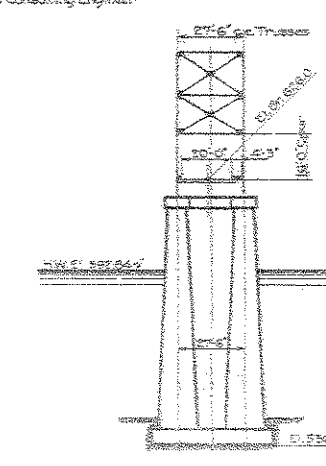
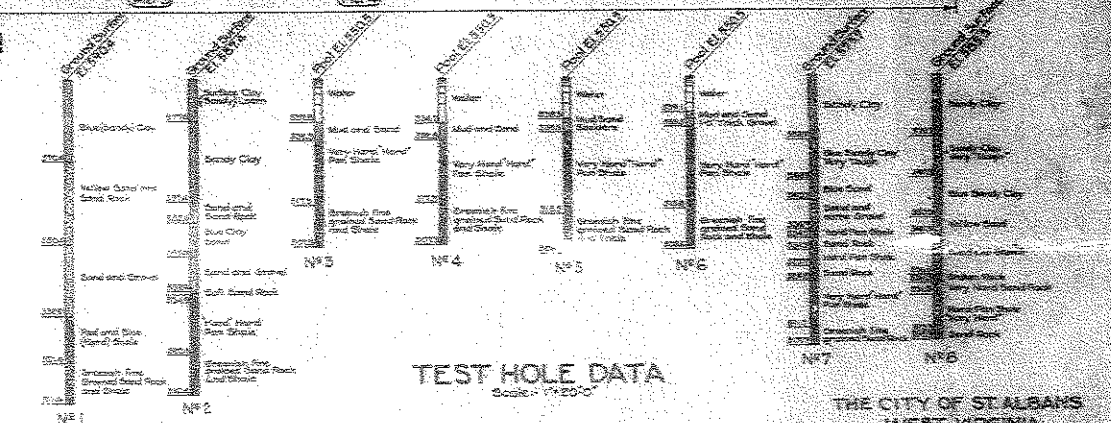


NOTE: If satisfactory foundations for river piers are not encountered at elevations shown, contractor shall excavate in the shale until foundations satisfactory to Consulting Engineer are reached.

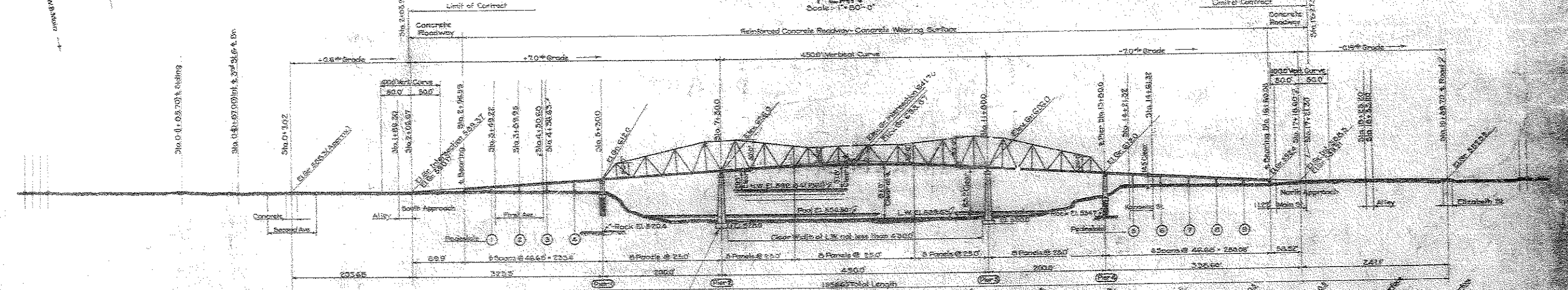
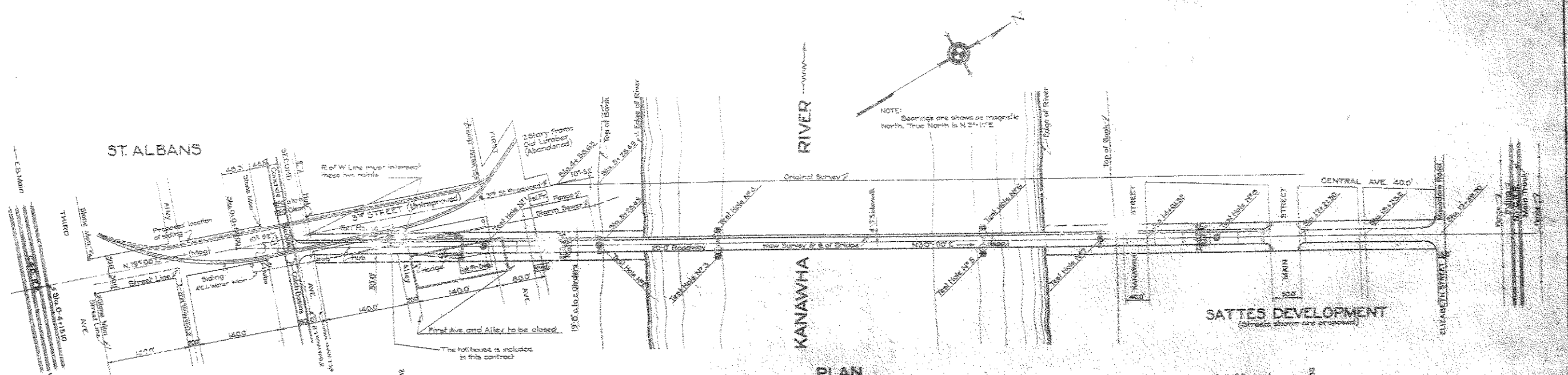


SECTION 200' SPAN LOOKING SOUTH Scale: 1/2"=10'-0"

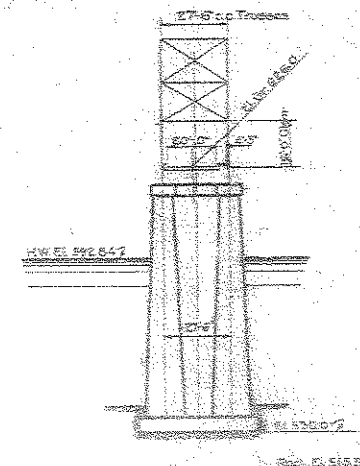


THE CITY OF ST ALBANS
WEST VIRGINIA
ST ALBAN J-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST ALBANS, W.VA.
LOCATION PLAN

Drawn by J.M.P. Sept. 1930
Traced by J.M.P.
Checked by J.M.P.



NOTE -
If satisfactory foundations for
river piers are not encountered all
dimensions shown are preliminary and
excavate to the grade until foundations
satisfactory to Consulting Engineer
are reached.



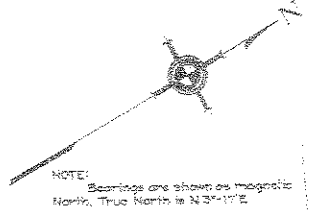
TEST HOLE DATA
Scale 1"=50'-0"

TEST HOLE NO.	DEPTH (ft)	SOIL TYPE	REMARKS
N#1	0-10	Gravelly Sand	...
N#2	0-10	Gravelly Sand	...
N#3	0-10	Gravelly Sand	...
N#4	0-10	Gravelly Sand	...
N#5	0-10	Gravelly Sand	...
N#6	0-10	Gravelly Sand	...
N#7	0-10	Gravelly Sand	...
N#8	0-10	Gravelly Sand	...

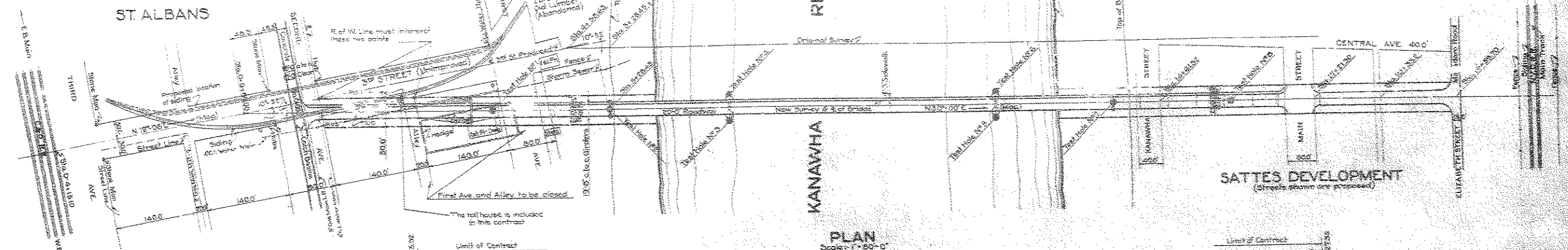
Note: All elevations refer to U.S. Engr. Corps Datum.

THE STATE BRIDGE COMMISSION
OF WEST VIRGINIA
ST. ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST. ALBANS, W. VA.
LOCATION PLAN

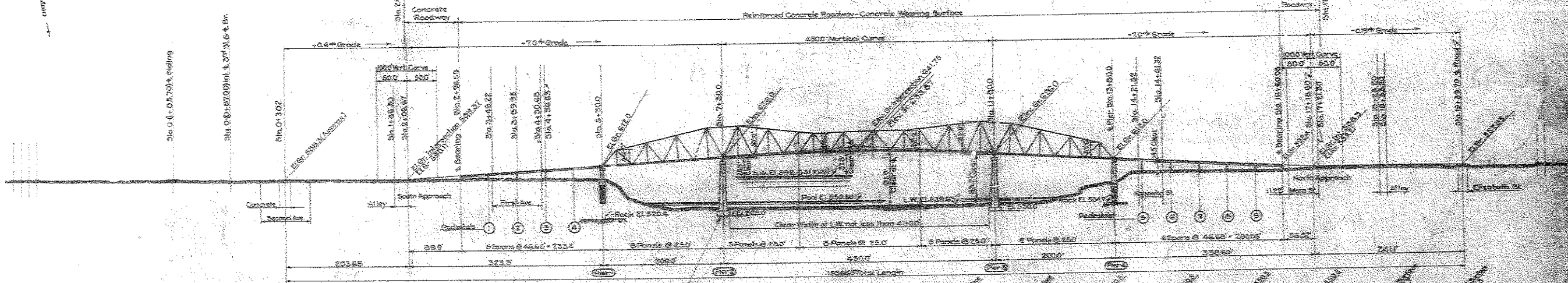
APPROVED:
The J.C. Greiner Co. Baltimore, Md. Consulting Engineers
Drawn by J.M.R. Sept. 1922
Checked by J.M.R. Oct.
Printed by W. Scott & Co. Sept. 15, 1922
TOLL BRIDGE
PROJECT NO. 3
C-250-1



NOTE:
Bearings are shown as magnetic North. True North is N 3° 17' E

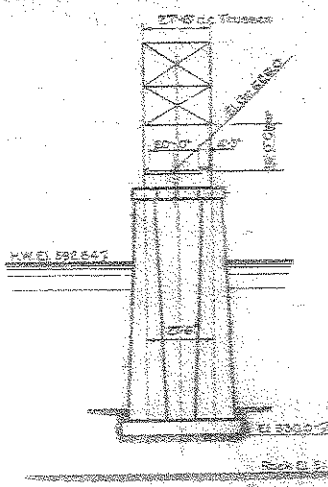


PLAN
Scale: 1" = 50'-0"



ELEVATION
Scale: 1" = 50'-0"

NOTE: If satisfactory foundations for river piers are not encountered at elevations shown, contractor shall excavate in the shoal until foundations satisfactory to Consulting Engineer are reached.



SECTION 450 SPAN LOOKING SOUTH
Scale: 1" = 50'-0"

TEST HOLE DATA
Scale: 1" = 50'-0"

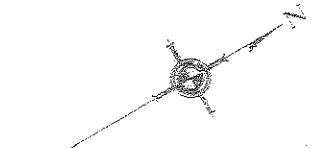
TEST HOLE NO.	DEPTH (FEET)	SOIL TYPE	REMARKS
N#1	0-10	Gravelly Sand	
N#1	10-20	Sand	
N#1	20-30	Clayey Sand	
N#1	30-40	Sand	
N#1	40-50	Clayey Sand	
N#1	50-60	Sand	
N#1	60-70	Clayey Sand	
N#1	70-80	Sand	
N#1	80-90	Clayey Sand	
N#1	90-100	Sand	
N#1	100-110	Clayey Sand	
N#1	110-120	Sand	
N#1	120-130	Clayey Sand	
N#1	130-140	Sand	
N#1	140-150	Clayey Sand	
N#1	150-160	Sand	
N#1	160-170	Clayey Sand	
N#1	170-180	Sand	
N#1	180-190	Clayey Sand	
N#1	190-200	Sand	
N#1	200-210	Clayey Sand	
N#1	210-220	Sand	
N#1	220-230	Clayey Sand	
N#1	230-240	Sand	
N#1	240-250	Clayey Sand	
N#1	250-260	Sand	
N#1	260-270	Clayey Sand	
N#1	270-280	Sand	
N#1	280-290	Clayey Sand	
N#1	290-300	Sand	
N#1	300-310	Clayey Sand	
N#1	310-320	Sand	
N#1	320-330	Clayey Sand	
N#1	330-340	Sand	
N#1	340-350	Clayey Sand	
N#1	350-360	Sand	
N#1	360-370	Clayey Sand	
N#1	370-380	Sand	
N#1	380-390	Clayey Sand	
N#1	390-400	Sand	
N#1	400-410	Clayey Sand	
N#1	410-420	Sand	
N#1	420-430	Clayey Sand	
N#1	430-440	Sand	
N#1	440-450	Clayey Sand	
N#1	450-460	Sand	
N#1	460-470	Clayey Sand	
N#1	470-480	Sand	
N#1	480-490	Clayey Sand	
N#1	490-500	Sand	
N#1	500-510	Clayey Sand	
N#1	510-520	Sand	
N#1	520-530	Clayey Sand	
N#1	530-540	Sand	
N#1	540-550	Clayey Sand	
N#1	550-560	Sand	
N#1	560-570	Clayey Sand	
N#1	570-580	Sand	
N#1	580-590	Clayey Sand	
N#1	590-600	Sand	
N#1	600-610	Clayey Sand	
N#1	610-620	Sand	
N#1	620-630	Clayey Sand	
N#1	630-640	Sand	
N#1	640-650	Clayey Sand	
N#1	650-660	Sand	
N#1	660-670	Clayey Sand	
N#1	670-680	Sand	
N#1	680-690	Clayey Sand	
N#1	690-700	Sand	
N#1	700-710	Clayey Sand	
N#1	710-720	Sand	
N#1	720-730	Clayey Sand	
N#1	730-740	Sand	
N#1	740-750	Clayey Sand	
N#1	750-760	Sand	
N#1	760-770	Clayey Sand	
N#1	770-780	Sand	
N#1	780-790	Clayey Sand	
N#1	790-800	Sand	
N#1	800-810	Clayey Sand	
N#1	810-820	Sand	
N#1	820-830	Clayey Sand	
N#1	830-840	Sand	
N#1	840-850	Clayey Sand	
N#1	850-860	Sand	
N#1	860-870	Clayey Sand	
N#1	870-880	Sand	
N#1	880-890	Clayey Sand	
N#1	890-900	Sand	
N#1	900-910	Clayey Sand	
N#1	910-920	Sand	
N#1	920-930	Clayey Sand	
N#1	930-940	Sand	
N#1	940-950	Clayey Sand	
N#1	950-960	Sand	
N#1	960-970	Clayey Sand	
N#1	970-980	Sand	
N#1	980-990	Clayey Sand	
N#1	990-1000	Sand	
N#2	0-10	Gravelly Sand	
N#2	10-20	Sand	
N#2	20-30	Clayey Sand	
N#2	30-40	Sand	
N#2	40-50	Clayey Sand	
N#2	50-60	Sand	
N#2	60-70	Clayey Sand	
N#2	70-80	Sand	
N#2	80-90	Clayey Sand	
N#2	90-100	Sand	
N#2	100-110	Clayey Sand	
N#2	110-120	Sand	
N#2	120-130	Clayey Sand	
N#2	130-140	Sand	
N#2	140-150	Clayey Sand	
N#2	150-160	Sand	
N#2	160-170	Clayey Sand	
N#2	170-180	Sand	
N#2	180-190	Clayey Sand	
N#2	190-200	Sand	
N#2	200-210	Clayey Sand	
N#2	210-220	Sand	
N#2	220-230	Clayey Sand	
N#2	230-240	Sand	
N#2	240-250	Clayey Sand	
N#2	250-260	Sand	
N#2	260-270	Clayey Sand	
N#2	270-280	Sand	
N#2	280-290	Clayey Sand	
N#2	290-300	Sand	
N#2	300-310	Clayey Sand	
N#2	310-320	Sand	
N#2	320-330	Clayey Sand	
N#2	330-340	Sand	
N#2	340-350	Clayey Sand	
N#2	350-360	Sand	
N#2	360-370	Clayey Sand	
N#2	370-380	Sand	
N#2	380-390	Clayey Sand	
N#2	390-400	Sand	
N#2	400-410	Clayey Sand	
N#2	410-420	Sand	
N#2	420-430	Clayey Sand	
N#2	430-440	Sand	
N#2	440-450	Clayey Sand	
N#2	450-460	Sand	
N#2	460-470	Clayey Sand	
N#2	470-480	Sand	
N#2	480-490	Clayey Sand	
N#2	490-500	Sand	
N#2	500-510	Clayey Sand	
N#2	510-520	Sand	
N#2	520-530	Clayey Sand	
N#2	530-540	Sand	
N#2	540-550	Clayey Sand	
N#2	550-560	Sand	
N#2	560-570	Clayey Sand	
N#2	570-580	Sand	
N#2	580-590	Clayey Sand	
N#2	590-600	Sand	
N#2	600-610	Clayey Sand	
N#2	610-620	Sand	
N#2	620-630	Clayey Sand	
N#2	630-640	Sand	
N#2	640-650	Clayey Sand	
N#2	650-660	Sand	
N#2	660-670	Clayey Sand	
N#2	670-680	Sand	
N#2	680-690	Clayey Sand	
N#2	690-700	Sand	
N#2	700-710	Clayey Sand	
N#2	710-720	Sand	
N#2	720-730	Clayey Sand	
N#2	730-740	Sand	
N#2	740-750	Clayey Sand	
N#2	750-760	Sand	
N#2	760-770	Clayey Sand	
N#2	770-780	Sand	
N#2	780-790	Clayey Sand	
N#2	790-800	Sand	
N#2	800-810	Clayey Sand	
N#2	810-820	Sand	
N#2	820-830	Clayey Sand	
N#2	830-840	Sand	
N#2	840-850	Clayey Sand	
N#2	850-860	Sand	
N#2	860-870	Clayey Sand	
N#2	870-880	Sand	
N#2	880-890	Clayey Sand	
N#2	890-900	Sand	
N#2	900-910	Clayey Sand	
N#2	910-920	Sand	
N#2	920-930	Clayey Sand	
N#2	930-940	Sand	
N#2	940-950	Clayey Sand	
N#2	950-960	Sand	
N#2	960-970	Clayey Sand	
N#2	970-980	Sand	
N#2	980-990	Clayey Sand	
N#2	990-1000	Sand	

Note: All elevations refer to U.S. Engr. Corps Datum.

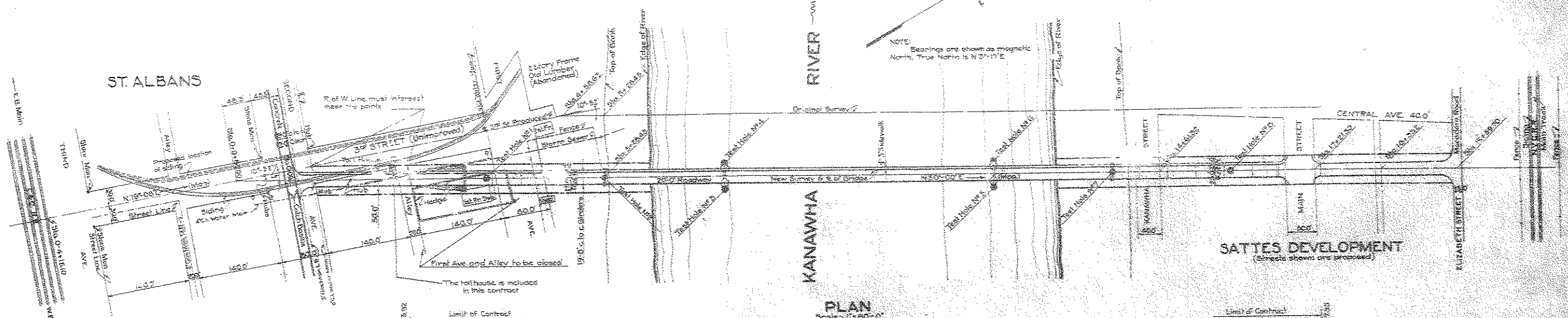
APPROVED
Consulting Engineer

THE STATE BRIDGE COMMISSION
OF WEST VIRGINIA
ST. ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST. ALBANS, W.VA.
LOCATION PLAN

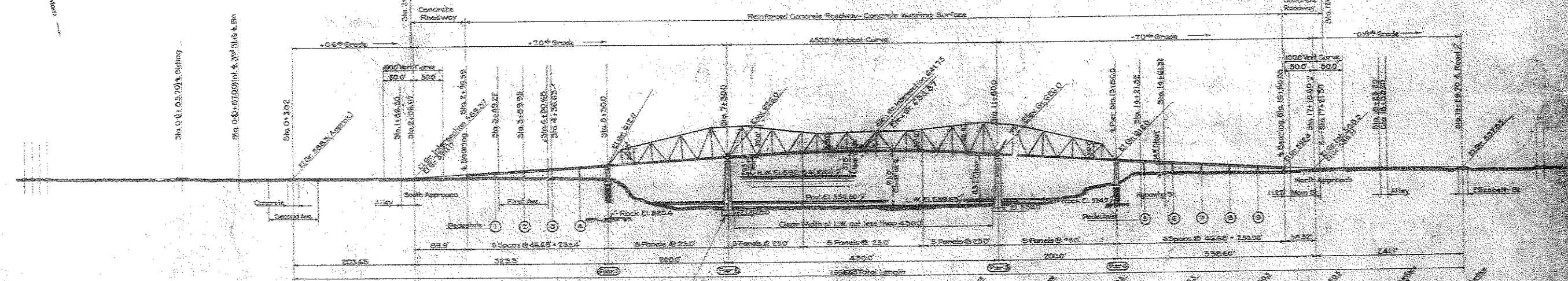
Scale: as noted
The J.C. Greiner Co. Baltimore, Md. Consulting Engineers
TOLL BRIDGE
PROJECT NO. C-250



NOTE: Bearings are shown as magnetic North. True North is N 3° 17' E

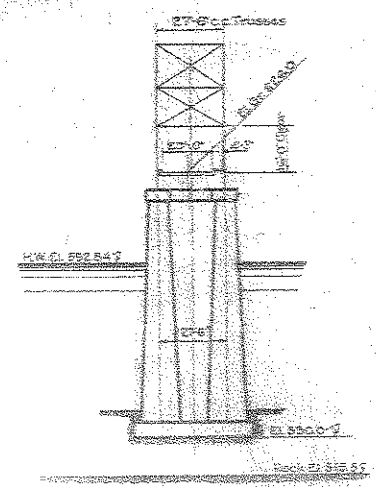


PLAN
Scale: 1" = 50'-0"



ELEVATION
Scale: 1" = 60'-0"

NOTE: If satisfactory foundations for river piers are not ascertained at elevations shown, contractor shall excavate in the usual until foundations satisfactory to Consulting Engineer are reached.



SECTION 450' SPAN LOOKING SOUTH
Scale: 1" = 30'-0"

TEST HOLE DATA
Scale: 1" = 20'-0"

TEST HOLE	DEPTH (ft)	SOIL TYPE	REMARKS
N#1	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	
N#2	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	
N#3	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	
N#4	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	
N#5	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	
N#6	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	
N#7	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	
N#8	0-10	Gravelly Sand	
	10-20	Sand	
	20-30	Sand	
	30-40	Sand	

Note: All elevations refer to U.S. Eng. Corps Dat.

APPROVED:

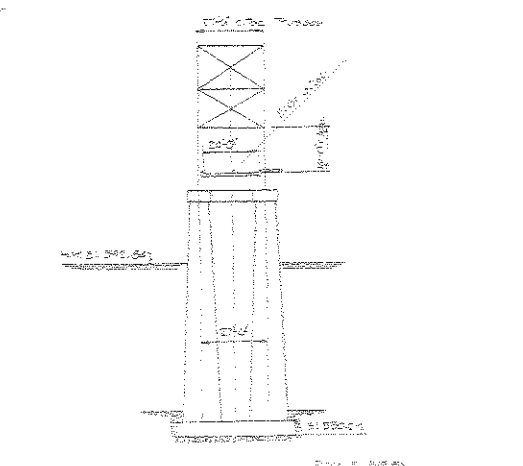
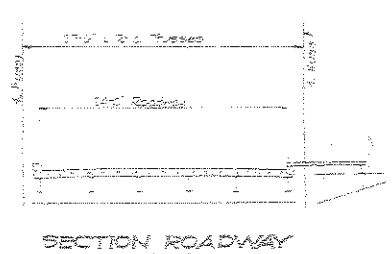
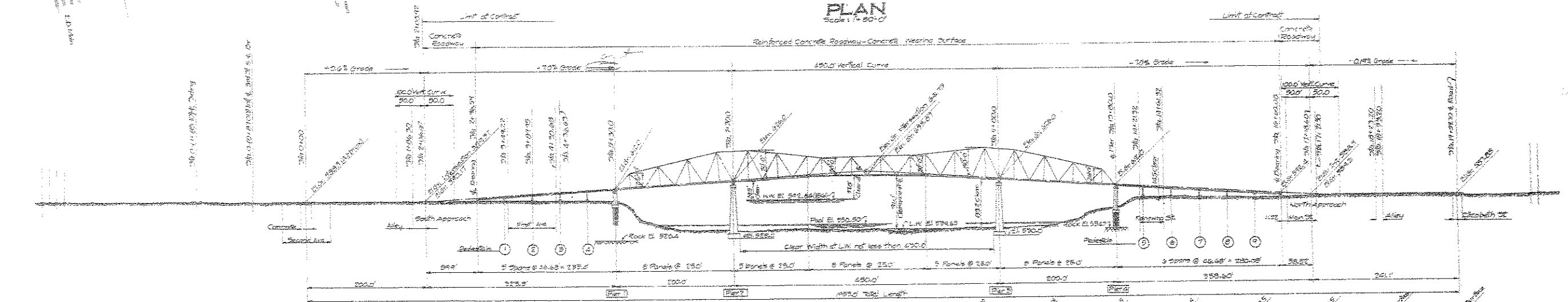
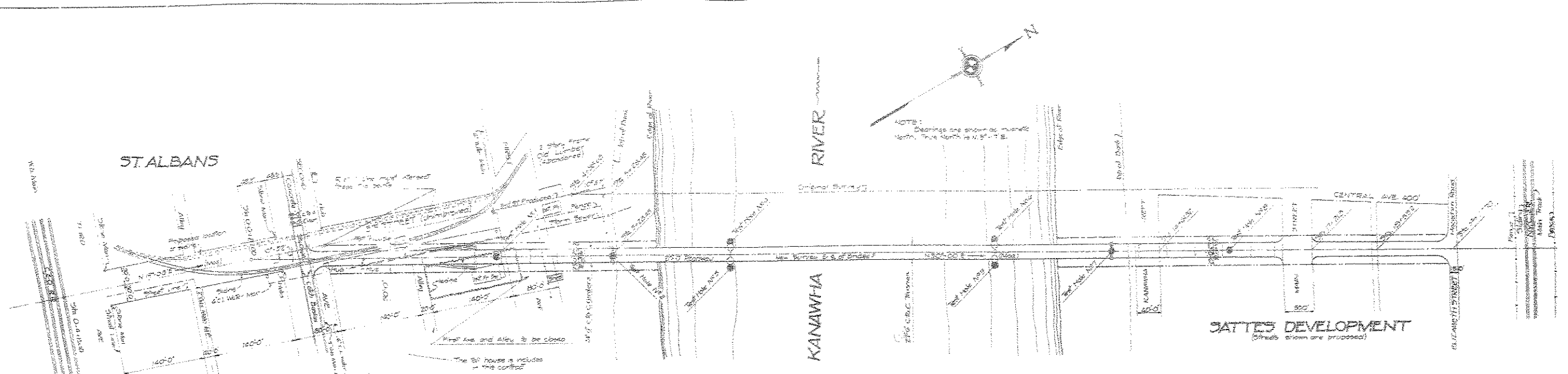
Engineer

THE STATE BRIDGE COMMISSION
OF WEST VIRGINIA
ST ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST ALBANS, W.VA.
LOCATION PLAN

The J.E. Granger Co.
Baltimore, Md.
Consulting Engineers

Drawn by J.M.R. Sept. 1922
Traced by J.M.R. Oct.
Checked by W.
Revised Sept. 2, 1930

TOLL BRIDGE
PROJECT NO. 3
C-250-1



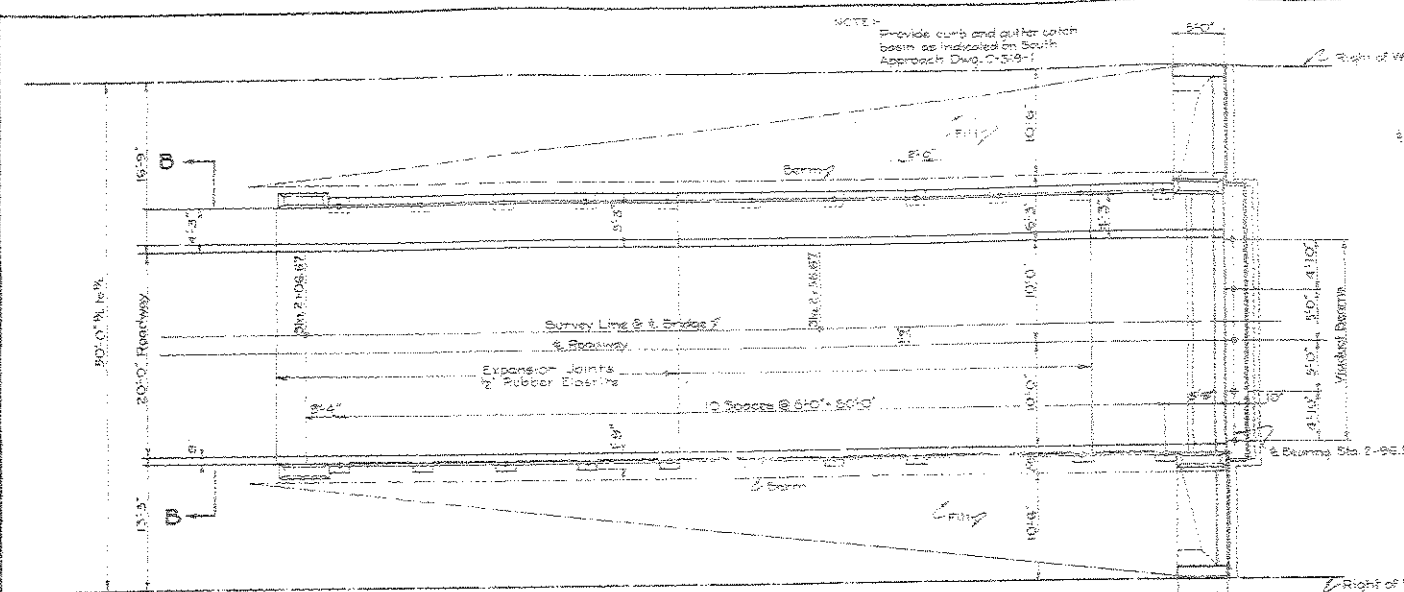
TEST HOLE DATA

TEST HOLE NO.	DEPTH (ft)	SOIL DESCRIPTION
N-1	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay
N-2	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay
N-3	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay
N-4	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay
N-5	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay
N-6	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay
N-7	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay
N-8	0-1	Surface Soil
	1-2	Dark Gray Silty Clay
	2-3	Dark Gray Silty Clay
	3-4	Dark Gray Silty Clay
	4-5	Dark Gray Silty Clay
	5-6	Dark Gray Silty Clay
	6-7	Dark Gray Silty Clay
	7-8	Dark Gray Silty Clay
	8-9	Dark Gray Silty Clay
	9-10	Dark Gray Silty Clay

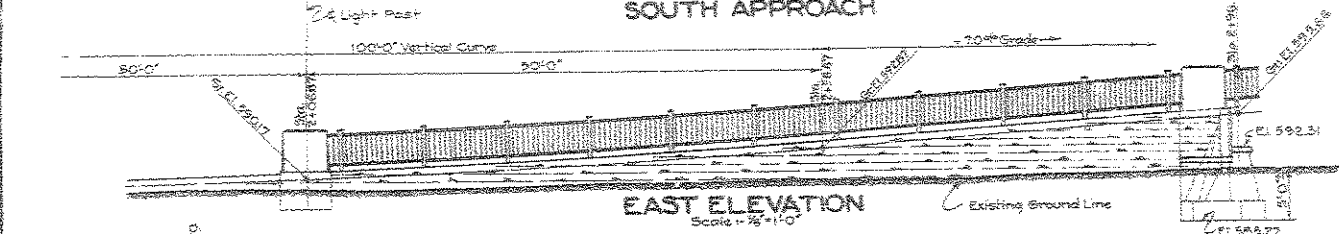
PROPOSED
STEEL THRU TRUSS
ST ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT ST ALBANS
KANAWHA CO. WVA.
STATE ROAD COMMISSION
CHARLESTON, WVA.
SCALE AS NOTED OCT 1932

#1344

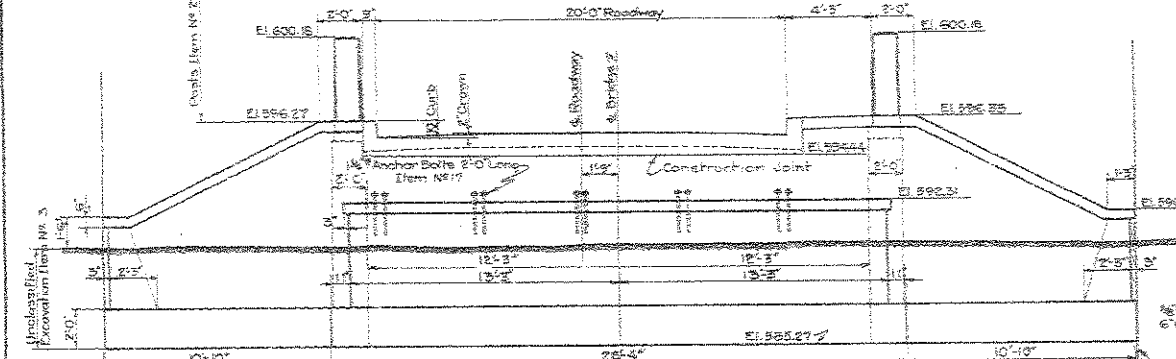
NOTE: Provide curb and gutter catch basin as indicated on South Approach Dwg. C-319-1



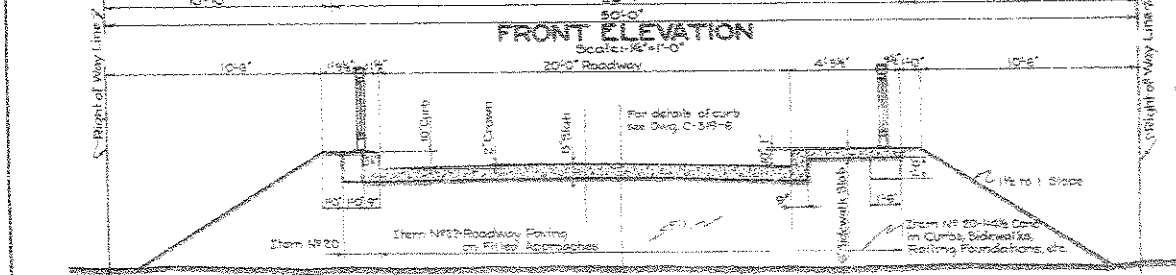
PLAN SOUTH APPROACH Scale: 1/8"=1'-0"



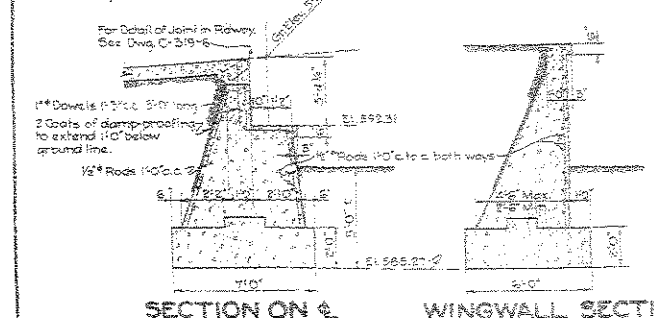
EAST ELEVATION Scale: 1/8"=1'-0"



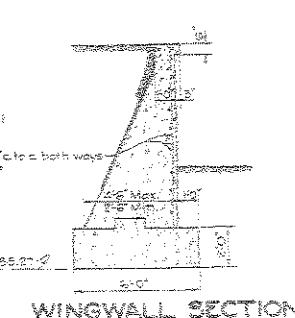
FRONT ELEVATION Scale: 1/8"=1'-0"



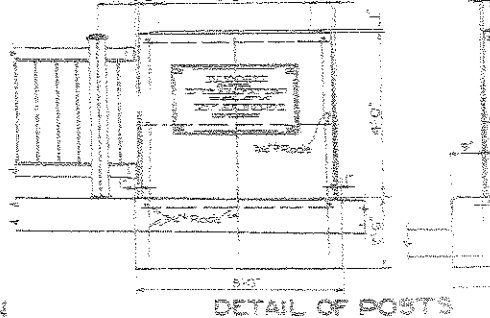
SECTION THRU FILL Scale: 1/8"=1'-0"



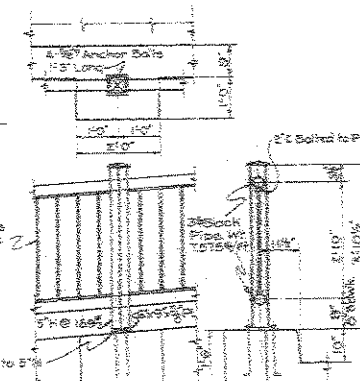
SECTION ON A Scale: 1/8"=1'-0"



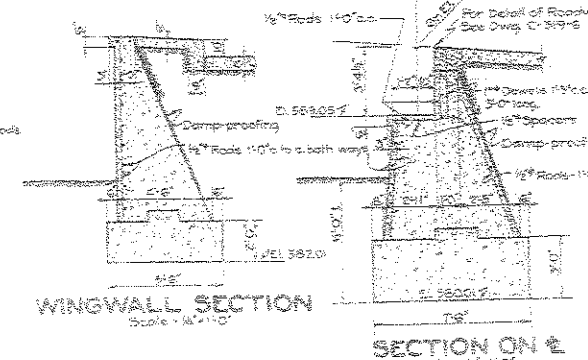
WINGWALL SECTION Scale: 1/8"=1'-0"



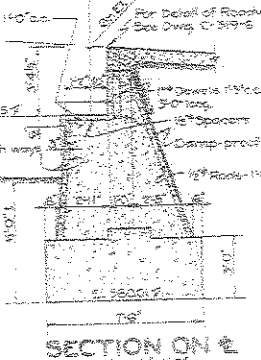
DETAIL OF POSTS Scale: 1/8"=1'-0"



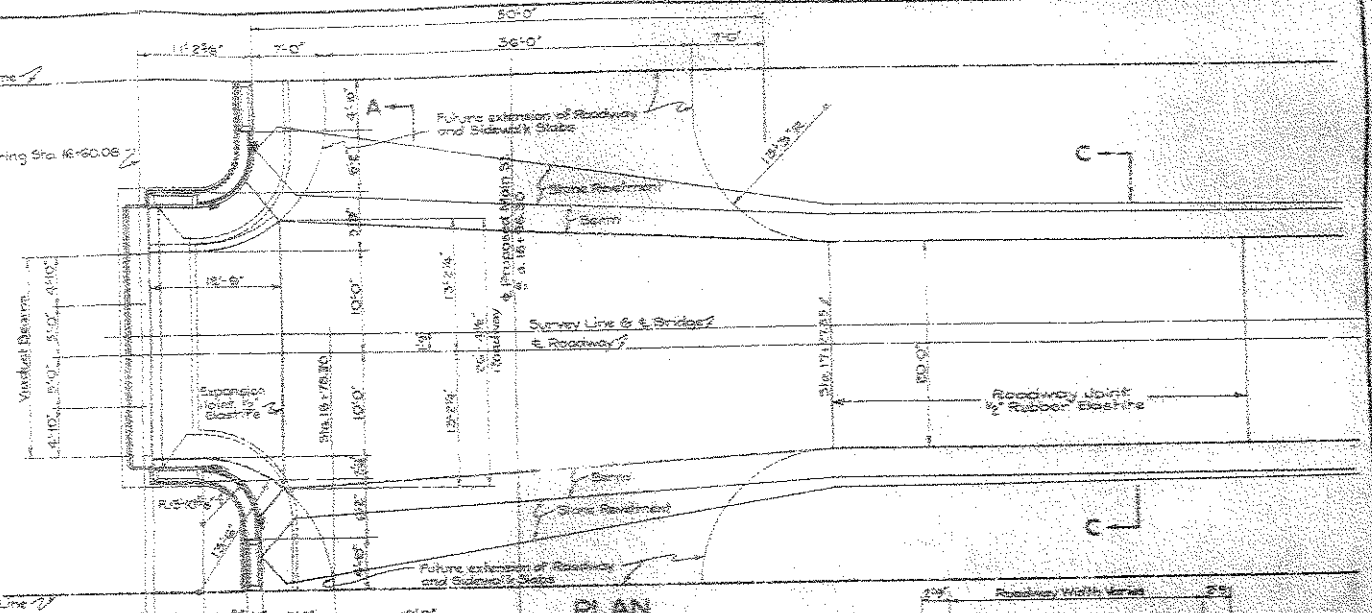
DETAIL OF HANDRAILING Scale: 1/8"=1'-0"



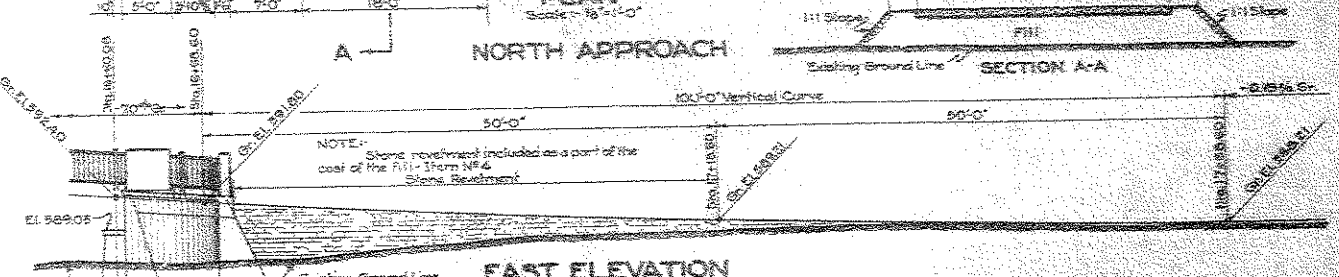
WINGWALL SECTION Scale: 1/8"=1'-0"



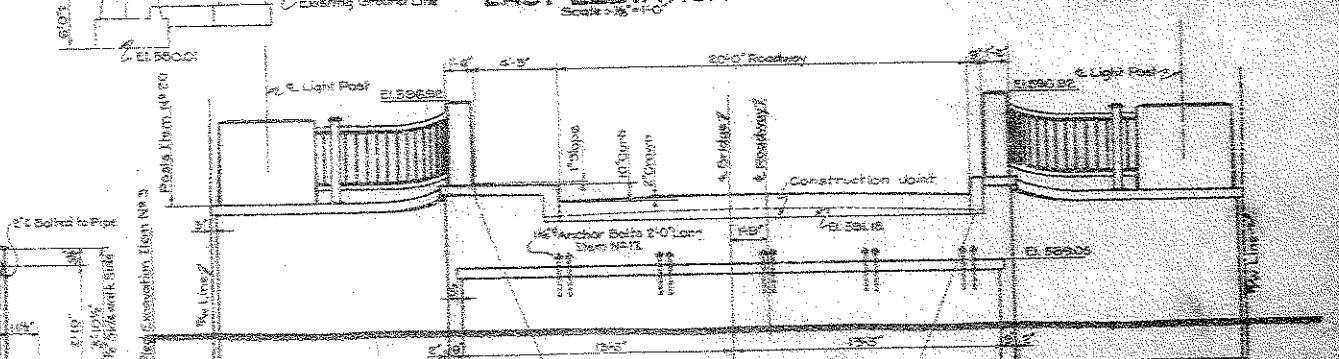
SECTION ON B Scale: 1/8"=1'-0"



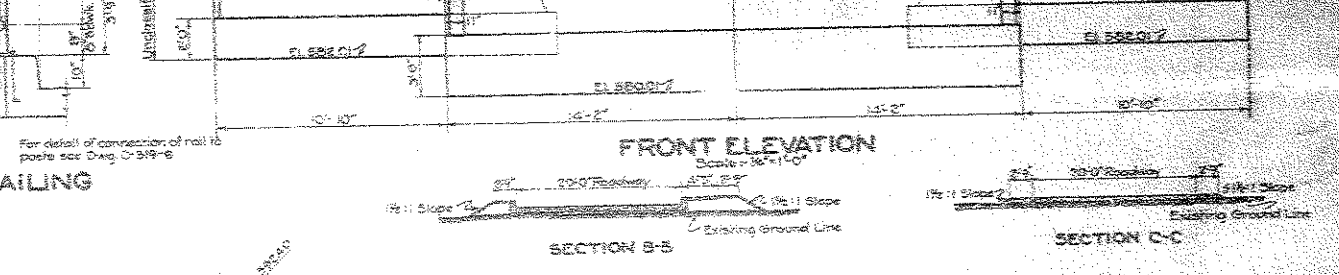
PLAN NORTH APPROACH Scale: 1/8"=1'-0"



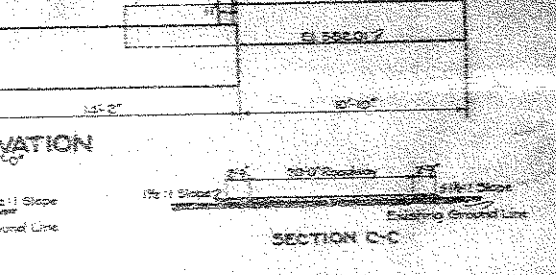
EAST ELEVATION Scale: 1/8"=1'-0"



FRONT ELEVATION Scale: 1/8"=1'-0"



SECTION B-B Scale: 1/8"=1'-0"



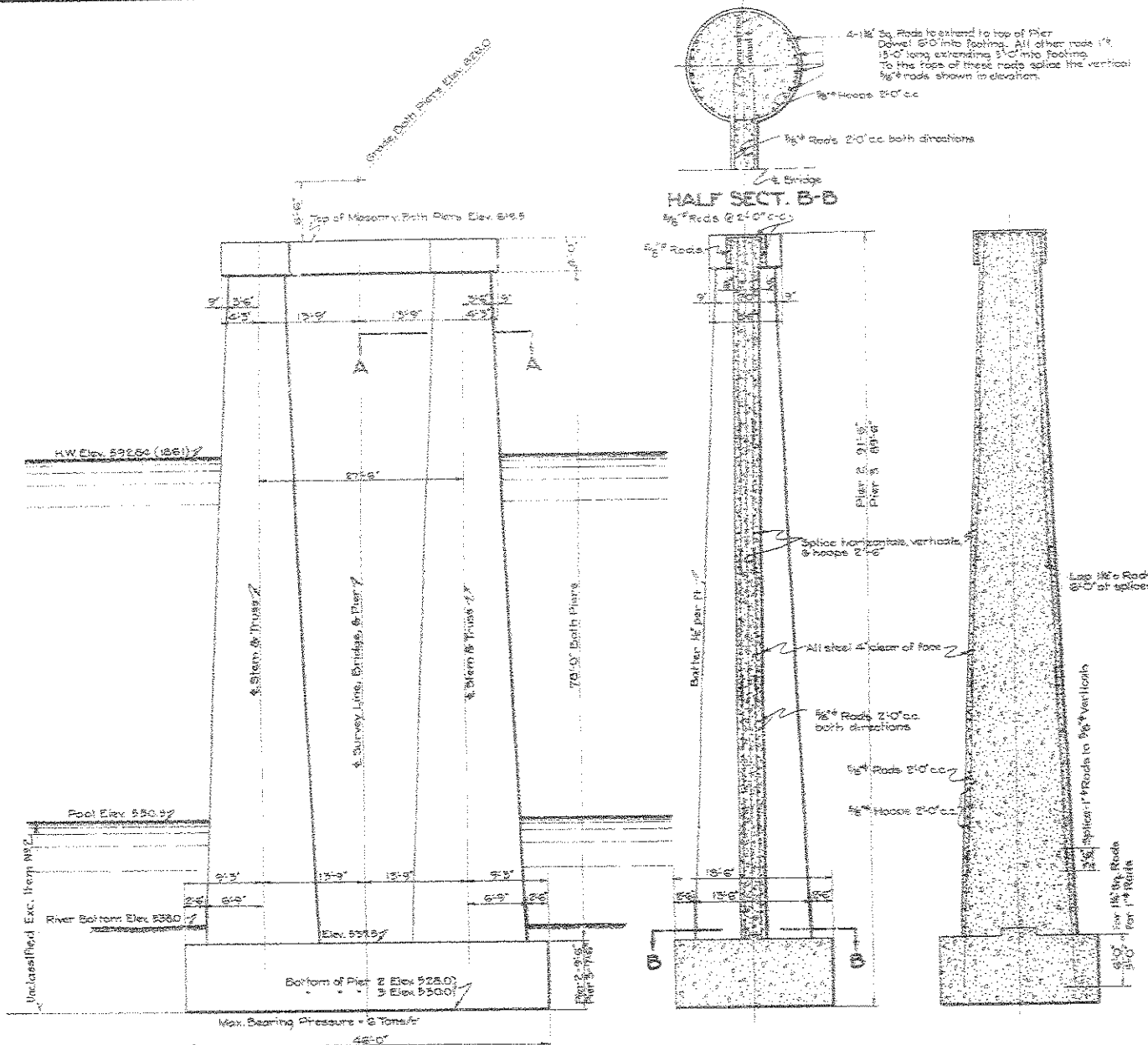
SECTION C-C Scale: 1/8"=1'-0"

NOTE: Surface Finish: All exposed concrete surfaces of abutment walls and posts to have rubbed finish. Anchor bolts to be furnished and set by the contractor for the superstructure. (Item N-7.) Concrete Mixes: Adjustments: Curb, Sidewalks, Posts, 1 1/2" Roadway - State Road Comm. Spec. Beam Serrations: To be poured to a higher elevation than shown on plans and accurately set or hammered to the correct elevation. Excavation: Limits of excavation 10' outside of footer outline.

THE CITY OF ST ALBANS WEST VIRGINIA
ST. ALBANS-NITRO BRIDGE
OVER THE KANAWHA RIVER
AT ST. ALBANS, W. VA.
ABUTMENTS & FILLED APPROACHES

Drawn by: E.R.A. Oct 1925
Traced by: J.M.P.
Checked by: E.R.A.
Reviewed:

C-319-2

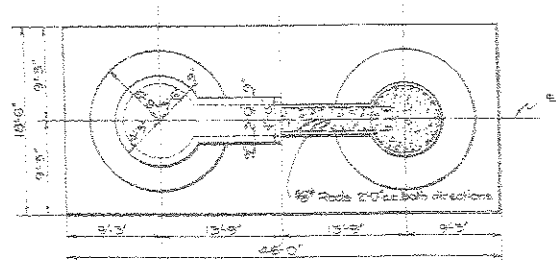


ELEVATION
Scale: 1/8" = 1'-0"

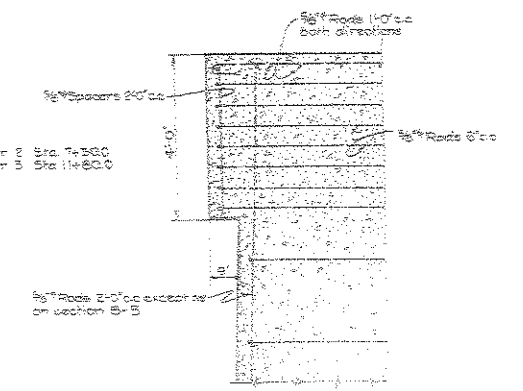
SECTION ON
E OF BRIDGE
Scale: 1/8" = 1'-0"

SECTION ON
E OF STEM
Scale: 1/8" = 1'-0"

NOTE: If satisfactory foundations for Piers 2 & 3 are not encountered at elevations shown, cutting for shafts to be made until foundations satisfactory to the Consulting Engineer are reached.

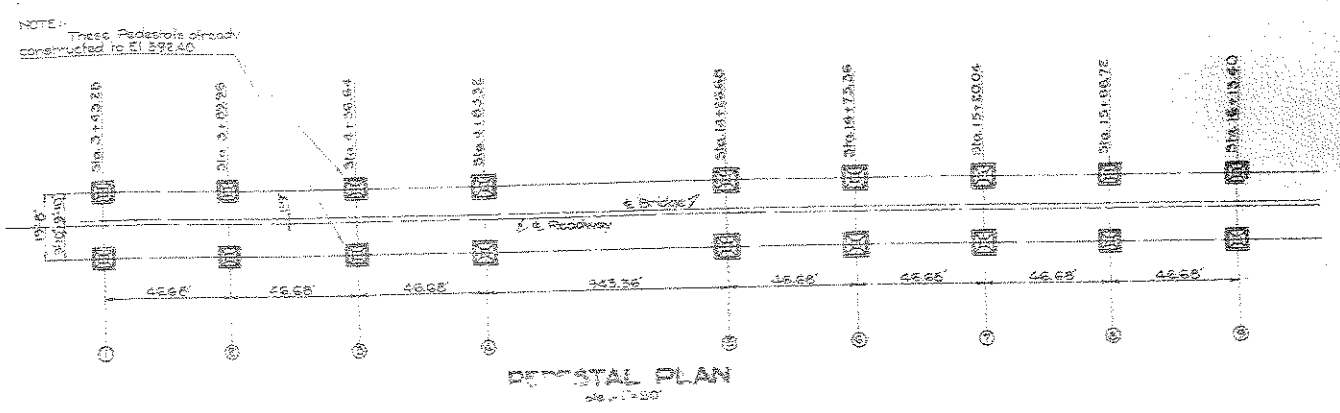


HALF PLAN HALF SECTION A-A
Scale: 1/8" = 1'-0"



COPING DETAIL
Scale: 1/8" = 1'-0"

PIERS 2 & 3

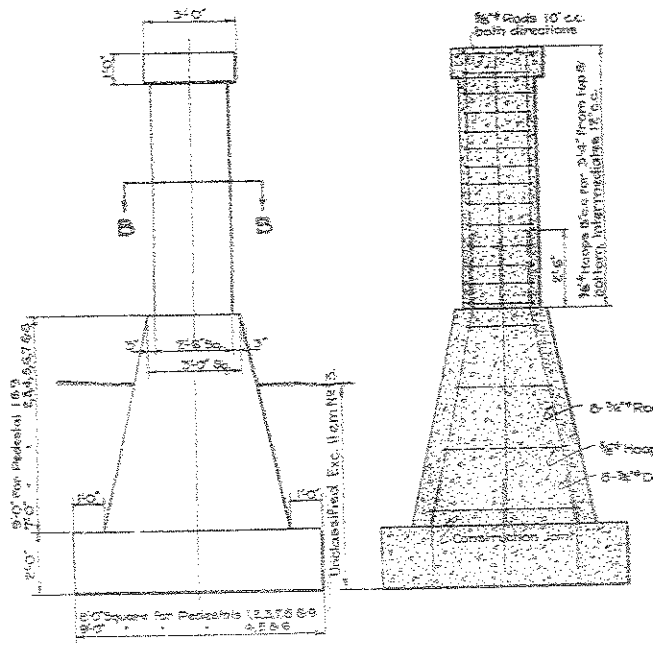


PEDESTAL PLAN
Scale: 1/8" = 1'-0"



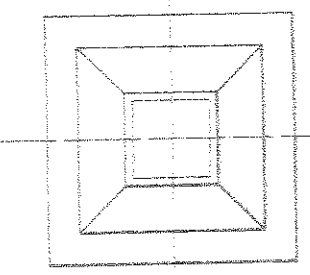
ELEVATION
Scale: 1/8" = 1'-0"

NOTE: If satisfactory foundations are not encountered at elevations given, bottoms of pedestals are to be carried to show where settlement does not exceed 1/4" under double loading. Maximum Soil Pressure (Including Wind Force) - 2.2 Tons/sq ft.



TYPICAL PEDESTAL
Scale: 1/8" = 1'-0"

SECTION
Scale: 1/8" = 1'-0"



PLAN
Scale: 1/8" = 1'-0"

VIADUCT PEDESTALS

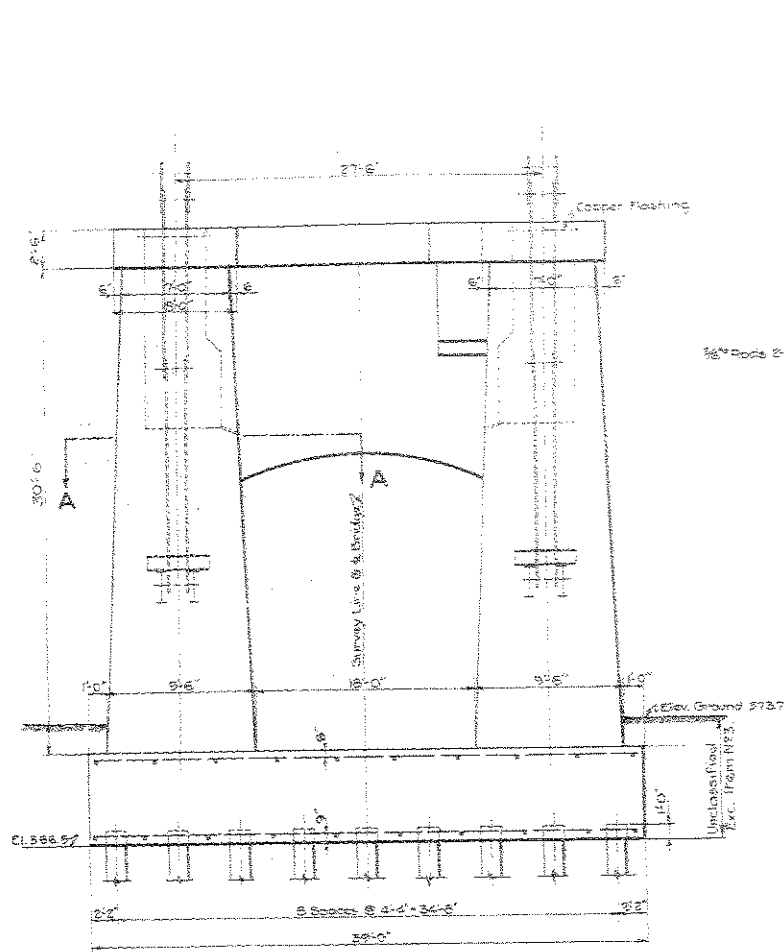
- NOTE: Concrete Mixes - Piers 2 & 3 - 1-16
- Pedestals including footings - 1-6
- Pedestal columns - 1-6
- Surface Finishes - All exposed surfaces of Piers, Pedestals, Columns and Abutments to be finished with a rubbed finish, see specifications.
- Anchor Bolts - All anchor bolts to be furnished and set by the superstructure contractor.
- Pedestals - Pedestals already constructed to E1v. 592.40. Holes for 6" x 4" dowels to be drilled 2'-6" in top of existing pedestals.
- Bearing Soils - To be panned to a higher elevation than shown on plans and accurately bench connected to the correct elevation.
- Excavation - Limits of excavation 1'-0" outside of footer course.

THE CITY OF ST. ALBANS
WEST VIRGINIA
ST. ALBANS - NITRO BRIDGE
OVER THE
KANAWHA RIVER
ST. ALBANS, W. VA.
PIERS 2 & 3, VIADUCT PEDESTALS

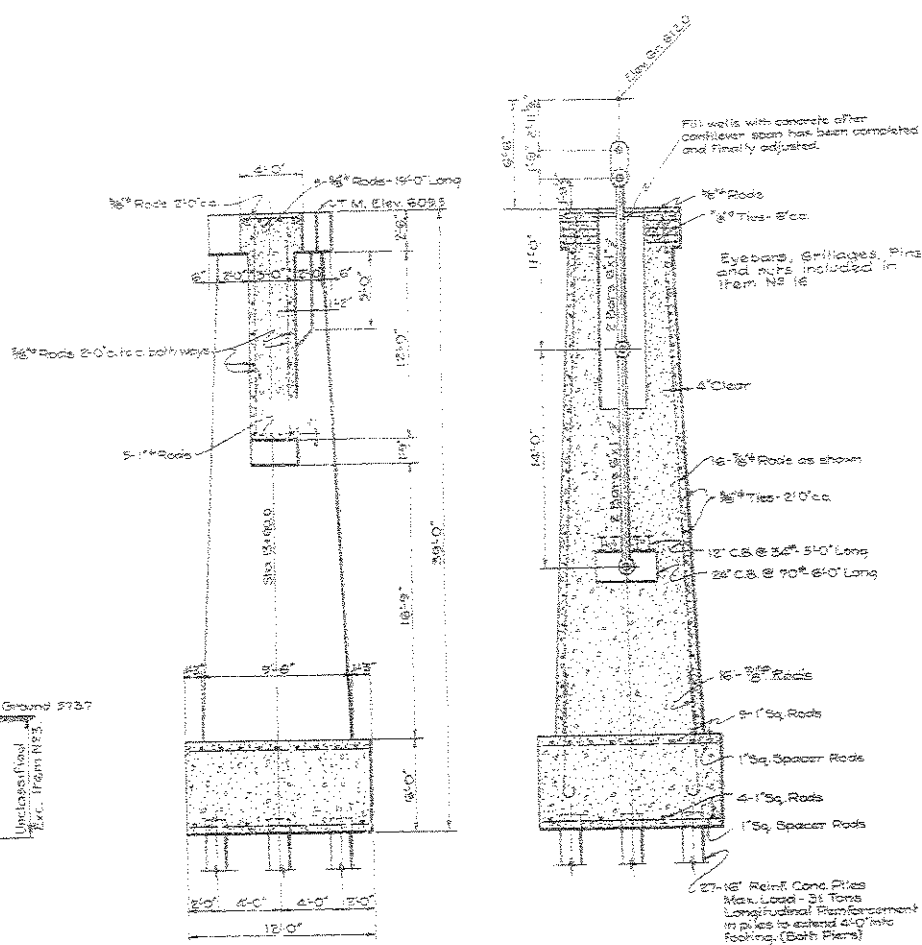
Scale: as noted
The J.E. Greiner Company Consulting Engineers
Baltimore, Md.

Drawn by: E.R.A. Sept 1935
Checked by: J.M.R.
Revised by: E.R.A.

C-319-3

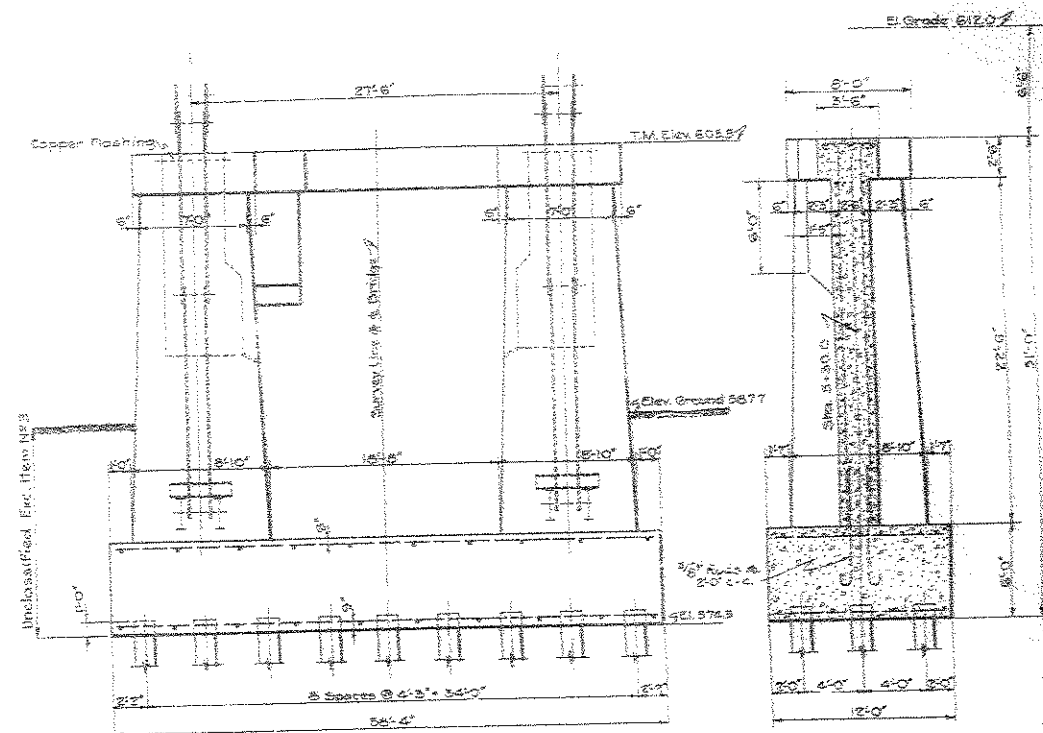


NORTH ELEVATION



SECTION ON & PIER

SECTION ON & STEM

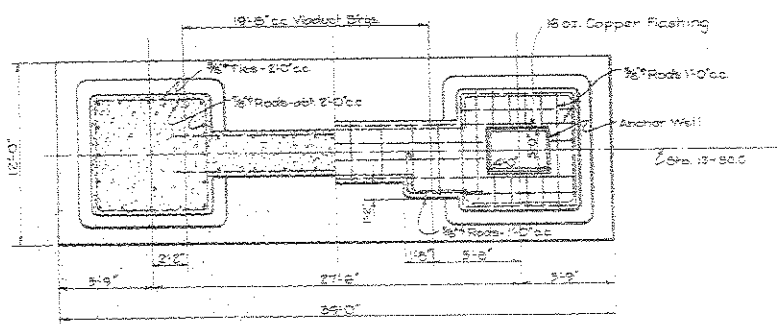


SOUTH ELEVATION

SECTION ON & PIER

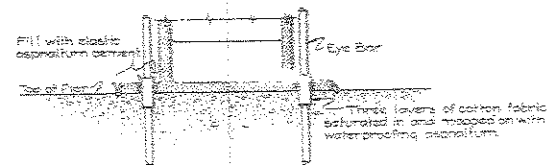
PIER 1
Scale - 3/16" = 1'-0"

NOTE: All details and reinforcing not shown same as shown for Pier 2.



SECTION A-A HALF PLAN

PIER 4
Scale - 3/16" = 1'-0"



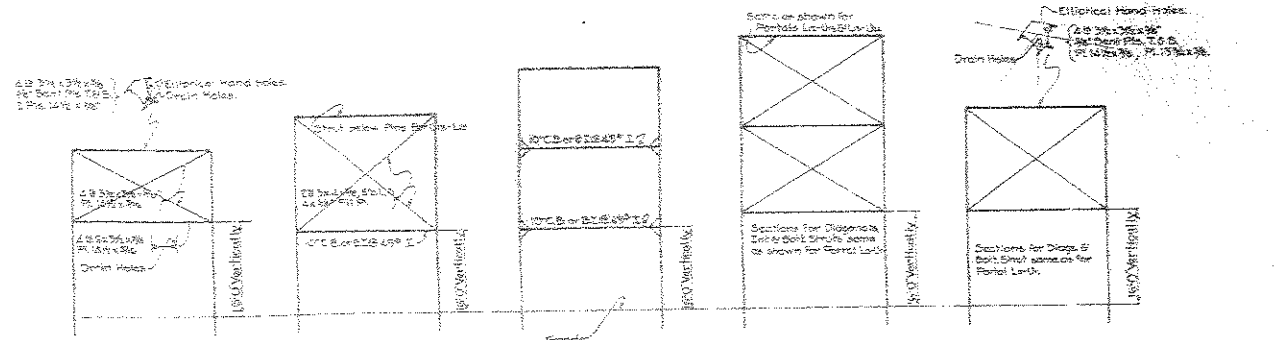
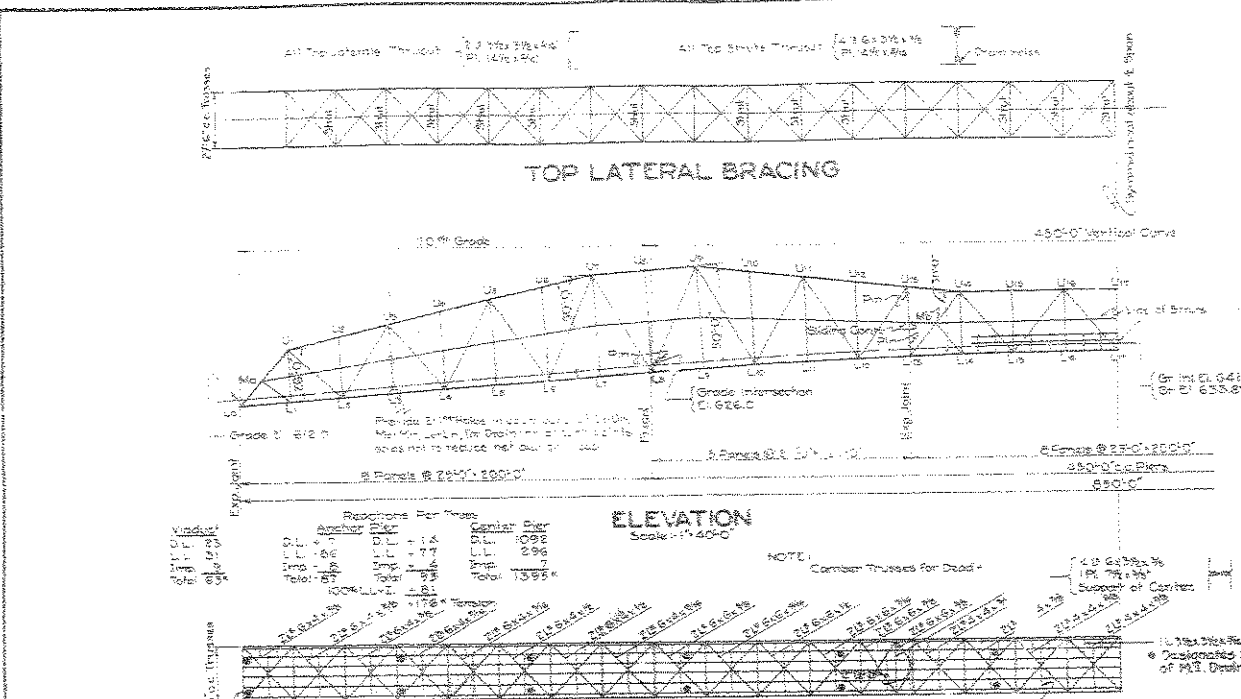
DETAIL OF ANCHOR BAR PROTECTION

NOTE: All concrete is 1:2:4 mix. All exposed surfaces of piers to be finished with a 'Rubbed Finish' per specifications. Sealing coats to be poured to a higher elevation than indicated on the plans and accurately bush hammered to the correct elevation. Anchor bolts, casters, girders and pins to be furnished and set by the Contractor for the Superstructure. 1:4:8 Concrete in Anchor Walls to be furnished and placed under Item 1175. Limit of Excavation 1'-0" outside of footer course.

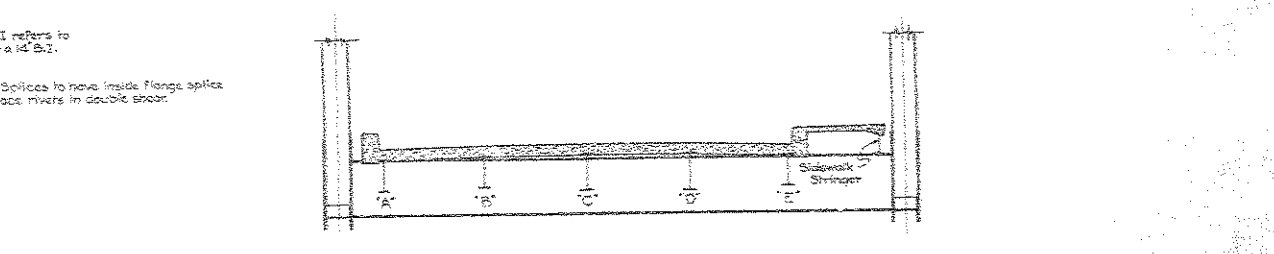
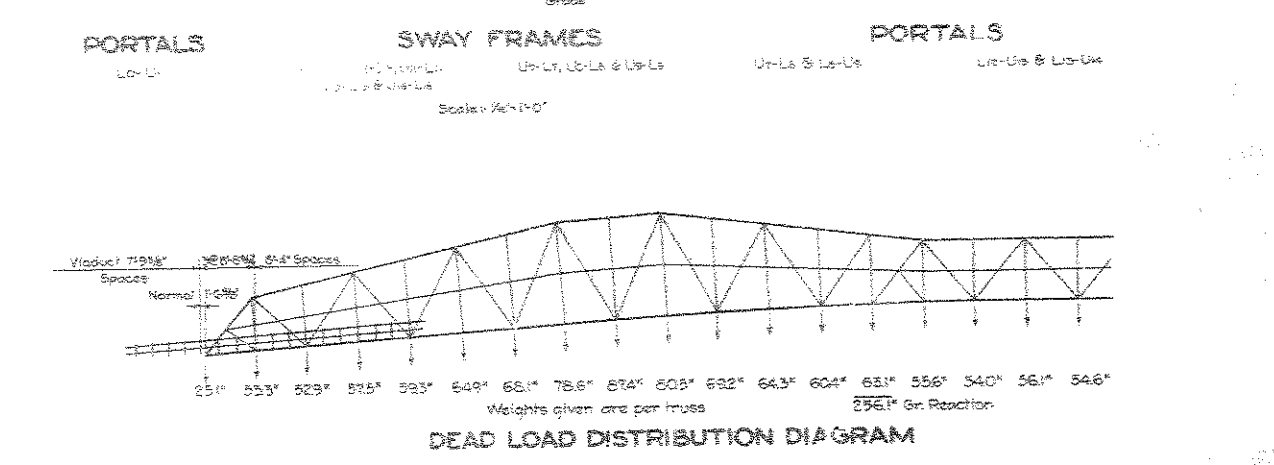
THE CITY OF ST ALBANS
WEST VIRGINIA
ST. ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST. ALBANS, W.VA.
PIERS 1 & 4
Scale - 3/16" = 1'-0"
The J.E. Greiner Company Consulting Engineers
Baltimore, Md.

Drawn by: C.L.R. Sept 1935
Traced by: J.M.P.
Checked by: E.R.A.
Revised:

C-319-4



MEMBER	DEAD	LIVE	IMPACT	I	WIND	DAWTLK	SIMPLE	II	III	DESIGN	I	SPEC	ALLOW	AREA	SECTION	AREA	
				D-L-I	Direct	Reactions	SPAN	OL-S-M	D-W	STRESS	STRESS	UNIT	STRESS	REQD	SKETCH	Grave	
Uo-Uo	+54	+101	+6	+167	+43	1245	+266	+149				59	139	174	G272	14' I @ 95"	27.92
Uo-Uo	-119	-73	+9	-397				-193				82	180	180	N159	14' I @ 87"	23.56
Uo-Uo	+320	-204	+12	+536				-575				81	180	180	N322	14' I @ 127"	37.53
Uo-Uo	-589	-321	+11	-997				-547				75	180	180	N508	14' I @ 202"	79.56
Uo-Uo	-982	-506	+17	-1595				-791				72	180	180	N715	14' I @ 314"	92.56
Uo-Uo	-1525	-119	+15	-1717				-546				75	180	180	N426	14' I @ 176"	51.75
Uo-Uo	+170	-62	-6	-236				-369				82	180	225	N187	14' I @ 87"	25.56
Uo-Uo	0	0	0	0				-285				82	180	225	N197	14' I @ 87"	25.56
Uo-Uo	-275	-106	-11	-396				-101				90	117	107	G575	14' I @ 127"	37.53
Uo-Uo	-567	-142	-14	-789				0				75	122	122	G474	14' I @ 167"	49.10
Lo-La	-37	-74	-7	-118				103	+130	+98		100	98	123	G270	14' I @ 78"	22.94
Lo-La	-202	-118	+12	-380				281	+220	-70		80	116	146	G412	14' I @ 145"	42.62
Lo-La	-440	+96	+10	-824				242	+227	-251		74	124	155	G603	14' I @ 211"	62.04
Lo-La	-730	-269	+12	-1014				202	+225	-272		72	126	1575	G863	14' I @ 300"	68.24
Lo-La	-700	-231	+14	-945				137	+232	-292		72	126	1575	G814	14' I @ 281"	64.39
Lo-La	-340	-120	-10	-470				158	+238	-308		75	124	1545	G526	14' I @ 184"	54.12
Lo-La	0	0	0	0				224	+240	-300		100	117	146	G509	14' I @ 111"	32.62
Lo-La	+160	+64	-6	+230				224	+240	-300		80	180	180	N295	14' I @ 119"	34.97
Lo-La	-246	-135	+13	-438				103	+105	-150		89	108	108	G175	14' I @ 81"	17.94
Lo-La	-105	-89	-7	-194				148	-60	-222		103	180	180	N193	14' I @ 91"	17.94
Lo-La	-58	-81	+4	-129				43	-34	-171		84	115	115	G260	14' I @ 84"	24.68
Lo-La	-246	-92	+4	-342				174	-75	-150		98	180	180	N190	14' I @ 78"	22.94
Lo-La	-272	-99	-4	-369				164	-67	-159		93	105	105	G751	14' I @ 107"	37.53
Lo-Uo	-337	+109	-4	-450				225	-112	-480		109	180	180	N249	14' I @ 95"	27.92
Lo-Uo	-329	-51	-4	-684				225	-112	-480		82	115	115	G594	14' I @ 202"	59.56
Lo-Uo	-395	+170	-10	-775				225	-112	-480		82	115	115	G671	14' I @ 226"	67.03
Lo-Uo	+410	+130	-6	+548				257				107	180	180	N305	14' I @ 119"	34.97
Lo-Uo	-348	-115	-6	-469				192				92	106	106	G244	14' I @ 158"	46.44
Lo-Uo	+338	-118	-10	+466				192				95	180	180	N269	14' I @ 105"	30.27
Lo-Uo	-284	-104	-10	-398				192				68	170	130	G308	14' I @ 111"	32.62
Lo-Uo	-291	-99	-9	-399				192				68	130	130	G310	14' I @ 111"	32.62
Lo-Uo	+176	-76	-6	+222				153				96	180	180	N146	14' I @ 81"	17.94
Lo-Uo	-108	-56	-7	-171				128				96	102	102	G167	14' I @ 81"	17.94
Lo-Uo	-58	-40	-8	-96				50				180	180	180	N45	14' I @ 42"	22.94
Lo-Uo	+247	-34	-6	+349				71				156	180	180	N184	14' I @ 78"	22.94
Lo-Uo	-55	+34	+20	+109				-74	-74			191	180	180	N18	14' I @ 42"	17.94
Lo-Uo	-7	0	0	-7				0				115	85	85	G12	14' I @ 42"	17.94
Lo-Uo	-8	0	0	-8				0				120	82	82	G13	14' I @ 42"	17.94
Lo-Uo	+11	0	0	+11				0				115	87	87	G14	14' I @ 42"	17.94
Lo-Uo	-16	0	0	-16				0				100	98	98	G15	14' I @ 42"	17.94
Lo-Uo	0	0	0	0				0				0	0	0	G16	14' I @ 42"	17.94
Lo-Uo	0	0	0	0				0				0	0	0	G17	14' I @ 42"	17.94
Lo-Uo	0	0	0	0				0				0	0	0	G18	14' I @ 42"	17.94



MEMBER	SHEAR in LBS.			MOMENT in FT. LBS.			UNIT STRESS	S.M. REQD.	SECTION	S.M. FURN.	
	D.L.	L.L.	Imp.	D.L.	L.L.	Imp.					
Stringer 'A'	5900	9900	2970	16800	37000	53600	16660	18000	73.0	18" L.I. or C.B. @ 92"	94.6
Stringer 'B'	5300	13320	4000	23820	39100	79000	22500	126600	91.4	18" L.I. or C.B. @ 92"	94.6
Stringer 'C'	6300	19700	5600	30600	108000	31500	175600		0	27" C.B. @ 125"	121.0
Stringer 'D'	7200	19900	2970	22750	48900	85600	16660	13980	88.2	18" L.I. or C.B. @ 92"	94.6
Stringer 'E'	2500	2900	—	5400	13650	16500	—	33900	22.6	12" C.B. @ 250"	23.9
7' x 7' Beam	27400	132000	9600	80500	159000	224500	74430	600430	400.0	27" C.B. @ 125"	406.1
End P. Beam	18700	132000	9600	80950	159500	225000	74430	461480	307.6	27" C.B. @ 125"	406.1

NOTE: - Stringer "D" designed for future widening of Roadway.

LIVE LOAD

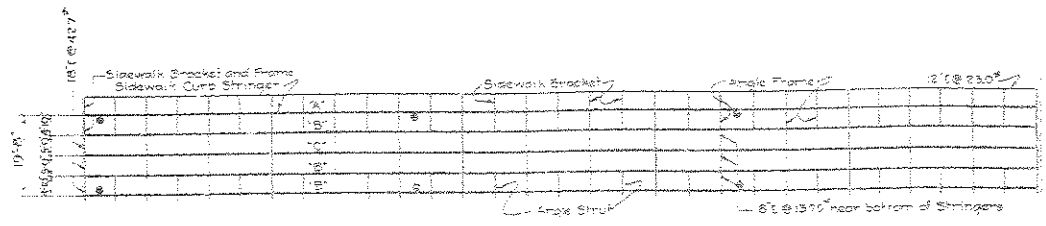
Roadway Spacing: 15 Ton Truck
 Stringers and Floor Beams: 15 Ton Trucks (20' Roadway)
 Trusses: 15 Ton Truck (20' Roadway) - 15 Ton Trucks (20' Roadway)
 Trusses: 15 Ton Truck (20' Roadway) - 15 Ton Trucks (20' Roadway)
 Impact: 15 Ton Truck (20' Roadway) - 15 Ton Trucks (20' Roadway)

**THE CITY OF ST. ALBANS
 WEST VIRGINIA
 ST. ALBANS-NITRO BRIDGE
 OVER THE
 KANAWHA RIVER
 AT
 ST. ALBANS, W. VA.
 STRESS SHEET - TRUSS SPANS**

Scales as noted
 The J.E. Greiner Company Consulting Engineers
 Baltimore, Md.

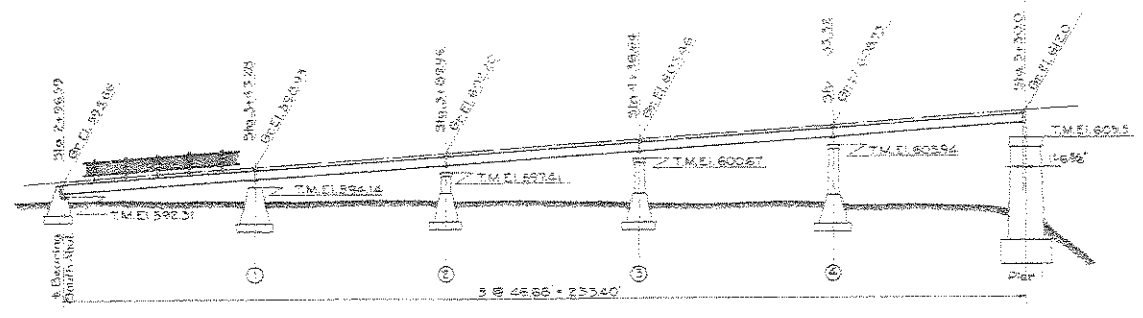
Drawn by: E.R.A. Oct 1937
 Traced by: J.M.R.
 Checked by: E.R.A.
 Revised: _____

C-319-5



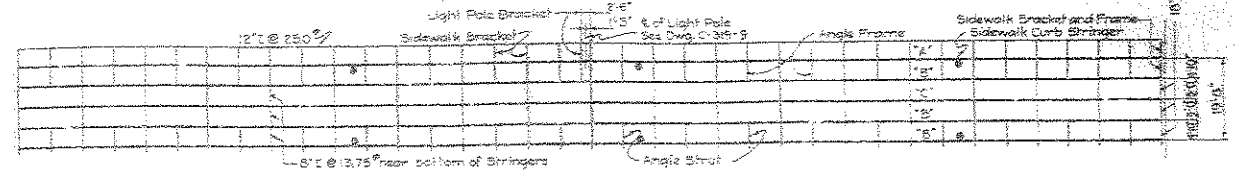
PLAN

6 Cast Iron Scaupers See detail of V.C. Drain on Dwg. C-319-7

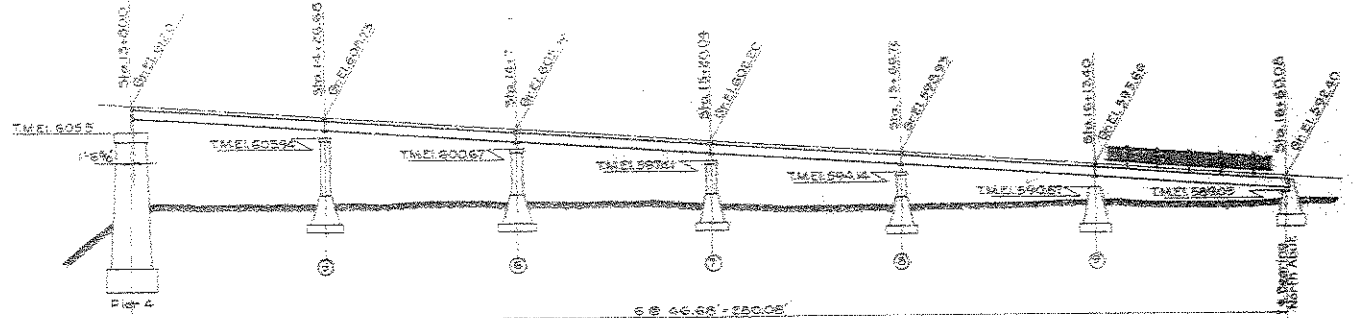


ELEVATION
SOUTH APPROACH

Scale: 1"=20'-0"

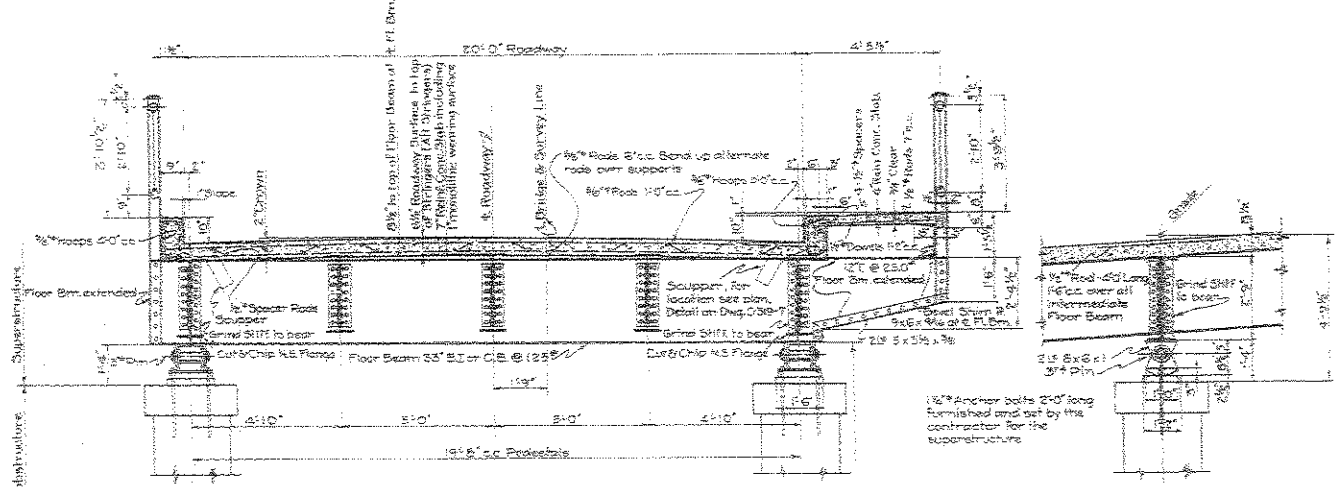


PLAN



ELEVATION
NORTH APPROACH

Scale: 1"=20'-0"



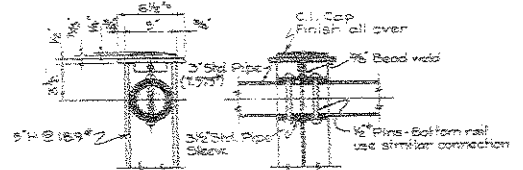
TYPICAL VIADUCT SECTION

Scale: 3/8"=1'-0"

ROCKER SHOE DETAIL

Scale: 3/8"=1'-0"

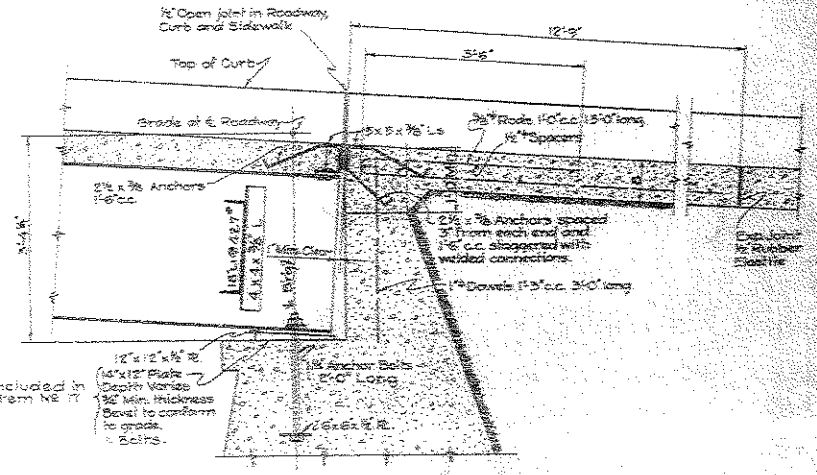
Shoes, Bases, Pins, Nuts, Angles, Anchor Bolts included under Item NS-17



POST AND RAIL DETAIL

Scale: 1/2"=1'-0"
Handrails, Handrail Posts, Connections etc. included in Item NS-16, Fabricated Structural Steel.

NOTE: Proper provision for the deflections of the stringers shall be made in order that the completed curbs, slabs and railings are absolutely true to line and grade. The permanent connections of the RR Post to the Brackets shall be made after the concrete slabs have been poured. Camber Stringers for D.L. Deflection.

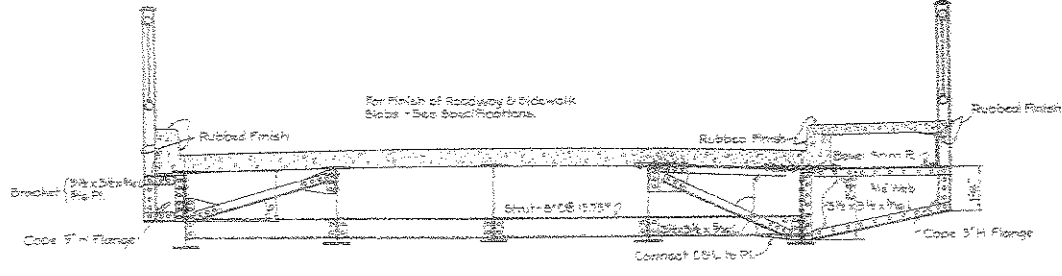


ROADWAY JOINT-ABUTMENT

Scale: 3/8"=1'-0"

MEMBER	SHEAR in LBS				MOMENT in FT. LBS				UNIT STRESS	S.M. REQ'D	SECTION	S.M. FURN.
	D.L.	L	Imp.	Total	D.L.	L	Imp.	Total				
Stringer 'A'	8,000	18,500	3,800	41,700	100,000	1,320,000	40,000	4,480,000	8,000	3'00"	30" B1 or C.B. @ 11"	326.3
Stringer 'B'	12,500	4,100	4,500	21,100	80,000	147,000	44,000	341,000	-	2272'	30" B1 or C.B. @ 8"	326.3
Stringer 'C'	12,800	19,200	3,500	35,500	90,000	216,000	68,000	437,000	-	2873'	30" B1 or C.B. @ 8"	326.3
Floor Beams	38,800	32,600	9,800	81,200	83,400	130,000	43,100	646,500	-	2976'	20" B1 or C.B. @ 12"	131.4
End Fl. Beams at Piers 1 & 4	18,000	32,600	9,800	60,400	104,200	50,000	45,100	329,300	-	3' 00"	30" B1 or C.B. @ 11"	164.4

Impactor = 50%



INTERMEDIATE SIDEWALK AND RAIL POST BRACKETS

Scale: 3/8"=1'-0"

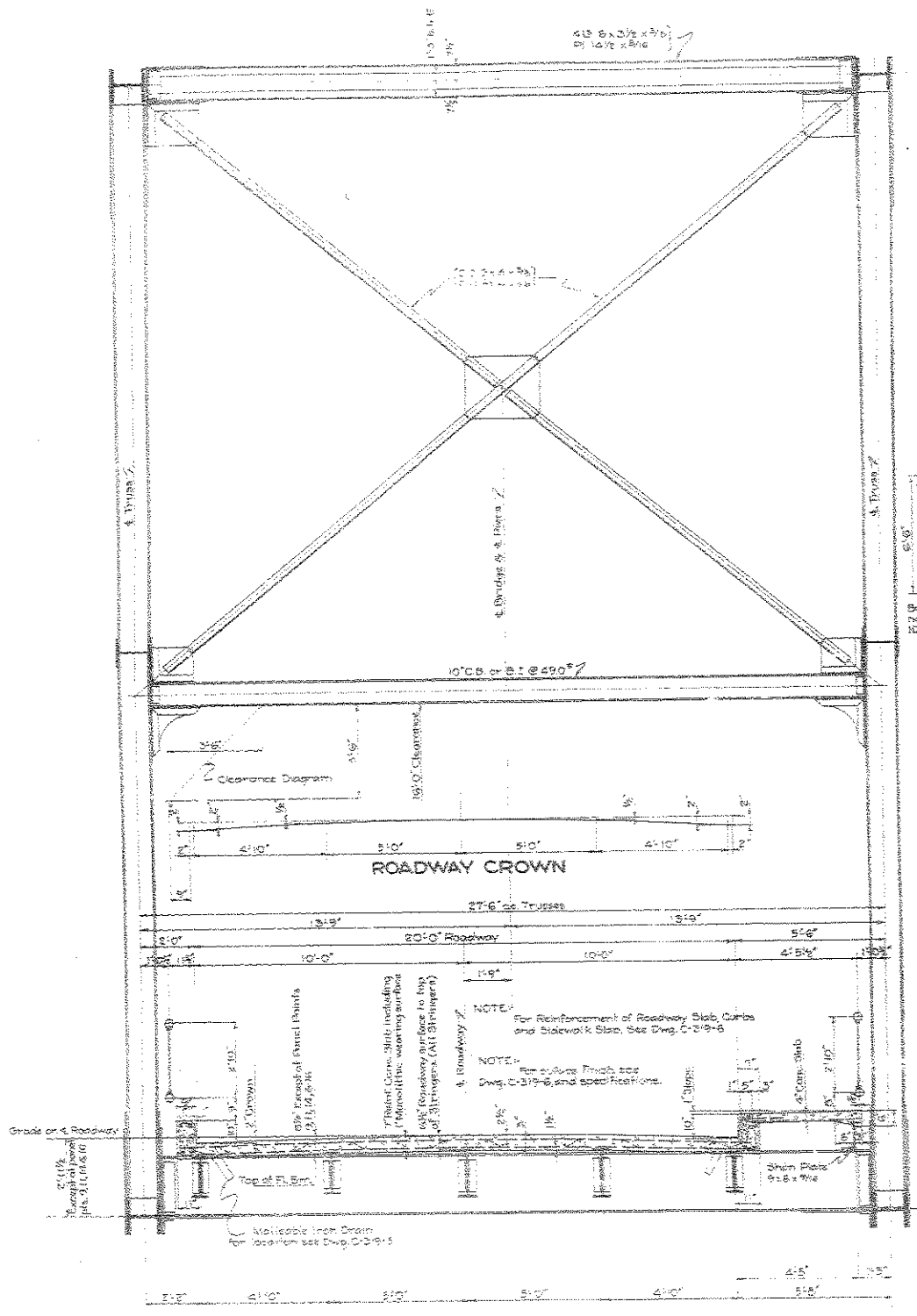
NOTE: For Live Load Data See Dwg. C-319-5

THE CITY OF ST. ALBANS
WEST VIRGINIA
ST. ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST. ALBANS, W. VA.
STRESS SHEET-VIADUCT

Scales as noted
The J.E. Greiner Company Consulting Engineers
Baltimore, Md.

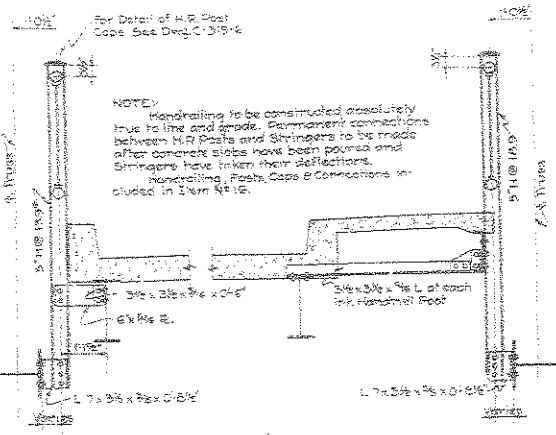
Drawn by: J.M.R. Oct 1933
Traced by: J.W.R.
Checked by: E.R.A.
Revised:

C-319-6

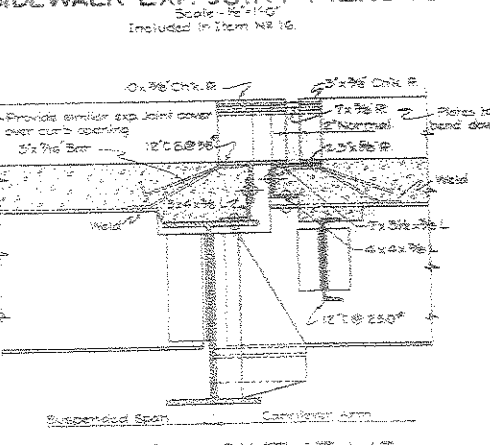
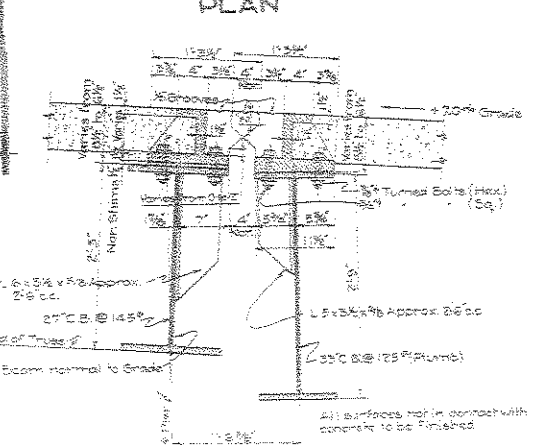
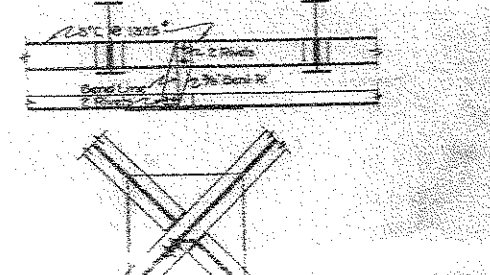
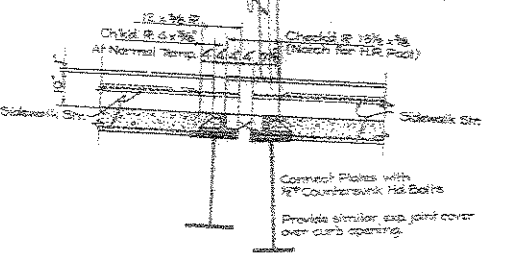
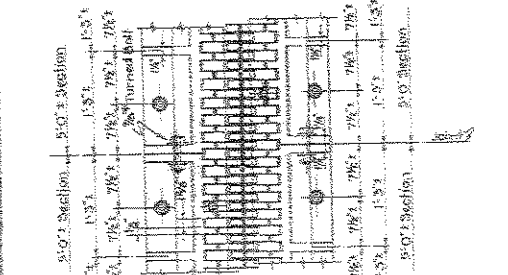
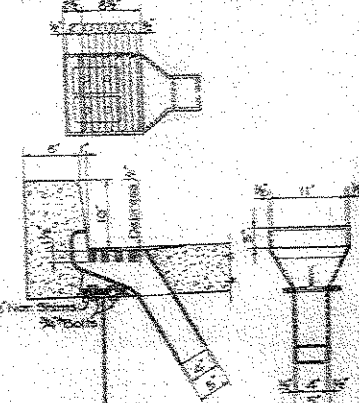
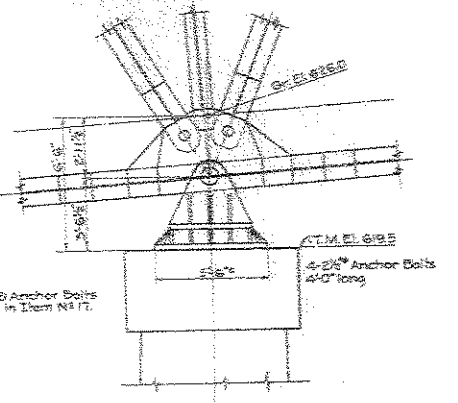
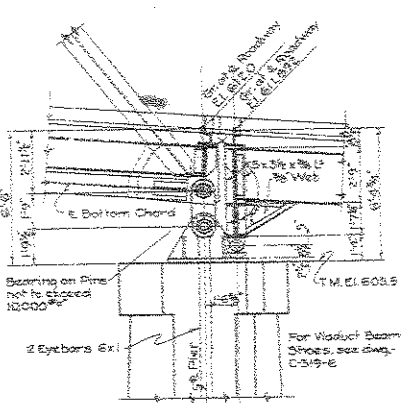
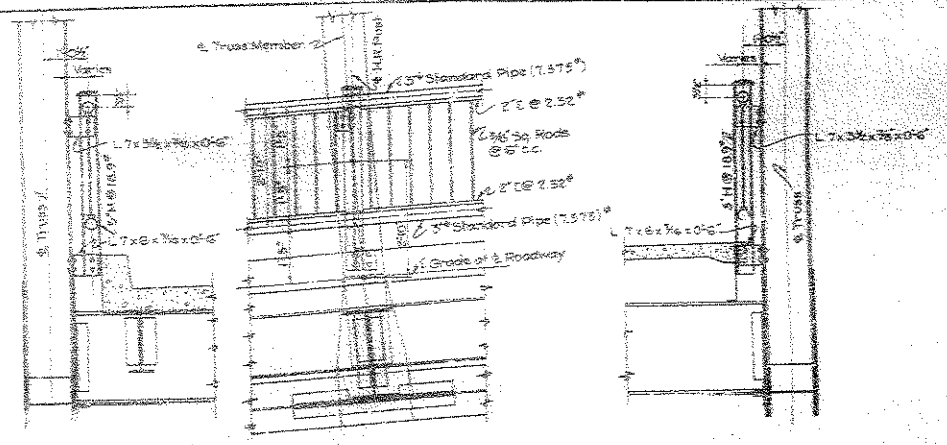


TYPICAL SECTION TRUSS SPANS
Scale: 1/2" = 1'-0"

NOTE: Proper bracing shall be made for deflection of struts in order that the completed slab and curbs are absolutely true to line and grade.



NOTE: Handrailing to be constructed absolutely true to line and grade. Permanent connections between H.R. Posts and Stringers to be made after concrete slabs have been poured and stringers have taken their deflections. Handrailing, Finish, Case & Connections included in Item No. 16.

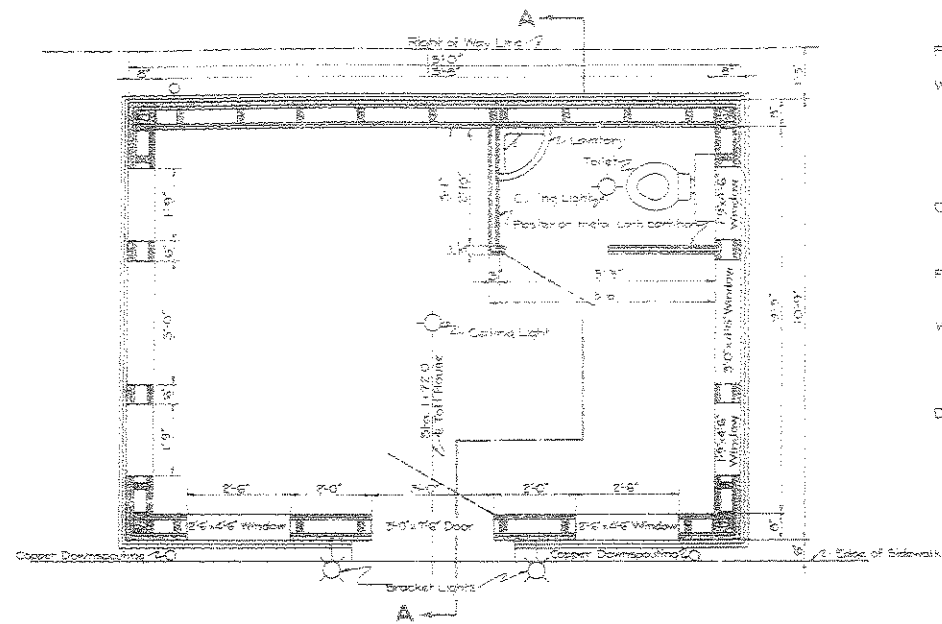


THE CITY OF ST. ALBANS
WEST VIRGINIA
ST. ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST. ALBANS, W. VA.
DETAILS - TRUSS SPANS

Scale: as noted
The J.E. Greiner Company Consulting Engineers
Baltimore, Md.

Drawn by: E.R.A./J.K.K. Nov 1938
Traced by: J.M.R.
Checked by: E.R.A.
Revised:

C-319-7



PLAN

Foundations - 1-8 mix concrete footing and slab.

Walls shall be of wood frame construction as shown on typical section and following the Manufacturers specifications for applying Plaster on Rocklath and Metal lath inside, Stucco with reinforcement on the outside. Stucco shall be Modern American Finish, light buff color.

Chimney shall be of Terra-cotta fastened to ceiling joists with steel collar. Provide hole in ceiling and necessary connections to stove flue.

Flash all windows, door, chimney, hip and valley in roof with copper.

Windows - Double hung counterweighted sash with suitable brass fastenings - Louvres shall be equipped with hinged sash hung on the inside. Provide frosted glass for toilet window.

Doors - Main entrance door shall be as shown, glass upper panel with clear glass. Door of toilet shall be double panel type. Provide Trap Door 2'-0\"/>

All materials and methods of construction shall be first class, and all workmanship shall be equal to the best building practice.

Timber -

- Sub-Flooring and roof sheathing - T. & G. Southern Y.P. "Select"
- Finished flooring - So. Y. P. edge grain, matched T. & G. Grade "A"
- All studding, sills, plates, headers and rafters - Southern Y.P. "Select"
- Window sash and frames - clear white pine.
- Doors - cypress, with cypress panels.
- All interior trim - Southern Y.P. "Select"
- All exterior trim - Cypress.

Location of Toll House is shown on Dwg. C-319-1

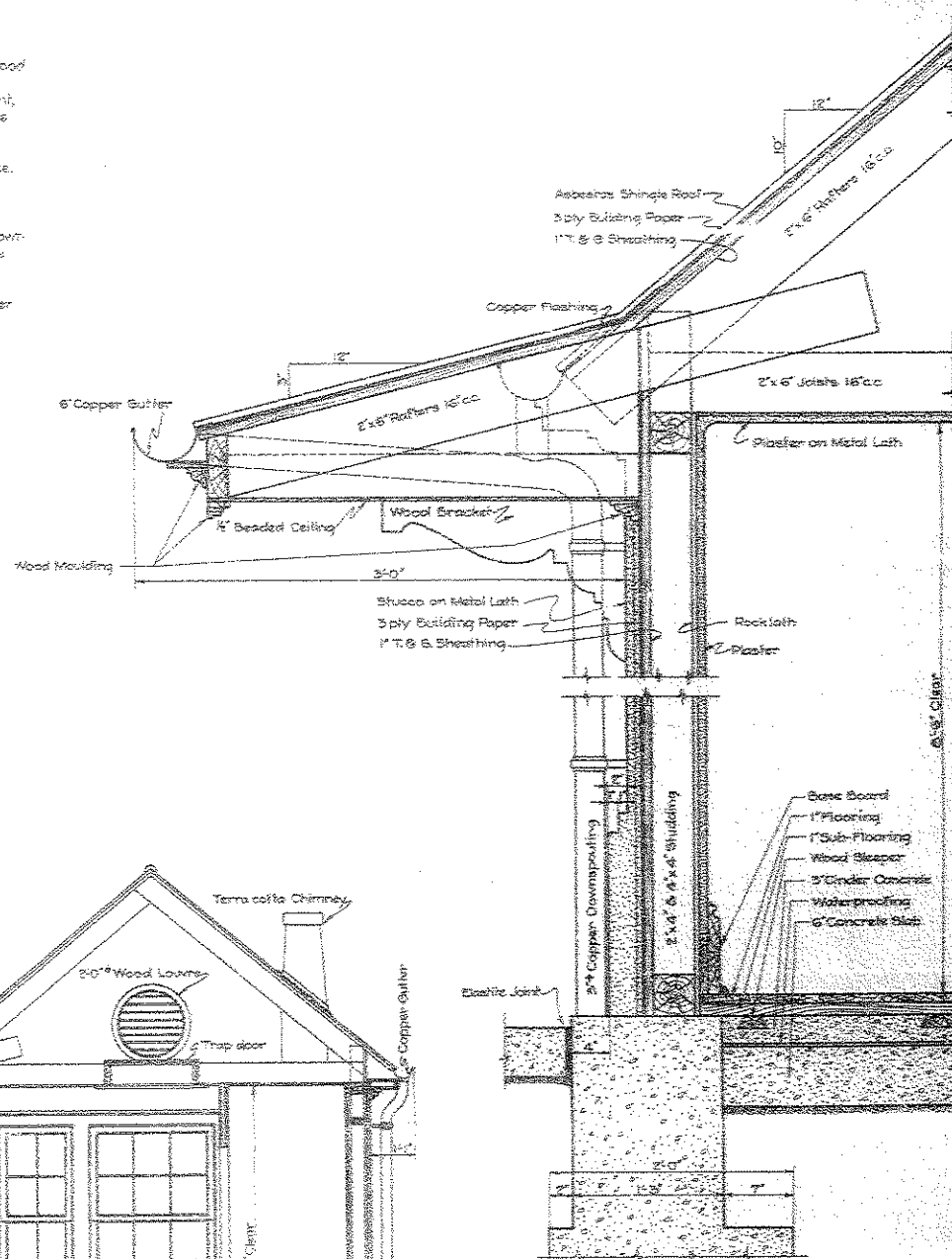
Provide brass hinges and mortised brass locks with brass knobs for all doors. (Solid Brass)

Paint - Inside Woodwork shall be painted with 1 coat of wood filler and 2 coats of varnish. Outside - priming coat and 2 coats of pure white lead paint, colors as selected, except ceiling of canopy which shall be finished same as interior woodwork.

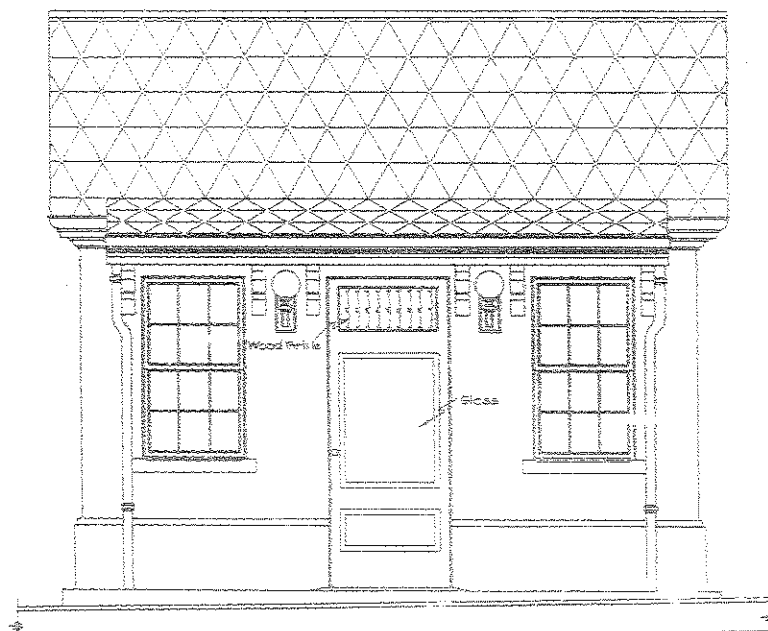
Heating - install gas heater complete and ready for service.

Lighting - Outside bracket lights shall be of design equal or similar to those shown on drawing. Inside ceiling lights shall be brass fixtures of simple design. Location as shown. This lighting system shall be included in contract for the bridge lighting system.

Plumbing - Provide plumbing fixtures as shown. Drain water waste and toilet to sanitary sewer. Provide running water. Connect all downspouts to storm sewer.



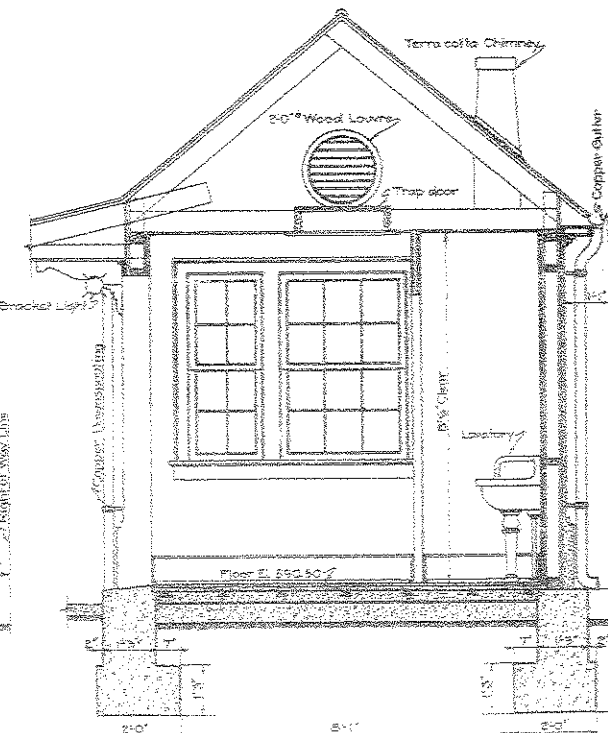
TYPICAL SECTION



FRONT ELEVATION



SIDE ELEVATION



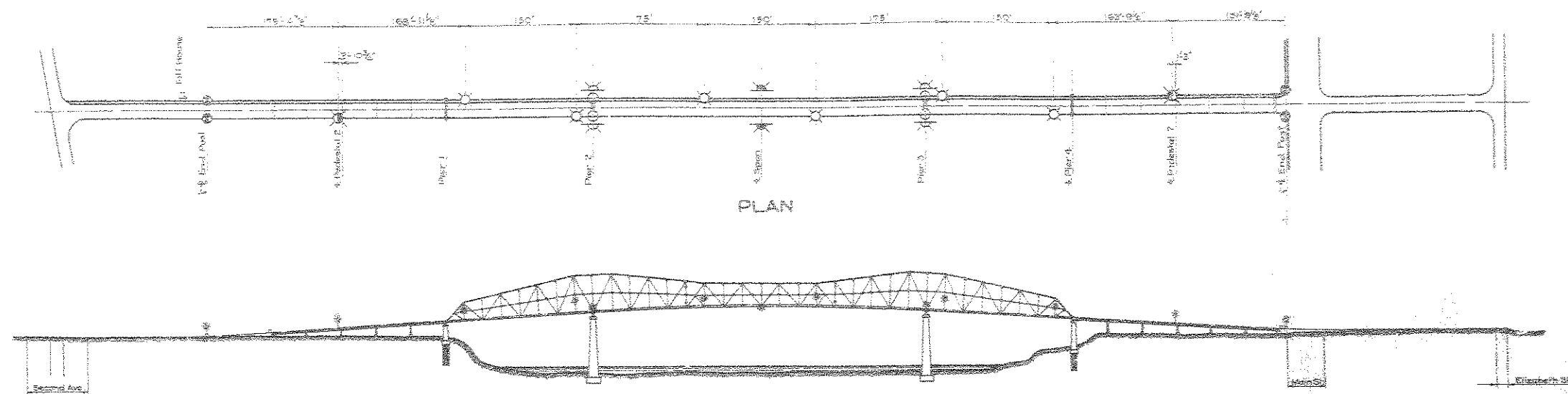
SECTION A-A

THE CITY OF ST. ALBANS
WEST VIRGINIA
ST. ALBANS-NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST. ALBANS, W.VA.
TOLL HOUSE

Scale - 1/2" = 1'-0"
The J.E. Breiner Company, Consulting Engineers
Baltimore, Md.

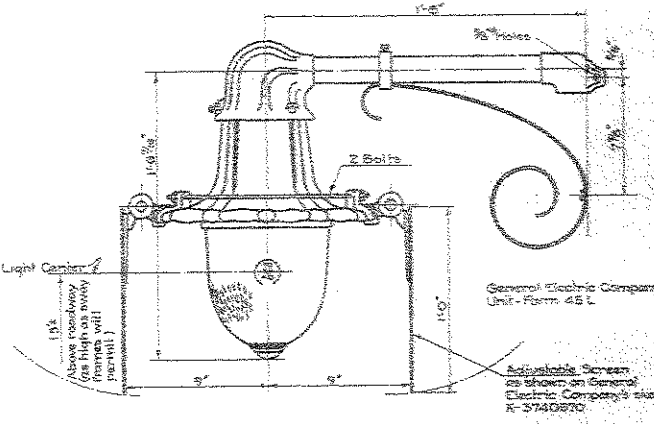
Drawn by - E.G. Sep. 1933
Traced by - J.M.R.
Checked by - E.R.A.
Revised -

C-319-8



PLAN

ELEVATION
Scale: 1"=50'



UNIT FOR TRUSS SPANS

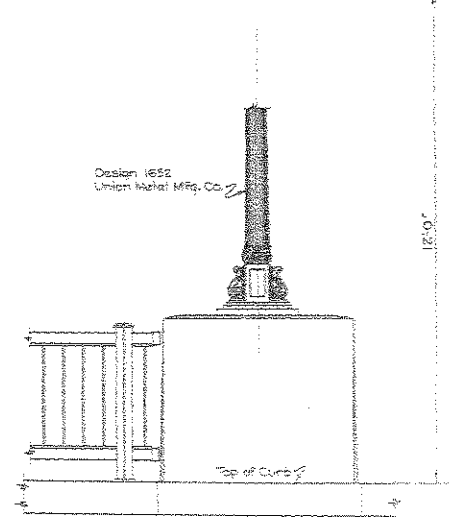
- LEGEND
- Light on End Posts
 - ✕ Light on Viaduct
 - Light on Truss Spans
 - ⊗ Green Light one on each side of bridge over channel
 - ⊗ Red Light one on each end of each truss span

General Electric Company's Unit - Form 45 L

NOTE: Screens to be added to lights in channel span and at Piers 2 & 3 only.

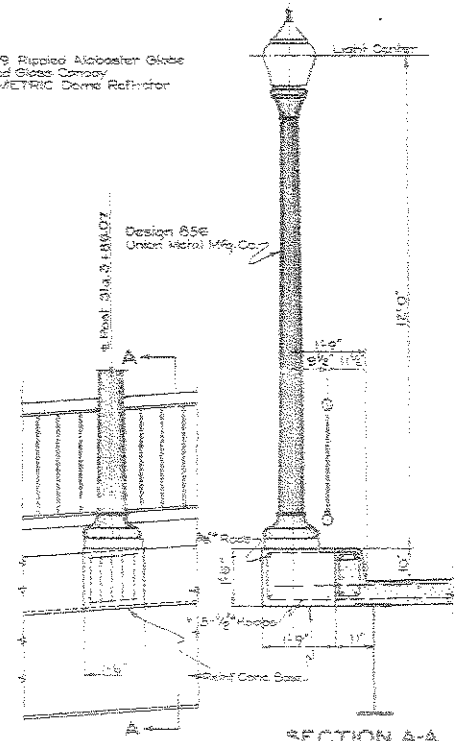
NOTE: Multiple lighting systems with 300 watt lamps, shall be used. The maximum number of lamps on any one span shall be controlled independently. Control switches shall be conveniently located in the Toll House. Navigation lights shall meet with U.S. Government regulations. These lights shall be controlled independently. Provision shall be made for moving channel lights for inspection. All conductors shall be sheathed. It shall be rigidly supported with proper provision for expansion at all bridge expansion joints. All fittings shall be galvanized. Electric lighting for the Toll House shall be included with the bridge lighting. See Dwg. C-319-B.

NOTE: Use same fixture as on posts on Viaduct.

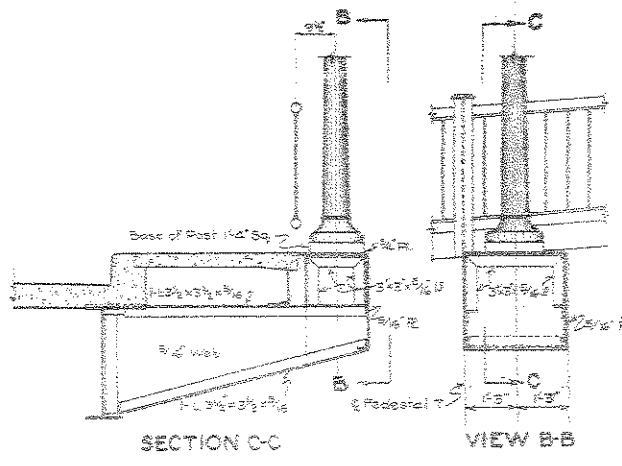


UNIT FOR END POSTS
Scale: 1/2"=1'-0"
4 Required

Nº 108 Rippled Alabaster Globe
Rippled Glass Choney
ASYMMETRIC Dome Reflector



POST ON APPROACH VIADUCT
AT PEDESTAL Nº2
CURB SIDE
Scale: 1/2"=1'-0"
4 Required



POST ON APPROACH VIADUCT
AT PEDESTAL Nº7
SIDEWALK SIDE
Scale: 1/2"=1'-0"
4 Required

THE CITY OF ST ALBANS
WEST VIRGINIA
ST. ALBANS - NITRO BRIDGE
OVER THE
KANAWHA RIVER
AT
ST. ALBANS, W. VA.
LIGHTING SYSTEM

Scale - as noted
The J.E. Greiner Company, Consulting Engineers
Baltimore, Md.

Drawn by: G.L.R. Oct 1933
Traced by: J.M.R.
Checked by: E.R.A.
Revised:

C-319-9

1341