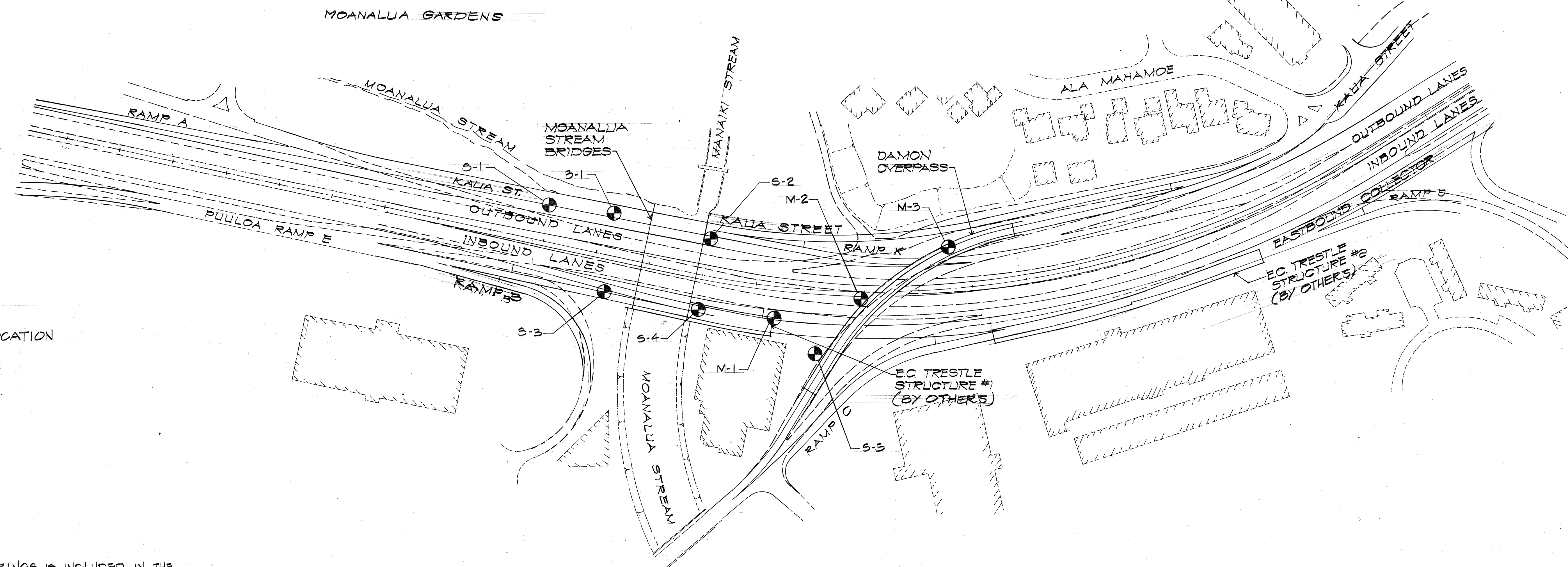
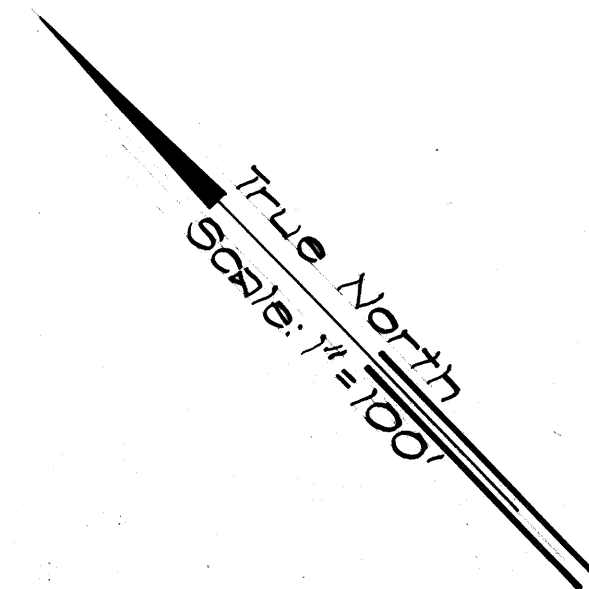


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	2	266



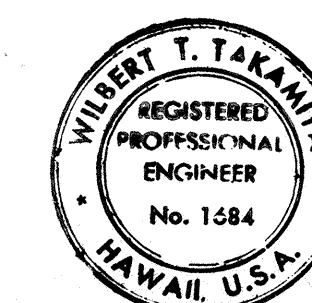
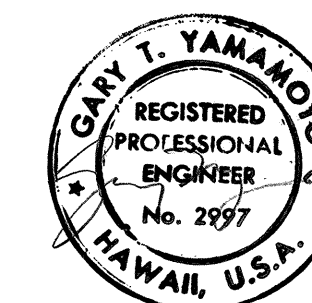
LEGEND

● BORING LOCATION

NOTE :

1. THE LOG OF BORINGS IS INCLUDED IN THE PLANS ONLY FOR THE CONVENIENCE OF THE BIDDERS AND ITS USE IS SUBJECT TO ALL THE CONDITIONS AND LIMITATIONS SET FORTH IN SECTION 102.05 OF THE STANDARD SPECIFICATION .

PLAN
Scale: 1"=100'

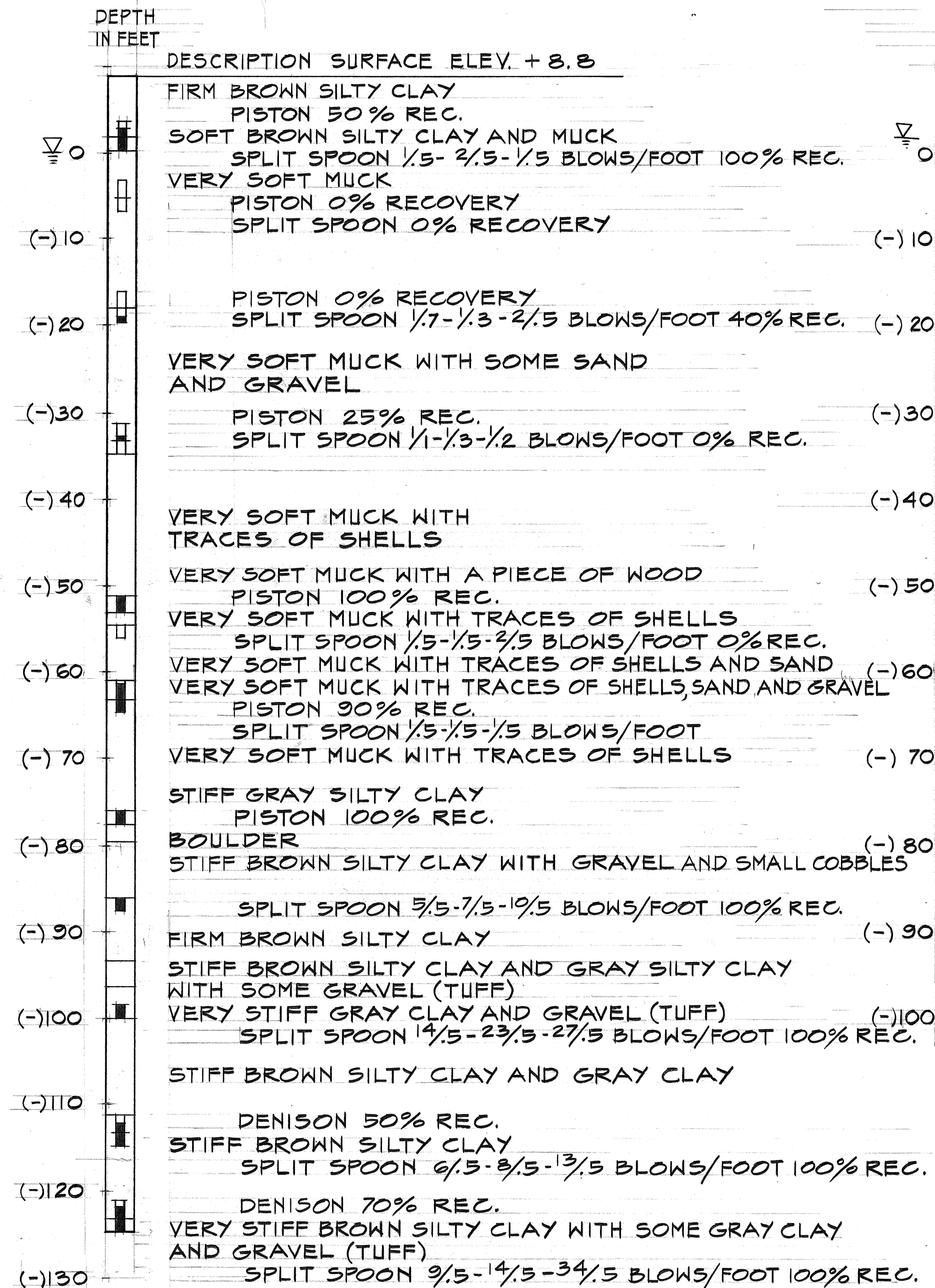


Desert T. Takamiya
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

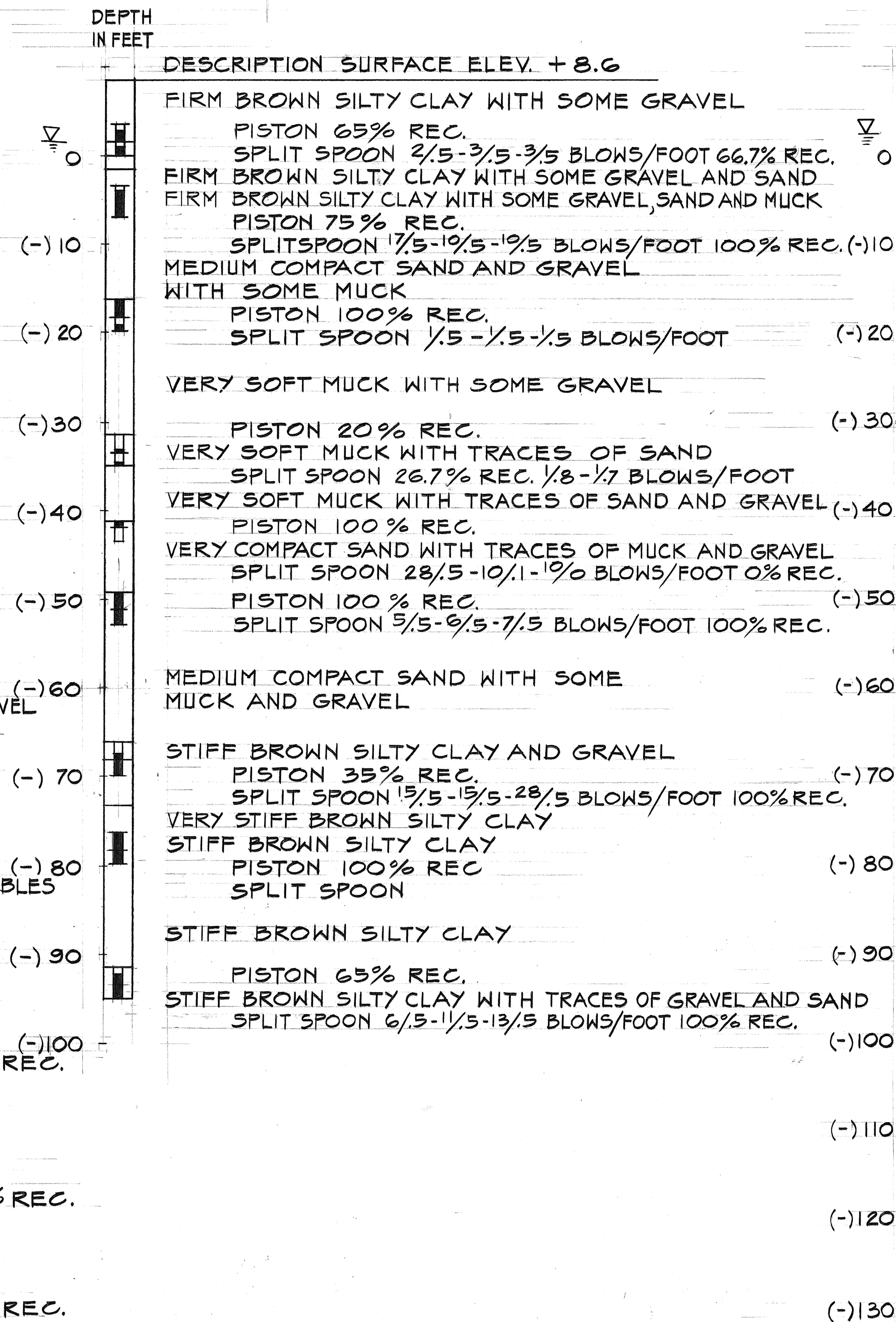
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
BORING PLAN	
MOANALUA ROAD PUULO A I.C. TO MIDDLE ST.-UNIT 3A F.A. Proj. No. TQ-F-078-1(18)	
SCALE: AS SHOWN	DATE: NOV 15 1978
SHEET No. 1 OF 2 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	3	266

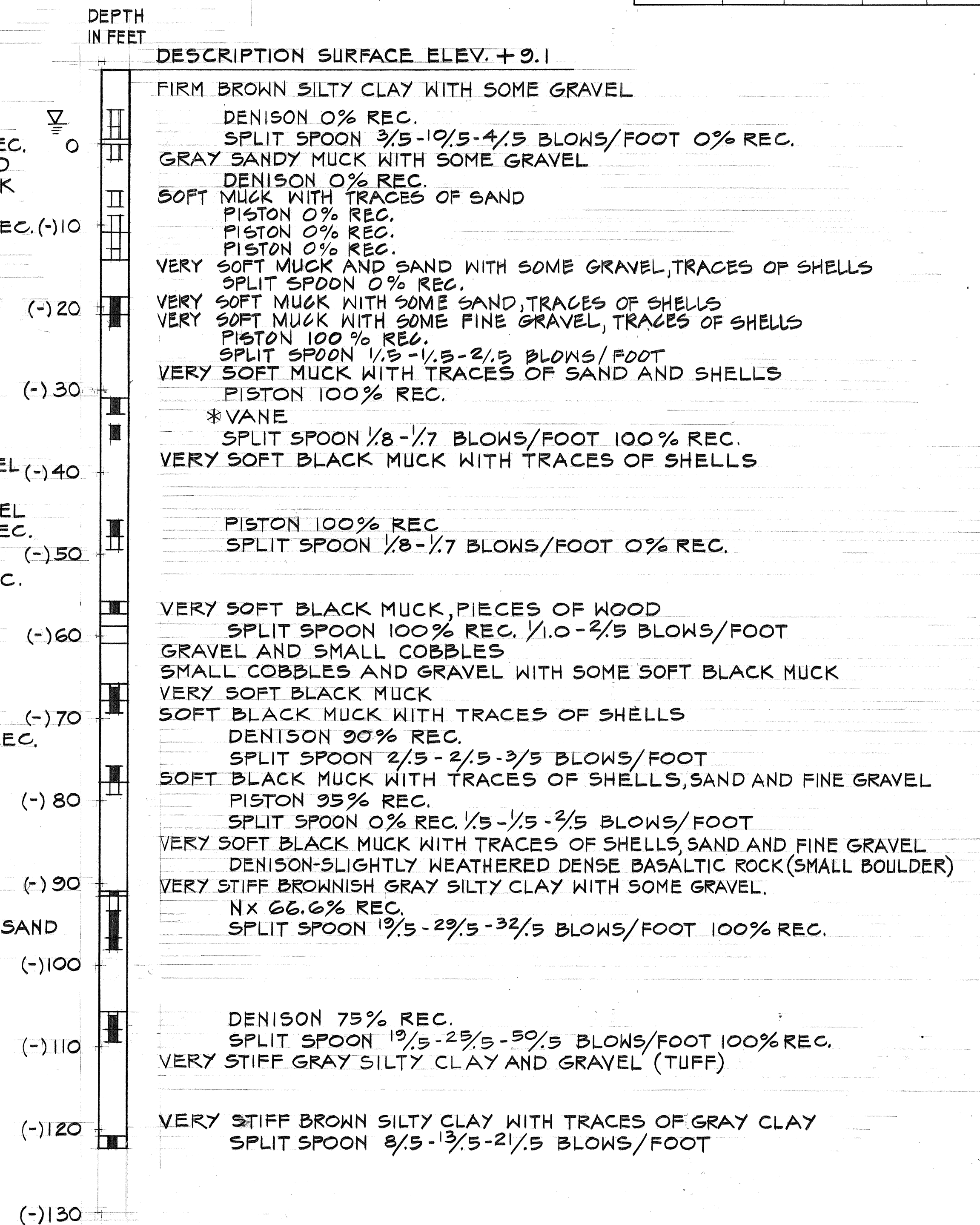
BORING S-1



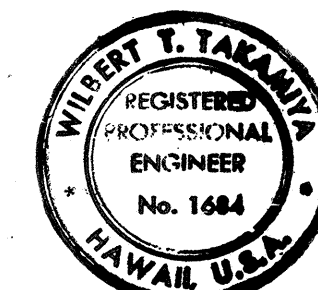
BORING S-2



BORING S-3



DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
NO.	_____



Wilbert T. Takamizawa
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

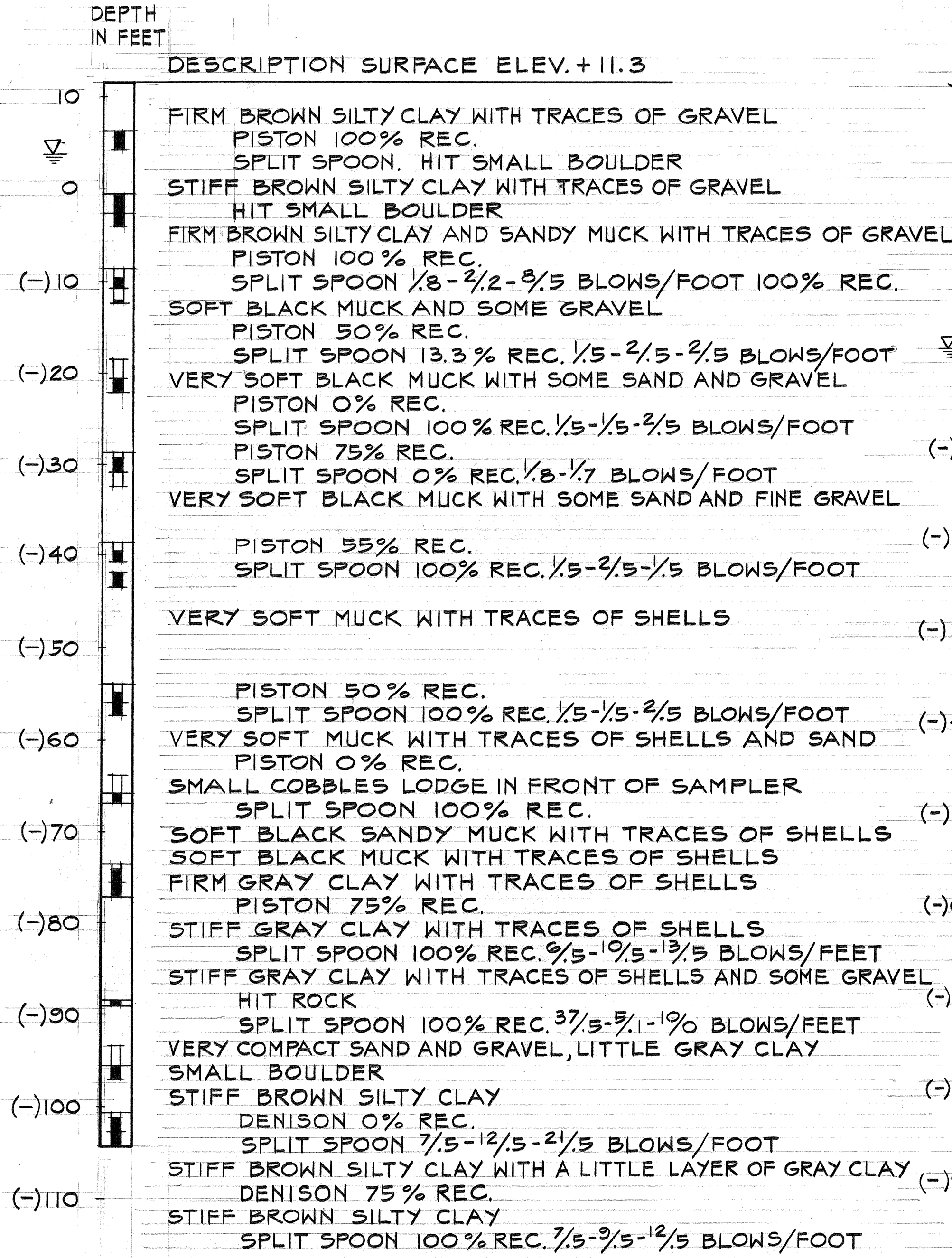
MOANALUA ROAD
PUULO A I.C. TO MIDDLE ST. - UNIT 3A
FA. Proj. No. TQ-F-078-1(18)

SCALE: AS SHOWN DATE: NOV. 15, 1978

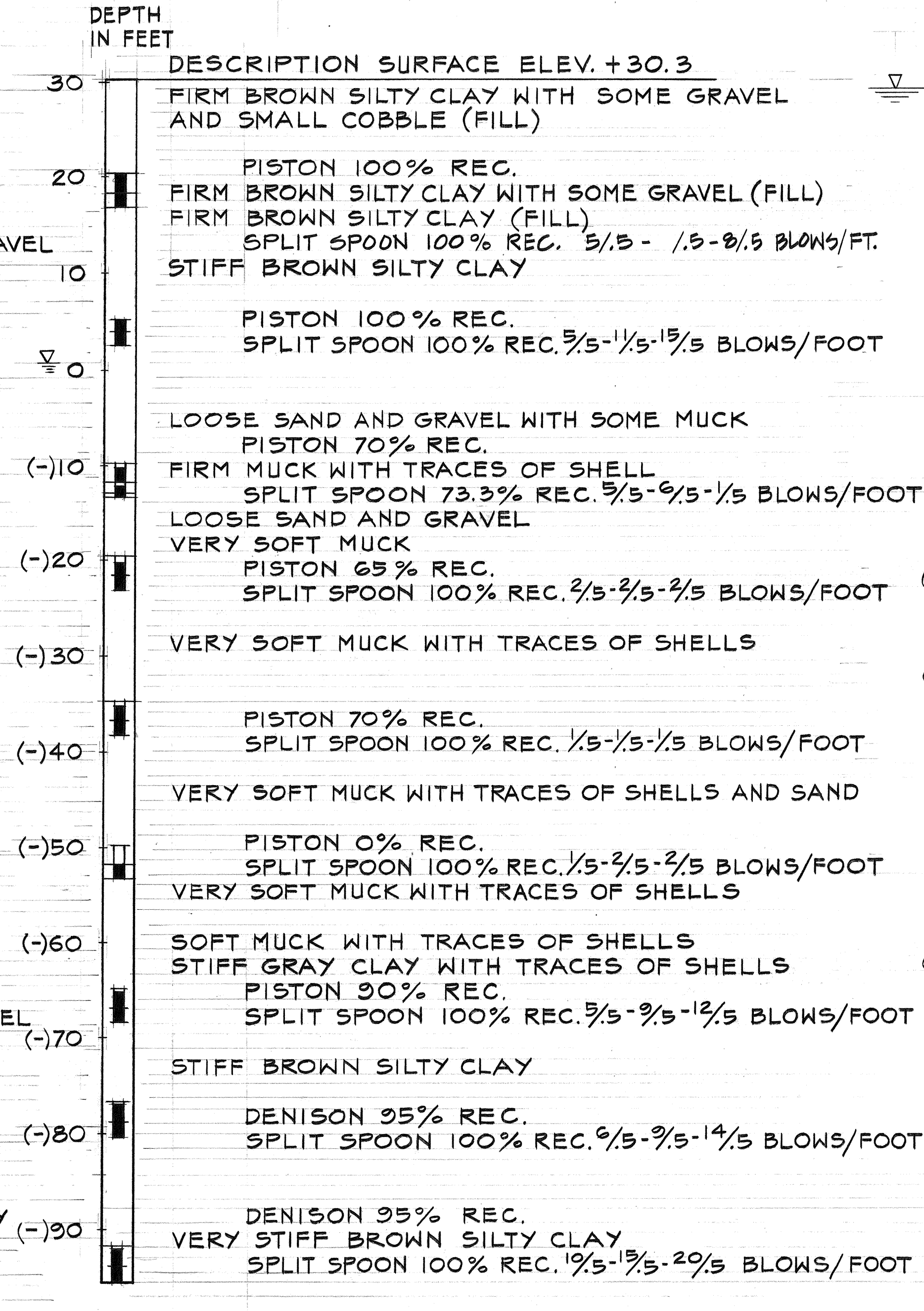
SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	10-F-078-1(10)	1978	4	266

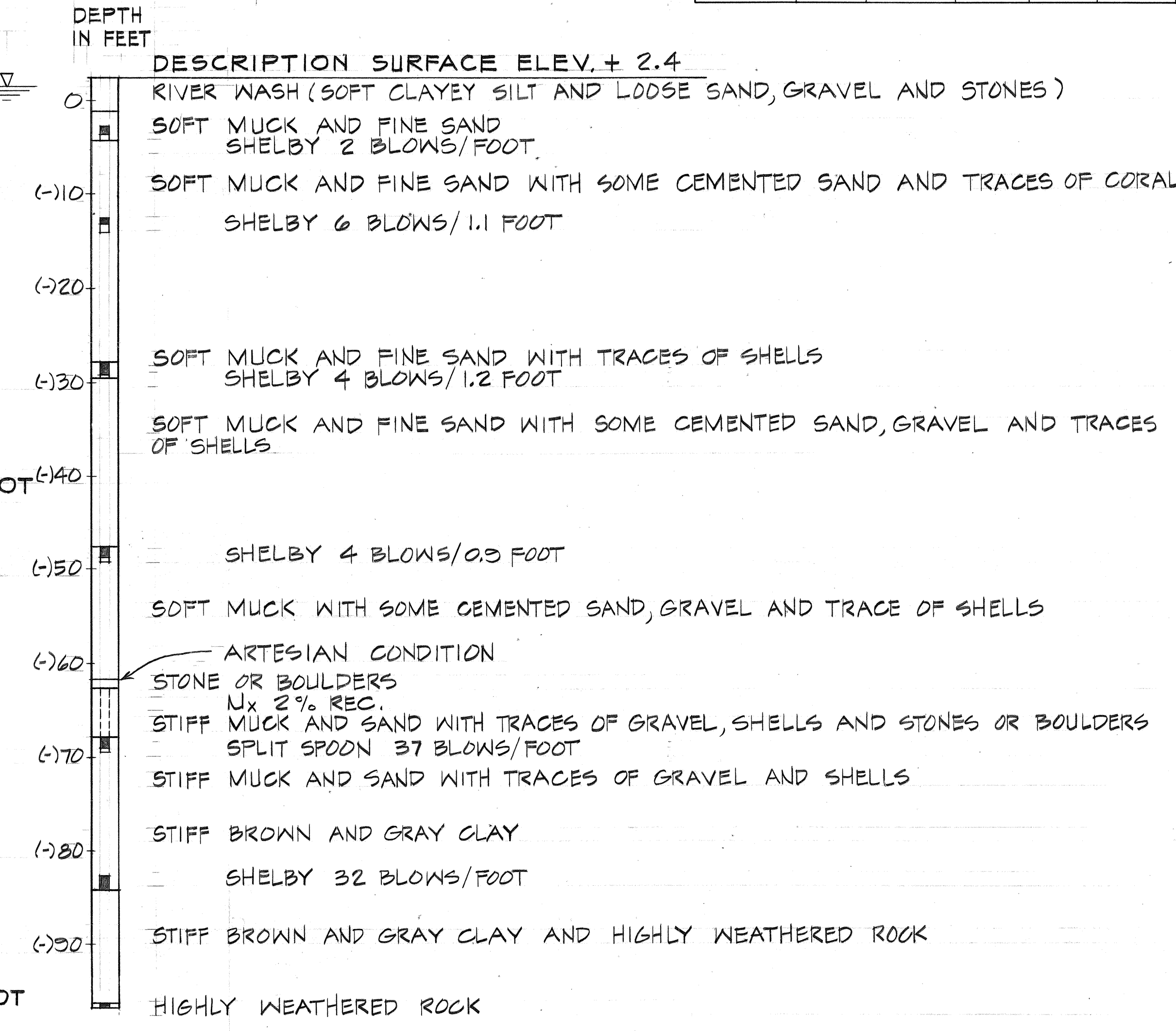
BORING S-4



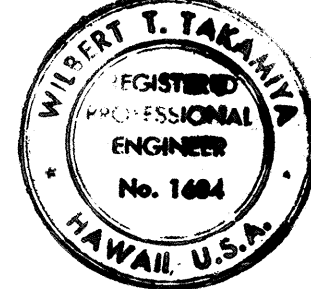
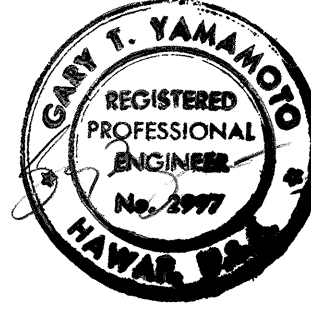
BORING S-5



BORING B-1



DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL	_____
FILED	_____
NO.	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST. - UNIT 3A
F.A. Proj. No. 10-F-078-1(10)

SCALE: AS SHOWN DATE: NOV. 15, 1978

SHEET NO. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	5	266

BORING S-8

DEPTH
IN FEET

DESCRIPTION SURFACE ELEV. +51.6

50 VERY STIFF BROWN SILTY CLAY
VERY STIFF BROWN SILTY CLAY WITH TRACES OF RIVER GRAVEL
DENISON 30 % REC.
SPLIT SPOON 35/5 - 10/0 BLOWS/FOOT 100 % REC.
40 VERY COMPACT FINE BROWN RIVER SAND W/ TRACES OF RIVER GRAVEL
VERY COMPACT FINE BROWN RIVER SAND W/ TRACES
OF FINE BROWN SILTY CLAY
STIFF TUFF (DECOMPOSED)
DENISON 50 % REC.
SPLIT SPOON 8/5 - 14/5 - 21/5 BLOWS/FOOT 53.3 % REC.
30 VERY STIFF GRAYISH BROWN SILTY CLAY
DENISON 30 % REC.
SPLIT SPOON 12/5 - 16/5 - 27/5 BLOWS/FOOT
20 HIGHLY AND MODERATELY WEATHERED DECOMPOSED ROCK
DENISON 100 % REC.
SPLIT SPOON 35/5 - 10/0 BLOWS/FOOT 100 % REC.
10 VERY STIFF GRAY AND BROWN SILTY CLAY
(DECOMPOSED ROCK FRAGMENTS)
VERY STIFF GRAYISH BROWN SILTY CLAY, TRACE OF RIVER GRAVEL
DENISON 100 % REC.
VERY STIFF GRAYISH BROWN SILTY CLAY
SPLIT SPOON 9/5 - 14/5 - 25/5 BLOWS/FOOT 80 % REC.

BORING M-3

DEPTH
IN FEET

DESCRIPTION SURFACE ELEV. +17.1

10 SOFT BROWN SILTY CLAY
FIRM BROWN SILTY CLAY AND GRAVEL
SOFT BROWN SILTY CLAY
PISTON 400 PSI
0 SOFT BROWN SILTY CLAY WITH A LITTLE SAND
SPLIT SPOON 8 BLOWS/FOOT
SOFT MUCK
FIRM BROWN SILTY CLAY
BOULDER
NX = 0 % REC.
(-) 10 HIGHLY WEATHERED GRAVEL AND BROWN SILTY CLAY
SPLIT SPOON 25 BLOWS/FOOT
STIFF BROWN SILTY CLAY WITH A LITTLE SAND
DENISON 100 % REC.
(-) 20 STIFF BROWN SILTY CLAY WITH SOME SAND
STIFF SPOON 11 BLOWS/FOOT
MEDIUM COMPACT SAND AND BROWN SILTY CLAY
DENISON 100 % REC.
(-) 30 MED. COMP. SAND AND GRAVEL WITH A LITTLE BRN. SILTY CLAY
SPLIT SPOON 13 BLOWS/FOOT
MED. COMP. SAND AND BRN. SILTY CLAY
PISTON 1100 PSI
SPLIT SPOON 16 BLOWS/FOOT
FIRM BROWN CLAYEY SILT WITH A LITTLE BLACK SILT
PISTON 600 PSI
SPLIT SPOON 12 BLOWS/FOOT
(-) 50 FIRM BROWN SILTY CLAY
PISTON 900 PSI
STIFF BROWN SILTY CLAY
SPLIT SPOON 22 BLOWS/FOOT
(-) 60

BORING M-1

DEPTH
IN FEET

DESCRIPTION SURFACE ELEV. +12.8

10 STIFF BROWN SILTY CLAY WITH A LITTLE GRAVEL AND BLACK SAND
STIFF BRN. SILTY CLAY WITH A LITTLE GRAVEL
SPLIT SPOON 26 BLOWS/FOOT
BEACH SAND
FIRM BROWN SILTY CLAY
FIRM BROWN SILTY CLAY WITH SOME COBBLES
SPLIT SPOON 4 BLOWS/FOOT
0 SOFT BROWN SILTY CLAY WITH TRACE OF SAND
SOFT GRAY MUCK WITH TRACE OF SHELLS AND GRAVEL
MEDIUM COMPACT SANDY MUCK WITH SOME GRAVEL
AND DECOMPOSED WOOD
PISTON 0.0 % REC.
(-) 10 MED. COMPACT SANDY MUCK WITH TRACE OF FINE
GRAVEL AND SHELLS
PISTON 100 % REC.
FIRM GRAY SILTY MUCK WITH TRACE OF GRAVEL AND SHELLS
PISTON 100 % REC.
PISTON 100 % REC.
FIRM GRAY SILTY MUCK WITH TRACE OF SHELLS
PISTON 100 % REC.
FIRM GRAY SILTY MUCK AND COMPACT SAND WITH TRACE OF SHELLS
SPLIT SPOON 5 BLOWS/FOOT
SOFT GRAY MUCK WITH TRACE OF SHELLS
PISTON 100 % REC.
FIRM GRAY SILTY MUCK WITH TRACE OF SHELLS
SPLIT SPOON 22 BLOWS/FOOT
PISTON 0 % REC.
STIFF BROWN SILTY CLAY
SPLIT SPOON 39 BLOWS/FOOT
VERY STIFF BROWN SILTY CLAY
DENISON 40 % REC.
(-) 70
(-) 80 VERY STIFF BROWN SILTY CLAY WITH LITTLE FINE GRAVEL
STIFF GRAY SILTY CLAY WITH TRACE OF SHELLS
DENISON 100 % REC.
SPLIT SPOON 25 BLOWS/FOOT
STIFF GRAY SILTY CLAY
STIFF GRAY SILTY CLAY WITH TRACE OF SHELLS
DENISON 100 % REC.
SPLIT SPOON 28 BLOWS/FOOT
(-) 90
STIFF BROWN SILTY CLAY
DENISON 100 % REC.
SPLIT SPOON 29 BLOWS/FOOT
(-) 100
DENISON 100 % REC.
MEDIUM COMPACT SANDY SILT AND CLAY
SPLIT SPOON 22 BLOWS/FOOT
(-) 110
DENISON 100 % REC.
MEDIUM COMPACT SANDY SILT AND CLAY
SPLIT SPOON 22 BLOWS/FOOT
(-) 120
MEDIUM COMPACT GRAVEL AND SANDY SILT WITH SOME BROWN CLAY
DENISON 55 % REC.
MEDIUM COMPACT SAND AND SANDY SILT WITH SOME BROWN CLAY
SPLIT SPOON 27 BLOWS/FOOT
(-) 130
(-) 140

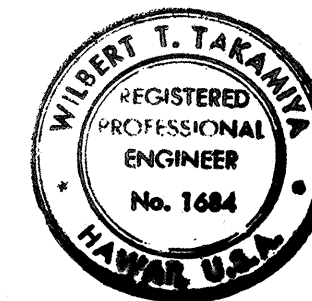
BORING M-2

DEPTH
IN FEET

DESCRIPTION SURFACE ELEV. +15.1

10 SOFT REDDISH BROWN SILTY CLAY
SOFT BRN SANDY CLAY
PISTON 900 PSI
SPLIT SPOON 1/0.5 - 3/0.5 - 1/0.5 BLOWS/FOOT
0 LOOSE BRN. SAND AND SOME BRN. SILTY CLAY
SOFT REDDISH BRN. SILTY CLAY
MED. COMPACT BEACH SAND
FIRM BROWN CLAY
PISTON 650 PSI
SPLIT SPOON 15 BLOWS/FOOT
FIRM BROWN CLAY WITH A TRACE OF REDDISH
BRN SILTY CLAY
PISTON 850 PSI
SPLIT SPOON 10 BLOWS/FOOT
MEDIUM COMPACT SANDY MUCK AND GRAVEL
PISTON 600 PSI
SPLIT SPOON 14 BLOWS/FOOT
MEDIUM COMPACT SANDY MUCK, GRAVEL AND SHELLS
PISTON 1000 PSI
MED. COMP. BRN. GRAVELY SAND AND BRN. SILTY CLAY
SPLIT SPOON 16 BLOWS/FOOT
FIRM BROWN SILTY CLAY
PISTON 1000 PSI
SPLIT SPOON 32 BLOWS/FOOT
VERY COMP. BRN. GRAVELY SAND AND A LITTLE BRN. SILTY CLAY
SPLIT SPOON 31 BLOWS/FOOT
COMP. HIGHLY WEA. GRAVEL AND SAND WITH SOME BRN AND
GRAY SILTY CLAY
PISTON 750 PSI
FIRM BRN. SILTY CLAY WITH TRACE OF SAND
SPLIT SPOON 15 BLOWS/FOOT
SOFT BROWN SILTY CLAY
STIFF BROWN SILTY CLAY, GRAVEL AND SAND
PISTON 1500 PSI
SPLIT SPOON 24 BLOWS/FOOT
STIFF BRN. SILTY CLAY WITH SOME GRAVEL AND SAND
GRAVEL AND SAND
PISTON 1250 PSI
STIFF BRN AND GRAY CLAY AND BRN. SILTY CLAY
SPLIT SPOON 24 BLOWS/FOOT
STIFF BRN CLAY AND BRN SILTY CLAY
SAND AND GRAVEL
PISTON 1000 PSI
FIRM BROWN SILTY CLAY
STIFF BROWN SILTY CLAY
SPLIT SPOON 23 BLOWS/FOOT

SURVEY PLOTTED BY	DATE
ORIGINAL PLAN	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST. - UNIT 3A
F.A. Proj. No. TQ-F-078-1(18)

SCALE: AS SHOWN DATE: NOV. 15 1978

SHEET No. 3 OF 3 SHEETS