FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	DA-NR90	1943	10	36

℄
13.60
12.98
388
220
6 +50
Exc = 683.3
Emb = 407.4
Cut 293
-3.0
℄
Sta. 11+50-End of H.L. Riprap
Channel Exc. 1098.1 Cu.Yd.
Hand laid Riprap
11.70
12.98
350
200
6 +00
Cut 300
3.0
℄
Exc = 1407.4
Emb = 944.4
Channel Exc. 1061.1 Cu.Yds.
12.40
400
300
5 +00
Hand laid Riprap
Cut 273
-3.0
℄
Channel Exc. 5055 Cu.Yds.
Sta. 9+25-Start of H.L. Riprap
13.80
4 +43
E.S.
W.L.
B.S.
10.70
4 +00
E.S.
W.L.
E.S.
E.S.
W.L.
E.S.
4.53
3 +00
E.S.
W.L.
B.S.
2 +50
2 +11.25
℄
12.98
C = 0
F = 496
Exc = 0
Emb = 1569.2
3.56
12 +00
12.98
0
400
4.86
11 +00
Exc = 0
Emb = 1899.9
12.98
C = 0
F = 626
1.96
10 +00
Exc = 0
Emb = 2253.7
12.98
0
591
2.03
9 +00
Exc = 0
Emb = 2359.3
12.98
C = 0
F = 683
1.03
8 +00
Exc = 205.5
Emb = 957.4
11.13
12.98
222
351
7 +50
Exc = 454.6
Emb = 531.5
10.50
12.98
269
223
7 +00
Exc = 608.3
Emb = 410.2
℄

PLATE 3 - CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 343-3 MADE IN U. S. A. 33823-3

5123.10

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	DANE90N	1943	11	36

13.39
4.44
T. Bank
T. Bank
C = 0
F = 660
Cut 379
-3.0
℄
19 +00
Exc = 0
Emb = 2029.6
Channel Exc 1396.3 Cu.Yds.
13.08
4.44
C = 0
F = 436
T. Bank
T. Bank
Cut 375
-3.0
℄
18 +00
Exc = 0
Emb 1687.0
Channel Exc 1362.9 Cu.Yds.
12.98
4.14
C = 0
F = 475
Cut 361
-3.0
℄
17 +00
Exc = 0
Emb 1757.4
Channel Exc 1274.1 Cu.Yds.
12.98
4.44
C = 0
F = 474
Cut 327
-3.0
℄
16 +00
Exc = 0
Emb = 1757.4
Channel Exc 1055.6 Cu.Yds.
12.98
4.24
C = 0
F = 475
Cut 243
-3.0
℄
15+00
Exc = 0
Emb = 1879.6
Channel Exc 998.1 Cu.Yds.
12.98
3.14
C = 0
F = 540
Cut 296
-3.0
℄
14 +00
Exc = 0
Emb = 1833.3
Channel Exc 1127.8
12.98
4.16
C = 0
F = 450
Cut 313
-3.0
℄
13 +00
Exc = 0
Emb = 1751.8
Channel Exc 1122.1 Cu.Yds.

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

5123.11

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	DA-NR9(1)	1943	12	36

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE	T. E. H.	
	AREAS		
NO.	AREAS CHECKED		

15.39
C. 70
F. 634
Hand laid Riprap
Exc. 83.3
Emb. 1350.9
8.68
21 +00
Cut 305
-3.0
℄
Channel Exc 574.1 CuYds.
14.99
C. 20
F. 825
Hand laid Riprap
9.88
20 +50
Cut 315
-3.0
℄
Exc. 18.5
Emb. = 1370.4
Channel Exc 528.7 CuYds.
14.59
C. 0
F. 655
Hand laid Riprap
4.28
Cut 256
-3.0
℄
Exc. 0
Emb. 453.5
20 +00
Sta.20+00-Start of H.L. Riprap
Channel Exc 1688 CuYds.
14.45
C. 0
F. 715
3.58
Cut 256
-3.0
℄
19 +82.12
Exc. 0
Emb. 3556.1
Channel Exc 1456.9
13.60
C. 0
F. 730
2.04
Cut 336
-3.0
℄
Exc. 0
Emb. 1266.3
Eqo. 18+49.2 / 19+49.2
Channel Exc 651.4 CuYds.

STRUCTURE DATA
24" Conc. Pipe = 112 ft.
2 Conc. Headwalls.
(per Standard details)
Excavation = 60 CuYds.

5123.12

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	DANR901	1943	13	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE T. L. H.
AREAS
AREAS CHECKED
BY
DATE

Sta. 23+00 - End of H.L. Riprap
58.7
22 +50
Channel Exc. 537.4 Cu. Yds.
Hand laid Riprap
Possible Borrow
16.59
C = 3470
F = 0
existing ground
Cut 580
-3.0
℄
55.68
22 +60
Exc. 6351.8
Emb. 0
Channel Exc. 987.9 Cu. Yds.
Possible Borrow
16.19
C = 5390
F = 0
existing ground
Hand laid Riprap
Cut 487
-3.0
℄
Exc. 4797.2
Emb. 0
34.82
21 +50
Channel Exc. 708.8 Cu. Yds.
Possible Borr.
15.79
C = 1791
F = 0
Hand laid Riprap
Exc. 2306.5
Emb. 587.0
Cut 278
-3.0
℄
Channel Exc. 539.8 Cu. Yds.

PLATE 3 CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 53828-3

5123.13

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	DA-NR9(1)	1943	14	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY T. C. C.
DATE

24 +50
33.53
18.20
C = 1582
F = 0
Exc = 3296.3
Emb = 0
24 +00
37.71
17.80
C = 1978
F = 0
Exc = 3912.0
Emb = 0
23 +50
38.31
17.40
C = 2247
F = 0
Exc = 4763.9
Emb = 0
23 +00
43.11
16.99
C = 2888
F = 0
Exc = 5887.0
Emb = 0
26 +00
41.50
19.40
E.C.
C = 1585
F = 0
Exc = 2256.7
Emb = 0
25 +64.8
47.00
19.12
C = 1877
F = 0
Exc = 3268.8
Emb = 0
25 +00
31.83
18.60
C = 847
F = 0
Exc = 2249.1
Emb = 0

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
K & E CO. No. 345-3 MADE IN U.S.A.

5123.14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HAW.	DA-NR90	1943	15	36

FINAL SURVEY | BY | DATE
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY | BY | DATE
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE H.F.B.
AREAS
AREAS CHECKED

℄
22.42
C = 0
F = 423
E.C.
12.33
29 +75
Exc = 0
Emb = 1009.7
21.81
C = 0
F = 304
15.52
29 +00
Exc = 731.5
Emb = 866.7
21.01
20.47
C = 395
F = 164
28 +00
Exc = 4611.1
Emb = 303.7
16.50
27 +00
E.C.
20.21
C = 2095
F = 0
39.80
Exc = 1640.1
Emb = 0
26 +75
E.C.
20.01
C = 1448
F = 0
Exc = 5597.8
Emb = 0
℄
23.42
E.C.
16.73
C = 5
F = 252
31 +00
Exc = 29.6
Emb = 474.1
23.02
E.C.
16.03
C = 27
F = 260
30 +50
Exc = 37.5
Emb = 948.7

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 33828-3

5123.15

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	DANR 911	1943	16	36

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

℄
℄
60.18
40 +00
44.46
C = 1240
F = 0
40.34
39.54
39 +00
C = 232
F = 150
E.C.
Exc = 197.2
Emb = 533.0
37.53
E.C.
29.53
C = 0
F = 477
38 +54.01
Exc = 0
Emb = 2825.8
Exc = 2172.2
Emb = 0
26.53
27.68
C = 0
F = 25
E.C.
E.C.
35 +50
E.C.
55.17
39 +50
41.89
C = 1106
F = 0
E.C.
Exc = 27.8
Emb 188.9
26.67
Bm.D.
21.63
C = 30
F = 179
Equ.
34+60
35 +00
Exc = 259.2
Emb = 3192.4
Exc = 1238.9
Emb = 138.9

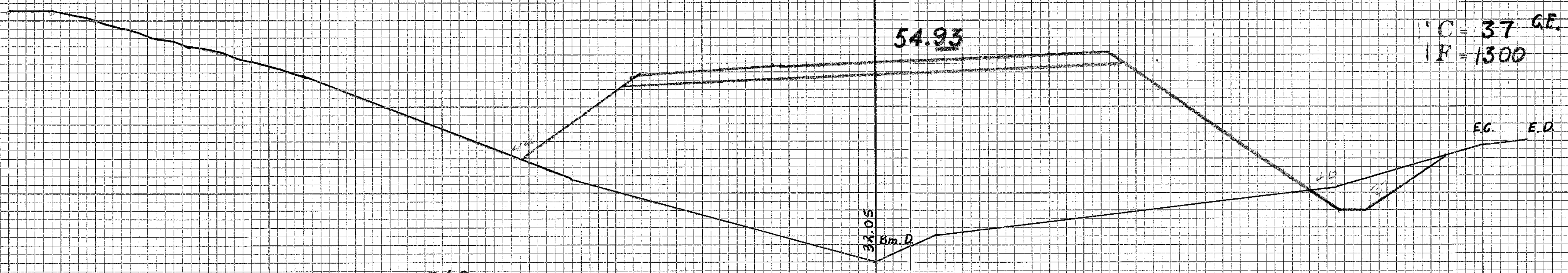
PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

5123.16

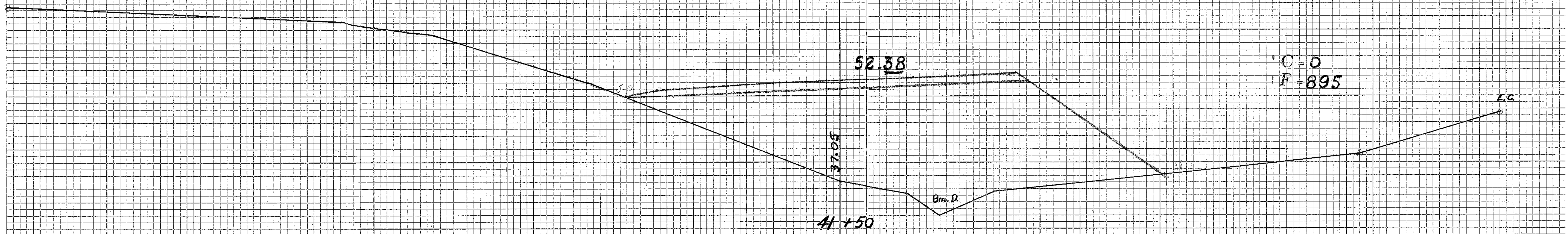
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	DANR90	1943	17	36

℄


54.93
G.E.
E.C.
E.D.
32.05
Bm. D.
42+00

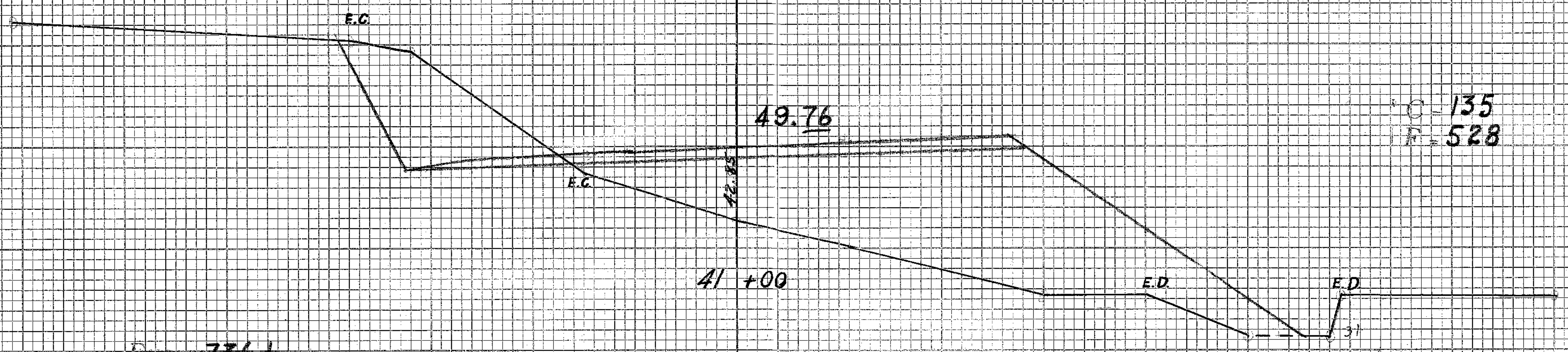
C = 37
F = 1300

Exc = 34.2
Emb = 2032.4


52.38
E.C.
37.05
Bm. D.
41+50

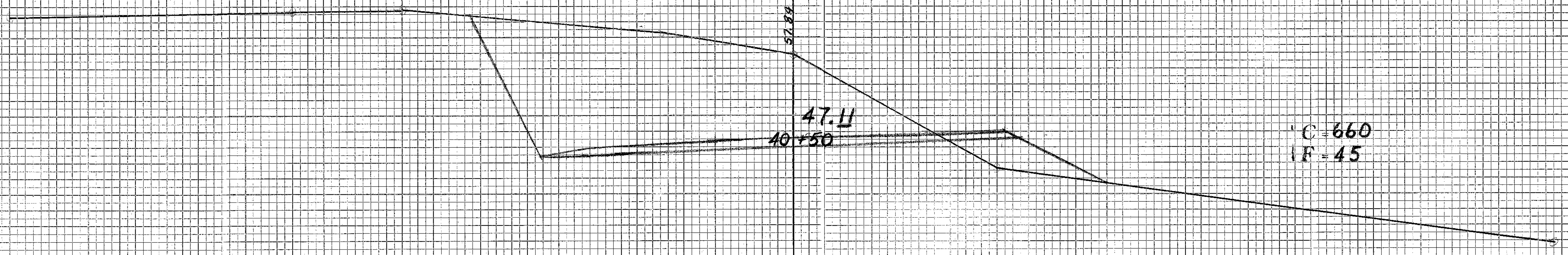
C = 0
F = 895

Exc = 125.0
Emb = 1317.6


E.C.
49.76
E.C.
42.85
41+00
E.D.
E.D.

C = 135
F = 528

Exc = 736.1
Emb = 530.6


52.89
47.11
40+50

C = 660
F = 45

Exc = 1759.3
Emb = 41.7

℄

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 33826-3

5123.17

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR9(1)	1943	18	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

℄
℄
68.83
67.00
45 +00
C = 0
F = 490
Exc = 0
Emb = 1487.9
76.76
73.55
E.C.
H.E. P.P.
I. D. & Flume
C = 0
F = 160
47 +00
16" x 16' Redwood flume ⊥ To Survey Line Flows Rt. to Lt.
66.68
52.85
44 +50
C = 0
F = 1117
Exc = 0
Emb = 2478.7
Exc = 0
Emb = 271.3
64.46
46.35
44 +00
C = 123 C.E.
F = 1560
Channel Exc.
Mudrock
Bm. D'
Exc = 0
Emb = 2336.1
74.88
71.78
46 +50
C = 0
F = 133
62.18
50.25
43 +50
C = 276 C.E.
F = 963
Exc = 0
Emb = 294.4
Channel Exc
Mudrock
Flow line 30" Culvt
Exc = 0
Emb = 2040.7
72.93
69.60
46 +00
C = 0
F = 185
59.83
47.65
43 +00
C = 26.4 E.C. C.E.
F = 1241
Channel Exc.
Mudrock
Exc = 0
Emb = 393.5
Bm. D
557
Exc = 0
Emb = 4705.5
70.91
66.68
45 +50
C = 0
F = 240
Exc = 0
Emb = 675.9

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

5123.18

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR911	1943	19	36

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE	J. C. C	
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

℄
℄
87.67
81.54
C = 0
F = 428
50 +00
Exc = 0
Emb = 1298.1
84.16
78.74
E.C. & H.E. Line
C = 0
F = 273
49 +00
Exc = 55.6
Emb = 681.5
80.46
76.75
E.C.
H.E. Line
C = 30
F = 95 L.O.
48 +00
Exc = 31.7
Emb = 142.6
79.11
78.05
E.C.
C = 19
F = 125
47 +65
Exc = 22.9
Emb = 342.8
99.57
92.43
C = 0
F = 262
55 +00
Exc = 0
Emb = 1762.9
98.09
87.14
C = 0
F = 690
54 +00
Exc = 0
Emb = 2483.3
95.95
82.26
C = 0
F = 651
53 +00
Exc = 0
Emb = 1890.7
93.56
86.96
C = 0
F = 370
52 +00
Exc = 0
Emb = 1422.2
51+25 12" Redwood flume ⊥ To Survey Line
90.81
83.64
C = 0
F = 398
51 +00
Exc = 0
Emb = 1529.6

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A.

5123.19

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR90(1)	1943	20	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

℄
℄
℄
106.75
108.23
C = 5
F = 19
60 +00
59+90 Irrigation ditch ⊥ to Survey line
Exc = 9.3
Emb = 735.2
105.31
98.23
C = 0
F = 378
59 +00
Exc = 0
Emb = 1903.7
103.88
96.33
C = 0
F = 650
58 +00
Exc = 0
Emb = 1868.5
102.45
95.43
C = 0
F = 359
57 +00
Exc = 0
Emb = 1735.2
101.00
93.13
C = 0
F = 578
56 +00
Exc = 0
Emb = 1555.6
Flow line 30" Conc Culvert Skewed
Sta 56+32
114.41
109.88
Bm. D.
C = 17
F = 156
66 +00
Exc = 550.0
Emb = 288.9
113.51
116.28
C = 280
F = 0
65 +00
Exc = 824.1
Emb = 0
112.39
112.78
C = 165
F = 0
64 +00
Exc = 394.5
Emb = 74.1
111.06
109.08
C = 48
F = 40
63 +00
Exc = 177.7
Emb = 581.5
62+00 X Section On R.R. Ballast
108.19
103.63
C = 0
F = 217
61 +00
Exc = 9.3
Emb = 437.0
115.74
126.95
C = 985
F = 0
71 +00
Exc = 3694.5
Emb = 0
115.90
127.95
C = 1010
F = 0
70 +00
Exc = 3574.1
Emb = 0
115.95
126.35
C = 920
F = 0
69 +00
Exc = 2848.1
Emb = 0
115.59
121.57
68 +00
Exc = 1353.7
Emb = 94.4
115.11
112.27
C = 135
F = 51
67 +00
Exc = 281.5
Emb = 383.3

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

5123.20

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR9(1)	1943	21	36

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

℄
℄
132.16
77 +00
114.12
C = 1100
F = 0
Exc = 4685
Emb = 0
131.74
76 +00
114.39
C = 1430
F = 0
Exc = 37222
Emb = 0
133.14
75 +00
114.66
C = 1580
F = 0
131.34
Exc = 5500.0
Emb = 0
74 +00
114.93
C = 1390
F = 0
128.85
Exc = 4648.2
Emb = 0
115.20
73 +00
C = 1120
F = 0
Exc = 3425.9
Emb = 0
123.55
115.41
72 +00
C = 730
F = 0
Exc = 3175.9
Emb = 0
113.44
100.01
C = 0
F = 815
79 +50
Exc = 0
Emb = 1342.6
113.58
104.11
C = 0
F = 635
79 +00
Exc = 0
Emb = 752.7
110.10
113.71
C = 0
F = 178
78 +50
Exc = 396.3
Emb = 164.8
118.30
113.85
78 +00
C = 428
F = 0
Exc = 1096.2
Emb = 0
123.64
113.98
77 +50
C = 756
F = 0
Exc = 1718.5
Emb = 0

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

5123.21

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR9(1)	1943	22	36

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

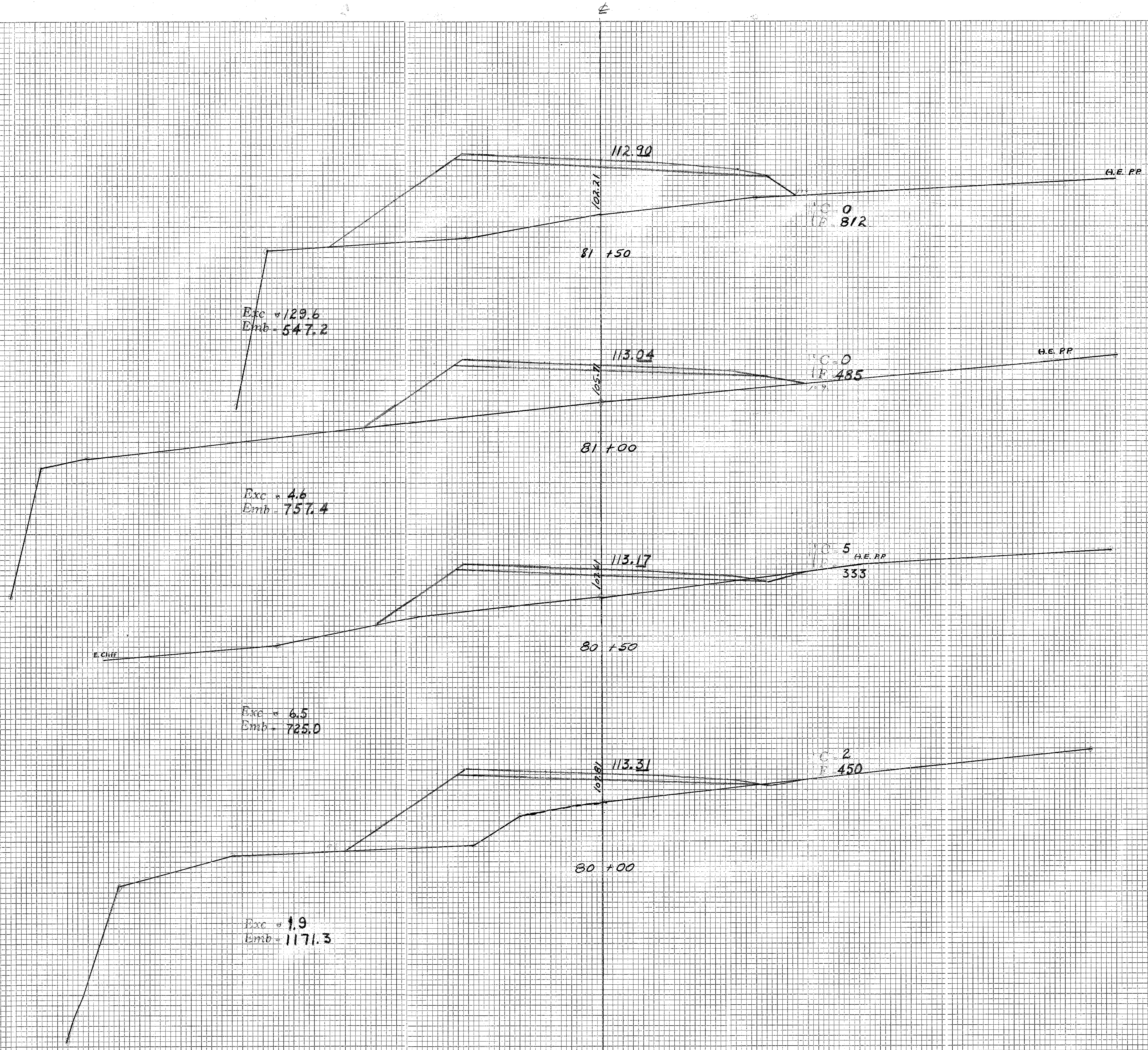
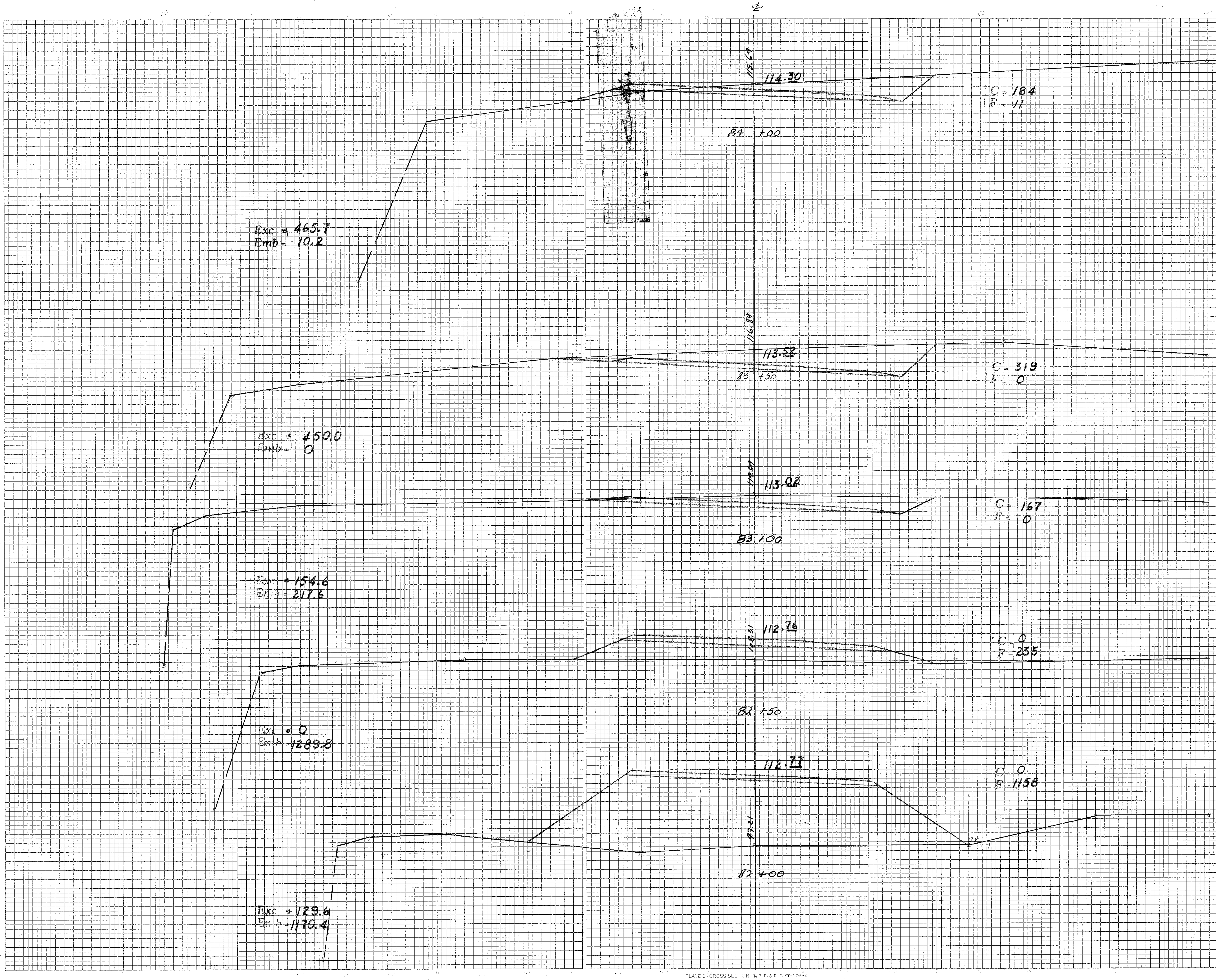

℄
112.90
102.21
H.E. PP.
C. 0
F. 812
81 +50
Exc = 129.6
Emb = 547.2
113.04
105.71
H.E. PP.
C. 0
F. 485
81 +00
Exc = 4.6
Emb = 757.4
113.17
107.61
C. 5
F. 333
H.E. PP.
E. Cliff
80 +50
Exc = 6.5
Emb = 725.0
113.31
107.81
C. 2
F. 450
80 +00
Exc = 1.9
Emb = 1171.3

PLATE 3 - CROSS SECTION G. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 33R28-3

5123.22

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR90(1)	1943	23	36



℄
115.69
114.30
84 +00
C = 184
F = 11
Exc = 465.7
Emb = 10.2
116.89
113.52
83 +50
C = 319
F = 0
Exc = 450.0
Emb = 0
114.69
113.02
83 +00
C = 167
F = 0
Exc = 154.6
Emb = 217.6
108.31
112.76
82 +50
C = 0
F = 235
Exc = 0
Emb = 1283.8
112.77
97.21
82 +00
C = 0
F = 1158
Exc = 129.6
Emb = 1170.4

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

PLATE 3 - CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 35628-3

5123.23

FED ROAD DIST NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR901	1943	24	35

FINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

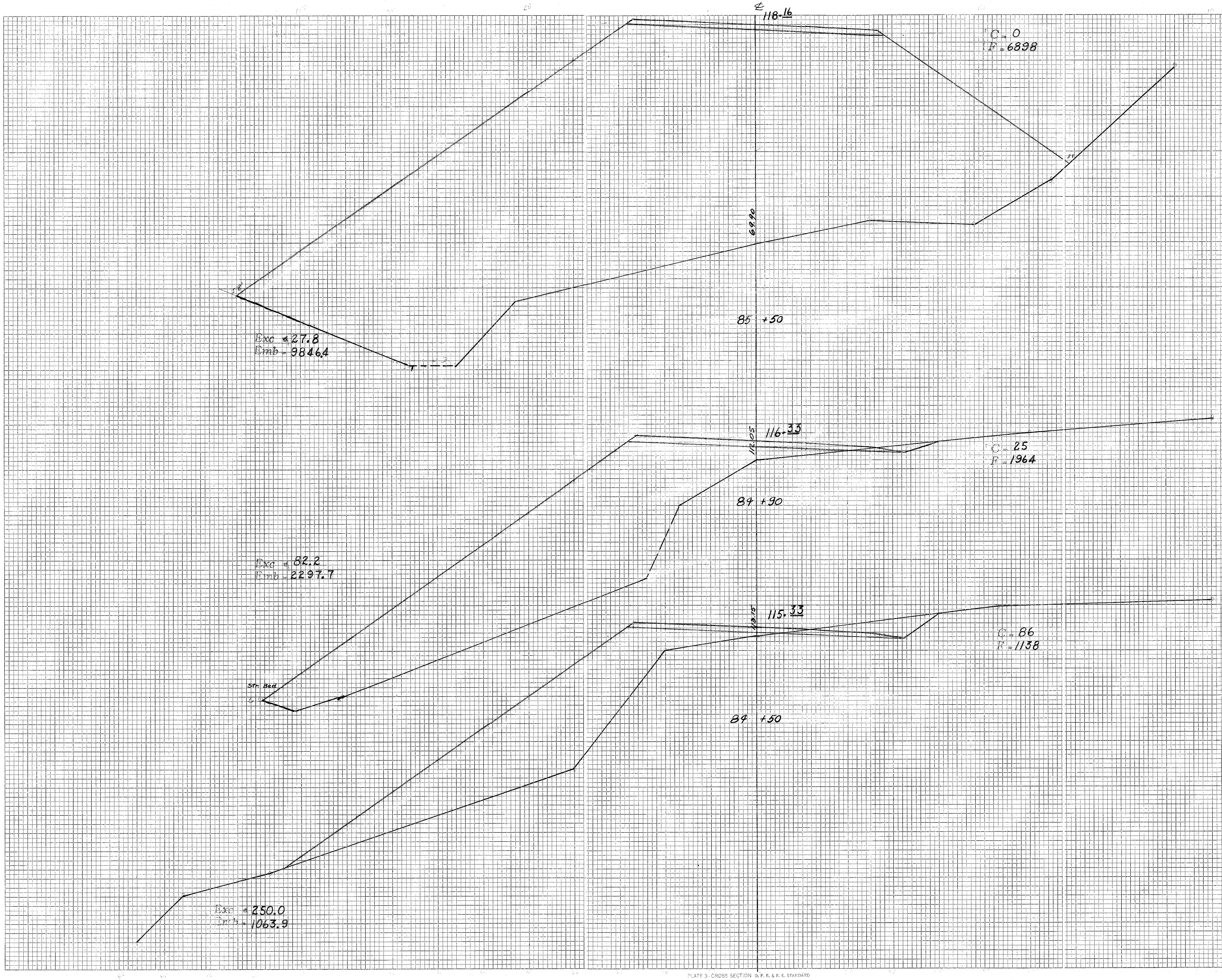

℄ 118.16
C = 0
F = 6898
69.90
85 +50
Exc = 27.8
Emb = 9846.4
112.05
116.33
C = 25
F = 1964
84 +90
Exc = 82.2
Emb = 2297.7
113.15
115.33
C = 86
F = 1138
Str. Bed
84 +50
Exc = 250.0
Emb = 1063.9

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 33828-5

5123.24

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR9(1)	1943	25	36

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

℄
124.37
C = 0
F = 5915
Exc = 0
Emb = 12194.4
84.98
87 +00
122.05
C = 0
F = 7255
Exc = 0
Emb = 14529.6
69.08
119.98
C = 0
F = 8437
86 +50
59.68
86 +00
Exc = 0
Emb = 14199.1

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

5123.25

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR90(1	1943	26	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

℄
E.P.
E. Shoulder
135.72 H.E.P.P.
131.27
C = 0
F = 225
89+00
Exc = 0
Emb = 752.8
132.75
123.55
C = 0
F = 588
88+50
E.D.
Exc = 0
Emb = 1439.8
129.78
116.75
C = 0
F = 967
E.D.
Exc = 0
Emb = 1714.8
88+00
126.93
C = 0
F = 1785
105.82
E.D.
87+50
Bm. D
Exc = 0
Emb = 7129.6

PLATE 3 - CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

5123.26

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR9(1)	1943	27	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

℄
152.25
153.54
Top Stone
E.P
E.P
E.Stone
E.Stone
92+00
C 3
F 57
Exc 28.7
Emb 62.0
149.54
150.57
E.P
E.P
91+50
C 28
F 10
Exc 47.2
Emb 55.5
146.80
147.60
E.P
E.P
91+00
C 23
F 50
Exc 50.9
Emb 62.0
143.76
144.93
E.P
E.P
90+50
C 32
F 17
Exc 76.8
Emb 53.7
141.21
141.66
E.P
E.P
90+00
C 51
F 41
Exc 51.8
Emb 96.3
137.42
138.69
E.P
E.M
E.M
89+50
C 5
F 63
Exc 4.6
Emb 266.7

PLATE 3 - CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 33828-3

5123.27

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR901	1943	28	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

182.21
183.24
E.P
C=8
F=38
E.M.
97+00
Exc = 25.9
Emb = 177.7
176.02
177.30
E.P
E.P
E.M.
C=6
F=58
¢ of Rps
E.Stone Pile
96+00
Exc = 25.9
Emb = 229.6
170.25
171.36
E.P
E.P
C=8
F=66
95+00
Exc = 53.7
Emb = 222.2
164.41
165.42
E.P
E.P
C=21
F=54
94+00
E.S.P
E.S.P
Exc = 48.1
Emb = 161.1
158.35
159.48
E.P
E.P
C=5
F=33
93+00
Exc = 14.8
Emb = 166.6

PLATE 3 - CROSS SECTION C.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U.S.A. 33328-3

5123.28

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR 911	1943	29	36

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

204.03
203.01
EP
100 +50
C = 0
F = 110
Exc = 0
Emb = 138.9
201.06
199.74
EP
EP
Corner of garage
100 +00
C = 0
F = 40
Exc = 3.7
Emb = 148.1
197.10
198.09
EP
ER
Bls
R
R
99 +50
C = 4
F = 120
Exc = 37.0
Emb = 176.8
194.46
195.12
EP
EP
T. of Fill
EM
EM
99 +00
C = 36
F = 71
Exc = 36.1
Emb = 165.7
191.31
192.15
EP
EP
R
R
98 +50
C = 3
F = 108
Exc = 6.5
Emb = 164.8
188.16
189.18
EP
EP
EM
EM
E. Stock Pile
98 +00
C = 4
F = 70
Exc = 22.2
Emb = 200.0

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U.S.A. 33828-3

5123.29

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR 901	1943	30	36

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE	TCC	
NO.	AREAS		
	AREAS-CHECKED		

221.82
C=0
F=911
P
R
R
217.00
103+50
Exc=0
Emb=1297.2
1:1 HLRR
Ramp Deck at 103+75
218.88
217.57
C=0
F=490
Blg
103+00
Exc=26.3
Emb=621.0
214.75
EP
213.97
C=25
F=100
Blg
R
R
102+43.15
Exc=27.2
Emb=106.3
212.94
211.37
EP
EP
EM
Gas Is
Blg
C=9
F=33
102+00
Exc=11.1
Emb=150.0
209.97
208.57
EP
EP
EM
EM
C=3
F=129
101+50
Exc=2.8
Emb=210.2
207.00
205.51
EP
EP
EM
EM
Stone Pile
C=0
F=98
101+00
Exc=0
Emb=192.6
230.26
C=0
F=1970
207.20
105+00
Exc=0
Emb=5738.9
224.70
C=0
F=1129
P
P
R
R
R
209.97
1:1 HLAR
104+00
Exc=0
Emb=1888.9

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 33828-3

5123.30

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR90A	1943	31	36

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE	T.C.C.	
	AREAS		
	AREAS CHECKED		

245.46
233.22
E.M.
E.P.
E.P.
C=0
F=784
E.M.
E.M.
108 +00
Exc =0
Emb =2300.0
240.64
233.0
C=0
F=458
E.P.
Outlet 18" R.C. Pipe
E.M.
E.M.
E.M.
E.M.
E.M.
107+00
Exc =0
Emb =1619.8
237.92
225.40
C=0
F=1150
E.P.
E.M.
E.M.
E.M.
E.M.
E.M.
E.M.
106 +45.6
Exc =0
Emb =2219.9
235.58
216.50
C=0
F=1479
E.P.
E.M.
E.M.
106 +00
Exc =0
Emb =1609.9
234.01
215.70
C=0
F=1419
2:3
105 +70
Exc =0
Emb =4393.0

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U.S.A. 33828-3

5123.31

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR9(1)	1943	32	36

FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

258.40
295.74
ER
ER
ER
EP
C = 0
F = 933
111 +00
Exc = 0
Emb = 1633.3
256.39
297.34
ER
ER
BM.Wall
Top Wall
EP
C = 0
F = 831
110 +50
Exc = 0
Emb = 1491.7
263.61
253.94
EP
EP
E.P.
E.P.
C = 0
F = 709
112 +50
254.34
298.50
ER
ER
BM.Wall
Top Wall
E.P.
C = 0
F = 780
110 +00
Exc = 0
Emb = 1725.0
Exc = 0
Emb = 1412.9
262.03
251.74
ER
ER
ER
ER
E.P.
C = 0
F = 1154
112 +00
252.21
297.17
ER
BM Wall
Top Wall
EP
C = 0
F = 746
109 +50
EM
EM
Exc = 0
Emb = 1268.5
Exc = 5.5
Emb = 2138.9
250.02
291.37
ER
ER
ER
ER
EM
E.M.
C = 0
F = 624
109 +00
Exc = 0
Emb = 2607.4
260.29
248.84
ER
ER
ER
ER
EP
ER
C = 6
F = 1156
111 +50
Exc = 5.5
Emb = 1934.3

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U. S. A. 33628-3

5123.32

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DANR 9(1)	1943	33	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

E.M.
E.P.
285.36
115 +00
269.20
C = 1287
F = 0
Exc = 1937.0
Emb = 0
E.M.
E.M.
E.P.
278.26
114 +50
268.39
C = 805
F = 0
Exc = 1081.5
Emb = 0
E.M.
E.P.
E.P.
270.96
267.42
114 +00
C = 363
F = 0
Exc = 510.2
Emb = 122.2
269.26
266.31
113 +50
E.P.
E.P.
C = 188
F = 132
Exc = 238.9
Emb = 550.0
E.M.
E.M.
265.04
257.96
E.P.
113 +00
C = 70
F = 462
Exc = 64.8
Emb = 1084.2

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U. S. A. 32828-3

5123.33

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	DAN29(1)	1943	34	36

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

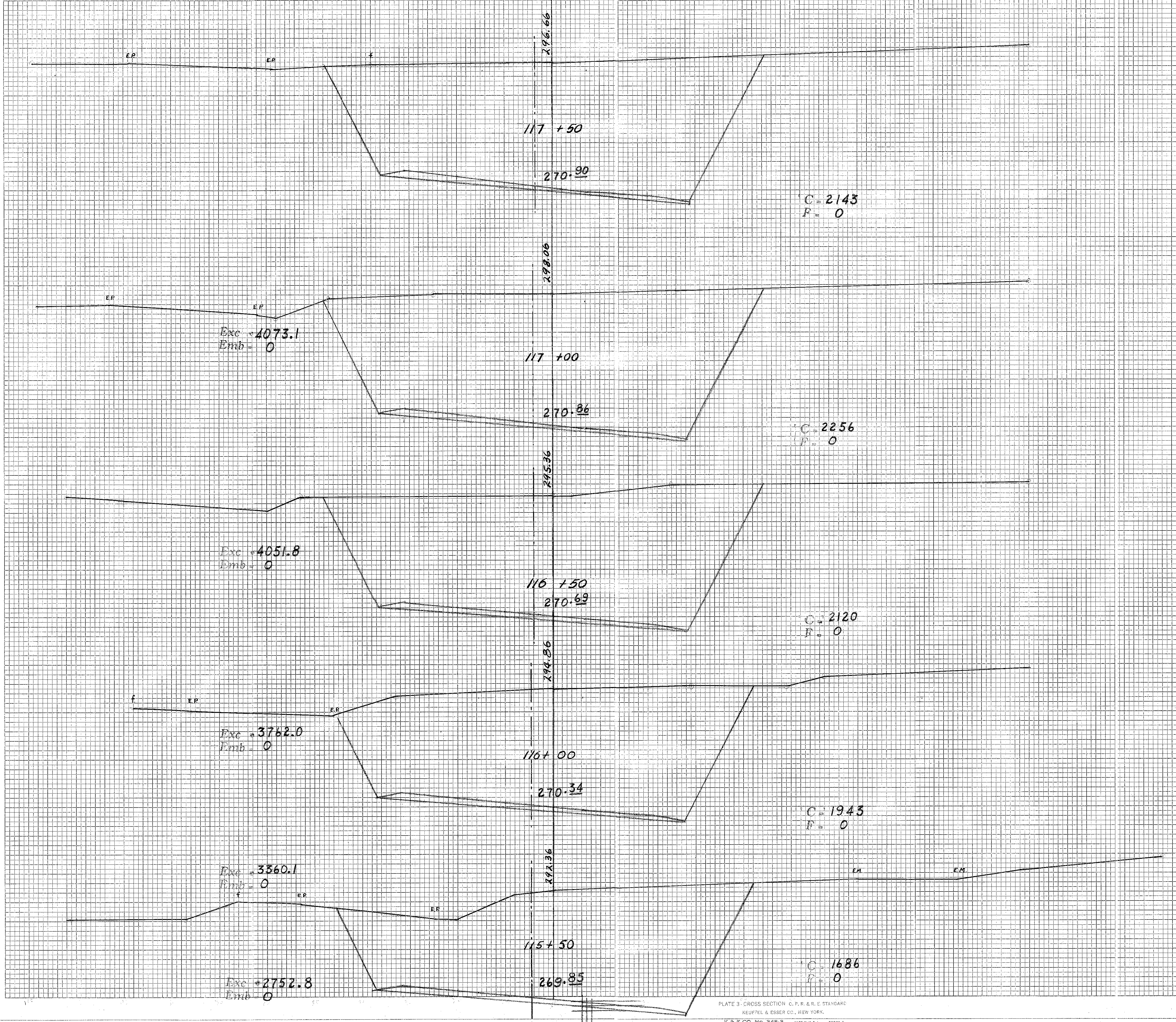

E.P.
E.P.
296.66
117 +50
270.90
C = 2143
F = 0
298.06
E.P.
E.P.
Exc = 4073.1
Emb = 0
117 +00
270.86
C = 2256
F = 0
295.36
Exc = 4051.8
Emb = 0
116 +50
270.69
C = 2120
F = 0
294.86
f
E.P.
E.P.
Exc = 3762.0
Emb = 0
116+00
270.34
C = 1943
F = 0
Exc = 3360.1
Emb = 0
292.36
f
E.P.
E.P.
E.M.
E.M.
115+50
269.85
Exc = 2752.8
Emb = 0
C = 1686
F = 0

PLATE 3 - CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 33828-3

5123.34

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR901	1943	35	36

FINAL SURVEY

NOTE BOOK

NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY

NOTE BOOK

NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

E. Park Lot
E.P.
285.15
120 +00
268.71
C = 1329
F = 0
267.21
260.86
123 +00
C = 627
F = 0
290.56
Exc = 5661.1
Emb = 0
119 +00
270.04
C = 1728
F = 0
Exc = 2700.0
Emb = 0
294.86
Exc = 3400.9
Emb = 0
118 +50
270.49
C = 1945
F = 0
273.81
264.07
122 +00
C = 831
F = 0
Exc = 3751.8
Emb = 0
296.26
118 +00
270.78
C = 2107
F = 0
Exc = 3429.6
Emb = 0
272.05
266.30
121 +00
C = 1021
F = 0
Exc = 3935.2
Emb = 0
Exc = 4351.8
Emb = 0

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 33828-3

5123.35

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	DANR90	1943	36	36

FINAL SURVEY
NOTE BOOK
NO.
BY
DATE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY
NOTE BOOK
NO.
BY
DATE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

℄
239.99
235.79
C = 78
F = 0
128 +00
Exc = 329.6
Emb = 0
239.99
241.79
E.P.
E.P.
C = 100
F = 0
127 +00
Exc = 457.4
Emb = 0
246.83
247.56
E.P.
E.P.
C = 147
F = 0
126 +00
Exc = 425.9
Emb = 37.0
251.53
252.61
E.P.
E.P.
C = 83
F = 20
125 +00
Exc = 733.3
Emb = 37.0
259.86
257.10
E.P.
E.P.
C = 313
F = 0
124 +00
Exc = 1740.7
Emb = 0
℄
Exc = 998.1
Emb = 0
6' W.P.
229.35
225.16
C = 539
F = 0
130 +00
Exc = 1216.7
Emb = 9.2
E Bldg
E.P.
229.39
230.13
E.P.
C = 136
F = 5
129 +00
Exc = 396.3
Emb = 9.2

PLATE 3 - CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 39628-3

5123.36