GENERAL ELECTRICAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC 2020) NFPA 70.
2. A MINIMUM OF 75% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS AS PER FBC E404.1. PROVIDE LAMPS WITH FIXTURES, VERIFY LAMP TYPE WITH MANUFACTURER. ALL RECESSED LIGHT FIXTURES IN CONTACT WITH INSULATION SHALL BE RATED FOR SUCH USE.
3. ALL 120-VOLT, SINGLE PHASE, BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER (AFCI), COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. KITCHENS, BATHROOMS, GARAGES AND OUTDOORS ARE NOT CONSIDERED TO BE AFCI PROTECTED.
4. IN ALL AREAS OF A DWELLING UNIT, ALL 120-VOLT, 15A AND 20A RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES, TO COMPLY WITH NEC 406.11.
5. COORDINATE ALL ELECTRICAL SITE WORK WITH GENERAL CONTRACTOR.
6. ELECTRICAL CONTRACTOR SHALL NOT SCALE DRAWINGS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT UNLESS OTHERWISE IS NOTED. IT SHALL BE UNDERSTOOD THAT ALL WORK PERFORMED SHALL BE DONE BY A LICENSED ELECTRICAL CONTRACTOR AND IN A FIRST-CLASS WORKMANLIKE MANNER. SAID CONTRACTOR SHALL MEET ALL REQUIREMENTS SET FORTH BY ANY LOCAL ORDINANCE AND GOVERNING AUTHORITIES.
7. IT SHALL NOT BE THE INTENT OF THESE PLANS AND/OR SPECIFICATION TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR SHALL BE EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
8. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY ALL CONDITIONS, LOCATIONS, DIMENSIONS AND COUNTS AS SHOWN AND/OR NOTED ON THE DRAWINGS. THIS SHALL INCLUDE ANY AND ALL FABRICATIONS PRIOR TO INSTALLATION. NOTIFY ENGINEER OF ANY DISCREPANCIES AT ONCE. FAILURE TO DO SO AND CONTRACTOR PRECEDES AT HIS OWN RISK.
9. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR FOR THE ADVANCED ORDERING OF LONG LEAD ITEMS, AS NOT TO INTERFERE WITH THE PRODUCTION OF OTHER TRADES RESULTING IN ANY DOWN OR LAG TIME AND ALSO, TO PROVIDE ALL LABOR, MATERIALS AND SUPERVISION NECESSARY TO ACCOMPLISH THE WORK AS SHOWN AND/OR NOTED ON THE DRAWINGS.
10. THE ELECTRICAL CONTRACTOR SHALL KEEP ALL AREAS IN WHICH WORK IS BEING PERFORMED, FREE FROM DEBRIS AND UNUSED MATERIALS AT ALL TIMES AND SAID AREAS SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY. AT THE COMPLETION OF THE PROJECT ALL EQUIPMENT, DEVICES AND FIXTURES TO BE CLEANED.
11. WHERE CORE DRILLING OF FLOOR/WALLS IS REQUIRED, CONTRACTOR SHALL SEAL OPENINGS WATERTIGHT AFTER UTILITIES HAVE BEEN INSTALLED. LOCATION OF CORED HOLES SHALL COORDINATE WITH LOCATION OF EQUIPMENT IN A MANNER TO BE CLEAN AND FUNCTIONAL. THE CONTRACTOR SHALL INSTALL ONLY ONE CONDUIT PER HOLE AND SEAL THE OPENING AROUND THE CONDUIT AS SPECIFIED. WALL/FLOOR FIRE RATING MUST BE MAINTAINED.
12. ALL ELECTRICAL ELEMENTS TO BE THOROUGHLY PROTECTED FROM DAMAGE AFTER INSTALLATION AND SHALL HAVE TRIM INSTALLED AFTER ADJOINING FINISH MATERIALS ARE INSTALLED. ALL ELECTRICAL EQUIPMENT, DEVICES, WIRE, ETC., SHALL BE LISTED, FOR THE INTENDED USE, WITH UNDERWRITER'S LABORATORY, INC. (U.L.) WHERE STANDARDS HAVE BEEN ESTABLISHED BY U.L.
13. ELECTRICAL CONTRACTOR TO PROVIDE TEMPORARY POWER FOR ALL TRADES.
14. CONTRACTOR TO REMOVE ALL ABANDONED OR UNUSED WIRING, CONDUIT AND BOXES.
15. UNLESS NOTED AS EXISTING, ALL EQUIPMENT, WIRING, DEVICES, ETC. SHALL BE NEW.
16. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR TO ORIGINAL CONDITIONS ANY AND ALL DAMAGES TO BUILDING SURFACES, EQUIPMENT AND FURNISHINGS CAUSED DURING PERFORMANCE OF WORK.
17. ALL CONDUCTORS SHALL BE COPPER, RATED 75°C WET/DRY EXCEPT WHERE OTHERWISE REQUIRED BY U.L. OR CODES, UNLESS OTHERWISE IS NOTED. MINIMUM WIRE SIZE SHALL BE #12 AWG EXCLUDING CONTROL WIRING. MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A CONDUIT TO BE INSTALLED PER NEC 310(B)(16). WIRE WAYS SHALL BE SIZED AS REQUIRED, PER NEC, UNLESS OTHERWISE NOTED.
18. ALL CONDUITS, FIXTURES, DEVICES TO HAVE GROUND EXTEND AS PER NEC TABLE 250-122, UNLESS OTHERWISE IS NOTED.
19. NEUTRAL NOT TO BE SHARED, UNLESS OTHERWISE IS NOTED.
20. ALL CONDUIT RUNS ARE SHOWN DIAGRAMMATIC. EXACT ROUTING SHALL BE DETERMINED IN THE FIELD, UNLESS OTHERWISE NOTED.
21. ALL DISCONNECT SWITCHES SHALL BE SIZED BY NEC TO ACCOMMODATE EQUIPMENT SERVED, INCLUDING REQUIRED FUSES, UON.
22. WHERE EXPOSED TO THE WEATHER, ALL ELECTRICAL EQUIPMENT SHALL BE RAIN TIGHT (NEMA 3R). ALL FLEX CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE LIQUID TIGHT.
23. FOR UNDERGROUND CONDUITS, PROVIDE PULL BOXES, SUCH THAT NO SINGLE CONDUIT RUN HAS BENDS IN EXCESS OF 360 FEET. PULL BOXES SHALL BE SUITABLE AND APPROVED FOR THE INTENDED USE. WARNING TAPE WHICH SAYS "WARNING BURIED ELECTRIC" SHALL BE PLACED IN TRENCHES ABOVE ALL UNDERGROUND ELECTRIC CONDUITS. WHERE CONDUITS PASS UNDERNEATH PAVED AREAS, THEY SHALL BE RGS. WHERE UNDERGROUND CONDUITS ARE NOT EXPOSED TO MECHANICAL DAMAGE OR ARE NOT UNDER PAVED AREAS, THEY SHALL BE SCHEDULE 40 PVC.
24. ALL LOW VOLTAGE CABLING AND SYSTEM ARE THE RESPONSIBILITY OF THE VENDOR THAT IS PROVIDING THE SYSTEM INCLUDING PERMITTING.
25. ALL CIRCUIT BREAKERS SHALL BE INVERSE TIME TYPE (THERMAL MAGNETIC). TWO POLE CIRCUIT BREAKERS SHALL BE COMMON TRIP. NO TIE HANDLES PERMITTED.
26. ALL FUSES TO BE CURRENT LIMITING AT SERVICE ENTRANCE. ALL OTHER FUSES ACCORDING TO MANUFACTURER SPECIFICATIONS.
27. ALL CONDUCTORS SHALL BE IN CONDUITS. ALL CONDUITS SHALL BE INTERMEDIATE (IMC) OR RIGID GALVANIZED STEEL (RGS) EXCEPT THAT: (A) POLY VINYL CHLORIDE (PVC) CONDUITS MAY BE USED IN CONCRETE SLABS AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS; (B) ELECTRICAL NON-METALLIC TUBING (ENT) MAY BE USED IN OR ON WALLS OR CEILINGS WHERE NOT SUBJECT TO MECHANICAL DAMAGE, DAMP CONDITIONS OR CORROSIVE CONDITIONS; (C) LIQUID TIGHT FLEXIBLE CONDUIT WHERE REQUIRED, (D) FLEXIBLE METALLIC CONDUIT WHERE REQUIRED IN DRY LOCATIONS. ALL CONDUITS IN HAZARDOUS AREAS PER NEC SHALL MEET THE REQUIREMENTS OF NEC CHAPTER 5.
28. COORDINATE ELECTRIC SERVICE WITH POWER COMPANY.
29. TYPICAL LIGHT SWITCHES TO BE AT 48" A.F.F. LEVEL. TYPICAL ELECTRICAL RECEPTACLE TO BE AT 18" A.F.F. ALL SWITCHES TO BE GANGED WITH CONTINUOUS FACE PLATES. ALL DEVICES THAT ARE ADJACENT TO BE SPARES 6" O.C.
30. CONTRACTOR TO BALANCE LOADS IN ALL PHASES AND PROVIDE PANEL SCHEDULES IDENTIFYING ALL CIRCUITS IN PANEL. PROVIDE BLANK PLATE IN EMPTY CIRCUIT BREAKER SPARES.
31. ELECTRICAL CONTRACTOR SHALL VERIFY CIRCUIT PROTECTIVE DEVICE RATING FOR EQUIPMENT PRIOR TO CONSTRUCTION. COORDINATE ALL EQUIPMENT LOAD AND PROTECTION WITH NAMEPLATE DATA PRIOR TO INSTALL OR WIRING.
32. THE LIGHTING DEVICES WITHOUT DIMENSION LOCATION WILL BE LOCATED AT LESS AT 6" TO THE BORDER OF A DOOR OR EDGE OF A WALL, IF OTHERS DEVICES ARE LOCATED NEAR OF THIS ITEM THEY WILL SPACED TO 4" AT LESS; THE LIGTHING FIXTURES WITHOUT DIMENSION LOCATION WILL BE PLACED AT THE CENTER OF THE LOCAL; THE TV CABLE AND TELEPHONE OUTLETS WILL BE PLACED AT LESS AT 4" OF THE DUPLEX DEVICE; THIS DIMENSIONS ARE REFERED TO THE CENTER OF EACH ITEM.

ELECTRICAL SHEET INDEX:

SHEET	DESCRIPTION	REV 0	REV 1	REV 2
E-1	NOTES, SYMBOL LEGEND & INDEX.	X		
E-2	GROUND FLOOR. LIGHTING PLAN. LOCATION.	X		
E-3	GROUND FLOOR. LIGHTING PLAN. CIRCUITS.	X		
E-4	GROUND FLOOR. POWER PLAN. LOCATION.	X		
E-5	GROUND FLOOR. POWER PLAN. CIRCUITS.	X		
E-6	FIRST FLOOR. LIGHTING PLAN. LOCATION.	X		
E-7	FIRST FLOOR. LIGHTING PLAN. CIRCUITS.			
E-8	FIRST FLOOR. POWER PLAN. LOCATION.	X		
E-9	FIRST FLOOR. POWER PLAN. CIRCUITS.			
E-10	ROOF TOP. PV SYSTEM AND A/C CIRCUITS.	X		
E-11	RISER DIAGRAM	X		
E-12	PANEL SCHEDULES.	X		
E-13	SITE PLAN. ELECTRICAL INSTALLATIONS.	X		

ELECTRICAL SYMBOL LEGEND:

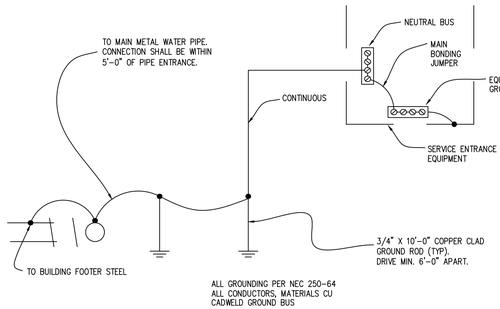
- SURFACE MOUNTED LIGHT FIXTURE WATER PROOF
- RECESSED LIGHT FIXTURE 4x9W LED, 85/265V, 60Hz, 4000K, BULB G13
- RECESSED LIGHT FIXTURE 2x18W LED, 85/265V, 60Hz, 4000K, BULB G13
- SURFACE LIGHT FIXTURE 2x18W LED, 85/265V, 60Hz, 4000K, BULB G13, WATER PROOF
- SURFACE WALL MOUNTED LIGHT FIXTURE WATER PROOF 11W, 85/265V, 60Hz, 4000K, SOCKET E27
- RECESSED DOWNLIGHT LIGHT FIXTURE 14W, 85/265V, 60Hz, 4000K
- RECESSED DOWNLIGHT LIGHT FIXTURE DAMP LOCATION 9W, 85/265V, 60Hz, 4000K
- RECESSED DOWNLIGHT LIGHT FIXTURE 9W, 85/265V, 60Hz, 4000K
- PENDANT DOWNLIGHT LIGHT FIXTURE 9W, 85/265V, 60Hz, 4000K
- PENDANT DOWNLIGHT LIGHT FIXTURE 6x7W ORIENTABLE LED LIGHTS, 85/265V, 60Hz, 4000K
- SURFACE WALL MOUNTED LIGHT FIXTURE 11W, 85/265V, 60Hz, 4000K
- STRIP LED FIXTURE 8.6W/m, 85/265V, 60Hz, 4000K
- SURFACE WALL MOUNTED EMERGENCY LIGHT FIXTURE
- RECESSED EMERGENCY LIGHT FIXTURE
- LIGHT FIXTURE WITH LED 15W, 85/265V, 60Hz, 4000K, FOR INSTALLATIONS ABOVE WA
- SINGLE LIGHTING SWITCH 15A 1P 120V IN RECESSED WALL MOUNTED BOX AT 48" AFFL
- DOUBLE LIGHTING SWITCH 15A 1P 120V IN RECESSED WALL MOUNTED BOX AT 48" AFFL
- 3-WAY SINGLE LIGHTING SWITCH 15A 1P 120V IN RECESSED WALL MOUNTED BOX AT 48" AFFL
- INDOOR LIFTMASTER STATION BUTTON FOR OPEN THE GARAGE DOOR AT 48" AFFL
- DUPLEX RECEPTACLE (20A, 125V), AT 18" AFF (U.O.N. "G" DENOTE GROUND FAULT TYPE)
- DRYER RECEPTACLE NEMA 14-30R (30A, 240V) AT 48" AFF
- SINGLE RECEPTACLE (20A, 120V), AT 48" A.F.F.
- FLOOR SINGLE RECEPTACLE (20A, 125V, GFCI TYPE)
- TELEFHONE/DATA OUTLET WALL MOUNTED AT 18" AFF, SPLIT WIRED
- TV CABLE OUTLET WALL MOUNTED AT 18" AFF
- 120V CEILING SMOKE DETECTOR
- JUNCTION BOX
- GARBAGE DISPOSE
- LIFT MOTOR FOR GARAGE DOOR
- ELECTRICAL PANELBOARD
- SMART ELECTRICAL METER
- ELECTRICAL MAIN BREAKER
- DISCONNECT SWITCH
- HIBRID INVERTER OF PV SYSTEM, WALL SURFACE MOUNTED
- CEILING VENTILATOR WITH LIGHTING BULB
- CCTV CAMARA WATER PROOF
- CCTV CONTROL PANEL
- FIRE ALARM CONTROL PANEL
- MANHOLE FOR UNDERGROUND ELECTRICAL INSTALLATIONS

G DENOTE GROUND FAULT CIRCUIT INTERRUPTER

WP DENOTE WEATHERPROOF PROTECTION RECEPTACLES TO BE WR

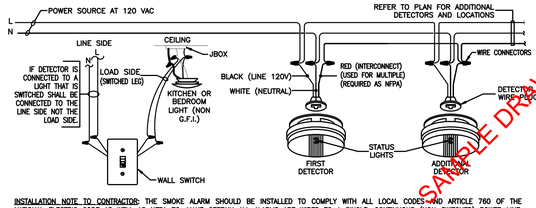
SW DENOTE SPLIT WIRE RECEPTACLE

TS TIMER SWITCH



Typical Grounding Schematic

N.T.S.



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.

SMOKE DETECTOR INTERCONNECTION

SCALE: N.T.S.

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LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: BSc. RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

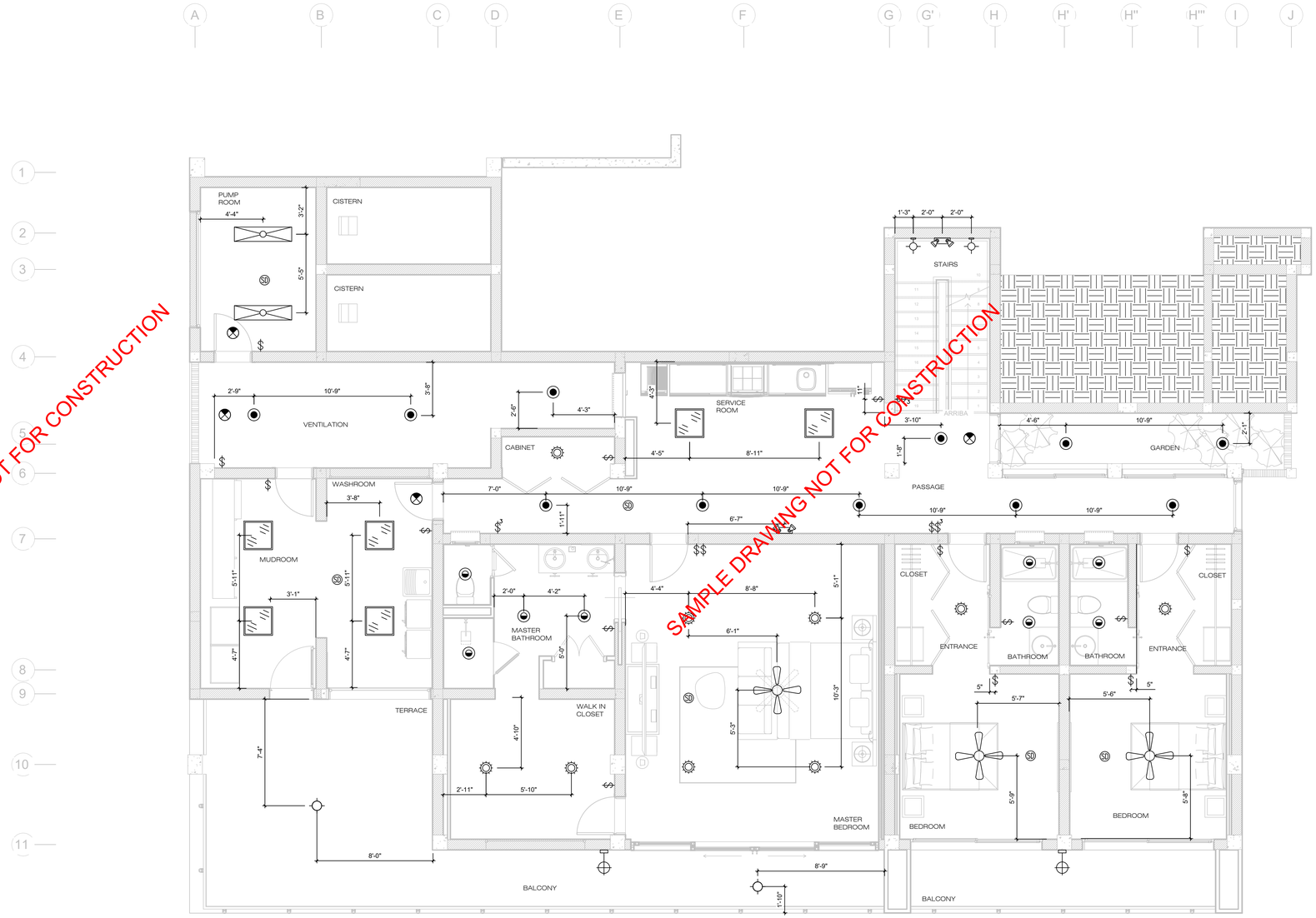
PLAN NAME

GENERAL NOTES, SYMBOLS AND INDEX.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
E-1
DATE: DEC-2024



GROUND FLOOR LIGHTING PLAN. LOCATION.

Scale: 1/4" = 1'-0"

KEYNOTES

1. CONNECT ALL EXIT TO NEAREST LIGHT FIXTURE AND AHEAD OF ANY LIGHTING CONTROL DEVICE FOR CONTINUOUS OPERATION OF THE BATTERY CHARGER.
2. THE LIGHTING DEVICES WITHOUT DIMENSION LOCATION WILL BE LOCATED AT LESS AT 6" TO THE BORDER OF A DOOR OR EDGE OF A WALL, IF OTHERS DEVICES ARE LOCATED NEAR OF THIS ITEM THEY WILL SPACED TO 4" AT LESS; THE LIGTHING FIXTURES WITHOUT DIMENSION LOCATION WILL BE PLACED AT THE CENTER OF THE LOCAL.
3. THE LIGHTING FIXTURES WITHOUT DIMENSION WILL BE IN THE CENTER OF THE ROOM.

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LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

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FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT:
Bsc.RAUDEL MORENO

ENGINEER:
ENG.R.DON

DRAFTSMAN:
ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

GROUND FLOOR. LIGHTING PLAN. LOCATION.

DESCRIPTION

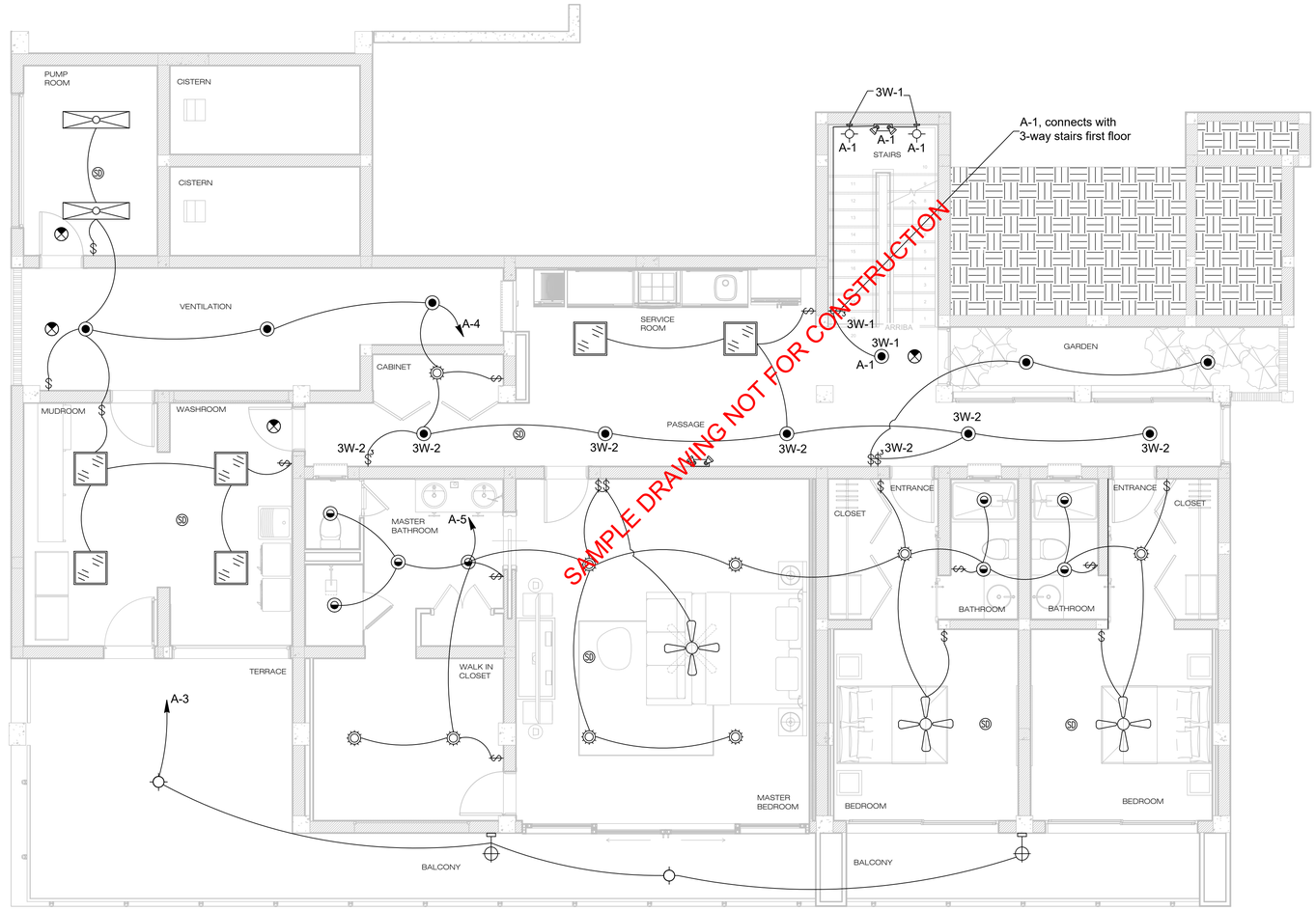
ERECTION OF A NEW BUILDING.

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

UNITS: FEETS-INCHES

E-2

DATE: DEC-2024



GROUND FLOOR LIGHTING PLAN. CIRCUITS.

Scale: 1/4" = 1'-0"

KEYNOTES

1. CONNECT ALL EXIT TO NEAREST LIGHT FIXTURE AND AHEAD OF ANY LIGHTING CONTROL DEVICE FOR CONTINUOUS OPERATION OF THE BATTERY CHARGER.

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LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

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REVIEWS N°	DATE
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Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT:
Bsc.RAUDEL MORENO

ENGINEER:
ENG.R.DON

DRAFTSMAN:
ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

GROUND FLOOR. LIGHTING PLAN. CIRCUITS.

DESCRIPTION

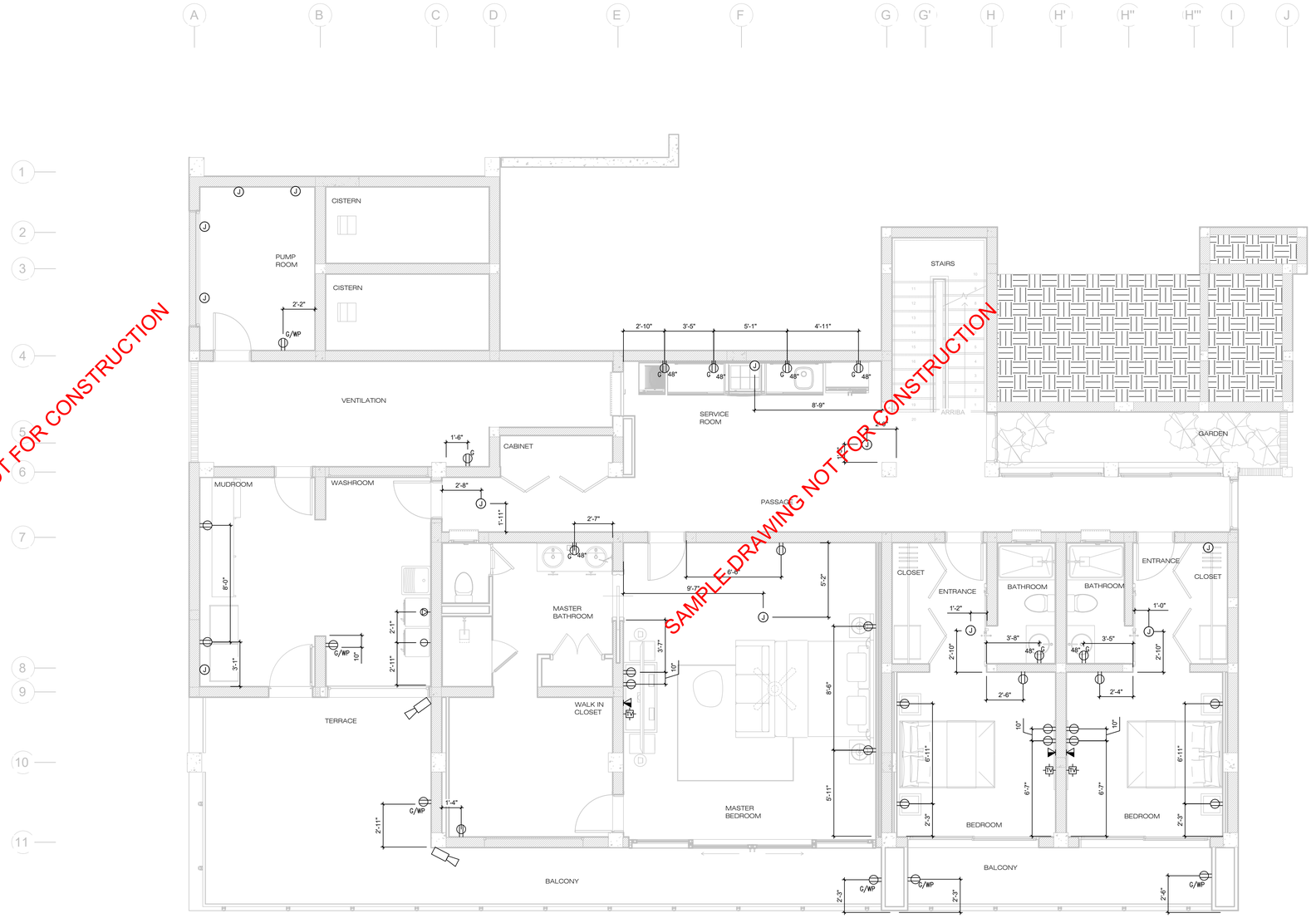
ERECTION OF A NEW BUILDING.

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

UNITS: FEETS-INCHES

E-3

DATE: DEC-2024



GROUND FLOOR POWER AND CCTV PLAN. LOCATION.

Scale: 1/4" = 1'-0"

KEYNOTES

1. THE LOCATION OF EACH ELECTRICAL FIXTURE IN THE PUMP ROOM WILL BE RELOCATED ACCORDING THE EQUIPMENT INSTALLATION.

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LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

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CAPTION

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REVIEWS N°	DATE
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Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

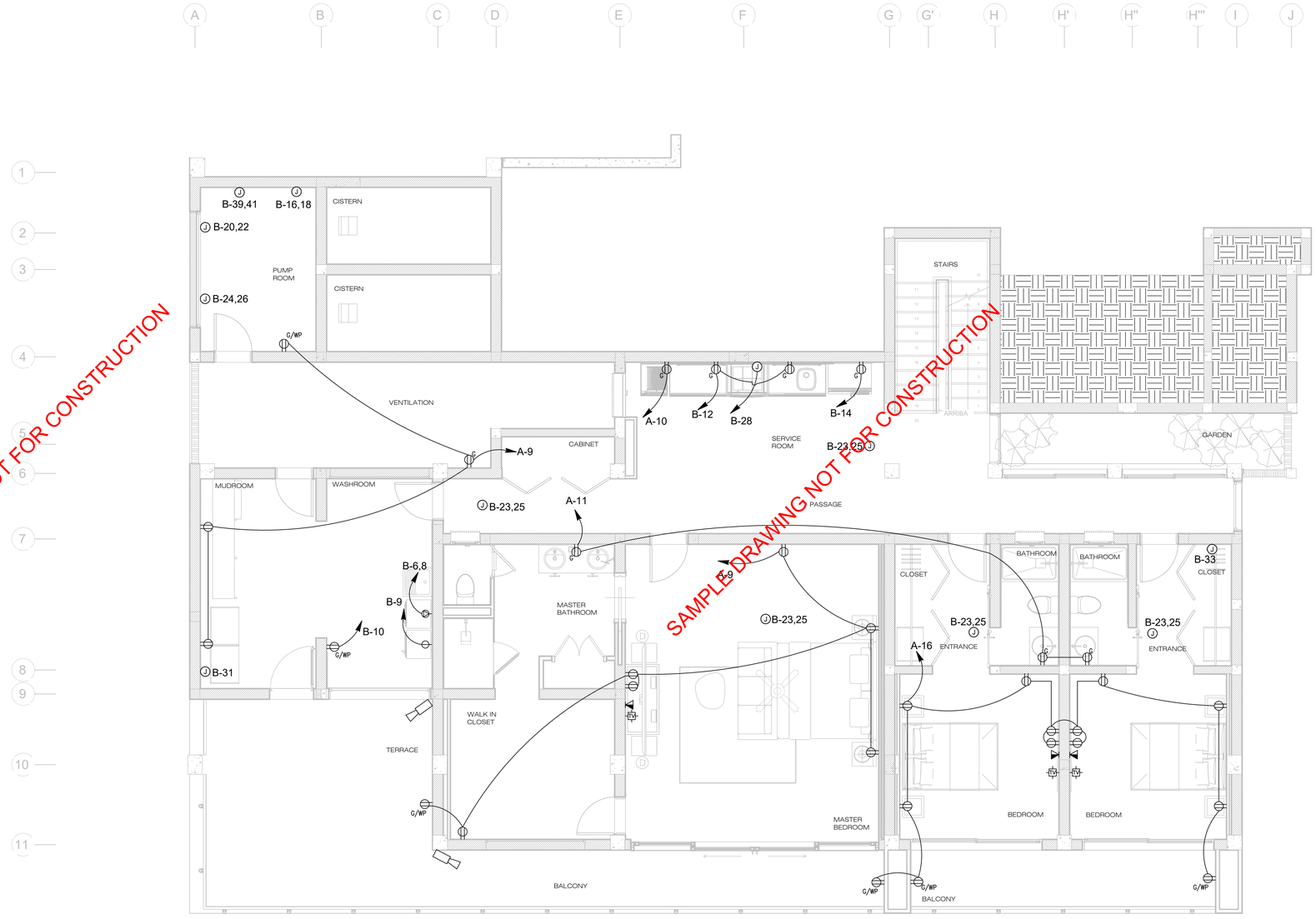
GROUND FLOOR. POWER PLAN. LOCATION.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
DATE: DEC-2024

E-4



GROUND FLOOR POWER AND CCTV PLAN. CIRCUITS.

Scale: 1/4" = 1'-0"

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LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
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Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

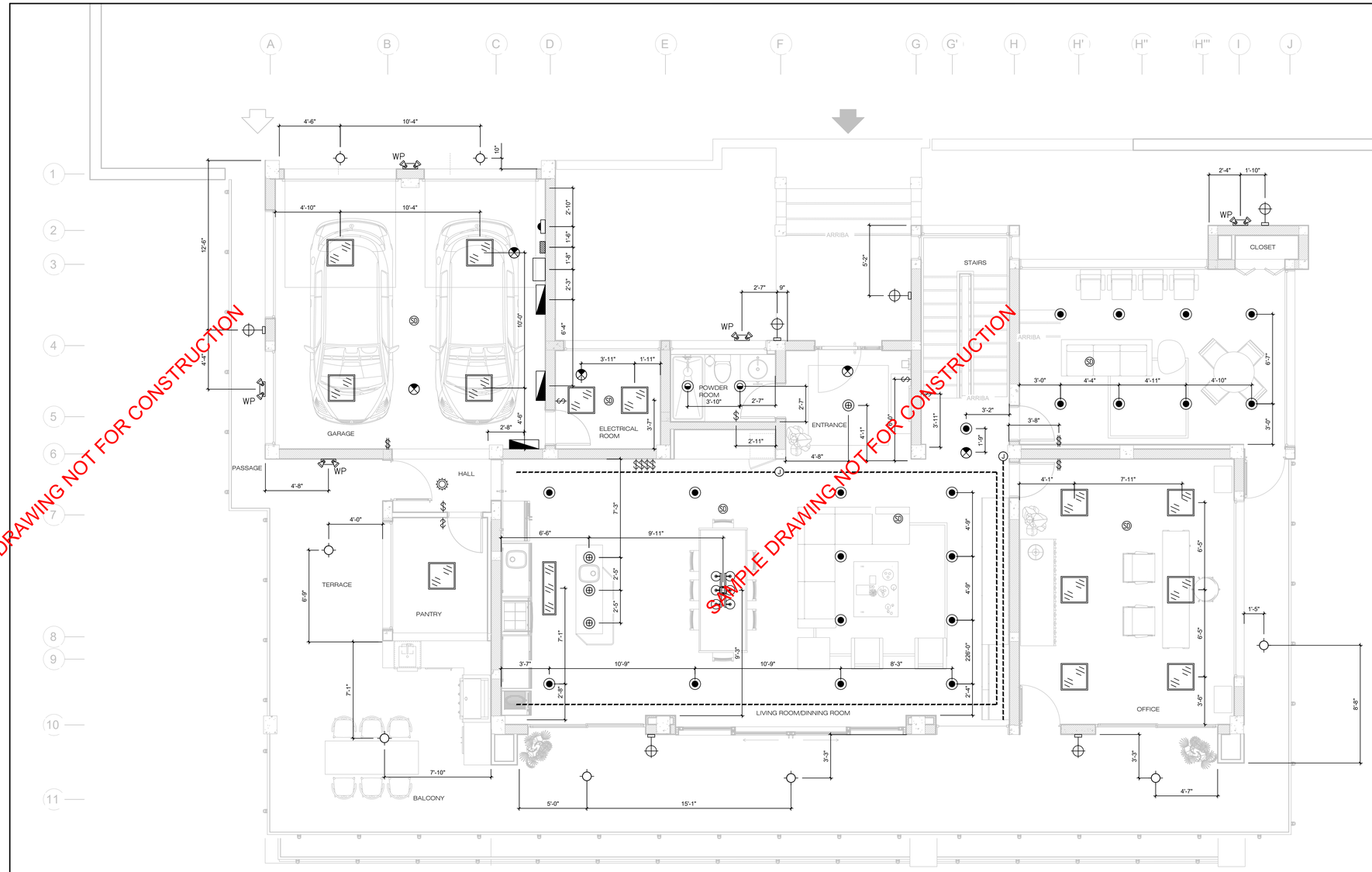
PLAN NAME

GROUND FLOOR. POWER PLAN. CIRCUITS.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
E-5
DATE: DEC-2024



FIRST FLOOR LIGHTING PLAN. LOCATION.

Scale: 1/4" = 1'-0"

KEYNOTES

1. CONNECT ALL EXIT TO NEAREST LIGHT FIXTURE AND AHEAD OF ANY LIGHTING CONTROL DEVICE FOR CONTINUOUS OPERATION OF THE BATTERY CHARGER.
2. THE LIGHTING DEVICES WITHOUT DIMENSION LOCATION WILL BE LOCATED AT LESS AT 6" TO THE BORDER OF A DOOR OR EDGE OF A WALL, IF OTHERS DEVICES ARE LOCATED NEAR OF THIS ITEM THEY WILL SPACED TO 4" AT LESS; THE LIGTHING FIXTURES WITHOUT DIMENSION LOCATION WILL BE PLACED AT THE CENTER OF THE LOCAL.
3. THE LIGHTING FIXTURES WITHOUT DIMENSION WILL BE IN THE CENTER OF THE ROOM.

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LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJECT ENGINEER: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

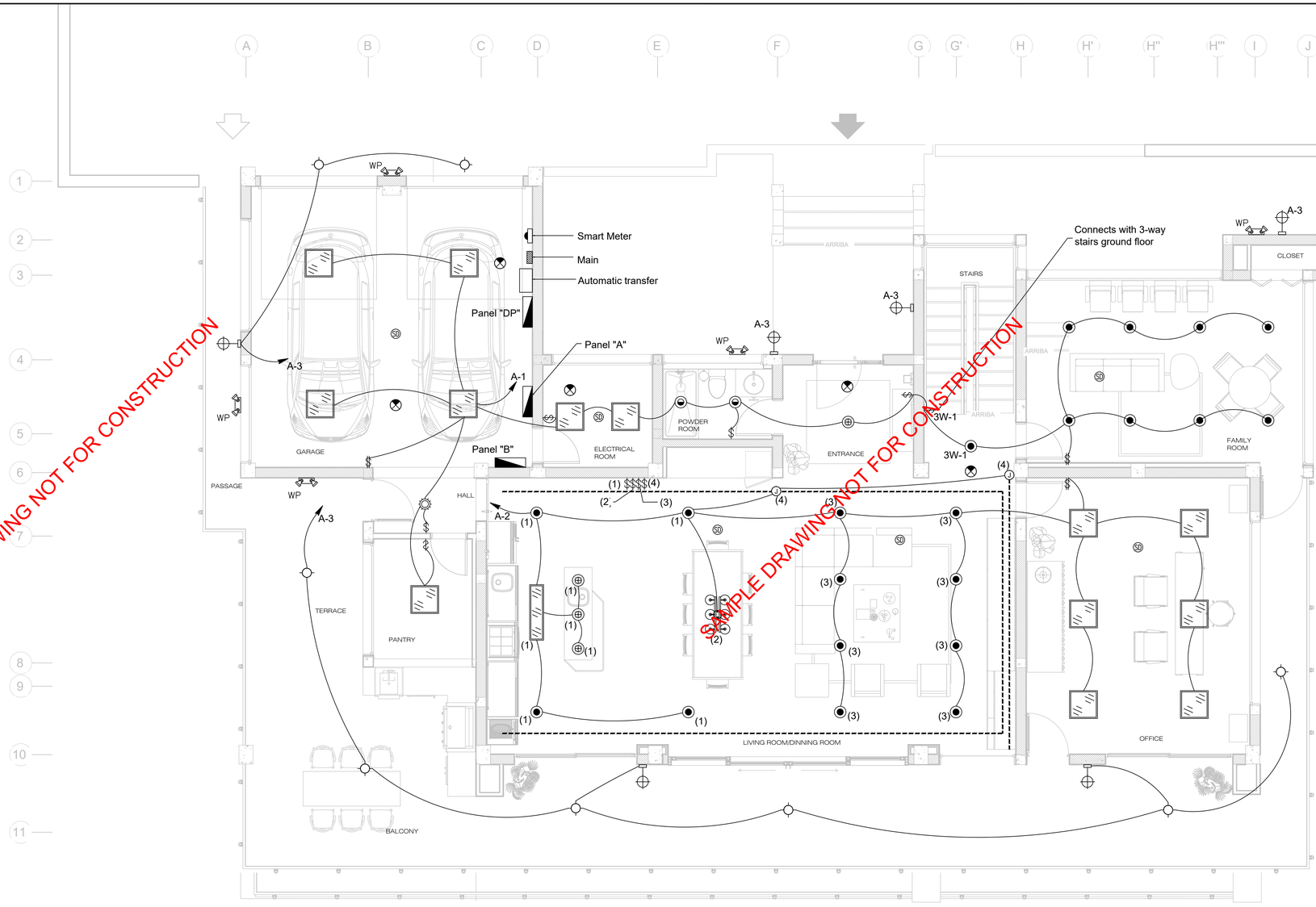
PLAN NAME

FIRST FLOOR. LIGHTING PLAN. LOCATION.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
E-6
DATE: DEC-2024



FIRST FLOOR LIGHTING PLAN. CIRCUITS.

Scale: 1/4" = 1'-0"

KEYNOTES

① CONNECT ALL EXIT TO NEAREST LIGHT FIXTURE AND AHEAD OF ANY LIGHTING CONTROL DEVICE FOR CONTINUOUS OPERATION OF THE BATTERY CHARGER.

EBENEZER ENGINEERING CONSULTING
Let's build our mark!

LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

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Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

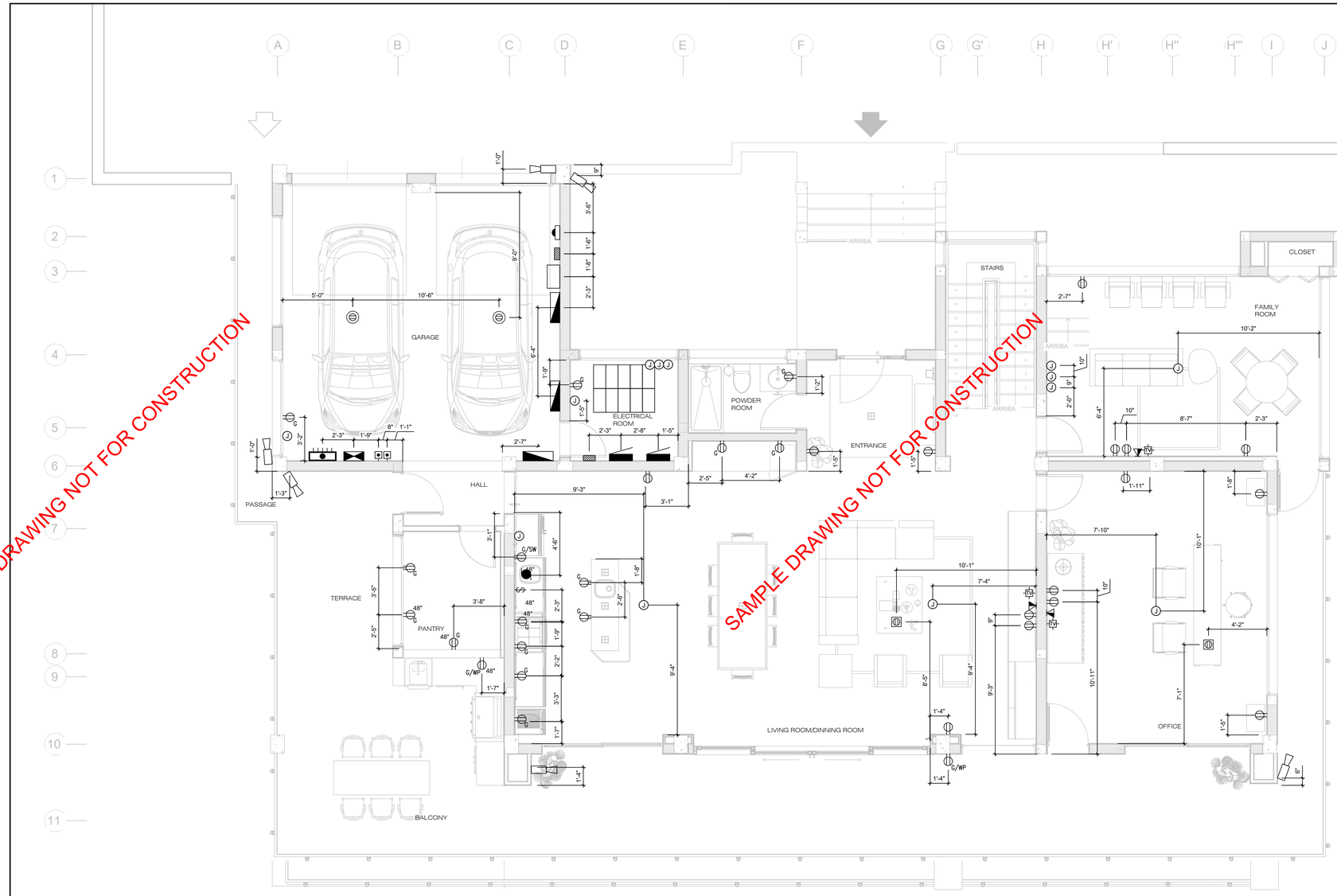
PLAN NAME

FIRST FLOOR. LIGHTING PLAN. CIRCUITS.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
E-7
DATE: DEC-2024



FIRST FLOOR POWER AND CCTV PLAN. LOCATION.

Scale: 1/4" = 1'-0"

EBENEZER ENGINEERING CONSULTING
Let's build our mark!

LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJECT ENGINEER: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

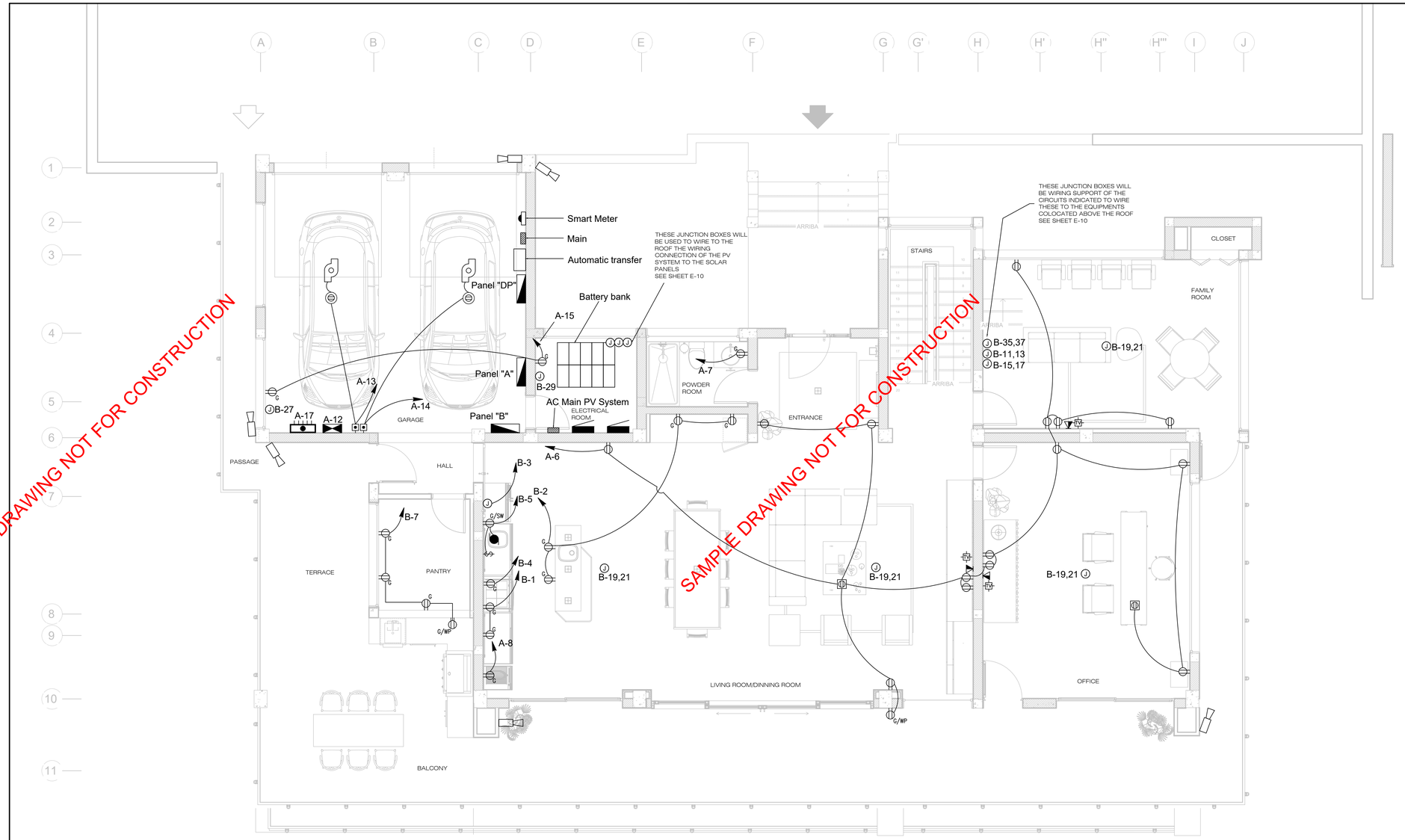
FIRST FLOOR. POWER PLAN. LOCATION

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
DATE: DEC-2024

E-8



FIRST FLOOR POWER PLAN AND CCTV SYSTEM. CIRCUITS.

Scale: 1/4" = 1'-0"

EBENEZER ENGINEERING CONSULTING
Let's build our mark!

LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

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FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

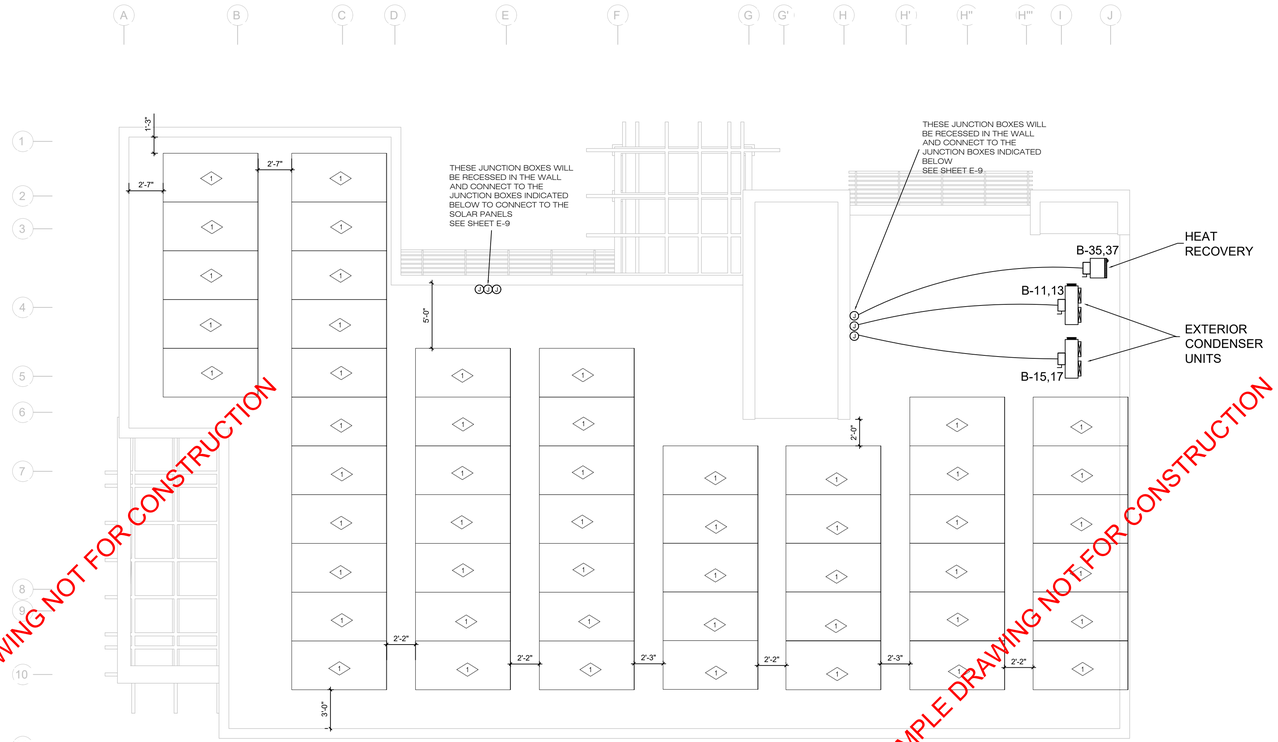
FIRST FLOOR. POWER PLAN. CIRCUITS.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
DATE: DEC-2024

E-9



ROOF TOP PV SYSTEM AND A/C CIRCUITS.

Scale: 3/16" = 1'-0"

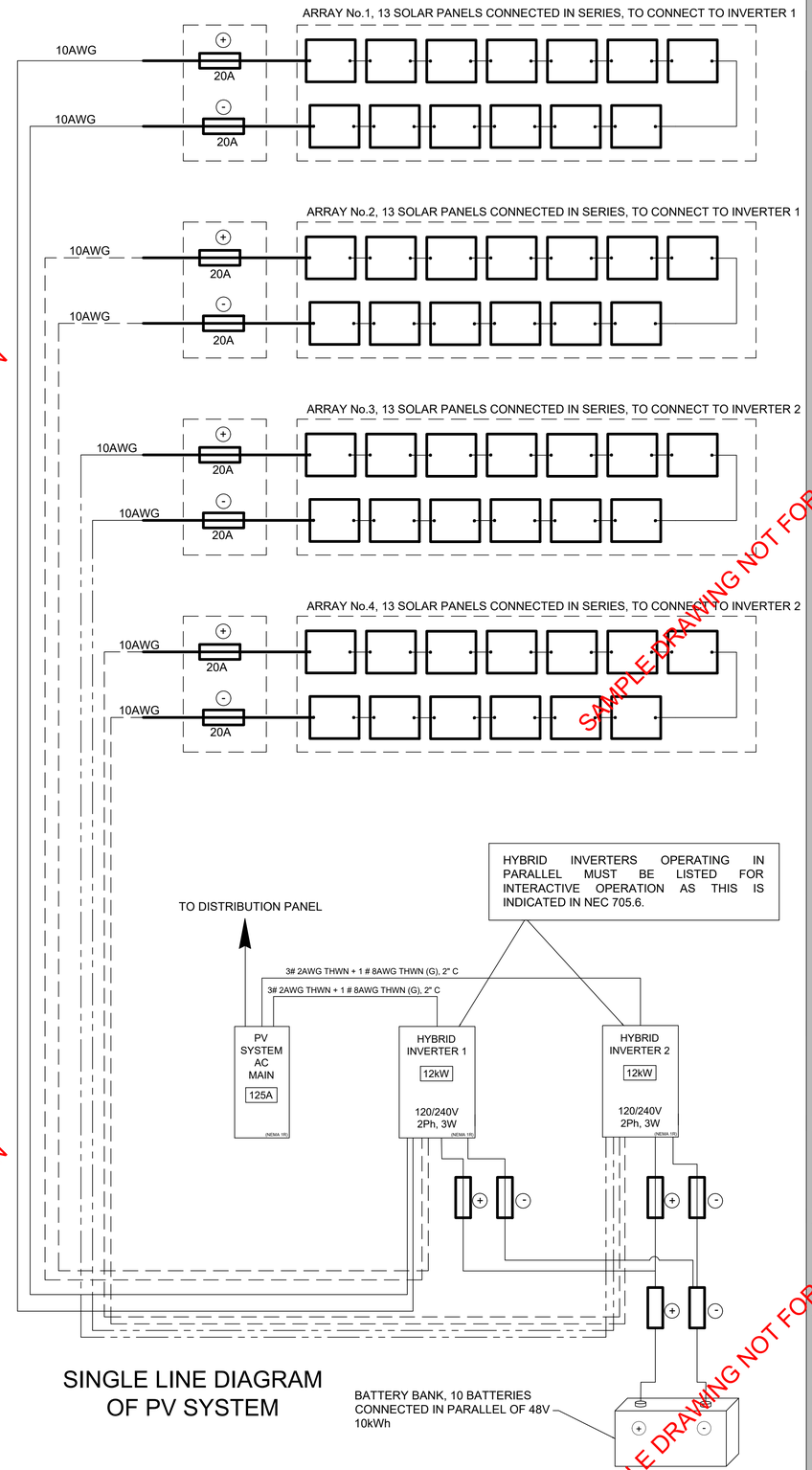
GENERAL DATA:

PHOTOVOLTAIC SOLAR PANEL, P=550 Wp, Vmpp=41.96 V, Impp=13.11 A, Voc=49.92 V, Isc=14 A.

DC FUSE, IN THE CASE OF THE BATTERIES DEPENDS OF THE INVERTERS.

KEYNOTES

1. THE DESIGN SHOWED IN THIS SHEET IS A PRE DESIGN, THIS SHEET MUST NOT BE TAKEN FOR CONSTRUCTION, THIS MUST BE APROVAL FOR A CERTIFIED COMPANY WHO MUST CERTIFICATED THE TECNOLOGY AND THE INSTALLATION.
2. THERE WILL BE THREE SOURCES FOR THE DWELLING UNIT:
   - POWER SUPPLY OF THE ELECTRICAL COMPANY.
   - PV SYSTEM WITH BATTERY BANK FOR STORAGE.
   - GENERATOR STAND BY.
3. ALL THE EQUIPMENT MUST BE LABELED FOR INTERACTIVE OPERATION, AND MUST BE COMPATIBLE WITH 120/240V SPLIT PHASE, 2 PHASES AND NEUTRAL.
4. THERE MUST BE A BIDIRECTIONAL SMART METER INSTALLED IN THE HOUSE AND SHUNT TRIP OF PANEL A AND B MUST BE CONTROLLED BY THE HYBRID INVERTERS.



SINGLE LINE DIAGRAM OF PV SYSTEM

EBENEZER ENGINEERING CONSULTING
Let's build our mark!

LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

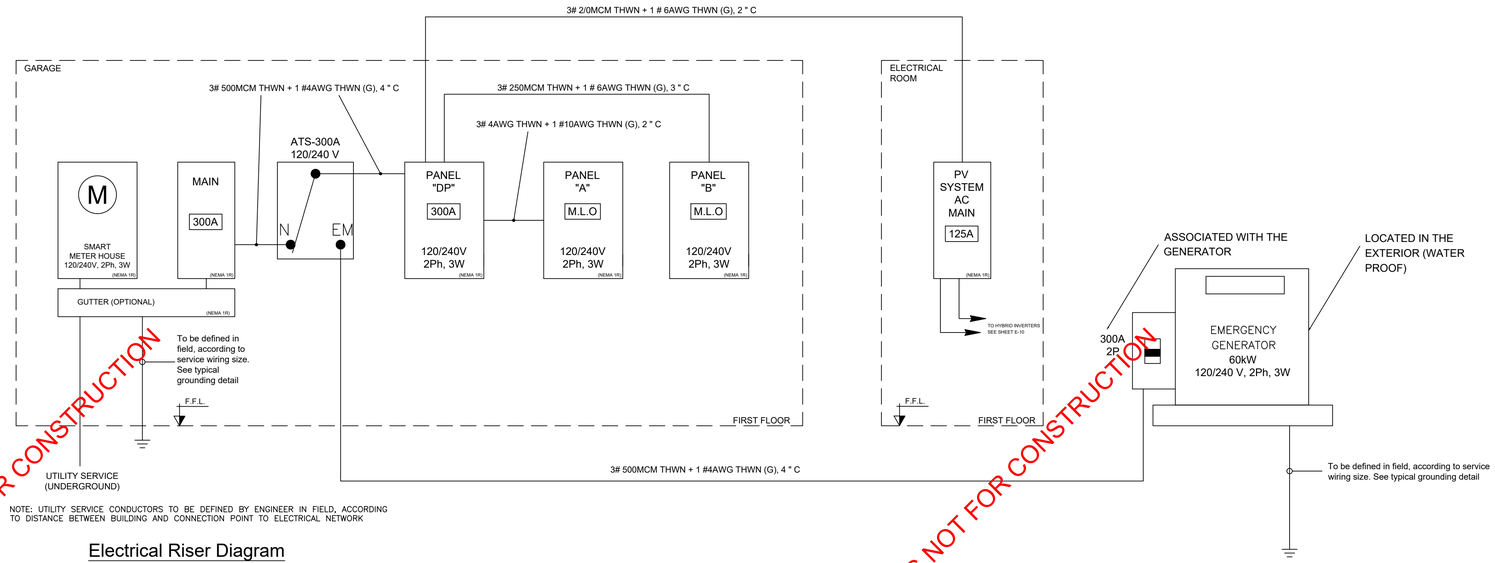
ROOF TOP PV SYSTEM AND A/C CIRCUITS.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 3/16"=1'-0"
UNITS: FEETS-INCHES
DATE: DEC-2024

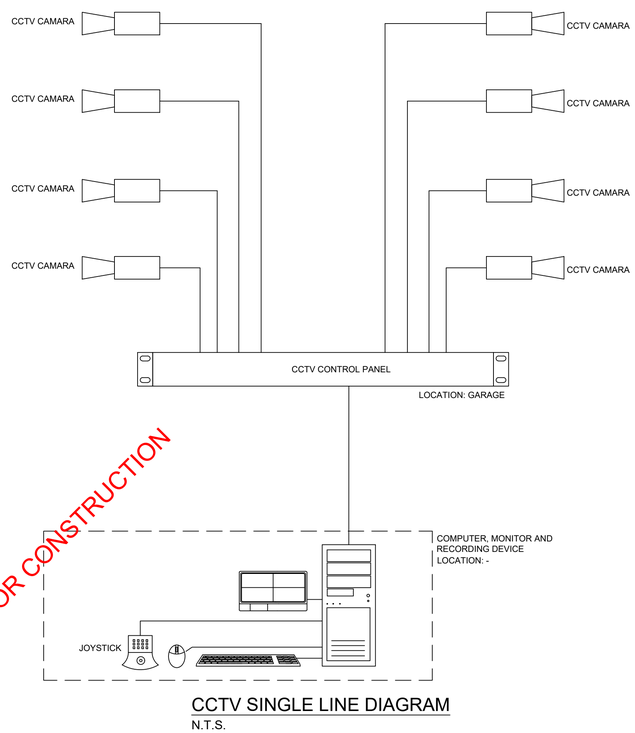
E-10



NOTE: UTILITY SERVICE CONDUCTORS TO BE DEFINED BY ENGINEER IN FIELD, ACCORDING TO DISTANCE BETWEEN BUILDING AND CONNECTION POINT TO ELECTRICAL NETWORK

Electrical Riser Diagram

N.T.S.



CCTV SINGLE LINE DIAGRAM

N.T.S.

KEYNOTES

1. THE PV SYSTEM MUST HAVE STORAGE BATTERIES FOR THE CONNECTION SHOWED IN THIS SHEET.
2. ALL THE EQUIPMENT MUST BE LABELED FOR INTERACTIVE OPERATION, AND MUST BE COMPATIBLE WITH 120/240V SPLIT PHASE, 2 PHASES AND NEUTRAL.
3. THERE MUST BE A BIDIRECTIONAL SMART METER INSTALLED IN THE HOUSE AND SHUNT TRIP OF PANEL A AND B MUST BE CONTROLLED BY THE HYBRID INVERTERS.

EBENEZER ENGINEERING CONSULTING
Let's build our mark!

LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

RISER DIAGRAM.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: N/S
UNITS: FEETS-INCHES
DATE: DEC-2024

E-11

PANEL "A"

TYPE: SIEMENS OR EQUAL APPROVED — RATED VOLTAGE: 120/240V, 1Ph, 3W — MAINS: M.L.O.
MOUNTING: RECESSED — BUS RATING: 100 AMPS — FEED LOCATION: FEED THRU
ENCLOSURE: NEMA 1 — A.I.C. RATING: N/A KAIC — SYSTEM: NORMAL
SUPPLY FROM: Panel DP — BRANCH POLES: 24 CIRCUITS — LOCATION: GARAGE

ID	LOAD SERVED	COND.	EQ. GND.	WIRE AWG	TYPE	TRIP	CKT	Phase A [kVA]		Phase B [kVA]		CKT	TRIP	TYPE	WIRE AWG	EQ. GND.	COND.	LOAD SERVED	ID
L	Ligthing. First floor	½	14	14	-	15	1	(*)	(*)			2	15	-	14	14	½	Lighting. First floor	L
L	Ligthing. Exterior	½	14	14	TS	15	3			(*)	(*)	4	15	-	14	14	½	Ligthing. Ground floor	L
L	Ligthing. Ground floor	½	14	14	-	15	5	(*)	(*)			6	20	-	12	12	½	Recep. First floor	R
R	Recep. First floor Bathroom	½	12	12	-	20	7			(*)	1.0	8	20	-	12	12	½	Refrigerator. First floor	O
R	Recep. Ground floor	½	12	12	-	20	9	(*)	1.0			10	20	-	12	12	½	Refrigerator. Ground floor	O
R	Recep. Ground floor Bathroom	½	12	12	-	20	11			(*)	0.5	12	20	-	12	12	½	Fire alarm panel. First floor	O
R	Recep. Door opener. Garage. First floor	½	12	12	-	20	13	0.5	0.5			14	20	-	12	12	½	Recep. Door opener. Garage. First floor	R
R	Recep. Garage and electrical room	½	12	12	-	20	15			1.0	(*)	16	20	-	12	12	½	Recep. Ground floor	R
O	CCTV panel. Ground floor	½	12	12	-	20	17	0.5	0.3			18	20	TS	10	10	¾	Ligthing. Exterior	L
	SPARE	-	-	-	-	20	19			-	-	20	-	-	-	-	-	SPACE	
	SPARE	-	-	-	-	20/2	21	-	-			22	-	-	-	-	-	SPACE	
							23			-	-	24	-	-	-	-	-	SPACE	
								2.8		2.5									

ID:
(L) LIGHTING LOAD
(R) RECEPTACLE LOAD
(O) OTHER LOAD
(*) INCLUDED IN AREA CALCULATION (3 VA/SQ FT)

TYPE:
TS - TIME SWITCH CONTROL

DEMAND LOAD CALCULATION:

CONNECTED LOAD:		=	5.3 KVA	
LTG. & RECEP. (3VA/SQ.FT)	5,990 FT²	=	18.0 KVA	
TOTAL CONNECTED LOAD:		=	23.3 KVA	
GEN. LTG. + SM. APP + LAUNDRY REC.		=	18.0 KVA	(A)
FIRST 3 KVA @	100%	=	3.0 KVA	
REMAINING @	35%	=	5.2 KVA	
OTHER LOADS BY 220.53	75%	=	0.0 KVA	
ALL OTHER LOADS @.....	100%	=	3.0 KVA	(O)
A/C LOAD (HEAT/COLD)	100%	=	0.0 KVA	(C)
TOTAL DEMAND LOAD:		=	11.2 KVA	
DEMAND AMPERES:		=	**47** AMPS	

PANEL "B"

TYPE: SIEMENS OR EQUAL APPROVED — RATED VOLTAGE: 120/240V, 1Ph, 3W — MAINS: M.L.O.
MOUNTING: RECESSED — BUS RATING: 200 AMPS — FEED LOCATION: BOTTON
ENCLOSURE: NEMA 1 — A.I.C. RATING: N/A KAIC — SYSTEM: NORMAL
SUPPLY FROM: Panel DP — BRANCH POLES: 42 CIRCUITS — LOCATION: GARAGE

ID	LOAD SERVED	COND.	EQ. GND.	WIRE AWG	TYPE	TRIP	CKT	Phase A [kVA]		Phase B [kVA]		CKT	TRIP	TYPE	WIRE AWG	EQ. GND.	COND.	LOAD SERVED	ID
A	Small appliances. First floor	½	12	12	-	20	1	1.5	1.5			2	20	-	12	12	½	Small appliances. First floor	A
K	Kitchen hood. First floor	½	12	12	-	20	3			1.0	1.4	4	20	-	12	12	½	Microwave. First floor	K
K	Dishwasher and garbage disposal. First floor	½	12	12	-	20	5	1.4	2.5			6	30/2	-	10	10	¾	Dryer. Ground floor	O
K	Small appliances. First floor Pantry	½	12	12	-	20	7			1.5	2.5	8							
O	Cloth washer machine. Ground floor	½	12	12	-	20	9	1.5	(*)			10	20	-	12	12	½	Recep. GFCI Launfry. Ground floor	R
C	Exterior condenser unit No.1. Roof top	1	10	6	-	50/2	11			4.0	1.5	12	20	-	12	12	½	Small appliances. Ground floor	A
C							13	4.0	1.4			14	20	-	12	12	½	Microwave. Ground floor	K
C	Exterior condenser unit No.2. Roof top	1	10	6	-	50/2	15			4.0	0.5	16	30/2	-	10	10	¾	Irrigation pump. Ground floor	O
C							17	4.0	0.5			18							O
C	Indoor units handlers. First floor	½	12	12	-	20/2	19			0.3	0.2	20	20/2	-	12	12	½	Flow pump. Ground floor	O
C							21	0.3	0.2			22							O
C	Indoor units handlers. Ground floor	½	12	12	-	20/2	23			0.3	1.0	24	30/2	-	10	10	¾	Water heater. Ground floor	C
C							25	0.3	1.0			26							C
C	Exhaust air motor. First floor	½	12	12	TS	20	27			0.2	1.0	28	20	-	12	12	½	Kitchen hood. Ground floor	K
C	Exhaust air motor. First floor	½	12	12	TS	20	29	0.2	-			30	20	-	-	-	-	SPARE	
C	Exhaust air motor. Ground floor	½	12	12	TS	20	31			0.2	-	32	20	-	-	-	-	SPARE	
C	Exhaust air motor. Ground floor	½	12	12	TS	20	33	0.2	-			34	20/2	-	-	-	-	SPARE	
C	Heat recovery equipment. Roof top	¾	10	10	-	30/2	35			1.0	-	36							
C							37	1.0	-			38	-	-	-	-	-	SPACE	
O	Main pump. Ground floor	¾	10	10	-	30/2	39			0.5	-	40	-	-	-	-	-	SPACE	
O							41	0.5	-			42	-	-	-	-	-	SPACE	
								22.0		21.1									

ID:
(C) A/C (COLD OR HEAT)
(R) RECEPTACLE LOAD
(K) FASTENED APP. BY NEC 220.53
(O) OTHER LOAD
(A) APPLIANCE LOAD

TYPE:
TS - TIME SWITCH CONTROL

DEMAND LOAD CALCULATION:

TOTAL CONNECTED LOAD:		=	43.1 KVA	
GEN. LTG. + SM. APP + LAUNDRY REC.		=	4.5 KVA	(A)
FIRST 3 KVA @	100%	=	3.0 KVA	
REMAINING @	35%	=	0.5 KVA	
OTHER LOADS BY 220.53	75%	=	5.8 KVA	(K)
ALL OTHER LOADS @.....	100%	=	8.9 KVA	(O)
A/C LOAD (HEAT/COLD)	100%	=	22.0 KVA	(C)
TOTAL DEMAND LOAD:		=	40.2 KVA	
DEMAND AMPERES:		=	**168** AMPS	

PANEL "DP"

TYPE: SIEMENS OR EQUAL APPROVED — RATED VOLTAGE: 120/240V, 1Ph, 3W — MAINS: M.C.B. 300 A
MOUNTING: SURFACE — BUS RATING: 400 AMPS — FEED LOCATION: FEED THRU
ENCLOSURE: NEMA 1 — A.I.C. RATING: N/A KAIC — SYSTEM: NORMAL
SUPPLY FROM: ATS — BRANCH POLES: 12 CIRCUITS — LOCATION: GARAGE

ID	LOAD SERVED	COND.	EQ. GND.	WIRE AWG	TYPE	TRIP	CKT	Phase A [kVA]		Phase B [kVA]		CKT	TRIP	TYPE	WIRE AWG	EQ. GND.	COND.	LOAD SERVED	ID
P	Panel A	2	10	4	ST	60/2	1	5.6	20.1			2	200/2	ST	250	4	3	Panel B	P
P							3			5.6	20.1	4							P
P	PV System	2	6	2/0	-	125/2	5	-	-			6	-	-	-	-	-	SPACE	
P							7			-	-	8	-	-	-	-	-	SPACE	
	SPARE	-	-	-	-	20/2	9	-	-			10	-	-	-	-	-	SPACE	
							11			-	-	12	-	-	-	-	-	SPACE	

TYPE:
ST - SHUNT TRIP

ID:
(P) PANEL
(*) INCLUDED IN AREA CALCULATION (3 VA/SQ FT)

DEMAND LOAD CALCULATION:

LTG. & RECEP. (3VA/SQ.FT)	5,990 FT²	=	18.0 KVA	
TOTAL CONNECTED LOAD:		=	66.4 KVA	
TOTAL NON-DIVERSIFIED LOAD:		=	66.4 KVA	
TOTAL CONNECTED LOAD LESS A/C:		=	44.4 KVA	
FIRST 10 KVA @	100%	=	10.0 KVA	
REMAINING @	40%	=	13.7 KVA	
A/C LOAD (COLD/HEAT) @	100%	=	22.0 KVA	
NON-CONCURRENT A/C LOAD		=	0.0 KVA	
TOTAL DEMAND LOAD:		=	45.7 KVA	
DEMAND AMPERES:		=	**191** AMPS	

KEYNOTES

1. THE PV SYSTEM MUST HAVE STORAGE BATTERIES FOR THE CONNECTION SHOWED IN THIS SHEET.
2. ALL THE EQUIPMENT MUST BE LABELED FOR INTERACTIVE OPERATION, AND MUST BE COMPATIBLE WITH 120/240V SPLIT PHASE, 2 PHASES AND NEUTRAL.
3. THERE MUST BE A BIDIRECTIONAL SMART METER INSTALLED IN THE HOUSE AND SHUNT TRIP OF PANEL A AND B MUST BE CONTROLLED BY THE HYBRID INVERTERS.

EBENEZER ENGINEERING CONSULTING
Let's build our mark!

LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
Rev. B	
Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

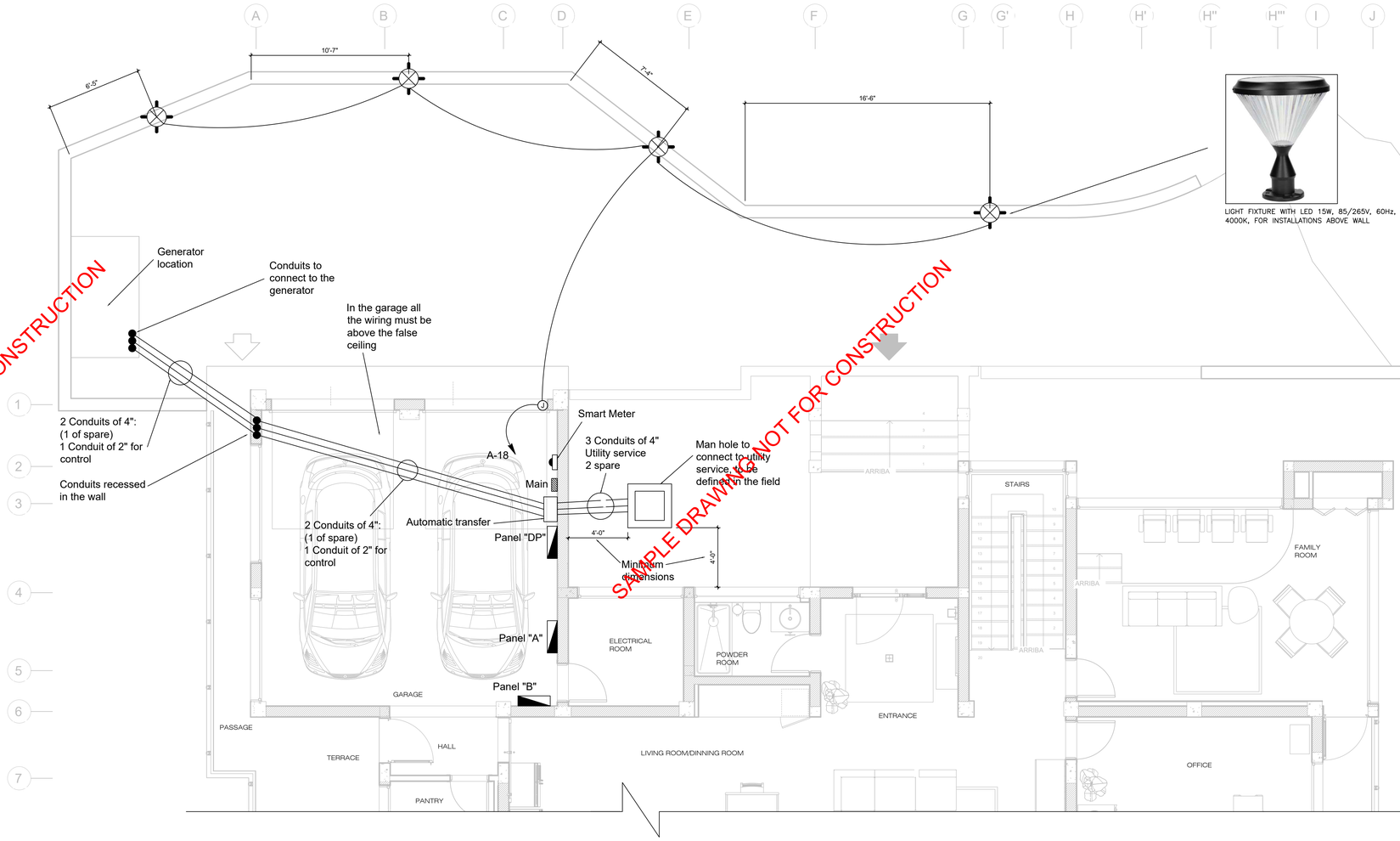
PLAN NAME

PANEL SCHEDULES.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: N/S
UNITS: FEETS-INCHES
E-12
DATE: DEC-2024



SITE PLAN. ELECTRICAL INSTALLATIONS.

Scale: 1/4" = 1'-0"

EBENEZER ENGINEERING CONSULTING
Let's build our mark!

LOCATION

FRIGATE BAY HOUSING DEVELOPMENT
SECTION DA/17
LOT 11

NOTES

CAPTION

REVIEWS

REVIEWS N°	DATE
Rev. A	
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Rev. C	

REFERENCES FILES

FILE N°	DESCRIPTION	APROVED

DESIGNERS

PROJET MANAGEMENT: Bsc.RAUDEL MORENO
ENGINEER: ENG.R.DON
DRAFTSMAN: ENG.R.DON

PROJECT

ZACHARIAS NEWMAN RESIDENCE

PLAN NAME

SITE PLAN. ELECTRICAL INSTALLATIONS.

DESCRIPTION

ERECTION OF A NEW BUILDING.

SCALE: 1/4"=1'-0"
UNITS: FEETS-INCHES
E-13
DATE: DEC-2024