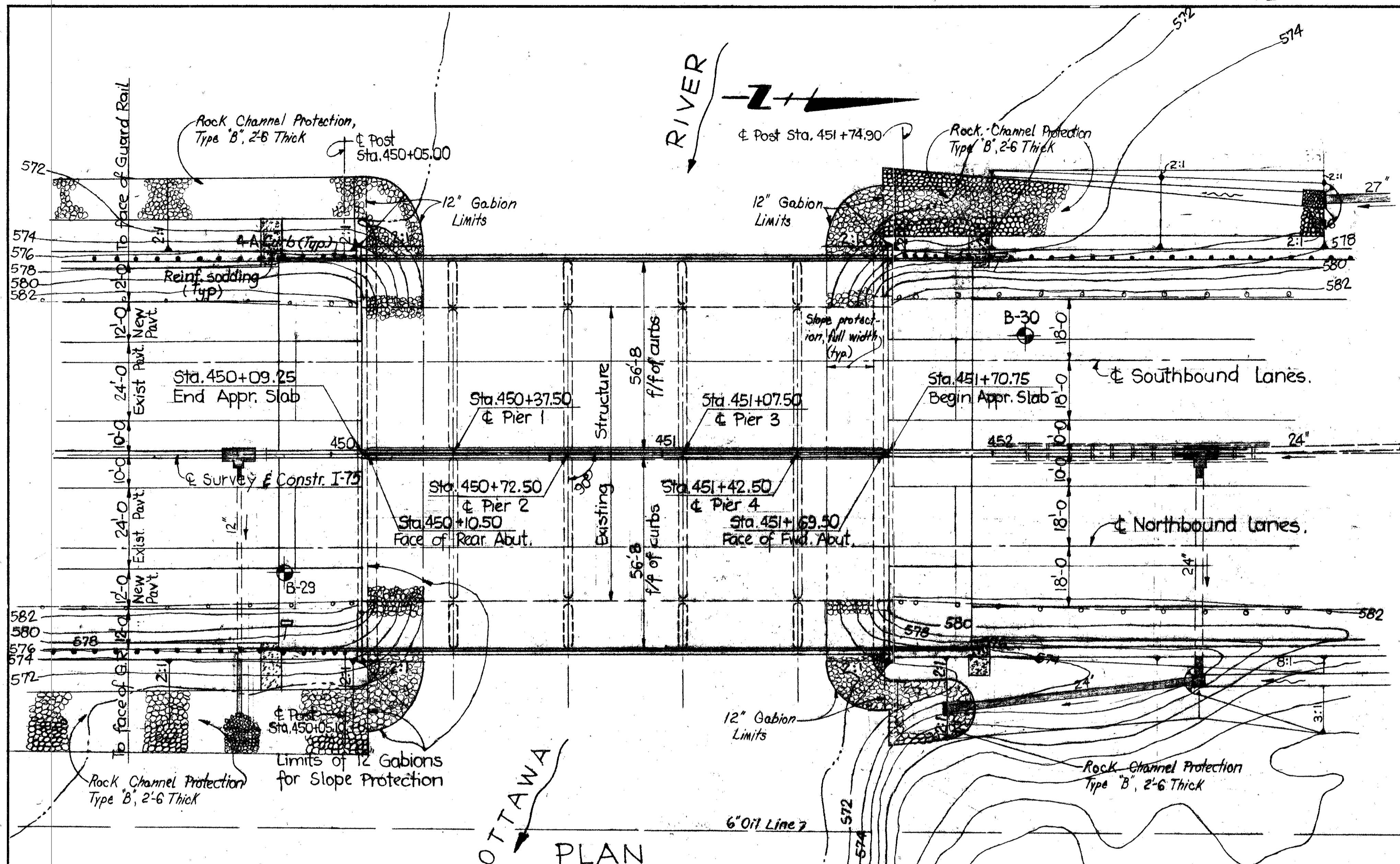
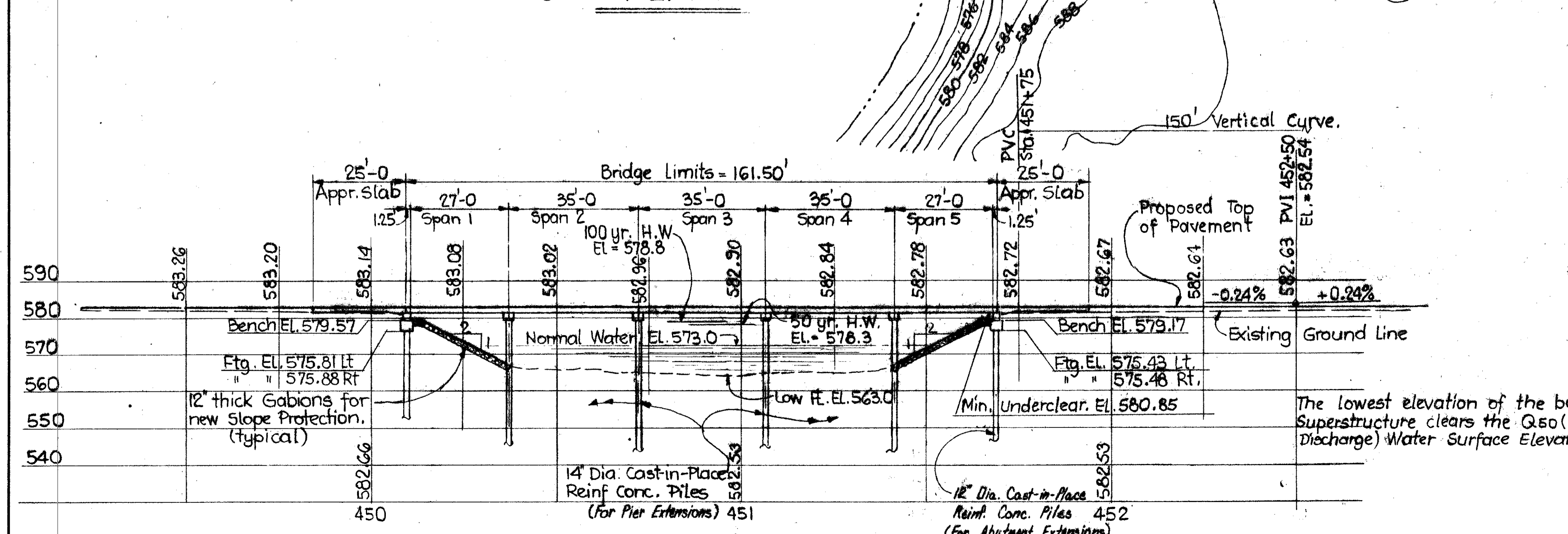


LUC-75-7.83
LUCAS COUNTY.



OTTAWA
PLAN

EXISTING STRUCTURE.	PROPOSED STRUCTURE.
TYPE 5 Span Continuous Slab Bridge with Capped Pile Substructure.	TYPE 5 Span Continuous Slab Bridge with Capped Pile Substructure.
SPANS 27'-0", 35'-0", 35'-0", 35'-0", 27'-0"	SPANS 27'-0", 35'-0", 35'-0", 35'-0", 27'-0"
ROADWAY 42'-5" fa/GR to fa/Curb + 3'-2" Conc. Median.	ROADWAY 56'-8" toe to toe of Parapets
LOADING CF 2000	PROPOSED ROADWAY 56'-8" toe to toe of Parapets
DATE BUILT: 1957	LOADING HS 20-44 and the Alternate Military Loading.
SKEW 0° 0' 0"	WEARING SURFACE Asphalt Concrete.
WEARING SURFACE Asphalt Concrete.	APPROACH SLABS 25'-0" Long (AS-1-54)
APPROACH SLABS 25'-0" Long (AS-1-54)	ALIGNMENT Tangent.
ALIGNMENT Tangent.	STRUCTURE FILE NUMBER: 4804686
STRUCTURE FILE NUMBER: 4804686	



LONGITUDINAL SECTION ALONG RT. STRUCTURE - 44' RT.

Drainage Area = 172 sq. mi.
 Q₅₀ = 8853 c.f.s.
 V₅₀ = 4.0 f.p.s.
 Q₁₀₀ = 7620 c.f.s.
 V₁₀₀ = 4.2 f.p.s.

- Earthwork Limits shown are approximate. Actual slopes shall conform to Plan Cross-Sections.
- BENCH MARK "K" - Elev. 582.44
"a" Cut SE Wingwall, Bridge Sta. 450+08 = 45 Rt.
- Traffic on I-75 (2-way):
2000 ADT = 64,978.
2000 ADTT = over 5000.
- Estimated Avg. Pay Length of Cast-in-Place Concrete Piles -
12' Dia. for Abutments : 45 lin. ft.
14' Dia. for Piers : 45 lin. ft.
- Indicates Boring Location.

EXISTING STRUCTURES	
• R.R. bridge 0.07 miles upstream from I-75	TYPE: Steel beam bridge with concrete abutments.
• Suder Ave bridge 0.13 miles downstream from I-75.	TYPE: Concrete-encased steel beam bridge with concrete abutments.
SPAN: 97' face/face abutments.	

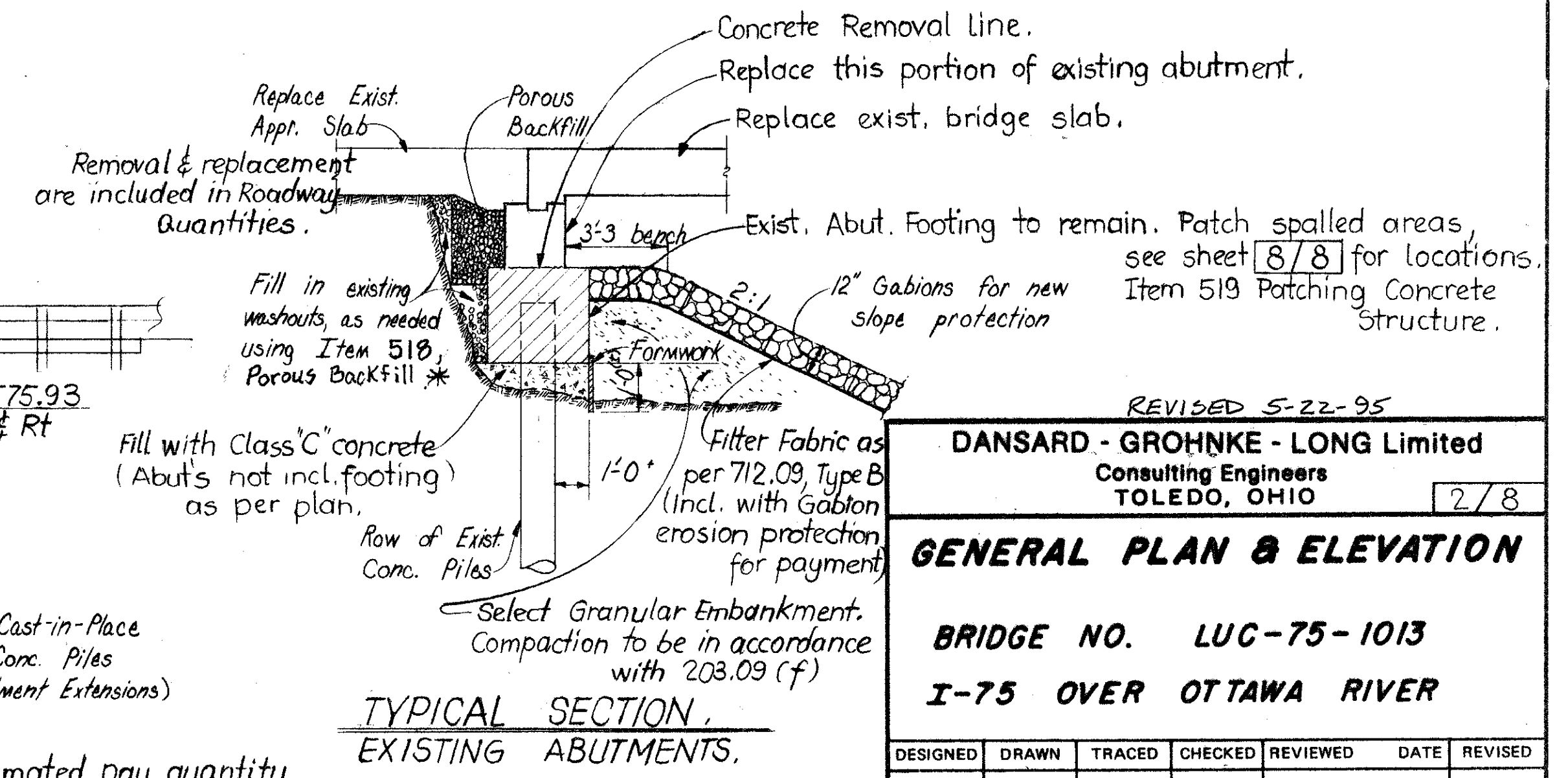
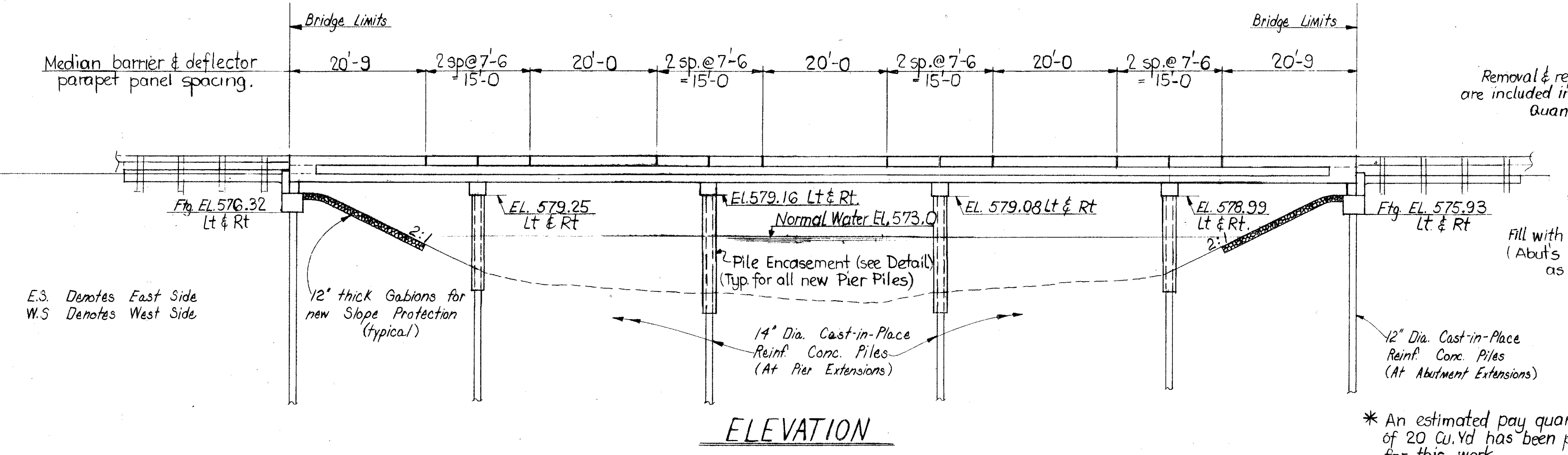
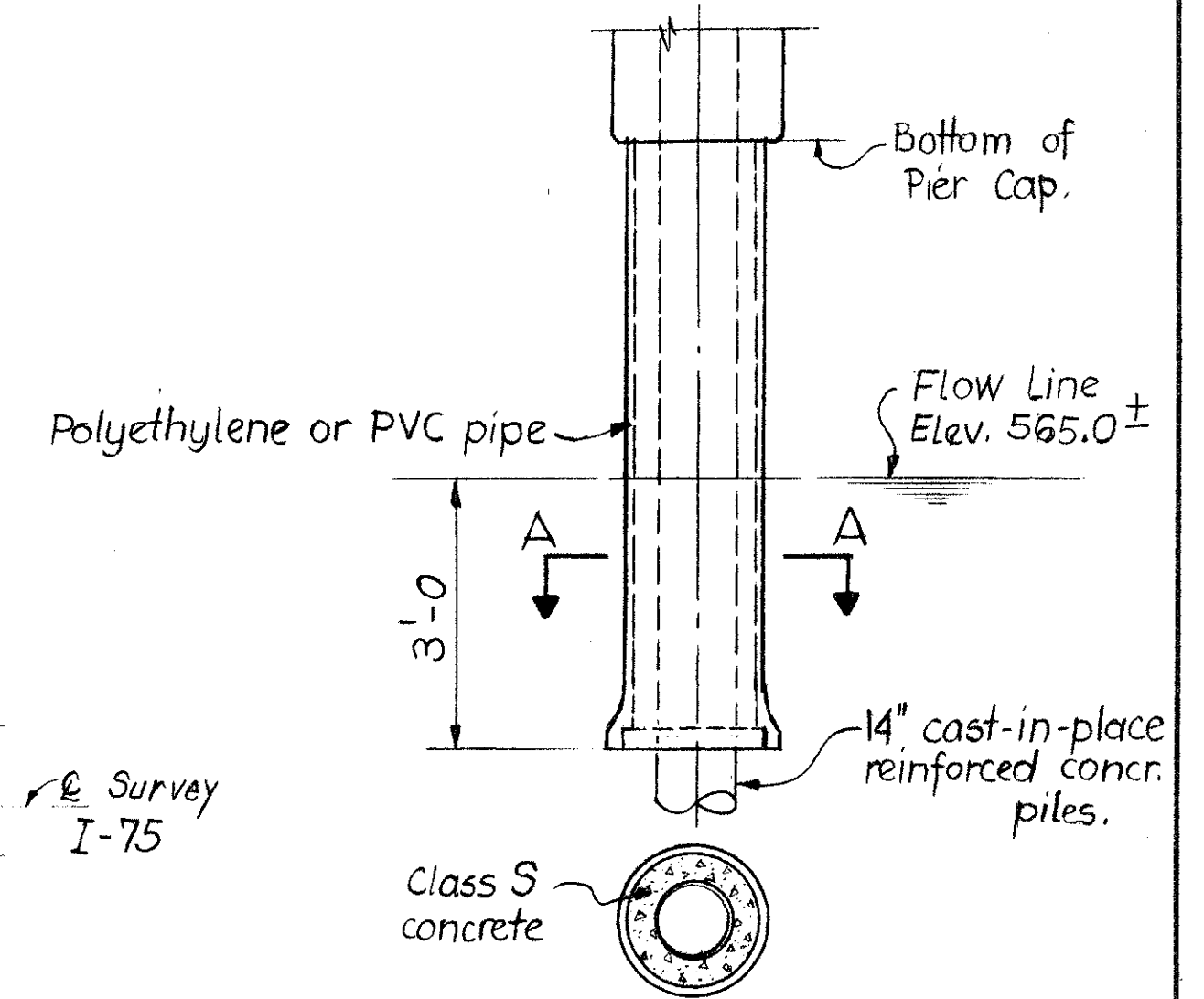
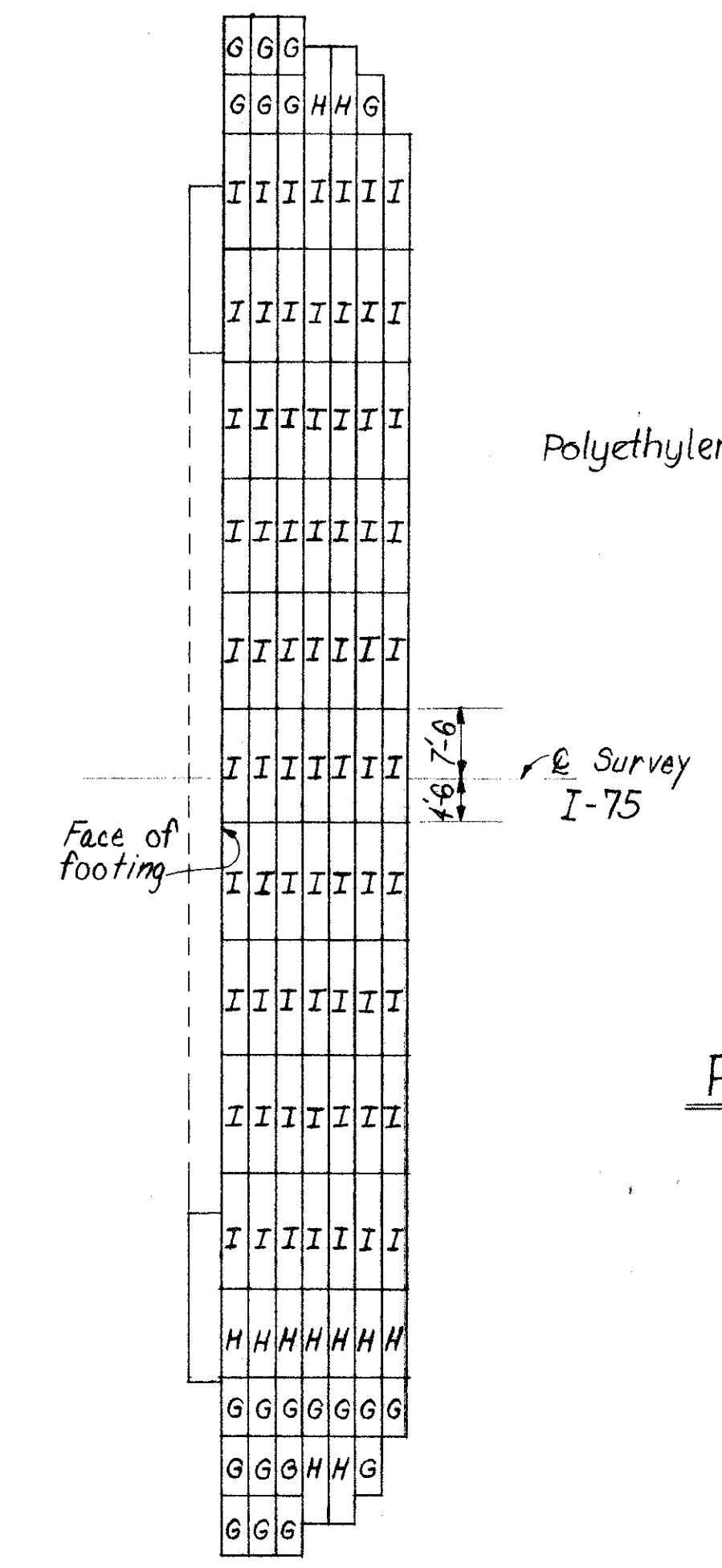
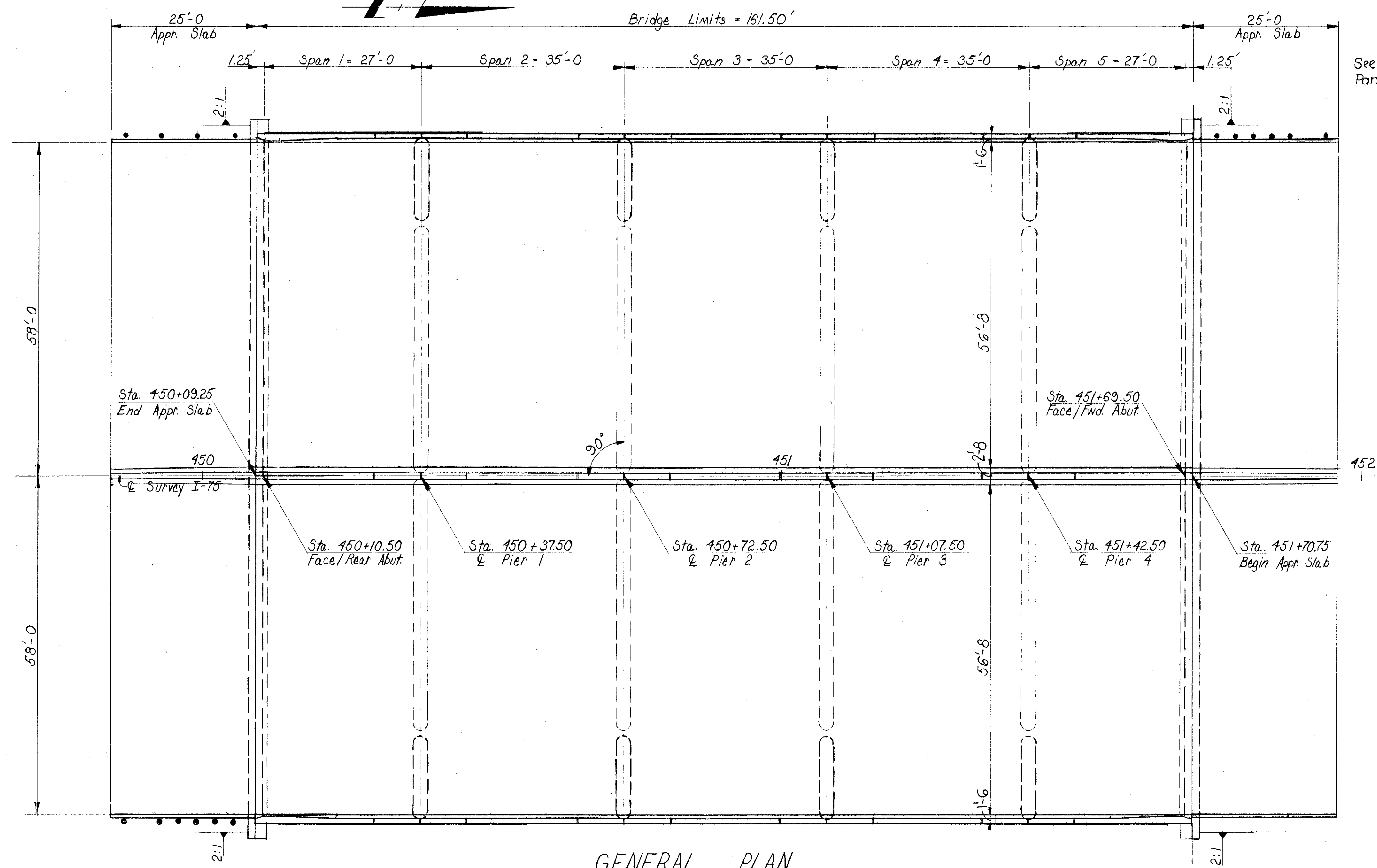
DANSARD - GROHNKE - LONG Limited Consulting Engineers TOLEDO, OHIO	
SITE PLAN	
BRIDGE NO.	LUC-75-1013
IR-75	OVER OTTAWA RIVER
LUCAS COUNTY	STA. 450+09.25-451+70.75
PRESENT TOPOGRAPHY	PROPOSED WORK
SURVEYED	DRAWN
J.C.A.	E.W.K.
DESIGNED	CHECKED
J.R.C.S.	J.R.C.S.
REVIEWED	REVIEWED
	BD

The lowest elevation of the bottom of the Superstructure clears the Q₅₀ (Design Year Discharge) Water Surface Elevation by 2.55 feet.

F.H.W.A. REGION	STATE	PROJECT
5	OHIO	I-IR-75-6(69)208

Size Code Letter	Color	Length	Width	Depth	Partitions	No.	Capacity (Cu. Yd.)
G	Blue/Red	6	3	1	1	42	.667
H	Blue/Green	9	3	1	2	22	1.0
I	Blue/Yellow	12	3	1	3	140	1.33

See Sheet 7/8 for Parapet Panel Details.



REVISED 5-22-95

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Consulting Engineers
TOLEDO, OHIO

GENERAL PLAN & ELEVATION

BRIDGE NO. LUC-75-1013
I-75 OVER OTTAWA RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.A.M.	D.B.G.		T.W.D.	BD	6-30-93	

* An estimated pay quantity of 20 Cu. Yd has been provided for this work.

ESTIMATED QUANTITIES					"I" FUNDS				"NH" FUNDS (IN CITY)			
Item	Item Ext.	Total	Unit	Description	Super.	Abut.	Pier	General	Super.	Abut.	Pier	General
202	11202	Lump	Sum	Portions of structure removed, over 20 foot span								Lump
203	35001	91	Cu. Yd.	Select granular embankment, as per plan		24				67		
503	11101	Lump	Sum	Cofferdams, cribs and sheeting, as per plan								Lump
503	21100	51	Cu. Yd.	Unclassified excavation		51						
505	11100	Lump	Sum	Pile driving equipment mobilization								Lump
507	22201	360	Lin. Ft.	12" cast-in-place reinforced concrete piles, as per plan		360						
507	42201	1080	Lin. Ft.	14" cast-in-place reinforced concrete piles, as per plan			1080					
SPECIAL	50771200	411	Lin. Ft.	PILE ENCASEMENT			411					
509	15840	138653	Lb.	Epoxy coated reinforcing steel, grade 60	32119	9530	10936	200	85868			
510	12200	104	Lin. Ft.	Dowel holes		48				56		
511	32202	1145	Cu. Yd.	Class S concrete, superstructure	315				830			
** 511	33404	1145	Cu. Yd.	Class S concrete, superstructure (using shrinkage compensating cement) *	315				830			
** 511	33410	Lump	Sum	Class S concrete, (using shrinkage compensating cement), for pre-placement testing *	Lump							
511	42500	19	Cu. Yd.	Class C concrete, pier cap			19					
511	43500	60	Cu. Yd.	Class C concrete, abutment including footing		34				26		
511	44101	282	Cu. Yd.	Class C concrete, abutment not including footing, as per plan						282		
512	33300	64	Sq. Yd.	Type A waterproofing		17				47		
Special	51267500	549	Sq. Yd.	Sealing of concrete surfaces *	197	10			342			
518	21200	52	Cu. Yd.	Porous backfill with filter fabric		14				38		
519	11100	52	Sq. Ft.	Patching concrete structure						52		
Special	60120700	236	Cu. Yd.	Gabion (See Sheet 533)		106				130		

* See proposal note
 ** These two items shall constitute one alternate bid to Class S concrete, superstructure.
 Estimated Quantities By: EWK 1-91
 Checked By: REG 1-93

FHWA REGION	STATE	PROJECT	TYPE FUNDS
5	OHIO	1-IR-75-6(69)208	600

LUC-75-7.83
 LUCAS COUNTY

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:
 AS-1-81 DATED 11-27-81
 CS-2-73 DATED 4-10-73
 PCB-91 DATED 4-24-92

AND TO SUPPLEMENTAL SPECIFICATIONS:
 DATED
 944 DATED 5-2-94

DESIGN SPECIFICATIONS THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992 AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA
 DESIGN LOADING: HS-20-44 AND THE ALTERNATE MILITARY LOADING.
 CONCRETE CLASS C, UNIT STRESS = 1333 P.S.I. (SUBSTRUCTURE)
 CONCRETE CLASS S, SUPERSTRUCTURE DESIGN BASED ON CLASS C CONCRETE, SEE STD. DWG. CS-2-73 FOR DESIGN DATA.
 REINFORCING STEEL ASTM A615, A616 OR A617 GRADE 60, UNIT STRESS 24,000 P.S.I.
 DECK PROTECTION METHOD: EPOXY REINFORCING STEEL, TOP AND BOTTOM MATS.
 MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

FOR MAINTENANCE OF TRAFFIC DETAILS, SEE MAINTENANCE OF TRAFFIC PHASE III PLAN SHEETS 7 AND 38 OF 92, STEP 5.

PLANS OF EXISTING BRIDGES
 PLANS OF EXISTING BRIDGES MAY BE EXAMINED AT THE DISTRICT 2 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, 317 EAST POE ROAD, BOWLING GREEN, 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 AND 105.02.

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

ITEM 202, PORTIONS OF STRUCTURES REMOVED
 SEQUENCE OF REMOVALS SHALL BE DETERMINED BY THE STAGE OF BRIDGE CONSTRUCTION AS SHOWN ON THE PLANS. CARE SHALL BE EXERCISED DURING REMOVAL TO AVOID DAMAGE TO ADJACENT PORTIONS OF THE BRIDGE WHICH ARE TO REMAIN FOR STAGE CONSTRUCTION OR ARE NOT TO BE REPAIRED UNDER THIS CONTRACT. THIS ITEM SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE SUPERSTRUCTURE AND PORTIONS OF THE ABUTMENTS AS REQUIRED BY STAGE CONSTRUCTION AND AS DETAILED IN THE PLANS. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED.

REPLACEMENT OF EXISTING REINFORCING STEEL
 ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT HIS COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 200 POUNDS IS INCLUDED IN ITEM 509 "EPOXY COATED REINFORCING STEEL, GRADE 60" FOR THIS PURPOSE.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES
 SEE PROPOSAL NOTE "ITEM SPECIAL, SEALING OF CONCRETE SURFACES" FOR A DESCRIPTION OF SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND PROCEDURES. A NON-EPOXY SEALER SHALL BE APPLIED TO THE SURFACES DESIGNATED ON SHEETS 5 AND 6 OF 8.

ITEM 507 12 INCH AND 14 INCH CAST-IN-PLACE REINFORCED CONCRETE PILES AS PER PLAN

PILE WALL THICKNESS
 THE RESPONSIBILITY OF CHOOSING AND PROVIDING A SATISFACTORY PILE WALL THICKNESS FOR THIS PROJECT SHALL BE BORNE BY THE CONTRACTOR EXCEPT THAT THE PILE WALL THICKNESS SHALL NOT BE LESS THAN 0.200 INCHES. IF A PILE WALL THICKNESS GREATER THAN 0.200 INCHES IS NECESSARY TO RESIST THE PILE INSTALLATION DRIVING STRESS, THE CONTRACTOR SHALL MAKE THIS DETERMINATION AND SHALL FURNISH A PILE WITH AN ACCEPTABLE WALL THICKNESS. MONOTUBE PILES ARE NOT REQUIRED TO COMPLY WITH THE ABOVE SPECIFIED MINIMUM PILE WALL THICKNESS.

PILE HAMMER
 THE PILE HAMMER USED TO INSTALL THE CAST-IN-PLACE PILES SHALL HAVE A STATE'S ENERGY RATING OF NOT LESS THAN 16,500 FOOT-POUNDS. THIS REQUIREMENT DOES NOT RELIEVE THE CONTRACTOR FROM 108.05 WHICH STATES THAT THE CONTRACTOR IS TO PROVIDE SUFFICIENT EQUIPMENT FOR PROSECUTING THE REQUIRED WORK. REFER TO "ODOT'S MANUAL OF PROCEDURES FOR STRUCTURES" TO OBTAIN THE STATE'S ENERGY RATING.

PILE DRIVING CONSTRAINTS
 PRIOR TO DRIVING PILES AT THE EXTENSION OF THE ABUTMENTS, THE REAR PIER, AND THE FORWARD PIER, THE SPILL-THRU SLOPE EMBANKMENT SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE FOR A MINIMUM DISTANCE OF 200 FEET BACK OF EACH ABUTMENT. AFTER THE EMBANKMENT IS COMPLETED WITHIN THE ABOVE REQUIRED LIMITS, THE EXCAVATION FOR THE EXTENSION ABUTMENT FOOTINGS SHALL BE MADE AND THEN THE PILES CAN BE DRIVEN.

PILE DESIGN LOADS
 THE DESIGN LOAD FOR THE ABUTMENT PILES IS 21 TONS PER PILE AND THE DESIGN LOAD FOR THE PIER PILES IS 35 TONS PER PILE.

ITEM SPECIAL - PILE ENCASEMENT
 ALL PILES FOR THE CAPPED PILE PIERS SHALL BE ENCASED IN CLASS S CONCRETE (499.03) AND SHALL BE IN ACCORDANCE WITH 511, EXCEPT AS MODIFIED AND SUPPLEMENTED HEREIN. THE REQUIRED SLUMP IS 6 (SIX) INCHES, PLUS OR MINUS ONE-HALF INCH. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.50. IF CONCRETE IS PLACED UNDER WATER, THE REQUIREMENTS OF ADDING 10 PERCENT MORE CEMENT TO THE CONCRETE SHALL BE WAIVED. THE CONCRETE SHALL BE PLACED WITHIN A FORM THAT CONSISTS OF POLYETHYLENE PIPE (707.16 OR SS 944), OR PVC PIPE (SS 942). THE ENCASEMENT SHALL EXTEND FROM 3 FEET BELOW THE FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP AND SHALL BE POSITIONED SO THAT AT LEAST 2 INCHES OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE.

THE LENGTH OF PILE ENCASEMENT SHALL BE MEASURED IN FEET ALONG THE LENGTH OF THE PILE. THIS ITEM INCLUDES ALL WORK AND MATERIALS NECESSARY TO FURNISH THE REQUIRED ENCASEMENT. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF PILE ENCASEMENT APPROVED IN PLACE.

COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN
 TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE DESIGN OF THE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER, AND CONFORM WITH 501.05. FOR APPROVAL, FIVE COPIES OF THE DRAWINGS SHALL BE SUBMITTED TO THE DIRECTOR AND CONCURRENTLY, ONE COPY TO THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN.
 CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE DIRECTOR. PORTIONS OF THE TEMPORARY SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

REVISED 5-22-95 3/8

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 110 Arco Drive Toledo, Ohio 43607 (419) 535-1015

ESTIMATED QUANTITIES AND GENERAL NOTES
 BRIDGE NO. LUC-75-1013
 1-75 over Ottawa River

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SAM	SAM		REG	BD	6-30-93	

FHWA REGION	STATE	PROJECT	TYPE FUNDS
5	OHIO	I-IR-75-6(69)208	

533
600

LUC-75-7.83
LUCAS COUNTY

GABION SPECIFICATIONS

GENERAL

UNDER THIS ITEM, THE CONTRACTOR SHALL FURNISH, ASSEMBLE, FILL WITH APPROVED STONES, HEAVILY GALVANIZED STEEL WIRE MESH BASKETS OF APPROVED SIZES. THEIR SIZES SHALL BE AS SPECIFIED IN THE TABLE OF QUANTITIES, MANUFACTURED IN ACCORDANCE WITH THESE SPECIFICATIONS AND PLACED IN ACCORDANCE WITH THE LINES, GRADES AND DIMENSIONS SHOWN ON THE PLANS, OR AS REQUIRED BY THE ENGINEER.

THE ASSEMBLY AND ERECTION OF GABIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

GABION FABRICATION

GABIONS SHALL BE MANUFACTURED IN SUCH A MANNER THAT THEIR SIDES, ENDS, LID AND DIAPHRAGM(S) CAN BE ASSEMBLED TO FORM RECTANGULAR UNITS OF THE SPECIFIED DIMENSIONS.

GABIONS SHALL BE OF A SINGLE UNIT CONSTRUCTION. THE FRONT, BASE, BACK AND LID SHALL BE WOVEN INTO A SINGLE UNIT. THE ENDS AND DIAPHRAGM(S) SHALL BE FACTORY CONNECTED TO THE BASE.

ALL PERIMETER EDGES OF THE MESH FORMING THE GABION SHALL BE SECURELY SELVEDGED SO THAT THE JOINTS OBTAINED HAVE AT LEAST THE SAME STRENGTH AS THE WIRE MESH ITSELF.

GABION DIMENSIONS

THE GABION LENGTH SHALL BE 2, 3 OR 4 TIMES ITS HORIZONTAL WIDTH. THE HORIZONTAL WIDTH SHALL NOT BE LESS THAN 36 INCHES. HOWEVER, ALL GABIONS FURNISHED BY THE MANUFACTURER SHALL BE OF UNIFORM WIDTH. THE GABION SHALL BE DIVIDED INTO CELLS BY DIAPHRAGM(S) OF THE SAME MESH GAUGE AS THE GABION BODY. THE SPACING OF THESE DIAPHRAGMS SHALL BE EQUAL TO THE HORIZONTAL WIDTH.

GABION MATERIALS

A) MESH: MESH OPENINGS SHALL BE HEXAGONAL IN SHAPE, MEASURING APPROXIMATELY THREE AND ONE-QUARTER (3 1/4) BY FOUR AND ONE-HALF (4 1/2) INCHES. UNIFORM IN SIZE.

B) MESH JOINTS: ALL JOINTS SHALL BE FLEXIBLE AND TRIPLE TWISTED TO PREVENT UNRAVELING.

C) GALVANIZING: ALL STEEL WIRE USED SHALL BE GALVANIZED HAVING A MINIMUM AMOUNT OF ZINC COATING OF 0.80 OZ./SQ. FT., OF WIRE, AND COMPLYING WITH FEDERAL SPECIFICATION (QQ-W-461g, CLASS 3).

ALL DIMENSIONS ARE SUBJECT TO A TOLERANCE LIMIT OF ±3% OF MANUFACTURER'S SPECIFIED SIZES.

GALVANIZED GABIONS

D) MESH WIRE: THE DIAMETER OF THE STEEL WIRE MESH SHALL BE 0.118 INCHES AFTER GALVANIZATION.

E) SELVEDGED WIRE: THE DIAMETER OF THE SELVEDGE WIRE, RUNNING THROUGH ALL THE EDGES (PERIMETER WIRE), SHALL BE 0.150 INCHES AFTER GALVANIZATION.

F) LACING WIRE: THE DIAMETER OF THE WIRE, NECESSARY FOR ASSEMBLING AND LACING THE GABION UNITS, SHALL BE .091 INCHES AFTER GALVANIZATION.

TENSILE STRENGTH OF ALL WIRE USED FOR MANUFACTURING THE GABIONS AND LACING WIRE SHALL RANGE FROM 60,000 TO 80,000 PSI IN ACCORDANCE WITH FEDERAL SPECIFICATIONS (QQ-W-461g, CLASS 3).

LOAD TEST SHALL BE CONDUCTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS (QQ-W-461g, CLASS 3).

ELONGATION TEST SHALL BE CONDUCTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS (QQ-W-461g, CLASS 3).

ASSEMBLING

GABIONS ARE SUPPLIED FOLDED FLAT, TIED IN PAIRS AND PACKED IN BUNDLES. SINGLE GABIONS SHALL BE REMOVED FROM THE BUNDLE, UNFOLDED FLAT ON THE GROUND, AND ALL KINKS AND BENDS FLATTENED.

THE GABION UNIT SHALL THEN BE ASSEMBLED INDIVIDUALLY, BY ERECTING THE SIDES (FRONT AND BACK), ENDS AND DIAPHRAGM(S), ENSURING THAT ALL CREASES ARE IN CORRECT POSITION AND TOPS OF ALL SIDES LEVEL.

THE FOUR CORNERS OF THE GABION UNIT SHALL BE LACED FIRST, FOLLOWED BY THE EDGES OF INTERNAL DIAPHRAGM(S) TO THE SIDES.

THE LACING PROCEDURE CONSISTS OF CUTTING A LENGTH OF LACING WIRE (APPROXIMATELY 1 1/2 TIMES THE DISTANCE TO BE LACED - NOT TO EXCEED 5 FEET). SECURE THE WIRE TERMINAL AT THE CORNER BY LOOPING AND TWISTING, THEN PROCEED TO LACE WITH ALTERNATING SINGLE AND DOUBLE LOOPS AT APPROXIMATELY FIVE (5) INCH INTERVALS. SECURELY FASTEN THE OTHER LACING WIRE TERMINAL.

INSTALLATION

THE ASSEMBLED GABION UNITS ARE CARRIED TO THE JOB SITE AND PLACED IN THEIR PROPER LOCATION. FOR STRUCTURAL INTEGRITY, ALL ADJOINING EMPTY GABIONS MUST BE LACED ALONG THE PERIMETER OF THEIR CONTACT SURFACES IN ORDER TO OBTAIN A MONOLITHIC STRUCTURE.

FILLING

GABION UNITS SHALL BE FILLED WITH HARD, DURABLE, CLEAN STONE FROM FOUR (4) TO EIGHT (8) INCHES IN SIZE, OR AS APPROVED BY THE ENGINEER.

GABIONS MAY BE FILLED BY ALMOST ANY TYPE OF EARTH-HANDLING EQUIPMENT, SUCH AS: BACKHOE, GRADALL, CRANE, ETC.

THE CELLS IN ANY ROW SHALL BE FILLED IN STAGES SO THAT LOCAL DEFORMATION MAY BE AVOIDED.

ALONG ALL EXPOSED GABION FACES, THE OUTER LAYER OF STONE SHALL BE CAREFULLY PLACED AND PACKED BY HAND, IN ORDER TO ENSURE PROPER ALIGNMENT AND A NEAT, COMPACT, SQUARE APPEARANCE.

THE LAST LAYER OF STONE SHALL BE LEVELED WITH THE TOP OF THE GABION TO ALLOW PROPER CLOSING OF THE LID AND PROVIDE AN EVEN SURFACE.

WELL PACKED FILLING WITHOUT UNDUE BULGING, AND SECURE LACING, IS ESSENTIAL IN ALL STRUCTURES.

LID CLOSING

THE LIDS SHALL BE STRETCHED TIGHT OVER THE FILLING, USING CROW BARS OR LID CLOSING TOOLS, UNTIL THE LID MEETS THE PERIMETER EDGES OF THE FRONT AND END PANELS.

THE LID SHALL THEN BE TIGHTLY LACED ALONG ALL EDGES, ENDS AND DIAPHRAGM(S) IN THE SAME MANNER AS DESCRIBED ABOVE FOR ASSEMBLING.

CUTTING AND FOLDING MESH

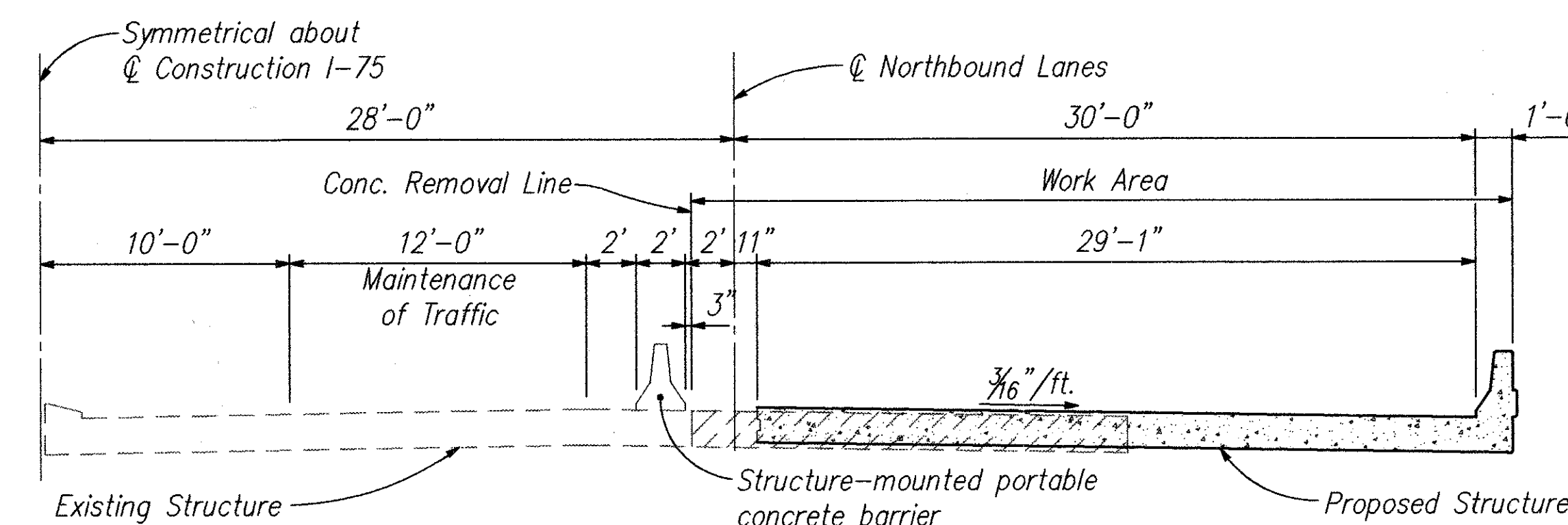
WHERE SHOWN ON THE DRAWINGS OR OTHERWISE DIRECTED BY THE ENGINEER, THE GABION MESH SHALL BE CUT, FOLDED AND WIRED TOGETHER TO SUIT EXISTING SITE CONDITIONS. THE MESH MUST BE CLEANLY CUT AND THE SURPLUS MESH CUT OUT COMPLETELY, OR FOLDED BACK AND NEATLY WIRED TO AN ADJACENT GABION FACE. THE CUT EDGES OF THE MESH SHALL BE SECURELY LACED TOGETHER WITH LACING WIRE IN THE MANNER DESCRIBED ABOVE FOR ASSEMBLING.

METHOD OF MEASUREMENT

GABION QUANTITIES WILL BE MEASURED BY THE CUBIC YARD COMPLETED IN PLACE, AND ACCEPTED IN ACCORDANCE WITH THE DIMENSIONS SHOWN ON THE PLANS.

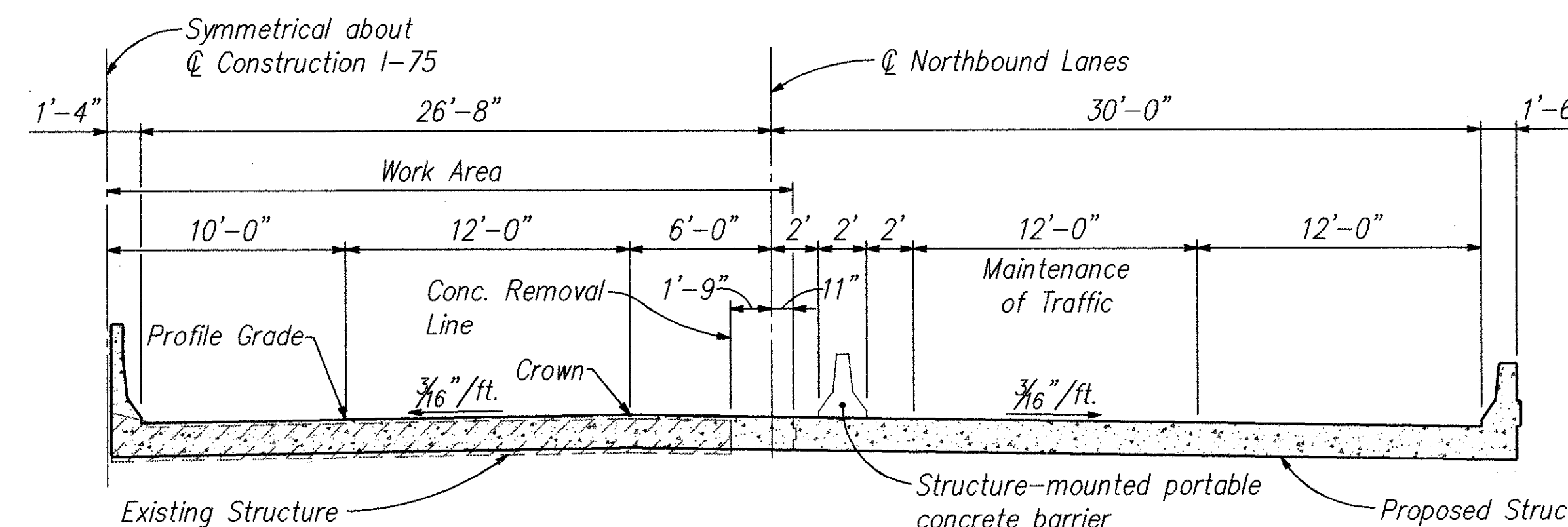
BASIS OF PAYMENT

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM SPECIAL , GABION.



STAGE I CONSTRUCTION

Note:
Existing guardrail not shown.



STAGE II CONSTRUCTION

Note:
See sheet 79 of 92 in the Maintenance of Traffic Plans for structure-mounted portable concrete barrier details.

STAGE CONSTRUCTION SECTIONS

REVISED 5-22-95

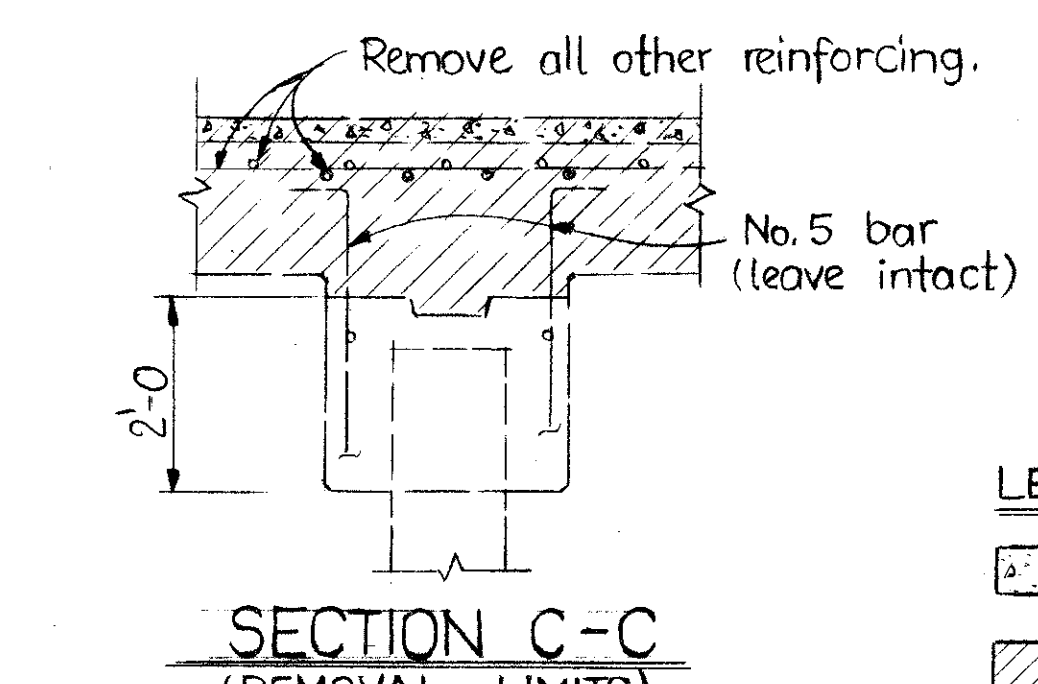
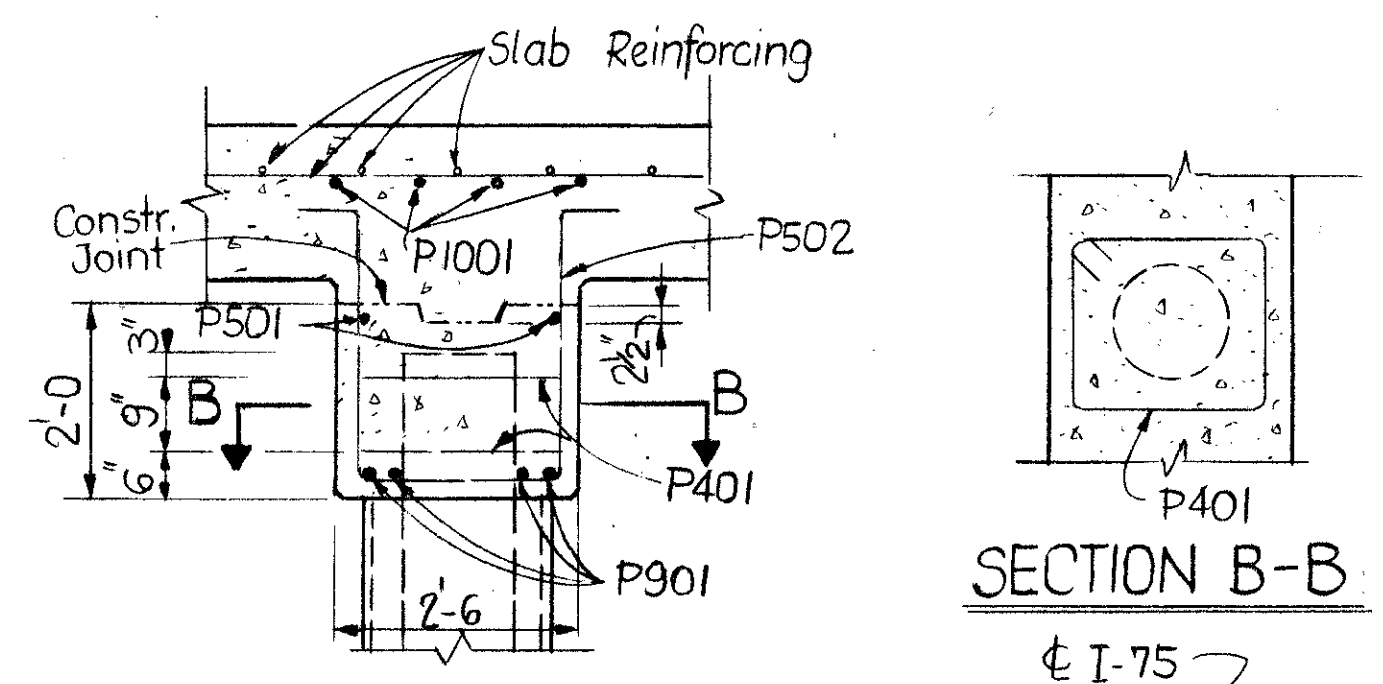
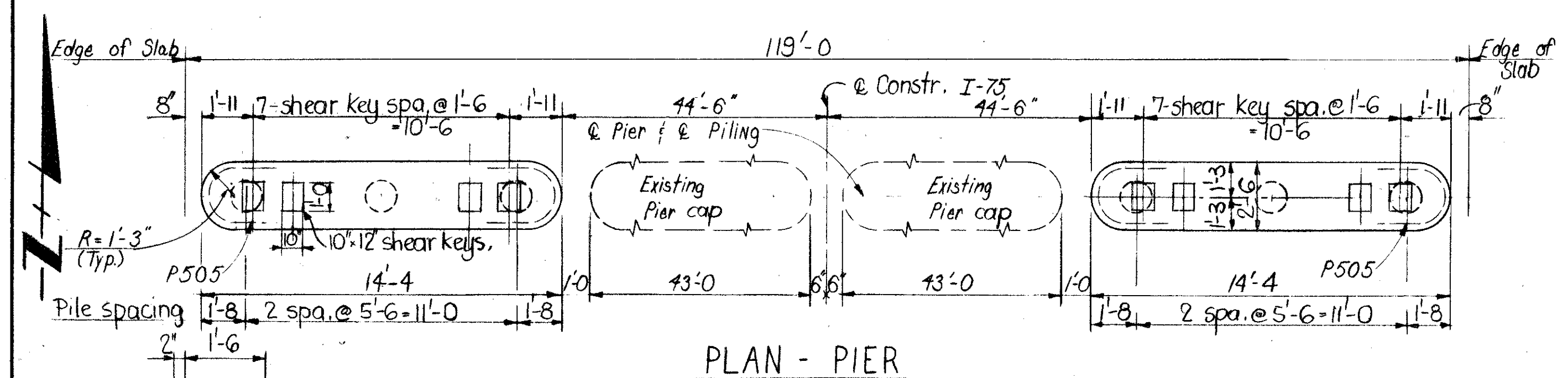
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110 Arco Drive Toledo, Ohio 43607 (419) 535-1015

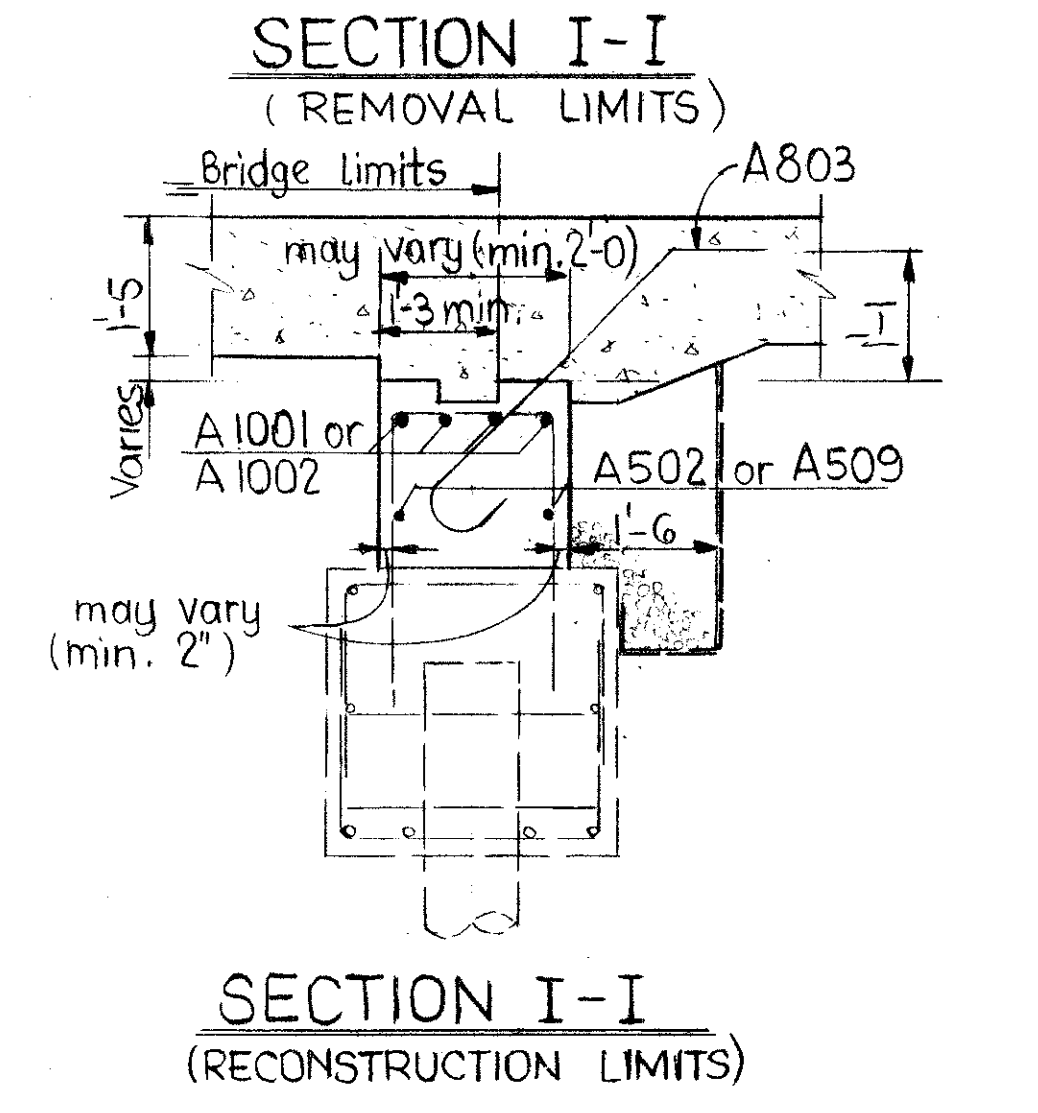
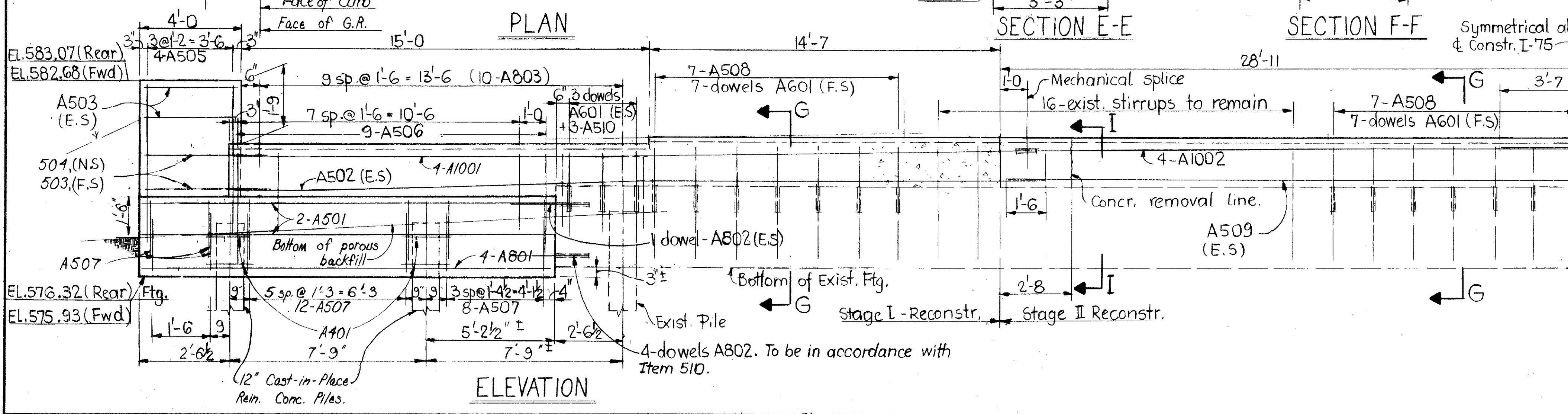
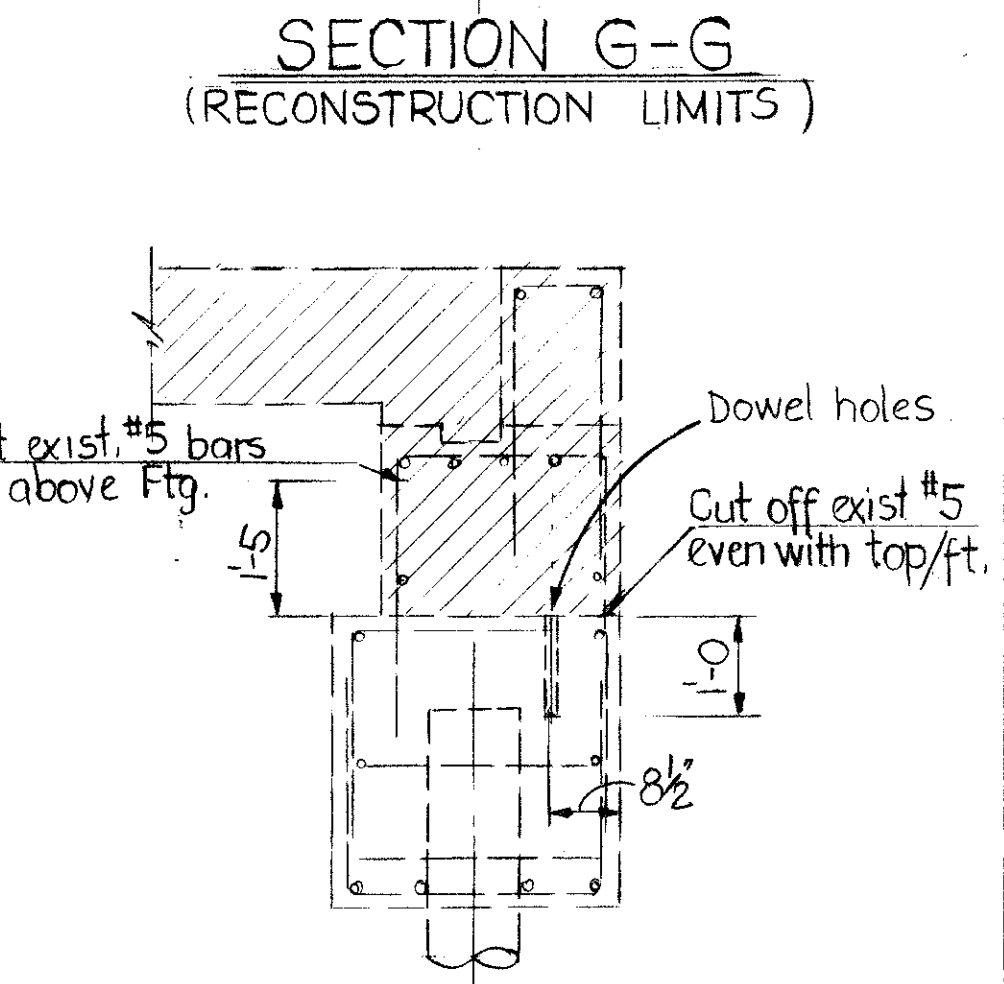
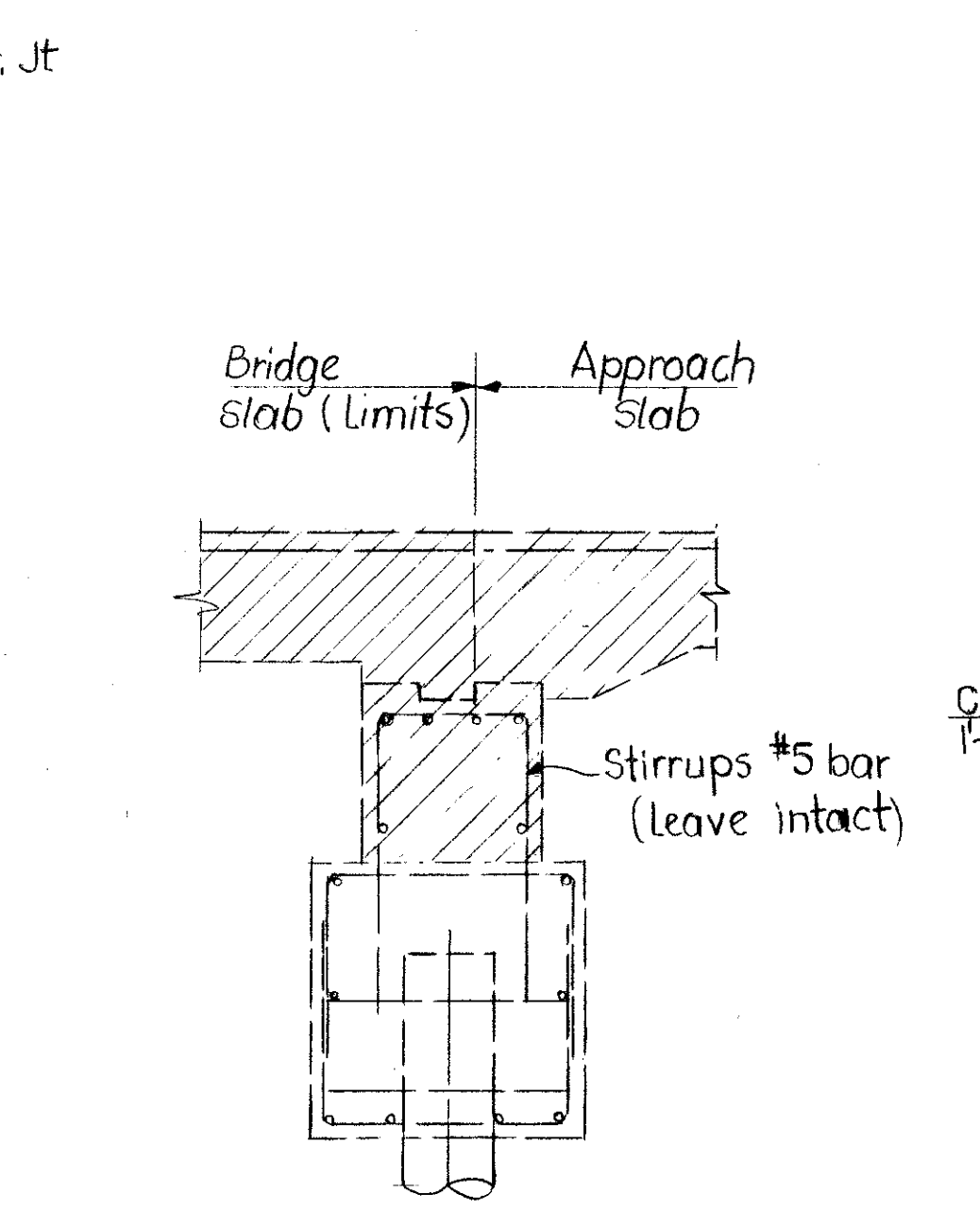
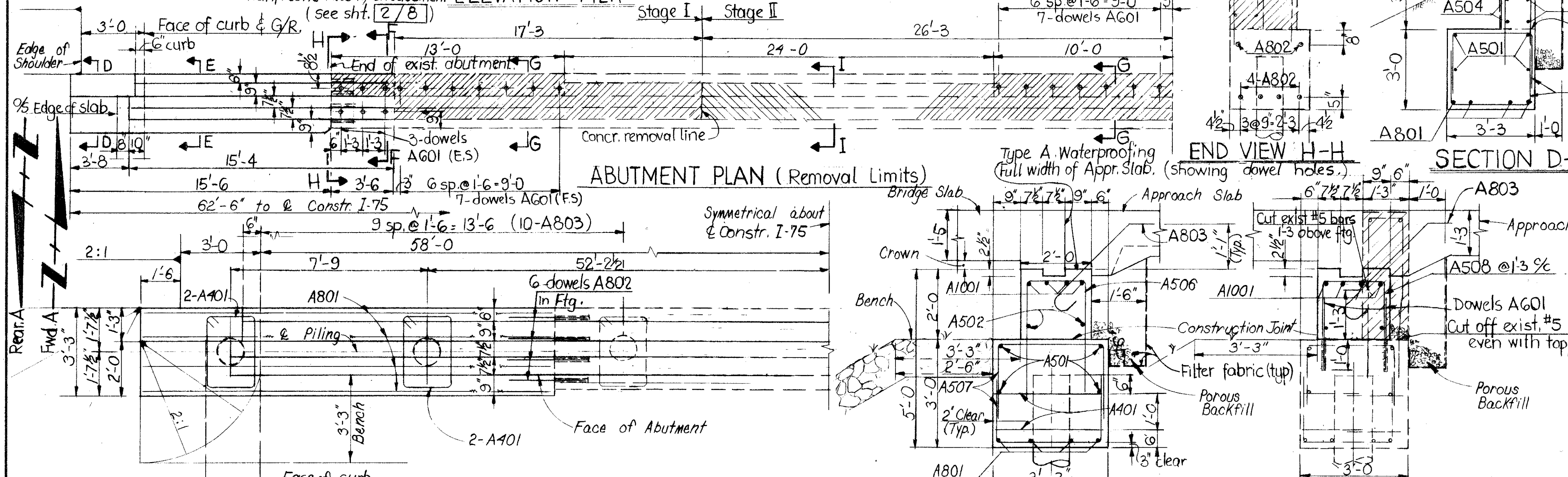
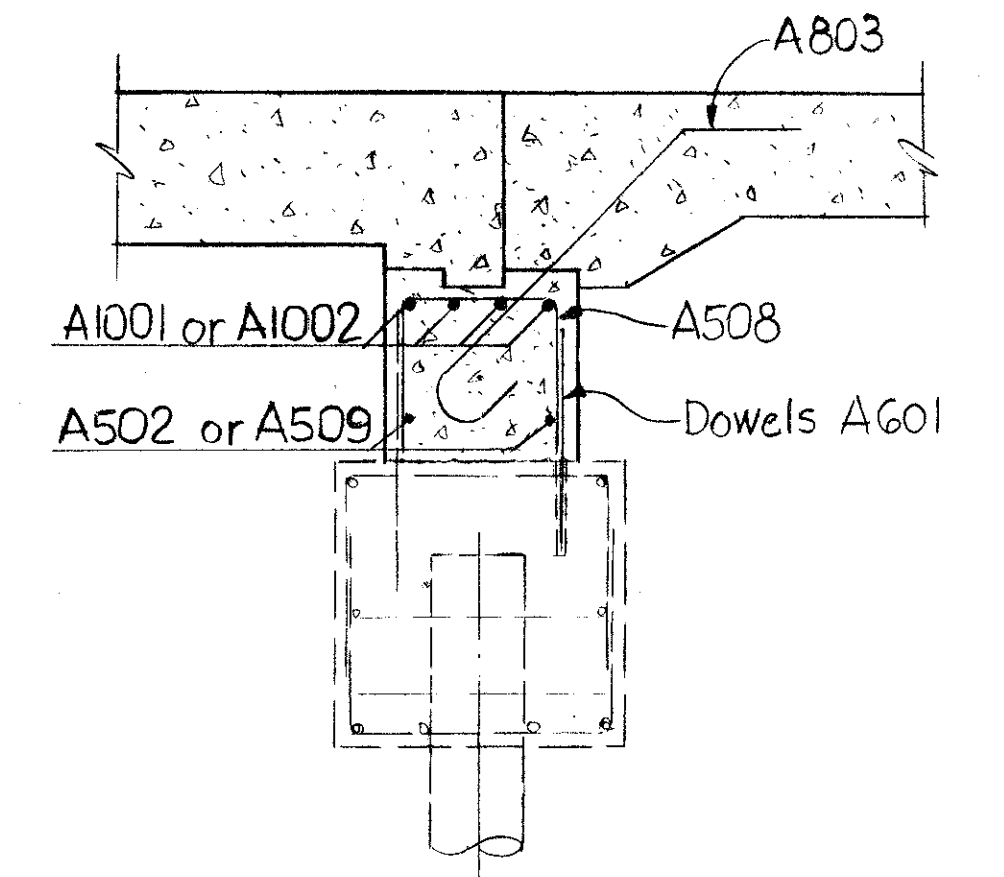
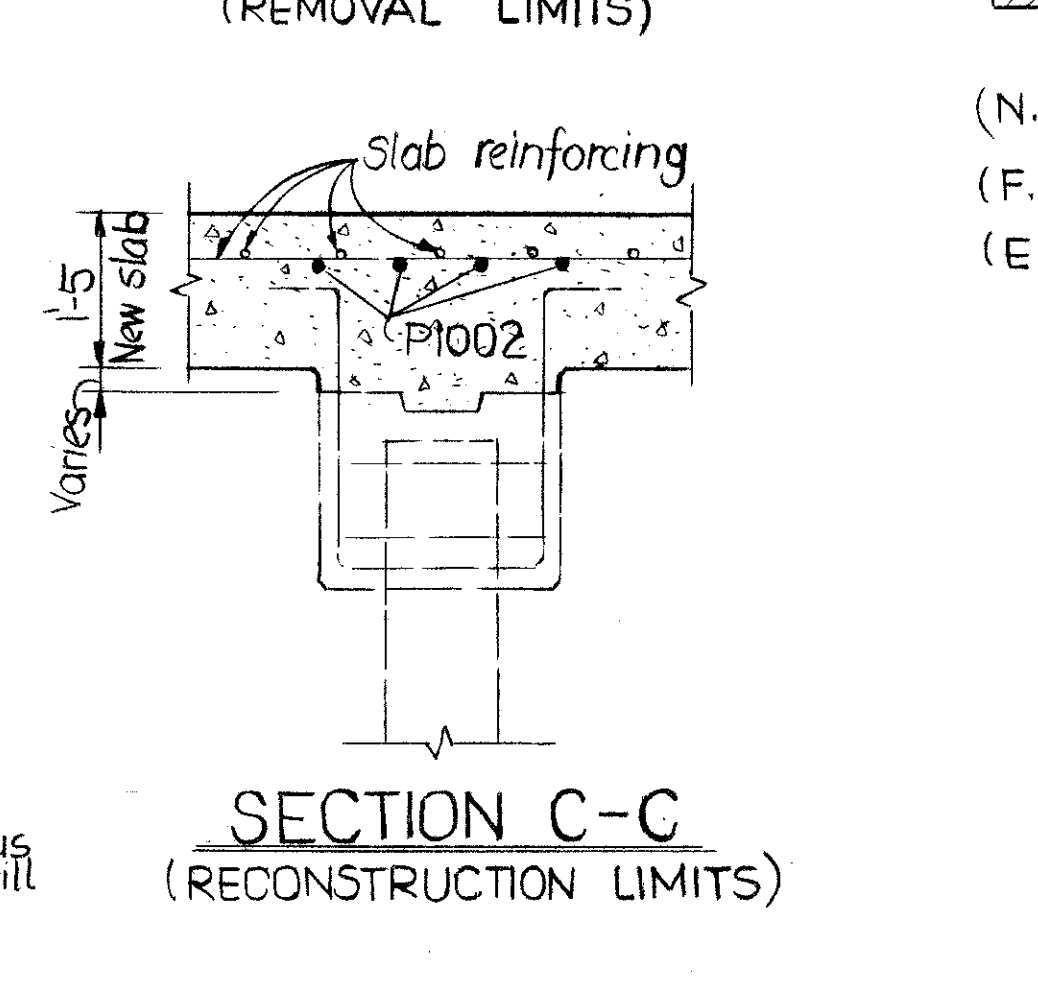
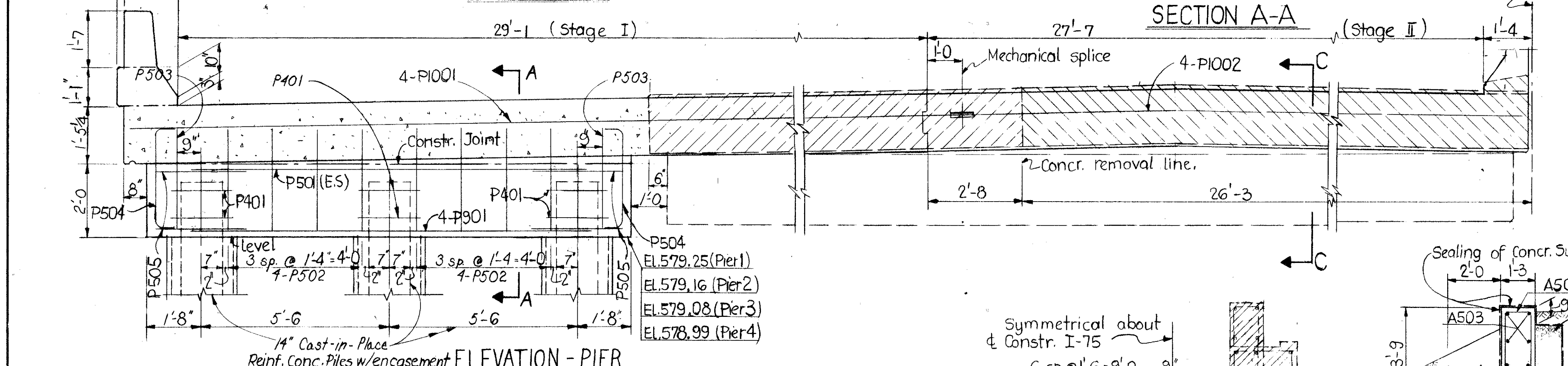
GABION SPECIFICATIONS AND
STAGE CONSTRUCTION DETAILS
BRIDGE NO. LUC-75-1013
I-75 over Ottawa River

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SAM	SAM		REG	BD	6-30-93	

LUC-75-7.83
LUCAS COUNTY.



LEGEND:
 Limits of Proposed Concrete.
 Existing concrete to be removed.
 (N.S) - Denotes Near Side.
 (F.S) - Denotes Far Side.
 (E.S) - Denotes Each Side.



REVISED 5-22-95

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 Consulting Engineers
 TOLEDO, OHIO

PIER & ABUTMENT DETAILS & REINFORCEMENT SCHEDULE
 BRIDGE NO. LUC-75-1013
 I-75 OVER OTTAWA RIVER

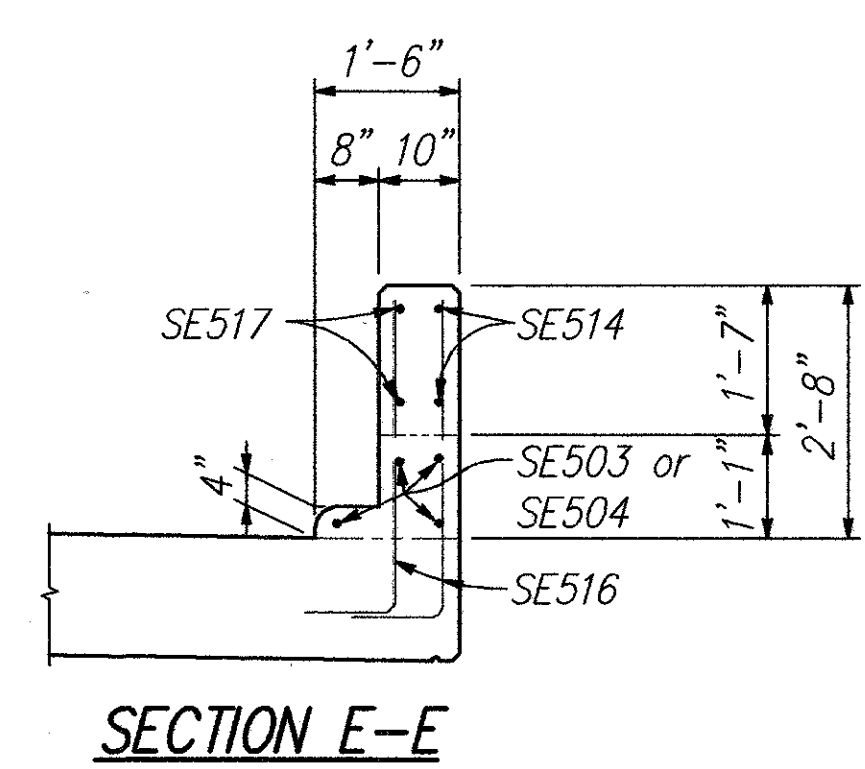
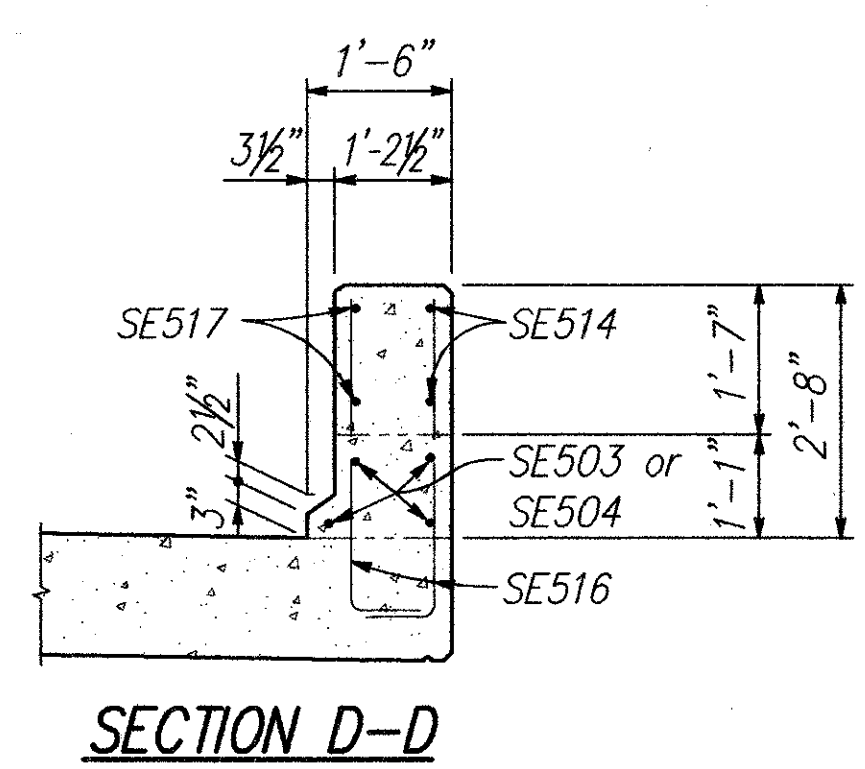
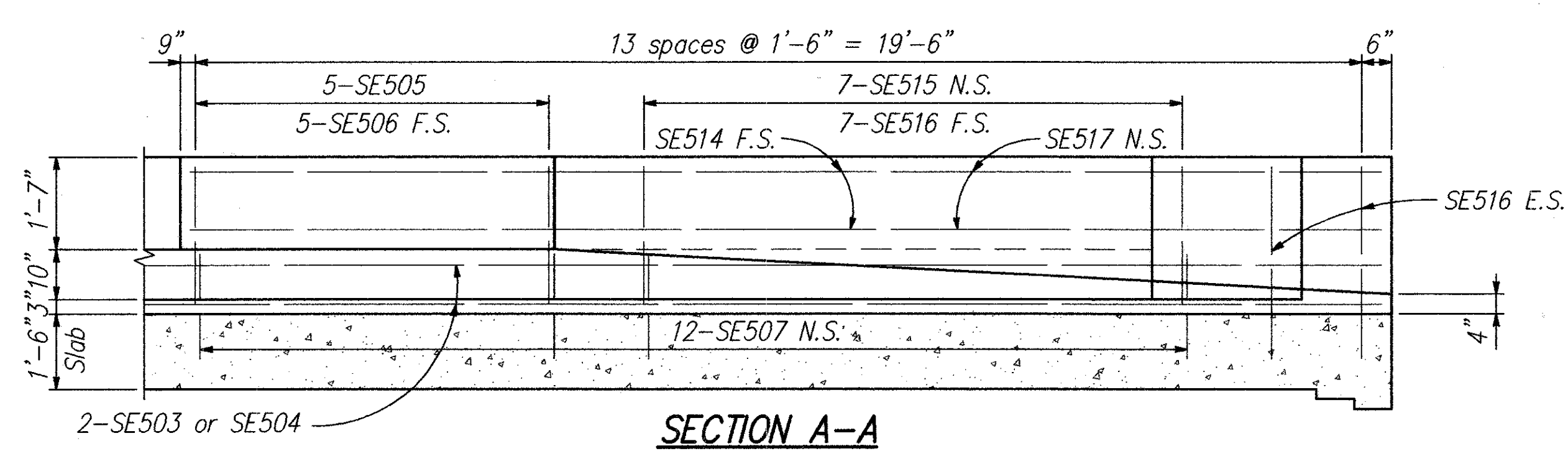
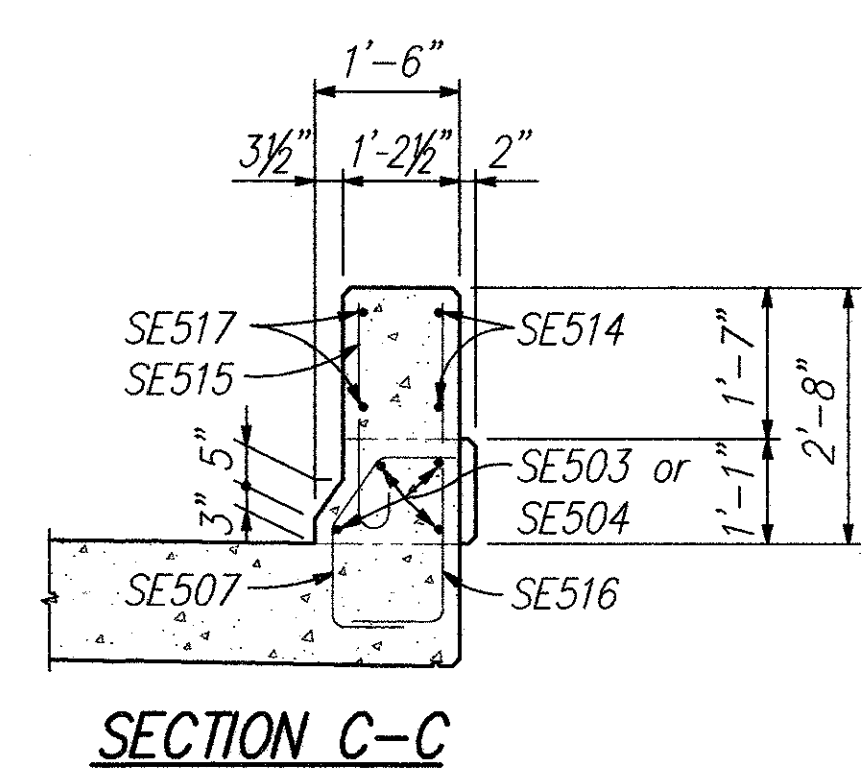
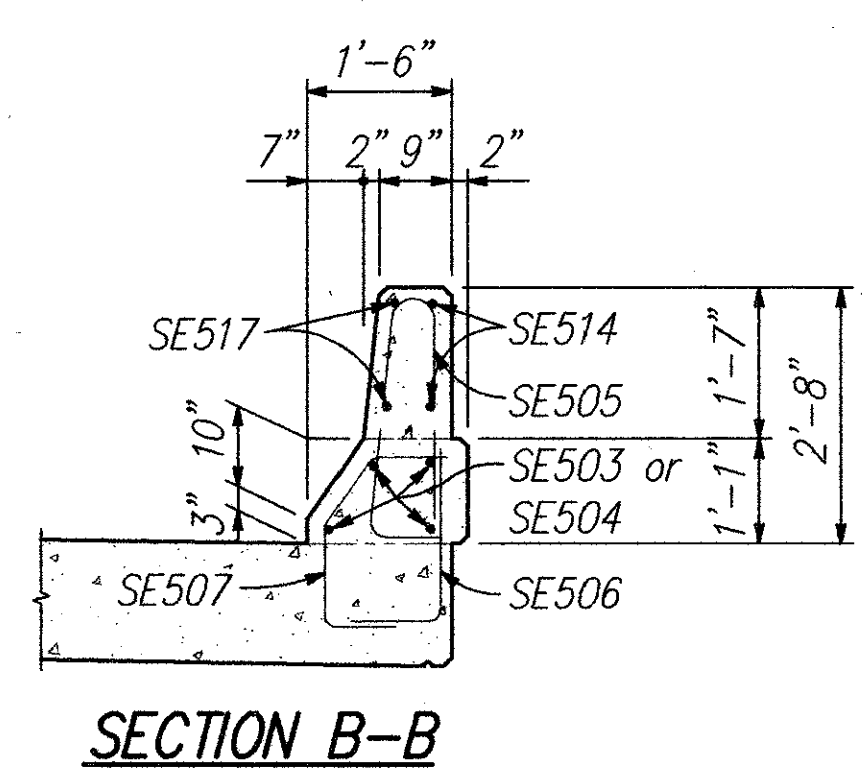
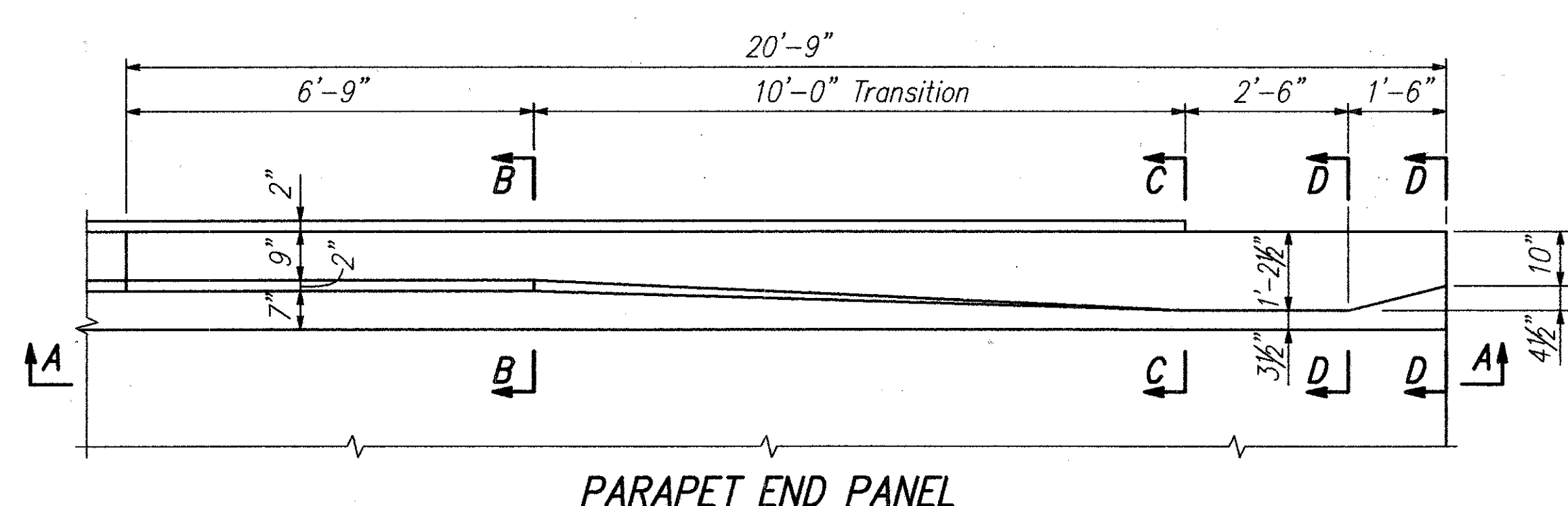
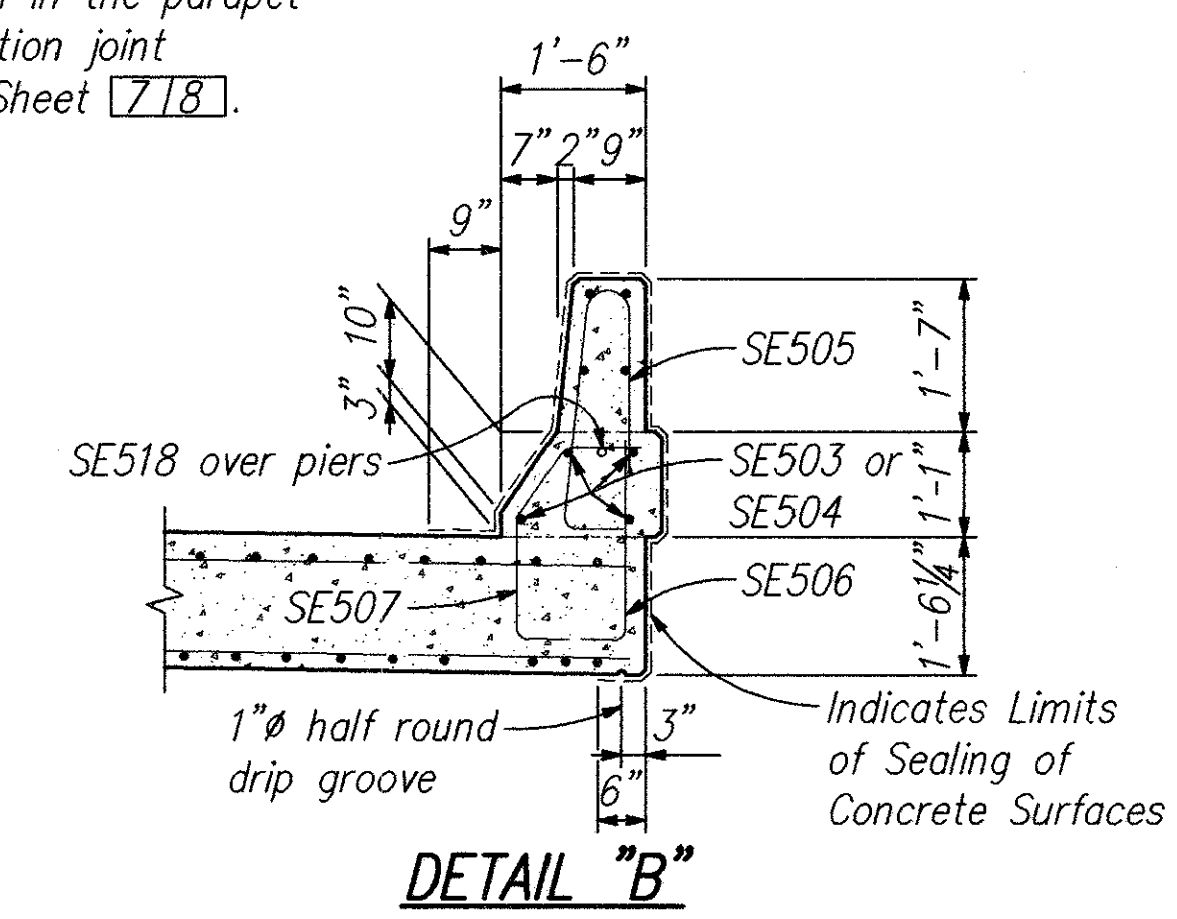
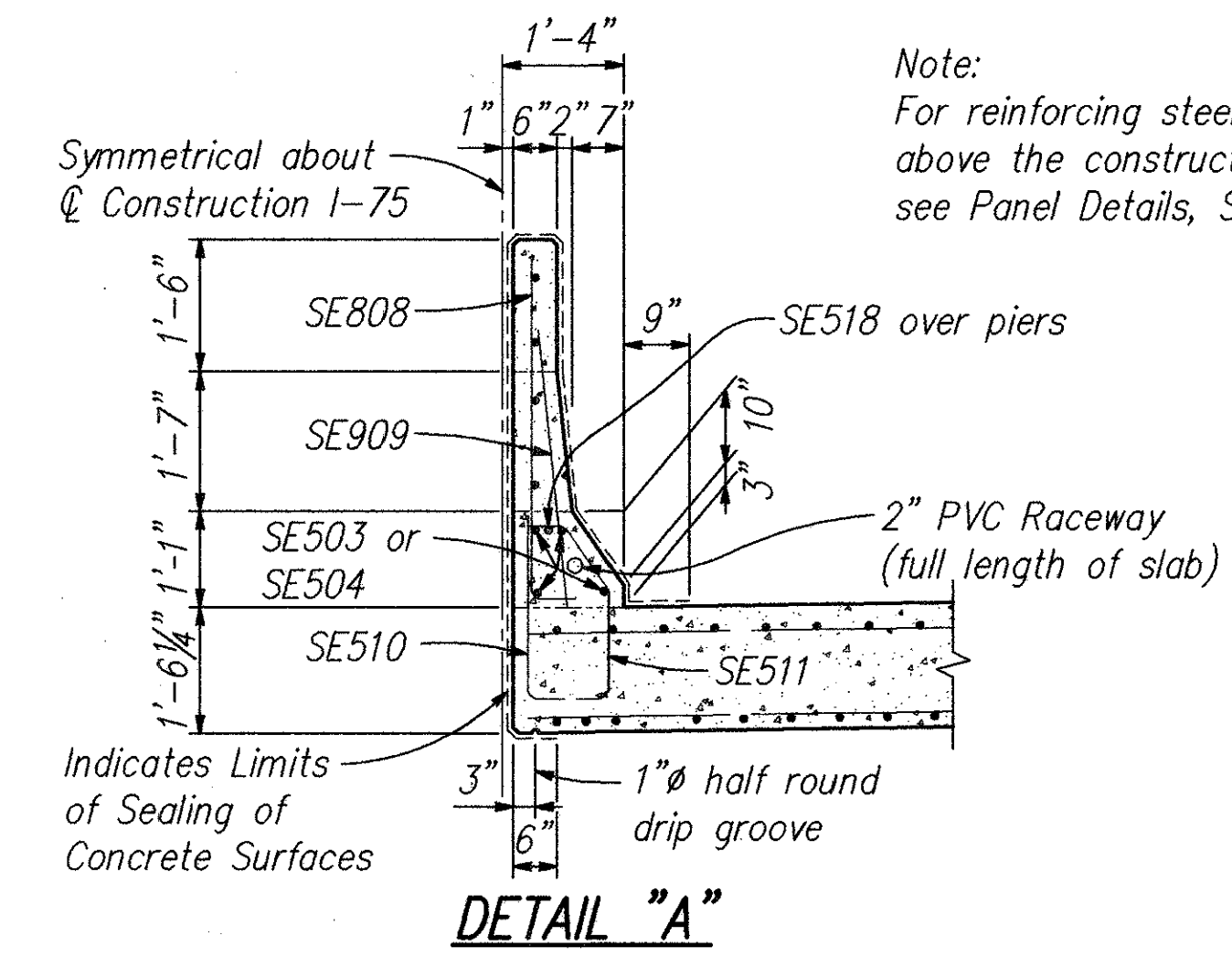
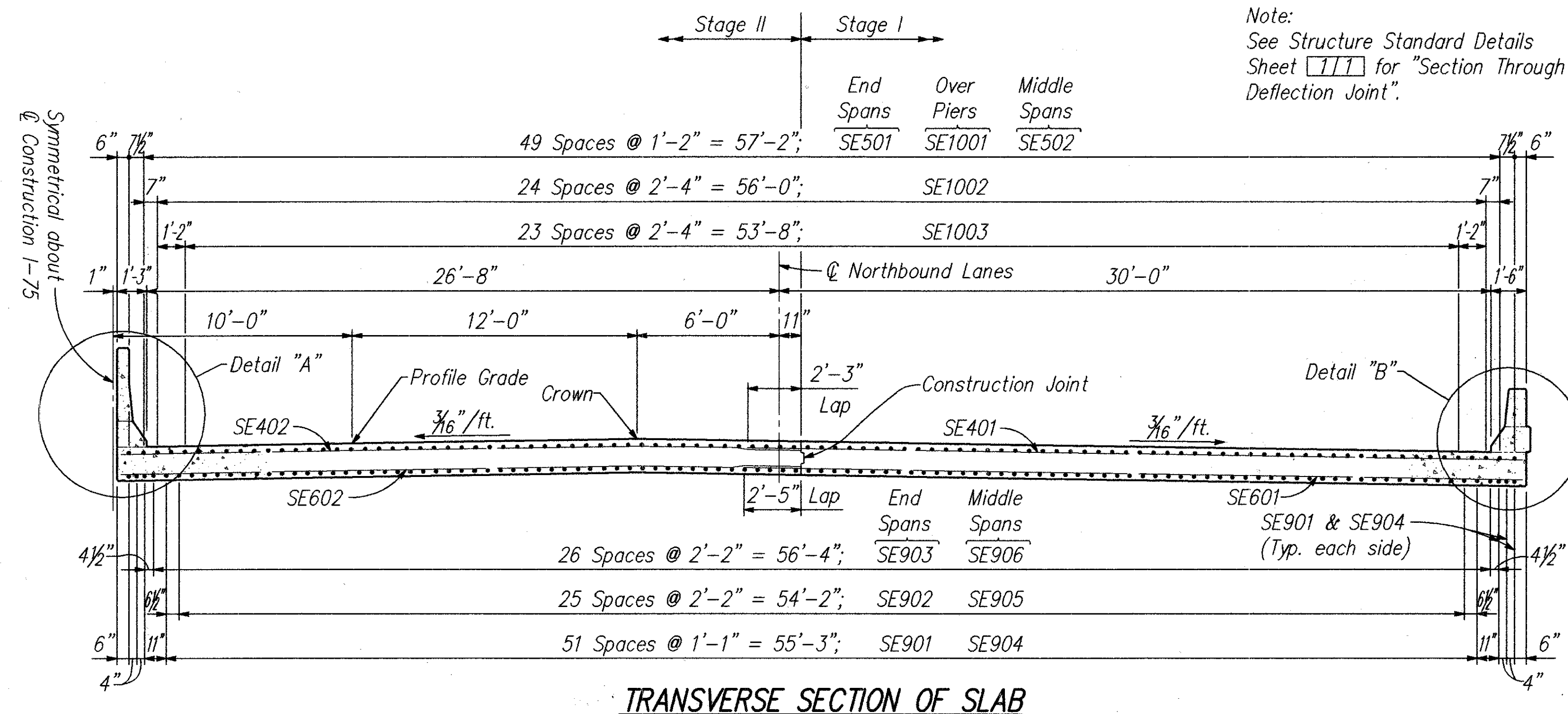
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SAM	DBG EWK		TWD	BD	6-30-93	

Jul 27, 1993 - 14:18:10

FHWA REGION	STATE	PROJECT	TYPE FUNDS
5	OHIO	I-IR-75-6(69)208	

535
600

LUC-75-7.83
LUCAS COUNTY



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SUPERSTRUCTURE

BRIDGE NO. LUC-75-1013
I-75 OVER OTTAWA RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SAM	SAM		REG	BD	6-30-93	

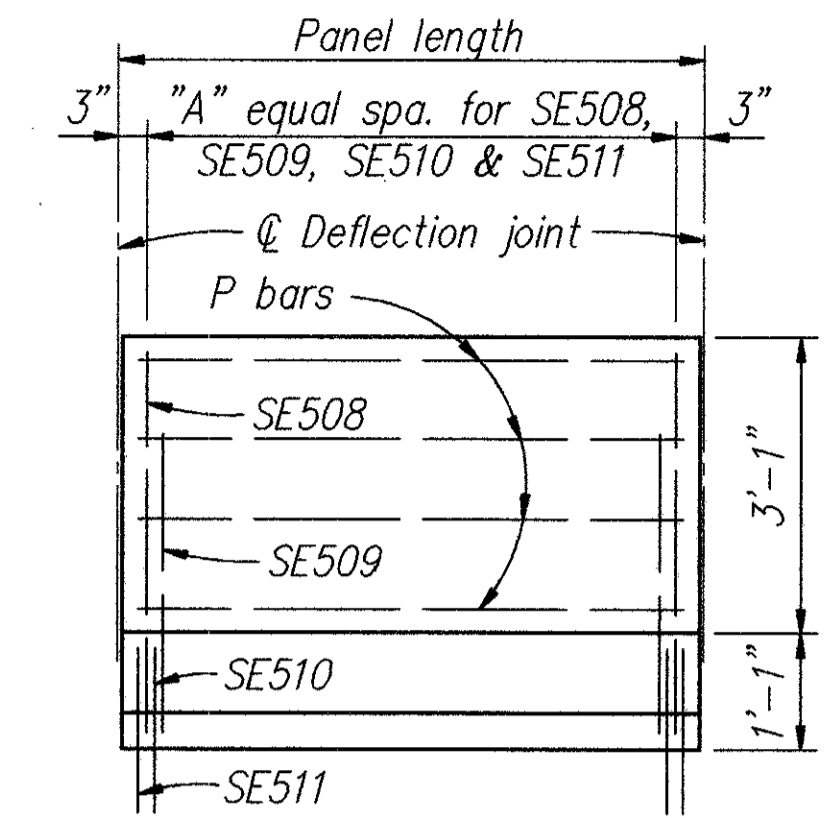
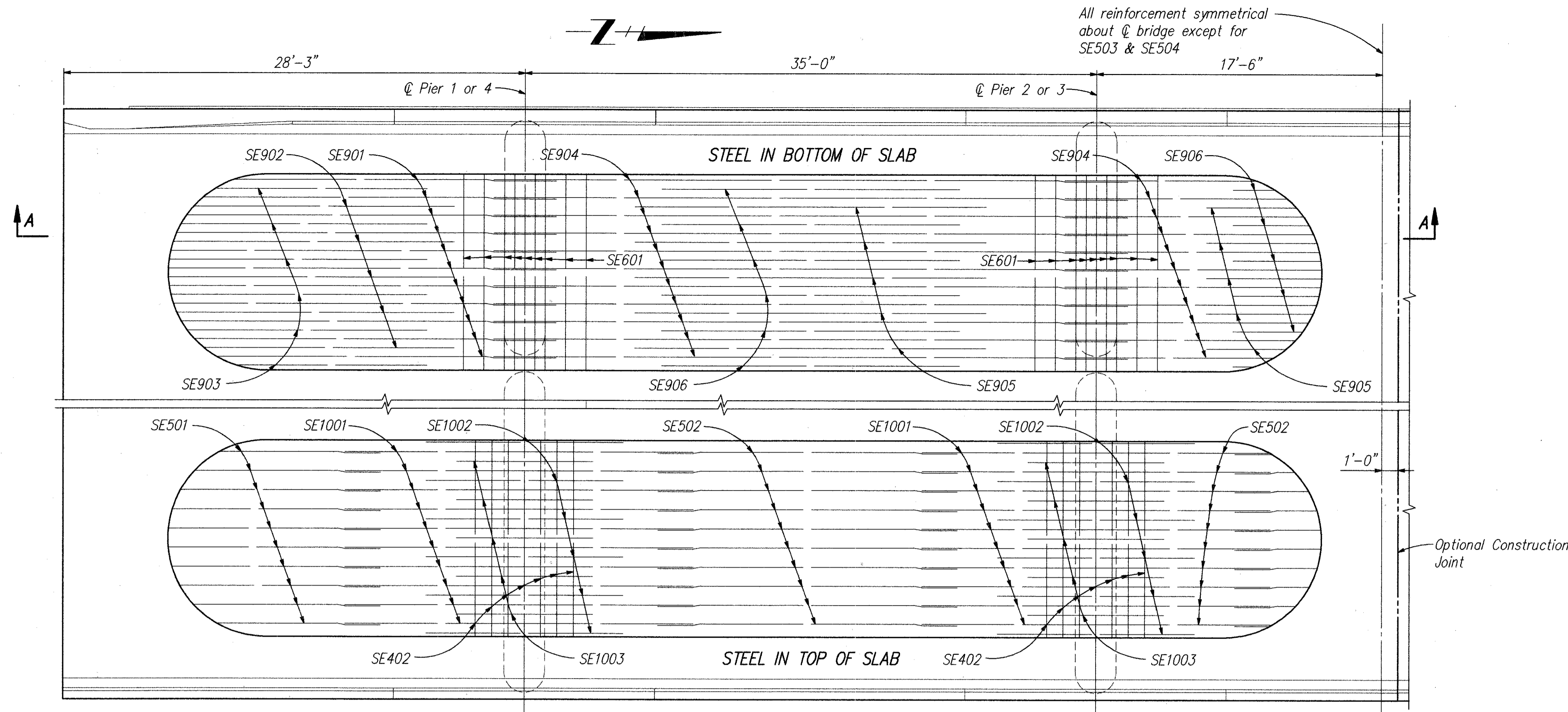
1013S406.DWG

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LUC-75-7.83
LUCAS COUNTY

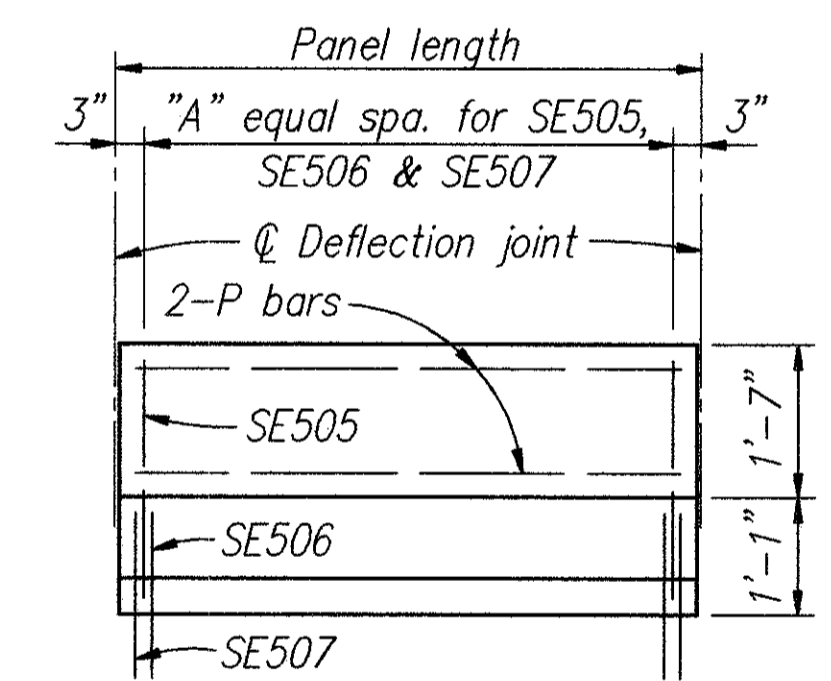
FHWA REGION	STATE	PROJECT	TYPE FUNDS
5	OHIO	I-IR-75-6(69)208	

536
600



Parapet Panel Length	Total Panels for two parapets	P-bars mark	No. of "A" spaces for SE508
7'-6"	16	SE512	5
20'-0"	6	SE513	14
20'-9"	4	SE514	14

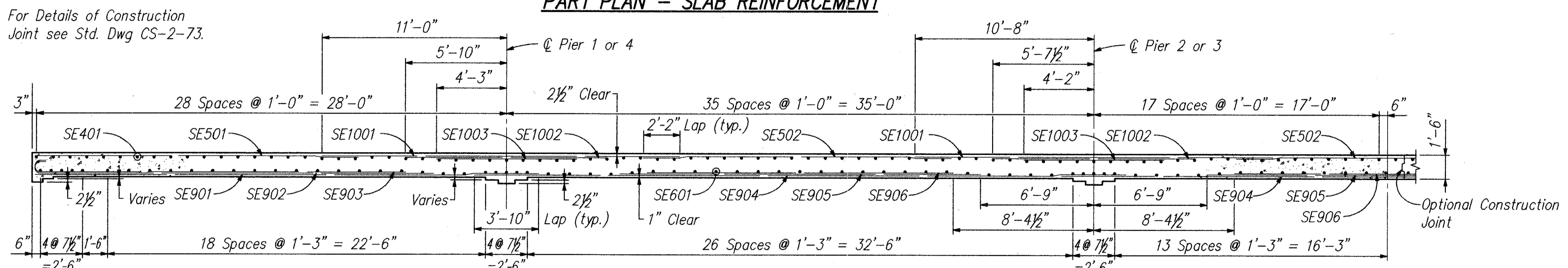
INTERIOR PANEL DETAIL



Parapet Panel Length	Total Panels for two parapets	P-bars mark	No. of "A" spaces for SE505
7'-6"	16	SE512	5
20'-0"	6	SE513	14

EXTERIOR PANEL DETAIL

PART PLAN - SLAB REINFORCEMENT



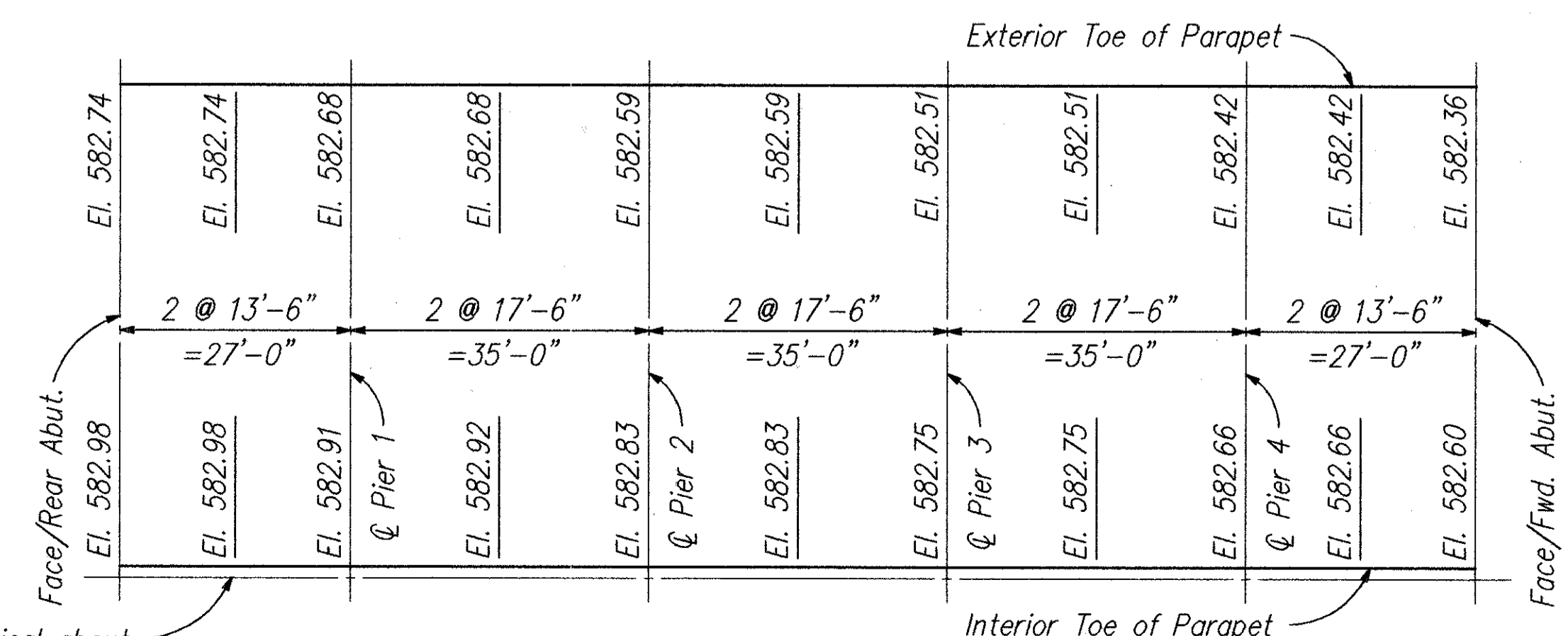
SECTION A-A

CAMBER

The deck forms shall be cambered to compensate for the deflection due to: the weight of the falsework and freshly placed concrete and the dead load of the self supporting slab.
The calculated values for required camber due to ultimate dead load slab are as follows:

Slab D.L.	Middle of Spans 1 & 5	Middle of Spans 2, 3 & 4
	+ $\frac{3}{8}$ "	+ $\frac{1}{2}$ "

The amount to be included for deflection due to the weight of falsework and freshly placed concrete shall be completed by the Contractor and submitted with the falsework plans.
Stage I falsework shall be left in place during Stage II construction.



TOP OF CLASS "S" CONCRETE DECK BEFORE PLACING CONCRETE

SCREED ELEVATIONS given are for the top surface of the concrete deck prior to concrete placement. Allowances have been made for anticipated deflections due to the weight of the concrete deck. Center-span elevations shall be adjusted upward appropriate amounts to compensate for anticipated falsework deflections. Forms for the bottom surface of the slab shall be constructed parallel to and a constant distance (18") below adjusted screed elevations.

See sheet 218 for parapet panel locations and sheet 618 for parapet panel sections.

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SUPERSTRUCTURE

BRIDGE NO. LUC-75-1013
I-75 OVER OTTAWA RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SAM	SAM		REG	BD	6-30-93	

1013S106.DWG

REINFORCEMENT SCHEDULE & BENDING DIAGRAMS

Mark	Pier 1	Pier 2	Pier 3	Pier 4	Total	Length	Shp.	Ser. Incr.	Weight Lbs.
PIERS									
P1001	8	8	8	8	32	31'-5"	Str.		4326
P1002	8	8	8	8	32	27'-8"	Str.		3810
P901	8	8	8	8	32	12'-6"	Str.		1360
P501	4	4	4	4	16	12'-6"	Str.		209
P502	16	16	16	16	64	8'-4"	Bt.		556
P503	4	4	4	4	16	8'-2"	Bt.		136
P504	4	4	4	4	16	4'-3"	Bt.		71
P505	8	8	8	8	32	6'-4"	Bt.		211
P401	12	12	12	12	48	8'-0"	Bt.		257
TOTAL PIERS									10936
Mark	Rear	Fwd.	Total	Length	Shp.	Ser. Incr.	Weight Lbs.		
ABUTMENTS									
A1001	8	8	16	30'-9"	Str.		2117		
A1002	8	8	16	31'-6"	Str.		2169		
A801	8	8	16	15'-2"	Str.		648		
A802	12	12	24	3'-0"	Str.		192		
A803	60	60	120	5'-2"	Bt.		1655		
A601	40	40	80	2'-3"	Str.		270		
A501	8	8	16	15'-2"	Str.		253		
A502	4	4	8	31'-5"	Str.		262		
A503	12	12	24	3'-8"	Str.		92		
A504	4	4	8	5'-1"	Str.		42		
A505	8	8	16	11'-2"	Bt.		186		
A506	18	18	36	7'-11"	Bt.		297		
A507	48	48	96	6'-10"	Bt.		684		
A508	28	28	56	4'-7"	Bt.		268		
A509	4	4	8	29'-6"	Str.		246		
A510	6	6	12	4'-1"	Bt.		51		
A401	8	8	16	9'-2"	Bt.		98		
TOTAL ABUTMENTS									9530

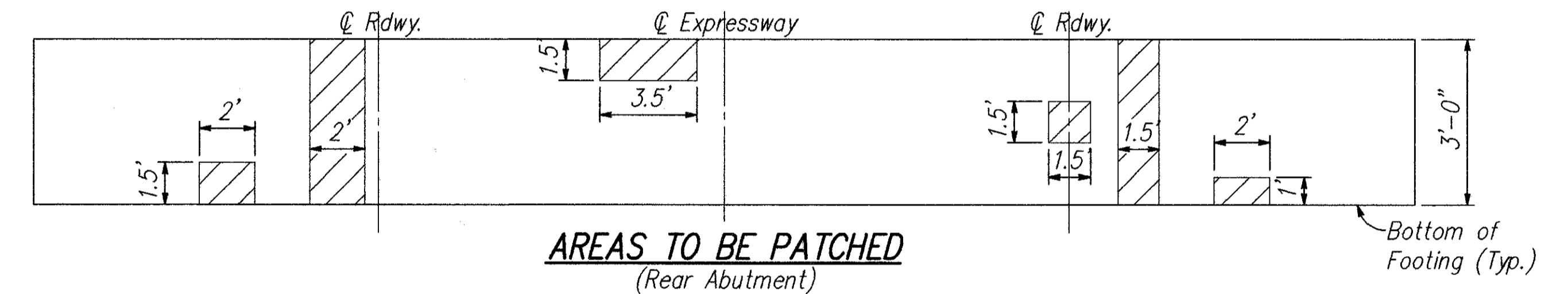
Mark	Total	Length	Shp.	Ser. Incr.	Weight Lbs.
SUPERSTRUCTURE					
SE1001	208	21'-4"	Str.		19094
SE1002	100	11'-3"	Str.		4841
SE1003	96	8'-4"	Str.		3442
SE901	116	30'-0"	Str.		11832
SE902	52	23'-9"	Bt.		4199
SE903	54	22'-1"	Bt.		4055
SE904	174	38'-10"	Str.		22974
SE909	78	21'-6"	Str.		5702
SE906	81	18'-3"	Str.		5026
SE601	141	32'-10"	Str.		6954
SE602	141	28'-8"	Str.		6071
SE501	104	19'-3"	Str.		2088
SE502	156	18'-4"	Str.		2983
SE503	80	30'-0"	Str.		2503
SE504	16	21'-2"	Str.		353
SE505	206	5'-3"	Bt.		1128
SE506	206	2'-11"	Bt.		627
SE507	234	3'-8"	Bt.		895
SE508	246	4'-6"	Bt.		1155
SE509	246	2'-8"	Str.		684
SE510	246	2'-11"	Bt.		748
SE511	246	3'-6"	Bt.		898
SE512	128	7'-2"	Str.		957
SE513	48	19'-8"	Str.		985
SE514	24	20'-5"	Str.		511
SE515	28	2'-4"	Bt.		68
SE516	44	4'-6"	Bt.		207
SE517	8	20'-5"	Bt.		170
SE518	16	12'-0"	Str.		200
SE401	162	32'-8"	Str.		3535
SE402	162	28'-8"	Str.		3102
TOTAL SUPERSTRUCTURE					117987

FHWA REGION	STATE	PROJECT	TYPE FUNDS
5	OHIO	I-IR-75-6(69)208	536a 600

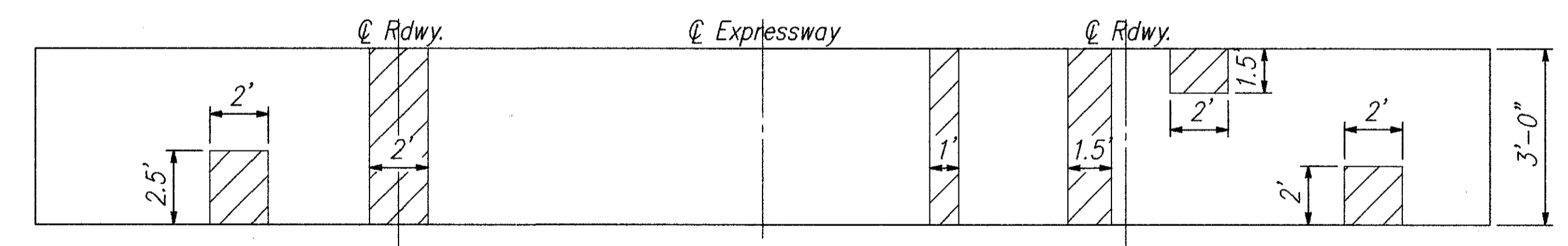
LUC-75-7.83
LUCAS COUNTY

Refer to CMS Sections 106.03, 700, 709.01 through 709.05 and 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.

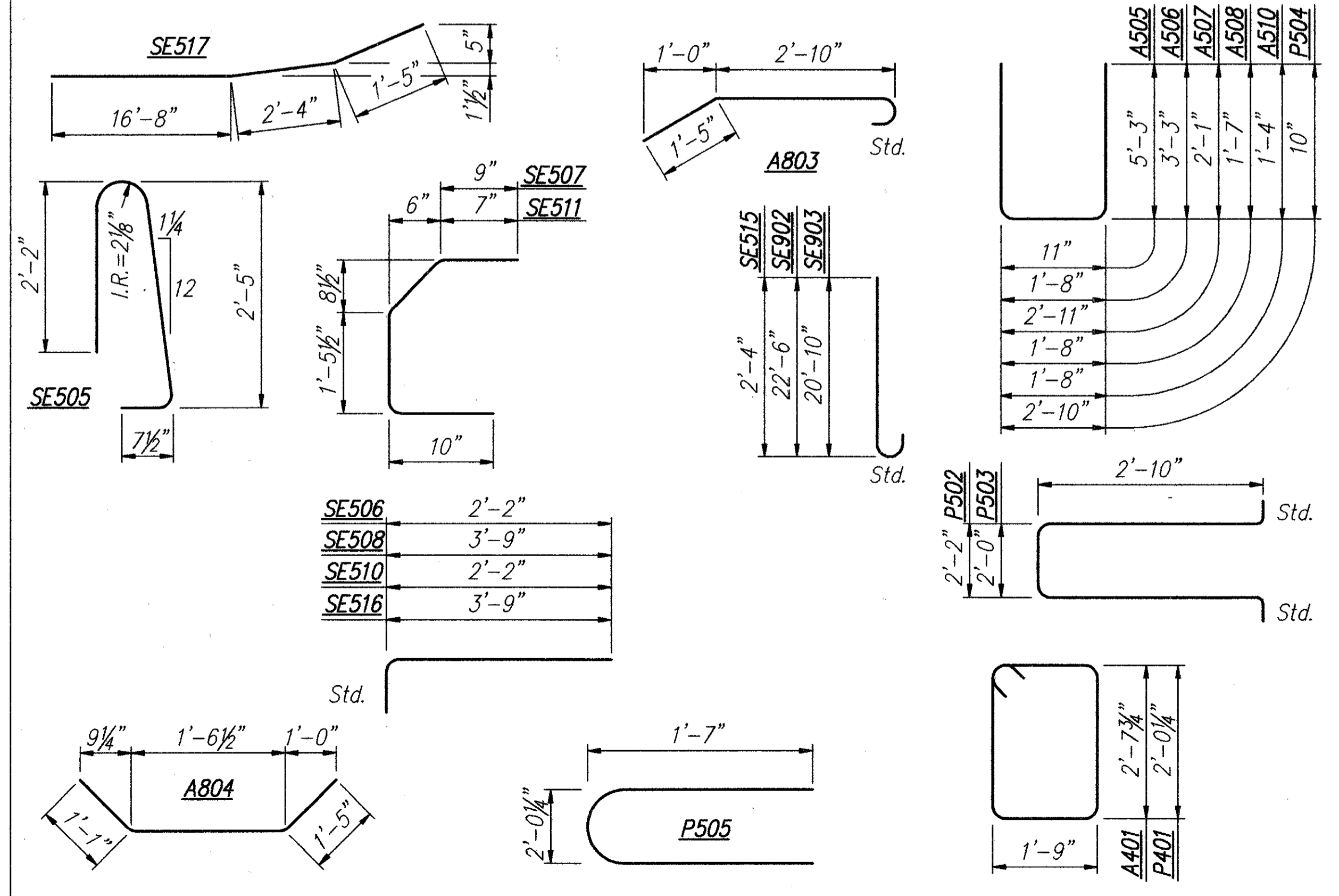
All Reinforcing Steel is to be Epoxy Coated.



AREAS TO BE PATCHED
(Rear Abutment)



AREAS TO BE PATCHED
(Forward Abutment)



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REINFORCEMENT SCHEDULE & ABUTMENT PATCHING AREAS

BRIDGE NO. LUC-75-1013
I-75 over OTTAWA RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SAM	SAM		REG	BD	6-30-93	