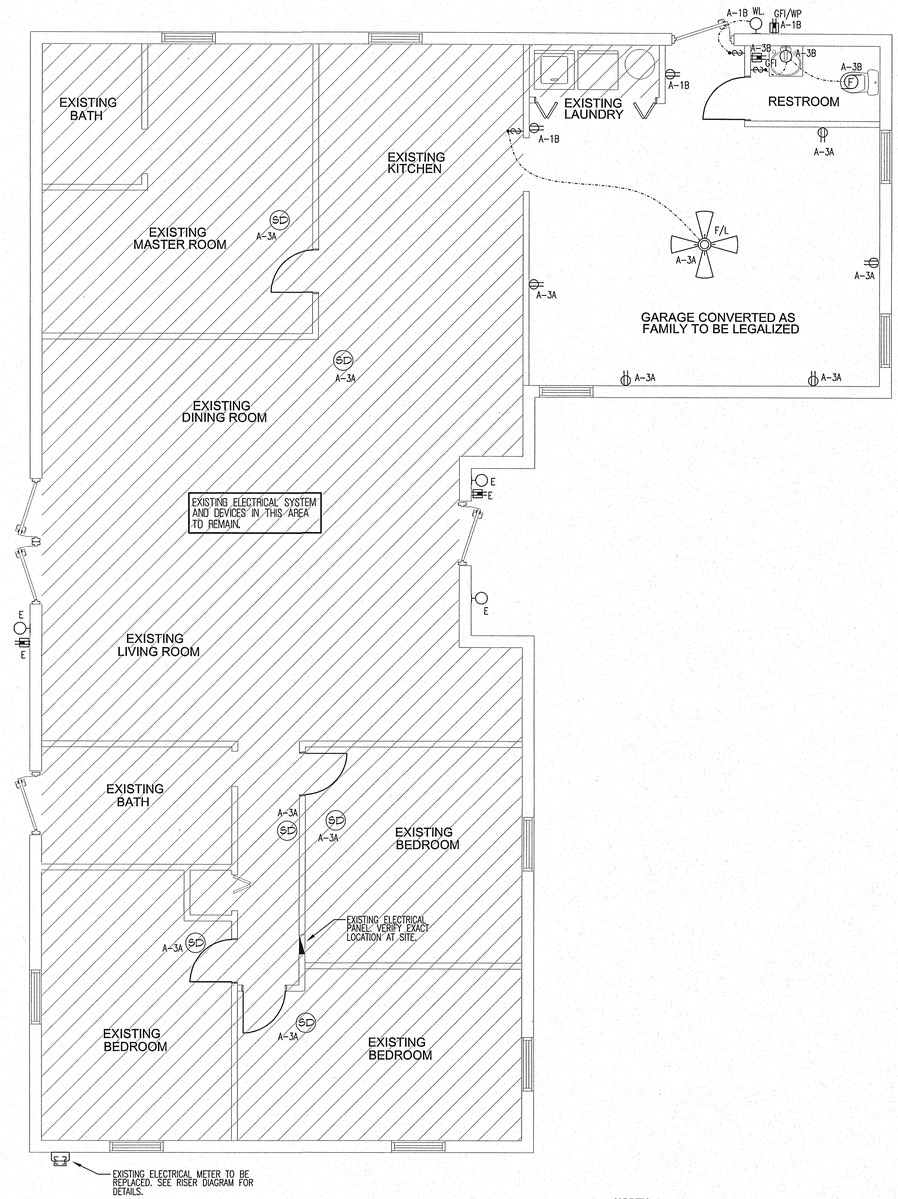
ELECTRICAL NOTES

1. MINIMUM WIRE SIZE SHALL BE #12 THHN/THWN WITH THE EXCEPTION OF 15A GENERAL LIGHTING AND RECEPTACLE BRANCH CIRCUITS WHICH ARE #14 THHN/THWN.
2. CONDUCTORS #6AWG AND LARGER SHALL BE THW.
3. ALL CONDUCTORS SHALL BE COPPER.
4. FUSES (WHEN REQUIRED) SHALL BE DUAL ELEMENT, TIME DELAY TYPE.
5. ALL MATERIALS SHALL BE U.L. LISTED.
6. WORKMANSHIP SHALL BE TO BEST RESIDENTIAL PRACTICE.
7. INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL, STATE AND NATIONAL CODES.
8. ALL LIGHT FIXTURES TO BE SELECTED BY OWNER/ARCHITECT AND INSTALLED BY CONTRACTOR. VERIFY LOCATION WITH ARCHITECT.
9. RECESSED LIGHT FIXTURES OVER BATHTUB OR SHOWER SHALL BE COMPLETELY ENCLOSED AND SUITABLE FOR WET LOCATION INSTALLATION.
10. ALL LUMINARIES SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS.
11. RISER IS DIAGRAMMATIC ONLY. IT DOES NOT SHOW EVERY BEND REQUIRED FOR THE INSTALLATION.
12. THIS DRAWING IS A GUIDE FOR THE INSTALLATION OF ELECTRICAL WORK. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A FUNCTIONING SYSTEM.
13. A/C EQUIPMENT WIRING, BREAKER AND FUSE SIZES ARE BASED ON A/C EQUIPMENT SPECIFIED ON CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRING, BREAKER AND FUSE SIZES IN ACCORDANCE WITH A/C EQUIPMENT NAMEPLATE REQUIREMENTS IF DIFFERENT FROM THAT SPECIFIED ON DRAWINGS, AS WELL AS ANY FEEDER CHANGES BEING AFFECTED BY THIS CHANGE. CONTRACTOR SHALL MAKE ABOVE MENTIONED CHANGES AT NO EXTRA COST.
14. CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER TRADES IN ORDER TO FURNISH AND INSTALL ALL CONTROL WIRING AND RACEWAYS, ALL POWER CONTROL CIRCUITS WIRING AND RACEWAYS AS SHOWN ON THE AIR CONDITIONING DRAWINGS OR SPECIFICATIONS. IF AIR CONDITIONING DRAWINGS REFER TO MANUFACTURER'S WIRING DIAGRAMS, THE CONTRACTOR SHALL VERIFY WITH SAID MANUFACTURER ALL REQUIREMENTS AND INCLUDE ALL RELATED WORK IN HIS CONTRACT.
15. AS OPTIONAL, PROVIDE A COMPLETE SECURITY SYSTEM PER OWNER'S REQUIREMENTS.
16. ALL WIRING DEVICES SHALL BE DECORATOR STYLE. COLOR AS SELECTED BY OWNER / ARCHITECT.
17. PROVIDE ALL FINAL CONNECTIONS TO ALL EQUIPMENT AND APPLIANCES, AS REQUIRED BY MANUFACTURER.
18. PROVIDE A COMPLETE TV PRE-WIRED SYSTEM.
19. COORDINATE LOCATION OF ALL DISCONNECT SWITCHES WITH OTHER TRADES TO ALLOW N.E.C. REQUIREMENTS CLEARANCES.
20. ALL COUNTER RECEPTACLES AND SWITCHES TO BE MOUNDED +6" ABOVE COUNTER (TO BOTTOM OF PLATE). UNLESS OTHERWISE NOTED OR DIRECTED BY OWNER / ARCHITECT
21. APPLIANCES RECEPTACLES TO BE MOUNTED WHERE REQUIRED BY MANUFACTURER
22. ALL LAVATORY RECEPTACLES TO BE MOUNTED +42" A.F.F. UNLESS OTHERWISE DIRECTED BY OWNER / ARCHITECT.
23. COORDINATE LOCATION OF AIR CONDITIONER (INDOOR UNIT) DISCONNECT SWITCH WITH A/C CONTRACTOR TO KEEP N.E.C. REQUIRED CLEARANCE.
24. RANGE AND DRYER SHALL HAVE NEUTRAL & GROUNDING WIRES PER NEC 250-60.
25. SMOKE DETECTORS TO BE HARDWIRED TO AFCI CIRCUIT NON-SWITCHABLE, NON GFI LIGHTING CIRCUIT, INTERCONNECTED, WITH BATTERY BACKUP. TANDEM WIRED TO SOUND ALL DETECTORS SIMULTANEOUSLY. DO NOT INSTALL DETECTORS WITHIN 3 FT OF A/C DIFFUSER OR BATHROOM DOOR.
26. PROVIDE A COMPLETE PRE-WIRED TELEPHONE SYSTEM.
27. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT DIMENSIONS.
28. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR COMPLETE ELECTRICAL SYSTEMS.
29. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IT WILL BE HIS RESPONSIBILITY TO SECURE AND PAY FOR ANY PERMITS, CERTICATES OF INSPECTION, ECT., AS REQUIRED.

ELECTRICAL LEGEND

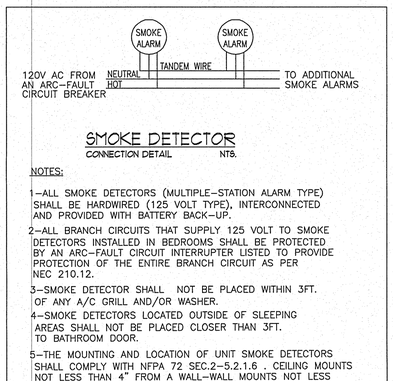
- 15A, 120V, DUPLEX RECEPTACLE.
- 20A, 120V, SINGLE RECEPTACLE.
- 20A, 120V, GFI, ABOVE COUNTER DUPLEX RECEPTACLE.
- 15A, 120V, GFI, DUPLEX RECEPTACLE.
- 30A, 240V DRYER RECEPTACLE.
- 240V RANGE OR OVEN RECEPTACLE.
- LIGHT SWITCH. SILENT TYPE.
- 3 WAY LIGHT SWITCH. SILENT TYPE.
- EXHAUST FAN.
- ELECTRICAL PANEL.
- ELECTRICAL METER.
- DISCONNECT SWITCH SIDE HANDLE TYPE.
- CEILING MOUNTED RECESSED LIGHT FIXTURE.
- RECESSED BOX FOR SURFACE MOUNT LIGHT FIXTURE.
- SURFACE MOUNTED 4' FLUORESCENT LIGHT FIXTURE.
- WALL MOUNTED LIGHT FIXTURE.
- SD — 120V, SMOKE DETECTOR. SEE NOTE #25.
- CO — 120V, SMOKE CARBON MONOXIDE DETECTOR COMBINATION ALARM. SEE NOTE #25.
- 3R WP — WEATHER PROOF.
- WL — WET LOCATION LABEL.
- GFI — GROUND FAULT INTERRUPTER DEVICE.

NOTES:
1-NEW AREAS CIRCUITS TO BE ARC FAULT
2-NEW OUTSIDE GFCI RECEPTACLES CIRCUITS TO BE W.R. TYPE & APPROVED COVER.
3-NEW RECEPTACLES TO BE TAMPER PROOF.



ELECTRICAL FLOOR PLAN
SCALE: 1/4"=1'-0"

NORTH



SMOKE DETECTOR
CONNECTION DETAIL N.T.S.

NOTES:

1-ALL SMOKE DETECTORS (MULTIPLE-STATION ALARM TYPE) SHALL BE HARDWIRED (125 VOLT TYPE), INTERCONNECTED AND PROVIDED WITH BATTERY BACK-UP.

2-ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT TO SMOKE DETECTORS INSTALLED IN BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT AS PER NEC 210.12.

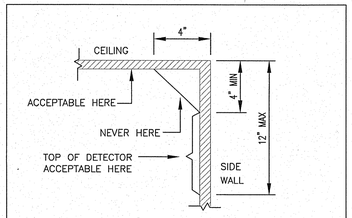
3-SMOKE DETECTOR SHALL NOT BE PLACED WITHIN 3FT. OF ANY A/C GRILL AND/OR WASHER.

4-SMOKE DETECTORS LOCATED OUTSIDE OF SLEEPING AREAS SHALL NOT BE PLACED CLOSER THAN 3FT. TO BATHROOM DOOR.

5-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-WALL MOUNTS NOT LESS THAN 4" FROM CEILING NOR MORE THAN 12" TO TOP OF DETECTOR.

6-IF SMOKE DETECTORS ARE MOUNTED WITHIN 20FT OF COOKING APPLIANCE THEY MUST BE OF THE PHOTOELECTRIC TYPE.

7-SMOKE DETECTOR SHALL BE LABELED SD ON THE TENANT ELECTRICAL BREAKER PANEL.



(FOR INSTALLATION NEAR A WALL OR IN CEILING)
N.T.S.

NOTES:
1_. DIMENSIONS SHOWN ARE TO THE NEAREST EDGE OF THE DETECTOR.
2_. DETECTORS SHALL NOT BE INSTALLED WITHIN 3 FEET OF A SUPPLY AIR DIFFUSER OR FAN

EXIST. PANEL "A" LOAD CALCULATION
(SERVICE LOAD CALCULATION)

GENERAL LIGHTING AND RECEPTACLES 3 VA/SQ.F X 2146 SQ.F	= 6,438VA
SMALL-APPLIANCE BRANCH CIRCUITS (@ 1500VA EACH), NAMEPLATE RATING FOR ALL APPLIANCES FASTENED IN PLACE AND MOTOR LOADS.	= 24,500VA
SUB-TOTAL CALCULATED LOAD	= 30,938VA
FIRST 10KVA @ 100%	= 10,000VA
REMAINING 20,938VA @ 40%	= 8,375VA
EXIST. AHU-1 LOAD (HEATER) @ 100%	= 11,256VA
TOTAL CALCULATED LOAD	= 29,631VA
TOTAL(KVA) /240V	= 124 AMPS.

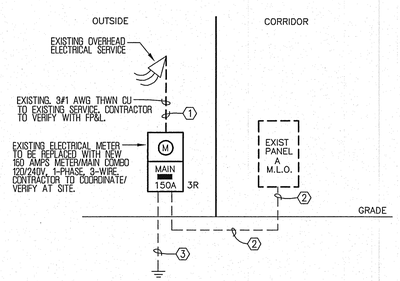
PANEL "A"
(EXISTING)

TYPE: 200 AMPS LOAD CENTER
VOLTAGE: 120/240, 1PH., 3W
MAINS: 150A.
AIC RATINGS: 10K

MOUNTING: SURFACE
FED FROM: ELECTRICAL METER

	AMPS	POLES	TOTAL V.A.	COND. SIZE	WIRE SIZE	REMARKS	CKT NO.	CKT NO.	REMARKS	WIRE SIZE	COND. SIZE	TOTAL V.A.	POLES	AMPS
	15	1	200	EXIST.	EXIST.	EXIST. GAS W.H. PILOT	1A							
	15	1	**	1/2"	14	NEW LTS/REC.	1B	2	EXIST. RANGE	6	EXIST.	10,000	2	50
(@)△	20	1	**	1/2"	12	NEW FAMILY LTS/REC.	3A	4	---	--	--	--		--
(@)	20	1	**	1/2"	12	NEW BATH	3B							
	40	2	(6,432)	EXIST.	10	EXISTING CU-1	5	6	EXIT. AHU-1	6	EXIST.	11,256	2	60
	--		--	--	--	---	7	8	---	--	--	--		--
	--	--	--	--	--	EXIST. SPACE	9	10	EXISTING DRYER	10	EXIST.	5,000	2	30
	--	--	--	--	--	EXIST. SPACE	11	12	---	--	--	--		--
	15	1	**	EXIST.	EXIST.	EXIT. LIVING	13A	14A	EXIST. BED-1 LTS/REC.	14	1/2"	**	1	15
	15	1	**	EXIST.	EXIST.	EXIT. DINNING	13B	14B	EXIST. BED-2 LTS/REC.	14	1/2"	**	1	15
	15	1	**	EXIST.	EXIST.	EXIST. GEN LTS/REC	15A	16A	EXIST. BED-3 LTS/REC.	14	1/2"	**	1	15
	15	1	900	EXIST.	EXIST.	EXIT. DISPOSAL	15B	16B	EXIST. GEN LTS/REC	14	1/2"	**	1	15
	15	1	1500	EXIST.	EXIST.	EXIT. KITCHEN CIRCUIT	17A	18A	EXIST. MASTER L/REC	14	1/2"	**	1	15
	15	1	1500	EXIST.	EXIST.	EXIT. KITCHEN CIRCUIT	17B	18B	EXIST. MASTER L/REC	14	1/2"	**	1	15
	15	1	**	EXIST.	EXIST.	EXIT. KITCHEN LTS	19A	20	EXIST. SPRINK. PUMP	12	EXIST.	2,400	2	20
	15	1	1500	EXIST.	EXIST.	EXIT. REFRIGERATOR	19B							
	20	1	1200	EXIST.	EXIST.	EXIST. WASHER	21	22	---	--	--	--		--

** GENERAL LTS & REC.
( ) NON-CONCURRENT LOAD
△ AFCI TYPE C/B
(@) TAMPER PROOF RECEPTACLE



ELECTRICAL RISER DIAGRAM
N.T.S.

FEEDER SCHEDULE

FEEDER	FEEDER SIZE
1	EXISTING. 3# 1 AWG THWN CU
2	EXISTING 3# 1 AWG THWN CU & 1#6(G). IN 1 1/2"C
3	EXISTING 1#6 AWG THW CU IN 3/4" C TO EXIST. GROUNDING ARRANGEMENT

⚠ CAUTION NOTES:

1- CIRCUIT BREAKERS SERVING ELECTRICAL RECEPTACLES IN FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS AREAS MUST BE A.F.C.I. TYPE.

2- ALL RECEPTACLES LISTED IN NEC.210.52 (I.E. GENERAL PROVISIONS, SMALL APPLIANCES AND KITCHEN RECEPTACLES, RECEPTACLES IN BEDROOMS, RECEPTACLES IN BATHROOMS, OUTDOOR, LAUNDRY, HALLWAYS, GARAGES AND BASEMENTS, BALCONIES, DECKS, PORCHES) SHALL BE TAMPER PROOF AS PER NEC. 406.11

3- CONTRACTOR TO ASSURE ELECTRICAL INSTALLATION MEET ALL THE MINIMUM REQUIREMENT DESCRIBED IN THE NEC 2008 EDITION AND IN ELECTRICAL NOTES WHEN APPLICABLE.

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PROJECT: GARAGE CONVERSION TO FAMILY

MARLENE CAMPBELL
16000 SW 100TH CT MIAMI, FL 33157

DATE:	NOV 07-2011
REVISIONS:	
SCALE:	AS SHOWN
DRAWN BY:	C.T.
CHECKED BY:	C.T.

11/7/11

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SHEET TITLE:
ELECTRICAL FLOOR PLAN NOTES AND DETAILS

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