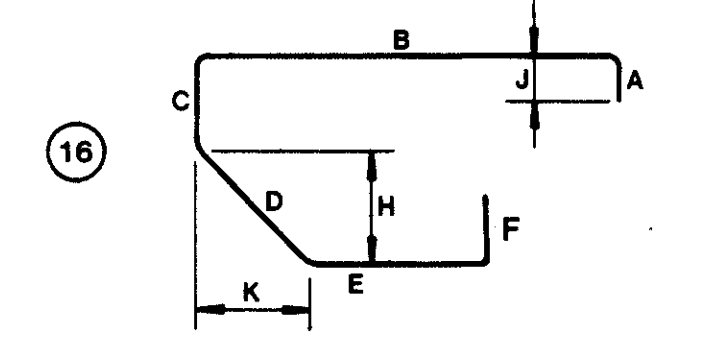
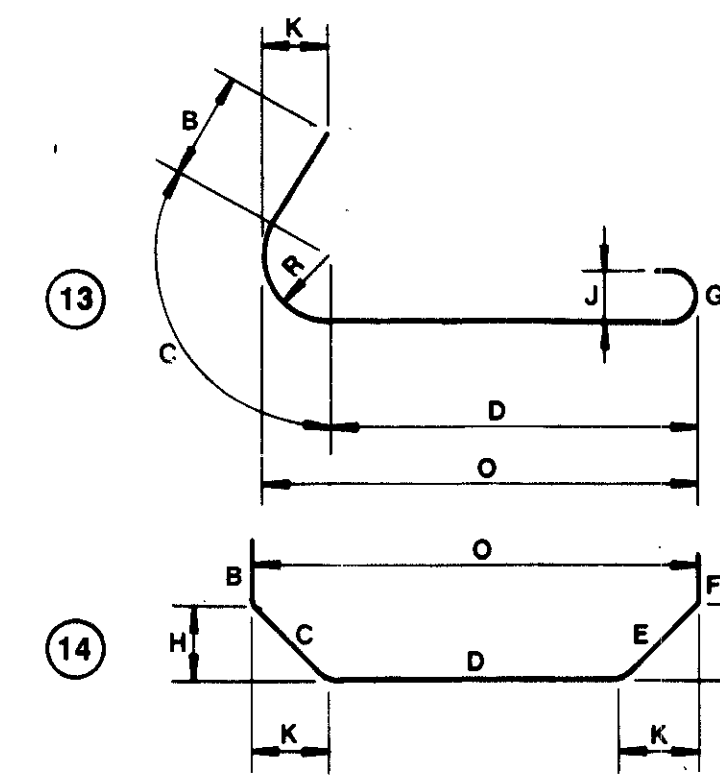
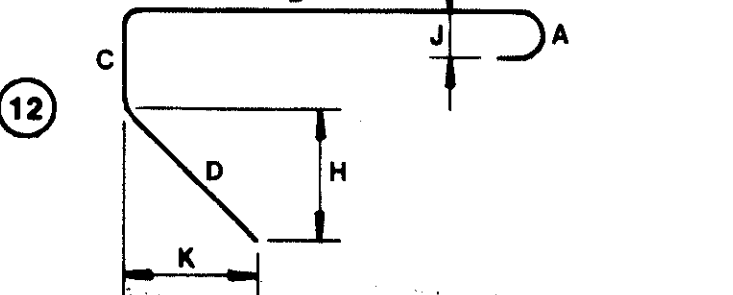
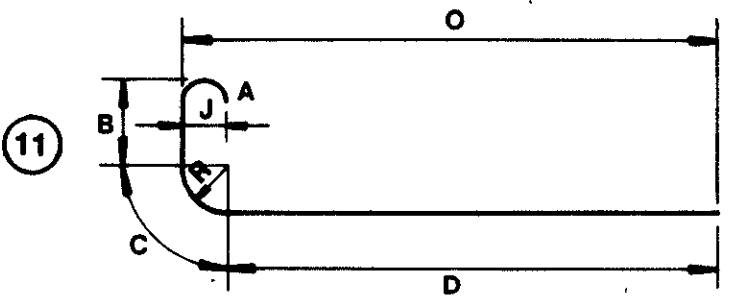
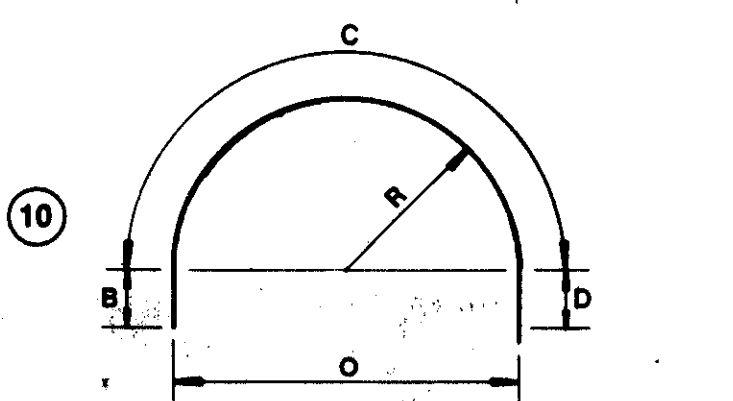
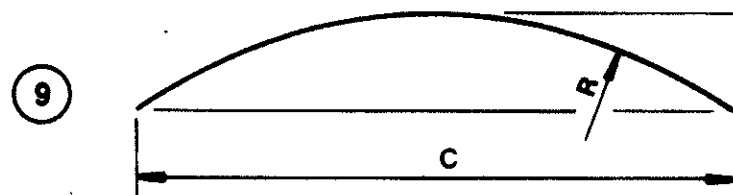
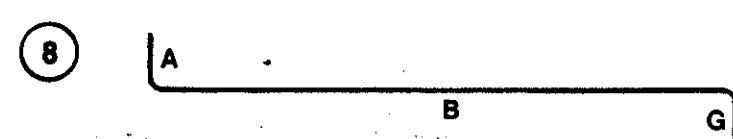
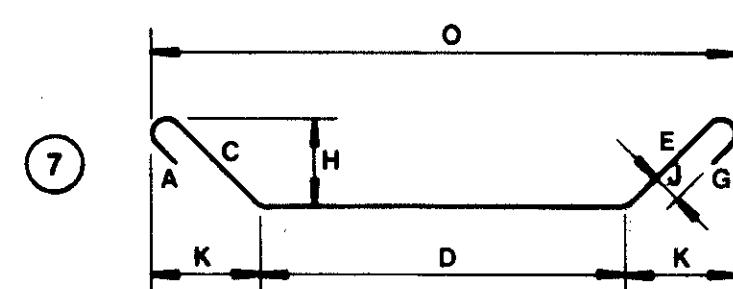
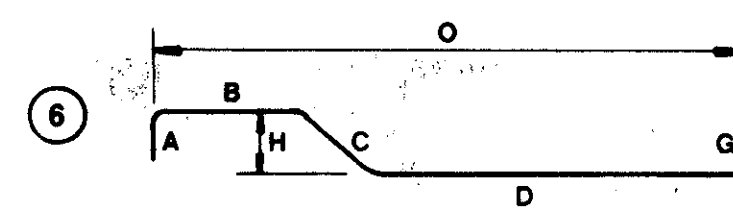
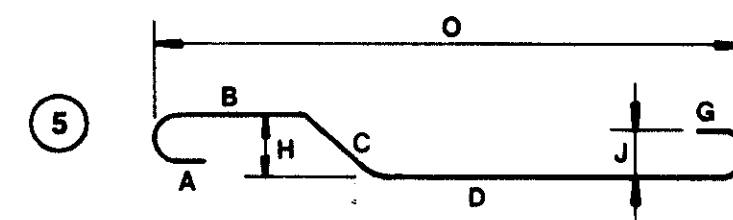
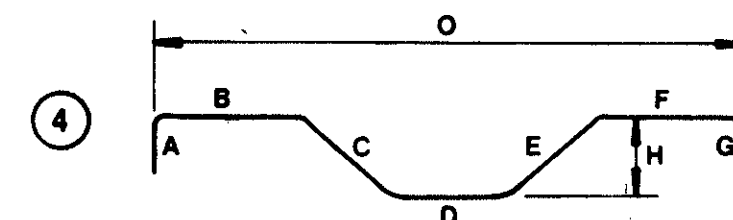
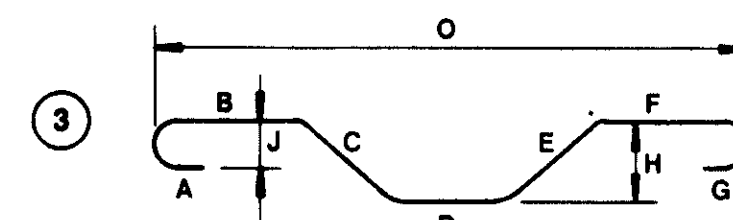
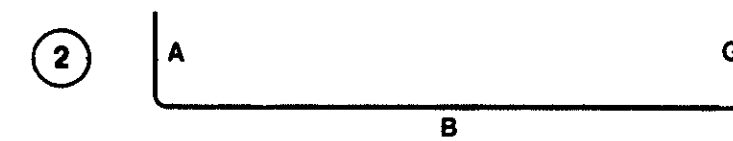
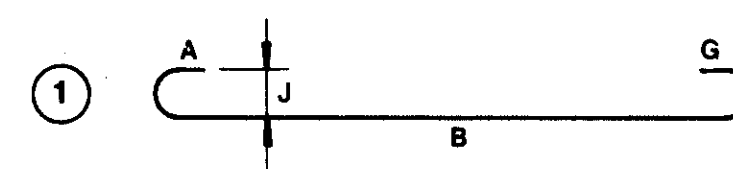
NOTES:

1. For Bar Bending Details-See Sheet 22/22
2. Refer to CMS Sections 106.03, 100, 109.1, through 109.05 & 109.08 Sufficient additional Reinforcing Steel shall be Provided for Sampling. Random Samples shall be Replaced in the Structures by the Additional Steel, Spliced in Accordance with 509.03.
3. E3 Bars are Epoxy Coated.

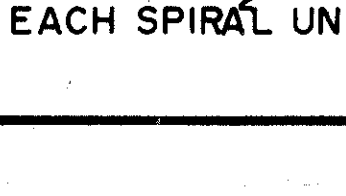
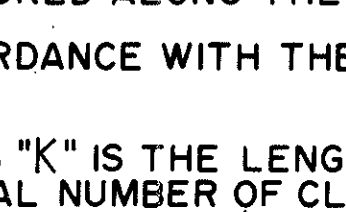
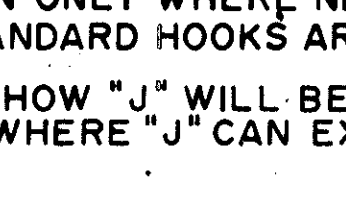
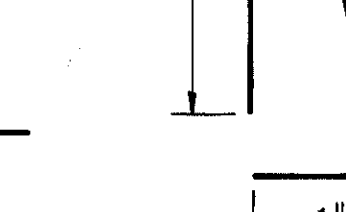
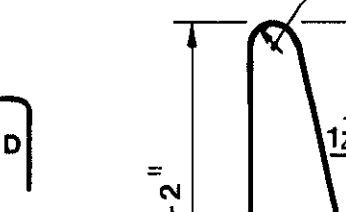
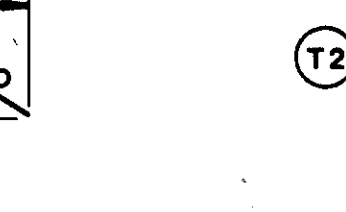
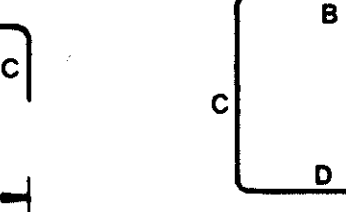
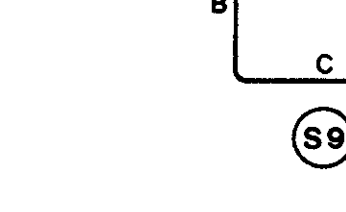
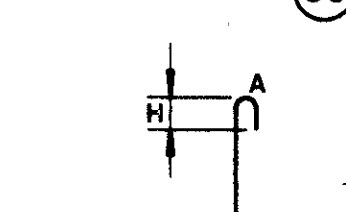
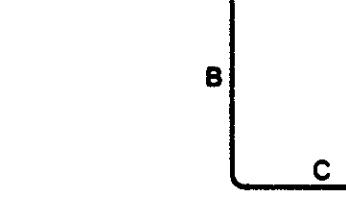
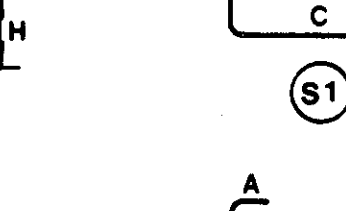
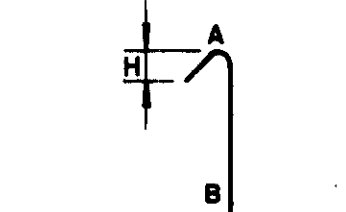
JAN 6 1991

Dimensions For Bending

Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
P901	1	1'-3"	38'-11"					1'-3"		0'-11 1/4"			
P902	2	2'-8"	38'-11"					2'-8"					
P903	2	2'-8"	38'-11"					2'-7"					
P904	14		0	4'-4"	30'-3"	4'-4"	0"		1'-0"		4'-3"		38'-9"
P802	2	1'-4"	6'-1"					0					
P502	TI	0'-5 1/2"	2'-8"	3'-7 1/2"	2'-8"	3'-7 1/2"		0'-5 1/2"					
P505	TI	0'-5 1/2"	2'-8"	2'-4"	2'-8"	2'-4"		0'-5 1/2"					
P506	TI	0'-5 1/2"	2'-8"	2'-8"	2'-8"	2'-8"		0'-5 1/2"					
P507	TI	0'-5 1/2"	2'-8"	3'-2"	2'-8"	3'-2"		0'-5 1/2"					
P508	TI	0'-5 1/2"	2'-8"	3'-6"	2'-8"	3'-6"		0'-5 1/2"					
P509	SIO		1'-8"	2'-7"	1'-8"								
P510	TI	0'-5 1/2"	2'-8"	2'-10"	2'-8"	2'-10"		0'-5 1/2"					
P511	TI	0'-5 1/2"	2'-8"	3'-1"	2'-8"	3'-1"		0'-5 1/2"					
P512	TI	0'-5 1/2"	2'-8"	3'-4"	2'-8"	3'-4"		0'-5 1/2"					
P513	TI	0'-5 1/2"	2'-8"	3'-7"	2'-8"	3'-7"		0'-5 1/2"					
P514	TI	0'-5 1/2"	2'-8"	2'-9"	2'-8"	2'-9"		0'-5 1/2"					
P515	TI	0'-5 1/2"	2'-8"	3'-0"	2'-8"	3'-0"		0'-5 1/2"					
P516	TI	0'-5 1/2"	2'-8"	3'-3"	2'-8"	3'-3"		0'-5 1/2"					
P517	2	0'-8"	2'-8"					0'-8"					
SP401	SP1		0'-4 1/2"	15'-10"	2'-8"						45		
SP402	SP1		0'-4 1/2"	11'-8"	2'-8"						34		
SP403	SP1		0'-4 1/2"	20'-6"	2'-8"						58		
SP404	SP1		0'-4 1/2"	16'-9"	2'-8"						48		
SP405	SP1		0'-4 1/2"	17'-0"	2'-8"						48		
SP406	SP1		0'-4 1/2"	12'-9"	2'-8"						37		
SP407	SP1		0'-4 1/2"	21'-7"	2'-8"						61		
SP408	SP1		0'-4 1/2"	17'-11"	2'-8"						51		
SP409	SP1		0'-4 1/2"	18'-2"	2'-8"						51		
SP410	SP1		0'-4 1/2"	13'-11"	2'-8"						40		
SP411	SP1		0'-4 1/2"	22'-9"	2'-8"						64		
SP412	SP1		0'-4 1/2"	19'-1"	2'-8"						54		
ES501	2	0'-10 1/2"	1'-8"					0					
ES502	22												
ES503	23	0'-9"											



(15) NOT USED



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NOTES:

- FIGURES IN CIRCLES SHOW BAR TYPES.
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WHERE SLOPE IS 45° SHOW "H" ONLY
OTHERWISE SHOW "H" AND "K"ENLARGED VIEW SHOWING
BAR BENDING DETAILS

KZF INCORPORATED				22/22
ARCHITECTS • ENGINEERS • INTERIOR DESIGNERS 111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117				
BAR BENDING DETAILS				
BRIDGE NO. JAC-35-1297 1/4 R OVER COUNTY RD. 10				
DESIGNED LEP	DRAWN MHW	CHECKED WAB	REVIEWED GTW	DATE 5/1/84