

ELECTRICAL GENERAL NOTES

1.- OVERALL INSTALLATION: THE INSTALLATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC-2014), THE FLORIDA BUILDING CODE (FBC-2020, 1st EDITION), AND ANY OTHER APPLICABLE FEDERAL, STATE AND LOCAL CODES.

2.- COMPLIANCE: WORKMANSHIP, MATERIALS AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE APPLICABLE EDITION OF THE NEC, NFPA, NEMA, ASTM, OSHA, HRS HEALTH AGENCIES, AND OTHER APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND PERTAINING REGULATIONS ESTABLISHED BY THE RULING AUTHORITY HAVING JURISDICTION. CONTRACTORS SHALL ALSO MEET THE REQUIREMENTS OF OTHER STANDARDS WHERE SUCH REQUIREMENTS ARE MORE STRICT THAN THOSE STANDARDS CITED ABOVE.

3.- MATERIALS: CONTRACTOR SHALL PROVIDE ALL NEW MATERIALS OF AMERICAN MANUFACTURE, BEARING THE UNDERWRITER'S LABORATORY (UL) LABEL AS APPLICABLE.

4.- PERMITS AND INSURANCE: CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, TAXES, INSPECTIONS, TESTS, FINES AND OTHER ITEMS AS REQUIRED FOR THE INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEMS AS OUTLINED HEREIN AND SHOWN ON PLANS. CONTRACTOR SHALL PROVIDE ALL REQUIRED INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

5.- EXISTING CONDITIONS: BEFORE BIDDING, THE CONTRACTOR SHALL VISIT THE JOB SITE AND ASCERTAIN ALL EXISTING CONDITIONS WHICH WILL AFFECT HIS WORK. FAILURE TO DO SO WILL NOT BE ACCEPTED AS A REASON FOR REQUESTING EXTRA PAY WHERE THE EXISTING CONDITIONS RESULT IN EXTRA MATERIALS OR ANY EXISTING CONDITIONS FOUND BY THE CONTRACTOR WHICH WILL ADVERSELY AFFECT THE WORK SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETELY WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENTS OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.

6.- CUTTING AND PATCHING: MAJOR CUTTING, PATCHING & PAINTING REQUIRED BY THIS CONTRACT WILL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. ALL SURFACES SHALL BE RETURNED TO ORIGINAL CONDITIONS AFTER THE INSTALLATION OF THE EQUIPMENT.

7.- THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF THE LOCAL ELECTRIC UTILITY AND THE TELEPHONE COMPANY.

8.- LOAD DATA IS BASED ON INFORMATION PROVIDED TO THE ENGINEER AT THE TIME OF DESIGN. ALL EQUIPMENT AND PANEL SIZES SHALL BE VERIFIED BEFORE ORDERING.

9.- CIRCUITS SHOWN ON PLANS ARE USED TO DETERMINE LOAD DATA AND PANEL SIZES. THE CONTRACTOR SHALL PROVIDE CIRCUIT ROUTING TO SUIT THE JOB CONDITIONS.

10.- FURNISH AND INSTALL ALL FIXTURES AS CALLED FOR ON THE PLANS OR AS SELECTED BY OWNER/ARCHITECT.

11.- ALL CONDUCTORS SHALL BE RUN IN CONDUIT, U.O.N.

12.- INSTALL 1/2" EMPTY CONDUIT TO ALL TELEPHONE/DATA OUTLETS. PROVIDE PULL WIRE NOTE: REQUIRE AT LEAST ONE HARD WIRED TELEF. OUTLET (USE TO CALL 911 IN EMERG.).

13.- INTERFERENCE: THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES SO THAT INTERFERENCE WITH EXISTING CONDITIONS, CONDUITS, PIPING, EQUIPMENT, ARCHITECTURAL AND STRUCTURAL MEMBERS BE AVOIDED.

14.- PLANS: DRAWINGS ARE BASICALLY DIAGRAMS INTENDED TO DEPICT APPROXIMATELY EQUIPMENT LOCATIONS AND ARRANGEMENTS, NOT TO SHOW EVERY MINOR DETAIL. PLANS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION AND DIMENSIONS.

15.- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE AREAS ONLY AND ABOVE BASE FLOOD ELEVATION.

16.- CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRING, BREAKER AND FUSES SIZES IN ACCORDANCE WITH A/C EQUIPMENT NAMEPLATES, IF DIFFERENT FROM THOSE SPECIFIED ON DRAWINGS, AS WELL AS ANY FEEDER CHANGES BEING AFFECTED BY THIS CHANGE. CONTRACTOR SHALL MAKE ABOVE MENTIONED CHANGES AT NO EXTRA COST.

17.- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE ALL REQUIRED L-BONES AND CONDUITS FOR INSTALLATION OF CONTROL WIRING. LOW VOLTAGE CONTROL WIRING AND THEIR TERMINATION IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

18.- ELECTRICAL METER AND PANEL LOCATIONS SHOWN MAY VARY DEPENDING ON SERVICE ENTRANCE LOCATION.

19.- ALL LIGHTING FIXTURES TO BE SELECTED BY THE OWNER/ARCHITECT, U.O.N. AND SHALL BE INSTALLED BY THIS CONTRACTOR.

20.- BALANCE ALL PHASES AT EACH PANEL AND MDP/SERVICE MAINS.

21.- CHECK AVAILABLE ELECTRICAL SERVICE CHARACTERISTICS WITH THE LOCAL POWER COMPANY PRIOR TO ORDERING ANY EQUIPMENT. INFORM THE ARCH/ENGINEER IF IT IS DIFFERENT FROM WHAT IS SHOWN ON PLANS.

22.- ELECTRICAL CONTRACTOR SHALL ASSURE THAT ALL FEATURES OF SERVICE COMPLY WITH THE POWER COMPANY'S REQUIREMENTS AND SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH POWER COMPANY FOR SERVICE. ALL EQUIPMENT NOT FURNISHED AND/OR INSTALLED BY THE POWER CO. IS TO BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

23.- U.O.N., COORDINATE REQUIRED A.I.C. RATINGS WITH POWER COMPANY.

24.- WHERE MORE THAN ONE DEVICE IS INDICATED AT ANY LOCATION, THESE SHALL BE GANGED UNDER ONE COMMON COVER.

25.- QUANTITY AND LOCATION OF ELECTRICAL, TELEPHONE/DATA & TV OUTLETS, LIGHTS AND LIGHT CONTROLS, SHALL BE ADJUSTED TO SUIT THE OWNER'S REQUIREMENTS AS PER OWNER/ARCHITECT INSTRUCTIONS. SAID ARRANGEMENTS SHALL NOT BE IN CONFLICT WITH APPLICABLE CODES.

26.- ELECTRICAL CONTRACTOR SHALL VERIFY REQUIREMENTS, EXACT LOCATIONS, TYPE AND ARRANGEMENT OF OUTLETS FOR ALL ELECTRICAL FIXTURES, APPLIANCES AND EQUIPMENT, PRIOR TO INSTALLATION.

27.- PROVIDE A TYPEWRITTEN DIRECTORY FOR EACH ELECTRICAL PANEL.

28.- CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS TO THE OWNER UPON COMPLETION OF WORK AND PRIOR TO FINAL PAYMENT.

29.- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES AS REQUIRED FOR OTHER CLASSIFIED AREAS AND SHALL CONFORM TO NEMA STANDARDS. PLASTIC BOXES MAY BE USED WHERE PERMITTED UNDER APPLICABLE CODES AND ORDINANCES.

30.- ALL DISCONNECT SWITCHES SHALL BE SIZED BY NEC REQUIREMENTS TO ACCOMMODATE THE EQUIPMENT SERVED, INCLUDING REJECTION CLIPS AND FUSES, WHEN APPLICABLE. SWITCHES SHALL BE HP RATED, QUICK-MAKE, QUICK-BREAK, IN NEMA 1 ENCLOSURES FOR INDOOR AND NEMA 3R FOR OUTDOOR.

2014 NEC CHANGE
210.8(A)(9) GFCI - Bathrooms or Shower Stalls
All 125-volt, single-phase, 15- and 20 -ampere receptacles installed within 6 ft of the outside edge of any dwelling unit bathtub or shower stall requires GFCI protection.

210.8 Ground-fault circuit interruption for personnel are required to be installed in a readily accessible location.

NOTE-1:
PROVIDE ARC-FAULT PROTECTION AS PER NEC 210.12

NOTE-2:
IN ALL AREAS OF A DWELLING UNIT, ALL 120-VOLT, 15A AND 20A RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES, TO COMPLY WITH NEC 406.12.

NOTE-3:
MINIMUM 75 % OF LAMPS TO BE HIGH EFFICIENCY
FBC E 404

NOTE-4:
PROVIDE INTERSYSTEM BONDING AS PER NEC 250.94

NOTE-5:
IN ALL AREAS SPECIFIED IN NOTE-1 AND NEC 210-52, ALL 125-VOLT, 15 AND 20 AMP, 115V RECEPTACLES SHALL BE LISTED TAMPER RESISTANT RECEPTACLES.

NOTE-6:
LEAVE SPARE NEUTRAL AT THE LIGHT SWITCHES.

2014 NEC CHANGE
210.8(A)(7) GFCI - Dwelling Unit Sinks
All 125-volt, single-phase, 15- and 20 -ampere receptacles installed within 6 ft of the outside edge of any dwelling unit sink now require GFCI protection.

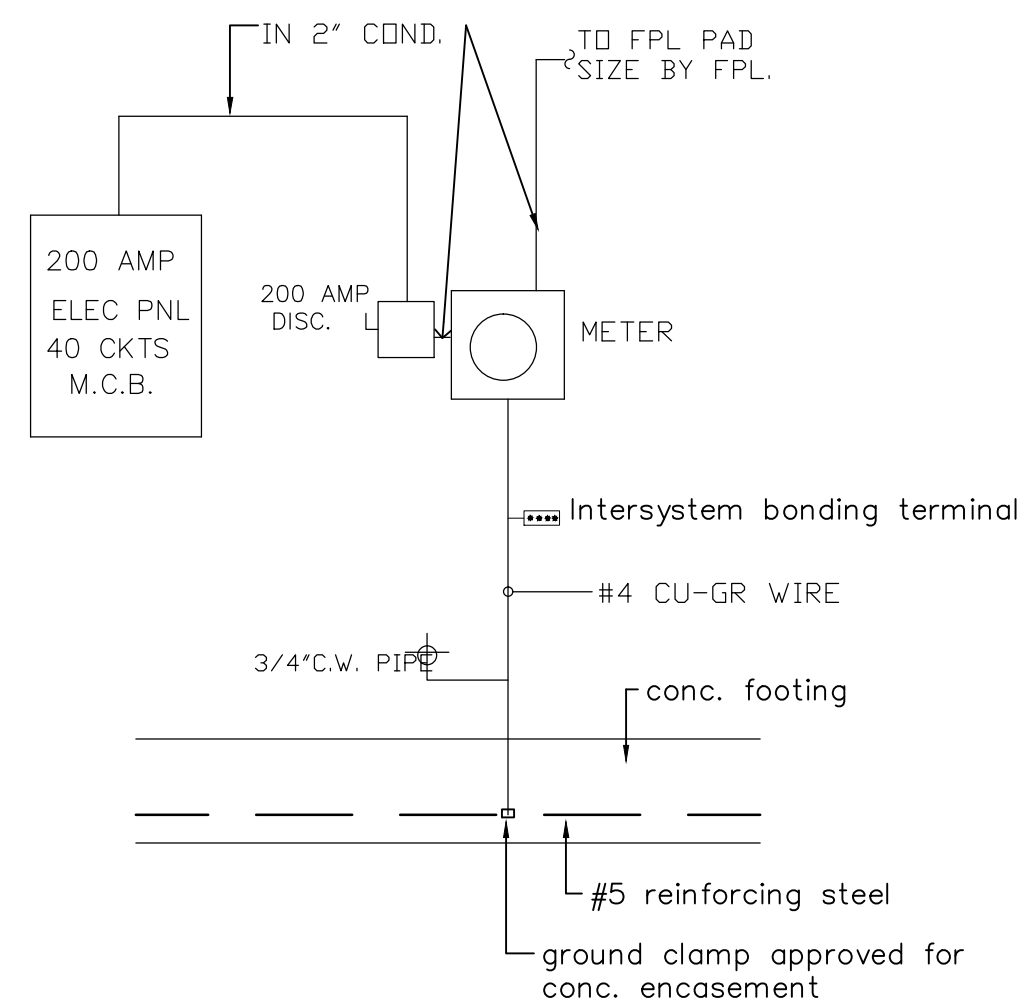
A/C CALCULATIONS		VA
A/C #1 & #2		6
CENTRAL A/C#1		
COMPRESSOR:	12.3 AMP	HEATER: 9,600
CONDENSER FAN:	1.3 AMP	
EVAP. BLOWER:	2.8 AMP	EVAP. BLOWER: 2.8A x 240V =
	16.4 AMP	
TOTAL VA = 16.4 A	240 x V = 3,936 VA	TOTAL HEATER = 10,272
SELECT LARGER NON CONCURRENT A/C LOAD: 10,272VA		

KEYNOTES:
1. CONNECT SMOKE DETECTORS TO AN ACTIVE CIRCUIT (FOR EXAMPLE, BATHROOM LIGHT BRANCH CIRCUIT). INTERCONNECT ALL SMOKE DETECTORS FOR SIMULTANEOUS OPERATION.

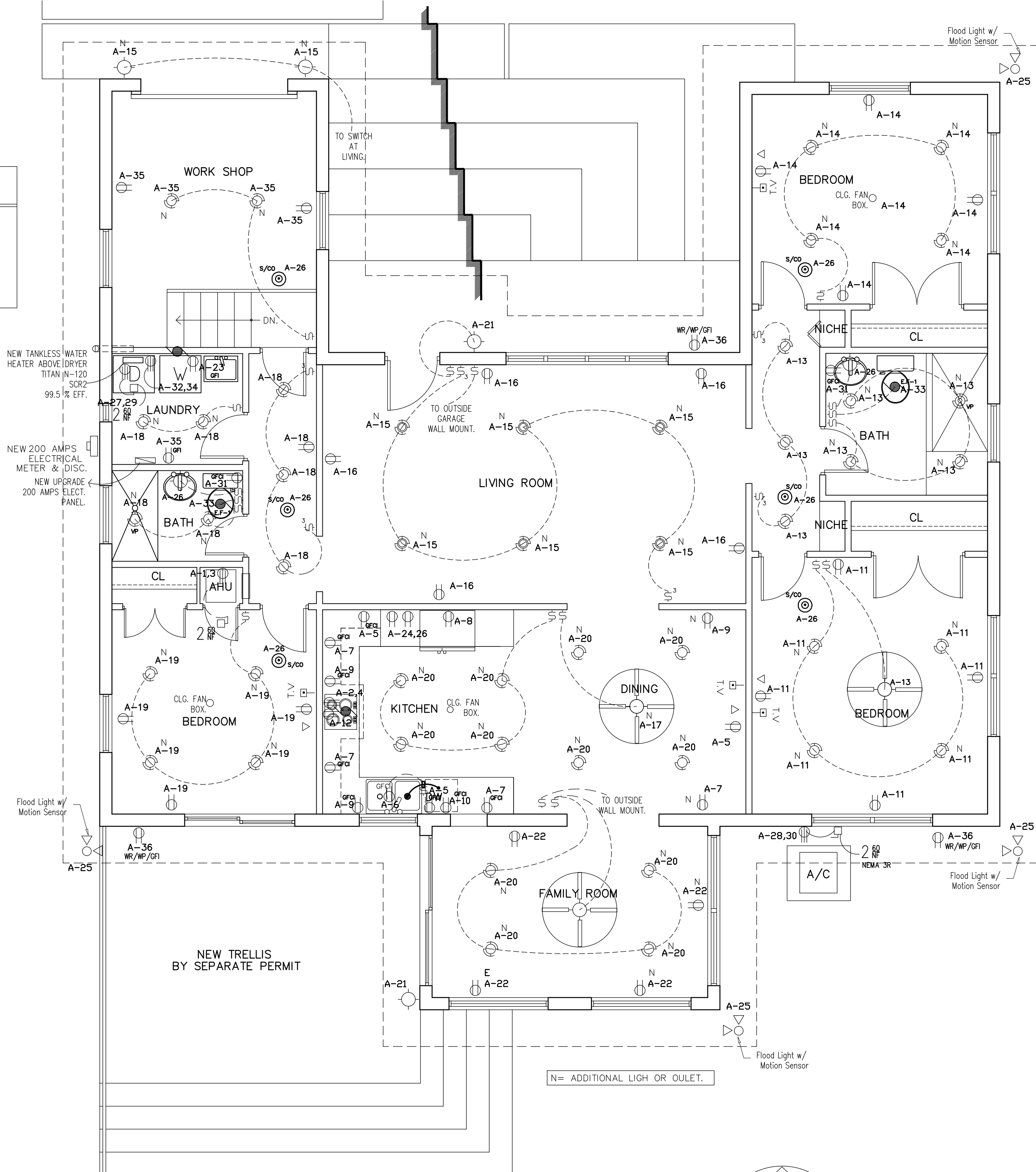
TYPE ITE EQ.				MAIN BUS 200 A			
DEM	NO DEM	TRIP	CON	WIRE	USE	WIRE	CON
KVA	KVA	POLE	DUIT				DUIT
10.2	60.2	1	6	A/C AHU	1	2	RANGE
1.5	20.1	ROMEX	12	SMALL APPLIANCES	5	6	GARBAGE DISPOSAL
1.0	15.1		14	LIGHTS & RECEPT.	11	12	MICROWAVE
1.5	20.1		12	WASHER MACHINE	23	24	DOUBLE OVEN/MICRO
1.0	15.1		14	FLOOD LIGHTS	25	26	
5.0	30.2		10	WATER HEATER	27	28	A/C COMP #1
1.5	20.1		12	BATH RECEPT GFI	31	32	DRYER
1.0	15.1		14	EXHAUST FAN	33	34	
1.0	15.1		14	LIGHTS & RECEPT.	35	36	LIGHTS & RECEPT.
				SPACE	37	38	SPACE
					39	40	
							30.0

TOTAL CONNECTED LOAD LESS A/C LOAD 41.5 KW
FIRST 10 KW @ 100% 10.0 KW
REMAINING @ 40 % 16.6 KW
A/C LOAD @ 100% 10.2 KW
TOTAL CONNECTED LOAD 36.8 KW
TOTAL AMPS 153 AMPS

* KEY NOTE! SHALL BE GFCI TYPE ARCH FAULT COMB.

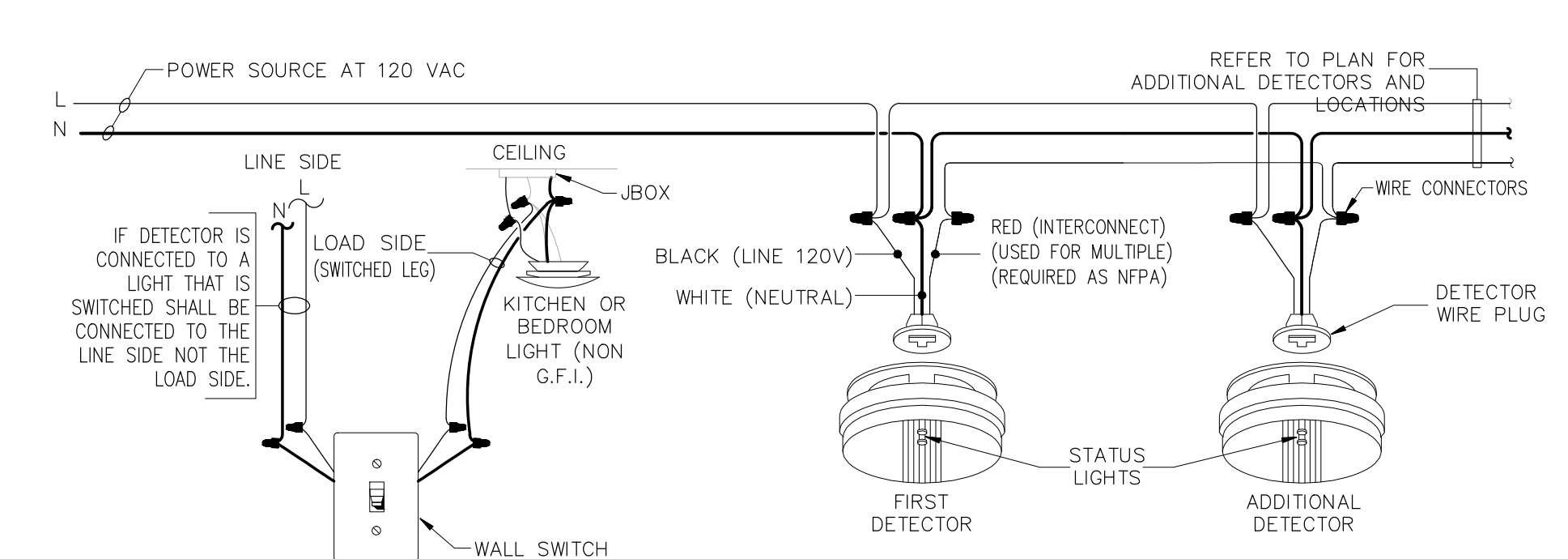


RISER DIAGRAM
NTS



ELECTRICAL PLAN

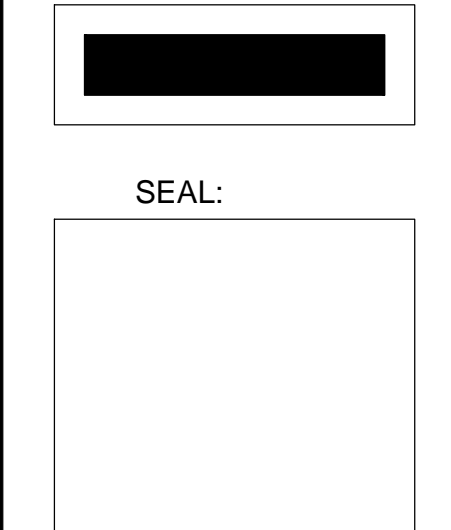
SCALE 1/4" = 1'-0"



INSTALLATION NOTE TO CONTRACTOR: THE SMOKE ALARM SHOULD BE INSTALLED TO COMPLY WITH ALL LOCAL CODES AND ARTICLE 760 OF THE NATIONAL ELECTRIC CODE AS WELL AS NFPA 72. MAKE CERTAIN ALL ALARMS ARE WIRED TO A SINGLE, CONTINUOUS (NON-SWITCHED) POWER LINE, WHICH IS NOT PROTECTED BY A GROUND FAULT INTERRUPTER. A MAXIMUM OF 1000 FT OF WIRE CAN BE USED IN THE INTERCONNECT SYSTEM. USE STANDARD UL LISTED HOUSEHOLD WIRE. WALL MOUNTED DETECTORS SHALL BE INSTALLED BETWEEN 4" AND 12" FROM THE CEILING.

120 V SMOKE DETECTOR & CO COMB.
CONNECT. & INTERCONNECT. DETAIL.

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Drawn by	MONTROYA
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