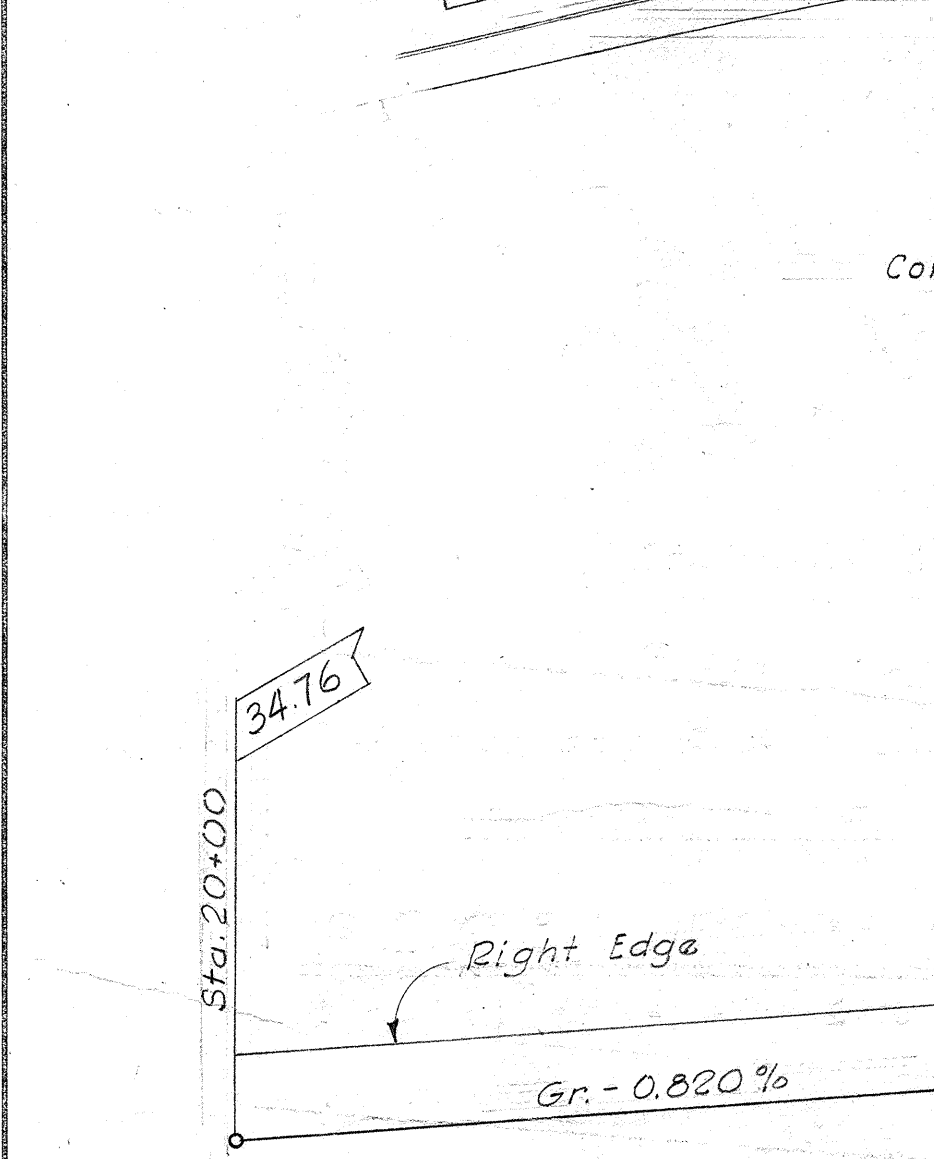


ESTIMATED QUANTITIES

ITEM	QUANTITY
Class A-1 Concrete	Lump Sum (1103 C.Y.)
Reinforcing Steel	Lump Sum (176,630 LBS.)
Structure Excavation	1008 Cubic Yds.
Filter Material	785 Cubic Yds.
A.C. Paving Mix II	3138 Tons
Tack Coat (Emul. Asph)	9893 Gals.
Grouted Rubble Paving	5959 Cubic Yds.
Aluminum Railing	502503 Lin. Ft.

12" min. thickness G.R.P. over footing backfill area along line of slope

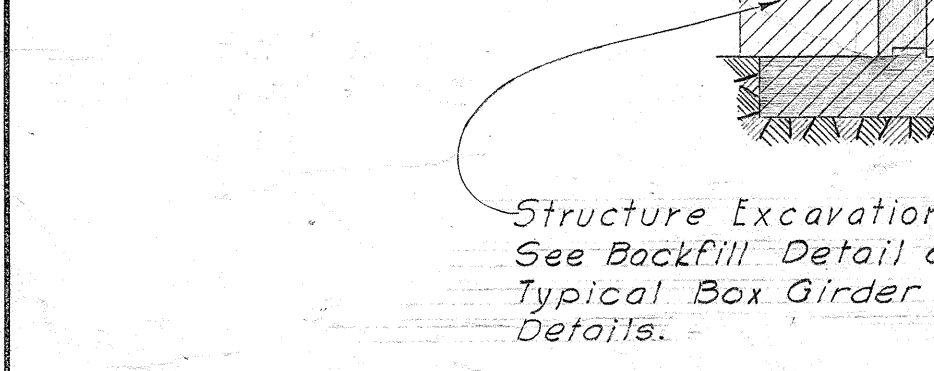


PROFILE RAMP "M-2"
No Scale



NOTE: If closure slab is used
See Std. Detail Box Girder

M-2 CURVE DATA
Δ = 72° 34' 00"
R = 450.00
T = 330.36
Lc = 569.94



LONGITUDINAL SECTION AT STRUCTURE
1" = 10' - 0"



RAILING ELEVATION

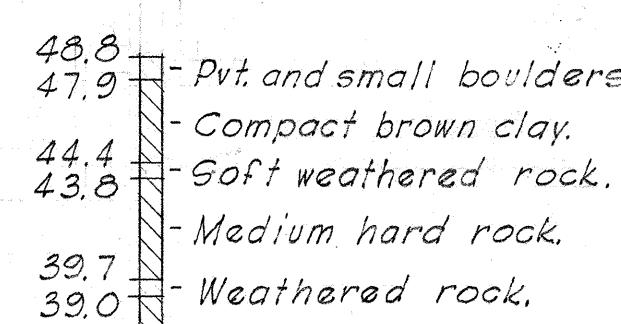
REFERENCE DRAWINGS:
TYPICAL BOX GIRDER DETAILS.
DETAIL ROADWAY PLAN.
STANDARD DETAILS.
TYPICAL DETAILS AND GENERAL STRUCTURAL NOTES.
STANDARD DETAIL BOX GIRDER
STANDARD DETAIL ALUMINUM RAILING

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
STRUCTURE "B"
PLAN AND SECTION

MIDDLE STREET BU-065-1 (1)
UNIT 3

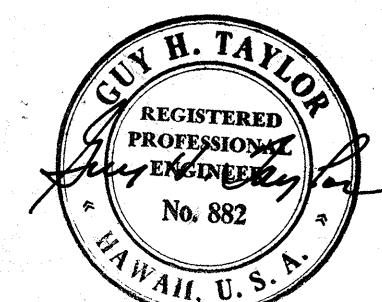
SHEET No. 1 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	BU-065-1	UNIT 3	30	115



BORING NO. 23.

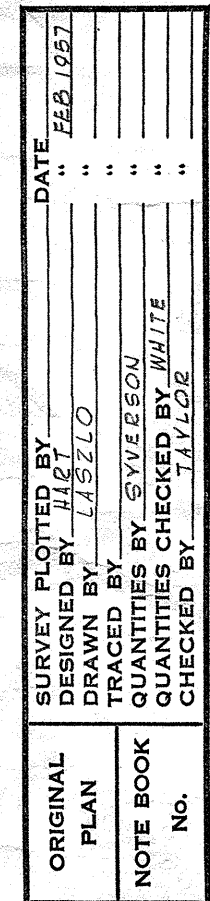
DATE: FEB 1967
DESIGNED BY: SUTELLE
CHECKED BY: SUTELLE
QUANTITIES BY: STERZON WHITE
NOTE BOOK No.



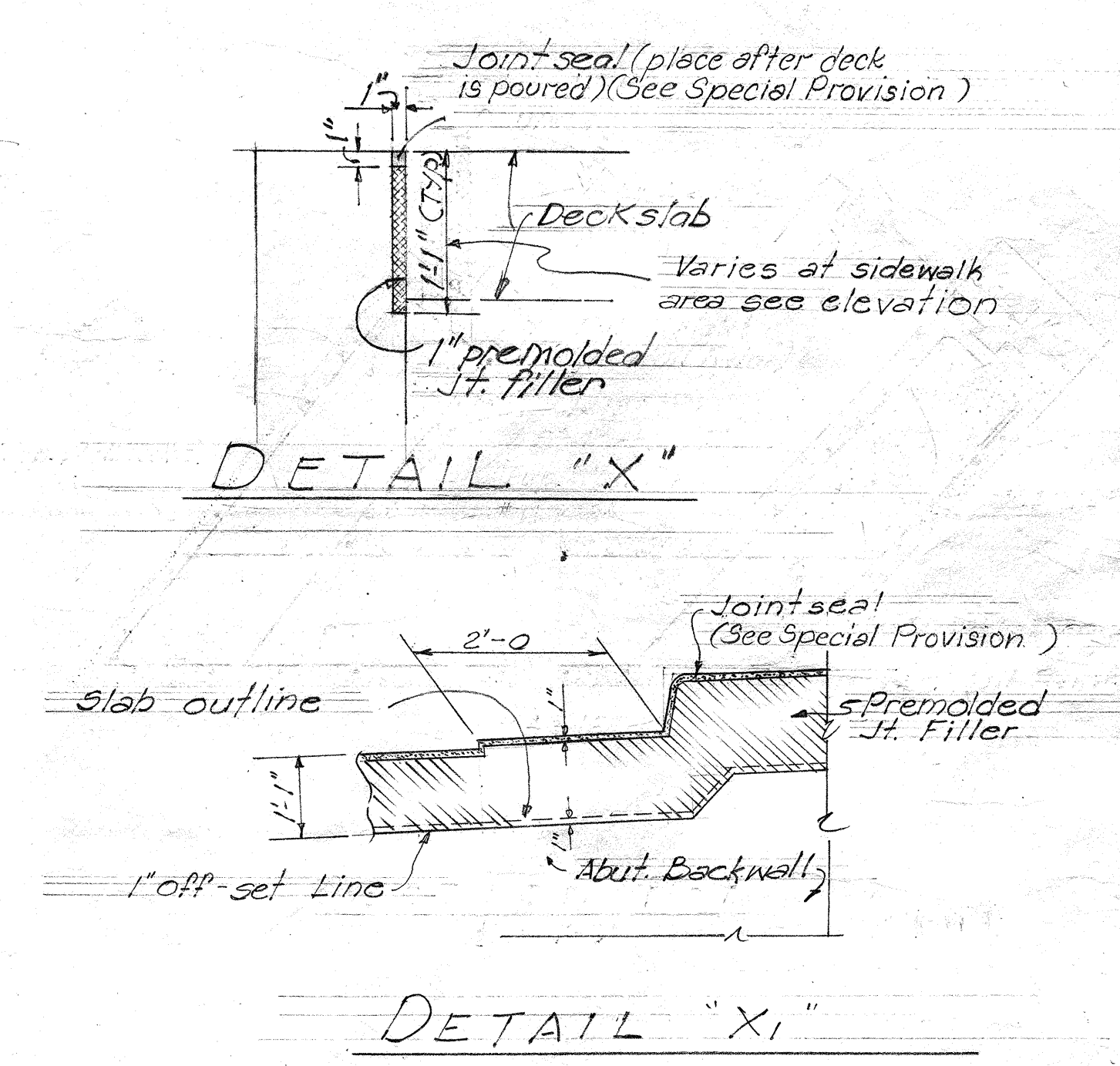
MOFFATT, NICHOL & TAYLOR
Associated with
BELT, COLLINS & ASSOC., LTD.
Civil and Structural Engineers

8161.30

ORIGINAL PLAN	SURVEY PLOTTED BY DESIGNED BY <u>W167</u> DRAWN BY <u>L152LO</u> TRACED BY _____ QUANTITIES BY <u>SWYERSON</u> QUANTITIES CHECKED BY <u>WHITE</u> CHECKED BY <u>L152LO</u>	DATE " " " " " " " " " "	<u>FEB 1957</u>
NOTE BOOK No.			



SECTION D-D
3/8" = 1'-0"



DETAIL "X1"

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

STRUCTURE "B"

ABUTMENT I

MIDDLE STREET BU-065-1 (1)
UNIT 3

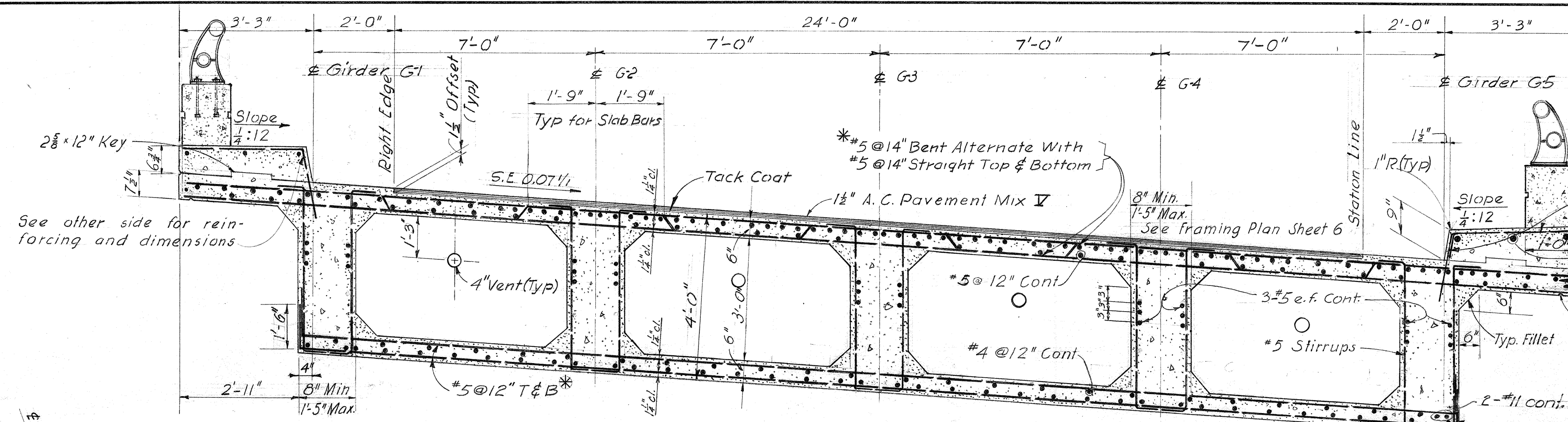
STRUCTURE "B"
ABUTMENT I

BU-065-1(1)
UNIT 3

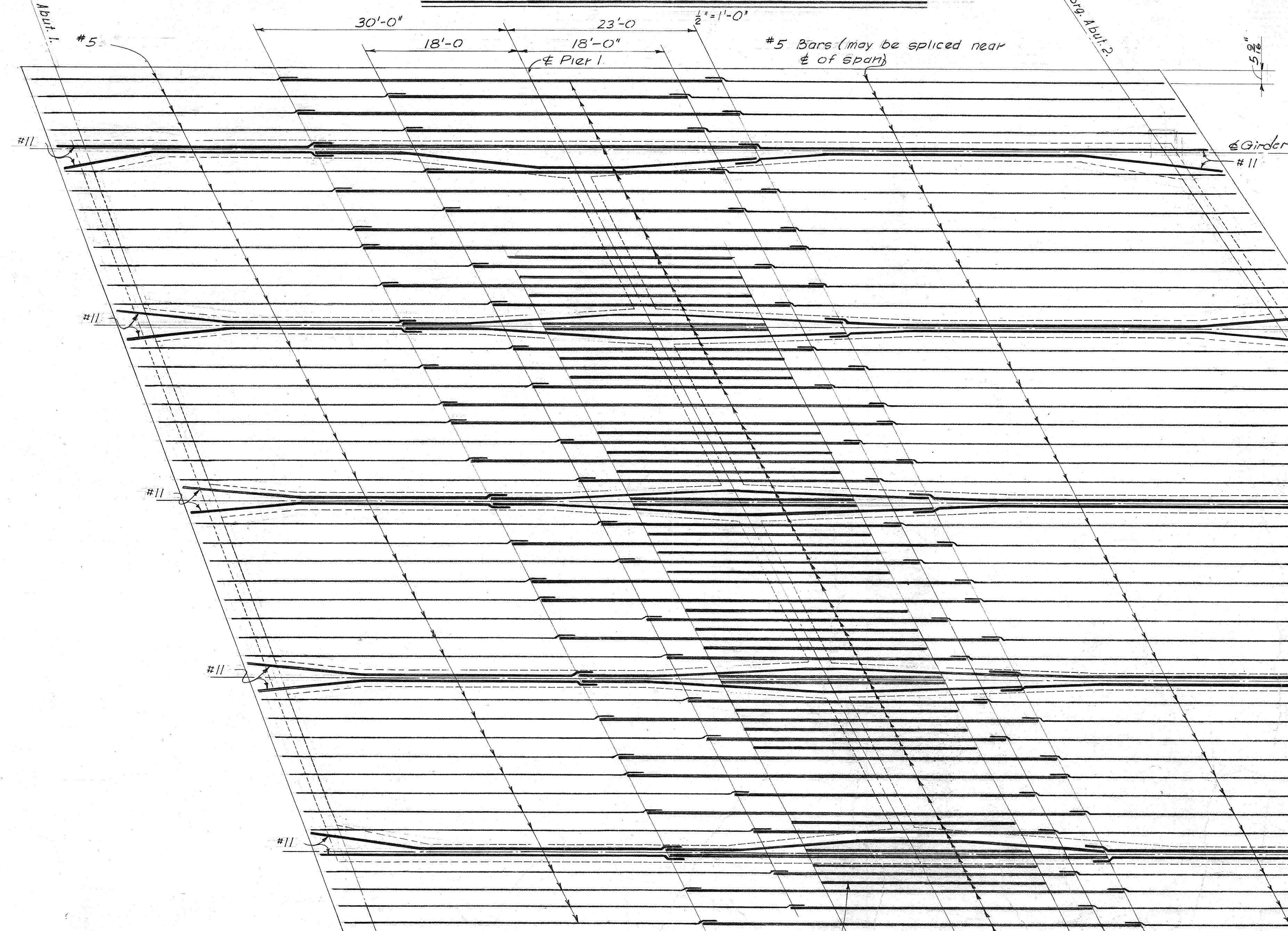
SHEET No. 2 OF 8 SHEETS

§ 161.31

8-2-60



TRANSVERSE SECTION AT PIER 1



PLAN - TOP SLAB TOP LAYER REINF.

No Scale

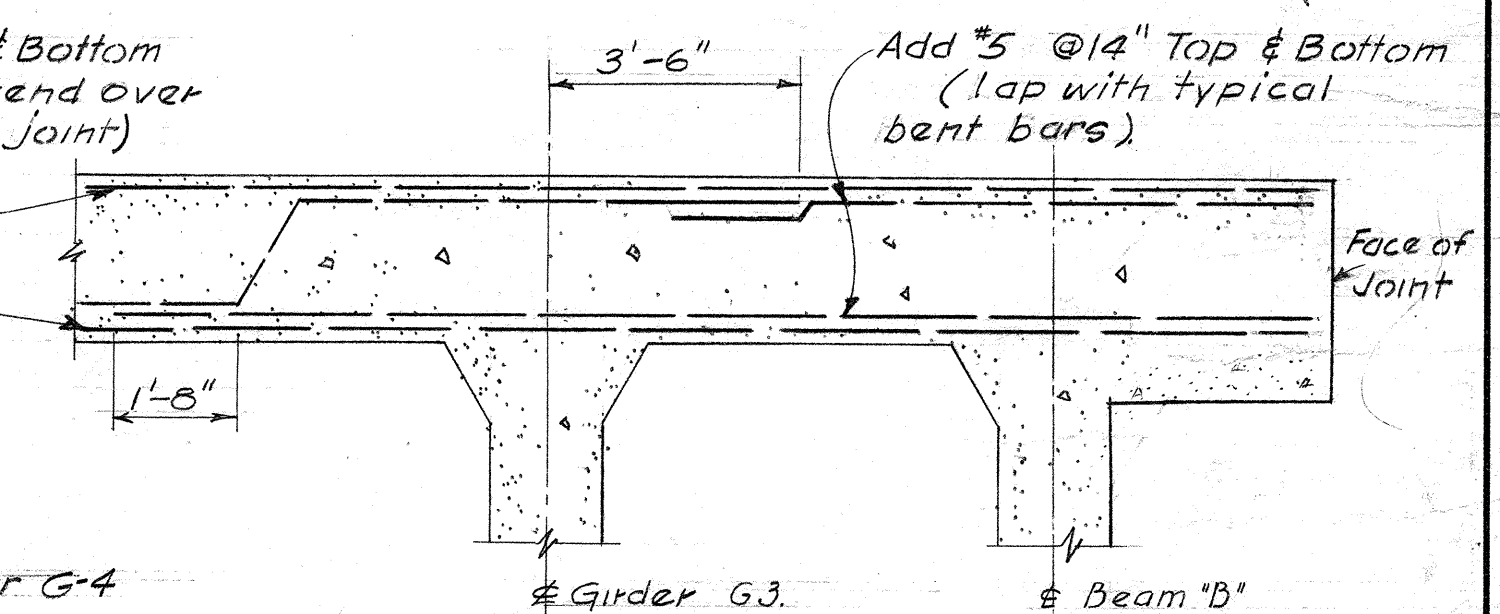
Note: Curvature of girders and reinforcement is not shown. $R = 450.00'$

TYP TOP ADDED SLAB REINF. OVER DIAPHRAGM AT GIRDERS G-1 & G-5.
(See Sht. No. 55)

PLAN - SPECIAL TRANSVERSE REINF. IN TOP SLAB

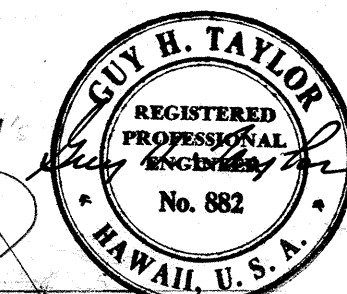
1" = 10'-0"

#5 @ 14" Top & Bottom Typ. Bars (Extend over $\pm$ of girder to joint)



SECTION A-A

No Scale



HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

STRUCTURE "B"
TOP DECK REINFORCING

MIDDLE STREET

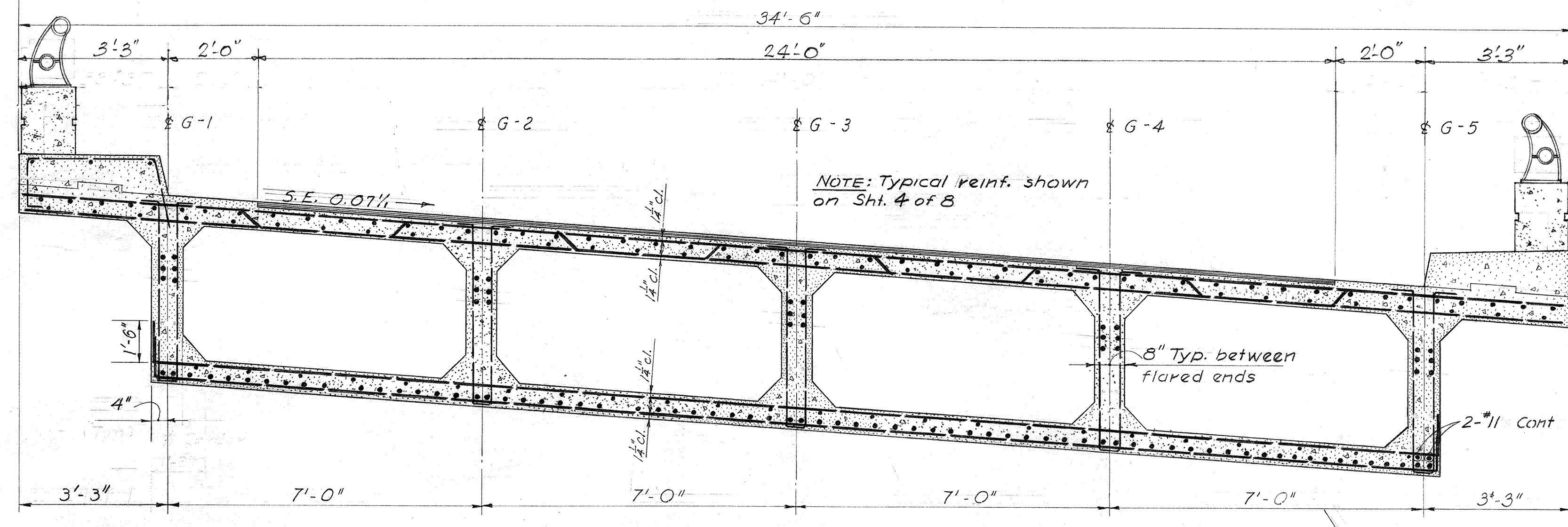
BU-065-1 (1)
UNIT 3

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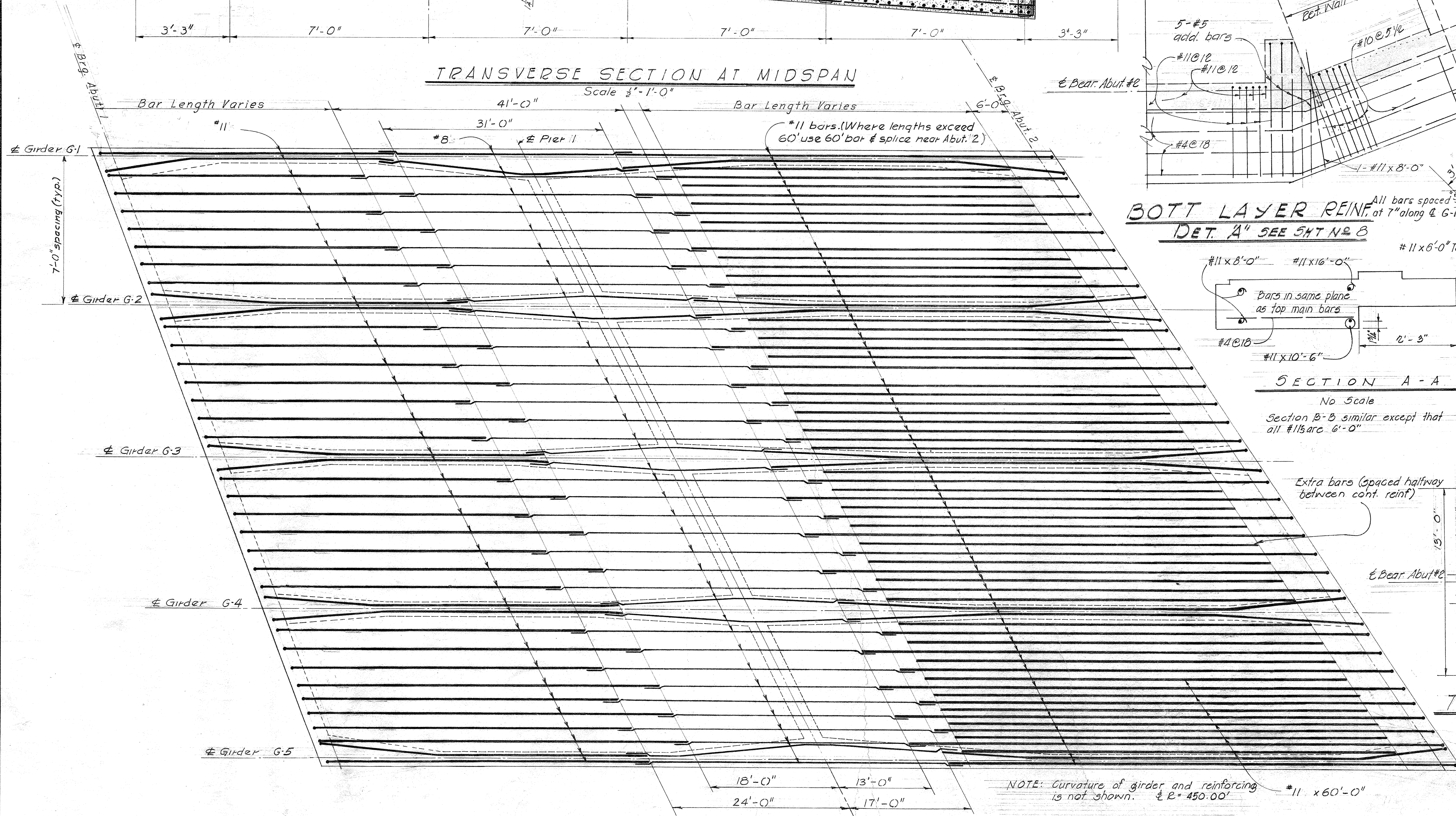
SHEET NO. 4 OF 8 SHEETS

8161.33

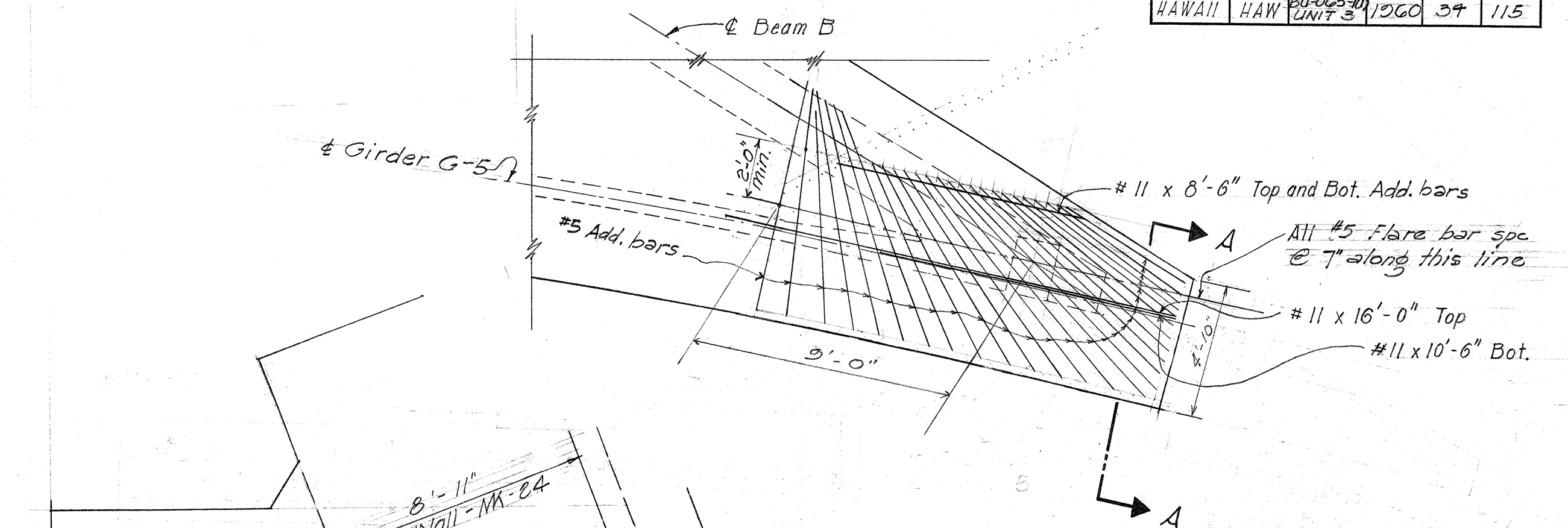
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	BU-065-1	1960	57	115



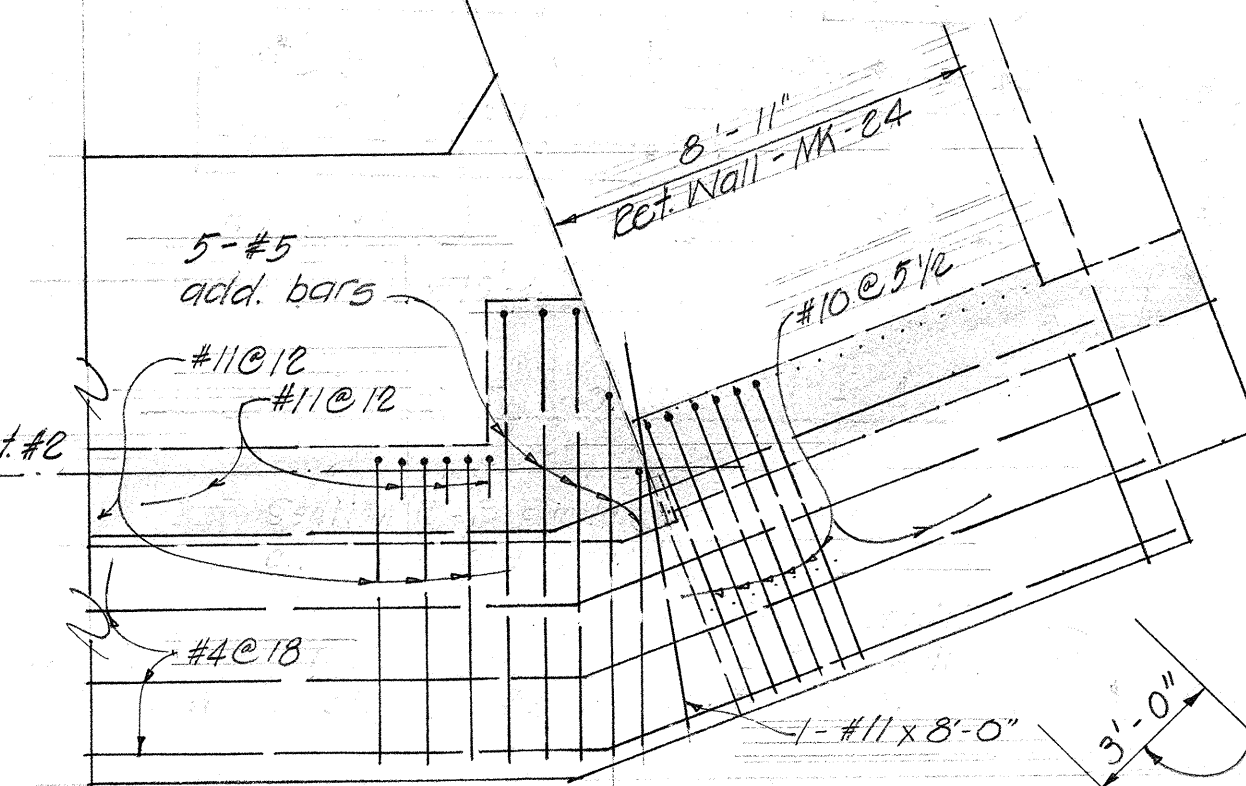
TRANSVERSE SECTION AT MIDSPAN
Scale 3/4" = 1'-0"



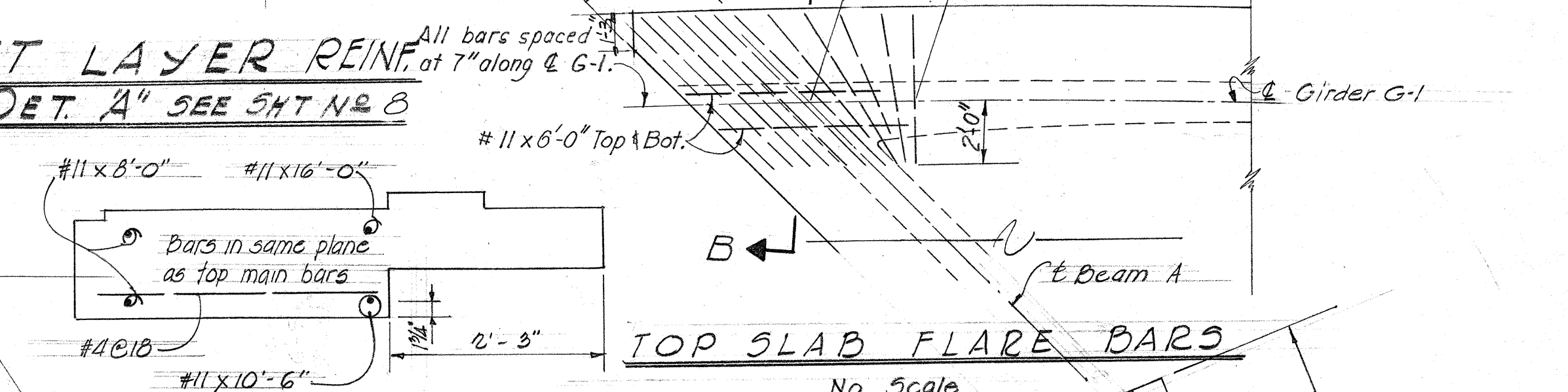
PLAN BOTTOM SLAB BOTTOM LAYER REINFORCING
No Scale



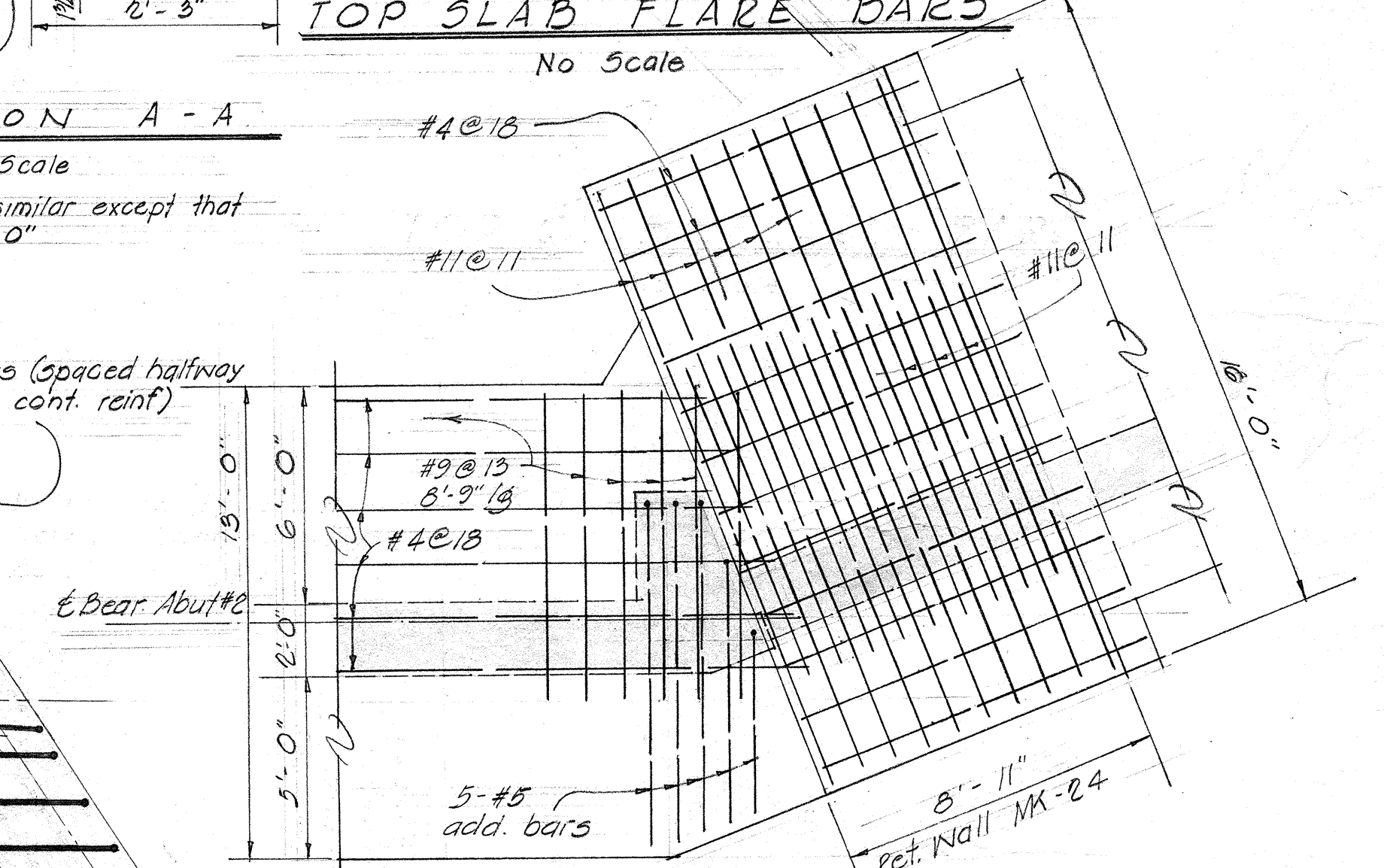
TOP SLAB FLARE BARS
No Scale



BOTT LAYER REINF.
DET. A SEE SHT NO 8



SECTION A-A
No Scale
Section B-B similar except that all #11s are 6'-0"



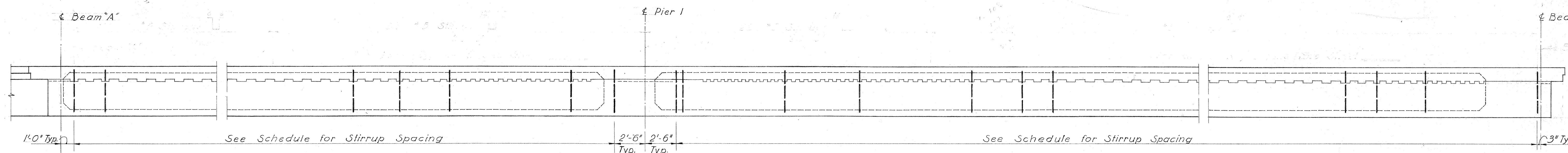
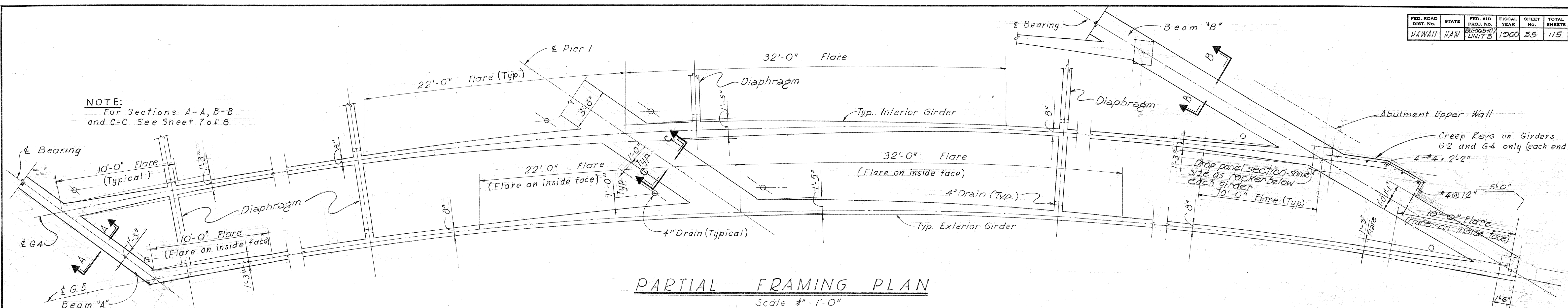
TOP LAYER REINF. - DET. A
SEE SHT NO 8



HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
STRUCTURE "B"
BOTTOM DECK REINFORCING
MIDDLE STREET
BU-065-1 (1)
UNIT 3

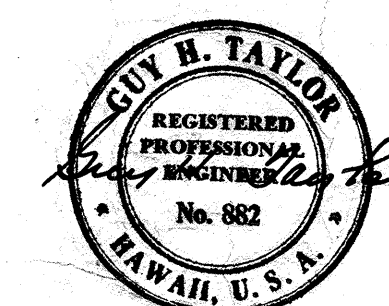
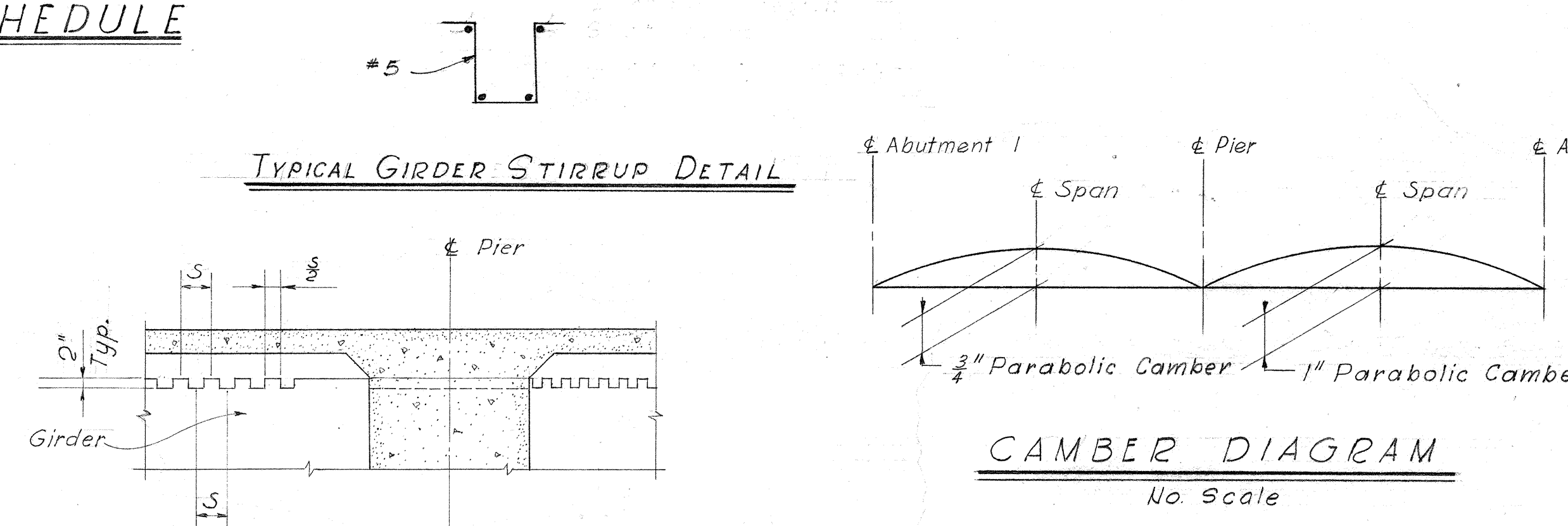
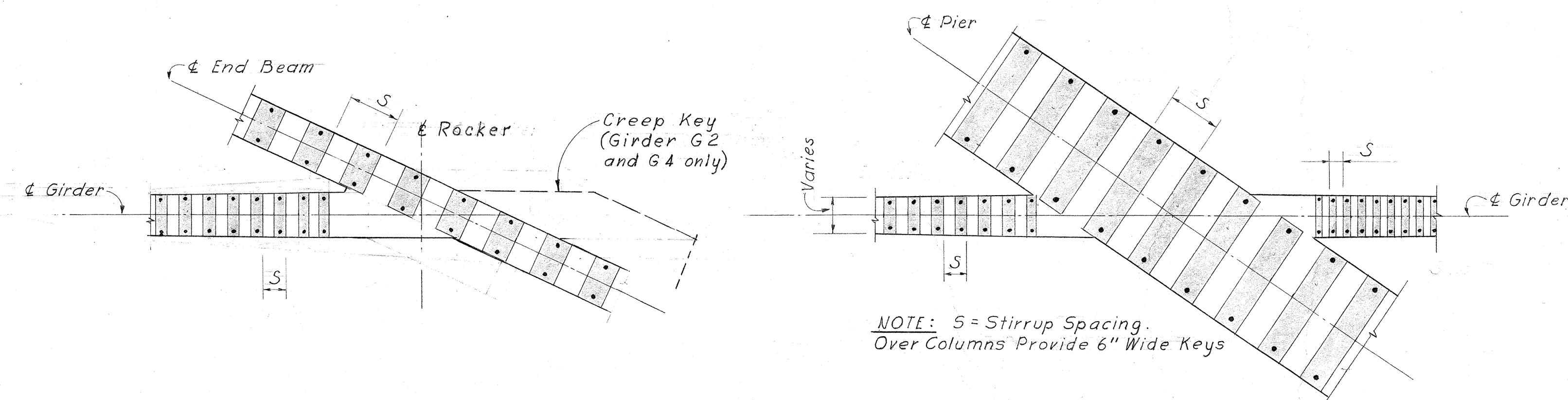
MOFFATT, NICHOL & TAYLOR
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BELT, COLLINS & ASSOC., LTD.
Civil and Structural Engineers

DESIGNED BY	DATE
DRAWN BY	SCALE
CHECKED BY	BY
QUANTITIES CHECKED BY	DATE
ORIGINAL PLAN	NO.



Girder No.	Beam "A"		Pier I		Beam "B"
G1	1'-0"	Fill @ 18" o.c.	2 @ 15" 2'-6" 2'-6" 4 @ 12" 5 @ 15"	Fill @ 18" o.c.	10 @ 10" 2 @ 8" 2 @ 8" 3'
G2	1'-0"	Fill @ 18" o.c.	2 @ 15" 6 @ 12" 12 @ 9" 3 @ 8" 2'-6" 2'-6" 10 @ 7" 8 @ 8" 14 @ 9" 6 @ 12" 3 @ 15"	Fill @ 18" o.c.	2 @ 15" 2 @ 12" 2 @ 9" 18 @ 8" 3'
G3	1'-0"	Fill @ 18" o.c.	2 @ 15" 3 @ 12" 14 @ 9" 10 @ 8" 6 @ 7" 2'-6" 2'-6" 4 @ 5" 16 @ 6" 12 @ 7" 9 @ 8" 12 @ 9" 3 @ 12" 2 @ 15"	Fill @ 18" o.c.	2 @ 15" 3 @ 12" 7 @ 9" 16 @ 8" 3'
G4	1'-0"	Fill @ 18" o.c.	2 @ 15" 3 @ 12" 14 @ 9" 10 @ 8" 6 @ 7" 2'-6" 2'-6" 4 @ 5" 16 @ 6" 12 @ 7" 9 @ 8" 12 @ 9" 3 @ 12" 2 @ 15"	Fill @ 18" o.c.	2 @ 15" 3 @ 12" 7 @ 9" 16 @ 8" 3'
G5	1'-0" 2 @ 12"	Fill @ 18" o.c.	7 @ 15" 2'-6" 2'-6" 1 @ 8" 18 @ 9" 9 @ 12" 4 @ 15"	Fill @ 18" o.c.	3 @ 15" 12 @ 12" 3'

GIRDER STIRRUP SPACING SCHEDULE



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HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
STRUCTURE "B"
FRAMING DETAILS I
MIDDLE STREET BU-065-1 (1)
UNIT 3

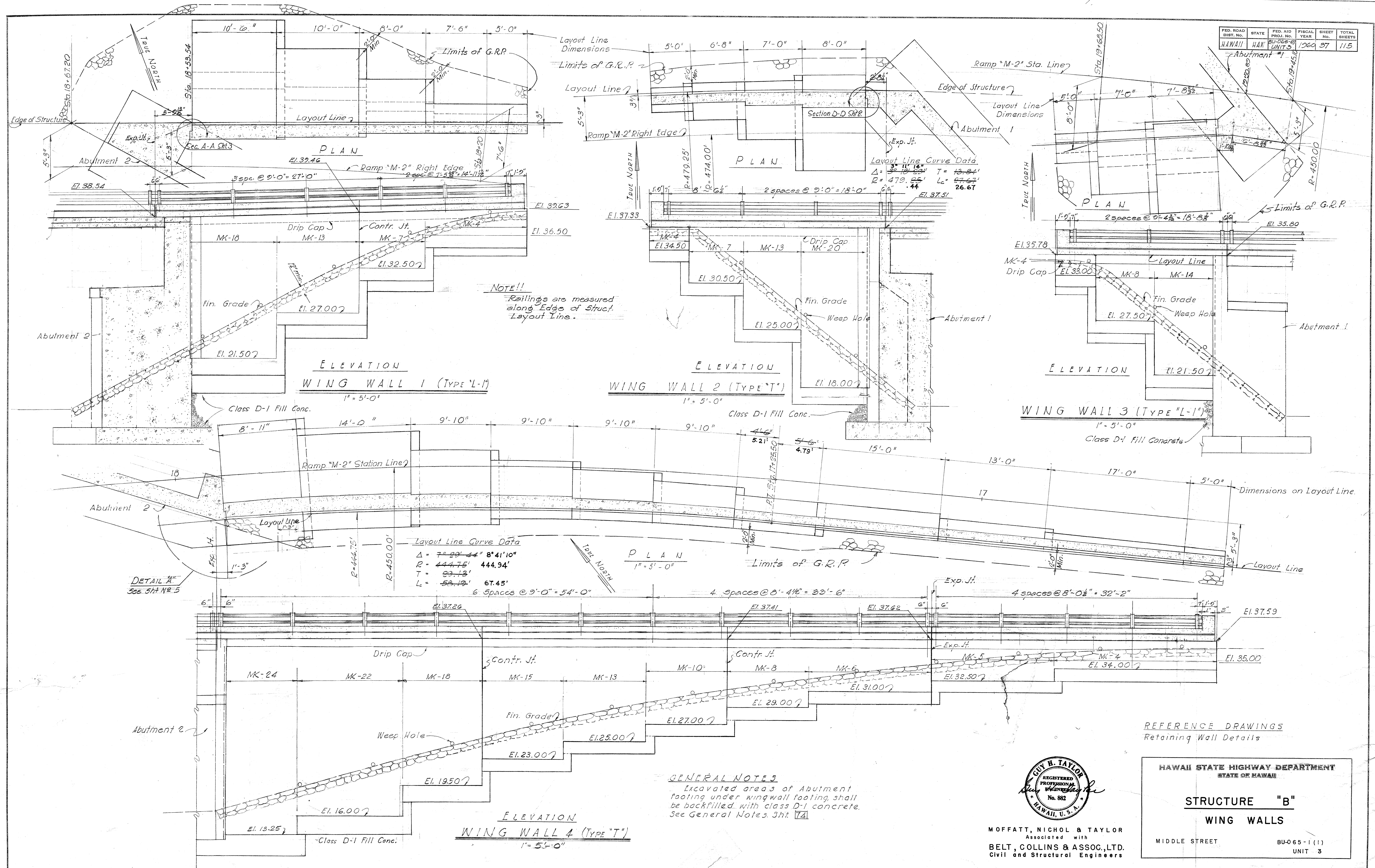
SHEET No. 6 OF 8 SHEETS

\$161.35

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DESIGNED BY <u>HART</u> DRAWN BY <u>SCHULIS</u>	DATE " " <u>FEB 1957</u>
NOTE BOOK	TRACED BY _____ QUANTITIES BY <u>SWERSON</u>	" " " "
No. _____	QUANTITIES CHECKED BY <u>WHITE</u> CHECKED BY <u>MILZE</u>	" " " "



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	BU-065-1(1)	1960	37	115



DESIGNED BY: L. C. GIBB	DATE: FEB 1957
TRACED BY: L. C. GIBB	
QUANTITIES BY: S. J. GIBB	
CHECKED BY: J. A. GIBB	
NO.:	



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 Associated with
 BELT, COLLINS & ASSOC., LTD.
 Civil and Structural Engineers

HAWAII STATE HIGHWAY DEPARTMENT
 STATE OF HAWAII

STRUCTURE "B"
WING WALLS

MIDDLE STREET BU-065-1(1)
 UNIT 3

SHEET NO. 8 OF 8 SHEETS

8161.37