FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(85)	1976	17	35

CONTROL STAKES T

℄ STATION	NO.	OFFSET	AREA
11+19	2 ~~3~~	25'R, 0, ~~25'L~~	1B
11+42	3	25'R, 0, 25'L	1B
11+70	3	25'R, 0, 25'L	1B
11+90	5	58'R, 25'R, 0, 25'L, 58'L	1B
12+15	4	58'R, 25'R, 25'L, 58'L	1B
12+40	5	58'R, 25'R, 0, 25'L, 58'L	1B
12+60	3	25'R, 0, 25'L	1B
12+88	3	25'R, 0, 25'L	1B
10+35	1	14'R	2A
10+60	5	14'L, 14'R, 34'R, 59'R, 79'R	2A
10+85	5	27'L, 2'L, 34'R, 59'R, 79'R	2A
11+10	4	14'L, 34'R, 79'R, 99'R	2A
11+35	6	53'L, 27'L, 14'R, 34'R, 59'R, 79'R	2A
11+55	8	79'L, 59'L, 34'L, 14'L, 14'R, 34'R, 59'R, 79'R	2B
11+80	5	79'L, 34'L, 14'R, 34'R, 79'R	2B
12+01	8	79'L, 59'L, 34'L, 14'L, 14'R, 34'R, 59'R, 79'R	2B
12+17	8	79'L, 59'L, 34'L, 14'L, 14'R, 34'R, 59'R, 79'R	2B
12+38	5	99'L, 79'L, 34'L, 14'R, 34'R	2B
12+63	6	79'L, 59'L, 34'L, 14'L, 28'R, 53'R	2B
12+88	5	79'L, 59'L, 34'L, 21'R, 46'R	2C
13+13	4	99'L, 79'L, 34'L, 15'R	2C
13+38	5	79'L, 59'L, 34'L, 8'R, 33'R	2C
13+58	1	14'L	2C
13+~~83~~13	1	14'L	2C

N.I.C.

GROUND ELEVATION STAKES +

℄ STATION	NO.	OFFSET	AREA
~~11+90~~	~~1~~	~~0~~	~~1B~~
12+40	1	0	1B
11+35	1	14'R	2A
11+55	2	14'L, 14'R	2B
11+80	1	14'R	2B
12+01	2	14'L, 14'R	2B
12+17	2	14'L, 14'R	2B
~~12+38~~	~~1~~	~~14'R~~	~~2B~~
~~12+63~~	~~1~~	~~14'L~~	~~2B~~

SETTLEMENT PLATFORMS SP

℄ STATION	NO.	OFFSET	AREA
11+80	2	12'R, 12'L	1B
12+15	1	5'R	1B
12+50	2	12'R, 12'L	1B
10+91	2	10'R, 38'R	2A
11+15	1	17'R	2A
11+39	2	7'L, 38'R	2B
11+62	2	38'L, 24'R	2B
11+80	1	8'L	2B
11+98	2	38'L, 24'R	2B
12+25	2	38'L, 24'R	2B
12+38	1	7'L	2B
12+50	2	38'L, 24'R	2B
12+88	2	38'L, 10'R	2C
13+13	1	17'L	2C
13+~~38~~13	2	38'L, ~~3~~10'R	2C

GROUND WATER OBSERVATION WELL ⊙GW

℄ STATION	NO.	OFFSET	ELEVATION (WELL-POINT)	AREA
10+50	1	15'R	-5	1A
12+25	1	20'L	-5	1B
10+10	1	110'R	-5	2A
11+21	1	24'R	-5	2A
11+80	1	3'R	-5	2B
12+33	1	7'L	-5	2B
13+04	1	15'L	-5	2C

INSTRUMENTS SUPPLIED BY CONTRACTOR

PIEZOMETER * ⊙P

℄ STATION	NO.	OFFSET	TYPE	ELEVATION	AREA
10+50	2	20'R, 25'R		-55, -110	1A
11+90	3	5'L, 0, 5'R		-110, -160, -80	1B
11+95	3	5'L, 0, 5'R		-55, -30, -140	1B
12+07	1	62'L		-50	1B
~~12+12~~11+97	1	42'R		-190	1B
12+~~15~~00	1	38'R		-55	1B
12+23	1	62'L		-90	1B
12+35	3	5'L, 0, 5'R		-55, -30, -140	1B
12+40	3	5'L, 0, 5'R		-110, -160, -80	1B
12+09	1	42'R		-175	1B
10+05	2	115'R, 125'R		-35, -85	2A
10+15	2	115'R, 125'R		-60, -120	2A
10+91	2	21'R, 35'R		-85, -120	2A
11+13	1	21'R		-35	2A
11+15	2	7'R, 35'R		-35, -60	2A
11+17	1	21'R		-60	2A
11+39	2	7'R, 21R		-120, -85	2A
11+62	2	21'L, 7'L		-120, -60	2B
11+74	2	0, 14'R		-35, -85	2B
11+86	2	21'L, 7'L		-85, -35	2B
11+98	2	0, 14'R		-60, -120	2B
12+32	4	19'L, 12'L, 2'L, 5'R		-120, -60, -35, -85	2B
12+44	4	19'L, 12'L, 2'L, 5'R		-85, -35, -60, -120	2B
12+86	2	19'L, 12'L		-120, -60	2C
12+98	2	19'L, 12'L		-85, -35	2C
~~13+10~~12+98	2	8.5' ~~12'L~~, ~~5'L~~2.5'L		-35, -85	2C
~~13+22~~12+86	2	8.5' ~~12'L~~, ~~5'L~~2.5'L		-60, -120	2C

* To be salvaged when directed by the Engineer.

INCLINOMETER ⊹INC.

℄ STATION	NO.	OFFSET	ELEVATION (BOTTOM PLUG)	AREA
12+15	5	67'L, 55'L, 27'L, 27'R, 55'R	-60, -60, -135, -135, -60	1B
11+10	2	40'L, 59'R	-60, -60	2A
11+80	2	59'L, 59'R	-60, -60	2B
12+38	2	59'L, 59'R	-60, -60	2B
13+13	2	59'L, 40'R	-60, -60	2C

DEEP SETTLEMENT POINT ●DSP

℄ STATION	NO.	OFFSET	ELEVATION	AREA
12+10	1	7'L	-135	1B
12+15	1	9'R	-50	1B
12+23	1	3'R	-90	1B
10+10	2	115'R, 125'R	-50, -90	2A
11+03	2	21'R, 35'R	-50, -90	2A
11+27	~~12~~	~~7'R~~, 21'R	-90, -50	2A
~~11+74~~	~~2~~	~~21'L, 7'L~~	~~-90, -50~~	~~2B~~
11+86	2	0*, 14'R*	-50, -90	2B
12+38	~~3~~4	19'L*, 12'L*, 2'L*, ~~5'R~~	-50, -90, -90, -50	2B
12+92	2	19'L*, 12'L*	-90, -50	2C
~~13+16~~	~~2~~	~~12'L, 5'L~~	~~-50, -90~~	~~2C~~

*Indicates DSP installed but no longer in use.

MULTI-DEEP SETTLEMENT POINT ◊MDSP

℄ STATION	NO.	OFFSET	ELEVATION (BOTTOM PLUG)	AREA
10+50	1	10'R	-148	1A
12+03	1	56'L	-148	1B
12+07	1	3'R	-188	1B
12+20	1	6'L	-148	1B
10+10	1	120'R	-140	2A
11+03	1	27'R*	-140	2A
11+27	1	14'R*	-140	2A
11+~~24~~75	1	15'~~14~~'L	-140	2B
11+86	1	7'R*	-140	2B
~~12+38~~	2	16'L*, 2'R	-140, -140	2B
12+92	1	16'L*	-140	2C
13+16	1	9'L	-140	2C
11+00	1	24'R	-140	2A
12+38	1	24'L	-140	2B

* Indicates MDSP installed but no longer in use.

BENCHMARKS

℄ STATION	NO.	OFFSET	ELEVATION	AREA
10+50	BM1	55'R	-250	1A
12+88	BM2	60'L	-250	1B
*See Below	BM3		-250	2A
13+22.78	BM4	144.5L	-250	2C

* ~~Location to be determined in the field~~
Because of excessive settlement, BM3 is no longer useable.

INSTRUMENTS SUPPLIED BY ENGINEER

ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

FRANK M. CLEMENTE, JR. REGISTERED PROFESSIONAL ENGINEER No. 3445 HAWAII, U.S.A.

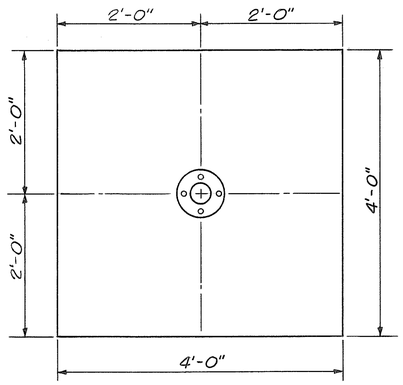
"THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION."

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KEEHI INTERCHANGE
FIELD TESTING PROGRAM

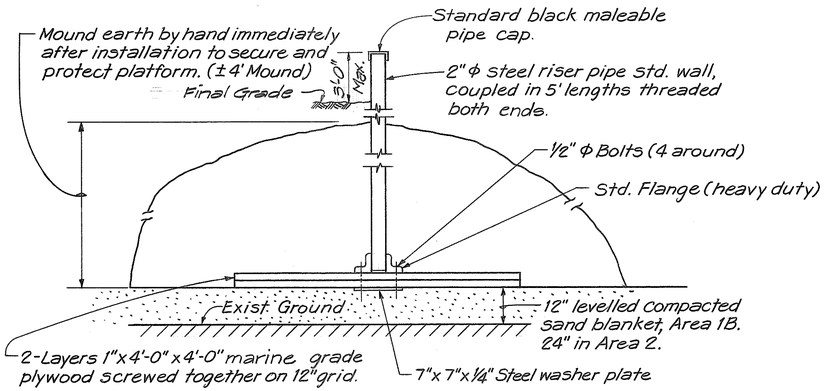
TABULATION OF FIELD INSTRUMENT LOCATIONS AND ELEVATIONS

INTERSTATE ROUTE H-1
PROJECT NO. I-H1-1(85)
DATE: 3/31/76

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(85)	1970	18	35



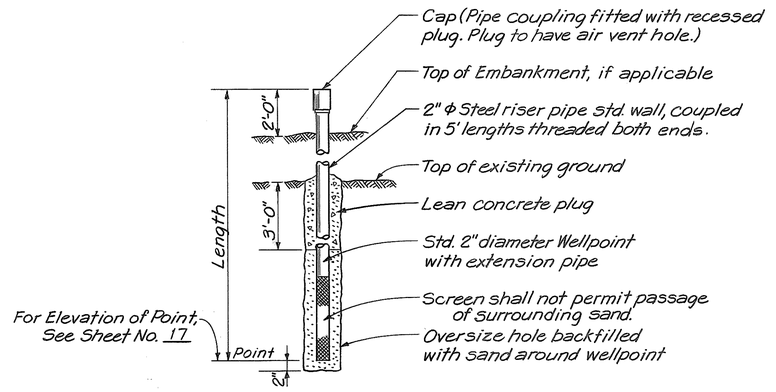
PLAN



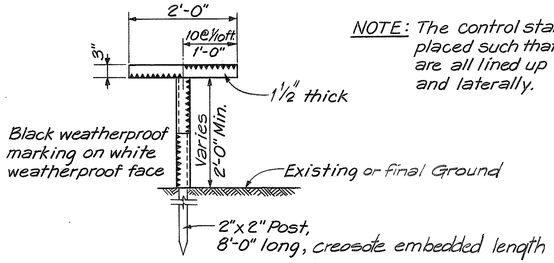
SETTLEMENT PLATFORM DETAIL
Scale: 1"=1'-0"

NOTES:

1. Contractor to furnish material and labor to extend pipe up through fill.
2. All vertical pipes of Settlement Platforms shall be accurately and consecutively numbered in one foot intervals measured from the bottom of the Settlement Platform base. The numbering and graduations shall be marked on the vertical pipe using file cuts and durable yellow paint by the contractor, under the supervision of the Engineer, immediately after each section of pipe is added.



GROUND WATER OBSERVATION WELL DETAIL
No Scale

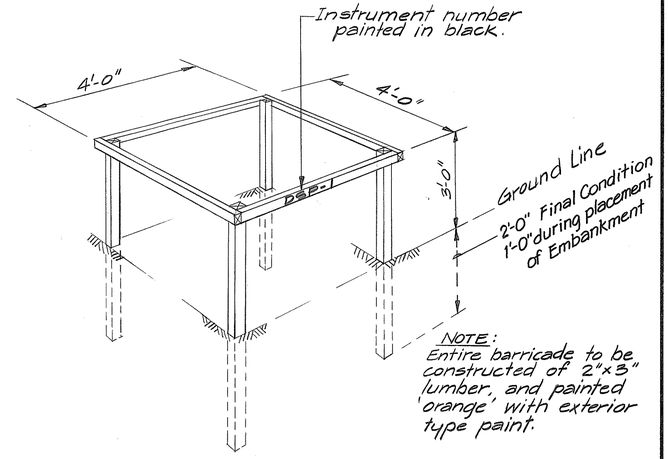


CONTROL STAKE DETAIL
No Scale

NOTE: The control stakes shall be placed such that in one row, are all lined up vertically and laterally.

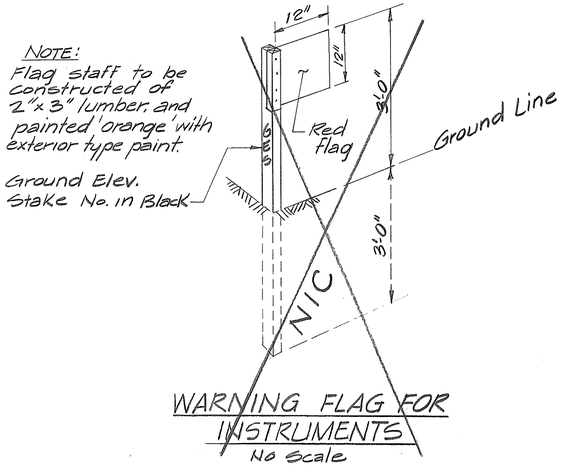
~~NOTE:~~ NIC

~~Contractor to furnish and install Ground Elevation Stakes on and around the fill at Test Areas 1B and 2 as shown on Sheet No's 5, 6, 6A & 17. Each ground elevation stake shall consist of a 3 ft length of 1" ϕ steel bar, 1" std. black pipe, or 3"x2" lumber with stake tack at top. Stakes shall be driven to stick up 6", and numbered with paint as directed by the Engineer.~~



NOTE: Entire barricade to be constructed of 2"x3" lumber, and painted 'orange' with exterior type paint.

PROTECTIVE BARRICADE FOR INSTRUMENTS AND PILES
No Scale



WARNING FLAG FOR INSTRUMENTS
No Scale

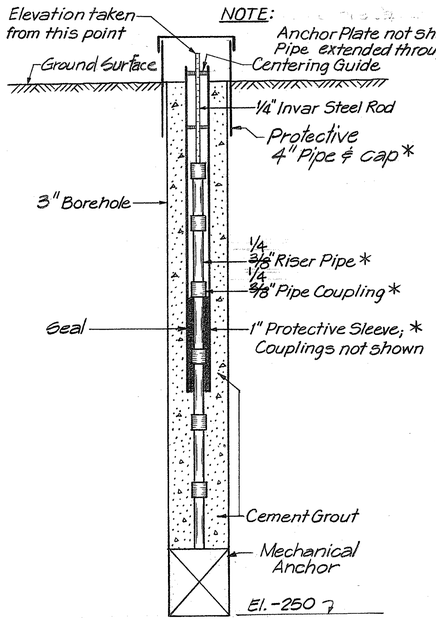
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

FRANK M. CLEMENTE JR. REGISTERED PROFESSIONAL ENGINEER No. 3445 HAWAII, U.S.A.

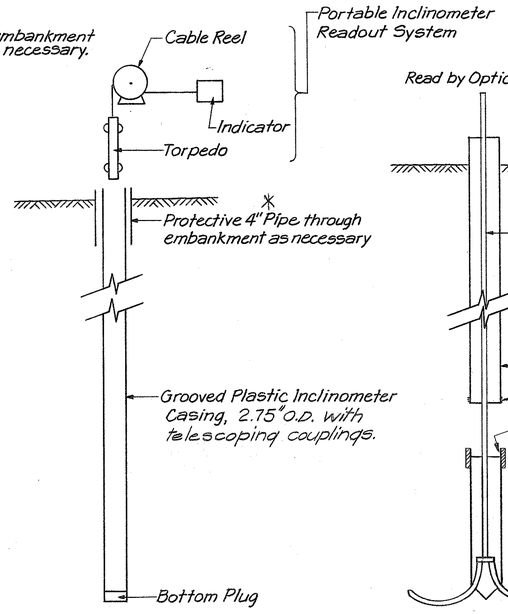
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Frank M. Clemente Jr.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KEEHI INTERCHANGE
FIELD TESTING PROGRAM
INSTRUMENTS SUPPLIED BY CONTRACTOR
INTERSTATE ROUTE H-1
PROJECT NO. I-H1-1(85)
SCALE: AS SHOWN DATE: 3/31/70
SHEET No. 18 OF 35 SHEETS

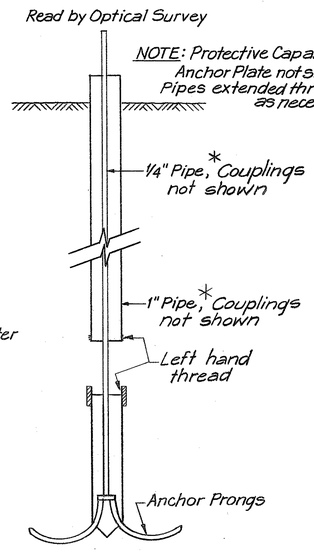
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(85)	1976	19	35



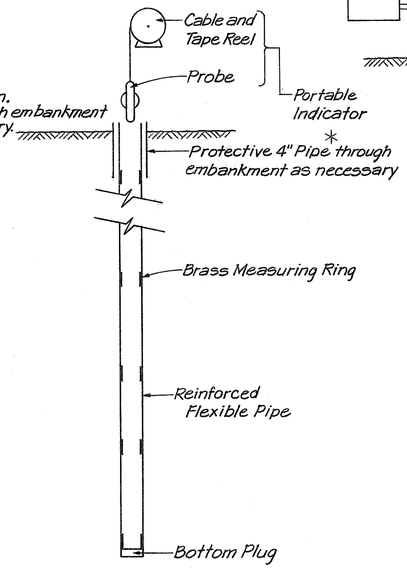
BENCHMARK



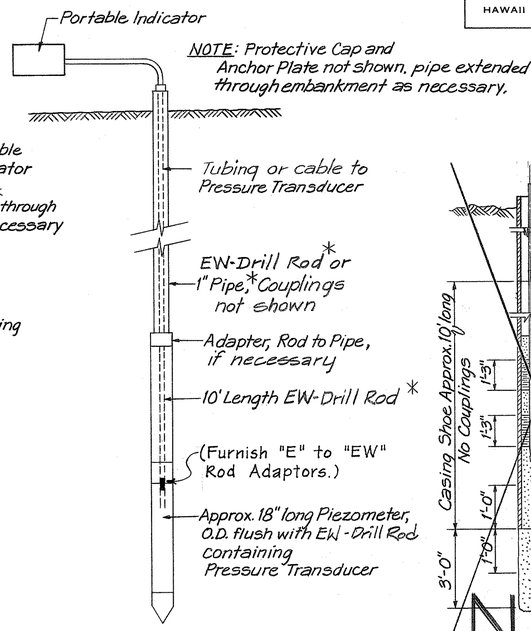
INCLINOMETER IN SOIL



DEEP SETTLEMENT POINT IN SOIL

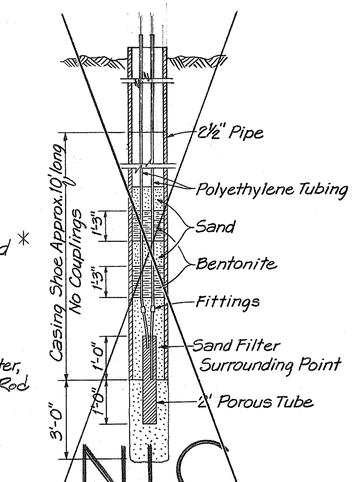


MULTIPLE DEEP SETTLEMENT POINT (MDSP)

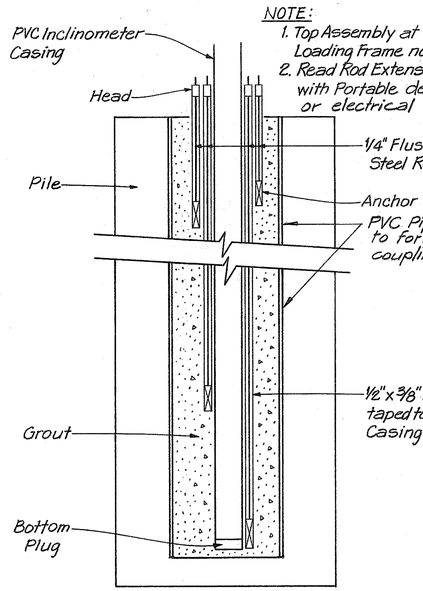


PIEZOMETER

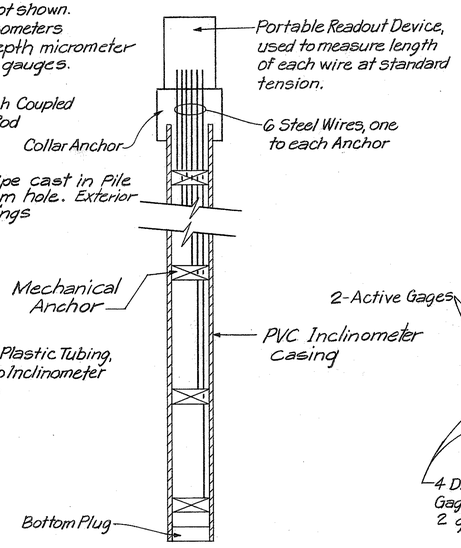
To be salvaged when directed by Engineer.



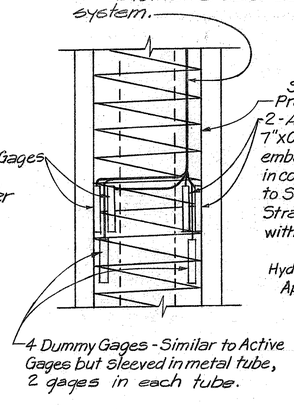
HYDRAULIC PIEZOMETER



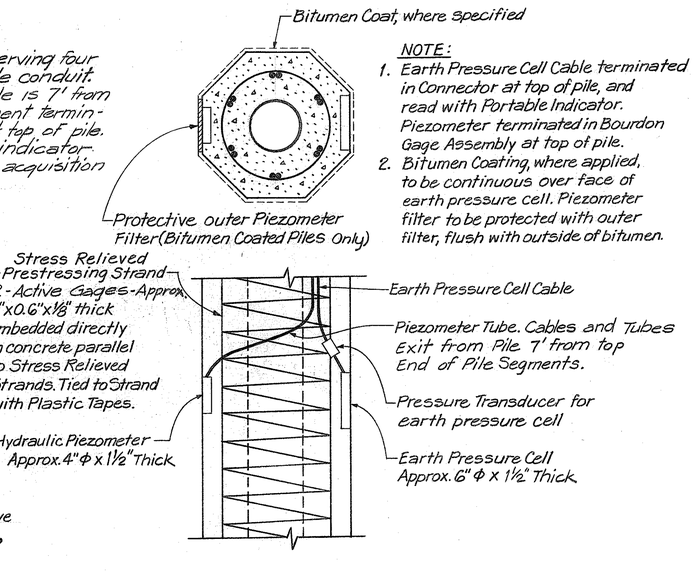
ROD EXTENSOMETER AND INCLINOMETER CASING IN PILE



WIRE EXTENSOMETER FOR INSTALLATION IN PILES



TWO FULL STRAIN GAGE BRIDGES



NOTE:
1. Earth Pressure Cell Cable terminated in Connector at top of pile, and read with Portable Indicator. Piezometer terminated in Bourdon Gage Assembly at top of pile.
2. Bitumen Coating, where applied, to be continuous over face of earth pressure cell. Piezometer filter to be protected with outer filter, flush with outside of bitumen.

EARTH PRESSURE CELL AND PIEZOMETER IN PILE

* INDICATES MISCELLANEOUS ITEMS TO BE FURNISHED BY THE CONTRACTOR.

ORIGINAL PLAN
SURVEY PLOTTED BY ____ DATE ____
DRAWN BY ____
TRACED BY ____
NOTE BOOK
DESIGNED BY ____
QUANTITIES BY ____
No. ____
CHECKED BY ____

FRANK M. CLEMENTE, JR. REGISTERED PROFESSIONAL ENGINEER No. 3445 HAWAII, U.S.A.

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Frank M. Clemente Jr.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KEEHI INTERCHANGE
FIELD TESTING PROGRAM

INSTRUMENTS SUPPLIED BY ENGINEER*

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1 (85)
SCALE: NONE DATE: 3/31/76

SHEET No. 19 OF 35 SHEETS