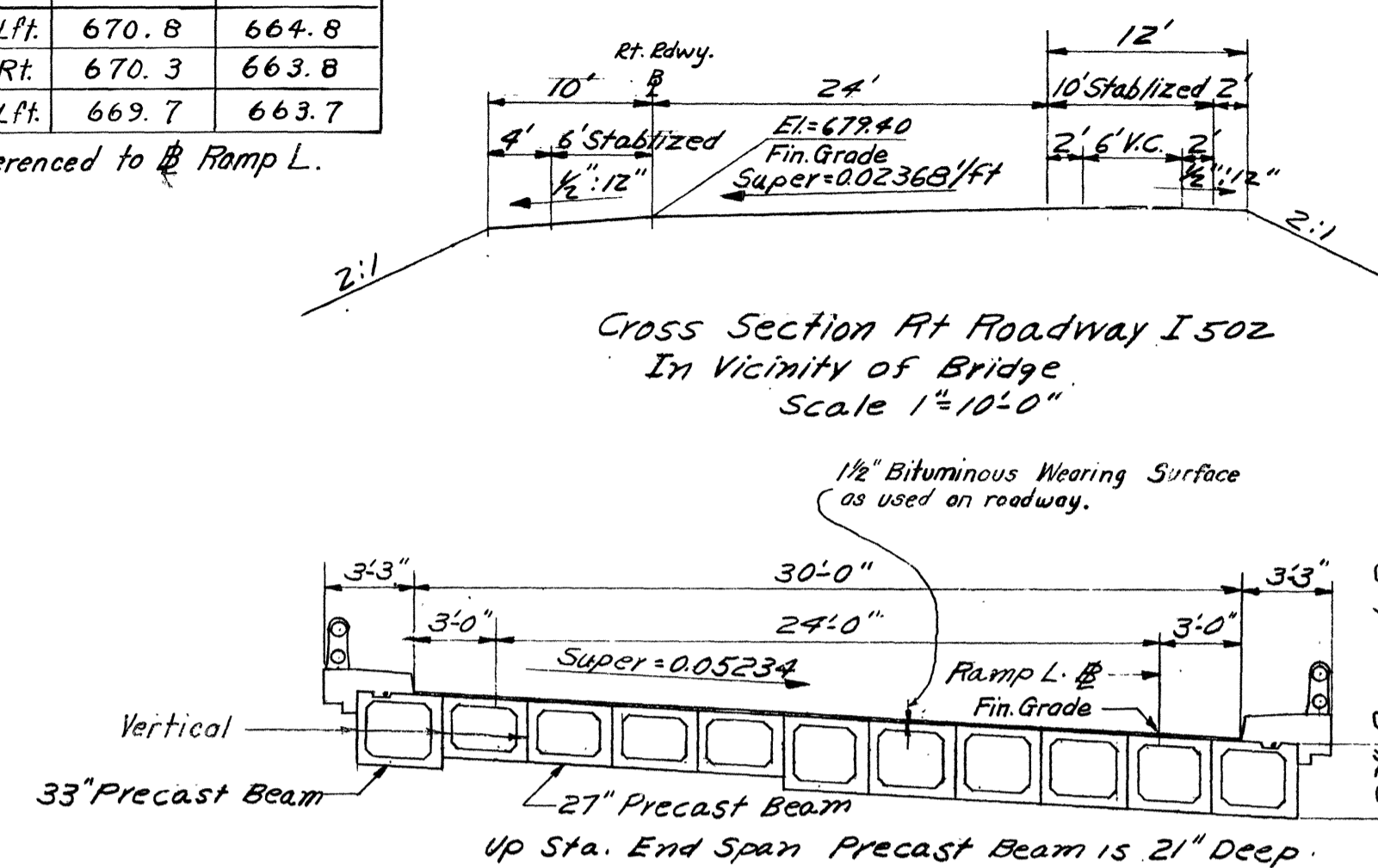


FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(7)0	1959	49	336

BORINGS				
Hole	Station	Offset	Ground El.	Rock El.
1	13+52	7' Rt.	671.2	667.2
2	13+87	34' Lft.	671.0	666.5
3	13+98	7' Rt.	671.0	666.0
4	14+32	34' Lft.	671.0	666.5
5	14+60	7' Rt.	670.5	663.0
6	14+92	34' Lft.	670.8	664.8
7	15+00	7' Rt.	670.3	663.8
8	15+33	34' Lft.	669.7	663.7

Boring locations referenced to Ramp L.



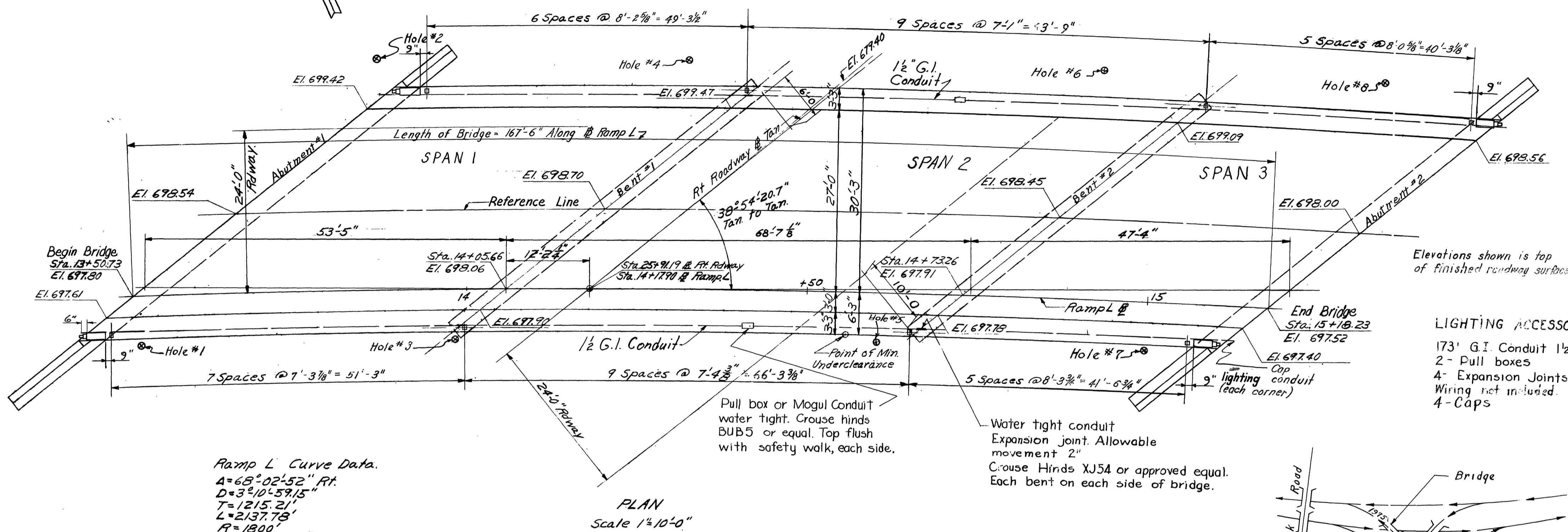
Down Sta. Span & Center Span Half Cross-Section. Scale 1"=6'-0"

**Rt. Roadway Curve Data.**  
 P.I. Sta. 13+63.21  
 $\Delta = 29^\circ 47' 32''$  Lt.  
 $D = 1500'$   
 $T = 1524.11'$   
 $L = 2979.22'$   
 $P = 5729.58'$   
 $S.E. = 0.02368$  ft.

**Ramp L Curve Data.**  
 $\Delta = 68^\circ 02' 52''$  Rt.  
 $D = 3^\circ 10' 59.15''$   
 $T = 1215.21'$   
 $L = 2137.78'$   
 $R = 1800'$   
 $S.E. = 0.05234$  ft.

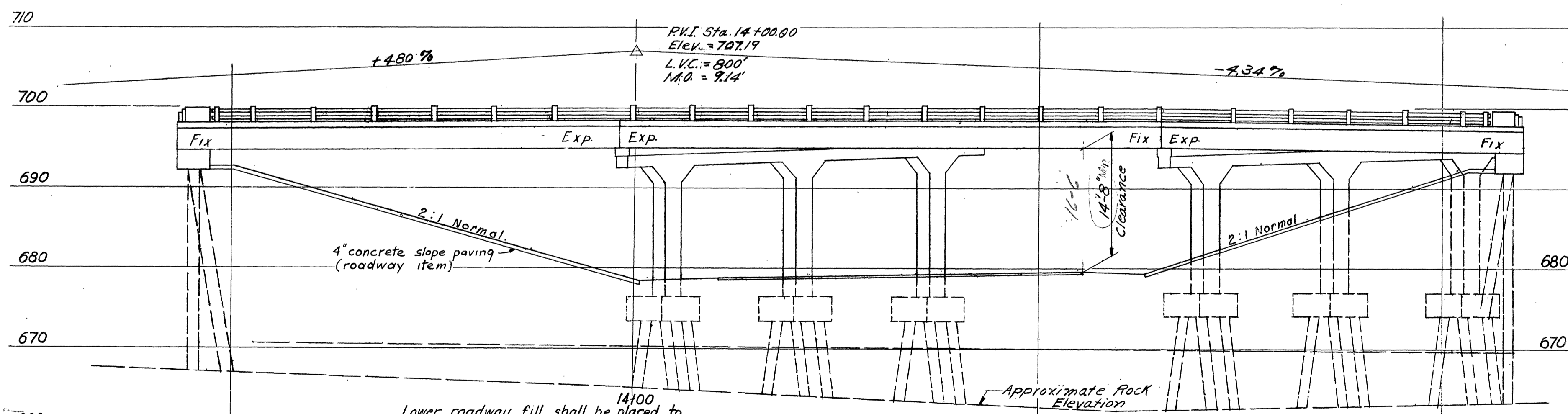
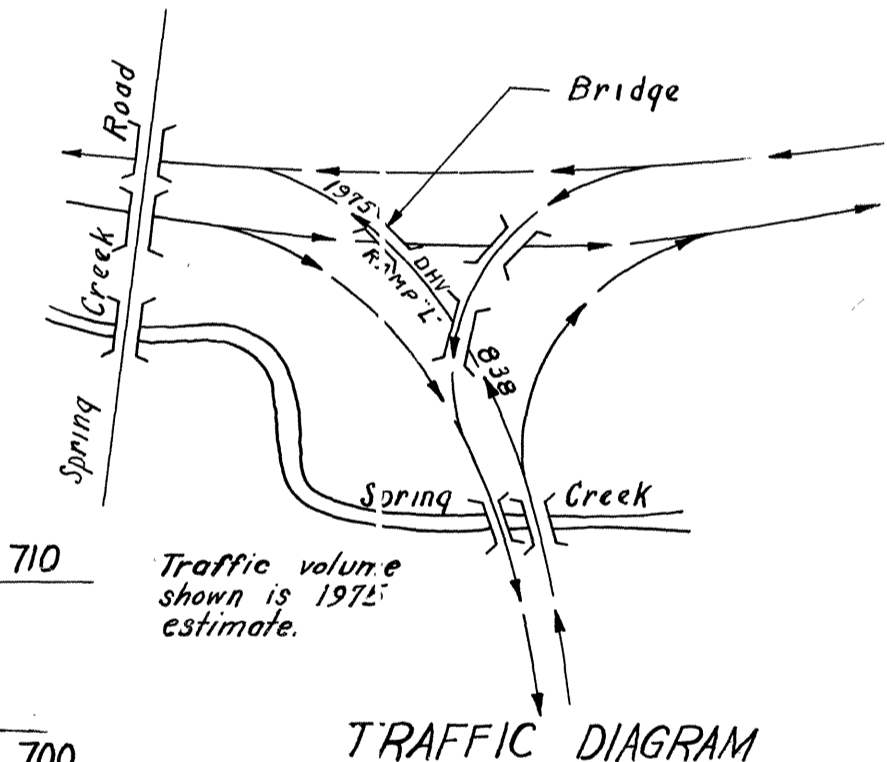
For railing details, see Tennessee Department of Highways & Public Works Standard F-2-115.

All railing posts shall be vertical. Railing spacing shown is on E of anchor bolts.



**LIGHTING ACCESSORIES**

- 173' G.I. Conduit 1 1/2" (Deck)
- 2- Pull boxes
- 4- Expansion Joints
- Wiring not included
- 4- Caps

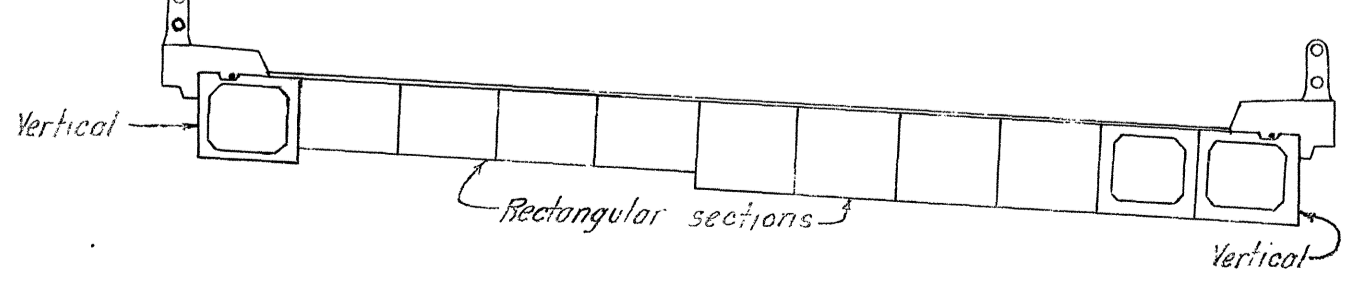


**QUANTITIES IN PRESTRESSED BEAMS**

CONCRETE	329. C.Y.
3/8 STRAND	15,400 LB.
REINF. STEEL	26,900 LB.

Lower roadway fill shall be placed to roadway subgrade and thoroughly compacted before excavating for bent footings. Upper roadway fill shall be at least to bottom of abutment and thoroughly compacted. Drive all piles through any fill in such locations.

**ELEVATION**  
Scale 1"=10'-0"



ALTERNATE METHOD OF CASTING BEAMS.

**TABLE OF ESTIMATED QUANTITIES**

ITEM NO.	UNIT	ITEM	SUB-STRUCTURE			SUPER-STRUCTURE			TOTAL	
			ABUT. 1	ABUT. 2	BENT 2	SPAN 1	SPAN 2	SPAN 3		
172	CY	Dry Excavation * (Bridges)			83	89			172	
135-12	LBS	Steel Bar Reinforcing	3046	2676	9931	9600	545	560	466	26833
135-4	CY	Class 'A' Concrete	23	21	61	59	12	14	10	200
137-3	L.F.	Steel Piles 10" BP 42#								1039
<b>Precast Prestressed Beams</b>										
154-6A	Ea.	33" Deep x 67'-0" Tapered Section					11			11
154-6B	Ea.	33" Deep x 54'-5" Tapered Section				2				2
154-6C	Ea.	33" Deep x 44'-5" Tapered Section					2			2
154-6D	Ea.	27" Deep x 54'-5" Tapered Section				9				9
154-6E	Ea.	27" Deep x 44'-6" Tapered Section					9			9
502	L.F.	Aluminum Railing (2 Rails)				100	133	82	315	
		Lump Sum Lighting Accessories (see notes)								

\* Dry excavation is based on that required for the bents below the lower roadway grade.

**LIST OF DRAWINGS**

TITLE	NO.
GENERAL PLAN	49
DECK PLAN & DETAILS	50
ABUTMENTS	51
BENTS	52
STD ALUMINUM RAIL	F-2-115
STD PILE DETAILS	F-2-118

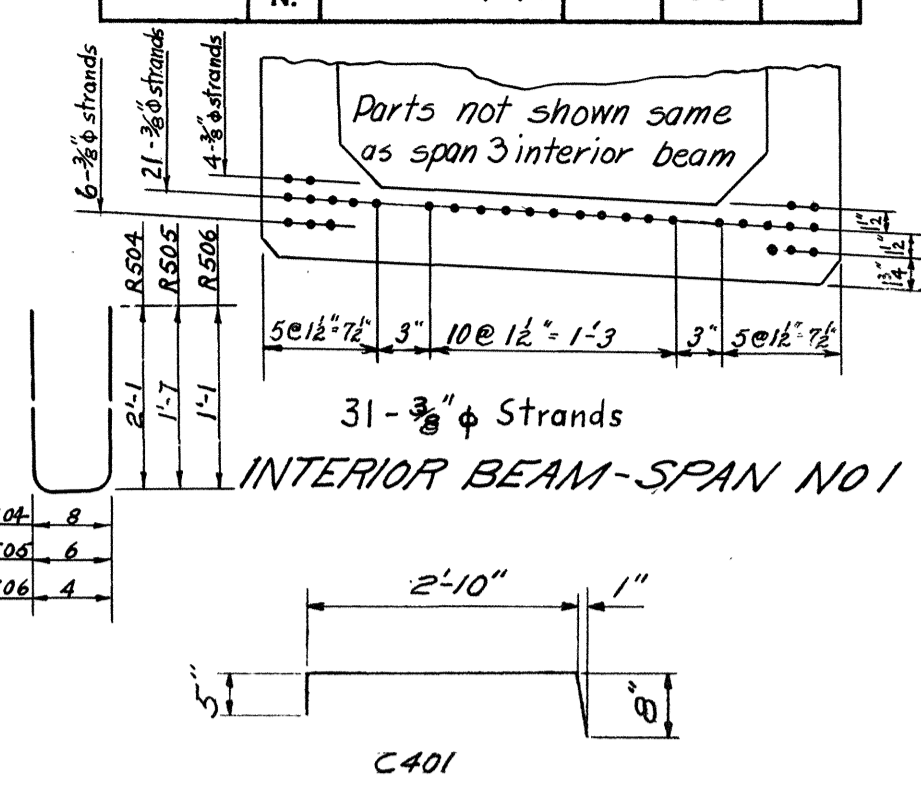
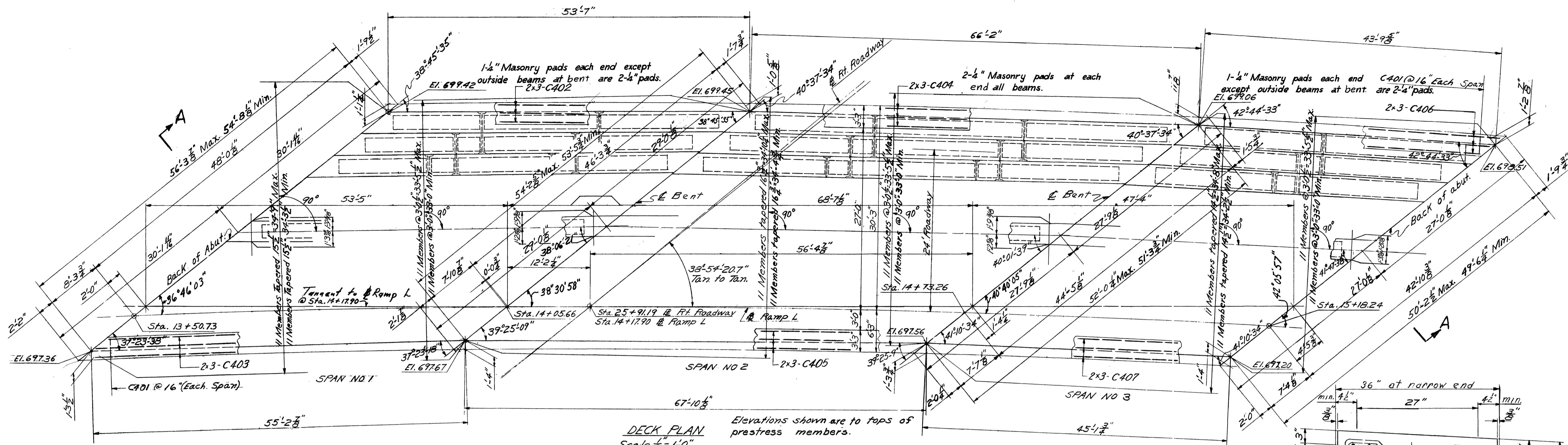
PREPARED BY  
 CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA  
 FOR  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE

**GENERAL PLAN**  
 RAMP L STRUCTURE OVER  
 RIGHT ROADWAY INTERSTATE RTE. 502  
 AT SPRING CREEK INTERCHANGE  
 STA. 14+1790 @ RAMP L  
 HAMILTON COUNTY

Revised 4-9-59.  
 5-19-59 Added note about reinforcing.  
 DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_  
 TRACED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_



FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(710)	1959	50	336



SUPERSTRUCTURE BAR LIST					
MARK	QUANTITY	LENGTH	TYPE	WEIGHT	TOTAL
C401	85	103	71	227	112
C402	6	6	27.6	57	112
C403	6	6	28.6	57	138
C404	6	6	33.9	57	142
C405	6	6	34.9	57	92
C406	6	6	22.7	57	95
C407	6	6	23.3	57	
R501	4	4	2	9	18
R502	4	4	2	11	22
R503	4	4	3	13	26
R504	8	8	16	40	80
R505	2	2	4	8	16
R506	2	2	4	5	10
Totals					545 560 466 1571

Notes:

Members are standard width 3'-0" at narrow end and tapered to accommodate geometry of curves. Contractor may taper all or part of members. Maximum Taper is 4% per member. Add one strand for tapers 2" to 3" and two strands for tapers above 3". Contractor for prestressed members must submit details of members and obtain approval from the engineer before proceeding with manufacture of members. Provision may be made in the facade of exterior units for approved inserts to facilitate forming of curbs.

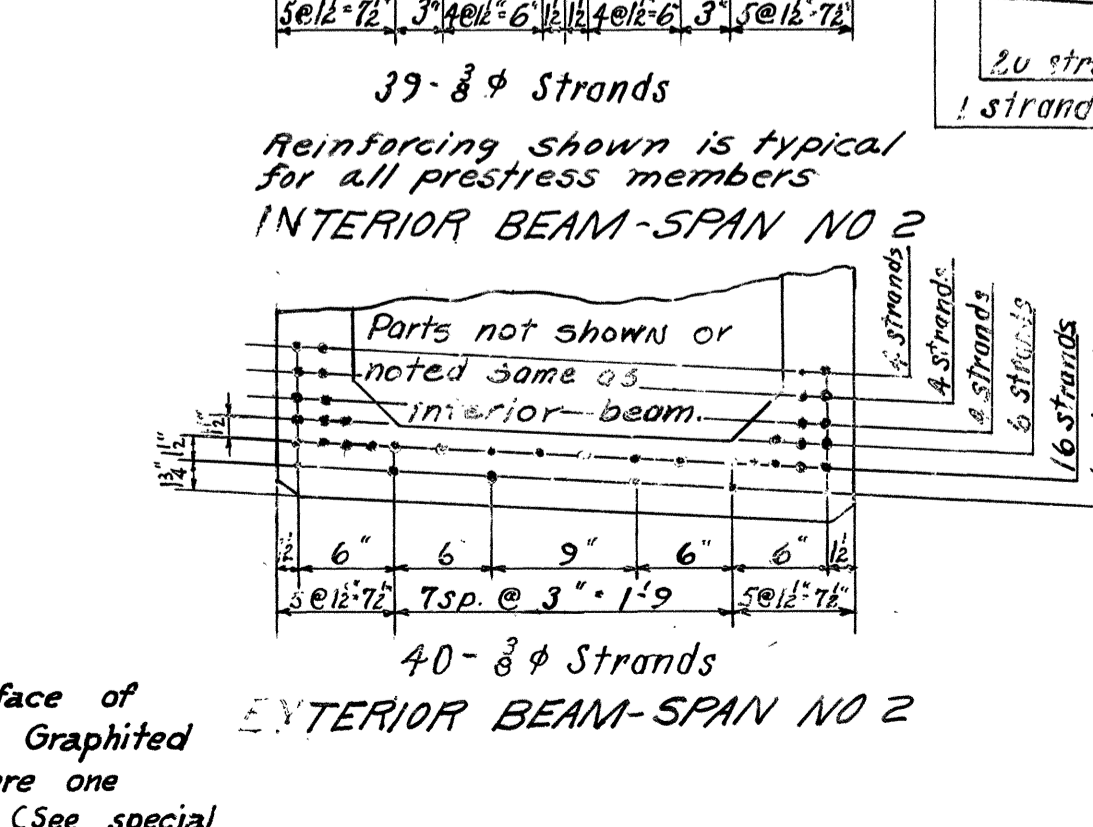
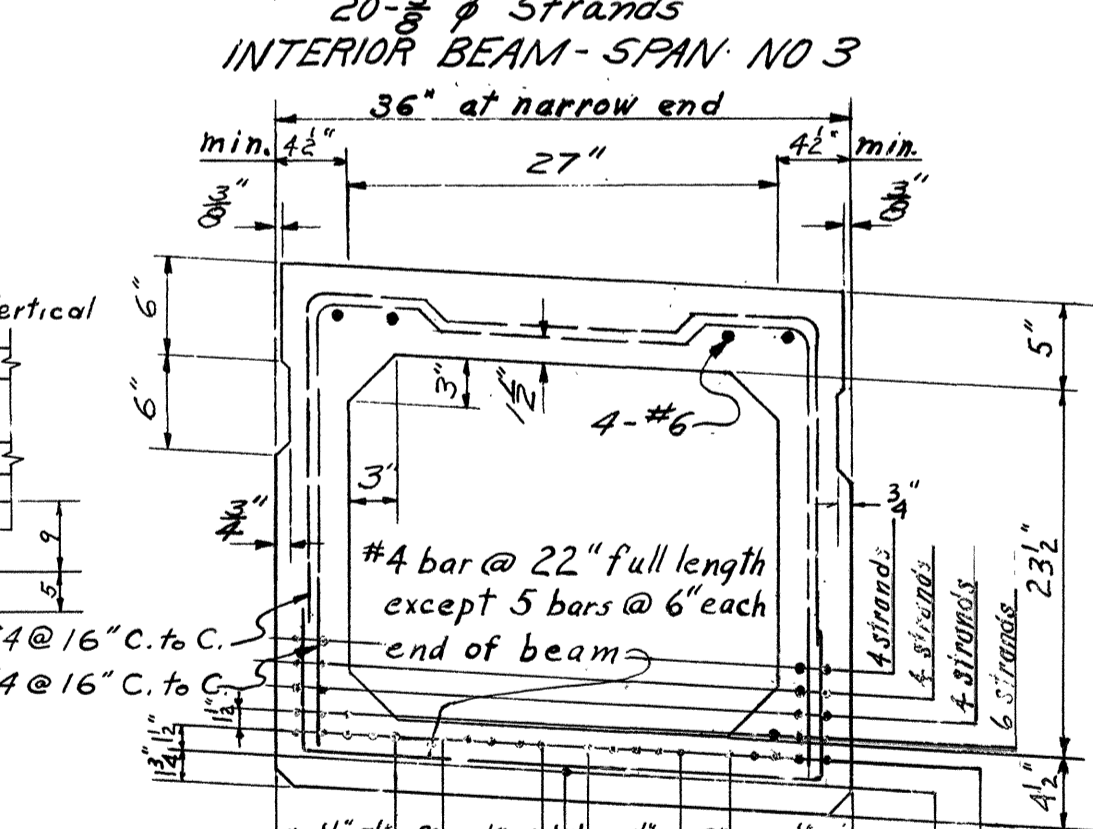
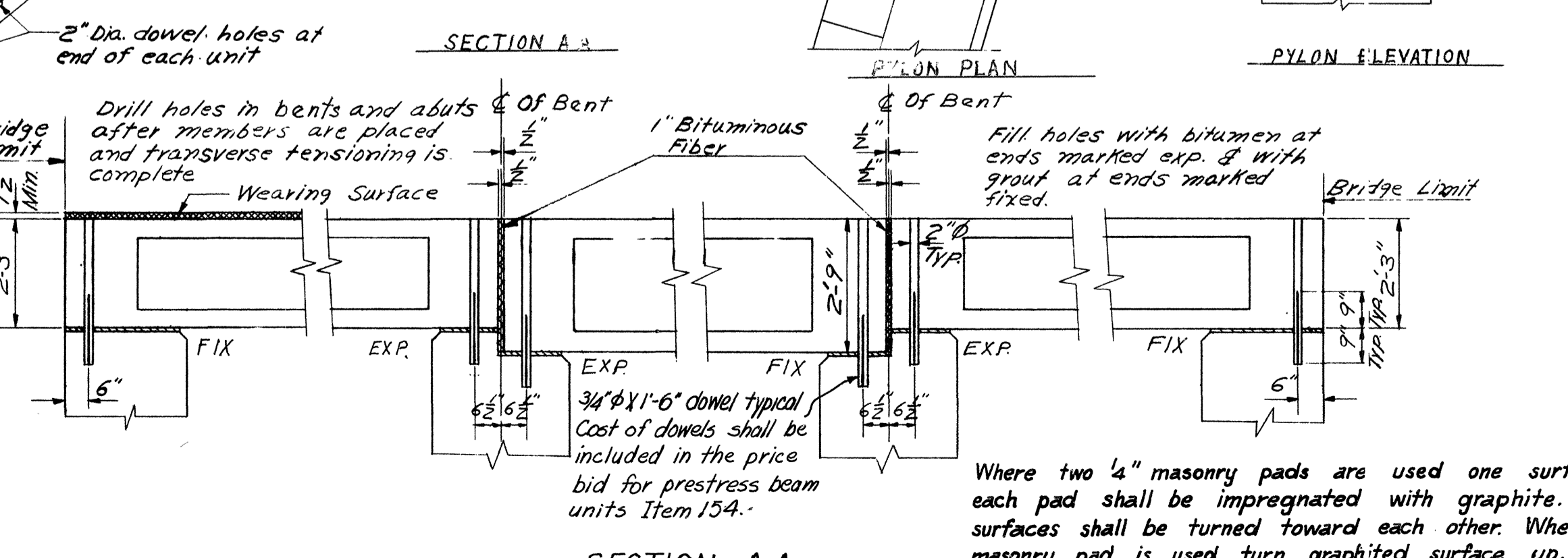
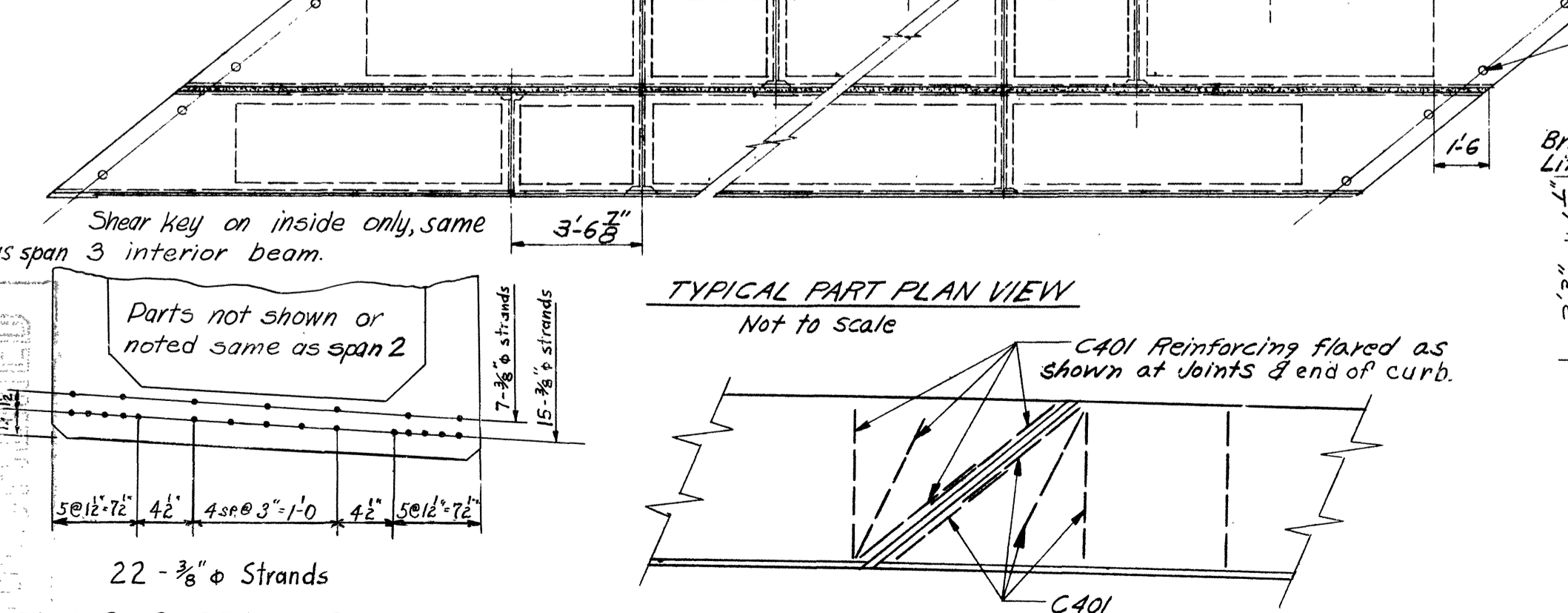
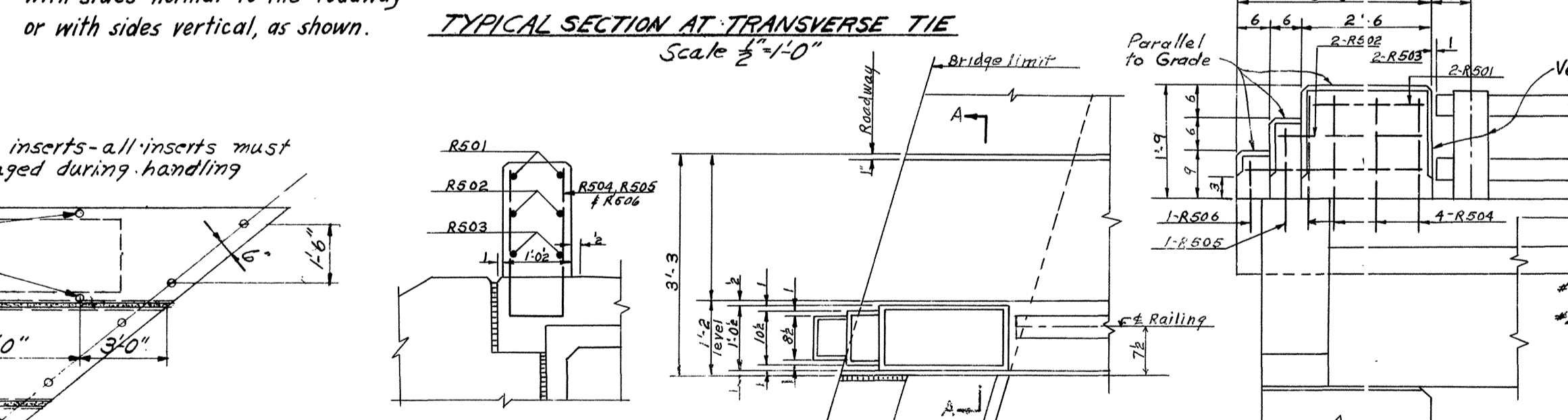
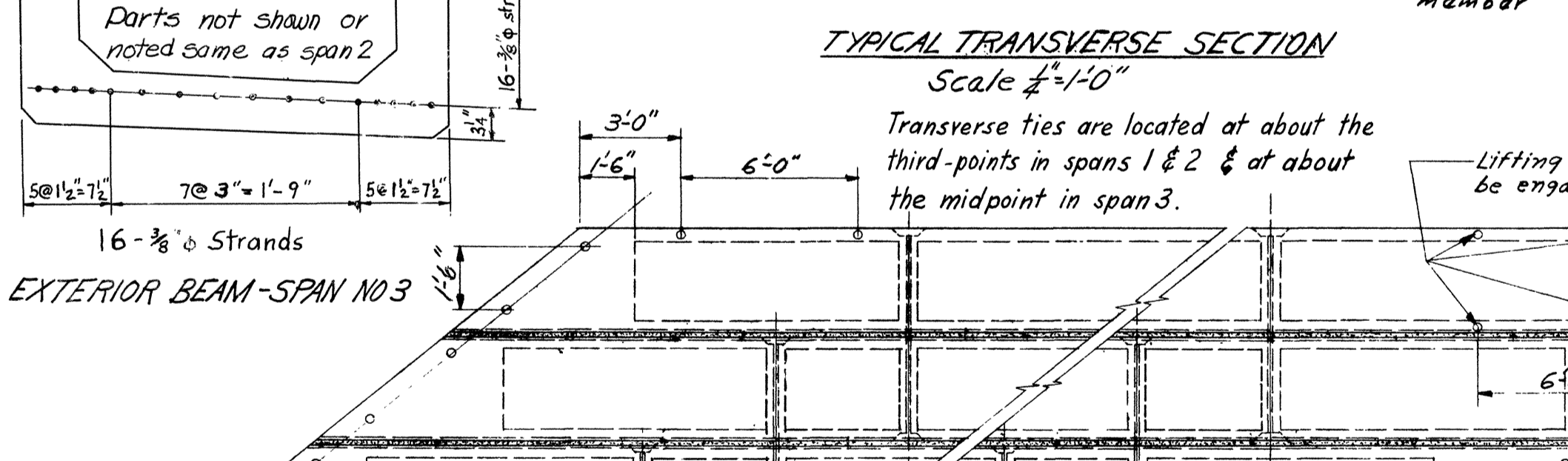
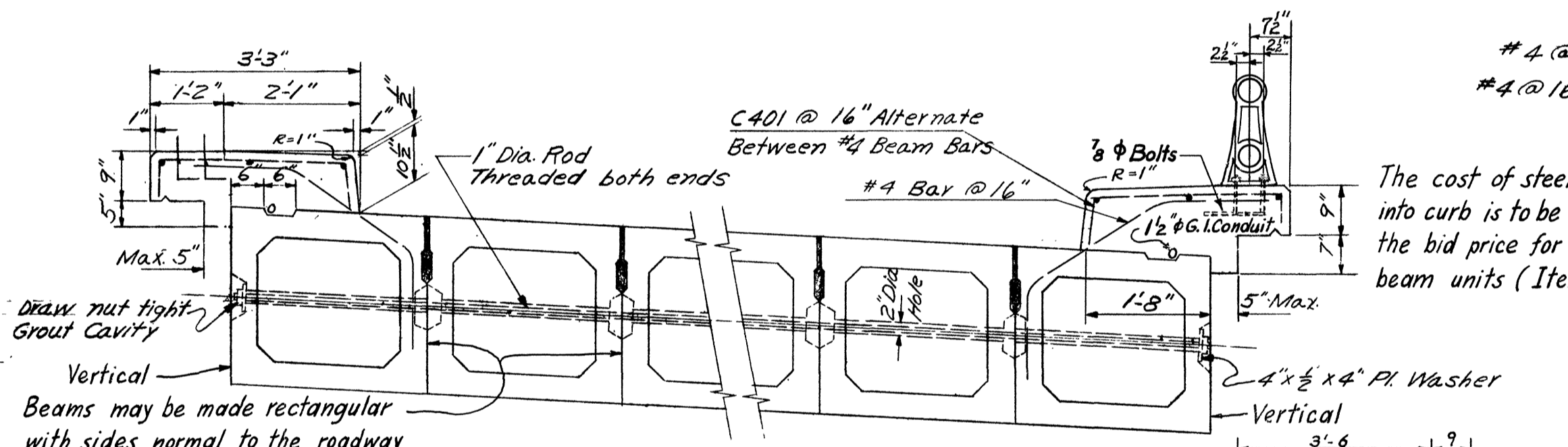
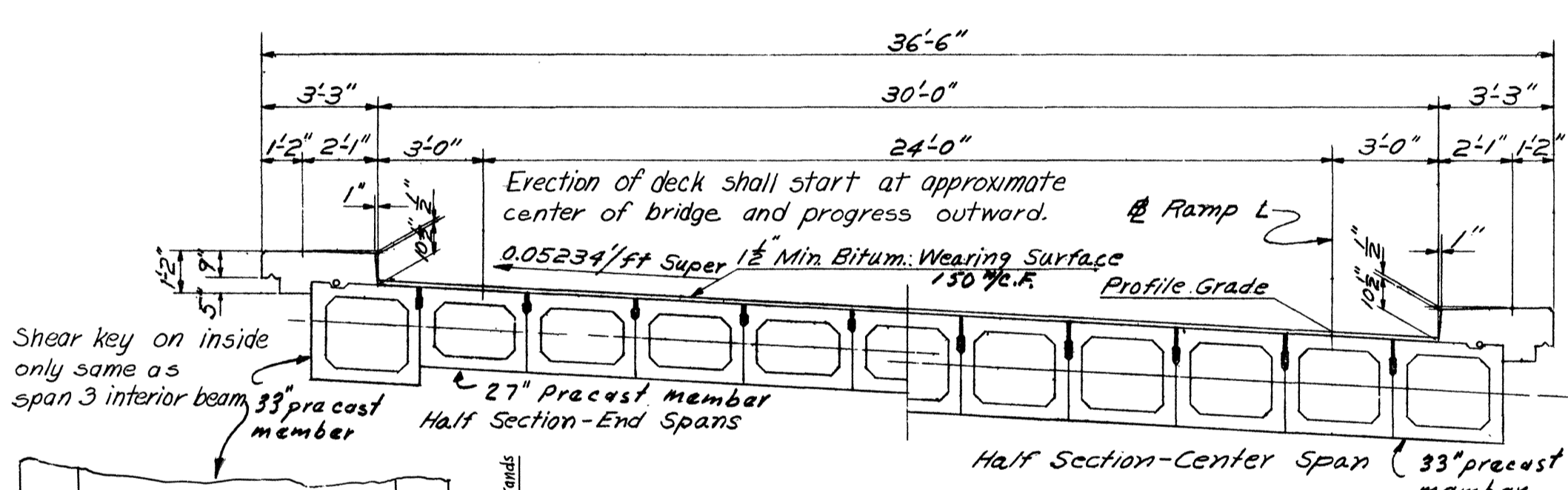
Lateral tension shall be 17,000" in 1" φ bar = 22,000"/in<sup>2</sup> on gross section of bar.

After lateral stressing is completed, fill keys with approved non-shrink grout of high compressive strength and impact resistance. See special provisions.

Curbs cast in place after grouting and lateral stressing.

Initial stress/strand = 14,000 pounds

QUANTITIES						
ITEM NO.	UNIT	ITEM	SPAN 1	SPAN 2	SPAN 3	TOTAL
135-4	C.Y.	Class "A" Concrete	12	14	10	36
135-12	LBS.	Steel Bar Reinforcement	545	560	466	1571



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CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
FOR  
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

DECK PLAN & DETAILS  
RAMP L STRUCTURE OVER  
RIGHT ROADWAY INTERSTATE RTE. 502  
AT SPRING CREEK INTERCHANGE  
STA. 14+790 @ RAMP L  
HAMILTON COUNTY









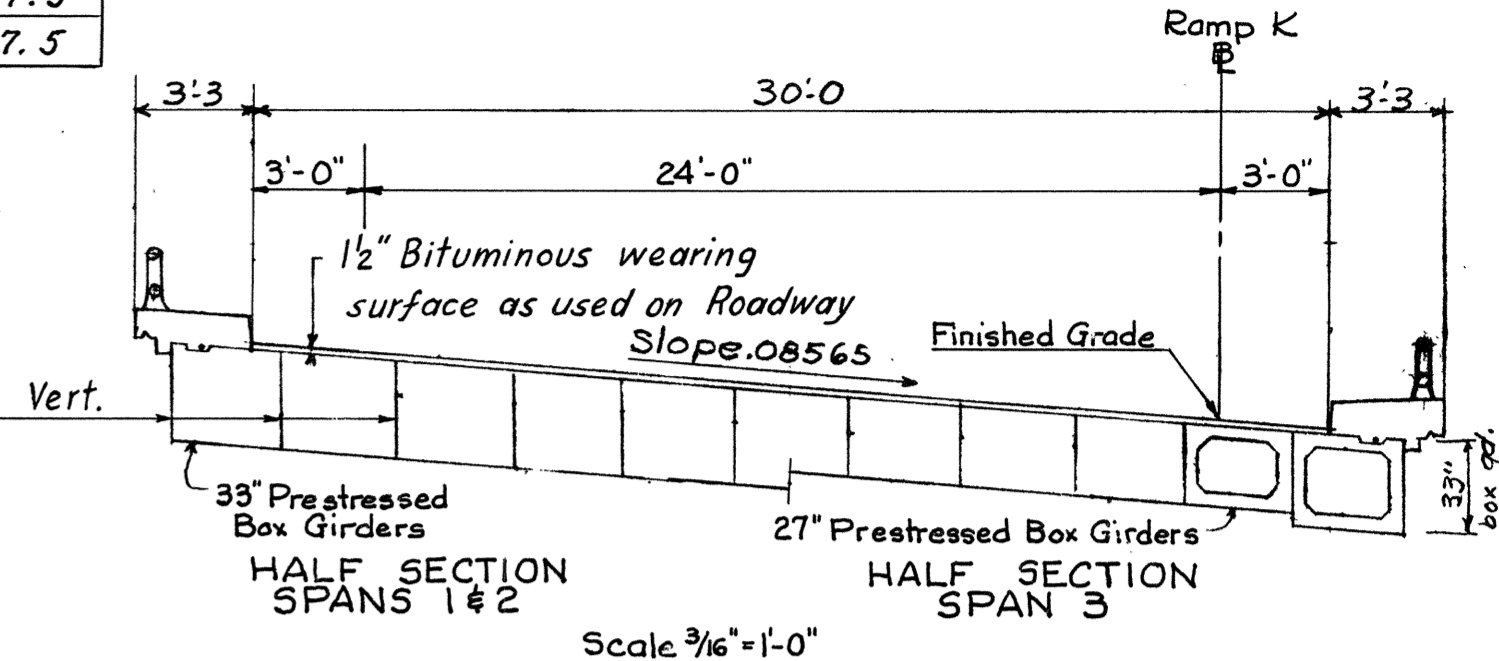
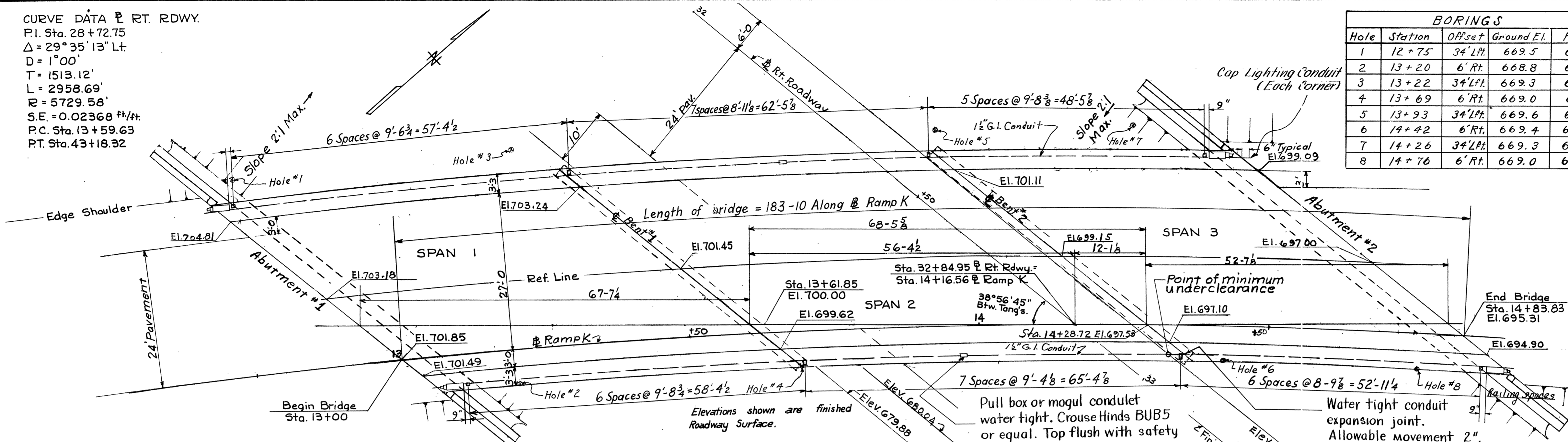


CURVE DATA RT. RDWY.  
 P.I. Sta. 28+72.75  
 $\Delta = 29^\circ 35' 13''$  Lt.  
 $D = 1^\circ 00'$   
 $T = 1513.12'$   
 $L = 2958.69'$   
 $R = 5729.58'$   
 $S.E. = 0.02368$  ft/ft.  
 P.C. Sta. 13+59.63  
 P.T. Sta. 43+18.32

BORINGS					
Hole	Station	Offset	Ground El.	Rock El.	
1	12+75	34' Lt.	669.5	663.0	
2	13+20	6' Rt.	668.8	662.3	
3	13+22	34' Lt.	669.3	664.3	
4	13+69	6' Rt.	669.0	663.0	
5	13+93	34' Lt.	669.6	665.1	
6	14+42	6' Rt.	669.4	667.4	
7	14+26	34' Lt.	669.3	667.3	
8	14+76	6' Rt.	669.0	667.5	

FED. ROAD REG. NO.	T E N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	N	I-75-1(710)	1959	53	336

Boring locations referenced to Ramp K

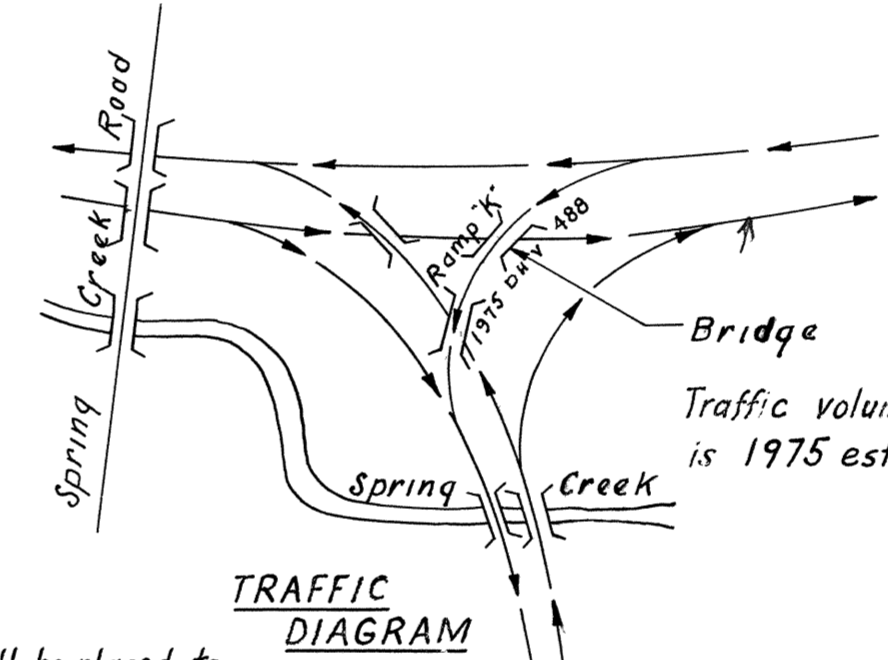


CURVE DATA RAMP K  
 P.I. Sta. 10+98.75  
 $\Delta = 71^\circ 58' 11''$  Rt.  
 $R = 1100'$   
 $D = 5^\circ 12' 31.35''$   
 $T = 798.75'$   
 $L = 1381.72'$   
 $S.E. = 0.08565$  ft/ft.  
 P.C. Sta. 3+00  
 P.C.C. Sta. 16+81.72

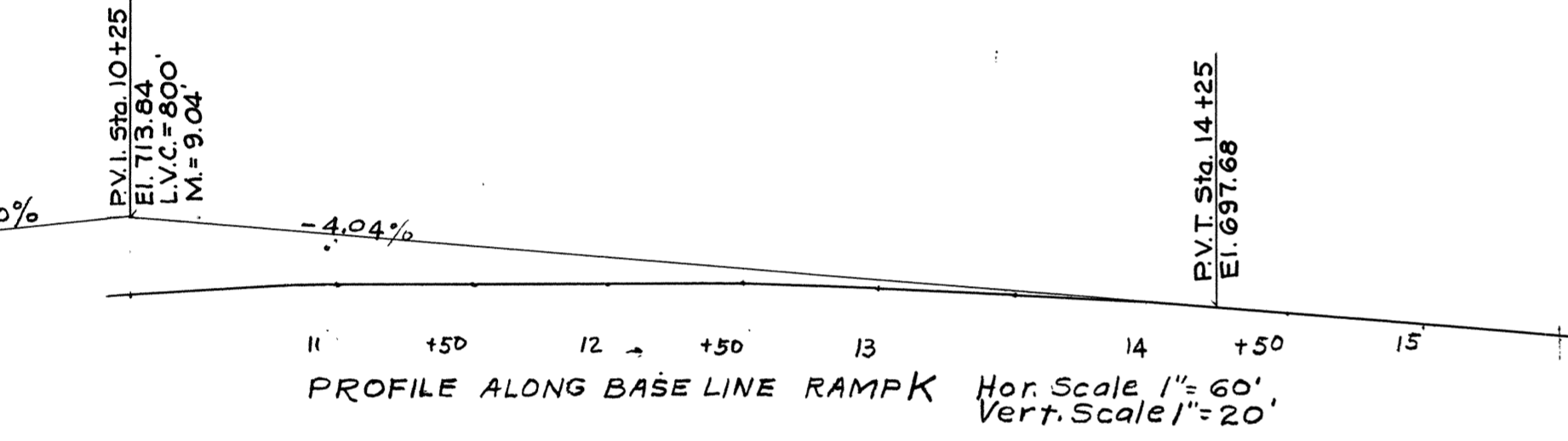
GENERAL PLAN  
 Scale  $\frac{3}{32} = 1'' = 10'$

LIGHTING ACCESSORIES

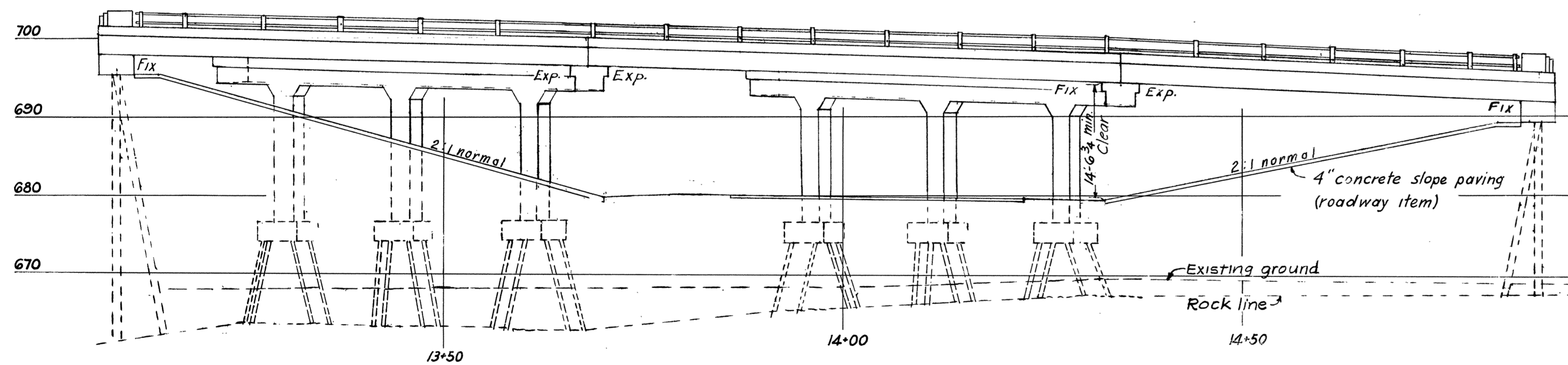
- 4 - Caps
- 375' G.I. Conduit 1 1/2" (deck)
- 2 - Pull boxes
- 4 - Expansion Joints wiring not included



GENERAL NOTES  
 Specifications: A.A.S.H.O. 1957 "Standard Specifications for Highway Bridges" except as modified by Bureau of Public Road's "Policy on Interstate System" and Criteria for Prestressed Concrete Bridges, 1954, and the Standard Specifications for Road and Bridge Construction of the Tennessee Department of Highway and Public Works.



For railing details, see Tennessee Department of Highways and Public Works Standard F-2-115.  
 All railing posts shall be vertical. Railing spacing shown is on  $\frac{1}{2}$ " anchor bolts.



Lower roadway fill shall be placed to roadway subgrade and thoroughly compacted before excavating for bent footings. Upper roadway fill shall be placed at least to bottom of abutment and thoroughly compacted. Drive all piles through any fill in such locations.

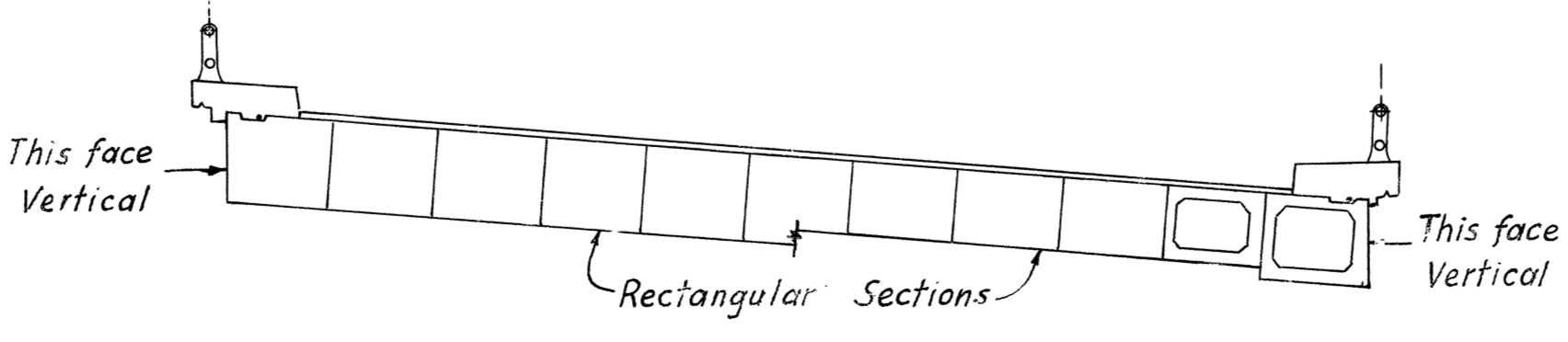
Tapered Prestressed Beams shall maintain the standard minimum width of 3'0" at the narrow end and may be tapered to a maximum of 4" taper per member. One strand of Prestressing Wire shall be added for tapers greater than 3". The Contractor may taper a lesser number of Tapered Members than shown. However, he shall submit a detail layout of members for approval by the Engineer before proceeding with the manufacture of Prestressed Members.

TABLE OF ESTIMATED QUANTITIES

ITEM NO.	UNIT	ITEM	SUB-STRUCTURE			SUPER-STRUCTURE			TOTAL
			ABUT 1	ABUT 2	BENT 1	BENT 2	SPAN 1	SPAN 2	
17-2	C.Y.	Dry Excavation *			88	88			176
135-4	C.Y.	Class 'A' Concrete	21	23	61	60	13	14	209
135-12	Lbs	Steel Bar Reinforcement	2579	2985	10205	10311	709	660	65428123
137-3	L.F.	Steel Piles 10" BP42#							911
Prestressed Beam									
154-4A	Ea.	33' Deep X 6 1/2" Tapered Section					11		11
154-4B	Ea.	33' Deep X 6'-0" Tapered Section					11		11
154-4C	Ea.	27' Deep X 54" Tapered Section					9	9	18
154-4D	Ea.	33' Deep X 54" Tapered Section					2	2	4
502	L.F.	Aluminum Railing (2 Rail)					114	132	246
		Lump Sum Lighting Accessories							

LIST OF DRAWINGS	
TITLE	NO.
GENERAL PLAN	53
DECK PLAN & DETAILS	54
ABUTMENTS	55
BENTS	56
STANDARD ALUMINUM RAIL	F-2-115
STANDARD PILE DETAILS	F-2-118

GENERAL NOTES  
 Steel bar reinforcement shall be intermediate grade or hard grade.  
 All poured in place concrete shall be Class "A".



ALTERNATE METHOD OF CASTING BEAMS

QUANTITIES IN PRESTRESSED BEAMS  
 Concrete 355 cu. yds.  
 Wire Rope 19,800 lbs.  
 Reinf. Steel 28,550 lbs.

PREPARED BY  
 CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
 FOR  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE

GENERAL PLAN  
 RAMP K STRUCTURE OVER  
 RIGHT ROADWAY INTERSTATE RTE. 502  
 AT SPRING CREEK INTERCHANGE  
 (BETWEEN I-514 & I-502) STA. 14+16.56 @ RAMP K  
 HAMILTON COUNTY

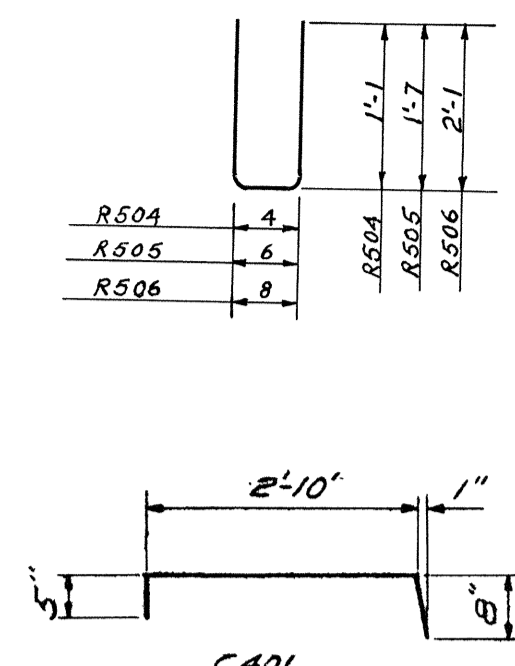
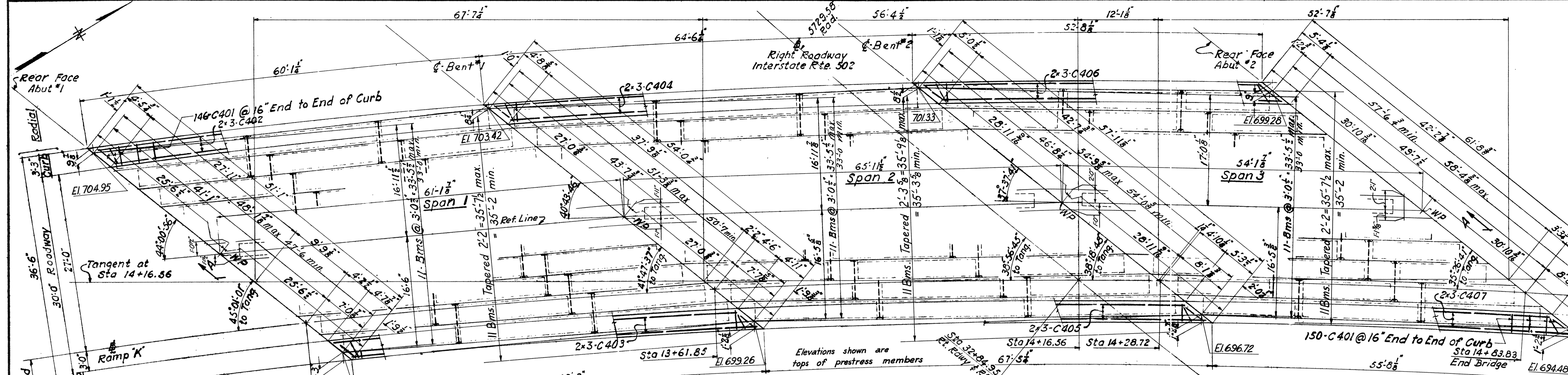
Revised 3-13-59 in accordance with comments by letter of Jan 13, 1959 and conference of Feb. 10, 11, 1959.  
 Revised 4-9-59  
 REV. 8/24/59  
 DESIGNED BY J.G.  
 DRAWN BY DATE  
 TRACED BY DATE  
 CHECKED BY G.F. DATE

5-19-59 Added note about reinforcing.

\* Dry excavation is based on that required for the bents below the lower roadway grade



FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(7)0	1959	54	336



**SUPERSTRUCTURE BAR LIST**

MARK	QUANTITY	WEIGHT	TOTAL
C401	99	108	89
C402	6	31	0
C403	6	32	2
C404	6	33	2
C405	6	34	2
C406	6	27	4
C407	6	28	4
R501	4	8	2
R502	4	8	3
R503	4	8	3
R504	2	2	4
R505	2	2	4
R506	8	8	16
<b>TOTALS</b>	<b>709</b>	<b>660</b>	<b>654</b>

**DECK PLAN**  
Scale: 1/4" = 1'-0"

letter of Jan. 19, 1959 and conference of Feb. 10, 11, 1959.  
 Rev. 5-19-59 Made beam details more complete.  
 Revised 5-17-59 Added tie figures for center members correct. Removed outside ties.

**NOTES:**

Members are standard width 3'-0" at narrow end, and tapered to accommodate geometry of curves. Contractor may taper all or part of members. Maximum taper per member = 4". For tapers in excess of 3" add one strand. Contractor for prestressed members must submit details of members and obtain approval from the engineer before proceeding with manufacture of members. Provision may be made in the fascio of exterior units for approved inserts to facilitate forming of curbs.

W.P. indicates working point

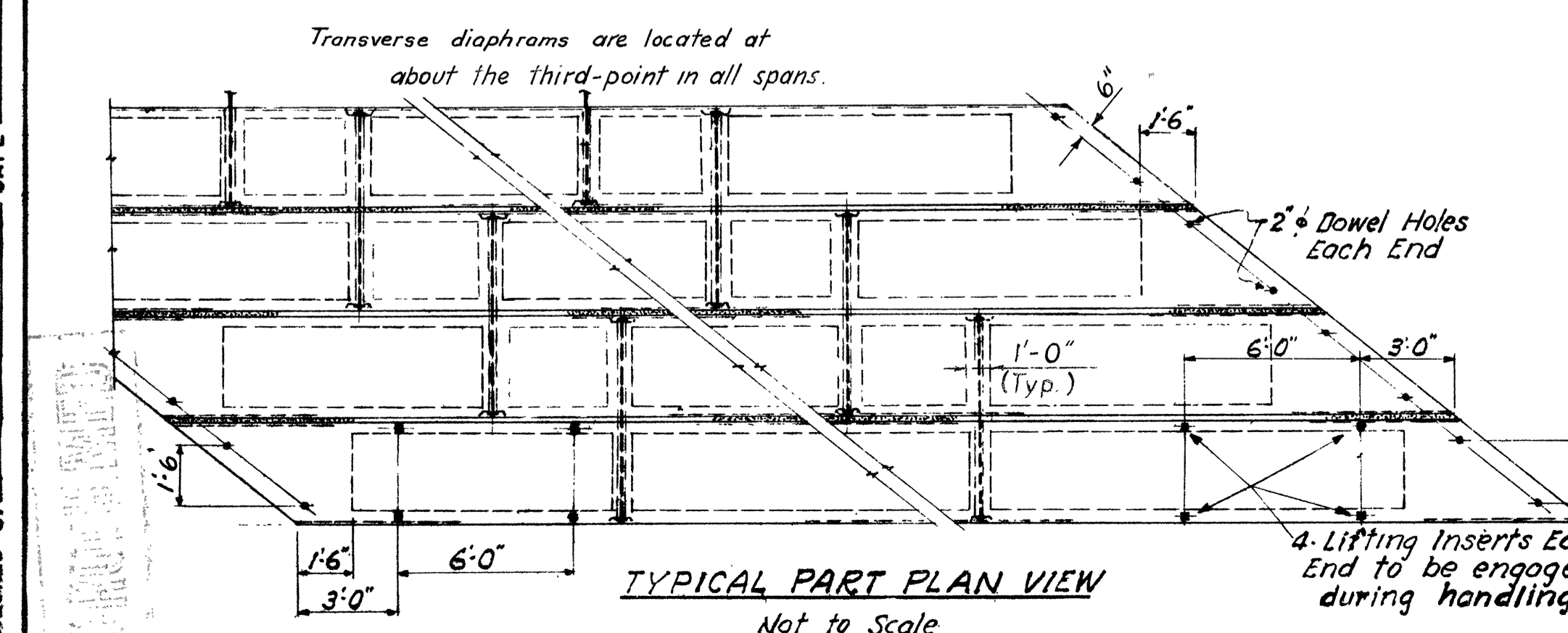
Lateral tension shall be 17,000# in 1" dia bar = 22,000#/in<sup>2</sup> on gross section of bar. After lateral stressing is completed, fill keys with approved non-shrink grout of high compressive strength and impact resistant. See special provisions.

Curbs cast in place after grouting and lateral stressing.

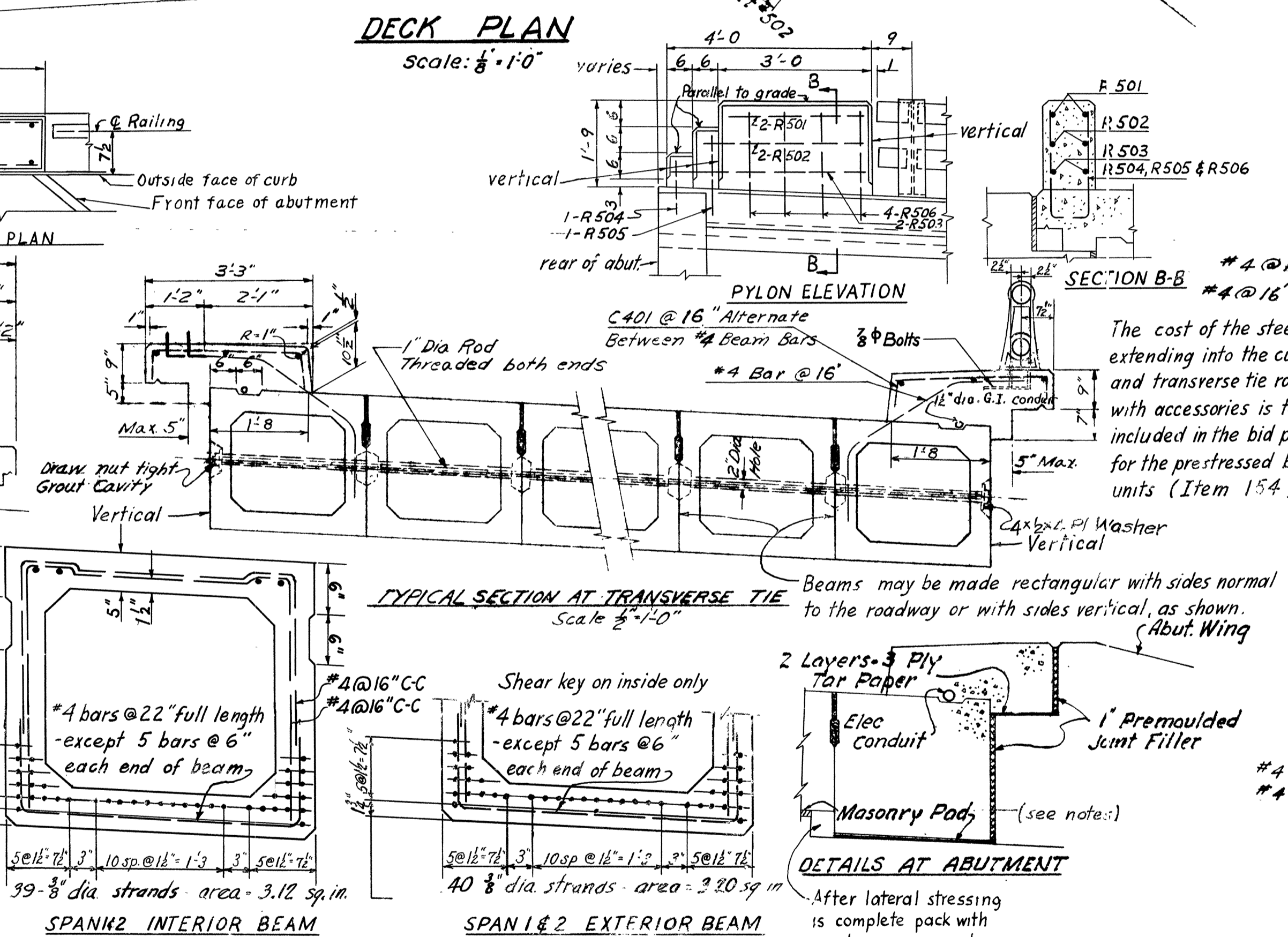
Initial stress per strand = 14,000 pounds

**QUANTITIES**

ITEM NO.	UNIT	ITEM	ABUT 1	ABUT 2	ABUT 3	TOTAL
135-4	CY	Class 21 Concrete	13	14	12	39
135-12	LBS	Steel Bar Reinforcement	709	660	654	2023

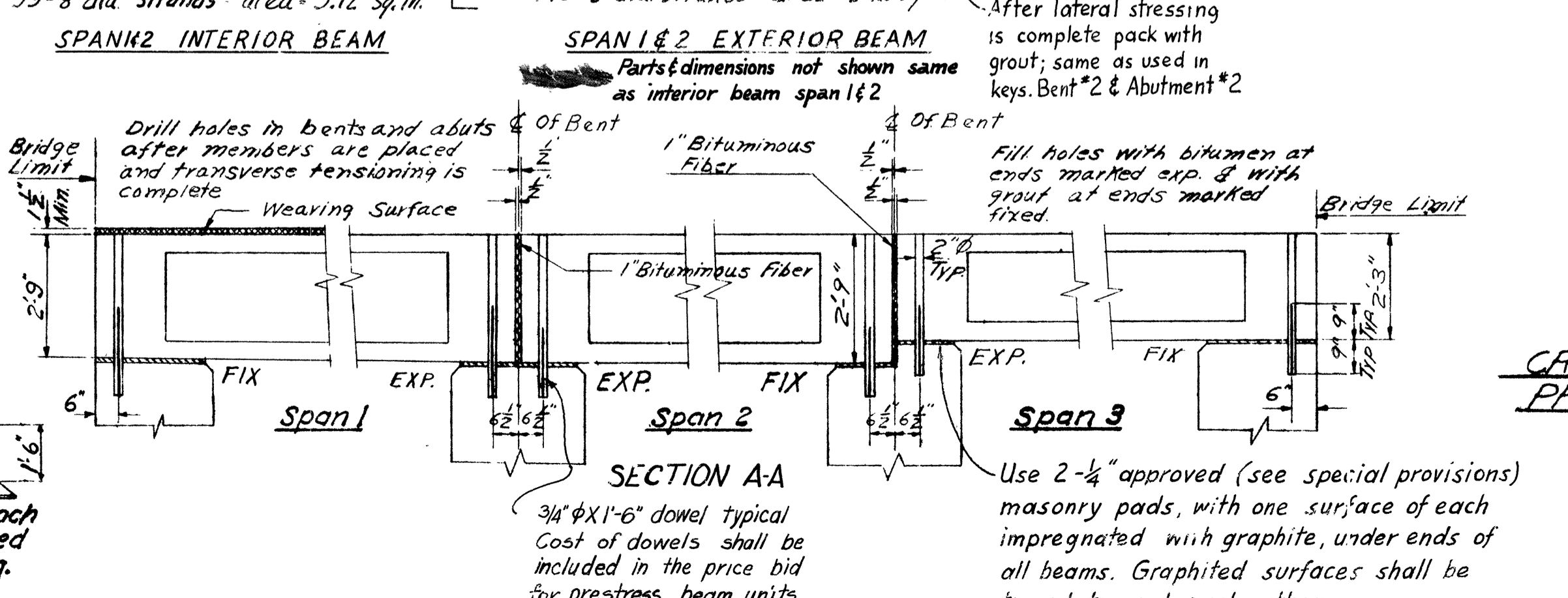


**TYPICAL PART PLAN VIEW**  
Not to Scale



**TYPICAL SECTION AT TRANSVERSE TIE**  
Scale: 1/2" = 1'-0"

**DETAILS AT ABUTMENT**



**SECTION A-A**

**CROSS SECTION OF PRESTRESSED BEAMS**

PREPARED BY  
CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
FOR  
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

DECK PLAN & DETAILS  
RAMP K STRUCTURE OVER  
RIGHT ROADWAY INTERSTATE RTE 502  
AT SPRING CREEK INTERCHANGE  
STA 14+1656 @ RAMP K  
HAMILTON COUNTY









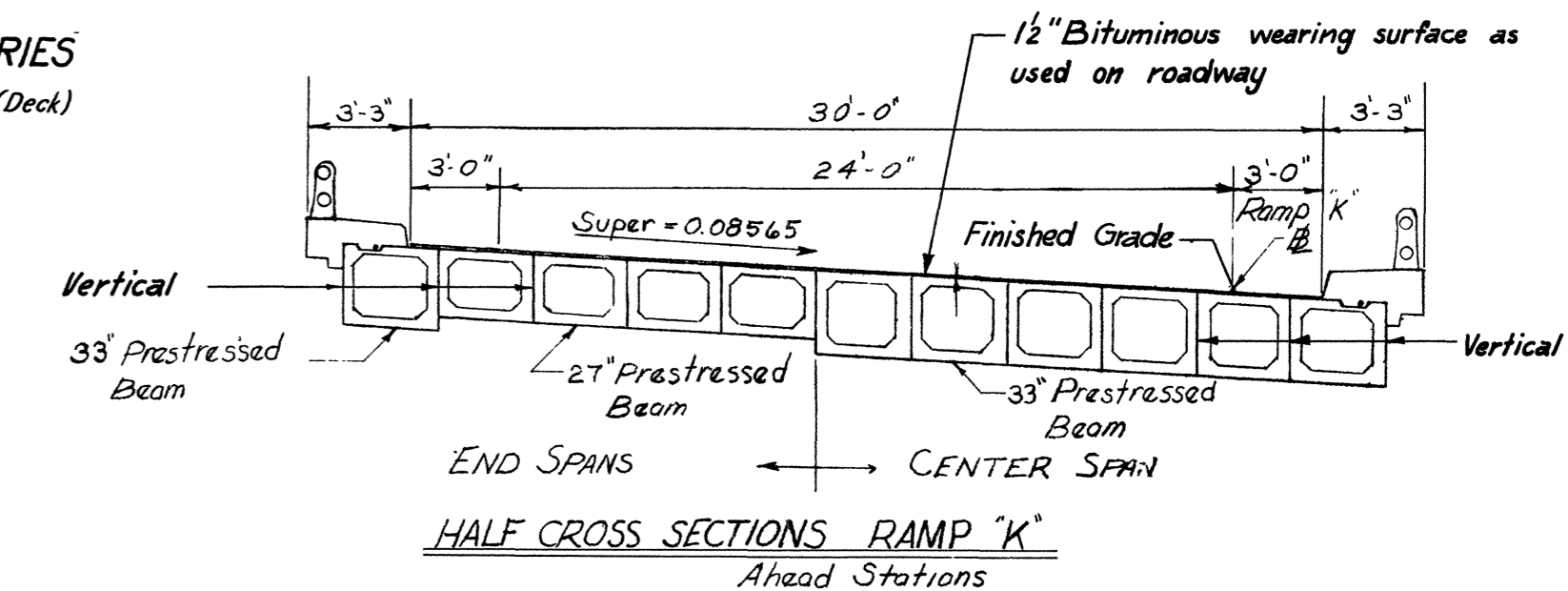
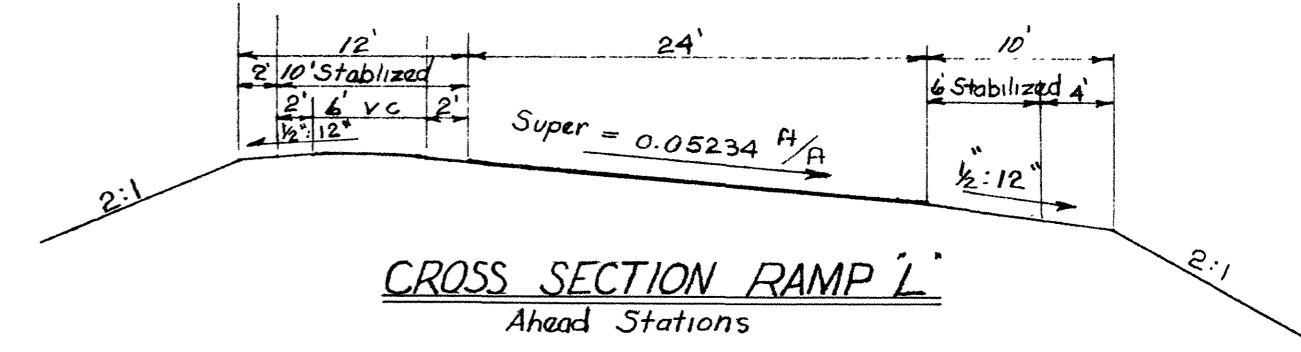
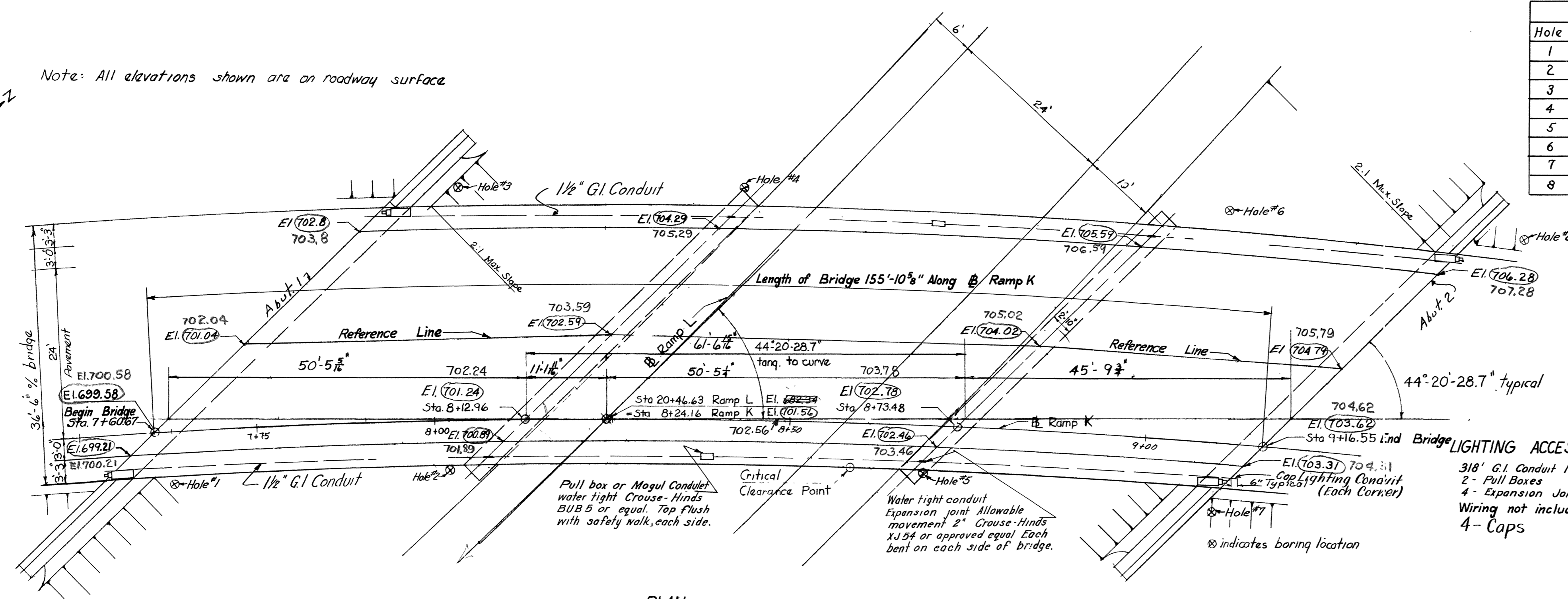


FED. ROAD REG. NO.	T E N. N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(70)	1959	57	336

BORINGS					
Hole	Station	Offset	Ground El.	Rock El.	
1	7+63	6'-9" RT	666.5	656.0 no rock	
2	8+02	6'-9" RT	666.7	660.6	
3	8+04	32'-9" LF	666.6	661.6	
4	8+73	32'-9" LF	666.8	662.4	
5	8+69	6'-9" RT	666.9	660.9	
6	9+09	32'-9" LF	667.1	659.6 no rock	
7	9+10	6'-9" RT	667.1	657.7	
8	9+50	32'-9" LF	667.1	660.4	

Boring locations are referenced to Ramp K

Note: All elevations shown are on roadway surface



- LIGHTING ACCESSORIES
- 318' G.I. Conduit 1/2" (Deck)
  - 2 - Pull Boxes
  - 4 - Expansion Joints
  - Wiring not included.
  - 4 - Caps

Pull box or Mogul Conduit water tight Grouse-Hinds BUB 5 or equal. Top flush with safety walk, each side.

Critical Clearance Point

Water tight conduit Expansion joint Allowable movement 2" Grouse-Hinds XJ 54 or approved equal Each bent on each side of bridge.

GENERAL NOTES

Specifications: A.A.S.H.O. 1957 "Standard Specifications for Highway Bridges" except as modified by Bureau of Public Road's "Policy on Interstate System" and Criteria for Prestressed Concrete Bridges, 1954, and the Standard Specifications for Road and Bridge Construction of the Tennessee Department of Highway and Public Works.

Loading H20-SIG-44 PPM 20-4

Cost of joint material shall be included in Class "A" concrete unless otherwise provided for in special provisions.

The 1/2" Bituminous wearing surface is included in Bridge Quantities on Roadway Plans.

Lighting Accessories installation shall include all lighting accessories shown on plan complete in place except wiring. SPECIFICATIONS for roadway lighting shall apply. Wiring to be installed under Roadway Lighting item.

Bar sizes are indicated in bar marks. The first digit of three numeral marks and the first two digits of four numeral marks indicate the bar diameter in eighths of inches and the last two digits indicate the specific bar.

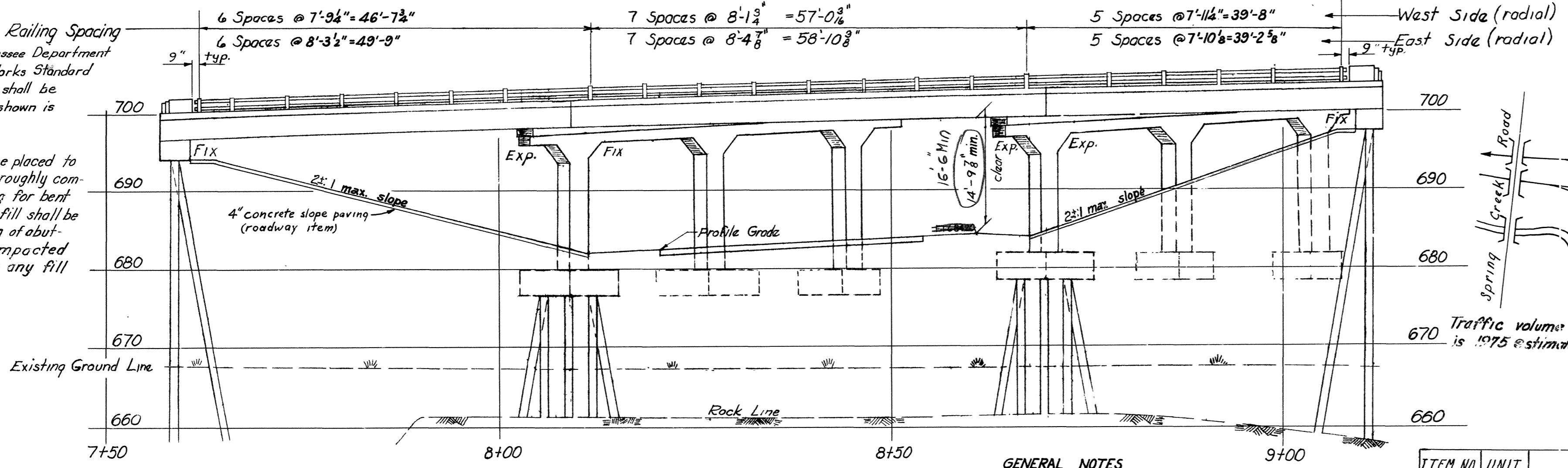
Tapered prestressed beams shall maintain the standard minimum width of 3'-0" at the narrow end and may be tapered to a maximum of 4" per member. One strand of Prestressing Wire shall be added for tapers of 2" to 3" and two strands for tapers greater than 3".

The Contractor may taper a lesser number of Tapered Members than shown. However, he shall submit a detail layout of members for approval by the Engineer before proceeding with the manufacture of Prestressed Members.

Railing Spacing

For railing details see Tennessee Department of Highways and Public Works Standard F-2-115. All railing posts shall be vertical. Railing spacing shown is on E of anchor bolts.

Lower roadway fill shall be placed to roadway subgrade and thoroughly compacted before excavating for bent footings. Upper roadway fill shall be placed at least to bottom of abutment and thoroughly compacted. Drive all piles through any fill in such locations.



GENERAL NOTES

Steel bar reinforcement shall be intermediate grade or hard grade.

All poured in place concrete shall be Class "A".

TRAFFIC DIAGRAM

TABLE OF ESTIMATED QUANTITIES

ITEM NO.	UNIT	ITEM	SUB STRUCTURE			SUPER STRUCTURE			TOTAL
			ABUT. 1	ABUT. 2	BENT 2	SPAN 1	SPAN 2	SPAN 3	
17-2	C.Y.	Dry Excavation * Bridges		117	117				234
135-4	C.Y.	Class "A" Concrete	22	19	61	61	13	15	202
135-12	Lbs	Steel Bar Reinforcement	2145	2307	9829	9945	596	587	26544
137-3	L.F.	Steel Piles 10BP#2							1329
154-5A	Each	27' deep x avg. length 52'-0" Tapered section				9			9
154-5B	Each	27' deep x avg. length 72'-0" Tapered section					9		9
154-5C	Each	33' deep x avg. length 60'-4" Tapered section					11		11
154-5D	Each	33' deep x avg. length 42'-9" Tapered section						2	2
154-5E	Each	33' deep x avg. length 51'-8" Tapered section					2		2
502	L.F.	Aluminum railing (2 rails)				96	120	78	294

\* Dry excavation is based on that required for bents below the lower roadway grade.

LIST OF DRAWINGS

TITLE	NO.
GENERAL PLAN	57
DECK PLAN & DETAILS	58
ABUTMENTS	59
BENTS	60
STD ALUMINUM RAIL	F-2-115
STD PILE DETAILS	F-2-116

PREPARED BY  
CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
FOR

STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

GENERAL PLAN  
RAMP K STRUCTURE OVER RAMP L  
AT SPRING CREEK INTERCHANGE  
(BETWEEN I-514 & I-502) STA. 8+24.16 @ RAMP K  
HAMILTON COUNTY

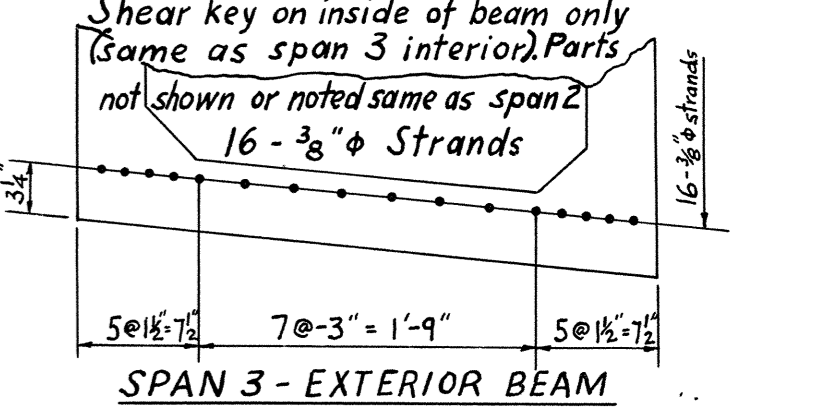
DESIGNED BY: J.P.C. DATE: 1-10-59  
DRAWN BY: J.P.C. DATE: 1-10-59  
TRACED BY: J.P.C. DATE: 1-10-59  
CHECKED BY: J.P.C. DATE: 1-10-59

REVISED 3-13-59 in accordance with comments by letter of Jan. 19 1959 and conference of Feb. 10, 11, 1959.  
REVISED 4-9-59  
REV. 3-18-60 Elev. of Roadway Surface

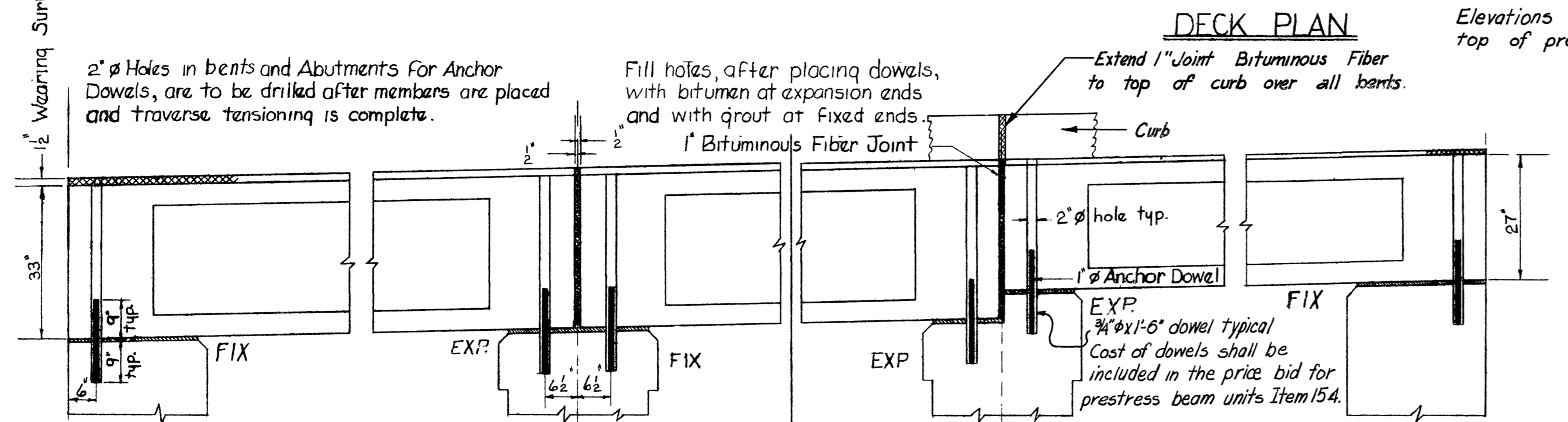
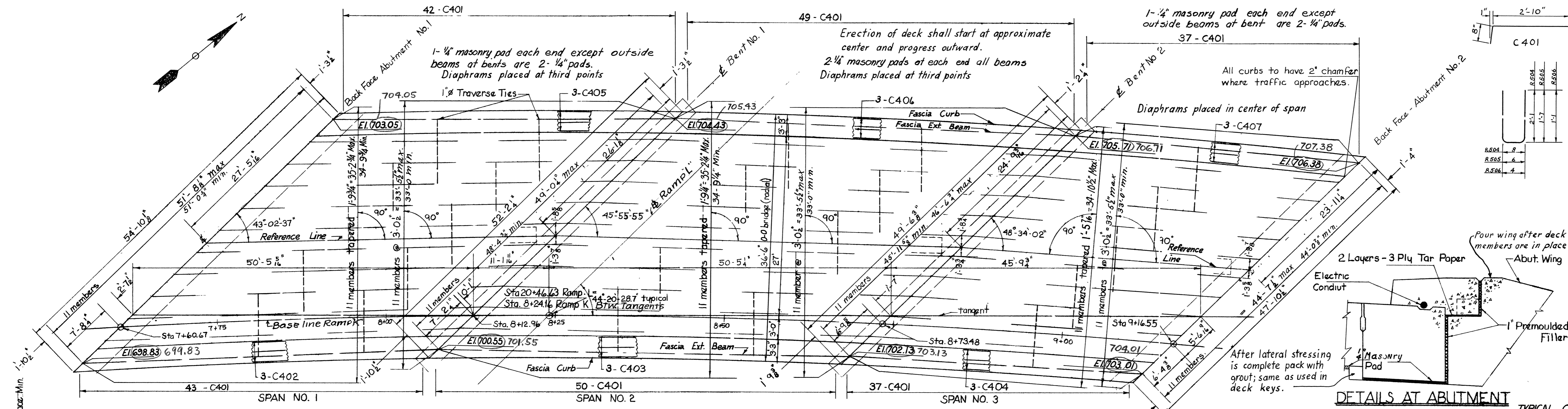
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DRAWN BY: J.P.C. DATE: 1-10-59  
TRACED BY: J.P.C. DATE: 1-10-59  
CHECKED BY: J.P.C. DATE: 1-10-59



FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(7)0	1959	58	336

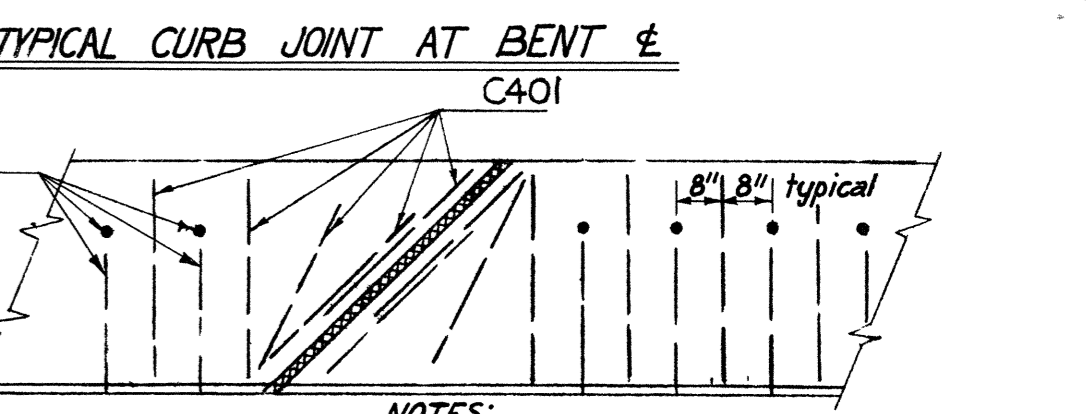
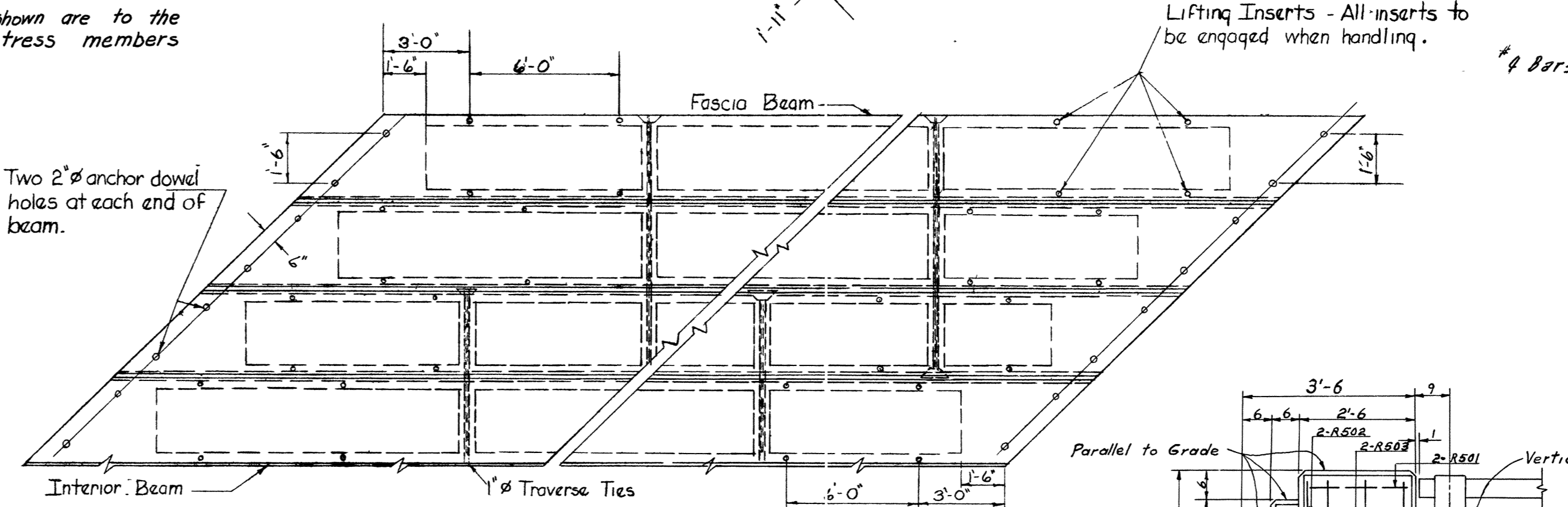


SUPERSTRUCTURE BAR LIST					
MARK	QUANTITY	LENGTH	TYPE	WEIGHT	TOTAL
C401	85	99	74	258	3-11 Bent 227 259 134 675
C402	6	6	27-0	STR	110
C403	6	6	31-1	STR	127
C404	6	6	22-4	STR	91
C405	6	6	26-0	STR	106
C406	6	6	30-3	STR	123
C407	6	6	21-9	STR	89
R501	4	4	8	2-2	STR 9 9 18
R502	4	4	8	2-8	STR 11 11 22
R503	4	4	8	3-2	STR 13 13 26
R504	2	2	16	4-10	Bent 40 40 80
R505	2	2	4	3-8	Bent 8 8 16
R506	2	2	4	2-6	Bent 5 5 10
Totals					524 509 463 1493



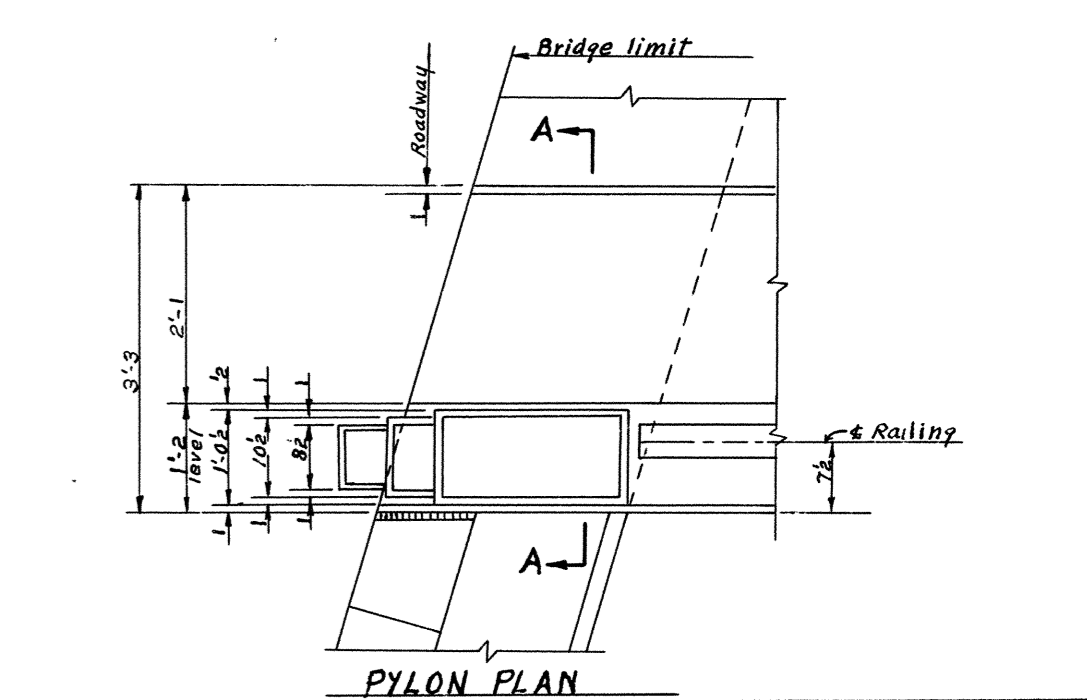
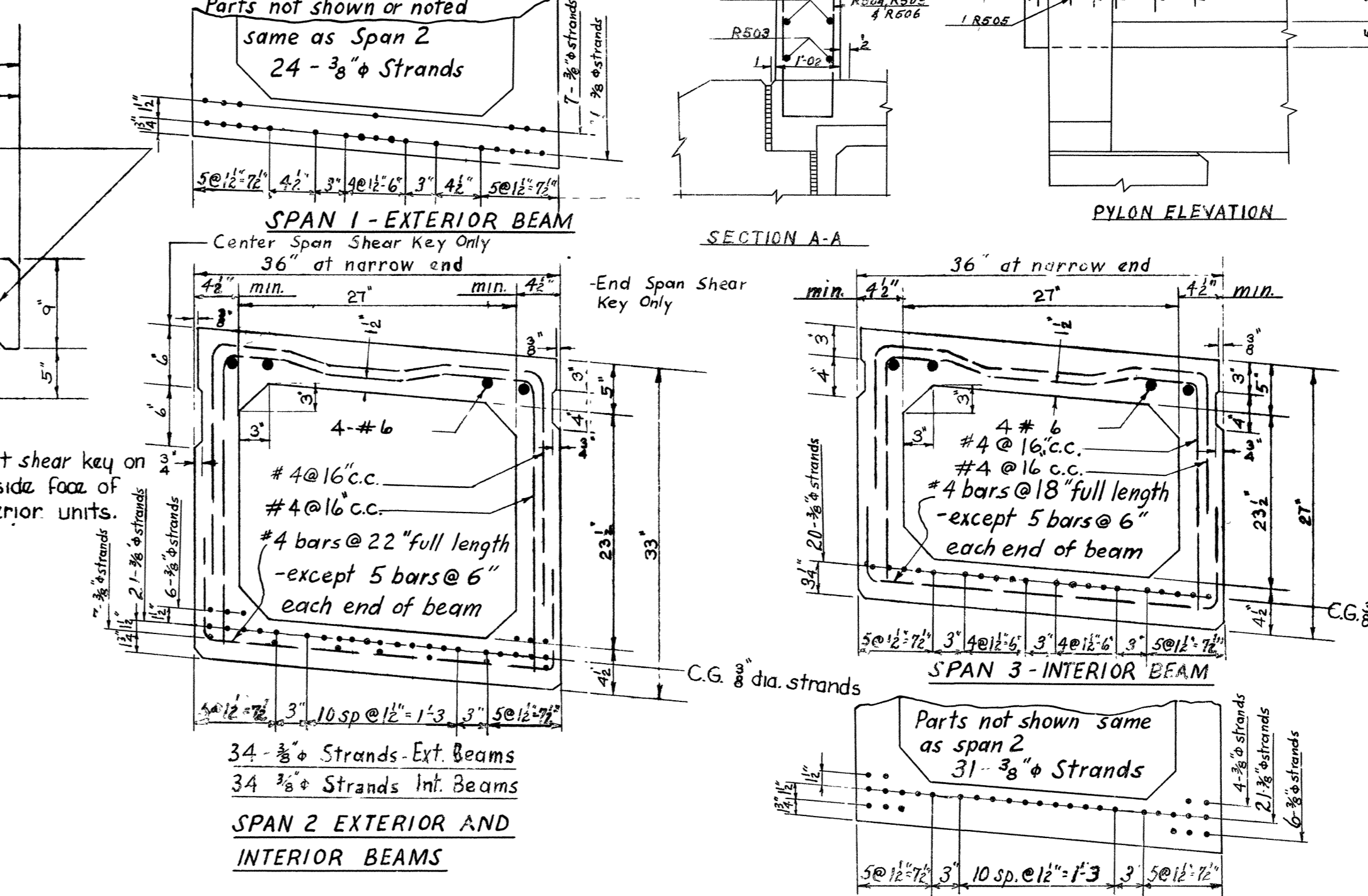
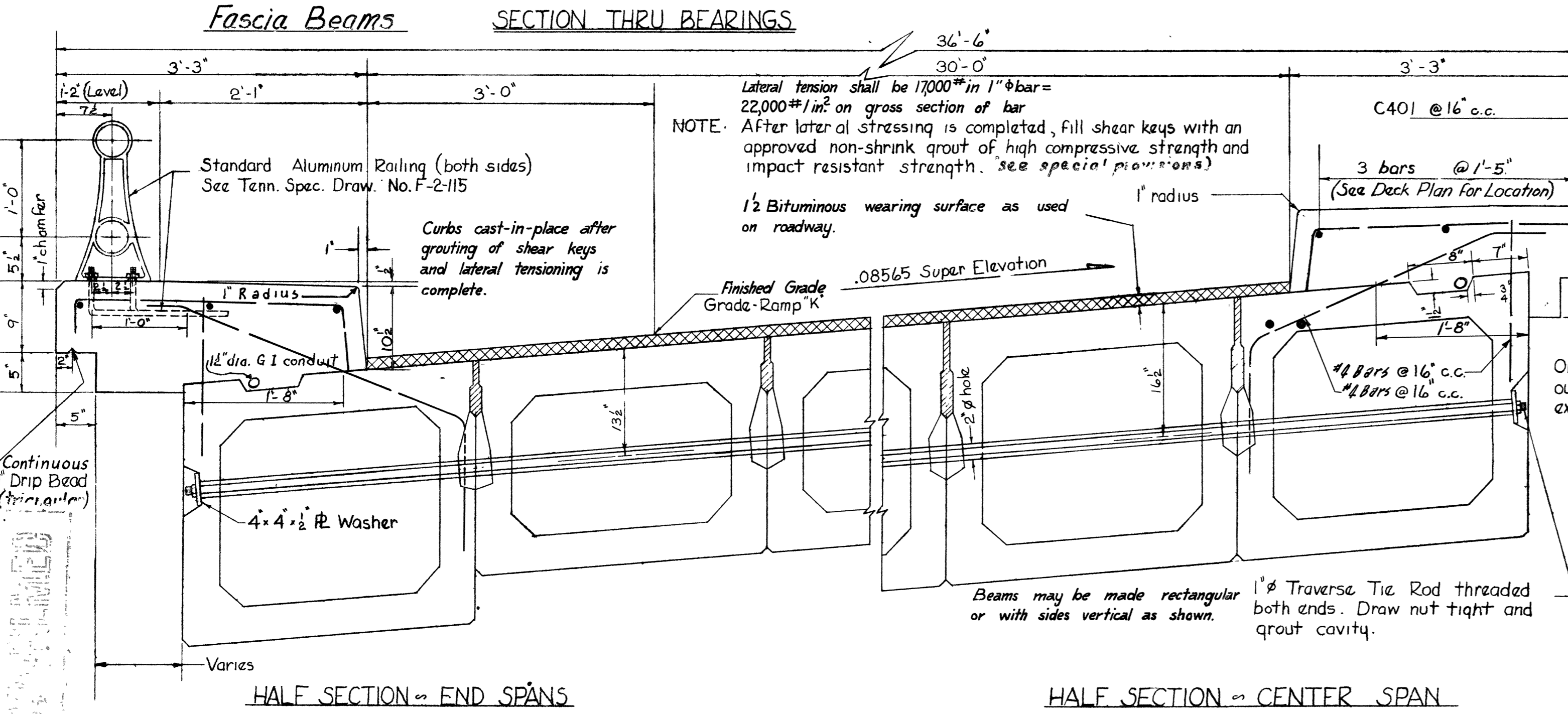
Where two 1/4 masonry pads are used one surface of each pad shall be impregnated with graphite. Graphited surfaces shall be turned toward each other. Where one masonry pad is used turn graphited surfaces up. (See Special Provisions)

Cost of steel extending from prestressed beam into medians and curbs shall be included in the price bid for prestress beam units (item 154).



NOTES:  
Contractor may taper all or part of members. Maximum taper is 4" per member. Add one strand for tapers 2" to 3"; two strands 3" to 4".  
Initial Stress/Strand = 14,000 pounds  
Members are standard width 3'-0" at narrow end and are tapered to accommodate the Geometry of the curves.  
Contractor for prestressed members must submit details of members and obtain approval from the Engineer before proceeding with the manufacture of the members. Provisions may be made in the fascia of exterior units for approved inserts to facilitate forming of curbs.

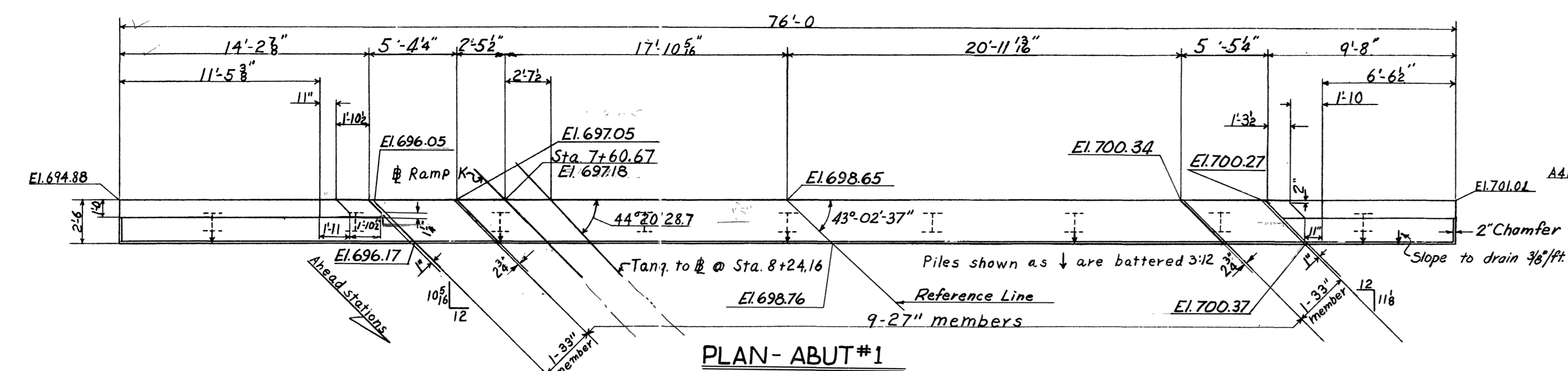
QUANTITIES						
ITEM	UNIT	ITEM	SPAN 1	SPAN 2	SPAN 3	TOTAL
135-4	C.Y.	Class "A" Concrete	13	15	11	39
135-12	LBS.	Steel Bar Reinforcement	596	587	515	1698



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DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE  
DECK PLAN & DETAILS  
RAMP K STRUCTURE OVER RAMP L  
AT SPRING CREEK INTERCHANGE  
(BETWEEN I-514 & I-502) STA. 8+24.16 @ RAMP K  
HAMILTON COUNTY

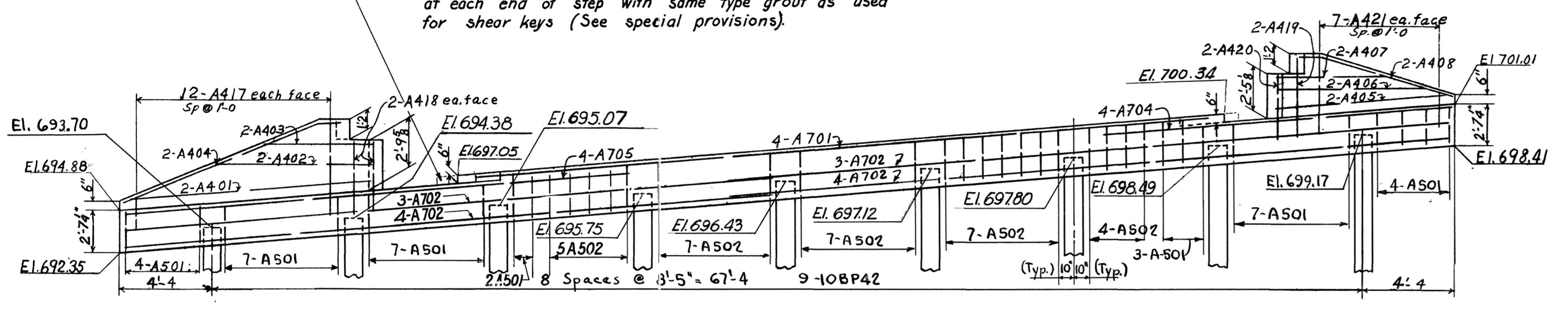
Revised 3-13-59 in accordance with comments by letter of Jan 19, 1959 and conference of Feb. 10, 11, 1959.  
 DATE 2A, Suppt. 58  
 DRAWN BY J.P.C.  
 TRACED BY J.P.C.  
 CHECKED BY J.P.C.  
 DATE 3-18-60 - Elev. of top of prestressed members



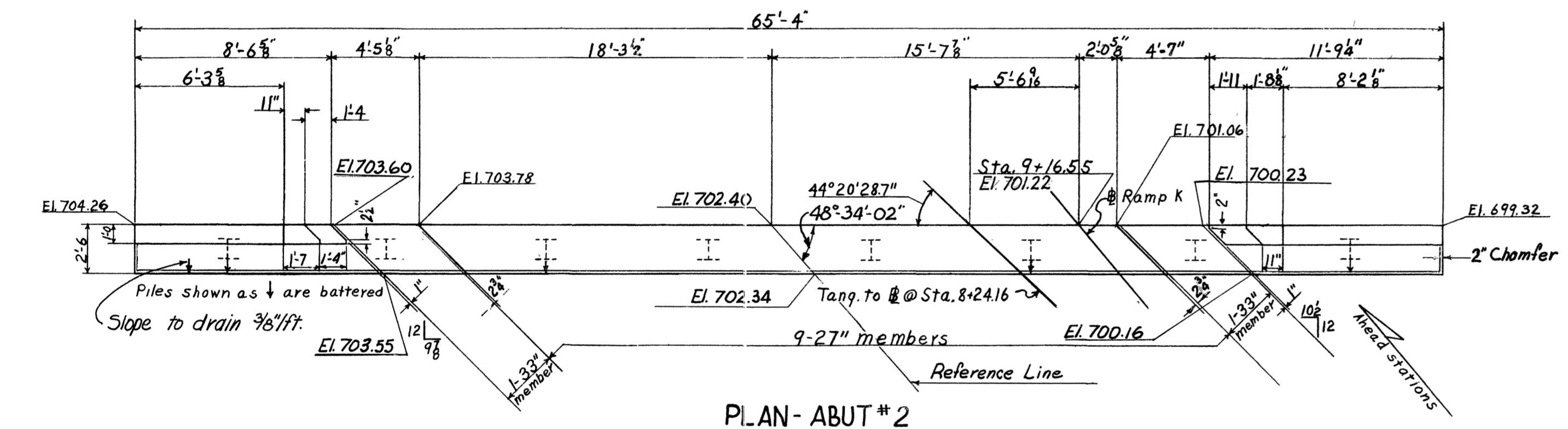


PLAN-ABUT #1

After lateral tensioning is complete, pack excess opening at each end of step with same type grout as used for shear keys (See special provisions).

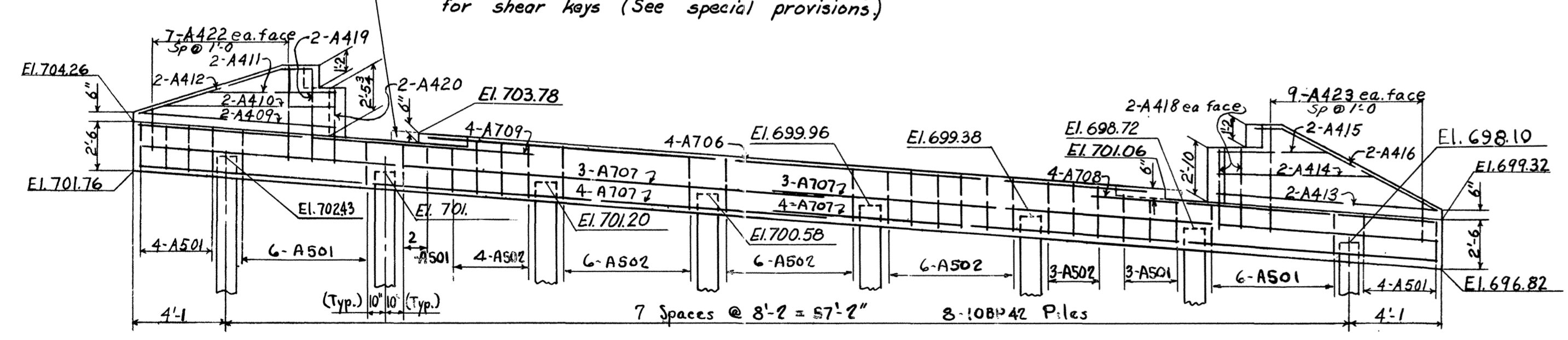


ELEVATION-ABUT #1

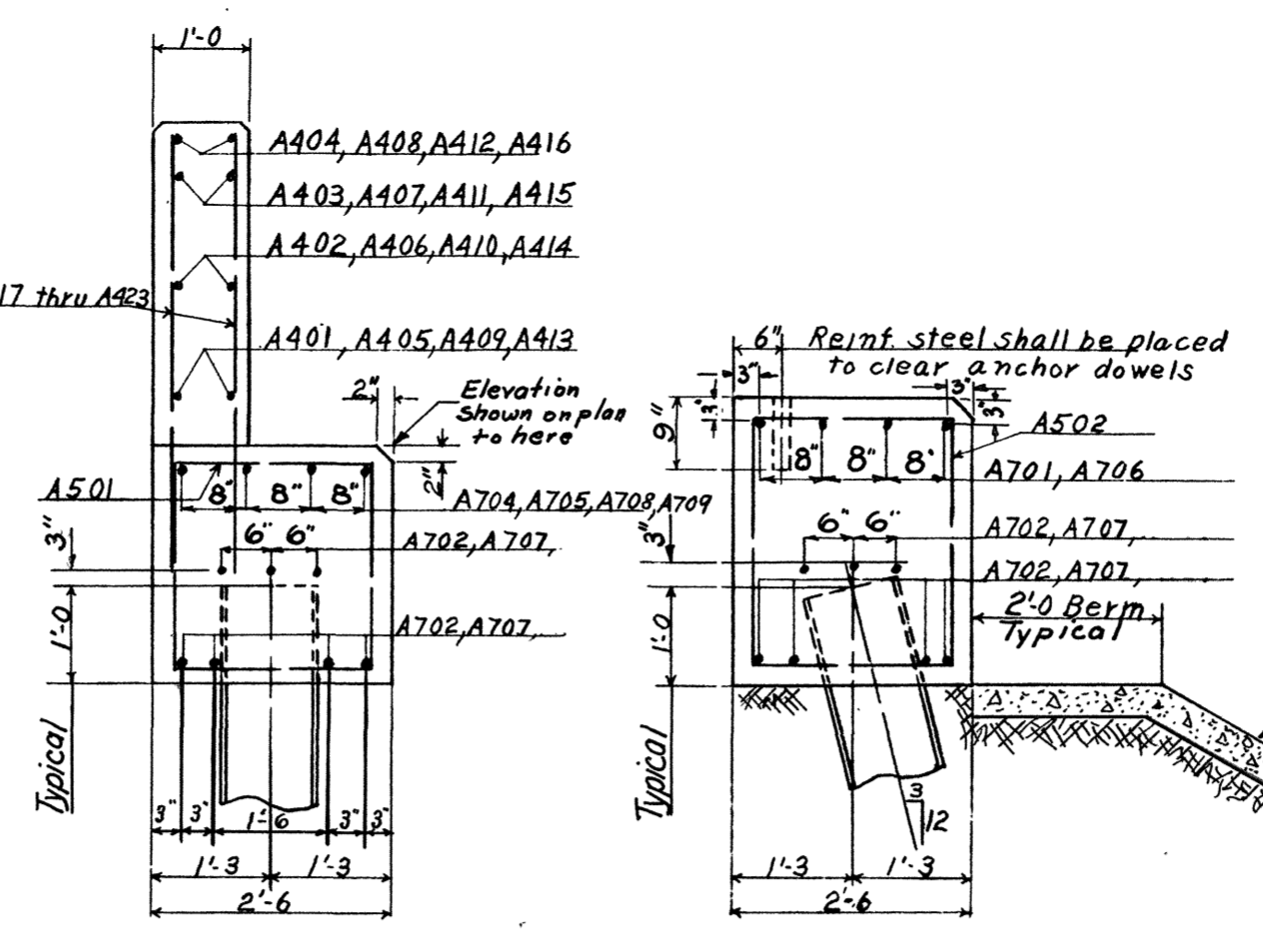


PLAN-ABUT #2

After lateral tensioning is complete, pack excess opening at each end of step with same type grout as used for shear keys (See special provisions).



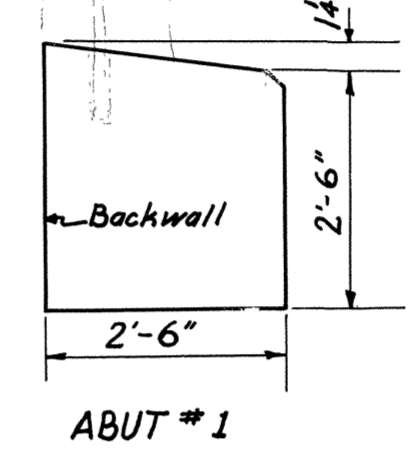
ELEVATION-ABUT #2



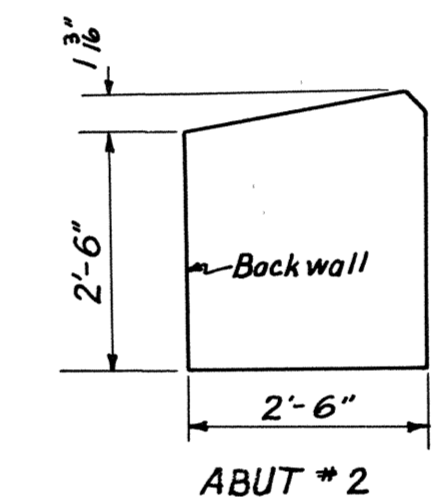
SECTION THRU WING

SECTION SHOWING BATTERED PILE

4" Concrete slope paving (roadway item)



ABUT #1



ABUT #2

ABUTMENT CAP BEVEL DETAIL  
Normal Section

NOTES:  
Elevations on top of piles are on a straight line joining elevations shown for end piles.  
Wing Walls shall be poured after deck members are in place.  
Piles are 10BD42 point bearing on rock or driven to a minimum bearing of 36 tons per pile.  
For pile detail see Tennessee Department of Highways and Public Works standard drawing F-2-113 7-3-58.

Top of abutments shall be built parallel to grade.  
Reinforcing shall have 2" cover from all faces, unless otherwise noted.  
Reinforcing in cap shall be placed to clear anchor dowels. For spacing of dowels see details of members by prestress contractor.  
Top of each abut. shall be stringlined for slope with adjacent substructure units.

MARK	SIZE	REQUIRED		LENGTH	TYPE	DIMENSION		REMARKS	WEIGHT
		ABUT 1	ABUT 2			A	B		
A401	# 4	2	2	13'-11"	Str				19
A402	4	2	2	8'-9"	Str				12
A403	4	2	2	6'-4"	Str			Bend in field	8
A404	4	2	2	12'-10"	Str				17
A405	4	2	2	9'-4"	Str				12
A406	4	2	2	7'-6"	Str				10
A407	4	2	2	5'-3"	Str				7
A408	4	2	2	8'-0"	Str			Bend in field	11
A409	4	2	2	8'-3"	Str				11
A410	4	2	2	7'-2"	Str				10
A411	4	2	2	5'-9"	Str			Bend in field	8
A412	4	2	2	7'-9"	Str				10
A413	4	2	2	11'-5"	Str				15
A414	4	2	2	7'-9"	Str				10
A415	4	2	2	5'-4"	Str				7
A416	4	2	2	9'-8"	Str			Bend in field	13
A417	4	2A	2A	5'-0" to 19A	Str			Varies by 6"	56
A418	4	4	4	3'-10"	Str			Varies by 6"	20
A419	4	2	2	4'-8"	Str			Varies by 5"	12
A420	4	2	2	3'-6"	Str				10
A421	4	14	14	4'-8" to 1-8"	Str			Varies by 6"	30
A422	4	14	14	4'-8" to 1-8"	Str			Varies by 6"	30
A423	4	18	18	5'-1" to 1-9"	Str			Varies by 5"	41
A501	# 5	34	25	59	9'-6"	1	2'-2"	2'-2"	59.4
A502	# 5	30	25	55	10'-6"	1	2'-2"	2'-8"	61.2
A701	# 7	4	4	40-2	Str				3.3
A702	7	14	14	38-2	Str				113.5
A704	7	4	4	21-0	Str				17.4
A705	7	4	4	27-0	Str				22.4
A706	7	4	4	35-8	Str				29.5
A707	7	14	14	33-9	Str				97.8
A708	7	4	4	18-6	Str				16.2
A709	7	4	4	20-0	Str				16.6
TOTAL									2745 2307
TOTAL									5052

QUANTITIES					
ITEM No.	UNIT	ITEM	ABUT 1	ABUT 2	TOTAL
135-4	CY	Class 'A' Concrete	22	19	41
135-12	LBS	Steel Bar Reinforcement	2745	2307	5052

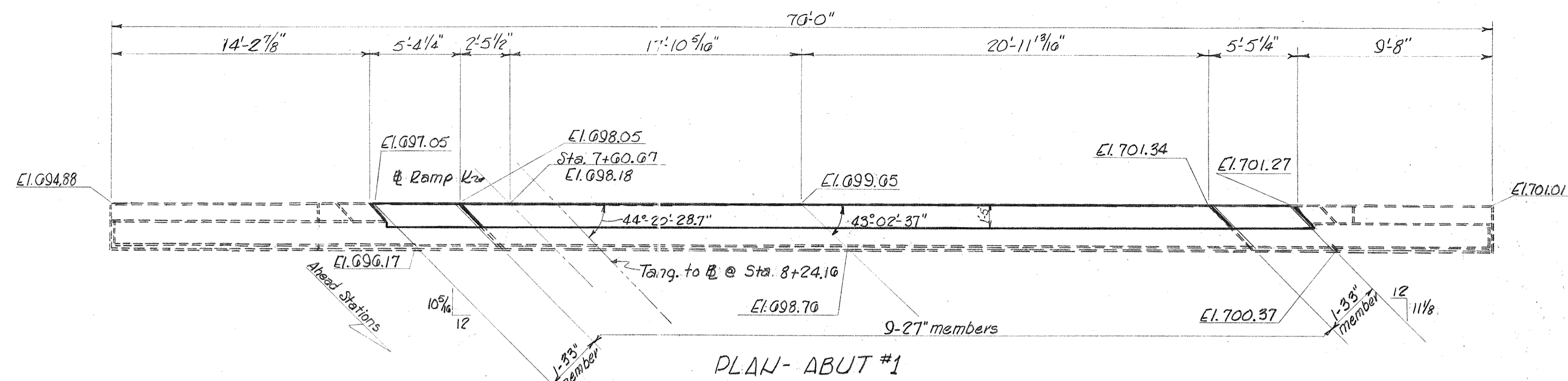
PREPARED BY  
CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
FOR  
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE  
ABUTMENTS  
RAMP K STRUCTURE OVER RAMP L  
AT SPRING CREEK INTERCHANGE  
(BETWEEN I-514 & I-502) STA. 8+24.16 @ RAMP K  
HAMILTON COUNTY

Revised 313-59 in accordance with comments with letter of Jan. 19, 1959 and conference of Feb. 10, 1959.

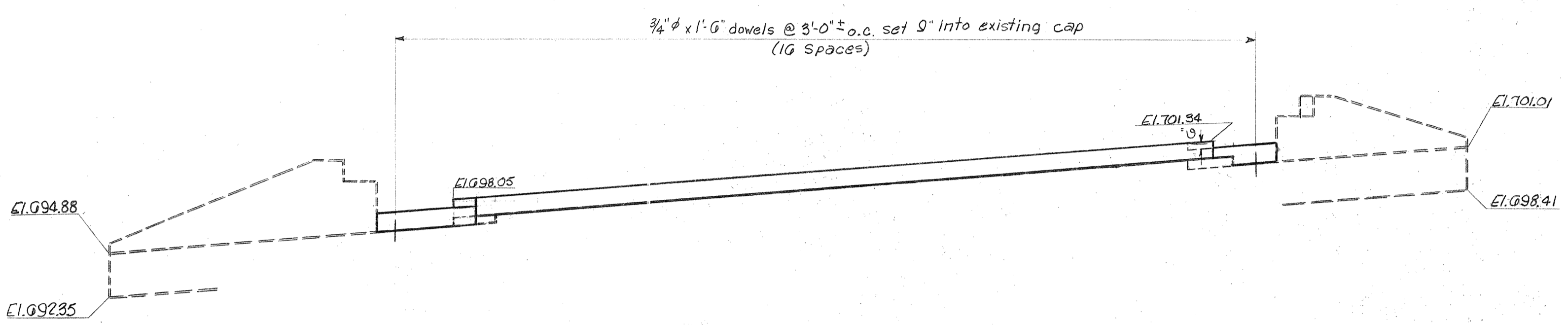
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 TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



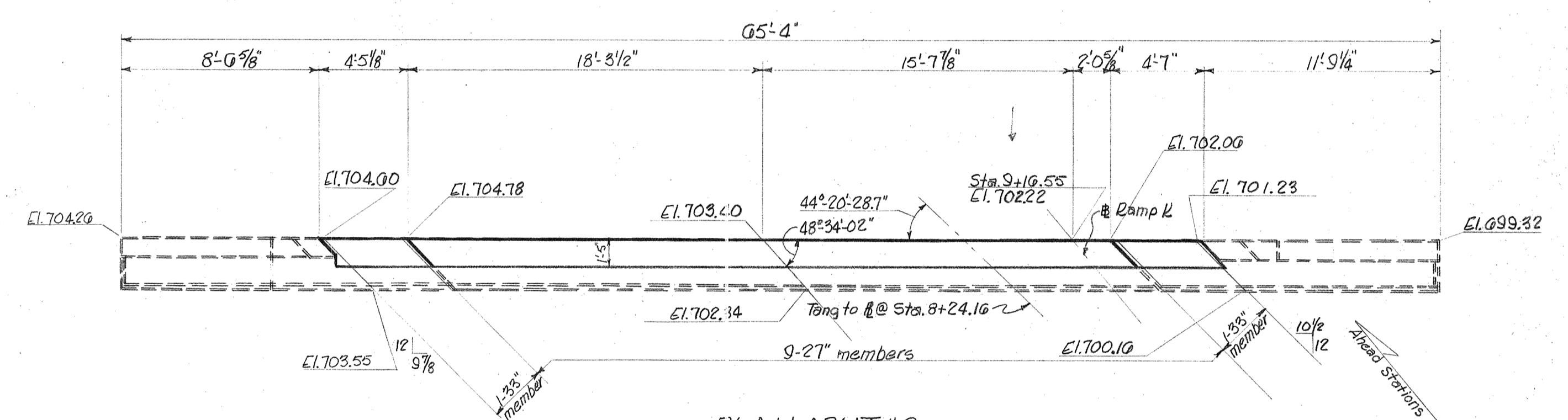
FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3			1959		



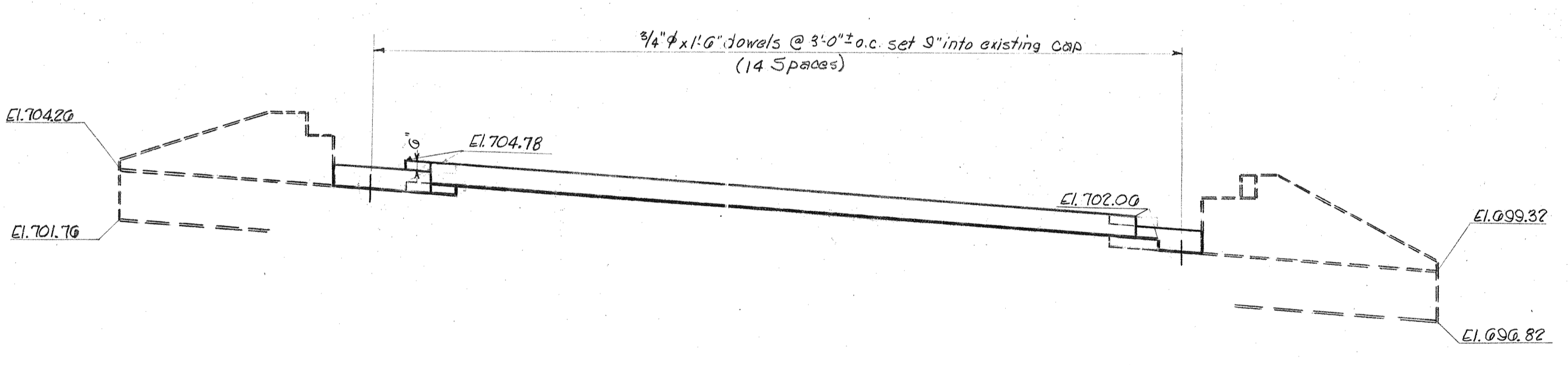
PLAN-ABUT #1



ELEVATION-ABUT #1

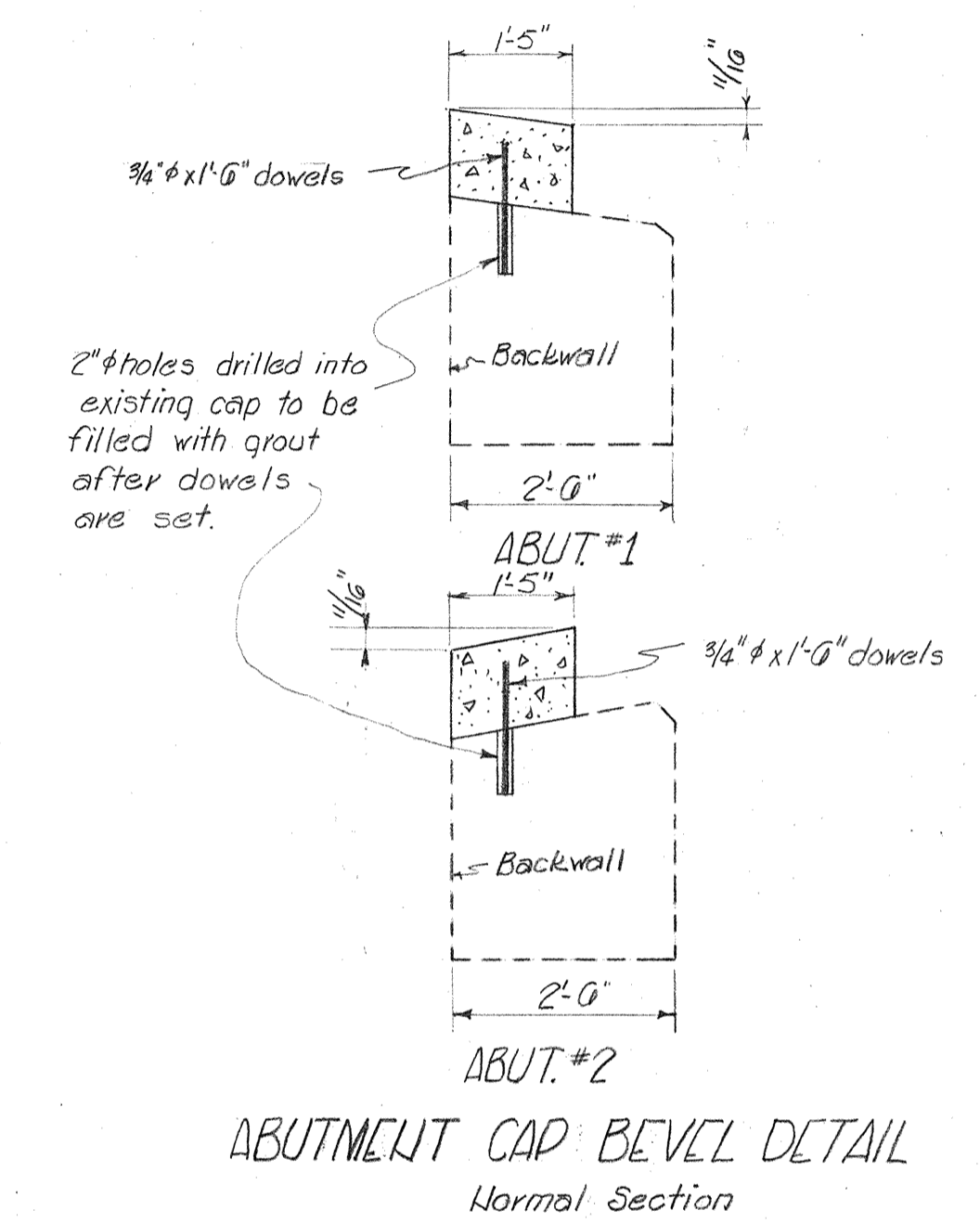


PLAN-ABUT #2

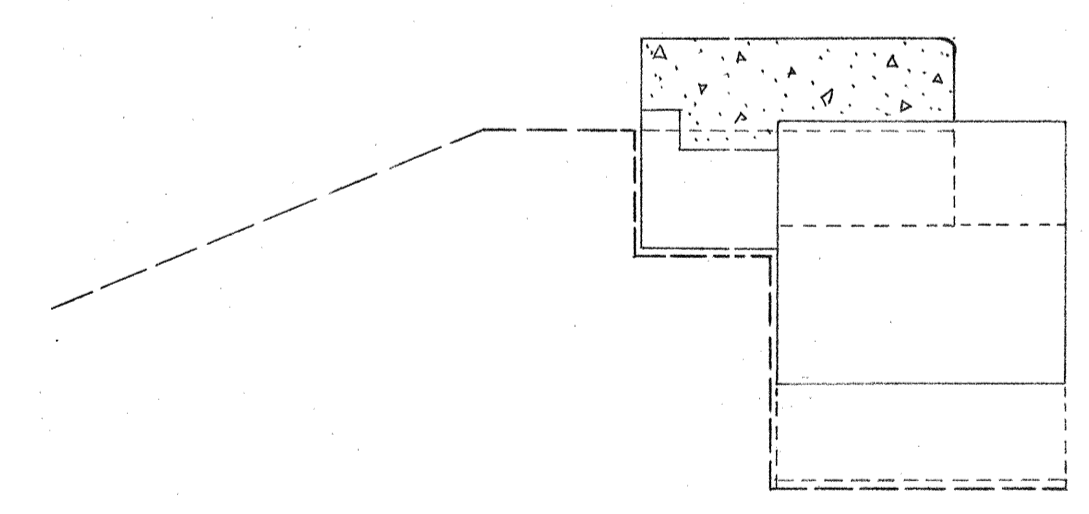


ELEVATION-ABUT #2

Note: Double dashed lines indicate existing structure, single dashed lines indicate hidden lines.



ABUTMENT CAP BEVEL DETAIL Normal Section



TYPICAL DETAIL AT ABUTMENT

MICROFILMED

H.W.D.  
G.P.M.

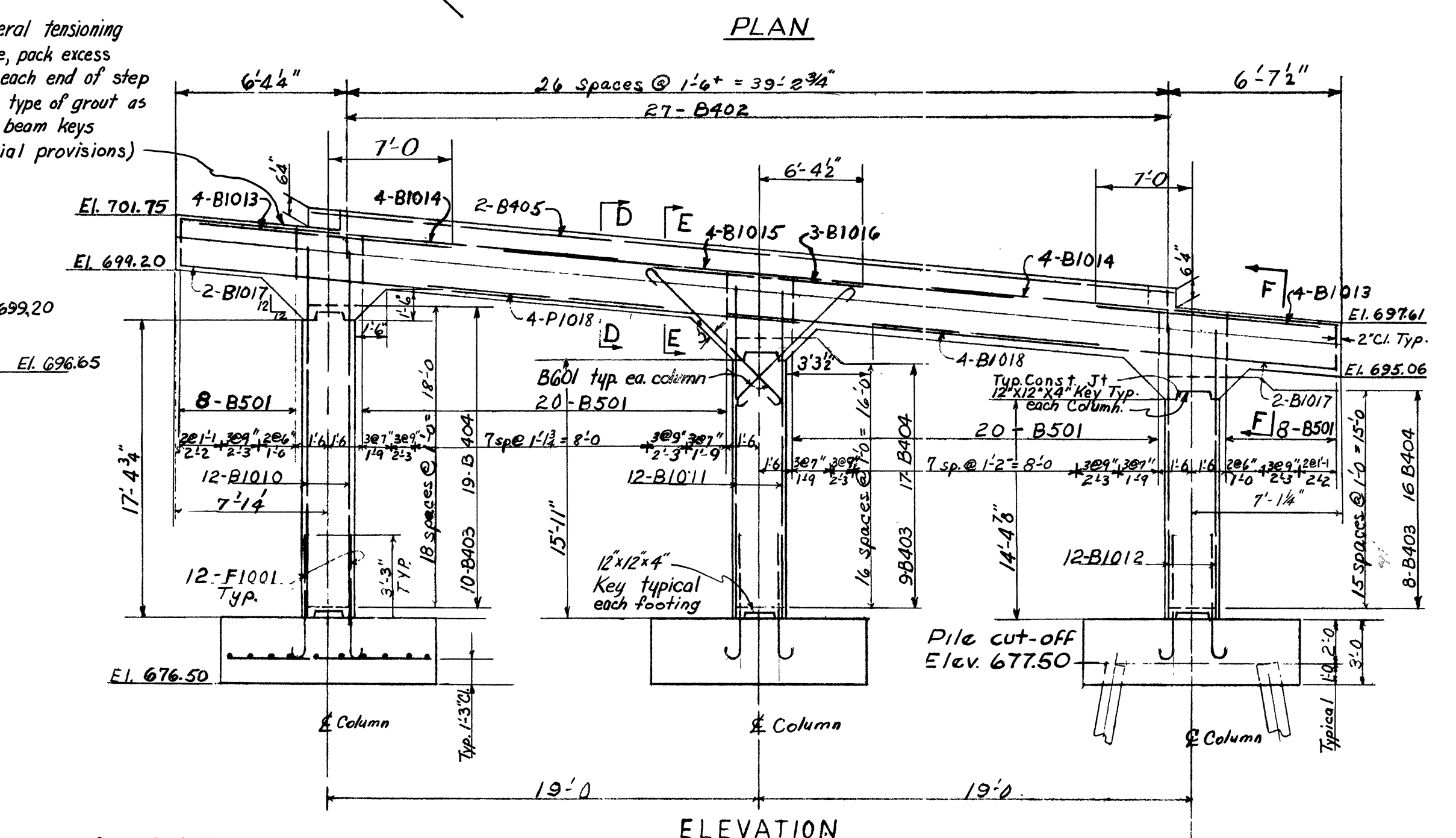
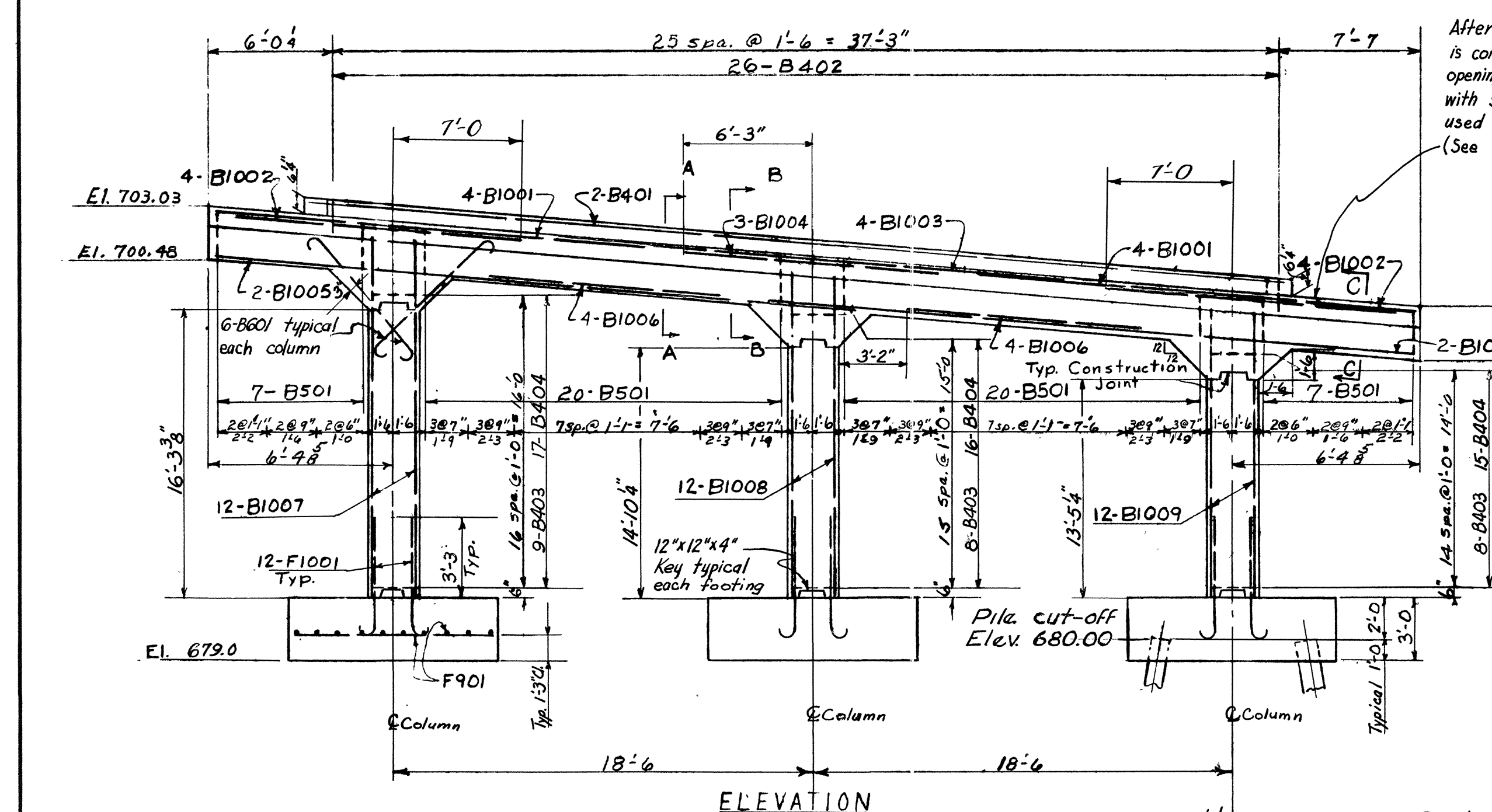
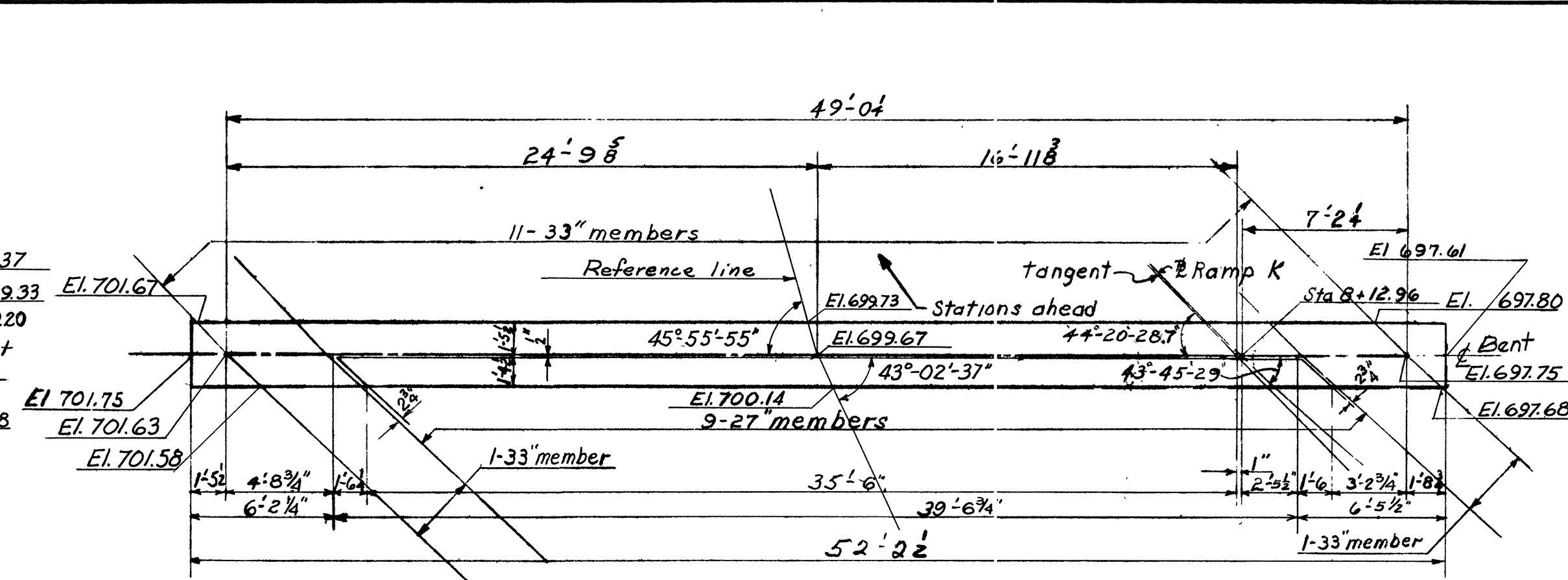
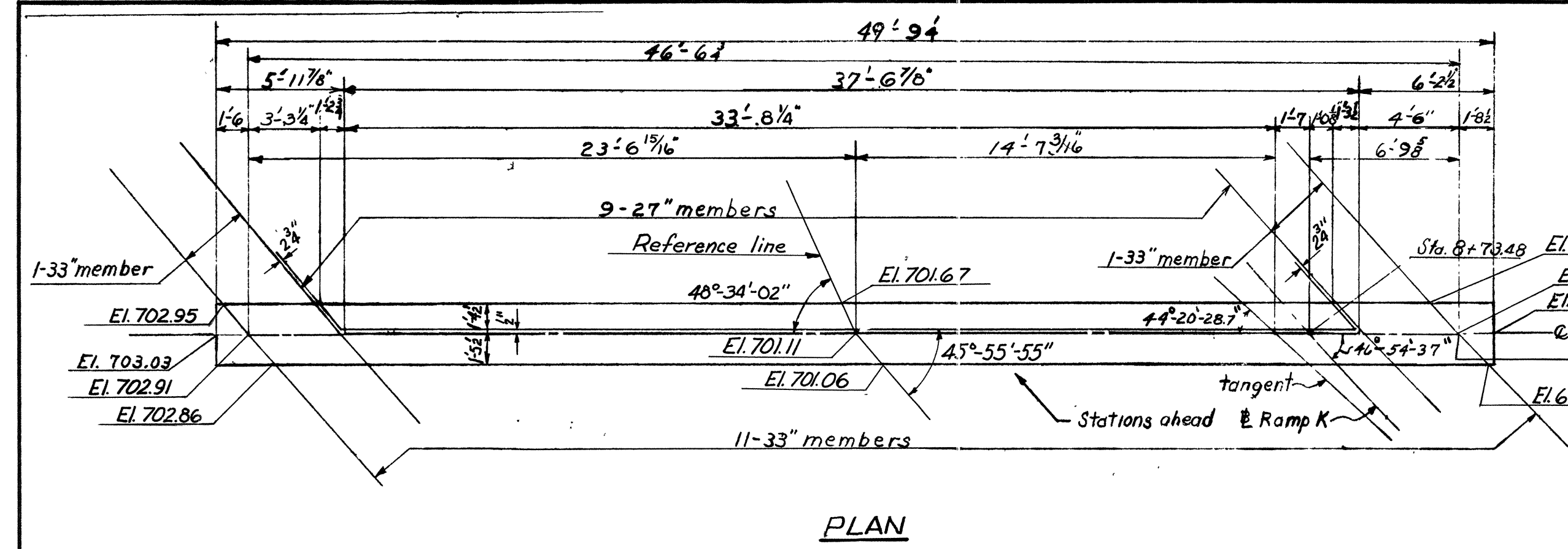
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

REVISED ABUTMENT DETAILS  
RAMP K STRUCTURE OVER RAMP L  
AT SPRING CREEK INTERCHANGE  
(BETWEEN I-514 & I-502) STA. 8+24.16 @ RAMP K  
HAMILTON COUNTY

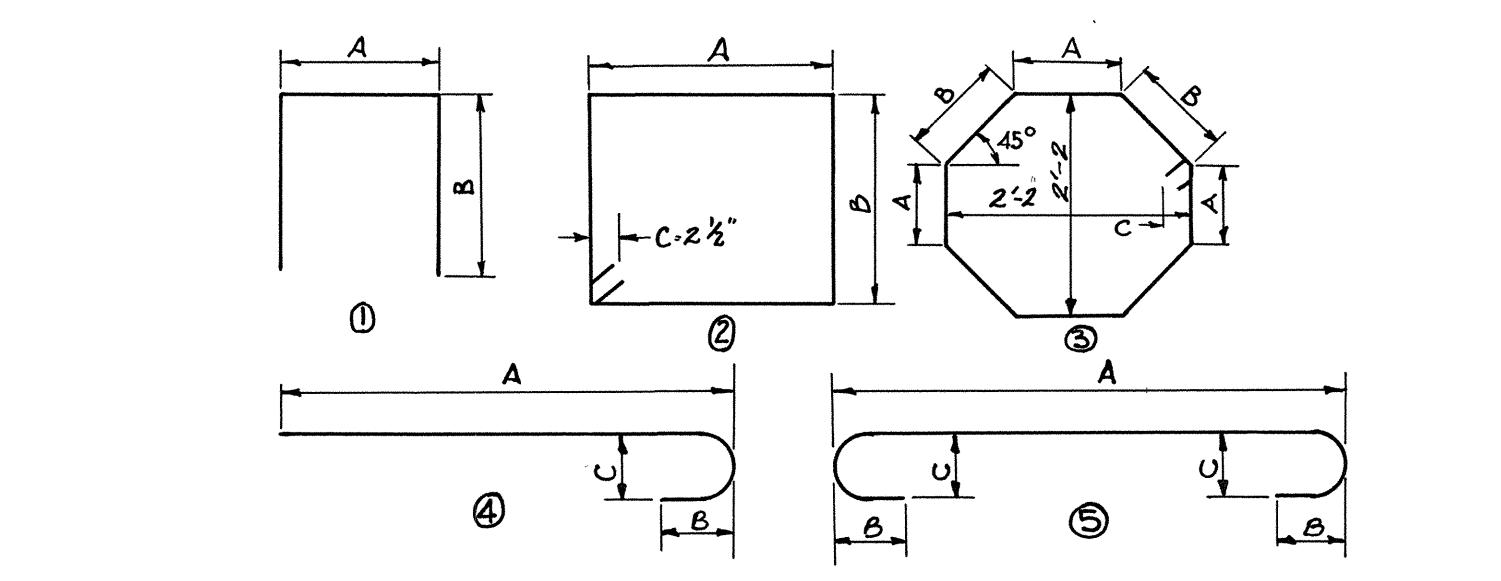
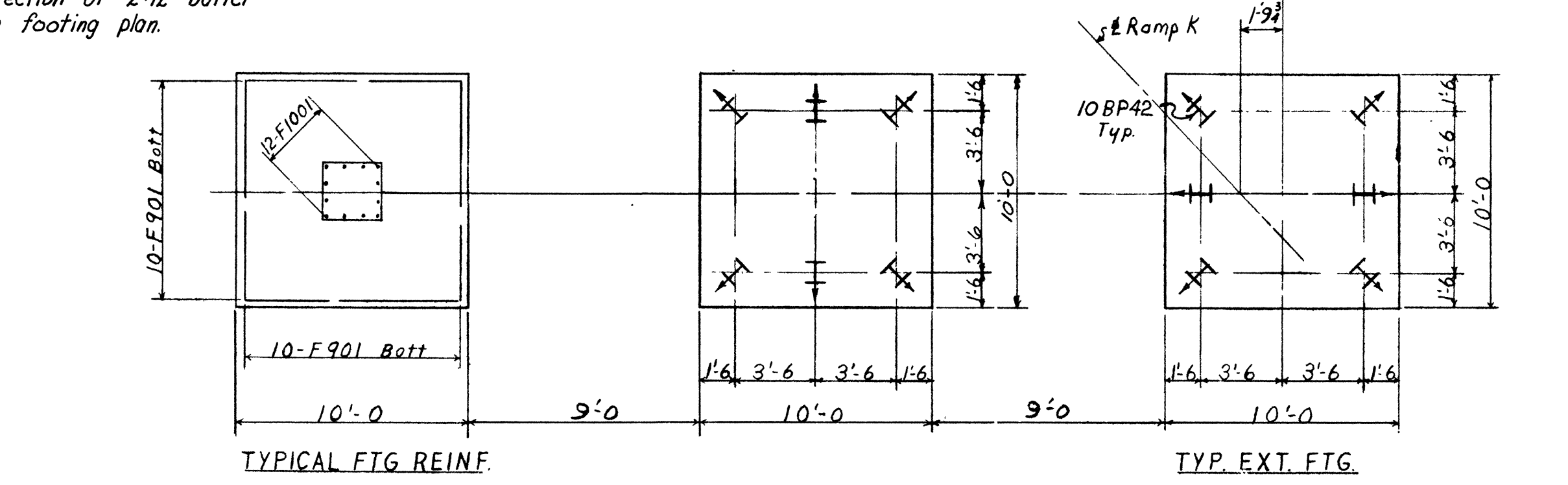
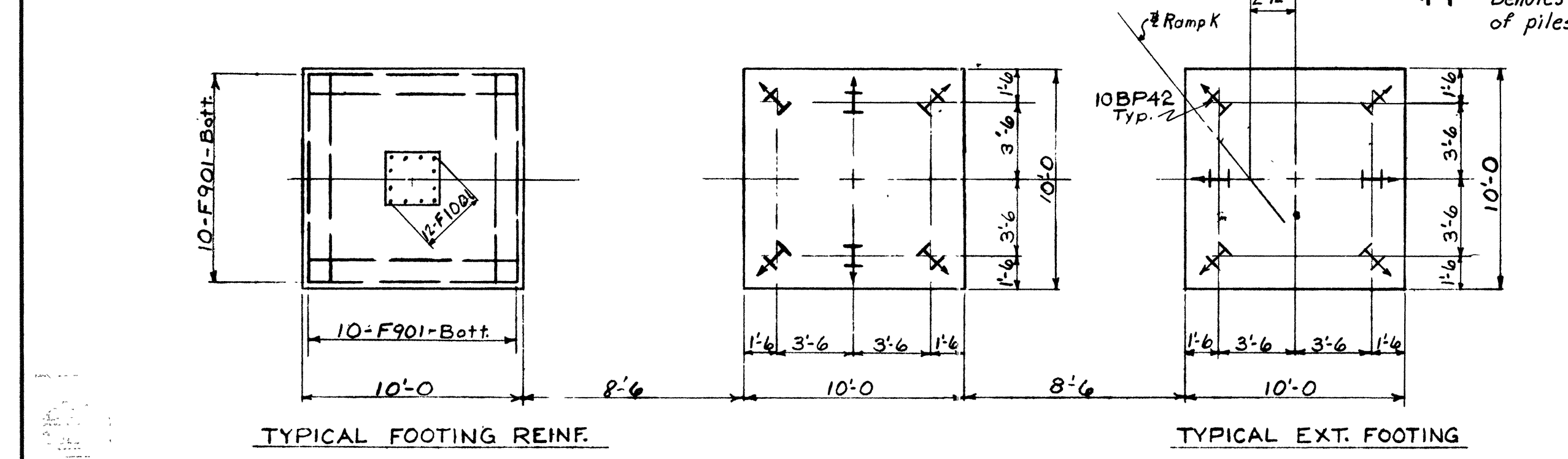
H-2-42A



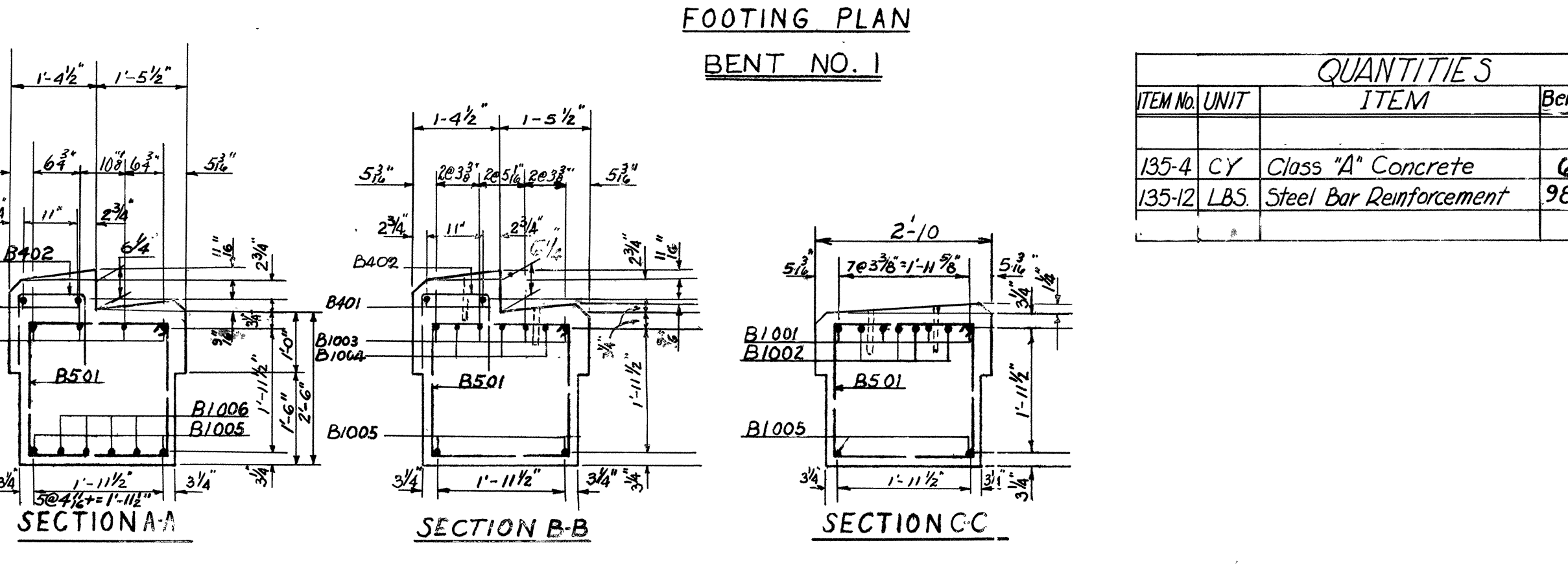
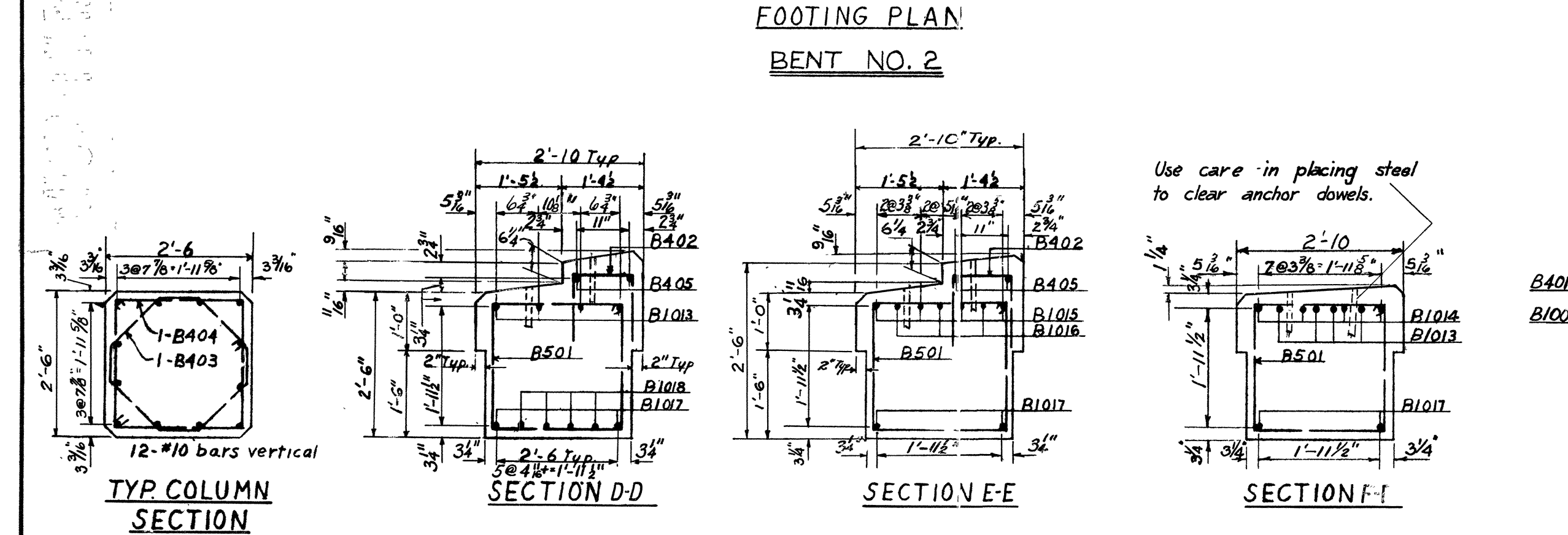
FED. ROAD REG. NO.	T. E. N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(7)0	1959	60	336



MARK	SIZE	Bent 1		Bent 2		Total No.	Type	Length	Dimension			Total Weight
		No.	Weight	No.	Weight				A	B	C	
F901	9	60	1,961	60	1,961	120	Str.	9'-6"				3,922
F1001	10	36	1,006	36	1,006	72	4	6'-5"	5'-0"	11/4"	1-0 1/2"	2,012
B401	4			2	51	2	Str.	37'-3"				51
B402	4	27	61	26	59	53	1	3'-4"	1'-0"	1'-2"		120
B403	4	25	132	27	143	52	3	7'-9"	8 3/4"	1-0 1/4"	0-4 1/2"	275
B404	4	48	308	52	354	100	2	9'-5"	2'-2"	2'-2"	0-2 1/2"	642
B405	4	2	53			2	Str.	39'-3"				53
B501	5	56	559	54	539	110	2	9'-5"	2'-2"	2'-2"	0-2 1/2"	1,098
B601	6	18	242	18	242	36	5	8'-10"	7'-6"	6"	6"	484
B1001	10			8	539	8	Str.	15'-6"				539
B1002	10			8	435	8	Str.	12'-6"				435
B1003	10			4	435	4	Str.	25'-0"				435
B1004	10			3	163	3	Str.	12'-6"				163
B1005	10			4	468	4	Str.	26'-11"				468
B1006	10			6	336	6	Str.	9'-8"				336
B1007	10	12	1,082			12	Str.	20'-2"				1,082
B1008	10	12	988			12	Str.	18'-9"				988
B1009	10	12	918			12	Str.	17'-4"				918
B1010	10			12	1,123	12	Str.	21'-5"				1,123
B1011	10			12	1,141	12	Str.	19'-11"				1,141
B1012	10			12	970	12	Str.	18'-5"				970
B1013	10	8	461			8	Str.	19'-3"				461
B1014	10	8	580			8	Str.	16'-8"				580
B1015	10	4	435			4	Str.	25'-0"				435
B1016	10	3	209			3	Str.	12'-9"				209
B1017	10	4	489			4	Str.	28'-1"				489
B1018	10	8	345			8	Str.	9'-11"				345
												9,829
												9,945
												19,774



NOTES:  
 Reinforcing in cap shall be placed to clear anchor dowels. For spacing of dowels see details of members by prestress contractor.  
 Piles are 10BP-42 point bearing on rock or driven to a minimum bearing of 36 tons per pile.  
 H Denotes direction of 2:12 batter of piles in footing plan.  
 Reinforcing steel shall have 3" of cover in the footing and 2" cover elsewhere, unless otherwise noted.  
 Top of each bent shall be stringlined for slope with adjacent substructure units.  
 For pile details see Tennessee Department of Highways and Public Works standard drawing F-2-118



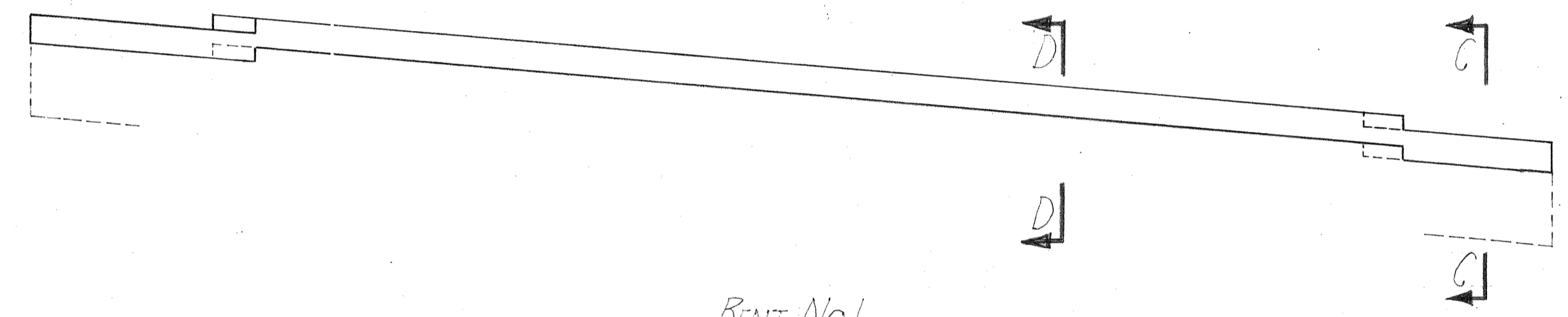
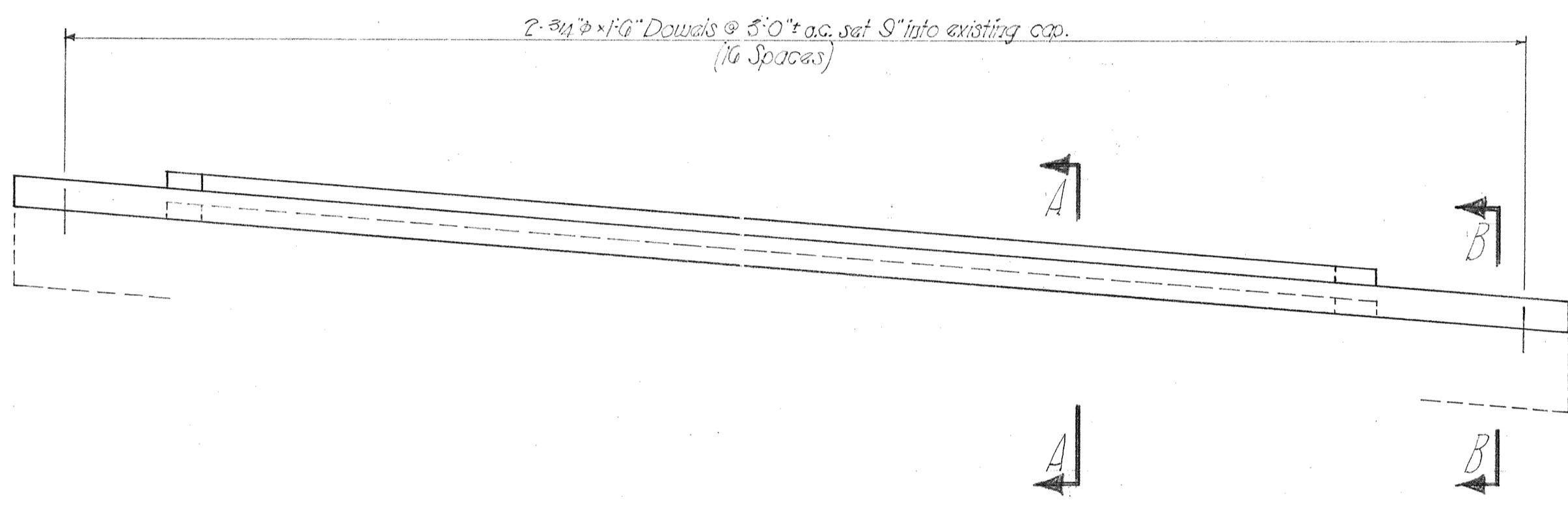
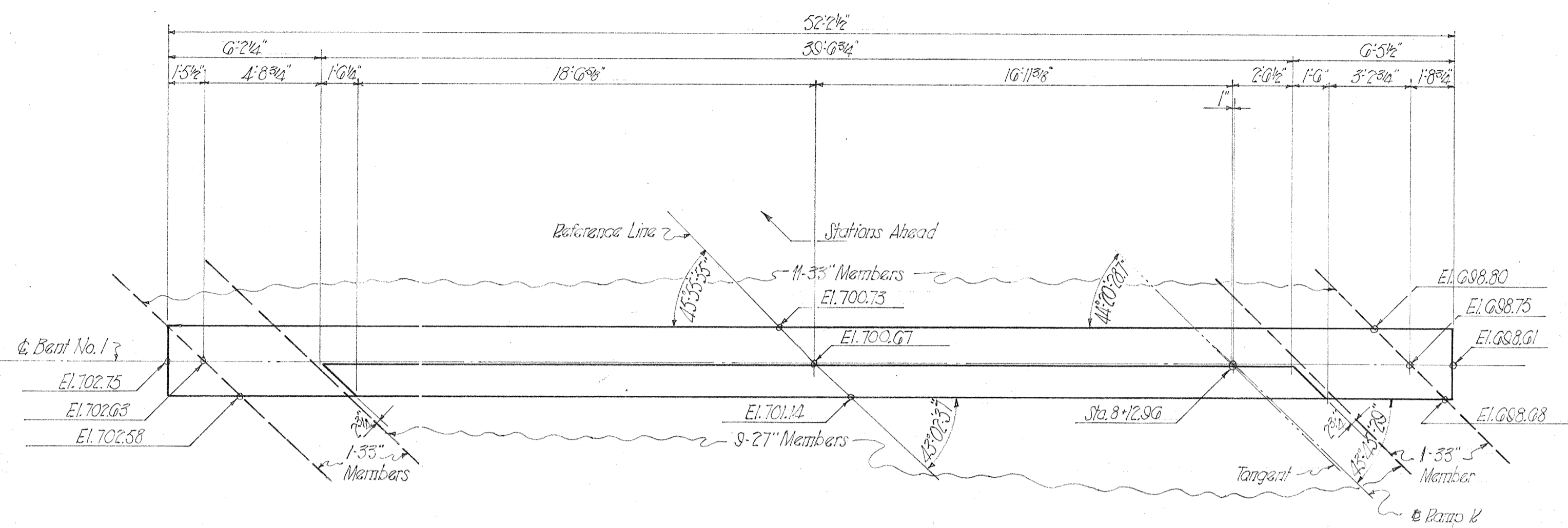
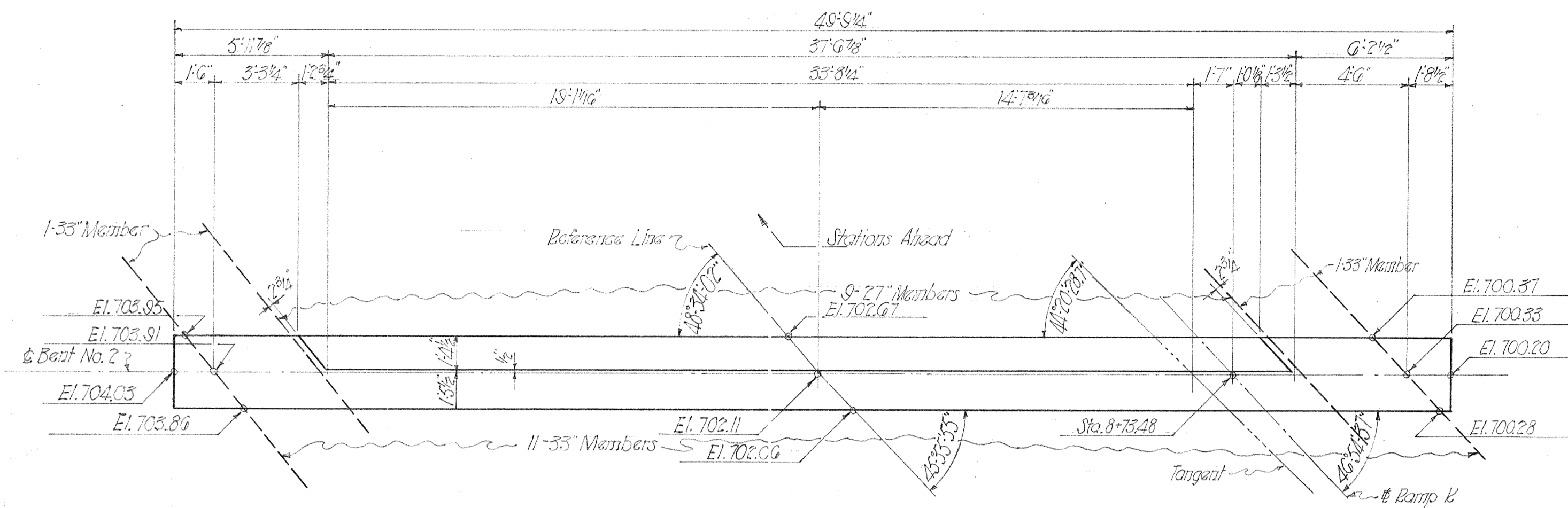
ITEM No.	UNIT	ITEM	Bent 1	Bent 2	TOTAL
135-4	CY	Class "A" Concrete	61	61	122
135-12	LBS	Steel Bar Reinforcement	9829	9945	19774

PREPARED BY  
 CAPITOL ENGINEERING CORPORATION, DILLSBURG PA. FOR  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE  
 BENTS  
 RAMP K STRUCTURE OVER RAMP L  
 AT SPRING CREEK INTERCHANGE  
 (BETWEEN I-54 & I-502) STA. 8+24.16 @ RAMP K  
 HAMILTON COUNTY

Revised 3-13-59 in accordance with comments by letter of Jan 19, 1959 and conference of Feb 10, 1959. Revised 4-9-59

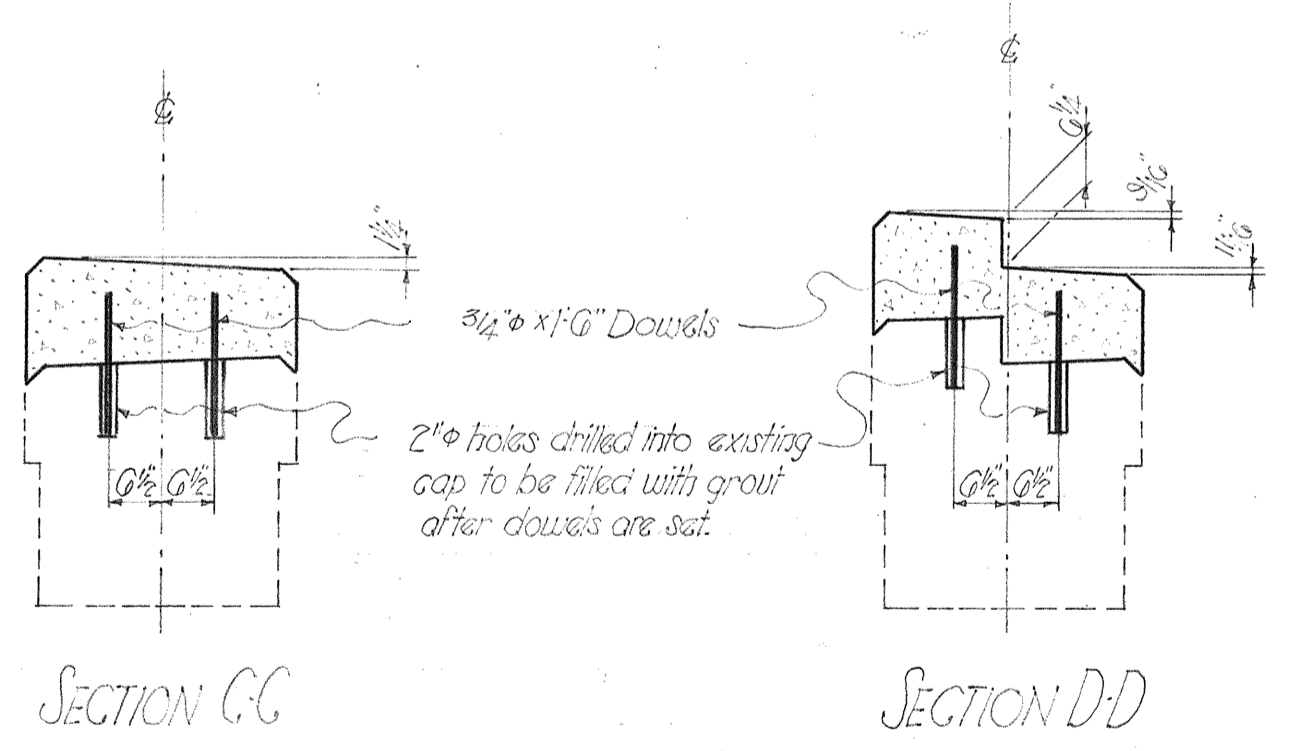
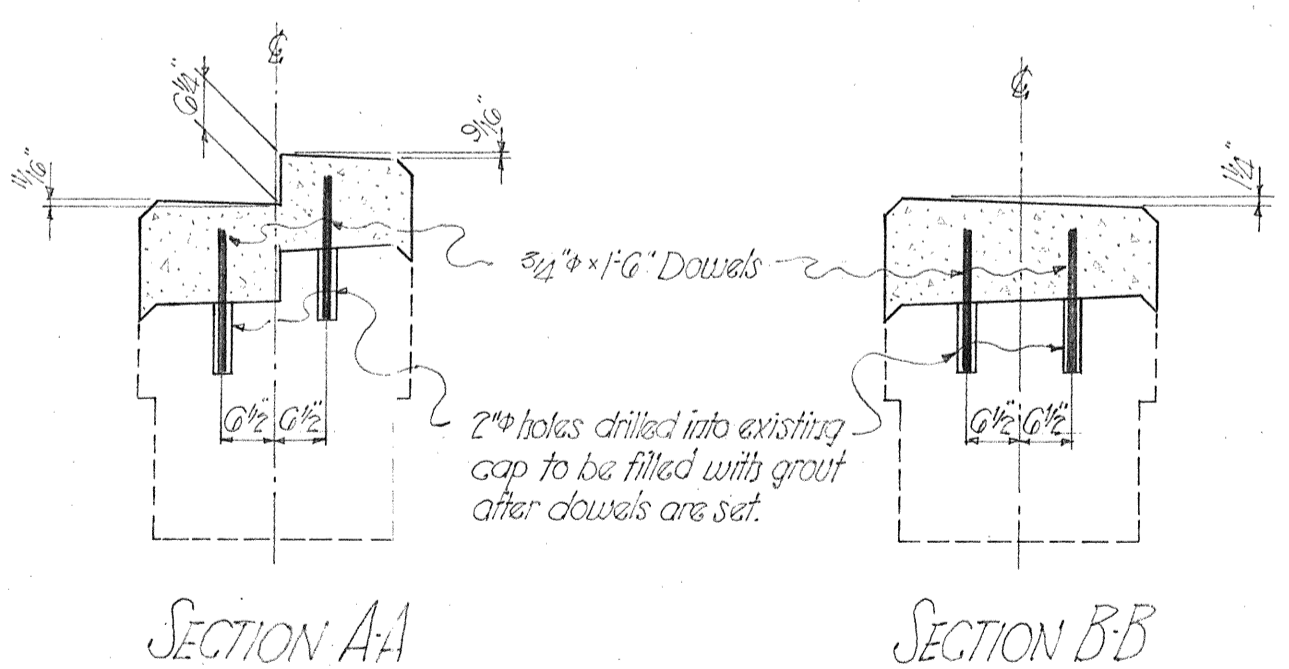
DESIGNED BY  
 DRAWN BY  
 TRACED BY  
 CHECKED BY R.C.





BENT No. 2

BENT No. 1



MICROFILMED

AWD. JMS.

STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
NASHVILLE  
REVISED BENT DETAILS  
RAMP K STRUCTURE OVER RAMP L  
AT SPRING CREEK INTERCHANGE  
(BETWEEN 1514 & 1502) STA. 8+24.16 @ RAMP K  
HAMILTON CO.  
1960

H-2-43A



**HYDRAULIC DATA**

**PROPOSED STRUCTURE:**

Drainage area: 2.0 sq. miles  
 Max. high water - 50 year flood: El. 675.4  
 High water - March 1951: El. 673.4  
 Waterway opening: 1200 sq. ft. to El. 675.4  
 Design V: 8.5 f.p.s. thru structure  
 Depth of flow: 16.3 ft.  
 Channel slope: 3° 0.2%

**EXISTING STRUCTURE UPSTREAM:**

Type: 2 simple spans  
 Span: 60 ft. rolled beams with concrete deck  
 Distance: Approximately 1600 ft. (under Spring Creek Road)

**SPIRAL CURVE DATA**

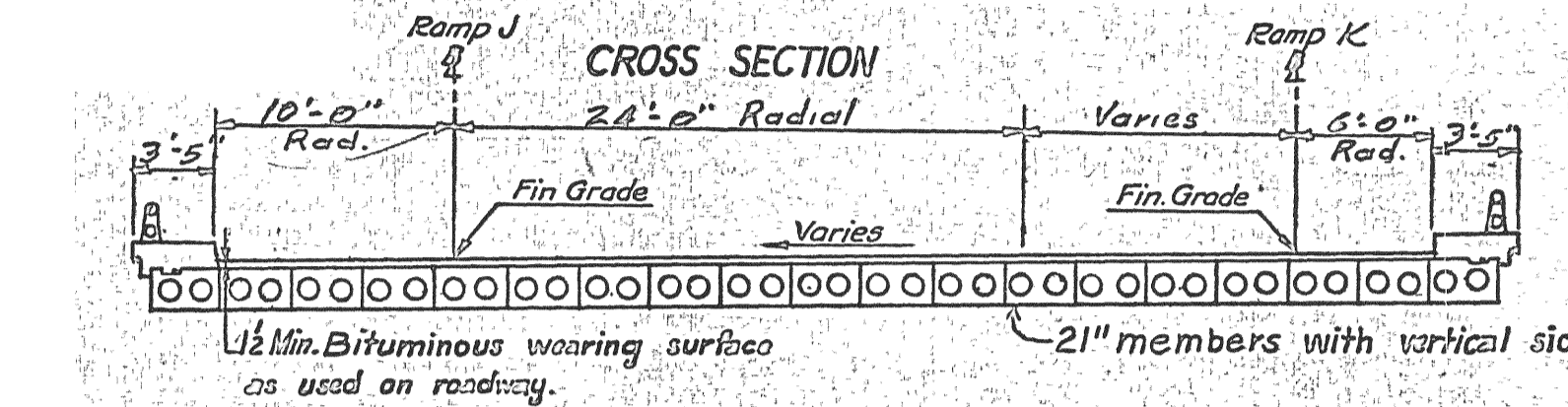
RAMP J  
 $\theta_s = 5^\circ 03' 20''$   
 $L_s = 300.00'$   
 $V_s = 299.78'$   
 $Y_s = 8.81'$   
 $L.T. = 200.08'$   
 $S.T. = 100.08'$   
 S.E. = Transition from 0.05542 ft. @ C.S. Sta. 22+75.07 to Normal Slope (1/8" ft.) @ S.T. Sta. 25+25.07

**SPIRAL CURVE DATA RAMP K**  
 $\theta_s = 7^\circ 48' 49''$   
 $L_s = 300.00'$   
 $V_s = 299.44'$   
 $Y_s = 13.62'$   
 $L.T. = 200.20'$   
 $S.T. = 100.18'$

**BORINGS**

HOLE	STATION	OFFSET	GROUND EL.	ROCK EL.
1	12+77	64'0" RT.	659.7	653.7
2	13+10	12'0" RT.	659.3	652.3
3	13+23	64'0" RT.	658.8	648.8
4	13+36	12'0" RT.	658.1	648.1
5	13+48	64'0" RT.	658.4	651.4
6	13+62	12'0" RT.	658.3	643.3
7	13+75	64'0" RT.	659.8	650.8
8	13+88	12'0" RT.	659.4	643.4

FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	CHRYST. NO.	TOTAL SHEETS
3		I-75-1(7)0	1959	61	336



**TABLE OF ESTIMATED QUANTITIES**

ITEM NO.	UNIT	ITEM	Sub-Structure			Superstructure			TOTAL
			Abut. 1	Abut. 2	Pier 1	Pier 2	Span 1	Span 2	
17-2	CY	Dry Excavation (Bridges)			48	47			95
17-3	CY	Wet Excavation (Bridges)			124	152			276
17-4	CY	Rock Excavation (Bridges)			13	15			28
17-5	L.F.	Rock Drilling (Bridges)			2.5	2.5			5.0
185-4	CY	Class "A" Concrete	19	18	105	115	8.6	8.3	283
185-12	Lbs.	Steel Bar Reinforcement	2853	2567	13731	14319	405	335	34615
187-3	L.F.	Steel Piles 10 inch ØP42							52.9
154-2A	each	2" Deep x 35" T Uniform Section				20	19	19	19
154-2B	each	2" Deep x 35" T Tapered Section							39
502	L.F.	Aluminum Railing (2-Rails)				66	71	66	203
176	CY	Rip-Rap	290	290					580

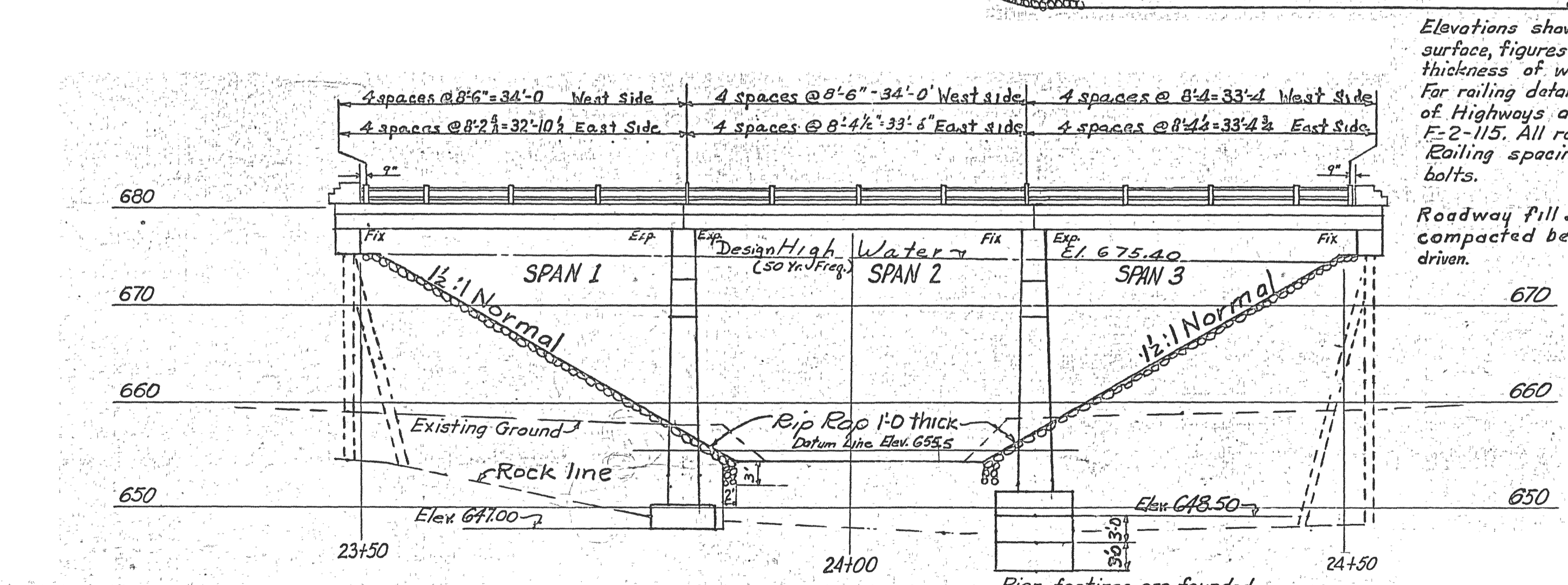
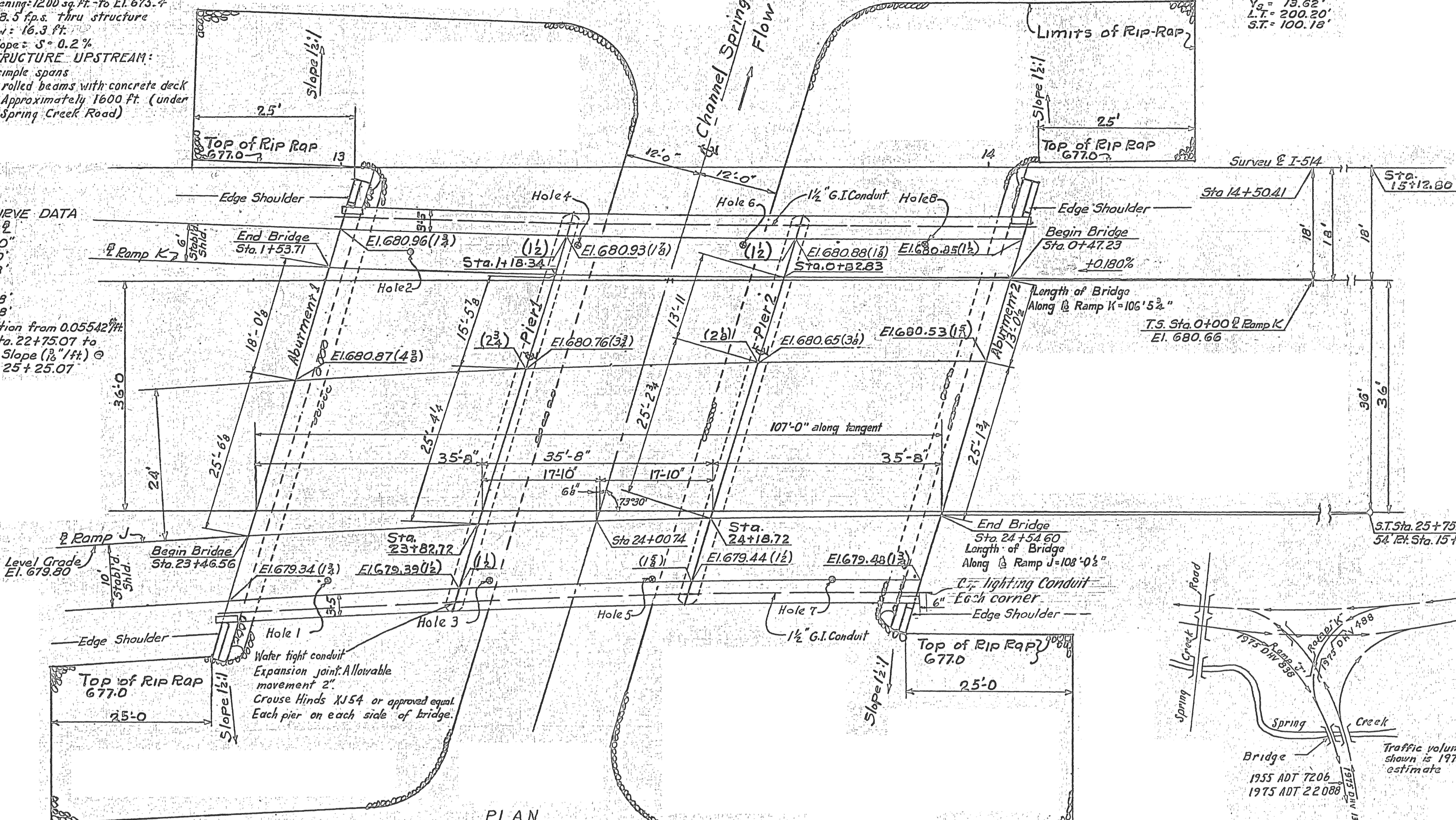
**GENERAL NOTES**  
 Specifications: A.A.S.H.O. 1957 "Standard Specifications for Highway Bridges" except as modified by Bureau of Public Roads "Policy on Interstate System" and "Criteria for Prestressed Concrete Bridges, 1954," and the Standard Specifications for Road and Bridge Construction of the Tennessee Department of Highway and Public Works.  
 Loading: H20-S16-44 PPM 20-4  
 Cost of joint material shall be included in class "A" concrete unless otherwise provided for in special provisions.  
 The 1 1/2" Bituminous wearing surface is included in Bridge Quantities on Roadway Plans.  
 Lighting Accessories: installation shall include all lighting accessories shown on plan complete in place except wiring. SPECIFICATIONS for roadway lighting shall apply. Wiring to be installed under Roadway Lighting item.  
 Bar sizes are indicated in the bar marks. The first digit of three numeral marks and the first two digits of four numeral marks indicate the bar diameter in eighths of inches and the last two digits indicate the specific bar.  
 Tapered Prestressed Beams shall maintain the standard minimum width of 3'-0" at the narrow end and may be tapered to a maximum of 4" taper per member. One strand of Prestressing Wire shall be added for tapers greater than 2". The Contractor may taper a lesser number of Tapered Members than shown. However, he shall submit a detail layout of members for approval by the Engineer before proceeding with the manufacture of Prestressed Members.  
 Steel bar reinforcement shall be intermediate grade or hard grade.  
 All poured in place concrete shall be Class "A".

**TRAFFIC DIAGRAM**  
 Bridge 1955 ADT 7206  
 1975 ADT 22088  
 Traffic volume shown is 1975 estimate

**LIST OF DRAWINGS**

TITLE	NO
GENERAL PLAN	61
DECK PLAN & DETAILS	62
ABUTMENTS	63
PIERS	64
STD ALUMINUM RAIL	F-2-115
STD. PILE DETAILS	F-2-118

PREPARED BY  
 CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
 FOR  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE  
 GENERAL PLAN  
**STRUCTURE OVER SPRING CREEK**  
 TERMINAL RAMP J & K MERGE  
 INTO INTERSTATE ROUTE 514  
 STATION 24+00.74  
 HAMILTON COUNTY



Elevations shown are top of Roadway surface, figures in parenthesis indicate thickness of wearing surface.  
 For railing details see Tennessee Department of Highways and Public Works Standard F-2-115. All railing posts shall be vertical. Railing spacing shown is an 8' of anchor bolts.  
 Roadway fill shall be placed and thoroughly compacted before piles for the abutments are driven.

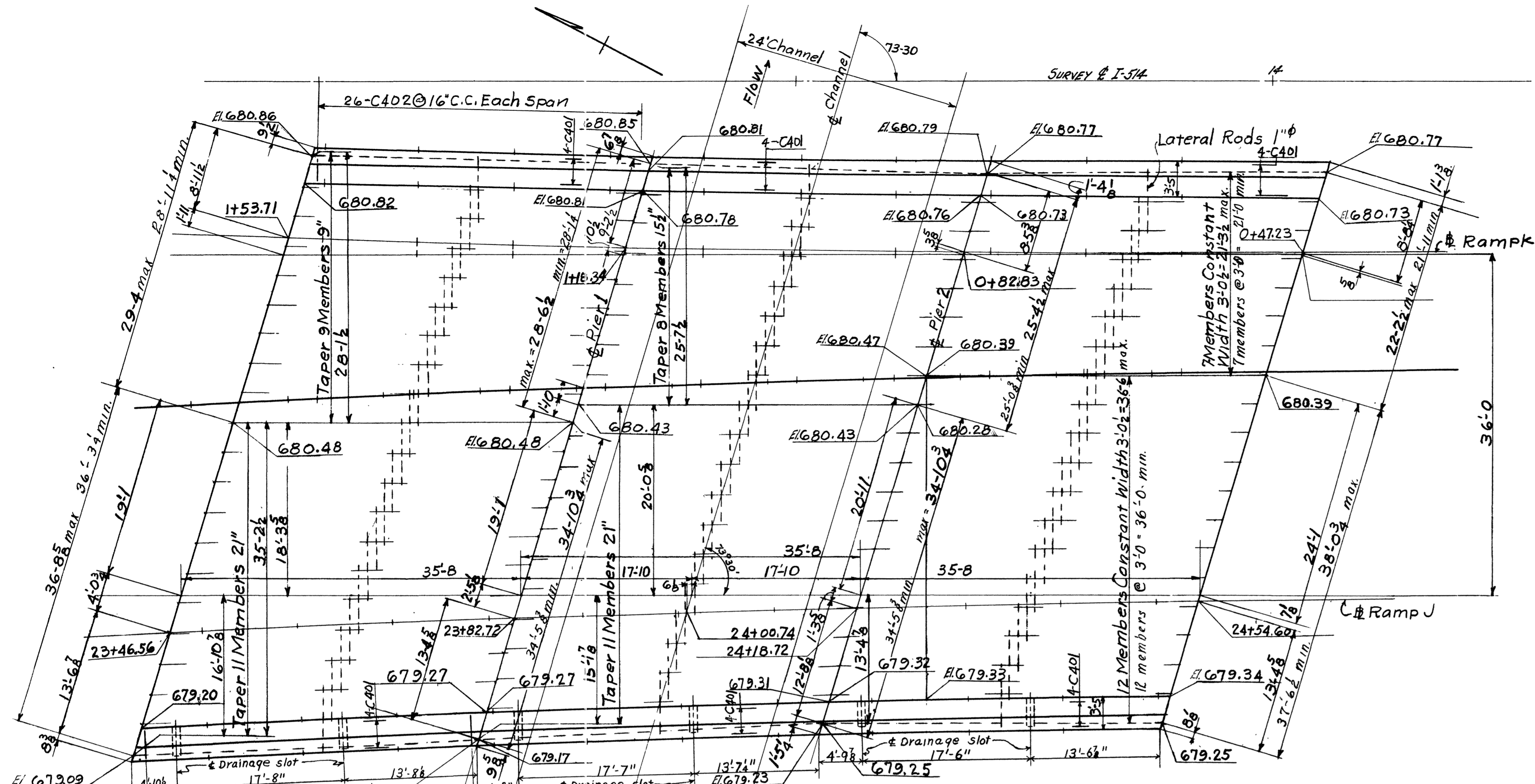
**QUANTITIES IN PRESTRESSED BEAMS**  
 CONCRETE 295 c.y.  
 STRAND 39,500 lbs.  
 REINF. STEEL 15,900 lbs.

ELEVATION ON RAMP J

DATE 9-24-58  
 CHECKED BY J.G.  
 DATE 9-24-58  
 TRACED BY J.G.  
 DATE 9-24-58  
 5-19-59 added note about reinforcing.  
 7-6-59 weight of strands corrected.

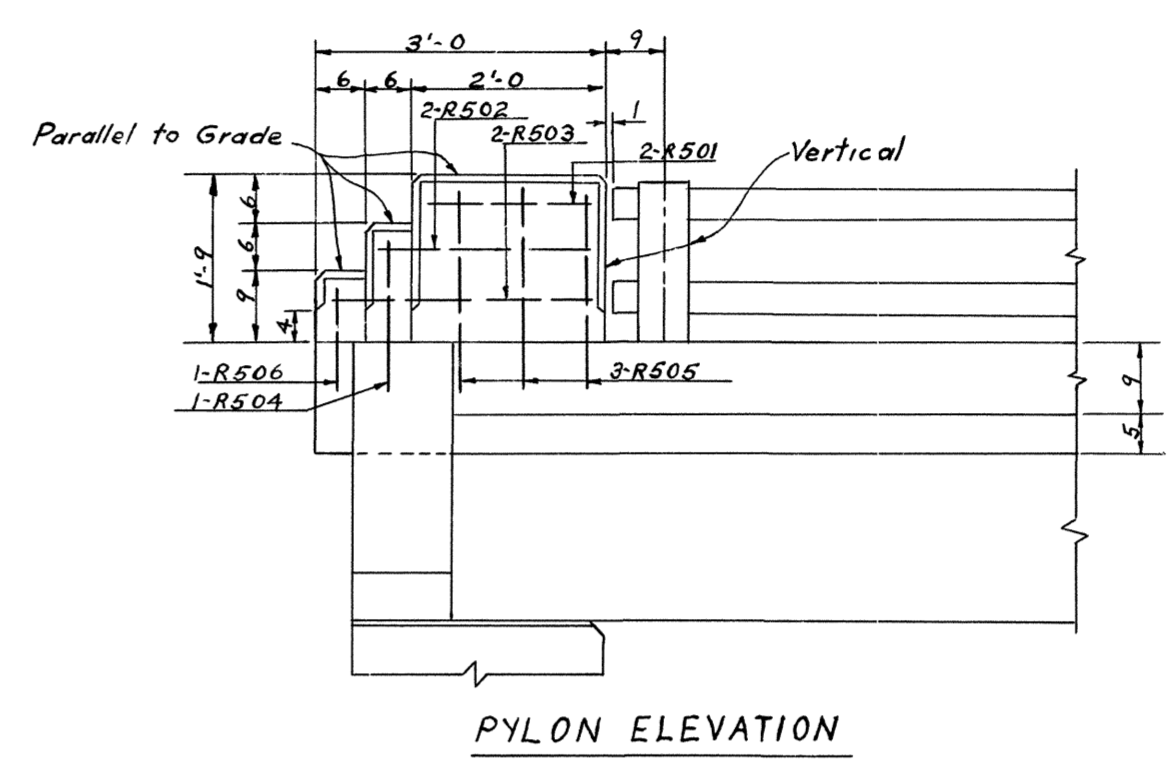
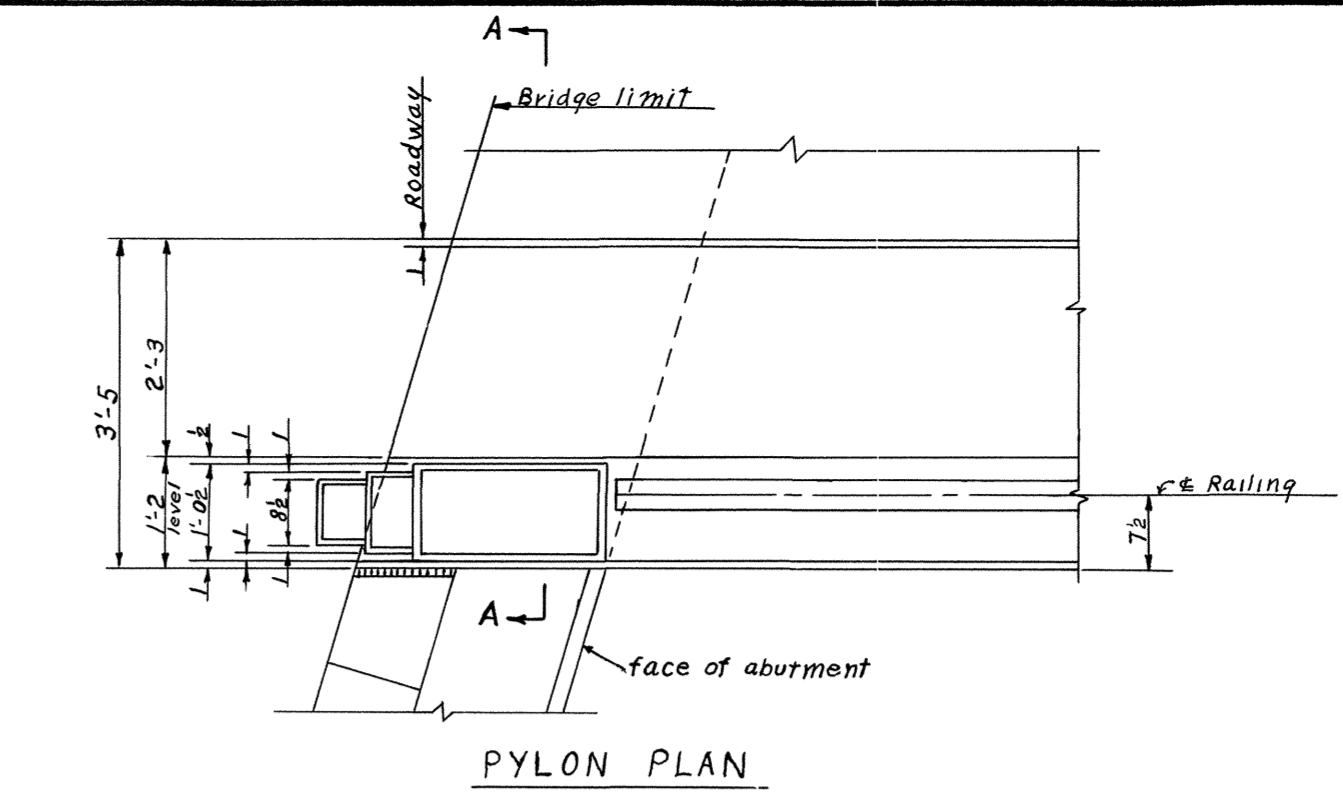


FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(7)0	1959	62	336



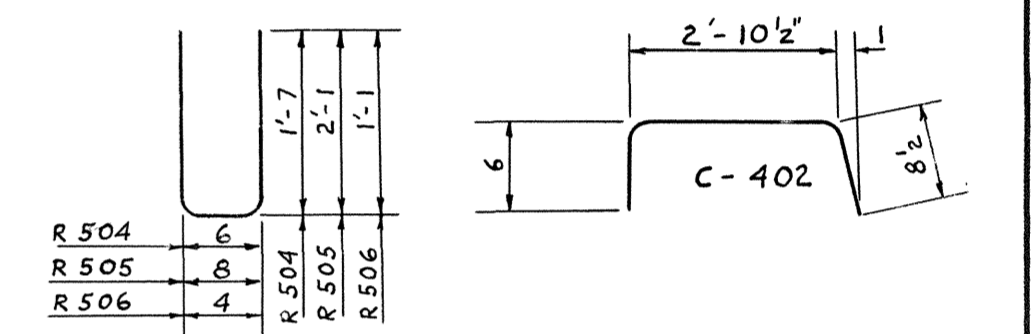
Elevations shown are tops of precast members. Where two elevations are shown for one point each elevation is shown in its respective span.

PLAN OF PRECAST MEMBERS  
Scale 1/8"=1'-0"



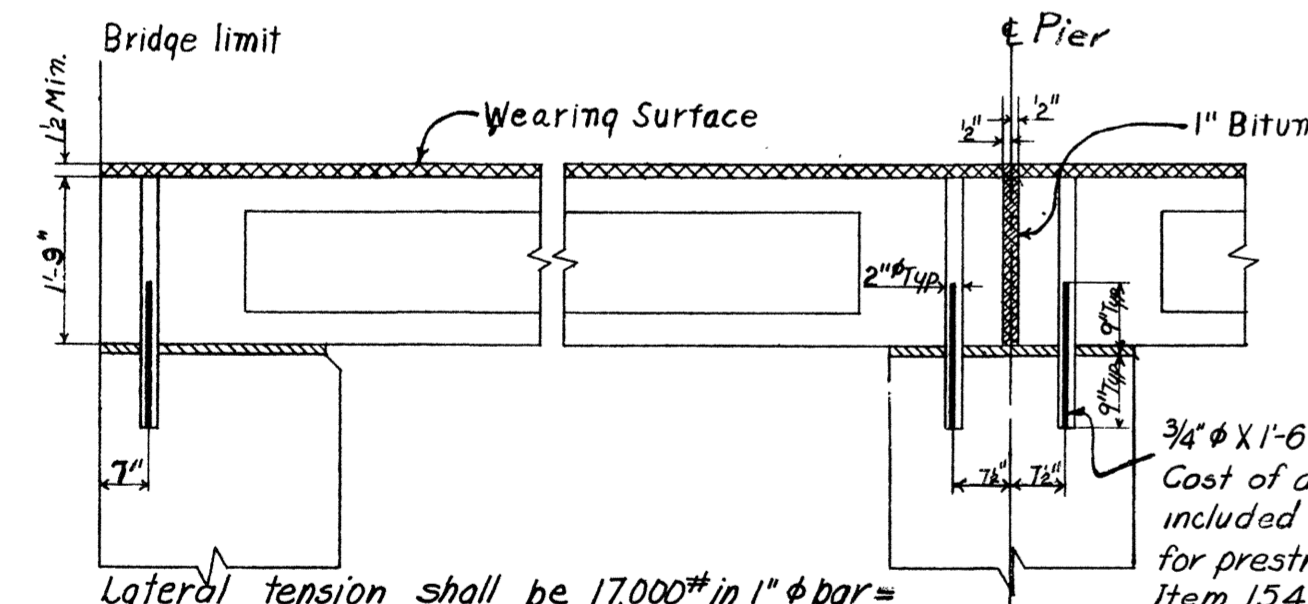
SUPERSTRUCTURE BAR LIST

MARK	QUANTITY			LENGTH	TYPE	WEIGHT			
	SPAN 1	SPAN 2	SPAN 3			SPAN 1	SPAN 2	SPAN 3	TOTAL
C401	8	8	8	24	35 1/2 str.	191	191	191	573
C402	52	52	52	156	4'-1 bent	144	144	144	432
Totals									405 335 405 1145

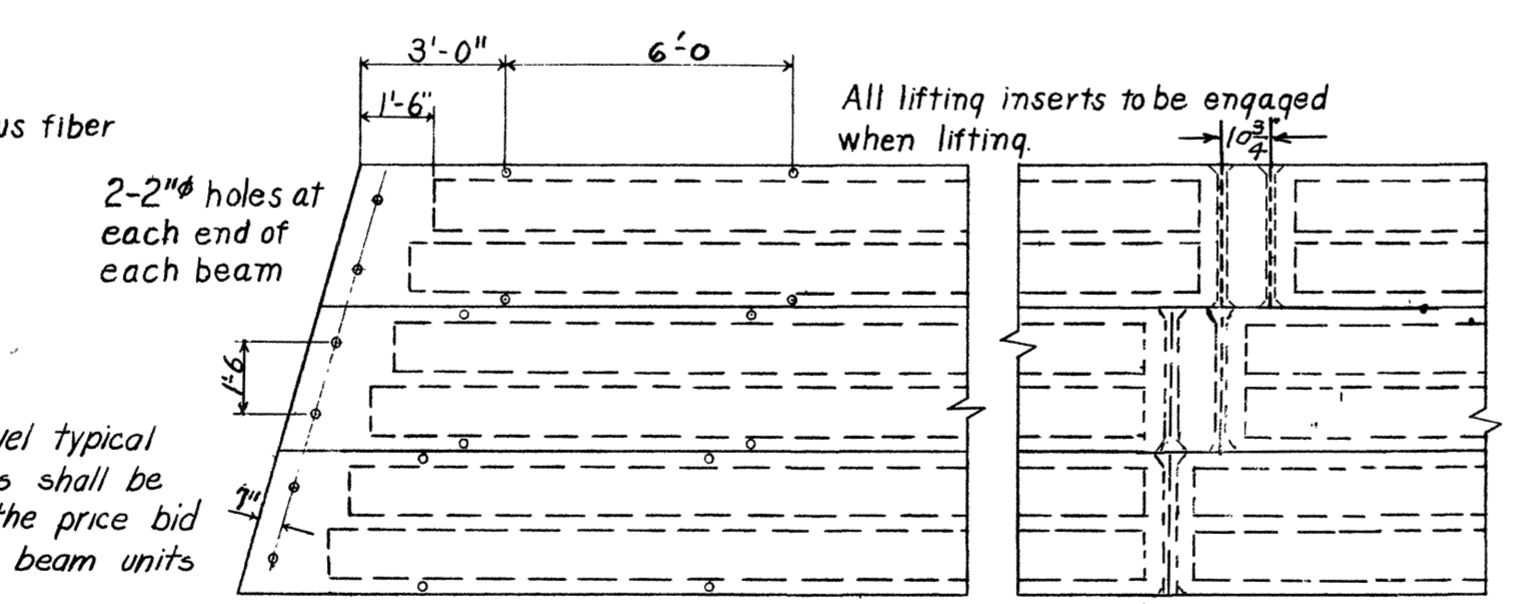


Members are standard width 3'-0" at narrow end and tapered to accommodate Geometry of curves. Contractor for prestressed members must submit details of members and obtain approval from the engineer before proceeding with manufacture of members.

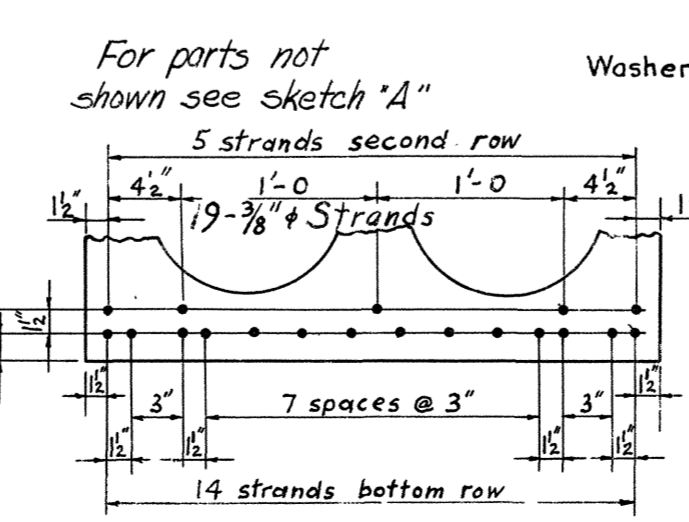
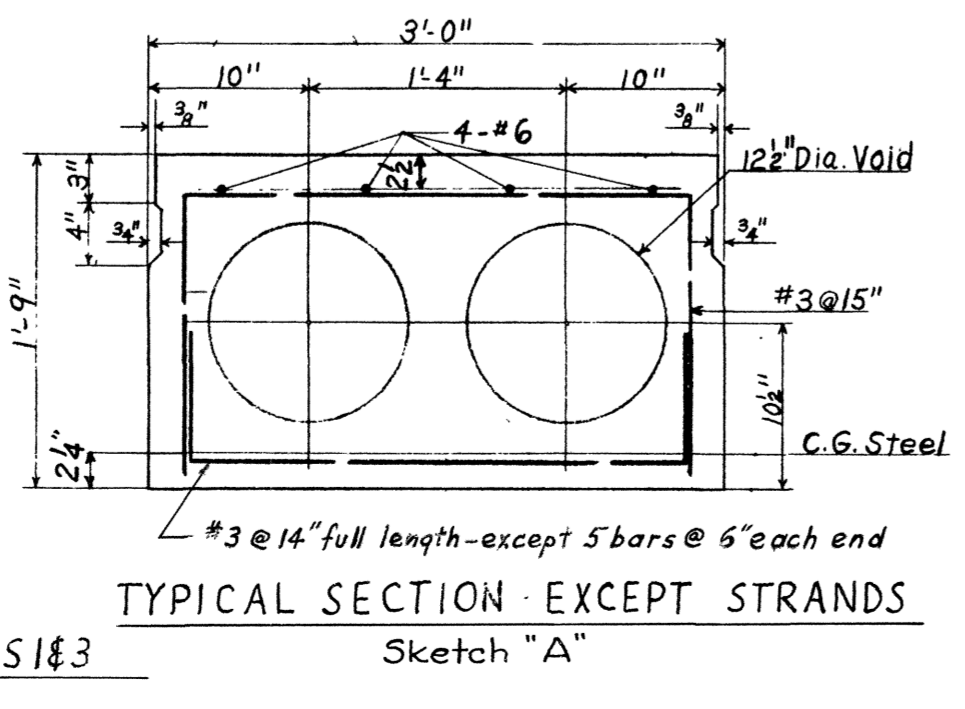
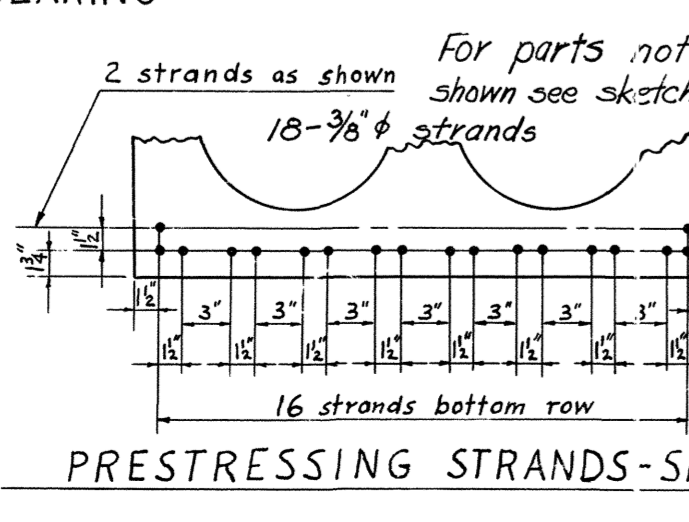
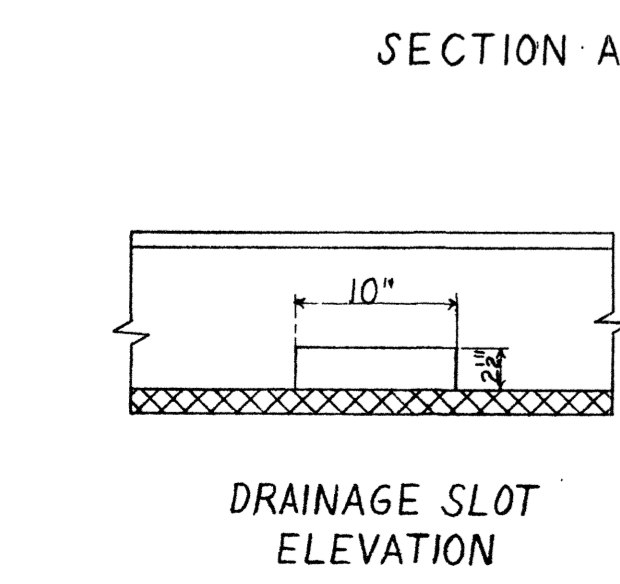
Contractor may taper fewer members than shown. The maximum allowable taper is 4" per member. Add one strand to that shown if taper exceeds 2" member.



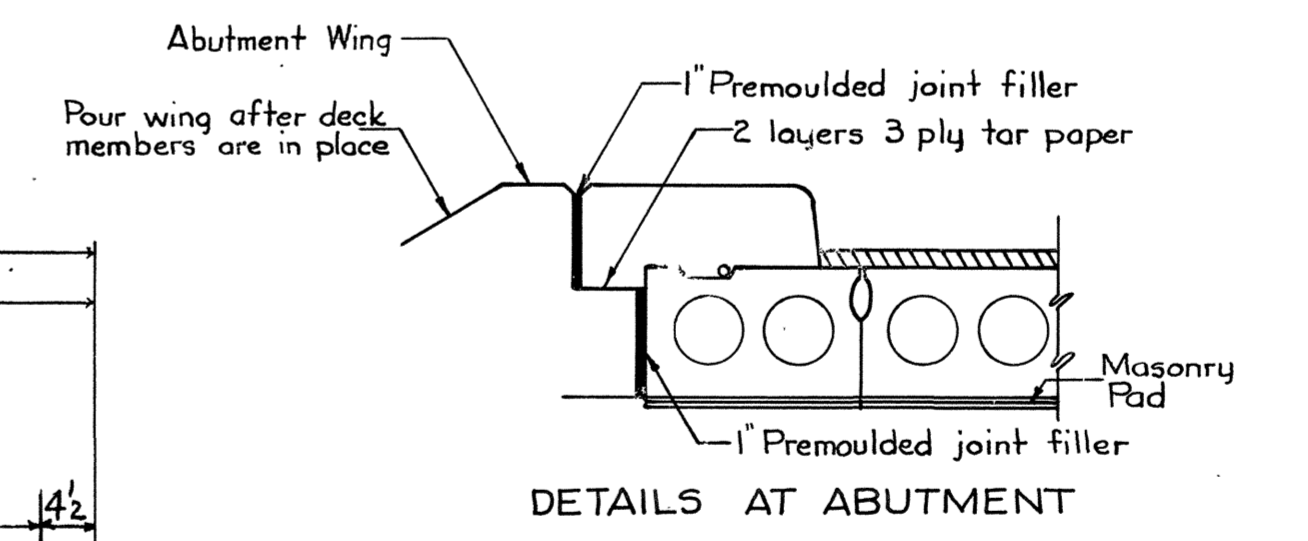
Lateral tension shall be 17,000# in 1"  $\phi$  bar = 22,000#/in<sup>2</sup> on gross section of bar. Holes in Piers and Abutments, for anchor dowels, are to be drilled after members are placed and transverse tensioning is complete. Fill holes with bitumen at expansion ends and with grout at fixed ends. Place one 3/4" approved masonry pads with one surface impregnated with graphite, at each end. Graphited surface shall be turned up. See special provisions.



PART PLAN-BEAM DETAILS



PRESTRESSING STRANDS-SPAN 2



DETAILS AT ABUTMENT

Cost of steel extending from prestressed beams into curbs shall be included in the bid price for the prestressed beam units (item 154).

Beams may be made rectangular with sides normal to the roadway or with sides vertical.

QUANTITIES						
ITEM NO.	UNIT	ITEM	SPAN 1	SPAN 2	SPAN 3	TOTAL
135-4	C.Y.	Class 'A' Concrete	8.6	8.3	8.6	25.5
135-12	Pound	Steel Bar Reinforcement	405	335	405	1145

PREPARED BY  
CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
FOR

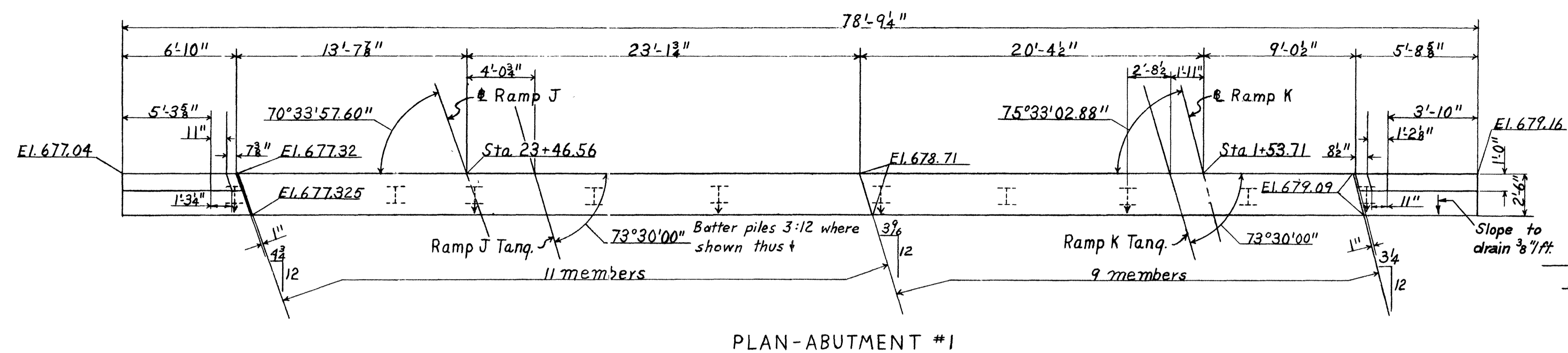
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

DECK PLAN & DETAILS  
STRUCTURE OVER SPRING CREEK  
TERMINAL RAMPS J & K MERGE  
INTO INTERSTATE ROUTE 514  
HAMILTON COUNTY

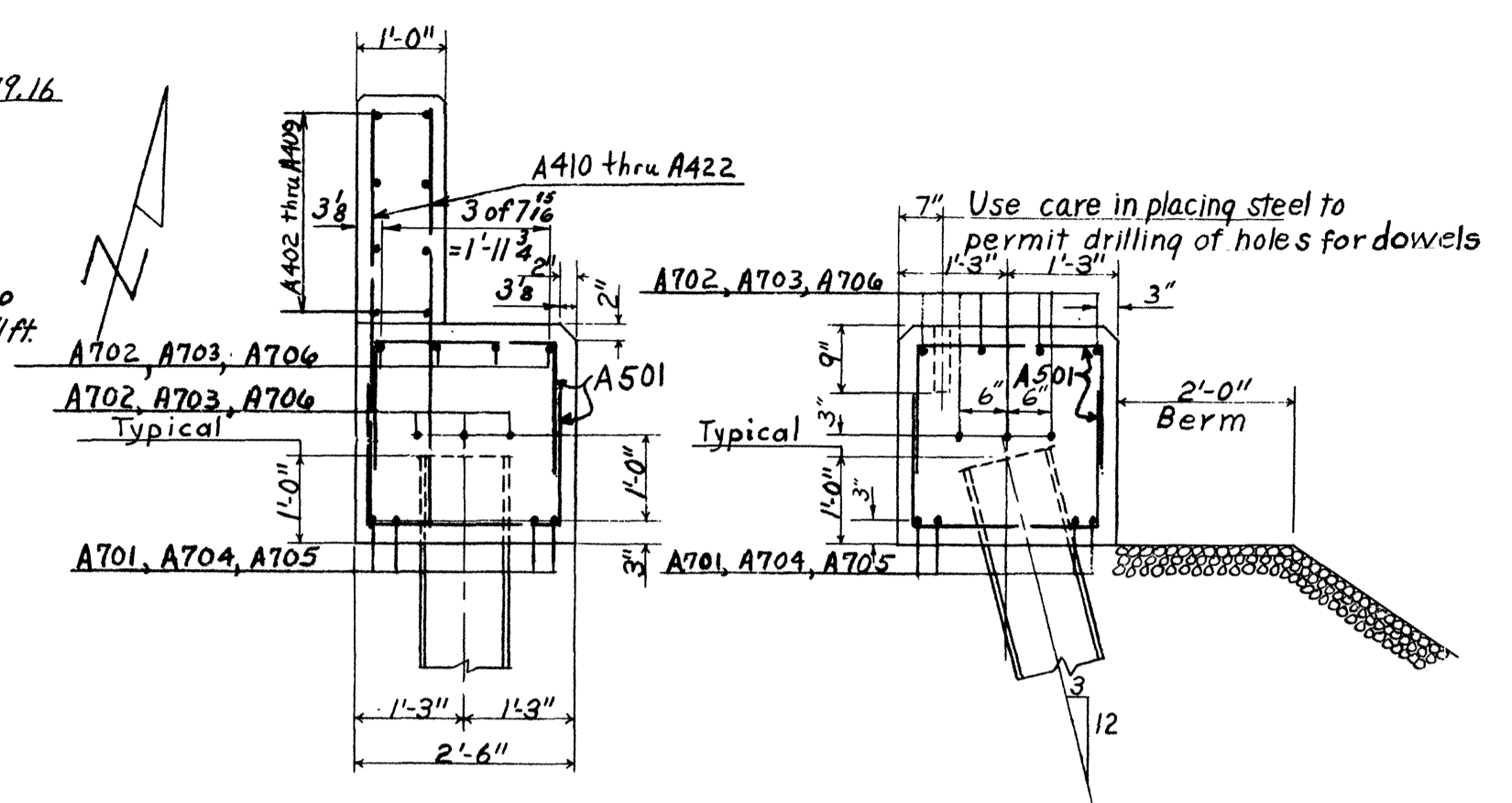
Revised 4-9-59

Drawn J. G.  
Ck. M. G. 9-24-58

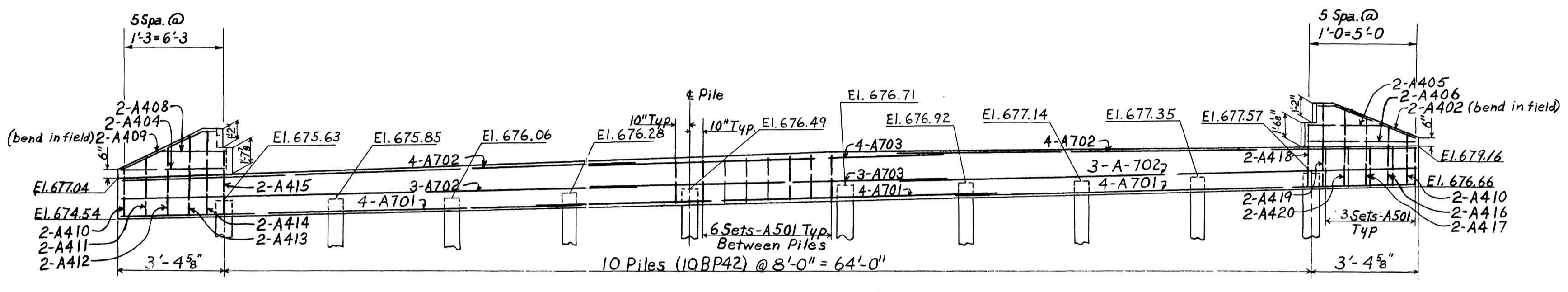




PLAN-ABUTMENT #1



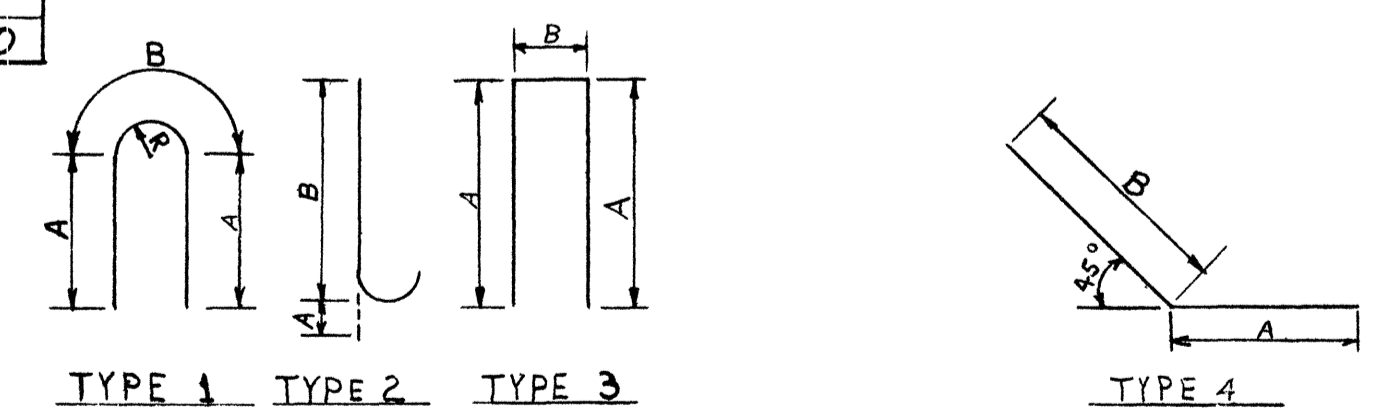
SECTION THRU WING SECTION SHOWING RIPRAP AND BATTERED PILE



ELEVATION-ABUTMENT #1

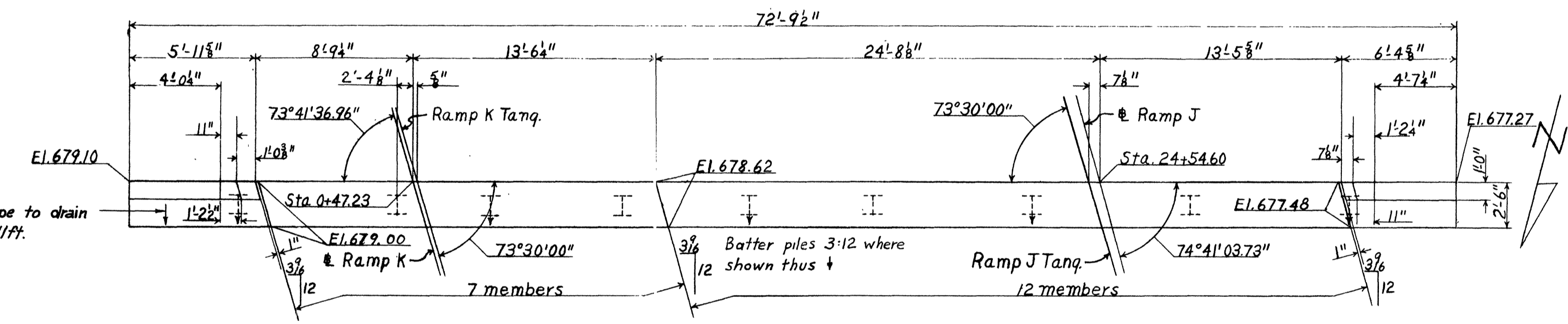
ABUTMENT REINFORCING										
ABUT #1	ABUT #2	TOTAL NO.	SIZE	LENGTH	MARK	TYPE	A	B	TOTAL WEIGHT	
120	814	112	759	232	#5	6'-6"	A501	3	2'-2"	1573
2	7	2	7	4	#4	5'-3"	A402	Str		14
2	8	2	8	2	#4	5'-9"	A403	Str		8
2	9	2	9	2	#4	6'-6"	A404	Str		9
2	5	2	5	4	#4	3'-6"	A405	Str		10
2	7	2	7	4	#4	5'-4"	A406	Str		14
2	2	2	8	2	#4	5'-9"	A407	Str		3
2	5	2	5	4	#4	3'-9"	A408	Str		10
2	9	2	9	2	#4	6'-6"	A409	Str		9
4	8	6	8	10	#4	3'-0"	A410	Str		16
2	5	2	5	4	#4	3'-8"	A411	Str		10
2	6	2	6	4	#4	4'-2"	A412	Str		12
2	6	2	6	4	#4	4'-8"	A413	Str		12
2	7	2	7	4	#4	5'-2"	A414	Str		14
2	5	2	5	2	#4	4'-1"	A415	Str		5
2	5	2	5	2	#4	3'-6"	A416	Str		5
2	5	2	5	2	#4	4'-0"	A417	Str		5
2	5	4	10	6	#4	3'-10"	A418	Str		15
2	7	2	7	4	#4	5'-0"	A419	Str		14
2	6	2	6	2	#4	4'-6"	A420	Str		6
2	2	2	5	2	#4	3'-8"	A421	Str		5
2	2	2	6	2	#4	4'-4"	A422	Str		6
12	697	12	697	12	#7	28'-5"	A701	Str		697
14	911	14	911	14	#7	31'-10"	A702	Str		911
7	316	7	316	7	#7	22'-1"	A703	Str		316
4	277	4	277	4	#7	40'-0"	A704	Str		277
4	277	4	277	4	#7	36'-4"	A705	Str		297
14	1092	14	1092	14	#7	38'-2"	A706	Str		1092
									TOTAL	5420

For spacing anchor dowels, see details of members by prestress contractor.  
 Reinforcing steel shall have 2" of cover from all faces. Wings shall be poured after deck members are in place.  
 Piles are 10BP42 point bearing on rock or driven to a minimum bearing of 36 tons per pile. For pile details see Tennessee Department of Highways and Public Works Standard Drawing F-2-118

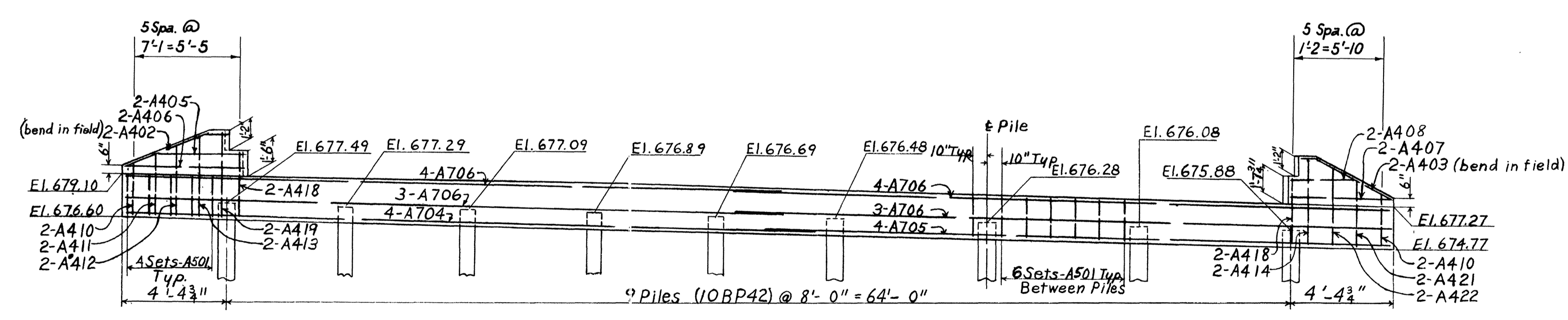


PIER REINFORCING														
MARK	SIZE	PIER #1 NO.	PIER #1 WT.	PIER #2 NO.	PIER #2 WT.	TOTAL NO.	LENGTH	TYPE	A	B	R	VARIABLES BY EACH	TOTAL WEIGHT	
F401	#4	31	135			31	6'-6"	Str					135	
F402	#4			27	135	27	7'-6"	Str					135	
F501	#5	28	686			28	23'-6"	Str					686	
F502				7	117	7	16'-0"	Str					117	
F503				7	153	7	20'-6"	Str	13'-7"	7'-0"			153	
F504		14	326	14	326	28	22'-0"	Str	15'-0"	7'-0"			326	
F505				7	98	7	13'-3"	Str					98	
F506	#5			7	141	7	19'-3"	Str	12'-3"	7'-0"			141	
F601	#6	48	341	46	326	94	4'-8"	Str	2	8"	4'-0"		667	
F701	#7	46	619			46	6'-6"	Str					619	
F702				39	605	39	7'-6"	Str					605	
F1101	#11	28	1102	28	1102	56	7'-4"	Str	1'-7"	5'-9"			2204	
P401	#4	44	1017			44	34'-0"	Str					1017	
P402				2	55	2	40'-0"	Str					55	
P403	#4	78	4	78	8	28'-3"	Str						156	
P404		186	8	186	16	33'-9"	Str						372	
P405		52	289	52	289	104	6'-2"	Str	3	3'-0"	2'-5"	4"	578	
P406	#4	305	42	290	96	10'-2"	Str	3	4'-0"	2'-5"			595	
P407	#6	36	6	36	12	8'-10"	Str	1	2'-6"	3'-10"	1'-2 1/2"		72	
P408		46	970	46		46	31'-0"	Str					970	
P409				2	36	2	26'-0"	Str					36	
P410				2	35	2	26'-0"	Str					35	
P411				2	16	2	11'-6"	Str					16	
P412	#4			2	51	2	37'-4"	Str					51	
P501	#5	48	1400			48	27'-6"	Str					1400	
P502	#5	491	23	246	69	9'-6"	Str	1	2'-10"	2'-3"	1'-1 1/2"	5/8"	737	
P503		12	429	12	33'-9"	12	33'-9"	Str					429	
P504		20	641	20	30'-3"	20	30'-3"	Str					641	
P505		14	386	14	26'-0"	14	26'-0"	Str					386	
P506	#5	28	303	28	9'-6"	28	10'-11"	Str	1	2'-10"	2'-3"	1'-1 1/2"	5/8"	303
P601	#6	4	85	4	85	8	14'-2"	Str	2	8"	13'-6"		170	
P1101	#11	28	435			28	27'-6"	Str					435	
P1102	#11	8	1074	8	1074	16	23'-0"	Str					2148	
P1103	#11	8	1439			8	33'-6"	Str					1439	
P1104		14	2537	14	33'-9"	14	33'-9"	Str					2537	
P1105		14	1955	14	26'-0"	14	26'-0"	Str					1955	
P1106	#11	8	1385	8	32'-3"	8	32'-3"	Str					1385	
PS07	#4	46	258	23	129	69	4'-11/16"	Str	3	13	3'-5"	3/8"	387	
PS08		28	159	28	11/16"	28	5'-10"	Str	3	4	3'-5"	3/8"	159	
Total Wt.		13731		14319								28,050		

QUANTITIES			
ITEM NO.	UNIT	ITEM	TOTAL
135-4	C.Y.	Class 'A' Concrete	19 18 37
135-12	Pounds	Steel Bar Reinforcement	2853 2567 5418



PLAN-ABUTMENT #2



ELEVATION-ABUTMENT #2

DESIGNED BY M.G. DATE  
 DRAWN BY J.G. DATE  
 TRACED BY J.G. DATE  
 CHECKED BY J.G. DATE

PREPARED BY  
 CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
 FOR  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE  
 ABUTMENTS  
 STRUCTURE OVER SPRING CREEK  
 TERMINAL RAMPS J&K MERGE  
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 STATION 24+00.74  
 HAMILTON COUNTY



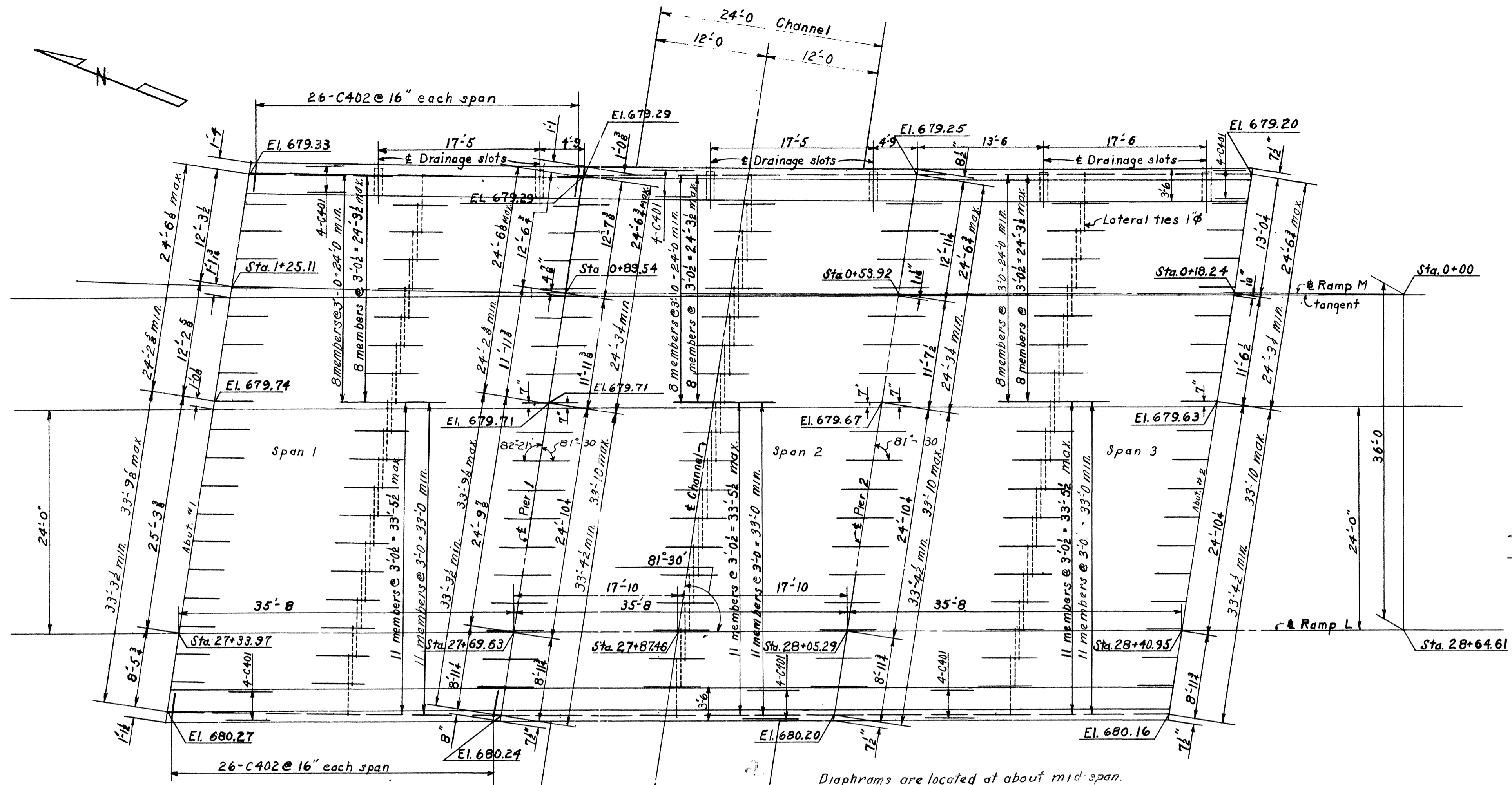








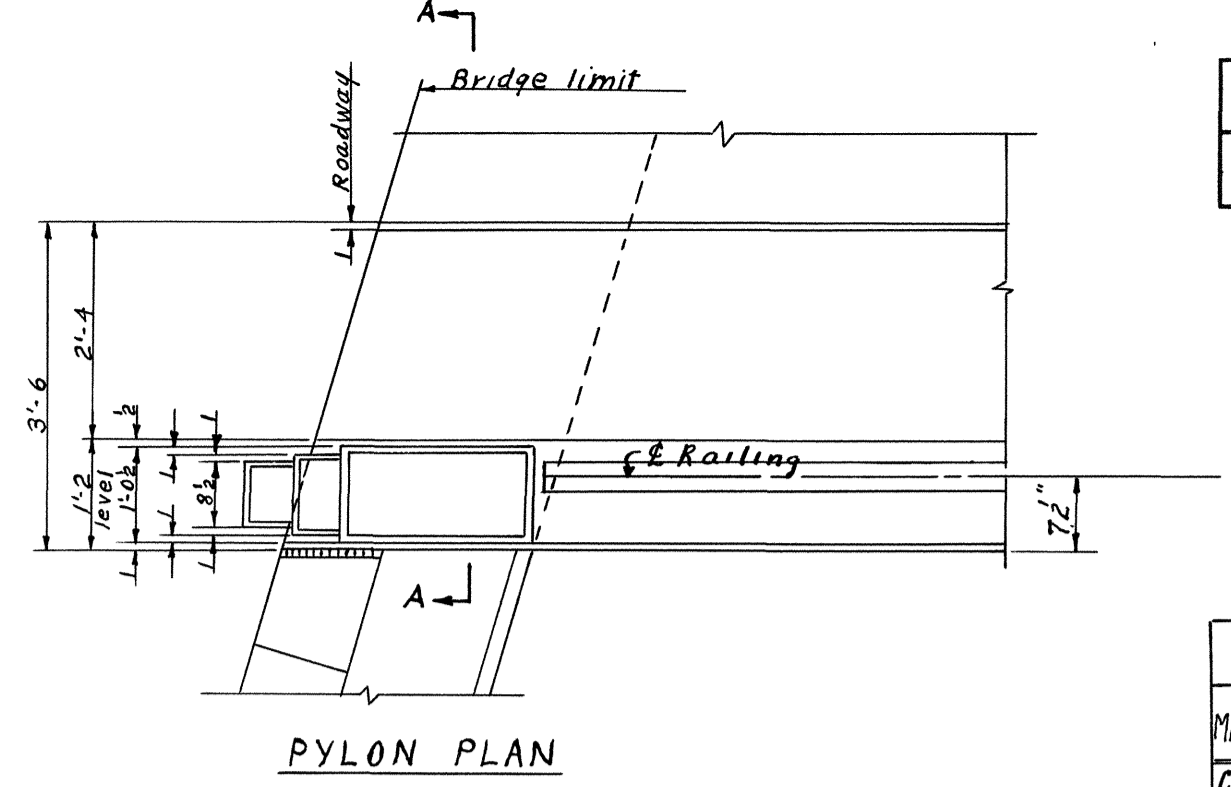
FED. ROAD REG. NO.	T E N N.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-1(7)0	1959	66	336



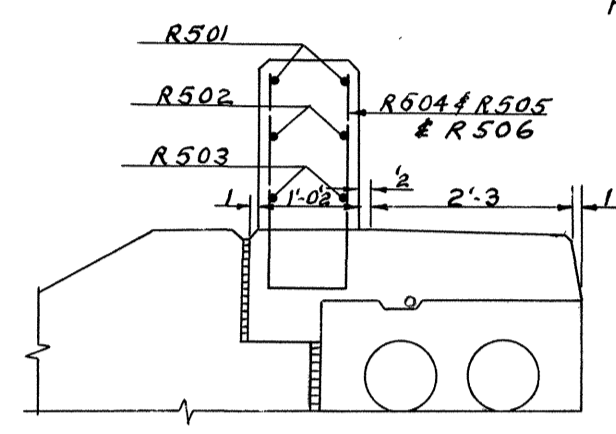
PLAN OF PRECAST MEMBERS

Erection of deck shall start at approximate center of bridge and progress outward

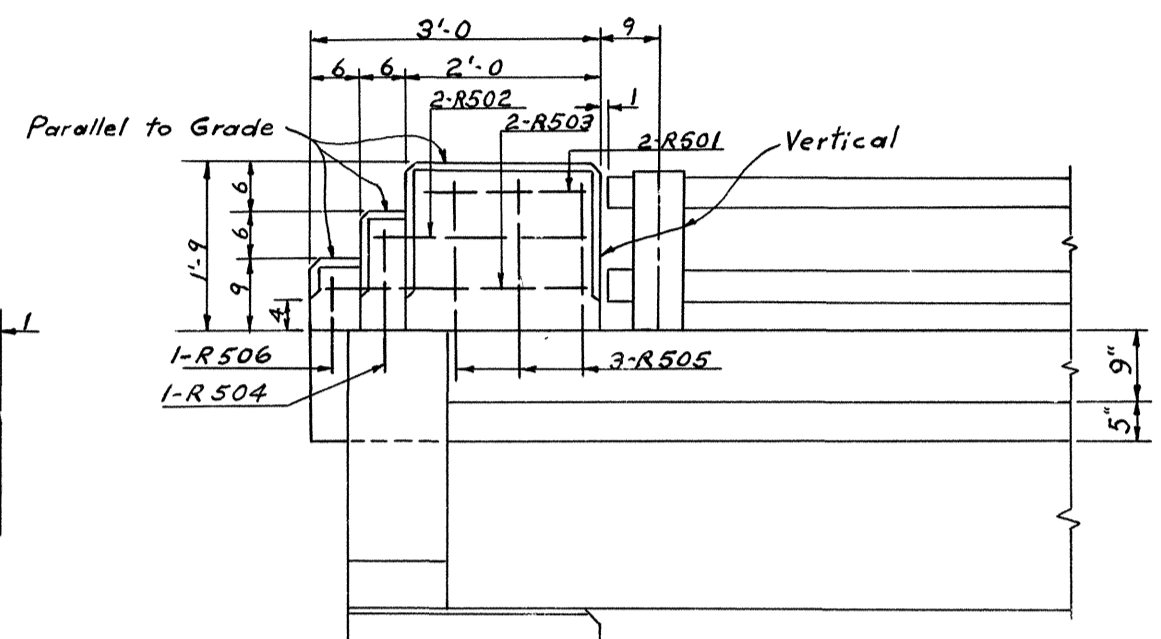
Diaphragms are located at about mid span. Elevations shown are tops of precast members.



PYLON PLAN



SECTION A-A



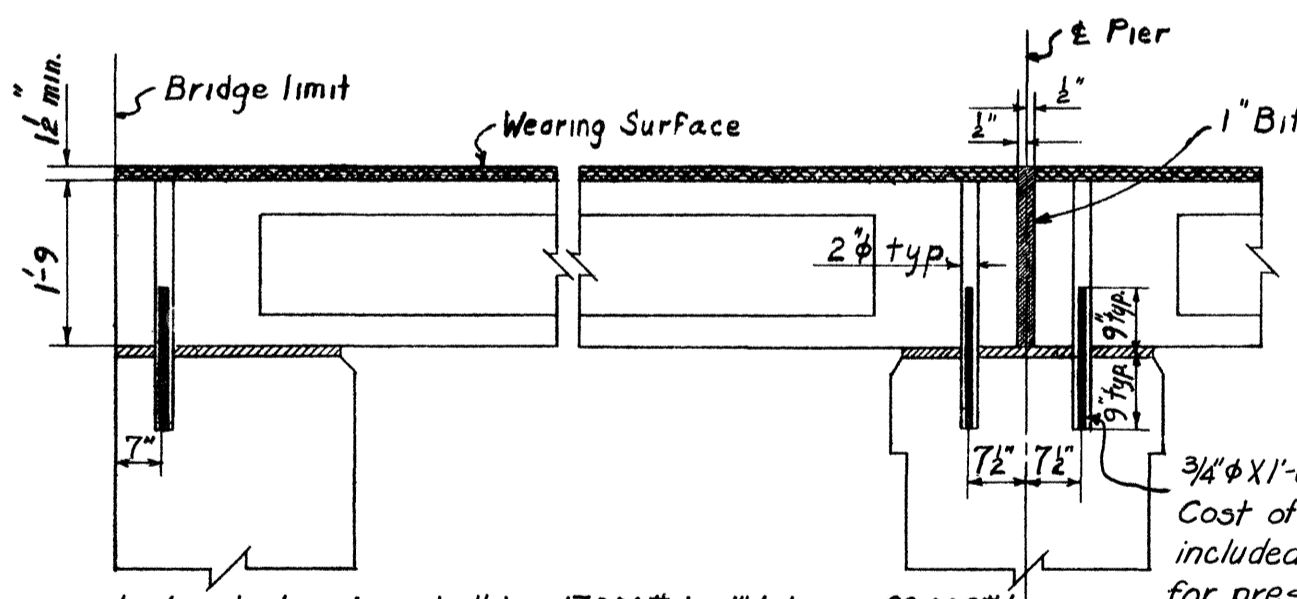
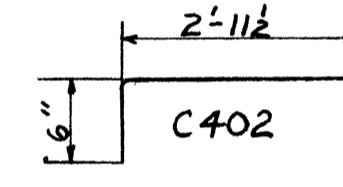
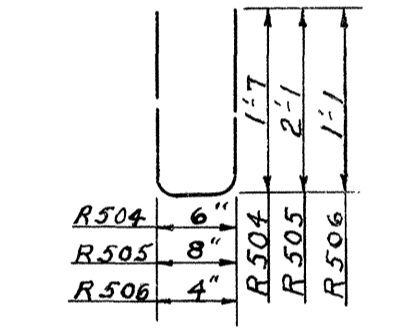
PYLON ELEVATION

SUPERSTRUCTURE BAR LIST

MARK	QUANTITY			LENGTH	TYPE	WEIGHT				
	SPAN 1	SPAN 2	SPAN 3			SPAN 1	SPAN 2	SPAN 3	TOTAL	
C-401	8	8	8	24	35 1/2	Str.	189	189	189	567
C-402	52	52	52	156	4 1/2	Bent	145	145	145	435
R501	4	4	4	8	1 1/8	Str.	7	7	7	21
R502	4	4	4	8	2 1/2	Str.	9	9	9	27
R503	4	4	4	8	2 1/8	Str.	11	11	11	33
R504	2	2	2	4	3 1/8	Bent	8	8	8	24
R505	6	6	6	12	4 1/8	Bent	30	30	30	90
R506	2	2	2	4	2 1/8	Bent	5	5	5	15
<b>TOTAL</b>							<b>404</b>	<b>334</b>	<b>404</b>	<b>1142</b>

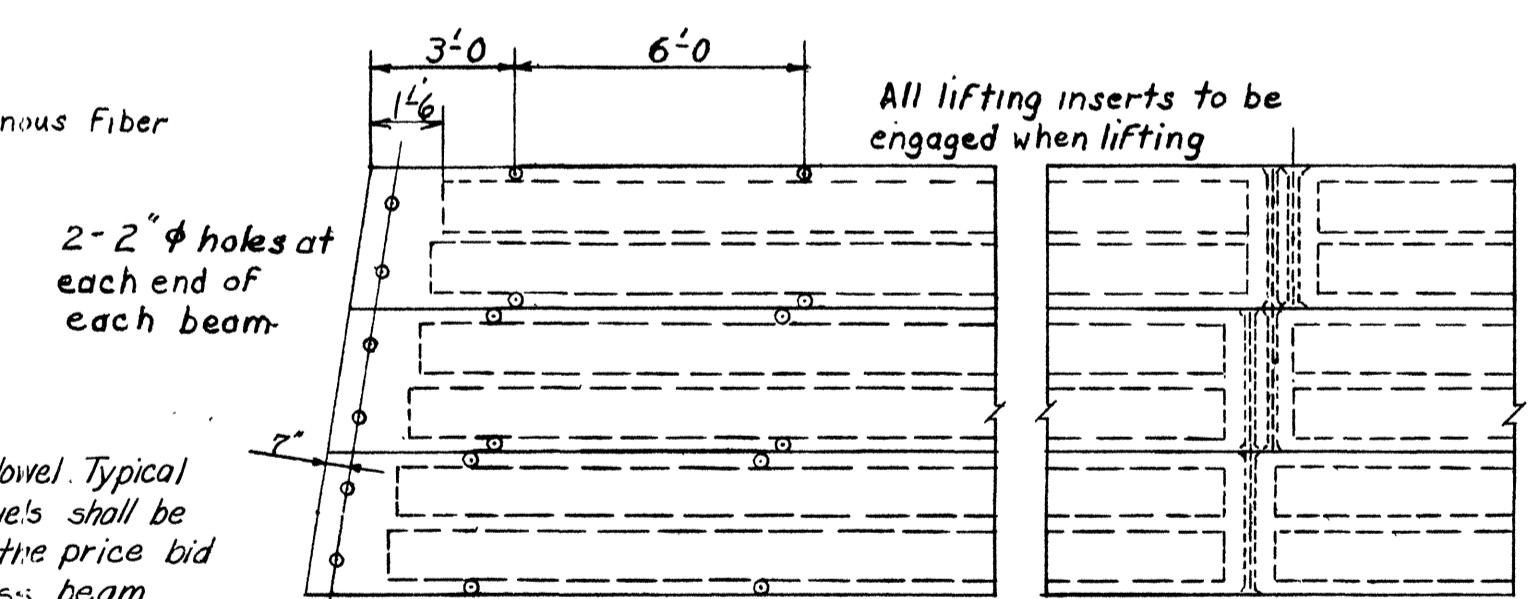
QUANTITIES

ITEM No	UNIT	ITEM	SPAN 1	SPAN 2	SPAN 3	TOTAL
135-4	C.Y.	Class "A" Concrete	8.8	8.4	8.8	26
135-12	Pound	Steel Bar Reinforcement	4.04	3.34	4.04	1142



SECTION AT BEARING

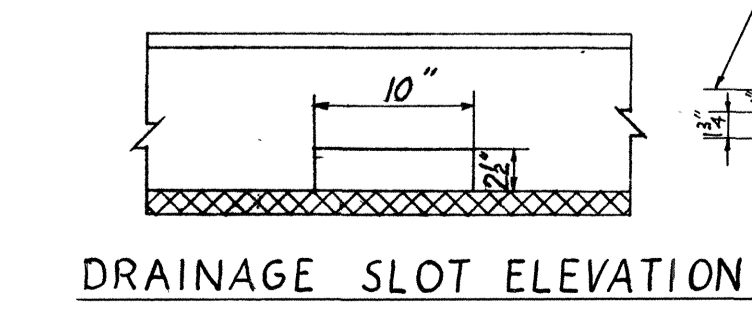
Lateral tension shall be 17000\* in 1" bar = 22,000\* in.² on gross section of bar. Holes in Piers & Abutments for anchor dowels, are to be drilled after members are placed & transverse tensioning is complete. Fill holes with bitumen at expansion ends & with grout at fixed ends. Place one approved masonry pad (see special provisions) with one surface impregnated with graphite at each end. Graphitized surfaces shall be turned up.



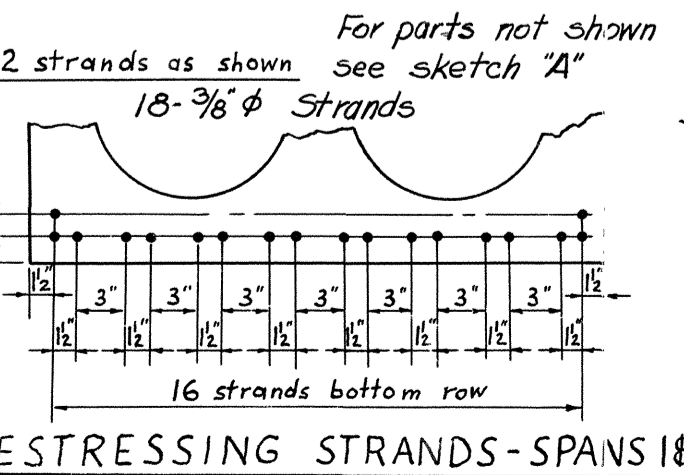
PART PLAN - BEAM DETAILS

2-2" holes at each end of each beam.

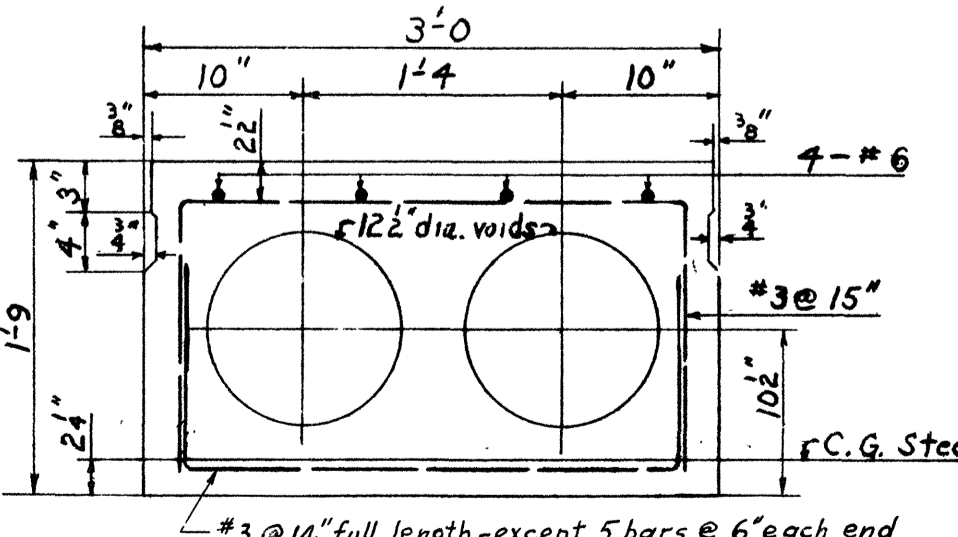
All lifting inserts to be engaged when lifting



DRAINAGE SLOT ELEVATION

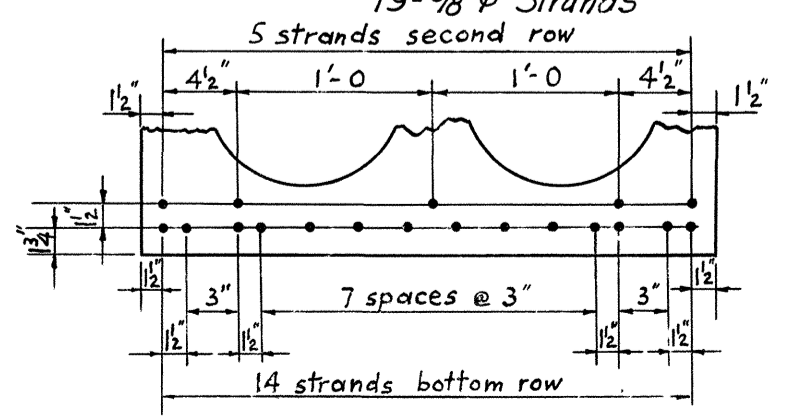


PRESTRESSING STRANDS - SPANS 1&3

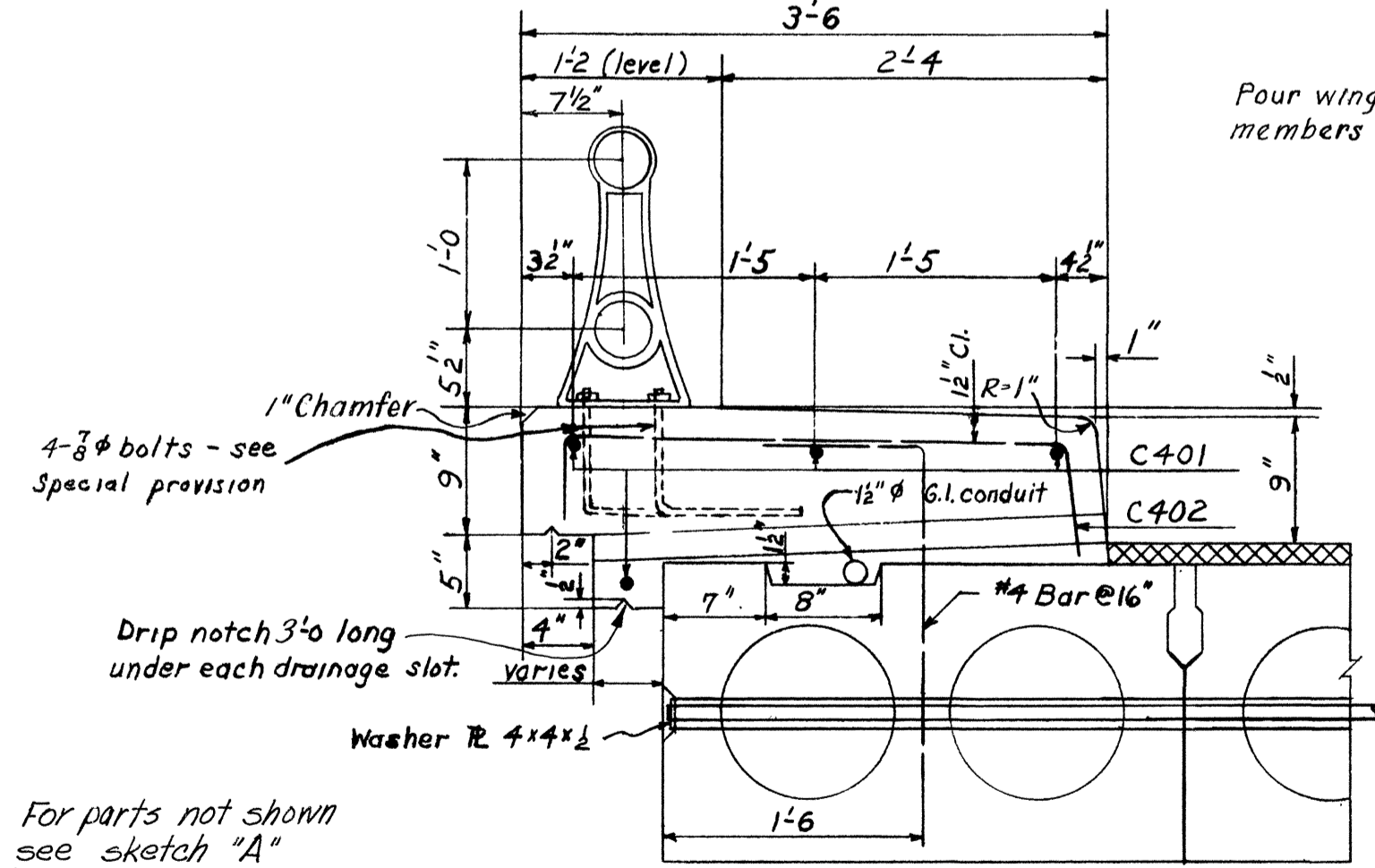


TYPICAL SECTION - EXCEPT STRANDS

Initial stress/strand = 14,000 pounds



PRESTRESSING STRANDS - SPAN 2



DETAILS AT ABUTMENT

Abutment wing

Four wing after deck members are in place

2 layers 3 ply tar paper

1" pre-moulded joint filler

Masonry Pad

Cost of steel extending from prestressed beams into curbs shall be included in the bid price for the prestressed beam units (item 154).

Beams may be made rectangular with sides normal to the roadway or with sides vertical.

After lateral stressing is completed, fill keys with approved non-shrink grout of high compressive strength and impact resistant. (See special provisions). Curbs cast in place after grouting and lateral stressing.

Contractor for prestressed members must submit details of members and obtain approval from Engineer before proceeding with the manufacture of the members.

PREPARED BY  
CAPITOL ENGINEERING CORPORATION, DILLSBURG, PA.  
FOR

STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

DECK PLAN & DETAILS  
STRUCTURE OVER SPRING CREEK  
TERMINAL RAMPS L & M MERGE  
INTO INTERSTATE ROUTE 514  
STATION 27 + 87.46  
HAMILTON COUNTY

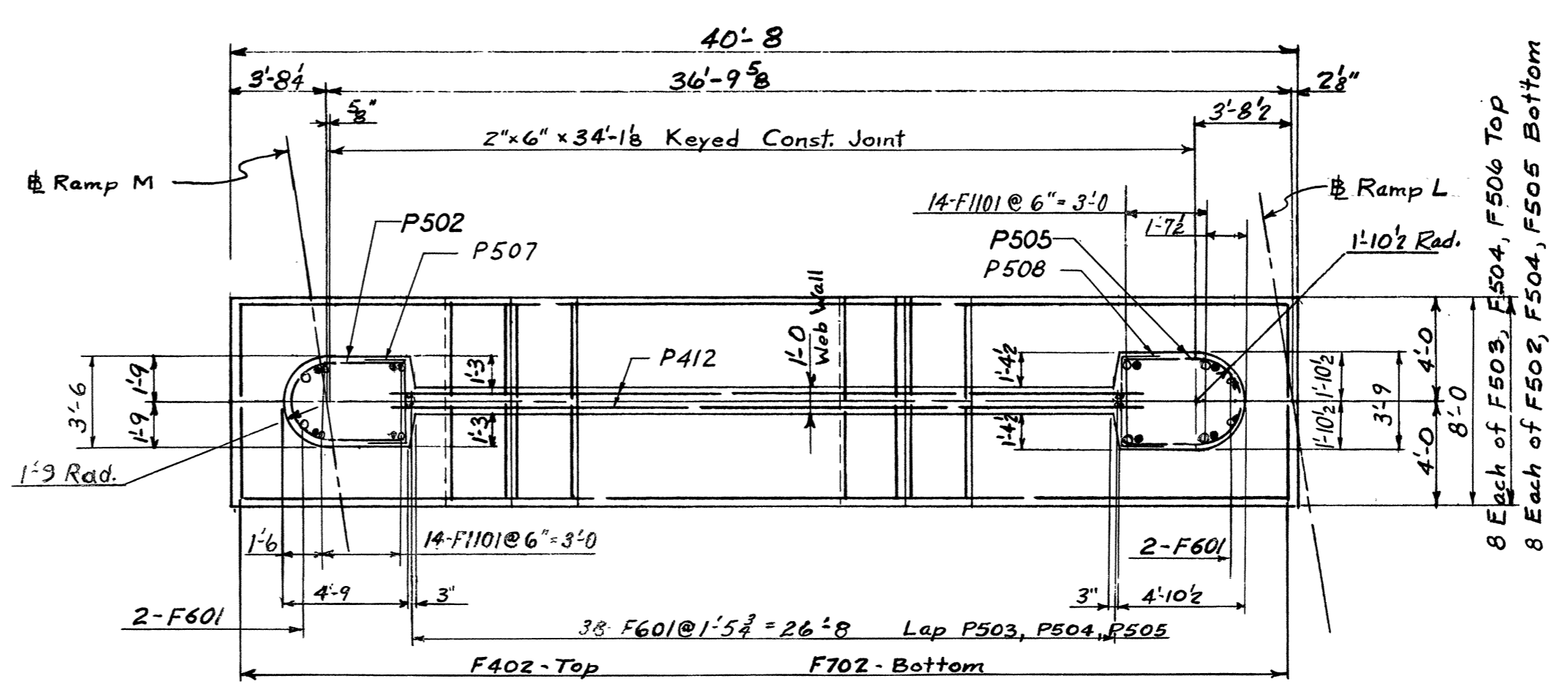
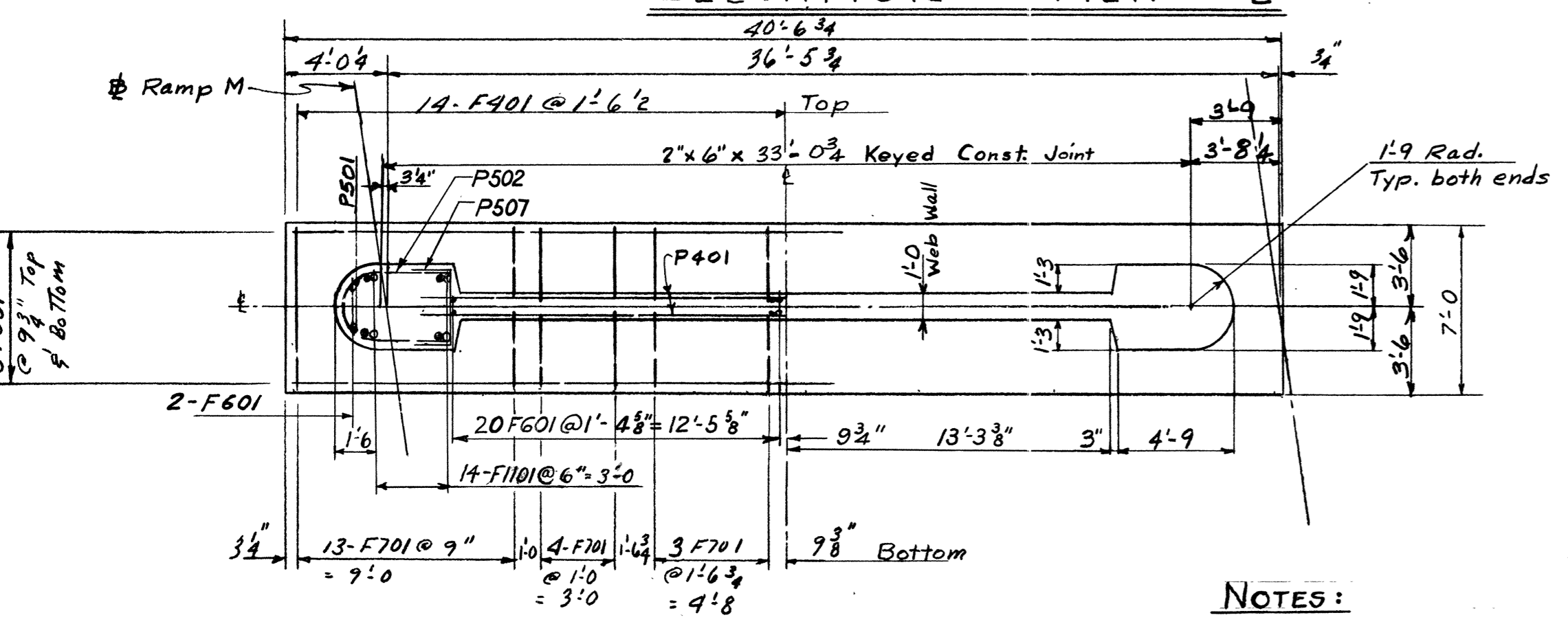
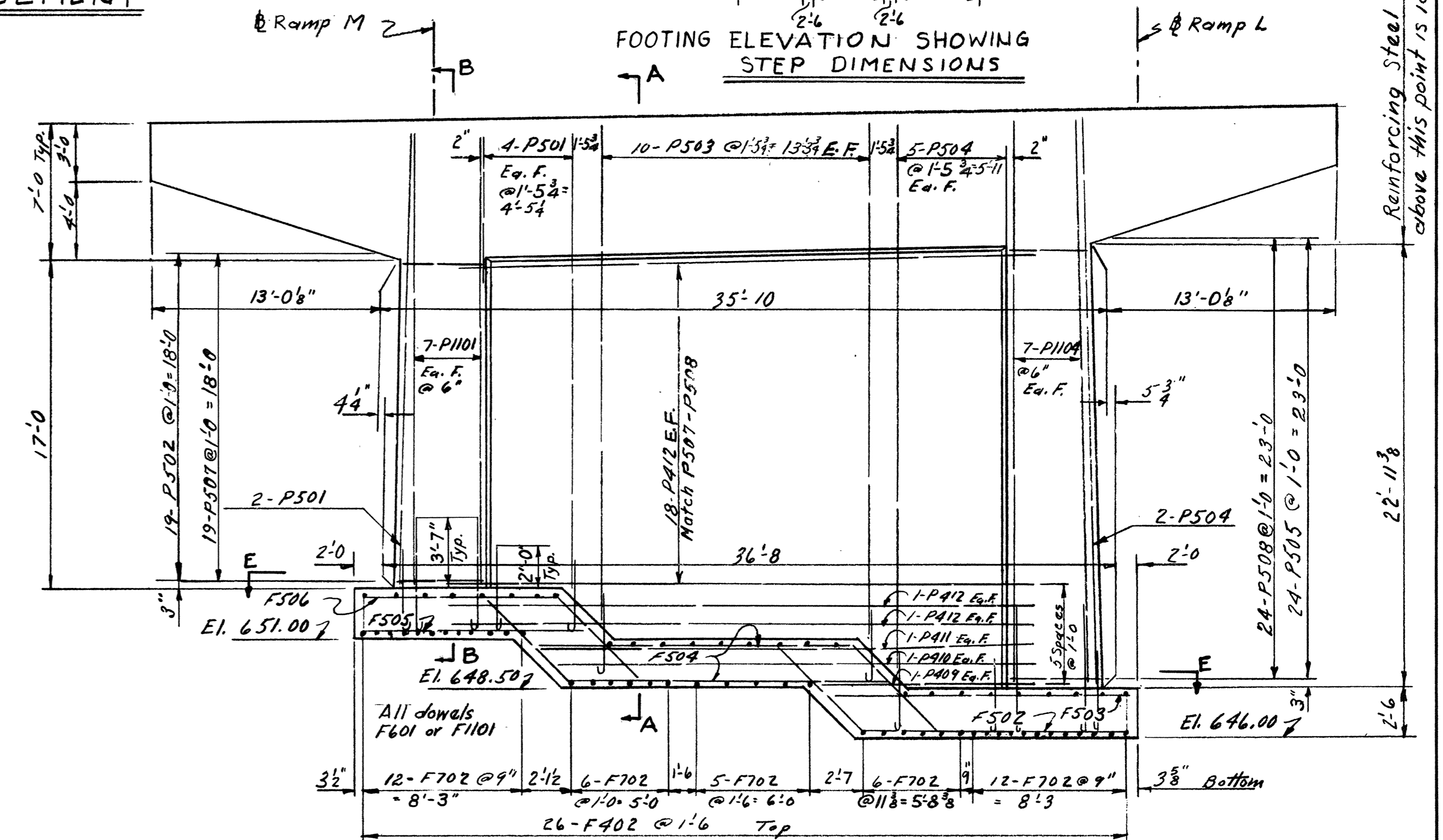
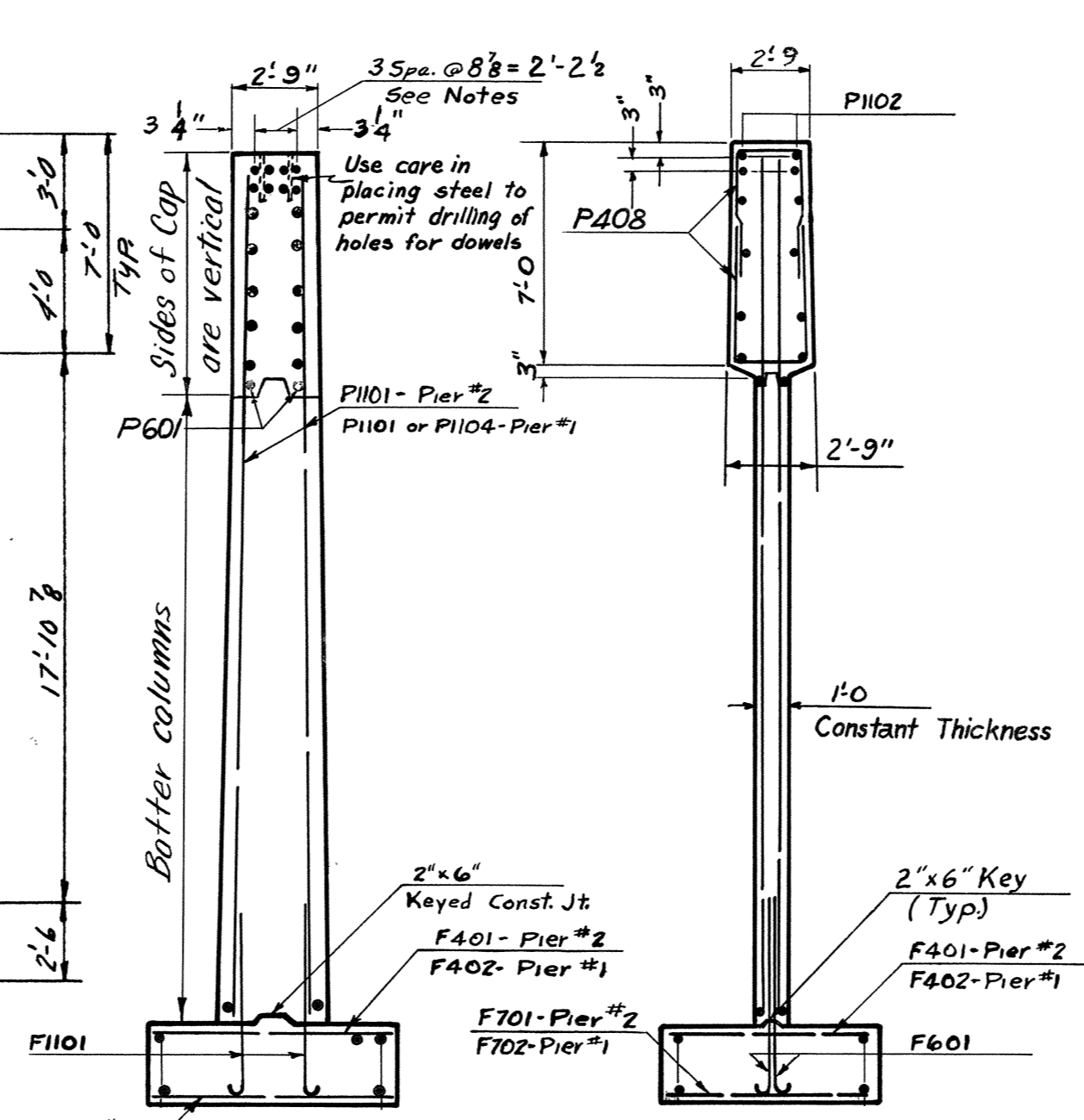
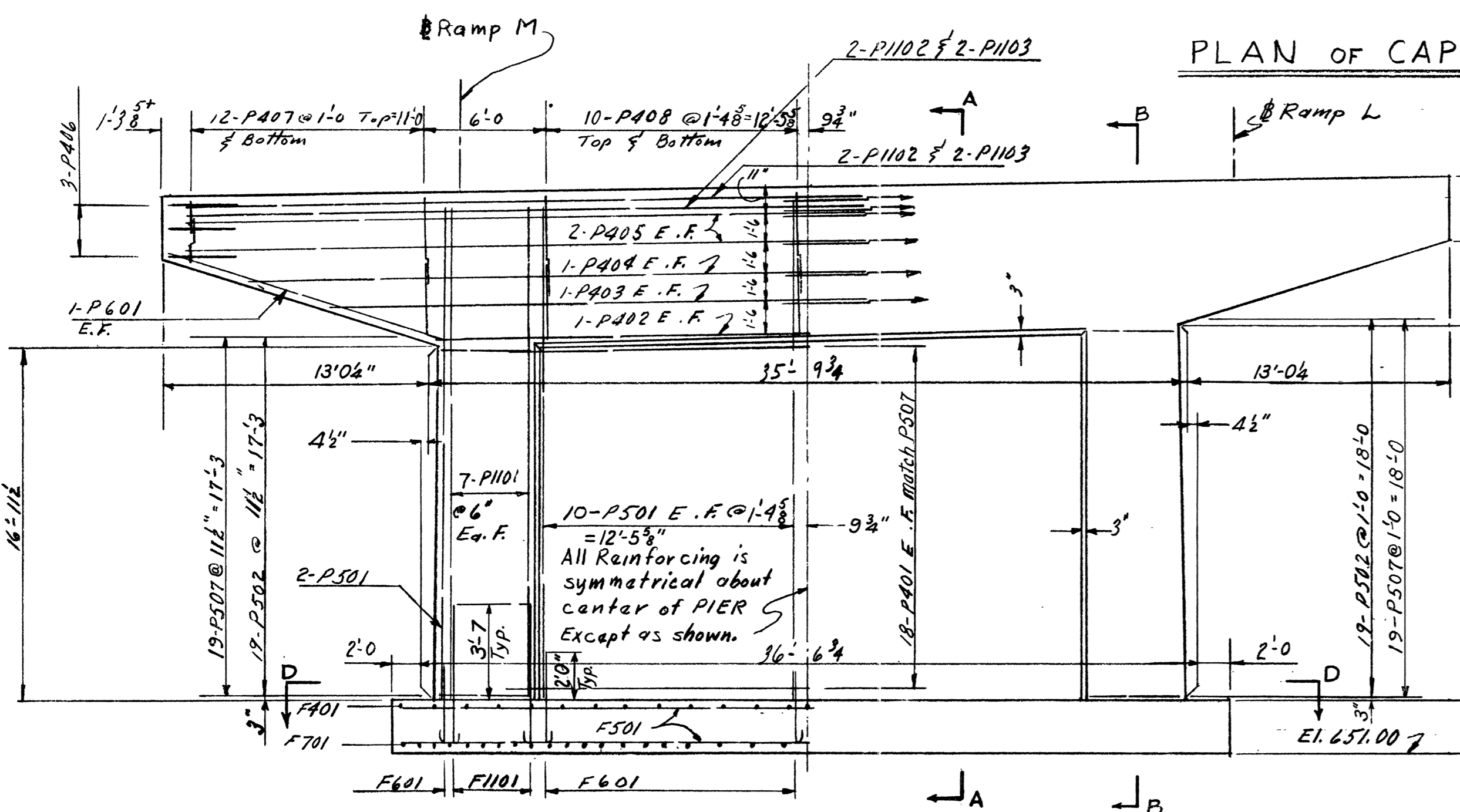
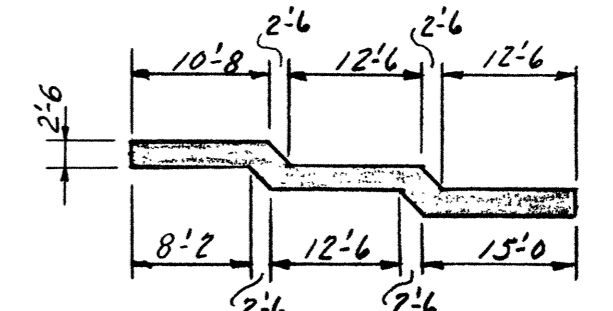
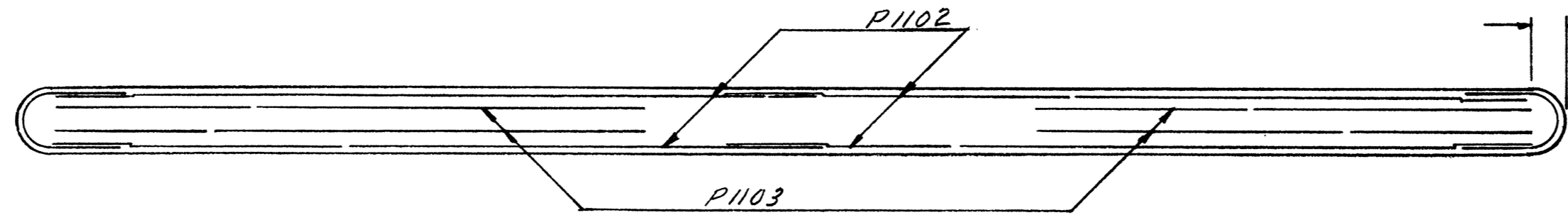
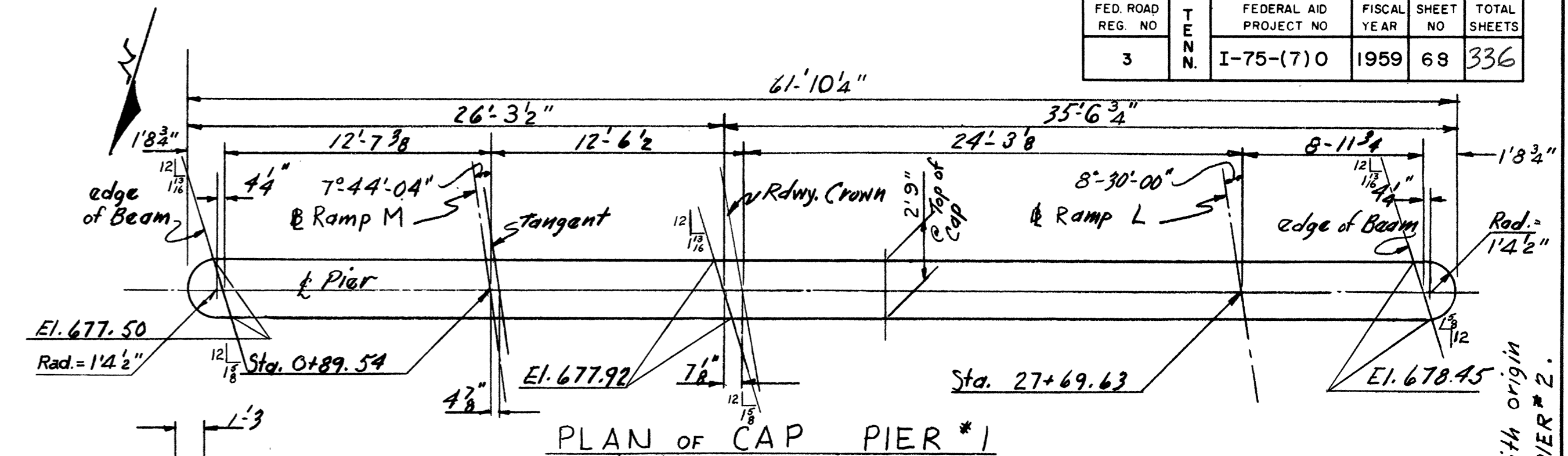
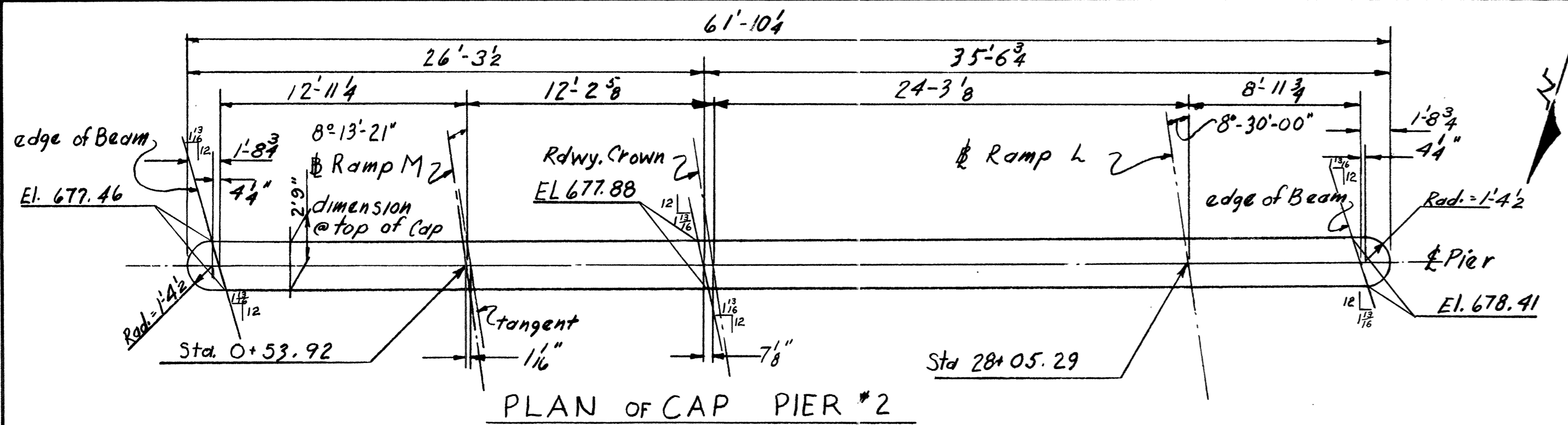
Revised 3-13-59 in accordance with comments by letter of Jan. 19, 1959 and conference of Feb. 10, 1959.  
 DESIGNED BY: [Signature]  
 DRAWN BY: [Signature]  
 TRACED BY: [Signature]  
 CHECKED BY: [Signature]







FED. ROAD REG. NO.	TENN.	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		I-75-(7)0	1959	68	336



**NOTES:**  
 Reinforcing steel shall have 3" of cover in the footing & 2" cover elsewhere  
 Reinforcing steel in the cap shall be placed so as to clear anchor dowels. For dowel spacing see details of members by prestress contractor.  
 Max. foundation pressure = 4.1 tons per sq. ft.  
 For bar list see sheet #67  
 E.F. = Each Face

QUANTITIES					
ITEM NO.	UNIT	ITEM	PIER 1	PIER 2 TOTAL	
135-4	C.Y.	Class "A" Concrete	109	96	205
135-12	LBS.	Steel Bar Reinforcement	13209	12,101	25,310

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 HAMILTON COUNTY

Revised 3-13-59 in accordance with comments by letter of Jan. 19 1959 and conference of Feb 10/11, 1959. Revised 4-9-59

DESIGNED BY  
 DRAWN BY  
 TRACED BY  
 CHECKED BY