

30.84
BRYANT-DURHAM ELECTRIC COMPANY, INC.



STARR ELECTRIC COMPANY, INC.

(A JOINT VENTURE)

POST OFFICE BOX 460
JACKSONVILLE, NORTH CAROLINA 28540
(919) 353-9300

October 14, 1982

CARDINAL CONTRACTING COMPANY, INC.
P.O. Box 8408
Camp Lejeune, North Carolina 28542

Attention: Ben Wyatt

Reference: Naval Regional Medical Center
Camp Lejeune, North Carolina
Contract Number N62470-77-C-7526

Gentlemen:

After my conversation with Andy Young of the Navy, I realized that I never submitted a record of the earth ground resistance measurements taken on the ground rods installed in the manholes.

According to my records these readings were:

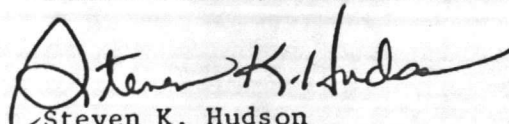
Electrical Manhole # 21	16.8 ohms
# 22	18.4
# 23	16.2
# 24	16.4
# 25	17.6
# 26	18.9
# 27	19.4

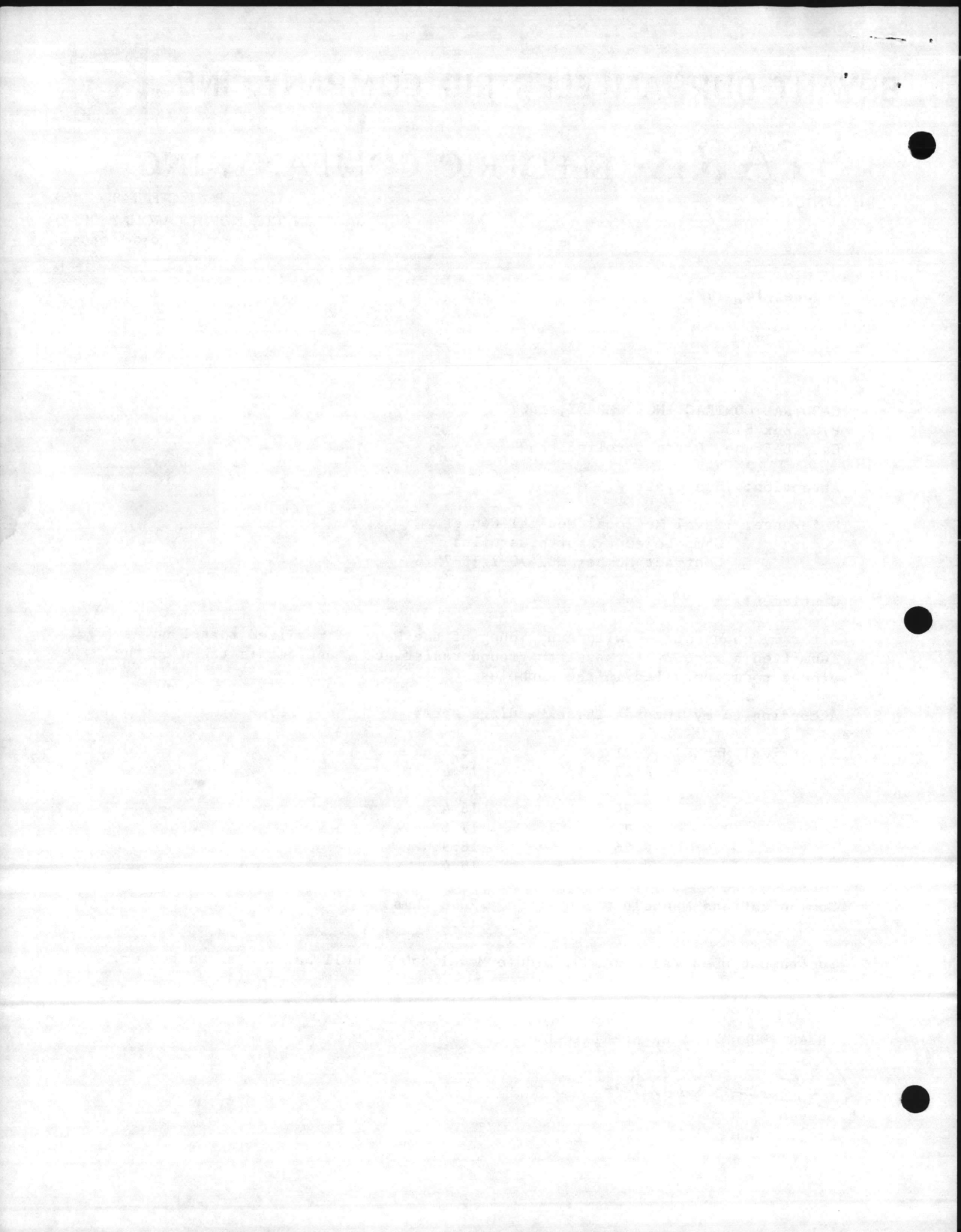
Communications Manhole # 1	20.6 ohms
# 2	19.2

Instrument used was James G. Biddle Model 250220 null balance earth tester.

Respectfully,

BRYANT-DURHAM/STARR ELECTRIC COS.


Steven K. Hudson
Project Manager



BRYANT-DURHAM ELECTRIC COMPANY, INC.



STARR ELECTRIC COMPANY, INC.

(A JOINT VENTURE)

POST OFFICE BOX 460
JACKSONVILLE, NORTH CAROLINA 28540
(919) 353-9300

October 6, 1982

CARDINAL CONTRACTING COMPANY, INC.
P.O. Box 8408
Camp Lejeune, North Carolina 28542

Attention: Bill Haymaker

Reference: Naval Regional Medical Center
Camp Lejeune, North Carolina
Contract Number N62470-77-C-7526

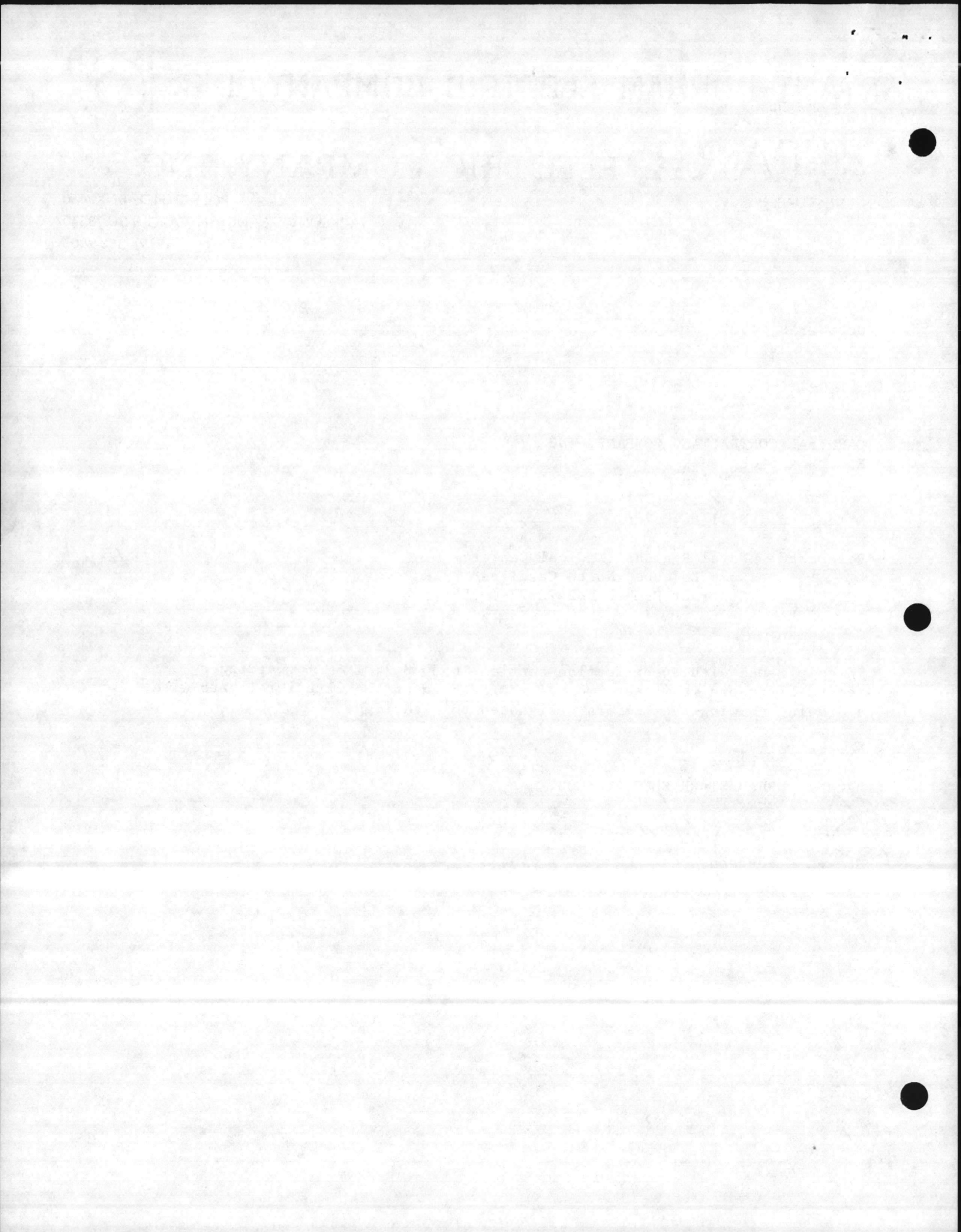
Gentlemen:

In compliance with specification section 16530-8.2, I am forwarding a record of ground resistance measurements taken on the exterior lights with a drawing showing the numbers designated to each light.

Respectfully,

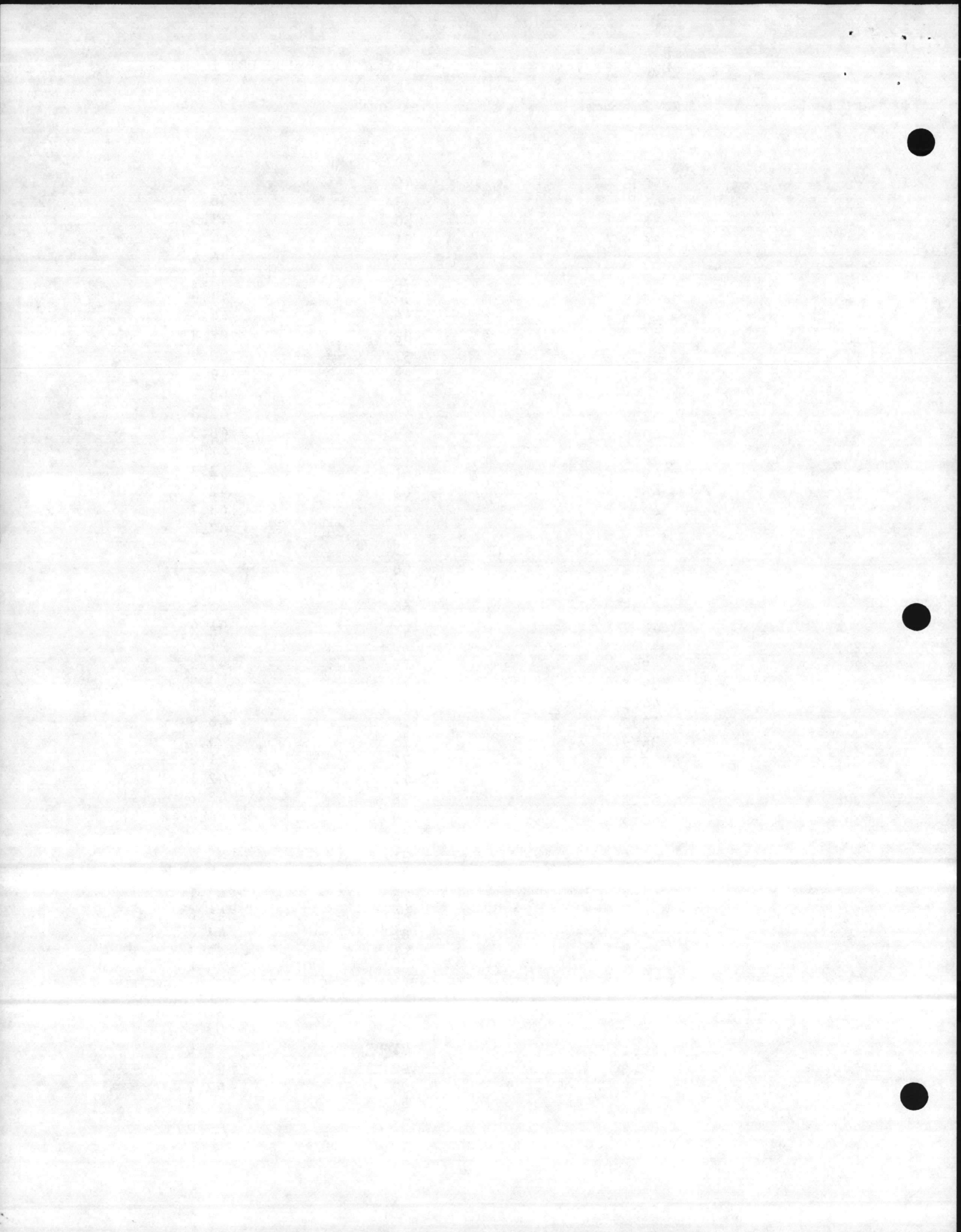
BRYANT-DURHAM/STARR ELECTRIC COS.

Steven K. Hudson
Project Manager



GROUND RESISTANCE READINGS - TYPE AAA PARKING LOT LIGHTS

Fixture Number	Resistance	Fixture Number	Resistance
1	38.5	48	38.6
2	40.6	49	44.8
3	44.2	49A	36.5
4	35.7	50	43.5
5	36.9	51	44.6
6	45.8	52	36.5
7	48.6	53	38.9
8	47.9	54	43.9
9	45.0	55	44.8
10	33.6	56	52.3
11	36.9	57	50.9
12	39.7	58	49.8
13	46.5	59	48.9
14	42.9	60	42.3
15	43.8	60A	43.5
16	42.2	60B	41.4
17	49.7	61	42.3
18	45.9	62	42.5
19	42.8	63	43.7
20	41.3	64	47.6
21	43.4	65	45.8
22	38.6	66	45.3
23	40.0	67	46.8
24	43.8	68	45.9
24A	48.7	69	41.4
25	50.8	70	41.7
26	49.7	71	47.3
27	39.5	72	42.8
28	44.8	73	48.6
29	42.2	74	48.9
30	36.9	75	45.8
31	38.9	76	41.3
32	45.9	77	42.1
33	42.3	78	43.6
34	40.5	79	44.4
35	51.4	80	44.1
36	42.5	81	45.2
37	43.3	82	43.2
38	39.7	83	45.1
39	40.2	84	46.6
40	38.5	85	47.8
41	42.5	86	49.3
42	39.7	87	50.5
43	43.3	88	50.2
44	48.6	89	49.3
45	42.2	90	53.3
46	42.1	91	48.6
46A	38.6	92	45.2
47	44.4	93	42.1
47A	38.7	94	44.3
47B	39.9	95	45.5



Fixture Number * Resistance

Fixture Number

Resistance

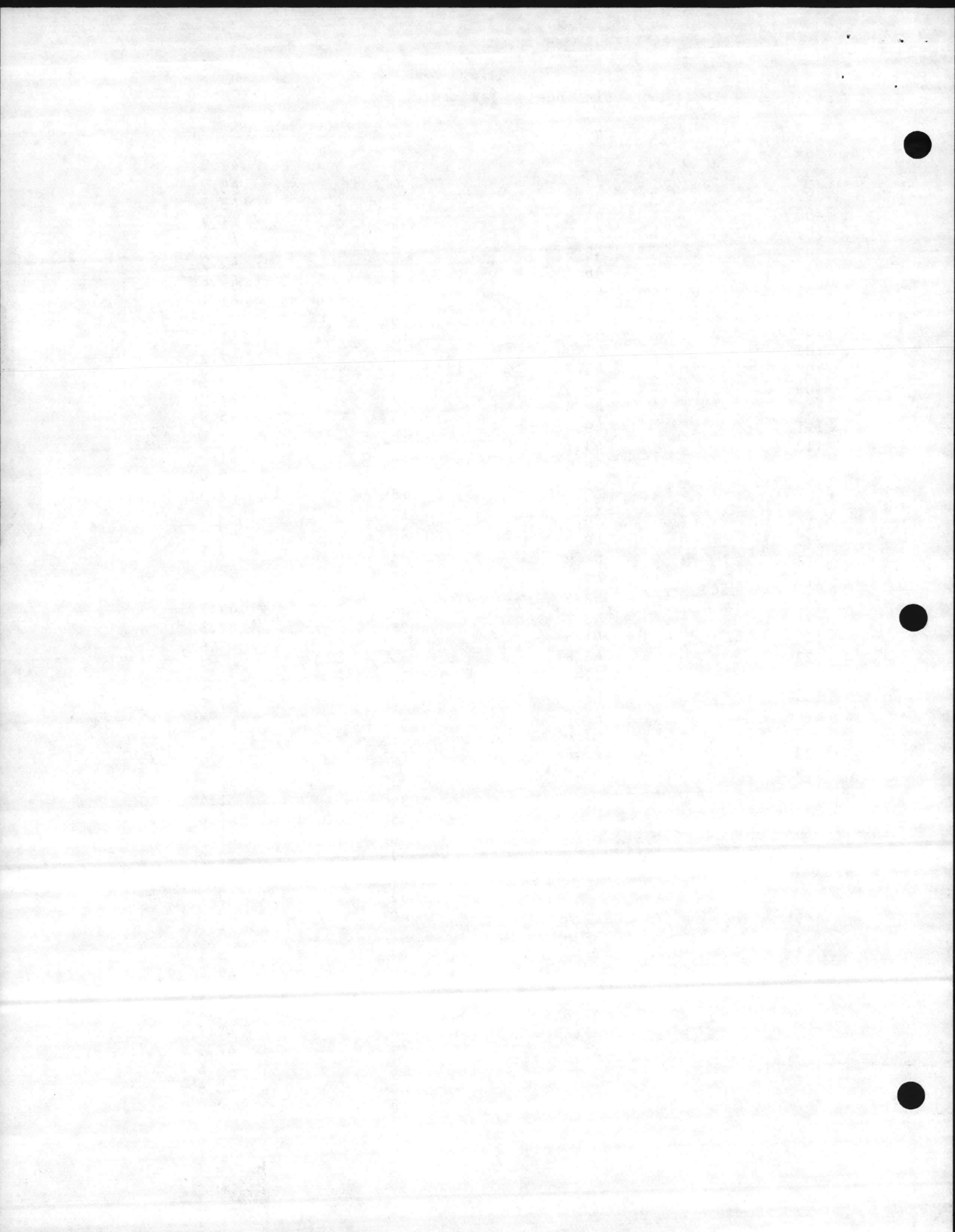
96 47.5
 97 43.3
 98 42.2
 99 47.5
 100 41.4
 101 42.3
 102 48.9
 103 46.7
 104 43.4
 105 44.2
 106 46.5
 107 44.3
 108 48.7
 109 46.5
 110 48.8
 111 49.6
 112 43.7
 113 50.3
 114 51.7
 115 52.9
 116 49.7
 117 48.9
 118 45.8
 119 47.6
 120 43.5
 121 42.7
 122 41.8
 123 43.8
 124 47.5
 125 41.8
 126 43.8
 127 42.8
 128 43.9
 129 42.9

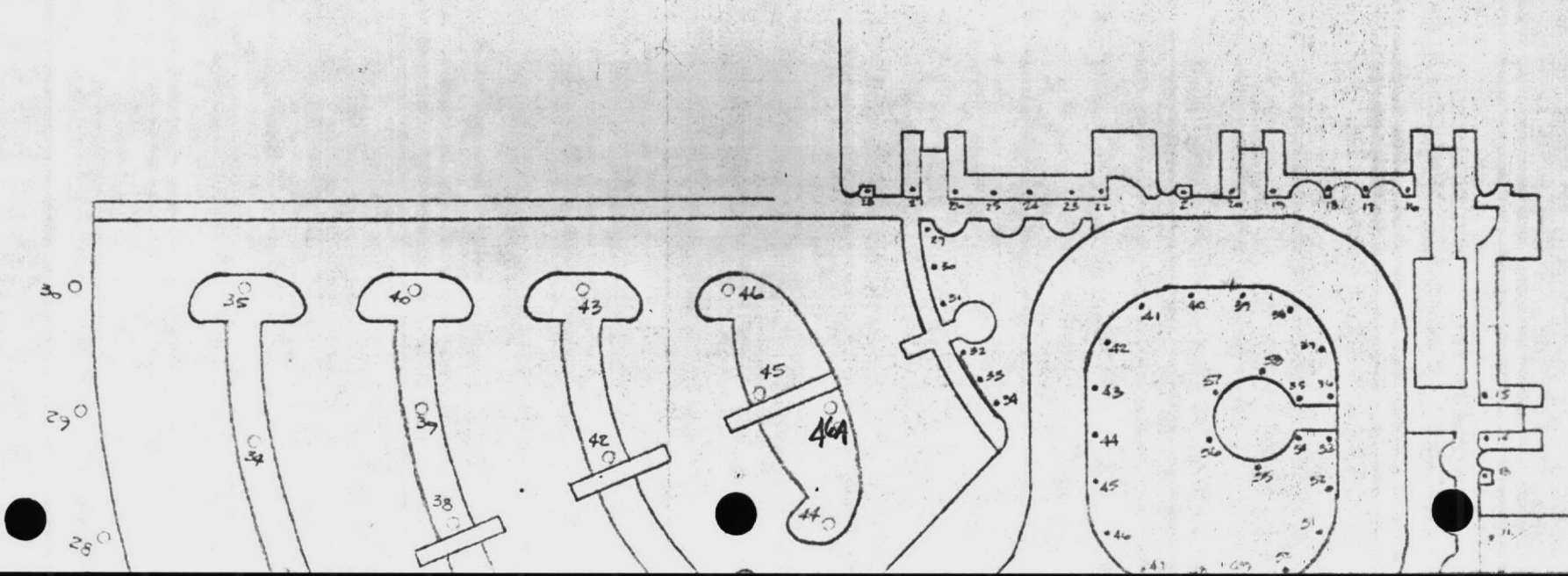
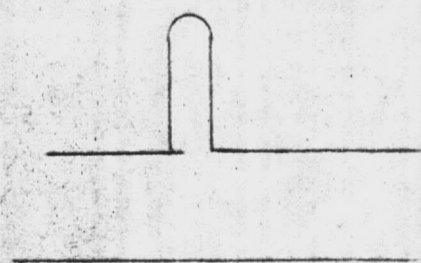
TYPE CCC BOLLARD

1 42.2
 2 44.9
 3 43.7
 4 41.7
 5 44.8
 6 45.9
 7 44.8
 8 41.1
 9 52.8
 10 51.1
 11 42.2
 12 43.2
 13 47.7
 14 45.9
 15 44.2
 16 41.8
 17 46.6
 18 47.3
 19 45.4
 20 48.6
 21 49.2
 22 42.1
 23 45.7
 24 44.1
 25 42.3
 26 48.6
 27 42.8
 28 45.2
 29 47.7
 30 46.2
 31 49.8
 32 50.2
 33 52.4
 34 51.4
 35 48.6
 36 47.5
 37 42.9
 38 43.2
 39 49.2
 40 42.8
 41 48.5
 42 48.1
 43 42.7
 44 43.2
 45 49.2
 46 42.7
 47 47.5
 48 49.6
 49 48.6
 50 42.9

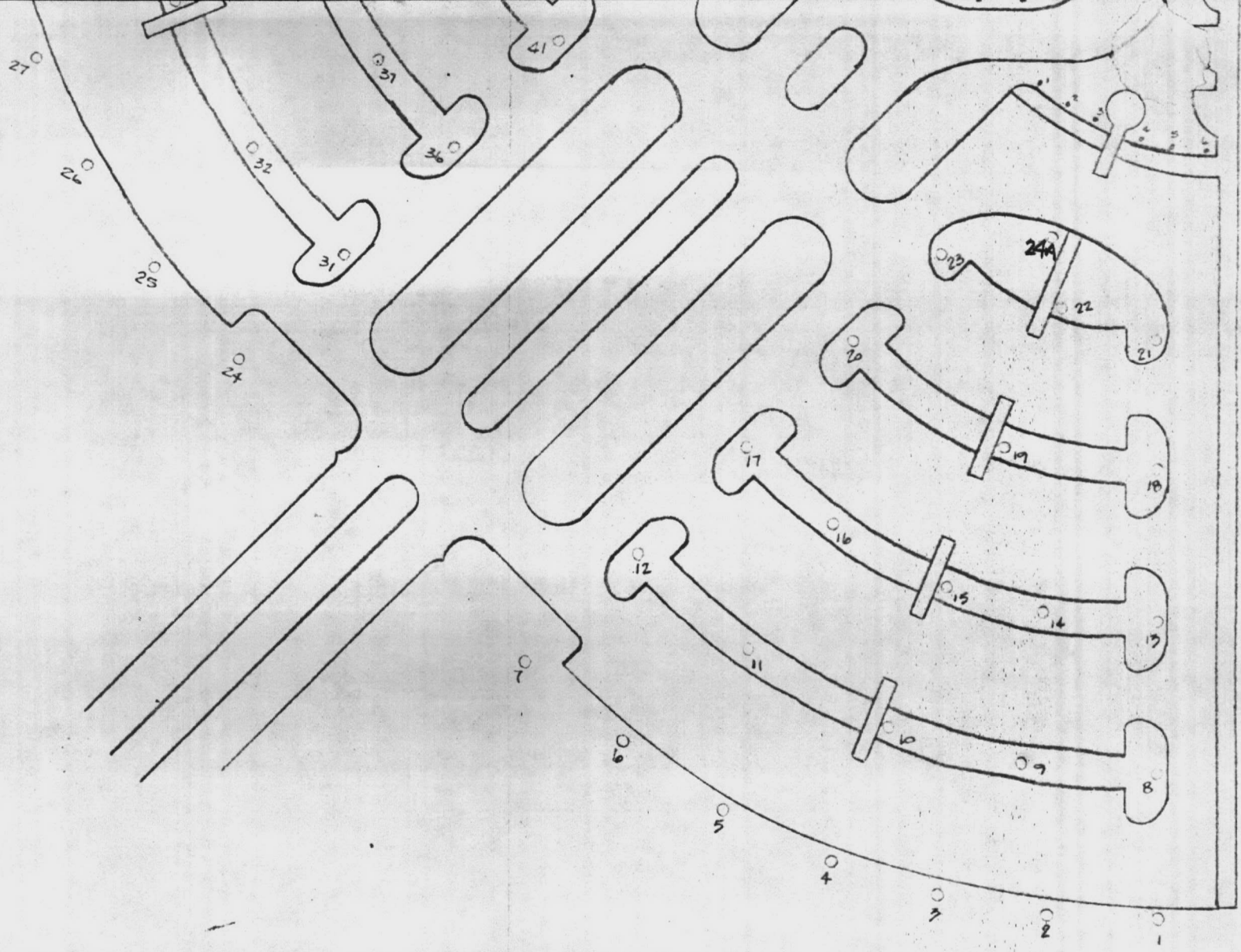
TYPE CCC BOLLARD (CONT)

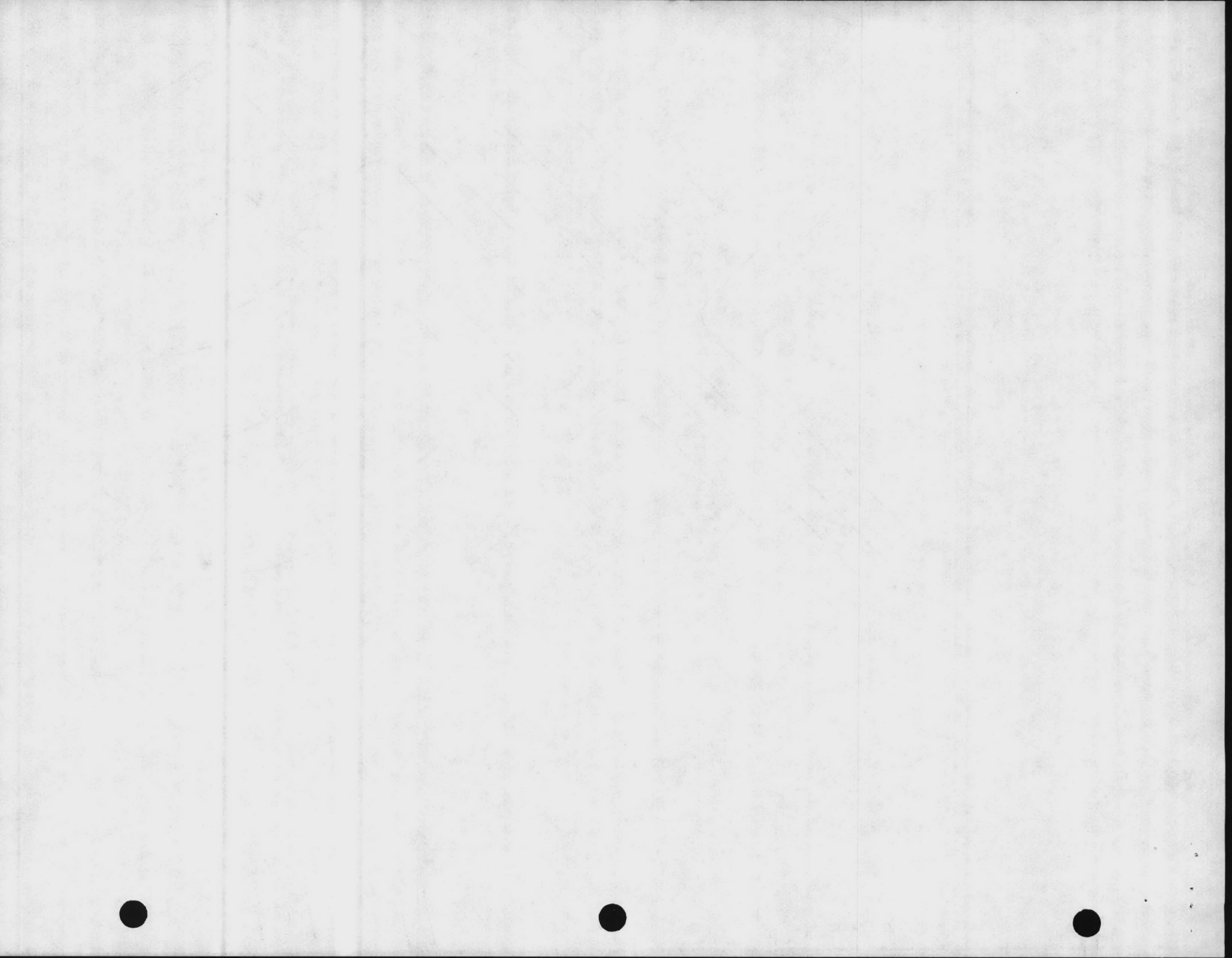
51 42.4
 52 48.6
 53 48.2
 54 50.3
 55 47.5
 56 42.8
 57 41.6
 58 49.3

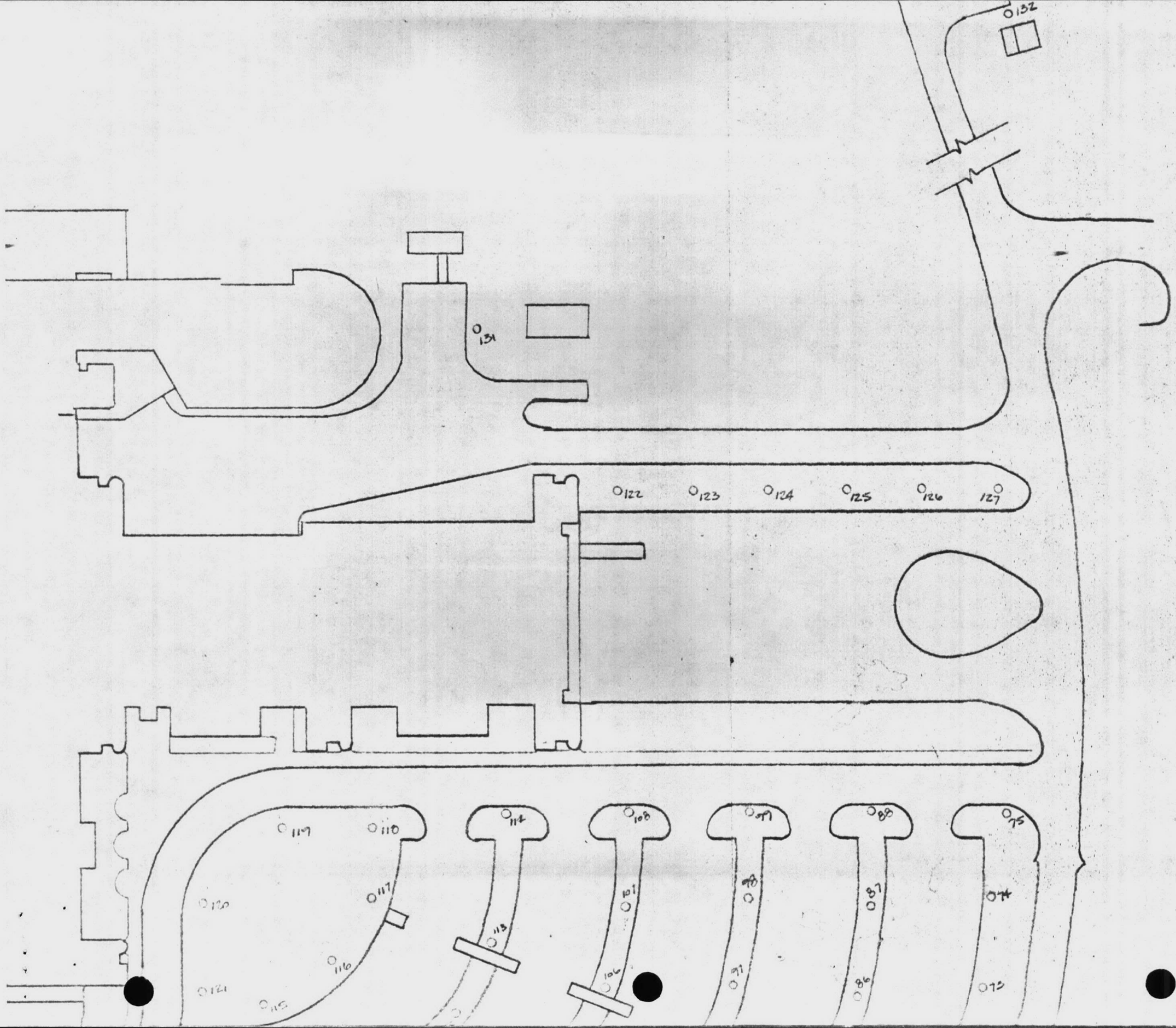




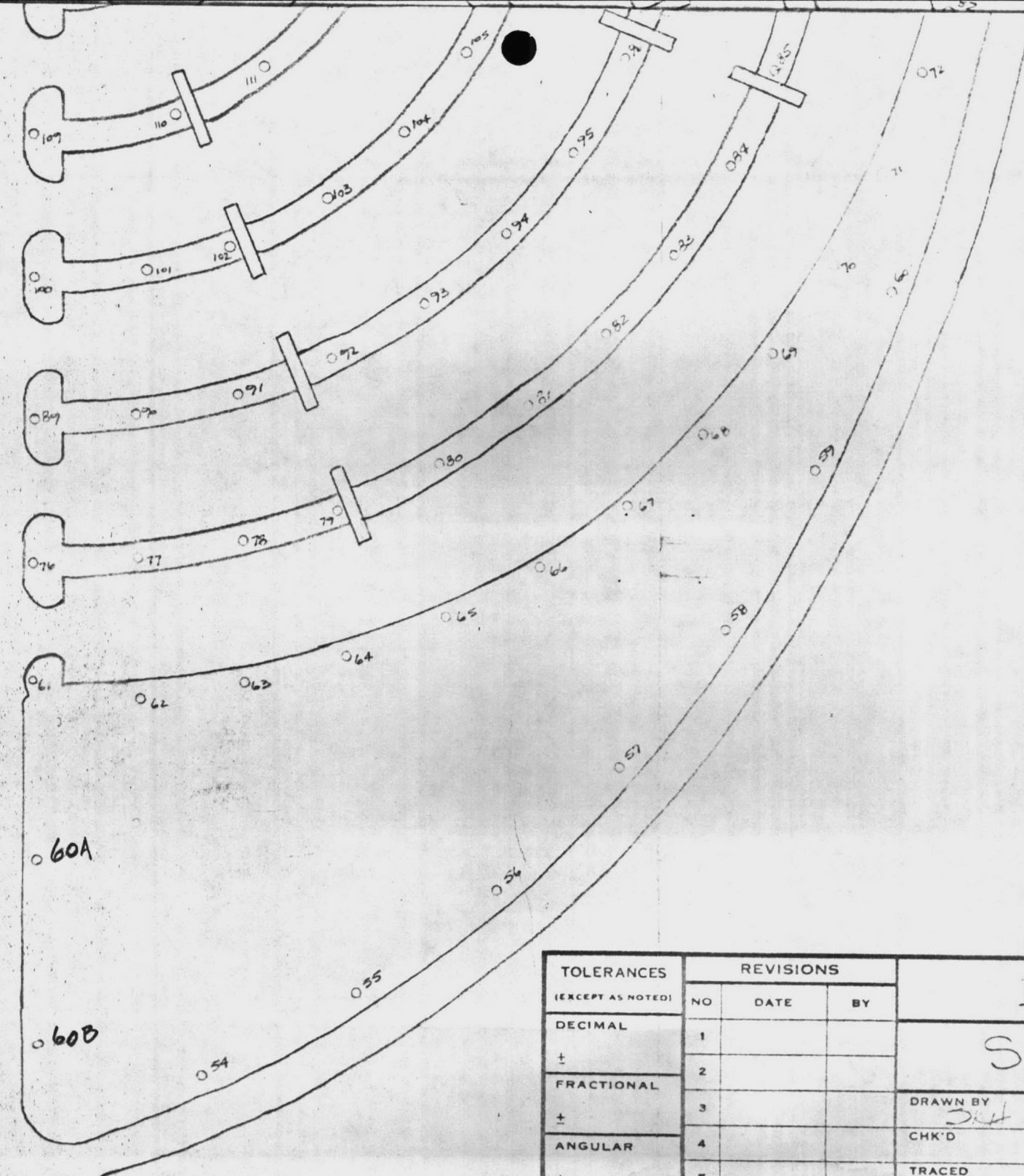
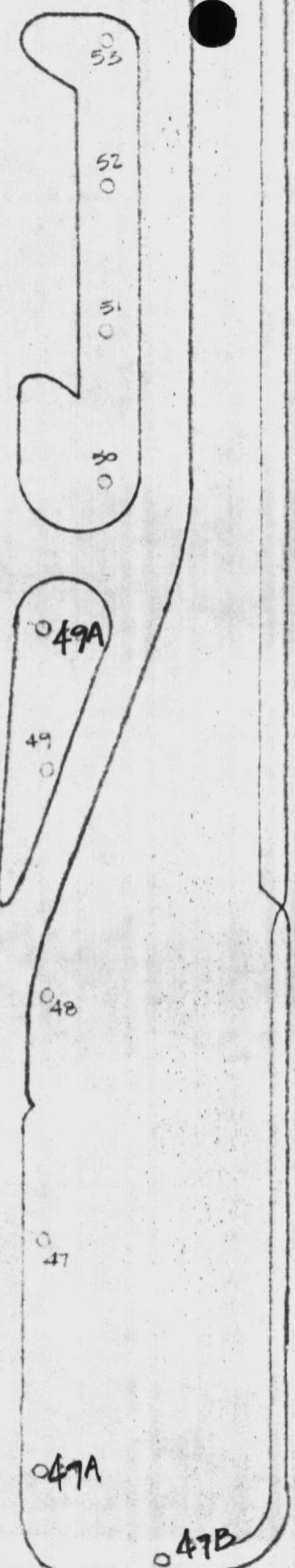






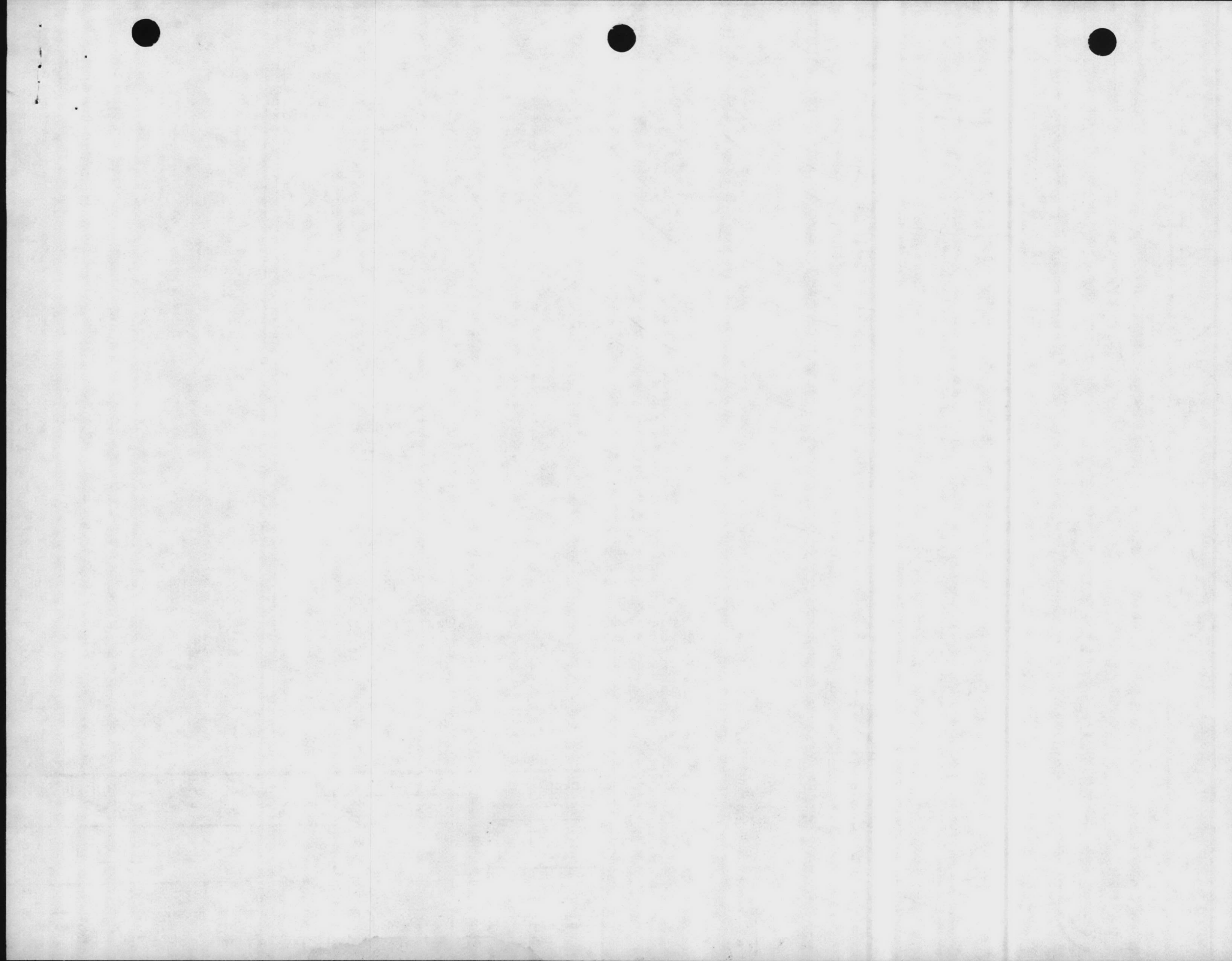






AAA 136
CCC 58

TOLERANCES (EXCEPT AS NOTED)	REVISIONS			B-D/S SITE LIGHTING		
	NO	DATE	BY			
DECIMAL	1			DRAWN BY JCH	SCALE NONE	MA
±	2					
FRACTIONAL	3			CHK'D	DATE 8/10/21	DRA
±	4					
ANGULAR	5			TRACED	APP'D	S
±						



BRYANT-DURHAM ELECTRIC COMPANY, INC.



STARR ELECTRIC COMPANY, INC.

(A JOINT VENTURE)

POST OFFICE BOX 460
JACKSONVILLE, NORTH CAROLINA 28540

April 15, 1980

Cardinal Contracting Company
Post Office Box 8408
Camp Lejeune, North Carolina 28542

Attention: Bill Haymaker

Ref.: Naval Regional Medical Center
Camp Lejeune, North Carolina
Contract Number N62470-77-C-7526

Gentlemen:

As required by specifications section 16300-8.4, we are submitting the attached log of ground readings taken by Floyd S. Pike on the overhead power line. The instrument used was by Vibro Ground.

Yours very truly,

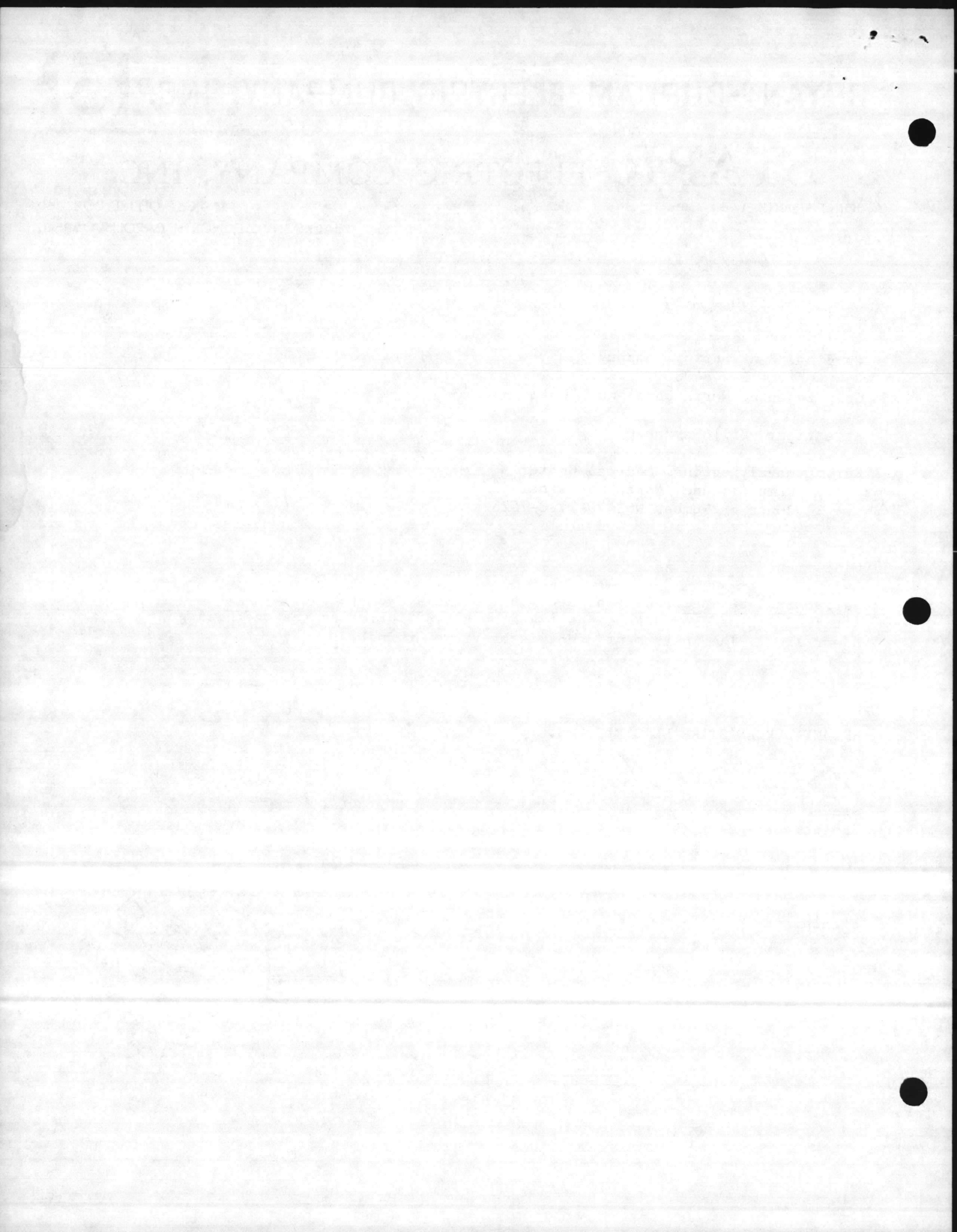
BRYANT-DURHAM/STARR ELECTRIC COS.

Steven K. Hudson
Project Manager

SKH/dc

attachments



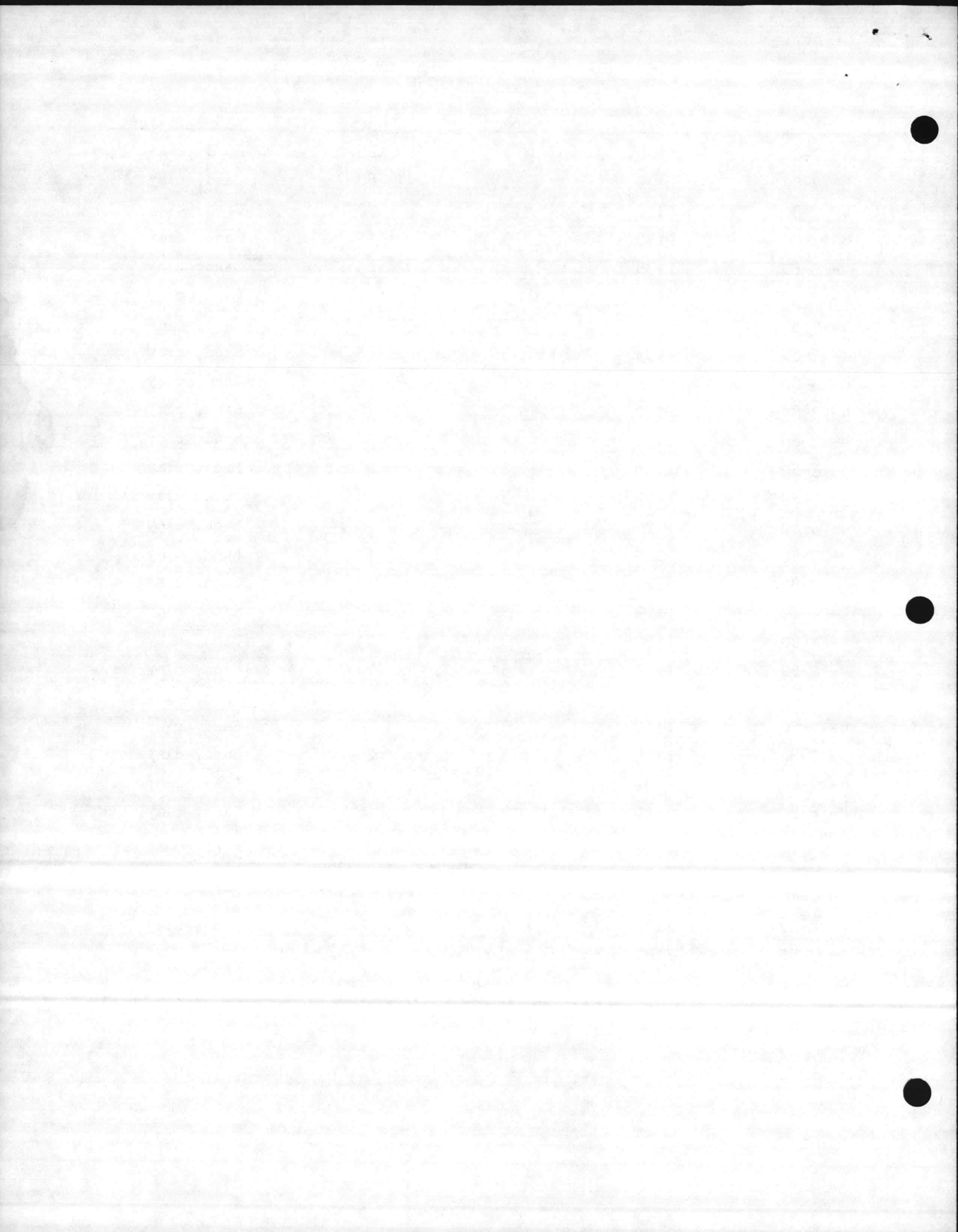


AUXILIARY LINE

<u>Date</u>	<u>Pole</u>	<u>Rods</u>	<u>Ohms</u>	<u>Conditions</u>
3-27-80	P140	3	125	Sand, clay
3-27-80	P139	3	80	Sand, clay
4- 3-80	P138	3	92	Sand, clay
4- 3-80	P137	3	115	Sand, clay
4- 3-80	P136	3	85	Sand, clay
4- 3-80	P135	3	128	Sand, clay
4- 3-80	P134	3	84	Sand, clay
4- 3-80	P133	3	65	Sand, clay
4- 3-80	P132	3	50	Sand, clay, wet
4- 3-80	P130	3	40	Sand, clay
4- 3-80	P129	3	20	Sand, clay, damp
4- 3-80	P128	3	22	Muck, clay
3-26-80	P127	3	6	Muck, clay
4- 3-80	P126	3	15	Muck, clay
4- 3-80	P125	3	12	Muck, clay
4- 7-80	P124	3	42	Sand, clay
4- 7-80	P123	3	34	Sand, clay
4- 7-80	P122	3	25	Sand, clay
4- 7-80	P121	3	16	Sand, clay
4- 7-80	P120	3	23	Sand, clay
4- 7-80	P119	3	44	Sand, clay
4- 7-80	P118	3	24	Sand, clay
4- 7-80	P131	3	12	Clay, damp
4- 8-80	P117	3	18	Sand, clay, damp

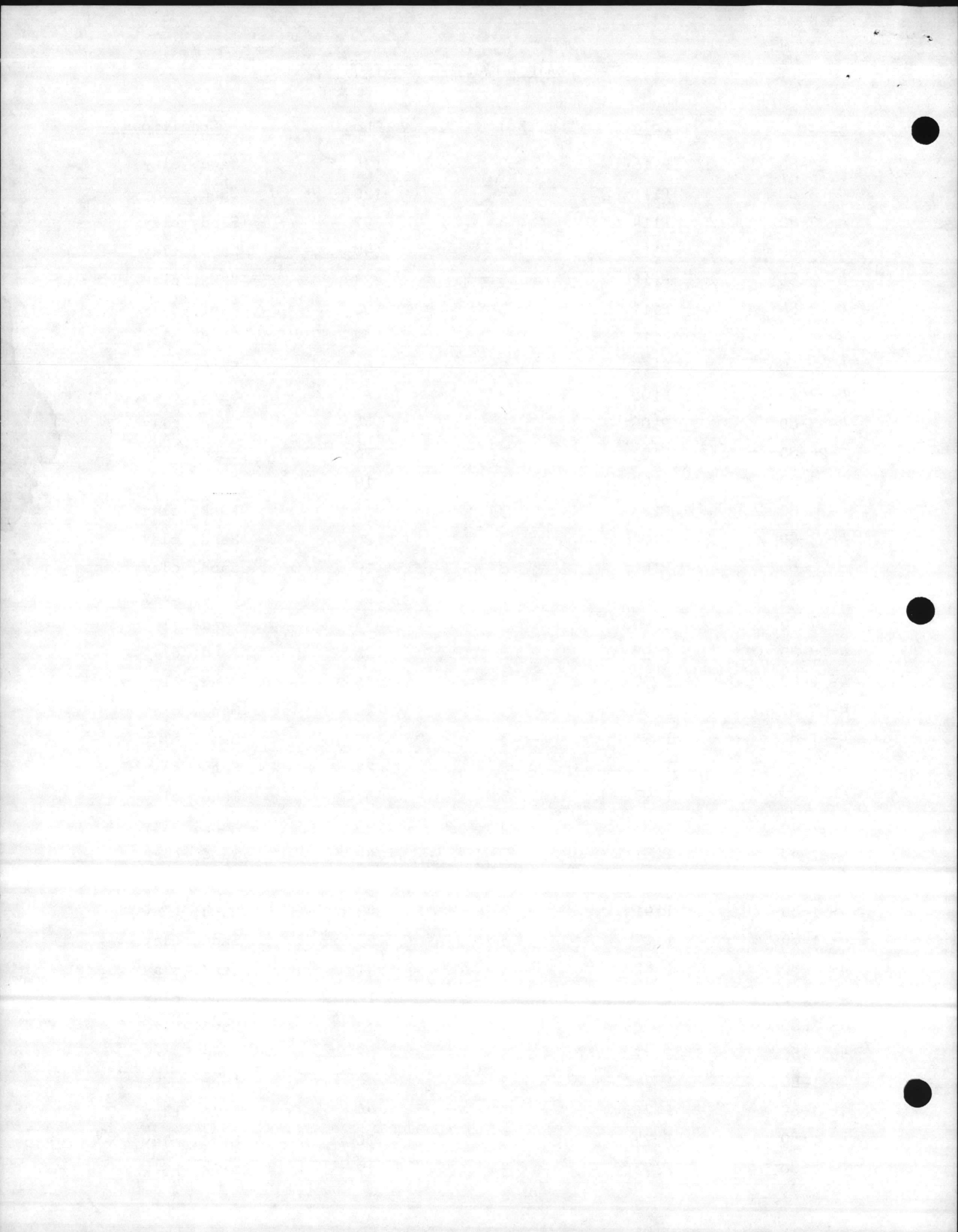
REGULATOR

4- 8-80	P141	3	8	Sand, clay
4- 3-80	P142	Connected to common ground		
4- 3-80	P143	Connected to common ground		



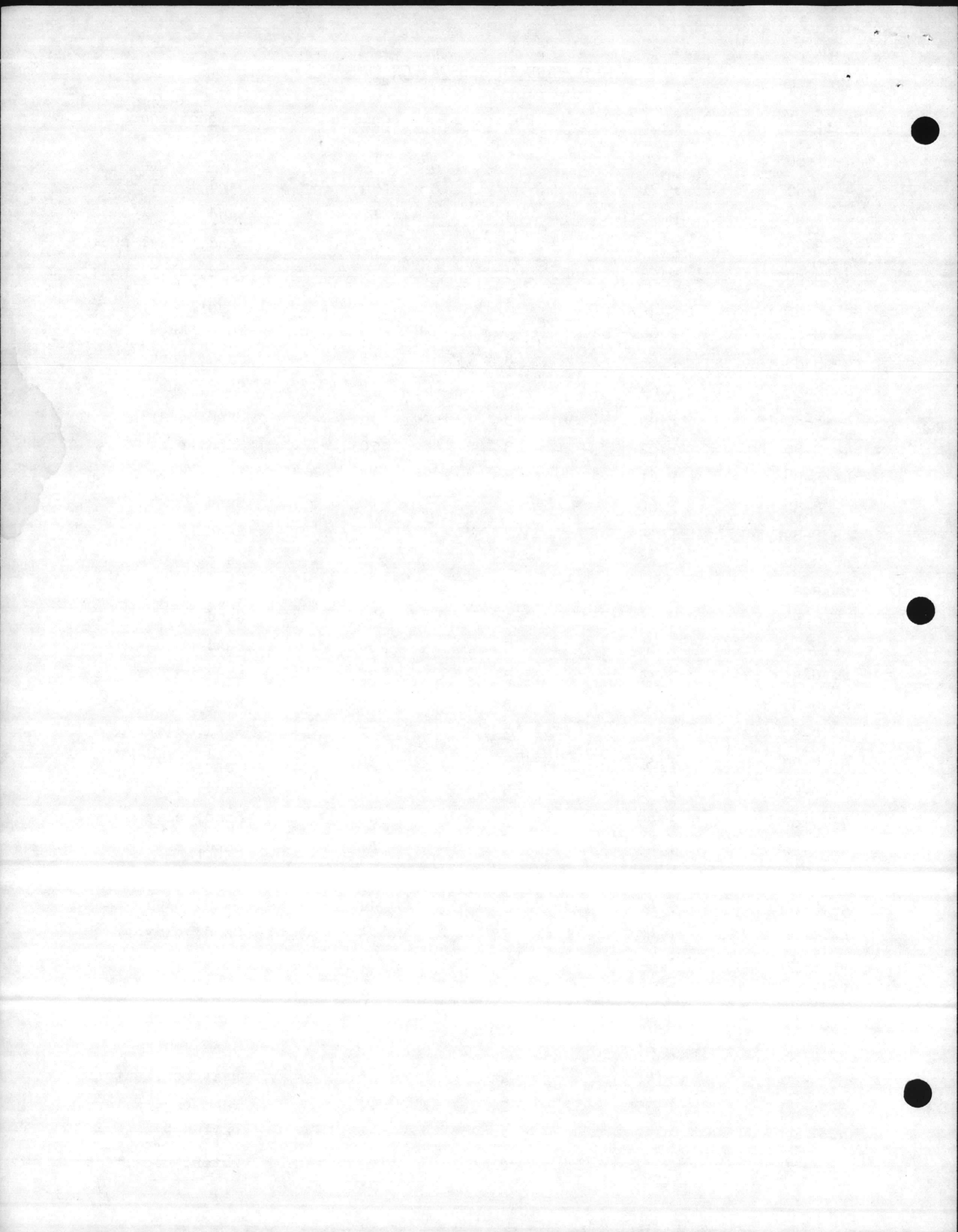
MAIN LINE TO SUBSTATION

<u>Date</u>	<u>Pole</u>	<u>Rods</u>	<u>Ohms</u>	<u>Conditions</u>
3-27-80	P116	3	130	Sand, clay
4- 3-80	P115	3	120	Sand, clay
4- 3-80	P114	3	97	Sand, clay
4- 3-80	P113	3	140	Sand, clay
4- 3-80	P112	3	73	Sand, clay
4- 3-80	P111	3	100	Sand, clay
4- 3-80	P110	3	103	Sand, clay
4- 3-80	P109	3	62	Sand, clay
4- 3-80	P108	3	53	Sand, clay, damp
4- 3-80	P106	3	44	Sand, clay
3-26-80	P105	3	26	Sand, clay
4- 3-80	P104	3	19	Sand, clay, damp
4- 3-80	P103	3	13	Muck, clay
4- 3-80	P102	3	26	Sand, clay
4- 3-80	P101	3	19	Sand, clay, damp
4- 7-80	P100	3	31	Sand, clay
4- 7-80	P 99	3	33	Sand, clay
4- 7-80	P 98	3	32	Sand, clay
4- 7-80	P 97	3	35	Sand, clay
4- 7-80	P 96	3	20	Sand, clay
4- 7-80	P 95	3	32	Sand, clay
4- 7-80	P 94	3	21	Sand, clay
4- 7-80	P 93	3	53	Sand, clay
4- 7-80	P 92	3	45	Sand, clay
4- 7-80	P 91	3	44	Sand, clay
4- 7-80	P 90	3	51	Sand, clay
4- 1-80	P141	3	43	Sand, clay
4- 1-80	P107	3	23	Sand, clay
4- 1-80	P 82	3	41	Sand, clay
4- 1-80	P 79	3	18	Sand, clay
4- 1-80	P 78	3	32	Sand, clay
4- 1-80	P 77	3	23	Sand, muck
4- 1-80	P 76	3	29	Sand, muck
4- 1-80	P 75	3	44	Sand, clay
4- 1-80	P 74	3	30	Sand, clay
4- 1-80	P 73	3	17	Sand, muck



MAIN LINE TO SUBSTATION (CON'T.)

<u>Date</u>	<u>Pole</u>	<u>Rods</u>	<u>Ohms</u>	<u>Conditions</u>
4- 1-80	P 72	3	19	Sand
4- 1-80	P 71	3	40	Sand
4- 1-80	P 70	3	51	Sand
4- 8-80	P 69	3	5	Sand, clay, muck
4- 8-80	P 68	3	4	Sand, clay, muck
4- 8-80	P 67	3	5	Sand, muck
4- 8-80	P 66	3	5	Sand, muck
4- 8-80	P 65	3	6	Sand, muck
4- 8-80	P 64	3	5	Sand, muck
4- 8-80	P 63	3	13	Sand, clay
4- 8-80	P 62	3	10	Sand, clay
4- 8-80	P 61	3	15	Sand, clay
4- 8-80	P 60	3	90	Sand
4- 8-80	P 59	3	80	Sand
4- 8-80	P 58	3	230	Sand
4- 8-80	P 57	3	190	Sand
4- 9-80	P 56	3	230	Sand
4- 9-80	P 55	3	230	Sand
4- 9-80	P 54	3	225	Sand
4- 9-80	P 53	3	150	Sand
4- 9-80	P 52	3	17	Sand, clay
4- 9-80	P 51	3	30	Sand, clay
4- 9-80	P 50	3	30	Sand, clay
4- 9-80	P 49	3	40	Sand, clay
4- 9-80	P 48	3	60	Sand, clay
4- 9-80	P 47	3	20	Sand, clay
4- 9-80	P 46	3	11	Sand, clay
4- 9-80	P 45	3	24	Sand, clay
4- 9-80	P 44	3	130	Sand
4- 9-80	P 43	3	160	Sand
4- 9-80	P 42	3	12	Sand, muck
4- 9-80	P 41	3	9	Sand, muck
3-24-80	P 40	2	24	Peat bog, water
3-24-80	P 39	2	21	Peat bog, water
3-25-80	P 38	2	14	Peat bog, water
3-25-80	P 37	2	12	Water, muck, peat bog



MAIN LINE TO SUBSTATION (CON'T.)

<u>Date</u>	<u>Pole</u>	<u>Rods</u>	<u>Ohms</u>	<u>Conditions</u>
3-25-80	P 36	1	8	Water, muck, peat bog
4-10-80	P 35	3	23	Muck, sand
4-10-80	P 34	3	150	Sand
4-10-80	P 33	3	12	Sand, clay
4-10-80	P 32	3	20	Sand
4-10-80	P 31	3	14	Sand, clay
4-10-80	P 30	3	19	Sand, clay
4-10-80	P 29	3	50	Sand
4-10-80	P 28	3	180	Sand
4-10-80	P 27	3	190	Sand
4-10-80	P 26	3	200	Sand
4-10-80	P 25	3	220	Sand
4-10-80	P 24	3	250	Sand
4-10-80	P 23	3	140	Sand
3-25-80	P 22	3	123	Sand
4-10-80	P 21	3	110	Sand
4-10-80	P 20	3	120	Sand
4-10-80	P 19	3	110	Sand
4-10-80	P 18	3	90	Sand
4-10-80	P 17	3	40	Sand
3-26-80	P 16	3	74	Sand, muck
3-26-80	P 15	2	22	Muck, water
3-26-80	P 14	2	20	Muck, water
4- 2-80	P 13	3	18	Sand, muck
4- 2-80	P 12	3	15	Sand, muck
4- 2-80	P 11	3	44	Sand, clay
4- 2-80	P 10	3	88	Sand, clay
4- 2-80	P 9	3	52	Sand, clay
4- 2-80	P 8	3	64	Clay
4- 2-80	P 7	3	55	Clay
4- 2-80	P 6	3	71	Clay
4- 2-80	P 5	3	99	Clay
4- 2-80	P 4	3	58	Clay
4- 2-80	P 3	3	47	Clay
4- 2-80	P 2	3	65	Clay
4- 2-80	P 1	3	80	Clay
4- 2-80	P 12 A	3	33	Sand, muck

(In line at dog pound)

