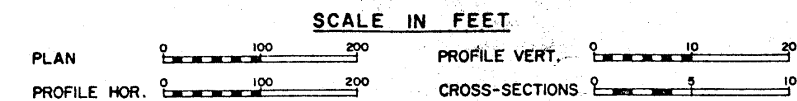


STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 2	55 BR	MC LEAN	24	1
P. R. R. NO. 4		ILLINOIS	PROJECT F-54 (22)	

P-93-004-65

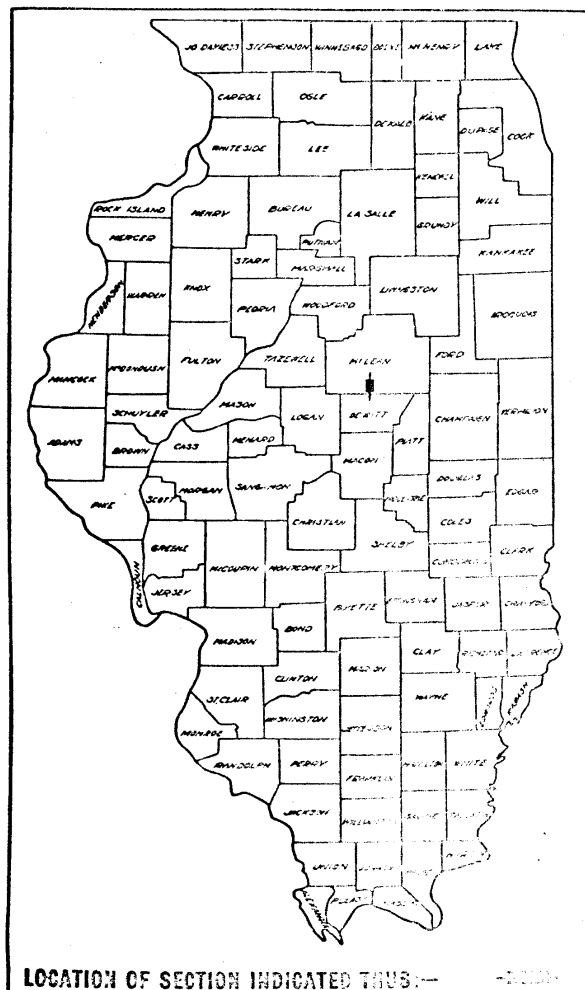


F.A. ROUTE 2
SECTION 55 BR
MC LEAN COUNTY
PROJECT F-54 (22)

C-93-059-68

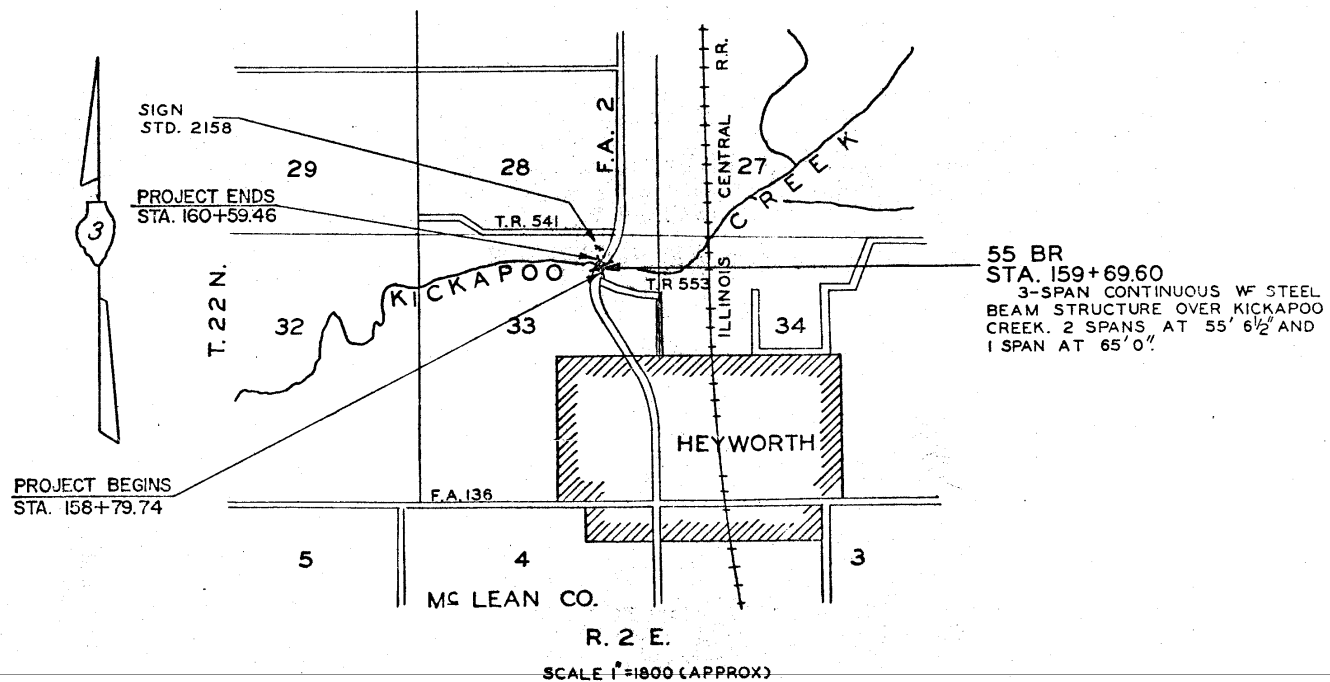
INDEX OF SHEETS

Sheet No.	Description
1	Title Sheet and Index of Sheets
2	Typical Sections
3	Summary of Quantities & Schedule of Quantities
4-6	Plan and Profile F.A. Route 2
7	Plan and Profile Kickapoo Creek
8	Cross-Sections F.A. Route 2
9	Cross-Sections Kickapoo Creek
10-22	Bridge Plans
<u>Standards</u>	
23	1686-3 Symbols and Abbreviations
23A	2113-1 Name Plate
24	1744-2 ROW Markers
24A	2158-5 Sign
24E	2300 Flagman Sign



DESIGN DESIGNATION
 1164 (89) C-2.32 (B-20)

CET Set
 40
 8-22-69



SUBMITTED	<i>[Signature]</i>
EXAMINED	<i>[Signature]</i>
PASSED	<i>[Signature]</i>
APPROVED	<i>[Signature]</i>
APPROVED	<i>[Signature]</i>

372

DEPARTMENT OF COMMERCIAL BUREAU OF PUBLIC ROADS	
APPROVED	DATE
<input type="text"/>	<input type="text"/>
DIVISION ENGINEER	DATE

PROJECT LENGTH = 179.72 FEET = 0.034 MILE
 NET LENGTH = 179.72 FEET = 0.034 MILE

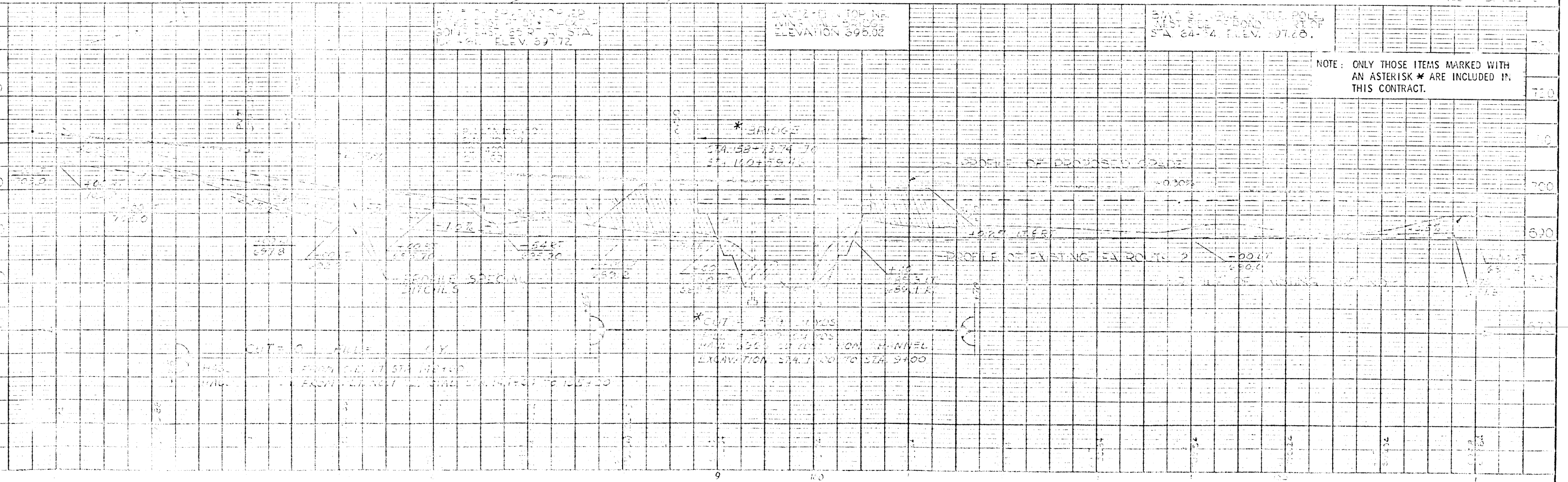
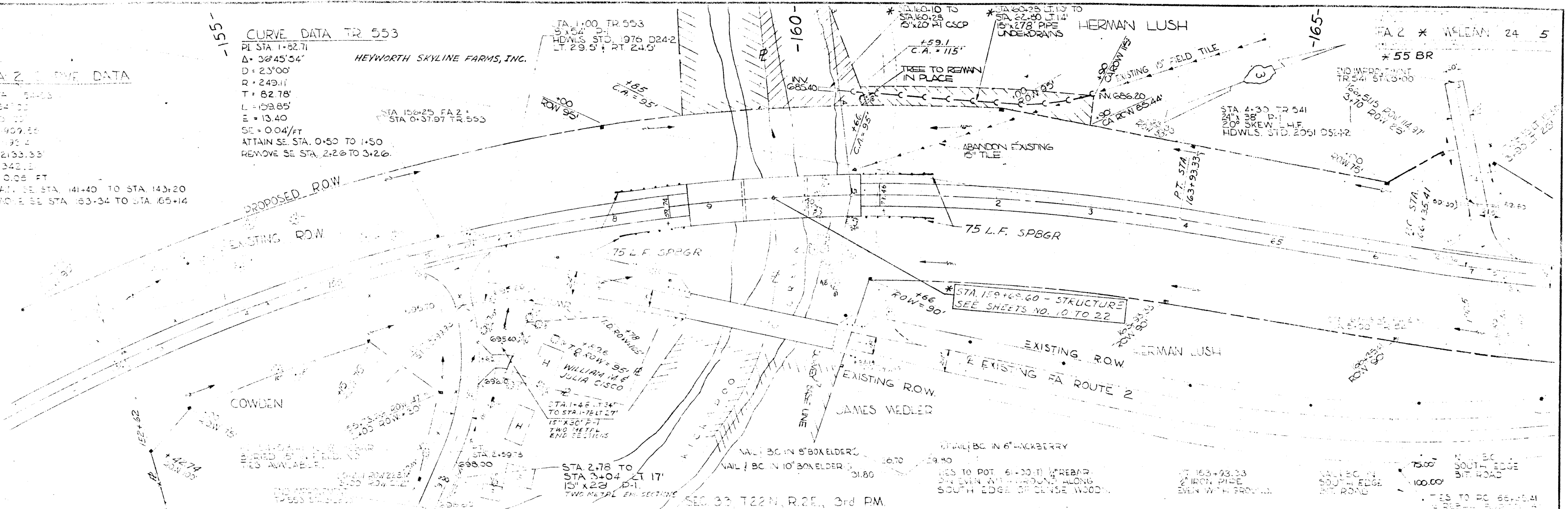
057-0056

CONTRACT NO. 26004

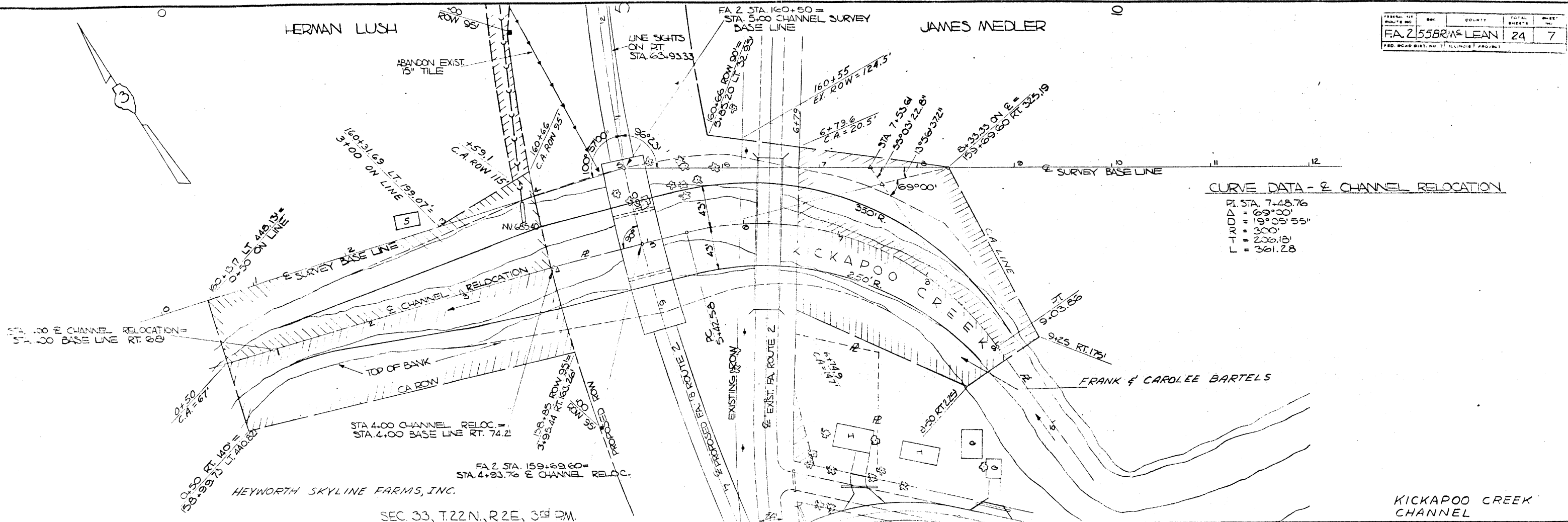
003-221

FA 2 CURVE DATA
 STA 141+00
 PI STA 141+20
 Δ = 38°45'34"
 D = 23°00'
 R = 249.11'
 T = 82.78'
 L = 109.85'
 E = 13.40'
 SE = 0.04/FT
 ATTAIN SE STA 141+40 TO STA 143+20
 REMOVE SE STA 163+34 TO STA 165+14

CURVE DATA TR 553
 PI STA 1-82.71
 Δ = 38°45'34"
 D = 23°00'
 R = 249.11'
 T = 82.78'
 L = 109.85'
 E = 13.40'
 SE = 0.04/FT
 ATTAIN SE STA 0+50 TO 1+50
 REMOVE SE STA 2+28 TO 3+26



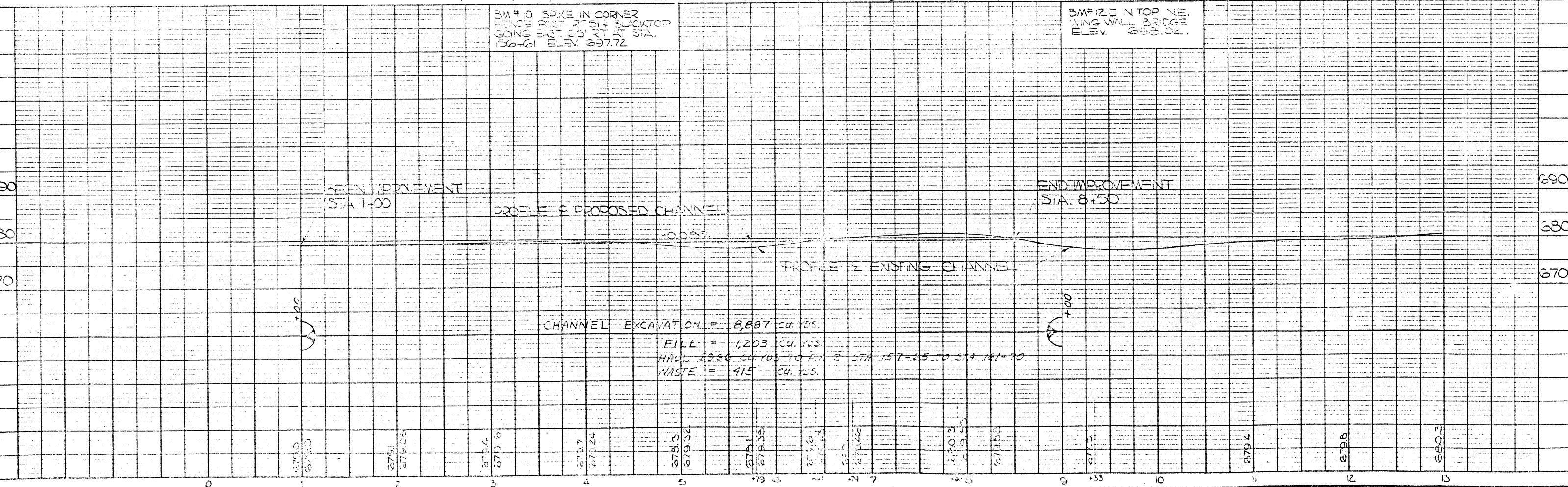
NOTE: ONLY THOSE ITEMS MARKED WITH AN ASTERISK * ARE INCLUDED IN THIS CONTRACT.



CURVE DATA - E CHANNEL RELOCATION

PI STA. 7+48.76
 Δ = 69°00'
 DD = 19°08'35"
 T = 300'
 L = 200.18'
 E = 361.28'

SEC. 33, T.22 N., R.2E, 3RD PM.

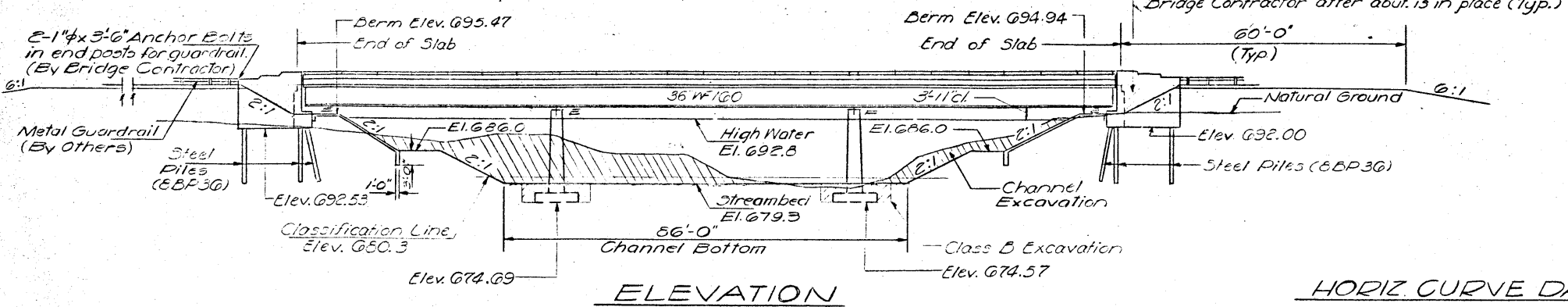


CHANNEL EXCAVATION = 8,887 CU. YDS.
 FILL = 1,203 CU. YDS.
 HAUL 4986 CU. YDS. TO STA. 15+25 TO STA. 14+75
 WASTE = 415 CU. YDS.

B.M. #12 on Top N.E. Wingwall of Bridge El. 698.00
 Existing Structure: Sta. 159+53, Sec. 55B Built 1924
 3 Span R.C.D.G., Spans 150', Reinf. Conc. Abutments
 and Piers, 22' Roadway Width.
 To be removed by Bridge Contractor
 after new structure is completed.
 No Salvage.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS

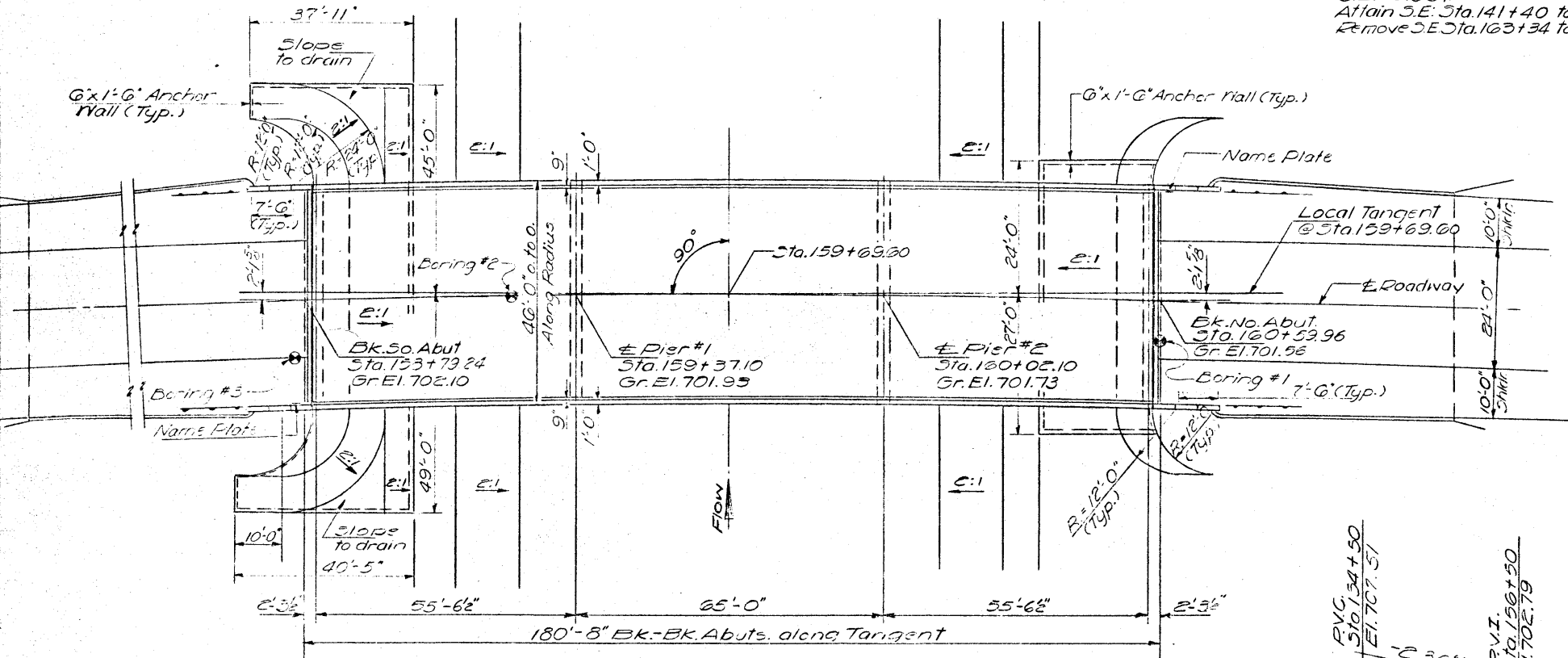
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55BR	McLEAN	24	10	13
SHEET NO. 1 / 13 SHEETS				



ELEVATION

HORIZ CURVE DATA

PI. Sta. 154+53.41
 $\Delta = 64^{\circ}00'$
 $D = 3^{\circ}00'$
 $R = 1909.86'$
 $T = 1193.41'$
 $L = 2133.33'$
 $E = 342.21'$
 $\Delta E = 0.06\%$
 Attain S.E. Sta. 141+40 to Sta. 143+20
 Remove S.E. Sta. 163+34 to Sta. 165+14



PLAN

STATION 159+69.00
 BUILT 1909 BY
 STATE OF ILLINOIS
 F.A.R.T. 2 SEC. 55BR
 PROJ. NO. F-54(22)
 LOADING HS20

NAME PLATE

See Std. E113-1

DESIGN	Checked
CHECKED	Checked
DRAWN	Checked
CHECKED	Checked

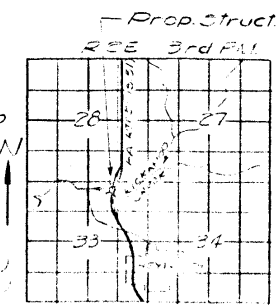
MAY 12 1969
 EXAMINED
 PASSED
 APPROVED

WATERWAY INFORMATION

Drainage Area — 70.93 Acres 109.5 Sq Miles
 Character — Level, Rolling, Hilly, Sand, Clay, wooded, cultivated
 Required Opening — (30 Yr Flood) — 1520 Sq Ft
 Present Opening — 1120 Sq Ft
 Proposed Opening — 1550 Sq Ft
 Discharge — 7000 C.F.S.
 Design High Water Elev. 692.8

DESIGN STRESSES

FIELD UNITS
 $f_c = 1200$ psi — Deck Slab
 $f_c = 1400$ psi — Curb, Parapet, Sub
 $f_s = 20,000$ psi — Reinf.
 $f_s = 20,000$ psi — Struct.
 $f_c = 75$ psi — Flgs.
 $n = 10$
 Allowable $k \leq 4 \sqrt{f_c}$
 Max. Flg. Pressure: 20 K.S.F. (Pier 1)
 40 K.S.F. (Abut. 2)
 Allowable Ft. W.S. 25%/ft



GENERAL PLAN & ELEVATION
 PROJ. F-54(22)
 F.A. ROUTE 2 OVER
 KICKAPOO CREEK
 F.A. 212 SECTION 55BR
 McLEAN COUNTY
 STATION 159+69.00

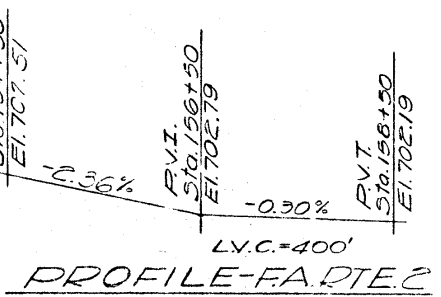
GENERAL NOTES

- All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
- Rivets $\frac{3}{4}$ " ϕ , open holes $\frac{1}{16}$ " unless otherwise noted.
- Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint.
- Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Anchor bolts shall be set before riveting diaphragms over supports.
- Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58# per 100 sq. ft.
- Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engineer.
- Class A Excavation for structures includes excavation for slope wall.
- The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.
- The Contractor shall drive one Steel Test Pile in a permanent location at S. Abut. as directed by the Engineer before ordering the remainder of piles.
- Diaphragm connectors may be adapted to shop welding subject to approval by this Engineer.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Protective Coat	Sq. Yds.	1030		1030
Class A Excav. for Structures	Cu. Yds.		60	60
Class B Excav. for Structures	Cu. Yds.		190	190
Class X Concrete	Cu. Yds.	242.8	112.5	355.3
Class A Concrete	Cu. Yds.		209.3	209.3
Structural Steel	Lbs.	207,830		207,830
Aluminum Finishing	Lin. Ft.	355		355
Reinforcement Bars	Lbs.	63,210	19,240	82,450
Steel Piles (6BP3G)	Lin. Ft.		608	608
Test Pile (Steel 6BP3G)	Each		1	1
Name Plates	Each			2
Slope Wall (6")	Sq. Yds.			570
* Bridge Seat Sealant	Linear Feet			1
Removal of Existing Structure	Each			1

* At Abutments Only

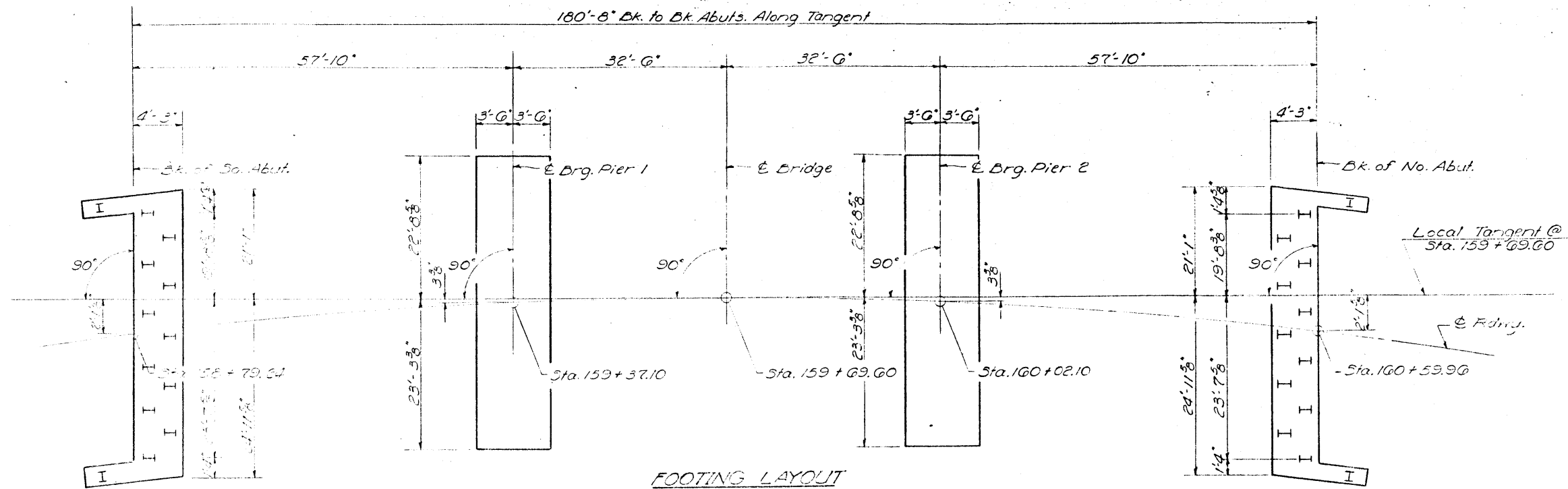


PROFILE-F.A. RTE 2

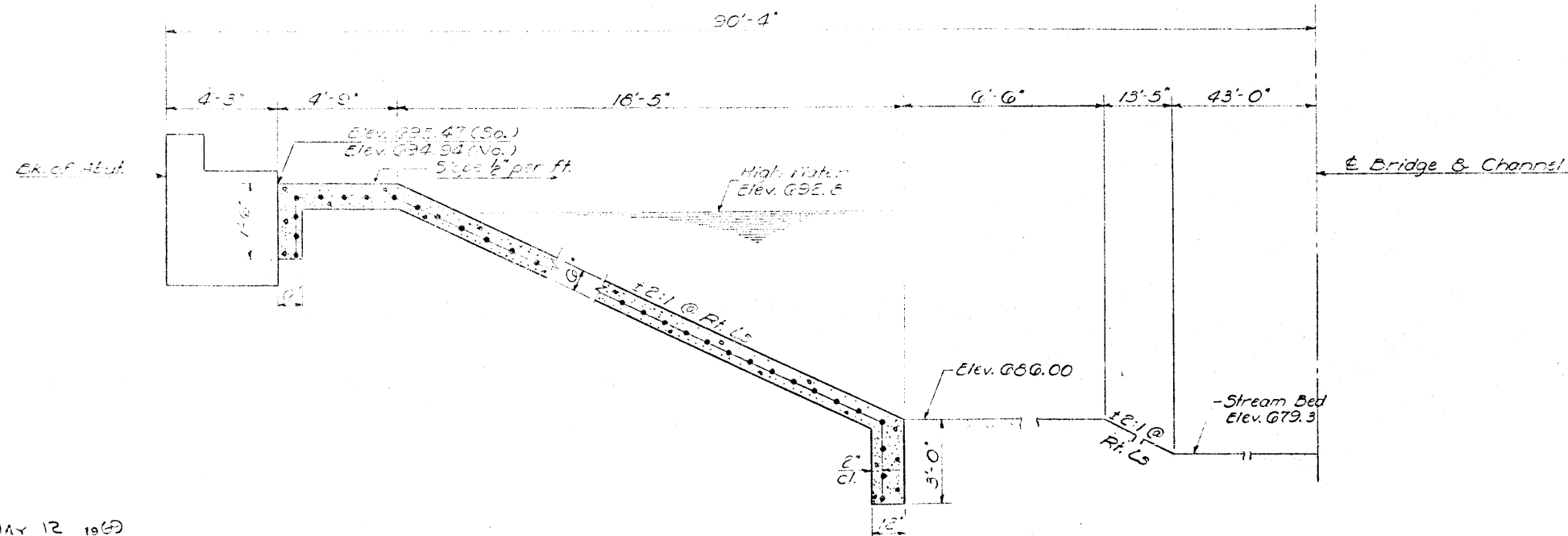
LOADING HS20-44

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 13 SHEETS
55BR	McLEAN	24	11		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



FOOTING LAYOUT



SLOPE WALL DETAILS

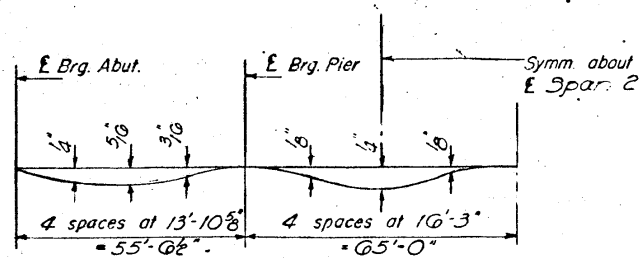
DESIGNED	Stacy Shaw-Torres
CHECKED	George P. Hill
DRAWN	John
CHECKED	George P. Hill

EXAMINED	May 12 1969 O.S. Hummel
PASSED	W.E. Baumann
APPROVED	Richard H. Goltz

FOOTING LAYOUT
& SLOPE WALL DETAILS
F.A. RT. 2 SEC. 55BR
MCLEAN COUNTY
STA. 159+69.60

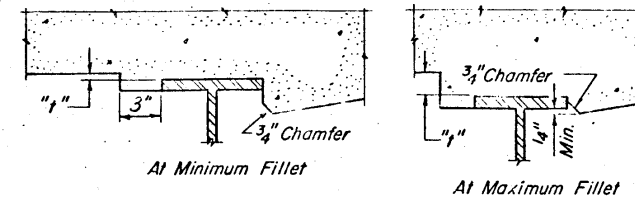
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 13 SHEETS
P.A. 2	55BR	McLEAN	24	12	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

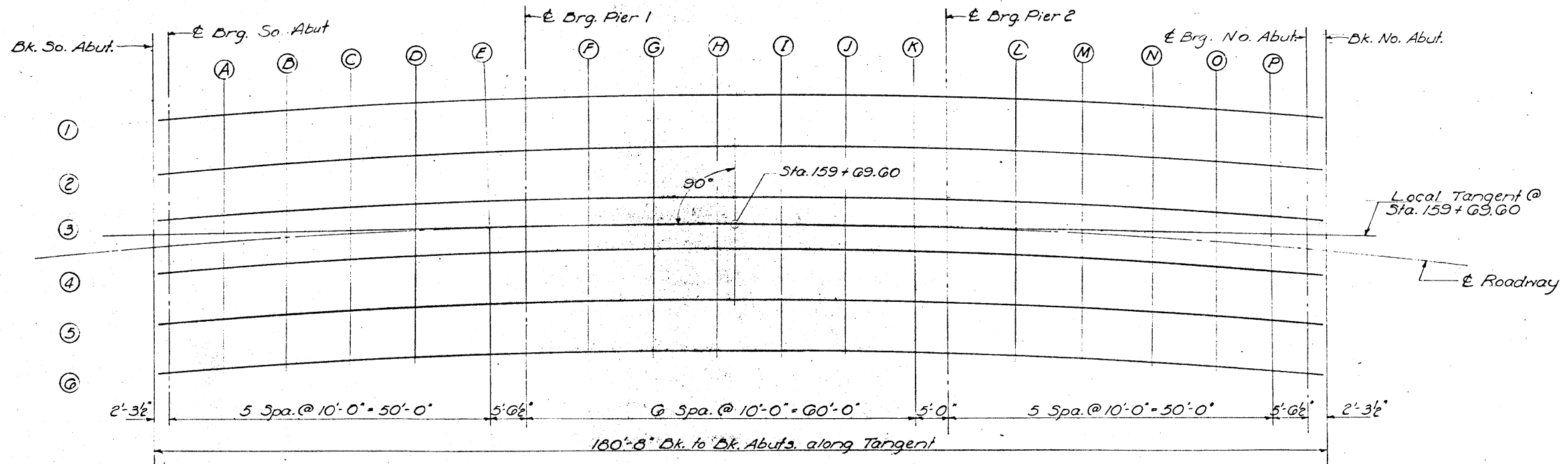


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.
FILLET HEIGHTS



PLAN

Note: Work this sheet with sheet #1

DESIGNED	<i>John T. Lee</i>
CHECKED	<i>George A. Dazi</i>
DRAWN	<i>Jacobs</i>
CHECKED	<i>G. A. Dazi S. L.</i>

EXAMINED	<i>Carl J. Hummer</i>	MAY 12 1963
PASSED	<i>W. B. Baumann</i>	
APPROVED	<i>Richard H. Gottemann</i>	

BEAM LAYOUT FOR
TOP OF SLAB ELEVATIONS
F.A. RT. 2 SEC. 55BR
MCLEAN COUNTY
STA. 159 + 69.60

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
2	55BR	MCLEAN	24	13	13 SHEETS

Beam 6

STATION	OFFSET	ELEV.	ADJ. ELEV.
<i>Bk. So. Abut.</i> 15878.276	20.000	700.905	700.905
<i>E Brg. So. Abut.</i> 15880.595	20.000	700.898	700.898
A 15890.701	20.000	700.868	700.883
B 15900.806	20.000	700.838	700.861
C 15910.912	20.000	700.807	700.832
D 15921.018	20.000	700.777	700.794
E 15931.124	20.000	700.747	700.753
<i>E Brg. Pier 1</i> 15936.755	20.000	700.730	700.730
F 15946.861	20.000	700.699	700.706
G 15956.967	20.000	700.669	700.682
H 15967.072	20.000	700.639	700.658
I 15977.178	20.000	700.608	700.624
J 15987.284	20.000	700.578	700.588
K 15997.390	20.000	700.548	700.551
<i>E Brg. Pier 2</i> 16002.446	20.000	700.533	700.533
L 16012.552	20.000	700.502	700.514
M 16022.658	20.000	700.472	700.492
N 16032.763	20.000	700.442	700.467
O 16042.869	20.000	700.411	700.433
P 16052.975	20.000	700.381	700.389
<i>E Brg. No. Abut.</i> 16058.606	20.000	700.364	700.364
<i>Bk. No. Abut.</i> 16060.925	20.000	700.357	700.357

Beam 5

STATION	OFFSET	ELEV.	ADJ. ELEV.
<i>Bk. So. Abut.</i> 15878.661	12.000	701.384	701.384
<i>E Brg. So. Abut.</i> 15880.970	12.000	701.377	701.377
A 15891.033	12.000	701.347	701.362
B 15901.097	12.000	701.317	701.340
C 15911.160	12.000	701.287	701.311
D 15921.223	12.000	701.256	701.273
E 15931.286	12.000	701.226	701.232
<i>E Brg. Pier 1</i> 15936.893	12.000	701.209	701.209
F 15946.957	12.000	701.179	701.186
G 15957.020	12.000	701.149	701.162
H 15967.083	12.000	701.119	701.138
I 15977.146	12.000	701.089	701.105
J 15987.209	12.000	701.058	701.068
K 15997.273	12.000	701.028	701.031
<i>E Brg. Pier 2</i> 16002.307	12.000	701.013	701.013
L 16012.371	12.000	700.983	700.994
M 16022.434	12.000	700.953	700.973
N 16032.497	12.000	700.923	700.948
O 16042.560	12.000	700.892	700.914
P 16052.624	12.000	700.862	700.870
<i>E Brg. No. Abut.</i> 16058.231	12.000	700.845	700.845
<i>Bk. No. Abut.</i> 16060.539	12.000	700.838	700.838

Beam 4

STATION	OFFSET	ELEV.	ADJ. ELEV.
<i>Bk. So. Abut.</i> 15879.043	4.000	701.863	701.863
<i>E Brg. So. Abut.</i> 15881.343	4.000	701.856	701.856
A 15891.363	4.000	701.826	701.841
B 15901.384	4.000	701.796	701.819
C 15911.405	4.000	701.766	701.790
D 15921.426	4.000	701.736	701.753
E 15931.447	4.000	701.706	701.712
<i>E Brg. Pier 1</i> 15937.031	4.000	701.689	701.689
F 15947.052	4.000	701.659	701.665
G 15957.073	4.000	701.629	701.642
H 15967.094	4.000	701.599	701.618
I 15977.115	4.000	701.569	701.585
J 15987.136	4.000	701.539	701.548
K 15997.157	4.000	701.509	701.512
<i>E Brg. Pier 2</i> 16002.170	4.000	701.493	701.493
L 16012.191	4.000	701.463	701.475
M 16022.212	4.000	701.433	701.454
N 16032.233	4.000	701.403	701.429
O 16042.254	4.000	701.373	701.395
P 16052.275	4.000	701.343	701.352
<i>E Brg. No. Abut.</i> 16057.858	4.000	701.326	701.326
<i>Bk. No. Abut.</i> 16060.157	4.000	701.320	701.320

E Roadway

STATION	OFFSET	ELEV.	ADJ. ELEV.
<i>Bk. So. Abut.</i> 15879.233	-0.0	702.102	702.102
<i>E Brg. So. Abut.</i> 15881.527	-0.0	702.095	702.095
A 15891.527	-0.0	702.065	702.080
B 15901.527	-0.0	702.035	702.059
C 15911.527	-0.0	702.005	702.030
D 15921.527	-0.0	701.975	701.992
E 15931.527	-0.0	701.945	701.952
<i>E Brg. Pier 1</i> 15937.099	-0.0	701.929	701.929
F 15947.099	-0.0	701.899	701.905
G 15957.099	-0.0	701.869	701.882
H 15967.093	-0.0	701.839	701.858
I 15977.099	-0.0	701.809	701.825
J 15987.099	-0.0	701.779	701.788
K 15997.099	-0.0	701.749	701.752
<i>E Brg. Pier 2</i> 16002.102	-0.0	701.734	701.734
L 16012.102	-0.0	701.704	701.715
M 16022.102	-0.0	701.674	701.694
N 16032.102	-0.0	701.644	701.669
O 16042.102	-0.0	701.614	701.635
P 16052.102	-0.0	701.584	701.592
<i>E Brg. No. Abut.</i> 16057.673	-0.0	701.567	701.567
<i>Bk. No. Abut.</i> 16059.968	-0.0	701.560	701.560

Beam 3

STATION	OFFSET	ELEV.	ADJ. ELEV.
<i>Bk. So. Abut.</i> 15879.422	-4.000	702.342	702.342
<i>E Brg. So. Abut.</i> 15881.712	-4.000	702.335	702.335
A 15891.691	-4.000	702.305	702.320
B 15901.670	-4.000	702.275	702.298
C 15911.649	-4.000	702.245	702.269
D 15921.628	-4.000	702.215	702.232
E 15931.607	-4.000	702.185	702.191
<i>E Brg. Pier 1</i> 15937.167	-4.000	702.168	702.168
F 15947.146	-4.000	702.139	702.145
G 15957.125	-4.000	702.109	702.121
H 15967.104	-4.000	702.079	702.098
I 15977.083	-4.000	702.049	702.065
J 15987.062	-4.000	702.019	702.028
K 15997.041	-4.000	701.989	701.992
<i>E Brg. Pier 2</i> 16002.034	-4.000	701.974	701.974
L 16012.013	-4.000	701.944	701.955
M 16022.992	-4.000	701.914	701.934
N 16031.971	-4.000	701.884	701.909
O 16041.950	-4.000	701.854	701.876
P 16051.930	-4.000	701.824	701.833
<i>E Brg. No. Abut.</i> 16057.489	-4.000	701.808	701.808
<i>Bk. No. Abut.</i> 16059.779	-4.000	701.801	701.801

Beam 2

STATION	OFFSET	ELEV.	ADJ. ELEV.
<i>Bk. So. Abut.</i> 15879.798	-12.000	702.821	702.821
<i>E Brg. So. Abut.</i> 15882.078	-12.000	702.814	702.814
A 15892.015	-12.000	702.784	702.799
B 15901.953	-12.000	702.754	702.777
C 15911.890	-12.000	702.724	702.749
D 15921.828	-12.000	702.695	702.711
E 15931.766	-12.000	702.665	702.671
<i>E Brg. Pier 1</i> 15937.302	-12.000	702.648	702.648
F 15947.239	-12.000	702.618	702.625
G 15957.177	-12.000	702.588	702.601
H 15967.114	-12.000	702.559	702.578
I 15977.052	-12.000	702.529	702.545
J 15986.990	-12.000	702.499	702.509
K 15996.927	-12.000	702.469	702.472
<i>E Brg. Pier 2</i> 16001.899	-12.000	702.454	702.454
L 16011.837	-12.000	702.424	702.436
M 16021.774	-12.000	702.395	702.415
N 16031.712	-12.000	702.365	702.390
O 16041.649	-12.000	702.335	702.357
P 16051.587	-12.000	702.305	702.314
<i>E Brg. No. Abut.</i> 16057.123	-12.000	702.289	702.289
<i>Bk. No. Abut.</i> 16059.403	-12.000	702.282	702.282

Beam 1

STATION	OFFSET	ELEV.	ADJ. ELEV.
<i>Bk. So. Abut.</i> 15880.170	-20.000	703.299	703.299
<i>E Brg. So. Abut.</i> 15882.441	-20.000	703.293	703.293
A 15892.337	-20.000	703.263	703.278
B 15902.234	-20.000	703.233	703.256
C 15912.130	-20.000	703.204	703.228
D 15922.026	-20.000	703.174	703.191
E 15931.923	-20.000	703.144	703.151
<i>E Brg. Pier 1</i> 15937.436	-20.000	703.128	703.128
F 15947.332	-20.000	703.098	703.104
G 15957.228	-20.000	703.068	703.081
H 15967.125	-20.000	703.039	703.058
I 15977.021	-20.000	703.009	703.025
J 15986.918	-20.000	702.979	702.989
K 15996.814	-20.000	702.950	702.953
<i>E Brg. Pier 2</i> 16001.765	-20.000	702.935	702.935
L 16011.661	-20.000	702.905	702.916
M 16021.558	-20.000	702.875	702.896
N 16031.454	-20.000	702.846	702.871
O 16041.351	-20.000	702.816	702.837
P 16051.247	-20.000	702.786	702.795
<i>E Brg. No. Abut.</i> 16056.760	-20.000	702.770	702.770
<i>Bk. No. Abut.</i> 16059.030	-20.000	702.763	702.763

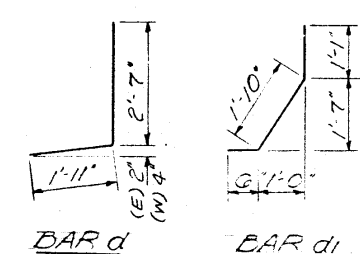
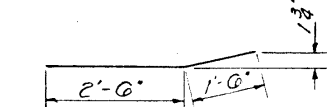
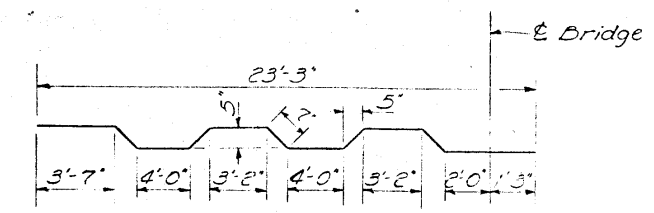
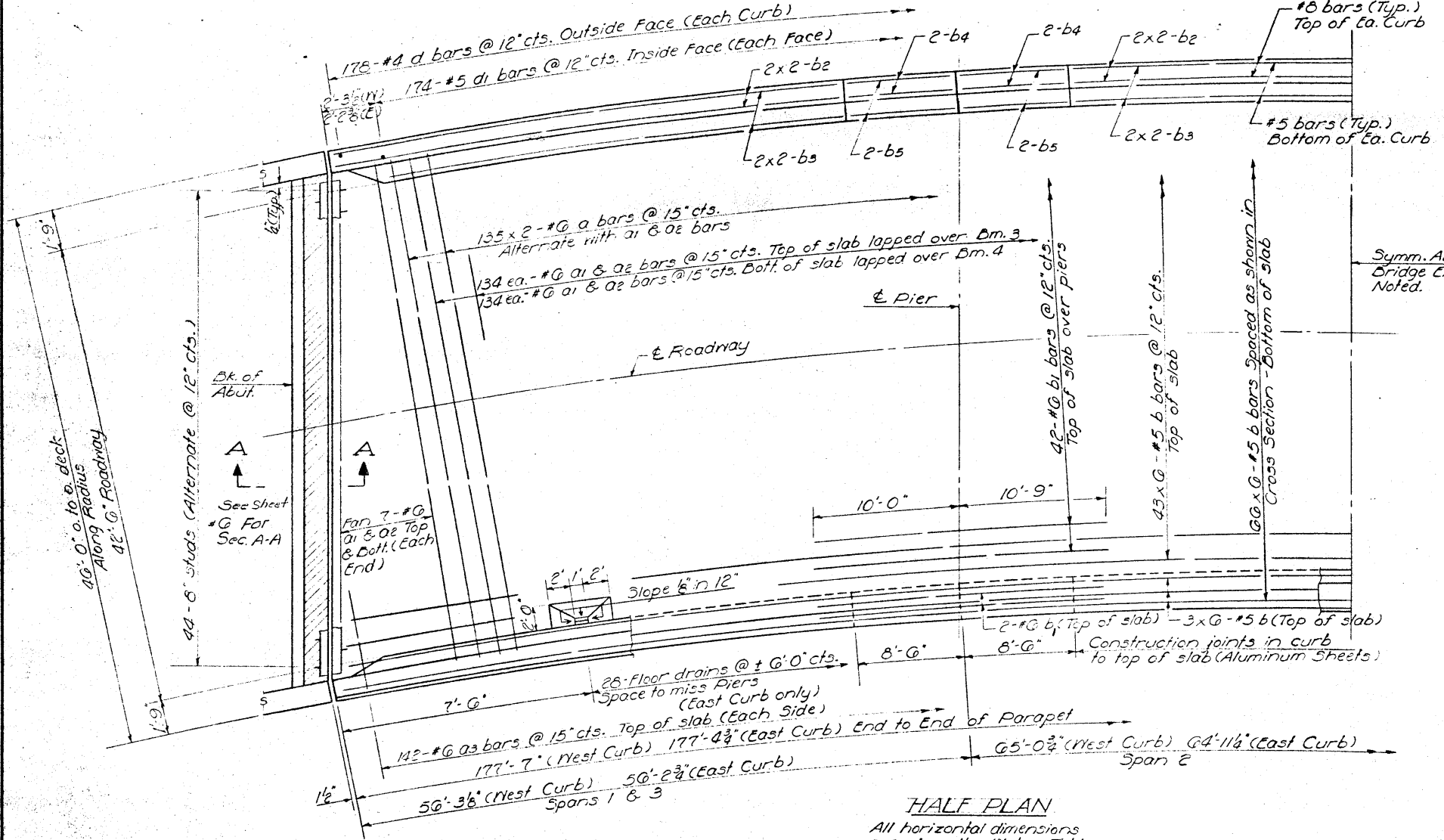
NOTE: Work this sheet with sheet #3

DESIGNED	Shun-Tai Liu	EXAMINED	Richard H. Goltzman
CHECKED	George A. Bari	PASSED	Richard H. Goltzman
DRAWN	Jacobs	APPROVED	Richard H. Goltzman
CHECKED	G. A. Bari & R.		

MAY 12 1969

TOP OF SLAB ELEVATIONS
E.A. RT. 2 SEC. 55BR
MCLEAN COUNTY
STA. 159+69.60

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

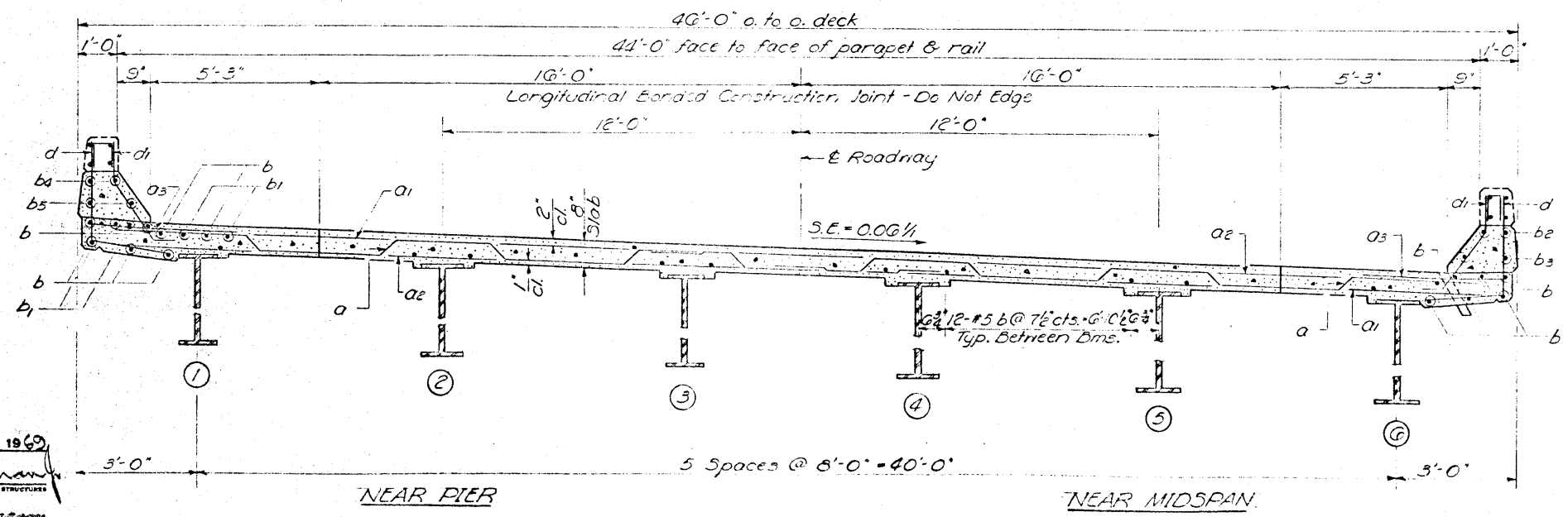


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	270	#6	24'-1"	~
a1	296	#6	19'-5"	~
a2	296	#6	27'-3"	~
a3	284	#6	4'-0"	~
b	690	#5	30'-9"	~
b1	92	#6	20'-9"	~
b2	24	#6	25'-0"	~
b3	24	#5	24'-9"	~
b4	10	#5	8'-3"	~
b5	10	#5	6'-3"	~
d	356	#4	4'-0"	~
d1	345	#5	5'-5"	~
Reinforcement Bars			Lbs.	62170
Structural Steel			Lbs.	207430
Class X Concrete			Cu.Yds.	235.3

HALF PLAN
All horizontal dimensions are along the Water Table

Notes:
Bars indicated thus 43x5-#6 etc. indicates 43 lines of bars with 6 lengths each.
The spacing of bars a thru a3 is given along E Roadway.
Place bars b thru b5 along curve.



Weight of bearing assemblies with lead plates and anchor bolts are included as Structural Steel. Est. Wt. = 8200 lbs.
The lengths and quantities of reinforcement and Class X Concrete in parapets are not included in above quantities. See Sheet #9

Work this sheet with sheet #6

DESIGNED: *Shun-Tsun Lin*
CHECKED: *George A. Dori*
DRAWN: *Jacobs*
CHECKED: *G. A. Dori S.L.*

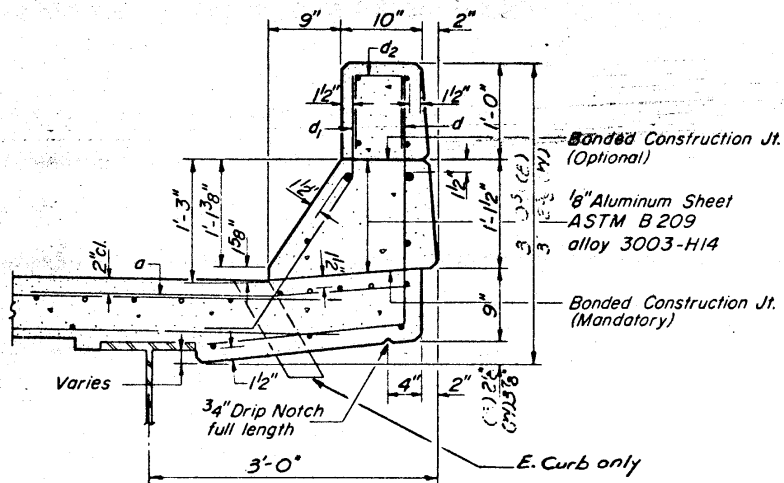
EXAMINED: *Carl Hummer*
PASSED: *W.E. Baumann*
APPROVED: *Richard H. Hollerman*

SUPERSTRUCTURE
F.A.R.T. 2 SEC. 55-B-R
MCLEAN COUNTY
STA. 159+69.00

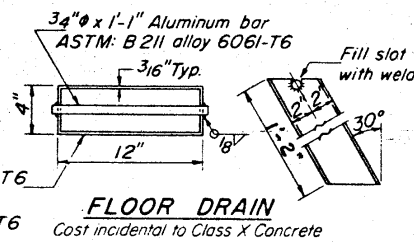
CROSS SECTION
(Looking North)

ROUTE NO. 2	SECTION 55BR	COUNTY McLEAN	TOTAL SHEETS 24	SHEET NO. 15
FED. ROAD DIST. NO. 7			ILLINOIS	FED. AID PROJECT

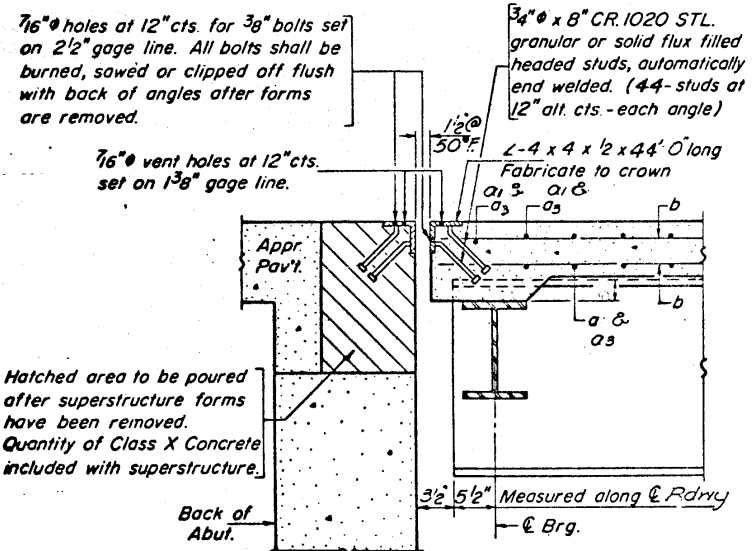
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



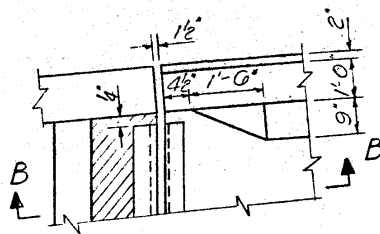
CURB SECTION
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete



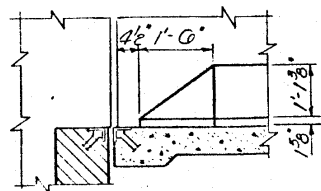
FLOOR DRAIN
Aluminum Sheets Welded
ASTM: B 209 alloy 6061-T6
or Aluminum Extrusions
ASTM: B 221 alloy 6061-T6
Cost incidental to Class X Concrete



SECTION A-A



CORNER DETAIL



SECTION B-B

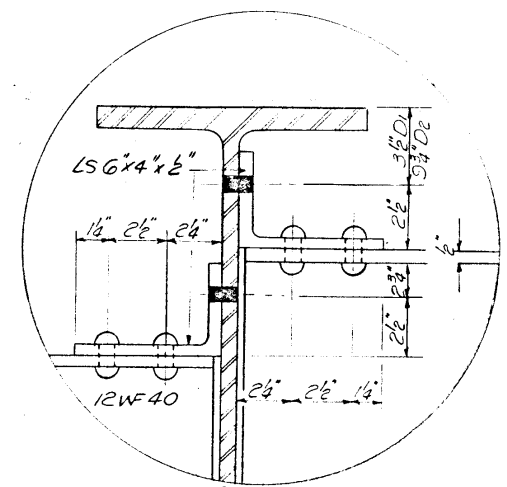
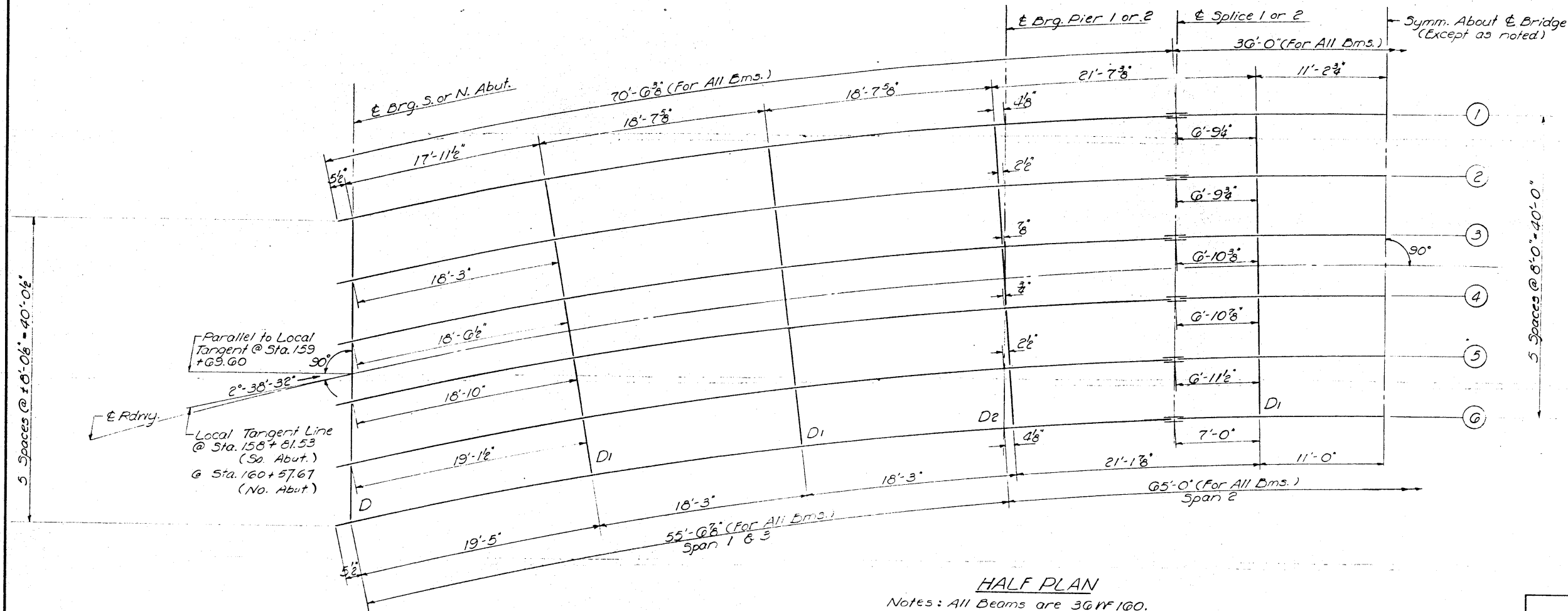
DESIGNED <i>John Steinlein</i>	EXAMINED <i>C. S. Hummer</i>
CHECKED <i>George Albrici</i>	PASSED <i>W. C. Raumann</i>
DRAWN <i>jacobs</i>	APPROVED <i>Richard H. Goltzman</i>
CHECKED <i>G. Albrici S. K.</i>	

May 12 1969

SUPERSTRUCTURE DETAILS
F.A.R.T. SEC. 55BR
MCLEAN COUNTY
STA. 159 + 69.00

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO. P.A. 2	SECTION 55BR	COUNTY MCLEAN	TOTAL SHEETS 2A	SHEET NO. 16	SHEET NO. 7 13 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	



DETAIL A

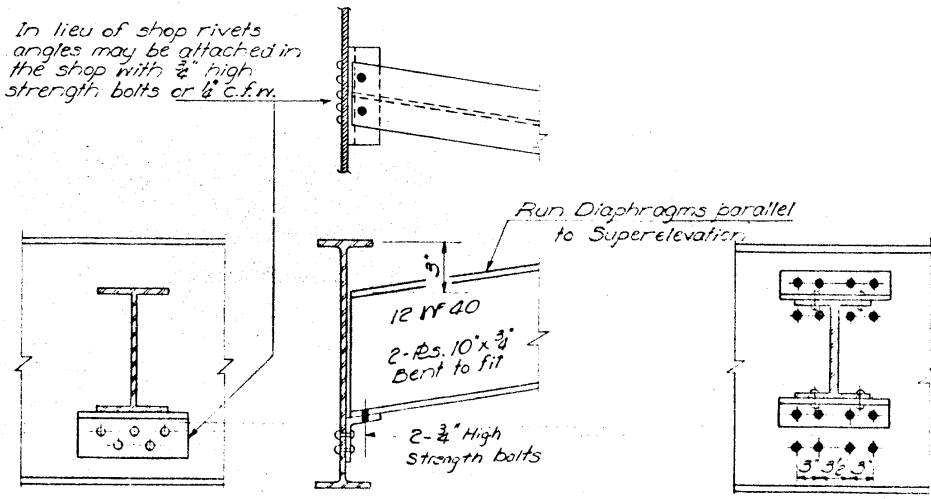
HALF PLAN

Notes: All Beams are 36WF100.
Beam Spacing is 8'-0" radially.
Each beam shall be fabricated according to its respective radius.
All horizontal dimensions are given along E Beam.

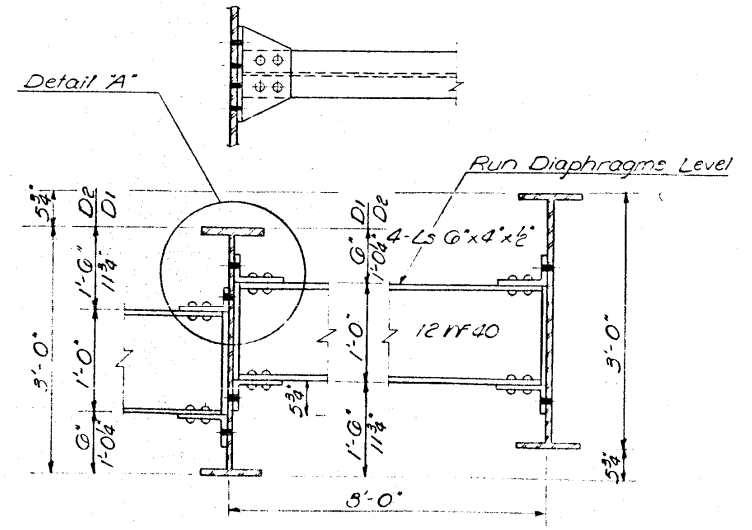
TOP OF WF ELEVATIONS
(For Fabrication Only)

	E Brg. S. Abut.	E Brg. Pier 1	E Splice 1	E Splice 2	E Brg. Pier 2	E Brg. N. Abut.	Radius (Feet)
Bm. 1	702.62	702.40	702.34	702.25	702.20	702.09	1329.80
Bm. 2	702.14	701.92	701.86	701.75	701.72	701.61	921.80
Bm. 3	701.66	701.44	701.38	701.27	701.24	701.13	1313.80
Bm. 4	701.18	700.96	700.90	700.79	700.76	700.65	505.80
Bm. 5	700.70	700.48	700.42	700.31	700.28	700.17	157.80
Bm. 6	700.22	700.00	699.94	699.83	699.80	699.69	55.80

In lieu of shop rivets angles may be attached in the shop with 2" high strength bolts or 1/2" c.f.r.



DIAPHRAGM D
Required 10



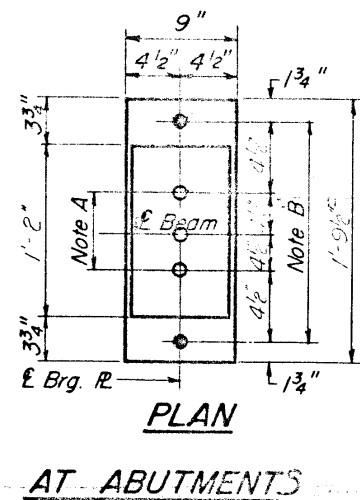
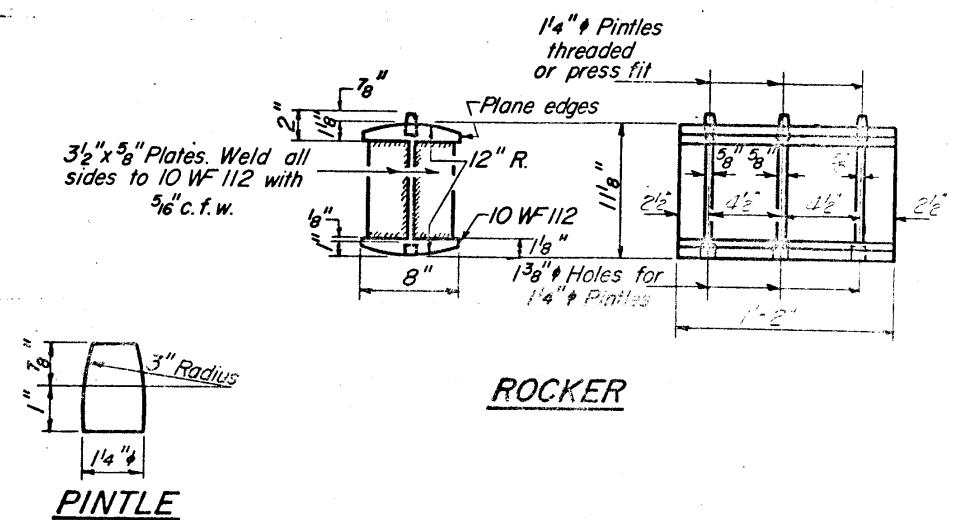
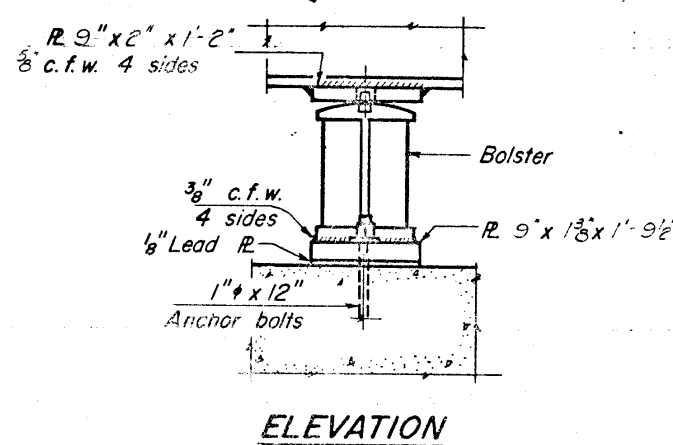
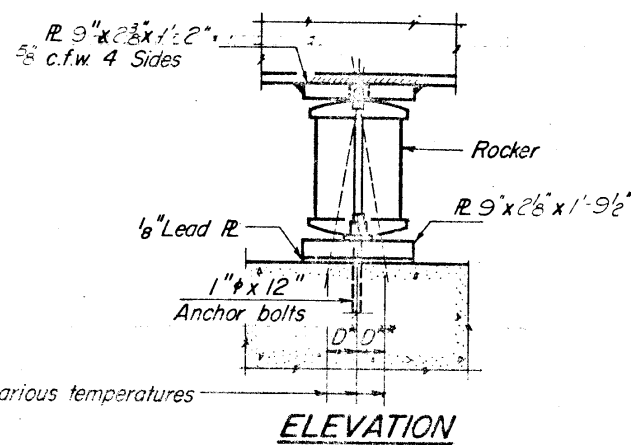
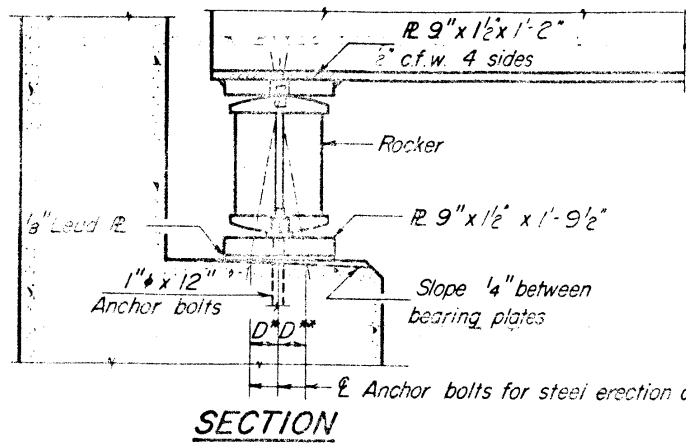
DIAPHRAGM D1 OR D2
Required 30-D1 & 10-D2

Note: Weight of structural steel billed on Sheet #5

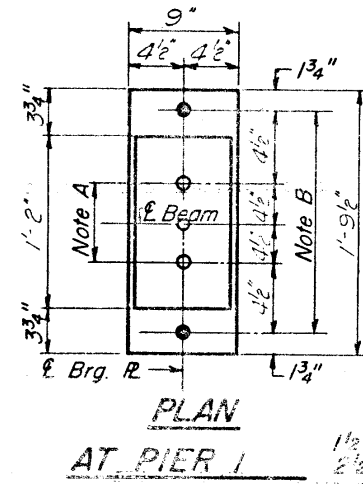
DESIGNED	St. J. Lee
CHECKED	George H. Dair
DRAWN	Jacobs
CHECKED	G. H. Dair & S.

MAY 12 1969
EXAMINED
PASSED
APPROVED
Richard H. Goltzman
CHIEF HIGHWAY ENGINEER

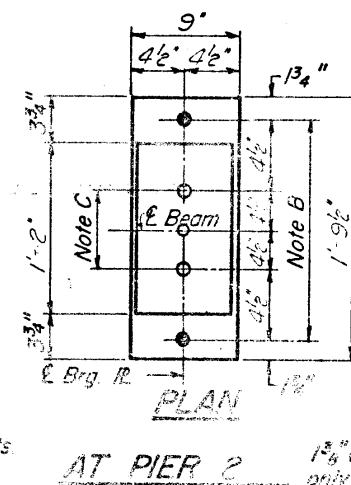
STRUCTURAL STEEL
F.A.R.T. 2 SEC. 55BR
MCLEAN COUNTY
STA. 159 + 69.60



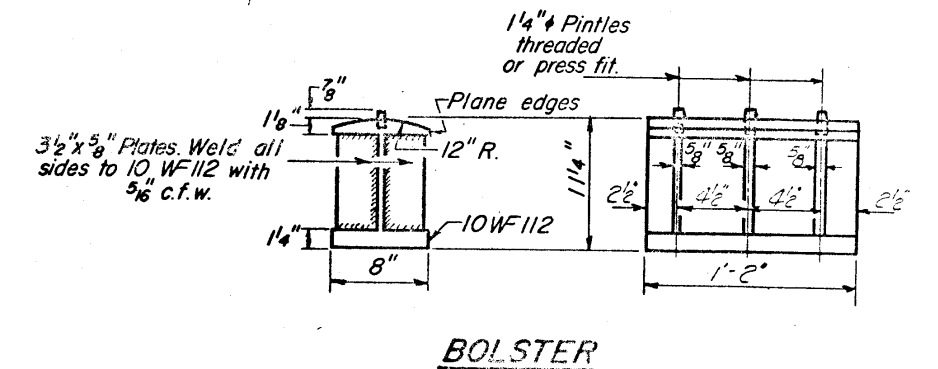
NOTE A
1 3/8" Holes - 1" deep in top R for pintles. Thread or press fit pintles into bottom R.



NOTE B
1 1/2" Holes for 1" anchor bolts. 2 1/2 x 2 1/2 x 1/4" R Washers under nut.



NOTE C
1 3/8" Holes 1" deep in top R only for 1 1/4" pintles.

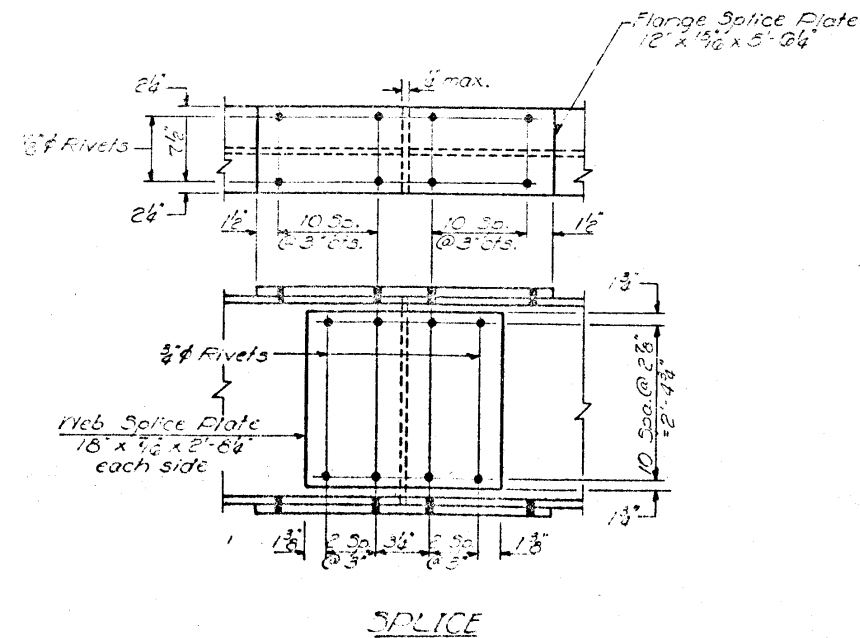


NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D^* (Side of brg away from fixed brg.)
 $D^* = 1/8"$ per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
- D^{**} (Side of brg toward fixed brg.)
 $D^{**} = 1/8"$ per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

- b) After beams have been erected and dimensions D^* or D^{**} determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

BEARING ASSEMBLY DETAILS



STRESS TABLE

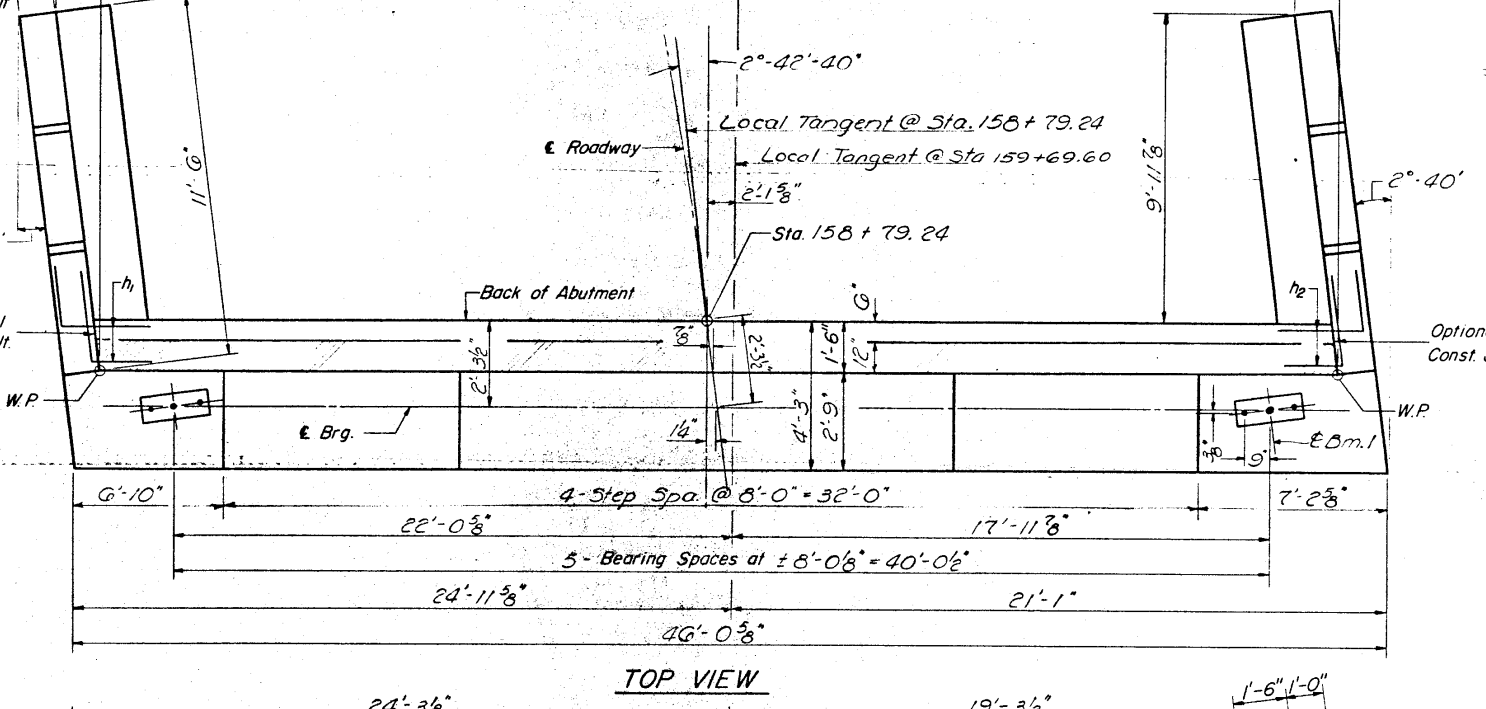
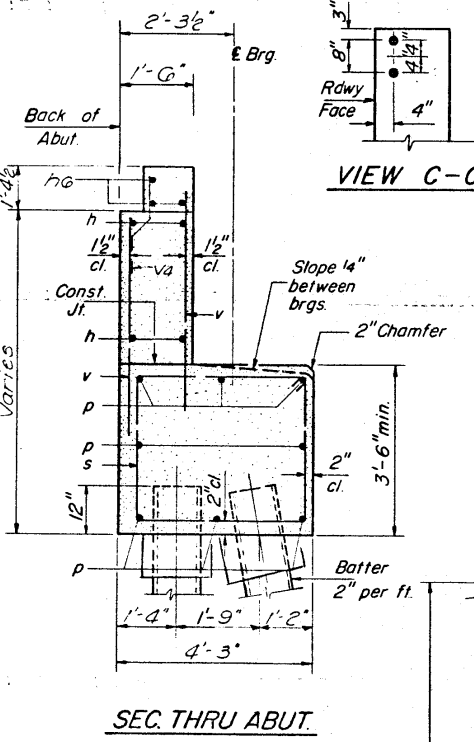
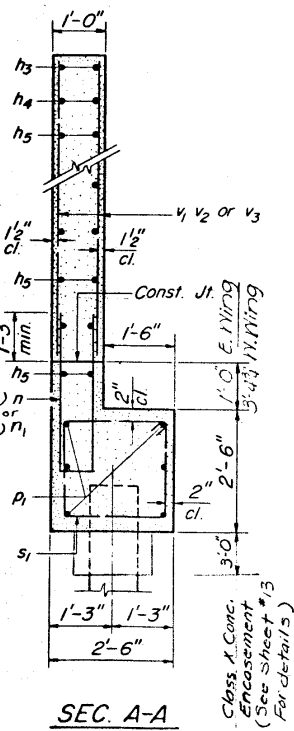
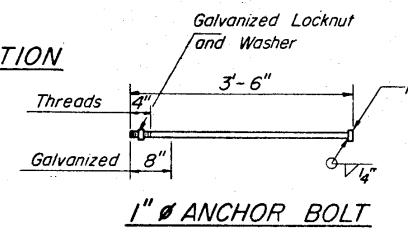
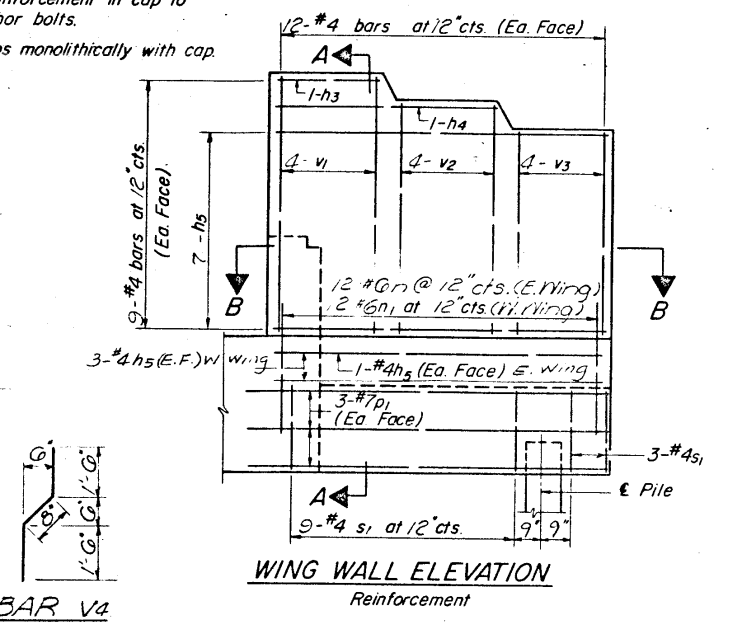
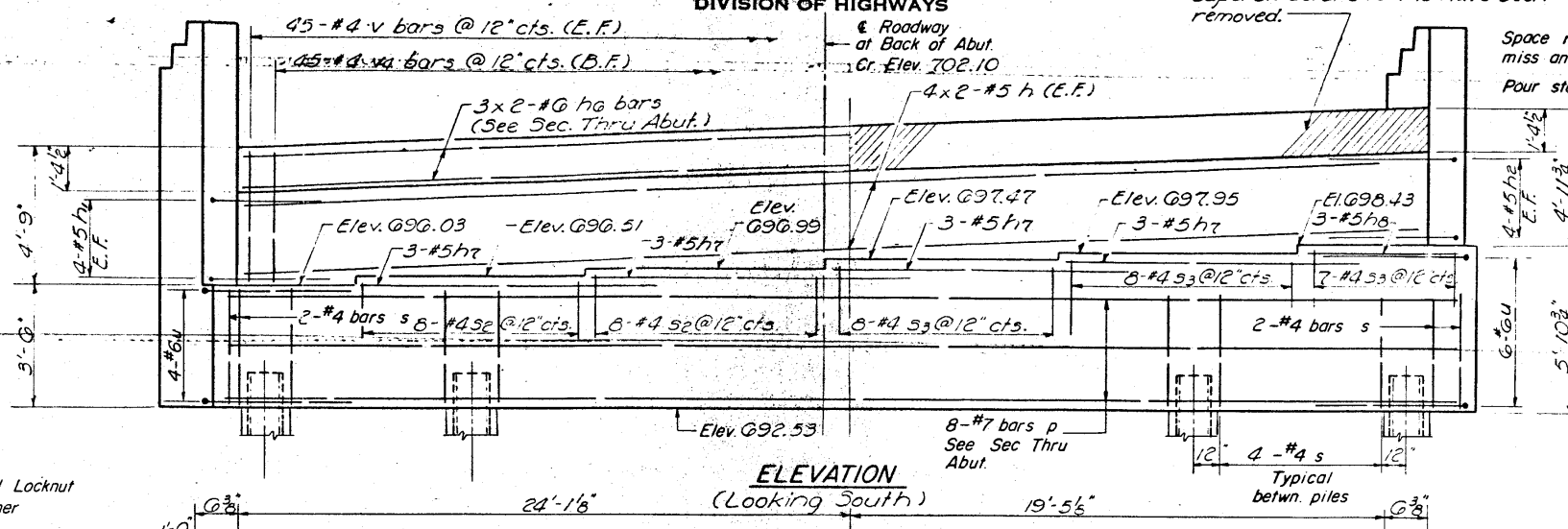
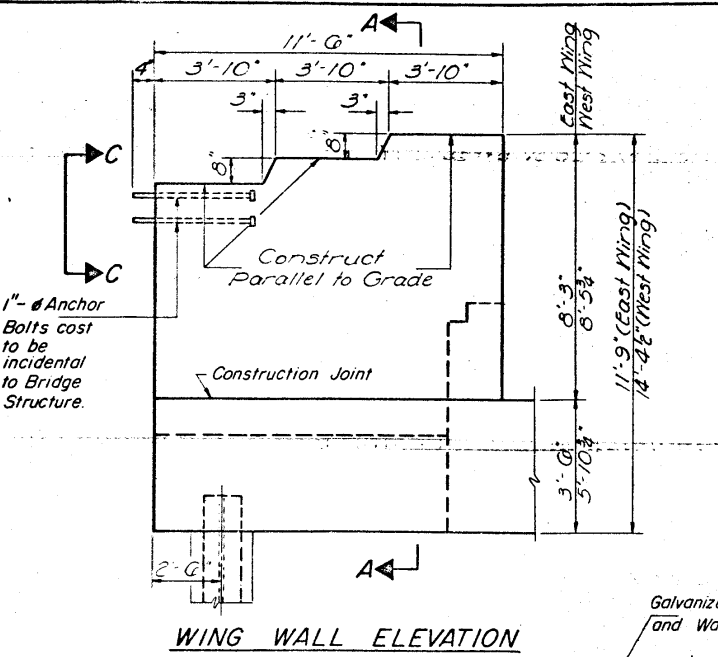
	MOMENTS			REACTIONS	
	1 Span 1	Pier 1 & 2	3 Span 2	Abuts.	Piers
D.L.	237.7	481.2	187.0	28.1	88.3
L.L.	105.3	335.2	378.7	41.9	52.4
Imp.	119.1	93.8	98.5	11.7	14.2
Total	462.1	910.2	664.2	81.7	154.9

DESIGNED *Ch. J. Sh. Tomlin*
CHECKED *George Al. Dosi*
DRAWN *P.G. Barnitt*
CHECKED *George Al. Dosi*

EXAMINED *Carl J. Hummel* MAY 12 1963
PASSED *W.E. Baumgardner*
APPROVED *Richard H. Gatterman*

STRUCTURAL STEEL DETAILS
F.A.R.T. 2 SEC. 55BR
MCLEAN COUNTY
STA. 159 + 09.60

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

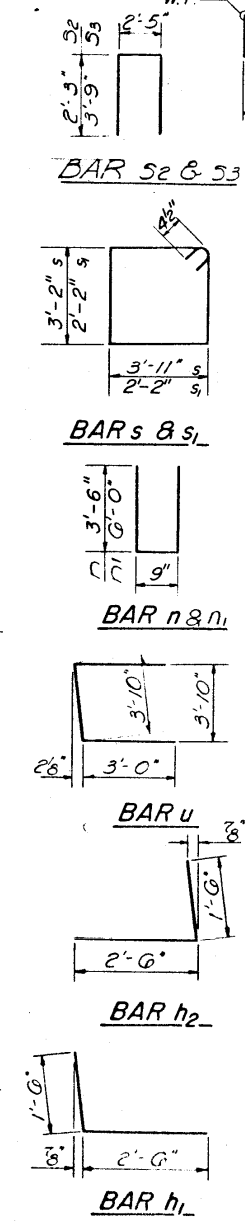


PILE DATA

Type	Steel Piles (88P36)
Capacity	32 Tons
Est. Length	30'-0"
No. Required	12 plus 1 Test pile

SOUTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	16	#5	23'-0"	—
h1	8	#5	4'-0"	┌
h2	8	#5	3'-0"	┌
h3	4	#4	3'-7"	—
h4	2	#4	7'-5"	—
h5	36	#4	11'-3"	—
h6	6	#6	22'-9"	—
h7	12	#5	9'-5"	—
h8	3	#5	6'-9"	—
n	12	#6	7'-9"	┌
n1	12	#6	3'-9"	┌
p	6	#7	3'-9"	—
p1	2	#7	7'-0"	—
s	24	#4	2'-6"	▣
s1	24	#4	3'-5"	▣
s2	16	#3	6'-11"	▣
s3	23	#2	9'-11"	▣
u	10	#6	9'-10"	┌
v	90	#4	2'-0"	—
v1	6	#4	2'-7"	—
v2	10	#4	2'-5"	—
v3	6	#4	3'-9"	—
v4	25	#2	3'-8"	—
Class X Concrete			Cu. Yds	55.4
Reinforcement Bars			Lbs	4160
Steel Piles (88P36)			Lin Ft	360
Test Piles (Ste-1)			Ea.	1



DESIGNED *Stacy Shen-Tsai Lee*

CHECKED *George Al-Dar*

DRAWN *SG Ferchow / jacobs*

CHECKED *G. A. Davis & L.*

EXAMINED *May 12 1966*

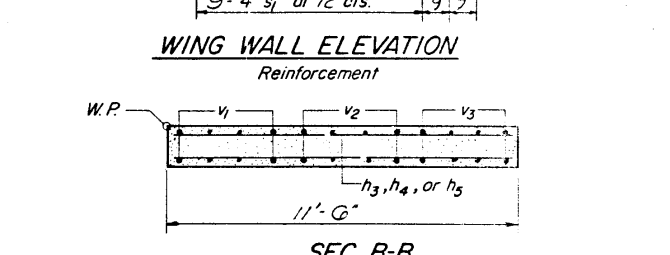
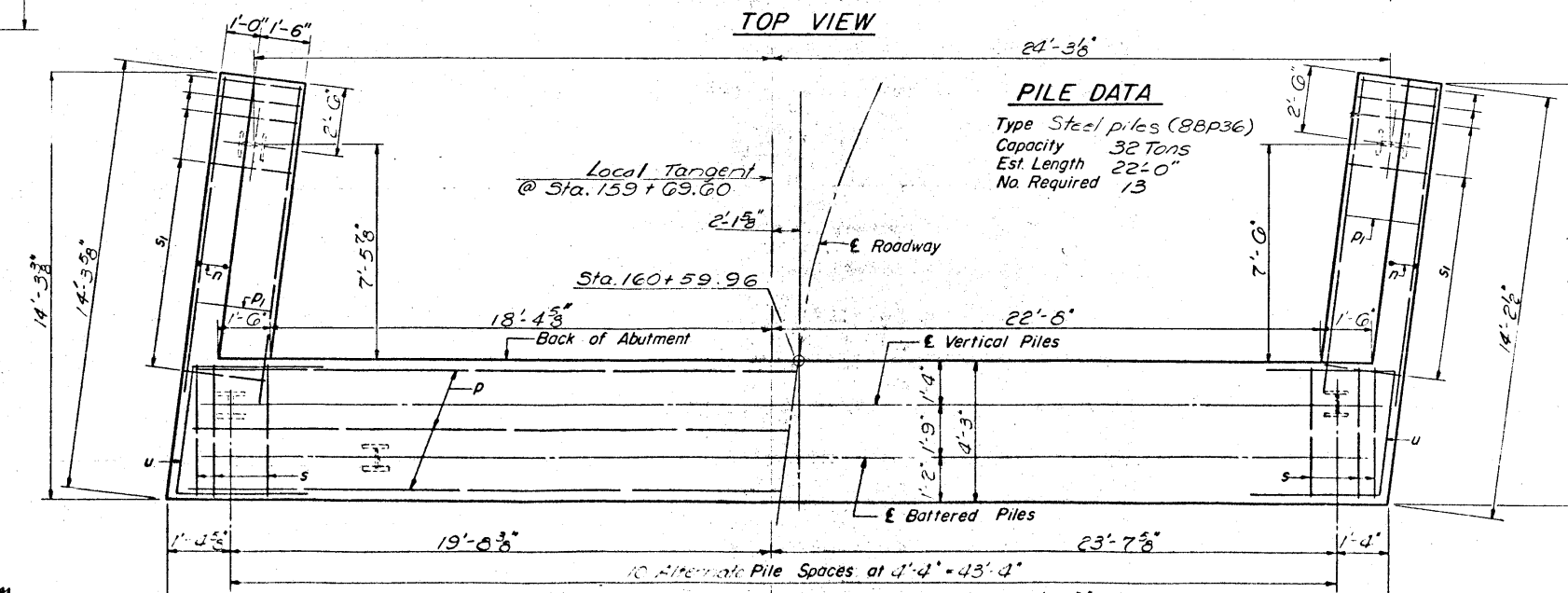
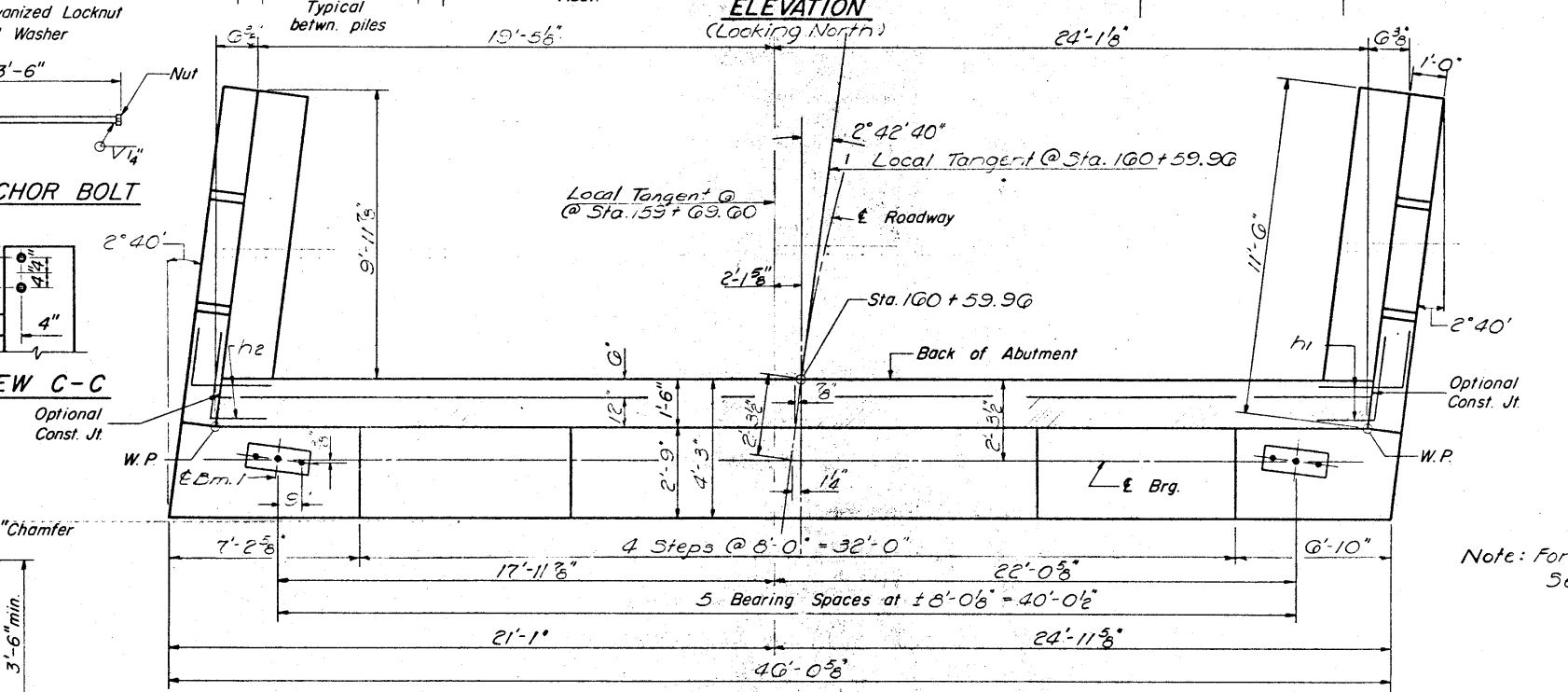
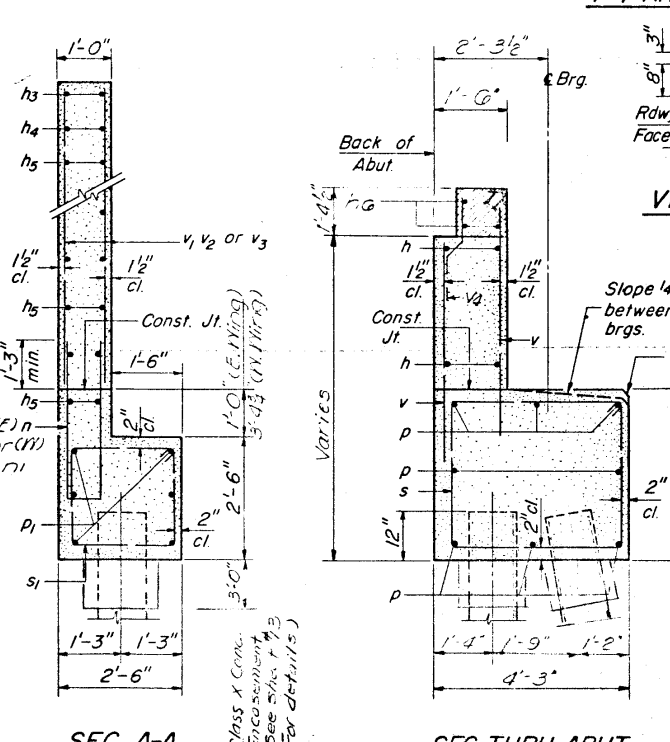
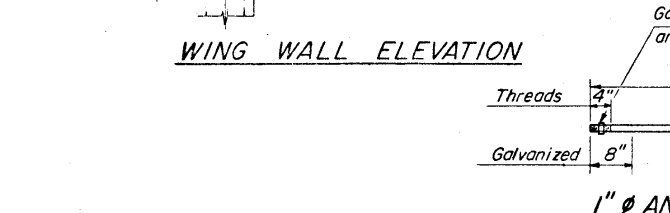
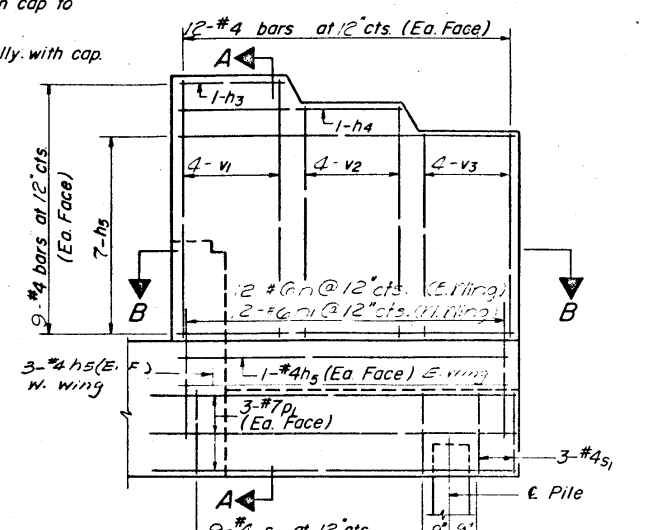
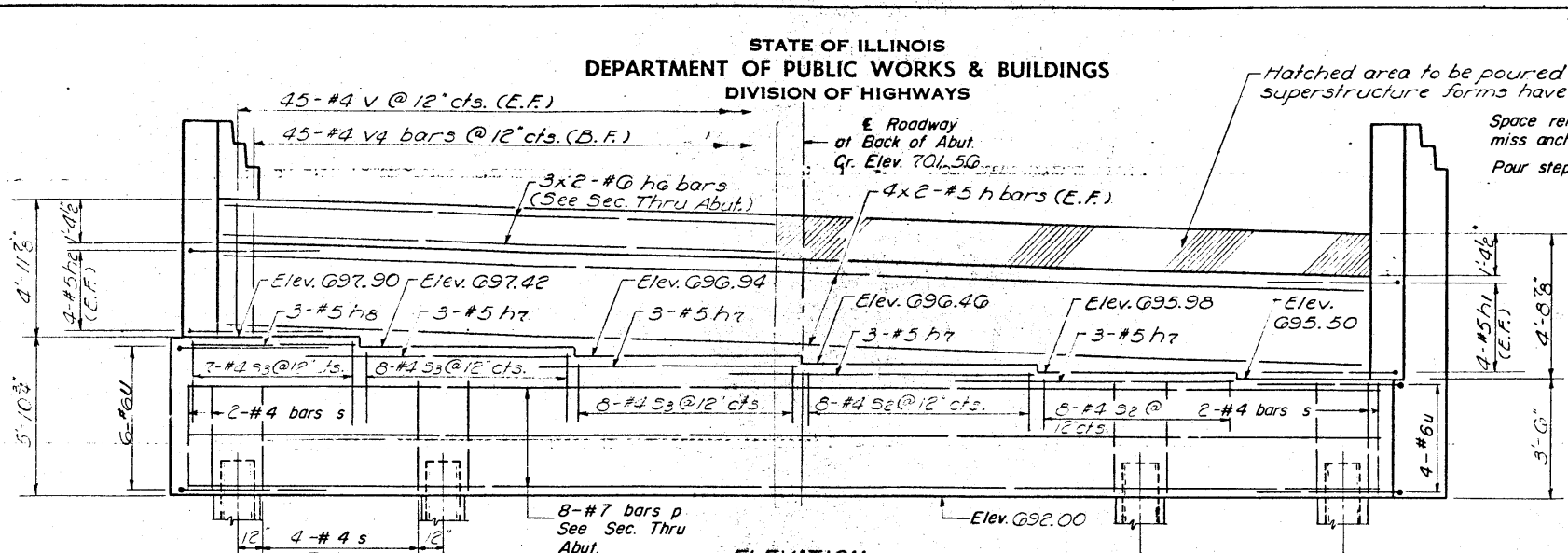
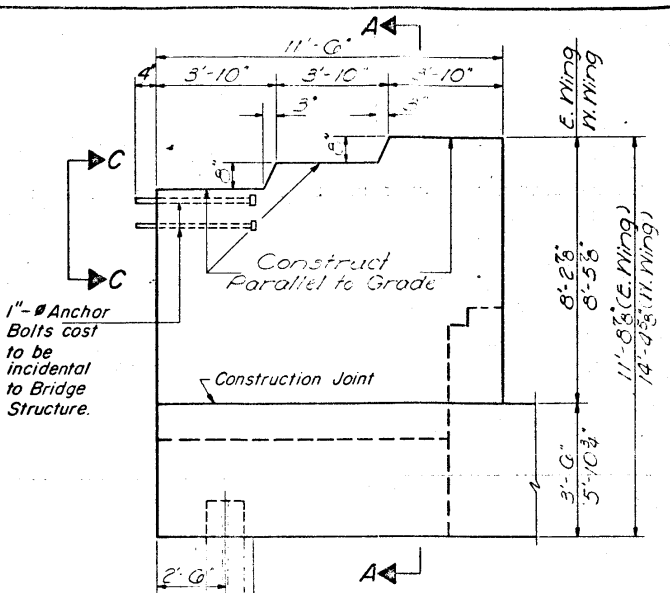
PASSED *NE Baumann*

APPROVED *Richard H. Hollerman*

**SOUTH ABUTMENT
F.A.R.T. 2 SEC. 55BR
MCLEAN COUNTY
STA. 159 + 69.60**

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
2	55BR	McLEAN	24	20	13 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



NORTH ABUTMENT
BILL OF MATERIAL

Bar	No	Size	Length	Shape
h	10	#5	3'-0"	—
h1	5	#5	3'-0"	L
h2	5	#5	3'-0"	L
h3	2	#4	3'-0"	—
h4	2	#4	3'-0"	—
h5	36	#4	3'-0"	—
h6	6	#6	3'-0"	—
h7	12	#5	3'-0"	—
h8	3	#5	3'-0"	—
v	12	#4	3'-0"	U
v1	12	#4	3'-0"	U
p	5	#7	28'-0"	—
p1	12	#7	28'-0"	—
s	22	#4	22'-0"	□
s1	22	#4	22'-0"	□
s2	10	#4	22'-0"	□
s3	23	#3	22'-0"	□
u	10	#6	3'-0"	—
v	90	#4	3'-0"	—
v1	10	#4	3'-0"	—
v2	10	#4	3'-0"	—
v3	10	#4	3'-0"	—
v4	45	#4	3'-0"	—
Class X Concrete		Cu. Yds	27.4	
Reinforcement Bars		Lbs	4162	
Steel Piles (88P36)		Lin. Ft.	283	

DESIGNED: Shun-Tai Lin

CHECKED: George A. Dazi

DRAWN: S.G. Ferchow

CHECKED: S. A. Dazi

EXAMINED: Carl Hummer

PASSED: W. E. Baumann

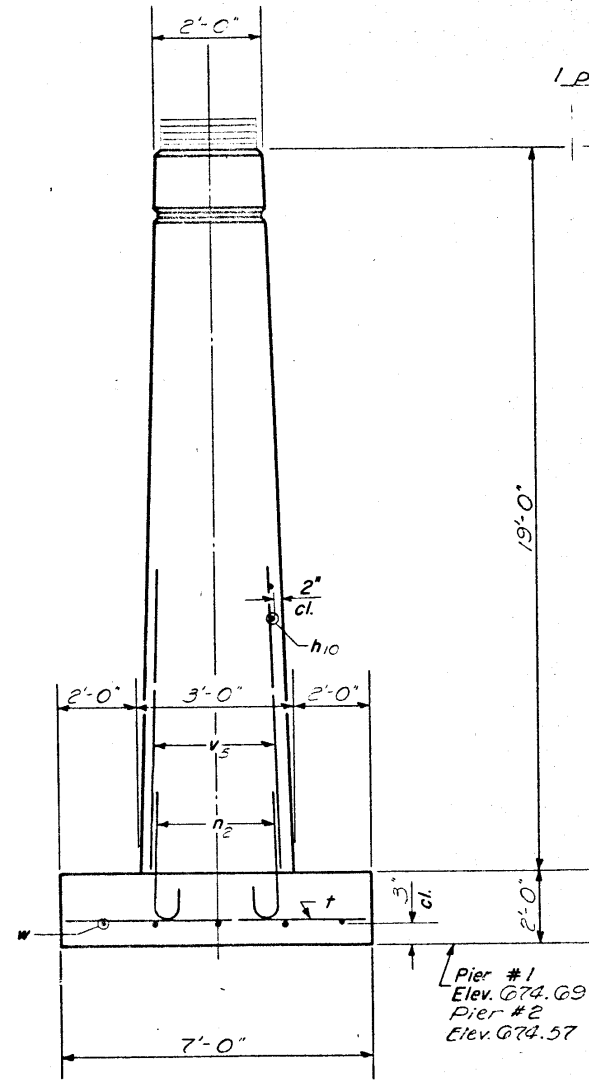
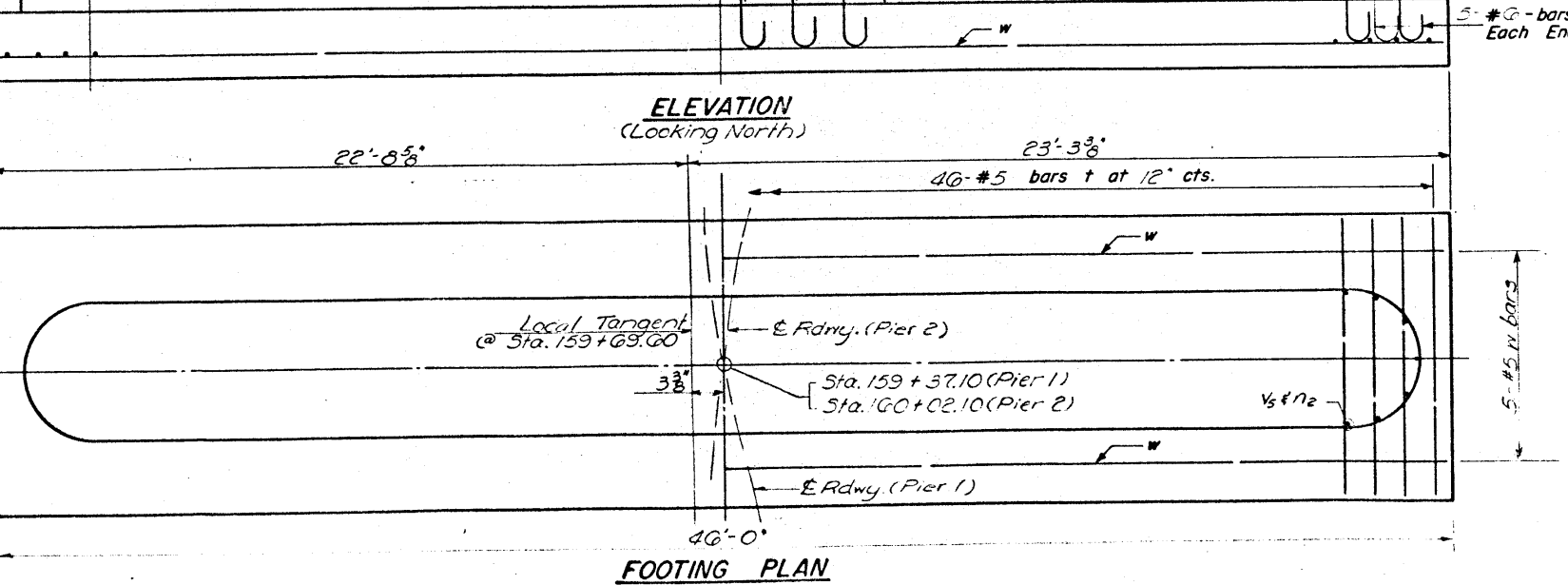
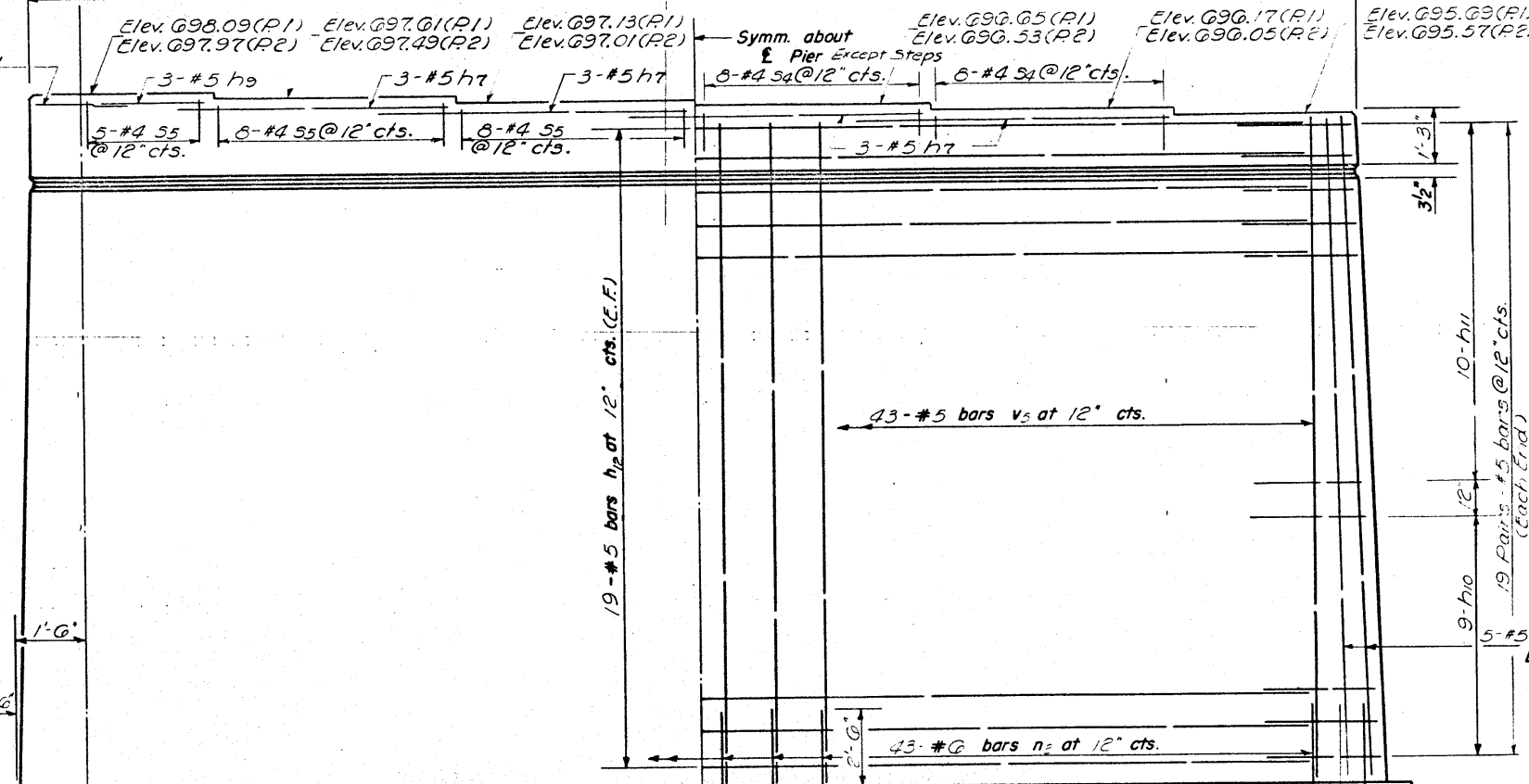
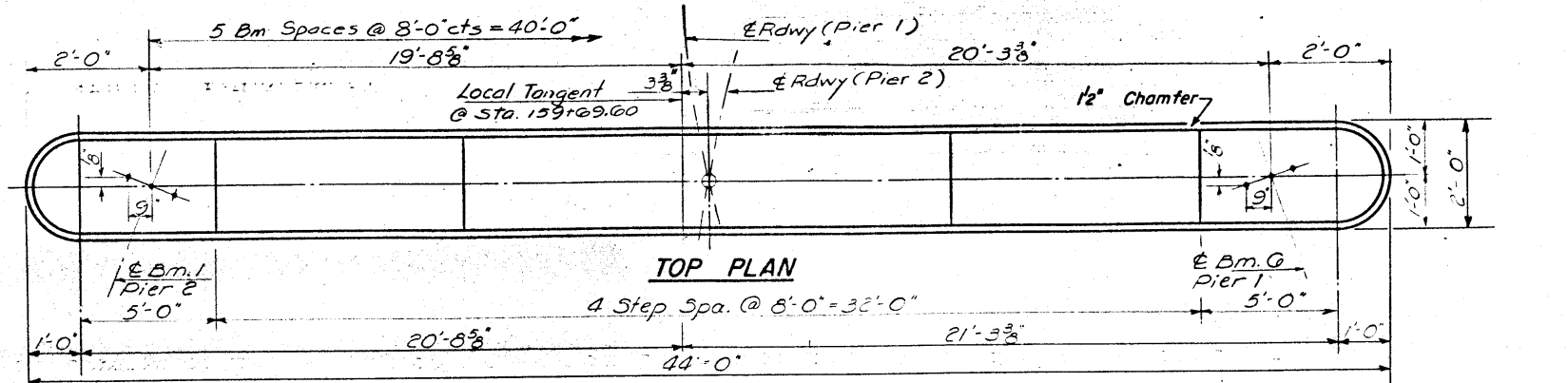
APPROVED: Richard H. Holloman

MAY 12 1963

NORTH ABUTMENT
PART 2 SEC. 55BR
McLEAN COUNTY
STA. 159+69.60

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
F.A. 2	55BR	McLEAN	24	21	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

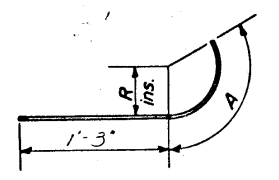


Max. Soil Pressure:
2.6 K.S.F. (Pier 1)
4.0 K.S.F. (Pier 2)

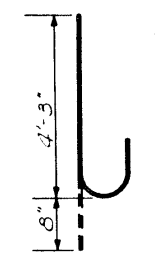
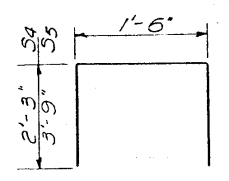
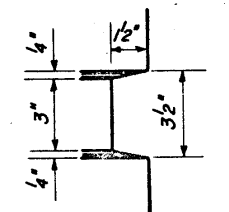
DESIGNED: *Shun-Tsu Lin*
CHECKED: *George Al. Bari*
DRAWN: *W. A. Sausaman*
CHECKED: *G. Al. Bari S. L.*

EXAMINED: *Richard H. Gottschman*
PASSED: *W. E. Baumann*
APPROVED: *Richard H. Gottschman*

May 12 1969



Bar	R	A
h ₁₀	1'-2"	2'-9"
h ₁₁	1'-2"	2'-6"



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₇	24	#5	3'-3"	—
h ₉	6	#5	4'-9"	—
h ₁₀	72	#5	1'-0"	—
h ₁₁	84	#5	3'-5"	—
h ₁₂	76	#5	4'-10"	—
n ₂	192	#6	1'-11"	—
s ₄	32	#4	6'-0"	□
s ₅	42	#4	9'-0"	□
t	32	#5	2'-9"	—
v ₅	192	#5	5'-10"	—
w	10	#5	45'-9"	—
Class A Concrete			Cu. Yds.	209.3
Reinforcement Bars			Lbs.	16920

PIERS 1 & 2
F.A. RT. 2 SEC. 55BR
McLEAN COUNTY
Sta. 159+69.60

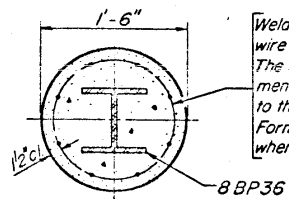
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2	55BR	McLEAN	24	22
RD. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

Boring No. 1 Station 160+59 Offset 7' R.		Elevation	N	Qu / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	Wash-Bored	Elevation	N	Qu / s.f.	w (%)	
Ground Surface		692.5	0								190	4.1	9
Stiff Brownish Black Silty Clay						Hard Gray Silty Clay Loam (Till)							
			10	1.0	30								
			12	1.9	25								
686.5													
Medium Density Yellowish Brown & Gray Limestone & Sandstone Fragments (Washed In)			18	-	-	Dense gray sub-angular COARSE SAND	662.5						
			34	-	-	Hard Gray Silty Clay (Till)							
681.50													
Medium Density Yellowish Brown fine to coarse Sub-angular GRAVEL (water bearing)			20	-	-								
			29	-	-								
* 676.5													
Hard Gray Silty Gray Loam (Till)			234	7.4	8		652.0						
			192	4.4	10								
						* Very hard sugering from 676.5 downward							

Boring No. 2 Station 159+23 Offset On C		Elevation	N	Qu / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	Wash-Bored	Elevation	N	Qu / s.f.	w (%)
Ground Surface		687.5	0									
Very Soft Brownish Black Loam						Hard Gray Clay Loam (Till)						
			10	0.2	22							
			7	0.2	24							
681.6												
Hard Gray Clay Loam (Till)			73	4.4	9		657.1					
			67	2.9	9							
			73	3.9	9							
			51	7.4	10							
671.6												
Medium gray coarse sub angular SAND			61	5.0	10							
			140	6.4	10							

Boring No. 3 Station 158+78 Offset 12' R.		Elevation	N	Qu / s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	Wash-Bored	Elevation	N	Qu / s.f.	w (%)
Ground Surface		690.0	0									
Soft to Medium Brownish Black CLAY LOAM and SILTY CLAY LOAM						Hard Gray SILTY CLAY LOAM (Till)						
			2	-	15							
			9	-	14							
684.0												
Dense Yellowish Brown fine to coarse sand & gravel			42	-	-							
			120	5.4	9							
			82	8.5	8							
			66	10.9	9							
654.5												
			69	6.6	9							
671.5												
Very Dense Gray FINE SAND			77	-	-							



Welded wire fabric 6"x6 mesh #4 wire weighing 58#/100 sq. ft. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles. Forms for encasement may be omitted when soil conditions will permit.

STEEL PILE ENCASUREMENT DETAILS
3'-0" Concrete Encasement

N - Standard Penetration Test - Blows per foot to drive 2" O. D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - t/sf
w - Water Content - percentage of oven dry weight - %.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

DESIGNED	[Signature]
CHECKED	George A. D'Arzi
DRAWN	Jacobs
CHECKED	G. A. D'Arzi & E

EXAMINED	[Signature]	MAY 12 1963
PASSED	W. E. Brumman	
APPROVED	Richard H. Holloman	

BORINGS
E.A. RT. 2 SEC. 5
McLEAN COUNTY
STA. 159+69.0