SINGLE LINE DIAGRAMS

ELECTRICAL LOAD CALCULATIONS

CODE LOAD:

A. GENERAL USE LOADS (GUEST ROOMS)
2VA/S.F. [PER 1993 NEC ARTICLE 220-3(b)]

1st FLOOR:	5,899 S.F. x 2VA	11,798 VA	
2nd FLOOR:	10,795 S.F. x 2VA	21,590	
3rd FLOOR:	10,795 S.F. x 2VA	21,590	
4th FLOOR:	10,795 S.F. x 2VA	21,590	
SUBTOTAL		76,568	
100 ROOMS w/GFI @ 1200VA/RM		120,000	
100 ROOMS w/HAIR DRYER @ 1500VA/RM		150,000	
SUBTOTAL		346,568	
DEMAND FACTOR PER TABLE 220-11	FIRST 20kVA x 50%:	10,000	
	NEXT 80kVA x 40%:	32,000	
	REMAINDER x 30%:	73,970	
	SUBTOTAL		115,970

B. LIGHTING (CORRIDOR, PUBLIC & UTILITY AREAS)

PANEL J:	6,096 CONNECTED x 125%	7,620 VA	
PANEL K:	1,320 CONNECTED x 125%	1,650	
PANEL M:	13,140 CONNECTED x 125%	16,425	
PANEL Q:	1,404 CONNECTED x 125%	1,755	
PANEL T:	1,404 CONNECTED x 125%	1,755	
PANEL W:	1,404 CONNECTED x 125%	1,755	
SUBTOTAL		30,960	

C. RECEPTACLES (CORRIDOR, PUBLIC & UTILITY AREAS)

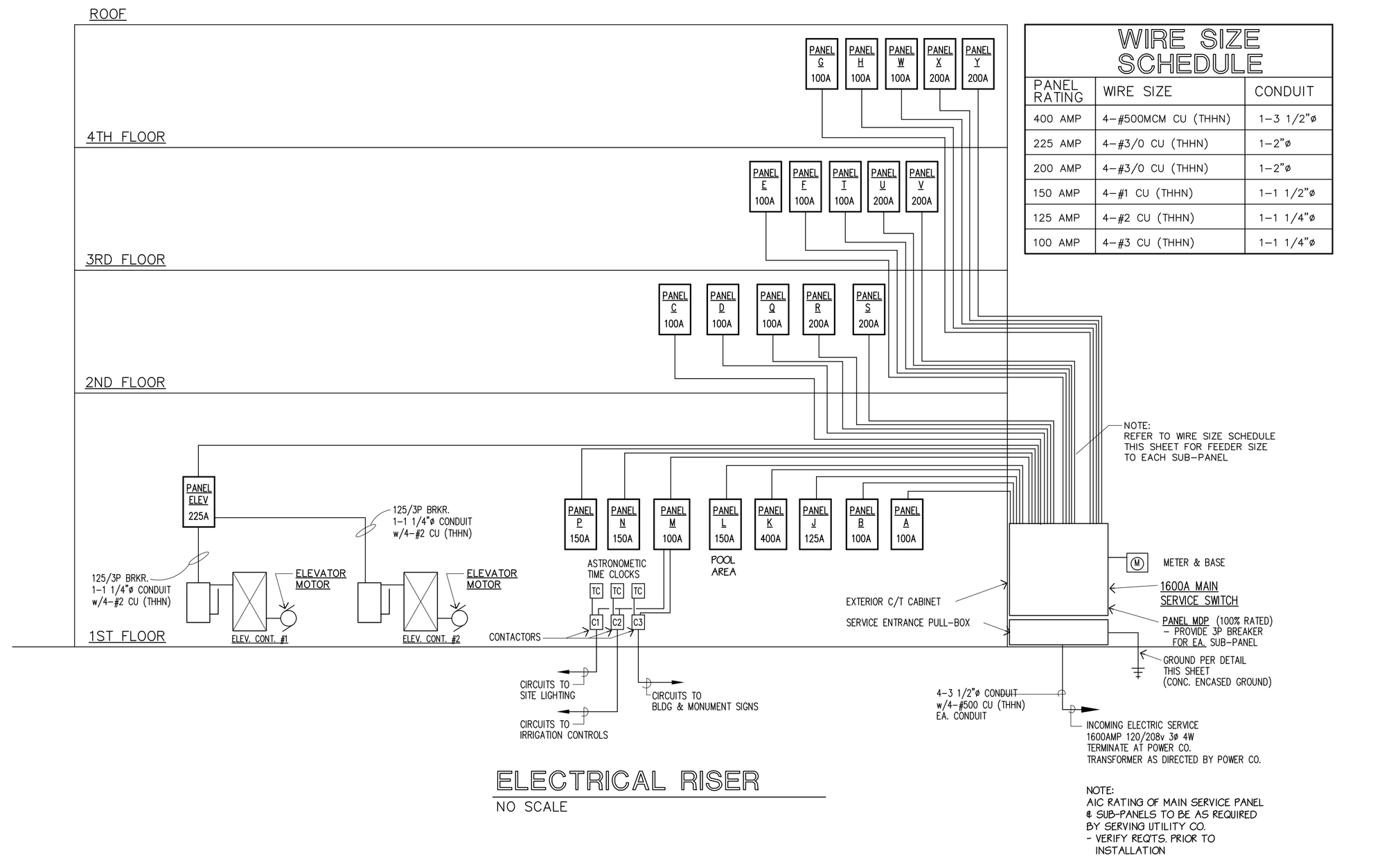
PANEL J:	17,040 CONNECTED	17,040 VA	
PANEL K:	2,160 CONNECTED	2,160	
PANEL Q:	3,600 CONNECTED	3,600	
PANEL T:	3,600 CONNECTED	3,600	
PANEL W:	3,600 CONNECTED	3,600	
SUBTOTAL		30,000	
DEMAND FACTOR PER TABLE 220-13	FIRST 10kVA x 100%:	10,000	
	REMAINDER x 50%:	10,000	
	SUBTOTAL		20,000
D. LAUNDRY EQUIPMENT (100%)			72,192
E. POOL/SPA EQUIPMENT (100%)			10,000
F. SERVING AREA	2,100 CONNECTED x 65%		1,365

G. MOTORS

GUEST ROOM HEAT PUMPS:	100 @ 912 VA EA.	91,200 VA	
ELEVATOR: (LARGEST MOTOR)	2 @ 31,700 VA EA.	63,400	
DEHUMIDIFIER (FUTURE):	1 @ 9,000 VA EA.	9,000	
DEHUMIDIFER COMPRESSOR (FUTURE):	2 @ 1,800 VA EA.	1,800	
FAN COIL UNITS:	1 @ 1,320 VA EA.	1,320	
	1 @ 768 VA EA.	768	
REMOTE HEAT PUMPS:	1 @ 6,840 VA EA.	6,840	
	1 @ 5,652 VA EA.	5,652	
CORRIDOR HEAT PUMPS:	7 @ 1,176 VA EA.	7,056	
LAUNDRY HEAT PUMPS:	7 @ 1,536 VA EA.	1,536	
LAUNDRY HEAT PUMPS:	20 @ 120 VA EA.	2400	
25% LARGEST MOTOR:		7,925	
SUBTOTAL			200,697
TOTAL CODE VOLT/AMPS			451,184 VA

$$\text{TOTAL CODE AMPS} = \frac{451{,}184\ \text{VA}}{(208)(1.732)} = 1{,}252.4\ \text{AMPS}$$

1,600 AMP MAIN SERVICE REQUIRED (100% RATED)



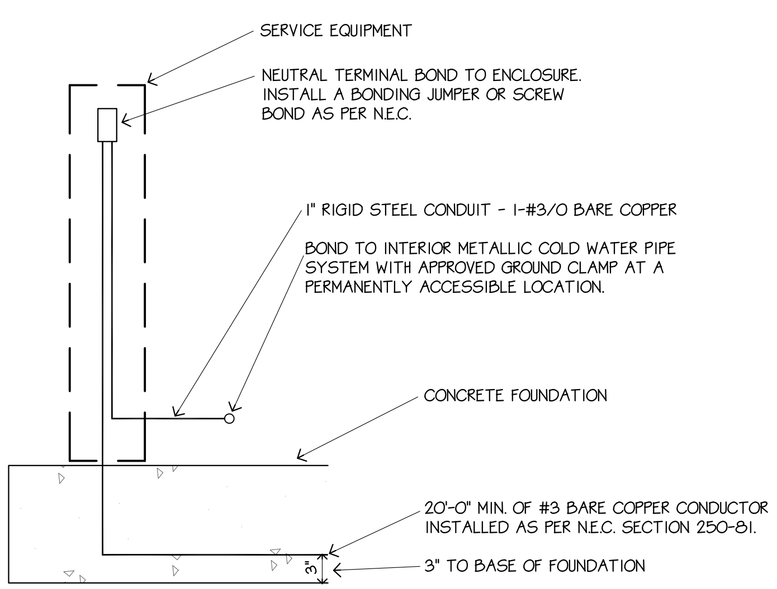
NOTE:
AIC RATING OF MAIN SERVICE PANEL & SUB-PANELS TO BE AS REQUIRED BY SERVING UTILITY CO.
- VERIFY REQTS. PRIOR TO INSTALLATION

WIRE SIZE SCHEDULE

PANEL RATING	WIRE SIZE	CONDUIT
400 AMP	4-#500MCM CU (THHN)	1-3 1/2"ø
225 AMP	4-#3/0 CU (THHN)	1-2"ø
200 AMP	4-#3/0 CU (THHN)	1-2"ø
150 AMP	4-#1 CU (THHN)	1-1 1/2"ø
125 AMP	4-#2 CU (THHN)	1-1 1/4"ø
100 AMP	4-#3 CU (THHN)	1-1 1/4"ø

ELECTRICAL RISER

NO SCALE



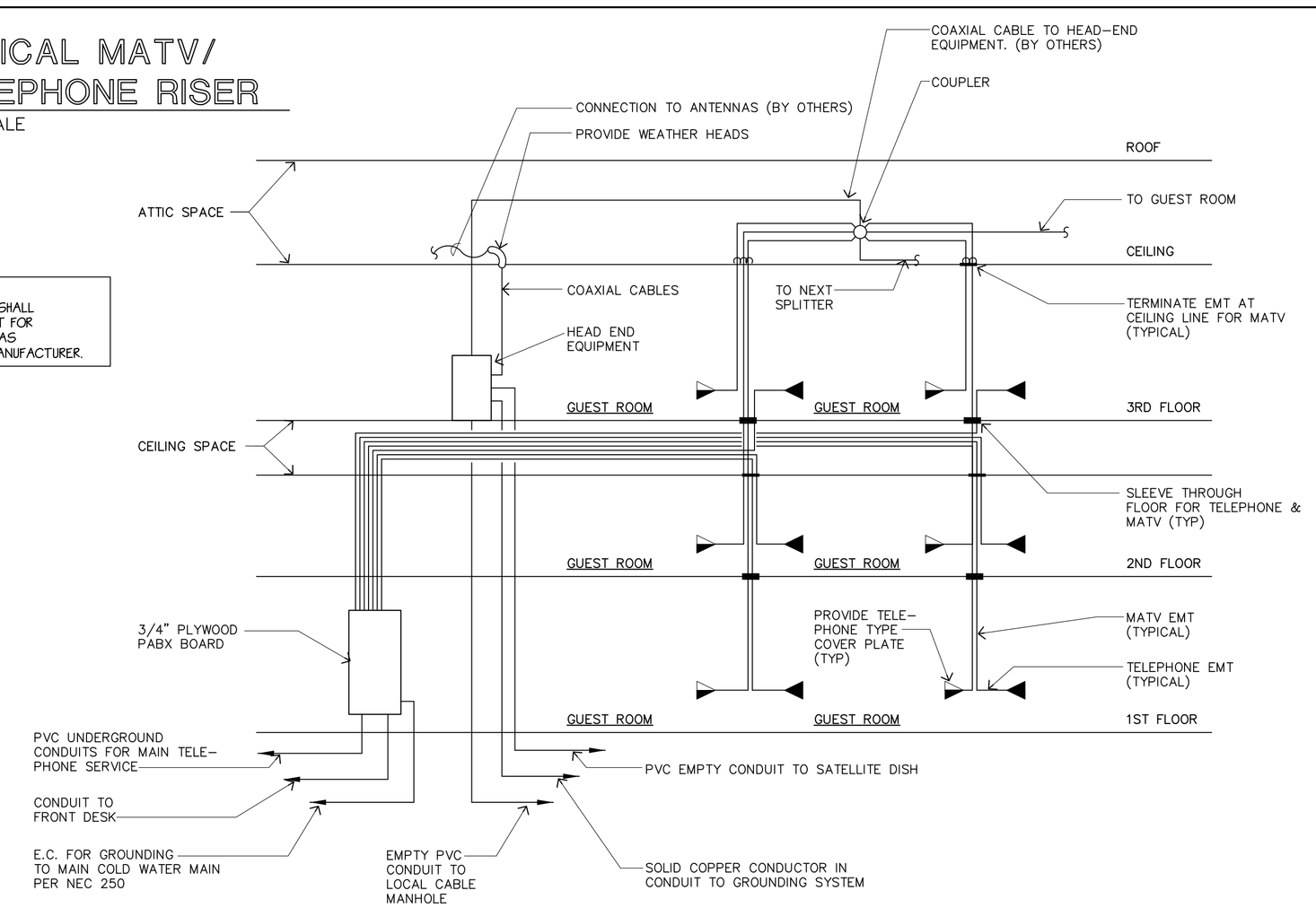
CONCRETE ENCASED GROUND DETAIL

NO SCALE

TYPICAL MATV/ TELEPHONE RISER

NO SCALE

NOTE
ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RIGID CONDUIT FOR ANTENNAS INSTALLATION AS REQUIRED BY EQUIPMENT MANUFACTURER.



12/19/97
LICENSED ARCHITECT
LEE GAGE
C-6718
REN. 1-31-99
STATE OF CALIFORNIA

C:\SDSKPROJ\SOUTHSFO\DWG\SFO-E9.DWG

LEE GAGE C-6718

© LEE GAGE & ASSOC.

lee gage & associates
architects • engineers • planners
7636 n. ingram suite 107 fresno, california 93711 phone (209) 439-2222

THESE DRAWINGS, DESIGNS, SPECIFICATIONS, IDEAS & ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF LEE GAGE & ASSOCIATES, AND WERE CREATED AND DEVELOPED BY AND FOR THE ARCHITECT'S USE ON WORK PERFORMED IN ASSOCIATION WITH THE ARCHITECT'S WORK. NOTHING CONTAINED OR REPRESENTED ON THESE DOCUMENTS SHALL BE USED BY ANYONE EXCEPT THE ARCHITECT'S CLIENT FOR ANY PURPOSE WITHOUT EXPRESSED WRITTEN CONSENT OF LEE GAGE & ASSOCIATES.

PROPOSED:
HAMPTON INN
CORPORATE DRIVE
SOUTH SAN FRANCISCO, CA.

by	date
drawn	
checked	
revised	
revised	
project no.	

E9

sheet SET NO.