


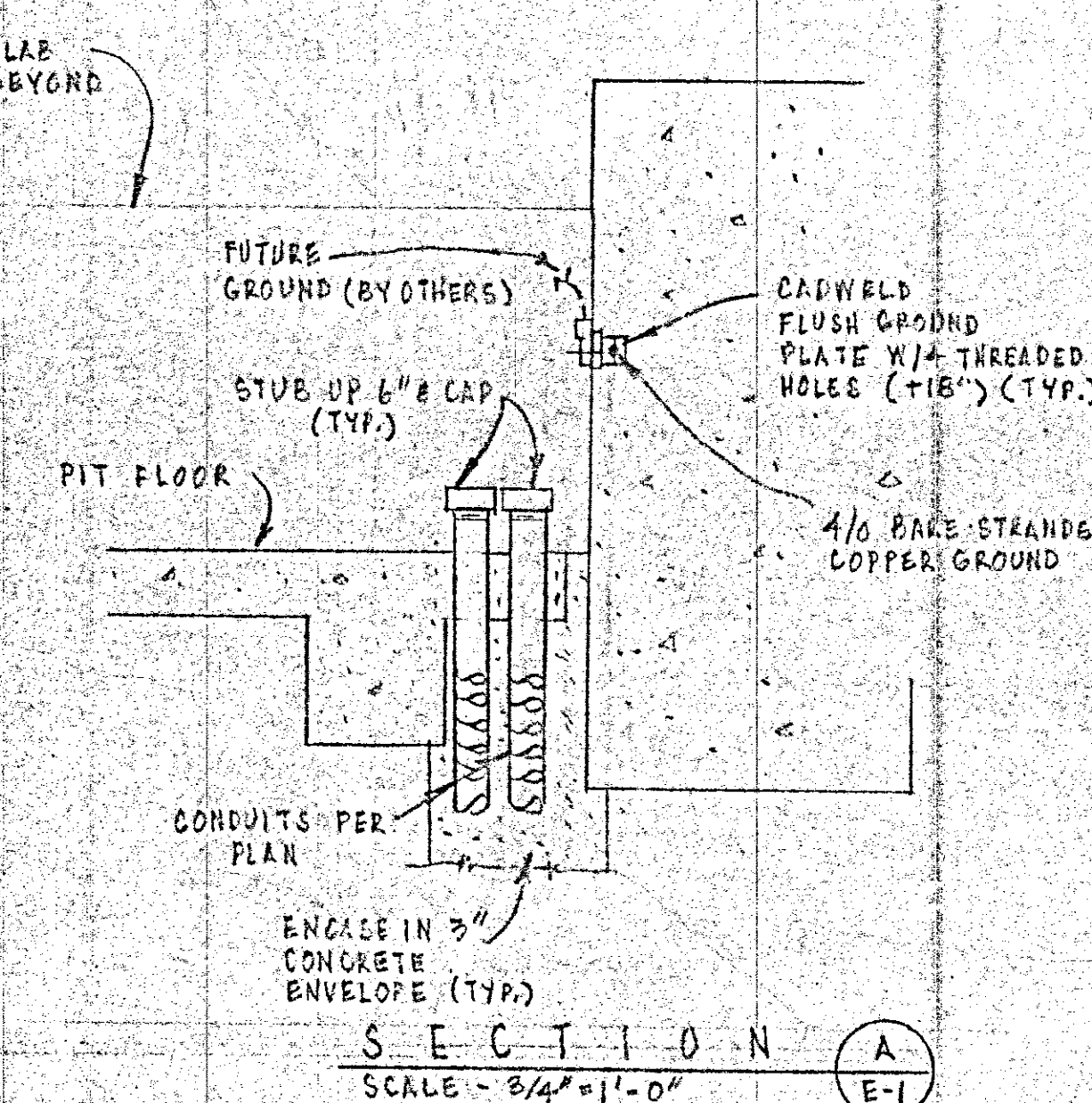
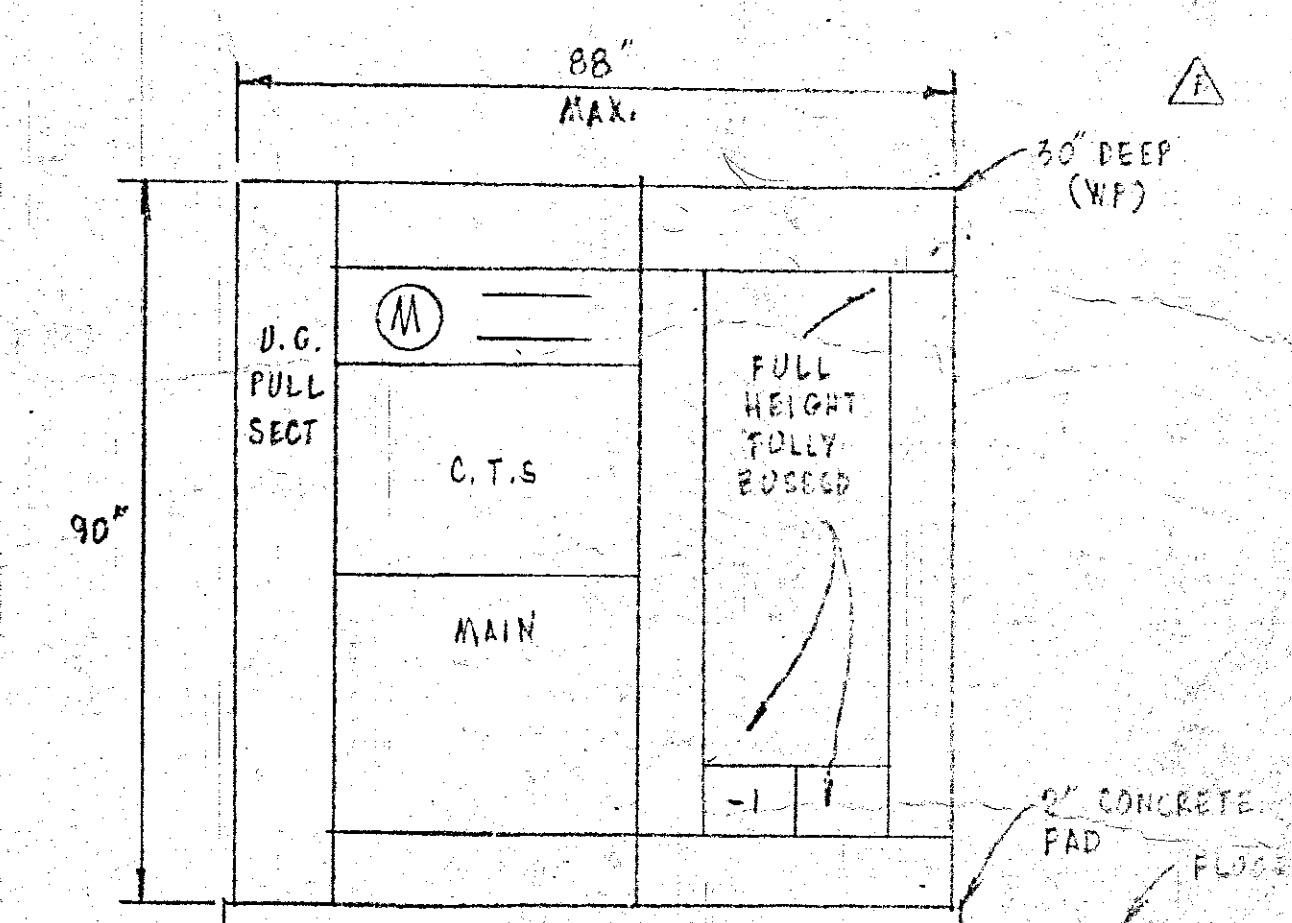
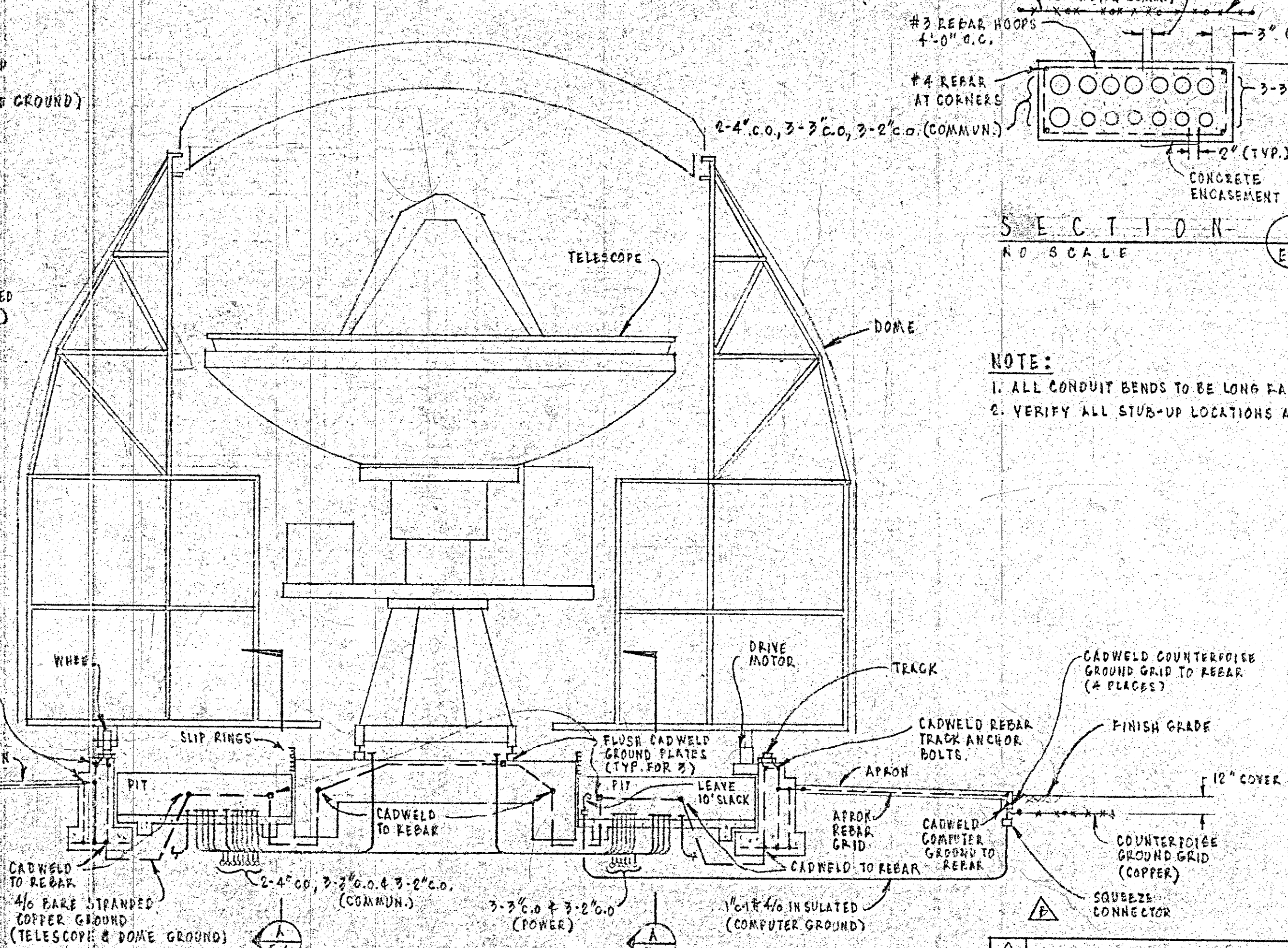


ELECTRICAL SYMBOLS	
WALL CIG. FLOOR	
	LIGHTING OUTLET - FLUORESCENT
	DUPLEX RECEPTACLE
So Sabc	SWITCH-1 POLE-SUBSCRIPT INDICATES OUTLETS CONTROLLED SWITCH-PROVIDE GANG ASSEMBLY WITH SWITCH FOR EACH SUBSCRIPT
	PANELBOARD SWITCHBOARD
<u>r 3/4" x 2"</u>	CONDUIT ONLY - SIZE AS MARKED
<u>1/2"</u>	2" x 12 IN 1/2"
<u>3/4"</u>	3" x 12 IN 3/4"
<u>1 1/4"</u>	4" x 12 IN 1 1/4"
<u>1 3/4"</u>	5" x 12 IN 1 3/4"
<u>1 1/2" x 1/2"</u> <u>1 1/2"</u> →	OTHER CONDUIT & WIRE SIZES AS MARKED
<u>1 1/2"</u>	HOME RUN
<u>1 1/2"</u>	CONDUIT RUN IN CEILING OR WALL
<u>1 1/2"</u>	CONDUIT RUN IN OR BELOW FLOOR, IN WALL OR UNDERGROUND
<u>1 1/2"</u>	CONDUIT RUN UNDERGROUND (BY OTHERS)
WP DC	WEATHERPROOF BARE COPPER







LIGHTING FIXTURES		
TYPE	WATTS	DESCRIPTION
A	2/25W	FLUORESCENT, STRIP LIGHT, 2 LAMP 4' PRUDENTIAL # P102-4GR5



MAIN SWBD. "M 5"  
SCALE -  $\frac{1}{2}'' = 1' - 0''$

EXISTING CONSTRUCTION  
REFERENCE DRAWING ONLY

**NOTES:** 1. REMOVE ALL BURRS AND SHARP EDGES.

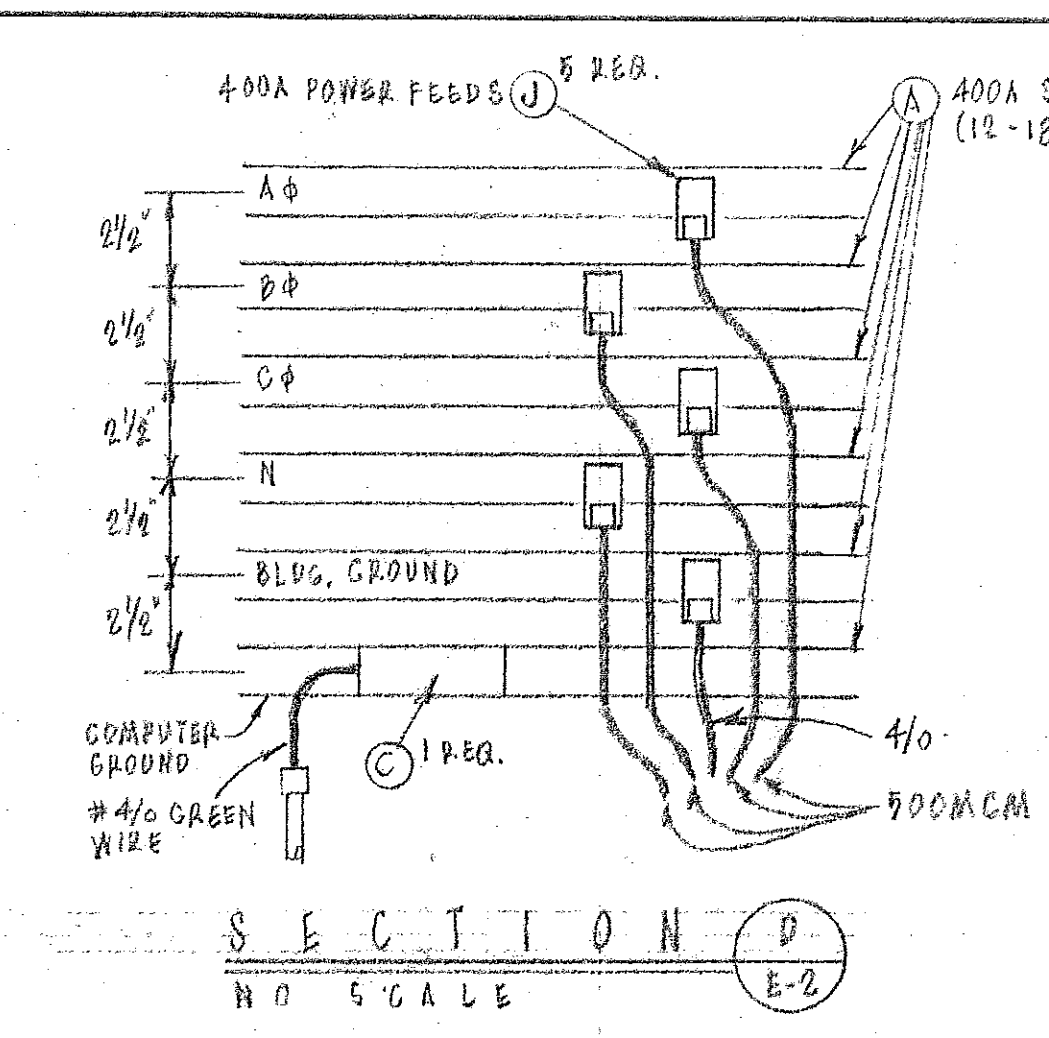
 PROGRESS CONNECTOR			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCE ON DECIMALS XX ± .03 ANGULAR ± 1/2° XXX ± .005 TOLERANCE ON FRACTIONS ± 1/16 MACHINE FINISH 12/				DRAWN EP, FP		DATE		CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CALIF.			
 HUMAN EJECTION, BO SET			12-20-54 MLH				CHECKED STW		DATE		TITLE			
 SHEET NUMBER CHANGED - SHEET SPECIFIED AS REFERENCE DRAWING			11-26-54 MLH				APPROVED MLH		DATE 7-2-55		ELECTRICAL SYSTEMS OPERATING MANUAL			
 CHANGE UTIL. BLDG TO SLEA ONLY			5-1-56 MLH				APPROVED		DATE		DRAWING NO.			
LTR			DESCRIPTION			DATE			APPD			DWG SIZE		
			REVISION			DRAWING NO.			ITEM			SCALE		
									WEIGHT			DWG NO.		
									APPLICABLE DOC			FILE NO.		
												W.O.		
												10PT		



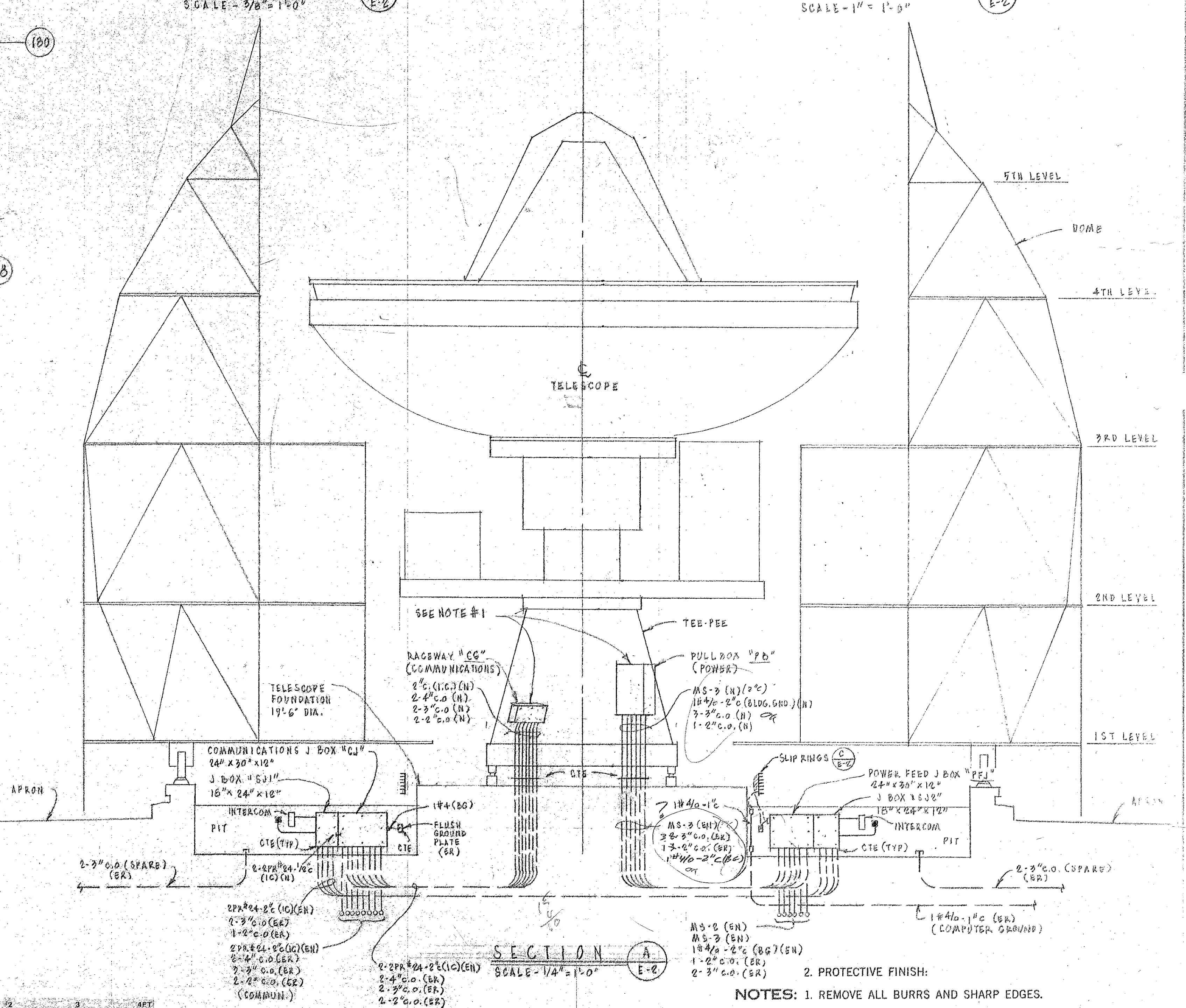
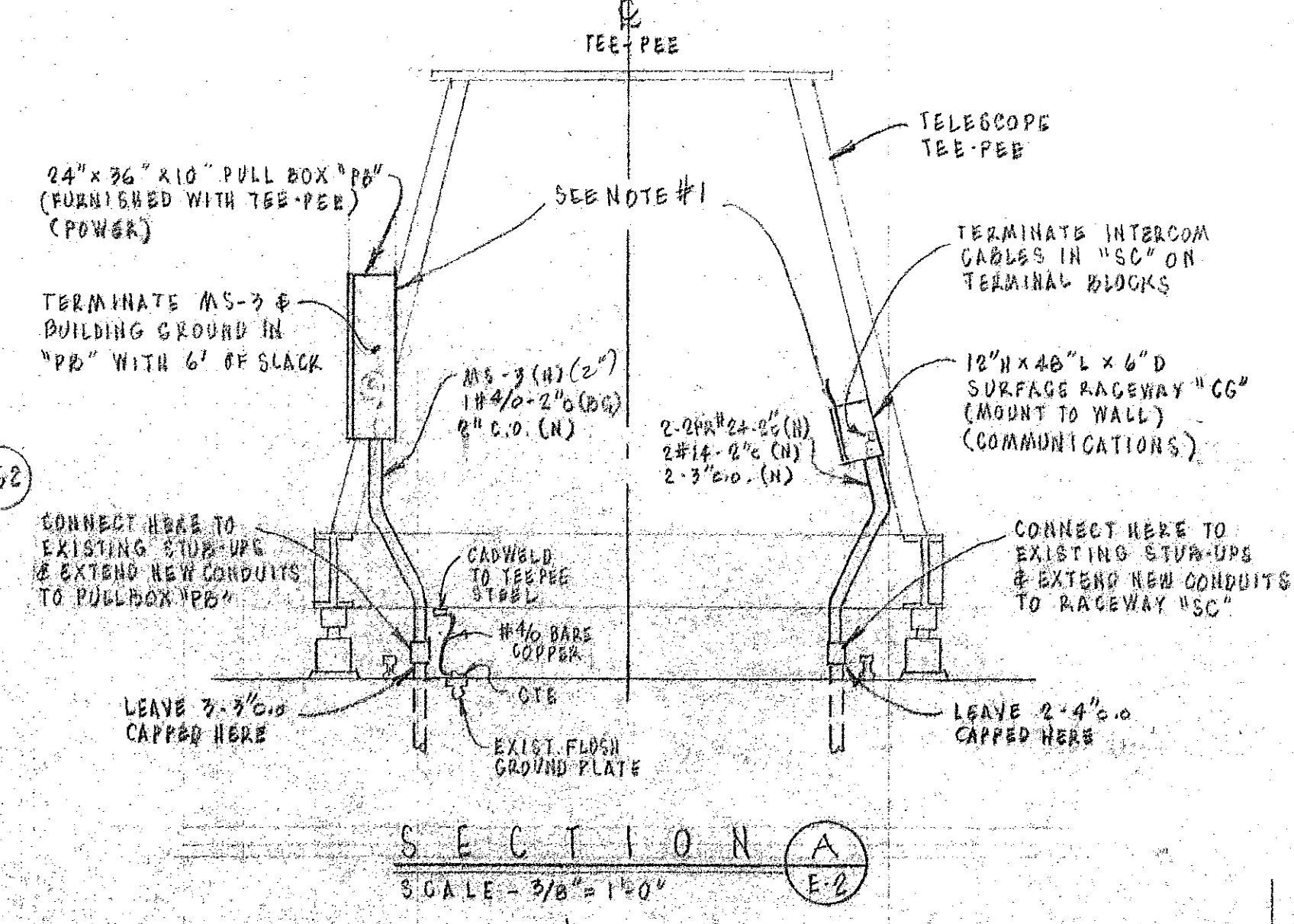
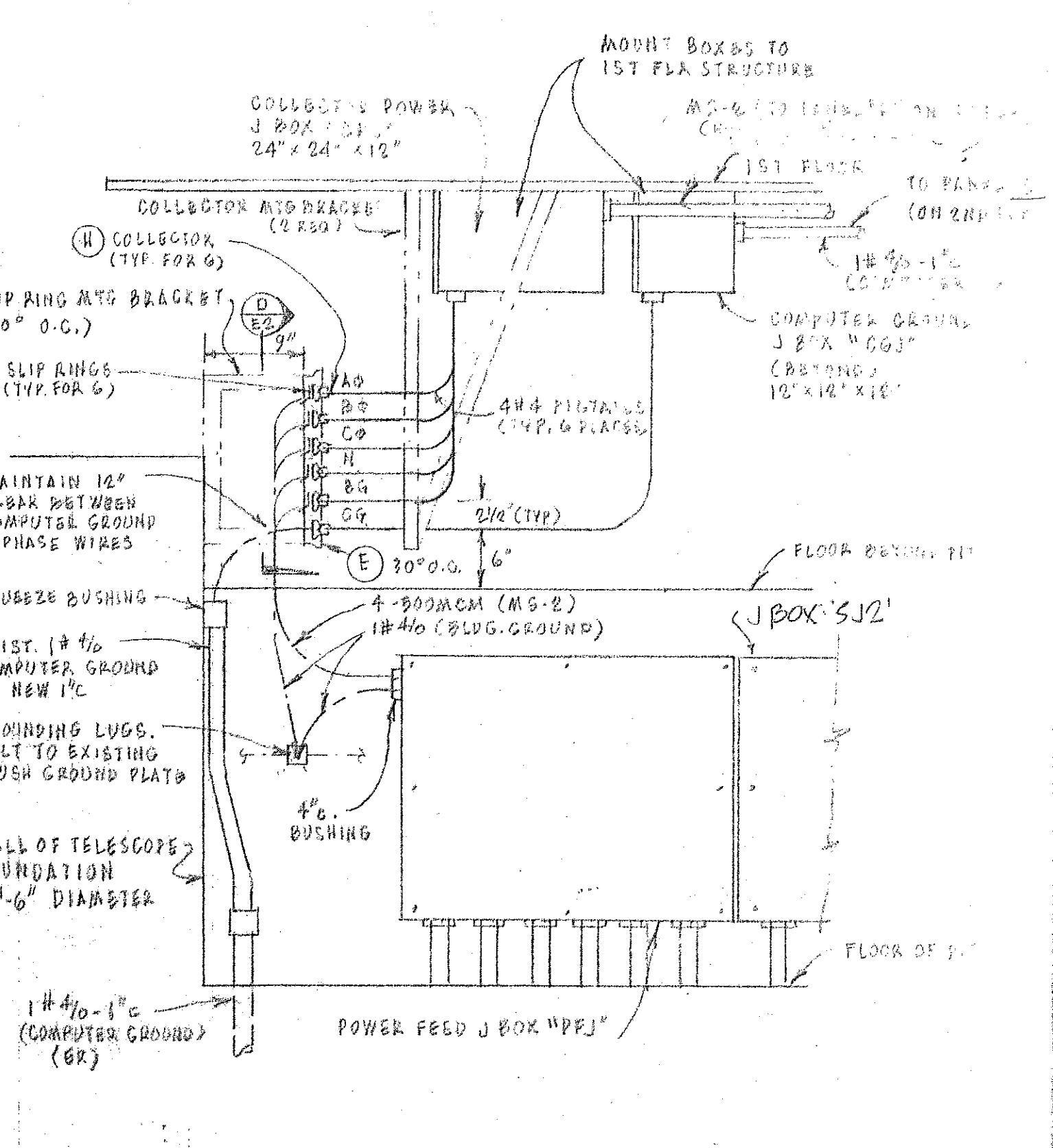




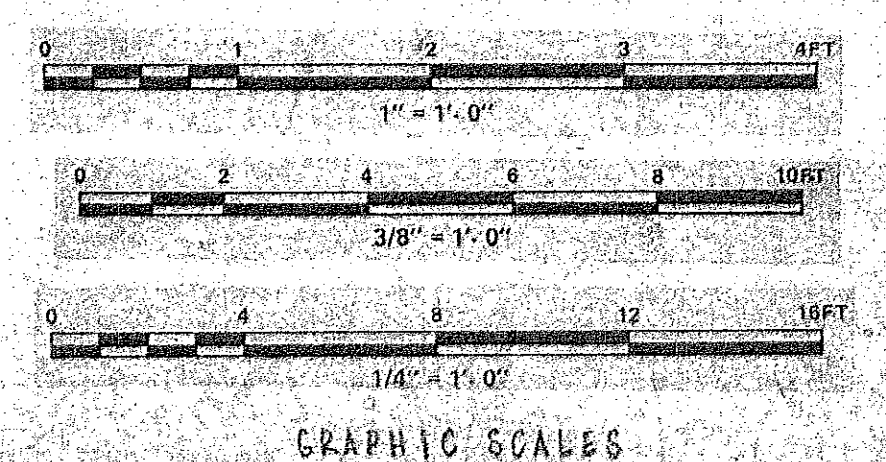
ITEM #	INSUL-B #	DESCRIPTION	QUANTITY
(A)	X26446	SLIP RING CONDUCTOR, 400A, PVC COVER, CURVED @ 180°, 10'-6" R.	12
(B)	X26447	EXPANSION GAP ASSY, CURVED, 10'-6" R.	6
(C)	26647	POWER FEED KIT, COMPUTER GROUND	1
(D)	X26647	SPLICE ASSEMBLY, CURVED, 10'-6" R.	6
(E)	26648	HANGER BRACKET ASSEMBLY, INSULATED	11
(F)	26649	ANCHOR BRACKET ASSEMBLY, INSULATED	1
(G)	26650	ANCHOR PIN, 3/4" LONG, 2 PER CONDUCTOR, FIBERGLASS	12
(H)	26651	COLLECTOR, 400A, LATERAL MOUNT (2 PER CONDUCTOR)	12
(I)	26652	POWER FEED PLATE ASSEMBLY, (A,B,C,H,BG)	5



LIST OF MATERIALS			
ITEM	QTY	DESCRIPTION	MATERIAL OR SOURCE OF SUPPLY



NOTE -  
1. ELECTRICAL WORK BETWEEN PULL BOX "PB" & TELESCOPE & RACEWAY "CG" & TELESCOPE IS N/C.



REVISION	DESCRIPTION	DATE	APPD
1	REVISD EMER. STOP WIRING	7-17-85	JWP
2	HAWAII ERECTION SHIP SET	10-20-84	JWP

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCE ON DECIMALS XX = ± .03 TOLERANCE ON FRACTIONS ± 1/16 MACHINE FINISH 12/		DRAWN: BP, FP CHECKED: JWP APPROVED: JWP DATE:	CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CALIF. TITLE: ELECTRICAL - FOUNDATION PLAN SUBMILLIMETER OBSERVATORY MAUNA KEA, HAWAII DWG. NO.: E10MD SCALE: AS NOTED FILE NO.: W.O. DEPT:
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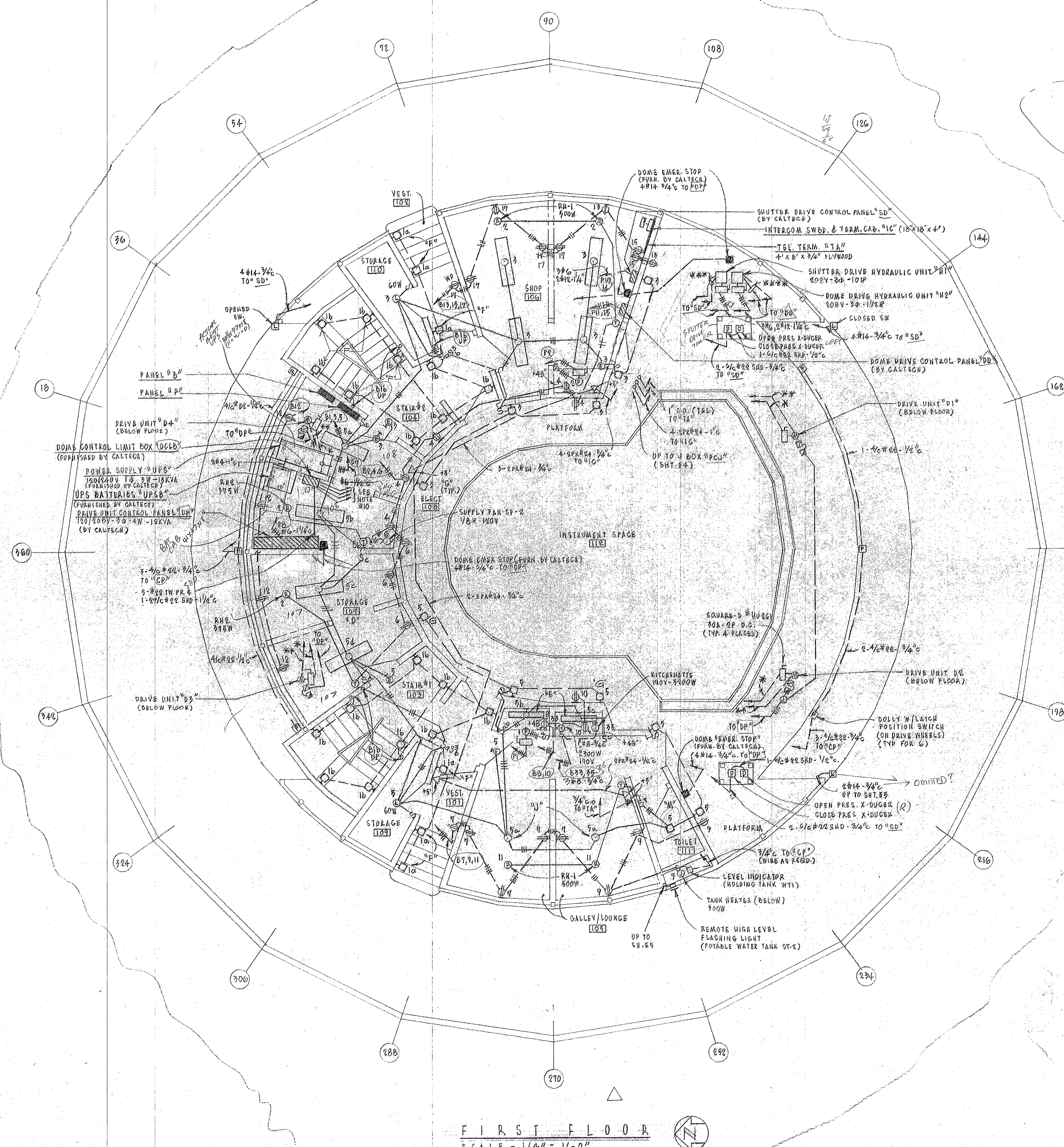
ALBERT S. C. CHUNG  
REGISTERED PROFESSIONAL ENGINEER  
ELECTRICAL  
NO. 1003-E  
STATE OF CALIFORNIA

POOR & DRESSER  
ELECTRICAL CONSULTANTS  
PASADENA, CALIF.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION  
*Albert S. Chung*



LIST OF MATERIALS			
ITEM	QTY	DESCRIPTION	MATERIAL OR SOURCE OF SUPPLY



PANEL "B"		SCHEDULE			
CIR NO	OUTLETS		WATTS		REMARKS
	O	OTHERS	A	B	
1	18		460		1
2	19	2-2-1-1/2			1
3	20			840	
4	21			360	
5	22	2-2-1		1440	
6	23	FAN 572		360	
7	24		180		
8	25		480		
9	26	5 HASTERS		560	
10	27			360	
11	28	2-2-1		1000	
12	29			720	
13	30		780		
14	31	CLOCK	- 178		
15	32			780	
16	33			1500	
17	34	FAN		400	
18	35	2-2-1		720	
19	36	2-2-1-1/2	1200		
20	37	2-2-1-1/2	1000		
21	38			300	
22	39	CLOCK		1782	
23	40			720	
24	41	2-2-1		1000	
25	42		980		
26	43		- 98		
27	44	5 HASTERS		840	
28	45			360	
29	46			360	
30	47			540	
31	48		360		
32	49	WIR. WTR.	200		1
33	50	WIR. WTR.		1300	
34	51	F.C-1		300	1
35	52			300	1
36	53	KLITCHENETTE		2000	1
37	54		540		1
38	55		- 153		
39	56	S.P.W. 2			
40	57			720	
41	58	S.F.A.E.S			
42	59				

L. WARD, L.P. 2080-4 12-6-31 13921 11938 376-4  
 OTHER LOAD = 60756 VOLTS = 1000 2838-30-4

PANEL "C" SCHEDULE		BASIC CIRCUIT	
CIR. NO.	OUTLETS		WATTS
	O	OTHERS	A B C
2	2		200
3	2		1000
4	2		300
5			1000
6	4		250
7			500
8	2		300
9			300
10			
11	1		500
14		SPACE	
15	1		500
18		SPACE	
19		"	
16		"	
17		"	
18		"	
19		SPACE	
20		"	
21		"	
22		"	
23		"	
24		RECEIVISTAN 2000	
25			2000
26			
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PANEL #			SCHEDULE			
CIR. NO.	OUTLETS		WATTS			BRANCH CIRCUIT PROCEEDINGS
	0	OTHERS	A	B	C	
1		SP-1	1650	1850	1250	2
2		"	1250	1250	1550	2
3		"	1250	1250	1550	2
4		"	1450	1850	1250	2
5		"	1250	1850	1350	2
6		WVAV (ELEM)	1050	1050	0	30
7		U.A.S.	7450	6850	2	190
8		"	4000	4000	4000	15
9		RTS-1	900	900	900	15
10		SD	3715	2915	3715	60
11		SD	6700	5700	6700	15
12		WPC	1850	1850	1850	20
13		PANEL "B"	1650	1450	1750	100
14		SD ON NTR	1050			15
15		SD ON NTR	700			15
16		"				15
17		"				15
18		"				15
19		"				15
20		"				15
21		"				15

16 1650x145-122      12000x3700x4380x10699  
LINE LOAD = 5222 VOLTS 120/208V 3P 4W

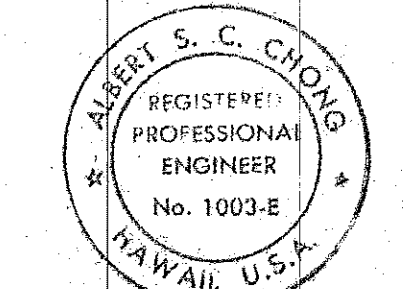
**NOTE -**

1. ALL RECESSED WALL LIGHT FIXTURES ARE TYPE "G" EXCEPT AS NOTED.
2. ALL FLUORESCENT FIXTURES ARE TYPE "C" EXCEPT AS NOTED.
3. VERIFY LOCATION OF ALL EQUIPMENT.
4. RUN A CODE SIZE GREEN GROUND WIRE IN ALL EQUIPMENT CONDUITS.
5. (\*\*) 2#6 TWISTED PAIR SHIELDED - 1" ALUMINUM CONDUIT TO "SR"  $\rightarrow$  DP
6. (\*\*) 1#00 TWISTED PAIR SHIELDED - 1/2" " "  $\rightarrow$  DP
7. INTERCOM CONDUITS ARE 3/4" WITH ONE EPR #4 PER STATION.
8. (\*\*) 2- 1/2" #22 SHIELDED - 1", AND 1#12, 1#14 - 1" TO "SB"
9. (\*\*) 1- 1/2" #22 SHIELDED - 3/4" AND 1#12, 2#14 - 1" TO "DB"
10. PROVIDE 4 HOME RUNS FROM "DCLE" AS FOLLOWS:  
a. 2- 3/8" #22 - 2#00 TW PR SHD - 1/2" TO "PCJ"  
b. 1- 1/2" #22 - 3/4" TO "DB"  
c. 1- 1/2" #22 - 3/4" TO "SB"  
d. 1- 1/2" #22 - 2#00 TW PR SHD - 1/2" TO "PCJ"

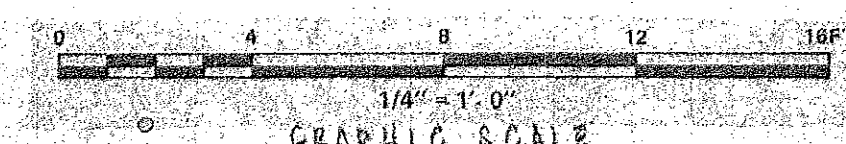
2. PROTECTIVE FINISH:

NOTES: 1. REMOVE ALL BURRS AND SHARP EDGES.

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCE ON DECIMALS $XX \pm .03$ ANGULAR $\pm 1/16$ $XXX \pm .005$ TOLERANCE ON FRACTIONS $\pm 1/32$ MACHINE FINISH $125 \mu$				DRAWN P.F.F.		DATE		CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CALIF.	
NEXT ASSEMBLY				CHECKED J.W.		DATE		TITLE ELECTRICAL FIRST FLOOR PLAN	
DRAWING NO.				APPROVED		DATE		SUBMITTER HAWAII KEA, HAWAII	
ITEM QTY				WEIGHT		DWSA SIZE		DWSA NO.	
APPLICABLE DOC				SCALE $1/4" = 1'-0"$		E		E10MD	
FILE NO.				I.W.O.		DEPT		SHEET 2 OF 2	

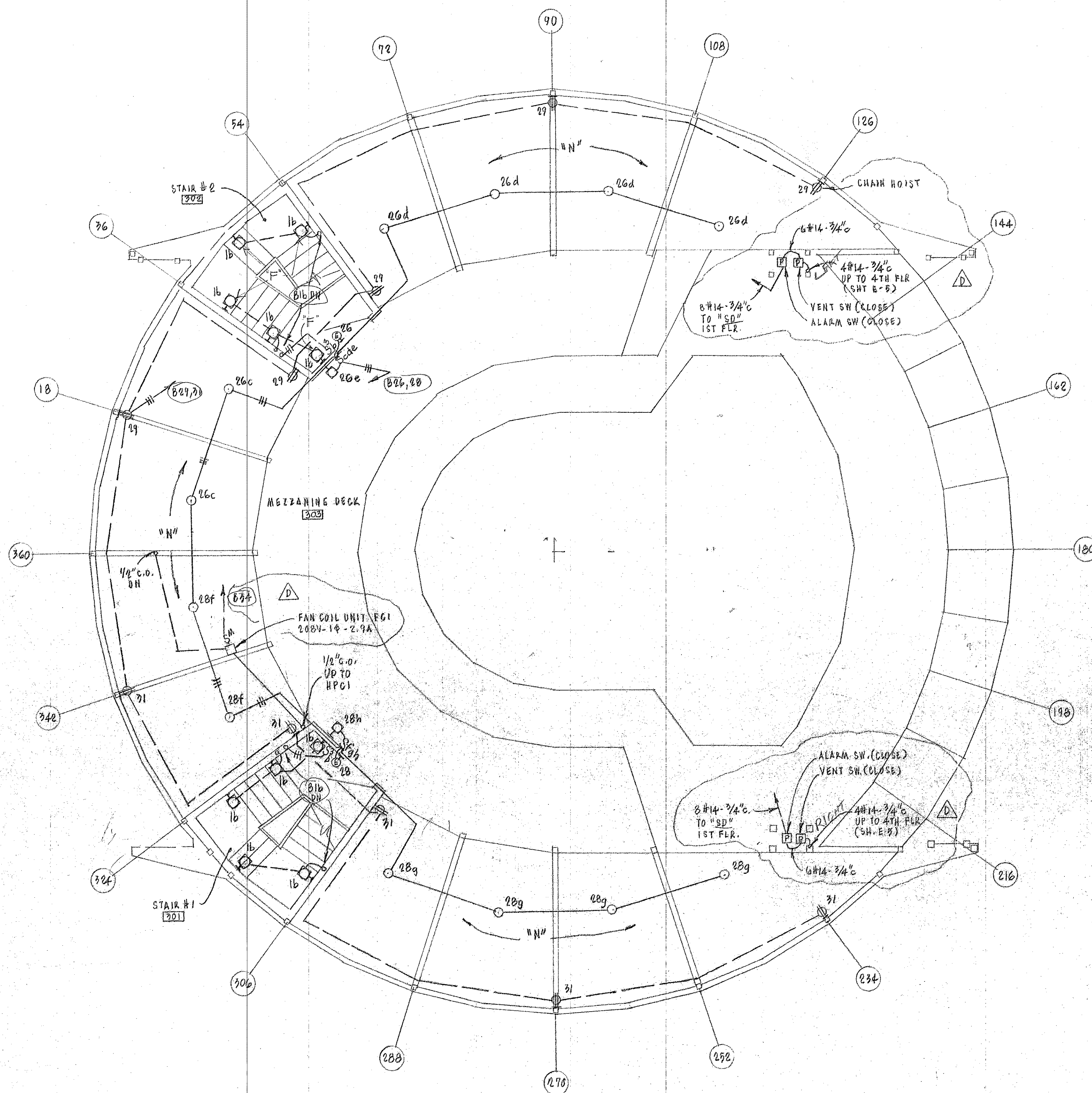


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Albert A. Chomsky

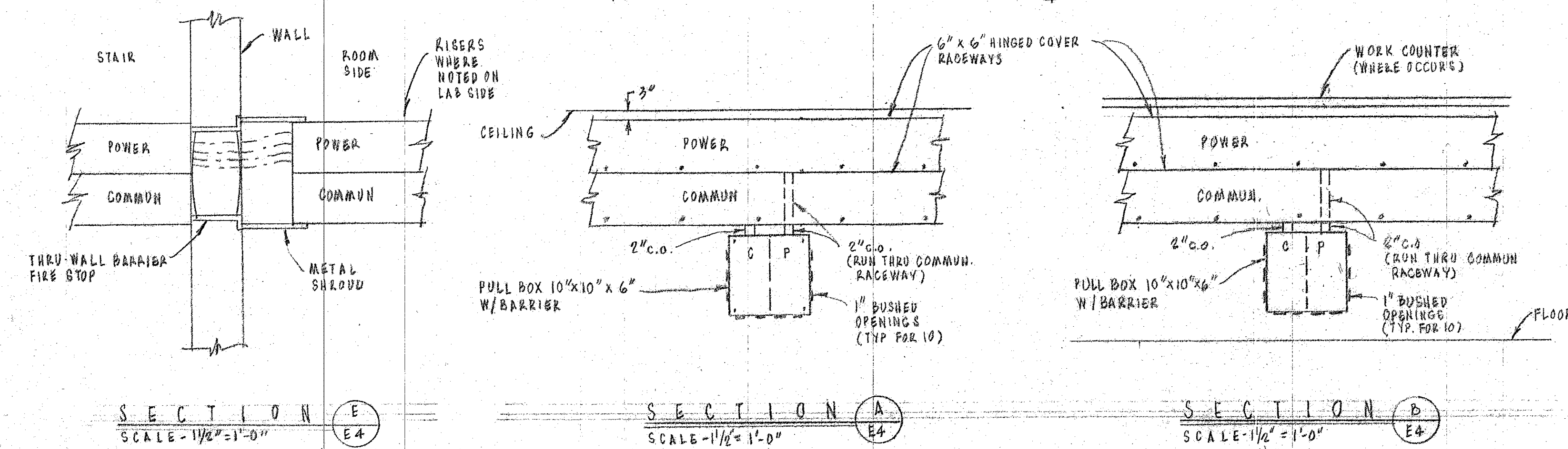




LIST OF MATERIALS				
ITEM	QTY	DESCRIPTION	MATERIAL OR SOURCE OF SUPPLY	UNIT WT.



THIRD FLOOR PLAN  
SCALE - 1/4" = 1'-0"



SECTION E  
SCALE - 1/2" = 1'-0"

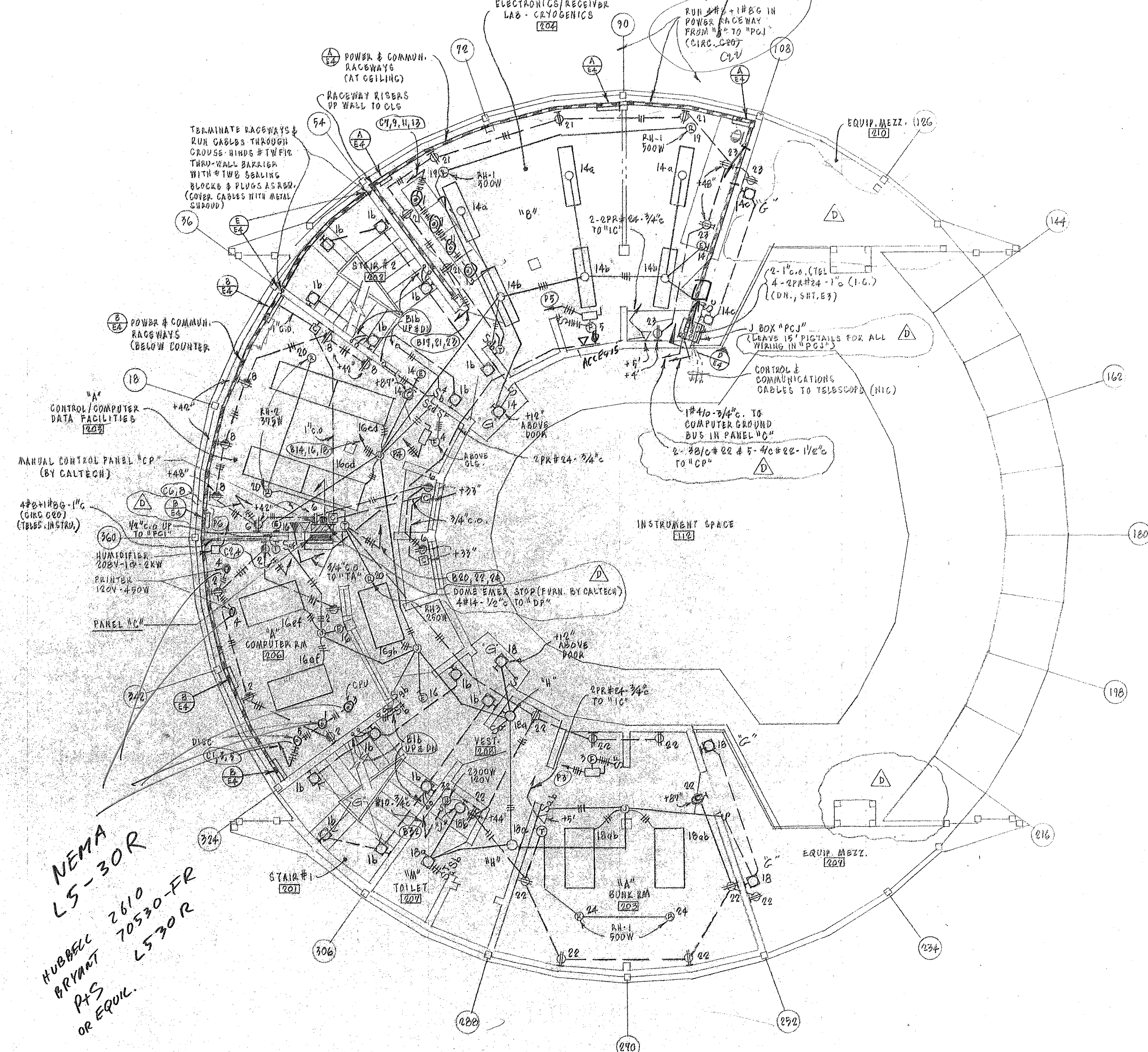
SECTION A  
SCALE - 1/2" = 1'-0"

SECTION B  
SCALE - 1/2" = 1'-0"

SECTION C  
SCALE - 3/8" = 1'-0"

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

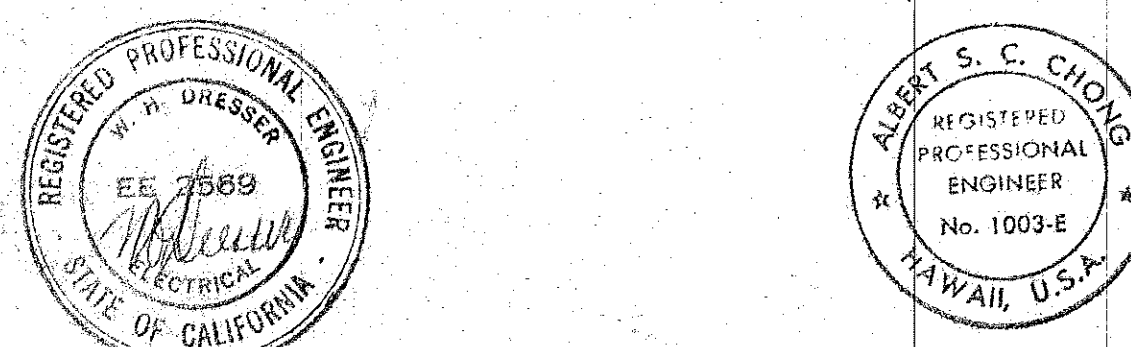
NEMA  
LS-30R  
HUBBELL  
BRYANT  
P&S  
OR EQUIV.



SECOND FLOOR PLAN  
SCALE - 1/4" = 1'-0"

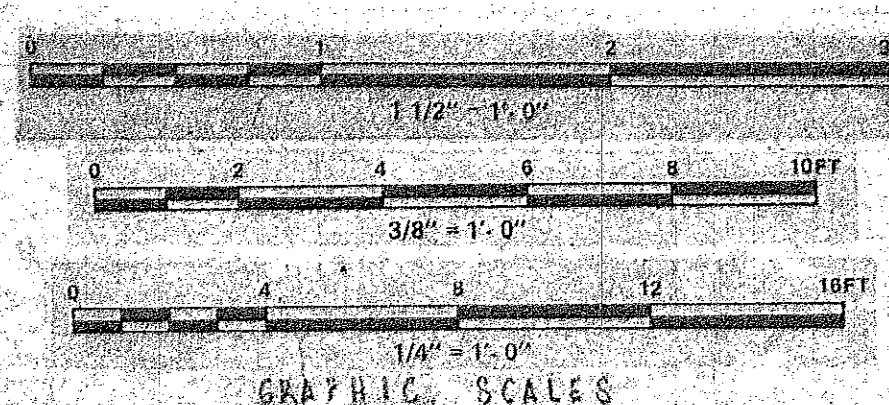
- NOTE -
1. TYPE "A" FLUORESCENT FIXTURES ARE INBOARD/OUTBOARD 1/2 SWITCHED.
  2. VERIFY LOCATION OF ALL EQUIPMENT.
  3. RUN A GREEN GROUND WIRE IN ALL EQUIPMENT CONDUITS.
  4. ISOLATED GROUND RECEIPLACES IN RMS. 205, 206 & 207 SHALL HAVE GREEN WIRES CONNECTED TO ISOLATED GROUND BUS IN PANEL "C" (COMPUTER GROUND).
  5. RECESSED WALL LIGHT FIXTURES ARE TYPE "B".

2. PROTECTIVE FINISH:  
NOTES: 1. REMOVE ALL BURRS AND SHARP EDGES.



POOR & DRESSER  
ELECTRICAL CONSULTANTS  
PASADENA, CALIF.

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*Albert S. Chung*

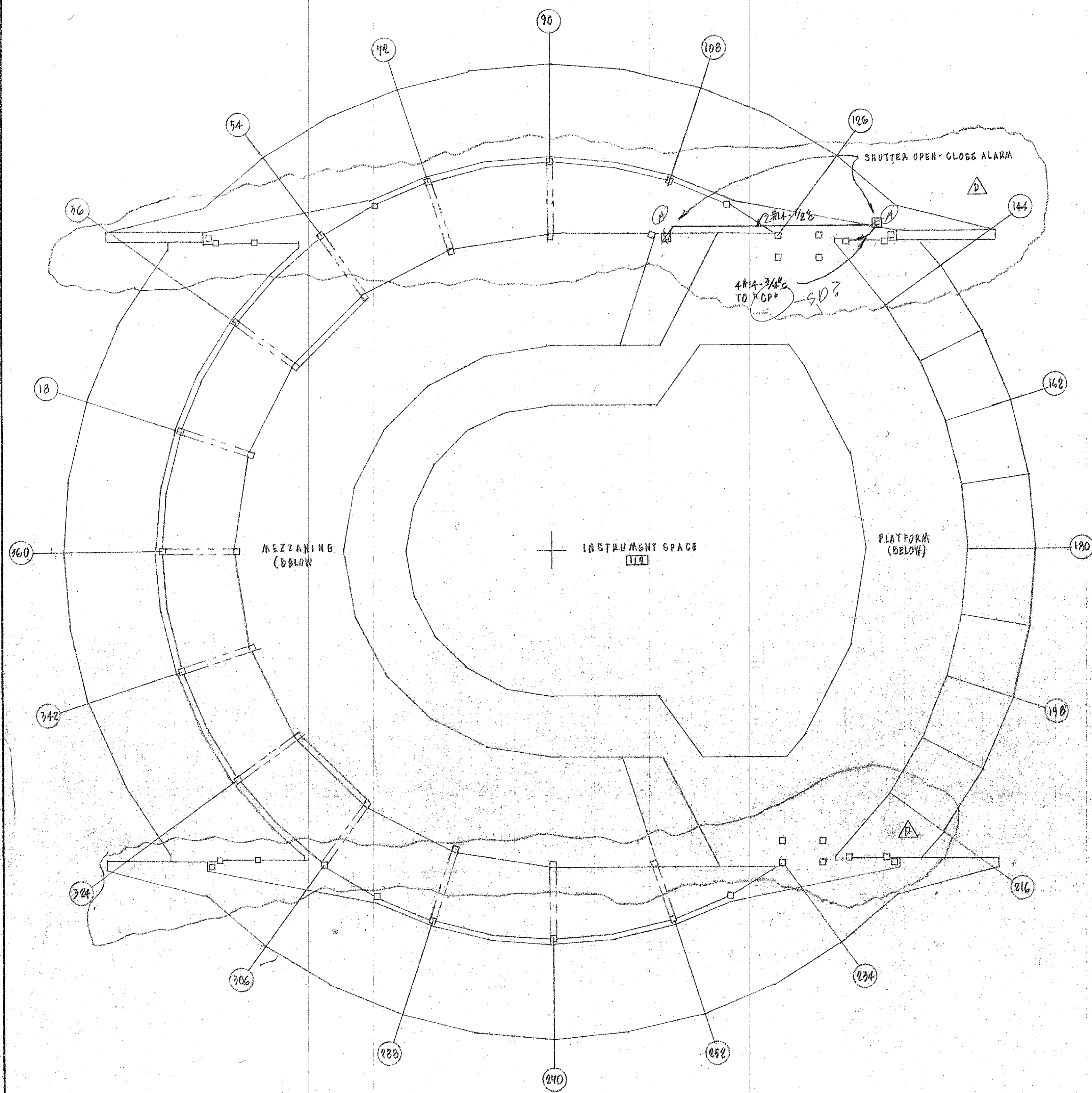


REVISION	DESCRIPTION	DATE	APPROVED
1	REVISED POSITION SWG, EMER STOP SWG	9-17-85	JWP
2	"PCJ" & ADDED PULL BOX	10-20-84	H/W
3	HAWAII ERECTION EXP. SET	12-20-84	H/W

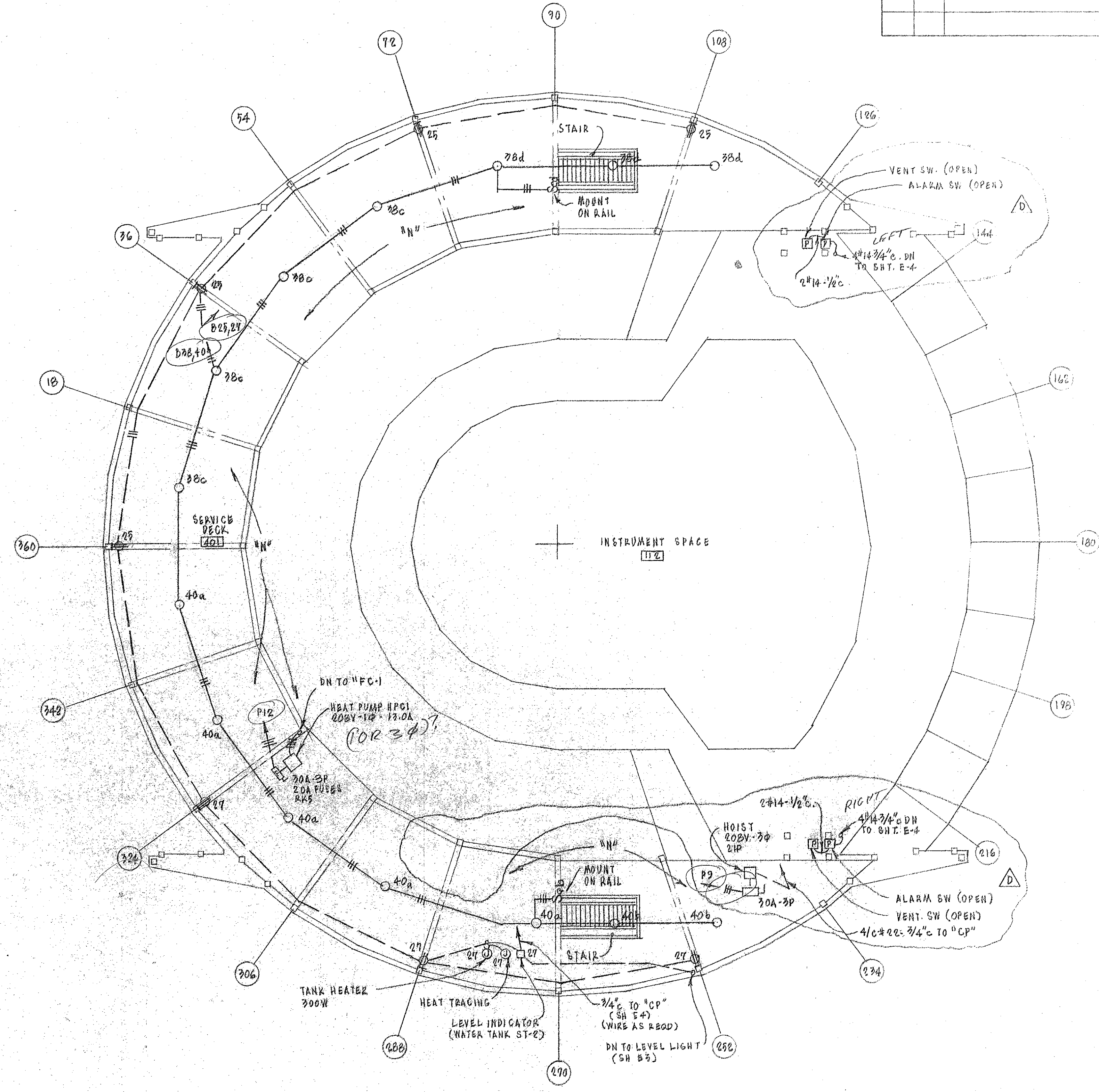
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES	DATE
TOLERANCE ON DECIMALS XX = ± .01	
TOLERANCE ON FRACTIONS ± 1/16	
MACHINE FINISH 12"	
NEXT ASSEMBLY	
DRAWING NO.	
ITEM	
QTY	
APPROVED	
APPLICABLE GDS	

CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CALIF.			
TITLE	DATE	SCALE	DWG. NO.
ELECTRICAL SECOND & THIRD FLOOR PLANS SUNLIGHTER OBSERVATORY MAUNA KEA, HAWAII		AS NOTED	E10MP
FILE NO.	W.O.	DEPT.	





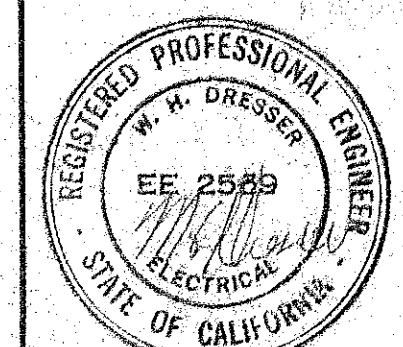
FIFTH LEVEL PLAN  
SCALE - 1/4" = 1'-0"



FOURTH FLOOR PLAN  
SCALE - 1/4" = 1'-0"

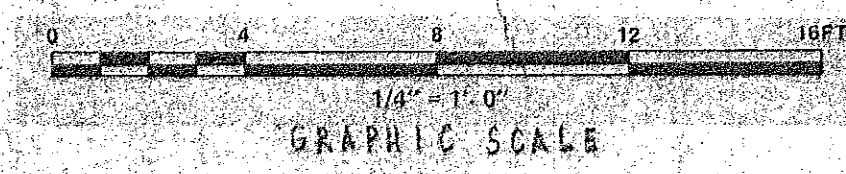
NOTE -

1. VERIFY LOCATION OF ALL EQUIPMENT.
2. RUN A GREEN GROUND WIRE IN ALL BUILDING.



POOR & DRESSER  
ELECTRICAL CONSULTANTS  
PASADENA, CALIF.

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OR UNDER MY SUPERVISION  
*Albert S. C. Chong*



REVISION	DESCRIPTION	DATE	APPRO
1	DEDICATED HOIST & REVISED POSITION & LIMIT SWITCHES	9-14-85	WHP
2	HAWAII ERECTION - BID SET	12-20-84	WHP

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES	
TOLERANCE ON DECIMALS	XX ± .03
TOLERANCE ON ANGULAR	ANGULAR ± 1/2°
TOLERANCE ON FRACTIONS	FRACTIONS ± 1/16
TOLERANCE ON MACHINE FINISH	MACHINE FINISH 12/

DATE	BY	DATE	BY
DESIGNED	DATE	CHECKED	DATE
APPROVED	DATE	APPROVED	DATE
APPROVED	DATE	APPROVED	DATE

NOTES: 1. REMOVE ALL EXISTING EQUIPMENT  
2. PROTECTIVE FENCING

CALIFORNIA STATE ENGINEER