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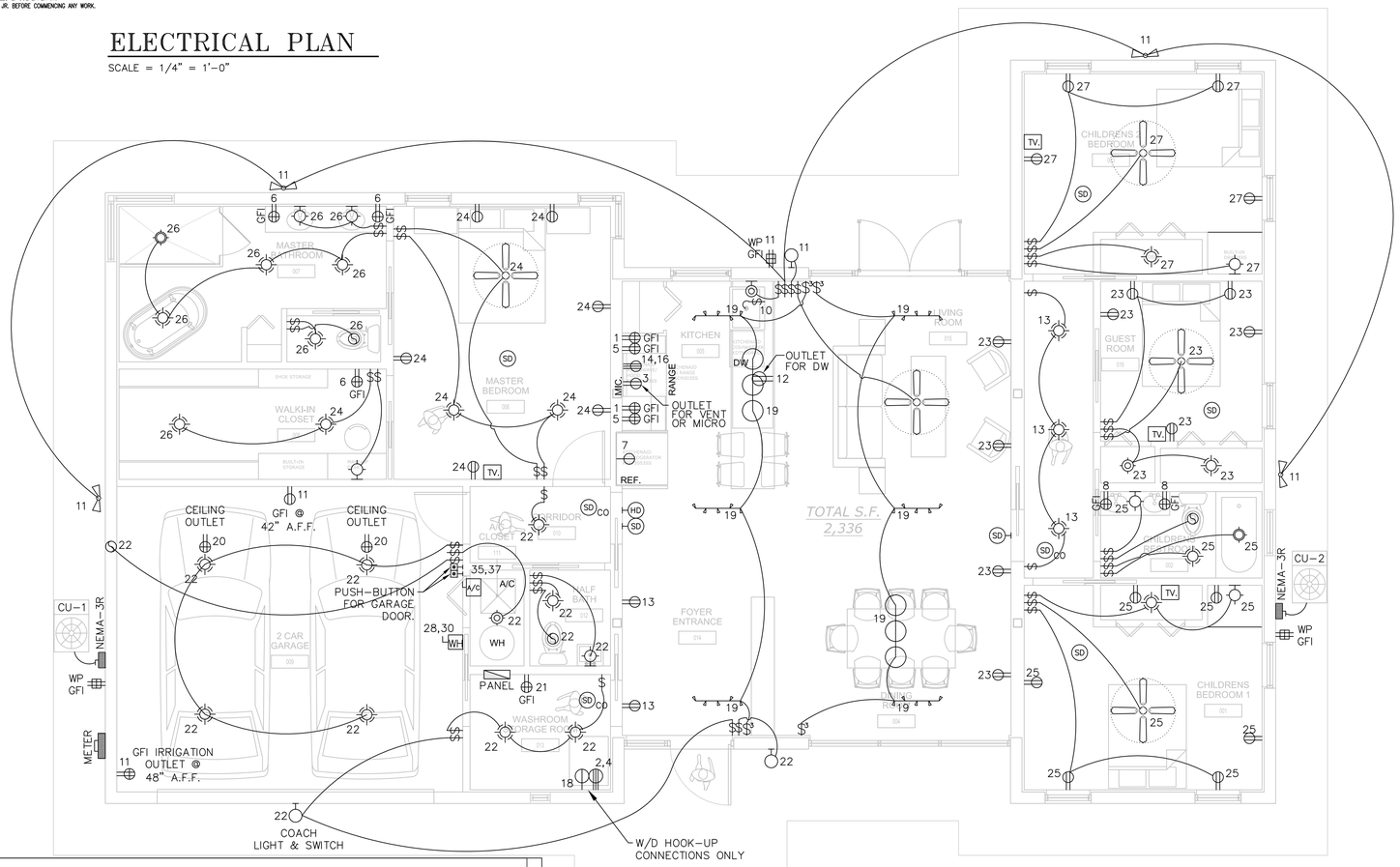
THE GENERAL CONTRACTOR AND ALL TRADES PERFORMING WORK ON THIS PROJECT SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS AND WITH REPORTING ANY DISCREPANCIES TO CHARLES E. CULPEPPER JR. BEFORE COMMENCING ANY WORK.

ELECTRICAL PLAN

SCALE = 1/4" = 1'-0"



ELECTRICAL LEGEND

SYMBOL	DEFINITION	NOTES
	125V OUTLET	20 AMP SINGLE POLE
	110V OUTLET	
	110V OUTLET	1/2 OF OUTLET WIRED TO SWITCH
GFI	110V OUTLET	EQUIPED WITH GROUND FAULT INTERRUPTER (TAMPER RESISTANT TYPE)
	220V OUTLET	4 WIRE CONNECTION
WP GFI	EXTERIOR WATERPROOF OUTLET	GROUND FAULT INTERRUPTER
$	SWITCH	
$3	SWITCH	3-WAY OPER.
$4	SWITCH	4-WAY OPER.
	WALL MOUNTED LIGHT	
	CEILING LIGHT	
VP	VAPOR PROOF LIGHT	
	RECESSED CAN	
	WALL SCONCE PREWIRE	
	VENT. FAN	1 CFM PER SQ. FT.
	VENT. FAN W/LIGHT	1 CFM PER SQ. FT.
	VANITY LIGHT FIXTURE (SPEC'S TBD BY BUILDER)	
	4'X2' FLUORESCENT LIGHT	2-BULB WRAP AROUND
	2' FLUORESCENT	
	4' FLUORESCENT	
	4' TRACK LIGHT	
	PANEL	
	METER	
HD	HEAT DETECTOR WALL MOUNT	BATT. BACK-UP W/ HARDWIRE
SD	SMOKE DETECTOR CEILING MOUNT	BATT. BACK-UP W/ HARDWIRE
SD	SMOKE DETECTOR CEILING MOUNT	BATT. BACK-UP W/ HARDWIRE
SD CO	CARBON MONOXIDE/ SMOKE DETECTOR COMBO	BATT. BACK-UP W/ HARDWIRE INTER-CONNECTED SHALL BE A DISTANCE OF NOT LESS THEN 4' FROM WALL
	PENDANT LIGHT	
	NATURAL GAS OUTLET	
	TELEPHONE JACK	
WH	WATER HEAT. DISCONNECT	IGNITION SOURCE TO BE ELEVATED MIN. 18" AFF.
A/C	AIR. COND. DISCONNECT	
TV.	TELEVISION JACK	
J	J-BOX	CEILING BOX REQUIRED TO BE SUPPORTED IN ACCORDANCE W/ BOX MARKED AS SUCH FOR INSPECTION
	CEILING FAN/LIGHT	CEILING BOX REQUIRED TO BE SUPPORTED IN ACCORDANCE W/ BOX MARKED AS SUCH FOR INSPECTION
	FLOOD LIGHT	
KP	OPTIONAL SECURITY KEYPAD	
P.B.	PUSH-BUTTON	FOR CHIMES
	USB PORT	

NOTES:
* LOCATION OF TV JACKS & PHONE OUTLETS & FANS TO BE VERIFIED @ HOMEOWNER PRE-CONSTRUCTION MEETING.
* ALL RECEPTACLES IN ALL HABITABLE ROOMS TO BE ARC FAULT PROTECTED PER ELECTRICAL PROVISIONS OF FBCR 5TH EDITION (2014).
* 20 AMP DEDICATED LAUNDRY CIRCUIT.
* GFI @ ISLAND (NOT ON KITCHEN CIRCUIT)
* DISHWASHER DISCONNECT TO BE LOCKOUT IN PANEL
* BATHROOM EXHAUST FAN TO HAVE MIN. CAPACITY OF 50 CFM INTERMITTENT PER ELECTRICAL PROVISIONS OF SECTION M1507.3 FBCR 5TH EDITION (2014).
* LAUNDRY ROOM RECEPTACLE SHALL BE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL ON FEEDERS
* WIRING METHOD SHALL BE NON METALLIC CABLE PER ELECTRICAL PROVISIONS OF FBCR 5TH ED (2014).
* ALL RECEPTACLES TO BE TAMPER-RESISTANT TYPE
* ALL WORK TO COMPLY WITH ELECTRICAL PROVISIONS OF THE FBCR 5TH ED (2014).

PANEL - A

PANEL: 42 crt. breaker **VOLTAGE:** 120 / 240 V -1Ph **MAIN:** 150 Amp M.L.O.

FEEDER: 3#2/0 Cu, THWN + 1#6 Cu IN 2" CONDUIT OR 3 #4/0 AL, THWN + 1#6 Cu IN 2" CONDUIT

Wire	Pole	Bkr	Description	Watts	Circuit	Circuit	Watts	Description	Bkr	Pole	Wire
#12	1	20	Small Appliances	1500	1	2	5000	Dryer	30	2	#10
#12	1	20	Microwave	1500	3	4					
#12	1	20	Small Appliances	1500	5	6	1000	Master's Bath GFI	20	1	#12
#12	1	20	Refrigerator	1200	7	8	1000	Bath & Powder GFI	20	1	#12
#12	1	20	Dining Rm. Receptacles AFCI	1500	9	10	500	Disposal	20	2	#12
#14	1	15	Garage GFCI, Exterior	1100	11	12	1200	Dishwasher	20	1	#12
#14	1	15	Foyer/Powder Rm Lights AFCI	1100	13	14	8000	Range/Oven	40	2	#8
0	0	0	Spare	0	15	16					
#14	1	15	Kitchen Lights AFCI	1100	17	18	1500	Washer GFCI	20	1	#12
#14	1	15	Great Rm. Rec/ Lights/ Dining AFCI	1100	19	20	1000	Garage Door Opener GFI	20	1	#12
#12	1	20	Laundry Receptacle AFCI	1100	21	22	1000	Garage/Exterior Lights/ Laundry Lights	15	1	#14
#14	1	15	Guestroom AFCI	1100	23	24	1100	Owner's Suite AFCI	15	1	#14
#14	1	15	Childrens Room #1 AFCI/Children's Restroom. AFCI	1100	25	26	1100	Master's Bath Lights AFCI	15	1	#14
#14	1	15	Childrens Room #2 AFCI / Den AFCI	1100	27	28	4500	Water Heater	25	2	#10
#14	1	15	SD, SDco, Alarm	1100	29	30					
0	0	0	Spare	0	31	32	0	Spare	0	0	0
0	0	0	Spare	0	33	34	0	Spare	0	0	0
#6	2	50	AHU-1 (Heater 10 KVA at 65%)	5430	35	36	5532	AHU-2 (Heater 10 KVA at 65%)	50	2	#6
					37	38					
#8	2	40	A/C C.U.-1	5275	39	40	5275	A/C C.U.-2	40	2	#8
					41	42					
Load subject to demand factor calculations / line				27805			37707	Load subject to demand factor calculations / line			

Demand Factor Calculations:	
Total load subject to demand factor	65512
First 10000 watts at 100%	10000
Remaining watts at 40%	22204.8
Total A/C load	10962
Future Growth = 10%	4316.68
Total Connected Load Watts	47483.48
Total Amps (watts / 240 volts)	**197.8**

ABBREVIATIONS:
AFCI: ARC FAULT CIRCUIT INTERRUPTER
NC: NON-COINCIDENT LOAD
GFI: GROUND FAULT INTERRUPTER

LOAD CALCULATION IS BASED ON A/C NON-COINCIDENT LOAD

NOTES:
A. CONFIRM BREAKER AND WIRE SIZES WITH EQUIPMENT PROVIDED.
B. INTERIOR WIRE SHALL BE TYPE "NM" ROMEX CABLE. OUTDOOR & DAMP AREAS TO BE COPPER, APPROVED FOR LOCATION
C. EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES.
D. DATA WIRE TO BE CAT 5
E. CABLE TV WIRE TO BE RG 6
F. BURGLAR ALARM WIRE TO BE CM
G. MAIN BREAKER TO HOUSE TO BE 22 K AIC.
H. MAIN TO ALWAYS BE LOCATED NEXT TO METER.
I. PROVIDE 4 CONDUCTORS FOR RANGE & DRYER PER NEC 250.140
J. RESIDENTIAL STAIRS MIN 1 FC INSIDE AND OUT PER F.B.C.R. 2017, 6th EDITION, CHAPTER 3, R303.7 (IF REQUIRE)
K. 75% OF LIGHTING MUST BE HIGH EFFICIENCY TYPE PER F.B.C. ENERGY CONSERVATION (RESIDENTIAL ENERGY & EFFICIENCY) 2017, 6th EDITION, CHAPTER 4, R404.1
L. PROVIDE TAMPER RESISTANT RECEPTACLES PER NEC 406.12
M. PROVIDE ARC FAULT PROTECTION PER NEC 210.12
N. GARAGE RECEPTACLE TO BE GFCI PER NEC 210.8(A)(2)

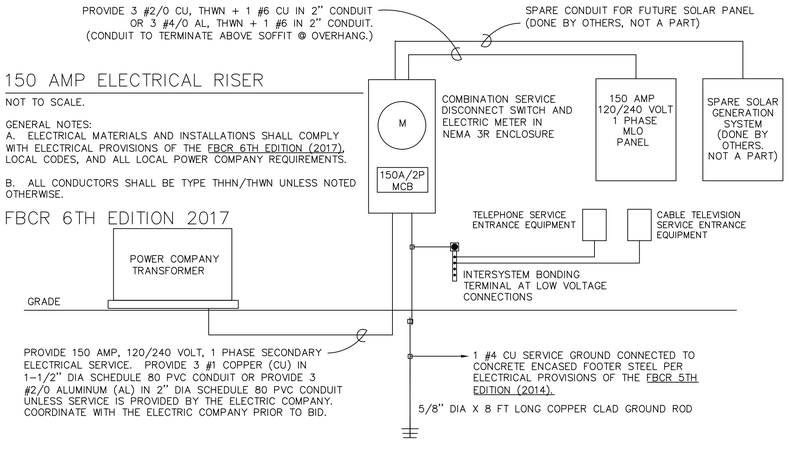
NEUTRAL CALCULATION:
LIGHTING, APPLIANCE, LAUNDRY LOADS: 14,283 VA
3000 VA @ 100%, REMAINDER @ 35%
NET LOAD: 6,949 VA
RANGE: 12,000 @ 70% 8,400 VA
DRYER: 5,000 @ 70% 3,500 VA
TOTAL 18,849 VA
NEUTRAL AMPACITY: 18,849 / 240 = 78 A
#2 AL MINIMUM NEUTRAL CONDUCTOR.

150 AMP ELECTRICAL RISER

NOT TO SCALE.

GENERAL NOTES:
A. ELECTRICAL MATERIALS AND INSTALLATIONS SHALL COMPLY WITH ELECTRICAL PROVISIONS OF THE FBCR 6TH EDITION (2017), LOCAL CODES, AND ALL LOCAL POWER COMPANY REQUIREMENTS.

B. ALL CONDUCTORS SHALL BE TYPE THHN/THWN UNLESS NOTED OTHERWISE.



0 2" 4" 8"

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CHARLES E. CULPEPPER JR.

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REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW YORK LICENSE No. 16-066511
STATE OF ILLINOIS LICENSE No. 062-043107
STATE OF FLORIDA LICENSE No. 14203

PROJECT:
AZEKIEL RESIDENCE
FOLIO#: 0639290100
SEFFNER, FL 33584

OWNER:
SHOMBAY DAHARI
5309 NANCY ST
TAMPA, FL 33617-8103

DRAWING:

REVISIONS	
ISSUE	ISSUE DATE/FOR

PROJECT No: 1605 DRAWN BY: SETOFPLANS.COM
SCALE: CHECKED BY: DH/ER
DATE: 07/25/2018
SHEET NO. E-1