

ELECTRICAL PLAN CONSTRUCTION NOTES:

- REMOVE AND REPLACE EXISTING EXTERIOR LIGHT FIXTURE WITH NEW EXTERIOR OCCUPANCY-SENSING LIGHT FIXTURE. MAINTAIN EXISTING BRANCH CIRCUIT CURRENTLY CONTROLLED BY TIME-CLOCK.
- REMOVE AND REPLACE EXISTING LIGHT FIXTURES IN COMMON AREAS WITH NEW OCCUPANCY-SENSING LIGHT FIXTURES. MAINTAIN ALL EXISTING LIGHTING CONTROL. MAINTAIN EXISTING BRANCH CIRCUITS CURRENTLY SERVING THESE FIXTURES. MODIFY WIRING AS REQUIRED TO ACCOMMODATE NEW LOCATIONS OF FIXTURES WHERE INDICATED.
- PROVIDE CEILING MOUNTED RECEPTACLE INSTALLED IN OUTDOOR ENCLOSURE FOR NEW OVERHEAD GARAGE DOOR OPERATOR. INCLUDE ALL ASSOCIATED WIRING FOR INSTALLATION OF PUSHBUTTON STATIONS, LIMIT SWITCHES, ETC. FOR COMPLETE OPERATION IN PER IN ACCORDANCE WITH MANUFACTURER'S WIRING DIAGRAM. CONNECT A MAXIMUM OF THREE OPENERS TO A SINGLE 20A-120V-1Ø BRANCH CIRCUIT IN "HOUSE" PANEL.
- DISCONNECT ALL EXISTING ELECTRICAL SERVICES, BRANCH CIRCUIT WIRING, ETC. TO ACCOMMODATE BOILER SYSTEM REPLACEMENT AND RELATED PUMPS, CONTROL DEVICES, ETC. REPLACE EXISTING DISCONNECT SWITCHES, DEVICES, WIRING, IMPROPERLY SIZED EQUIPMENT, ETC. FOR COMPLETE REPLACEMENT IN ACCORDANCE WITH ALL N.E.C. REQUIREMENTS. COORDINATE ALL WORK WITH MECHANICAL AND PLUMBING DRAWINGS, RESPECTIVE CONTRACTORS, ETC.
- DISCONNECT ALL EXISTING ELECTRICAL SERVICES, BRANCH CIRCUIT WIRING, ETC. TO ACCOMMODATE CHILLER SYSTEM REPLACEMENT AND RELATED PUMPS, CONTROL DEVICES, ETC. REPLACE EXISTING DISCONNECT SWITCHES, DEVICES, WIRING, IMPROPERLY SIZED EQUIPMENT, ETC. FOR COMPLETE REPLACEMENT IN ACCORDANCE WITH ALL N.E.C. REQUIREMENTS. CHILLER IS SERVED FROM A SEPARATE 200A-240V-1Ø UTILITY SERVICE (125 AMP FUSING). WIRING SHALL BE 3Ø/1Ø, 1Ø/Ø, 1-1/2". EXISTING WIRING MAY BE REUSED, HOWEVER, THE E.C. SHALL CONFIRM AND NOTIFY THE ENGINEER UPON CONFIRMATION. BASE BID SHALL INCLUDE REPLACEMENT WITH NEW, COORDINATE ALL WORK WITH MECHANICAL AND PLUMBING DRAWINGS, RESPECTIVE CONTRACTORS, ETC.
- LOCATION OF NEW (REPLACEMENT) "HOUSE" PANEL. COORDINATE AND LOCATE IN COMPLIANCE WITH N.E.C. ARTICLE #110.
- PROVIDE A 4' x 4' x 3/4" THICK PLYWOOD BACKBOARD(S) FINISHED WITH FIRE RETARDANT PAINT FOR CABLE/ANTENNA TELEVISION TERMINAL BOARD. INCLUDE A COPPER BUS BAR KIT AND RUN A #6 AWG CONDUCTOR TO SERVICE. COORDINATE LOCATION, COORDINATE FINAL LOCATION IN FIELD WITH OWNER AND EXISTING CONDITIONS. PROVIDE A TYPE #RG6, DUAL COAXIAL CABLE WITH INDIVIDUAL INSULATION ROUTED TO EACH APARTMENT. VERIFY EXACT ROUTING IN FIELD WITH OWNER FOR A CONCEALED INSTALLATION. INCLUDE ALL COSTS ASSOCIATED WITH THE CABLE RUN. INCLUDE AND TERMINATE AT A SPLITTER AT EACH APARTMENT AND INSTALL IN AN ACCESSIBLE LOCATION APPROVED BY THE OWNER. THE ROUTING OF ANY SURFACE MOUNTED CONDUIT MUST BE APPROVED BY THE ARCHITECT/OWNER PRIOR TO ANY INSTALLATION.
- EXISTING SERVICE FOR BUILDING #3 CHILLER IS A 100 AMP SERVICE. THIS SERVICE MUST BE INCREASED TO ACCOMMODATE NEW CHILLER (105.5MCA-240V-3Ø). REMOVE AND REPLACE EXISTING 100A-3Ø MAIN SERVICE SWITCH AND REPLACE WITH NEW 200A-3Ø, U.L. LISTED "SERVICE ENTRANCE" RATED DISCONNECT SWITCH WITH 125A FUSING. COORDINATE WITH LOCAL UTILITY AND INCLUDE ALL FEES, COSTS, ETC. ASSOCIATED WITH SERVICE INCREASE. REFER TO NOTE 5 ABOVE FOR ADDITIONAL INFORMATION RELATED TO RELATED EQUIPMENT, DEVICES, ETC. AND WIRE SIZE.
- LOCATION OF EXISTING APARTMENT SERVICE EQUIPMENT METERS, TIME CLOCK, ETC. TO BE MODIFIED, REPLACED, ETC. AS INDICATED ON POWER RISER DIAGRAM.
- LOCATION OF 200A-3Ø (240V) MAIN SERVICE SWITCH SERVING CHILLER. REFER TO NOTE 5 ABOVE FOR ADDITIONAL INFORMATION.
- IT IS THE INTENT FOR THE E.C. TO MODIFY THE EXISTING BRANCH CIRCUIT SERVING STAIRWAY LIGHTING TO BE CONTROLLED BY A NEW ELECTRONIC, ASTRONOMIC, DPST TIME PROVIDE MULTIPLE POLE ELECTRICALLY HELD CONTACTOR FOR CONTROL OF MULTIPLE BRANCH CIRCUITS (VERIFY NUMBER OF POLES). TIME CLOCK SHALL BE INTERMATIC #ET103C WITH INTEGRAL NEMA 1 ENCLOSURE. LOCATE ADJACENT "HOUSE" PANEL LOCATION OR AS OTHERWISE DIRECTED BY OWNER.
- REMOVE EXISTING APARTMENT ENTRY INTERCOM SYSTEM WITH ALL RELATED EQUIPMENT, WIRING TO APARTMENT, ETC. REPLACE WITH NEW, LCD DISPLAY, DOOR CONTROL, RELAYS, SPEAKER, SURGE PROTECTION, INTEGRAL SOFTWARE, CLOCK, CALENDAR AND ALL RELATED PROGRAMMING FOR COMPLETE INSTALLATION. INCLUDE TELEPHONE WIRING TO EXISTING TELEPHONE TERMINAL BOARD/CABINET AND ELECTRIC STRIKE (PROVIDED BY OTHERS). PROVIDE ALL MATERIAL AND LABOR REQUIRED FOR COMPLETE VOICE OPERATION AND DOOR RELEASE OPERATION. ENTRY SYSTEM SHALL BE SELECT ENGINEERED SYSTEMS, INC. #TEICA.

INDIVIDUAL APARTMENT ELECTRICAL SERVICE CALCULATION

APARTMENT TYPE	AREA (SQ. FT.)	LIGHTING	SMALL APPLIANCE	REFRIG	DISH WASHER	ELECTRIC RANGE	GARBAGE DISPOSER	WASHING MACHINE	DRYER	HEATER #1	HEATER #2	FAN COIL UNITS	TOTAL V _{ad}	FLA
A	1400.0	4200.0	3000	620	1000	7600	450	1500	5000	500	500	100	24470	102
B	1400.0	4200.0	3000	620	1000	7600	450	1500	5000	500	500	100	24470	102
C	1280.0	3840.0	3000	620	1000	7600	450	1500	5000	500	500	100	24110	100

BUILDING 1 - ELECTRIC SERVICE CALCULATION

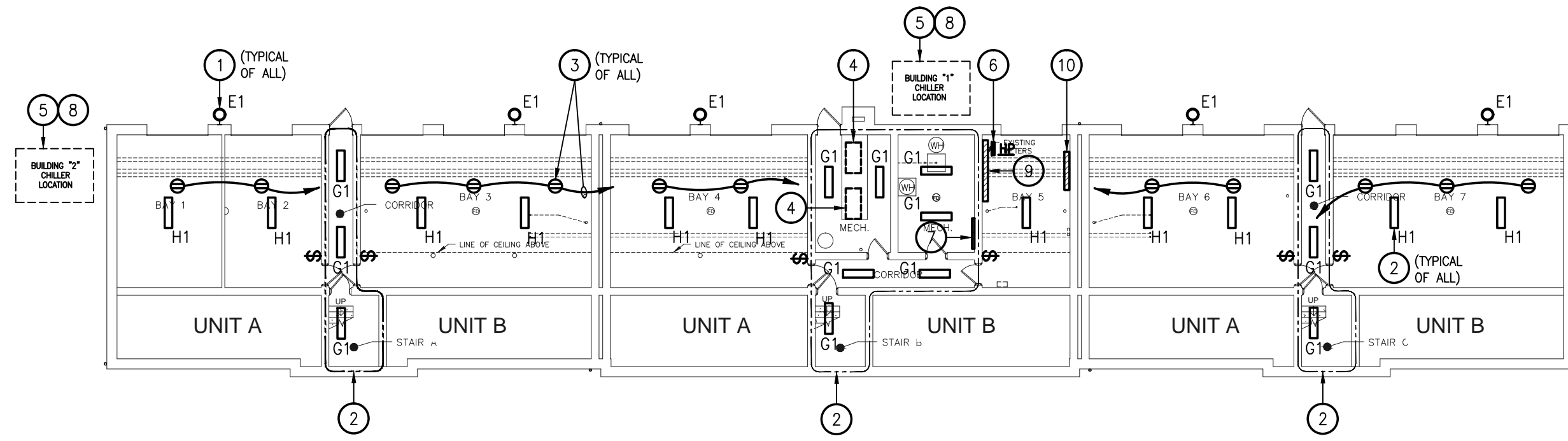
DESCRIPTION	AREA	QUANTITY	LOAD	TOTAL	N.E.C. ARTICLE
TOTAL OF 12 APARTMENTS					
TYPICAL A UNIT	1400.0	12	3	50400 (50400)	220.84(c)(1)
SMALL APPLIANCE CIRCUITS (2X1500)		12	3000	36000	220.84(c)(2)
REFRIGERATOR		12	620	7440	220.84(c)(3)
ELECTRIC RANGE		12	7600	91200	220.84(c)(3)
WASHER		12	1500	18000	220.84(c)(3)
DRYER		12	5000	60000	220.84(c)(3)
DISPOSER		12	480	5760	220.84(c)(3)
DISHWASHER		12	1200	14400	220.84(c)(3)
FAN COIL UNITS		12	100	1200	220.84(c)(3)
HEATER #1		12	1000	12000	220.84(c)(3)
HEATER #2		12	1000	12000	220.84(c)(3)
TOTAL CONNECTED LOAD	-	-	-	258000 (258000)	
DEMAND FACTOR		41%	-	126444	TABLE 220.84
AMPS AT 120/240V-1Ø-3W				527	

BUILDING 2 - ELECTRIC SERVICE CALCULATION

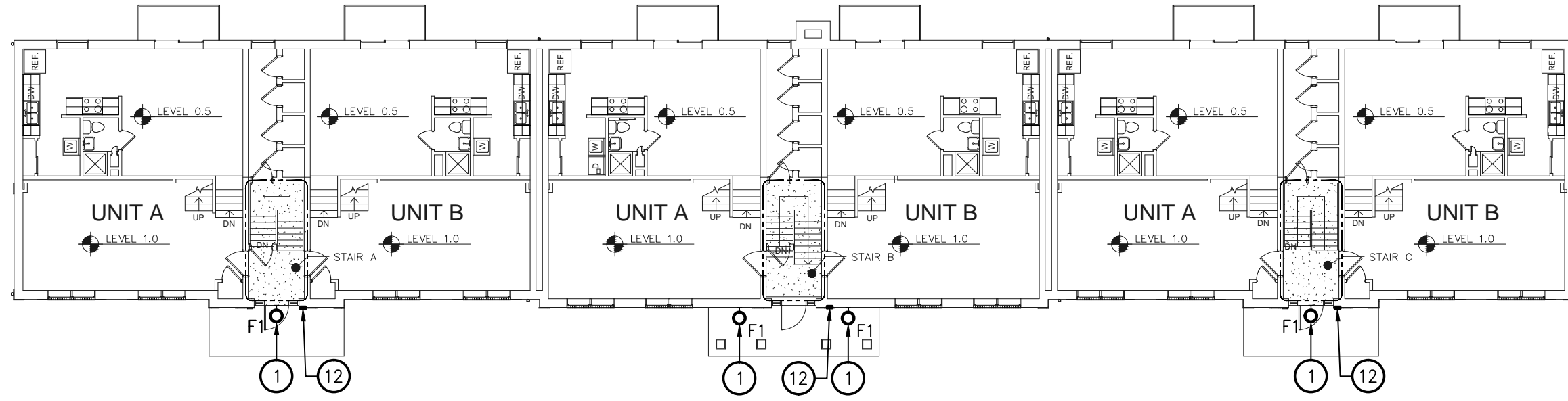
DESCRIPTION	AREA	QUANTITY	LOAD	TOTAL	N.E.C. ARTICLE
TOTAL OF 12 APARTMENTS					
TYPICAL B UNIT	1400.0	12	3	50400 (50400)	220.84(c)(1)
SMALL APPLIANCE CIRCUITS (2X1500)		12	3000	36000	220.84(c)(2)
REFRIGERATOR		12	620	7440	220.84(c)(3)
ELECTRIC RANGE		12	7600	91200	220.84(c)(3)
WASHER		12	1500	18000	220.84(c)(3)
DRYER		12	5000	60000	220.84(c)(3)
DISPOSER		12	480	5760	220.84(c)(3)
DISHWASHER		12	1200	14400	220.84(c)(3)
FAN COIL UNITS		12	100	1200	220.84(c)(3)
HEATER #1		12	1000	12000	220.84(c)(3)
HEATER #2		12	1000	12000	220.84(c)(3)
TOTAL CONNECTED LOAD	-	-	-	308400 (258000)	
DEMAND FACTOR		41%	-	126444	TABLE 220.84
AMPS AT 120/240V-1Ø-3W				527	

BUILDING 3 - ELECTRIC SERVICE CALCULATION

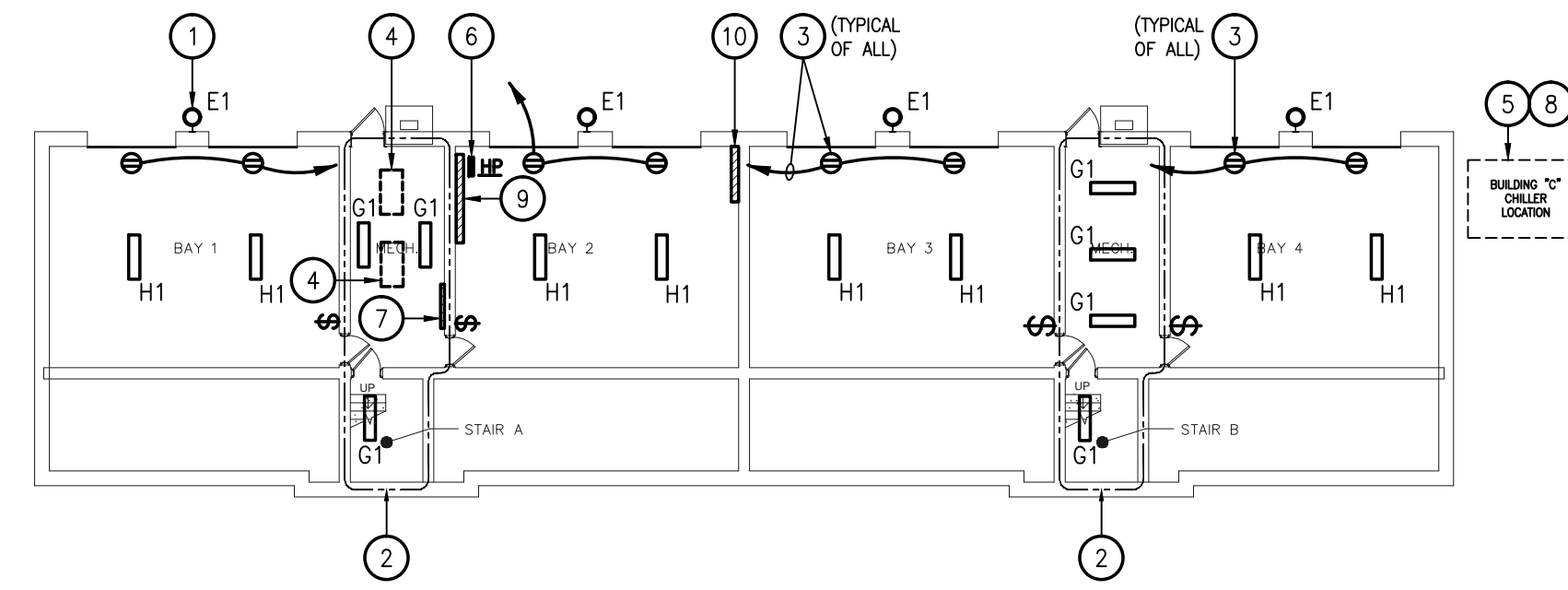
DESCRIPTION	AREA	QUANTITY	LOAD	TOTAL	N.E.C. ARTICLE
TOTAL OF 8 APARTMENTS					
TYPICAL C UNIT	1280.0	8	3	30720 (30720)	220.84(c)(1)
SMALL APPLIANCE CIRCUITS (2X1500)		8	3000	24000	220.84(c)(2)
REFRIGERATOR		8	620	4960	220.84(c)(3)
ELECTRIC RANGE		8	7600	60800	220.84(c)(3)
WASHER		8	1500	12000	220.84(c)(3)
DRYER		8	5000	40000	220.84(c)(3)
DISPOSER		8	480	3840	220.84(c)(3)
DISHWASHER		8	1200	9600	220.84(c)(3)
FAN COIL UNITS		8	100	800	220.84(c)(3)
HEATER #1		8	1000	8000	220.84(c)(3)
HEATER #2		8	1000	8000	220.84(c)(3)
TOTAL CONNECTED LOAD	-	-	-	172000 (172000)	
DEMAND FACTOR		43%	-	87170	TABLE 220.84
AMPS AT 120/240V-1Ø-3W				363	



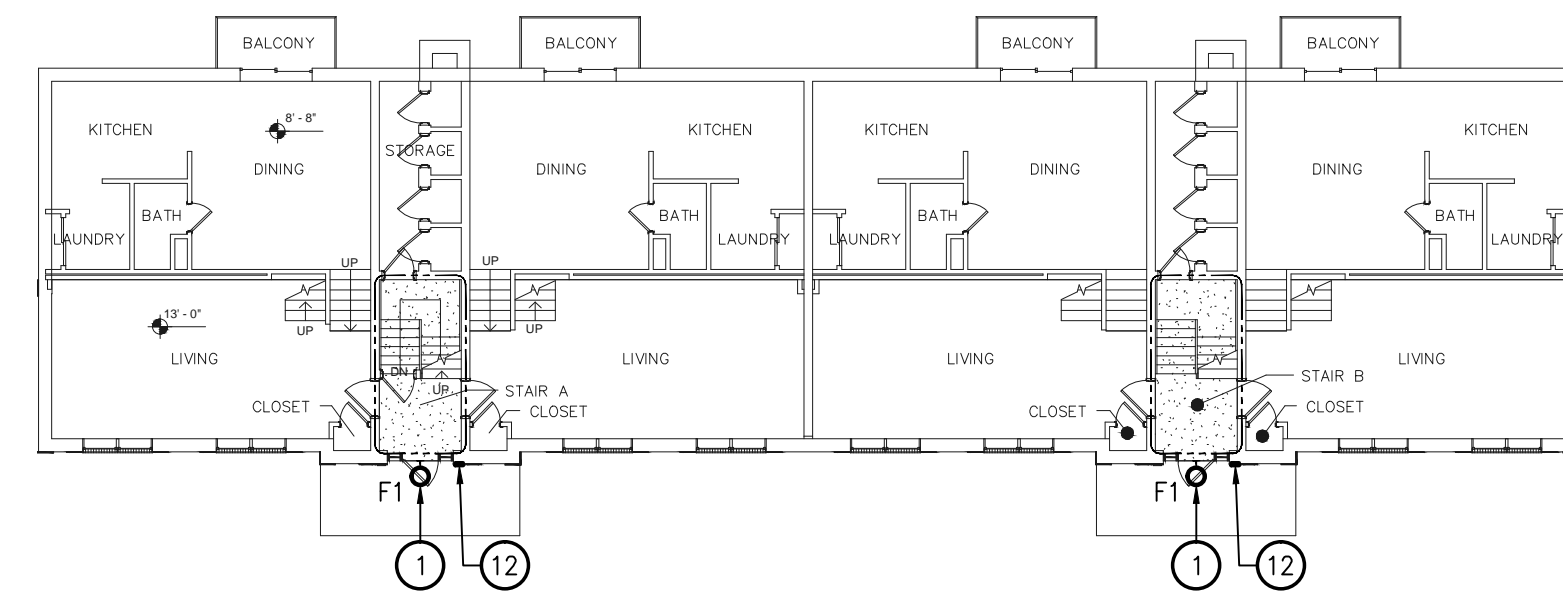
BUILDINGS 1 & 2:
LEVEL 0 ELECTRICAL PLAN
1 E2.01 SCALE: 1/16" = 1'-0"



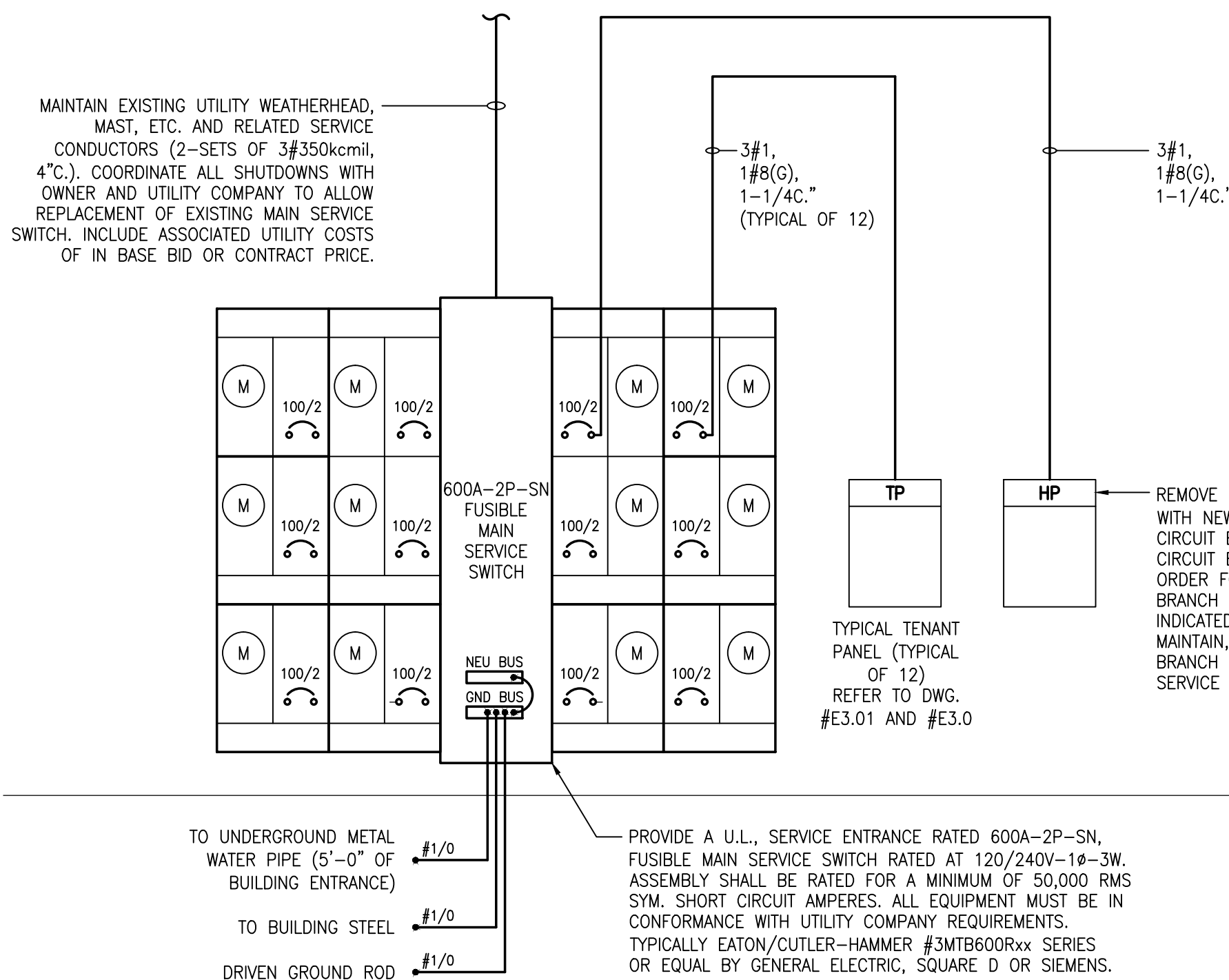
BUILDINGS 1 & 2:
EXTERIOR ELECTRICAL PLAN
3 E2.01 SCALE: 1/16" = 1'-0"



BUILDING 3:
LEVEL 0 ELECTRICAL PLAN
2 E2.01 SCALE: 1/16" = 1'-0"



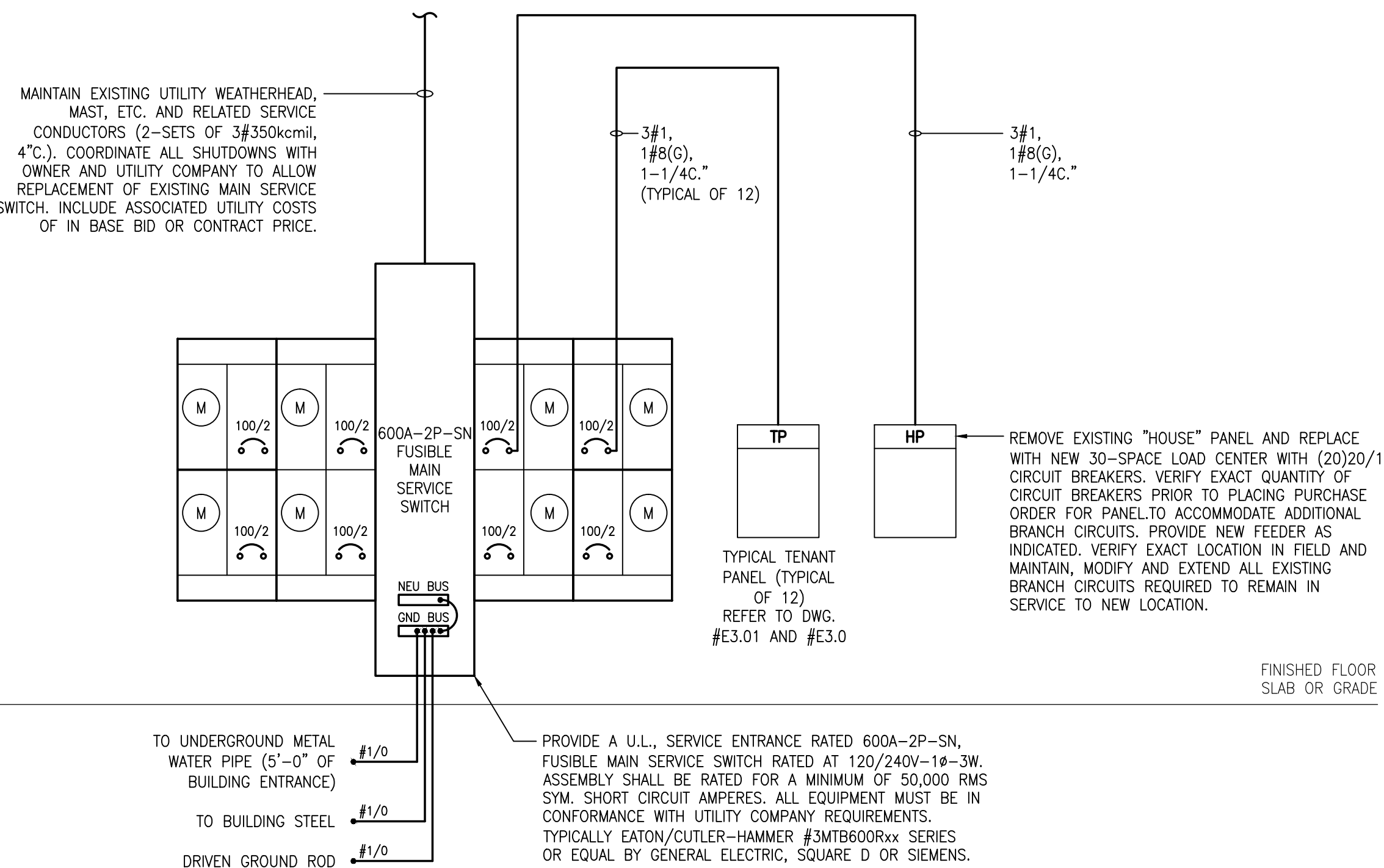
BUILDING 3:
EXTERIOR ELECTRICAL PLAN
4 E2.01 SCALE: 1/16" = 1'-0"



BUILDING #1 & #2 - SINGLE-LINE POWER RISER DIAGRAM
(120/240V-1Ø-3W) NO SCALE

GENERAL SERVICE NOTE:

IT IS THE INTENT TO REMOVE THE EXISTING 600A-2P MAIN SERVICE SWITCH AND 2-CIRCUIT BREAKER PANEL ENCLOSURES, RELATED WIREWAYS, METERS, ETC. AT THE MAIN SERVICE LOCATION. EACH EXISTING APARTMENT IS CURRENTLY SERVED WITH A 60 AMP FEEDER (PANEL) AND A 40 AMP FEEDER (ELECTRIC RANGE). REMOVE EXISTING FEEDER AND REPLACE WITH A SINGLE 100A FEEDER. COORDINATE EXACT ROUTE OF NEW APARTMENT FEEDERS UP TO EACH APARTMENT. INCLUDE ALL COSTS ASSOCIATED WITH REMOVE DRYWALL, CORE DRILLING, ETC. FOR A CONCEALED INSTALLATION. INCLUDE ALL WEATHER SEAL, FIRE STOPPING, ETC. TO MAINTAIN FIRE RATING OF ALL CONSTRUCTION ASSEMBLIES. THE ROUTING OF ALL SURFACE MOUNTED CONDUIT MUST BE SUBMITTED AND APPROVED BY THE ARCHITECT AND ENGINEER PRIOR TO COMMENCEMENT OF WORK.

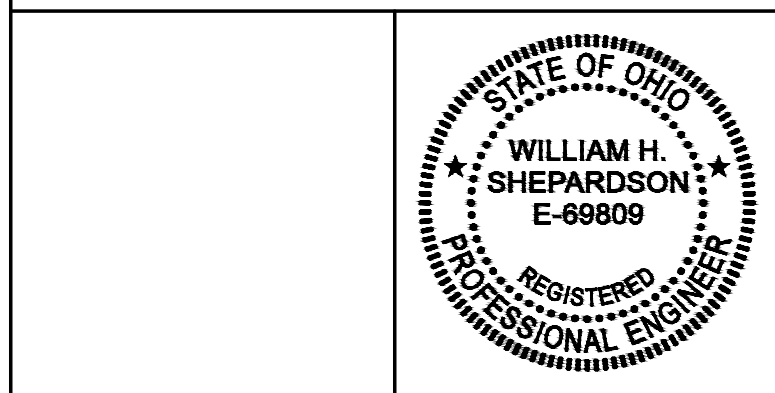


BUILDING #3 - SINGLE-LINE POWER RISER DIAGRAM
(120/240V-1Ø-3W) NO SCALE

GENERAL SERVICE NOTE:

IT IS THE INTENT TO REMOVE THE EXISTING 600A-2P MAIN SERVICE SWITCH AND 2-CIRCUIT BREAKER PANEL ENCLOSURES, RELATED WIREWAYS, METERS, ETC. AT THE MAIN SERVICE LOCATION. EACH EXISTING APARTMENT IS CURRENTLY SERVED WITH A 60 AMP FEEDER (PANEL) AND A 40 AMP FEEDER (ELECTRIC RANGE). REMOVE EXISTING FEEDER AND REPLACE WITH A SINGLE 100A FEEDER. COORDINATE EXACT ROUTE OF NEW APARTMENT FEEDERS UP TO EACH APARTMENT. INCLUDE ALL COSTS ASSOCIATED WITH REMOVE DRYWALL, CORE DRILLING, ETC. FOR A CONCEALED INSTALLATION. INCLUDE ALL WEATHER SEAL, FIRE STOPPING, ETC. TO MAINTAIN FIRE RATING OF ALL CONSTRUCTION ASSEMBLIES. THE ROUTING OF ALL SURFACE MOUNTED CONDUIT MUST BE SUBMITTED AND APPROVED BY THE ARCHITECT AND ENGINEER PRIOR TO COMMENCEMENT OF WORK.

DATE	DESCRIPTION
10.23.2013	Issued for 60% Owner Review
11.06.2013	Issued for 100% Owner Review
12.09.2013	Issued for Permit and Bidding



a 3109 Mayfield Road, Suite 201 p 216.932.1890
Cleveland, OH 44118 f 216.932.1891
w www.LDAarchitecture.com

Horizon Hills

Cincinnati Metropolitan Housing Authority
Intersection at Grand and Warsaw Avenue,
Cincinnati, OH 45204

LDA Project No. 13.25

Overall Electrical Plans
Calcs & Diagrams

E2.01