

CONDUCTORS -- 600 VOLT AND BELOW

- A. GENERAL: SINGLE-CONDUCTOR 98% CONDUCTIVITY, ANNEALED, NON-COATED COPPER CONDUCTORS WITH 600-VOLT RATED TYPE "THHN/THWN" INSULATION.
- B. CONNECTORS: NYLON SHELL INSULATED METALLIC SCREW-ON CONNECTORS FOR #14-#10 AWG, AND BOLTED PRESSURE OR COMPRESSION TYPE LUGS AND CONNECTORS WITH INSULATING COVERS FOR #8 AWG AND LARGER.

HANGERS AND SUPPORTS

- A. GENERAL: ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED OR EQUIVALENT CORROSION RESISTANCE BY TREATMENT, AND SHALL BE MANUFACTURED PRODUCTS DESIGNED FOR THE APPLICATION.
- B. TYPES: HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC., AS INDICATED OR REQUIRED.

ELECTRICAL IDENTIFICATION

- A. NAME PLATES: LAMINATED PLASTIC WITH MINIMUM 1 / 4" HIGH BLACK ENGRAVED CHARACTERS ON WHITE BACKGROUND.
- B. FASTENERS: DOUBLE SIDED 3 / 4" ADHESIVE TAPE.
- C. UNDERGROUND WARNING TAPE: 3-INCH WIDE DETECTABLE TAPE. PERMANENTLY COLORED WITH CONTINUOUS-PRINTED LEGEND INDICATING GENERAL TYPE OF UNDERGROUND LINE BELOW AND "CAUTION". COLORS AS FOLLOWS:
 - 1. RED = ELECTRIC
 - 2. ORANGE = COMMUNICATIONS
- D. MARKING PENS: PERMANENT, WATERPROOF, QUICK-DRYING BLACK INK. ACCEPTABLE MANUFACTURERS: SANFORD FINE POINT "SHARPIE", OR EQUAL.
- E. WIRE TAGS: VINYL OR VINYL-CLOTH, SELF-ADHESIVE WRAPAROUND TYPE INDICATING APPROPRIATE CIRCUIT NUMBER, ETC.

ENCLOSURES

- A. DRY LOCATION, INDOOR -- NEMA 1.
- B. WET LOCATION OR OUTDOOR -- NEMA 3R.

CODES AND REGULATIONS

- A. GENERAL: COMPLY WITH ALL GOVERNING FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, CODES, RULES, AND REGULATIONS. WHERE THE CONTRACT DOCUMENTS EXCEED REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN. IN NO CASE SHALL WORK BE INSTALLED CONTRARY TO OR BELOW MINIMUM LEGAL STANDARDS
- B. UTILITIES: COMPLY WITH ALL APPLICABLE RULES, RESTRICTIONS, AND REQUIREMENTS OF THE UTILITY COMPANY SERVING THE PROJECT SITE AND FACILITIES
- C. NONCOMPLIANCE: SHOULD ANY WORK BE PERFORMED WHICH IS FOUND NOT TO COMPLY WITH ANY OF THE ABOVE, THE CONTRACTOR SHALL PROVIDE ALL WORK AND PAY ALL COSTS NECESSARY TO CORRECT THE DEFICIENCIES

PERMITS

- A. ALL PERMITS REQUIRED BY APPLICABLE AGENCIES WILL BE OBTAINED BY MBA ARCHITECTS

SUBMITTALS

- A. REQUIRED SUBMITTALS INCLUDE: LIST OF CONTRACTORS; PRODUCT DATA; SHOP DRAWINGS; AND VARIOUS ADMINISTRATIVE SUBMITTALS
- B. RECORD DOCUMENTS: INDICATED ACTUAL INSTALLED LOCATIONS; ALL EQUIPMENT AND DEVICES; ROUTING OR MAJOR INTERIOR RACEWAYS; LOCATION OF ALL CONCEALED AND UNDERGROUND EQUIPMENT AND RACE RACEWAYS; AND ALL APPROVED MODIFICATIONS TO THE CONTRACT DOCUMENTS, ELEVATIONS, DEVIATIONS NECESSITATED BY FIELD CONDITIONS, AND CHANGE ORDERS
- C. SAFETY MEETING MINUTES

JOB No.	2113
DATE	7-12-2023


DESCRIPTION	DATE	REV.

RESIDENTIAL ADDITION AND HARDSCAPE
 1065 MAZZONE DR
 SAN JOSE, CA

ARCHITECTS

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 MEMBERSHIP IN THE ARCHITECTURAL ASSOCIATION OF CALIFORNIA
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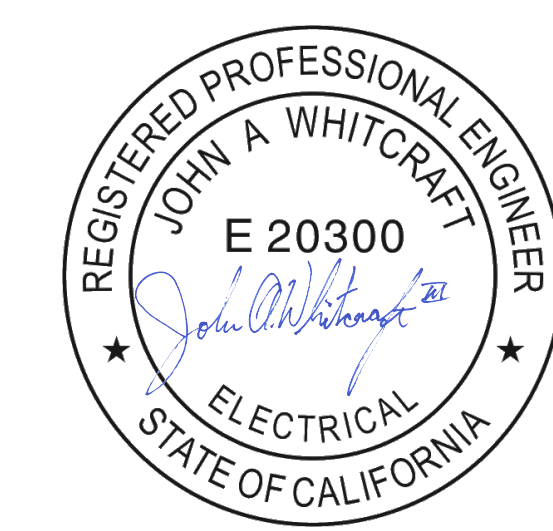
WHITCRAFT ENGINEERING SOLUTIONS INC



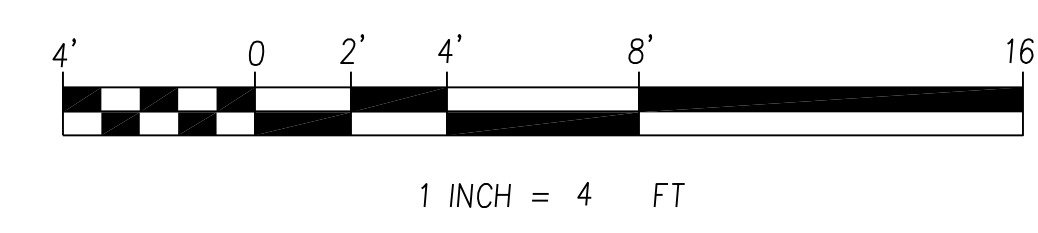
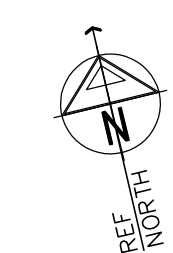
SHEET TITLE
ELECTRICAL SPECIFICATION

SCALE NONE
 CAD FILE 2113-SPEC.DWG
 DRAWN BY JAW

SHEET
E-1.0
 1 OF 1 SHEETS



1
E-1.0 ELECTRICAL SPECIFICATION
 SCALE: NONE



MOUNTING HEIGHTS

A. GENERAL: INDICATED HEIGHTS AREA MEASURED FROM THE CENTER OF THE DEVICE OUTLET BOX TO THE FINISHED FLOOR OR GRADE, UNLESS INDICATED OTHERWISE.

B. DEVICES: SWITCHES -- 48" A.F.F.
RECEPTACLES -- 18" A.F.F.
THERMOSTAT -- 48" A.F.F.

HOLES, SLEEVES AND OPENINGS

A. GENERAL: PROVIDE ALL HOLES SLEEVES, AND OPENINGS REQUIRED FOR THE COMPLETION OF WORK AND RESTORE ALL DAMAGED SURFACES TO MATCH SURROUNDING SURFACES. MAINTAIN INTEGRITY OF ALL FIRE AND SMOKE RATED BARRIERS USING APPROVED FIRE-STOPPING SYSTEMS. WHEN CUTTING HOLES OR OPENINGS, OR INSTALLING SLEEVES, DO NOT CUT, DAMAGE OR DISTURB STRUCTURAL ELEMENTS OR REINFORCING STEEL, UNLESS APPROVED IN WRITING BY THE PROJECT STRUCTURAL ENGINEER.

B. CONDUIT PENETRATIONS: SIZE CORE DRILLED HOLES SO THAT AN ANNULAR SPACE OF NOT LESS THAN 1 / 4" AND NOT MORE THAN 1" IS LEFT AROUND THE CONDUIT. WHEN OPENINGS ARE CUT IN LIEU OF CORE DRILLED, PROVIDE SLEEVE IN ROUGH OPENING. SIZE SLEEVES TO PROVIDE AN ANNULAR SPACE OF NOT LESS THAN 1 / 4" AND NOT MORE THAN 1" AROUND THE CONDUIT, PIPE, ETC. PATCH AROUND SLEEVE TO MATCH SURROUNDING SURFACES.

CONDUCTORS -- 600 VOLT AND BELOW

A. MINIMUM CONDUCTOR SIZE: ALL BRANCH CIRCUIT WIRING SHALL BE MINIMUM #12 AWG. FEEDER CIRCUIT WIRING SHALL BE MINIMUM #2 AWG, UNLESS OTHERWISE INDICATED. PROVIDE LARGER SIZES, AS INDICATED OR REQUIRED. A FULL-SIZED EQUIPMENT GROUNDING CONDUCTOR WILL BE INSTALLED IN POWER AND LIGHTING CONDUITS (CONDUITS WILL NOT BE USED AS A GROUNDING CONDUIT).

B. ROMEX, BX, AC AND MC TYPE CABLES ARE ALLOWED. FOLLOW MANUFACTURER INSTALLATION REQUIREMENTS.

C. TERMINATIONS: FURNISH AND INSTALL TERMINATIONS INCLUDING LUGS IF NECESSARY TO MAKE ALL ELECTRICAL CONNECTIONS INDICATED OR REQUIRED. EXTERIOR AND SWITCH GEAR TERMINATIONS SHALL HAVE AN ANTIOXIDANT APPLIED. SPRING-TYPE WIRE CONNECTORS USED IN EXTERIOR BOXES SHALL BE SILICONE FILLED.

HANGERS AND SUPPORTS

A. GENERAL: RIGIDLY SUPPORT AND SECURE ALL MATERIALS, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS SUITABLE FOR THE USE, MATERIALS AND LOADS ENCOUNTERED, PROVIDE ALL NECESSARY HARDWARE. PROVIDE CONDUIT SUPPORTS AT MAXIMUM 5 FEET ON CENTER OR PER NEC CODE REQUIREMENTS.

B. OVERHEAD MOUNTING: ATTACH OVERHEAD MOUNTED EQUIPMENT TO STRUCTURAL FRAMEWORK OR SUPPORTING METAL FRAMEWORK. DO NOT MAKE ATTACHMENTS TO STEEL ROOFING, STEEL FLOORING OR CEILING MINERAL TILE.

C. WALL MOUNTING: SUPPORT WALL MOUNTED EQUIPMENT BY MASONRY, CONCRETE BLOCK, METAL FRAMING OR SUB-FRAMING.

D. EXTERIOR WALLS: MOUNT ALL EQUIPMENT LOCATED ON THE EXTERIOR BUILDING WALLS, AT LEAST ONE INCH AWAY FROM WALL SURFACE, USING SUITABLE SPACERS.

E. STRUCTURAL MEMBERS: DO NOT CUT, DRILL OR WELD ANY STRUCTURAL MEMBER EXCEPT AS SPECIFICALLY APPROVED BY THE ENGINEER.

F. INDEPENDENT SUPPORT: DO NOT SUPPORT MATERIALS OR EQUIPMENT FROM OTHER EQUIPMENT, PIPING, DUCTWORK, OR SUPPORTS FOR SAME.

G. TEMPORARY CONDITIONS: DO NOT ATTACH TO OR SUPPORT ELECTRICAL WORK FROM REMOVABLE OR KNOCKOUT PANELS OR TEMPORARY WALLS OR PARTITIONS.

FUSES

A. UL CLASS RK1, 250 VOLT OR 600 VOLT AS REQUIRED FOR SYSTEM VOLTAGE, DUAL ELEMENT, TIME DELAY CURRENT-LIMITING, 200,000 A/C, AMPERE RATINGS AS INDICATED. SIZE AND QUANTITY AS INDICATED ON POWER DIAGRAM.

B. ACCEPTABLE MANUFACTURERS: BUSSMAN "FUSETRON", OR EQUAL BY FERRAZ SHAWMUT.

CIRCUIT BREAKERS

A. GENERAL: MOLDED CASE WITH THERMAL AND MAGNETIC TRIPS UNLESS INDICATED OTHERWISE. MINIMUM 10,000 AMPS INTERRUPTING CAPACITY, HIGHER RATINGS AS INDICATED OR REQUIRED BY AVAILABLE FAULT CURRENT.

B. CIRCUIT BREAKERS FOR EXISTING EQUIPMENT SHALL BE FROM THE SAME MANUFACTURER AS THE ORIGINAL EQUIPMENT.

LOAD CENTER / PANEL BOARDS

A. GENERAL: TWO-ROW CIRCUIT BREAKER WITH MAINS, RATINGS AND BRANCH DEVICES AS INDICATED

B. MINIMUM 10,000 AIC FOR 208V OR 240V PANEL BOARD UNLESS OTHERWISE NOTED.

C. LOCKABLE COVER, COPPER BUS.

D. LOAD CENTER SHALL HAVE MAIN CIRCUIT BREAKER (LOCKABLE IN ON & OFF POSITIONS).

E. COPPER GROUND BARS PREFERRED (ALUMINUM COMPONENTS MUST BE LISTED FOR PROPOSED USE -- ALUMINUM GROUND PARTS MUST BE COPPER OR TIN PLATED. TO COMPENSATE FOR THE THERMAL EXPANSION DIFFERENCE BETWEEN ALUMINUM AND COPPER, USE "BELLVILLE" WASHERS AT BOLTED CONNECTIONS). ISOLATED NEUTRAL BUS AND FULL-SIZE GROUND BUS.

F. ACCEPTABLE MANUFACTURERS: EATON, GE, SQUARE D TYPE QC, SEIMENS, OR EQUIVALENT.

DEVICES

A. SWITCHES: 20 AMP, 120-277 VOLTS, A.C. ONLY TOGGLE TYPE, SINGLE POLE, DOUBLE POLE, 3-WAY, OR 4-WAY TIMER STYLE AS INDICATED OR REQUIRED. ONE LIGHT FIXTURE IN GARAGE, LAUNDRY ROOM & BATHROOMS SHALL BE CONTROLLED BY A VACANCY SENSOR.

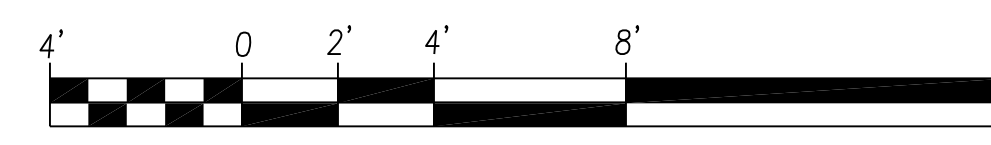
B. DIMMERS: USE DIMMERS FOR ALL INDOOR LIGHTING CONTROLS ONE LIGHT FIXTURE IN GARAGE, LAUNDRY ROOM & BATHROOMS SHALL BE CONTROLLED BY A VACANCY SENSOR.

C. RECEPTACLES: 20 AMP, 120V, NEMA 5 208V DUPLEX TYPE, FOR INDOOR MOUNTED, USE STAINLESS STEEL COVER. FOR OUTDOOR OR WET LOCATION MOUNTED. USE DEVICE RATED FOR USE. PROVIDE GFCI TYPE WITH COULD STATE GROUND FAULT SENSING & 6 MA TRIP FOR OUTDOOR OR WET LOCATIONS

D. LUMINARIES: LUMINARIES SHALL COMPLY WITH CALIFORNIA TITLE 24 PART 6 AND BE IDENTIFIED AS "JA8" HIGH EFFICACY LIGHT SOURCES

E. ASTRONOMICAL TIME-SWITCH OUTDOOR LIGHTING CONTROLS: NSI SS721Z TORK SUNSET/SUNRISE ASTRONOMIC IN-WALL TIMER SWITCH; 7 DAYS, WHITE, SPST, 120/277 VOLT AC, OR EQUIVALENT

1 ELECTRICAL SPECIFICATION
E-1.1 SCALE: NONE



1 INCH = 4 FT

JOB No. 2113

DATE 7-12-2023

DESCRIPTION	DATE	REV.

RESIDENTIAL ADDITION AND HARDSCAPE
1065 MAZZONE DR
SAN JOSE, CA

ARCHITECTS

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MAYNARD MATHIAS ASSOCIATES INC.

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WHITCRAFT ENGINEERING SOLUTIONS INC

REGISTERED PROFESSIONAL ENGINEER
JOHN A WHITCRAFT
E 20300
ELECTRICAL
STATE OF CALIFORNIA

SHEET TITLE
ELECTRICAL SPECIFICATION

SCALE NONE
CAD FILE 2113-SPEC.DWG
DRAWN BY JAW

SHEET
E-1.1
1 OF 1 SHEETS



ELECTRICAL SERVICE

- A. GENERAL: ARRANGE WITH THE UTILITY COMPANY AND THE CUSTOMER FOR A TIMELY INSTALLATION OF THE TEMPORARY ELECTRIC SERVICE (IF REQUIRED) AND PERMANENT ELECTRIC SERVICES. COMPLY WITH AND COORDINATE ALL REQUIREMENTS OF THE UTILITY COMPANY.
- B. CONTRACTOR WILL COORDINATE WITH ELECTRICAL UTILITY SERVICE PROVIDER FOR ALL INSPECTIONS AND METER SET.
- C. ARRANGE FOR AN INSPECTION OF THE ELECTRICAL SERVICE BY THE AUTHORITY HAVING JURISDICTION. OBTAIN A CERTIFICATE OF INSPECTION IF POSSIBLE FROM THE JURISDICTION. FURNISH A COPY OF THE CERTIFICATE TO THE CUSTOMER WITH THE HANDOFF PACKAGE AND A COPY TO THE UTILITY COMPANY.
- D. COORDINATE METER SOCKET REQUIREMENTS WITH THE ELECTRIC UTILITY AS REQUIRED.
- E. GROUNDING: PROVIDE GROUNDING ELECTRODE SYSTEM FOR THE SERVICE, PER THE NEC, PER UTILITY COMPANY REQUIREMENTS, AND AS INDICATED.
- F. SHORT CIRCUIT RATINGS: PROVIDE EQUIPMENT WITH HIGHER FAULT CURRENT RATINGS AS NEEDED TO MATCH UTILITY COMPANY AVAILABLE FAULT CURRENT.

TESTING EQUIPMENT

- A. ALL TEST EQUIPMENT SHALL BE CALIBRATED PER MANUFACTURER SPECS. CALIBRATION CERTIFICATES WILL BE PROVIDED TO CUSTOMER.

COLOR CODES

- A. LAMINATED PLASTIC TAGS REQUIREMENTS:

- 1. WHITE BACKGROUND WITH BLACK LETTERING
- 2. SECURE TAGS WITH STAINLESS STEEL TIES
- 3. TAGS SHALL BE STAMPED ON ONE SIDE ONLY

TAGS STAMPING SHALL BE WITH TEXT HEIGHT OF 5 / 16" OR LARGER

EQUIPMENT CONNECTIONS

- A. VERIFICATION: OBTAIN AND REVIEW SHOP DRAWINGS, PRODUCT DATA AND MANUFACTURER'S INSTRUCTIONS FOR EQUIPMENT FURNISHED BY OTHERS. EXAMINE ACTUAL EQUIPMENT TO VERIFY PROPER CONNECTION LOCATIONS AND REQUIREMENTS.
- B. NAMEPLATES: PROVIDE NAME PLATE ENGRAVER WITH EQUIPMENT DESIGNATION FOR EACH SAFETY SWITCH, PANEL BOARD, TRANSFORMER, MOTOR STARTER, AND ALL OTHER EQUIPMENT, ETC., USING LAMINATED PLASTIC WITH WHITE BACKGROUND & BLACK LETTERING.
- C. UNDERGROUND WARNING TAPE: DURING TRENCH BACK FILLING FOR EACH UNDERGROUND ELECTRICAL, TELEPHONE, SIGNAL AND COMMUNICATIONS LINE, PROVIDE A CONTINUOUS UNDERGROUND WARNING TAPE LOCATED DIRECTLY ABOVE LINE, AT TWELVE INCHES BELOW FINISHED GRADE.
- D. MARK EACH JUNCTION AND PULL BOX INDICATING SOURCE DESIGNATION AND CIRCUIT NUMBER(S) FOR THE ENCLOSED CONDUCTORS USING LAMINATED PLASTIC WITH WHITE BACKGROUND & BLACK LETTERING.
- E. ALL CONDUITS SHALL BE TAGGED/IDENTIFIED INSIDE ALL PULL BOXES, J-BOXES, AND CABINETS WITH P-TOUCH TYPE PRINTED LABELS (1 / 2" LABEL, WHITE FACE WITH BLACK LETTERING).
- F. LOAD CENTER CIRCUIT DIRECTORIES: AT COMPLETION OF PROJECT, ACCURATELY COMPLETELY EACH PANEL BOARD CIRCUIT DIRECTORY CARD, IDENTIFYING LOAD SERVED, "SPARE" OR "SPACE" FOR EACH CIRCUIT POLE. WHEN MODIFYING, ADDING, OR DELETING CIRCUITS AT AN EXISTING PANEL BOARD, UPDATE THE EXISTING (OR PROVIDE NEW) CIRCUIT DIRECTORY CARD TO ACCURATELY REFLECT FINAL CONDITIONS.

CHECKOUT, TESTING AND ADJUSTING

- A. POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY & INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH & POWER CABINET.

CLEANING AND TOUCH-UP PAINTING

- A. GENERAL: PERIODICALLY REMOVE FROM THE PROJECT SITE ALL WASTE, RUBBISH AND CONSTRUCTION DEBRIS ACCUMULATED FROM CONSTRUCTION OPERATIONS. THE PREMISES SHALL BE LEFT FREE OF ANY DEBRIS AND UNUSED CONSTRUCTION MATERIALS PRIOR TO FINAL ACCEPTANCE.
- B. ELECTRICAL EQUIPMENT: REMOVE ALL DUST, DIRT, DEBRIS, MORTAR, WIRE SCRAPS, RUST, AND OTHER FOREIGN MATERIALS FROM THE INTERIOR AND EXTERIOR OR ALL ELECTRICAL EQUIPMENT AND ENCLOSURES, AND WIPE DOWN. CLEAN ACCESSIBLE CURRENT CARRYING ELEMENTS AND INSULATORS PRIOR TO ENERGIZING.
- C. TOUCH-UP PAINTING: RESTORE AND REFINISH TO ORIGINAL CONDITION ALL SURFACES OR ELECTRICAL EQUIPMENT THAT IS SCRATCHED, MARRED AND/OR DINGED DURING SHIPPING, HANDLING, OR INSTALLATION. REMOVE ALL RUST, AND PRIME AND PAINT AS RECOMMENDED BY MANUFACTURER.

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RESIDENTIAL ADDITION AND HARDSCAPE 1065 MAZZONE DR SAN JOSE, CA		

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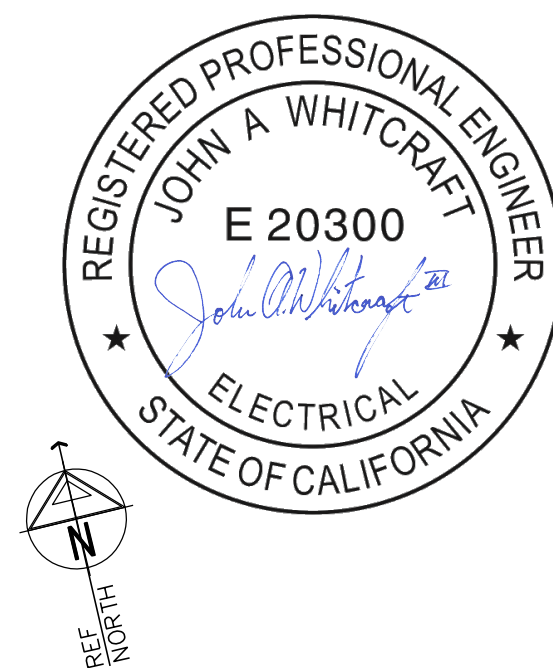
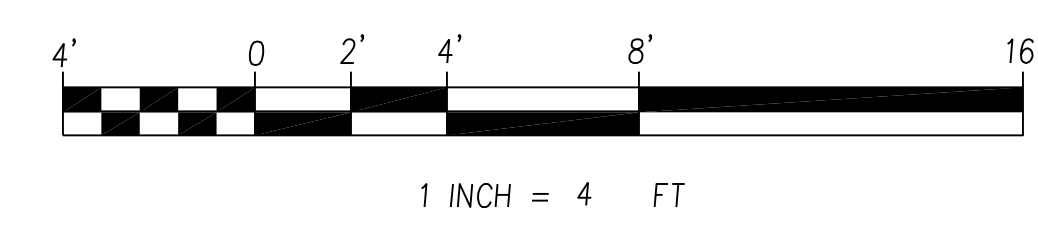
**WHITCRAFT
ENGINEERING
SOLUTIONS INC**



SHEET TITLE	ELECTRICAL SPECIFICATION
SCALE	NONE
CAD FILE	2113-SPEC.DWG
DRAWN BY	JAW

SHEET	E-1.2
1 OF 1 SHEETS	

1
E-1.2 ELECTRICAL SPECIFICATION
SCALE: NONE



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1065 MAZZONE DR
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WHITCRAFT
ENGINEERING
SOLUTIONS INC
REGISTERED ELECTRICAL ENGINEER

SHEET TITLE
ELECTRICAL FLOOR ONE REFLECTED CEILING PLAN

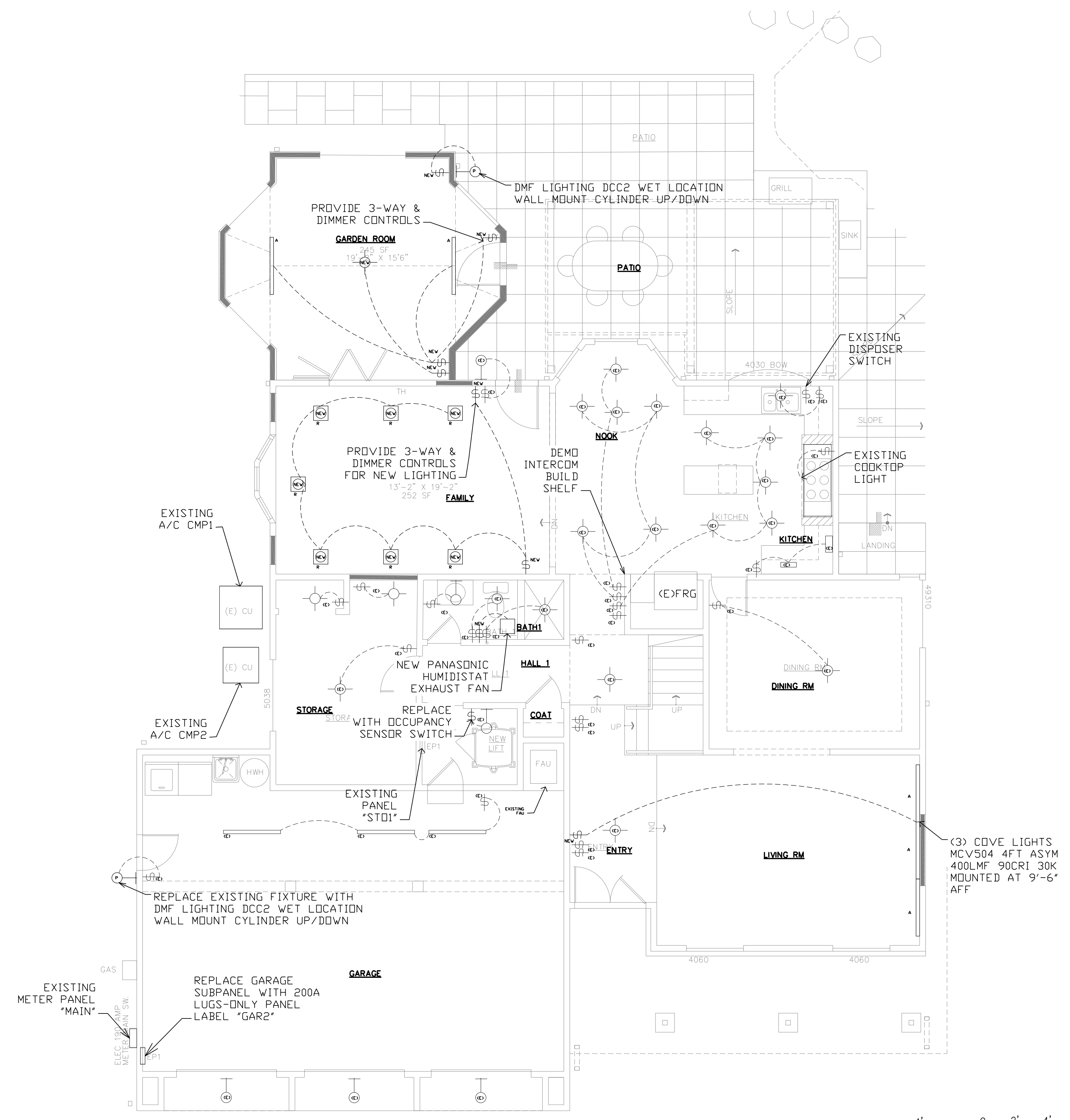
SCALE 1/4" = 1'
CAD FILE 2113-ELECTRICAL-FL1
DRAWN BY JAW

SHEET E-2
1 OF 1 SHEETS

Label	Catalog Number	Description	Lamp Lumens	Watts
A	MCV504 4FT ASYM 400LMF 90CRI 30K	Integrated Cove Fixture 4 Foot Section Length Asymmetric Distribution 400 Lumens Per Foot 90CRI 3000 Kelvin	1597.608	14.44
W	DRDH-07-9-30-SP-W-0	DMF LIGHTING DRD4 360 DEGREE ADJUSTABLE WALL WASH LAMP	750.000	9.15
P	DCC2-WW-2-77-30-WH-O	DMF LIGHTING DCC2 WET LOCATION WALL MOUNT CYLINDER UP/DOWN	(2) 750.000	18.75
R	IXMD-07-9-27-WF-T X2RMR X2TRDSWHDH	DMF SMALL APERTURE DOWNLIGHT 750 LUMEN 93% CRI 2700K 60 DEG FLOOD TRIAC 1%	750.001	9.51

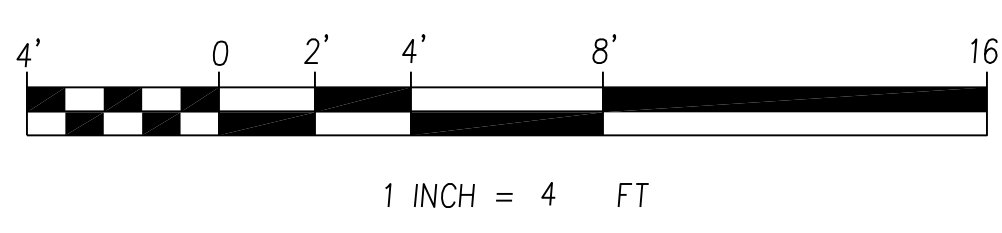
LEGEND

	A
	W
	P
	R



LIGHTING NOTES:

1. MOUNT COVE LIGHTS (A) FACING UPWARD WITH ASYMMETRIC FEATURE POINTING OUT FROM THE MOUNTING WALL.
2. MOUNT COVE LIGHTS (A) ABOVE DOOR OR CLOSET OPENING AND BELOW CEILING SO THAT THE LUMINAIRE PROVIDES REFLECTED, DIFFUSE LIGHT IN THE ROOM.
3. COVE LIGHTS (A) IN THE LIVING ROOM SHALL BE MOUNTED ON THE EAST WALL AT 9'-6" AFF, FACING UPWARD WITH ASYMMETRIC FEATURE POINTING OUT FROM THE MOUNTING WALL.



FLOOR ONE REFLECTED CEILING PLAN
SCALE: 1" = 4'

DESCRIPTION	DATE	REV.

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WHITCRAFT
ENGINEERING
SOLUTIONS INC
REGISTERED ELECTRICAL ENGINEER

SHEET TITLE
ELECTRICAL FLOOR TWO
REFLECTED
CEILING
PLAN

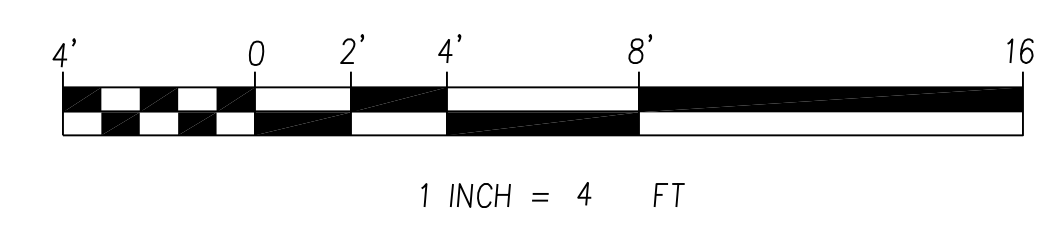
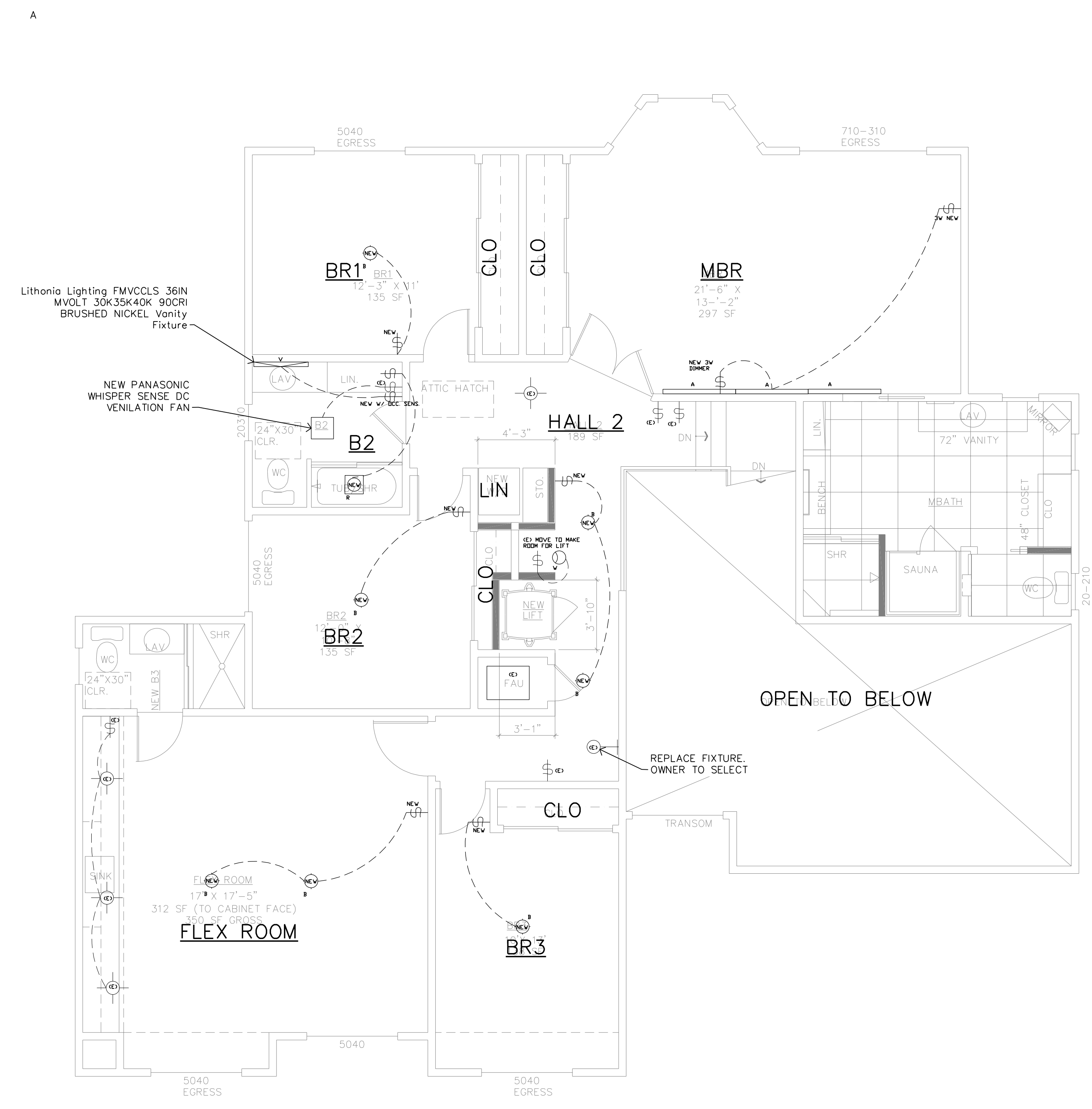
SCALE 1/4" = 1'
CAD FILE 2113-ELECTRICAL-FL2
DRAWN BY JAW

SHEET
E-3
1 OF 1 SHEETS

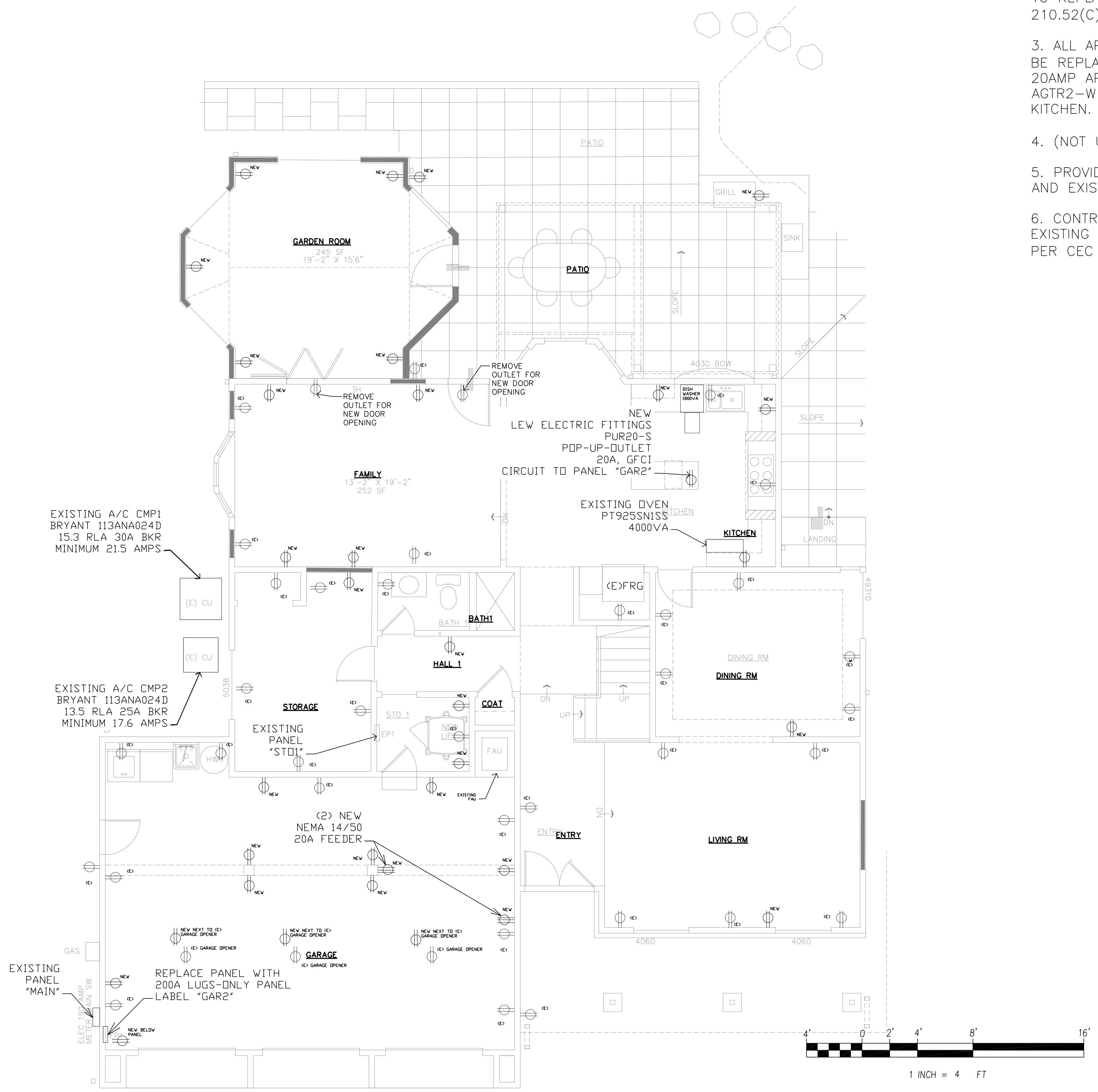
Label	Catalog Number	Description	File	Lamp Lumens	Lumen Multiplier	LLF	Watts
A	MCV504 4FT ASYM 400LMF 90CRI 30K	Integrated Cove Fixture 4 Foot Section Length Asymmetric Distribution 400 Lumens Per Foot 90CRI 3000 Kelvin	MCV504_4FT_ASYM_400LMF_90CRI_30K.ies	1597.608	1	1	14.44
B	FMABFL T4 20830 F22	16" ABERDALE COLLECTION LED FLUSHMOUNT LILAC	FMABFL T4 20840 F22.ies	1496.001	1	1	24.01
V	FMVCCLS 36IN MVOLT 30K35K40K 90CRI BN	Lithonia Lighting FMVCCLS 36IN MVOLT 30K35K40K 90CRI BRUSHED NICKEL Vanity Fixture		2450.001	1	1	27.01
V	FMVCCLS 48IN MVOLT 30K35K40K 90CRI BN	Lithonia Lighting FMVCCLS 48IN MVOLT 30K35K40K 90CRI BRUSHED NICKEL Vanity Fixture		3100.001	1	1	36.01
R	IXMD-07-9-27-WF-T X2RMR X2TRDSWHDH	DMF SMALL APERTURE DOWNLIGHT 750 LUMEN 93% CRI 2700K 60 DEG FLOOD TRIAC 1%		750.001	2	1	9.51
W	DRDH-07-9-30-SP-W-0	DMF LIGHTING DRD4 360 DEGREE ADJUSTABLE WALL WASH LAMP		750.000	1	1	9.15

LEGEND

	A
	V
	R
	W
	B



FLOOR TWO REFLECTED
CEILING PLAN
SCALE: 1/4" = 1'



- ELECTRICAL POWER NOTES:
1. ALL NEW WALL OUTLETS SHALL BE LEVITON AGTR2-W 20-AMP AFCI/GFCI
 2. PROVIDE NEW LEW ELECTRIC FITTINGS PUR20-S TO REPLACE EXISTING OUTLET PER CEC ART. 210.52(C) ON KITCHEN ISLAND COUNTERTOP.
 3. ALL APPLIANCE OUTLETS IN THE KITCHEN SHALL BE REPLACED. PROVIDE TWO NEW ART. 210.52(B) 20AMP APPLIANCE CIRCUITS AND NEW LEVITON AGTR2-W OUTLETS IN EXISTING POSITIONS IN THE KITCHEN.
 4. (NOT USED)
 5. PROVIDE A WHILE-IN-USE COVER OVER NEW AND EXISTING OUTDOOR OUTLETS.
 6. CONTRACTOR SHALL INVESTIGATE AND COMPLETE EXISTING CIRCUIT CARD FOR EXISTING PANEL ST01 PER CEC ART. 408.4 (A)



1
E-4
FLOOR ONE
POWER PLAN
SCALE: 1" = 4'

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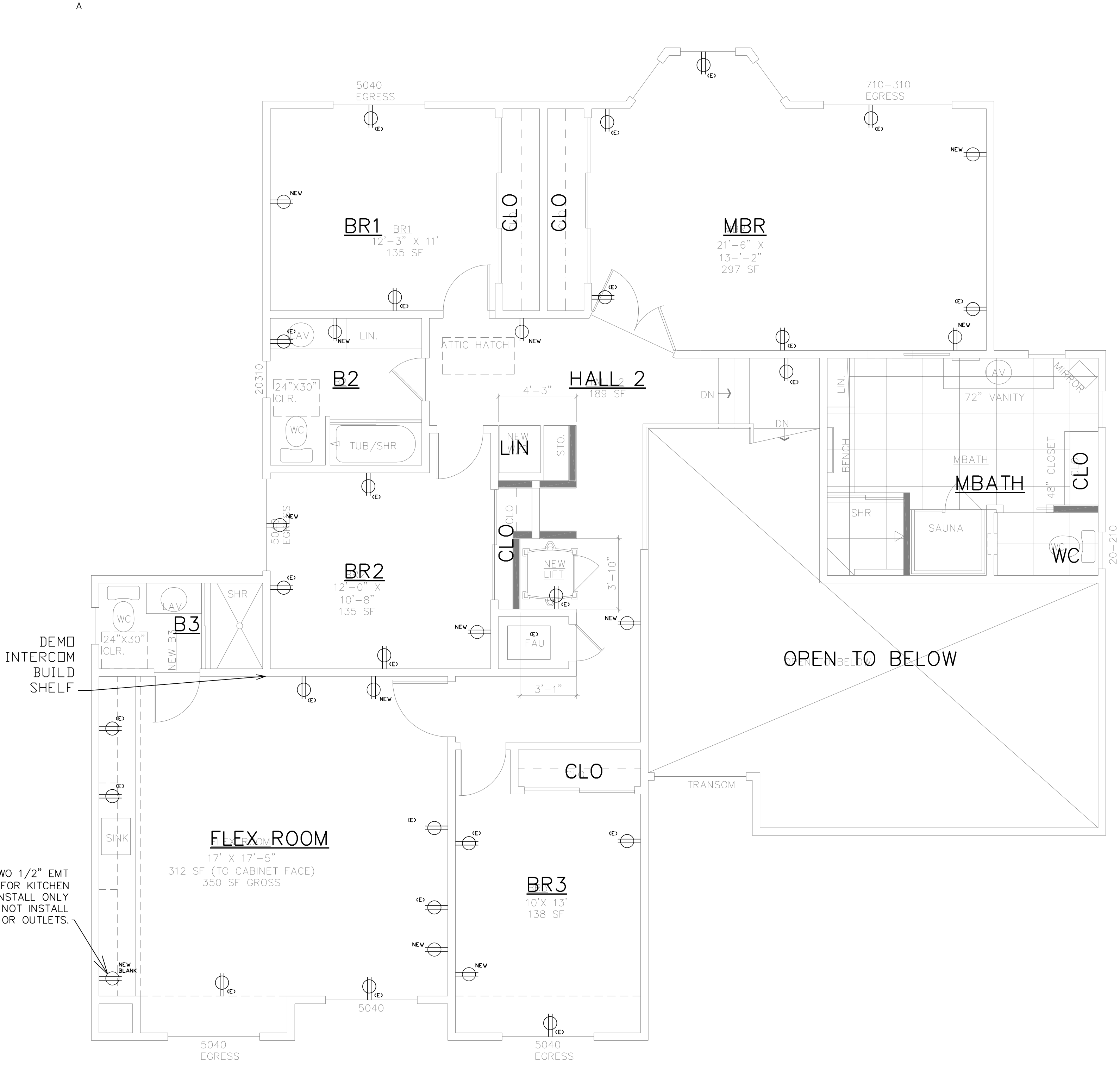
WHITCRAFT
ENGINEERING
SOLUTIONS INC

SHEET TITLE
ELECTRICAL
FLOOR ONE
POWER
LAYOUT
PLAN

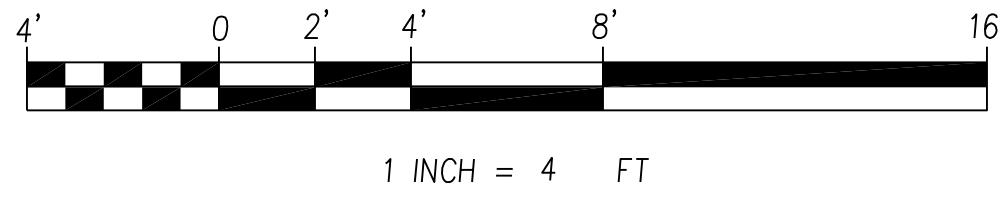
SCALE 1/4" = 1'
CAD FILE 2113-ELECTRICAL-FL1
DRAWN BY JAW

SHEET
E-4
1 OF 1 SHEETS

ELECTRICAL POWER NOTES:
 1. ALL NEW WALL OUTLETS SHALL BE LEVITON AGTR2-W 20-AMP AFCI/GFCI



PROVIDE TWO 1/2" EMT CONDUITS FOR KITCHEN APPLIANCES. INSTALL ONLY PULL TAPE. DO NOT INSTALL CONDUCTORS OR OUTLETS.



FLOOR TWO POWER PLAN
 SCALE: 1/4" = 1'

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ARCHITECTS

MB

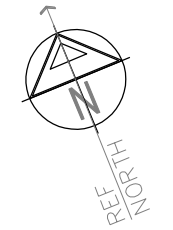
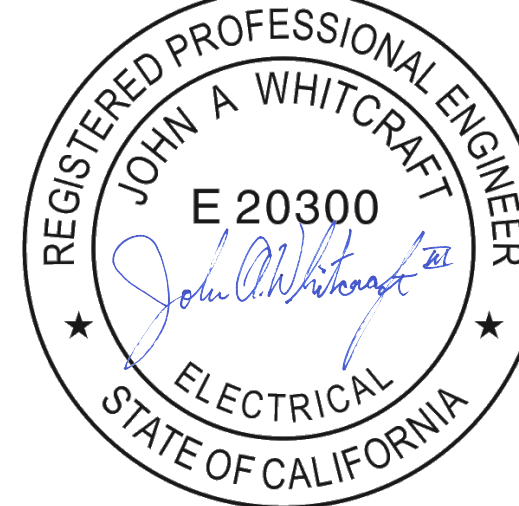
1176 LINCOLN AVENUE SAN JOSE CALIFORNIA 95125
 PH 408/297-0288 X13 FAX 408/497-0384

WHITCRAFT ENGINEERING INC

SHEET TITLE
ELECTRICAL FLOOR TWO POWER LAYOUT PLAN

SCALE 1/4" = 1'
 CAD FILE 2113-ELECTRICAL-FL2
 DRAWN BY JAW

SHEET
E-5
 1 OF 1 SHEETS



ELECTRICAL POWER NOTES:

1. DEMO PANEL "A/C SPA"
2. PROVIDE NEW LUGS ONLY 200A 42 CIRCUIT PANEL "GAR 2"
3. SEE PANEL SCHEDULE

JOB No.	2113	
DATE	7-12-2023	
DESCRIPTION	DATE	REV.

RESIDENTIAL ADDITION AND HARDSCAPE
 1065 MAZZONE DR
 SAN JOSE, CA

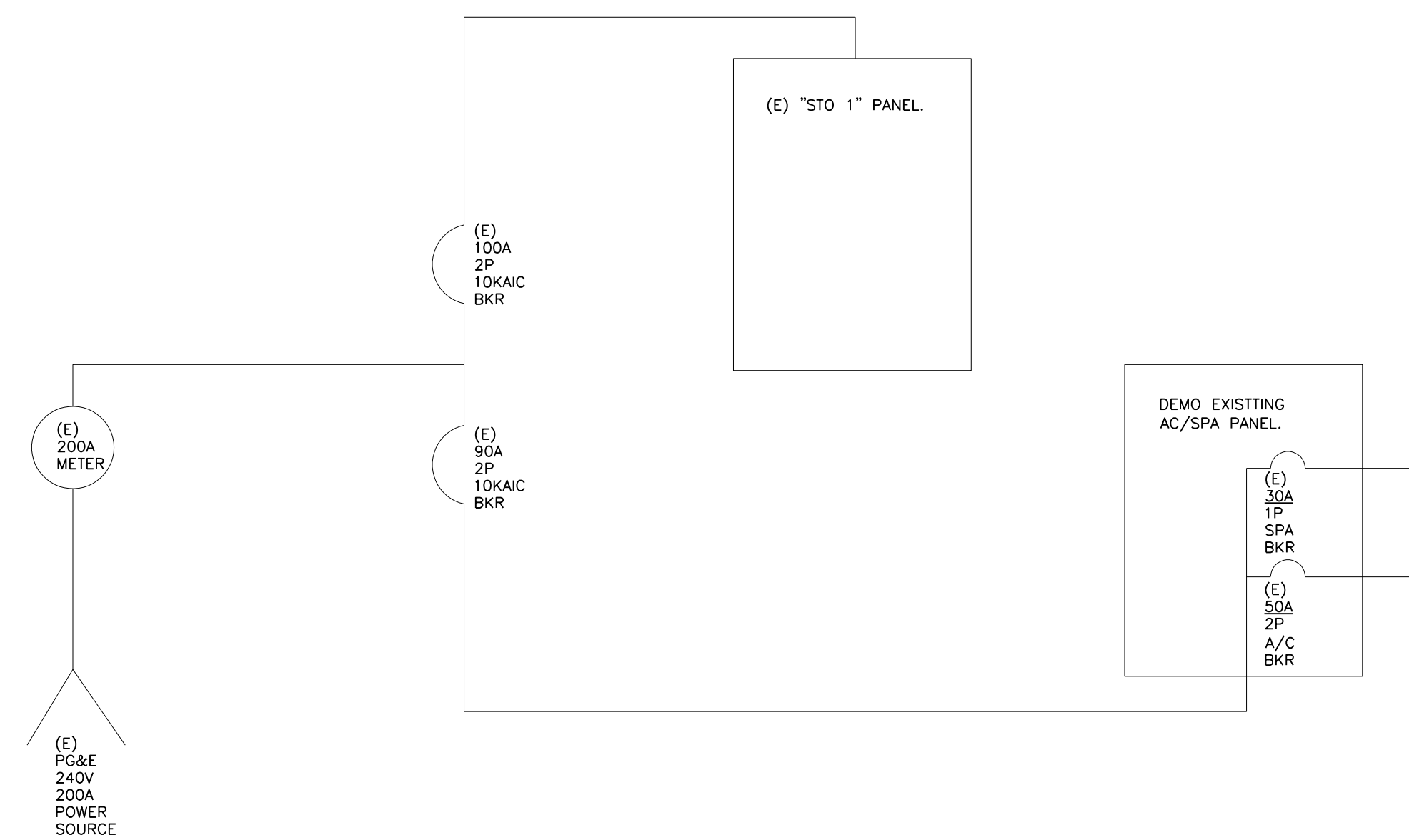
ARCHITECTS
MBIA
 MARIAN MARIANO ASSOCIATES INC.
 1176 LINCOLN AVENUE SAN JOSE CALIFORNIA 95125
 PH 408/297-0288X13 FAX 408/497-0384

WHITCRAFT ENGINEERING SOLUTIONS INC

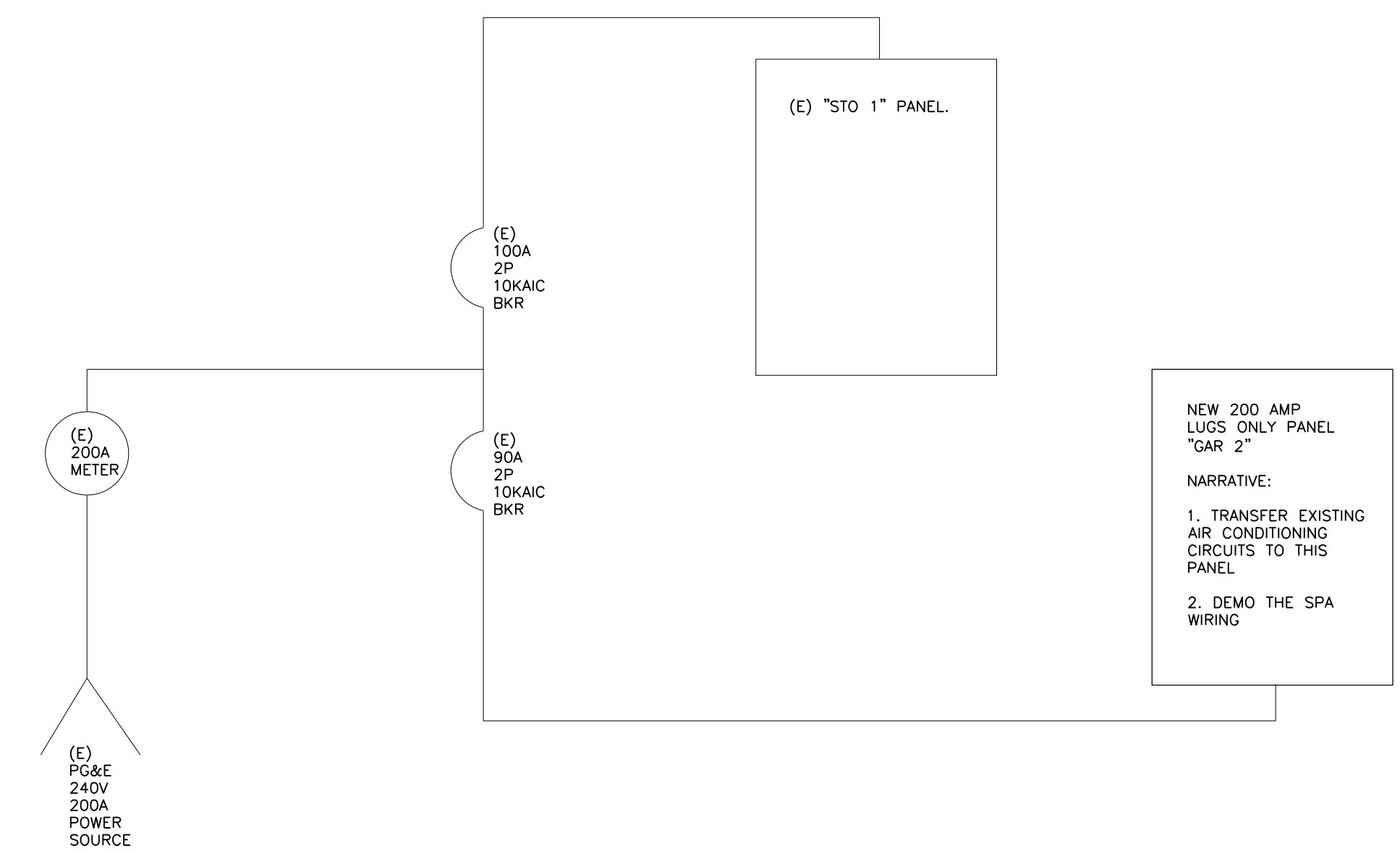

SHEET TITLE
ELECTRICAL SINGLE LINE DIAGRAM

SCALE NONE
 CAD FILE 2113-ELECTRICAL-FL1
 DRAWN BY JAW

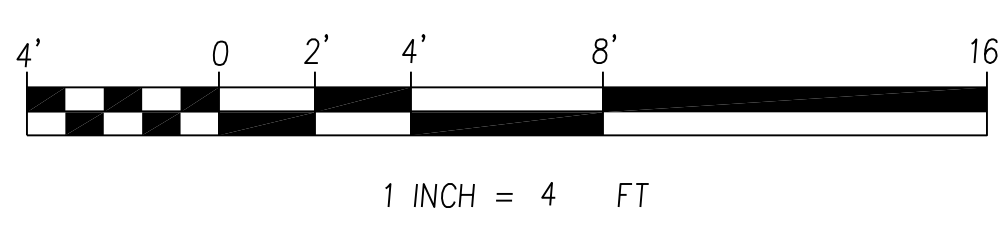
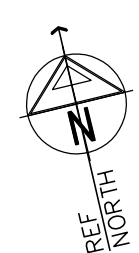
SHEET
E-6
 1 OF 1 SHEETS



1 EXISTING SINGLE LINE DIAGRAM
 E-6 SCALE: NONE



2 NEW SINGLE LINE DIAGRAM
 E-6 SCALE: NONE



EXISTING 3330 SQFT HOME				
USING ART. 220.40	CALCULATION	QTY CKTS	LOAD	
GENERAL LIGHTING (1-YEAR DEMAND REPORT)	ART. 220.87 DEMAND		7538	VA
MINIMUM CIRCUITS	7538 VA / 120V		63	A
THIS REQUIRES FIVE 15 AMP CIRCUITS OR THREE 20 AMP CIRCUITS				
KITCHEN APPLIANCE LOAD IS TWO 20 AMP CKTS		5	32	A
LAUNDRY LOAD		1	20	A
BATHROOM CIRCUIT(S) (VA INCLUDED IN GEN LIGHTING)	TWO BATH CKTS			
MBATH IS NOT NEAR 2ND FLOOR BATH2		1		
BATH1 ON FIRST FLOOR IS NEAR BATH2 (SHARE CIRCUIT)		1		
FLEX ROOM BATHROOM		1		
FEEDER CALCULATION PER ARTICLE 220.87 DEMAND REPORT 125%				
GENERAL LIGHTING			7538	VA
SMALL KITCHEN APPLIANCE				VA
LAUNDRY				VA
TOTAL			7538	VA
125% OF DEMAND 6030 VA IS 7538		7538		VA
NET LOAD				
(E) RANGE (TABLE 220.55) GAS				VA
(E) ELECTRIC OVEN GE PT925SN1SS 240VAC		1		VA
(E) DRYER LOAD (TABLE 220.54)		1		VA
(E) AIR CONDITIONING (ART 220.82) FLR 1	MIN 21.5A	1		VA
(E) AIR CONDITIONING (ART 220.82) FLR 2	MIN 17.6A	1		VA
ELEVATOR (STILTZ)		1	2640	VA
TOTAL		1	10178	VA
SERVICE SIZE	240V		42	A

3 LOAD CALCULATION
E-7 SCALE: NONE

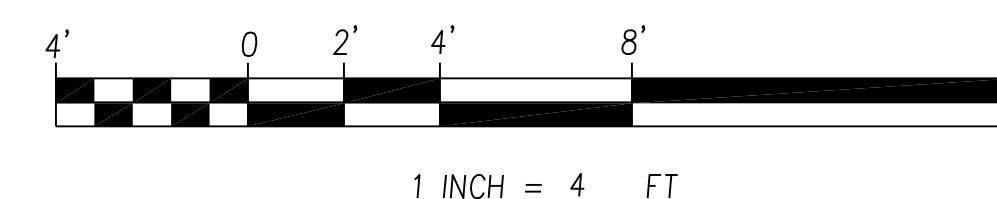
PROJECT NAME: MAZZONE RESIDENTIAL ADDITION										PROJECT NUMBER: 2113									
VOLTS 120/240V					PANEL NEW GAR2					LUGS ONLY 200 AMP BUS									
PHASE 1PH, 3 WIRE					LOCATION GARAGE INTERIOR WEST WALL					NON-AUTO									
A.I.C. 10,000					FED FROM MAIN PANEL 90 AMP BREAKER					MOUNTING SURFACE									
VA LOAD										LOAD									
DESCRIPTION	LTG	REC	MSC	AMP	P	NO.	A	B		NO.	AMP	P	MSC	REC	LTG	DESCRIPTION			
COVE LIGHTS FLR 1	13			20	1	1	188			2	20	1			10	COVE LIGHTING FLR 2			
BATHROOM VANITY LIGHTS	3			20	1	3		81		4	20	1			4	DINING ART LIGHTS			
OUTLETS FLR 2 WEST		8		20	1	5	1440			6	20	1			6	OUTLETS FLR 2 EAST			
SPACE						7	1080			8	50					(E) A/C CMP (FROM EXIST PANEL)			
APPLIANCE KITCHEN 1		3		20	1	9	540			10	20	2				(E) A/C CMP (FROM EXIST PANEL)			
OUTDOOR LIGHTS	2			20	1	11		38		12	20	1			3	APPLIANCE KITCHEN 2			
OUTLETS FLR 1 SOUTH		7		20	1	13	1260			14	20	1	2			FLR 2 BATH FANS FV-0511VQCL1			
SPACE						15	52			16	20	1		8		OUTLETS FLR 1 GARDEN ROOM			
OUTDOOR DC LIGHTING			1	20	1	17	180			18	20					SPACE			
SPACE						19	1200			20	20	1				ELEVATOR (STILTZ)			
EAST BAY LEFT CHARGER PLUG		1		20	1	21	180			22	20	1				EAST BAY RIGHT CHARGER PLUG			
EAST BAY LEFT CHARGER PLUG		1		20	1	23	180			24	20	2				EAST BAY RIGHT CHARGER PLUG			
						25				26									
						27				28									
11606.1VA - 1PH TOTAL CONNECTED							6445	5161	0	11728 FEEDER TOTAL (VA)									
488.1VA - CONTINUOUS X 1.25=							610VA			49 FEEDER AMPS @ 240V 1 PHASE									
6300VA - GP RECEPTS X (*) =							6300VA			48 DEMAND AMPS @ 240V 1 PHASE									
4818VA - NON-CONTIN X 1.00=							4818VA			35 TOTAL RECEPTACLES									
488.1VA - LIGHTS THIS PANEL																			
(* 100% OF FIRST 10KW + 50% OF BALANCE)										8/19/2023 12:58									
COMMENT: AIR CONDITIONING LOAD IS INCLUDED IN THE DEMAND REPORT (THEREFORE EXCLUDED HERE)																			
COMMENT: TANDEM BREAKERS ARE NOT ALLOWED IN THE NEW PANEL.																			
COMMENT: ELECTRIC CAR CHARGER INLET COULD BE EITHER SIDE / PROVIDE (2) 20 AMP FEEDERS TO NEMA 14/50 / LABEL "20AMP"																			

1 NEW PANEL GAR2 SCHEDULE
E-7 SCALE: NONE

PROJECT NAME: MAZZONE RESIDENTIAL ADDITION										PROJECT NUMBER: 2113									
VOLTS 120/240V					PANEL (E) STO1					LUGS ONLY (EXISTING)									
PHASE 1PH, 3 WIRE					LOCATION STO1 (BETW. GARAGE AND HALLWAY)					NON-AUTO									
A.I.C. 10,000					FED FROM MAIN PANEL 100 AMP BREAKER					MOUNTING FLUSH									
VA LOAD										LOAD									
DESCRIPTION	LTG	REC	MSC	AMP	P	NO.	A	B		NO.	AMP	P	MSC	REC	LTG	DESCRIPTION			
(EXISTING PANEL IS WITHOUT A DIRECTORY)				15	1	1				2	20	1				(EXISTING IS WITHOUT A DIRECTORY)			
(EXISTING BKRS 1,3,5,7 ARE TANDEM)				15	1	3				4	20	1				(EXISTING BKRS 2,4,6 ARE TANDEM)			
				15	1	5	0			6	15	1							
				15	1	7	0			8	15	1							
				15	1	9	0			10	15	1				(EXISTING BKRS 10,12,14 ARE TANDEM)			
				30		11	0			12	20	1							
				20		13	0			14	20	1							
				2		15	0			16	20	1							
ART. 220.87 125% 1-YEAR DEMAND				17		17	3769	0		18	20	1				125.00% 1-YEAR DEMAND REPORT			
				19		19		3769		20		1							
7538VA - 1PH TOTAL CONNECTED							3769	3769	0	7538 FEEDER TOTAL (VA)									
0VA - CONTINUOUS X 1.25=							0VA			31 FEEDER AMPS @ 240V 1 PHASE									
0VA - GP RECEPTS X (*) =							0VA			31 DEMAND AMPS @ 240V 1 PHASE									
7538VA - NON-CONTIN X 1.00=							7538VA			0 TOTAL RECEPTACLES									
0VA - LIGHTS THIS PANEL																			
(* 100% OF FIRST 10KW + 50% OF BALANCE)										9/23/2022 20:35									
COMMENT: ARTICLE 220.87 DEMAND REPORT VOLT*AMPS ARE ENTERED IN THIS PANEL FOR LOAD CALCULATIONS																			
COMMENT: PANEL IS EXISTING. ** CONTRACTOR SHALL DISCOVER & PROVIDE DIRECTORY OF EXISTING CIRCUITS. **																			

2 EXISTING PANEL STO1
E-7 SCALE: NONE

ELECTRICAL:
1. CONTRACTOR SHALL DISCOVER AND DOCUMENT (E) "STO1" PANEL CIRCUITS SERVICED BY EACH BREAKER IN THE PANEL / CREATE PANEL CARD AND INSTALL INSIDE PER CEC ART. 408.4 (A)



JOB No. 2113
DATE 7-12-2023

DESCRIPTION	DATE	REV.

RESIDENTIAL ADDITION AND HARDSCAPE
1065 MAZZONE DR
SAN JOSE, CA

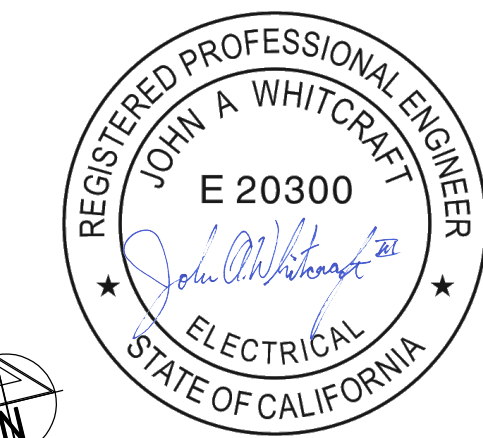
ARCHITECTS
MBA
1176 LINCOLN AVENUE SAN JOSE CALIFORNIA 95125
PH 408/297-0288 X13 FAX 408/987-0384

WHITCRAFT ENGINEERING SOLUTIONS INC
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL 00000000

SHEET TITLE
ELECTRICAL PANEL SCHEDULE LOAD CALCULATION

SCALE NONE
CAD FILE 2113-ELECTRICAL-FL1
DRAWN BY JAW

SHEET
E-7
1 OF 1 SHEETS



JOB No.	2113	
DATE	7-12-2023	
DESCRIPTION	DATE	REV.

RESIDENTIAL ADDITION AND HARDSCAPE
**1065 MAZZONE DR
SAN JOSE, CA**

ARCHITECTS
MB
MEMBER NATIONAL ARCHITECTURAL ASSOCIATION
1176 LINCOLN AVENUE SAN JOSE CALIFORNIA 95125
PH 408/297-0288 X13 FAX 408/497-0384

**WHITCRAFT
ENGINEERING
SOLUTIONS INC**
REGISTERED ELECTRICAL ENGINEER

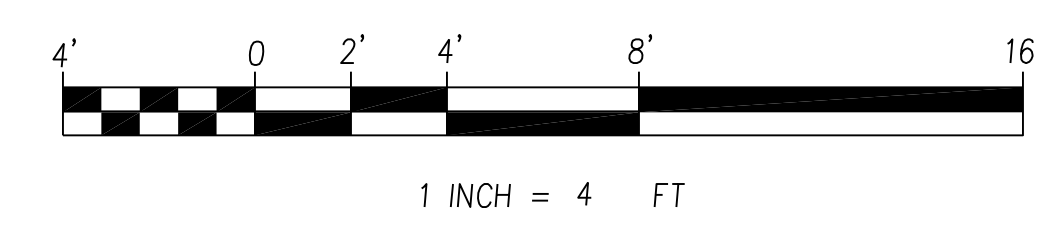
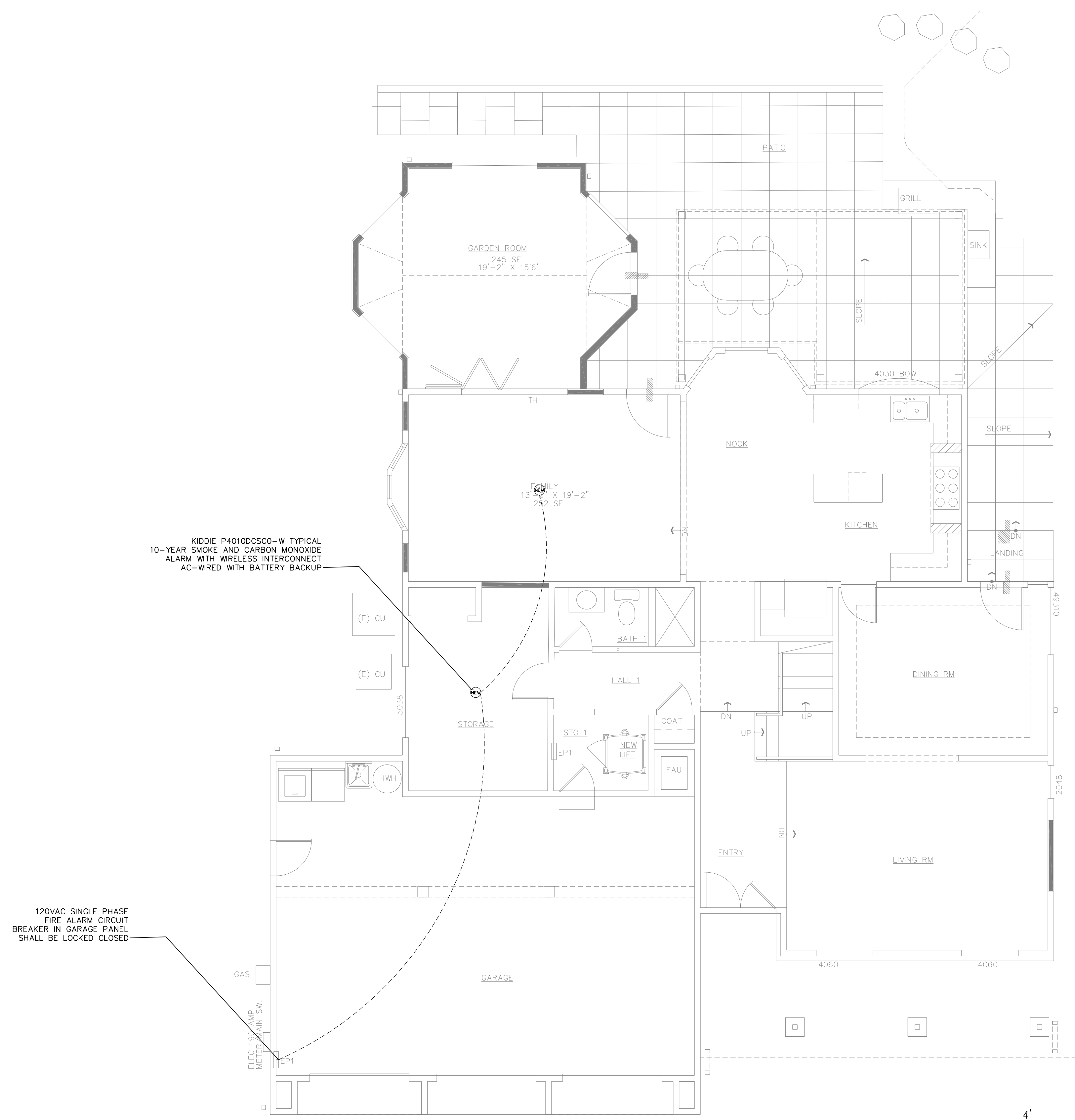
SHEET TITLE
**FIRE ALARM
FLOOR ONE
REFLECTED
CEILING
PLAN**

SCALE 1/4" = 1'
CAD FILE 2113-ELECTRICAL-FL1
DRAWN BY JAW

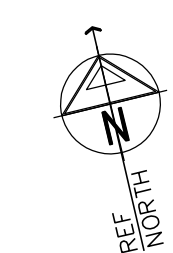
SHEET
E-8
1 OF 1 SHEETS

FIRE ALARM NOTES:

1. SMOKE AND CARBON MONOXIDE SAFETY EQUIPMENT AS FOLLOWS: KIDDIE MODEL P4010DCSCOW. THIS IS AN AC-WIRED CEILING MOUNTED DISK PROVIDING BOTH SMOKE AND CARBON-MONOXIDE ALERTS. MULTIPLE UNITS INCLUDE WIRELESS INTERCONNECTION. Unit verbally announces "Fire!" and other alerts such as "Replace Alarm," which helps the user better understand current status of the unit..
2. THE CONTRACTOR SHALL COMMISSION ALL P4010DCSCOW TO INTER-COMMUNICATE WIRELESSLY AS DESIGNED.
3. PROVIDE ONE 20 AMP CIRCUIT AND CONDUCTORS PER CEC ARTICLE 210.24.



**FLOOR ONE FIRE ALARM
CEILING PLAN**
1
E-2 SCALE: 1" = 4'



DESCRIPTION	DATE	REV.

RESIDENTIAL ADDITION AND HARDSCOPE
1065 MAZZONE DR
SAN JOSE, CA

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WHITCRAFT
ENGINEERING
SOLUTIONS INC
ELECTRICAL ENGINEERING

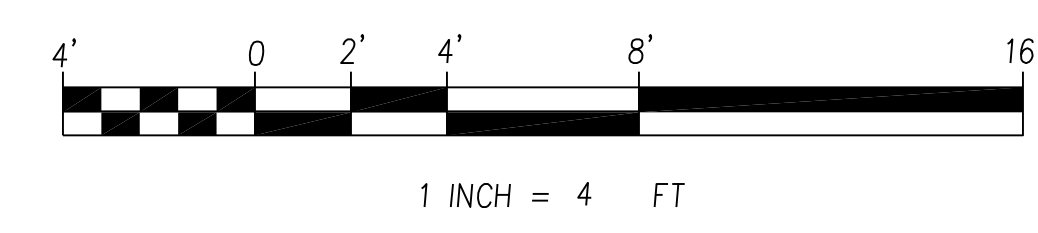
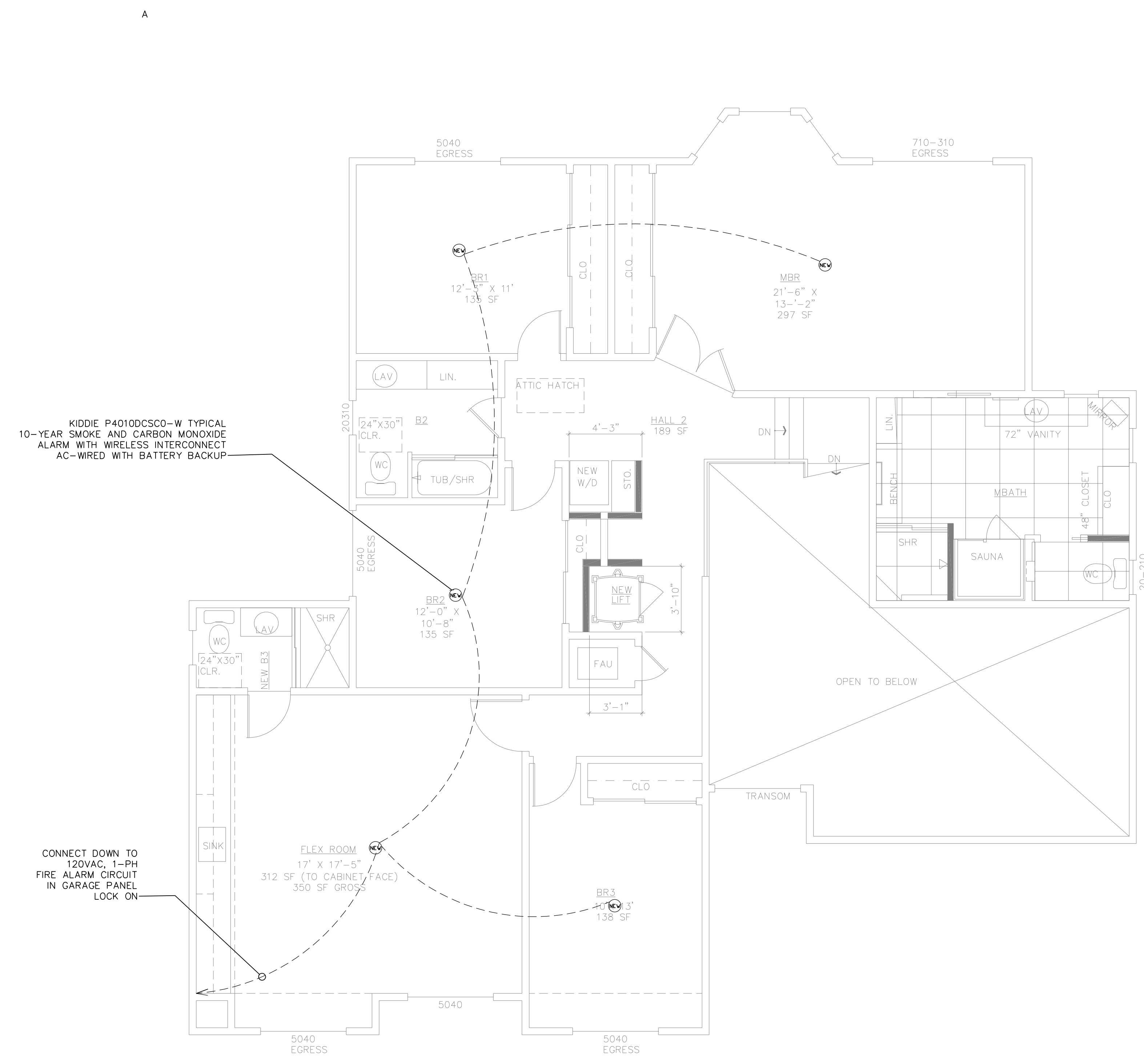
SHEET TITLE
FIRE SMOKE CO DET.
FLOOR TWO
REFLECTED
CEILING
PLAN

SCALE 1/4" = 1'
CAD FILE 2113-FIRE-ALARM-FL2
DRAWN BY JAW

SHEET
E-9
1 OF 1 SHEETS

FIRE ALARM NOTES:

1. SMOKE AND CARBON MONOXIDE SAFETY EQUIPMENT AS FOLLOWS: KIDDIE MODEL P4010DCSCOW. THIS IS AN AC-WIRED CEILING MOUNTED DISK PROVIDING BOTH SMOKE AND CARBON-MONOXIDE ALERTS. MULTIPLE UNITS INCLUDE WIRELESS INTERCONNECTION. Unit verbally announces "Fire!" and other alerts such as "Replace Alarm," which helps the user better understand current status of the unit.
2. THE CONTRACTOR SHALL COMMISSION ALL P4010DCSCOW TO INTER-COMMUNICATE WIRELESSLY AS DESIGNED.
3. PROVIDE ONE 20 AMP CIRCUIT AND CONDUCTORS PER CEC ARTICLE 210.24.



1 FLOOR TWO REFLECTED
E-3 CEILING PLAN
SCALE: 1/4" = 1'