

GENERAL NOTES

ALL DRAWINGS MUST COMPLY WITH CODE IN EFFECT: NEC: 2017 & FBC 2020, 7TH EDITION.

SECTION 404 ELECTRICAL POWER AND LIGHTING SYSTEMS
404.1 LIGHTING EQUIPMENT:
A MINIMUM OF 90 PERCENT OF THE LAMPS IN PERMANENTLY T
INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

NEC 2017: 210.12 ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR DWELLING UNITS
210.12(A) WHERE REQUIRED: ALL 15A OR 20A, 120V BRANCH CIRCUITS IN DWELLING UNITS SUPPLYING OUTLETS IN FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENIS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, KITCHENS, LAUNDRY AREAS OR SIMILAR ROOMS OR AREAS MUST BE PROTECTED BY A LISTED AFCI DEVICE OF THE COMBINATION TYPE.

ALL EXTERIOR LIGHTS SHALL BE UL LISTED WEATHER PROOF. UL LISTED TAMPER PROOF RECEPTACLES FOR NEW ADDITION.

FOR RESIDENTIAL STAIRS MINIMUM 1 FOOT CANDLE INSIDE AND OUTSIDE STAIRS. FBC 9303.7
INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE TO ILLUMINATE THE LANDINGS AND TREADS. THE LIGHT SOURCE SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS OF NOT LESS THAN 1 FOOTCANDLE (1 LUX) AS MEASURED AT THE CENTER OF TREADS AND LANDINGS. THERE SHALL BE A WALL SWITCH AT EACH FLOOR LEVEL TO CONTROL THE LIGHT SOURCE WHERE THE STAIRWAY HAS SIX OR MORE RISERS.

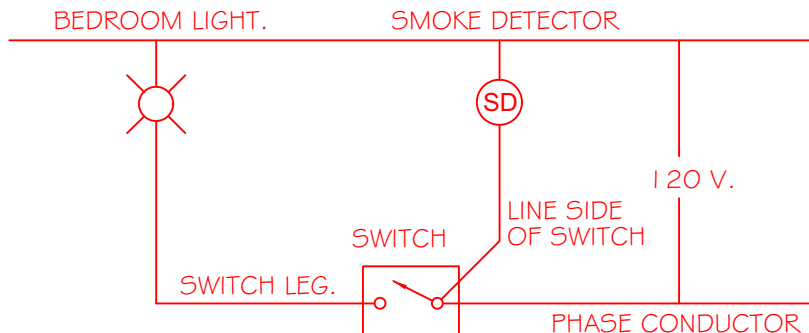
GFCI T BE READILY ACCESSIBLE PER NEC 210.8

RECESSED LUMINAIRES TO BE IC RATED PER NEC 410.105

ELECTRICAL NOTES

1. PROVIDES COMPLIANCE WITH THE 2014 NEC, SECTION 406.11 SPECIFICATION THAT STATES ALL RECEPTACLES INSTALLED IN DWELLING UNITS MUST BE TAMPER RESISTANT.
2. WALK-IN CLOSETS (NEC 410.2/410.16) LIGHT FIXTURES SHALL BE KEPT AT LEAST 12" AWAY FROM COMBUSTIBLE MATERIALS.
3. SMOKE DETECTORS SHALL BE CAPABLE OF DETECTING CARBON MONOXIDE.
4. KITCHENS (210-52-4-2) 'PENINSULAS' AND 'ISLANDS' SHALL HAVE AT ITS ENDS, THIS OUTLET SHALL NOT BE INSTALLED ANY LOWER THAN 6" BELOW THE COUNTERTOP.
5. CONTRACTOR SHALL COORDINATE ALL TELEPHONE AND CABLE TV OUTLET MH PRIOR TO INSTALLATION TYPICAL ENTIRE HOUSE.

NOTE-1:
WALK-IN CLOSETS (NEC 410.2/410.16) LIGHT FIXTURES SHALL BE KEPT AT LEAST 12" AWAY FROM COMBUSTIBLE MATERIALS.



SMOKE DETECTOR CONNECTION DETAIL
NTS

SMOKE DETECTOR NOTES:

- 1- SMOKE DETECTOR SHALL BE HARDWIRED (110 VOLT TYPE) WITH BATTERY BACK-UP AND SHALL BE CONNECTED TO A BEDROOM CIRCUIT PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER. ALL SMOKE DETECTORS WITHIN EACH UNIT SHALL BE INTERCONNECTED (AFCI PROTECTED)
- 2- SMOKE DETECTOR SHALL BE LOCATED AT LEAST 8FT. FROM ANY A/C DIFFUSER OR BATHROOM VENT AN 11" WITHIN 20FT. OF A COOKING APPLIANCE. IT IS TO BE A PHOTOELECTRIC TYPE.
- 3- THE MOUNTING AND LOCATION OF UNIT SMOKE DETECTORS SHALL COMPLY WITH NFPA 72 SEC. 2-5.2.1.6. CEILING MOUNTS NOT LESS THAN 4" FROM A WALL AND WALL MOUNTS AT LEAST 4" FROM CEILING AND NOT MORE THAN 12" TO TOP OF DETECTOR.
- 4- SMOKE DETECTORS LOCATED AT THE STAIRS, SHALL BE CAPABLE OF DETECTING CARBON MONOXIDE.

SUB PANEL: 'A' 150 AMPS													
AIC:10,000 MAIN: 150 BREAKER SIZE: 150 A													
VOLTAGE: 120/240 VOLTS PHASE: 1 PHASE, 3 WIRES MOUNTING: SURFACE													
Circuit													
COND	WIRE	CIRCUIT ID	LOAD	POLES	TRIP	CKT#	U1	U2	CKT#	TRIP	POLES	LOAD	CIRCUIT ID
1/2"	2-#12	GEN. LIGHTS / RECEPT. LIVING	+	1	20	1			X	2			
1/2"	2-#12	GEN. LIGHTS / RECEPT. KITCHEN	+	1	20	3	X		4		50	2	7,000
1/2"	2-#12	SMALL APPLIANCES	1,500	1	20	5	X	6		20	1	+	GEN. LIGHTS / RECEPT. GARAGE
1/2"	2-#12	SMALL APPLIANCES	1,500	1	20	7	X		8		20	1	+
1/2"	2-#12	GEN. LIGHTS / RECEPT. DINING	+	1	20	9			X	10		50	2
1/2"	2-#12	GARAGE DOOR	1,000	1	20	11	X		12				
1/2"	2-#12	KITCHEN HOOD	500	1	20	13			X	14		1,500	1
1/2"	2-#12	DISHWASHER	1,200	1	20	15	X		16		20	1	+
1/2"	2-#12	GEN. LIGHTS / RECEPT. BEDROOM	+	1	20	17	X		18		20	1	+
1/2"	2-#12	GEN. LIGHTS / RECEPT. MASTER	+	1	20	19	X		20		20	1	1,500
1/2"	2-#12	GEN. LIGHTS / RECEPT. MASTER	+	1	20	21	X		22		20	1	1,500
1/2"	2-#12	GEN. LIGHTS / RECEPT. BATH	+	1	20	23	X		24		20	1	+
1/2"	2-#12	GEN. LIGHTS / RECEPT. HALL	+	1	20	25	X		26		40	2	
1/2"	2-#12	DRYER	5,000	2	30	27	X		28				
1/2"	2-#12	GEN. LIGHTS / RECEPT. BATH 2	+	1	20	31	X		32		40	2	27,000
1/2"	2-#12	GEN. LIGHTS / RECEPT. BEDS	+	1	20	33	X		34				
1/2"	2-#12	GEN. LIGHTS / RECEPT. BED 2	+	1	20	35	X		36		40	2	
1/2"	2-#12	BATH VENT	+	1	20	37			X	38			
		SPARE				39	X			40			
		SPARE				41			X	42			

*ROMEX IS OK TO USE IN LIEU OF CONDUIT

* NOTE: THE NEUTRAL CONDUCTOR CANNOT BE USED FOR EQUIPMENT GROUNDING. THIS MEANS THAT 4-WIRE CORDS AND RECEPTACLES ARE REQUIRED FOR RANGES, DRYERS, AND OVENS.

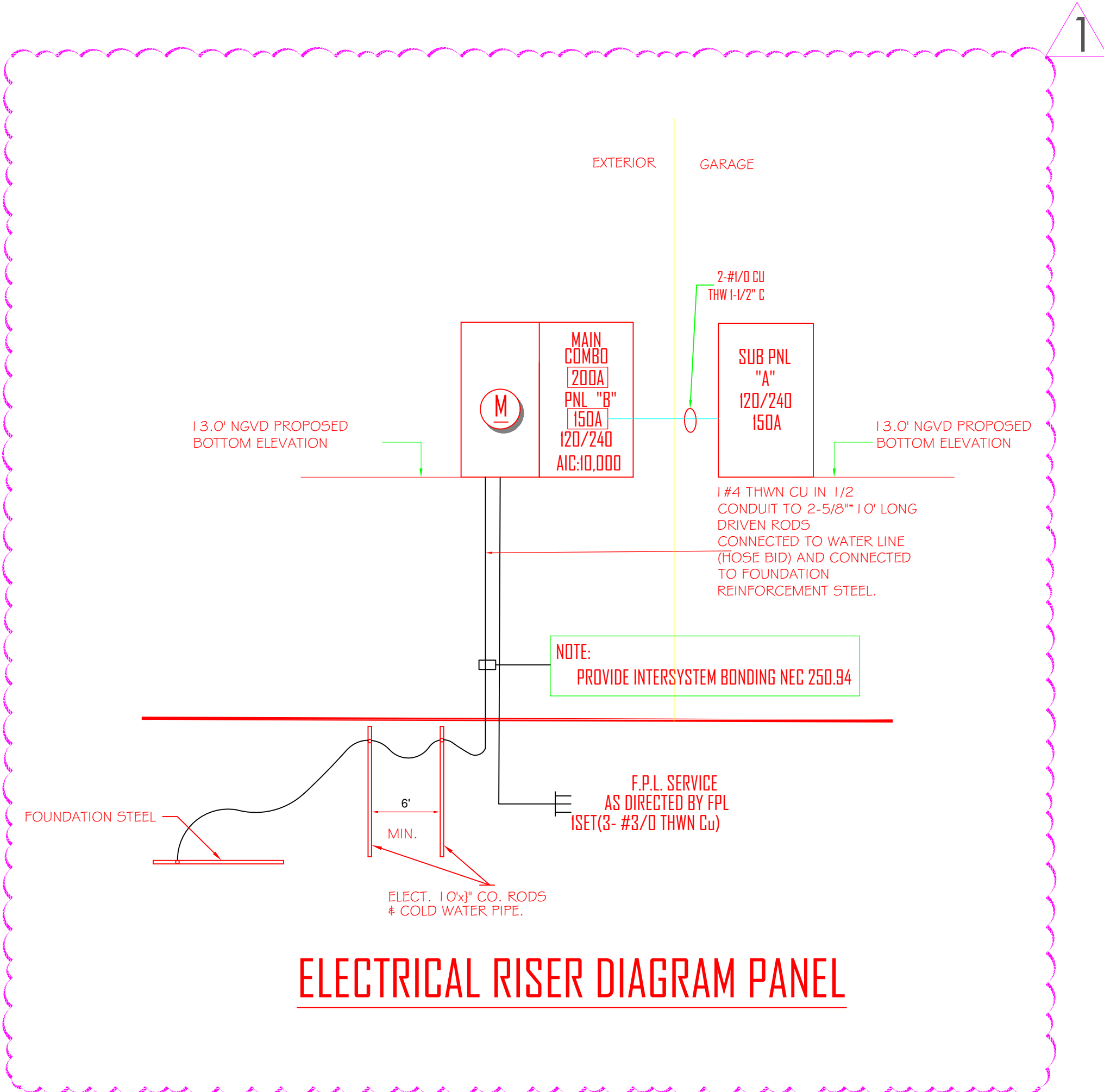
NEW PANEL: 'B' 200 AMPS													
AIC:10,000 MAIN: 200 BREAKER SIZE: 200 B													
VOLTAGE: 120/240 VOLTS PHASE: 1 PHASE, 3 WIRES MOUNTING: SURFACE													
Circuit													
COND	WIRE	CIRCUIT ID	LOAD	POLES	TRIP	CKT#	U1	U2	CKT#	TRIP	POLES	LOAD	CIRCUIT ID
3/4"	2-#6	ANU-1	7,000	2	60		1		X	2		150	2
						3			X	4			
						5			X	6			
1/2"	2-#10	CU-1	+	2	30		7		X	8		30	2
						9			X	10			
1/2"	2-#12	GARAGE OUTLET	+	2	20		11		X	12		30	2
						13			X	14		2,500	2
		SPARE	+			15	X			16			
		SPARE	+						X				

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TOTAL LOAD CALCULATION PANEL 'A'			
CONNECTED LOAD	VOLTS/VA	VOLTS	VA
GENERAL LIGHTING	3 X 3,027.57	120	368,271
COOKTOP		240	7,000
DRYER		240	5,000
TANKLESS WATER HEATER		240	27,000
REFRIGERATOR		120	1,200
SMALL APPLIANCES		120	3,000
WASHER MACHINE		120	1,500
MICROWAVE		120	1,500
DISHWASHER		120	7,500
HOOD		120	500
GARAGE DOOR		120	1,000
TOTAL			65,783
FIRST 10,000 VA @ 100%			10,000
REMAINDER VA @ 40%			22,313
TOTAL			32,313
TOTAL DEMAND (KVA)	32		
TOTAL DEMAND (AMPS) / 240	133.80		

SERVICE LOAD CALCULATION & PANEL 'B'			
CONNECTED LOAD	VOLTS/VA	VOLTS	VA
PANEL A		240	32,313
PUMP		240	2,500
A/C-1		240	7,000
A/C-2		240	5,000
TOTAL			46,813
TOTAL DEMAND (KVA)	47		
TOTAL DEMAND (AMPS) / 240	195.22		

PROPOSED MAIN PANEL B 200 A
PROPOSED FEEDER: 3/4" 3/0 THWN IN 2-1/2" C



ELECTRICAL RISER DIAGRAM PANEL



REVISIONS	BY
1 05/12/2023	BLDG.

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LAST DATE REV.:
05-12-2023

ELECTRICAL
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SHEET: 22 OF 26

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