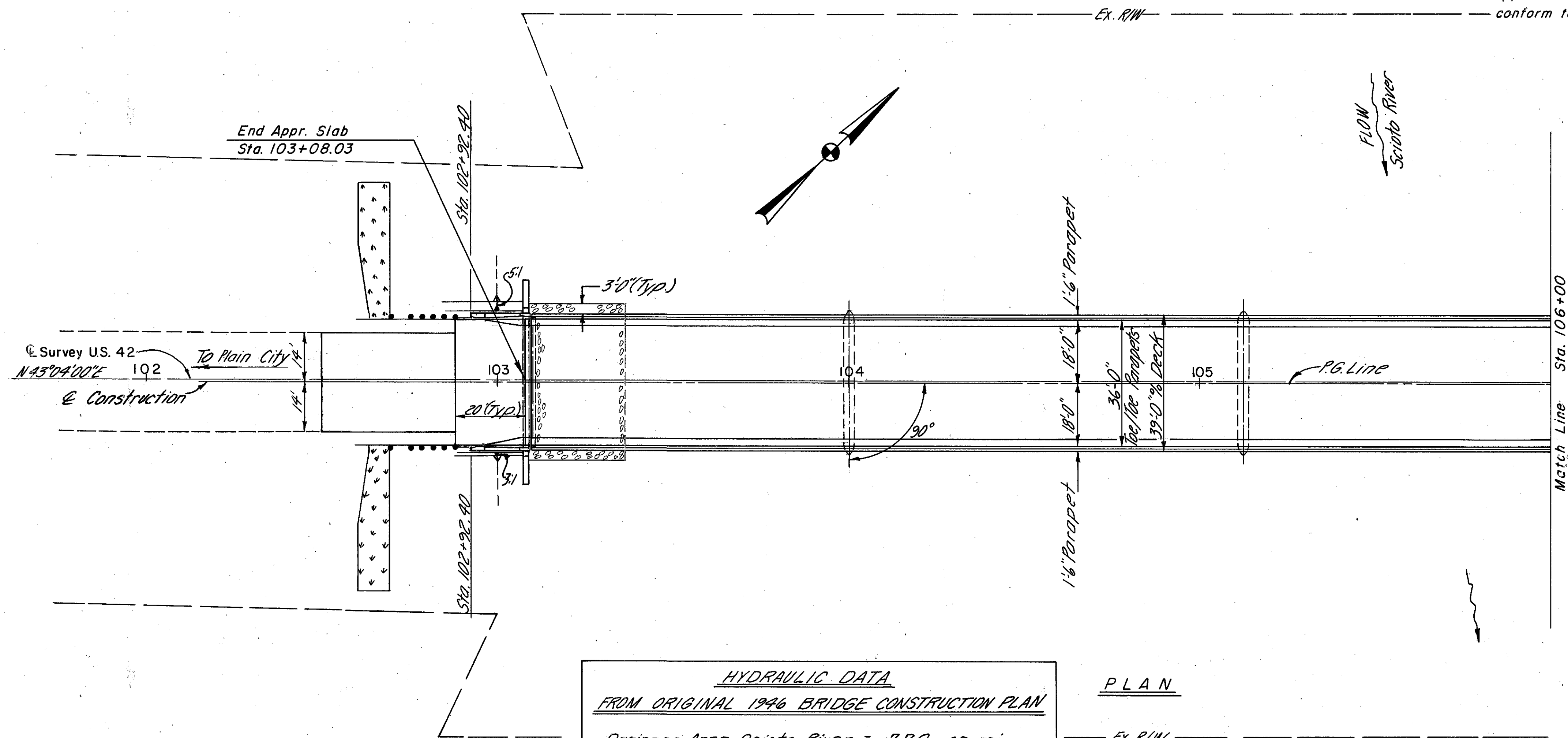


EARTHWORK LIMITS shown are approximate. Actual slopes shall conform to plan cross-sections.

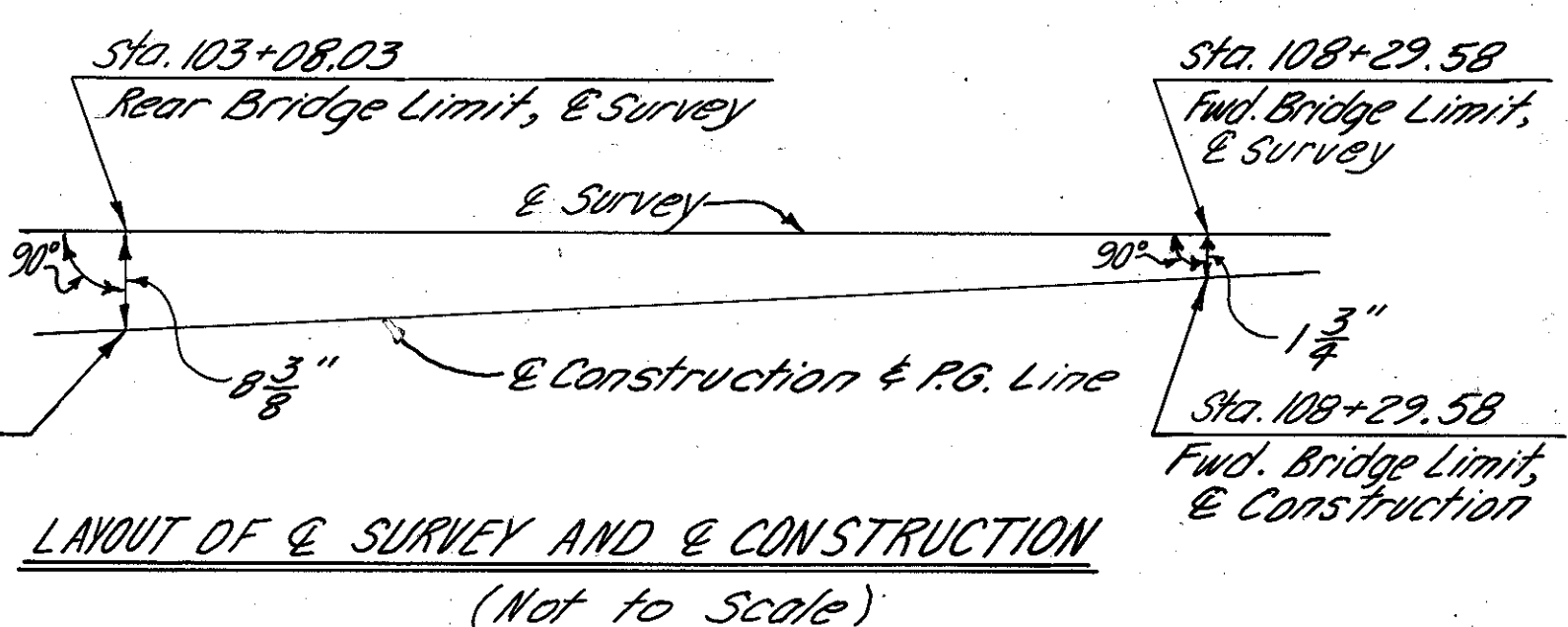


HYDRAULIC DATA
FROM ORIGINAL 1946 BRIDGE CONSTRUCTION PLAN
Drainage Area Scioto River = 770 sq. mi.
Drainage Area Mill Creek = 180 sq. mi.
Maximum Discharge
At Dublin: 78,000 S.F. (Second Feet) in 1913
27,000 S.F. (Second Feet) in 1937
At Griggs Dam: 78,000 S.F. (Second Feet) in 1913
1913 High Water: Elev. 860 ±
1937 High Water: Elev. 851 ±

PLAN

SHAWNEE HILLS QUADRANGLE
Lat. 40°-14'-39"
Long. 83°-08'-50"

TRAFFIC: 2012 ADT = 4419
ADTT = 784

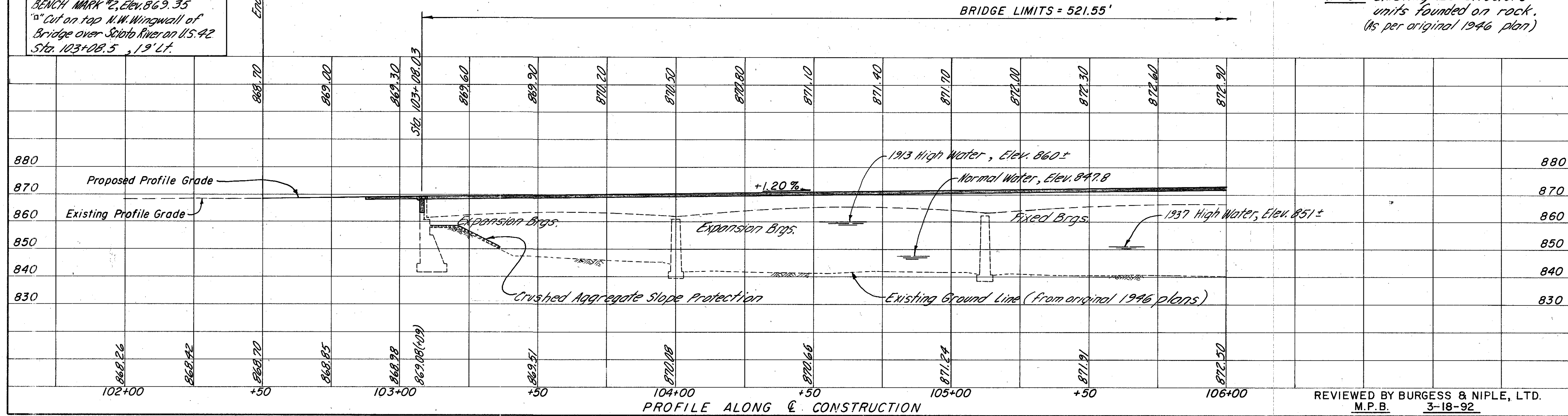


LAYOUT OF & SURVEY AND & CONSTRUCTION
(Not to Scale)

EXISTING STRUCTURE
TYPE: 5 Span cont. steel deck plate girder bridge w/conc. floor and substructures
SPANS: 90'-112.5'-112.5'-112.5'-90' % brg's.
ROADWAY: 28' 1/4 sidewalk curbs
SIDEWALKS: 2 @ 3'-6"
SKEW: None
LOADING: S-15-40
DECK: 7 1/2" reinforced concrete
WEARING SURFACE: Monolithic conc. + bit.
APPROACH SLABS: AS-41-S (15' long x 24' wide)
ALIGNMENT: Tangent
SUPERELEVATION: None
DATE BUILT: 1946
STRUCTURE FILE NUMBER: 2101742
(Reinforced Concrete Deck, Approach Slabs and Portions of Abutments To Be Removed)

BENCH MARK "2", Elev. 869.35
"a" Cut on top N.W. Wingwall of
Bridge over Scioto River on U.S. 42
Sta. 103+08.5, 19' Lt.

NOTE: Existing substructure
units founded on rock.
(As per original 1946 plan)



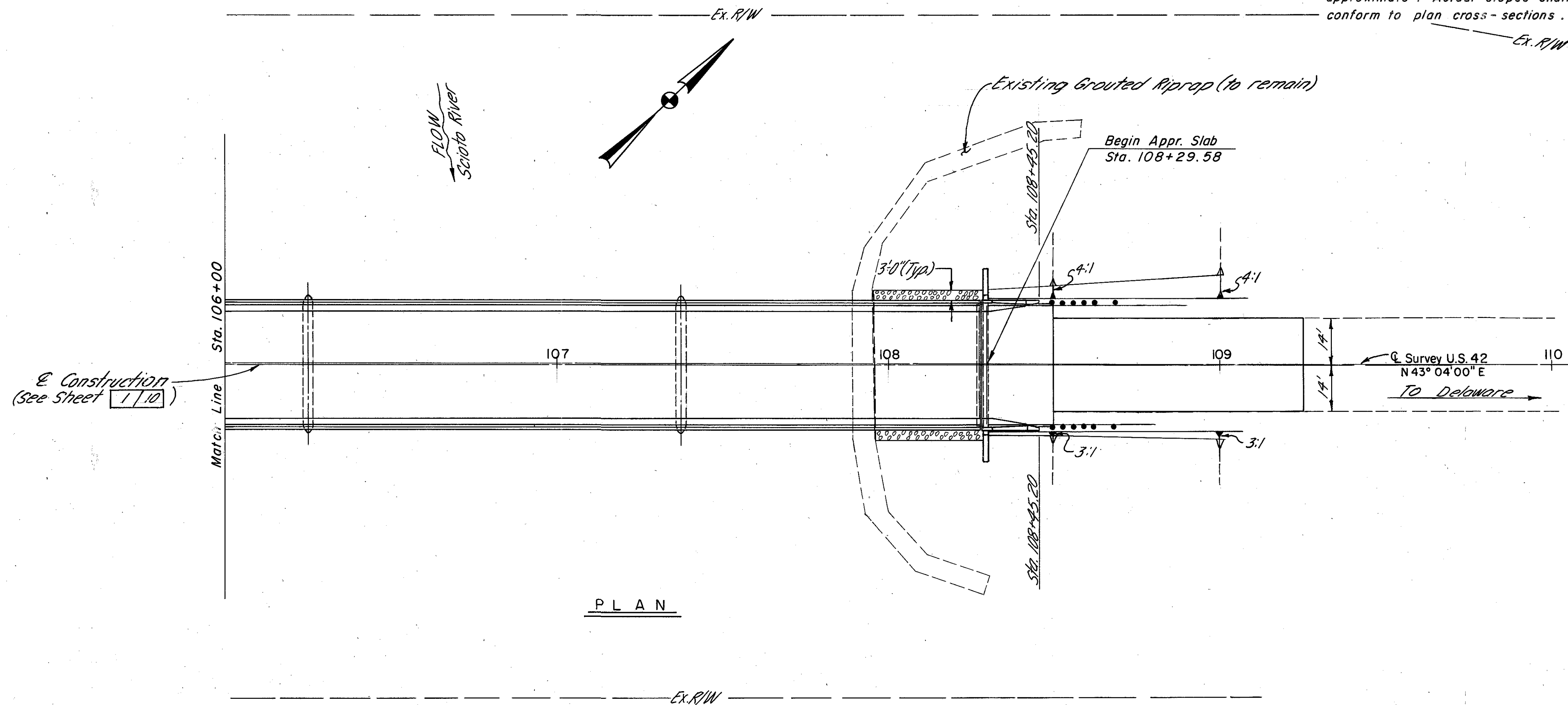
PROPOSED STRUCTURE
TYPE: Existing 5-span continuous steel deck plate girders with new reinforced concrete deck and modified existing abutments.
SPANS: 89.77±-112.5±-112.5±-112.5±-89.78± % brgs.
ROADWAY: 36'-0" Toe/Toe parapets
SKEW: None
LOADING: HS 20-44 (Case II) & Alternate Military Loading
WEARING SURFACE: Monolithic concrete
ALIGNMENT: Tangent
APPROACH SLABS: AS-1-81 (20' long)
SUPERELEVATION: None

STICKLEN - BELSHEIM & ASSOCIATES
ENGINEERS
COLUMBUS OHIO

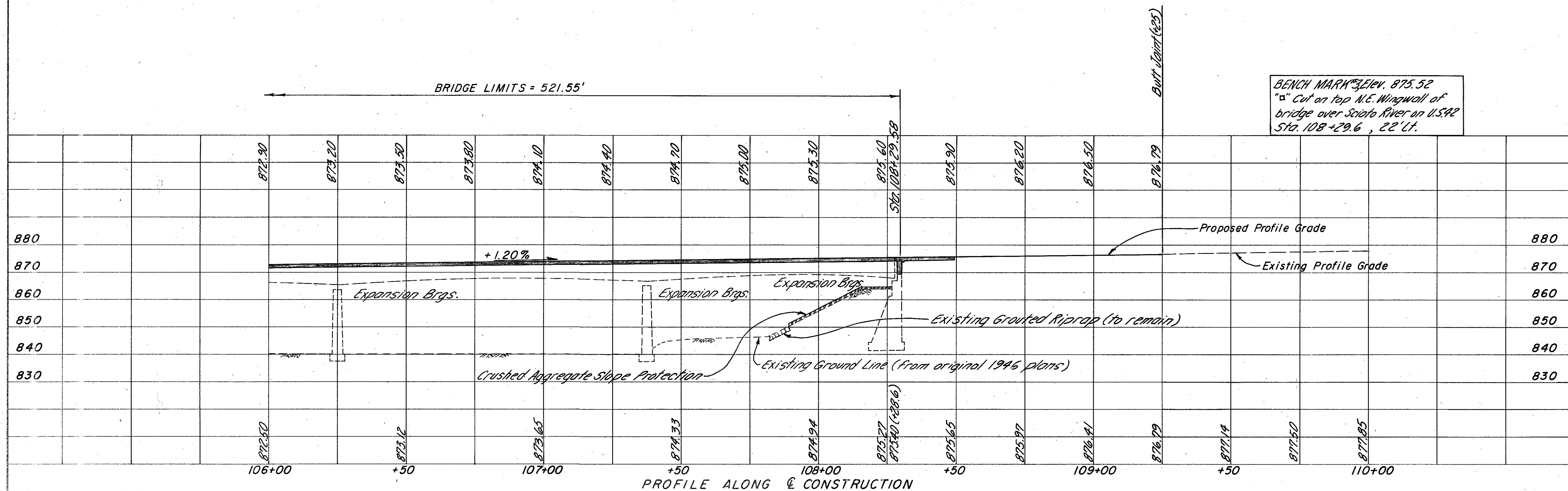
SITE PLAN
BRIDGE No. DEL-42-0195
OVER
SCIOTO RIVER
DESIGNED BY G.T. M.P.B. 3-18-92
DRAWN BY ROK
TRACED
CHECKED BY SDS
REVIEWED BY TRO 8-2-91
DATE 1-9-92
STA. 103+08.03
108+29.58

REVIEWED BY BURGESS & NIPLE, LTD.
M.P.B. 3-18-92

EARTHWORK LIMITS shown are approximate. Actual slopes shall conform to plan cross-sections.

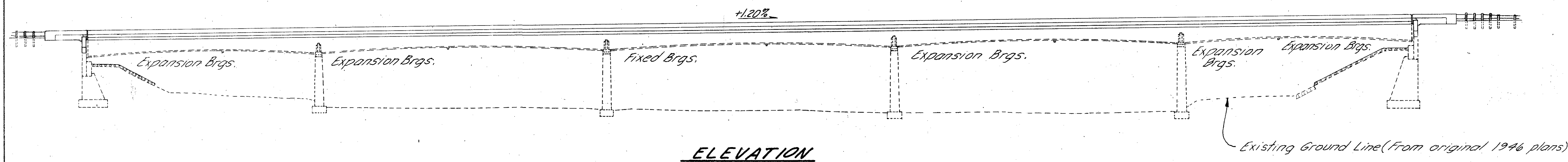
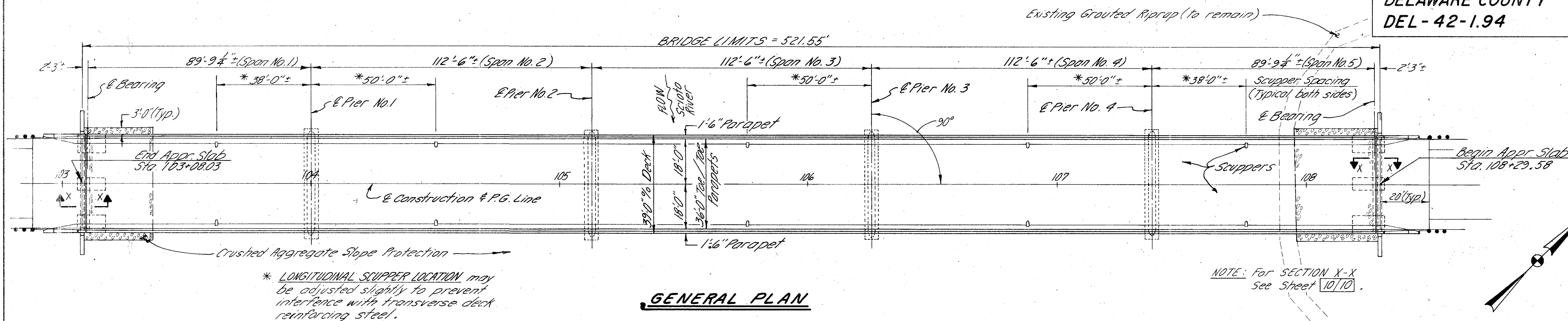


PLAN



PROFILE ALONG Q CONSTRUCTION

STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS COLUMBUS OHIO					
SITE PLAN					
BRIDGE No. DEL-42-0195 OVER SCIOTO RIVER					
DELaware CO. STA. 103+08.03 108+29.58					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
G.T.	R.D.Y.		SDS	TRQ	8-2-91 1-9-92



STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS							
COLUMBUS				OHIO			
GENERAL PLAN & ELEVATION							
BRIDGE No. DEL-42-0195 OVER SCIOTO RIVER							
DELAWARE CO.				STA. 103+08.03 108+29.58			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION	
G.T.	R.D.Y.		SDS	7/20	1/9/92		

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81 DATED 11-27-81
EXJ-4-87 DATED 01-05-89
SD-1-69 DATED 06-12-69

AND TO SUPPLEMENTAL SPECIFICATIONS:

836 DATED 11-12-85

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1989 INCLUDING THE 1990 AND 1991 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA: (NEW CONSTRUCTION ONLY)

DESIGN LOADING - HS20-44 (CASE II) AND THE ALTERNATE MILITARY LOADING.
STRUCTURAL STEEL - ASTM A36 - YIELD STRENGTH 36000 P.S.I.
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. FOR SUBSTRUCTURE.
CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. FOR SUPERSTRUCTURE.
REINFORCING STEEL - ASTM A615, A616 OR A617 - GRADE 60, MINIMUM YIELD STRENGTH 60000 P.S.I. FOR SUBSTRUCTURE AND SUPERSTRUCTURE SLAB.

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL, TOP AND BOTTOM MATS, SEALING OF CONCRETE SURFACES (AND IF USED, CLASS S CONCRETE, SUPERSTRUCTURE, USING SHRINKAGE COMPENSATING CEMENT).

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

ITEM 511, CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN: MEMBRANE CURING PER SUPPLEMENTAL SPECIFICATION 836 WILL NOT BE PERMITTED. CONCRETE SHALL BE CURED BY METHOD (A), WATER CURING.

EXISTING STRUCTURE PLANS: PLANS PERTAINING TO THE EXISTING STRUCTURE MAY BE OBTAINED OR VIEWED BY INTERESTED PARTIES AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6 OFFICE IN DELAWARE, 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 CMS SECTIONS 102.05, 105.02 AND 513.02.

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.

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, PORTIONS OF THE EXISTING BRIDGE SHALL BE REMOVED IN ACCORDANCE WITH ITEM 202 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

REMOVALS OVER WATER: REASONABLE CARE SHALL BE USED BY THE CONTRACTOR TO PREVENT REMOVED MATERIALS FROM FALLING INTO THE WATER. ANY DROPPED MATERIALS SHALL BE IMMEDIATELY RECOVERED AND DISPOSED OF AWAY FROM THE SITE.

DECK REMOVALS: DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURAL STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.), CARE SHALL BE TAKEN DURING DECK REMOVAL TO AVOID DAMAGING STRINGERS WHICH ARE TO REMAIN. STRINGERS DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS SHALL, AT NO COST TO THE PROJECT, BE REPLACED OR REPAIRED UNDER THE DIRECTION AND APPROVAL OF THE DIRECTOR.

CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN: AFTER COMPLETION OF MAJOR MODIFICATION ITEMS, EXISTING EMBANKMENT SURFACES SHALL BE RESTORED TO A UNIFORM PLANE SURFACE WITH CRUSHED AGGREGATE SLOPE PROTECTION. PROTECTION SHALL EXTEND LONGITUDINALLY FROM THE FACE OF THE REAR ABUTMENT TO THE TOE OF SLOPE (APPROXIMATE ELEVATION 850) AND FROM THE FACE OF THE FORWARD ABUTMENT TO THE EXISTING GROUTED RIPRAP. THE EXISTING GROUTED RIPRAP SHALL NOT BE DISTURBED. PROTECTION SHALL EXTEND Laterally TO AT LEAST 3'-0" BEYOND DECK FASCIAS. THE MINIMUM TOTAL THICKNESS OF PROPOSED PROTECTION SHALL BE 1'-0".

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT HIS PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) UNDER THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK SHALL BE DRAWN ON THE SURFACE OF DECK. SMALL DIAMETER PILOT HOLES SHALL BE DRILLED 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. DURING CUTTING OF THE DECK SLAB, CARE SHALL BE TAKEN NOT TO DAMAGE STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE.

EXTRANEOUS MEMBERS: EXISTING EXTRANEOUS MEMBERS (I.E., FINISHING MACHINE AND FORM SUPPORTS, ETC., AND THE SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTIONS TO PORTIONS OF THE TOP FLANGES DESIGNATED "TENSION" SHALL BE REMOVED AND THE FLANGE SURFACES GROUND SMOOTH. GRINDING SHALL BE CAREFULLY DONE AND PARALLEL TO THE FLANGES.

LOADING LIMITATIONS: NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED BY MORE THAN ONE-THIRD THE ALLOWABLE UNIT STRESSES GIVEN IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. STRUCTURAL ANALYSIS COMPUTATIONS, BY AN ENGINEER REGISTERED BY THE STATE OF OHIO, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE CONTRACTOR'S METHODS OR EQUIPMENT SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO THE START OF THE WORK.

DAMAGE REPAIR: ANY DAMAGE TO PORTIONS OF THE STRUCTURE THAT ARE TO REMAIN AND BE INCORPORATED INTO THE PROPOSED STRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. PROPOSED REPAIRS, DEVELOPED BY A REGISTERED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL BY THE DIRECTOR.

STRUCTURE EXCAVATION IN ADDITION TO THAT NECESSARY TO REMOVE PORTIONS OF THE EXISTING STRUCTURE, AND ALL NECESSARY BACKFILL, IS INCLUDED IN THE LUMP SUM BID ITEM, "UNCLASSIFIED EXCAVATION", FOR PAYMENT.

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18-INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18-INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 85 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

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 EPOXY COATED REINFORCING STEEL AT HIS COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 200 POUNDS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE.

CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THEN, THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

ITEM 513, STRUCTURAL STEEL FOR REHABILITATION: STRUCTURAL STEEL UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE BUREAU OF BRIDGES. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.07. AFTER FABRICATION THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE BUREAU OF BRIDGES FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH ITEM 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN ITEM 501.05.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: A CONCRETE SEALER SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES: SEE SHEET [6/10] AND SHEET [8/10]. SEE THE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES (EPOXY): AN EPOXY CONCRETE SEALER SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES: SEE SHEET [6/10] AND SHEET [7/10]. SEE THE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

ITEM SPECIAL, CAULKING: THE VOIDS UNDERNEATH THE CRIMPED STIFFENERS AND AT MEMBER SPLICES SHALL BE CAULKED BEFORE PAINTING.

PROPOSED WORK

BRIDGE CONSTRUCTION

1. REMOVE THE EXISTING REINFORCED CONCRETE DECK, SCUPPERS, SIDEWALK, APPROACH SLABS AND EXISTING ABUTMENT BACKWALLS.
2. REMOVE LOOSE AND DISINTEGRATED CONCRETE, PREPARE THE SURFACE AND PLACE CONCRETE PATCHES AS PER ITEM 519 ON THE ABUTMENTS.
3. REPLACE EXISTING DETERIORATED STRUCTURAL STEEL MEMBERS WITH NEW STEEL.
4. CLEAN AND PAINT EXISTING STRUCTURAL STEEL, INCLUDING CROSSFRAMES AND BEARINGS, AS PER ITEM 514.
5. CONSTRUCT PROPOSED ABUTMENT BACKWALLS.
6. CONSTRUCT NEW CONCRETE DECK, SCUPPERS, STRUCTURAL EXPANSION JOINTS, AND DEFLECTOR PARAPET.
7. CONSTRUCT NEW REINFORCED CONCRETE APPROACH SLABS.

DELAWARE COUNTY
DEL-42-1.94

OHIO
FHWA
REGION 5

15
21

4/10

STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS COLUMBUS OHIO			
GENERAL NOTES			
BRIDGE NO. DEL 42-0195 OVER SCIOTO RIVER			
STA. 103+08.03 108+29.58			
DELAWARE CO.			
DESIGNED	DRAWN	TRACED	CHECKED
G.T.	G.T.	SDS	TRO
DATE			REVISION
3/3/92			

ST. IN THE COLUMN FOR "TYPE"
INDICATES STRAIGHT BARS.

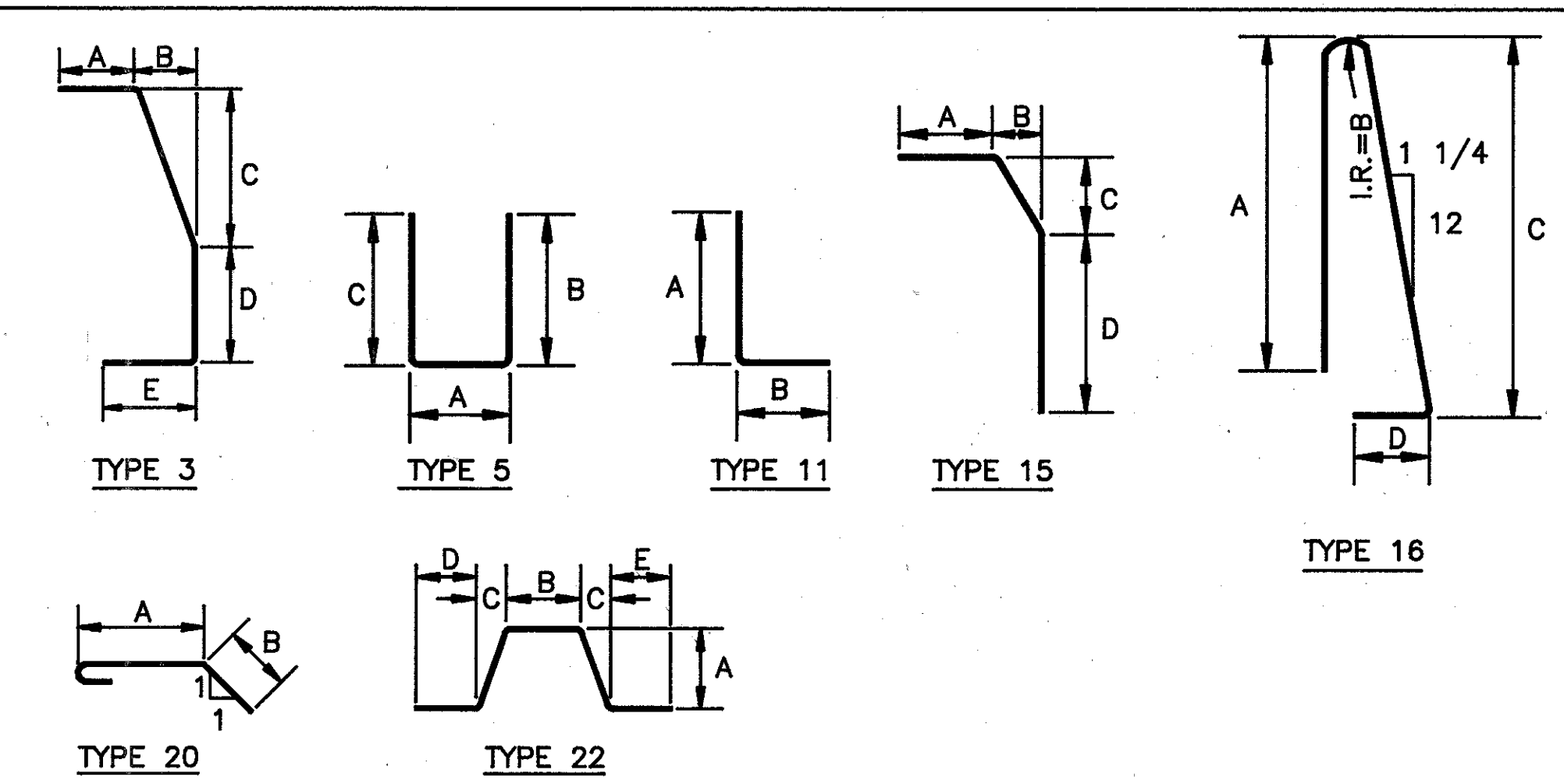
REINFORCING STEEL LIST

DELAWARE COUNTY
DEL-42-1.94

OHIO
FHWA
REGION 5

16
21

ABUTMENTS											SUPERSTRUCTURE											BENDING DIAGRAMS					
MARK	NO.	LENGTH	WEIGHT	TYPE	ABUTMENT		DIMENSION					MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSION										
					REAR	FWD.	A	B	C	D	E						A	B	C	D	E						
EA801	64	4'-8"	797	20	32	32	2'-4"	1'-5"				ES601	888	38'-8"	51573	ST.											
EA601	80	9'-10"	1182	5	40	40	1'-2"	4'-6"	4'-6"			ES501	888	38'-8"	35812	ST.											
EA602	80	6'-4"	761	5	40	40	0'-8"	3'-0"	3'-0"			ES502	1178	30'-0"	36860	ST.											
EA501	24	30'-3"	757	ST.	12	12						ES503	888	6'-11"	6406	22	0'-9 1/2"	1'-2"	1'-2"	1'-6"	1'-11"						
EA502	8	28'-6"	238	ST.	4	4						ES504	1332	7'-4"	10188	22	0'-9 1/2"	1'-2"	1'-2"	1'-11"	1'-11"						
EA503	8	26'-6"	221	ST.	4	4						ES505	692	4'-4"	3128	11	1'-8"	2'-9"									
EA504	8	23'-6"	196	ST.	4	4						ES506	692	3'-3"	2346	3	0'-9"	0'-6"	0'-8 1/2"	1'-1"	0'-10"						
EA505	8	3'-6"	29	3	4	4	0'-9"	0'-6"	0'-8 1/2"	1'-3"	0'-10 1/2"	ES507	280	7'-1"	2069	ST.											
EA506	8	2'-10"	24	11	4	4	2'-1"	0'-10 1/2"				ES508	120	14'-7"	1825	ST.											
EA507	16	1'-0"	17	ST.	8	8						ES509	16	14'-11"	249	ST.											
EA508	12	6'-9"	84	5	6	6	1'-2"	2'-11"	2'-11"			ES510	794	5'-3"	4348	16	2'-2"	0'-2"	2'-5"	0'-7 1/2"							
EA509	8	8'-1"	67	5	4	4	1'-2"	3'-7"	3'-7"			ES401	988	30'-0"	19800	ST.											
EA510	8	11'-10"	99	15	4	4	1'-2"	7'-9"	3'-10"	2'-2"		ES402	204	40'-0"	5451	ST.											
												ES403	408	12'-9"	3475	ST.											
		TOTAL =	4472												183530												
REPLACEMENT REINFORCING STEEL																											
			200				(SEE SHEET [4/10] FOR "REPLACEMENT OF EXISTING REINFORCING STEEL")																				



QUANTITIES CALCULATED BY G.T. - FEBRUARY 12, 1992				ESTIMATED QUANTITIES	QUANTITIES CHECKED BY S.D.S. - FEBRUARY 17, 1992				
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENT	PIER	SUPERSTR.	GENERAL	
202	11202	LUMP	SUM	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				LUMP	
503	21300	LUMP	SUM	UNCLASSIFIED EXCAVATION	LUMP				
509	15800	188202	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60	4472		183530	200	
511	31503	783	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN			783		
511 *	33404	783	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, USING SHRINKAGE COMPENSATING CEMENT (SEE PROPOSAL NOTE)			783		
511 *	33410	LUMP	SUM	CLASS S CONCRETE, USING SHRINKAGE COMPENSATING CEMENT, FOR PRE-PLACE MENT TESTING (SEE PROPOSAL NOTE)			LUMP		
511	45500	36	CU YD	CLASS C CONCRETE, ABUTMENT	36				
512	44400	39	SQ YD	TYPE B WATERPROOFING	39				
SPECIAL	51267500	1167	SQ YD	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)	3		1164		
SPECIAL	51267502	157	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)	157				
513	16000	100	POUND	STRUCTURAL STEEL FOR REHABILITATION			100		
513	20000	4090	EACH	WELDED STUD SHEAR CONNECTOR			4090		
SPECIAL	51400050	47000	SQ FT	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU			47000		
SPECIAL	51400056	47000	SQ FT	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU			47000		
SPECIAL	51400060	47000	SQ FT	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU			47000		
SPECIAL	51400066	47000	SQ FT	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU			47000		
SPECIAL	51400500	230	LIN FT	CAULKING			230		
							LUMP		
							LUMP		
516	11210	77	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			77		
518	12300	10	EACH	SCUPPER, INCLUDING SUPPORTS			10		
518	21200	34	CU YD	POROUS BACKFILL WITH FILTER FABRIC	34				
519	11100	33	SQ FT	PATCHING CONCRETE STRUCTURE	33				
601	20001	335	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN				335	

* ALTERNATE BID ITEM: THESE TWO ITEMS SHALL CONSTITUTE ONE ALTERNATE BID TO CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

5/10

STICKLEN-BELSHEIM & ASSOCIATES
ENGINEERS
COLUMBUS, OHIO

ESTIMATED QUANTITIES &
REINFORCING STEEL LIST
BRIDGE NO. DEL-42-0195
OVER
SCIOTO RIVER

STA. 103+08.03
108+29.58

DELAWARE CO.

DESIGNED
G.T.

DRAWN
G.T.

TRACED
SDS

CHECKED
TLO

REVIEWED
3/3/92

DATE
3/3/92

REVISION
3/3/92

BACKWALL CONCRETE: IN ADDITION TO THE PROVISIONS OF 511.08, BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT SHALL NOT BE PLACED UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.

POROUS BACKFILL SHALL EXTEND UPWARD TO THE PLANE OF THE SUBGRADE AND 1'-0" (MIN.) BELOW PROPOSED GROUND SURFACE AND Laterally TO THE SURFACE OF THE EMBANKMENT SLOPES. EXCAVATION IN EXCESS OF THAT REQUIRED FOR THE CONSTRUCTION OF THE ABUTMENTS SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR POROUS BACKFILL WITH FILTER FABRIC FOR PAYMENT.

FILTER FABRIC: FILTER FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND THE APPROACH FILL AS SHOWN. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN UP 6 INCHES AGAINST THE BACK FACE OF THE ABUTMENT.

A CONCRETE EPOXY SEALER SHALL BE APPLIED TO THE FRONT FACE OF ABUTMENT BACKWALLS FROM TOP TO BRIDGE SEAT; BRIDGE SEAT AND BREASTWALL DOWN TO THE GROUNDLINE, AND THE ENTIRE EXPOSED SURFACES OF WINGWALLS. PAYMENT SHALL BE INCLUDED IN ITEM SPECIAL, SEALING OF CONCRETE SURFACES (EPOXY).

LEGEND

PORTION OF EXISTING CONCRETE TO BE REMOVED.

●●●●● FILTER FABRIC

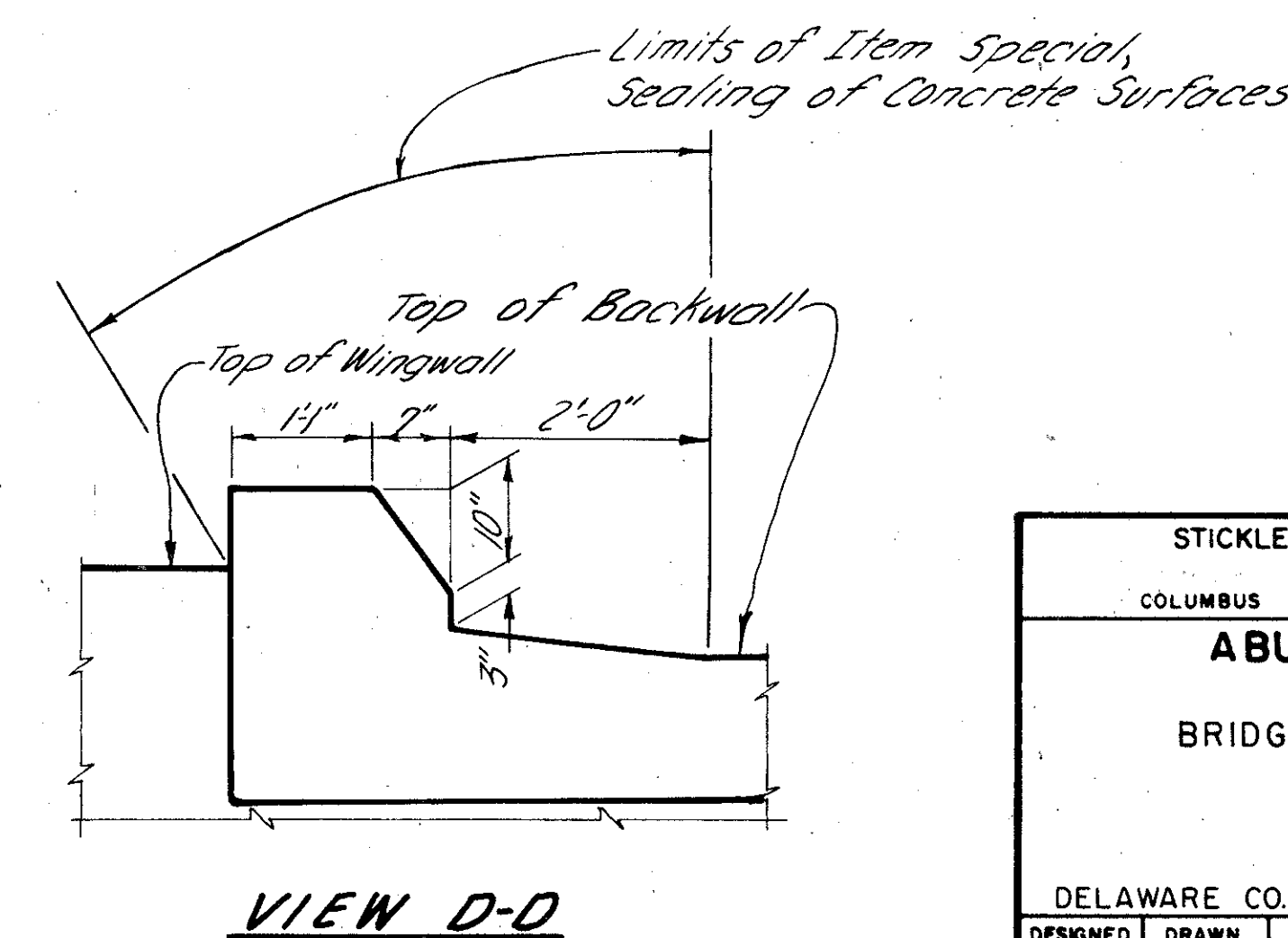
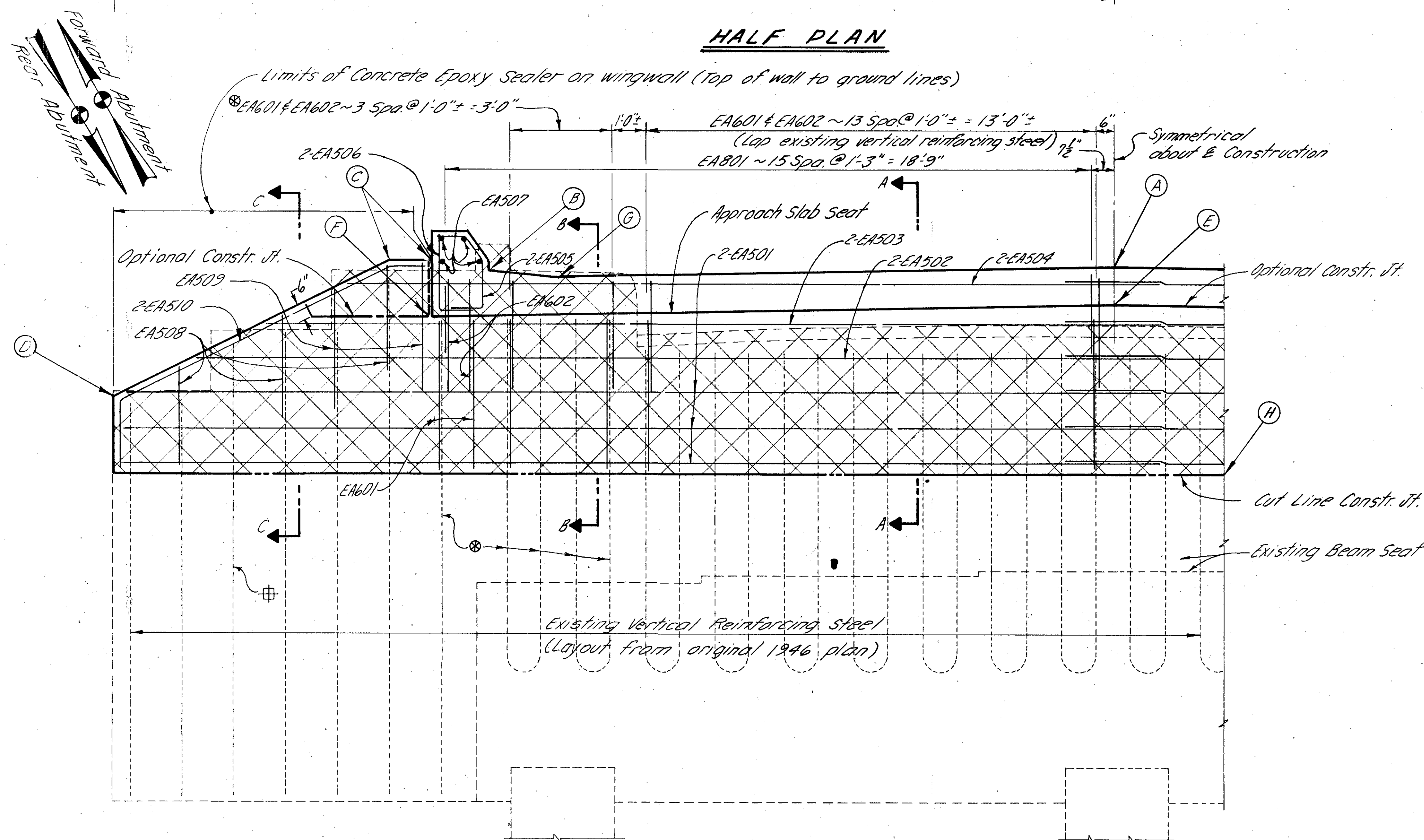
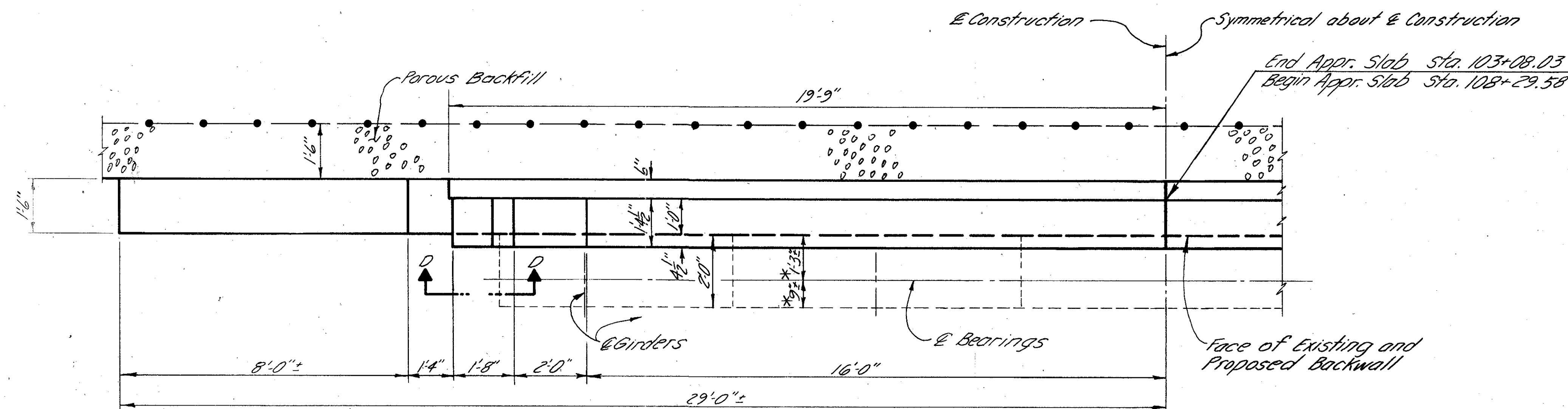
⊗ - EXISTING VERTICAL REINFORCING STEEL SHALL BE CUT 2" BELOW PROPOSED APPROACH SLAB SEAT.

* - FIELD MEASURED

⊕ - EXISTING VERTICAL REINFORCING STEEL SHALL BE CUT 2" BELOW PROPOSED TOP OF WINGWALL.

NOTE: FOR SECTIONS A-A, B-B & C-C, SEE SHEET 7/10.

MINIMUM REINFORCING BAR SPLICE LAP LENGTH
NO. 5 BAR = 2'-9" (HORIZONTAL); 1'-11" (VERTICAL)
NO. 6 BAR = 3'-0"



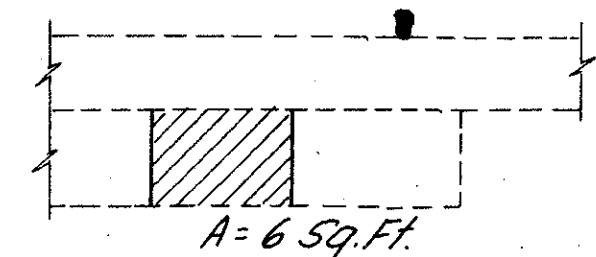
ELEVATION TABLE								
LOCATION	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Rear Abutment	869.41	869.38	869.67	865.72	868.31	868.00	869.16	863.2
Forward Abutment	875.64	875.61	875.94	871.99	874.57	874.26	875.39	869.5

STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS COLUMBUS OHIO					
ABUTMENT DETAILS					
BRIDGE No. DEL-42-0195 OVER SCIOTO RIVER					
DELaware CO. STA 103+08.03 108+29.58					
DESIGNED G.T.	DRAWN G.T.	TRACED R.D.Y.	CHECKED SDS	REVIEWED TRO	DATE 1/9/92

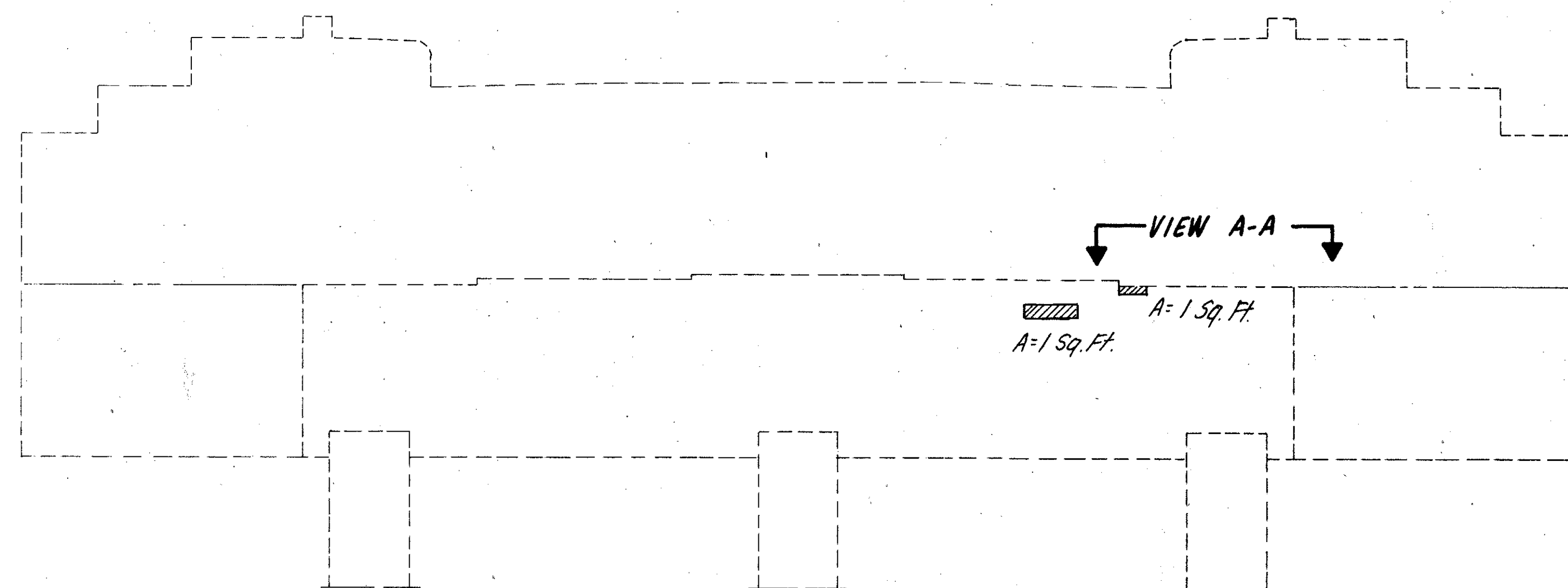
LEGEND

Area of Patching Concrete Structures as per Item 519.

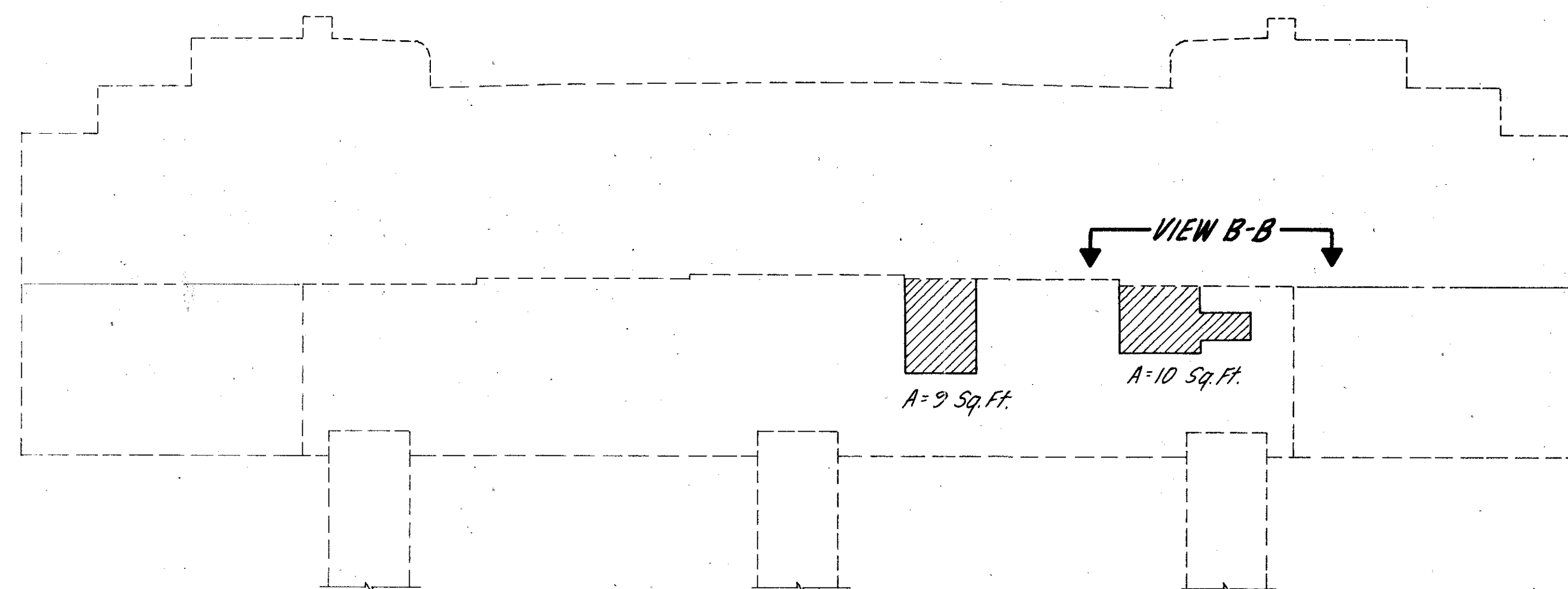
Patching Concrete Structures: Surface preparation shall include sandblasting of all reinforcing steel and concrete to be patched (steel cleaned to SA-1 quality.) Payment shall include all work, including sandblasting, necessary to comply with Item 519.



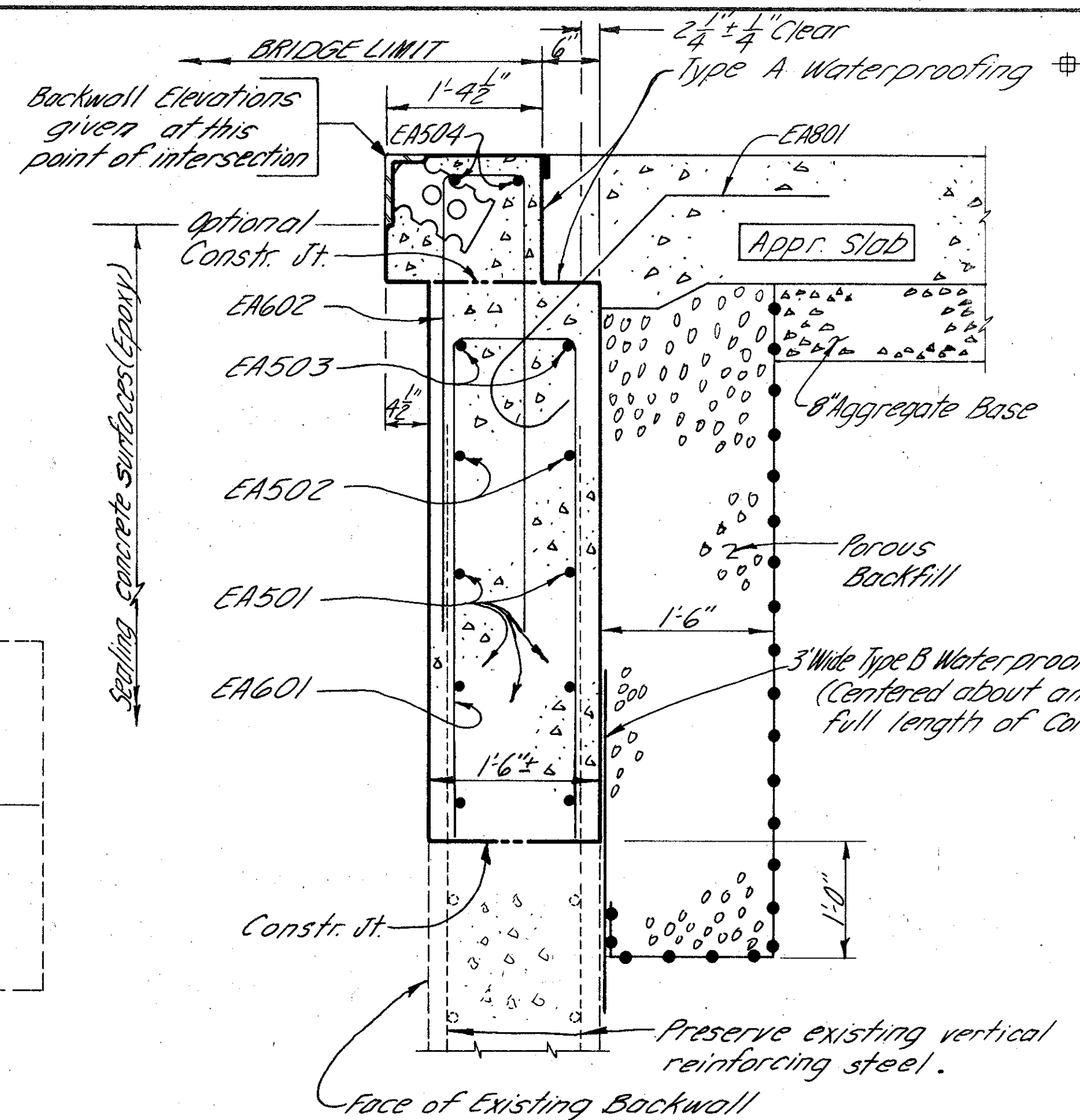
VIEW A-A & VIEW B-B



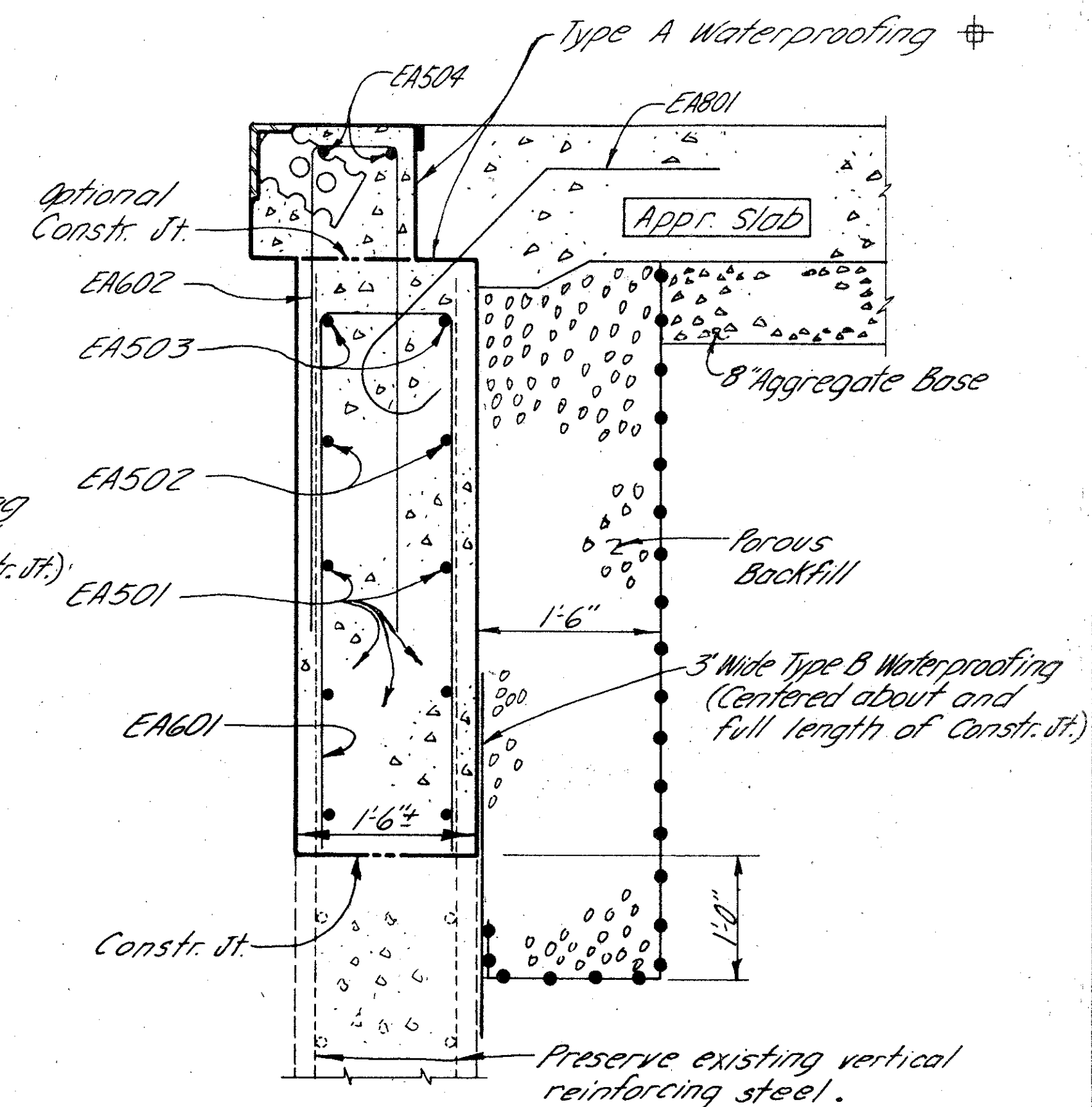
REAR ABUTMENT



FORWARD ABUTMENT
PATCHING AREAS



SECTION A-A

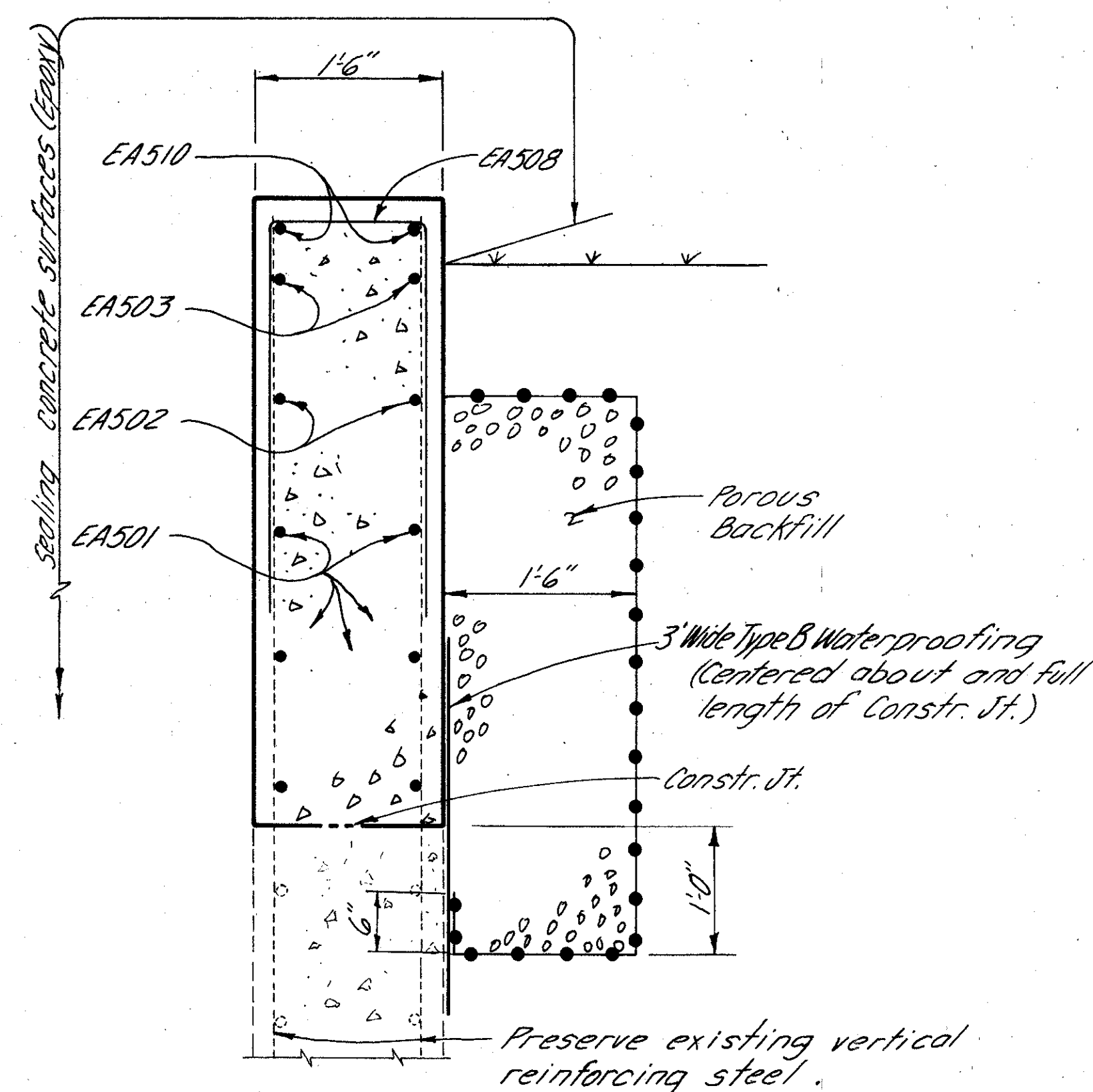


SECTION B-B

LEGEND

- Filter Fabric
- Included with Approach Slab for payment.

NOTE: For additional Notes and Legend, See Sheet 6/10.



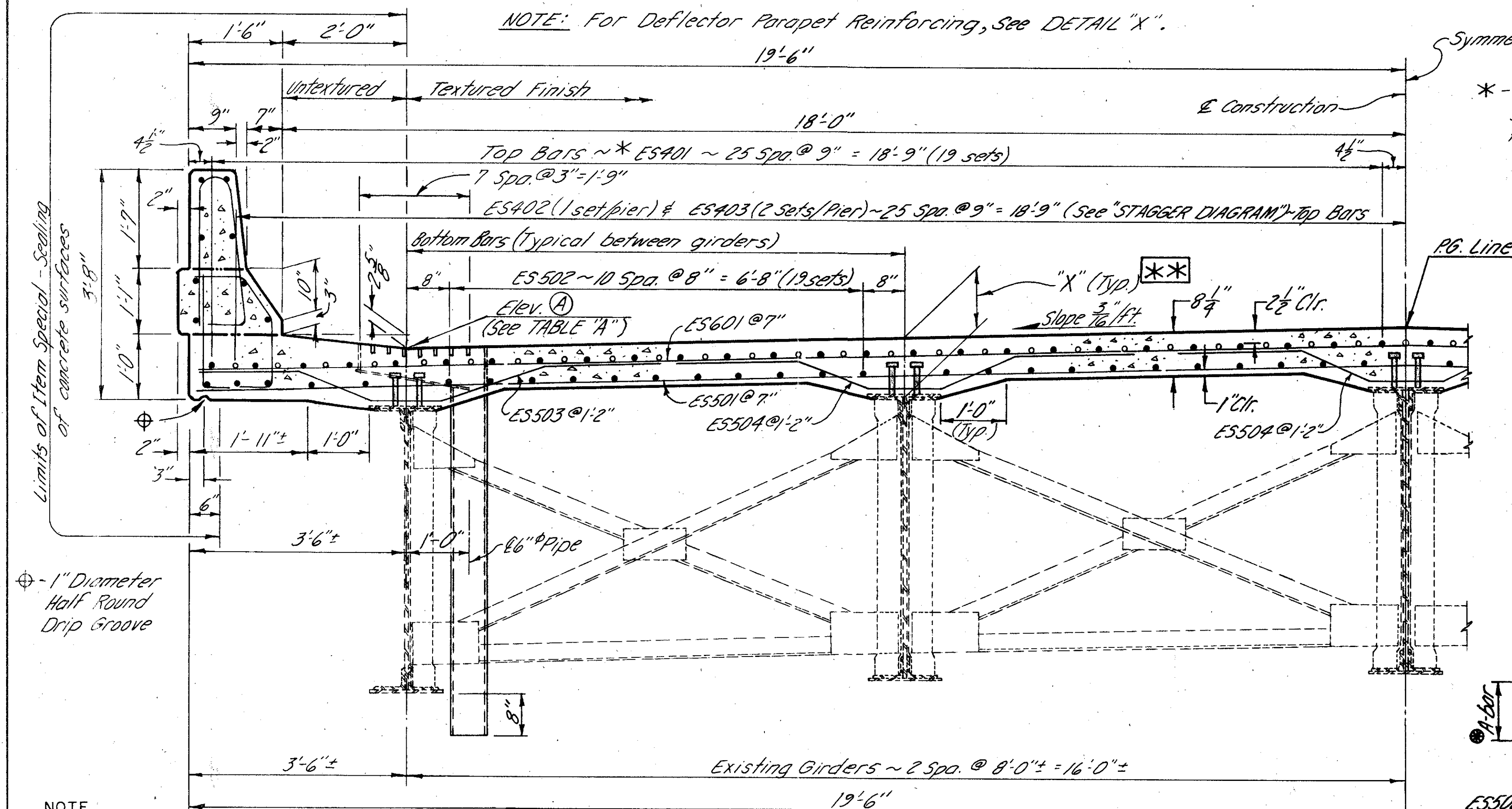
SECTION C-C

DELAWARE COUNTY
DEL-42-1.94

OHIO
FHWA
REGION 5

18
21

STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS COLUMBUS OHIO							
ABUTMENT DETAILS							
BRIDGE No. DEL-42-0195 OVER SCIOTO RIVER							
DELaware CO. STA. 103+08.03 108+29.58							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
G.T.	G.T.	RDX	SDS	TRD	1/9/92		

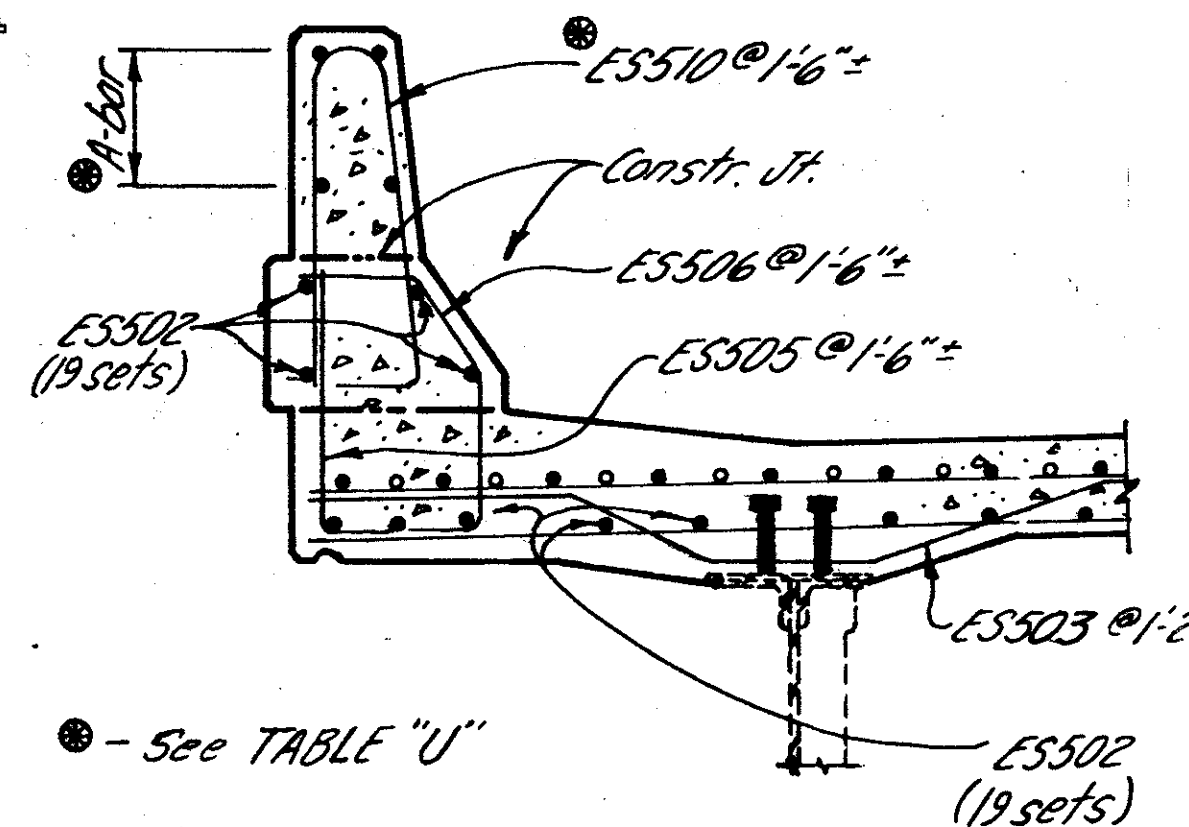


HALF TRANSVERSE SECTION

**** DIMENSION "X"**
(Deck surface to top of Flange angles)

LOCATION	GIRDER NO.				
	①	②	③	④	⑤
@ Rear Abut. Brgs.	1'-5 1/8"	1'-3 3/4"	1'-3 1/2"	1'-3 5/8"	1'-4 5/8"
@ Pier No. 1	1'-3 3/8"	1'-3 3/8"	1'-3 3/8"	1'-3 3/8"	1'-3 3/8"
@ Pier No. 2	1'-4 3/4"	1'-3 1/2"	1'-3 3/8"	1'-4"	1'-5 1/4"
@ Pier No. 3	1'-3 3/8"	1'-3 1/4"	1'-3 1/2"	1'-3 3/8"	1'-4 1/8"
@ Pier No. 4	1'-4 1/8"	1'-3 5/8"	1'-4"	1'-3 5/8"	1'-4 3/8"
@ Fwd. Abut. Brgs.	1'-4 1/4"	1'-3 3/4"	1'-3 3/4"	1'-3 1/2"	1'-4 1/4"

1. Dimensions shown are based on field survey data.
2. For Girder No. locations, see EXISTING FRAMING PLAN, Sheet 9/10.



DETAIL "X"

TABLE "U"

PANEL LENGTH	LONGITUDINAL BAR A-BAR	NUMBER OF BARS PER PANEL
7'-6"	ES507	6
15'-0"	ES508	11
15'-3 1/2"	ES509	11

NOTE:
THE ELEVATIONS SHOWN IN THE SCREED ELEVATION TABLE ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF CONCRETE.

TABLE "A"

SCREED ELEVATION TABLE

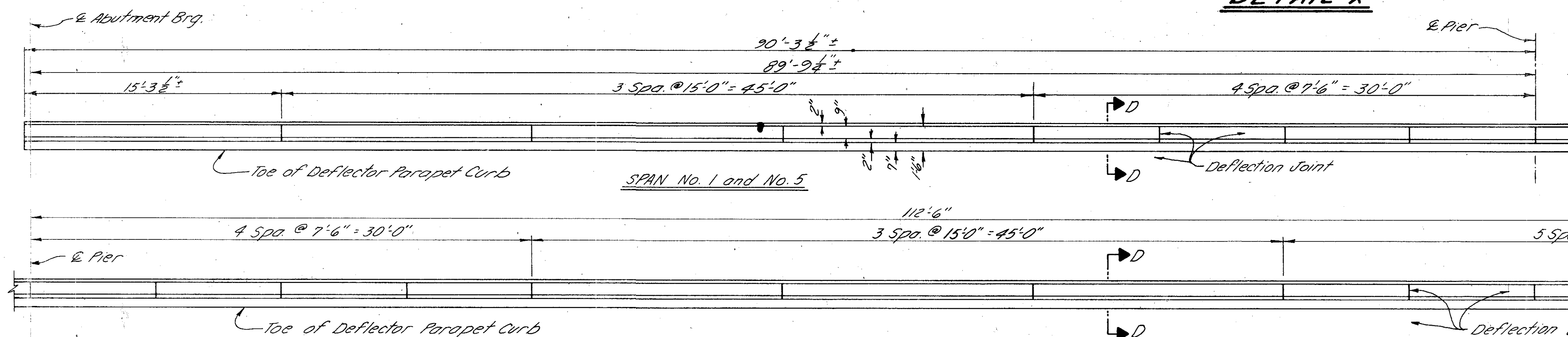
STATION (C CONSTRUCTION)	ELEVATION (A)
103+10.05	869.17
103+28.05	869.42
103+46.05	869.65
103+64.05	869.86
103+82.05	870.04
104+00.05	870.25
104+22.55	870.53
104+45.05	870.82
104+67.55	871.09
104+90.05	871.34
105+12.55	871.60
105+35.05	871.88
105+57.55	872.18
105+80.05	872.45
106+02.55	872.69
106+25.05	872.95
106+47.55	873.23
106+70.05	873.52
106+92.55	873.79
107+15.05	874.04
107+37.55	874.30
107+55.55	874.53
107+73.55	874.77
107+91.55	875.00
108+09.55	875.19
108+27.55	875.38

NOTE
SCUPPERS SHALL BE IN ACCORDANCE WITH STD. DWG. SD-1-69 EXCEPT THAT SCUPPER PIPES SHALL EXTEND 8" BELOW THE BOTTOM OF THE BEAMS INSTEAD OF 2". FOR SCUPPER SPACING, SEE GENERAL PLAN SHEET 3/10.

MINIMUM REINFORCING BAR SPLICE LAP LENGTH

NO. 4 BAR = 2'-9"
NO. 5 BAR = 2'-9"

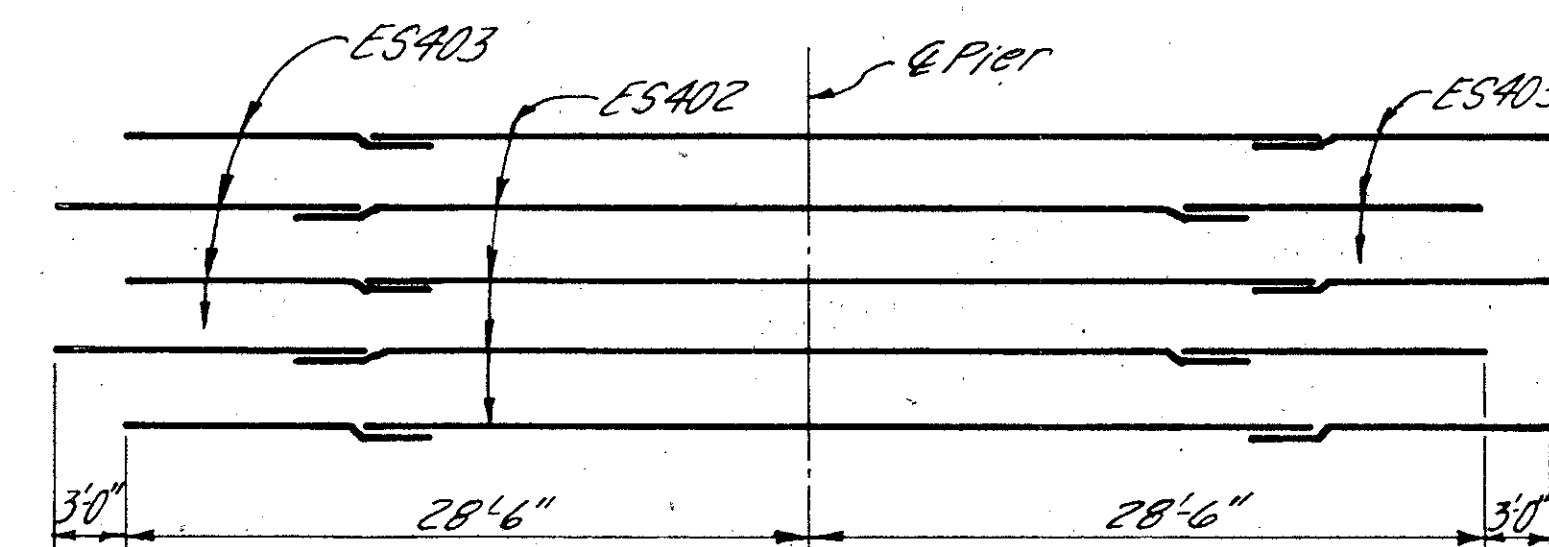
** THESE ARE THE DESIGN DIMENSIONS. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON THESE DIMENSIONS, EVEN THOUGH DEVIATION FROM THEM MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES AS PER 511.18.



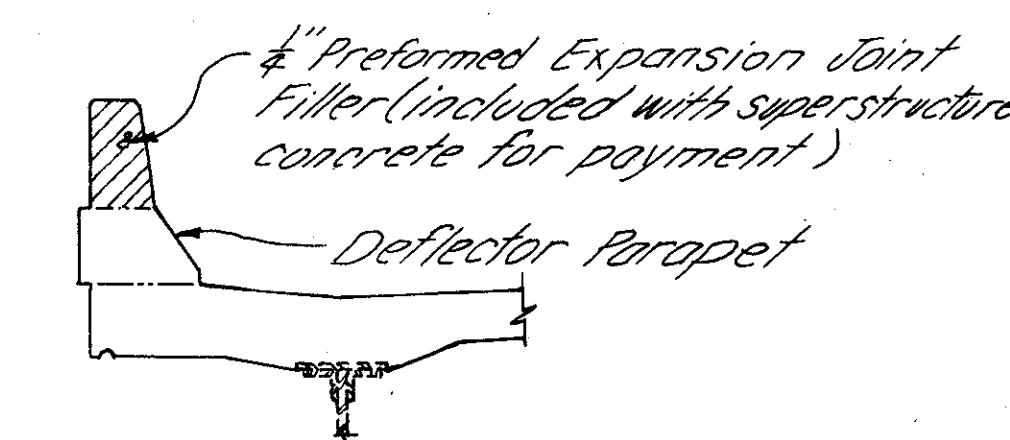
PARAPET PANEL SPACING

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. SPONGE RUBBER FILLER SHALL CONFORM TO AASHTO M-153, TYPE I. DENSITY OF PVC SPONGE NOT BE LESS THAN 20 LBS. PER CU. FT.

CONCRETE PARAPETS ABOVE UPPER CONSTRUCTION JOINT SHALL BE PLACED IN ALTERNATE SECTIONS BY THE USE OF BULKHEADS. CLOSING SECTIONS SHALL BE PLACED AFTER REMOVAL OF BULKHEADS AND AFTER PLACEMENT OF EXPANSION JOINT FILLER. EXPOSED EDGES OF THE FILLER SHALL BE FLUSH WITH THE SURFACE OF CONCRETE AND SHALL BE FREE OF MORTAR.



STAGGER DIAGRAM



SECTION D-D

(Section thru Deflection Joint)

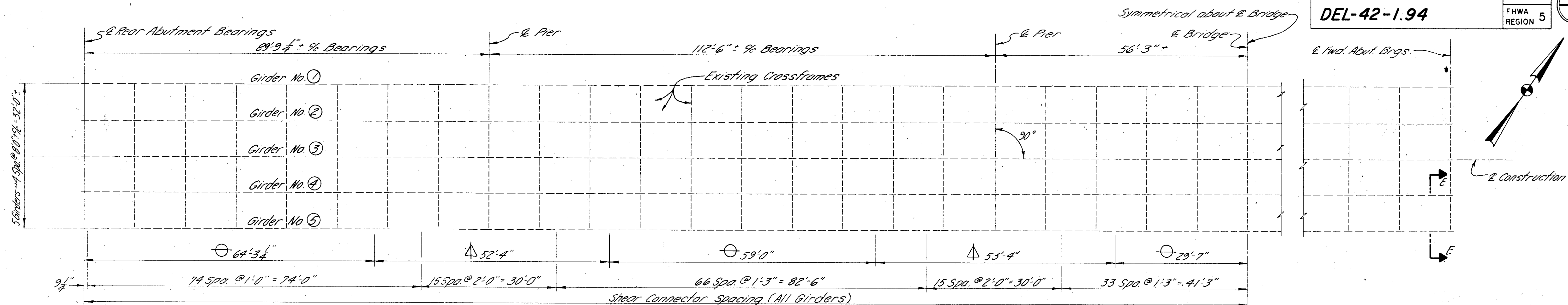
STICKLEN - BELSHEIM & ASSOCIATES
ENGINEERS
COLUMBUS OHIO

SUPERSTRUCTURE DETAILS

BRIDGE No. DEL-42-0195
OVER
SCIOTO RIVER

DELaware CO. STA. 103+08.03
108+29.58

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.T.	R.D.K.	R.D.K.	S.D.S.	T.R.O.	1/9/92	

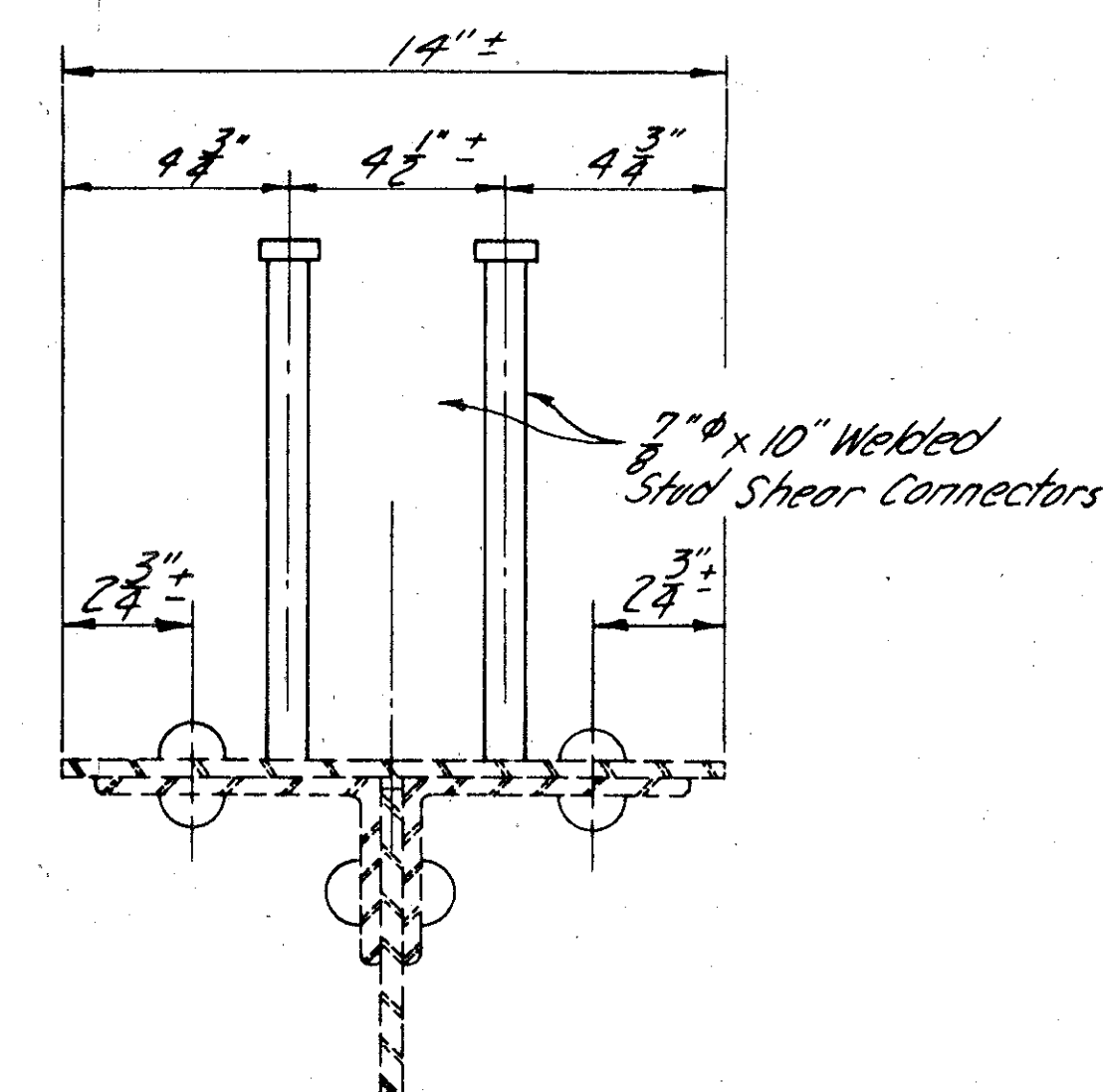
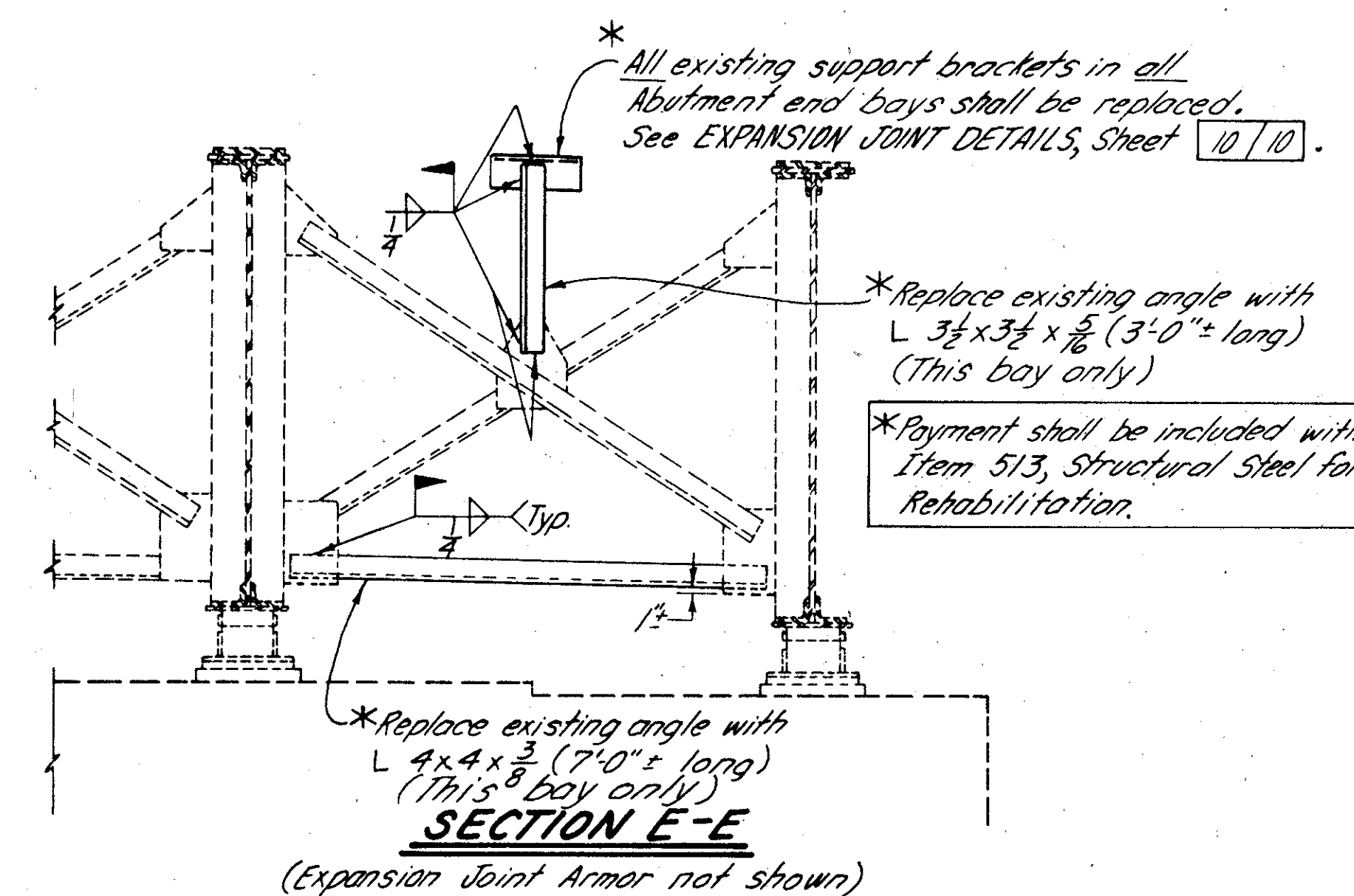


SHEAR CONNECTOR LAYOUT & EXISTING FRAMING PLAN

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA GIRDER 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 AND BE NOT MORE THAN 2" LONG.

LEGEND

- - TOP FLANGE IS IN COMPRESSION.
- △ - TOP FLANGE IS IN TENSION.



SHEAR CONNECTOR DETAIL

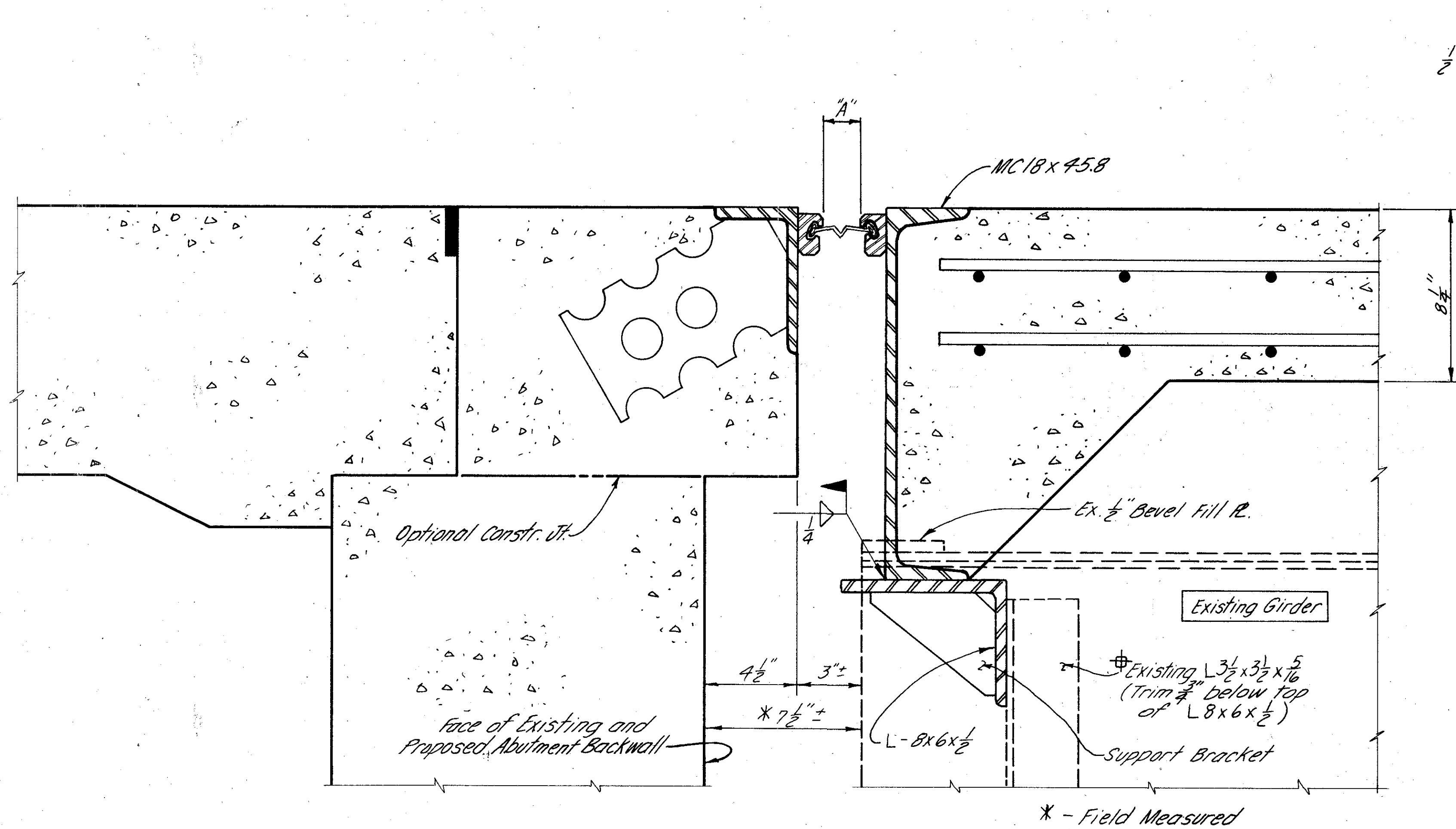
STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS					
COLUMBUS			OHIO		
SUPERSTRUCTURE DETAILS					
BRIDGE No. DEL-42-0195 OVER SCIOTO RIVER					
DELAWARE CO.			STA. 103+08.03 108+29.58		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
G.T.	G.T.	R.D.V.	SDS	TRO	1/9/92
				REVIS	

EXPANSION JOINT DETAILS

- NOTE: FOR ADDITIONAL EXPANSION JOINT DETAILS NOT SHOWN HEREON, REFERENCE SHALL BE MADE TO STD. DWG. EXJ-4-87.
1. A STRIP SEAL GLAND WITH A 4 INCH MINIMUM MOVEMENT IS RECOMMENDED.
 2. THE SHOP SPLICE IN THE END DAM ARMOR SHALL BE LOCATED AT THE CROWN OF THE ROADWAY (CONSTRUCTION).
 3. THE FOLLOWING CHART INDICATES THE VARIATION OF DIMENSION "A" WITH TEMPERATURE:
 4. THE SUPPORT BRACKET AND MC18X45.8 SHALL BE FURNISHED, PLACED AND INCLUDED FOR PAYMENT WITH ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL.

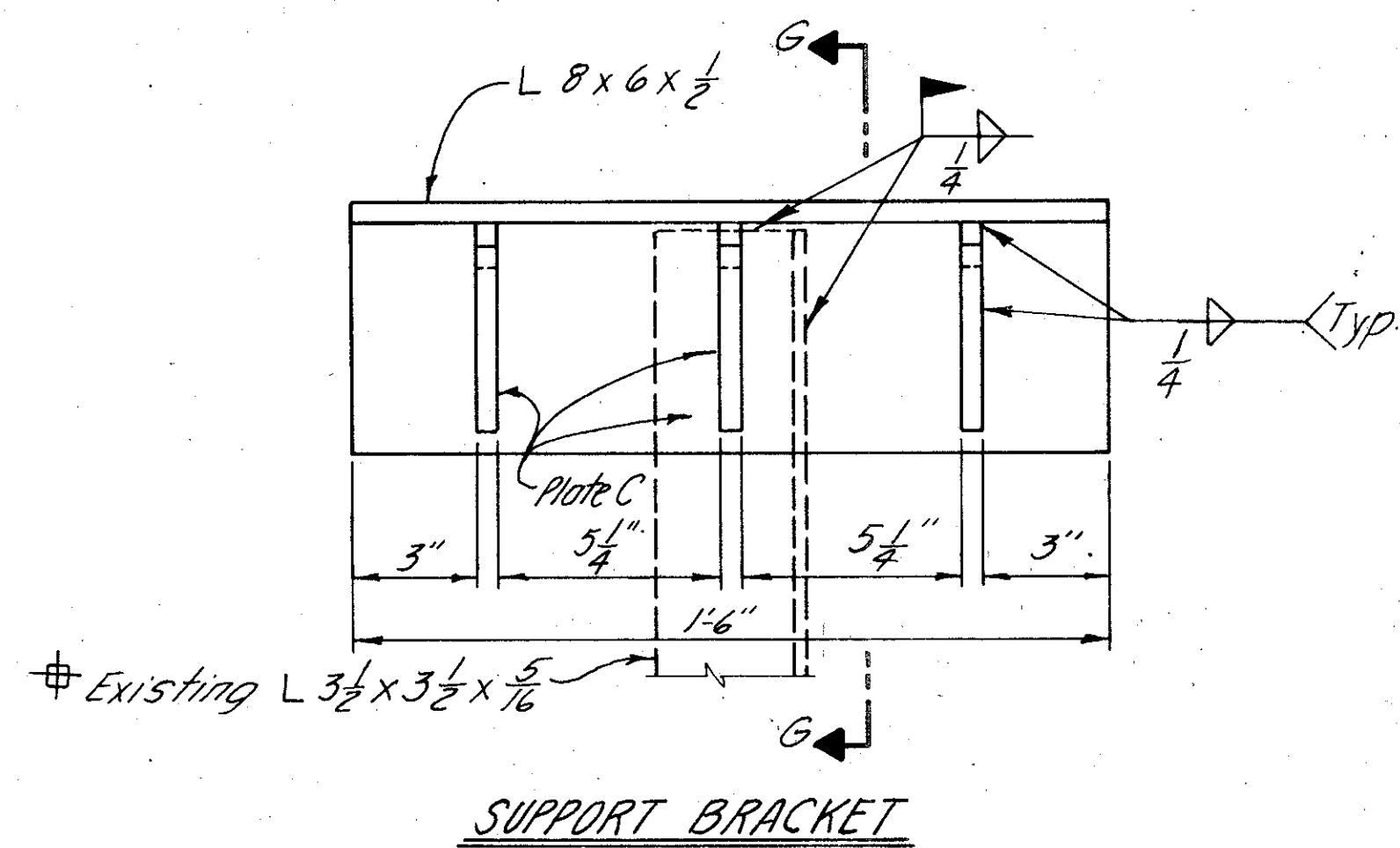
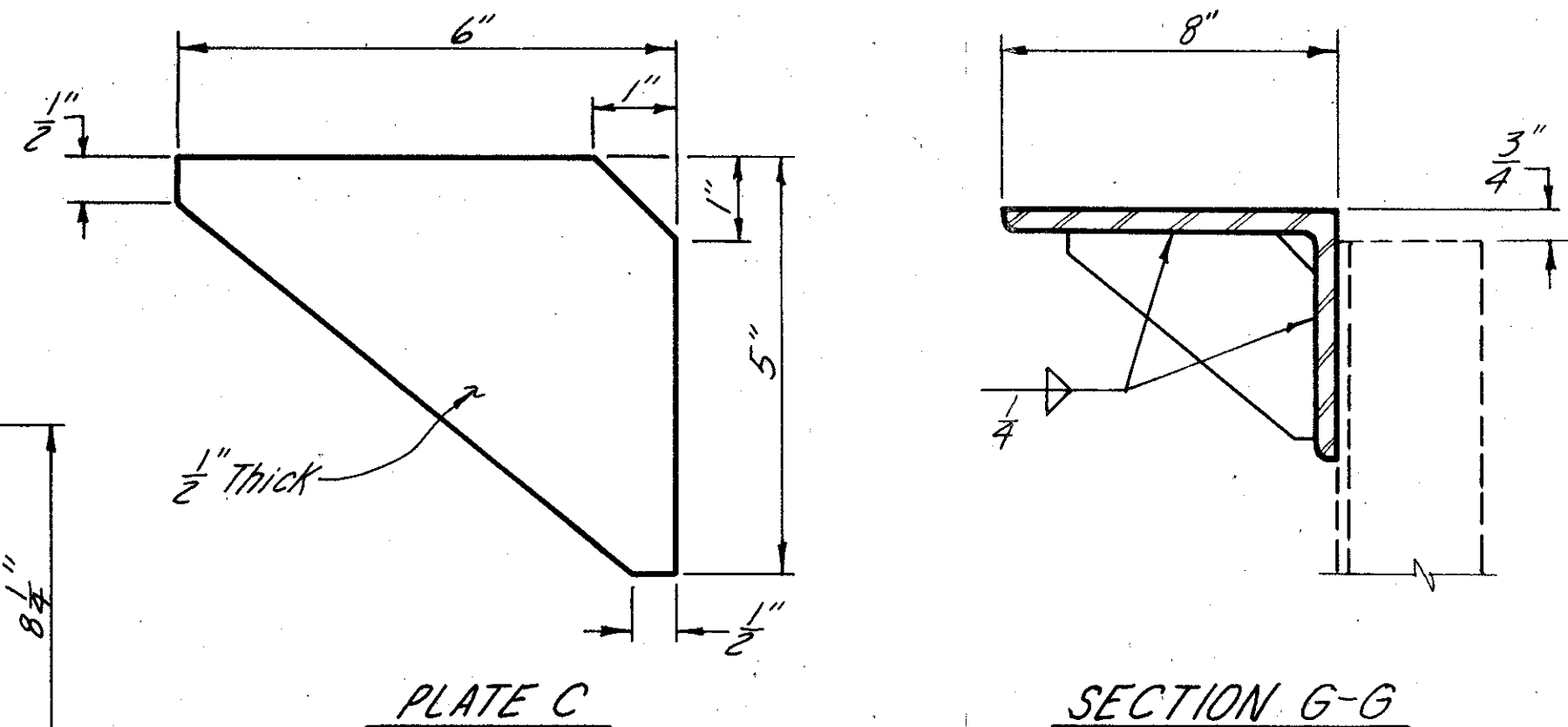
FOR AN ANTICIPATED PEAK AMBIENT TEMPERATURE (°F)		
TEMPERATURE (°F)	DIMENSION "A" (INCHES)	
	REAR ABUTMENT	FORWARD ABUTMENT
30	2 1/2	2 5/8
40	2 3/8	2 3/8
50	2 1/8	2 1/8
60	2	1 7/8
70	1 7/8	1 5/8
80	1 5/8	Δ 1 3/8
90	1 1/2	Δ 1 1/8

Δ MINIMUM JOINT OPENING (DIMENSION "A") AT TIME OF SEAL GLAND INSTALLATION SHALL BE NOT LESS THAN 1 1/2". IF THE JOINT OPENING IS LESS, THE INSTALLATION SHALL BE POSTPONED UNTIL THE TEMPERATURE DROPS A SUFFICIENT AMOUNT TO ALLOW THE MINIMUM 1 1/2" OPENING.



SECTION X-X
(Abutment Reinforcing Steel not shown)

NOTE: All L 3 1/2 x 3 1/2 x 5/16 shall remain except as noted on SECTION E-E, Sheet 9/10.



SUPPORT BRACKET DETAILS

STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS					
COLUMBUS			OHIO		
EXPANSION JOINT DETAILS					
BRIDGE No. DEL-42-0195 OVER SCIOTO RIVER					
DELaware CO. STA 103+08.03 108+29.58					
DESIGNED G.T.	DRAWN G.T.	TRACED R.D.K.	CHECKED S.D.S.	REVIEWED T.R.O. 1/9/92	DATE 1/9/92