FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR	
2	OHIO	H.I.F.	1948	162 / 172

LAWRENCE COUNTY
S.H. 681 SEC. A(Pt.) B & C(Pt.)
9.5 Mi. E. of Coalgrove
LAW-243-5.03

Proposed Structure

Type: Continuous concrete slab with concrete substructure
Spans: 28'-35'-28' c/c brgs.
Roadway: 28' f/f guard rails
Loading: S-12-46
Skew: None
Wear. Surf.: 1/4" Monolithic Concrete
Appr. Slabs: None
Alignment: Tangent
Superelevation: Variable, on transition 14° curve

Existing Bridge Data

Type: Steel Truss, Wood Deck, Stone Abutments
Span: 42'-0" c/c 39'-0" Clear
Roadway: 13' Clear (To be removed)
Skew: None
Condition: Superstructure ~ Poor, Substructure ~ Fair

Bottom Chord Plan — Truss Elevation
Top Chord: Pl 10"x1/4", 2-L5"x1 3/4"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN
BRIDGE No. LA-243-110
OVER LEATHERWOOD CREEK
LAWRENCE CO. S.H. 681
Sec. C Sta. 570+00.00
Scale: Hor. 1"=20'; Vert. 1"=10'

Present Topography		Proposed Work			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Arthur	S.E.K.	C.N.A.	C.N.A.	P.E.S.	

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR
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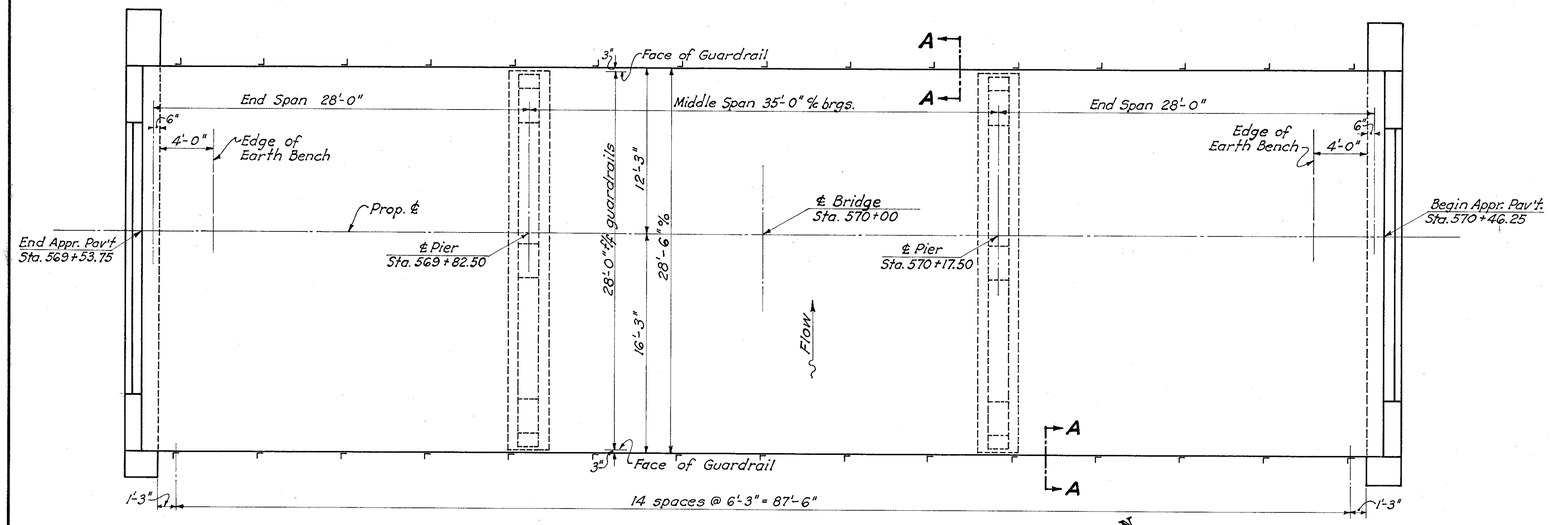
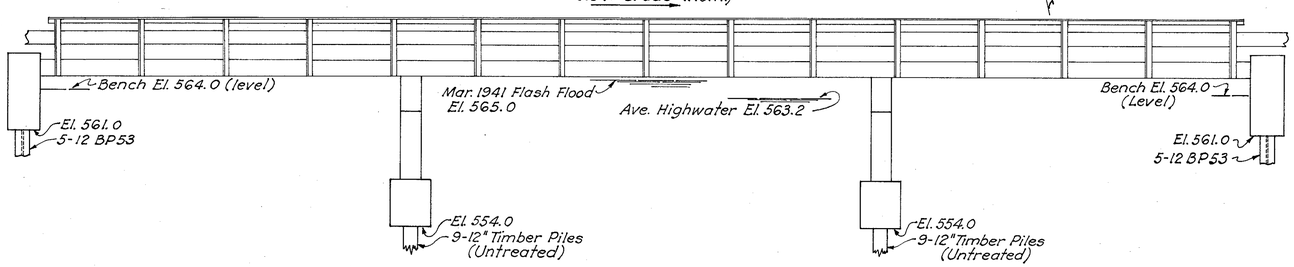
LAWRENCE COUNTY
S. H. 681 SEC. A(Pt.) B & C(Pt.)
LAW-243-5.03



GENERAL PLAN

Piling and Paved Gutters not shown.
See SITE PLAN for gutter location.

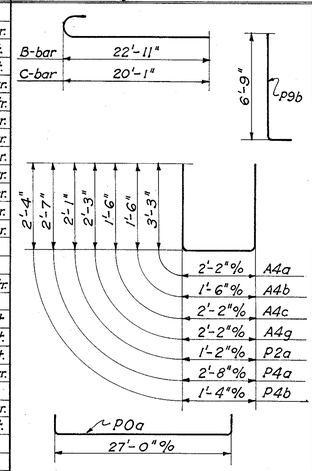


GENERAL ELEVATION

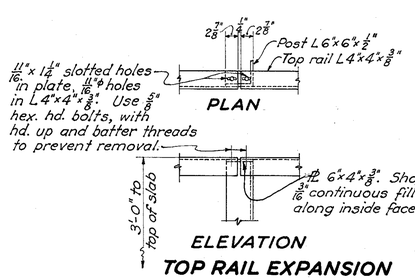
REINFORCING STEEL LIST

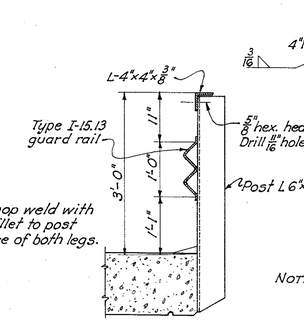
Mark	Size	No.	Length	Weight	Shp.
SUPERSTRUCTURE					
A	1" □	66	33'-0"	7405	Str.
B	1" □	22	24'-0"	1795	Bt.
C	1" □	22	21'-2"	1584	Bt.
D	1" □	11	21'-0"	785	Str.
E	1" □	11	17'-6"	655	Str.
F	1" □	58	20'-6"	4043	Str.
G	1" □	28	10'-9"	1023	Str.
H	1" □	28	7'-3"	690	Str.
J	3/4" ϕ	30	20'-9"	935	Str.
K	3/4" ϕ	15	19'-6"	439	Str.
L	3/4" ϕ	87	28'-0"	3659	Str.
M	3/4" ϕ	60	28'-0"	2523	Str.
ABUTMENTS					
A7a	1" ϕ	26	33'-9"	2343	Str.
A4a	5/8" ϕ	128	8'-4"	1112	Bt.
b	5/8" ϕ	40	4'-2"	174	Bt.
c	5/8" ϕ	8	4'-10"	40	Bt.
d	5/8" ϕ	52	2'-0"	109	Str.
f	5/8" ϕ	8	3'-11"	32	Str.
g	5/8" ϕ	8	6'-4"	53	Bt.

Bending Diagram



Mark	Size	No.	Length	Weight	Shp.
PIERS					
P0a	1 1/4" □	16	29'-10"	2536	Bt.
P9a	1 1/8" □	24	27'-6"	2840	Str.
b	1 1/8" □	48	8'-0"	1652	Bt.
c	1 1/8" □	16	8'-3"	602	Str.
d	1 1/8" □	16	8'-0"	551	Str.
e	1 1/8" □	16	7'-3"	499	Str.
P4a	5/8" ϕ	104	7'-7"	822	Bt.
P4b	5/8" ϕ	72	5'-9"	432	Bt.
P2a	1/2" ϕ	202	5'-1"	685	Bt.
REPLACEMENT STEEL					
RE0	1 1/4" □	1	8'-2"	43	Str.
RE9	1 1/8" □	1	7'-9"	33	Str.
RE8	1" □	1	7'-4"	25	Str.
RE7	1" ϕ	1	7'-4"	20	Str.
RE5	3/4" ϕ	1	6'-11"	10	Str.
RE4	5/8" ϕ	1	6'-1"	6	Str.
RE2	1/2" ϕ	1	5'-8"	4	Str.





Note: Auxiliary rail angle (4"x4"x3/8") shall be included with Item S-14, Railing, for payment.

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CS-1-47 dated 9-18-47.

TEMPORARY RUN-AROUND ROAD AND BRIDGE are included in this contract. Surface course for approaches to the temporary run-around bridge shall be composed of material as specified in Supplemental Specification T-110, revised 8-3-36. It shall be placed in two or more courses and shall have a final compacted thickness of 6 inches and as much more than this as the Engineer considers necessary. Calcium chloride shall be applied to the extent the Engineer considers necessary, but not less than one ton per 60 cu.yd. of aqqregate (measured loose).

EXISTING SUPERSTRUCTURE shall be removed and become the property of the contractor.

EXISTING SUBSTRUCTURE shall be removed to Elev. 558 and disposed of as directed by the Engineer.

EXCAVATION quantity includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.

PILING shall be driven to a minimum bearing capacity of 22 tons. for steel H and 20 tons for timber.

REINFORCING STEEL. Unless otherwise shown, all bars shall be fabricated with dimensions in accordance with the proposed Manual of Standard Practice, American Concrete Institute, 1946, except that a tolerance will be permitted in the diameter of bends equal to the diameter of the bar. No weight allowance will be made for tolerances.

PAVED GUTTER: A concrete gutter, 5'-0" wide, 6" thick, depressed 6" at center, shall be placed where shown on "Site Plan," centered under edge of deck. 1/2" ϕ bars @ 1'-6" ctrs., both directions included in price per lin. ft. See Sheet No. 3

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abuts.	Piers	Superstr.	General	As Built	
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump		Lump
E-2	90	Cu.yd.	Unclassified excavation	36	54				90
E-3	100	Cu.yd.	Channel excavation				100		100
S-1	116	Cu.yd.	Class "C" concrete, superstructure			116			116
S-1	34	Cu.yd.	Class "C" concrete, abutments	34					34
S-1	13	Cu.yd.	Class "C" concrete, pier caps and columns		13				13
S-1	21	Cu.yd.	Class "C" concrete, pier footings		21				21
S-4	40,159	Lb.	Reinforcing steel	3,863	10,619	25,536	141		40,159
S-9	12	Sq.ft.	1/2" Premolded expansion joint filler.			12			12
S-14	185	Lin.ft.	Railing (Steel beam Type I-15.13 Modified.)			185			185
S-15	Lump	Sum	Temporary run-around bridge and approaches.				Lump		Lump
S-16	Lump	Sum	First test pile, timber or steel.				Lump		Lump
S-18	630	Lin.ft.	Timber piling, untreated.		630			#7, -35.1	594.9
S-18	450	Lin.ft.	Steel piling, 12" BP @ 53 lb.	450				#7, -2.2	447.8
S-18	18	Each	Steel pile points.		18				18
S-24	Lump	Sum	Removal of existing structure				Lump		Lump
I-14	36	Lin.ft.	Concrete paved gutter				36	#4, -36	0

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN-STEEL LIST NOTES & EST. QUANTITIES

BRIDGE NO. LA-243-110
OVER LEATHERWOOD CREEK
LAWRENCE CO. S.H. 681
SECTION C STA. 570+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WAK	WAK	J.V.G.	GJD	CRV	1/9/48	

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	
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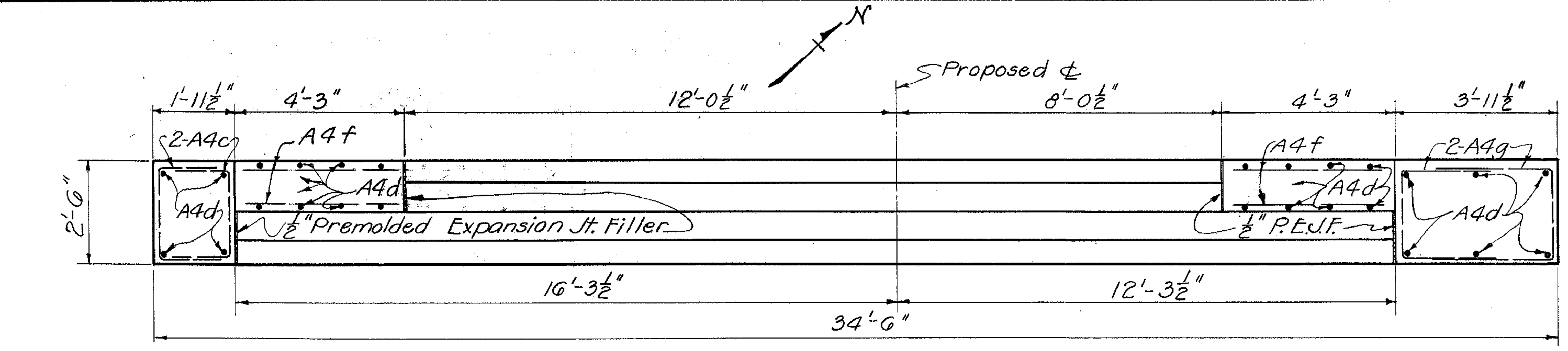
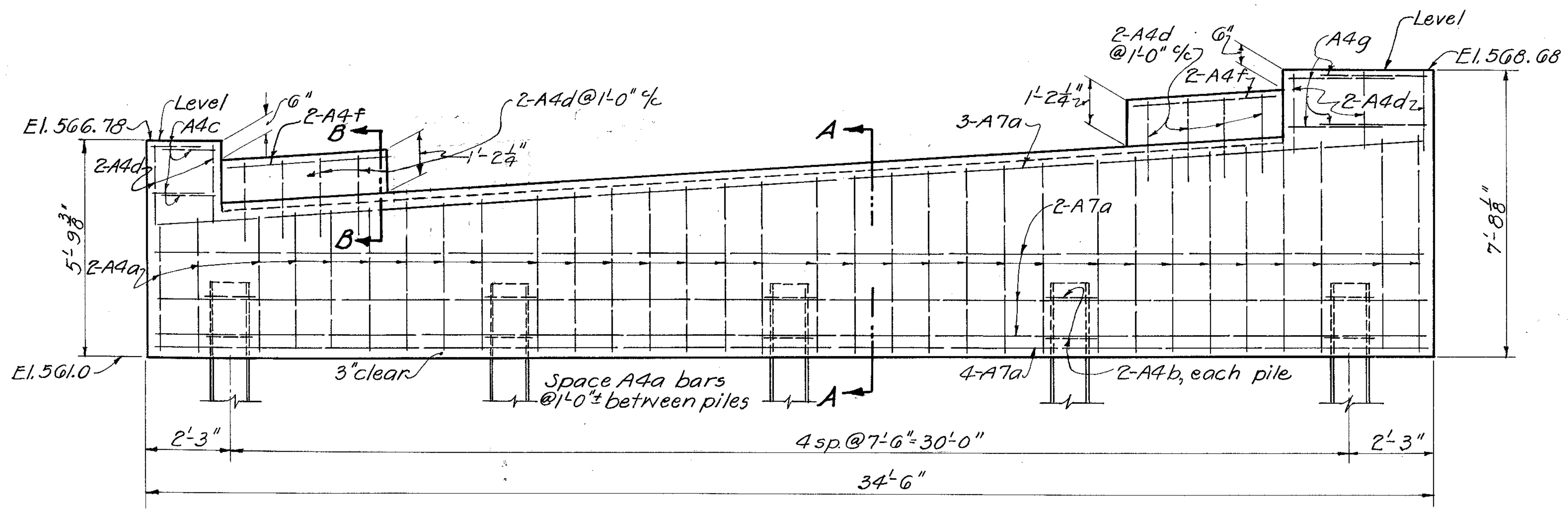
LAWRENCE COUNTY
S.H. 681 SEC. A(Pt) B&C(Pt)
LAW-243-5.03

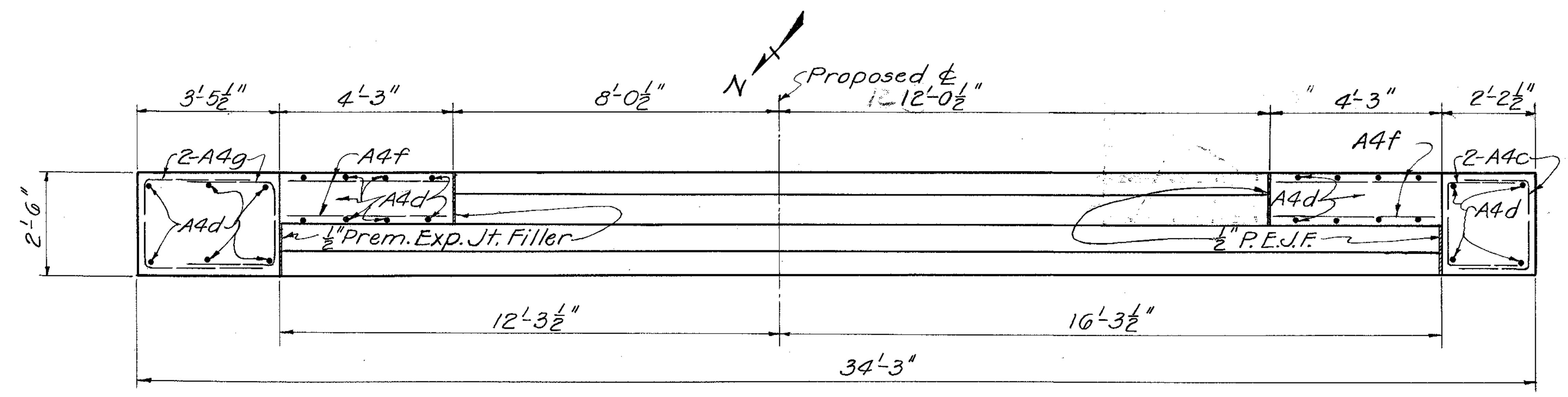


PLAN - WEST ABUTMENT
Piling not shown

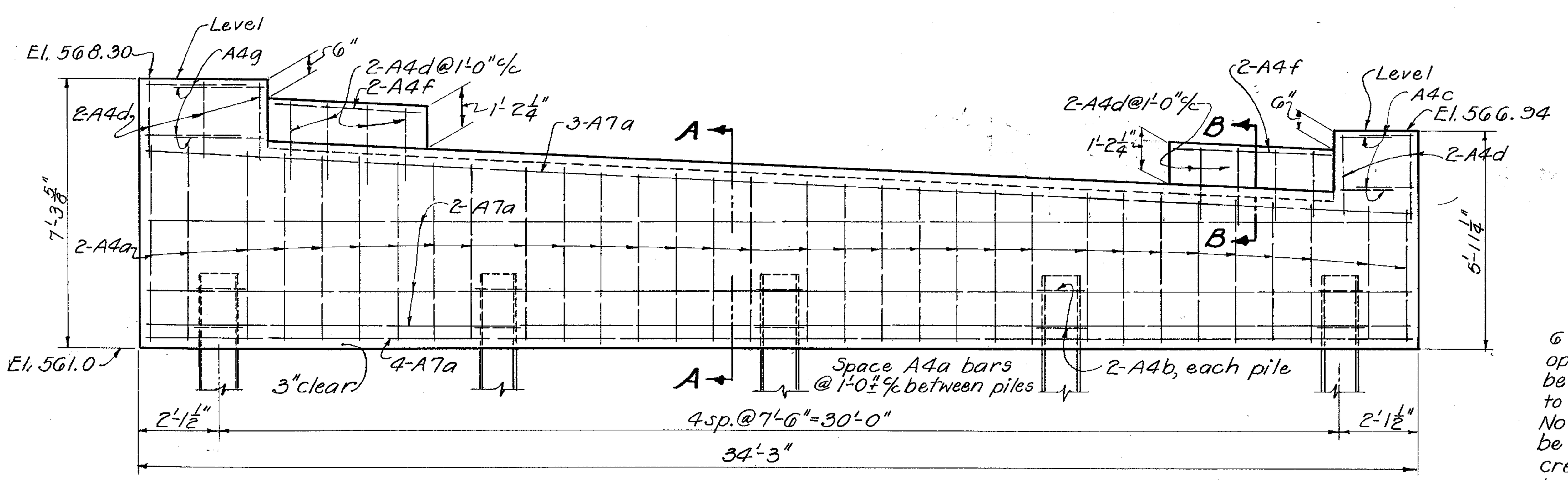
NOTE: All earth fill around abutments shall be made full height of earth bench. Excavation shall then be made for abutment cap, after which piling shall be driven. If bottom forms for abutment cap are used, they shall be left in place.



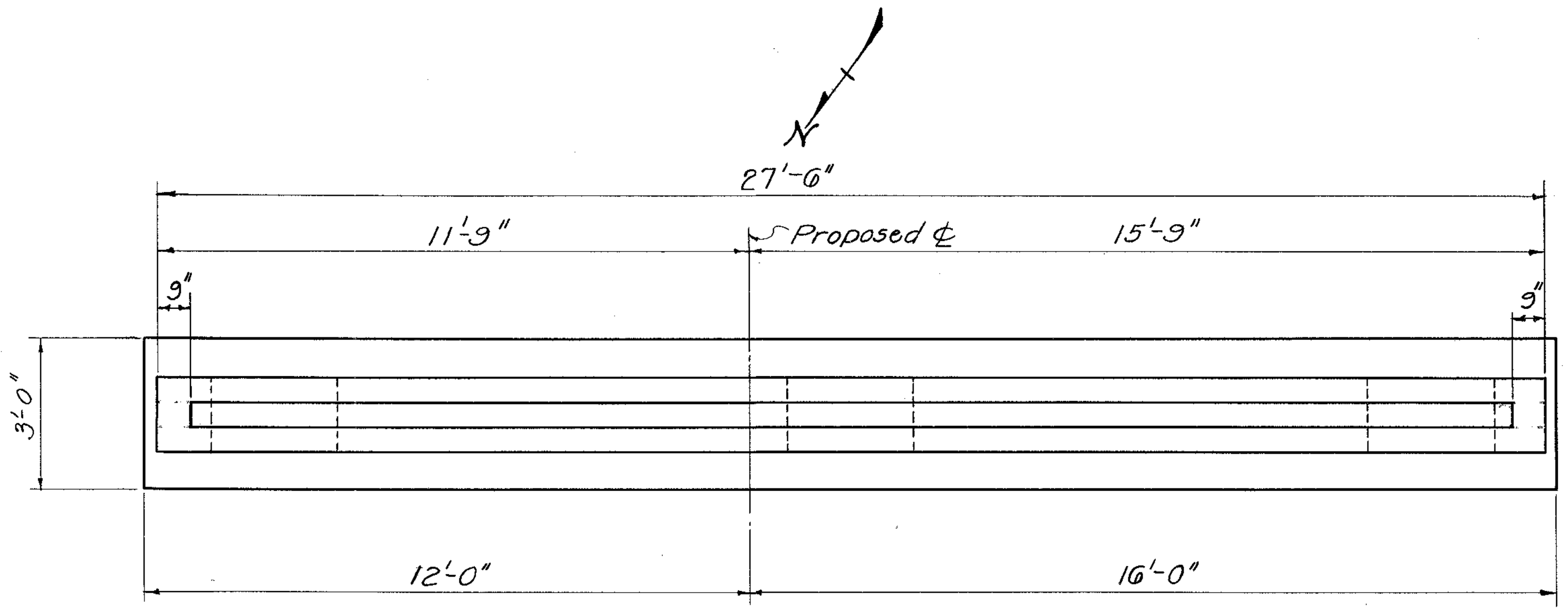
ELEVATION - WEST ABUTMENT



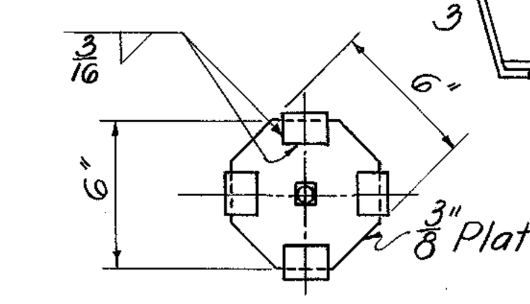
PLAN - EAST ABUTMENT
Piling not shown



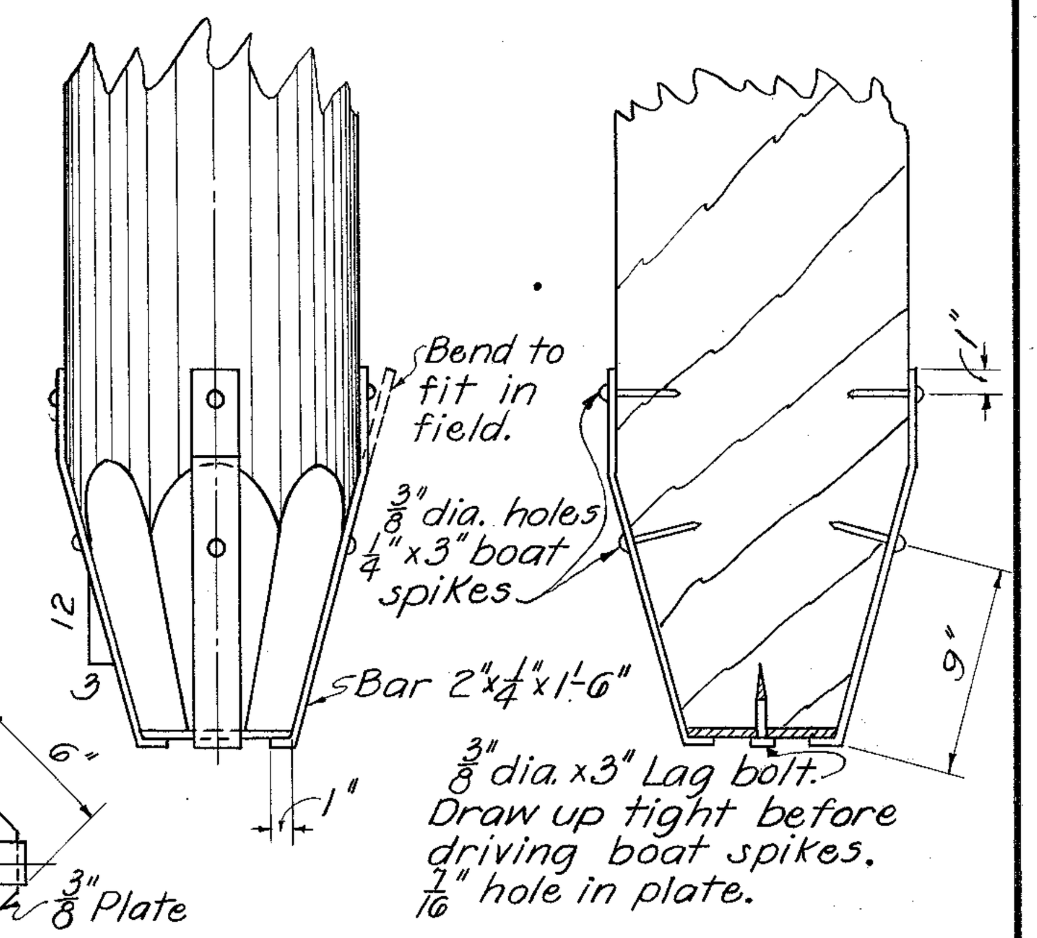
ELEVATION - EAST ABUTMENT



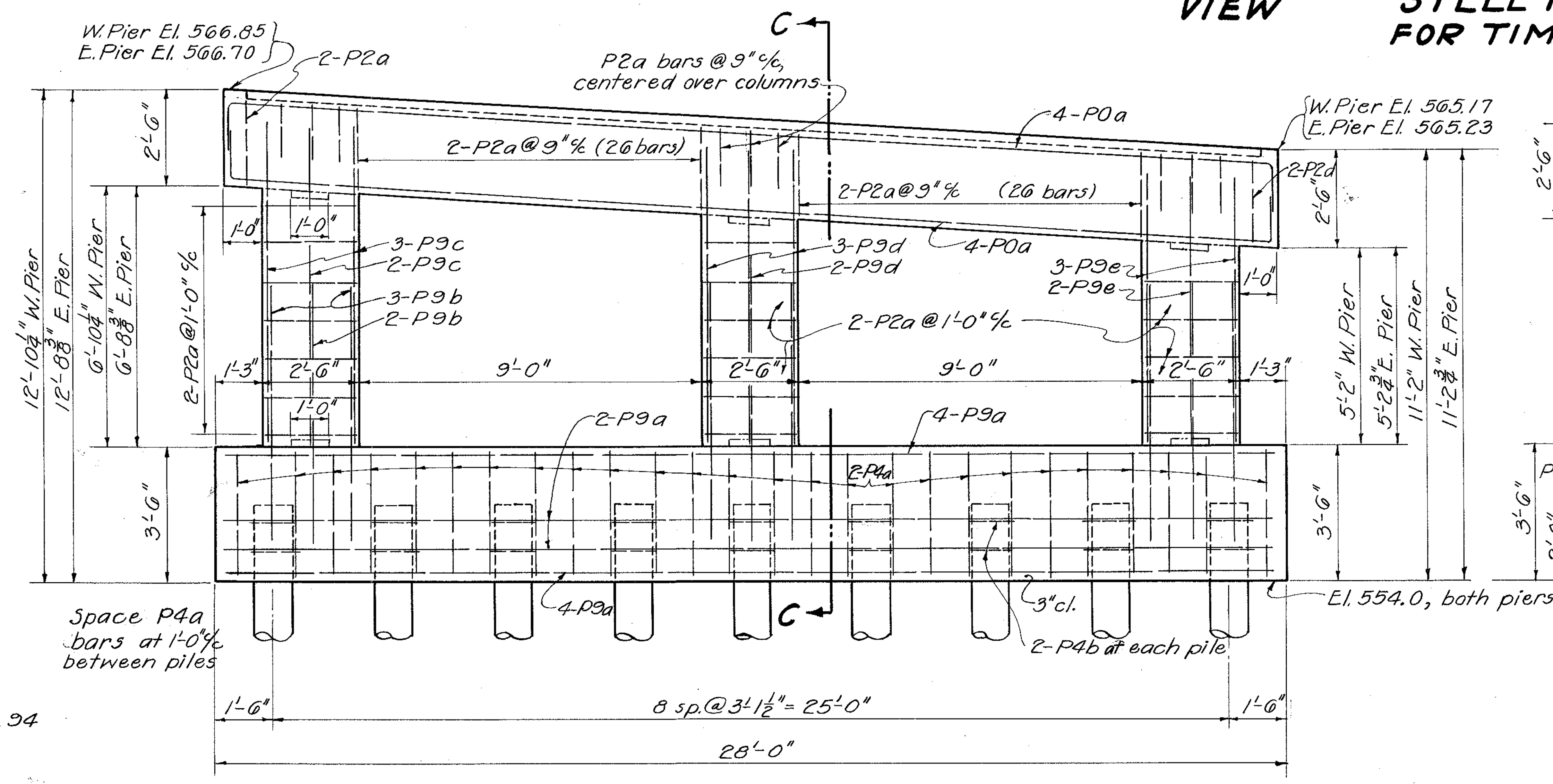
PLAN - PIERS
Piling not shown



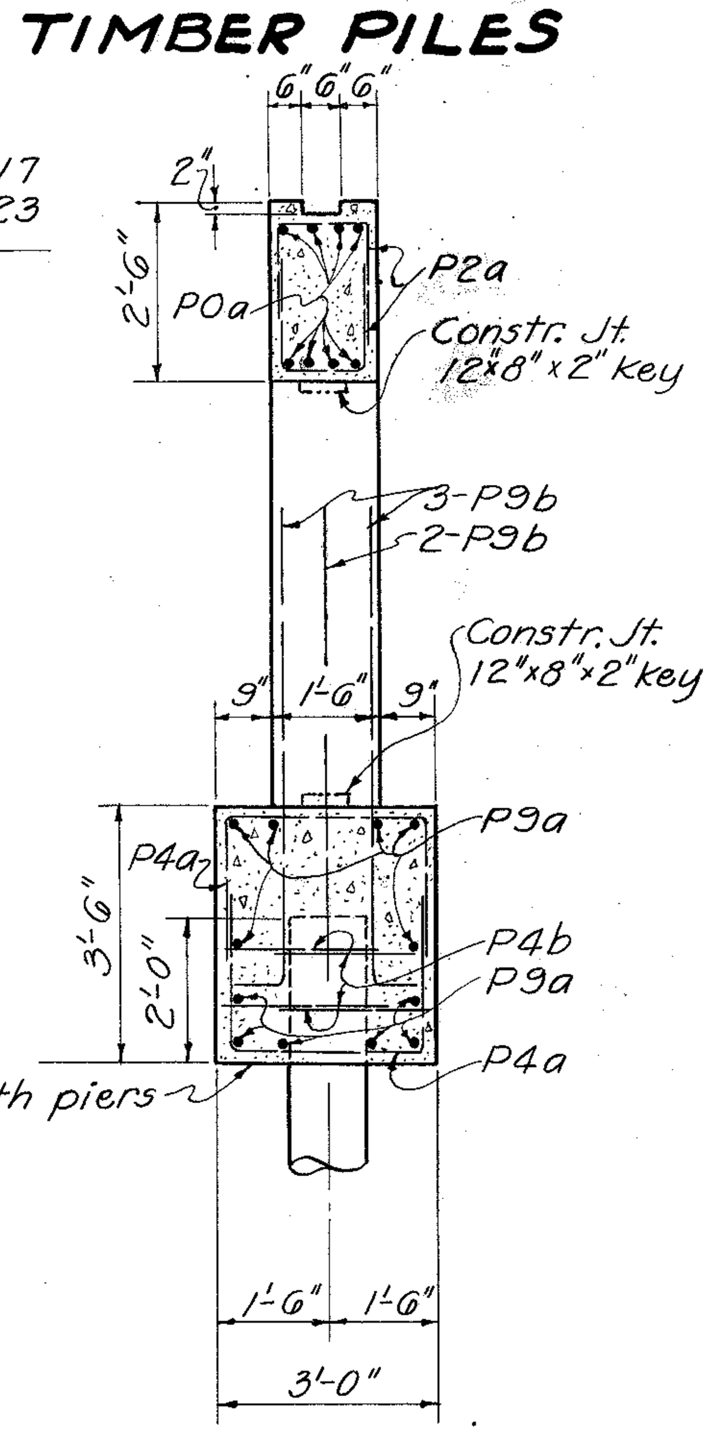
BOTTOM VIEW



STEEL PILE POINT FOR TIMBER PILES

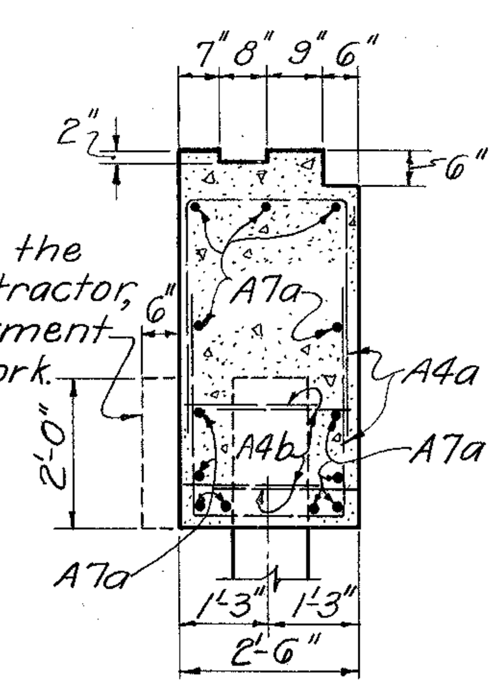


ELEVATION - PIERS

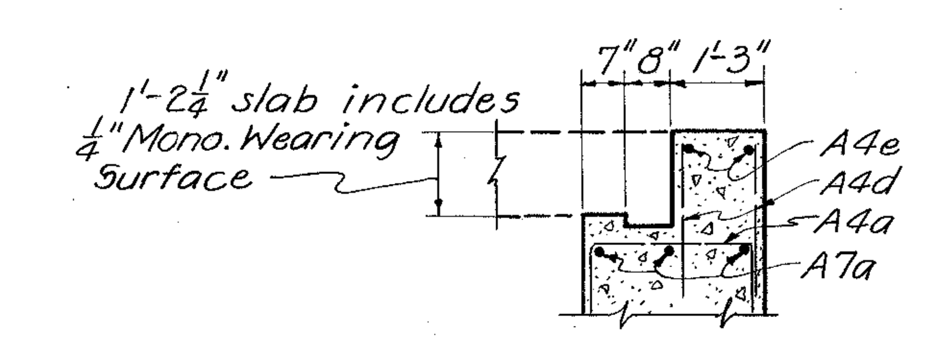


SECTION C-C

6" ledge may, at the option of the Contractor, be cast with abutment to support falsework. No payment will be made for concrete used in ledge.



SECTION A-A



SECTION B-B

NOTE: All reinforcing steel in piers and abutments shall have a minimum clear distance of 2" unless otherwise shown.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

ABUTMENTS AND PIERS

BRIDGE NO. LA-243-110
OVER LEATHERWOOD CR.

LAWRENCE CO. S.H. 681
SEC. "C" STA. 570+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WAK	WAK	KET	[illegible]	[illegible]	1/9/48	

FED. RD. DIVISION	STATE	FED. AID PROJECT	FISCAL YEAR
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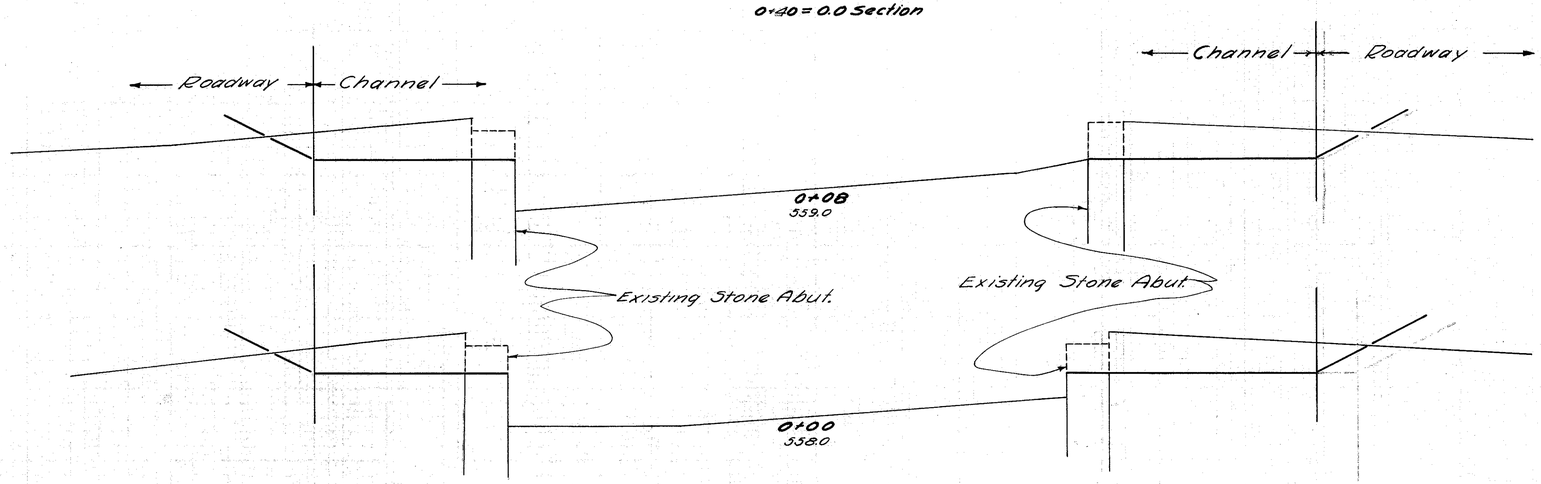
LAWRENCE COUNTY
S.H. 681 SEC. A(PT) B&C(PT)

Seeding End Width	Seeding Sq. Yds.
20	30
25	24
28	
20	51
28	19
28	

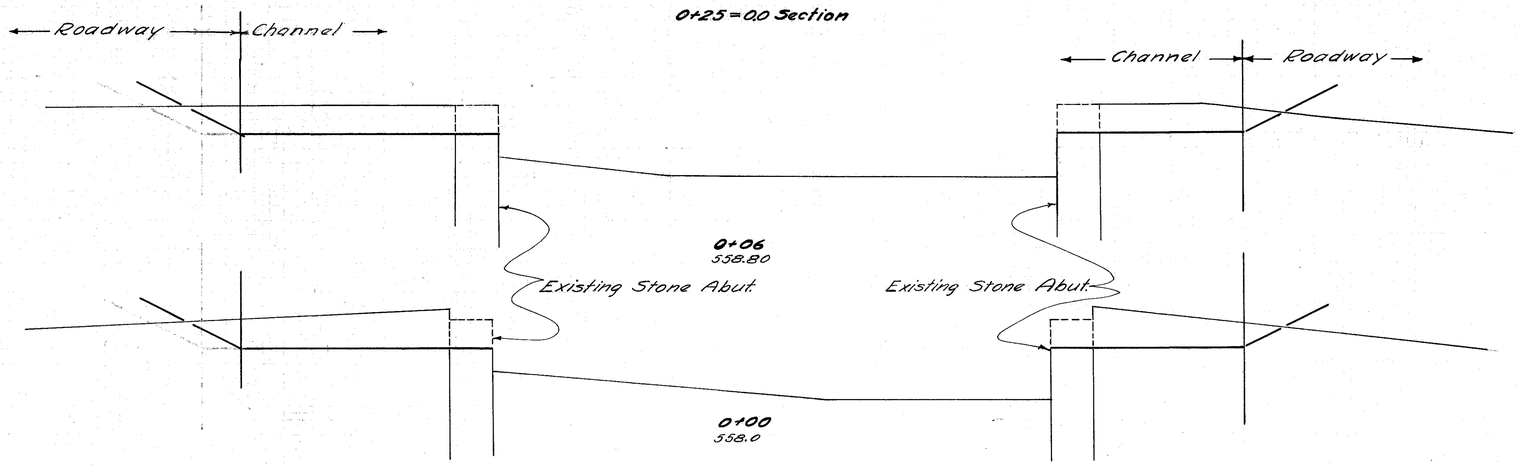
Total Seeding Channel Rt. & Lt. Sta. 570+00 = 124 Sq. Yds.

0+40 = 0.0 Section



CHANNEL SECTIONS LT. ℄

0+25 = 0.0 Section



CHANNEL SECTIONS RT. ℄

End Area Cut	Volume Cut
0	40
68	21
75	
0	23
65	16
75	

Total Channel Excavation Rt. & Lt. 100 Cu. Yds.

CHANNEL SECTIONS LEATHERWOOD CREEK STA. 570+00

60 30 40 30 20 10 ℄ 10 20 30 40 30 60