

TYPE: TYPE I, INTERIOR MOUNTING: RECESSED MAIN: 150A MLO	NEW PANEL "A"						VOLTS: 120/240V, 1 ph., 3 W BUS: 150 A		
DESCRIPTION	CKT Brkr.	WIRE & CONDUIT	VA	CKT No.	CKT No.	DESCRIPTION	CKT Brkr.	WIRE & CONDUIT	VA
DOMESTIC WATER PUMP	2	#10 - 3/4"	2880	1	2	TANKLESS WH. #3	2	#8 - 3/4"	14,400
	30			3	4		40		
AHU #2 + HEATER	2	#10 - 3/4"	3260	5	6	CONDENSING UNIT #2	2	#12 - 1/2"	(2300)
	30			7	8		20		
REFRIGERATOR	1	#12 - 1/2"	1500	9	10	CLOTHES WASHER	1	#12 - 1/2"	1500
GARAGE DOOR	1	#12 - 1/2"	1200	11	12	LTG/RECEPT-- outdoor	1	#12 - 1/2"	*
WORK BENCH	1	#10 - 3/4"	2500	13	14	LTG/RECEPT-- outdoor	1	#12 - 1/2"	*
LTG/RECEPT-- garage	1	#12 - 1/2"	*	15	16	LTG/RECEPT-- garage	1	#12 - 1/2"	*
BATHROOM GFCI-- 3 total	1	#12 - 1/2"	*	17	18	LTG/RECEPT-- BR #3 & hall	1	#12 - 1/2"	*
LTG/RECEPT-- mud rm/pantry	1	#12 - 1/2"	*	19	20	LTG/RECEPT-- bath #2 & hall	1	#12 - 1/2"	*
LIGHTING-- kitchen	1	#12 - 1/2"	*	21	22	LTG/RECEPT-- kitchen	1	#12 - 1/2"	*
KITCHEN SMALL APPLIANCES	1	#12 - 1/2"	1500	23	24	KITCHEN SMALL APPLIANCES	1	#12 - 1/2"	1500
LTG/RECEPT-- living room	1	#12 - 1/2"	*	25	26	LTG/RECEPT-- living room	1	#12 - 1/2"	*
LTG/RECEPT-- rear porch	1	#12 - 1/2"	*	27	28	LTG/RECEPT-- front porch	1	#12 - 1/2"	*
LTG/RECEPT-- BR #2	1	#12 - 1/2"	*	29	30	LTG/RECEPT-- master BR	1	#12 - 1/2"	*
LTG/RECEPT-- master bath	1	#12 - 1/2"	*	31	32	LTG/RECEPT-- master BR	1	#12 - 1/2"	*
LTG/RECEPT-- BR #3	1	#12 - 1/2"	*	33	34	LTG/RECEPT-- master BR	1	#12 - 1/2"	*
SPACE				35	36	LTG/RECEPT-- corridors			
SPACE				37	38	SPACE			
SPACE				39	40	SPACE			
SPACE				41	42	SPACE			

NEC Article 220.82, Section B & C:

- B. GENERAL LOADS
- 1) * 3,462 sf x 3W / sf = 10,386 VA
- 2) Other Loads = 26,980 VA
- Total, General Loads = 36,980 VA
- C. A/C & HEATING LOADS
- 1) 100% of A/C & Cooling = 5,560 VA

LOAD CALCULATION:

- General Loads = 36,980 VA
- 1st 10,000 VA @ 100% = 10,000 VA
- Balance @ 40% = 26,980 VA (.40) = 10,792 VA
- A/C & Cooling @ 100% = 5,560 VA (1.00) = 5,560 VA
- Total VA = 26,352 VA
- Panel Size: 26,352 VA / 240 V = 109.80 A (USE 150 A)

TYPE: TYPE I, INTERIOR MOUNTING: RECESSED MAIN: 250A MLO	NEW PANEL "B"				VOLTS: 120/240V, 1 ph, 3 W BUS: 250 A			
DESCRIPTION	CKT Brkr.	WIRE & CONDUIT	VA	CKT No.	DESCRIPTION	CKT Brkr.	WIRE & CONDUIT	VA
AHU #1 + HEATER	2 60	#6 - 1"	10600	1 3	2 4	CONDENSING UNIT #1	2 50	#8 - 3/4" (5800)
AHU #3 + HEATER	2 30	#10 - 3/4"	3260	5 7	6 8	CONDENSING UNIT #3	2 20	#12 - 1/2" (2300)
CLOTHES DRYER	2 30	#10 - 3/4"	5000	9 11	10 12	MINI-SPLIT OUTDOOR UNIT (AC #4)	2 20	#12 - 1/2" 2880
TANKLESS WH. #1	2 50	#8 - 3/4"	18200	13 15	14 16	SPRINKLER PUMP	2 30	#10 - 3/4" 2880
TANKLESS WH. #2	2 50	#8 - 3/4"	18200	17 19	18 20	OVEN	2 50	#8 - 3/4" 8000
TANKLESS WH. #4	1 40	#6 - 1"	12000	21 23	22 24	DISHWASHER GARBAGE DISPOSER	1 20	#12 - 1/2" 1200 #12 - 1/2" 800
				25	26			
				27	28			
				29	30			
				31	32			
				33	34			
SPACE				35	36	SPACE		
SPACE				37	38	SPACE		
SPACE				39	40	SPACE		
SPACE				41	42	SPACE		

NEC Article 220.82, Section B & C:

- B. GENERAL LOADS
- 1) * 0 sf x 3W / sf = 0 VA
- 2) Other Loads = 68,280 VA
- Total, General Loads = 68,280 VA
- C. A/C & HEATING LOADS
- 1) 100% of A/C & Cooling = 24,840 VA

LOAD CALCULATION:

- General Loads = 68,280 VA
- 1st 10,000 VA @ 100% = 10,000 VA
- Balance @ 40% = 58,280 VA (.40) = 23,312 VA
- A/C & Cooling @ 100% = 24,840 VA (1.00) = 24,840 VA
- Total VA = 58,152 VA
- Panel Size: 58,152 VA / 240 V = 242.30 A (USE 250 A)

ELECTRICAL NOTES

- The Contractor shall furnish all labor, materials and equipment for a complete electrical system in full accordance with these drawings, and the Florida Building Code- Residential, 2007 edition (including all supplements and updates, and all of its referenced codes and standards), and the 2008 Edition of the National Electrical Code.
- All work shall be performed by an electrical contractor who is licensed and authorized to work by the Authority Having Jurisdiction (AHJ). All insurances must be in force for the duration of the work.
- Materials and workmanship shall be guaranteed for a period of at least one year from the date of final acceptance. Any correction of defects shall be completed without additional charge to the Owner and shall include replacement or repair of any components of any other part of the Project which may have been damaged during the course of this installation.
- These plans do not show every minor detail of construction. The Contractor shall furnish and install all necessary items for a complete, fully functioning electrical system, and provide all of the necessary requirements for all of the equipment depicted on these plans to be placed in proper working order.
- Do not scale the drawings. Refer to the architectural plans for the exact location of all items and confirm same with the Owner or Architect prior to commencing.
- The Contractor shall visit the jobsite and be thoroughly familiar with existing conditions before submitting a bid for the Work.
- All work shall meet the standards of the local electric utility, telephone company, and cable/broadband provider as may be applicable.
- All materials shall be new, bearing UL labels where applicable.
- Coordinate all work with other trades so as to not hinder the progress of construction.
- Minimum wire size shall be #12 ALUG. Unless otherwise noted, all conductors shall be copper. All conductors size #8 and smaller shall have type THHN insulation, and type THWN for sizes larger than #8. All conductors #10 and smaller may be solid, and those #8 and larger shall be stranded.
- All conductors shall be run in conduits, as follows:
 - EMT (electrical metallic tubing) may be used indoors, out of soil, in interior partitions and ceilings.
 - Carlon PVC conduit, type 'A' UL listed (or equal) may be used where installed underground outdoors, or under slab inside the building.
 - Flexible conduit shall be used for equipment connections not to exceed 6 ft.
 - The use of MC (metal clad) cable shall be limited to branch circuiting, installed in strict accordance with NEC Article 330, and with the manufacturer's printed instructions.
- Outlet boxes shall be pressed steel in dry locations, cast alloy with threaded hubs in wet or damp locations, and shall conform to NEMA standards.
- Disconnect switches shall be horsepower rated, heavy duty, in NEMA-1 enclosure for indoors and NEMA-3 for outdoors.
- Ground fault circuit protection:

All 120V single phase 15 amp and 20 amp outlets installed outdoors and in wet locations shall have ground fault circuit interrupter circuit breakers which are WR rated, with bubble type weather proof cover.
- Provide temporary service and lighting for the use of all trades as required during construction.
- Provide a typewritten directory for each panel.
- Substitutions:

Products and materials may be called out by trade name and/or catalog numbers. The Contractor shall base his/her proposal on those items, as they shall be considered as a standard basis of bidding.

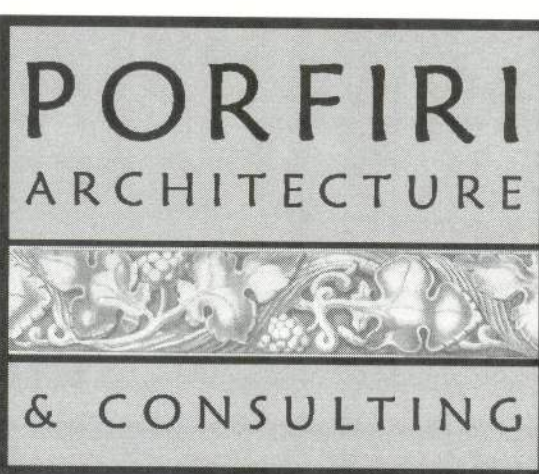
Requests for substitution shall be submitted in writing to the Architect/Engineer, demonstrating that the product is comparable in design and fabrication, standards and warranties, that dimensions will not require any changes, and that it does not cause extra work for other trades.

Contractor shall be responsible for providing equality of substitution. Architect/Engineer will not, under any circumstances, be required to prove that such item is or is not of equal quality to the specified item. Any expenses incurred by Architect/Engineer due to Contractor's requested revisions or substitutions shall be paid by the Contractor.
- Record drawings:

Maintain a complete set of prints for indicating all changes. Contractor shall stamp 'As-Built' on all prints, date and sign in ink. Furnish As-Built drawings to the Owner upon completion of the Work and prior to final payment.

ELECTRICAL SYMBOLS

- EXISTING SWITCH TO REMAIN
- NEW LIGHT SWITCH
- 3-WAY LIGHT SWITCH, 4-WAY LIGHT SWITCH
- DIMMER SWITCH
- FAN SWITCH WITH SPEED CONTROL
- LIGHT SWITCH WITH INDICATOR LIGHT
- MANUAL MOTOR SWITCH, WITH OVERLOAD, NEMA 1.
- DUPLEX RECEPTACLE 20A, 120V, 3W @ + 10' AFF.
- NEW WALL RECEPTACLE @ + 10' AFF. (IF ALTERATION).
- EXIST. RECEPT. TO REMAIN CONNECTED TO EXIST. CIRCUIT
- QUADRUPLUX WALL RECEPTACLE @ + 10' AFF
- SWITCH OPERATED/ SPLIT WIRED RECEPTACLE
- DEDICATED CIRCUIT RECEPTACLE, 120V
- WEATHERPROOF RECEPTACLE, NEMA 3R
- DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER, NEMA 5-20R
- FLOOR RECEPTACLE
- 240V RECEPTACLE
- TELEPHONE JACK. STUB-UP A 3/4" CONDUIT INTO CEILING SPACE. PROVIDE INSULATED BUSHING AT 10' AFF.
- DATA JACK. STUB-UP A 3/4" CONDUIT INTO CEILING SPACE. PROVIDE INSULATED BUSHING AT 10' AFF.
- TV WALL JACK AT 10' AFF, UON. TYPE F (75 OHM) COAXIAL.
- JUNCTION BOX, CEILING JUNCTION BOX
- NEW FLOODLIGHTS
- RECESSED INCANDESCENT
- SURFACE MOUNT INCANDESCENT
- LAMPHOLDER w/ FULLCHAIN
- WALL MOUNT INCANDESCENT
- CEILING MOUNT PENDANT, SPOTLIGHT
- UNDER CABINET FLUORESCENT
- VAPOR PROOF INCANDESCENT
- MINI-CAN INCANDESCENT
- SMOKE ALARM, SMOKE DETECTOR 120V, TANDEM WIRED.
- COMBINATION SMOKE/ CARBON MONOXIDE ALARM 120V, TANDEM WIRED.
- BATHROOM EXHAUST FAN, ATTIC EXHAUST FAN
- MOTOR DISCONNECT SWITCH. (2) DENOTES NUMBER OF POLES, (60) DENOTES FRAME SIZE, (F) DENOTES FUSED AS PER EQUIPMENT MANUFACTURER.
- ELECTRICAL PANEL
- CEILING FAN ONLY
- CEILING FAN WITH LIGHT
- POST LIGHT
- MOTOR
- FLUORESCENT LIGHTING
- TANKLESS WATER HEATER
- WALL-MOUNTED THERMOSTAT
- GROUND CONNECTION
- DOORBELL BUTTON, DOOR CHIME



Florida Licenses: AR0008515 / AA26001883
5794 Bird Road, # 225 Miami, Florida 33155
Tel 305.665.5500 / Fax 305.665.5800

seal:

consultants:

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New Residence for
Mr. & Mrs. Wade Schile
319 Singleton Terrace, Columbia County, Florida

Date: July 14, 2011

Project no.

Drawn: JRFP

Checked: JRFP

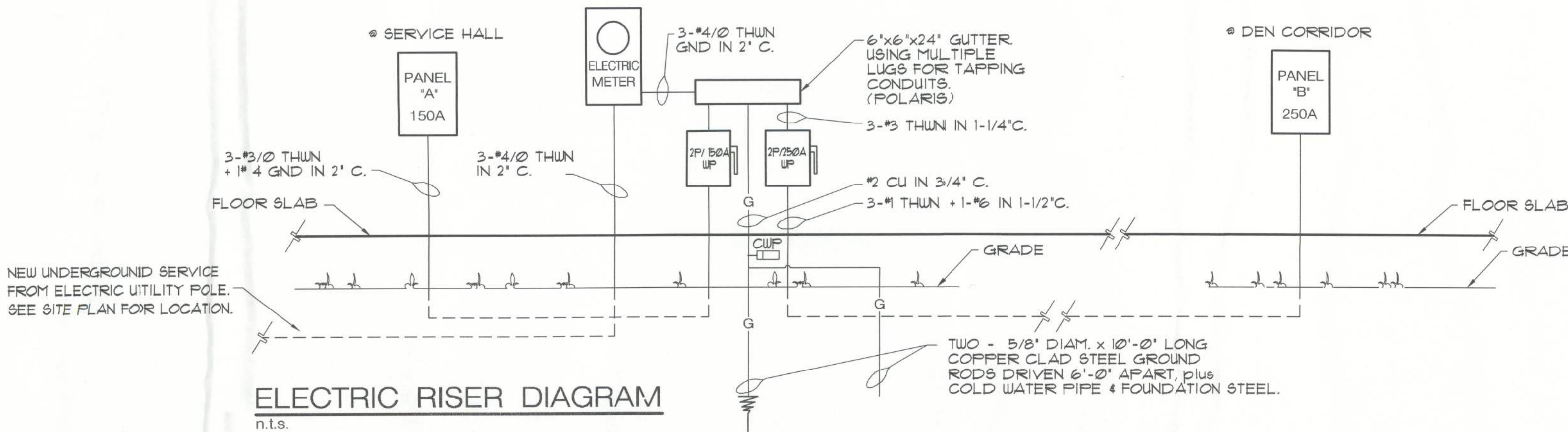
Revisions:

Sheet title:

RISER & SCHEDULES

Sheet no.

E101



ELECTRIC RISER DIAGRAM
n.t.s.

NOTE: USAGE OF PVC CONDUIT IS ACCEPTABLE WHERE PERMITTED BY LOCAL CODE. ADDITIONAL GROUNDING CONDUCTOR SHALL BE ADDED AND INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.