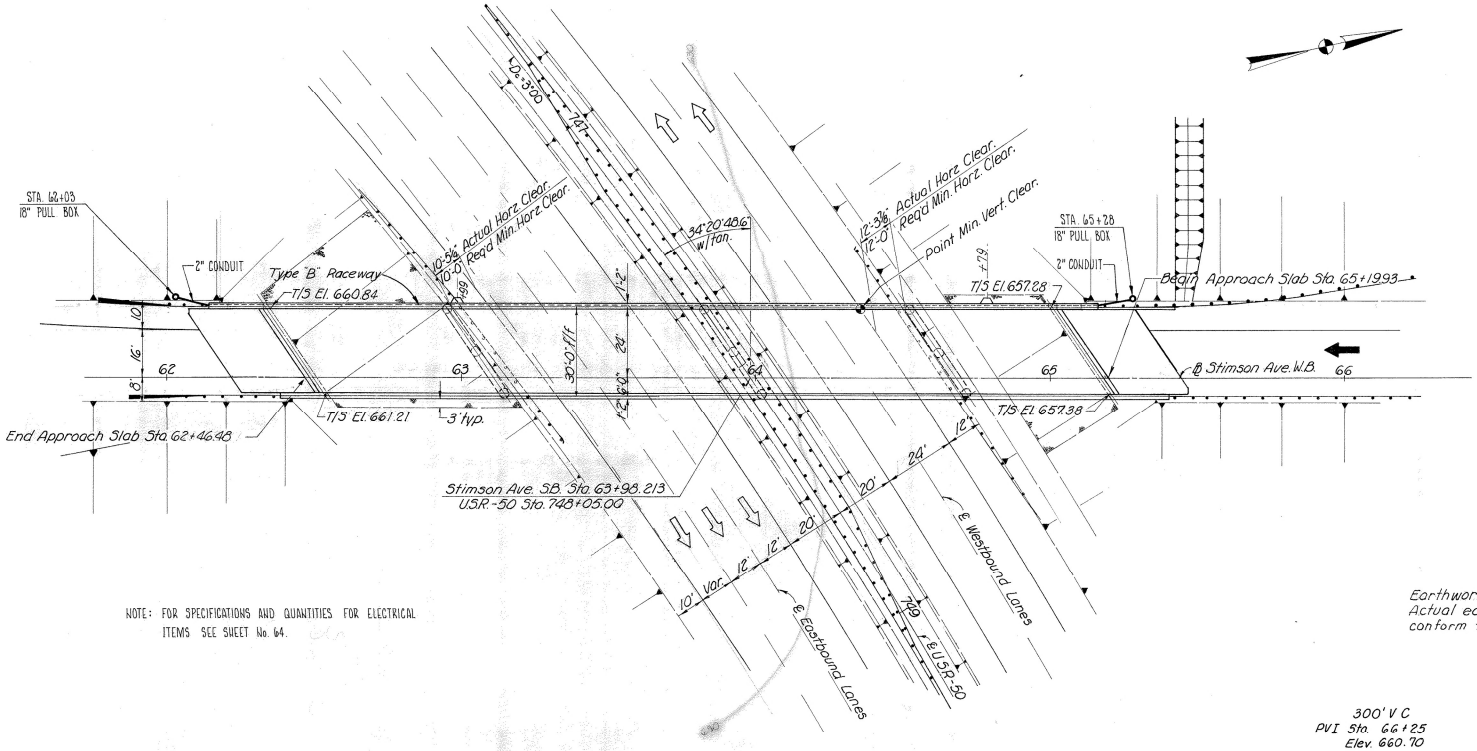
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

ATH-33-15.93

73
93

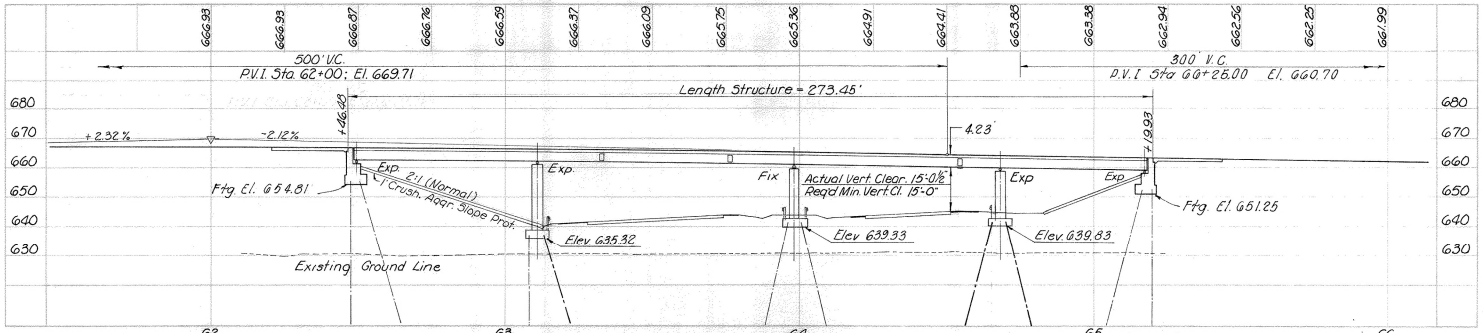


NOTE: FOR SPECIFICATIONS AND QUANTITIES FOR ELECTRICAL ITEMS SEE SHEET No. 64.

Earthwork slopes are schematic. Actual earthwork slopes shall conform to plan cross-sections.

300' V.C.
P.V.I. Sta. 66+25
Elev. 660.70
G1 -2.12% G2 +0.80

PLAN



PROFILE ALONG ℄ STIMSON AVE. Westbound

Estimated average pay length of piles: Abutments: steel H-piles, HP 10×42 @ 5'-0" Piers: steel H piles, HP 12×53, 50'-0"

PROPOSED STRUCTURE

TYPE: Continuous steel beam bridge with reinf. conc. deck and substructure
SPANS: 61'-6"; 87'-6"; 70'-0"; 49'-0" c/c brgs
ROADWAY: 30'-0" f/f of parapets
LOADING: HS 20-44
WEARING SURFACE: 1½" Asphalt Concrete.
SKEW: 34°20'48.6" R.F.
APPROACH SLAB: A3-1-72 (25'-0" long)
ALIGNMENT: tangent
SUPERELEVATION: none
AVERAGE DAILY TRAFFIC: 1150 (1990)

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FRANKLIN ENGINEERING, LIMITED
Consulting Engineers
COLUMBUS, OHIO

SITE PLAN

BRIDGE No. ATH-33-1597
under STIMSON AVE. Westbound

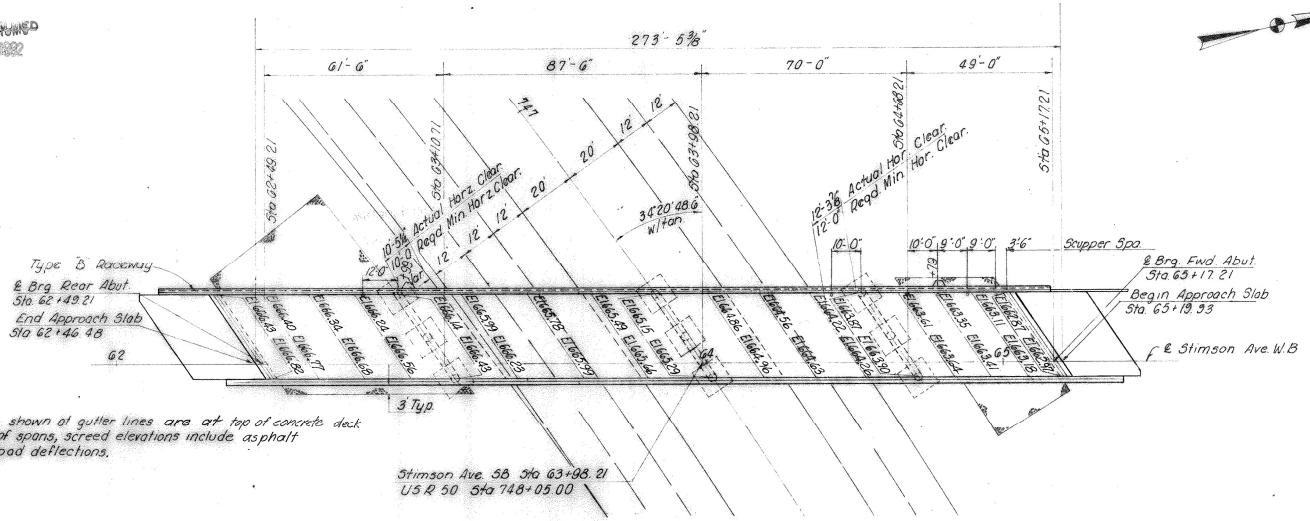
ATHENS COUNTY USR-33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SA	[illegible]					

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

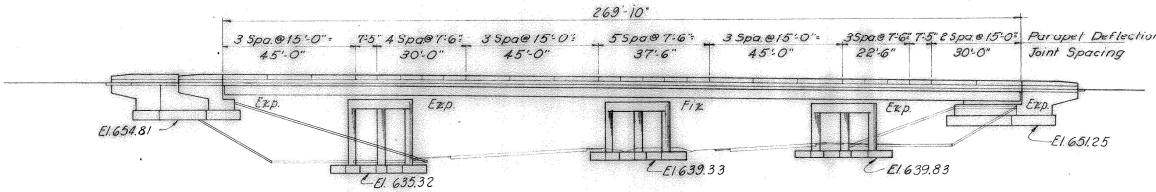
74/93

ATH-33-15.93

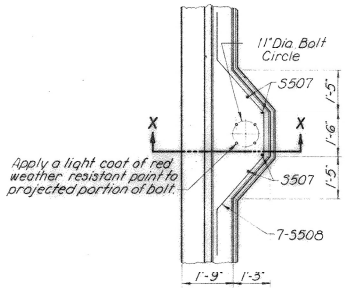


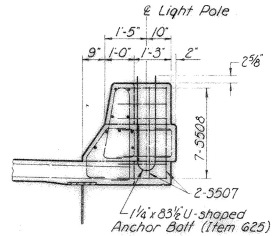
NOTE: Elevations shown at gutter lines are at top of concrete deck and at quarter points of spans, screed elevations include asphalt and concrete dead load deflections.

PLAN



ELEVATION
Piles are not shown





SECTION X-X

LIGHT POLE PILASTER

2/8

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers
COLUMBUS, OHIO

GENERAL PLAN

BRIDGE Nº ATH-33-1597
UNDER STIMSON AVENUE W.B.

ATHENS COUNTY USR 33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.C.			V.A.D.	[illegible]	4/12/70	

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

75/93

ATH-33-15.93

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	PIERS	ABUT.	GEN'L		
503	406	Cu.Yds	Unclassified Excavation		192	214			
505	Lump	Sum	Test Pile				Lump		
507	1300	Lin.Ft.	Steel H Piles HP 10 x 42			1300			
507	2400	Lin.Ft.	Steel H Piles HP 12 x 53		2400				
509	138,037	Lbs.	Reinforcing Steel	86,971	38,345	12,521			
511	155	Cu.Yds	Class "C" Concrete, Abutment			155			
511	296	Cu.Yds	Class "C" Concrete, Superstructure	296					
511	73	Cu.Yds	Class "C" Concrete, Pier above Footing		73				
511	100	Cu.Yds	Class "C" Concrete Pier Footing		100				
513	241,818	Lbs.	Structural Steel	241,818					
514	241,818	Lbs	Field Painting of Structural Steel	241,818					
506	Lump	Sum	Pile Test Load				Lump		
506	1	Each	Subsequent pile test load.				1		
518	6	Each	Scuppers, including supports	6					
518	41	Cu Yds	Porous Backfill			41			
518	62	Lin.Ft.	6" Perf. Helical Corrugated Metal Pipe, including specials (707.01)			62			
518	76	Lin.Ft.	6" Non-Perf. Helical Corrugated Metal Pipe (707.01)			76			
518	546	Lin.Ft.	Subdrainage for wearing course	546					
601 @28	522	Sq Yds	Crushed Aggregate Slope Protection for Lighting Items See Sheet 66				522		
808	296	Units	Chemical Admixture for Concrete, Type A, B or D	296					
401	24	C.Y.	Asphalt Concrete (70-85 or AC-20)	24					
Special	12	C.Y.	Sand Asphalt (See proposal note)	12					
Special	853	S.Y.	Membrane Waterproofing, Sheet Type (see proposal note)	853					

RECEIVED
MAY 1982

ITEM SPECIAL - SAND-ASPHALT:
A layer of Sand-Asphalt shall be used to protect the protective membrane. Traffic will not be permitted on the membrane until a protective layer of sand-asphalt has been placed and compacted. The sand-asphalt shall be mixed hot using natural sand, 703.05, and asphalt cement, 702.01. The asphalt grade and content shall be established by the contractor within a range of 8.5 to 10.5 percent of the total mix. The sand-asphalt shall be placed on the membrane by means of a pneumatic tired mechanical spreader and compacted by rolling to produce a reasonably smooth surface. The quantity placed shall be as necessary to level irregularities and cover the surface with a compacted layer ½" in thickness. Turning movements of equipment used to place the sand-asphalt shall not be made on the membrane.*

Basis of Payment. The accepted quantity of Sand-Asphalt will be paid for at the contract unit price per cubic yard, which price and payment shall be full compensation for furnishing and placing all materials.

Payment will be made under:

ITEM	UNIT	DESCRIPTION
Special	Cu. Yd	Sand-Asphalt.

*The sand-asphalt mixture temperature on arrival at the project site shall be as determined by the Engineer.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings BS-1-72 (6-30-72), BR-1-67 (W-1671) sheet number 1 of 3, RB-1-55 (2-2-59), SD-1-69 (6-12-69) sheet numbers 1, 2, 3 & 4 of 4, and Supplemental Specification 808 (1-1-71) and 836 (1-1-71).

DESIGN SPECIFICATIONS - This structure conforms to "Standard Specifications for Highway Bridges", adopted by the Am. Assoc. of State Hwy. Officials, 1969, including the Ohio Supplement to these Specifications.

DESIGN DATA:

Design Loading ~ H S 20-44

Concrete Class "C" ~ Unit Stress 1200 psi. for Superstructure.
Unit Stress 1333 psi. for Substructure.

Structural Steel ~ ASTM A36, Unit Stress 20,000 psi.

Reinforcing Steel ~ ASTM A615, A616 or A617, Unit Stress 20,000 psi. Spiral Reforcement may be plain bars ASTM A82 A306, A499 or A615. (If bars in accordance with ASTM A616 are provided, they shall be subject to bend tests as per AASHO designation M42-70.)

EMBANKMENT CONSTRUCTION ~ The embankments shall be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments. After a waiting period of not less than 30 days, excavation may be made for the abutments and piers.

PILES shall be driven by a hammer of not less than 11,000 foot pounds per blow to firm contact with bedrock. If the length of penetration is approximately equal to the depth of bedrock, according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in 507.05 is not less than the following value for a pile hammer of the indicated energy rating.

Abutment Piles:
37 tons per pile using an 11,000 ft. lb. hammer.
35 tons per pile using a 15,000 ft. lb. or greater hammer.

Pier Piles:
82 tons per pile using an 11,000 ft. lb. hammer.
79 tons per pile using a 15,000 ft. lb. or greater hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile for the abutment piles and 50 tons per pile for pier piles.

UTILITY LINES - All expense involved in relocating the affected utility lines shall be borne by the owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either would be held to a minimum.

FOR LIGHTING DETAILS not shown, see sheet no 66.

DECK FINISHING: Texturing of the Deck Surface as provided in 451.09 shall not be done.

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COLUMBUS, OHIO

ESTIMATED QUANTITIES & GENERAL NOTES
BRIDGE Nº ATH-33-1597
UNDER STIMSON AVENUE W.B.

ATHENS COUNTY USR 33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.					4/12/70	

Rev. 7-7-73
Rev 8-16-73

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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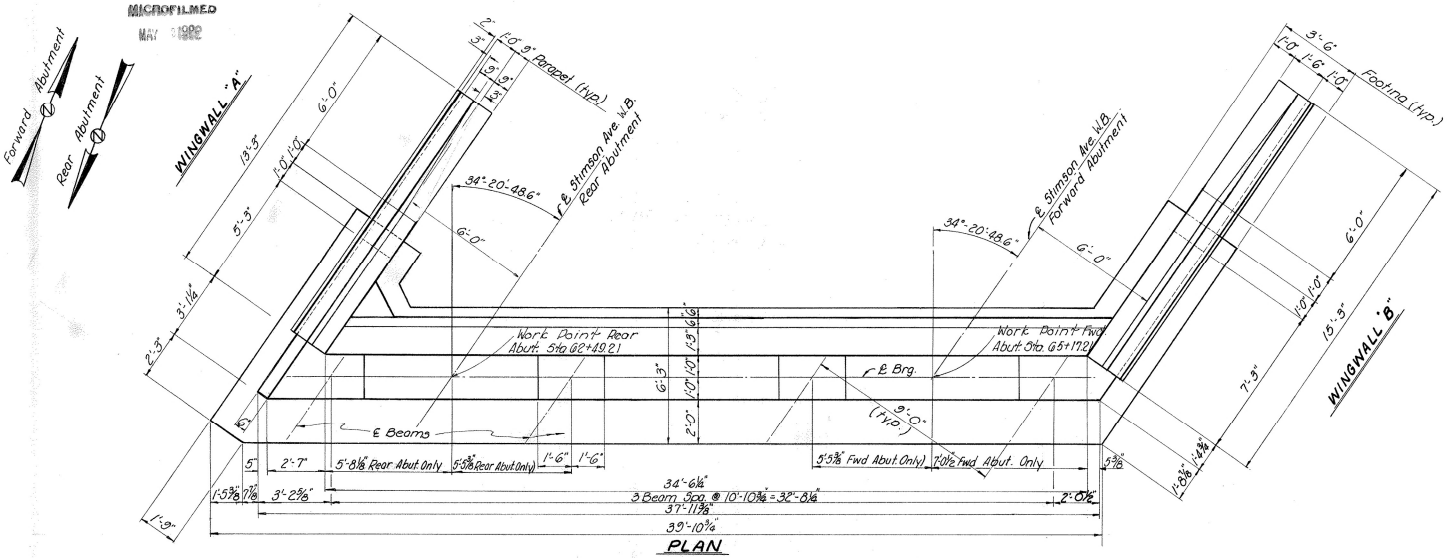
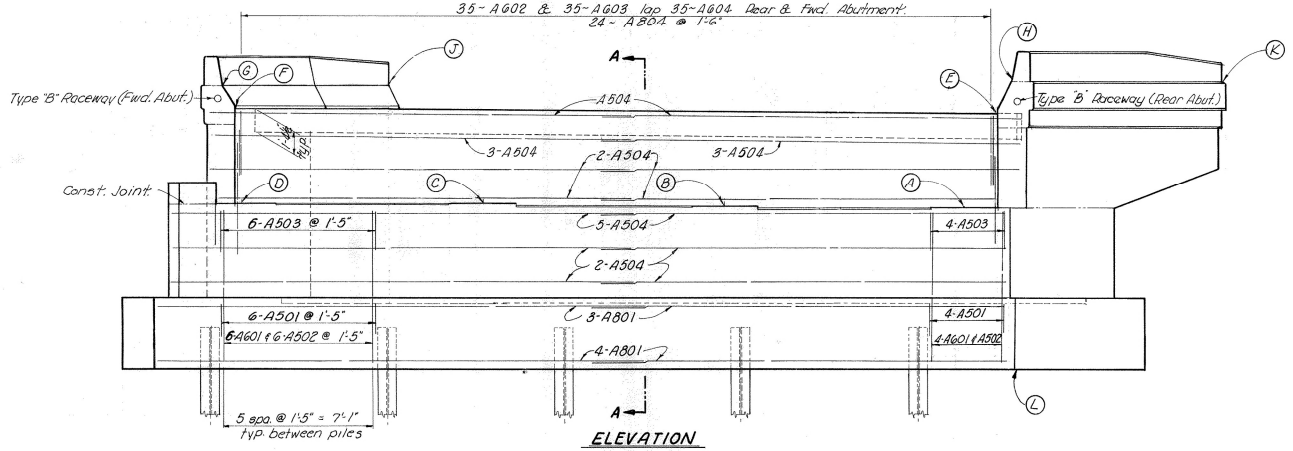
ATH-33-15.93



PLAN

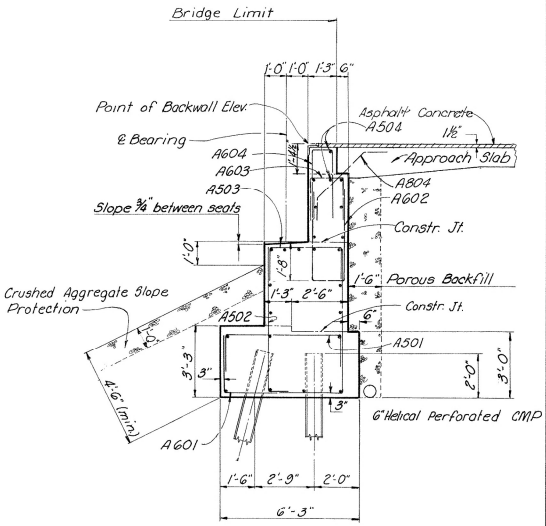


ELEVATION

TABLE OF ELEVATIONS											
Points	A	B	C	D	E	F	G	H	J	K	L
Rear Abutment	661.84	661.96	662.09	662.21	666.56	666.95	668.20	667.81	668.25	667.81	654.81
Forward Abutment	658.38	658.34	658.31	658.28	663.07	662.97	664.22	664.32	663.97	664.09	651.25

POROUS BACKFILL: 1.5 ft. thick shall extend up to the plane of the subgrade and laterally to the ends of the wingwalls.

Note: All longitudinal bars above footing are A504 unless noted



SECTION A-A

Note: All longitudinal bars in footing are A801

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ABUTMENT DETAILS

BRIDGE N° ATH-33-1597
UNDER STIMSON AVENUE W.B.

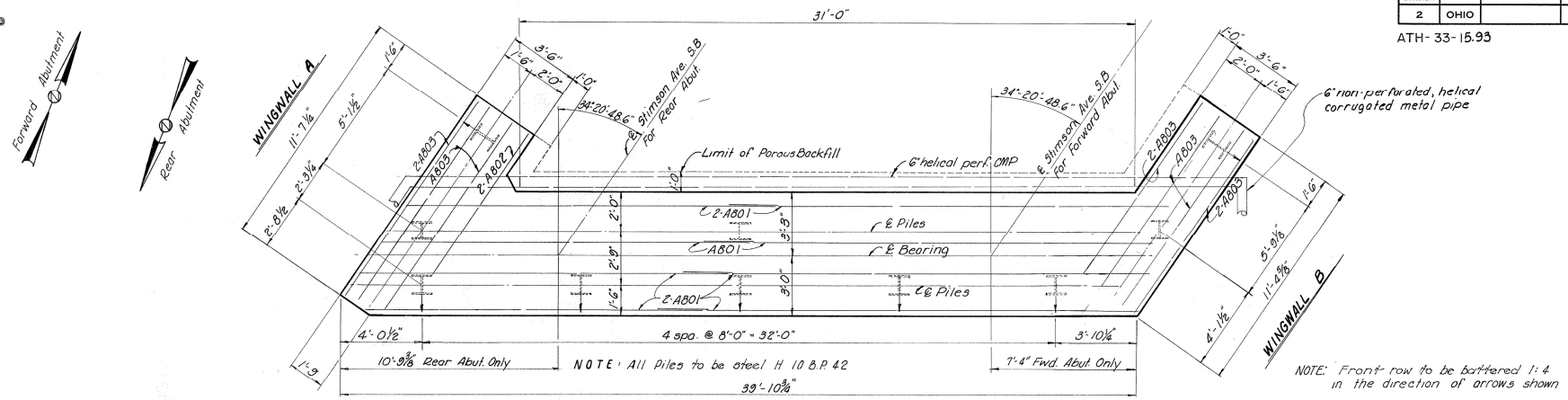
ATHENS COUNTY USR 33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.					5/12/70	

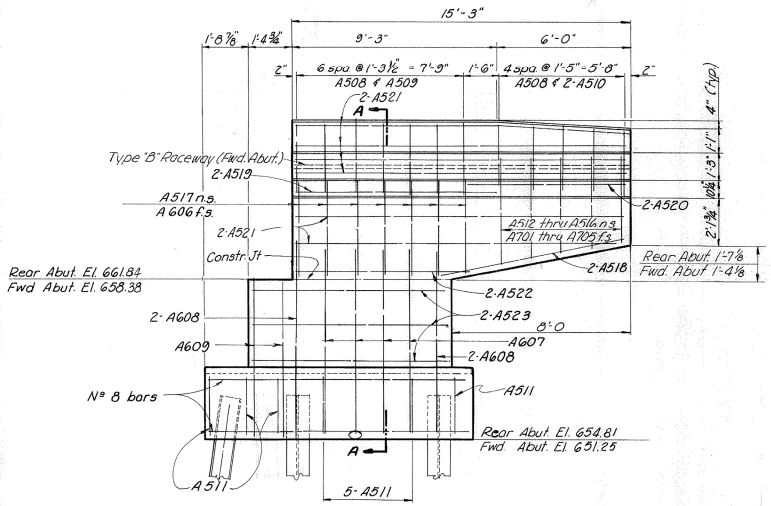
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

77/93

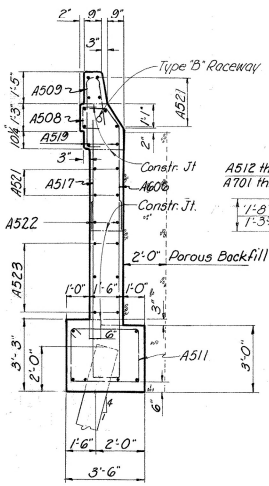
ATH-33-15.93



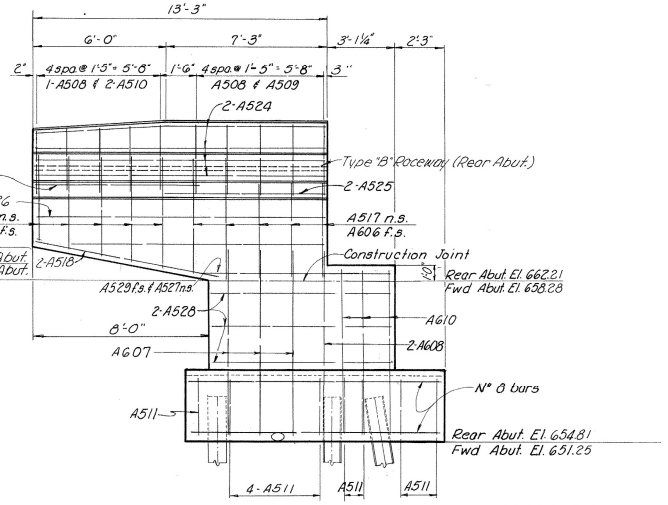
FOOTING PLAN



WINGWALL B



SECTION A-A



WINGWALL A

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WINGWALL AND FOOTING DETAILS

BRIDGE Nº ATH-33-1597
UNDER STIMSON AVENUE W.B

ATHENS COUNTY USR 33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.				JF	4/22/92	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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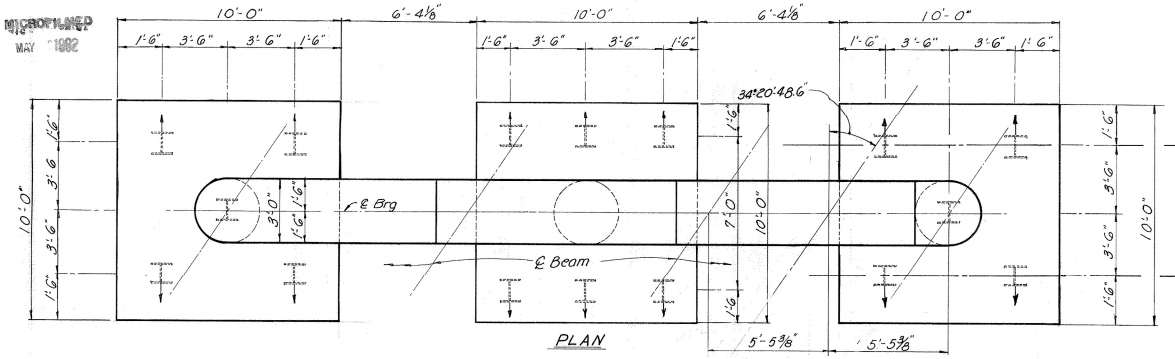
ATH-33-15.93



Batter this row
Rear, Center, & Forward Piers

See General Plan for pier layout

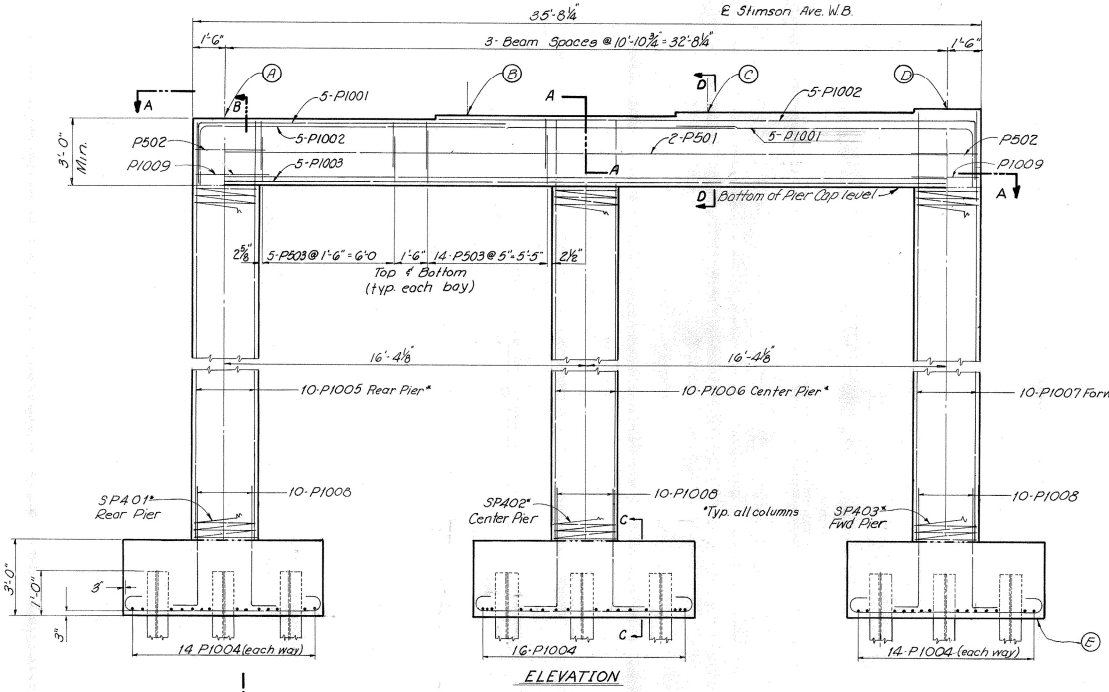
Batter this row
Center & Forward Piers

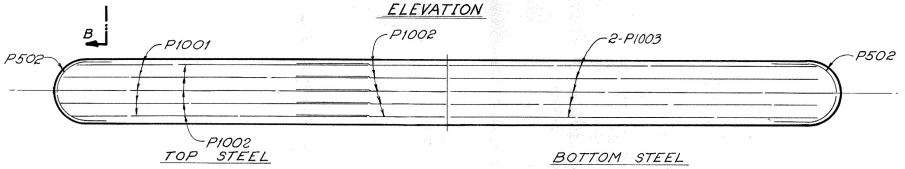
TABLE OF ELEVATIONS					
	A	B	C	D	E
Rear Pier	660.97	661.08	661.15	661.24	635.32
Center Pier	660.00	660.04	660.08	660.12	639.33
Forward Pier	658.87	658.88	658.89	658.90	639.83

CENTER PIER: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bolt holes.

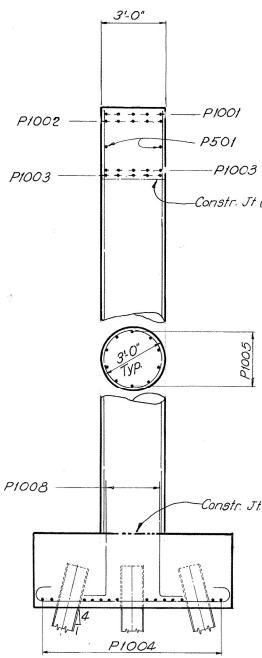
All Piles are to be HP 12×53

For structure grounding see Standard Construction Drawing HL-4. (Center Pier)

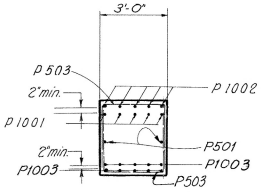


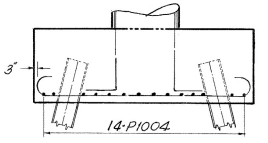


SECTION A-A



SECTION B-B





6/8

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PIER DETAILS

BRIDGE No. ATH-33-1597
under Stimson Avenue W.B.

ATHENS COUNTY US R-33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.					5/12-70	

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MAY 1992

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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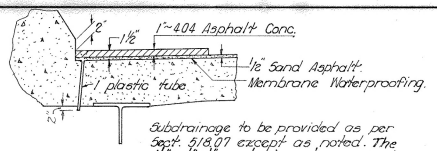
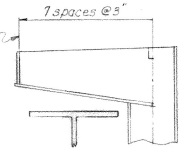
93

ATH-33-15.93

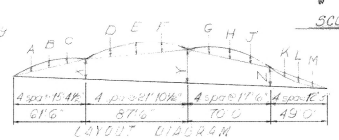
* DECK SLAB DEPTH: The distance shown from top of deck slab to top of steel beam is the design dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



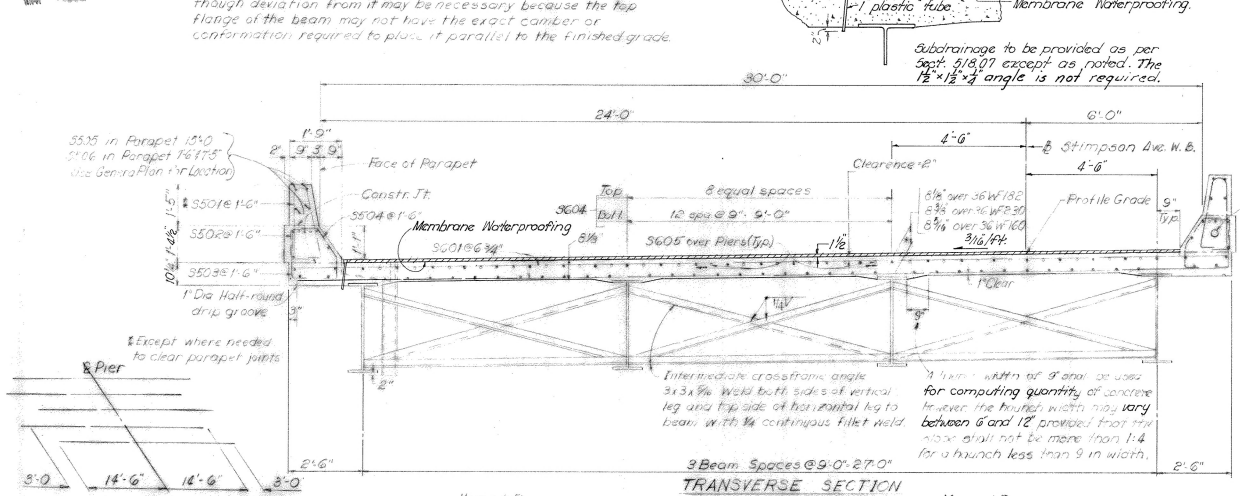
	X	Y	Z
Beam 1	6 9/16"	8 3/8"	4 1/4"
Beam 2	6 1/4"	3 1/8"	3 1/4"
Beam 3	6"	7 3/4"	5 3/8"
Beam 4	5 7/8"	7 1/4"	2 7/8"



SCUPPER DETAILS



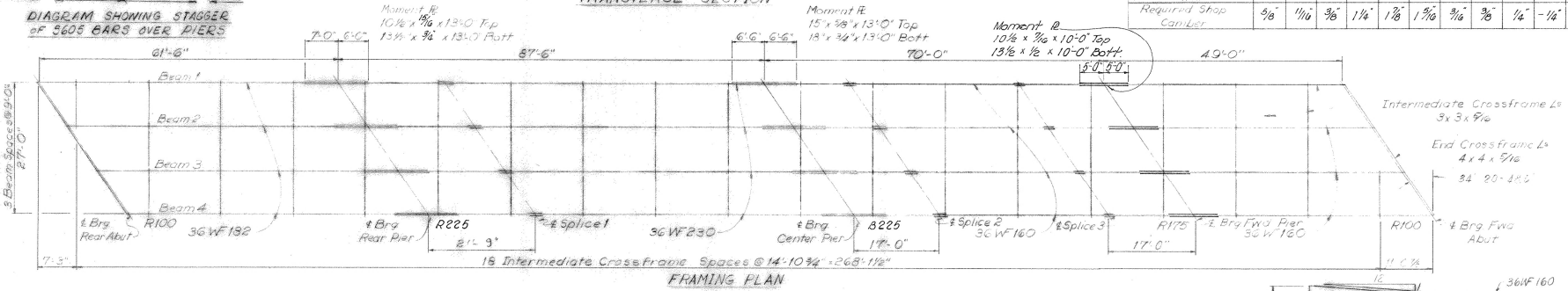
LAYOUT DIAGRAM



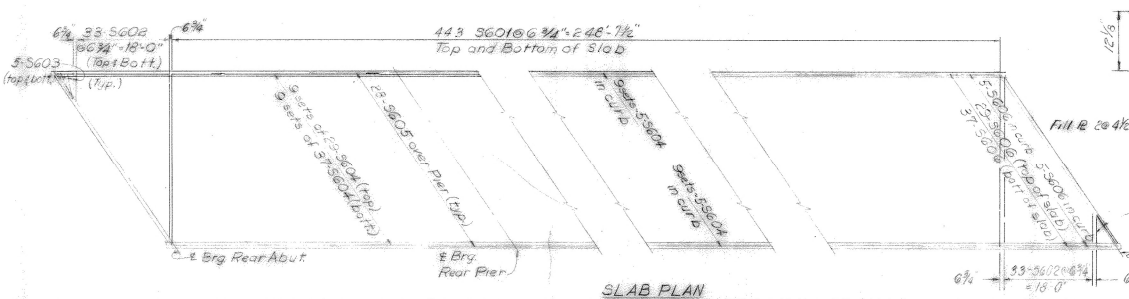
DEFLECTION AND CAMBER TABLE

LOCATION	SPAN 1			SPAN 2			SPAN 3			SPAN 4		
	⅛ Pt A	¼ Pt B	⅜ Pt C	Spl Pt D	¼ Pt E	⅜ Pt F	Spl Pt G	¼ Pt H	Spl Pt J	¼ Pt K	½ Pt L	¾ Pt M
Deflection due to weight of steel	1/16"	1/16"	0"	7/16"	1/4"	7/16"	0"	0"	0"	0"	0"	0"
Deflection due to remaining dead load	3/16"	1/8"	0	5/16"	5/8"	3/8"	-3/16"	-1/8"	-1/8"	-1/16"	0	1/16"
Adjustment required for vertical curve	3/16"	1/2"	3/8"	3/4	1"	3/4	3/8"	1/2"	3/8"	3/16"	-1/4"	-3/16"
Required Shop Camber	5/8"	1 1/16"	3/8"	1 1/4"	1 7/8"	1 5/16"	3/16"	3/8"	1/4"	-1/4"	-1/4"	-1/8"

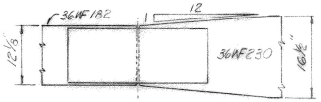
DIAGRAM SHOWING STAGGER OF S605 BARS OVER PIERS



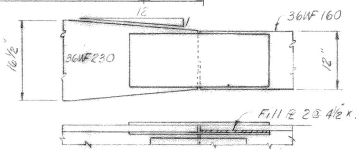
FRAMING PLAN



SLAB PLAN



SPLICE Nº 1



SPLICE Nº 2

-5-S603 (Top & Bott.)

For Splice No. 3 and additional details, see std. Dwg. S.D.-1-39, Sheet 4 of 4.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.	FDS	FDS	[illegible]	[illegible]	5/12/10	

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COLUMBUS, OHIO

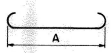
SUPERSTRUCTURE DETAILS
BRIDGE Nº ATH-33-15.97
under Stimpson Avenue W.B.
ATHENS COUNTY USR33

MICROFILMED
MAY 1982

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

80/93

ATH-33-15.93



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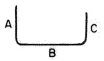

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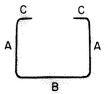
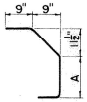


TYPE 3



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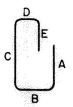
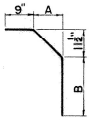


TYPE 5

TYPE 6



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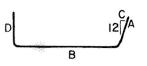

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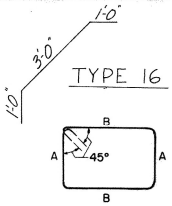
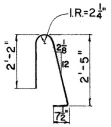


TYPE 9

TYPE 16



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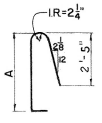


TYPE 11

TYPE 12

ABUTMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	28	21'-6"	5						1607
A802	4	8'-6"	5						91
A803	20	11'-3"	5						601
A804	48	4'-10"	16						619
A701	4	6'-3"	7	9"	4'-4"				51
A702	4	5'-4"	7	9"	3'-5"				44
A703	4	5'-7"	7	9"	3'-8"				46
A704	4	5'-10"	7	9"	3'-11"				48
A705	2	6'-1"	7	9"	4'-2"				50
A601	56	14'-2"	2	6'-7"	5'-4"	2'-7"			1192
A602	70	10'-7"	2	4'-9"	1'-5"	4'-9"			1113
A603	70	4'-11"	2	1'-11"	1'-5"	1'-11			517
A604	70	7'-1"	2	3'-3"	11"	3'-3"			745
A606	24	6'-6"	7	9"	4'-8"				234
A607	14	17'-10"	2	8'-6"	1'-2"	8'-6"			375
A608	12	8'-7"	5						155
A609	4	13'-6	2	6'-9"	1'-2"	6'-9"			81
A610	6	14'-6"	2	6'-4"	1'-2"	7'-4"			131
A501	56	8'-3"	2	1'-7"	5'-4"	1'-7"			482
A502	56	7'-0"	2	6'-6"	8"	0"			409
A503	56	7'-0"	2	1'-11"	3'-5"	1'-11"			409
A504	68	19'-8"	5						1395
A508	44	2'-0"	2	7½"	1'-0"	7½			92
A509	24	6'-3"	11	3'-0"					156
A510	40	2'-0	5						83
A511	36	11'-6"	9	2'-1"	5'-2"				432
A512	4	3'-11"	5						16
A513	4	4'-2"	5						17
A514	4	4'-4"	5						18
A515	4	4'-7"	5						19
A516	4	4'-10"	5						20
A517	24	5'-0"	5						125
A518	8	8'-5"	5						70
A519	8	9'-3"	5						77
A520	8	7'-6"	5						63
A521	24	14'-11"	5						373
A522	4	7'-11"	5						33
A523	12	8'-4"	5						104
A524	16	12'-11"	5 *	Bend in field where necessary					216
A525	4	6'-11"	5						29
A526	4	12'-11"	5						54
A527	2	8'-6"	5						18
A528	12	8'-0"	5						100
A529	2	5'-5"	5						11
							TOTAL		12521

PIERS

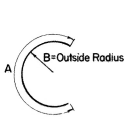
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1001	30	16'-7"	2	14'-3"	2'-8"	0			2141
P1002	30	26'-4"	2	24'-0"	2'-8"	0			3399
P1003	30	32'-9"	Str.						4228
P1004	258	12'-6"	1	9'-8"					13877
P1005	30	22'-0"	Str.						2840
P1006	30	17'-0"	Str.						2195
P1007	30	15'-4"	Str.						1979
P1008	90	7'-8"	2	6'-5"	1'-5"	0			2905
P1009	6	10'-8"	6	3'-3"	4'-2"				275
P501	6	32'-9"	Str.						205
P502	6	7'-4"	6	1'-7"	4'-2"	1'-7"			46
P503	228	7'-9"	2	2'-8"	2'-8"	2'-8"			1843
SP401	3	19'-1¾"	13	4½"	54	2'-8"			1078
SP402	3	14'-2"	13	4½"	41	2'-8"			811
SP403	3	12'-6½"	13	4½"	36	2'-8"			723
							TOTAL		38,545

SUPERSTRUCTURES

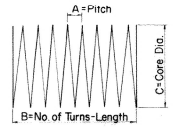
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S601	886	31'-8"	Str.						42141
S602	(A)	(B)	Str.						3370
S603	20	4'-0"	Str.						120
S604	684	30'-0"	Str.						30821
S605	84	31'-0"	Str.						3911
S606	76	16'-4"	Str.						1865
S501	180	5'-4"	10						1001
S502	180	2'-0"	2	7½"	1'-0"	7½"			376
S503	180	2'-2"	2	1'-8"	7½"	0			407
S504	180	3'-3"	4	9"					610
S505	88	14'-8"	Str.						1346
S506	108	7'-2"	Str.						837
S507	8	3'-1"	Str.						26
S508	14	9'-7"	15						140
(A)	4 sets of 33 bars								
(B)	varies from 4'-0" to 30'-0" in increments of 9¾"								
							TOTAL		86,971

REPLACEMENT BARS

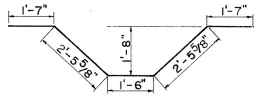
RE1001	2	8'-3"	Str.						
RE801	1	7'-6"	Str.						
RE701	1	6'-0	7	9"	4'-2"				
RE601	5	6'-11	Str.						
RE501	1	6'-7	Str.						
RE401	1	6'-3	14	6'-3"	1'-4"				



TYPE 14



TYPE 13



TYPE 15

NOTES:

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus three turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformation but shall in other respects conform to Item 509. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channels, tee or angle spacers, weighing approximatly 0.80 lbs. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.80 lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, the first two digits where four are used, indicate the bar size number. For example: A506 is a No.5 size bar and P1101 is a No.11 size bar.

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FRANKLIN ENGINEERING, LIMITED
Consulting Engineers
COLUMBUS, OHIO

REINFORCING STEEL

BRIDGE Nº ATH-33-1597
UNDER STIMSON AVENUE W.B

ATHENS COUNTY USR 33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.G.			V.B.P.		4/12/70	