## **ELECTRICAL SPECIFICATIONS**

DIVISION 16

ELECTRICAL

SECTION A: GENERAL ELECTRICAL REQUIREMENTS

I. THESE PLANS AND SPECIFICATIONS APPLY TO THE VIEWPOINT CONDOMINIUM, ST. SIMONS ISLAND, GEORGIA. THE WORK DESCRIBED BY THESE PLANS AND SPECIFICATIONS APPLY TO THE INDICATED PROJECT AND MAY NOT BE MODIFIED OR REUSED WITHOUT WRITTEN APPROVAL OF THE ENGINEER. . ALL WORK SHALL BE PERFORMED BY LICENSED ELECTRICAL CONTRACTOR WITH MINIMUM OF TWO YEARS OF EXPERIENCE. LIST OF PREVIOUS JOBS AND REFERENCES SHALL BE MADE AVAILABLE UPON REQUEST. CONTRACTOR SHALL PROVIDE ADEQUATE INSURANCE FOR PERSONNEL AND SHALL REPAIR ANY DAMAGE OCCURRING AS THE

RESULT OF THIS PROJECT SITE AND RELATED PROPERTY. \_WORK SHALL BE PERFORMED IN A PROFESSIONAL MANNER IN ACCORDANCE WITH HE (OI) NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE NFPA 101, ADA CODE, GA CESSIBILITY CODE, STATE OF GEORGIA ENERGY CODE AND ALL OTHER APPLICABLE CODES AND ORDINANCES.

4. ALL PERMITS AND FEES SHALL BE OBATINED AND PAID FOR BY THE CONTRACTOR. 5. ALL EQUIPMENT, MATERIAL, AND DEVICES SHALL BE LISTED OR RECOGNIZED BY UNDERWRITER'S LABORATORY OR ELECTRICAL TESTING LABORATORY AND USED AND INSTALLED IN ACCORDANCE WITH IT'S LISTING.

6. ALL WORK PERFORMED SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR FROM THE THE FINAL COMPLETION DATE EXCEPT FOR FUSES AND LAMPS IN LIGHT FIXTURES. UPON NOTIFICATION OF A PROBLEM, THE CONTRACTOR SHALL INVESTIGATE THE PROBLEM. WITHIN 48 HOURS UNLESS A DIFFERENT TIME PERIOD IS AGREED TO. THE CONTRACTOR SHALL INVESTIGATE REPAIR OR REPLACE ALL FAULTY EQUIPMENT WITHIN A REASONABLE TIME PERIOD WITHOUT CHARGE TO THE OWNER.

. THE TERM "PROVIDE" SHALL BE UNDERSTOOD TO MEAN, OBTAIN THE ITEM DESCRIBED, INSTALL ITEM IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, AND MANUFACTURER'S RECOMMENDATIONS.

8. ALL PENETRATIONS MADE IN FIRE RATED BUILDING PORTIONS SHALL BE SEALED WITH A LISTED RESISTANT MATERIAL SUITABLE FOR THE APPLICATION.

9. ALL INSTALLATIONS OF ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION. IO. PLANS ARE DIAGRAMMATIC AND SHOW THE LOCATION OF THE EQUIPMENT, RACEWAY AND FIXTURES, AND ARE NOT TO BE SCALED. ALL DIMENSIONS SHALL BE VERIFIED AT THE BUILDING SITE.

I. CONTRACTOR SHALL VERIFY AND COORDINATE ALL EQUIPMENT AND DEVICE LOCATIONS WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.

12. EQUIPMENT BREAKER AND WIRING REQUIREMENTS; THE CONTRACTOR SHALL SUBMIT FOR REVIEW A TABULATED SHEET OF EQUIPMENT BREAKER AND WIRING REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT REQUIRING POWER AS SPECIFIED IN DIVISION 15. REQUIREMENTS SHALL BE IDENTIFIED BY HORSEPOWER OR KW, OPERATING AMPERAGE, REQUIRED VOLTAGE AND PHASE REQUIREMENTS, AND MANUFACTURERS SUGGESTED OVERCURRENT CIRCUIT PROTECTION DEVICE SIZE AND MINIMUM CIRCUIT AMPACITY SIZE. WHERE THE ELECTRICAL REQUIREMENTS SUBMITTED FOR MECHANICAL EQUIPMENT DIFFERS FROM THE BRANCH CIRCUITRY SHOWN ON THE ELECTRICAL DRAWINGS (WHEN USING THE BASIS OF DESIGN UNIT LISTED IN THE MECHANICAL SCHEDULES/SPECIFICATIONS OR A SIMILAR UNIT OF THE SAME SIZE FROM LISTED ALTERNATE MANUFACTURERS). THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS TO THE BRANCH CIRCUITRY PER THE CURRENT NEC AT NO ADDITIONAL COST TO THE OWNER. WHEN CHANGES ARE MADE TO POWER REQUIREMENTS FOR EQUIPMENT DUE TO OWNER.ARCHITECT/ENGINEER APPROVED VALUE ENGINEERING CHANGES TO EQUIPMENT, THE COST MUST NE INCLUDED IN THE VALUE ENGINEERING VERALL CHANGE ORDER COST. COSTS DUE TO ADJUSTMENTS IN BRANCH CIRCUITRY TO EQUIPMENT DUE TO VALUE ENGINEERING CHANGES WILL NOT BE ALLOWED AFTER THE OVERALL VALUE ENGINEERING CHANGE ORDER HAS BEEN APPROVED. IN ALL CASES, POWER WIRING REQUIREMENTS FOR MECHANICAL EQUIPMENT MUST BE PROVIDED TO THE ENGINEER BEFORE OR AT THE SAME TIME AS THE SHOP DRAWINGS FOR THE ELECTRICAL DISTRIBUTION GEAR OR EQUIPMENT. IN NO CASE SHALL THE ELECTRICAL DISTRIBUTION GEAR OR EQUIPMENT BE ORDERED OR BRANCH CIRCUITRY ROUGHED IN PRIOR TO ENGINEER REVIEW AND COMMENT ON THIS DOCUMENT. ANY EQUIPMENT ORDERED OR BRANCH CIRCUITRY ROUGHED IN ON THE JOBSITE WITHOUT THIS REVIEW AND COMMENT WILL BE TOTALLY AT THE CONTRACTORS RISK.

## SECTION B: BASIC MATERIALS

.ALL CONDUCTORS USED FOR 600 VOLTS OR LESS SHALL BE HIGH GRADE COPPER CONDUCTORS WITH 75 DEGREE C, THW THERMOPLASTIC INSULATION. ALL CONDUCTORS SHALL BE MADE IN THE USA, ALL CONDUCTORS ROUTED IN UNDERGROUND CONDUIT OR IN OR BELOW THE DFE SHALL BE RATED FOR WET LOCATIONS. . ALL INTERIOR 120 VOLT,20 AMP POWER AND LIGHTING WIRING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING OR "MC" CABLE (IF NOT EXPOSED) FOR ALL INTERIOR CIRCUITS UNLESS OTHERWISE NOTED. IF "MC" CABLE IS USED, HOMERUNS SHALL BE IN 5/4 IN.EMT.POWER CIRCUITS FOR HVAC EQUIPMENT SHALL BE IN ELECTRICAL METALIC CONDUIT. ALL CONDUIT SHALL BE SUPPORTED FROM BUILDING STRUCTURE. IT SHALL NOT BE SUPPORTED FROM DUCTWORK, PIPING, CEILING GRID OR CEILING GRID SUPPORTS OR ANY OTHER NON-STRUCTURAL ITEM, CONDUIT SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC. CONDUIT IN EXPOSED STRUCTURE AREAS SHALL BE EMT. GALVANIZED RIGID STEEL CONDUIT SHALL BE USED IN AREAS WHERE IT WILL BE EXPOSED TO PHYSICAL DAMAGE.

3. CONDUIT UNDERGROUND SHALL BE SCHEDULE 80 PVC. IF MORE THAN ONE CONDUIT S PROVIDED IN A SINGLE TRENCH, THE CONDUIT SHALL BE RACKED WITH SPACERS EVERY FOUR FEET TO MAINTAIN A MINIMUM SPACING BETWEEN CONDUIT OF TWO INCHES. BACKFILL USED FOR UNDERGROUND INSTALLATIONS SHALL BE FREE OF FOREIGN MATTER. WHERE EXPOSED TO WEATHER, CONDUIT SHALL BE GALVANIZED RIGID STEEL OR INTERMEDIATE METALLIC CONDUIT. THE CONDUIT SHALL BE TERMINATED WITH LISTED FITTINGS AND ALL CONDUIT ENDS SHALL BE REAMED AND SMOOTH. ALL CONDUIT ENDS IN BOXES SHALL BE PROVIDED WITH INSULATED BUSHINGS.

4. A #12 INSULATED COPPER GROUND CONDUCTOR SHALL BE INCLUDED IN ALL BRANCH CIRCUITS RATED 20 AMPERES. ALL OTHER CIRCUITS AND FEEDERS WILL BE PROVIDED WITH AN INSULATED COPPER CONDUCTOR SIZED AS NOTED OR IN ACCORDANCE WITH THE NEC.WHICHEVER IS GREATER.

5. THE MINIMUM SIZE OF ALL CONDUCTORS NOT OTHERWISE INDICATED IS #12 AND THE MINIMUM SIZE OF ALL CONDUIT UNLESS OTHERWISE INDICATED IS 1/2 IN. 6. ALL JUNCTION BOXES SHALL BE PROVIDED WITH COVERS AND ALL UNUSED OPENINGS SHALL BE PLUGGED. ALL JUNCTION BOXES SHALL BE INDEPENDENTLY SUPPORTED FROM TRUCTURE. COVERS OF BOXES SHALL BE LABELED WITH THE CIRCUIT NUMBER WITH A BLACK PERMANENT MARKER IN 3/4 IN. HIGH LETTERS (LEGIBLE HANDWRITTEN LETTERING

7, ALL OUTLET BOXES SHALL BE SQUARE METAL BOXES. PROVIDE PLASTER RINGS FOR ALL OUTLET BOXES CONTAINING DEVICES TO PROVIDE A FIRM MOUNTING SUPPORT FOR 8. ALL CONVENIENCE RECEPTACLES SHALL BE SPECIFICATION GRADE 20 AMP

9. ALL LIGHT SWITCHES SHALL BE SPECIFICATION GRADE 20 AMP TOGGLE SWITCHES FULL LOAD RATED FOR TUNGSTEN-HALOGEN LAMPS, OWNER TO SELECT COLOR.

IO. PROVIDE FACEPLATES FOR ALL RECEPTACLES AND SWITCHES. COORDINATE STYLE AND COLOR WITH OWNER'S PROJECT MANAGER. II. PROVIDE BETWEEN 12 AND 24 INCHES OF LIQUID TIGHT FLEXIBLE CONDUIT BETWEEN RIGID CONDUIT AND ANY EQUIPMENT CONTAINING MOTORS. THE FLEXIBLE CONDUIT SHALL BE SUPPORTED TO PREVENT THE CONDUIT FROM RESTING ON THE GROUND OR

2. PROVIDE WEATHERPROOF RECEPTACLE WITHIN 25 FEET OF EACH PIECE OF EXTERIOR EQUIPMENT. THIS RECEPTACLE SHALL BE MOUNTED HORIZONTALLY WITH METAL HINGED 'IN USE" COVER MOUNTED TO OPEN UP. THIS OUTLET SHALL BE A GFCIRECEPTACLE. THIS RECEPTACLE SHALL BE BE MOUNTED IN DIE CAST NON CORRODING METAL BOX. . WHEN OUTLETS OR BOXES ARE INDICATED INSTALLED ON OPPOSITE SIDES OF THE SAME WALL. THE CONTRACTOR SHALL ADJUST THE LOCATION TO OFFSET THE OUTLETS WITH A WALL STUD PROVIDING SEPERATION.

## SECTION C: DISTRIBUTION EQUIPMENT

CONCRETE PAD.

RECEPTACLES, OWNER TO SELECT COLOR.

. CONTRACTOR SHALL PROVIDE CONDUCTORS AND CONDUIT FOR ALL FEEDERS IN ACCORDANCE WITH THE PLANS. 2. SEPERATELY MOUNTED CIRCUIT BREAKERS SHALL BE MOUNTED IN NEMA TYPE I ENCLOSURES IN INDOOR APPLICATIONS AND IN NEMA 3R ENCLOSURES IN EXTERIOR OR WET LOCATIONS. ALL CIRCUIT BREAKER ENCLOSURES SHALL BE PROVIDED WITH HINGED COVERS AND PROVISIONS FOR PADLOCKING THE COVERS.

3. ALL EQUIPMENT CONTAINING MOTORS SHALL BE PROVIDED WITH A DISCONNECTING MEANS WITHIN TEN FEET OF THE UNIT UNLESS OTHERWISE NOTED. THIS DISCONNECTING MEANS SHALL AS A MINIMUM BE A NON-FUSED SWITCH OR TOGGLE STARTER SIZED TO MATCH THE EQUIPMENT. PROVIDE OTHER DEVICES AS NOTED ON THE PLANS. PROVIDE NEMA TYPE LENCLOSURES INDOORS AND NEMA 3R OUTDOORS.

4. PROVIDE GFCI CIRCUIT BREAKERS AND RECEPTACLES AS INDICATED ON THE PLANS AND IN THESE SPECIFICATIONS. THESE DEVICES SHALL BE CLASS A GFCI DEVICES.

5. PROVIDE PANELS AS SCHEDULED ON PLANS. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC BREAKERS WITH A MINIMUM INTERRUPTING RATING OF 10,000 AIC FOR 120/208V OR AS INDICATED ON THE PLANS. BREAKERS SHALL HAVE 65/75 DEGREE C RATED TERMINATIONS. PANEL NOTED SHALL BE SERVICE ENTRANCE RATED. MOUNT PANELS WITH TOP OF PANEL 6 FT. ABOVE FLOOR, PROVIDE 3/4 IN., GREY PAINTED PLYWOOD BACKBOARD FOR ALL PANELS SECURED TO WALL WITH 1/4 IN. TOGGLE BOLTS. PANEL MANUFACTURERS: SQUARE D, GE, SEIMENS, AND CULTER HAMMER. ALL CURRENT CARRYING PARTS SHALL BE COPPER. 6. SYSTEM COORDINATION: THE MANUFACTURER OF THE PANELBOARDS SHALL PROVIDE SERIES RATED EQUIPMENT BASED ON U.L.LISTED TEST RESULTS. THE CONTRACTOR SHALL VERIFY THE AVAILABLE SHORT CIRCUIT CURRENT AT THE SERVING TRANSFORMER.

7. PROVIDE EACH PANELBOARD WITH A TYPEWRITTEN CIRCUIT BREAKER DIRECTORY CARD INSIDE A PLASTIC COVERING (EVERY CIRCUIT AND CIRCUIT MODIFICATION SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. THE INDETIFICATION SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS). THE DIRECTORY AND COVERING SHALL BE LOCATED INSIDE A STEEL FRAME PROVIDED INSIDE THE DOOR OF EACH PANELBOARD. THE DIRECTORY SHALL BE TYPED TO IDENTIFY THE LOAD FED BY EACH CIRCUIT BREAKER AND THE AREAS SERVED.

8. PROVIDE NAMEPLATES FOR ALL PANELBOARDS, DISCONNECT SWITCHES, ENCLOSED CIRCUIT BRAKERS, COMBINATION STARTERS, CONTACTORS, AND ALL OTHER ELECTRICAL DISTRIBUTION EQUIPMENT PANELS, MOUNT NAMEPLATES ON EXTERIOR OF THE DOOR OF ALL SURFACE MOUNTED PANELS AND EQUIPMENT. NAME PLATES SHALL BE LAMINATED PLASTIC PLATES WITH 3/16 IN. HIGH WHITE LETTERS ETCHED ON BLACK BACKGROUND. NAME PLATES SHALL BE INSTALLED PARALLEL TO EQUIPMENT LINES. THE NAME OR USEAGE OF EACH DEVICE OR BRANCH CIRCUIT SHALL BE ETCHED IN THE NAMEPLATE. CONTRACTOR TO COORDINATE EXACT EQUIPMENT IDENTIFICATION WITH THE OWNER. SECURE NAMEPLATES VIA EPOXY GLUE.

#### SECTION D: LIGHTING

I. TYPES AND SPECIFIC REQUIREMENTS ARE PROVIDED ON THE LIGHTING FIXTURE SCHEDULE ON THE PLANS. ALL LIGHT FIXTURES SHALL BE PROVIDED WITH LAMPS, DRIVERS, BALLASTS, AND FULLY FUNCTIONING AT COMPLETION OF PROJECT. 2. ALL LED FIXTURES SHALL BE U.L. LISTED AND HAVE A MINIMUM OF 5 YEAR ON-SITE REPLACEMENT WARRANTY FOR DEFECTIVE OR NON-STARTING LED SOURCE ASSEMBLIES, DRIVERS, AND FOR LUMINAIRES EXHIBITING INADEQUATE LUMEN OUTPUT. IT SHALL COVER MATERIAL, FIXTURE FINISH, WORKMANSHIP, AND SHIPPING. ON-SITE REPLACEMENT SHALL INCLUDE TRANSPORTATION, REMOVAL, AND INSTALLATION OF NEW FIXTURE.

3. RATED LUMINAIRE WATTAGE SHALL BE ACTUAL, ACCOUNTING FOR ANY REDUCTION IN EFFICIENCY DUE TO SUB-OPTIMAL LOADING OF DRIVERS. 4. DRIVERS SHALL BE CAPABLE OF ACCEPTING THE VOLTAGE INDICATED ON THE LIGHTING FIXTURE SCHEDULE AND CAPABLE OF DIMMING IF REQUIRED. DRIVERS SHALL HAVE A CLASS A RATING, TOTAL HARMONIC DISTORTION OF LESS THAN 20%, AND SHALL NOT CONTAIN ANY POLYCHLORINATED BIPHENYL (PCB).

5. ALL LED FIXTURES SHALL BE TESTED TO IES LM-79 AND IES LM-80 STANDARDS. OUTDOOR FIXTURES SHALL BE 1P65 RATED. LED'S, DRIVERS AND ALL COMPONENTS SHALL HAVE A SYSTEM LIFETIME OF 50,000 HOURS OR MORE AT 25 DEGREES CELSIUS AND SHALL MAINTAIN A MINIMUM OF 85% OF INITIAL LUMEN OUTPUT AFTER 55,000 HOURS OF OPERATION. LED'S SHALL HAVE COLOR RENDERING INDEX (CRI) OF 80 OR GREATER.

6. ALL SURFACE MOUNTED FIXTURES SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE, ALL CEILING MOUNTED FIXTURES SHALL BE SUPPORTED FROM STRUCTURE AND BRACED TO PREVENT MOVEMENT IF IMPACTED. 7. ALL RECESSED FIXTURES IN LAY IN TYPE CEILINGS SHALL BE PROVIDED WITH GRID CLIPS TO FASTEN FIRMLY TO CEILING SUPPORT GRID. THE CEILING GRID SHALL BE SUPPORTED AT EACH CORNER OF A FIXTURE.

8. CONNECTION TO ALL FIXTURES IN LAYIN CEILING SHALL BE BY FLEXIBLE CONDUIT OF

FOUR TO SIX FEET IN LENGTH. A GROUND CONDUCTOR WILL BE INCLUDED WITH THIS 9. ALL LENSES ON FIXTURES SHALL BE 0.125 INCH THICK MINIMUM. ALL HOUSINGS SHALL BE 22 GAUGE STEEL MIN. AND HAVE A POST FABRICATION HIGH REFLECTIVE WHITE FINISH.

## SECTION E: FIRE ALARM SYSTEM

. ACCEPTABLE MANUFACTURERS: NOTIFIER, FIRE LITE, EDWARDS, SIMPLEX, OR SILENT KNIGHT 2. PROVIDE A COMPLETE OPERABLE FIRE ALARM SYSTEM FOR THIS PROJECT. THE MAIN PANEL SHALL BE LOCATED AS SHOWN. THE FIRE ALARM SYSTEM SHALL BE DESIGNED FOR CLASS B OPERATION. THE WIRING FOR THE FIRE ALARM SYSTEM SHALL INSTALLED IN 1/2 IN. ELECTRICAL METALLIC TUBING. PROVIDE INSULATED FITTINGS ON ALL CONDUIT ENDS. THE FIRE ALARM SHALL BE MADE IN THE USA AND BE UL LISTED. ALL WIRING AND DEVICES FOR THE SYSTEM SHALL BE SUPERVISED. COLOR CODE THE

3. THE MAIN PANEL SHALL HAVE A BATTERY BACKUP AND BE SURGE PROTECTED. THE BATTERY SHALL BE CAPABLE OF PROVIDING NORMAL OPERATION FOR A PERIOD OF 24 HOURS WITH ENOUGH RESERVE TO ANNUCIATE A BUILDING ALARM FOR 15 MINUTES. 4. NEW DEVICES SHALL BE PROVIDED WITH RECESSED METAL BOXES. ALL DEVICES SHALL BE MOUNTED FLUSH WITH WALL EXCEPT FOR PULL STATIONS WHICH SHALL BE 5. NEW HORN/STROBE DEVICES SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. THE SPEAKER SHALL PRODUCE A SOUND LEVEL OF 90 DECIBELS AND THE STROBE SHALL PRODUCE A FLASHUNG PULSE OF LIGHT OF 75

CONDUIT EVERY 24 IN. WITH RED MARKINGS (EXCEPT WHERE EXPOSED).

CANDELA. 6. STROBE DEVICES SHALL PRODUCE A FLASHING PULSE OF LIGHT OF 75 CANDELLA. 7. NEW PULL STATIONS SHALL BE NON-GLASS-BREAK TYPE AND KEYED THE SAME AS THE FIRE ALARM PANEL. 8. THE SMOKE DETECTORS SHALL BE THE PHOTOELECTRIC TYPE POWERED FROM THE

MAIN FIRE ALARM PANEL. 9. PROVIDE CEILING MOUNTED SMOKE ALARMS WITH AUDIO ANNUCIATION WHERE SHOWN. PROVIDE 9 VOLT BATTERY BACKUP. UNIT SHALL BE NORMALLY FED FROM NEAREST 120V CIRCUIT WITHIN SLEEPING UNIT UNLESS OTHERWISE NOTED ON DRAWINGS. UNIT SHALL ONLY ANNUNCIATE LOCALLY.

10. THE GENERAL BUILDING ALARM WILL SOUND WHEN ACTIVATED AT THE CONTROL PANEL, BY SMOKE OR HEAT DETECTORS, OR BY A PULL STATION. ALARM WILL ALSO SOUND WHEN ACTIVATED BY A DUCT SMOKE DETECTOR OR SPRINKLER.

II. THE MAIN PANEL SHALL PROVIDE INDICATION OF EACH INITIATING DEVICE LOCATION FOR ALARM, TROUBLE AND SUPERVISORY CONDITIONS. THE PANEL SHALL HAVE LAMP EST, ALARM SILENCE, TROUBLE AND SUPERVISORY SILENCE, SYSTEM RESET, AND ALARM INITIATE CONTROLS. THE PANEL SHALL ALSO INDICATE VOLTAGE AND BATTERY TEST. THE PANEL SHALL ALSO INCLUDE AN LCD DISPLAY. PANEL SHALL BE IN A SURFACE MOUNTED ENCLOSURE WITH LOCLABLE, SEE THROUGH, HINGED FRONT COVER. 12. THE FIRE ALARM PANEL SHALL BE EQUIPPED WITH A DIGITAL DIALER WITH LINE SEIZURE FUNCTION FOR OFF PREMISES REMOTE MONITORING (FIRE DEPARTMENT) DURING ALARM CONDITION. PROVIDE 3/4 IN. CONDUIT FROM FIRE ALARM PANEL TO TELEPHONE

SUPPLIER. FIELD COORDINATE. 13. PROVIDE (1) REMOTE ANNUNCIATOR PANEL AS SHOWN ON PLANS. THE ANNUNCIATOR PANEL SHALL BE PROVIDED WITH AN LCD DISPLAY AND COMPLETE CONTROL PUSH BUTTONS INCLUDING, BUT NOT LIMITED TO, ALARM ACKNOWLEDGE, ALARM SILENCE, RESET, ETC.

BACKBOARD. FINAL TELEPHONE CONNECTION BY THE OWNERS TELEPHONE SYSTEM

SECTION F: TELEPHONE/DATA SYSTEMS

## WORK INCLUDED:

.PROVIDE IIN.EMT FROM EACH OUTLET TO ABOVE 12 INCHES ABOVE ACCESSIBLE CEILING. PROVIDE 4 IN. SQUARE BACKBOX WITH SINGLE GANG PLASTER RING FOR EACH ELEPHONE/DATA OUTLET.ALL CONDUIT SHALL BE CONCEALED.PROVIDE FACEPLATE WITH MODULAR JACKS. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.

	LIGHTING FIXTURE SCHE	EDULE
TYPE	DESCRIPTION	MANUFACTURER
А	SHOWER LIGHT, SEMI-RECESSED, WET LOCATION, 7 IN. APERTURE. DROP OPAL LENS WITH GASKETS PROVIDING SEAL BETWEEN LENS AND FACE TRIM, AND FACE TRIM AND HOUSING. TRIM RING SHALL BE PLASTIC WITH NO EXPOSED METAL PARTS.	HALO "H7ICT-I7OPS" SERIES OR OWNER APPROVED EQU.
	LAMPS: CREE LED, 10 WATT, 815 LUMEN, A19, 2700 DEGREE K BALLAST: 120 VOLT	
В	DOWNLIGHT, RECESSED SELF FLANGED, 6IN. APERTURE, WHITE BAFFLE, SPECULAR LOW IRIDESCENT REFLECTOR. FIXTURE ON BUILDING EXTERIOR (SHALL BE DAMP LOCATION RATED).	HALO "H7ICT" SERIES OR OWNER APPROVED EQU
	LAMPS: CREE LED,13.5 WATT,1100 LUMEN, A19,2700 DEGREE K BALLAST: 120 VOLT	
С	DECORATIVE PENDANT.	PROVIDED BY OWNER AND INSTALLED BY CONTRACTO
D	DECORATIVE FIXTURE.	PROVIDED BY OWNER AND INSTALLED BY CONTRACTO
F	SURFACE MOUNTED 4 FT. STANDARD FLUORESCENT STRIP. [WITH MINIMUM 14 GAUGE STEEL WIRE GUARD.	LITHONIA "C" SERIES OR OWNER APPROVED EQU
	LAMPS: 2-32 WATT, T-8, 3500 DEGREE K BALLAST: 120 VOLT ELECTRONIC	
G	CEILING MOUNTED ROUND FIXTURE WITH POLYCAROBONATE GLOBE, WHITE IN FINISH.	SEAGULL LIGHTING "5326-I5" SERIES OR OWNER APPROVED EQU
	LAMPS: CREE LED, 10 WATT, 815 LUMEN, A19, 2700 DEGREE K BALLAST: 120 VOLT	
L	WALL MOUNTED VANITY LIGHT FIXTURE.	PROVIDED BY OWNER AND INSTALLED BY CONTRACTO
	LAMPS:(3)CREE LED,IO WATT,815 LUMEN,A19 BALLAST:120 VOLT	
М	CEILING MOUNTED ROUND FIXTURE, DAMP LOCATION RATED.	MAXIM "1940MRSN" SERIES OR OWNER APPROVED EQU
	LAMPS: (2) CREE LED, 6 WATT, 460 LUMEN, 2700 DEGREE K BALLAST: 120 VOLT	
UCI	IFT.BRACKET MOUNTED UNDERCOUNTER TASK LIGHT WITH FINISH SELECTED BY OWNER.	WAC "BA-BF-08"SERIES OR OWNER APPROVED EQUA
	LAMPS: 8 WATT T-5,3500 DEGREE K BALLAST: 120 VOLT ELECTRONIC	
ОА	DECORATIVE EXTERIOR GRADE WALL MOUNTED FIXTURE.	PROVIDED BY OWNER AND INSTALLED BY CONTRACTO
⊗	FIXTURE, EXIT, LED, UNIVERSAL MOUNTING, WHITE FINISH, SINGLE OR DOUBLE GREEN PANEL FACE, GREEN LETTERS, WITH BATTERY UNIT (90 MINUTE), DIRECTION OF ARROWS AS SHOWN ON THE DRAWINGS. UL LISTED FOR DAMP LOCATIONS WHERE SIGN NOT INSIDE BUILDINGS INTERIOR.	LITHONIA "LV" SERIES OR OWNER APPROVED EQU.
	LAMPS: LED BALLAST: 120 VOLT	
4 5	FIXTURE, EGRESS, WALL MOUNTING, TWO HEAD, WITH NICAD BATTERY UNIT (90 MINUTE), WET LOCATION.	LITHONIA "WLTU MR" SERIE DUAL-LITE, SURELITE, EMERGILITE, CHLORIDE
	LAMPS: (2) 7 WATT, MRI6, WITH UNIT BALLAST: UNV. VOLT	
FA	52 IN., 5 BLADE CEILING FAN, 3 SPEED, REVERSIBLE WITH LIGHT KIT.	PROVIDED BY OWNER AND INSTALLED BY CONTRACTO
	LAMPS: (3) CREE LED, 10 WATT, 815 LUMEN, A19, 3500 DEGREE K. BALLAST: 120 VOLT	
OF	52 IN., 5 BLADE CEILING FAN, 3 SPEED. DAMP LOCATION UL LISTED.	PROVIDED BY OWNER AND INSTALLED BY CONTRACTO
	LAMPS: NONE BALLAST: 120 VOLT	

## GENERAL LIGHTING NOTES:

A. PROVIDE TENMAT "FF109-300 ONE HOUR FIRE RATED LIGHT COVER OVER ALL RECESSED FIXTURE HOUSINGS IN FIRE RATED CEILINGS.

# FLOOD ZONE GENERAL NOTES:

- A. ALL METERS, DISTRIBUTION PANELS, DISCONNECT SWITCHES AND ENCLOSED CIRCUIT BREAKERS SHALL BE LOCATED ABOVE THE DESIGN FLOOD ELEVATION (DFE). COORDINATE EXACT DESIGN FLOOD ELEVATION HEIGHT WITH ARCHITECTURAL PRIOR TO ANY ROUGH-IN OF ELECTRICAL APPURTENANCES. IF A DEVICE CANNOT BE LOCATED ABOVE THE DFE WITHOUT EXCEEDING THE MAXIMUM ELEVATION STIPULATED IN NFPA 70 OF 6 1/2 FEET, IT MUST BE RELOCATED TO A HIGHER FLOOR WITHIN THE STRUCTURE.OR, AS AN ALTERNATIVE, INSTALLATION OF A PLATFORM WITH STAIRS TO PROVIDE ACCESS TO THE ELEVATED ELECTRICAL COMPONENTS, PER FEMA 348, 3.3.3.
- B. THE ONLY ELECTRICAL DEVICES THAT ARE PERMITTED BELOW THE DFE ARE THE MINIMUM NECESSARY FOR LIFE/SAFETY, PER FEMA 348, 3.3.3. THIS INCLUDES SMOKE DETECTORS, LIGHT FIXTURES, SWITCHES AND RECEPTACLES REQUIRED FOR AREAS USED FOR BUILDING ACCESS, PARKING, OR STORAGE.
- C. ALL ELECTRICAL EQUIPMENT LOCATED BELOW THE DFE SHALL BE ON SEPARATE GFC INTERRUPTING CIRCUITS CLEARLY MARKED IN THE DISTRIBUTION PANEL SO THAT THESE DEVICES MAY BE ISOLATED (SHUT OFF) IN CASE OF A FLOOD, PER FEMA 348.
- D. ALL JUNCTION BOXES SHALL BE CONSTRUCTED OF NON-CORROSIVE MATERIALS.
- E. STEEL ARMORED CABLE (IF USED) IS ALLOWED ONLY IN DRY INDOOR LOCATIONS AND IS NOT PERMITTED BELOW THE DFE, PER FEMA 348, 3.3.5.
- F. IN SITUATIONS WHERE WIRING MUST BE EXTENDED BELOW THE DFE, THE WIRING SHALL BE ENCASED IN NON-CORROSIVE CONDUIT. THE CONDUIT SHALL BE INSTALLED VERTICALLY TO PROMOTE THOROUGH DRAINAGE, PER FEMA 348, 3.3.5.
- G. ELECTRICAL WIRE SHALL BE RATED FOR BOTH DRY AND WET LOCATIONS. TYPES RHW, TW, THW, XHWN ARE SUITABLE FOR FLOOD ZONES.
- H. ALL UNDERGROUND WIRING SHALL BE RUN IN WATERTIGHT CONDUIT AND SHALL EXTEND ABOVE THE DFE BEFORE WIRING IS RELEASED FROM CONDUIT. PROVIDE WYE TYPE SEAL-OFF FITTINGS AS REQUIRED.
- I. PROVIDE WYE TYPE SEAL-OFF FITTINGS AT ALL FIRST FLOOR, FLOOR PENETRATIONS AS
- J. NM CABLE (IF USED) IS ALLOWED FOR ALL INTERIOR 20A POWER AND LIGHTING CIRCUITS IN RESIDENTIAL UNITS AND ONLY IN DRY INDOOR LOCATIONS AND IS NOT PERMITTED BELOW THE DFE, PER FEMA 348, 3.3.5.

## ELECTRICAL LEGEND

LIGHTING AND POWER

CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALL, HASH MARKS INDICATE NUMBER OF CONDUCTORS. (3 CONDUCTORS INDICATED UNLESS HASHMARKS ARE SHOWN). CONDUIT RUN CONCEALED BELOW FLOOR SLAB, OR UNDERGROUND.

HOMERUN TO PANELBOARD, LETTER OR LETTERS INDICATE PANELBOARD. A-2,4 NUMBERS INDICATES CIRCUIT NUMBERS.

LIGHTING FIXTURE.

FLUORESCENT FIXTURE, SURFACE OR STEM MOUNTED.

LIGHTING FIXTURE, WALL BRACKET MOUNTED. (MOUNTING HEIGHT AS NOTED ON DRAWINGS.)

JUNCTION BOX, FLUSH WALL MOUNTED.

JUNCTION BOX LOCATED ABOVE CEILING.

DUPLEX CONVENIENCE OUTLET, 18 IN. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED. DUPLEX CONVENIENCE OUTLET. MOUNTED ABOVE COUNTER AT 46 IN..

SPECIAL RECEPTACLE TO SUIT EQUIPMENT FURNISHED. SEE SPECIFICATIONS FOR LOCKING RECEPTACLE REQUIRED AT THRU-WALL UNITS.

DUPLEX CONVENIENCE OUTLET, GFITYPE. 18 IN. TO CENTERLINE UNLESS OTHERWISE NOTED. "WP" WHERE SHOWN PROVIDE WEATHERPROOF IN-USE COVERPLATE. FLUSH FLOOR BOX WITH DUPLEX CONVENIENCE OUTLET. PROVIDE WALKER 880 OMNIBOX

SERIES IRON OR PLASTIC FLOOR BOX WITH BRASS FLANGE AND COVERPLATE. DUPLEX CONVENIENCE OUTLET, GFI TYPE, MOUNTED 8 IN. ABOVE COUNTER OR MOUNT AT 46 IN. ABOVE FINISHED FLOOR.

SINGLE POLE TOGGLE SWITCH, 3FT. - 6 IN. MOUNTING HEIGHT.

THREE OR FOUR WAY SWITCH AS INDICATED. 3FT. - 6 IN. MOUNTING HEIGHT.

MANUAL MOTOR STARTER. 3FT. - 6 IN. MOUNTING HEIGHT.

DIMMER, SLIDE TYPE, 3FT. - 6 IN. MOUNTING HEIGHT.

PANELBOARD, SEE RISER.

DOORBELL.

DISCONNECT SWITCH, SIZE AS NOTED ON DRAWINGS (FUSED UNLESS OTHERWISE NOTED). MOTOR

PUSHBUTTON FOR DOORBELL.

**⊢**(B)

TELEPHONE AND COMPUTER SYSTEM

TELEPHONE OUTLET. FLUSH WALL MOUNTED AT 18 IN. TO CENTER LINE OF OUTLET. TELEPHONE OUTLET, FLUSH WALL MOUNTED AT 46 IN. TO CENTER LINE OF OUTLET.

FIRE ALARM SYSTEM

FIRE ALARM SIGNAL. HORN AND FLASHING LIGHT. 80 IN. MOUNTING HEIGHT TO BOTTOM OF LENS. "C" INDICATES CEILING MOUNTED, "WP" WHERE SHOWN PROVIDE WEATHERPROOF COVER. FIRE ALARM PULL STATION. WALL MOUNTED 42 IN. ABOVE FLOOR. RATED FOR EXTERIOR USE. EEPING ROOM SMOKE DETECTOR, CEILING MOUNTED. SLEEPING ROOM SMOKE DETECTORS SHALL HAVE AN INTEGRAL STROBE LIGHT FOR ACCESSIBLE UNITS.
ALSO IN UNITS WITH MORE THAN ONE ROOM THE SMOKE DETECTORS SHALL
BE INTERLOCKED SO THAT WHEN ONE ACTIVATES THEY BOTH ACTIVATE.
SLEEPING ROOM UNITS SHALL BE POWERED AND MONITORED FOR TROUBLE BY
THE FIRE ALARM CONTROL PANEL BUT SHALL NOT ACTIVATE THE ENTIRE SYSTEM.

FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED.

FIRE ALARM CONTROL PANEL, SURFACE WALL MOUNTED. TAMPER SWITCH, FURNISHED AND INSTALLED WITH SPRINKLER SYSTEM.

INTERLOCK WITH FIRE ALARM SYSTEM BY ELECTRICAL. FLOW SWITCH, FURNISHED AND INSTALLED WITH SPRINKLER SYSTEM. INTERLOCK WITH FIRE ALARM SYSTEM BY ELECTRICAL.

FIRE ALARM HEAT DETECTOR, 135 DEG, OPERATION.

ELEVATOR/FIRE ALARM INTERFACE MODULE

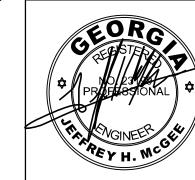
TELEVISION SYSTEM

NOTE: FIRE ALARM SMOKE DETECTORS AND HEAT DETECTOR IN UNITS SHALL BE STAND ALONE 120 VOLT WITH BATTERY BACKUP AND THEY SHALL BE INTERCONNECTED WITHIN UNIT SO THAT IF ONE IS ACTIVATED THEY ALL ACTIVATE. SMOKE DETECTORS IN UNITS SHALL BE SMOKE ALARM TYPE WITH AUDIBLE ALARM. SMOKE DETECTORS IN ADA UNITS SHALL BE SMOKE ALARM TYPE WITH BOTH AUDIBLE AND VISUAL

TELEVISION OUTLET, 18 IN. TO CENTER LINE, UNLESS OTHERWISE NOTED.

## GENERAL NOTES:

- A. UNDERGROUND CONDUIT SHALL BE SCHEDULE AS SHEET PROVIDE GRS ELBOWS PAINTED WITH BITUMINOUS PAINT TO TRANSITION TO ABOVE GRADE OR SLAB.
- B. ALL ELECTRICAL APPURTENANCES AND UNDERGROUND WIRING SHALL COMPLY TO N.E.C. ARTICLE 680.
- C. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH DIVISION 15. PRIOR TO ELECTRICAL ROUGH-IN.
- D. ALL FLEXIBLE CONDUIT SHALL BE METALLIC WATERPROOF.
- E. COORDINATE FINAL RECEPTACLE, CATV AND TELEPHONE OUTLET LOCATIONS WITH ARCHITECTURAL CASEWORK AND OWNER PRIOR TO ROUGH-IN. NO EXCEPTIONS.
- F. COORDINATE EXACT CONDUIT REQUIREMENTS FOR THERMOSTATS TO ALL AIR HANDLING UNITS. SEE MECHANICAL DRAWINGS FOR EXACT LOCATIONS.
- G. FIRE SEAL ALL FIREWALL PENETRATIONS.





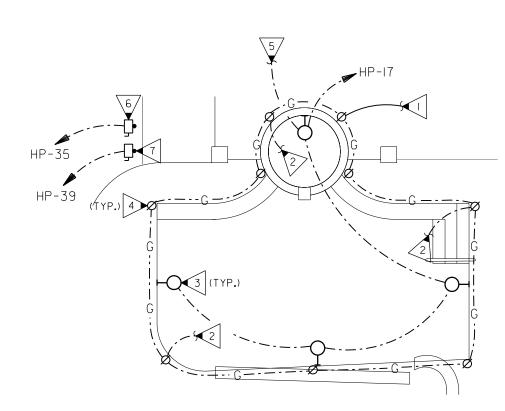
P.C. ARCHITECTS I

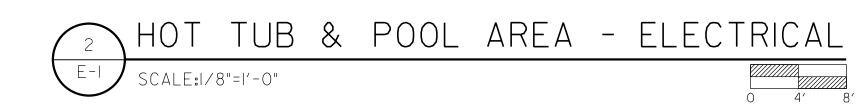
USSERY/RULE A 1804-A FREE ST. SIMONS ISLAI

DIVISION Z SUBI NUE OLD AVEI AND  $\mathbf{\Omega}$ 

0 4 S  $\mathbf{\Omega}$ Ω 9

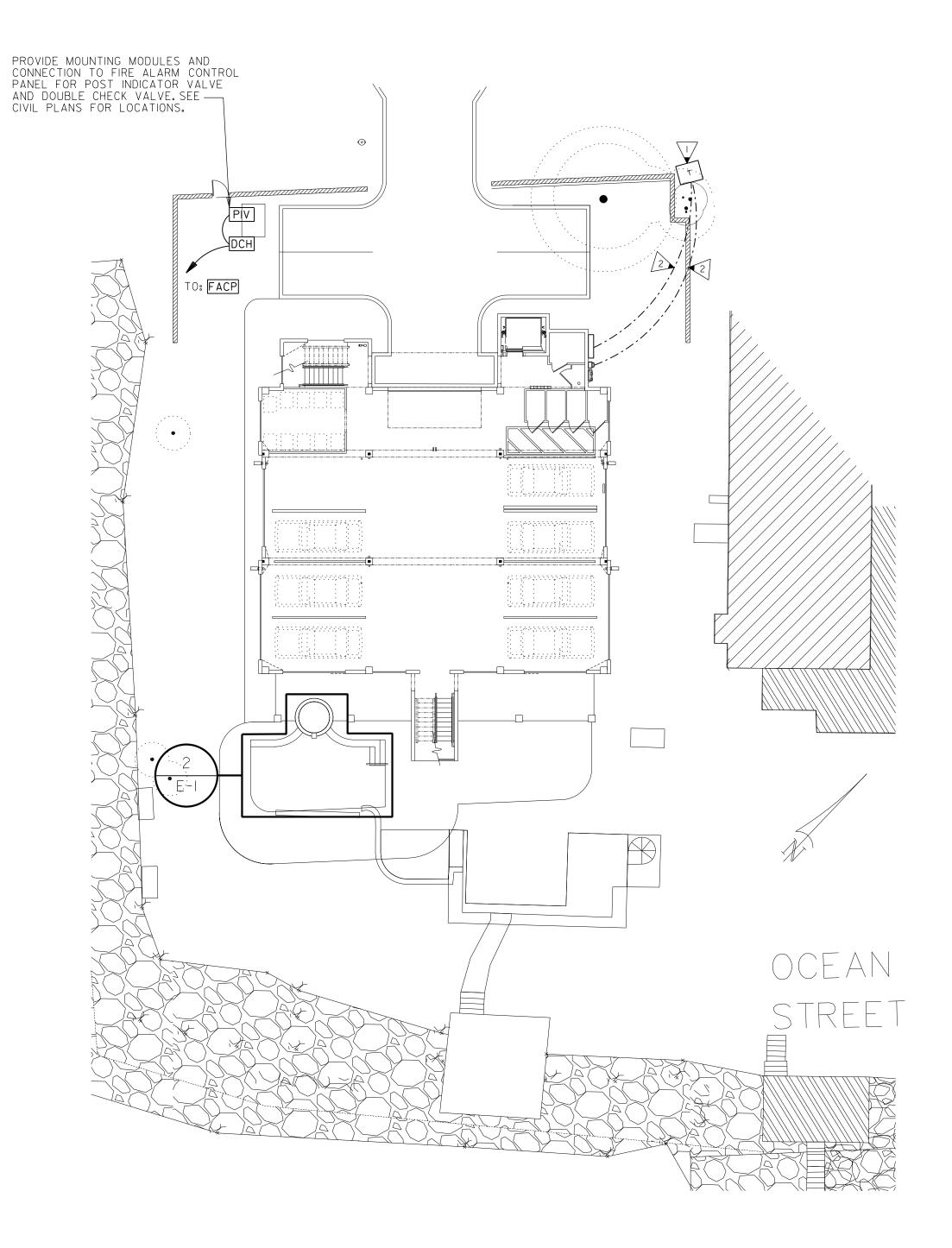
8-25-17 11-08-17 6-08-18





# KEYED NOTES: (DETAIL 2/E-I ONLY)

- BOND POOL GROUNDING GRID TO ELECTRICAL POWER SYSTEM GROUND.
- BOND TO ALL METAL ELEMENTS OF POOL.
- POOL LIGHTS PROVIDED BY MANUFACTURER. RACEWAY AND POWER FEED TO PANEL "HP" PROVIDED BY CONTRACTOR. COORDINATE EXACT FIXTURE QUANTITIES, LOCATIONS AND EXACT REQUIREMENTS WITH POOL MANUFACTURER PRIOR TO ROUGH-IN.
- 4 5/8 IN. x IO FT. COPPER CLAD STEEL GROUNDING ROD.
- 5 CONNECT TO TIMER SWITCH SHOWN ON SHEET E-2.
- PROVIDE 30A/2P/3R DISCONNECT MOUNTED ON PREASURE TREATED 4X4 POST (POST TO BE 3FT. IN GROUND) 36 IN. AFF TO BOTTOM OF DISCONNECT FOR POWER TO HOT TUB. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH HOT TUB MANUFACTURER/OWNER. ROUTE THROUGH HOT TUB TIMER (PROVIDED BY HOT TUB SUPPLIER) AS REQUIRED. #10'S ENTIRE CIRCUIT.
- PROVIDE 30A/2P/3R DISCONNECT MOUNTED ON PREASURE TREATED 4X4 POST (POST TO BE 3FT. IN GROUND) 36 IN. AFF TO BOTTOM OF DISCONNECT FOR POWER TO POOL. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH POOL MANUFACTURER/OWNER. ROUTE THROUGH POOL TIMER (PROVIDED BY POOL SUPPLIER) AS REQUIRED. #10'S ENTIRE CIRCUIT.





# GENERAL NOTES - LOCATION OF UTILITY COMPANY PAD MOUNTED TRANSFORMER:

- I. TRANSFORMER PAD LOCATIONS SHALL BE A MINIMUM OF 10 FT.-O IN. FROM ANY BUILDING OVERHANGS, CANOPIES, EXTERIOR WALLS, BALCONY, EXTERIOR STAIRS AND OR WALKWAYS CONNECTED TO THE BUILDING.
- 2. TRANSFORMER PAD EDGE SHALL BE NO LESS THAN 14 FT.-O IN. FROM ANY DOOR WAY.
- 3. TRANSFORMER PAD EDGE SHALL BE NO LESS THAN 10 FT.-O IN. FROM ANY WINDOWS OR OTHER OPENINGS
- 4. IF THE BUILDING HAS ON OVERHANG THE 10 FT.-O IN. CLEARANCE SHALL BE MEASURED FROM A POINT BELOW THE EDGE OF THE OVERHANG ONLY IF THE BUILDING IS 3 STORIES OR LESS. IF THE BUILDING IS 4 STORIES OR MORE 10 FT.-O IN. SHALL BE MEASURED FROM THE OUTSIDE BUILDING WALL.
- 5. FIRE ESCAPES, OUTSIDE STAIRS, AND COVERED WALKWAYS ATTACHED TO OR BETWEEN BUILDINGS, SHALL BE CONSIDERED PART OF THE BUILDING.

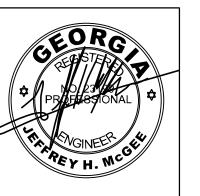
# GENERAL NOTES:

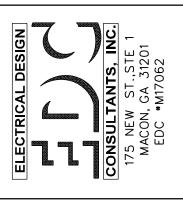
- A. SURVEY AND SITE INFORMATION PROVIDED BY OTHERS. VERIFY ALL CONDITIONS ON SITE AND WITH OFFICIAL SURVEYS AND OTHER TRADES.
- B. CALL UNDERGROUND UTILITY CENTER AND VERIFY ALL UNDERGROUND UTILITIES.
- C. UNDERGROUND CONDUIT SHALL BE SCHEDULE 80 PVC.
- D. COORDINATE WITH SERVING UTILITY COMPANIES FOR EXACT SERVICE LOCATIONS. CONTRACTOR SHALL PAY ALL ADDITIONAL COST TO PROVIDE SERVICES SHOWN.
- E. PROVIDE HAND-HOLES AS REQUIRED BY 2014 NEC FOR UNDERGROUND FEEDERS SHOWN.
- F. I IN. MINIMUM FOR SITE LIGHTING FEEDERS.

# KEYED NOTES: (DETAIL 1/E-I ONLY)

PROPOSED UTILITY CO. PAD MOUNTED TRANSFORMER. TRANSFORMER FURNISHED AND INSTALLED BY UTILITY CO. CONTRACTOR TO PAY ALL COSTS ASSOCIATED WITH. SEE GENERAL TRANSFORMER NOTES ON THIS SHEET.

2 SEE POWER RISER DIAGRAM, I/E-5.





INTEGERACHITECTS P. (4-A FREDERICA ROAD AONS ISLAND, GEORGIA 31522 com PH. 912-638-60

ST. SIMON www.urarch.con tecture . Land

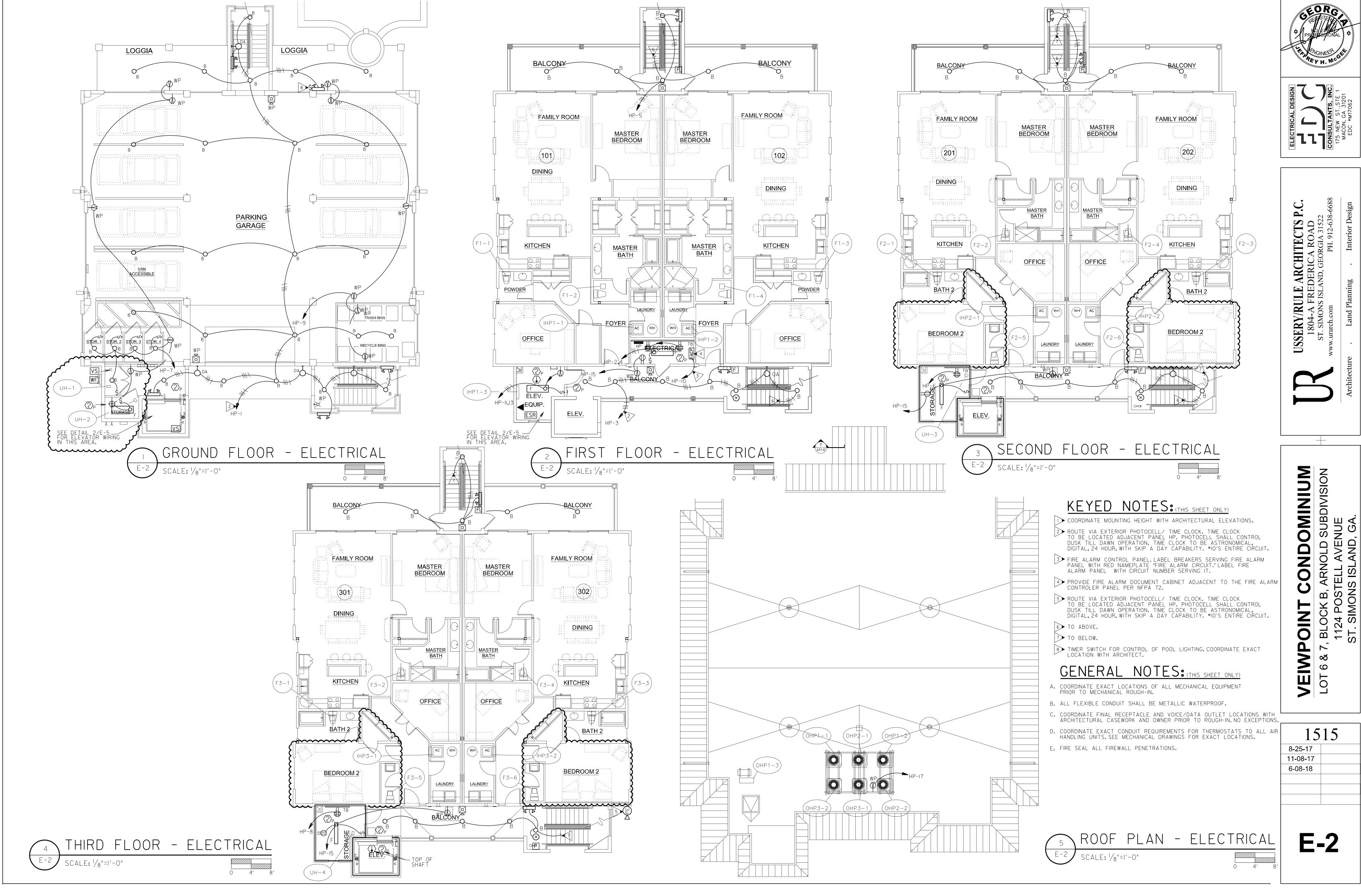
I CONDOMINIUM

K B, ARNOLD SUBDIVISION

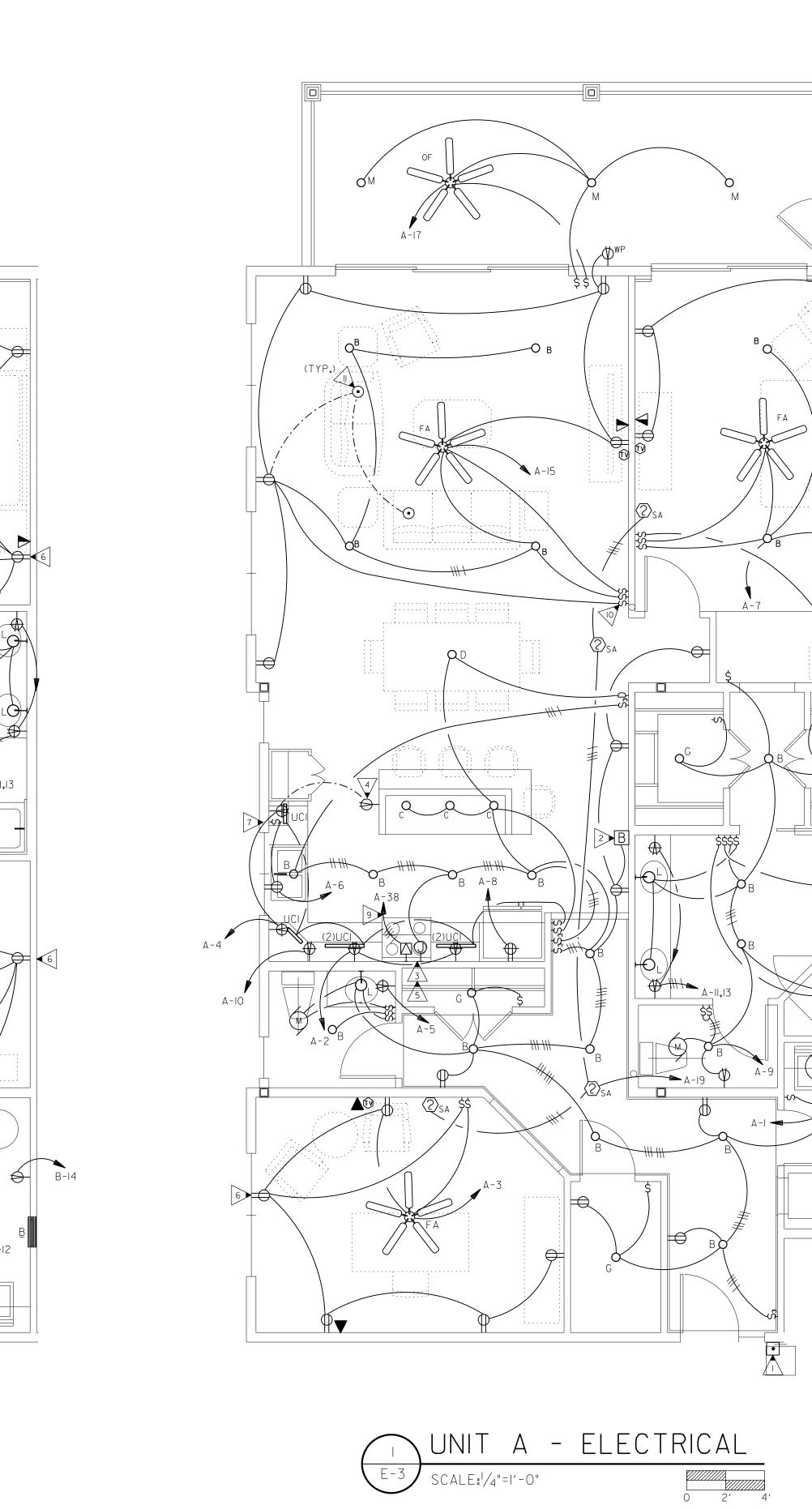
OSTELL AVENUE

1515 8-25-17

E-1



8-25-17 11-08-17 6-08-18

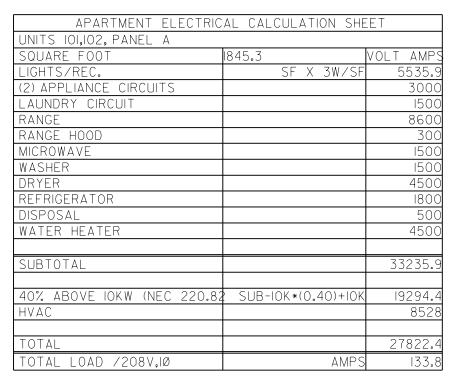


# KEYED NOTES: (THIS SHEET ONLY)

- PROVIDE DOORBELL PUSHBUTTON. SEE DETAIL 3/E-5. COORDINATE EXACT MOUNTING HEIGHT.
- PROVIDE DOORBELL ANNUNCIATOR/CHIME. SEE DETAIL 3/E-5. COORDINATE EXACT MOUNTING.
- 3 COORDINATE MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH IN.
- 4 COORDINATE WITH CASEWORK.
- PROVIDE CONNECTIONS TO RANGE HOOD PER MANUFACTURERS RECOMMENDATIONS.
- RECEPTACLE FOR TABLE OR FLOOR MOUNTED FIXTURE WITH CORD. RECEPTACLE SHALL HAVE TAB BROKEN SO TOP RECEPTACLE CAN BE SWITCHED.
- > SWITCH TO CONTROL TOP HALF OF RECEPTACLE FOR GARBAGE DISPOSAL.
- 8 PROVIDE #10'S ENTIRE CIRCUIT.
- 9 3 # 8, # IOG., 3 / 4 IN. C.
- SWITCH TO CONTROL FLOOR MOUNTED RECEPTACLES.
- COORDINATE EXACT LOCATION OF FLOOR BOX WITH ARCHITECTURAL.

# GENERAL NOTES:

- A. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT PRIOR TO ELECTRICAL ROUGH-IN.
- B. ALL FLEXIBLE CONDUIT SHALL BE METALLIC WATERPROOF.
- C. COORDINATE FINAL RECEPTACLE AND TELEPHONE OUTLET LOCATIONS WITH ARCHITECTURAL CASEWORK AND OWNER PRIOR TO ROUGH-IN. NO EXCEPTIONS.
- D. COORDINATE EXACT CONDUIT REQUIREMENTS FOR THERMOSTATS TO ALL AIR HANDLING UNITS. SEE MECHANICAL DRAWINGS FOR EXACT LOCATIONS.
- E. FIRE SEAL ALL FIREWALL PENETRATIONS.
- F. PROVIDE TAMPER RESISTANT (SAFETY TYPE) RECEPTACLES IN ALL UNITS.
- G. PROVIDE AFCITYPE BREAKERS FOR ALL 20A/IP CIRCUITS AND AFCI/GFCIBREAKERS FOR ALL 20A/IP CIRCUITS WITHIN 6FT OF SINK WHEN GFCIRECEPTACLES ARE NOT UTILIZED (IN ALL UNITS AS PER 2014 NEC).
- H. PROVIDE SMART EXHAUST (BATH FAN/LIGHT CONTROLLER) MADE BY AIRCYCLER (OR APPROVED EQUAL) IN EACH APARTMENT BATHROOM TO CONTROL LIGHT AND EXHAUST FAN. COORDINATE SETTINGS WITH MECHANICAL/OWNER.



APARTMENT ELECTRIC	CAL CALCULATION SHE	ET
UNITS 201,202,301,302, PANEL		
SQUARE FOOT	1881.3	VOLT AMPS
LIGHTS/REC.	SF X 3W/SF	5643.9
(2) APPLIANCE CIRCUITS		3000
LAUNDRY CIRCUIT		1500
RANGE		8600
RANGE HOOD		300
MICROWAVE		1500
WASHER		1500
DRYER		4500
REFRIGERATOR		1800
DISPOSAL		500
WATER HEATER		4500
SUBTOTAL		33343.9
40% ABOVE IOKW (NEC 220.82	SUB-10K*(0.40)+10K	19337.6
HVAC		8528
TOTAL		27865.6
TOTAL LOAD /208V,10	AMPS	134.0

MEC	HANICAL EQUI	PMENT P			
unit name	VOLTAGE/ PHASE	FLA	MCA	MOCP	COMPLY (YES OR NO
IHPI-I					
IHPI-2					
IHP2-I					
IHP2-2					
IHP3-I					
IHP3-2					
OHPI-I					
OHPI-2					
OHP2-I					
0HP2-2					
OHP3-I					
0HP3-2					
WH-I-I					
WH-I-2					
WH-2-I					
WH-2-2					
WH-3-I					
WH-3-2					
OHPI-3/IHPI-3					
UH-I					
NOTES:	ELECTRICAL S REFLECT ALL AS SPECIFIED EQUIPMENT MI PRIOR TO SUE FOR MORE INF DIVISION 16 EN	SHOP DRAW MECHANIC IN DIVISIO JST BE AF BMITTING T FORMATION NGINEER PF E ENTIRE E	MINGS BY AL AND POST OF THE PROVED BY THE PROVINCE OF THIS BRIGHT TO CELECTRICA	THE CONTR LUMBING E CHANGES T BY THE EN N 16, SEE D NFORMATIO IR AT THE	MITTED WITH THE ACTOR. THIS FORM SHALL QUIPMENT REQUIRING POWE TO THE DIVISION IS GINEER OF THAT DIVISION IVISION I6 SPECIFICATIONS IN IS NOT PROVIDED TO T SAME TIME AS THE SHOP AL WILL BE MARKED (REV!

S.E. RATED E.C.B./ METER CENTER

L#3/0

SERVICE GROUNDING DETAIL

GROUND BAR-

#3/0 AWG-

BOND TO FOUNDATION REBAR. PER NEC ARTICLE 250.52(3).

NOT TO SCALE

NEUTRAL FROM UTILITY —

METAL Water Pipe—

SPRINKLER PIPE-

PHASE 3 WIRE 4	120	208										LOCAT	ION	ELEC. RM.
PHASE 3 WIRE 4				PANEL			H	Р	_			MOUN <sup>-</sup>	ΓING	SURFACE
BUS AMPS	40	00	•	MAIN A	MP	S	40	00	-			MAIN		LUGS
DESCRIPTION	VOLT AMPS		BRKR		СКТ	BUS	СКТ	BRKR		VOLT AMPS		°S	DESCRIPTION	
	А	В	С	AMP	Р	NO	CONN	NO	Ρ	AMP	С	В	А	
EXT. LTS.	500			20			А	2	-	20			400	TB IST FLOOR
EXT. LTS.		570		20	-	3	В	4	-	20		400		TB IST FLOOR
EXT.LTS.			540	20		5	С	6	-	20	400			TB 2ND FLOOR
LTS./REC.	1220			20		7	Д	8	-	20			400	TB 3RD FLOOR
RECEP.		1200		20	Τ	9	В	10	1	20		1200		FACP
RECEP.			200	20	Ι	Ш	С	12	Ι	20	200			ELEVATOR LTS
LIGHT	70			20	Т	13	А	14	Π	20			60	ELEV. PIT LTS.
RECEP.		1340		20	Τ	15	В	16	Ι	20		200		ELEV. PIT REC.
POOL LTS.			400	20	T	17	С	18	Ι	20	500			ELEV.PIT SUMP
SPARE				20	Т	19	А	20	1					SPACE
SPARE				20	Ι	21	В	22	2	20		1500		UH-I
SPARE				20	1	23	С	24			1500			~~~~
SPARE				20	Ι	25	А	26	2	20			1500	UH-2
SPARE				20	T	27	В	28				1500	<b>\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ </b>	3
SPARE				20	T	29	С	30	2	20	1500		7	UH-3
OHPI-3/IHPI-3	1248			15	2	31	А	32					1500	}
		1248				33	В	34	2	20		1500	<b></b>	UH-4
HOT TUB REC. PMP.			1900	30	2	35	С	36			1500			
	1900					37	А	38	3	250			21120	*ELEVATOR
POOL REC. PMP.		2250		30	2	39	В	40				21120		
			2250			41	С	42			21120			
	4938		5290	1		İ					26720	27420	24980	

DESCRIPTION	VOLT	AMPS	BRKR		СКТ	BUS	СКТ	E	BRKR	VOLT	AMPS	DESCRIPTION
<i>52301</i> 111 11011	А	В	AMP	Р	NO	CONN		Р	AMP	В	А	B2301 11011
LTS/REC.	1490		20	1	1	А	2	П	20		400	RECEP.
LTS/REC.		1270	20	1	3	В	4	П	20	600		RECEP.
RECEP.	1500		20	Т	5	А	6	П	20		1200	*DISP./DISHWASHER
LTS/REC.		1210	20		7	В	8		20	1800		*REFRIG.
LTS/REC.	1840		20		9	А	10		20		1500	MICROWAVE
RECEP.		1500	20		Ш	В	12		20	1500		*WASHER
RECEP.	1500		20		13	А	14	П	20		1500	LAUNDRY
LTS/REC.		1840	20		15	В	16	1	20			SPARE
LTS/REC.	475		20		17	А	18		20			SPARE
FIRE ALARM		500	20	1	19	В	20	Т	20			SPARE
SPARE			20	1	21	Д	22	2	30		2250	DRYER
SPARE			20		23	В	24			2250		
SPARE			20		25	А	26	2	25		2080	IHP*-*
SPARE			20		27	В	28			2080		
SPARE			20		29	А	30	2	35		2184	0HP*-*
SPARE			20		31	В	32			2184		
SPACE					33	А	34	2	30		2250	WH-*
SPACE					35	В	36			2250		
SPACE					37	А	38	2	50		4300	RANGE
SPACE					39	В	40			4300		
TOTALS	6805	6320								16964	17664	
VOLT AMPS	BUS A	24469	_		REMA	RKS:	IOKAI	СМ	INIMUM			

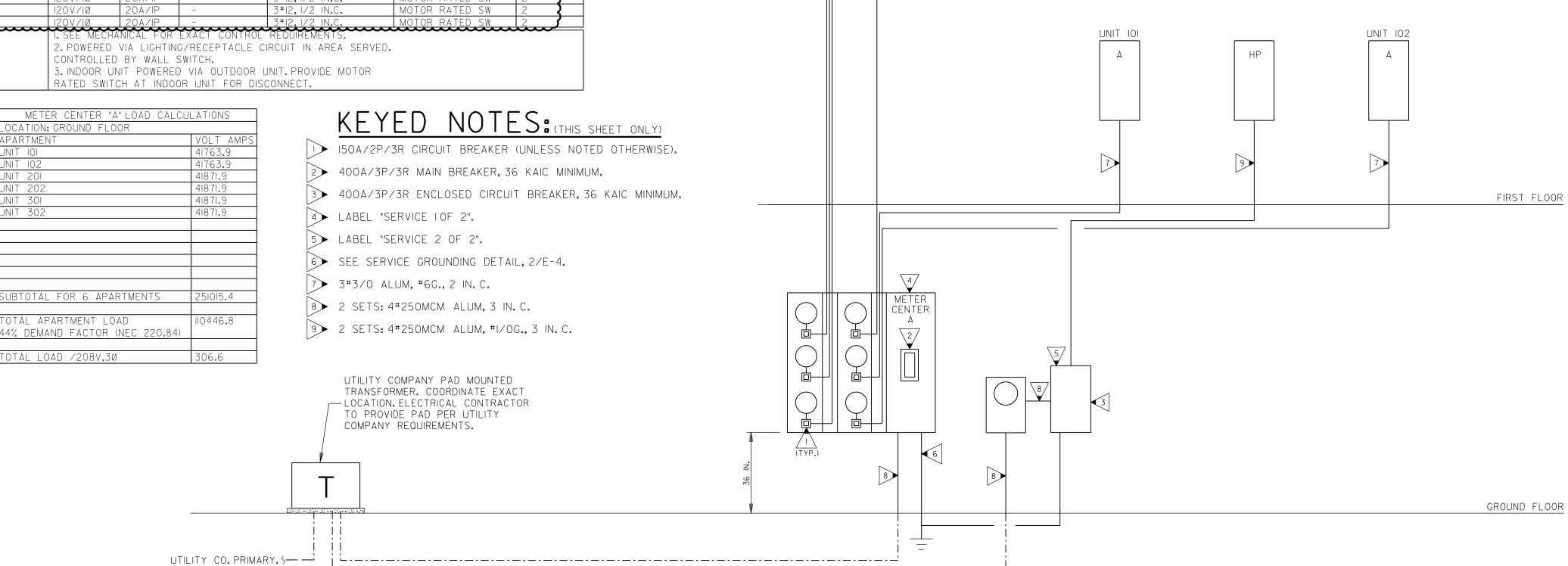
- 1	*FROVIDE AFCI/ GFCI CINCUIT BREAKER	
	NOTE AA:PROVIDE HANDLE TIES FOR ALL 2 AND 3 CIRCUIT MULTI-WIRE BRANCH CIRCUI	TS IN
	ACCORDANCE WITH 2014 NEC ARTICLE 210.4. MULTI-WIRE BRANCH CIRCUITS MUST BE GR	ROUPED
	AND PHYSICALLY TIED TO DISCONNECT ALL UNGROUNDED CONDUCTORS SIMULTANEOUSI	_Y.

DESCRIPTION	VOLT	AMPS	BRKR		СКТ	BUS	СКТ	T (	BRKR	VOLT AMPS		DESCRIPTION
DESCINI FION	А	В	AMP	Р	NO	CONN		Р	AMP	В	А	besermi no
LTS/REC.	1490		20	1	I	А	2	1	20		400	RECEP.
LTS/REC.		1270	20	1	3	В	4	П	20	600		RECEP.
RECEP.	1500		20	1	5	А	6	1	20		1200	*DISP./DISHWASH
LTS/REC.		1210	20	1	7	В	8	1	20	1800		*REFRIG.
LTS/REC.	1840		20	Ι	9	А	10		20		1500	MICROWAVE
RECEP.		1500	20	1	Ш	В	12		20	1500		*WASHER
RECEP.	1500		20	1	13	А	14		20		1500	LAUNDRY
LTS/REC.		1840	20	1	15	В	16	1	20			SPARE
LTS/REC.	475		20	1	17	А	18	Т	20			SPARE
FIRE ALARM	~~~	500	20		19	В	20	Т	20			SPARE
DEAED	1500		20		21	А	22	2	30		2250	DRYER
SPARE	<del>~~~</del>	$\overline{}$	720		23	В	24			2250		
SPARE			20	1	25	А	26	2	25		2080	IHP*-*
SPARE			20	-	27	В	28			2080		
SPARE			20		29	А	30	2	35		2184	OHP*-*
SPARE			20		31	В	32			2184		
SPACE				1	33	А	34	2	30		2250	WH-*
SPACE				-	35	В	36			2250		
SPACE				-	37	А	38	2	50		4300	RANGE
SPACE				1	39	В	40			4300		
TOTALS	8305	6320								16964	17664	

UNIT 301

NAME	VOLTAGE/ PHASE	CIRCUIT BREAKER	PANEL NAME/ CIRCUIT NUMBER	FEEDER	DISCONNECT SWITCH	NOTES
	208V/IØ	25A/2P	A-26	3#12.3/4 IN.C.	30A/2P	
2	2087/10	25A/2P	A-26	3#12, 3/4 IN.C.	30A/2P	+;
-	2087/18	25A/2P	B-26	3#12, 3/4 IN.C.	30A/2P	<del>                                     </del>
-2	208V/IØ	25A/2P	B-26	3#12, 3/4 IN.C.	30A/2P	<del>                                     </del>
<u>-</u>	2087/10	25A/2P	B-26	3#12, 3/4 IN.C.	30A/2P	+;
-2	2087/10	25A/2P	B-26	3#12, 3/4 IN.C.	30A/2P	1
<u>-</u>	2087/10	35A/2P	A-30	3#10, 3/4 IN.C.	60A/2P/3R	+;
·2	208V/IØ	35A/2P	A-30	3#10, 3/4 IN.C.	60A/2P/3R	<del>li</del>
-	208V/IØ	35A/2P	B-30	3#10, 3/4 IN.C.	60A/2P/3R	<del>li</del>
-2	208V/IØ	35A/2P	B-30	3#10, 3/4 IN.C.	60A/2P/3R	<del>Ti</del>
-	208V/IØ	35A/2P	B-30	3#10, 3/4 IN.C.	60A/2P/3R	<del>                                     </del>
-2	208V/IØ	35A/2P	B-30	3#10, 3/4 IN.C.	60A/2P/3R	<del>                                     </del>
	1207/10	20A/IP	-	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120V/IØ	20A/IP	_	3#12,1/2 IN.C.	MOTOR RATED SW	2
	120V/1Ø	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120V/1Ø	20A/IP	_	3#12,1/2 IN.C.	MOTOR RATED SW	2
	120V/IØ	20A/IP	_	3#12,1/2 IN.C.	MOTOR RATED SW	2
	120V/IØ	20A/IP	_	3#12,1/2 IN.C.	MOTOR RATED SW	2
	120V/1Ø	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120V/1Ø	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120 V / 10	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120 V / 10	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120V/18	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120V/1Ø	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	208V/IØ	30A/2P	A-34	3#10, 3/4 IN.C.	30A/2P	
2	2087/10	30A/2P	A-34	3#10, 3/4 IN.C.	30A/2P	+
-	208V/IØ	30A/2P	B-34	3#10, 3/4 IN.C.	30A/2P	+
-2	208V/IØ	30A/2P	B-34	3#10, 3/4 IN.C.	30A/2P	
_ <u></u> -	208V/IØ	30A/2P	B-34	3#10, 3/4 IN.C.	30A/2P	
-2	208V/IØ	30A/2P	B-34	3#10, 3/4 IN.C.	30A/2P	
3/IHPI-3	208V/IØ	15A/2P	HP-3I	4#12, 1/2 IN. C.	30A/2P/3R	1,3
37 11 11 1 3	208V/IØ	20A/2P	HP-22	3#12,1/2 IN. C.	MOTOR RATED SW	
	208V/IØ	20A/2P	HP-26	3#12,1/2 IN. C.	MOTOR RATED SW	+;
	208V/IØ	20A/2P	HP-30	3#10, 1/2 IN. C.	MOTOR RATED SW	+;
	208V/IØ	20A/2P	HP-34	3#10,1/2 IN.C.	MOTOR RAJED SW	+;
~~~	1207/10	20A/IP	<del>~~~~~~</del>	3#12, 1/2 IN.C.	MOTOR RATED SW	72~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	120V/10	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120V/10	20A/IP	_	3#12, 1/2 IN.C.	MOTOR RATED SW	2
	120V/IØ	20A/IP	_	3#12.1/2 IN.C.	MOTOR RATED SW	2
<del>~~~~</del>			EXACT CONTROL			كستك

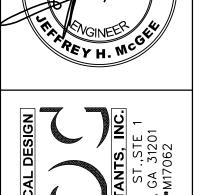
	UNIT 101 UNIT 102 UNIT 20 UNIT 20 UNIT 30 UNIT 30
SUB FED PANEL  GROUND BAR  (BOND)	SUBTOTAL A
3/0	
— (3) IO FTO IN. x¾IN. COPPER CLAD GROUND RODS IO FT. ON CENTER IN TRIANGLE SHAPE. (RESISTANCE TO GROUND 25 OHMS OR LESS). PROVIDE ADDITIONAL GROUND RODS AS REQUIRED.	



POWER RISER DIAGRAM

NOT TO SCALE





B, ARNOLD SUBDIVISION OSTELL AVENUE ONS ISLAND, GA.

THIRD FLOOR

SECOND FLOOR

VEIWPOINT 1515

8-25-17 11-08-17 6-08-18

## ELEVATOR NOTES: (DETAIL 3/E4.3 ONLY)

A THE CONTRACTOR SHALL: COORDINATE AMONG THE CONTRACTOR, SUBCONTRACTORS AND ELEVATOR SUPPLIER. SUBMIT AND COORDINATE ELEVATORS BOTH IN ADVANCE OF INSTALLATION AND BEFORE STUBBING OF THE CIRCUITS. SUBMIT ELECTRICAL EQUIPMENT FOR ELEVATORS ACTUALLY

COORDINATE ELEVATOR WORK REGARDLESS OF THE DIVISION UNDER WHICH WORK IS

- B PROVIDE ELEVATOR WORK IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE INTERNATIONAL BUILDING CODE CHAPTER 30.
- (C) THE CONTRACTOR SHALL PROVIDE THE FOLLOWING WORK: ELEVATOR CONTROL STATIONS AND RELATED CIRCUITING

TWO-HOUR FIRE RATED ELEVATOR CONTROL ROOM:

CONTROL CIRCUITING AND INTERLOCKS INCLUDING CONTROL "CARDS"

OTHER ITEMS REQUIRED BY THE ELEVATOR SUPPLIER OR CODES

EQUIPMENT ARRANGEMENT IN THE ELEVATOR CONTROL ROOM AS RECOMMENDED BY THE ELEVATOR SUPPLIER AND REQUIRED BY APPLICABLE CODES.

- D PER ANSIAI7.IRULE 1061E, EACH ELEVATOR PIT SHALL BE PROVIDED A PERMANENT FIXTURE AND GFI RECEPTACLE BELOW THE ELEVATOR WITH A SWITCH ACCESSIBLE AT THE TOP OF THE PIT LADDER OR THRU THE PIT ACCESS DOOR.
- E ELEVATOR CONTROL ROOM SHALL BE: PER ANSIAI7.IRULE 101.5, PROVIDED 10 FOOTCANDELS ILLUMINATION MINIMUM AT FLOOR LEVEL PROVIDED DISCONNECTS FOR EACH CAR'S 110 VAC LIGHTING. DISCONNECTS SHALL CONSIST OF SEPARATELY ENCLOSED 1-POLE BREAKERS LOCKABLE IN THE "OFF" POSITION. REFERENCE NEC SECTIONS 620-22 AND 620.52.
- F ELEVATOR CONTROL ROOM SHALL:
  IN ELEVATOR CONTROL ROOM, NEAR THE ENTRY DOOR, FOR EACH ELEVATOR, PROVIDE A LOCKABLE
  SHUNT TRIP BREAKER. (REFERENCE NFPA CHAP.70 620-51) MULTIPLE BREAKERS SHALL BE SEPARATELY ENCLOSED. SIZE FOR ELEVATORS ACTUALLY PROVIDED. DEVICE SHALL BE FULLY RATED FOR FAULT

SPRINKLER AND AUTOMATIC DISCONNECTING MEANS SHALL NOT BE PROVIDED. REFERENCE GA DEPT OF LABOR - R&R 300-3-6-.25(c)J PROVIDE SMOKE SENSING DEVICE IN EACH ELEVATOR LOBBY HOISTWAY, DEDICATED TO INITIATE FIREMANS EMERGENCY RETURN PER ANSIAI7.IRULE 211.3b.

CONNECT FOUR DRY CONTACTS FROM THE MAIN SMOKE SENSING PANEL TO THE ELEVATOR CONTROLLER FOR OPERATION OF FIRE SERVICE, PER ANSIAI7.IRULE 211.3a.

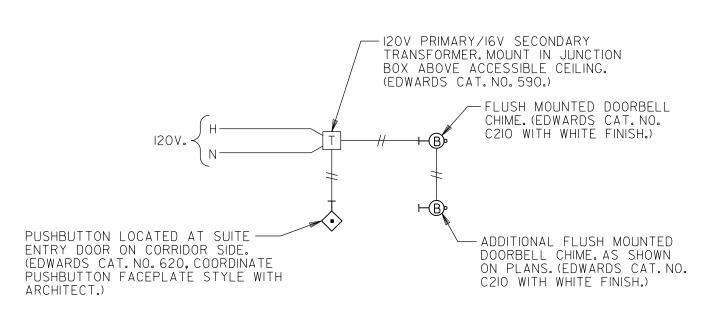
G COMMUNICATIONS: PROVIDE WORKING TELEPHONE OR INTERCOMS IN EACH CAR WITH NECESSARY WIRING PULLED TO THE ELEVATOR CONTROLLER PER ANSIAI7.IRULE 211.1.

PROVIDE CONDUIT AND CATEGORY-6 CABLE TO THE COMMUNICATIONS ROOM WITH ONE CABLE PER ELEVATOR CAB. HOMERUNS MAY CONTAIN MULTIPLE CABLES.

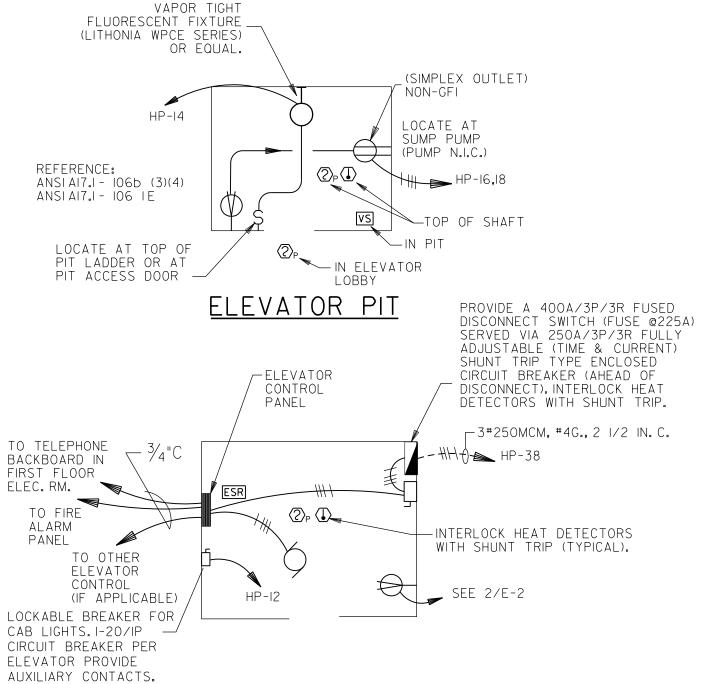
(H) SMOKE DETECTION: PROVIDE SMOKE SENSING DEVICES IN EACH ELEVATOR MACHINE ROOM AND LOBBY HOISTWAY DEDICATED TO INITIATE FIREMAN'S EMERGENCY RETURN PER ANSIAI7.IRULE 211.3b.

PER ANSIAI7.IRULE 211.3a CONNECT TWO DRY CONTACTS FROM THE MAIN SMOKE SENSING PANEL TO THE ELEVATOR CONTROLLER FOR FIRE SERVICE.

IN EVENT OF POWER LOSS: PROVIDE ELEVATOR CONTROLS SUCH THAT UPON POWER LOSS, THE ELEVATOR WILL OPEN AT EGRESS LEVEL. U CONTRACTOR SHALL ARRANGE BREAKERS TO PROVIDE MAXIMUM CLEARANCE. LAYOUT SHOWN IS A CIRCUITING GUIDE

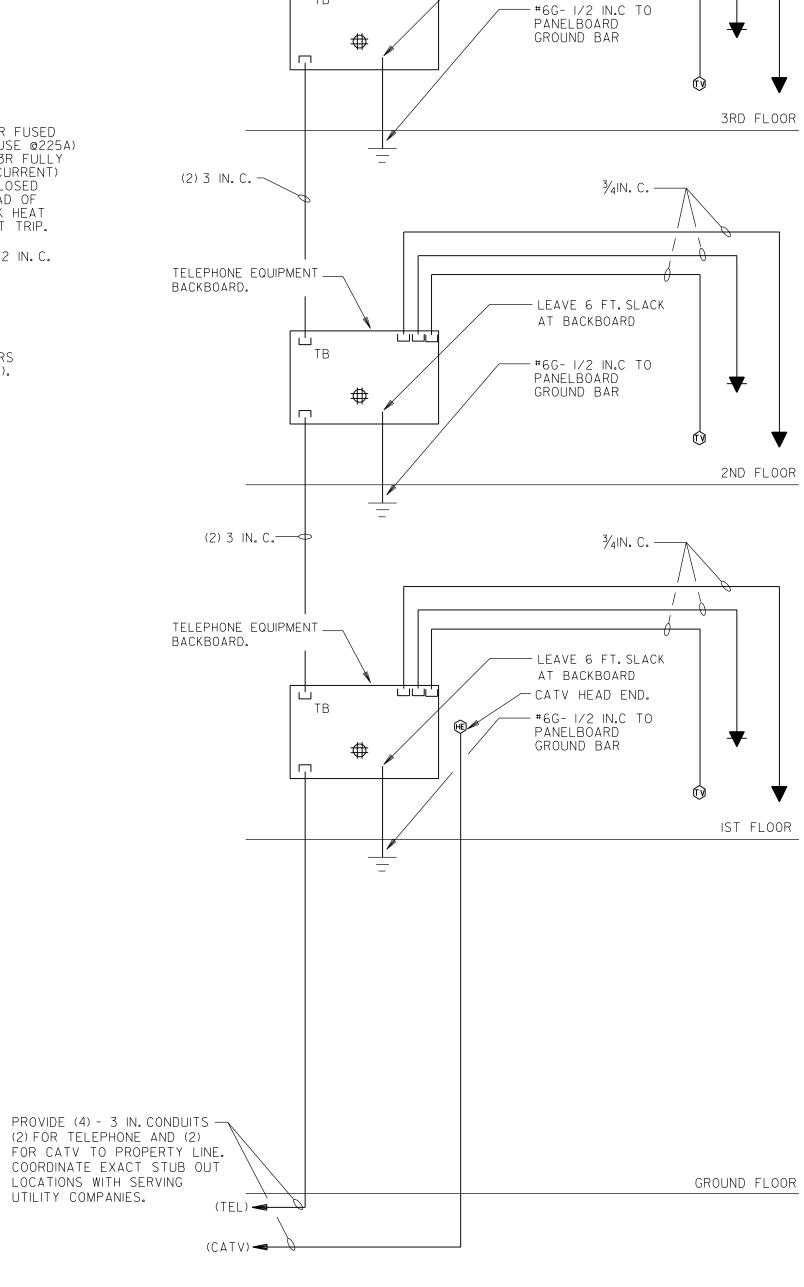






## ELEVATOR MACHINE ROOM





TELEPHONE EQUIPMENT \_

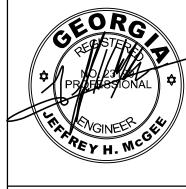
BACKBOARD.

 $\frac{3}{4}$ IN. C. —

LEAVE 6 FT. SLACK

AT BACKBOARD







ARCHITECTS P.C. DERICA ROAD USSERY/RULE A
1804-A FREE
ST. SIMONS ISLAI

CONDOMINIUM

, ARNOLD SUBDIVISION TELL AVENUE AS ISLAND, GA. , BLOCK B, AF 1124 POSTE ST. SIMONS I VEIWPOINT
LOT 6 & 7, BLOCK B

1515 8-25-17

**E-5**