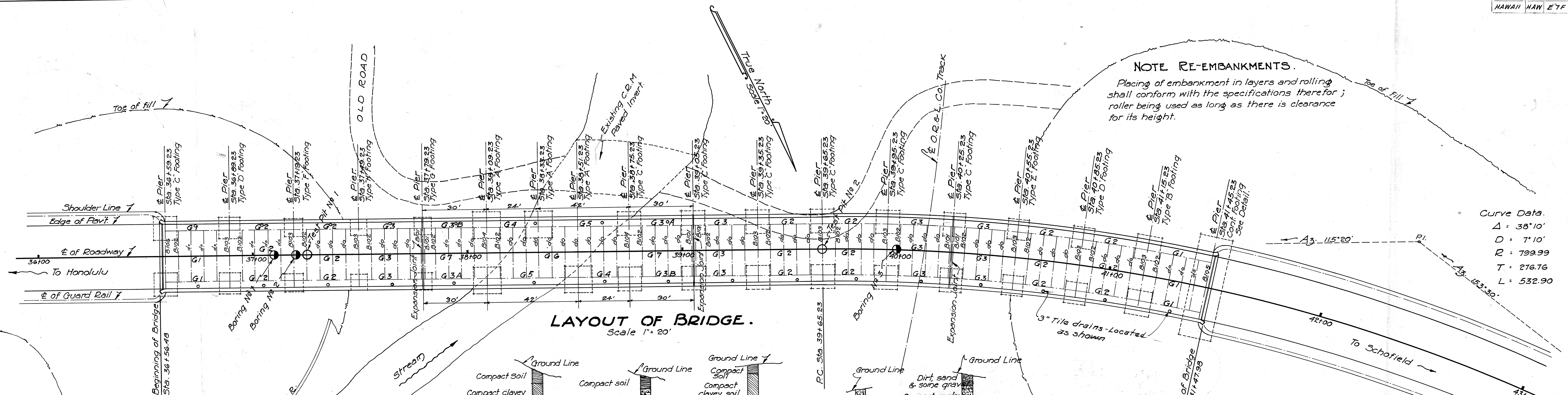
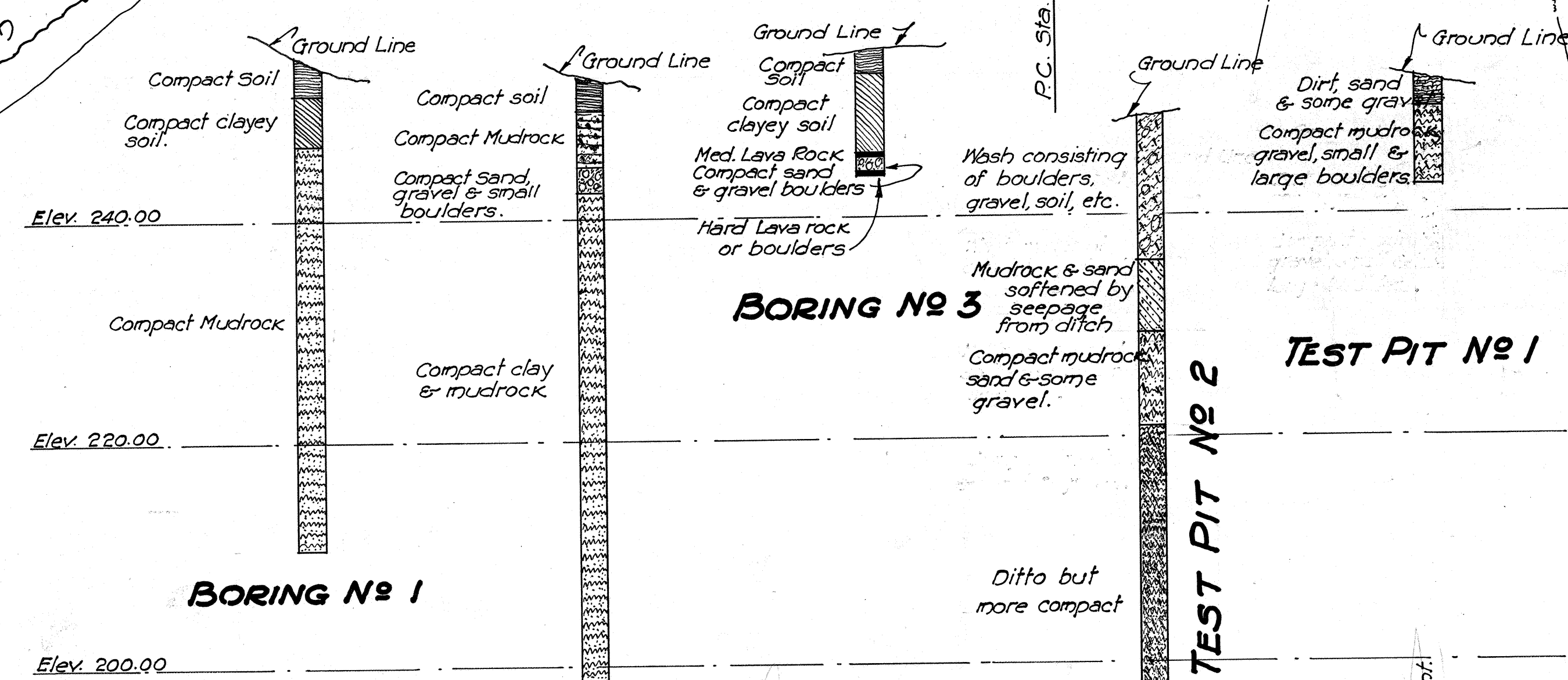


NOTE RE-EMBANKMENTS.
Placing of embankment in layers and rolling shall conform with the specifications therefor; roller being used as long as there is clearance for its height.

Curve Data.
 $\Delta = 38^{\circ}10'$
 $D = 7^{\circ}10'$
 $R = 799.99$
 $T = 276.76$
 $L = 532.90$

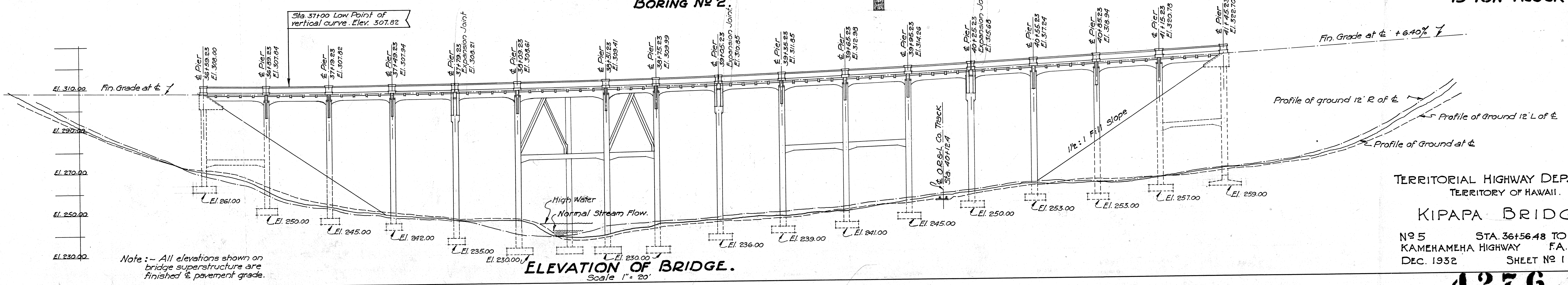
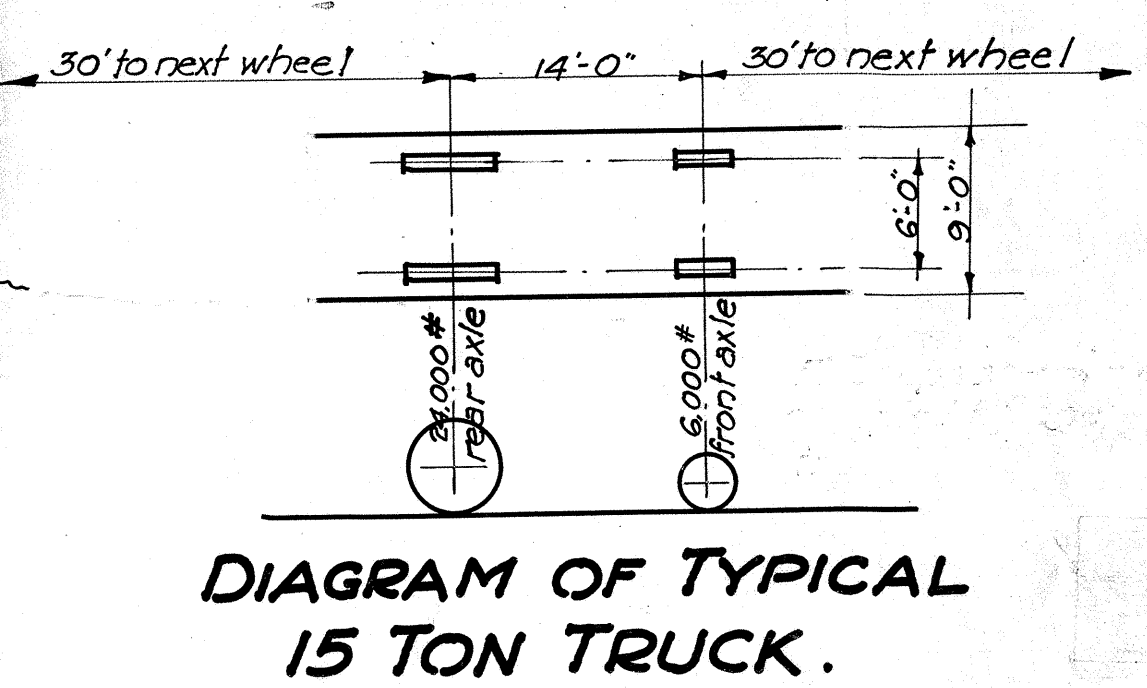


GENERAL NOTES.
Dead Load :- Concrete at 150# per cu. ft.
Live Load :- Train of 15 Ton trucks in three traffic lanes, spacing of trucks as per diagram with 30% allowance for impact.
Concrete :- Class A (1:2:4 mix) with all exposed edges chamfered $\frac{3}{4}$ " unless otherwise noted. Allowable compression 250# per sq. inch.
Reinforcing Steel :- Allowable tensile stress 16,000# per sq. inch. All steel to be round or square deformed. All dimensions relating to reinforcement are to centers of bars unless otherwise noted. Where splicing of reinforcement is necessary bars are to be lapped 40 diameters & splices are to be staggered. Main longitudinal bars in girders cannot be spliced. No allowance will be made in the quantities for extra weight of steel required for splices. Unless otherwise noted the minimum covering measured from the surface of concrete to the face of any steel shall be not less than $\frac{2}{2}$ " in abutments and abutment footings; 2" in beams, girders & handrails and $\frac{1}{4}$ " in slabs. Steel to be held rigidly & accurately in place before and during placing of concrete.



BRIDGE QUANTITIES.

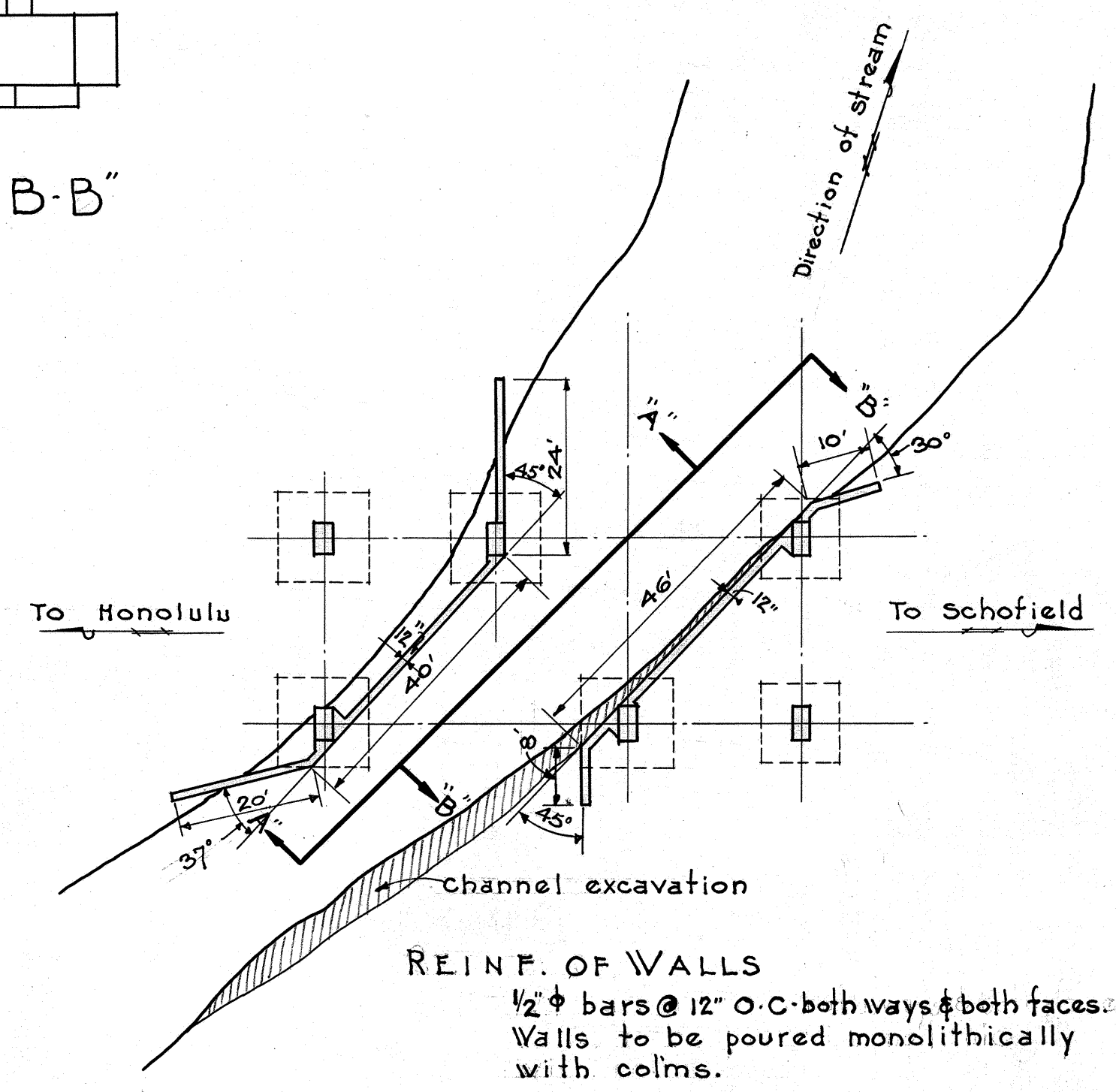
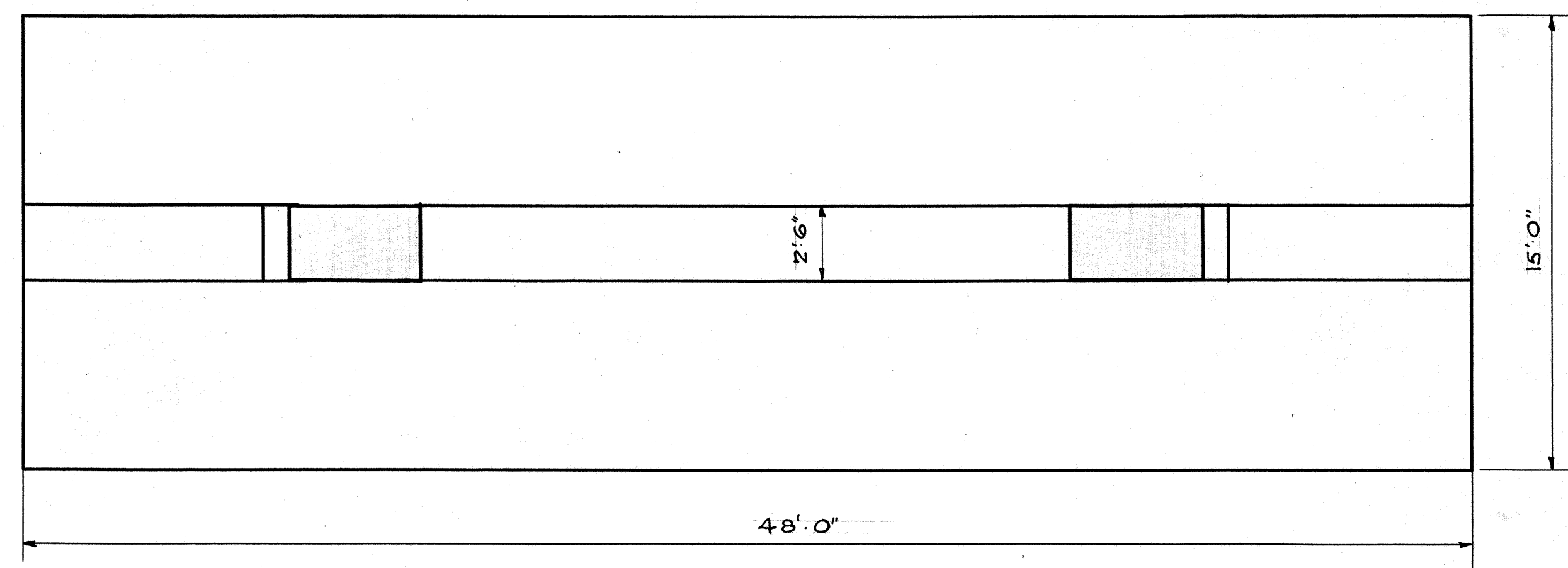
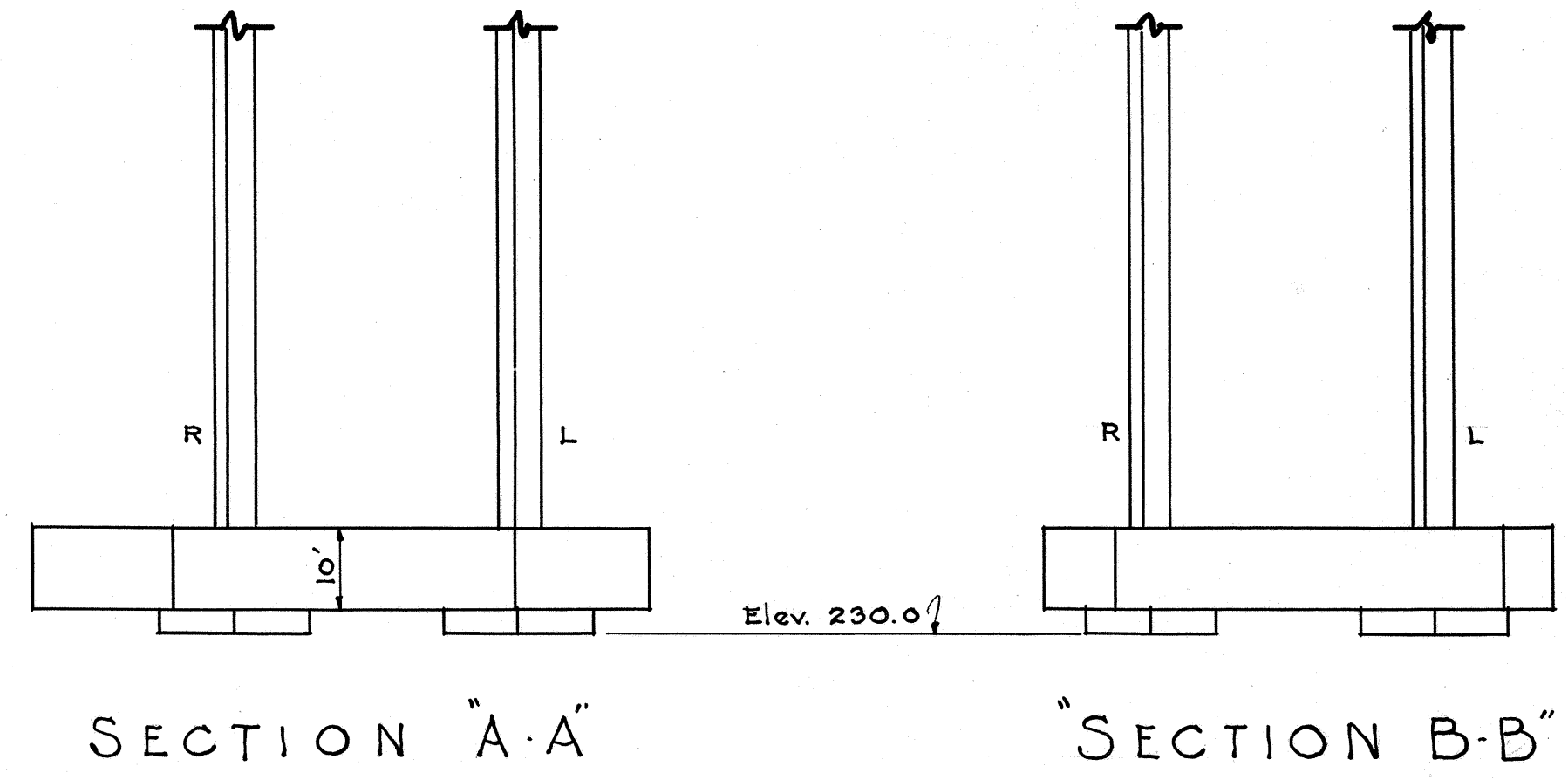
LOCATION	EXCAVATION	CONCRETE	STEEL
Footings.	2,387.0 C.Y.	5,650 C.Y.	2,373,600 lbs
Piers		8,450 "	1,080,000 "
Superstructure		9,320 "	
Steel according to schedule excluding railing			2,480,123.9 "
Steel in railing not shown on schedule			11,310.00 "
TOTALS	2,387.0 C.Y.	2,342.0 C.Y.	3,911,213.9 lbs



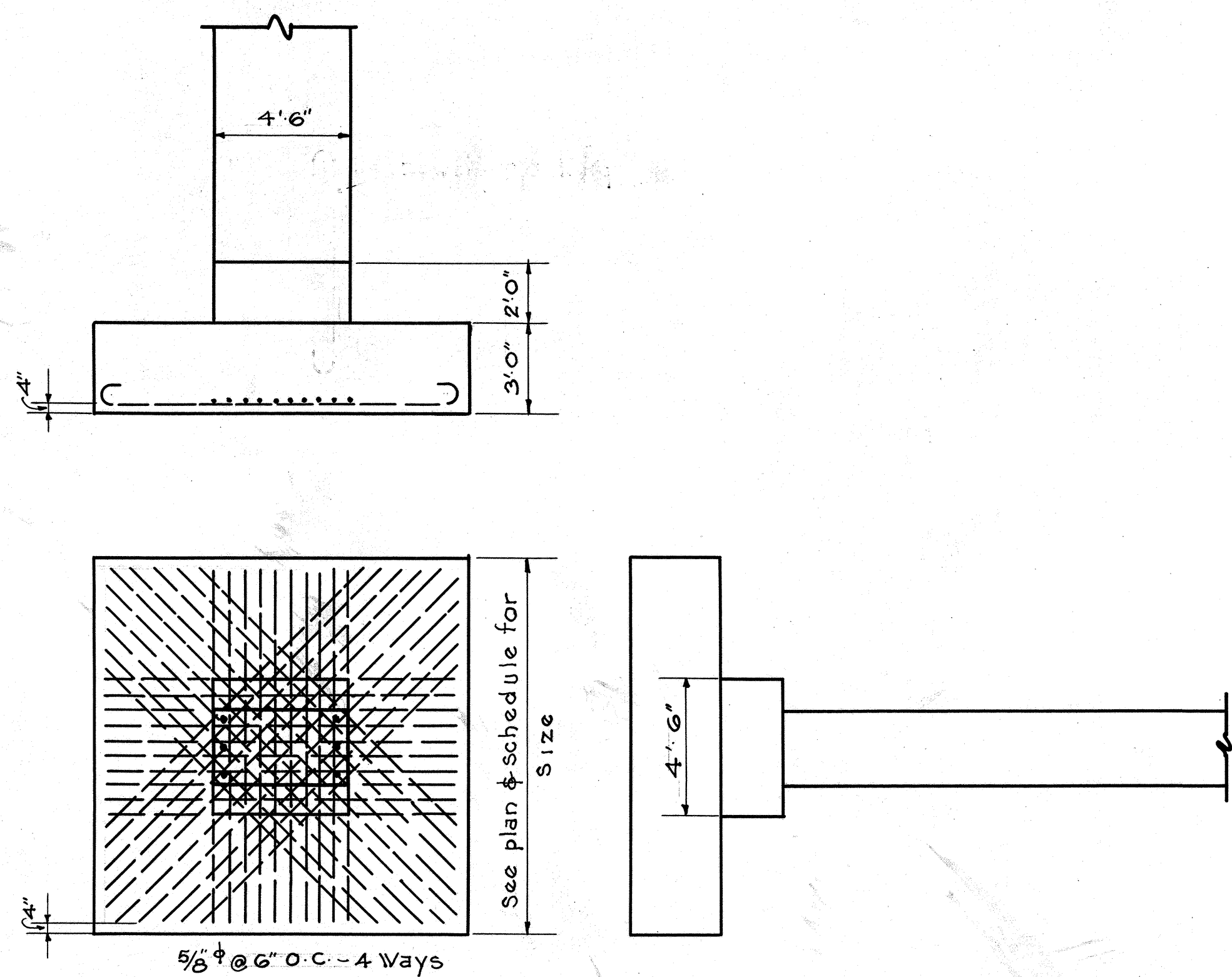
Note :- All elevations shown on bridge superstructure are finished & pavement grade.

TERRITORIAL HIGHWAY DEPARTMENT.
TERRITORY OF HAWAII.
KIPAPA BRIDGE.
No 5 STA. 36+56.48 TO 41+47.98
KAMEHAMEHA HIGHWAY F.A.P. No E-7F.
DEC. 1932 SHEET No 1 OF 12 SHEETS.

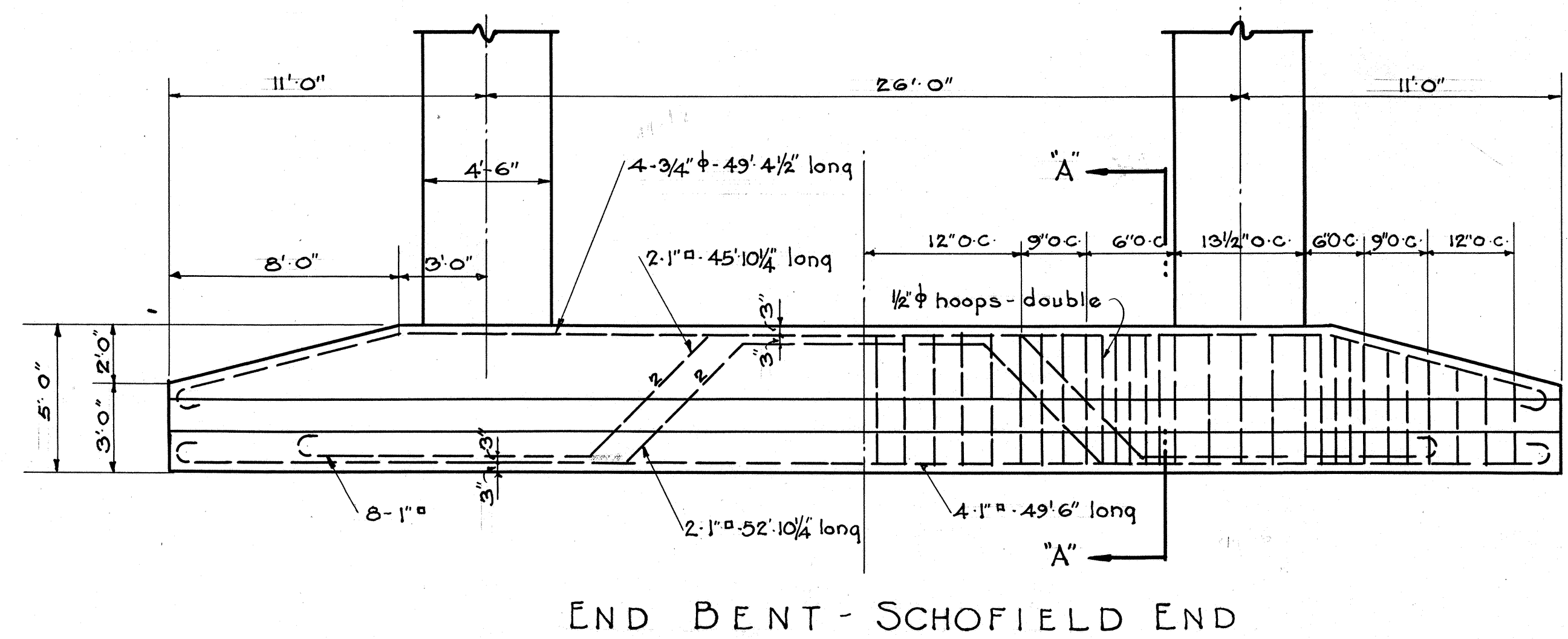
FOOTING SCHEDULE										
TYPE	SIZE			No OF FTGS REQ'D	CONCRETE QUANTITIES		STEEL QUANTITIES		WT. PER LIN. FT. lbs per LIN. FT.	TOTAL WT. EACH GROUP OF FTGS TOTAL lbs.
	WIDTH	LENGTH	HEIGHT		Cu. Yds. IN EACH FOOT'g	Cu. Yds FOR ALL SIM'AR FOOT'GS	LIN. FT. OF STEEL EACH FOOT'g	TOTAL LIN. FT. OF STEEL FOR ALL SIMILAR FTGS.		
A	12'-6"	12'-6"	3'-0"	4	18.86	75.44	612.94	2451.76	1.06	2,598.86
B	11'-6"	11'-6"	3'-0"	2	16.19	32.38	529.90	1059.80		1,123.38
C	11'-0"	11'-0"	3'-0"	14	14.94	209.16	503.00	7042.00		7,464.52
D	10'-0"	10'-0"	3'-0"	4	12.61	50.44	458.33	1833.33		1,943.33
E	9'-6"	9'-6"	3'-0"	2	11.52	23.04	433.33	866.66		918.66
F	8'-6"	8'-6"	3'-0"	2	9.52	19.04	379.00	758.00		803.48
G	8'-0"	8'-0"	3'-0"	2	8.61	17.22	358.00	716.00		758.96
H	7'-3"	7'-3"	3'-0"	2	7.34	14.68	323.00	646.00		684.76
CONTINUOUS FOOTING				1	62.45 66.88	62.96 68.88				3621.14 4339.5
TOTAL						512.88				20635.45 19,917.09
HONOLULU WALL				1	29.74 31.00	29.74 31.00	160 bars 9'6" long 20 " 80'0" 1/2"	2831. 3120.00		1825. 2121.60
SCHOFIELD "				1	24.2 24.0	24.2 24.0	128 bars 9'6" long 20 " 64'0" 1/2"	2319.5 2496.00		1577. 1,697.28
GRAND TOTAL						565.28				24137.45 23,735.97



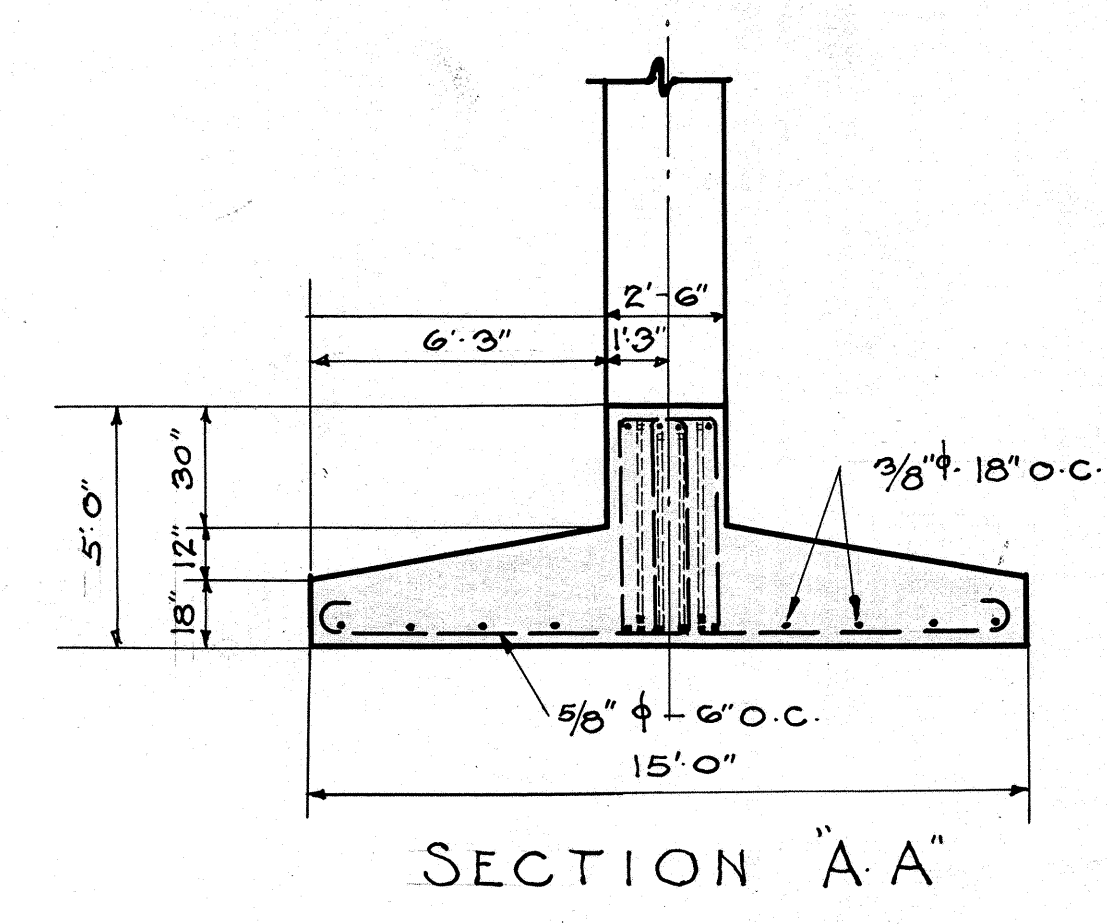
CHANNEL WALL DETAILS
Scale - 1" = 20'



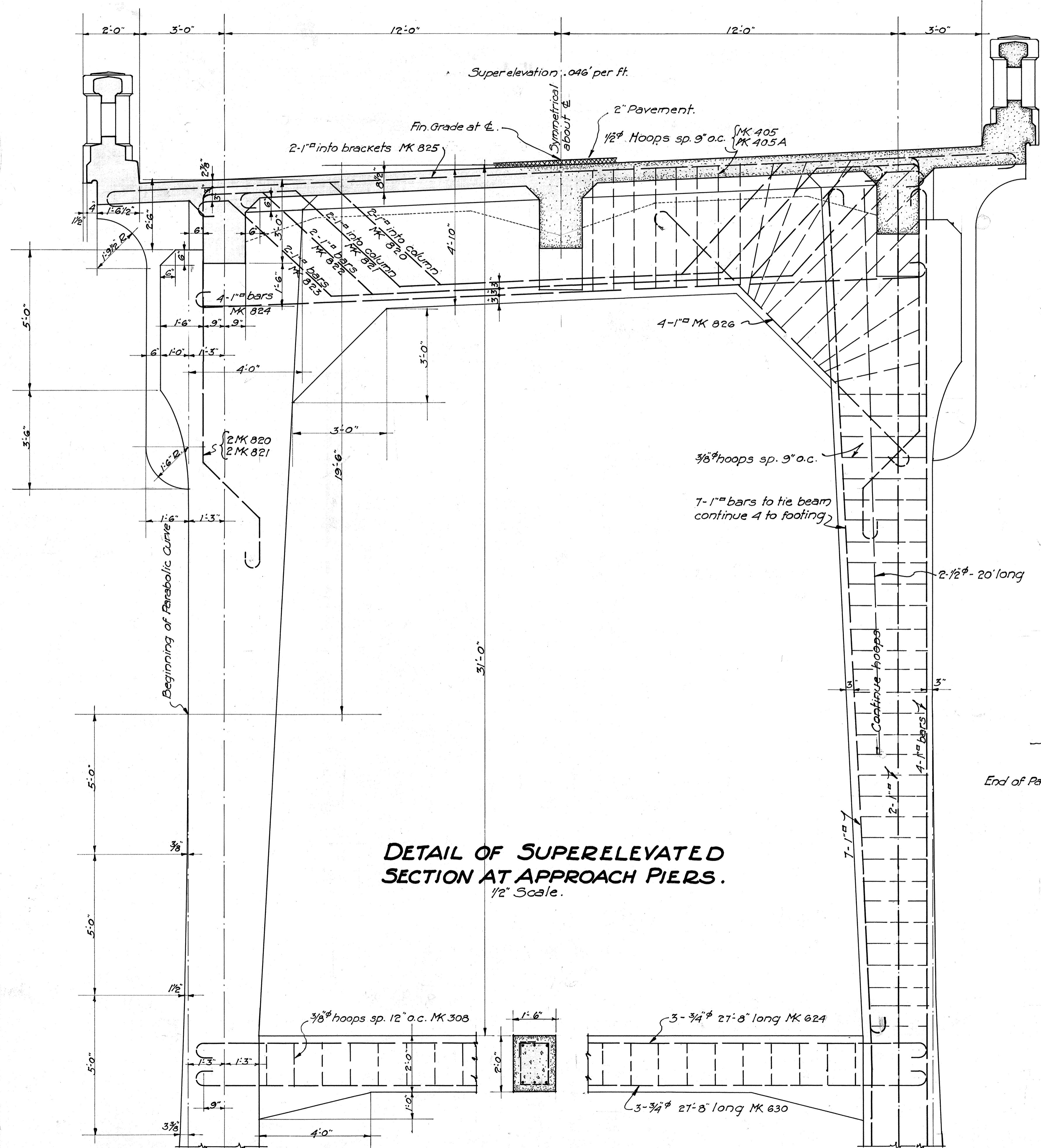
TYPICAL SQ. FOOTING



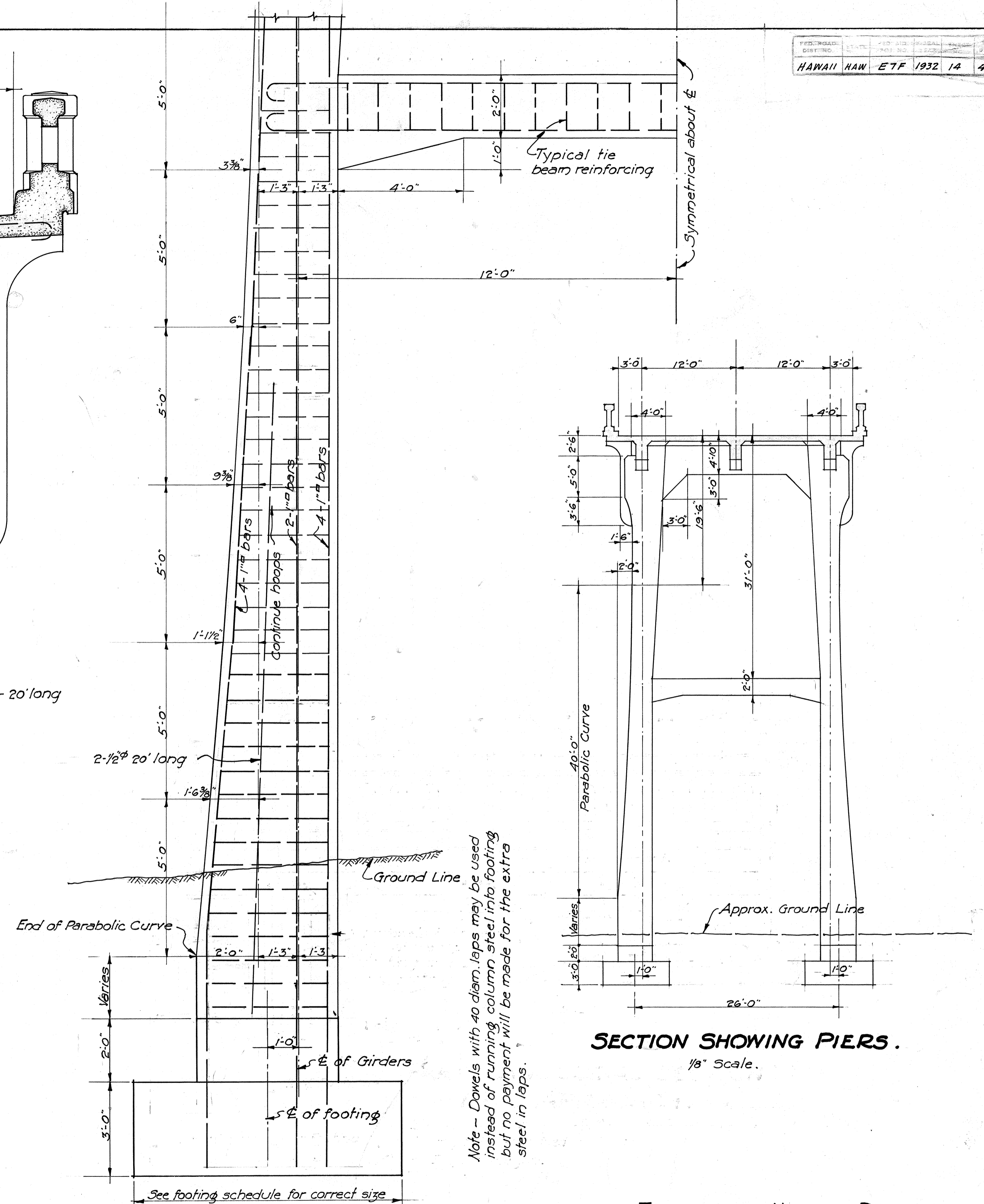
DETAILS OF CONTINUOUS FOOTING AT STA. 41+45.43
Scale - 1/4" = 1'-0"



TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII.
KIPAPA BRIDGE.
No 5 STA. 36+56.48 TO 41+47.98
KAMEHAMEHA HIGHWAY F.A.P. No E-7F.
DEC. 1932 SHEET No 2 OF 11 SHEETS.



DETAIL OF SUPERELEVATED SECTION AT APPROACH PIERS.
1/2" Scale.

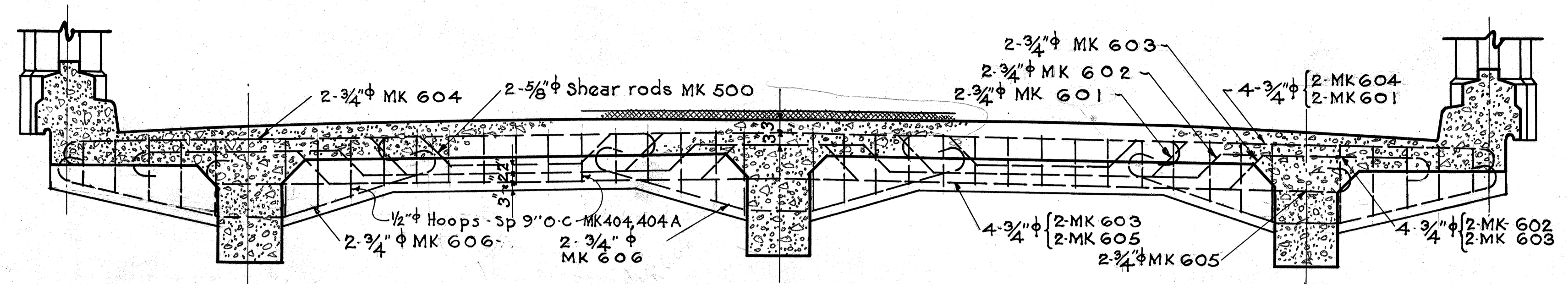


SECTION SHOWING PIERS.
1/8" Scale.

Note - Dowels with 40 diam. laps may be used instead of running column steel into footing but no payment will be made for the extra steel in laps.

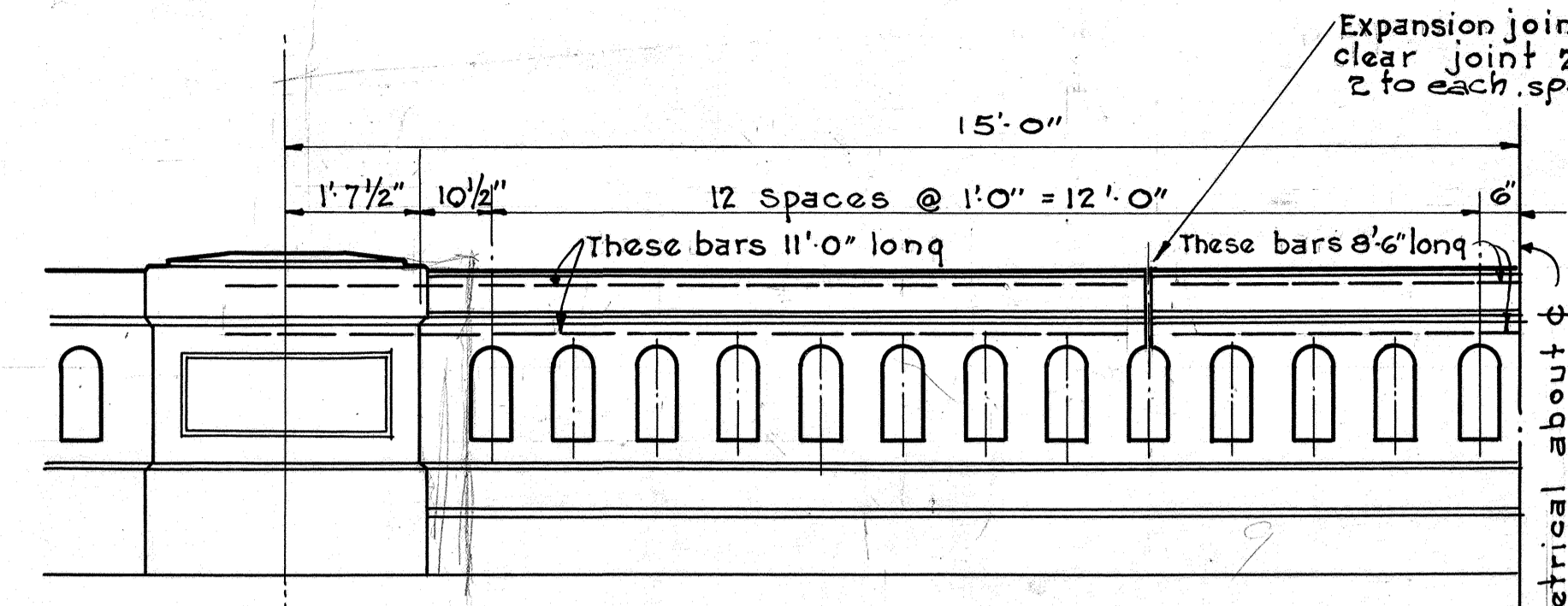
TERRITORIAL HIGHWAY DEPARTMENT.
TERRITORY OF HAWAII.
KIPAPA BRIDGE.
No 5 STA. 36+56.48 TO 41+47.98
KAMEHAMEHA HIGHWAY F.A.P. No E-7F.
DEC. 1932 SHEET No 3 OF 11 SHEETS.

FED. ROAD DIST. NO.	STATE	FED. AID FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	ETF 1932	15	46



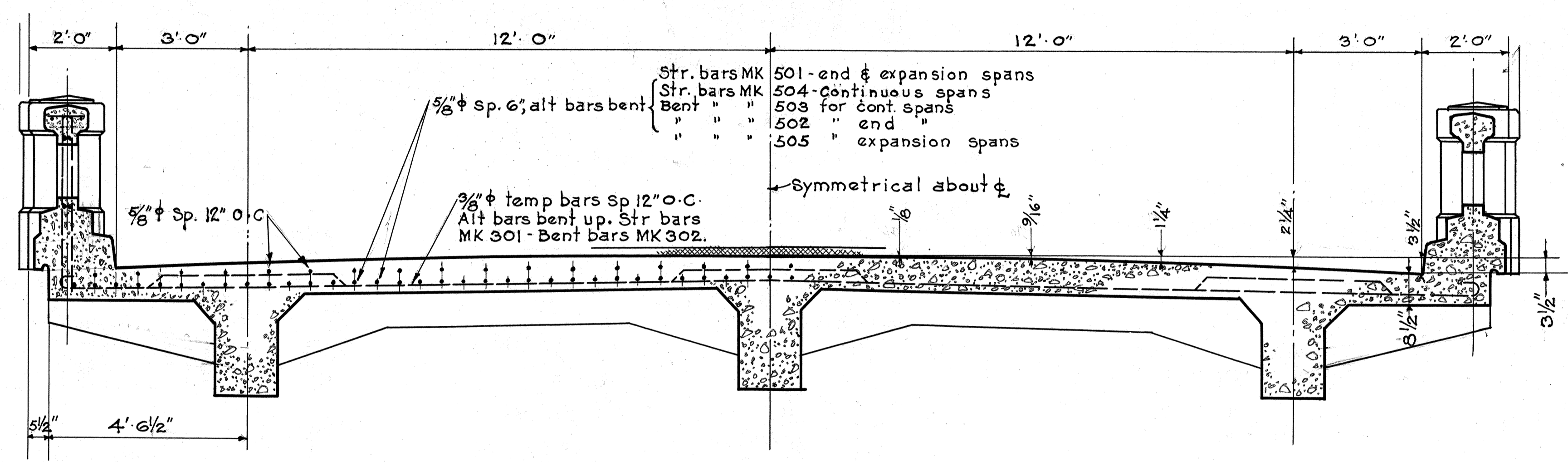
TYPICAL BEAM REINF. THROUGHT ENTIRE BRIDGE

Scale - 1/2" = 1'0"



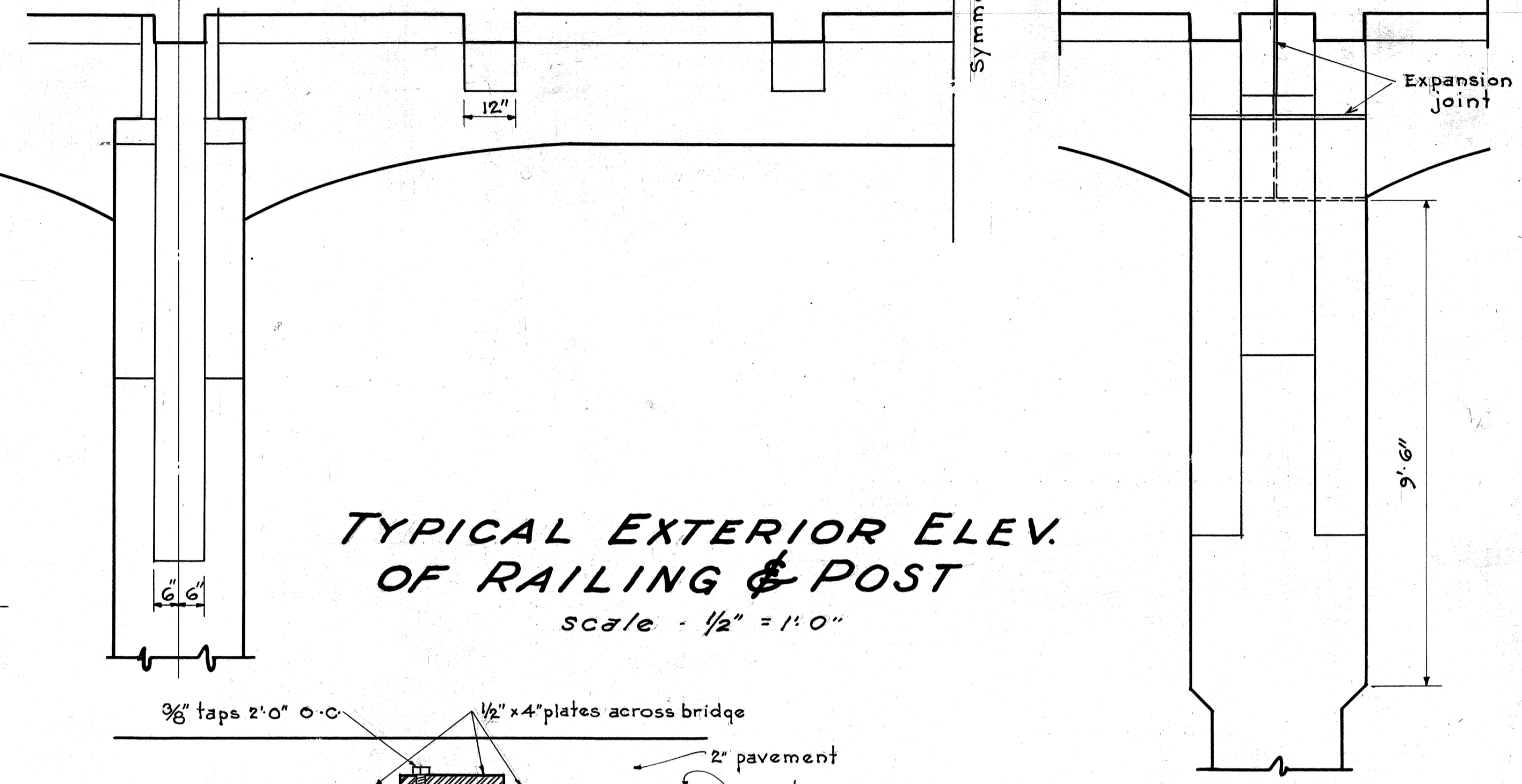
TYPICAL EXTERIOR ELEV. OF RAILING & POST

Scale - 1/2" = 1'0"



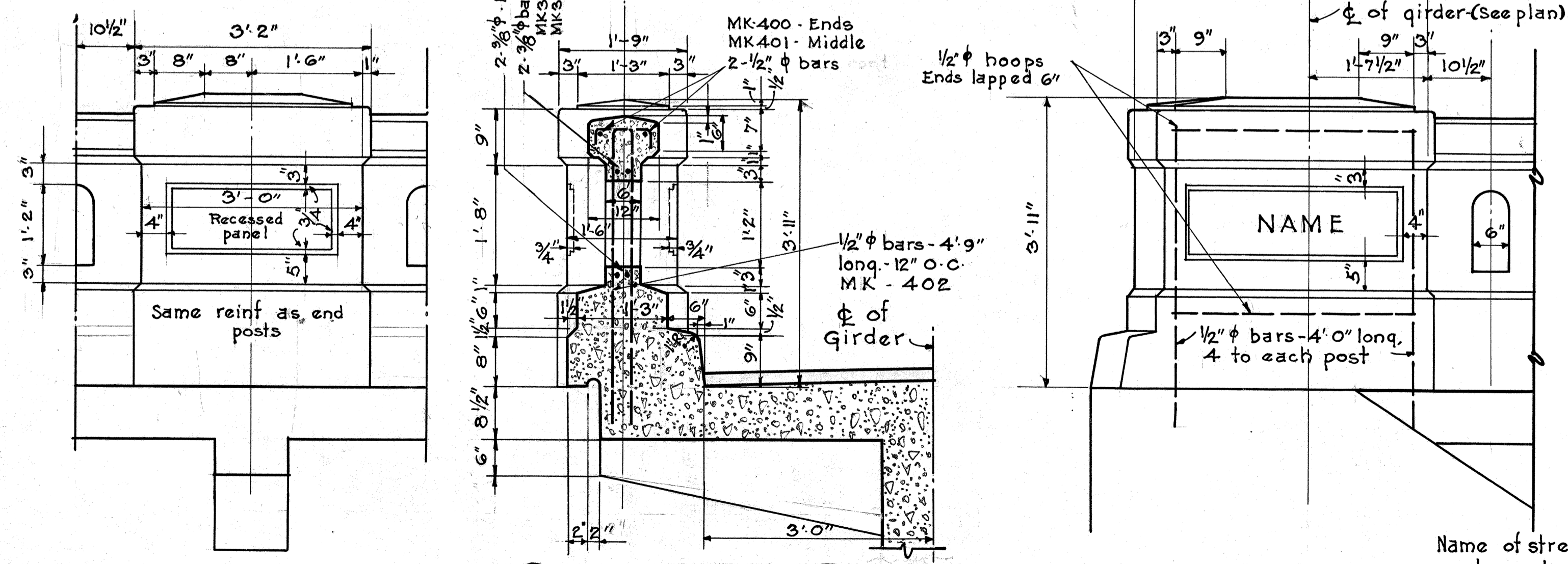
TYPICAL SLAB REINF. THROUGHT ENTIRE BRIDGE

Scale - 1/2" = 1'0"



EXTERIOR ELEV. OF RAILING & POST AT EXPANSION JOINT

Scale - 1/2" = 1'0"



INTERMEDIATE POST

SECTION OF RAIL

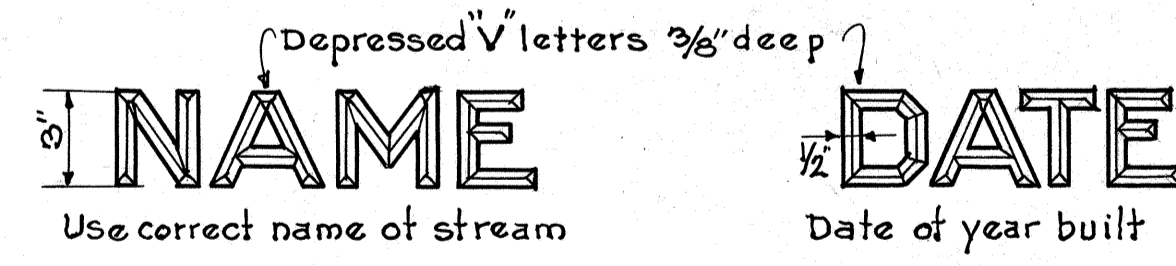
END POST

RAILING DETAILS

Scale - 3/4" = 1'0"

TYPICAL DETAIL FOR EXPANSION JOINTS

Scale - 3" = 1'0"



DETAIL OF LETTERS & FIGURES AT BOTH APPROACHES

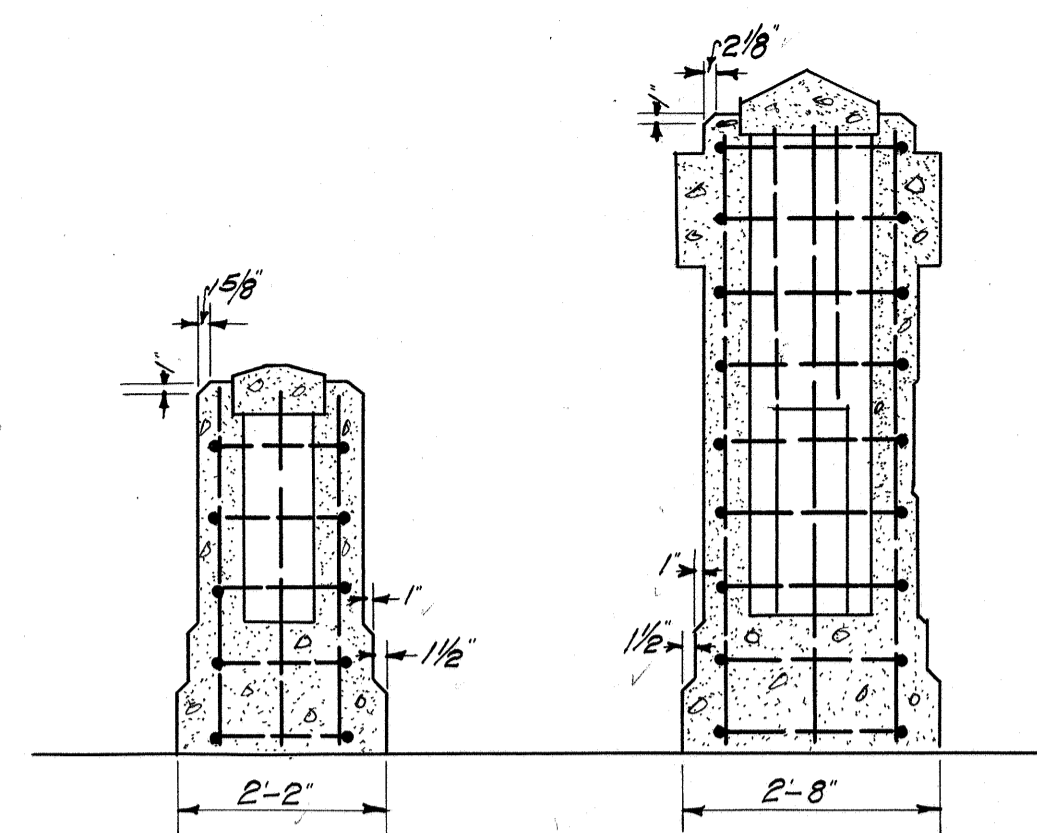
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII.

KIPAPA BRIDGE.

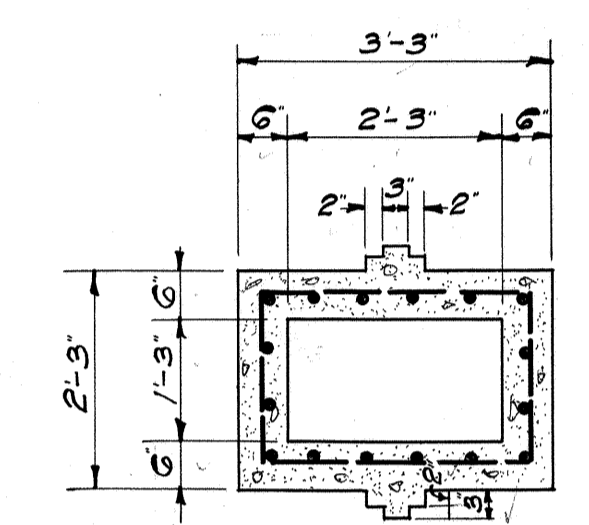
No 5 STA 36+5648 TO 41+4798
KAMEHAMEHA HIGHWAY F.A.P NoE-7F.
DEC. 1932 SHEET No 4 OF 15 SHEETS

4276.15

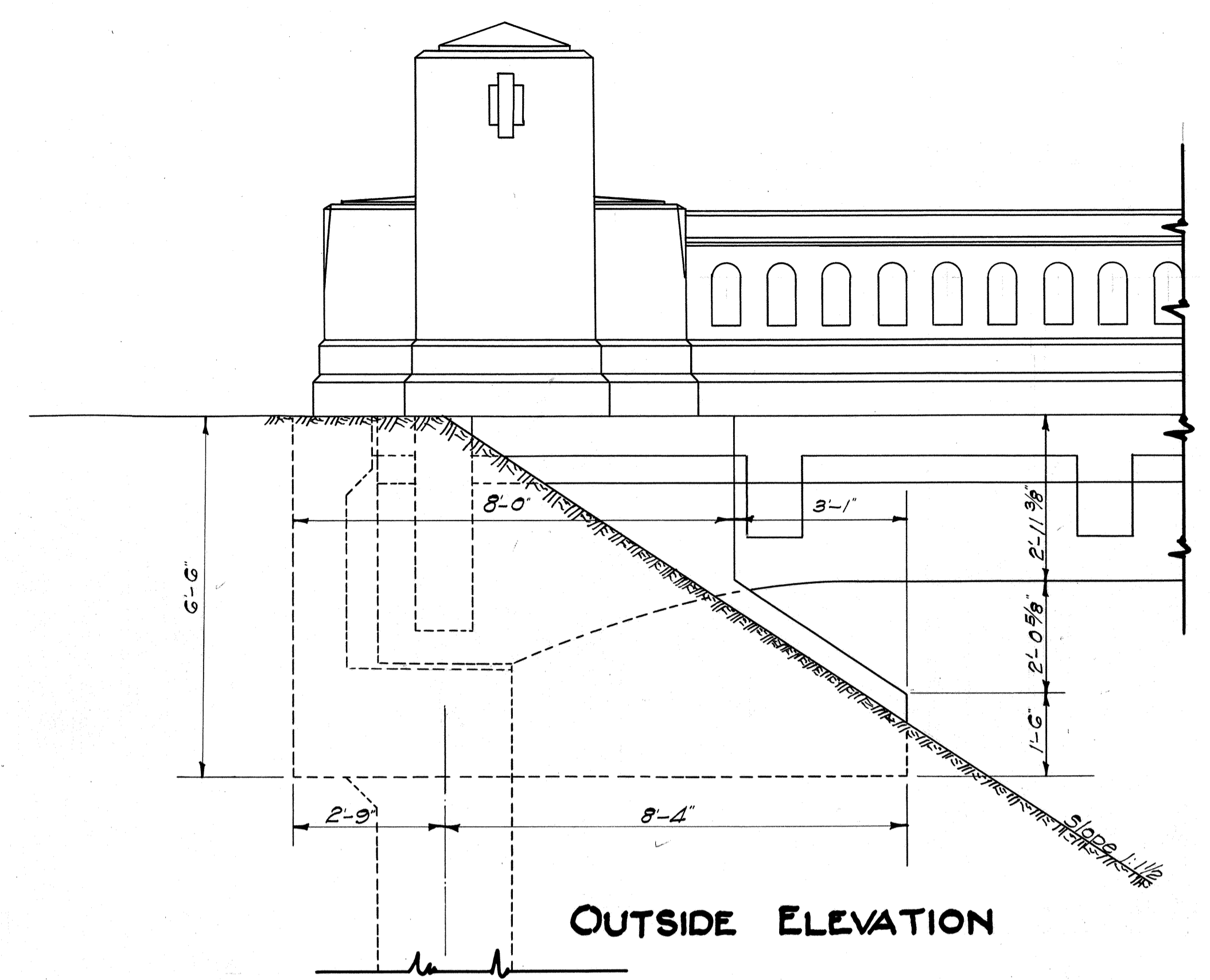
This sheet constitutes a revision of sheets #4265.15 & #4265.19. It supersedes the corresponding details on these sheets.



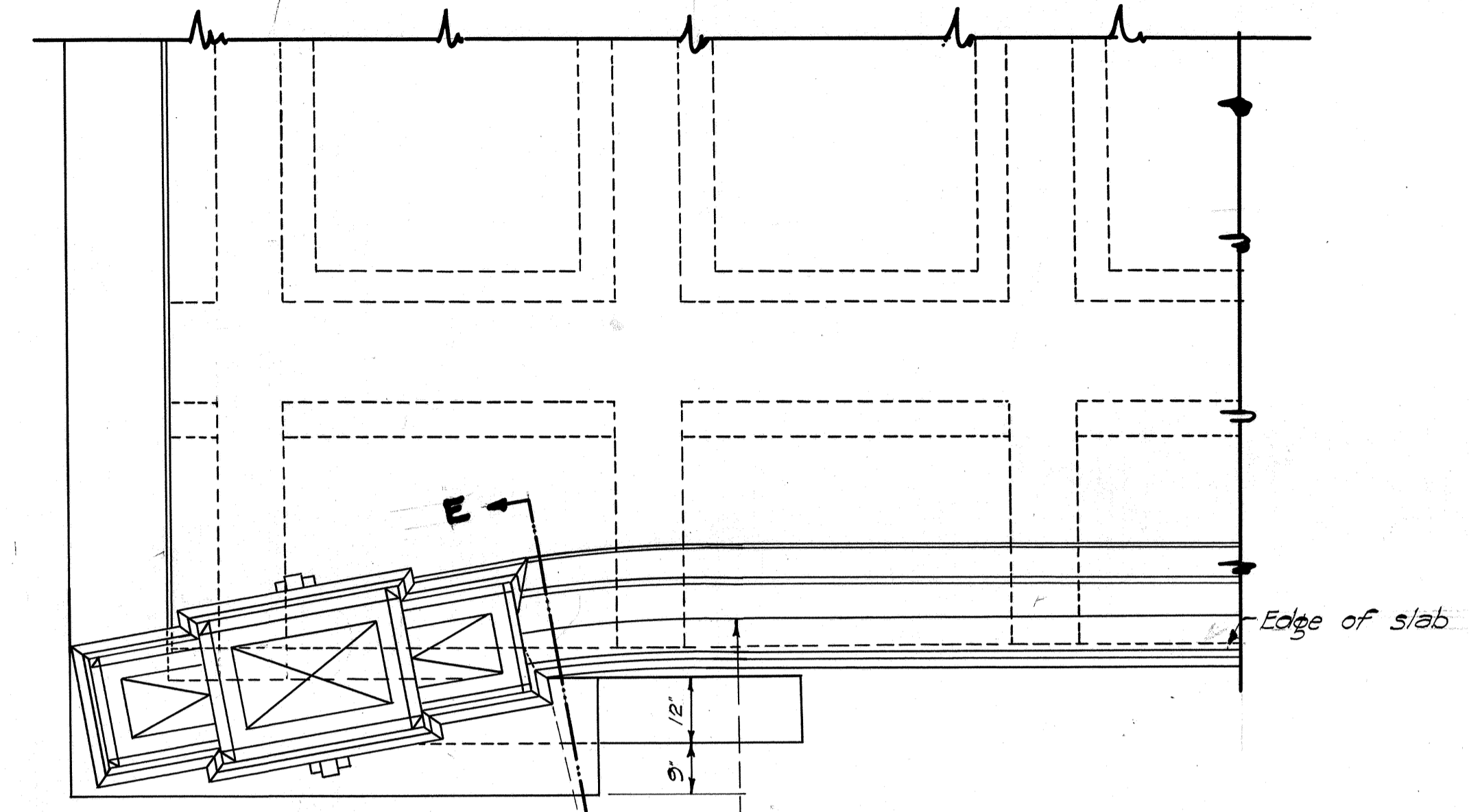
SECTION F-F SECTION B-B



SECTION D-D

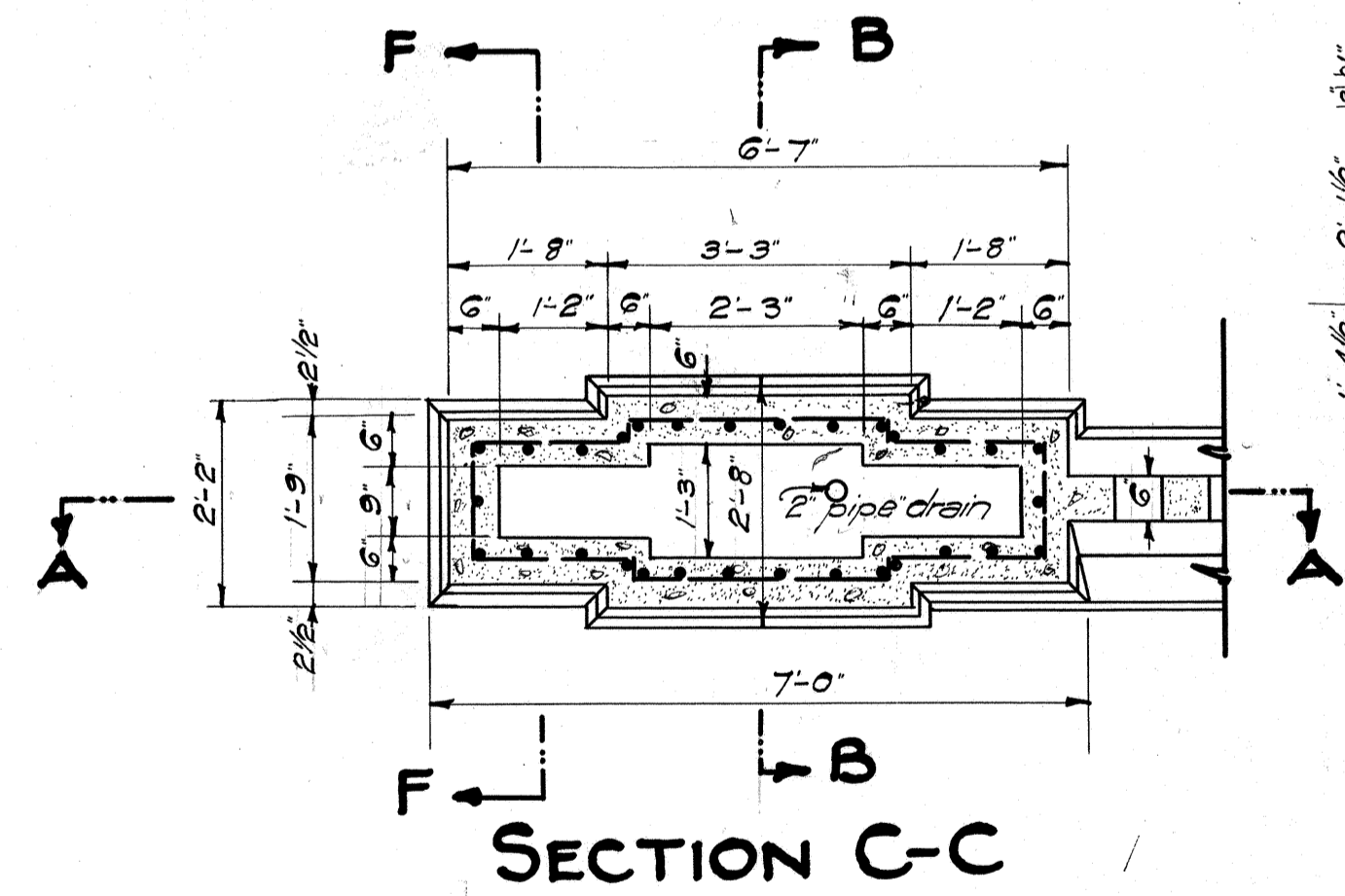


OUTSIDE ELEVATION

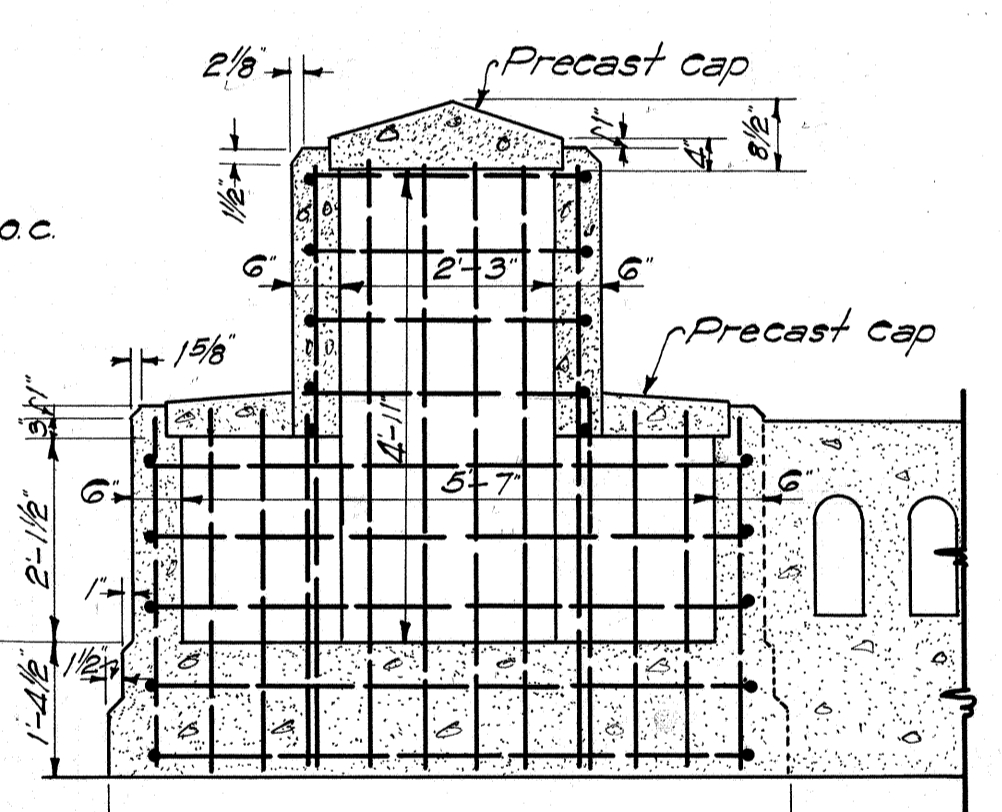


PLAN

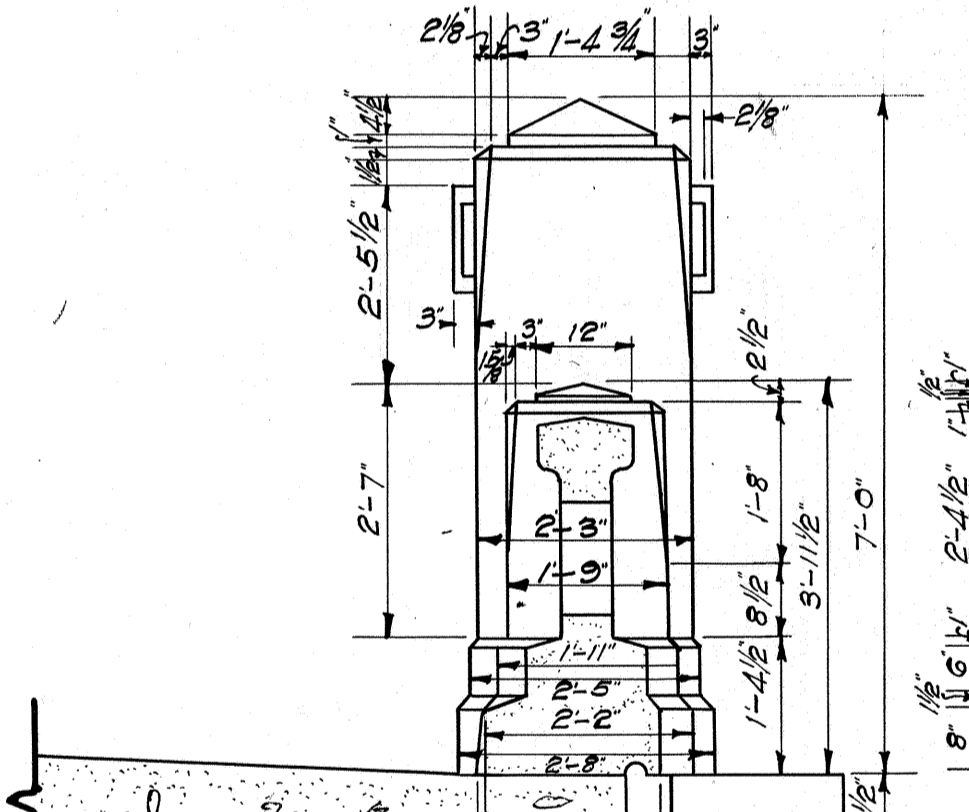
NOTE: All bars $\frac{3}{8}$ " Horizontals 9" o.c. Verticals spaced as shown.



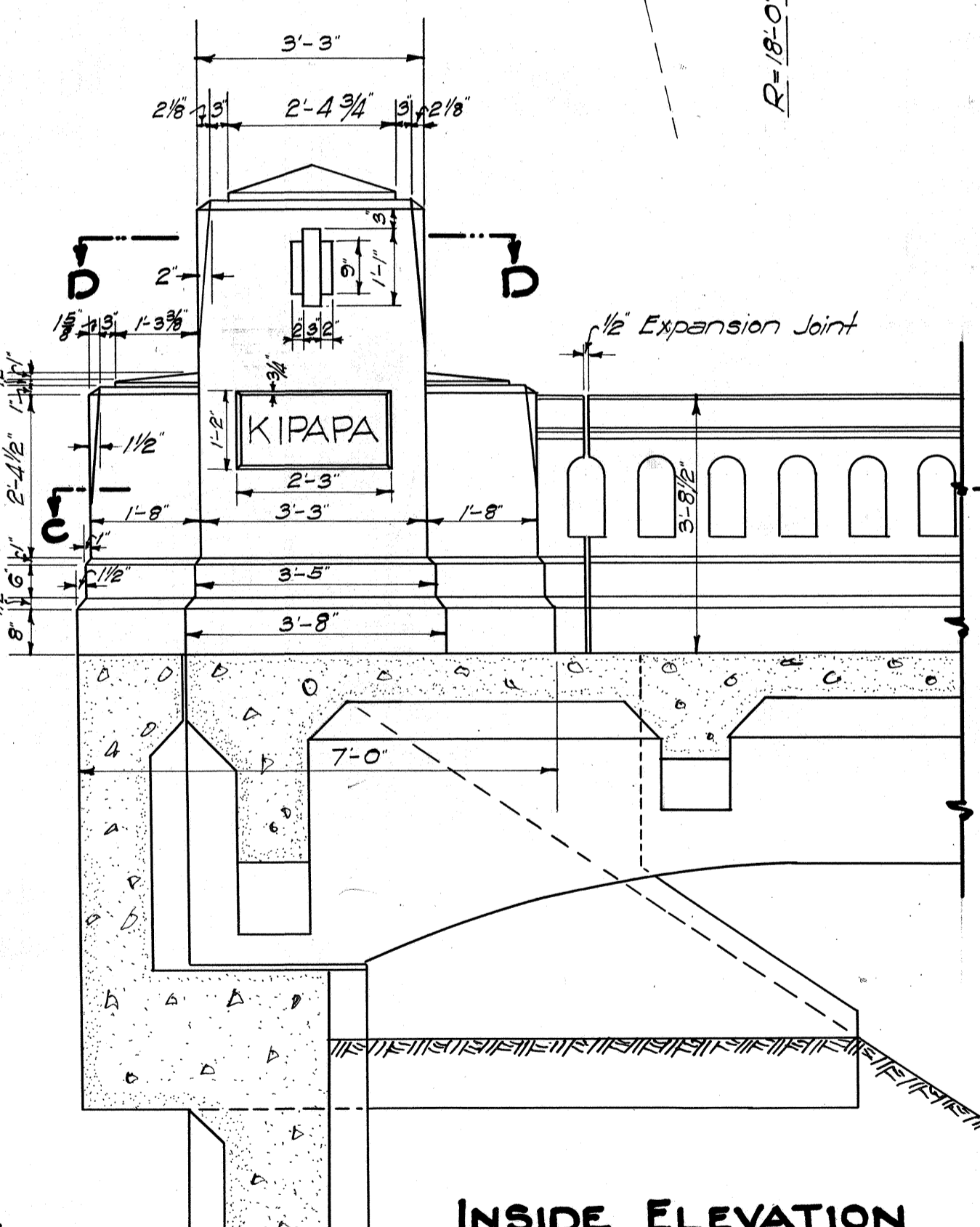
SECTION C-C



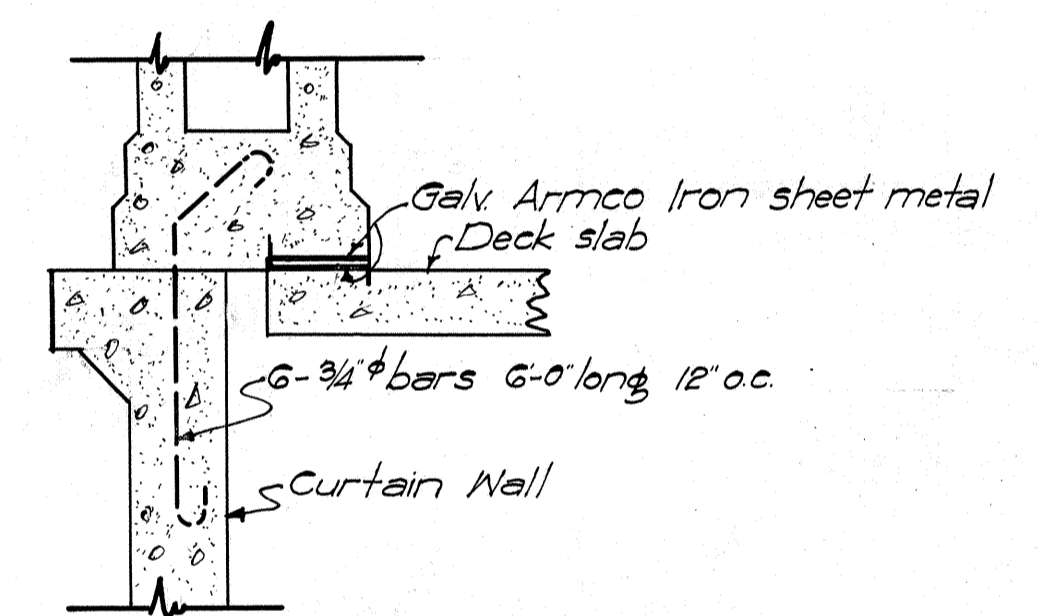
SECTION A-A



SECTION E-E



INSIDE ELEVATION



DETAIL SHOWING ANCHORAGE OF END POST TO CURTAIN WALL & EXPANSION JOINT BETWEEN END POST & DECK

QUANTITIES FOR ONE END POST

	conc. (cu. Yds)	Steel (Lbs)
Revised End Post	253	114
Original End Post	120	47
Difference	133	67

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

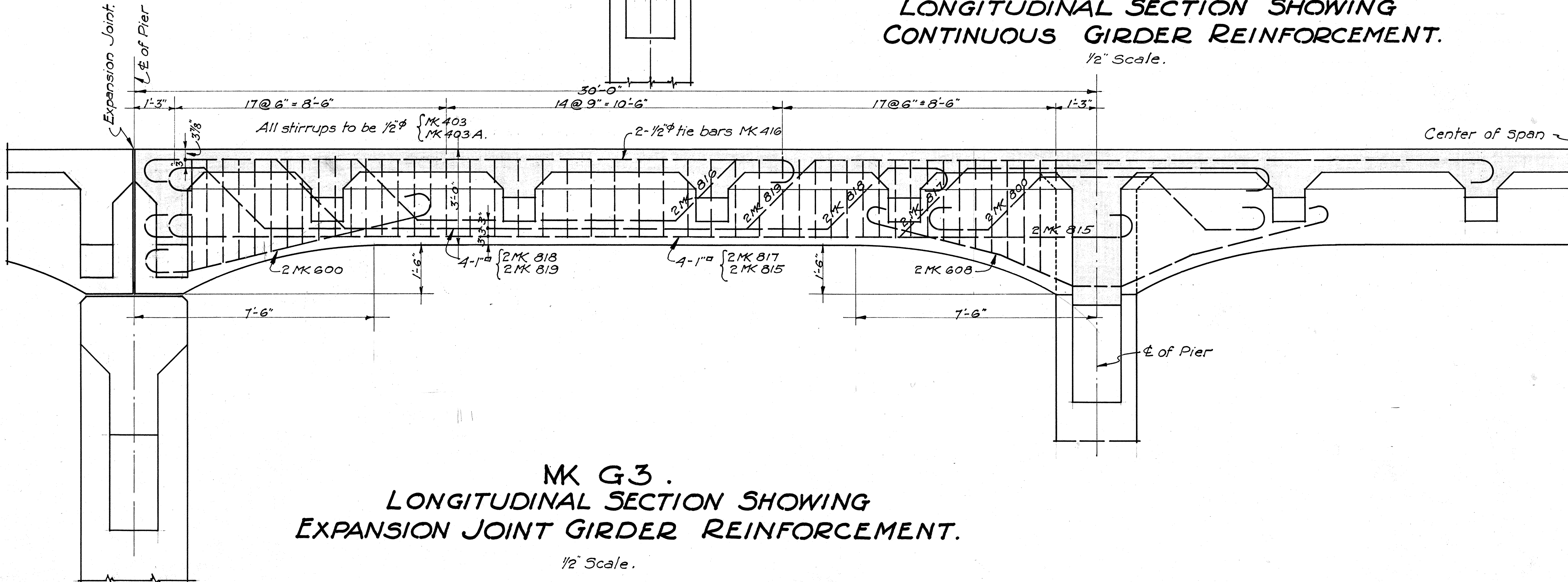
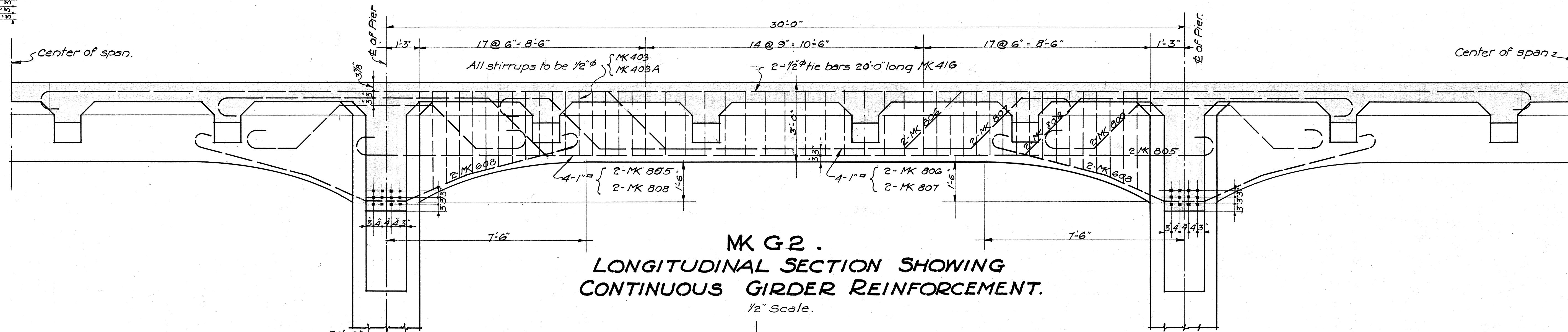
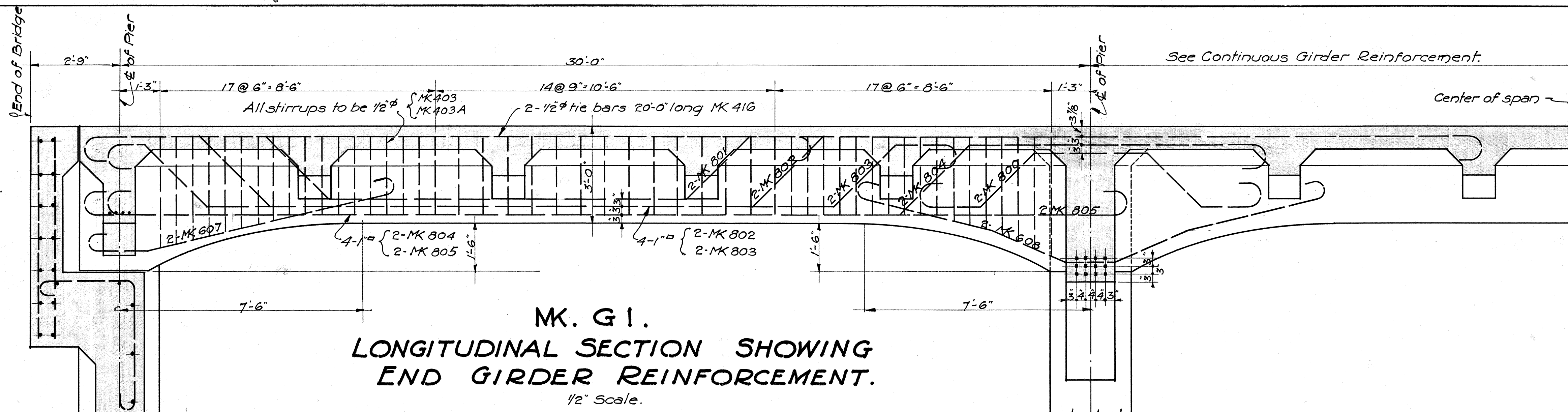
END POST DETAIL

KIPAPA BRIDGE F.A.P. E-7-F

Scale = 1/2" = 1'-0"

Architectural Design By B.C.D. 3/33
Engineering Design By N.R.B.
Traced by W.C.V.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	ETF	1932	16	46



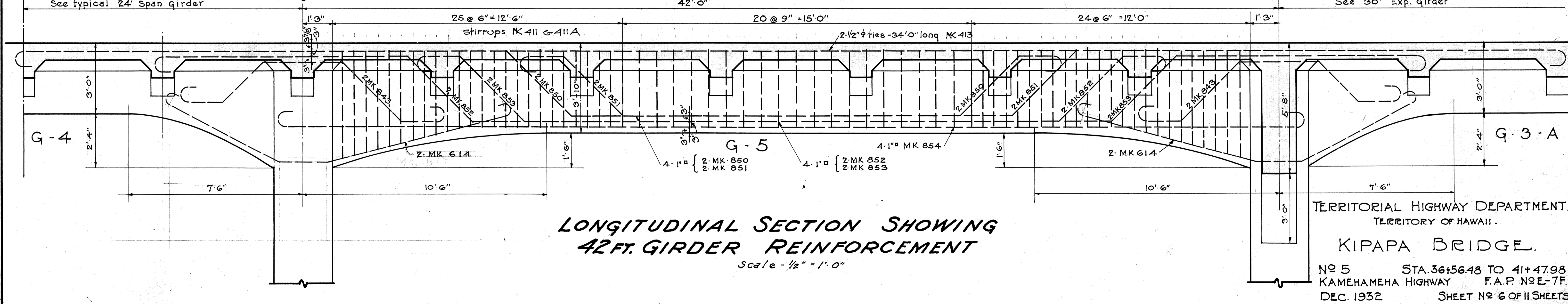
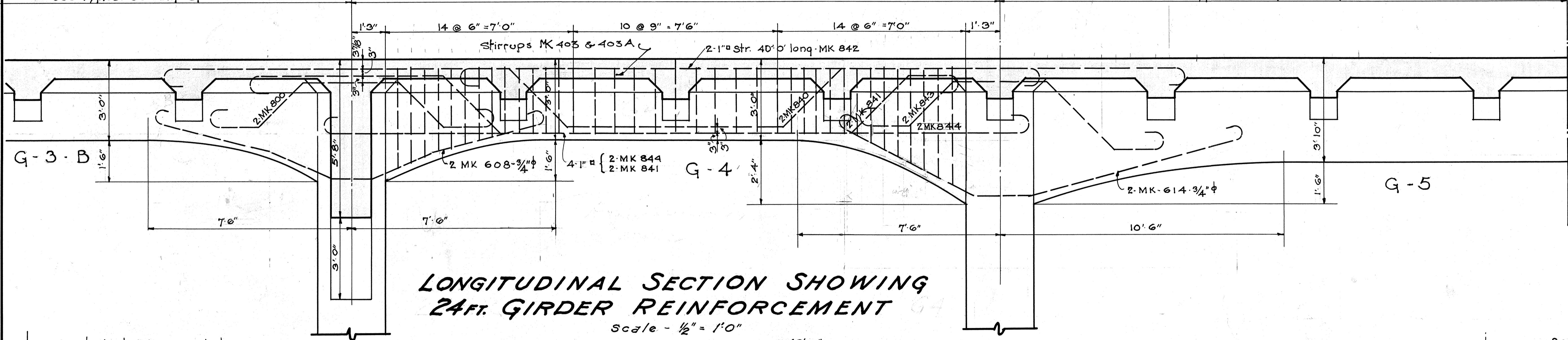
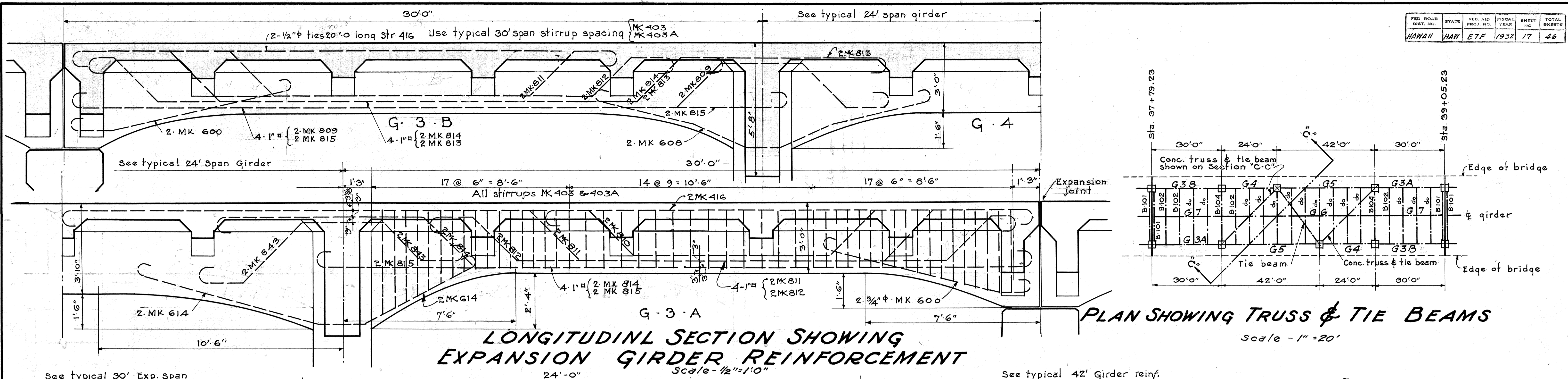
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII.

KIPAPA BRIDGE.

No 5 STA. 36+56.48 TO 41+47.98
KAMEHAMEHA HIGHWAY F.A.P. NO E-7F.
DEC. 1932 SHEET NO 5 OF 11 SHEETS.

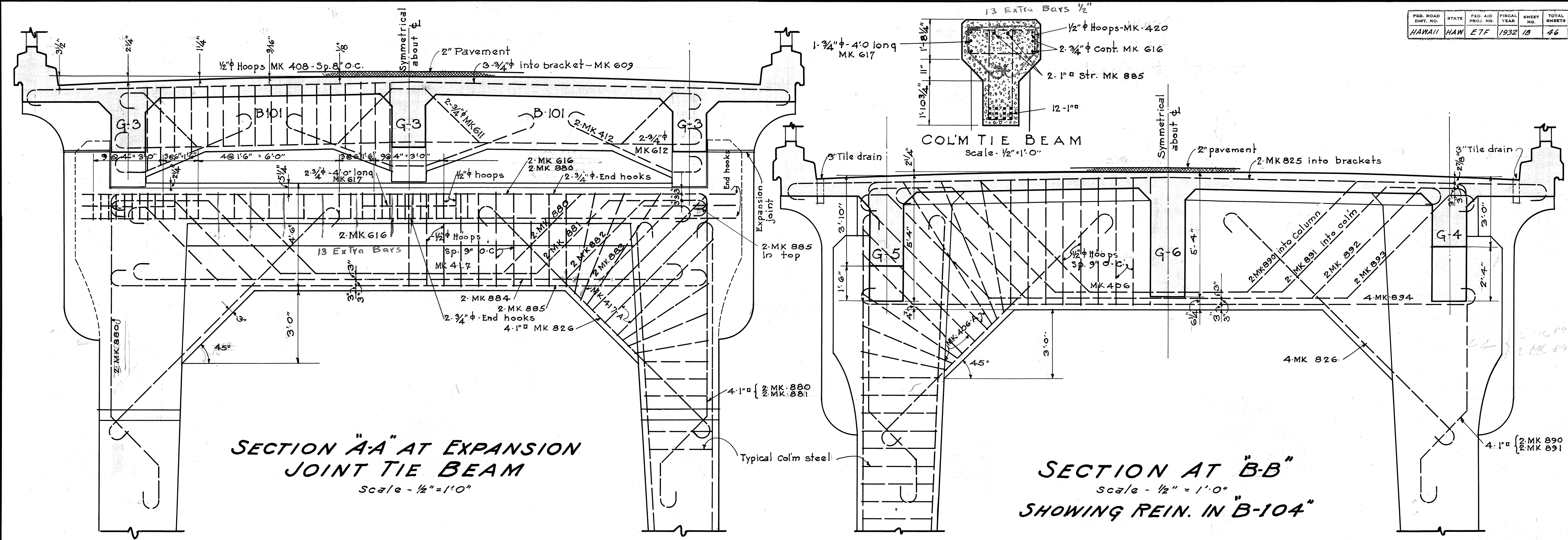
4276.16

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	ETF	1932	17	46



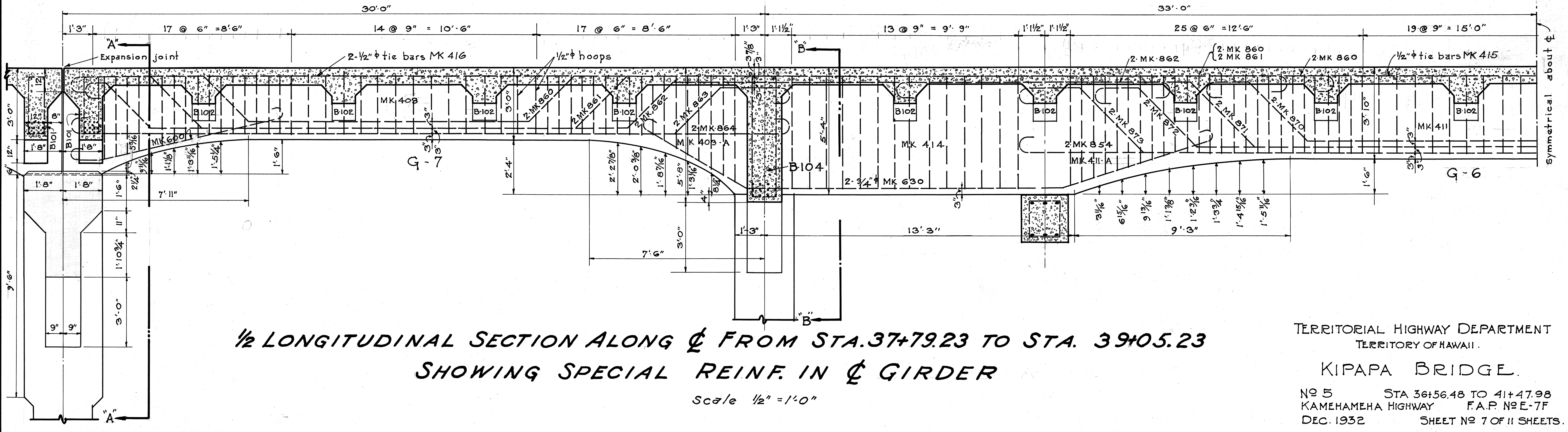
TERRITORIAL HIGHWAY DEPARTMENT.
TERRITORY OF HAWAII.
KIPAPA BRIDGE.
No 5 STA. 36+56.48 TO 41+47.98.
KAMEHAMEHA HIGHWAY F.A.P. N9E-7E.
DEC. 1932 SHEET No 6 OF 11 SHEETS.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E 7 F	1932	18	46



SECTION AA AT EXPANSION JOINT TIE BEAM
Scale - 1/2" = 1'-0"

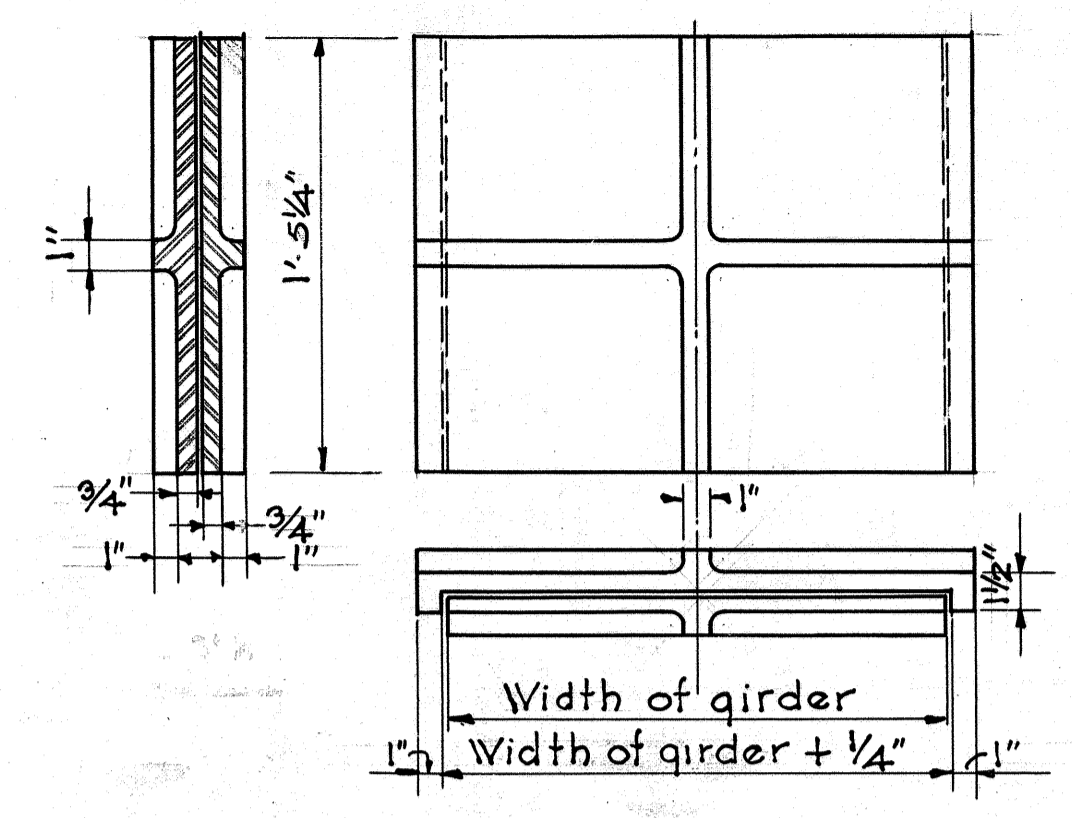
SECTION AT BB
Scale - 1/2" = 1'-0"
SHOWING REIN. IN B-104



1/2 LONGITUDINAL SECTION ALONG C FROM STA. 37+79.23 TO STA. 39+05.23
SHOWING SPECIAL REIN. IN C GIRDER
Scale 1/2" = 1'-0"

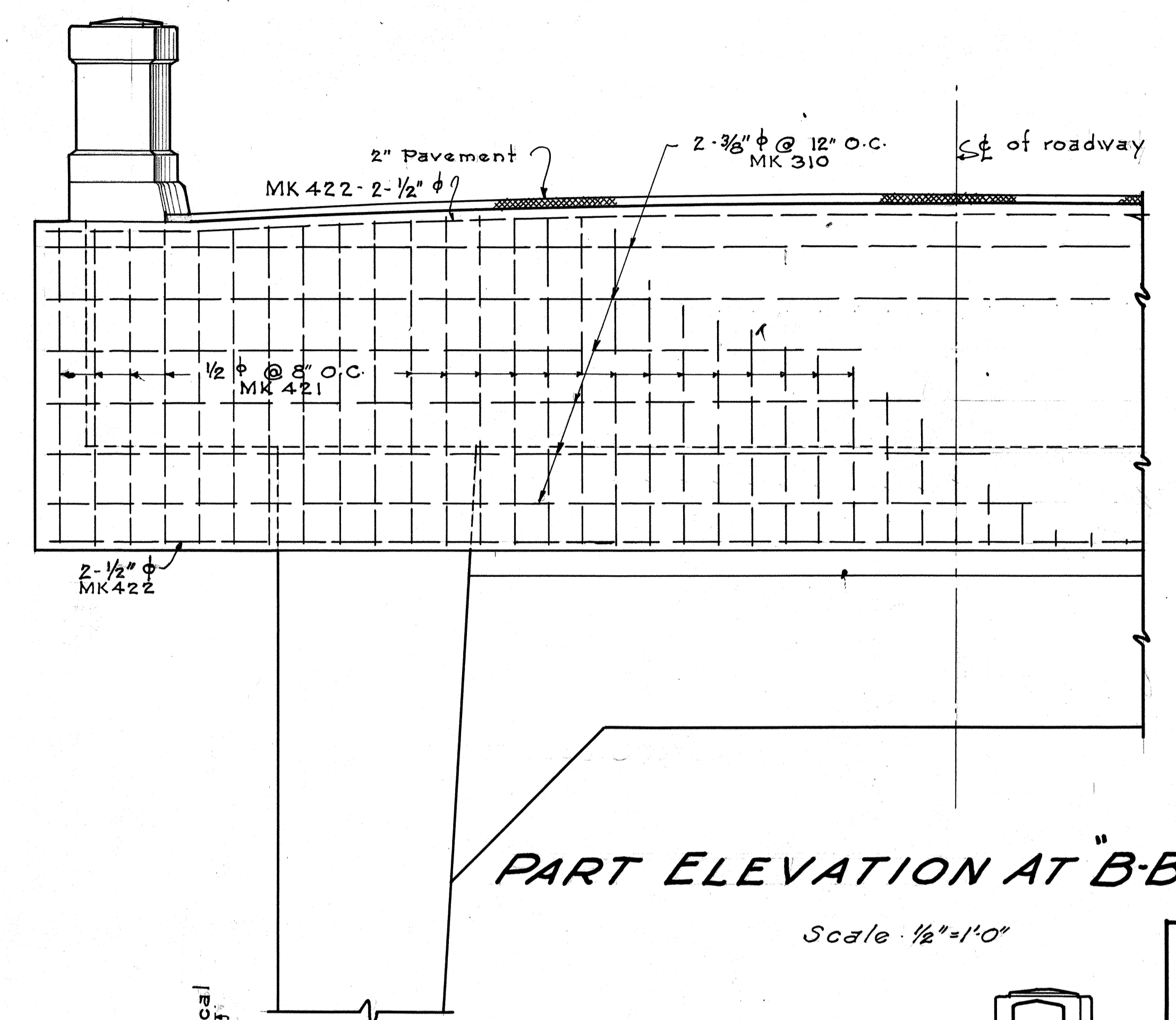
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII.
KIPAPA BRIDGE.
No 5 STA 36+56.48 TO 41+47.98
KAMEHAMEHA HIGHWAY F.A.P. No E-7F
DEC. 1932 SHEET No 7 OF 11 SHEETS.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	ETP	1932	19	46

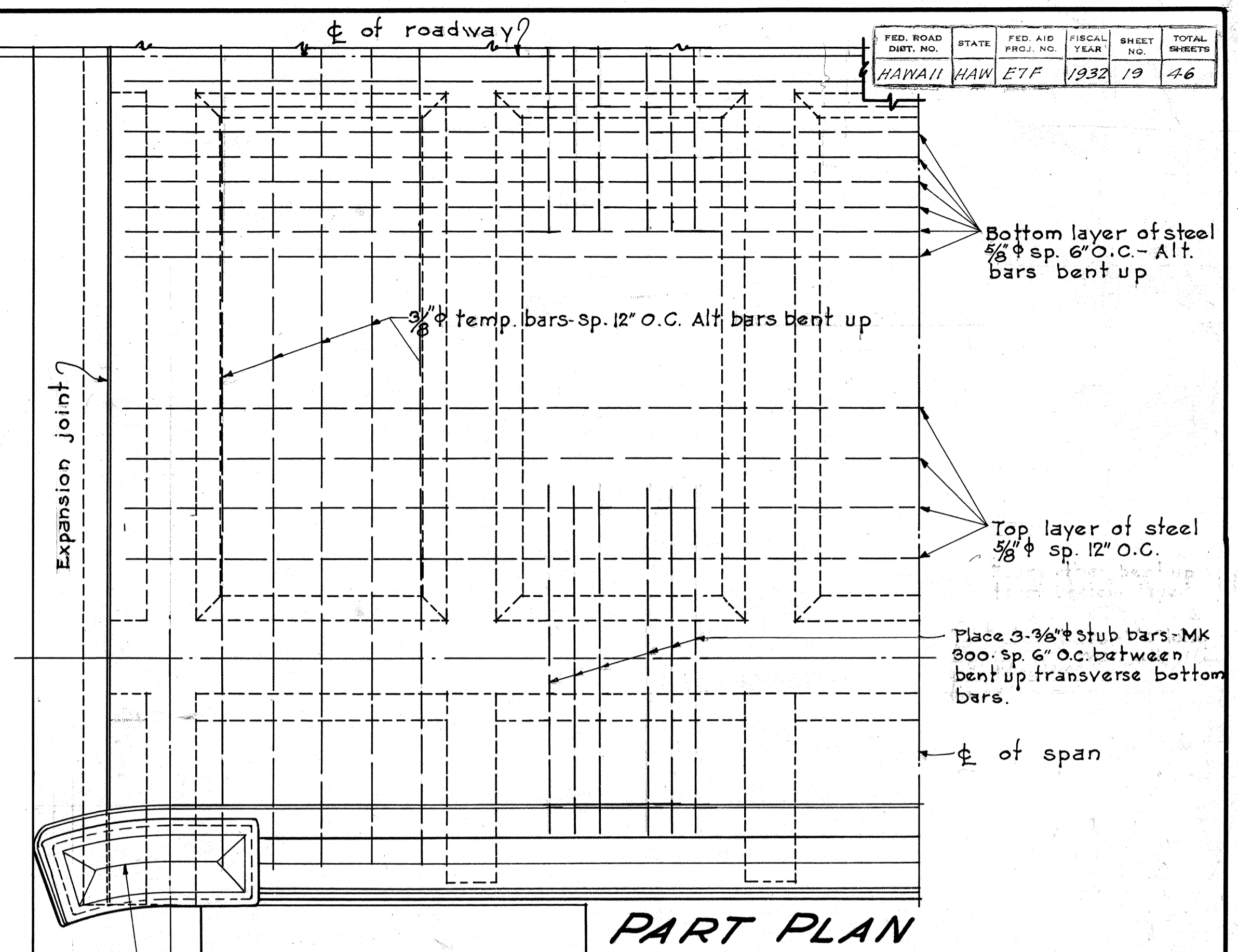


Plates to be Phosphor Bronze with all bearing surfaces milled to true planes. Immediately before placing plates all bearing surfaces shall be treated with graphite.

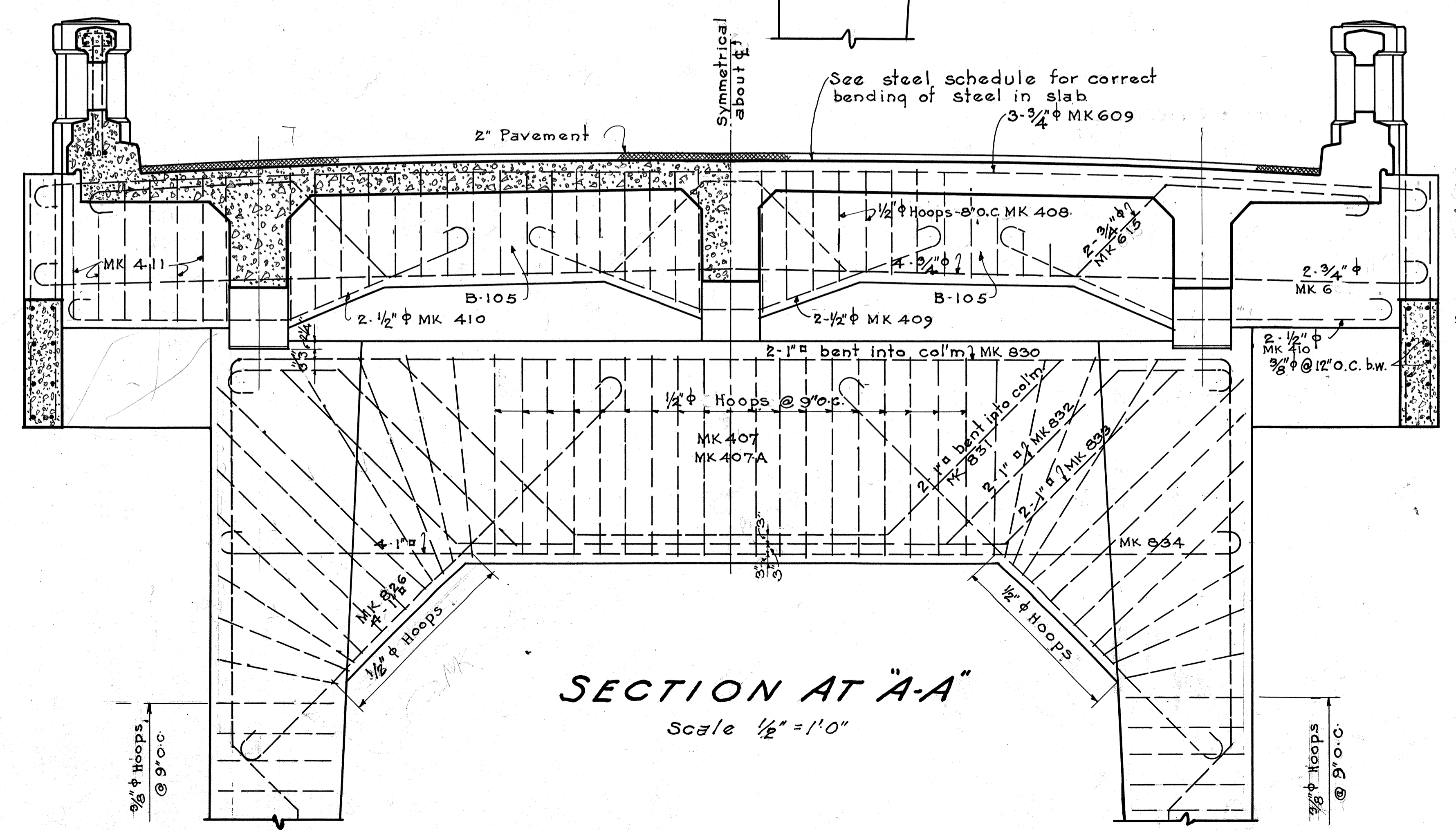
EXPANSION PLATES
Scale - 1 1/2" = 1'-0"
24 PAIR REQUIRED



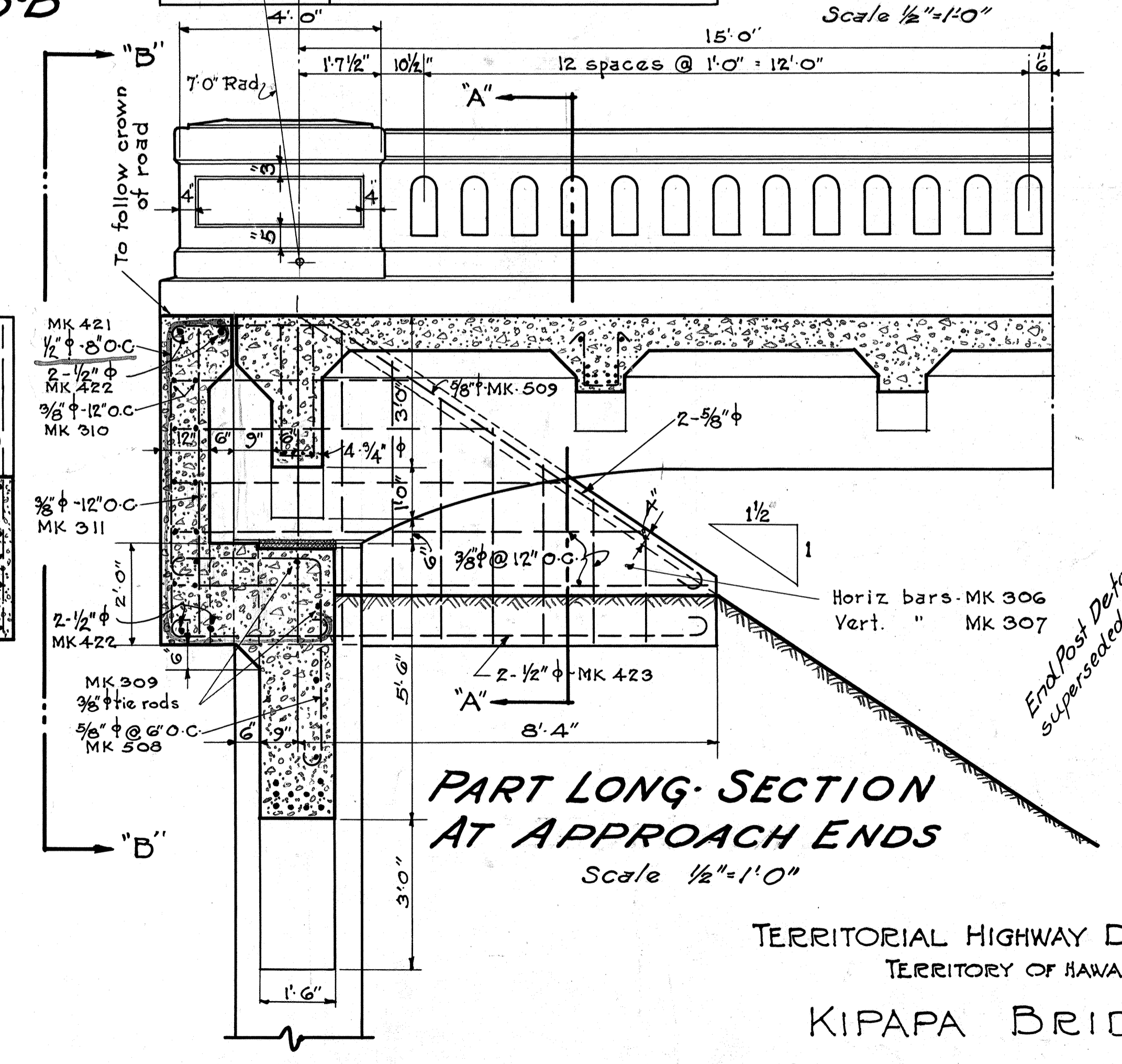
PART ELEVATION AT "B-B"
Scale 1/2" = 1'-0"



PART PLAN
Scale 1/2" = 1'-0"



SECTION AT "A-A"
Scale 1/2" = 1'-0"

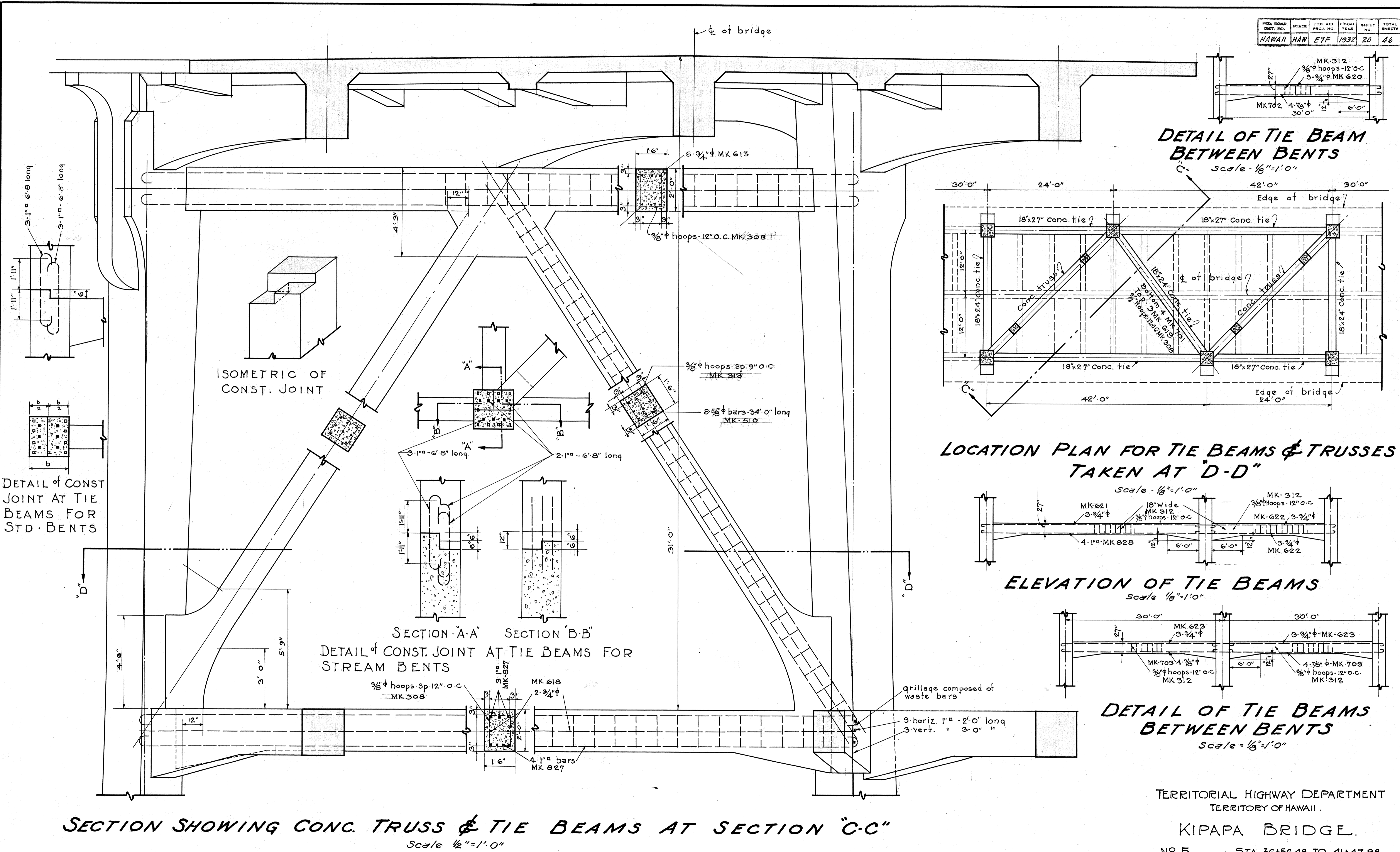


PART LONG SECTION AT APPROACH ENDS
Scale 1/2" = 1'-0"

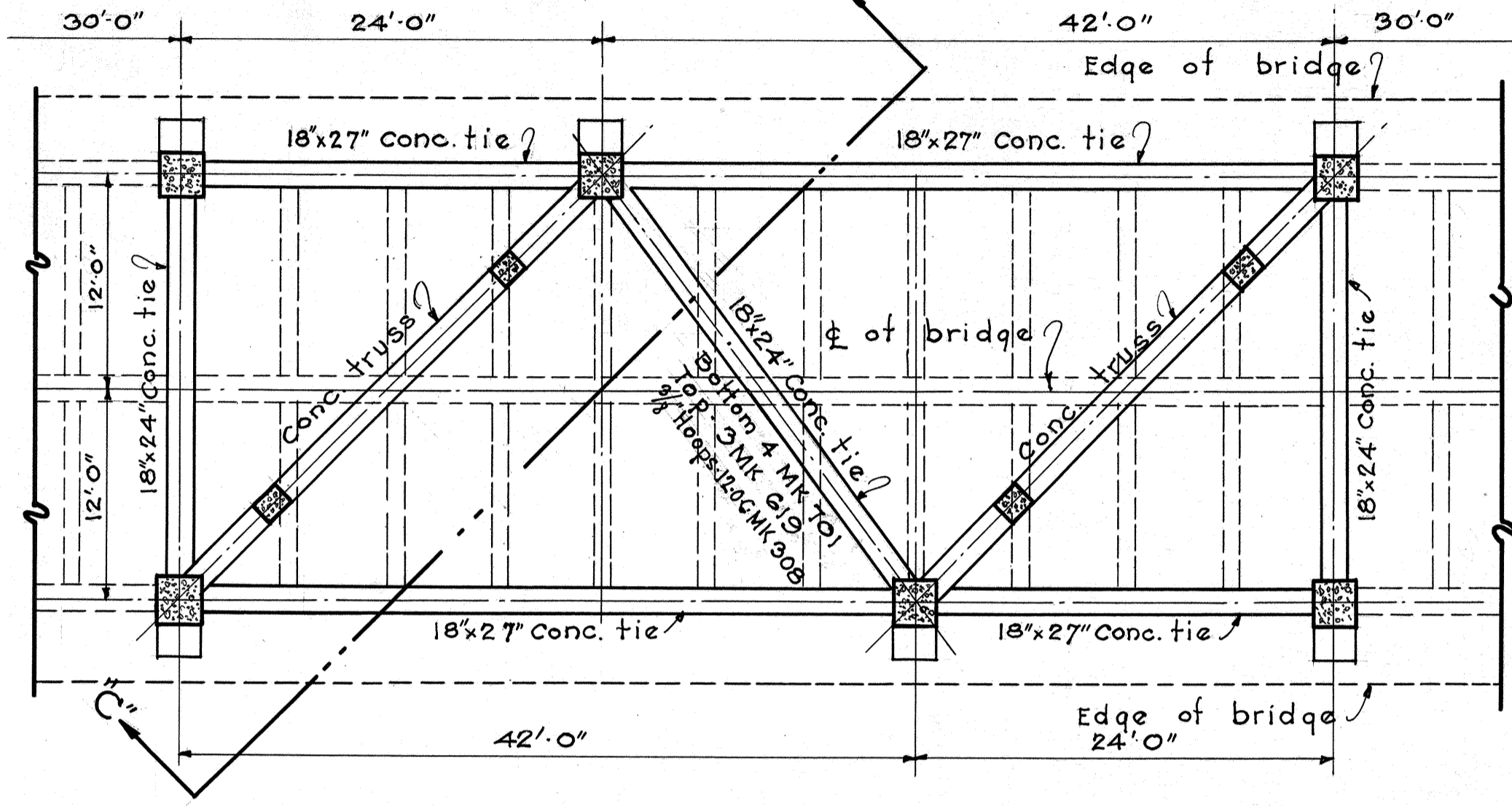
End Post Detail and support superseded by sheet No. 11A

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII.
KIPAPA BRIDGE.
No 5 STA 36+56.48 TO 41+47.98
KAMEHAMEHA HIGHWAY F.A.P. No E-7F.
DEC. 1932 SHEET No 8 OF 11 SHEETS.

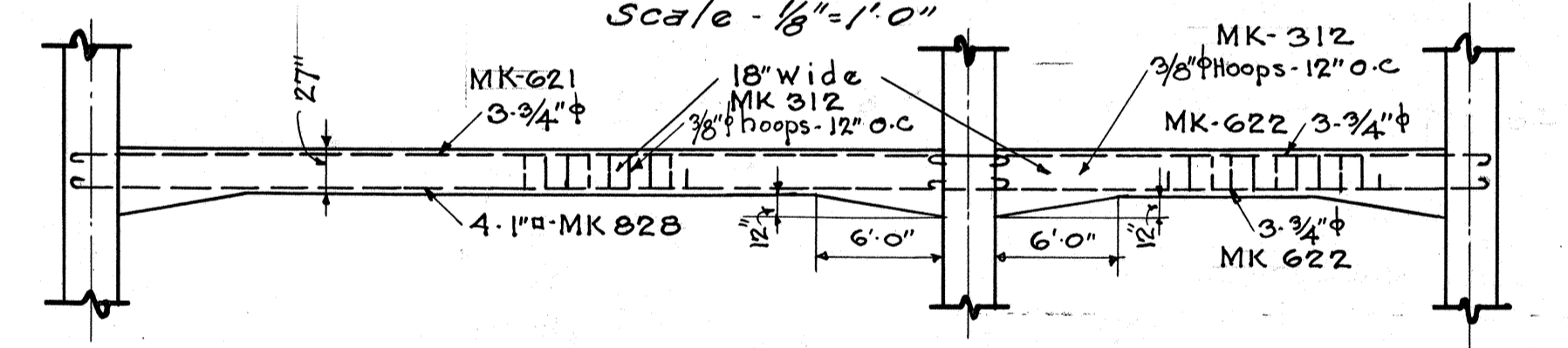
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E7F	1932	20	46



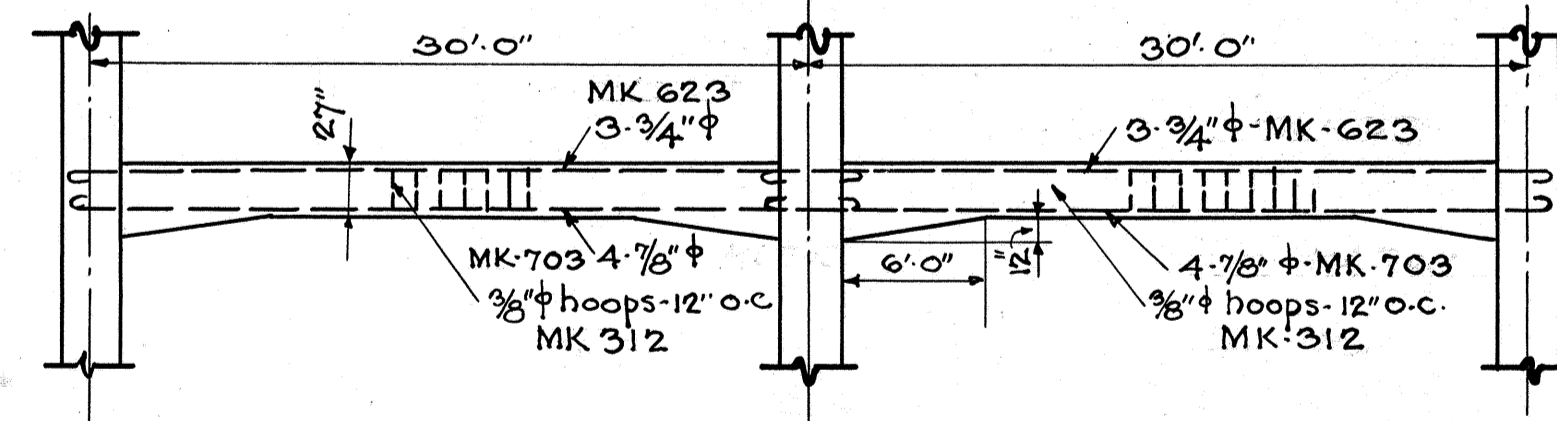
DETAIL OF TIE BEAM BETWEEN BENTS
Scale - 1/8" = 1'-0"



LOCATION PLAN FOR TIE BEAMS & TRUSSES TAKEN AT "D-D"
Scale - 1/8" = 1'-0"



ELEVATION OF TIE BEAMS
Scale 1/8" = 1'-0"



DETAIL OF TIE BEAMS BETWEEN BENTS
Scale = 1/8" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII.

KIPAPA BRIDGE.

NO 5 STA. 36+56.48 TO 41+47.98
KAMEHAMEHA HIGHWAY F.A.P. NO E-7F.
DEC. 1932 SHEET NO 9 OF 11 SHEETS.

SECTION SHOWING CONC. TRUSS & TIE BEAMS AT SECTION "C-C"
Scale 1/2" = 1'-0"

