

CALC'D BY: SIA 7/91
CHK'D BY: HSS 9/92

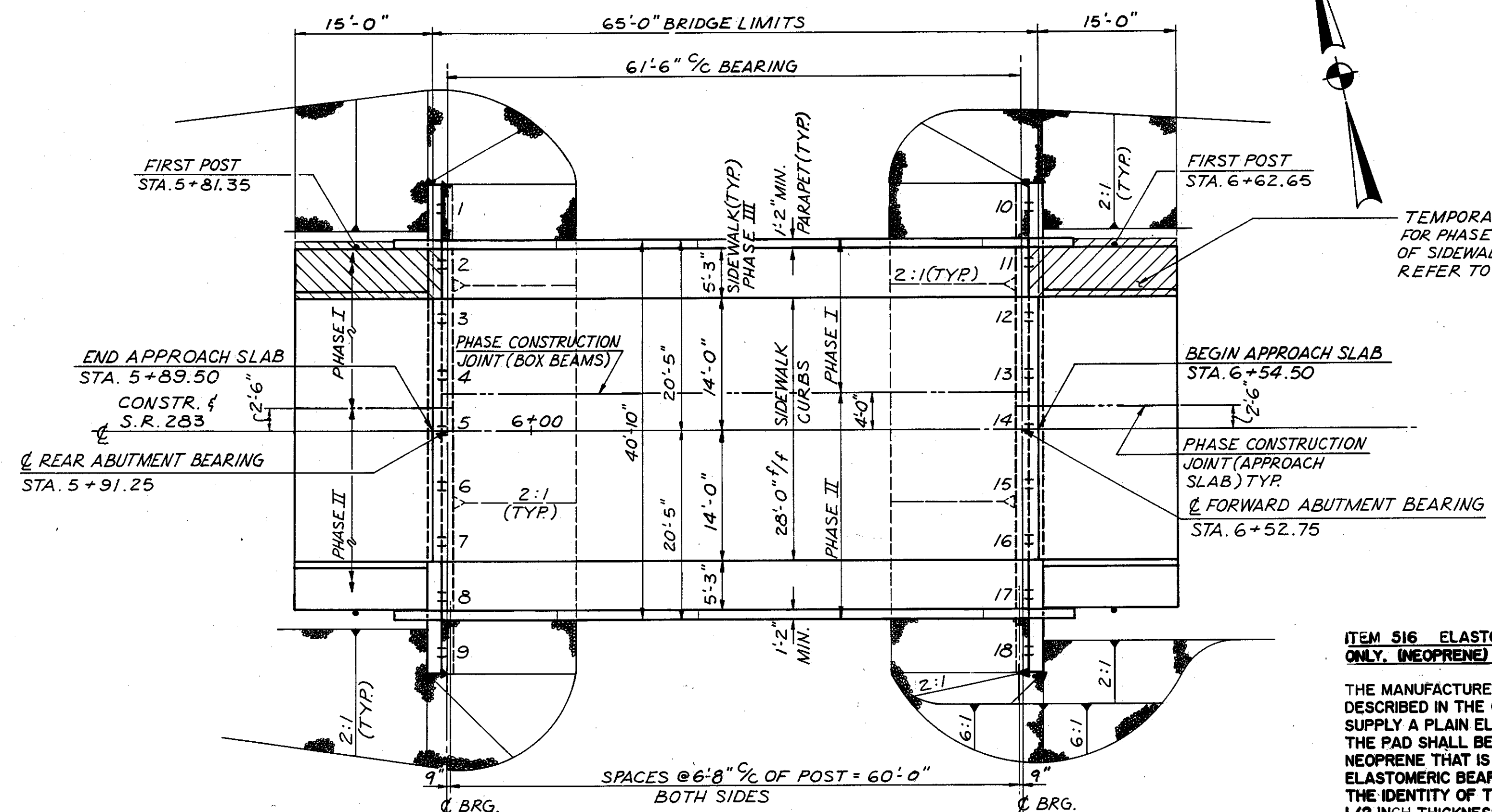
LAKE COUNTY
LAK-283-11.65

ESTIMATED BRIDGE QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN'L
202	11002	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN			LUMP
503	11101	LUMP		COFFERDAM, CRIBS AND SHEETING, AS PER PLAN			LUMP
503	21100	106	CU.YD.	UNCLASSIFIED EXCAVATION	106		
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION			LUMP
507	11100	720	LIN.FT.	STEEL PILES HP 10 x 42	720		
509	15824	13,345	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60	7,338	6,007	
510	11101	99	EACH	DOWEL HOLE, AS PER PLAN	16	83	
SPEC	51148000	76	CU.YD.	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK) (**)		76	
SPEC	51149000	LUMP		HIGH PERFORMANCE CONCRETE TRIAL MIX (**)			LUMP
SPEC	51148040	86	CU.YD.	HIGH PERFORMANCE CONCRETE (SUBSTRUCTURE) (**)	86		
512	44400	3	SQ.YD.	TYPE B WATERPROOFING	3		
SPECIAL	51267504	196	SQ.YD.	SEALING OF CONCRETE SURFACES (NON EPOXY) (**)		196	
SPECIAL	51267510	47	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE (**))	47		
515	54851	9	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM (**)(62'-78' LENGTH), AS PER PLAN, CB 27-48		9	
515†	54851	1	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM (**)(62'-78' LENGTH), AS PER PLAN, CB 27-48		1	
516	10500	81	LIN.FT.	STRUCTURAL EXPANSION JOINT INCL. ELASTOMERIC COMPRESSION SEAL (**)		81	
516	43101	40	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN, 1" x 7 1/2" (**)		40	
517	71501	145	LIN.FT.	RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL) AS PER PLAN		145	
518	21200	35	CU.YD.	POROUS BACKFILL WITH FILTER FABRIC	35		

** SEE PROPOSAL NOTE.

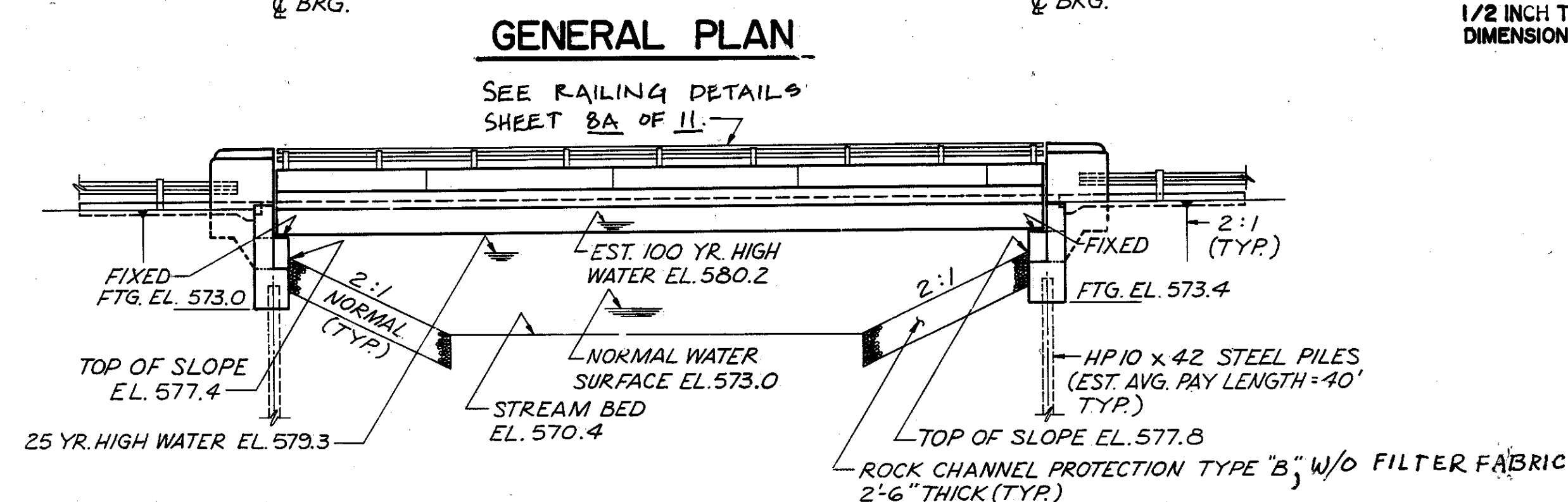
† BID ITEM FOR BEAM WITH CONDUITS. THE DIFFERENCE IN THE UNIT BID PRICE BETWEEN THIS AND THE OTHER 515 ITEM SHALL BE 100% FUNDED BY AMERITECH.



TEMPORARY PAVEMENT FOR PHASE II PRIOR TO CONSTRUCTION OF SIDEWALK IN PHASE III (TYP.) REFER TO SHEETS 9 AND 10 OF 27.

ITEM 516 ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) 1" x 7 1/2", AS PER PLAN.

THE MANUFACTURER SHALL NOT SUPPLY A SAMPLE BEARING AS DESCRIBED IN THE CMS. INSTEAD THE MANUFACTURER SHALL SUPPLY A PLAIN ELASTOMERIC PAD FOR TESTING PURPOSES. THE PAD SHALL BE FURNISHED FROM THE SAME BATCH OF NEOPRENE THAT IS USED IN FABRICATION OF THE LAMINATED ELASTOMERIC BEARINGS AND THE FABRICATOR SHALL CERTIFY THE IDENTITY OF THE ELASTOMER. THE PAD SHALL HAVE A 1/2 INCH THICKNESS AND A MINIMUM LENGTH AND WIDTH DIMENSION OF 6 INCHES.



GENERAL NOTES

REFERENCE: SHALL BE MADE TO STANDARD DRAWINGS: EXJ-3-82 (DATED 8-1-84), BR-2-82 (DATED 11-1-82), PSBD-1-93 (REVISED 3-4-94) AND PCB-91 (DATED 4-24-92), AS-1-81 (DATED 9-15-94), AND TO SUPPLEMENTAL SPECIFICATION

849

949

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

DESIGN DATA: DESIGN LOADING - HS 20-44 AND THE ALTERNATE MILITARY LOADING.

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI FOR DECK, SLAB, SIDEWALK, AND APPROACH SLAB.

HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET) - COMPRESSIVE STRENGTH 4500 PSI

HIGH PERFORMANCE CONCRETE SUBSTRUCTURE - COMPRESSIVE STRENGTH 4500 PSI

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I. GRADE 40 (MINIMUM YIELD STRENGTH-40,000 P.S.I.) IS ALSO PERMISSIBLE FOR USE IN THE PRESTRESSED CONCRETE BOX BEAMS ONLY.

CONCRETE FOR PRESTRESSED CONCRETE BEAMS - UNIT STRESS 2,200 P.S.I. COMPRESSION, 444 P.S.I. TENSION.

PRESTRESSING STRANDS - ASTM A416 F'S = 270,000 P.S.I., INITIAL STRESS = 0.70 F'S.

DECK PROTECTION METHOD - ITEM SPECIAL CONCRETE SEALER AS PER NOTE, EPOXY COATED REINFORCING STEEL.

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

APPROACH SLABS: MECHANICAL CONNECTORS WILL BE REQUIRED AT THE APPROACH SLAB PHASE CONSTRUCTION JOINT FOR THE TRANSVERSE REINFORCING BARS.

PILES DESIGN DATA: PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS ATTAINED BY PENETRATING SOFT BEDROCK WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH, OR REFUSAL SHALL BE CONSIDERED AS ATTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS. THE DESIGN LOAD IS 43 TONS PER PILE FOR THE ABUTMENT PILES.

EMBANKMENT CONSTRUCTION: THE EMBANKMENTS SHALL BE CONSTRUCTED TO THE LEVEL OF SUBGRADE. EXCAVATION MAY THEN BE MADE FOR THE ABUTMENTS AND THE PILES INSTALLED.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: A CONCRETE SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES AS SHOWN ON PLANS. SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES. THE COLOR OF THE URETHANE TOP COAT SHALL BE P.E.D. COLOR NO. BUFF 3772B.

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

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED PER 202.03. SUITABLE WASTE MASONRY MAY BE PLACED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER.

ABUTMENT PILING: ABUTMENT PILING BENDING STRESS MAY APPROACH, REACH, OR EXCEED YIELD STRESS.

PROPOSED WORK: SEE CONSTRUCTION SEQUENCE, SHEET 3/11.

ITEM 510 DOWEL HOLE, AS PER PLAN: MATERIALS AND INSTALLATION SHALL CONFORM WITH CMS 510 AND CMS 705.20.

ITEM 503 - 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.

ITEM 515 - PRESTRESSED CONCRETE COMPOSITE BOX BEAMS, AS PER PLAN:

- "THE SHEAR KEYS SHALL BE FILLED WITH NON-SHRINKING EPOXY MORTAR 705.20 IN LIEU OF THE MORTAR SPECIFIED IN PSBD-1-93. THE EPOXY SEALING OF ALL EXTERIOR SURFACES OF THE BOX BEAMS PER PROPOSAL NOTE 515 AND THE MORTARING OF SHEAR KEYS, SHALL BE INCLUDED IN ITEM 515 - PRESTRESSED CONCRETE COMPOSITE BOX BEAMS, AS PER PLAN.

JOHN E. FOSTER AND ASSOCIATES, INC. 2/11
2999 Payne Ave., Cleveland, Ohio 44114

GENERAL PLAN, NOTES AND ESTIMATED QUANTITIES

BRIDGE NO. LAK-283-11.65
SR 283 OVER
MENTOR MARSH

LAK COUNTY STA. 5+89.50
STA. 6+54.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.I.A.	D.M.T.	-	L.I.	H.S.S.	1/92	0007 BRIDGES 2/95