GDI ENGINEERING

Burt ADU Resindencial Costa Mesa, California





					HVAC LEGEND	SPECIAL NOTES TO C
	AREA	H HEIGHT	(R) RELOCATED		S	1. MECHANICAL CONTRACTOR SHALL EXAMINE ALL OTHER SPECIFICATIONS, DRAWINGS AND SHALL BE GOVERNED BY THESE AND OTHER SPECIFICATIONS, INCLUDING THE GENERAL CO
A ABV	ABOVE	HC HEATING COIL	R RISE			2. ALL WORK SHALL BE EXECUTED AND INSPECTED IN STRICT ACCORDANCE WITH ALL LOCAL
ADJ	ADJUSTABLE	HTG HEATING	RA RETURN AIR		(E) EXISTING DUCT WORK AND/OR EQUIPMENT	APPLICABLE TO THIS PARTICULAR CLASS OF WORK, AND EACH CONTRACTOR SHALL INCLU OTHER SIMILAR COSTS IN CONNECTION THEREWITH.
AC	AIR CONDITIONING	HTR HEATER	RAD RETURN AIR DUCT			3. PRIOR TO FABRICATION OF DUCTWORK, THE MECHANICAL CONTRACTOR SHALL EXAMINE
ACH		HP HORSE POWER	RAF RETURN AIR FAN			INTERFERE WITH THE DUCT SYSTEM AND NOTIFY THE ARCHITECT OF ANY CONFLICT ENCOUN WITHOUT ADDITIONAL COST TO THE OWNER.
AFC AFF	ABOVE FINISHED CEILING ABOVE FINISHED FLOOR	HSPF HEATING SEASONAL PERFORMANCE FACTOR	RAG RETURN AIR GRILLE		(D) DUCT WORK AND/OR EQUIPMENT TO BE DEMOLISHED	4. CONTRACTOR WILL BE HELD RESPONSIBLE TO HAVE VISITED AND EXAMINED THE PREMISES F CONDITIONS RELATED TO HIS WORK.
AFG	ABOVE FINISHED GRADE	HUM HUMIDIFIER	REQD REQUIRED			5. THE PERSON WITH OVERALL RESPONSIBILITY FOR CONSTRUCTION OR THE PERSON RESPONSI
AHU	AIR HANDLING UNIT	HZ HERTZ	REV REVISION RH RELATIVE HUMIDITY		RETURN AIR DUCT UP	MANUFACTURED DEVICES SHALL POST, OR MAKE AVAILABLE WITH THE BUILDING PERMIT(S) MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES REGULATED BY THE APPLIANCE E
AMB	AMBIENT	l	RHC REHEAT COIL		SUPPLY AIR DUCT UP	MADE AVAILABLE TO THE ENFORCEMENT AGENCY FOR ALL APPROPRIATE INSPECTIONS. TH
ASHRAE	AMERICAN SOCIETY OF HEATING AND REFRIGERATION ENGINEERS	ID INSIDE DIAMETER	RLA RUNNING LOAD AMPS		EXHAUST AIR DUCT UP	 i) IDENTIFY FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES REQUIRED TO ii) INCLUDE A STATEMENT INDICATING THAT THE FEATURES, MATERIALS, COMPONENTS, OR MA
ASME	AMERICAN SOCIETY OF	IDU INDOOR UNIT	RM ROOM			PART 6 AND THE REQUIREMENTS FOR SUCH FEATURES, MATERIALS, COMPONENTS, OR MAN
	MECHANICAL ENGINEERS	IN INCH	RPM REVOLUTIONS PER MINUTE		RETURN AIR DUCT DOWN	LOCAL ENFORCEMENT AGENCY. iii) STATE THE NUMBER OF THE BUILDING PERMIT UNDER W6. THE BUILDER SHALL PROVIDE THE BUILDING OWNER OR THE PERSON(S) RESPONSIBLE FOR BU
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS	IN WC INCH, WATER COLUMN	RR RETURN REGISTER		SUPPLY AIR DUCT DOWN	BUILDINGS) AT OCCUPANCY THE FOLLOWING: 1) OPERATING INFORMATION: THE APPROPRIATE CERTIFICATE(S) OF COMPLIANCE AND A LIST
AVG	AVERAGE	INSUL INSULATION	RTU ROOFTOP UNIT		EXHAUST AIR DUCT DOWN	IN THE BUILDING AND INSTRUCTIONS ON HOW TO OPERATE THEM EFFICIENTLY.
	В	INT INTERNAL / INTERIOR	S		EXHAUST AIR DUCT DOWN	 MAINTENANCE INFORMATION: REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEA BE LIMITED TO IDENTIFYING THE OPERATION AND MAINTENANCE MANUAL.
BDD	BACK-DRAFT DAMPER	К	SA SUPPLY AIR		ELBOWS WITH TURNING VANES	7. WORK IN THIS BUILDING SHALL BE DONE WHEN AND AS DIRECTED AND SHALL BE PERFORME
BHP	BREAK HORSE POWER	KEF KITCHEN EXHAUST FAN	SAD SUPPLY AIR DUCT		S TEE DUCT WITH TURNING VANES	OCCUPANTS. ALL WORK IS TO BE COMPLETED DURING NORMAL HOURS UNLESS OTHERWISE 8. MATERIALS, DOCUMENTATION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH BUILD
BTU	BRITISH THERMAL UNIT	KW KILOWATT	SEER SEASONAL ENERGY EFFICIENCY RATIO			9. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN A
	C	L	SENS SENSIBLE		SS DUCT WITH ACOUSTICAL LINING	FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. 10. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS
CDP	CONDENSATE DRAIN PIPE	L LENGTH	SD SMOKE DETECTOR	┝╥┍╖┤	<u>, D ,</u>	POLYISOBUTYLENE PLASTICIZER AND EPDM O-RING FOR ROUND DUCTS. SURFACE-BURNING FLAME-SPREAD INDEX OF 25 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 50 WHEN TES
CFH	CUBIC FEET PER HOUR	LBS POUNDS	SF SQUARE FOOT		$ + \frac{\mathbf{D}}{\mathbf{T}} + \mathbf{T} $ DUCT DROP (IN DIRECTION OF AIRFLOW)	11. FIREPROOFING AND INSULATION DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO
CFM	CUBIC FEET PER MINUTE	LP LOW PRESSURE	SQ IN SQUARE INCH		$ + \frac{R}{-} + $ duct rise (in direction of Airflow)	 DO NOT INTERRUPT ANY SERVICES OF THE EXISTING BUILDING NOR INTERFERE WITH THE SERV AS POSSIBLE AND ONLY AT DESIGNATED TIMES. NOISE SHALL BE REDUCED TO A MINIMUM.
CG	CEILING GRILLE	LRA LOCKED ROTOR AMPS	SP STATIC PRESSURE			13. REMOVE RUBBISH FROM PREMISES AND SITE AT THE END OF EACH WORK DAY AND AS DIRE
CLG	CEILING	LV LEVEL LWB LEAVING WET BULB TEMPERATURE	SPEC SPECIFICATION		5 7 TRANSITION SQUARE TO ROUND	 COORDINATE NEW WORK WITH OTHER TRADES AND EXISTING FIELD CONDITIONS. MECHANICAL CONTRACTOR SHALL COORDINATE ALL TIE-INS, PLUS REMOVALS WITH GENER
COND	CONDENSATE	LWT LEAVING WATER TEMPERATURE	SS STAINLESS STEEL		STRANSITION SQUARE TO SQUARE /ROUND TO ROUND	16. THIS CONTRACTOR SHALL PAY FEES, GIVE NOTICE, FILE NECESSARY DRAWINGS AND OBTAIN
со	CLEAN OUT		T THERMOSTAT		/KOUND TO ROUND	UNDER THIS CONTRACT. THE CONTRACTOR SHALL COMPLY WITH LOCAL & STATE LAWS, OR 17. NEW WORK AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND MADE READY FOR US
CONT	CONTINUATION / CONTINUED	M	T/A TO ABOVE		S FLEXIBLE DUCT	18. ALL DEMOLITION WORK SHALL STRICTLY COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AN BUILDING CODE, ETC.
COP	COEFFICIENT OF PERFORMANCE CONDENSATE PUMP		T/B TO BELOW	<u>k</u>	5	19. THE CONTRACTOR TO PROVIDE CHEMICAL CLEANING FOR THE TENANT CONDENSER WATE
CP		MAX MAXIMUM MB MIXING BOX	TBD TO BE DETERMINED		<i>,</i>	CONDENSER WATER SYSTEM. THIS WORK MUST BE DONE UNDER THE SUPERVISION OF THE BU 20. CONTRACTOR SHALL MOUNT AND CONNECT EACH ITEM OF EQUIPMENT IN STRICT ACCOR
D	DEPTH	MBH THOUSAND BTUH	TDH TOTAL DYNAMIC HEAD		RADIUS ELBOW	CHAPTER 6 AND STATE BUILDING CODE SECTION 1632A.
DB	DRY BULB	MCA MINIMUM CIRCUIT AMPACITY	TEMP TEMPERATURE	\boxtimes	SUPPLY AIR RECTANGULAR CEILING DIFFUSER	21. INSULATE AND SEAL ALL DUCTWORK PER CHAPTER 10 OF THE STATE MECHANICAL CODE (T- 22. CONTRACTOR SHALL VERIFY ALL CLEARANCES AND AVAILABLE SPACE FOR HVAC UNITS AT
DEHUM	DEHUMIDIFIER	MD MOTORIZED DAMPER	TG TRANSFER GRILLE		RETURN AIR CEILING REGISTER/GRILLE	23. EXACT LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES SHALL BE COORDIN
DMPR	DAMPER	MECH MECHANICAL	TR TOP REGISTER		EXHAUST AIR REGISTER GRILLE	ROUTING AND AIR DISTRIBUTION. DOORS SHALL BE PROVIDED ON ALL FIRE DAMPERS, AUTO SECTION. COORDINATE WITH UNITS RECOMMENDED CLEARANCE PRIOR TO INSTALLATION
DWG	DRAWING	MIN MINIMUM MOCP MAXIMUM OVERCURRENT	TRF TRANSFER FAN		VERTICAL DUCT DROP	24. ALL SHEET METAL DUCT CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH "SMACNA PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES.
	E	PROTECTION	TG TRANSFER GRILLE TRD TRANSFER DUCT	₹ <u>∎₽</u> ∎_₹		25. PROVIDE BACK DRAFT DAMPER AND MOTORIZED DAMPER IN ALL OUTSIDE AIR DUCTS, WHE
(E)	EXISTING	MOPD MAXIMUM OVERCURRENT PROTECTION DEVICE	TYP. TYPICAL		VERTICAL DUCT RISE	26. CONTRACTOR SHALL PROVIDE ALL RETURN AIR WALL OPENINGS REQUIRED FOR A COMPLE 27. PRIOR TO INSTALLATION OF EQUIPMENT, VERIFY MANUFACTURER RECOMMENDED AND CO
EA	EACH	MUA MAKE-UP AIR UNIT			DETAIL TOP - I.D. NUMBER	28. COORDINATE ALL AIR DEVICES LOCATION WITH FINAL ARCHITECTURAL REFLECTED CEILING
EAD		N		$ (\frac{1}{M-1})$	REF. BOTTOM - SHT. NUMBER	29. UNLESS NOTED OTHERWISE, ALL LINE VOLTAGE WIRING, CONDUIT, FINAL CONNECTIONS, DI FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THESE MED
EAT	ENTERING AIR TEMPERATURE ENTERING DRY BULB	(N) NEW	U/F UNDER FLOOR U/G UNDER GROUND			SECTION OF THE SPECIFICATIONS. 30. INSTALL ALL LOW VOLTAGE HVAC CONTROL WIRE AND DEVICES PER PLAN. ALL WIRE SHALL
EDB	TEMPERATURE	NC NORMALLY CLOSED	UH UNIT HEATER	1	SECTION TOP - I.D. NUMBER	NOTED OTHERWISE.
EER	ENERGY EFFICIENCY RATIO	NIC NOT IN CONTRACT	U/S UNDER SLAB	M-1	REF. BOTTOM - SHT. NUMBER	31. PROVIDE OWNER WITH THREE COPIES OF A CERTIFIED AIR BALANCE REPORT PREPARED IN B HVAC SYSTEM IN ACCORDANCE WITH AABC OR NEBB PROCEDURES. PROVIDE START-UP/TE
EF	EXHAUST FAN	NK NECK	UON UNLESS OTHERWISE NOTED		FIRE DAMPER	EQUIPMENT. TEST AND VERIFY PROPER OPERATION OF ALL MAKE-UP AIR/EXHAUST AIR INTER
ELEC ELEV	ELECTRIC ELEVATION	NO NORMALLY OPEN, NUMBER	UTR UP THROUGH ROOF		COMBINATION OF SMOKE & FIRE DAMPER	WITHIN 5% OF DESIGN VALUES. PERMANENTLY MARK BALANCE POSITION OF ALL REGULATIN 32. PROVIDE OWNER WITH THREE SETS OF AS-BUILT PLANS AND OPERATIONS AND MAINTENANCE
EQ	EQUAL	NTS NOT TO SCALE	V	-		LABELS/TAGS (PEN MARKING NOT ACCEPTABLE).
EVC	EVAPORATIVE COOLER			®	BACK DRAFT DAMPER	33. PROVIDE ONE YEAR WARRANTY ON ALL LABOR, PARTS AND MATERIALS.34. ANY CHANGE OR DEVIATION FROM THESE PLANS OR SPECIFICATIONS SHALL REQUIRE THE V
EWB	ENTERING WET BULB	OA OUTSIDE AIR OAI OUTSIDE AIR INTAKE	VAV VARIABLE AIR VOLUME VD VOLUME DAMPER	S	SMOKE DETECTOR	35. HVAC CONTROL SYSTEM SHALL BE TESTED TO ENSURE THAT CONTROL ELEMENTS ARE CALIBI MEETS THE DESIGN REQUIREMENTS.
EWT	ENTERING WATER TEMPERATURE	OD OUTSIDE DIAMETER	VEL VELOCITY		MANUAL VOLUME DAMPER	36. CONTRACT DIRECTLY A THIRD PARTY TO PROVIDE TEST AND BALANCE OF THE HVAC SYSTEM
EXH	EXHAUST	ODU OUTDOOR UNIT	VIF VERIFY IN FIELD		DOOR LOUVER	ALL MECHANICAL SYSTEM AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION AABC 2002, AND ASHRAE STANDARD 111, ELIMINATE NOISE AND VIBRATION, AND ASSURE
	F	OV OUTLET VELOCITY	VTR VENT THROUGH ROOF	_L→	DOORLOUVER	TO OWNER'S REPRESENTATIVE. BALANCING CONTRACTOR SHALL BE INDEPENDENT AND CH
°F	DEGREES FAHRENHEIT	Р	W	_UC _►	UNDERCUT (DOOR)	INDICATED ON DRAWINGS, AND REPORT ALL DISCREPANCIES TO THE HVAC CONTRACTOR PERMANENT MARKER.
F	FILTER	P PRESSURE / POWER	W WATT, WIDTH	—CD—	CONDENSATE DRAIN	
F/A		PD PRESSURE DROP	W/ WITH	T	THERMOSTAT	HVAC BUILDING DEPARTMENT NOTES
FAD F/B		PF PRE FILTER	W/O WITHOUT WB WETBULB	ø	DIAMETER/ROUND	
F/B FCU	FROM BELOW FAN COIL UNIT	PH PHASE POC POINT OF CONNECTION	WIC WALK-IN COOLER	н	SQUARE FEET	A. A SPECIAL INSPECTION AND TEST WILL BE CONDUCTED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT OR
FCU	FAN COIL UNIT	PSI POUNDS PER SQUARE INCH	WIF WALK-IN FREEZER			OTHER PERSON HAVING NOT LESS THAN (5) YEARS EXPERIENCE
FPM	FEET PER MINUTE	PSIG POUNDS PER SQUARE INCH,	WMS WIRE MESH SCREEN	M	PROVIDED AND INSTALLED BY DIVISION 15	SUPERVISING THE INSTALLATION OF VENTILATING SYSTEMS. THE TEST WILL
FT	FEET / FOOT	GAUGE	WT WEIGHT	©	PROVIDED & INSTALLED BY DIVISION 15 CONTRO	SHOW COMPLIANCE WITH THE BUILDING ADMINISTRATIVE CODE AND REFERENCE STANDARDS
FLA	FULL LOAD AMPERES	Q	_			B. THE LICENSED PROFESSIONAL ENGINEER OR ARCHITECT OR OTHER
FLEX	FLEXIBLE	QTY QUANTITY		E	PROVIDED AND INSTALLED BY DIVISION 16	PERSON NOT HAVING LESS THAN (5) YEARS EXPERIENCE SUPERVISING THE
FV	FACE VELOCITY				POC POINT OF CONNECTION	INSTALLATION OF VENTILATING SYSTEMS AND CONDUCTING SUCH TESTS
		COMPLETION REQUIREMENTS		18	DIFFUSER NECK SIZE	WILL FILE A CERTIFICATE AND REPORT OF TEST THAT THE SYSTEM COMPLIES WITH THE APPLICABLE LAWS.
		AFTER THE DATE OF SYSTEM ACCEPTANCE, RECOR			CFM	C. A STATEMENT WILL BE FILED BY THE OWNER (OR TENANT) IN POSSESSION M 1.01
			ER. THE RECORD DRAWING SHALL BE OF THE ACTUAL E OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT			THAT THE VENTILATING SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION M 1.02
AND PIPE D	ISTRIBUTION SYSTEM INCLUDING SIZES, AN		ES. THE OPERATING AND MAINTENANCE MANUALS		CODE COMPLIANCE	DURING NORMAL OCCUPANCY OF THE PREMISES. D. ALL FIRE DAMPERS ARE TO BE OF TYPE APPROVED BY THE BOARD OF FIRE
					CHANICAL CODE (CMC), TITLE 24, PART 4	UNDERWRITERS. WHERE ENTERING OR LEAVING SHAFTS, FIRE DAMPERS
(B) OPERA	tion manuals and maintenance ma		G MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED		JMBING CODE (CPC), TITLE 24, PART 5	ARE TO BE EQUIVALENT TO WALL RATING.
	T OF THE PROJECT. REQUIRED ROUTINE I AND ADDRESSES OF AT LEAST ONE SERV	MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTI /ICE AGENCY	FIED		ERGY CODE (CENC), TITLE 24, PART 6 ECTRICAL CODE (CEC), TITLE 24, PART 3	E. THE LATEST RULES OF BUILDING CODES ARE TO BE COMPLIED WITH.F. SMOKE AND FIRE DETECTION SYSTEMS TO BE INSTALLED IN ACCORDANCE
(D) HVAC	CONTROLS SYSTEMS MAINTENANCE AND		DIAGRAMS, SCHEMATICS, AND CONTROL SYSTEM		EEN BUILDING STANDARDS CODE (CGBSC), TITLE 24, PART 1	WITH THE BUILDING ADMINISTRATIVE CODE & REFERENCE STANDARDS.
DEVICE	es or, for digital control systems, i	N PROGRAMMING COMMENTS			FERENCED STANDARDS, TITLE 24, PART 12	
(E) A CON	IPLEIE NARRATIVE OF HOW EACH SYSTEM	M EACH SYSTEM IS INTENDED TO OPERATE, INCLUDI	NG SEI-POINTS.	1		
1				1		

CONTRACTORS

AND ALL FEATURES OF BUILDING CONSTRUCTION WHICH MAY AFFECT HIS WORK AND CONDITIONS AND PARTICULAR INSTRUCTIONS TO ALL BIDDER AND SUPPLIERS. CAL CODES AND/OR STATE CODES, LAWS, ORDINANCES, RULES AND REGULATIONS CLUDE IN HIS PRICE ALL APPLICABLE SERVICE CHARGES, FEES, PERMITS, TAXES, AND

INE AND VERIFY ALL CONDITIONS ABOVE AND BELOW THE CEILING WHICH MAY OUNTERED. CONTRACTOR SHALL PROVIDE ALL OFFSETS, ETC. WHICH MAY BE REQUIRED,

SES PRIOR TO SUBMITTING HIS PROPOSAL IN ORDER TO UNDERSTAND THE EXISTING

DNSIBLE FOR INSTALLATION OF REGULATED FEATURES, MATERIALS, COMPONENTS, OR T(S) ISSUED FOR THE BUILDING, THE REQUIRED INSTALLATION CERTIFICATE(S) FOR FEATURES, CE EFFICIENCY REGULATIONS OR PART 6. SUCH INSTALLATION CERTIFICATE(S) SHALL BE . THESE CERTIFICATES SHALL:

TO VERIFY COMPLIANCE WITH THE APPLIANCE REGULATIONS AND PART 6. MANUFACTURED DEVICES CONFORM TO THE APPLIANCE EFFICIENCY REGULATIONS AND ANUFACTURED DEVICES GIVEN IN THE PLANS AND SPECIFICATIONS APPROVED BY THE R WHICH CONSTRUCTION OR INSTALLATION WAS PERFORMED.

R BUILDING MAINTENANCE (IN CASE OF MULTI-TENANT OR CENTRALLY OPERATED

LIST OF THE FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED

LEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL. THE LABEL MAY

RMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO ITS WISE DIRECTED.

UILDING STANDARDS, LOCAL CODES AND AS SPECIFIED. IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT

DRS WITH MINERAL WOOL, BUTYL RUBBER, NEOPRENE OR EPDM POLYMER WITH NG CHARACTERISTICS FOR SEALANTS AND GASKETS SHALL BE A MAXIMUM TESTED ACCORDING TO UL 723, CERTIFIED BT NRTL. ED TO ORIGINAL CONDITION.

ERVICES IN ANY WAY WITHOUT WRITTEN PERMISSION. INTERRUPTIONS SHALL BE AS BRIEF

DIRECTED. STORE MATERIALS IN DESIGNATED SPACES.

ENERAL CONTRACTOR AND OWNER'S SCHEDULE. TAIN PERMITS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK , ORDINANCES, RULES & REGULATIONS.

USE. , AND LOCAL CODES AND STANDARDS INCLUDING BUT NOT LIMITED TO OSHA, STATE

VATER PIPING, AND FLUSH OUT ALL DEBRIS PRIOR TO TIE INTO THE BASE BUILDING E BUILDING MANAGEMENT.

ORDANCE WITH MANUFACTURER'S RECOMMENDATION, STATE MECHANICAL CODE

E (T-24, PART 4). S AND DUCTWORK PRIOR TO ORDERING AND/OR FABRICATING MATERIAL. RDINATED WITH ALL OTHER TRADES. DRAWINGS SHALL BE USED ONLY FOR GENERAL DUCT UTOMATIC DAMPERS, MANUAL DAMPERS, BYPASS ACCESS DAMPERS AND UNITS FILTER

ON. CNA" LOW PRESSURE DUCT CONSTRUCTION STANDARD. ALL BRACING OF DUCTS AND

VHETHER INDICATED OR NOT.

APLETE SYSTEM..

CODE REQUIRED CLEARANCE. ING PLAN.

, DISCONNECTS, STARTERS, AND OVER CURRENT PROTECTION DEVICES SHALL BE MECHANICAL DRAWINGS AND/OR ELECTRICAL DRAWINGS AND/OR ELECTRICAL

HALL BE IN CONDUIT PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS

IN BY A THIRD PARTY CERTIFIED BY THE AABC OR NEBB. TEST, ADJUST AND BALANCE THE P/TEST REPORTS FOR ALL AIR HANDLING EQUIPMENT, FANS, AND REFRIGERATION TERLOCK SYSTEMS AND THEIR SEQUENCES OF OPERATION. BALANCE ALL AIR FLOWS LATING DEVICES.

ANCE MANUALS. CLEARLY IDENTIFY ALL EQUIPMENT WITH PERMANENT PLASTIC OR METAL

THE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO COMMENCEMENT OF SUCH WORK. LIBRATED, ADJUSTED, AND IN PROPER WORKING CONDITION, AND THAT THE SYSTEM

STEM. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING. TEST AND ADJUST TION. PERFORM TESTS IN ACCORDANCE WITH NEBB PROCEDURAL STANDARDS-1999 OR JRE PROPER FUNCTION OF CONTROLS. SUBMIT COMPLETED TEST AND BALANCE REPORT CERTIFIED WITH NEBB OR AABC. BALANCE ALL SYSTEMS WITHIN 5% OF AIR FLOW TOR FOR CORRECTION. MARK FINAL BALANCE POSITIONS ON DAMPERS WITH

SCOPE OF WORK

VIDING MECHANICAL SERVICES FOR A NEW DETACHED ADU.

MECHANICAL SHEET INDEX

DESCRIPTION MECHANICAL COVER SHEET MECHANICAL REQUIREMENTS & CODE ANALYSIS MECHANICAL GENERAL DETAILS FIRST FLOOR - MECHANICAL LAYOUT

	VISIONS		D
0.	Descrip	otion	Date
	BURT ADU	3163 MADEIRA DR., COSTA MESA, CA 92626	
	ECHA OTES GENE	&	AL.
Dr	awen By: M.J	Scale: N.T.S	6

GDI ENGINEERING

3707 Cypress Creek Parkway, Suite 310

GDI ENGINEERING

Houston, TX 77068 Office: 346-509-5860

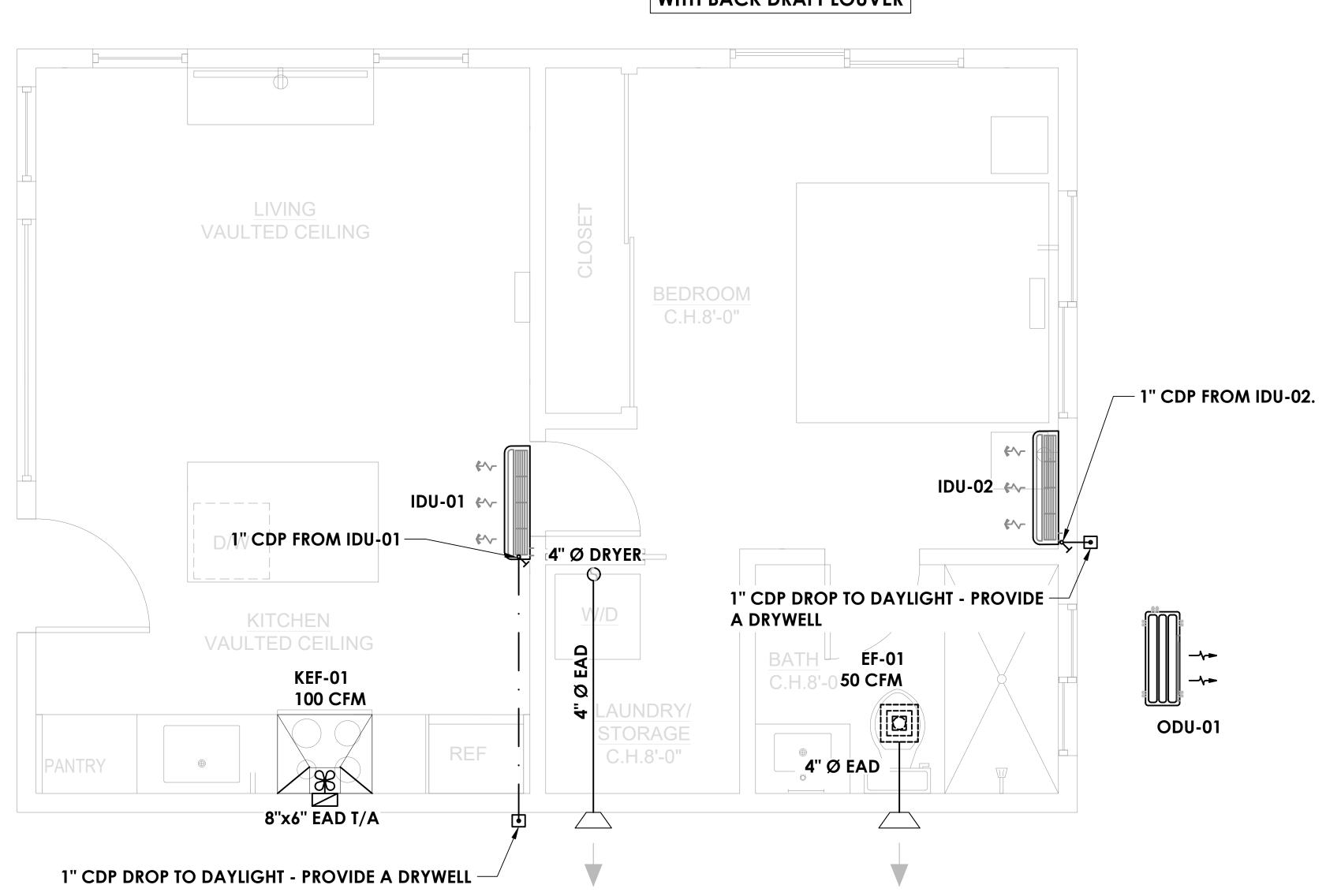
www.gdiengdesign.com

INNOVATING SOLUTIONS

Date: 05.24.2024 PROJ.NO.:

M 1.01

SHEET NO.



ALL EXHAUSTS EQUIPPED WITH BACK DRAFT LOUVER

GDI E 3707 (Houst Office	DIERG NOVATIN NGINEERING Cypress Creek Pa on, TX 77068 : 346-509-5860 gdiengdesign.com	G SOL∪ rkway, Suite 3	TIONS
RE No.	VISIONS	iption	Date
	BURT ADU	3163 MADEIRA DR., COSTA MESA, CA 92626	
	ECHA AYOU	NIC/ T	AL
Di	rawen By: M.J	Scale: 1/2"	= 1'-0"
Da	ate: 05.24.2024	PROJ.NO.	
	M 2	2.0	1
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SCHEDULE No. 1 INDOOR UNIT SCHEDULE (OR APPROVED EQUAL)

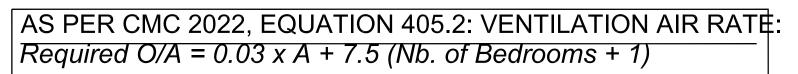
TAG	IDU-01	IDU-02
SERVING	LIVING ROOM	BEDROON
MANUFACTURER	DAIKINGS	DAIKING
INDOOR MODEL	CTX12AXVJU	CTX09AX
COOLING CAPACITY (BTU/H)	12,000	9,000
HEATING CAPACITY (BTU/H)	13,000	10,000
ELECTRICAL INPUT (V/PH/Hz)	208-230/1/60	208-230/1

SCHEDULE No. 2 HEAT PUMP OUTDOOR UNIT SCHEDULE (OR APPROVED EQUAL)

	ODU-01
SERVING	IDU-01
MANUFACTURER	DAIKING
OUTDOOR MODEL	2MX18AXVJU
COOLING CAPACITY (BTU/H)	27
SEER	17
EER	10
HSPF	9
СОР	3.5
ELECTRICAL DATA (V/PH/Hz)	208-230/1/60
MCA (A)	10
MOCP (A)	15

SCHEDULE No. 3 EXHAUST FANS SCHEDULE (OR APPROVED EQUAL)

TAG	EF-01 & 02
MANUFACTURER	WHISPERGREEN
MODEL	FV-0511VK2
LOCATON	BATHROOMS
STATIC PRESSURE (INCH W.C.)	0.1
AIR VOLUME (CFM)	50
ELECTRICAL (V/ PH/ HZ)	120 / 1 / 60
MAX CURRENT (AMPS)	0.2
POWER CONSUMPTION (W)	3.1
MOTOR SPEED (RPM)	722
NOISE (SONES)	< 0.3
FAN TYPE	CEILING MOUNT



- A = 531.0 FT2
- NB. OF BEDROOMS = 1
- REQUIRED O/A = 25 CFM

VENTILATION REQUIREMENTS TO BE MET BY RUNNING EF-02 CONTINUOUSLY WHEN THE FLOOR IS OCCUPIED.



GDI ENGINEERING 3707 Cypress Creek Part Houston, TX 77068 Office: 346-509-5860 www.gdiengdesign.com	
REVISIONS No. Descrip	otion Date
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MECHA SCHEDU	
Date: 05.24.2024	PROJ.NO.:
SHEE	ET NO.



1. <u>DO NO</u>	SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.		
2. WHERE	/er the word "provide" is used, it shall mean to "provide and install".	24. ELECTRICAL SYSTEMS SHALL BE COMPLETION OF PROJECT.	COMP
DETAILS AND I THE CO	ONNECTIONS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAM NSTRUCTIONS. IT SHALL BE NTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH CTUALLY SUPPLIED.	S,25. RECEPTACLES WHICH ARE SHO WHICH, ON THE ARCHITECTURAL DR SHALL BE FLUSH FLOOR DUPLEX REC	AWING
4. IT IS THE	INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. RESERVES THE RIGHT TO APPROVE METHODS AND MATERIALS NOT REFLECTED HEREIN.	26. RECEPTACLES AT COUNTER SH NOTED.	IALL BE I
5. CONTRA	ACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND OTHER RELATED	27. FLUSH FLOOR RECEPTACLE OU FLANGE TO MATCH FLOOR FINISH.	JTLETS SH
CONTRACT D SHALL II	ACTOR SHALL VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED IN TH OCUMENTS. CONTRACTOR NCLUDE IN HIS BID, ANY COSTS REQUIRED TO MAKE HIS WORK MEET THE CONTRACT SCOPE	SMOOTH HIGH ABUSE NYLON OR EG	ALL BE ST QUIVALE
	TING CONDITIONS. HALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT	29. ROMEX CABLE WITH A GROUN . N.E.C. AND LOCAL ORDINANCES.	NDING (
	MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE ANI DDES AND ORDINANCES.	D 30. DISCONNECT SWITCHES SHALL FUSES ONLY AND REJECT ALL OTHER	
	E PERMITS AND INSPECTIONS REQUIRED.	31. FINAL CONNECTIONS TO VIBR.	ATING E
OCCUR UNDE	NTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY R NORMAL USAGE FOR A PERIOD YEAR AFTER OWNER'S ACCEPTANCE, DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT CO	APPLICATIONS) AND APPROVED FIT DUCTWORK OR MECHANICAL EQUIF ST32. THE ENGINEER OF RECORD HA INDICATED FOR EACH DEVICE IS AD	PMENT. AS PERFO
11. PROVID	e record drawings to engineer. Drawings shall include all addendum items,	33. THE ENGINEER OF RECORD HA	AS PERF
	DERS, ALTERATIONS, REROUTINGS, ETC.	CIRCUITS AND FEEDERS COMPLY WI 210-19(A) FPN NO4.	TH NEC
13. ELECTRI	CAL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS ONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.	34. THE CONTRACTOR SHALL PRO WHERE REQUIRED FOR CONDENSAT MECHANICAL CONTRACTOR.	
	ED LIGHT FIXTURES INSTALLED IN GYP. BOARD OR PLASTER CEILINGS SHALL HAVE PLASTER LLED PRIOR TO CEILING MATERIAL.	35. THE CONTRACTOR SHALL COO TYPE, COLOR, ETC. OF ALL DEVICES	
15. RECESSI	ED FIXTURES INSTALLED INDOORS SHALL BE THERMALLY PROTECTED.	36. CONNECTIONS TO HYDROMA	
	ISION 15 DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AN UIPMENT AS REQUIRED.	MADE IN ACCORDANCE WITH ARTIC D680.74 OF THE NEC.	JE 680
17. PROVID	e equipment grounding conductor in all conduits.	37. ALL INDOOR FLUORESCENT FIX THAT CAN BE SERVICED IN PLACE O	R BALLA
18. ALL ELE TESTING FACII	CTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZE .ITY.	CIRCUITS AND CONTAIN BALLAST(S) D THE NEC.	IHAI C
	RMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL RICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75 DEGREE C.	38. CEILING MOUNTED SMOKE AN COMPLY WITH U.L. 2075 AND SHALL SPECIFICATIONS.	ND CAR BE INST
	LOWING CONDUCTOR SIZES SHALL BE UTILIZED FOR 20 AMP CIRCUITS PERTAINING TO I FEET) INDICATED:	39. All Smoke detectors and C Hardwired on Same Circuit and	
0-	20VOLT, 1PH CONDUCTOR 240 VOLT, (1PH) 64 #12AWG 0-129	40. WHEN MORE THAN EITHER ON ALARM IS REQUIRED TO BE INSTALLED	
	5106 #10AWG 130-212 07-160 #8AWG 213-321	INTERCONNECTED IN SUCH A MANN ALARMS IN THE INDIVIDUAL UNIT. SM	OKE AI
Ν	OTE: BASED ON 75°C COPPER CONDUCTORS INSTALLED IN EMT WITH 16AMP LOAD $@$ 85% P.F		RMS IN
	ACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND DE LIGHTS, SWITCHES, RECEPTACLES,	B. SMOKE ALA VICINITY OF THE BEI C. SMOKE ALA	
EQUIPM	ENT CONNECTIONS, ETC., AND ASSOCIATED CIRCUITING IN NEW AND REMODELED AREAS, AREAS ARE NOT SHOWN ON	BASEMENTS BUT NO DWELLINGS OR DW	T INCLU
ELECTRI	CAL DRAWINGS. LAYOUTS, FIXTURE TYPES, QUANTITIES AND SPACING SHALL BE IN CE WITH SIMILAR AREAS ON THIS PROJECT.	BETWEEN THE ADJA SUFFICE FOR THE AL	CENT L
	ACTOR SHALL INCLUDE COSTS FOR THE ABOVE IN HIS BID. IN ADDITION, CONTRACTOR SHALL DUT DRAWINGS FOR WORK IN SUCH AREAS AND SUBMIT FOR APPROVAL PRIOR TO		LOW TH
ROUGH-IN.		VICINITY OF THE BEL ARE INSTALLED AND	D IN DW
FLUORESCENT INSTALLATION	e Copper, 75 Degrees C rated for general use, for wiring within 3 inches of Ballasts wire shall be copper, minimum 90 degrees C rated. Sizes indicated are fo In a maximum 30 degrees C ambient. Conductor ampacity shall be derated for Ent installations. 600 volt compact	E. CARBON M R FUEL-FIRED APPLIAN 43. ALL BRANCH CIRCUITS THAT SU	ICE.
22. CONTRA	ACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO ELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED	SUPPLYING OUTLETS INSTALLED IN DV	WELLIN MS, SU AREAS
	ACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL PTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT OR INSTALLATION	ARTICLE 210.12 (A). 44. ALL ATTIC ACCESSES SHALL BE	PROV
		NEAR THE FORCED AIR UNIT. LOCATE	ELIGHI
	SCOPE OF WORK		NOT
			L1
	ESSORY DWELLING UNIT IN THE REAR YARD OF AN EXISTING ADE EXITING 100AMP ELECTRICAL PANEL TO 200 AMP	SINGLE FAMILY HOME,	L2 L 3
	ELECTRICAL SHEET INDEX		
HEET #	DESCRIPTION		
1.00	ELECTRICAL SPECIFICATIONS & GENERAL NOTES		
2.01	FLOOR PLAN LIGHTING LAYOUT		
3.01	FLOOR PLAN AND ROOF PLAN POWER LAYOUT		
4.00	ONE LINE DIAGRAM		

PLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION AT

VALL MOUNTED ON THE ELECTRICAL DRAWINGS ON WALLS GS AND ELEVATIONS ARE SHOWN AS GLASS OR PARTITIONS, ELES MOUNTED ADJACENT TO BAS OR WALLS.

E MOUNTED WITH THEIR LONG AXIS HORIZONTAL AT +46" UNLESS

SHALL BE WIREMOLD 862 SERIES. PROVIDE CARPET OR TILE

OVER PLATES SHALL BE AS DIRECTED BY ARCHITECT. IN DAMP OR STAINLESS STEEL. IN DRY LOCATIONS COVER PLATES SHALL BE LENT. PROVIDE COVER PLATES FOR SWITCHES, RECEPTACLES, J-BOX OUTLETS AS REQUIRED.

CONDUCTOR MAY BE USED WHERE PERMITTED BY BOTH THE

ENERAL DUTY TYPE. FUSIBLE SWITCHES SHALL ACCEPT CLASS 'R'

EQUIPMENT SHALL BE WITH FLEX (LIQUIDTIGHT FOR EXTERIOR DO NOT SECURE CONDUITS, DISCONNECTS OR DEVICES TO

FORMED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS TE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM.

FORMED VOLTAGE DROP CALCULATIONS AND ALL BRANCH

20V CONNECTION TO NEAREST MAINTENANCE RECEPTACLE PS ASSOCIATED WITH FAN COIL UNITS. COORDINATE WITH

ATE THE SPECIFIC LOCATION, MOUNTING HEIGHT, ROTATION, TO INSTALLATION.

E BATHTUBS, JACCUZZI TUBS OR SIMILAR EQUIPMENT SHALL BE 0.70 OF THE NEC. PROVIDE BONDING AS REQUIRED BY ARTICLE

S THAT UTILIZE DOUBLE-ENDED LAMPS AND CONTAIN BALLAST(S) LASTED LUMINARIES THAT ARE SUPPLIED FROM MULTIWIRE BRANCH CAN BE SERVICED IN PLACE SHALL COMPLY WITH 410.73 (G) OF

RBON MONOXIDE DETECTORS PER NFPA 72, SECTION R314 MUST TALLED IN ACCORDANCE WITH THE MANUFACTURERS

INATION SMOKE/CARBON MONOXIDE DETECTORS SHALL BE E A BATTERY BACKUP SYSTEM.

MOKE ALARM OR MORE THAN ONE (1) CARBON MONOXIDE HIN AN INDIVIDUAL DWELLING UNIT, ALL ALARM DEVICES SHALL BE AT THE ACTUATION OF ONE ALARM WITH ACTIVATE ALL OF THE AND CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN THE 3143 AS AMENDED)

N EACH SLEEPING ROOM. DUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE MS.

ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING UDING CRAWL SPACE AND UNINHABITABLE ATTICS. IN G UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL ENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN THE UPPER LEVEL..

(IDE ALARMS OUTSIDE OF SLEEPING AREAS IN THE IMMEDIATE MS IN DWELLING UNITS WITHIN WHICH FUEL-FIRED APPLIANCES WELLING UNITS THAT HAVE ATTACHED GARAGES. (IDE ALARMS WITHIN EACH BEDROOM WHICH CONTAINS A

125-VOLT, SINGLE PHASE, 15 AND 20 AMP BRANCH CIRCUITS NG UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, UNROOMS, RECREATION ROOMS, CLOSETS,

AS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT LED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. NEC

/IDED WITH A SWITCHED LIGHT AND 120 VOLT GFI OUTLET AT OR SWITCH AT THE ATTIC ACCESS OPENING.

)TE-GEN-CENLEFT

IAG	SYMBOL	DESCRIPTION	TYPE	W	V	MOUNT.	MANUF.	MODEL	
L1		4" RECESSED CAN LIGHT	LED	16 W	120V	REC.	TBD	TBD	
L2	Q ^{L2}	WALL MOUNTED EXTERIOR LIGHT	LED	10 W	120V	MOUNTED	TBD	TBD	
L9	L3	BAR LIGHT	LED	12 W	120V	MOUNTED	TBD	TBD	

ELECTRICAL GENERAL NOTES

1. ALL 120 VOLT, SINGLE PHASE 15 AND 20 AMPERE BRANCH CIRCUIT SUPPLYING OUTLETS INSTALLED IN DWELL LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR AREAS S COMBINATION TYPE INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. (NEC ARTICLE 210.12(A)

2. IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM, PARLOR, LIBRARY, DEN, SUNROOM, BEDR UNITS RECEPTACLE OUTLETS SHALL BE INSTALLED IN ACCORDANCE WITH THE GENERAL PROVISIONS SPECIFIE

- a. NEC ARTICLE 210.52(A) (1) SPACING. RECEPTACLES SHALL BE INSTALLED THAT NO POINT ALONG THE FLOOR
 b. NEC article 210.52(a) (2) AS AMENDED WALL SPACE. ANY WALL 24-INCHES OR MORE IN LENGTH SHALL BE P AROUND CORNERS, THE FIRST SLIDING PANEL OF A SLIDING DOOR, FIXED ROOM DIVIDERS SUCH AS A FREES BEHIND OPERABLE DOORS. AND NEED NOT INCLUDE ENTRIES, HALLWAYS ETC. LESS THAN 5-FEET WIDE LOCATION.
 c. NEC ARTICLE 210.52(A) (3) AS AMENDED FLOOR RECEPTACLES.
- IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM, PARLOR, LIBRARY, DEN, SUNROOM, BEDR UNITS, ALL 125 VOLT 15 AND 20 AMP RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES NEC 406.12)

 ALL WORK AND EQUIPMENT UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE WITH THE CODES, STANI FURNISHED AS THE MINIMUM LATEST REQUIREMENTS.
 A. LIFE SAFETY CODE

B. NATIONAL FIRE PROTECTION ASSOCIATION

C. NATIONAL ELECTRICAL CODE

D. AMERICAN NATIONAL STANDARDS INSTITUTE E. INSTITUTE IF ELECTRICAL AND ELECTRONIC ASSOCIATION

F. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA)

G. REQUIREMENTS OF LOCAL POWER COMPANY H. BUILDING CODE

- 5. THE ELECTRICAL INSTALLATION SHALL MEET THE APPROVAL OF THE LOCAL GOVERNING AUTHORITIES AND T
- 6. REFER TO THE ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION, CIVIL, INTERIOR DESIGN, FOR R BE CONSIDERED AS PART OF THE ELECTRICAL CONTRACT DOCUMENTS.
- 7. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION THE CONTRACTOR PROVIDE EVERYTHING NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER. THE CONTR OBVIOUSLY NECESSARY TO COMPLETE THE INSTALLATION.
- 8. LIGHT SWITCHES SHALL BE MOUNTED 48 INCHES ABOVE FINISHED FLOOR TO CENTER LINE OF THE DEVICE, UN COMMON PLATE WHERE TWO (2) OR MORE ARE INDICATED ADJACENT TO EACH OTHER.
- 9. RECEPTACLES SHALL BE LOCATED 18" ABOVE FINISHED FLOOR TO CENTER LINE OF DEVICE. UNLESS NOTED OF BACK SPLASH TO CENTERLINE OF DEVICE UNLESS NOTED OTHERWISE.
- 10. USE GALVANIZED RIGID STEEL CONDUIT WHERE EPOSED TO EXTERIOR CONDITIONS OR WHERE EXPOSED IN A BE PROVIDED WITH SET SCREW STEEL FITTINGS FOR INSTALLATION IN ALL CONCEALED WALLS AND CEILINGS I SCHEDULE 40. UNLESS OTHERWISE NOTED, PVC MAY BE USED WHERE BURIED UNDER GRADE AND ENCASED EMT CAN BE USED IN DRY AREAS WHEN INSTALLED 10 FEET ABOVE FINISHED FLOOR LEVEL.
- 11. ALL CONDUITS IN PUBLIC SHALL BE CONCEALED UNLESS NOTED OTHERWISE.
- 12. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH APPROVED DRAWINGS AND ANY ALTERNA
- 13. ALL ELECTRICAL WORKS TO BE DONE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE AND THE LOCAL
- 14. TV, TELEPHONE, AND A/C THERMOSTAT LOCATIONS ON DRAWINGS ARE TENTATIVE TO BE CONFIRMED BY
- 15. SERVICE SHALL COMPLY WITH NEC 230.
- 16. ALL BATHROOM FIXTURES SHALL COMPLY WITH NEC 410.10 (D).
- 17. EXTERIOR FLEXIBLE CONDUITS SHALL BE CARFLEX ONLY.
- 18. VERIFY PHONE COMPANY BOX PRIOR TO INSTALLATION.
- 19. HEIGHTS FOR WALL MOUNTED FIXTURE LIGHTS
- EXTERIOR TYPE: 90" INTERIOR TYPE: 6'8"
- 20. INSULATION IN ATTIC TO BE A MINIMUM 3" FROM RECESS CAN LIGHTS FIXTURE WHEN APPICABLE
- 21. GALV. RIGID CONDUITS AND GROUNDING BY CUC POLE TO COMPLY WITH NEC SECTION 250-80
- 22. BATHROOM, GARAGE, OUTDOOR, KITCHEN AND ACCESSORY BUILDING REQUIRES GFCI AS PER NEC 210.8
- 23. ELECTRICIAN TO PROVIDE 1 SWITCH-LIGHT-RECEPTACLE IN ATTIC SPACE AND SHALL COMPLY WITH NEC 210
- 24. PROVIDE 4-WIRE BRANCH CIRCUITS FOR ALL DRYERS, RANGE, AND COOKTOP.
- 25. CLOSET LIGHT SHALL COMPLY WITH NEC 410.16
- 26. SMOKE DETECTOR SHALL BE CONNECTED TO A GENERAL LIGHTING CIRCUIT
- 27. KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, DENS, BEDROOMS, SUNROOMS, REC OR AREA SHALL BE PROTECTED BY AFCI (ARCH-FAULT CIRCUIT BREAKER AS PER NEC 210.12
- 28. TAMPER-RESISTANT RECEPTACLES SHALL BE INSTALLED AS SPECIFIED IN 406.12(A) THROUGH (C)
- 29. ALL WIRES/CONDUITS SHALL BE COPPER

QUANTITY

14

1

1

30. ALL BATHROOM RECEPTACLES AND LIGHTING FIXTURES SHALL BE GFCI PROTECTED.

31. ALL ELECTRIC PANELS TO BE WITHIN THE WALL

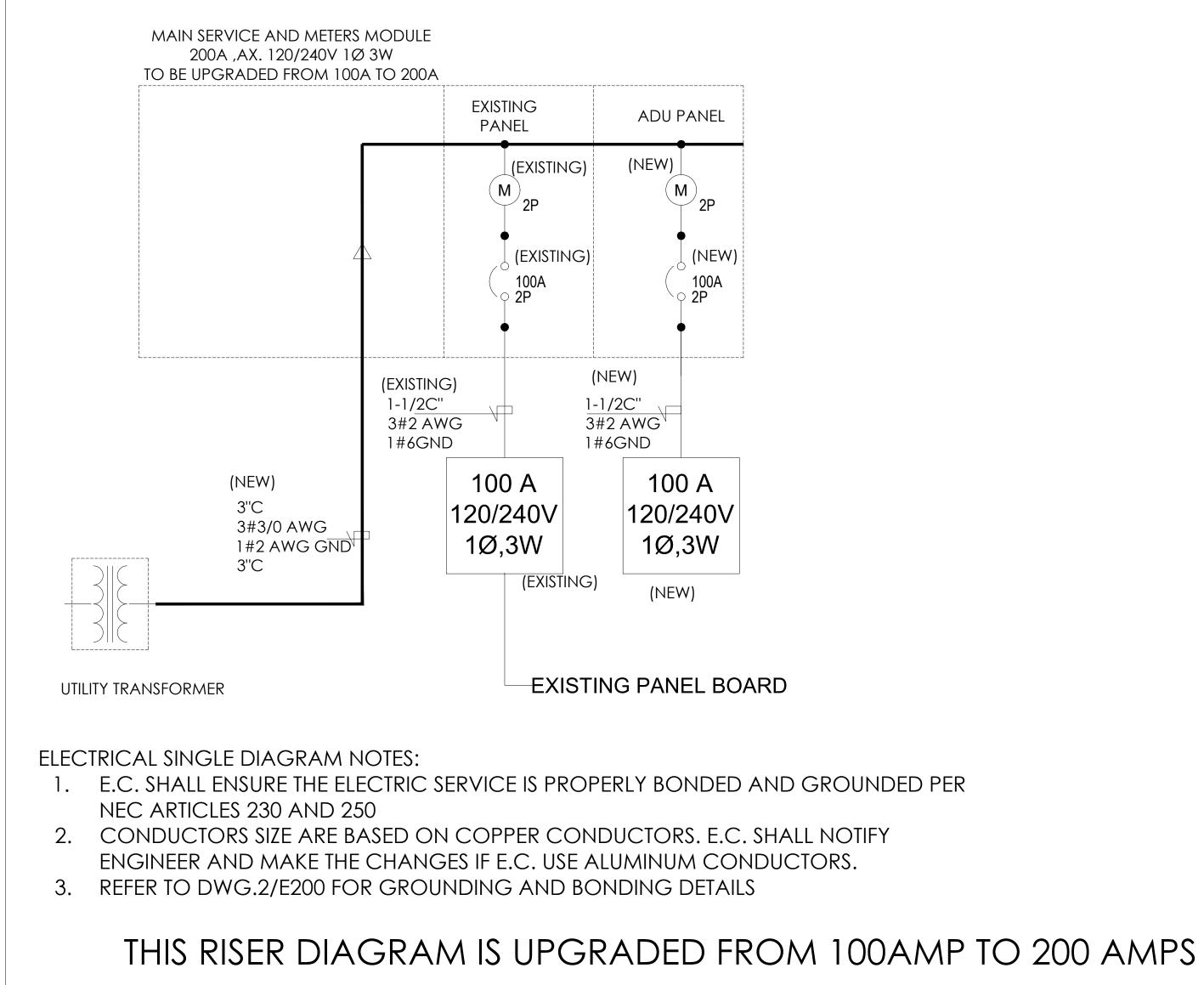
CODES ANALYSIS THIS PROJECT SHALL COMPLY WITH THE FOLLOWING: 2022 CALIFORNIA BUILDING CODE (CBC) 2022 CALIFORNIA RESIDENTIAL CODE (CRC) 2022 CALIFORNIA MECHANICAL CODE (CMC) 2022 CALIFORNIA ELECTRICAL CODE (CEC) 2022 CALIFORNIA PLUMBING CODE 2022 CALIFORNIA GREEN BUILDING STANDARDS (CGBS) 2022 CALIFORNIA ENERGY EFFICIENT STANDARDS (CEES)

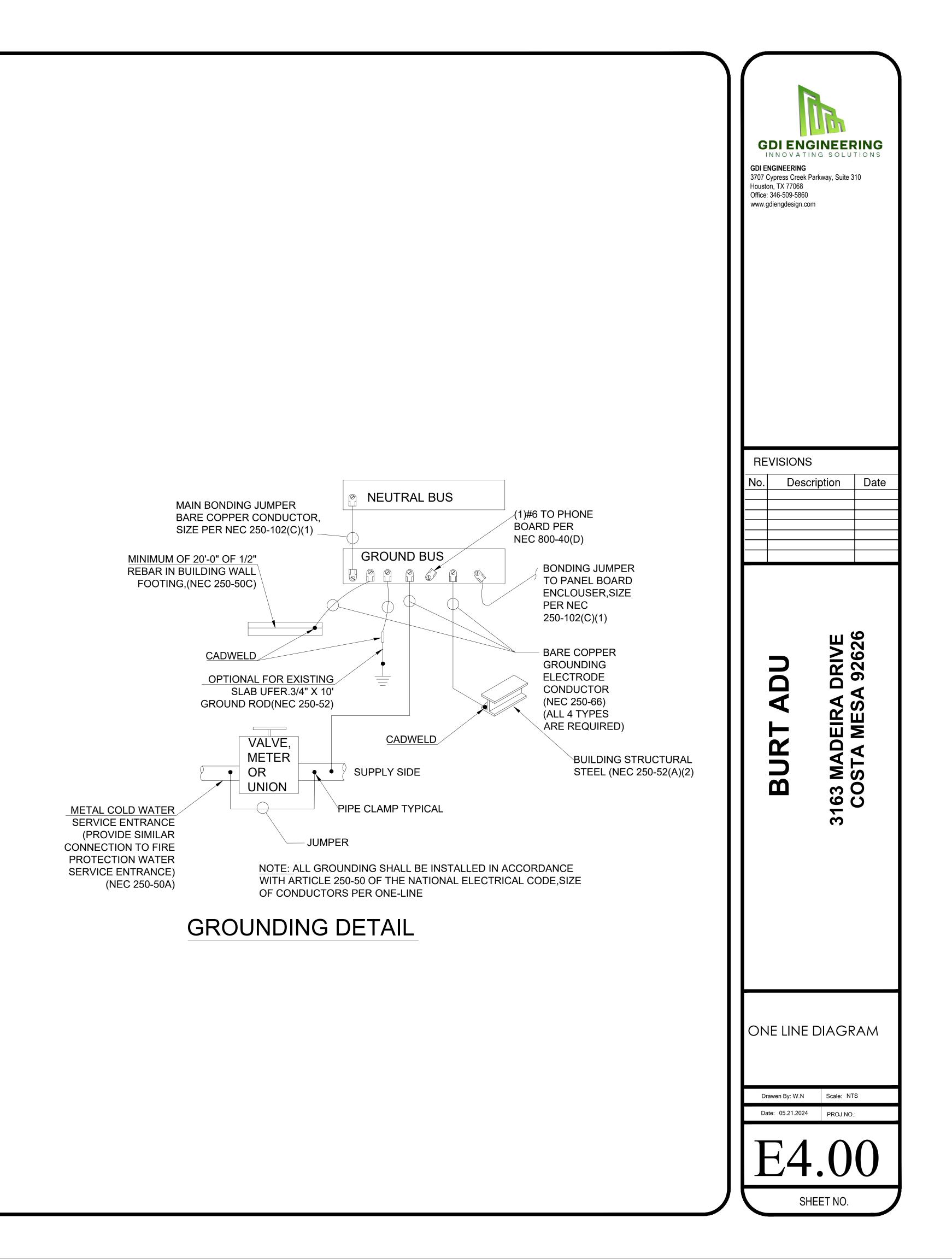
LING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, ()) ROOM, RECREATION ROOM OR SIMILAR ROOM OR AREA OF DWELLING ED IN THE FOLLOWING ARTICLES. R LINE OF THE WALL IS MORE THAN 6-FEET FROM A RECEPTACLE. PROVIDED WITH A RECEPTACLE OUTLET. WALL SPACE SHALL INCLUDE ISTANDING BAR TYPE COUNTER. WALL SPACE NED NOT INCLUDE THE SPACE ATED IN BEDROOMS. ROOM, RECREATION ROOM OR SIMILAR ROOM OR AREA OF DWELLING	GDI ENG 3707 Cyp Houston, Office: 34	DECOMPOSE DECOMPOSE DECOMPOSE NOVATING SOLUTIONS SINEERING press Creek Parkway, Suite 310 , TX 77068 46-509-5860 engdesign.com	
IDARDS AND PRACTICES LISTED HEREIN, AND THEIR RESPECTIVE DATES ARE			
THE OWNER'S REPRESENTATIVE PRIOR TO ACCEPTANCE. RELATED INFORMATION AND ADDITIONAL INSTALLATION REQUIREMENTS TO PR IS EXPECTED TO FURNISH ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM.			
TRACTOR SHALL FURNISH AND INSTALL ALL MINOR ITEMS WHICH ARE			
NLESS NOTED OTHERWISE. GANG SWITCHES AND DIMMER WITH A		/ISIONS	
OTHERWISE. ABOVE-COUNTER RECEPTACLES SHALL BE MOUNTED 6" ABOVE	<u>No.</u>	Description Date	
ANY LOCATIONS WHERE SUBJECT TO MECHANICAL DAMAGE. EMT SHALL IN DRY AREAS. ALL CONDUIT FOR LIGHTING PROTECTION SHALL BE PVC, IN CONCRETE SLAB OR WALLS. ALUMINUM CONDUIT IS NOT ALLOWED.			
ATIONS MUST FIRST BE APPROVED BY THE ELECTRICAL INSPECTOR.		/	
ELECTRICITY REGULATIONS.			
0.63. SHALL COMPLY WITH BUILDING ELECTRICAL CODE AND LOCAL LAWS. CREATION ROOM CLOSETS, HALLYS, LAUNDRY AREAS, OR SIMILAR ROOMS		BUKI ADU 3163 MADEIRA DRIVE COSTA MESA 92626	
OWING:	SPE	ECTRICAL ECIFICATION ANI NERAL NOTES	D
			_
DS (CGBS)	Draw	ven By: W.N Scale: 1/4" = 1'-0"	

Date: 05.21.2024 PROJ.NO.: **E100** SHEET NO.

GENERAL NOTES:

- A. CONTRACTOR SHALL RELABEL ALL EXISTING ELECTRICAL EQUIPMENT IMPACTED AS PART OF THIS PROJECT. REPLACE ALL DAMAGED OR MISSING LABELS. PROVIDE UPDATED CIRCUIT DIRECTORIES.
- B. AIC RATING OF ALL NEW EQUIPMENT SHALL MEET OR EXCEED THE AIC RATING OF EXISTING.
- C. CONTRACTOR SHALL FIELD VERIFY EXISTING EQUIPMENT TO DETERMINE SPARE CAPACITY INCLUDING ELECTRICAL METER READINGS PER NEC ART 220.87. ALL FINDINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- D. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE START OF WORK AND BRING ANY DISCREPANCIES THAT WILL IMPACT THE WORK TO THE ARCHITECT'S ATTENTION.





	LOAD CA	LCULATIO		DU					
Step			ections						
	LIGHTING & GENERA								
1	Square footage	517			=	1,551	va		
	SMALL APPLIANCES								
2	Number of circuits		Х	1500		3,000	va		
	APPLIANCES & M	OTOR LOA	DS: 220.82((B)(3) & (4)					
	Microwave	0	va						
	Refrigerators	750	va						
	Dishwasher	1,200	va						
	Coffee Machine	0	va						
	Washer	1,500	va						
2	Dryer	5,000	va						
3	Oven	0	va						
	Cooktop	8,000	va						
	Garbage Disposal	900	va						
	Gas Water Heater	350	va						
	Tesla Charger	0	va						
	TOTAL	22,251							
	TOTAL	STEPS 1-3							
	1. Total of Loads	22,251		10,000	va	=	12,25		
4	2. Line 1	12,251		40%		4,900			
	3. Line 2	4,900		10,000		=	14,900		
	HEATING & AIR C						,		
	A. Air-Conditioning Equipment	1870							
	B. Gas Furnace	N/A	va						
5	C. Suppl. Heating for HP	N/A	va						
-	D. Electrical Space Heating	N/A	va						
	E. Electric Thermal Storage	N/A	va						
	CALCULATE TOTAL S			AD: 220.82	·(A)				
	Total of Line 3 from Step 4		14,900						
6	Enter only the largers load from Step 5	+	1,870						
Ū	Total Calculated Service or Feeder Load		16,770						
	CALCULATE								
	Total Calculated Load	16,770			volts =	70	amps		
7			-						
1	This calculation resulted in a calculated load of 70 amps, the main feeder 100 amps will be able to serve the single family house.								

	Loc	ation: KITCHEN		CONNEC	TED LOAD	
*	LOAD SUMMARY	CL	DF	Α	В	DEMAND TOTAL
L	Lighting	0.35	1.25	0.35		0.44
R	Convenience Recept	3.24		1.26	1.98	3.24
н	Heating (Space)	0.35	1.25	0.35		0.44
С	Cooling		1.00			
А	HVAC	1.87	1.00	0.94	0.94	1.87
Р	Process		1.00			
0	Other Continuous		1.25			
к	Kitchen	20.35	13.00	9.65	10.70	13.23
N	Noncontinuous		1.00			
			1.00			
	Total	26.16		12.55	13.62	19.22
		· ·				

18.06

75.24

.00

Total Demand Load (KVA)

Total Demand Current (A)

Min. Feeder Ampacity (A)

PANELBOA	ARD DESIGNATION
SYSTEM VOLTAGE	240/120V, 1Φ, 3W
BUS SIZE	100A-2P C/B Bus Plug
SYSTEM TYPE	NORMAL
FEEDER PROT	100A-2P C/B Bus Plug
CONDUCTOR SIZE	3/0 AWG - #2G CU
CONDUCTOR/PHASE	1
MAINS	100A MCB
SCCR	FULLY RATED
MCB RATING	80%
GROUND FAULT	NO
FEEDER LENGTH (FT)	100
FEEDER V. DROP (%)	0.641
FAULT CURRENT	
KAIC RATING	22
ENCLOSURE	TYPE 1

DEMAND LOAD TO BE CALCULATED AS BELOW: FIRST 10kVA OF GENERAL LOAD AND FIXED APPLIANCES AT 100% THE REMAINDER AT 40% + AIR CONDITIONING AT 125%

	DESCRIPTION	*	WIRE G	RD	СВ	KVA	Α	В	KVA	СВ	WIRE	GRD	DESCRIPTION	*		
1	LIGHTING KITCHEN, LIVING AND OUTDOOR	L	2X 14 AWG - #1	14G	15A-1P	0.17	0.35		0.18	15A-1P	2x 14 AWG	- #14G	LIGHTING BEDROOM , LAUNDRY AND BATHROOM	L	,	2
3	RECEPTACLES OUTDOOR	R	2x 12 AWG - #1	12G	20A-1P	0.36		1.08	0.72	20A-1P	2x 12 AWG	- #12G	RECEPTACLES KITCHEN	R	2	4
5	GARABGE DISPOSABLE	к	2x 12 AWG - #1	12G	20A-1P	0.90	1.65		0.75	20A-1P	2x 12 AWG	- #12G	FRIDGE	ĸ		6
7	WASHER	к	2x 12 AWG - #1	12G	20A-1P	1.50		5.50	4.00	50A-2P	2x 6 AWG	- #6G	ELECTRIC COOKER	к		8
9	ELECTRIC DRYER	к	3x 10 AWG - #	‡10G	30A-2P	2.50	6.50	1.50	4.00	50A-2P	22 0 AVVG	- #6G	ELECTRIC COOKER	к		0
11		к	5X 10 AVVG - 4	FIUG	30A-2P	2.50		3.70	1.20	20A-1P	2x 12 AWG	- #12G	DISHWASHER	к		2
13	RECEPTACLE BATHROOM	R	3x 12 AWG - #1	12G	20A-2P	0.18	1.26		1.08	20A-1P	2x 12 AWG	- #12G	RECEPTACELS BEDROOM	R	2	4
15	RECEPTACLES LIVING ROOM	R	2x 12 AWG - #1	12G	20A-1P	0.90		2.40	1.50	20A-1P	2x 12 AWG	- #12G	SMALL APPLIANCE	к		16
17	SMALL APPLIANCE	к	2x 12 AWG - #1	12G	20A-1P	1.50	1.85		0.35	20A-1P	2x 12 AWG	- #12G	GAS WATER HEATER	Н	1	8
19	AC UNIT	A	3x 12 AWG - 7	#12G	20A-2P	0.94		0.94					SPACE			20
21		A		#120	204-27	0.94	0.94						SPACE			22
23	SPACE												SPACE			24
		(K)	/A)								1					

Total Connected Load 12.55 13.62

ADU PANEL PANELBOARD DESIGNATION

Image: Circle Colspan="3">Colspan="3">Colspan="3">Circle Colspan="3">Colspan="3">Circle Colspan="3">Colspan="3">Circle Colspan="3">Circle Colspan="3" Office: 346-509-5860 www.gdiengdesign.com							
		Date					
BURT ADU	3163 MADEIRA D						
PANEL BOARDS SCHEDULES AND LOAD CALCULATIONS							
Date: 05.21.202							

		PLUA	ABING ABBREVIAT				PI	LUMBING LEGEND
	A		Н			Q		FITTINGS
ABV	ABOVE	Н	HEIGHT		QTY	QUANTITY	X	BALL VALVE
ADJ	ADJUSTABLE	HB	HOSE BIBB				✓ ⁻ N	
٩C	AIR CONDITIONING	HD	HEAD / HUB DRAIN			R		CHECK VALVE - ONE WAY VAVLE
AFC	ABOVE FINISHED CEILING	HTR	HEATER		(R)	RELOCATED		
٩FF	ABOVE FINISHED FLOOR	HP	HORSE POWER		R	RISE	G	PIPE ELBOW / PIPE DROP
AFG	ABOVE FINISHED GRADE	HPWH	HEAT PUMP WATER HE	ATER	RD	ROOF DRAIN		
AHU	AIR HANDLING UNIT	HW				RECIRCULATE/RECIRCULATING	-0-	PIPE UP
AVG	AVERAGE				RECIRC			
AVO		HWP	HOT WATER PIPE		REQD	REQUIRED	$\widehat{}$	PIPE DOWN
	В	HWRP	HOT WATER RETURN P	IPE	REQD	REQUIRED	_	
BF	BELOW FLOOR	HZ	HERTZ		REV	REVISION	4 -	PIPE UNION
BFP	BACK-FLOW PREVENTER		I		RLA	RUNNING LOAD AMPS	· · · · · · · · · · · · · · · · · · ·	
		ID	INSIDE DIAMETER					BACK FLOW PREVENTER
BT	BATH-TUB	IDU	INDOOR UNIT		RM	ROOM		
BTU	BRITISH THERMAL UNIT				RP	RECIRCULATION PUMP	\bowtie	CALIBRATED BALANCE VALVE
BV	BALL VALVE	IE	INVERT ELEVATION		RPM	REVOLUTIONS PER MINUTE		
	c	IN	INCH		RPZ	REDUCED PRESSURE ZONE		FLEXIBLE HOSE CONNECTER
		IN WC	INCH, WATER COLUM	N	RTU	ROOFTOP UNIT	₩	TELABLE HOSE CONNECTER
CDP	CONDENSATE DRAIN PIPE	INSUL	INSULATION		RV			
CLG	CEILING	INT	INTERNAL / INTERIOR		ΓV	RELIEF VALVE	区	FLOW CONTROL VALVE
COND	CONDENSATE	IW	INDIRECT WASTE			6	A	
CO	CLEAN-OUT					S	Î	HOSE BIBB
			K		S	SEWER	N 4	
CONT	CONTINUATION / CONTINUED	KS	KITCHEN SINK		SAN	SANITARY	\bowtie	ISOLATION VALVE
СР	CIRCULATING PUMP	KW	KILOWATT		SD	STORM DRAIN	_ _ \	
CV	CHECK VALVE				SE		\bowtie	MIXING VALVE
CW	COLD WATER / CITY WATER	•				SEWAGE EJECTOR	0	
CWP	COLD WATER PIPE	L	LENGTH		SEC	Secondary	ž	PRESSURE GAGE
		LAV	LAVATORY		SF	SQUARE FOOT	 ح	
	D	LBS	POUNDS		SH	SHOWER	Ŕ	PRESSURE REDUCING VALVE
D	DEPTH	LP	LOW PRESSURE		SQ IN	SQUARE INCH		
DFU	DRAINAGE FIXTURE UNITS	LRA	LOCKED ROTOR AMF	² S		SQUARE INCH		SOLENOID VALVE
DN	DOWN	LV	LEVEL		SOV	SHUT-OFF VALVE	-	
	-				SP	STATIC PRESSURE / SUMP PUMP	Į	THERMOMETER
DW	Domestic water / dish washer	LWT	LEAVING WATER TEMPERATURE		SPEC	SPECIFICATION	1	
DWG	DRAWING				JI LC	SI LEINCARON		TRIPLE DUTY VALVE
	E		М			Т		
(E)		MAX	MAXIMUM					MISCELLANEOUS
(E)	EXISTING				T/A	TO ABOVE	\bigcirc	CONDENSATE POC
EA	EACH	MBH	THOUSAND BTUH		T/B	TO BELOW		POC - WATER, WASTE, VENT, GAS,
ELEC	ELECTRIC	MCA	MINIMUM CIRCUIT AN	MPACITY			\bullet	(DRAWING DEPENDANT)
ELEV	ELEVATION	MECH	MECHANICAL		TBD	TO BE DETERMINED	\sim	
EQ	EQUAL				TDH	TOTAL DYNAMIC HEAD	X	COLD WATER POC
		MH	MANHOLE		TEMP	TEMPERATURE		
EVC	EVAPORATIVE COOLER	MIN	MINIMUM		TP	TRAP PRIMER	ŀЮ	WALL CLEAN-OUT
EWH	ELECTRIC WATER HEATER	MOCP	MAXIMUM OVERCUR	RENT				
EWT	ENTERING WATER TEMPERATURE		PROTECTION		TV	THERMOSTATIC MIXING VALVE		FLOOR CLEAN-OUT
EXP	EXPANSION	MOPD	MAXIMUM OVERCUR	RENT	TYP.	TYPICAL	[]	
EXP.T	EXPANSION TANK		PROTECTION DEVICE					FLOOR SINKS: HALF GRATE
		MS	MOP SINK			U		
	F	MUA	MAKE-UP AIR UNIT				O	FLOOR DRAIN
°F	DEGREES FAHRENHEIT	MV	MIXING VALVE		U	URINAL		
F	FILTER	, v t v			U/F	UNDER FLOOR		TRENCH DRAIN
' F/A	FROM ABOVE		Ν		U/G	UNDER GROUND		1
-		(N)	NEW		UH	UNIT HEATER		AREA DRAIN
F/B	FROM BELOW	NC	NORMALLY CLOSED		U/S	UNDER SLAB	XX FU	PIPE FIXTURE UNIT LOAD
FCO	FLOOR CLEAN-OUT	NIC	NOT IN CONTRACT		UON	UNLESS OTHERWISE NOTED	/XX" DIA	VALUE AND PIPE SIZE TAG
FCU	FAN COIL UNIT	NO	NORMALLY OPEN, NI	JMBER				
FD	FLOOR DRAIN / FUNNEL DRAIN				UTR	UP THROUGH ROOF	\bigcirc	PUMP / RECIRCULATION PUMP
		NTS	NOT TO SCALE					
FH	FIRE HYDRANT / FIRE HOSE		0			V	\odot	EXPANSION TANK
FIXT	FIXTURE				V	VOLT / VENT		
FPS	FEET PER SECOND	OA	OUTSIDE AIR		V VAC	VACUUM		WATER METER
FS	FLOOR SINK / FIRE SPRINKLER	OD	OUTSIDE DIAMETER		VEL		-	
FT	FEET / FOOT		OVER-FLOW DRAIN			VELOCITY	L C J	GAS METER
		ODU	OUTDOOR UNIT		VIF			
FLR	FLOOR				VTR	VENT THROUGH ROOF	X	PLUMBING NOTE CALL-OUT
	G		Р			W		
<u> </u>		Р	PUMP / PRESSURE / P	OWER				
G	GAS	PD	PRESSURE DROP		W	WATT / WIDTH / WASTE		G
GAL	GALLON	PH	PHASE		W/	WITH		
GM	GAS METER				W/O	WITHOUT		urb less than one acre of soil shal RM water is conveyed to a public df
GND	GROUND	PLBG	PLUMBING		WC	WATER CLOSET	METHOD.	
GPD	GALLONS PER DAY	POC	POINT OF CONNECTI	ON	WCO	WALL CLEAN-OUT		DING OR DRAINAGE SYSTEM WILL MAN
		POU	POINT OF USE		WIC		,	. EXCEPTION: ADDITIONS NOT ALTERING N A SHOWER IS PROVIDED WITH MULTIPLI
GPH	GALLONS PER HOUR	PP	POLYPROPYLENE			WALK-IN COOLER		D THAT ONLY ONE HEAD IS ON AT A TIME
GPM	GALLONS PER MINUTE	PPM	PARTS PER MILLION		WIF	WALK-IN FREEZER	CGC 4.304.1. LANDSC	APE IRRIGATION WATER USE SHALL HAVE
GV	GATE VALVE	PSI	POUNDS PER SQUAR		WM	WATER METER /		IS THAT A MINIMUM OF 65% OF CONSTRUCTION
GW	GREASE WASTE	PSIG	POUNDS PER SQUAR			WASHING MACHINE		NTRACTOR SHALL SUBMIT A CONSTRUCTION
		1 510	GAUGE	/	WSFU	WATER SUPPLY FIXTURE UNIT	INSPECTION.	
GWH	GAS WATER HEATER	PVC	POLYVINYL CHLORID	E I	WT	WEIGHT		S FIREPLACE(S) SHALL BE A DIRECT-VENT
								ECTIVE FLUSH VOLUME OF ALL WATER C
	CODE COMPLIA	NCE			SCOP	PE OF WORK		ECTIVE FLUSH VOLUME OF WALL-MOUN
0000			- 4		05=		GALLONS PER FLUSH.	
2022 CAL	LIFORNIA MECHANICAL CODE (CMC),	TITLE 24, PAR	4			COLD AND HOT WATER PIPING AND		SHOWERHEADS SHALL HAVE A MAXIMU
2022 CAL	IFORNIA PLUMBING CODE (CPC), TITLE	24, PART 5		FITTINGS FOR N	NEW HIXTUR	ΚΕδ.		RITERIA OF THE U.S. EPA WATER-SENSE SP E OF ALL SHOWERHEADS SHALL NOT EXC
2022 CAL	LIFORNIA ENERGY CODE (CEnC), TITLE	24, PART 6		- INSTALLATION	OF ALL NF	w sewer and vent piping and	OUTLET TO BE IN OPERA	
				FITTINGS FOR N			CGC 5.303.3.4. i) NON	IRESIDENTIAL LAVATORY FAUCETS SHALL
	LIFORNIA ELECTRICAL CODE (CEC), TITI							S SHALL HAVE A MAXIMUM FLOW RATE (
2022 CAL	LIFORNIA GREEN BUILDING STANDARDS	CODE (CGB	SC), TITLE 24, PART 11	- INSTALLATION HEATER AS SHO		O GAL. HEAT PUMP HYBRID WATER		E MAXIMUM RATE, BUT NOT TO EXCEED 2 ETERING FAUCETS SHALL NOT DELIVER M
2022 CAL	IFORNIA REFERENCED STANDARDS, TIT	LE 24, PART 12	2	HEALER AS SH			CGC 5.303.5. FOR THC	DSE OCCUPANCIES WITHIN THE AUTHORI
								5.3034 SHALL APPLY TO NEW FIXTURES IN
							CCC E 410 4 E DDC)"	DE THE BUILDING OWNER OR REPRESENT

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THE CONTRACTOR SHALL EXAMINE THE PROPOSED PROJECT SITE AND EXAMINE ALL EXISTING CONDITIONS, INCLUDING ALL SERVICE POINT OF CONNECTIONS THAT COULD AFFECT THE PLUMBING SCOPE OF WORK PRIOR TO SUBMITTING A BID. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PERTAINING TO THE PLUMBING WORK SHOWN AND SHALL INCLUDE ALL OF THE NECESSARY LABOR AND MATERIAL COSTS IN THE PROPOSAL TO CONNECT SERVICES AND TO PROVIDE FULLY OPERATIONAL SYSTEMS ANY DISCREPANCIES NOTED SHALL BE REPORTED TO THE ARCHITECT PRIOR TO BID. NO ADDITIONAL ALLOWANCES WILL BE GRANTED DUE TO LACK OF KNOWLEDGE OF SITE CONDITIONS. CONTRACTOR SHALL ACCEPT SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS INCLUDING THE SAFETY OF ALL PERSONAL AND PROPERTY DURING THE EXECUTION OF THE WORK. THE DRAWINGS SHALL INDICATE DIAGRAMMATICALLY THE CONFIGURATION OF THE PRINCIPAL EQUIPMENT & FIXTURES, PIPING, DUCTWORK, AND OTHER MATERIAL. DRAWINGS SHALL BE ADHERED TO AS MUCH AS POSSIBLE IN ORDER TO OBTAIN A CLEAN INSTALLATION WHILE WORKING TO AVOID ANY OBSTRUCTIONS. INSPECTION OF THE SITE CONDITIONS THAT MAY AFFECT IS NECESSARY FOR INSTALLATION. PROVIDE REQUIRED FITTINGS AND ACCESSORIES TO MEET SIDE CONDITIONS WHETHER THEY ARE SHOWN OR NOT. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO WORK BEING DONE. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND REPAIRING ANY DAMAGE DONE TO THEM. CONTRACTOR SHALL CONTACT THE UNDERGROUND SERVICE ALERT AT 1-800-642-2444 48 HOURS PRIOR TO BEGINNING THE WORK.) THE CONTRACTOR SHALL COORDINATE SERVICE LOCATIONS AND SIZES OF UTILITIES WITH ALL UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TRENCHING, CONDUITS, CONDUCTORS, METERS AND ANY OTHER NECESSARY OUTLETS REQUIRED BY THE UTILITY COMPANIES. THE OWNER SHALL PAY ALL REQUIRED UTILITY FEES. TRENCHING AND BACKFILLING SHALL BE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS SHOWN ON THE PLANS. PRIOR TO INSTALLATION, TRENCHING FOR UNDERGROUND SYSTEM SHALL BE STAKED OUT FOR APPROVAL BY THE OWNER. NO SITE WORK SHALL BEGIN PRIOR TO STAKE-OUT APPROVAL BY THE AUTHORITY HAVING JURISDICTION OVER THE PROJECT. THE INTENTION OF THE PLANS AND SPECIFICATIONS IS NOT TO COVER ALL INCIDENTALS NECESSARY TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, PROVIDE NECESSARY TRANSPORTATION AND STORAGE OF MATERIALS & EQUIPMENT, AND TO PROVIDE MISCELLANEOUS SERVICES, ETC, REQUIRED TO ACCOMPLISH THE DESIGN. ANYTHING THAT MAY BE REASONABLE CONSTRUED AS NECESSARY AS PART OF THE INSTALLATION SHALL BE INCLUDED, WHETHER THAT TOPIC IS SPECIFICALLY SHOWN, MENTIONED, OR NOT. THE EOR SHALL PROVIDE INTERPRETATIONS UPON REQUEST. ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH ALL STATE AND LOCAL CODES AND AMENDED CODES THAT HAVE BEEN ADOPTED BY THE AUTHORITY HAVING JURISDICTION (THE AHJ) OVER THE PROJECT. NOTHING ON THESE PLANS IS TO BE MISCONSTRUED TO PERMIT WORK NOT CONFORMING TO THE CODES AND REGULATIONS APPLICABLE TO THIS PROJECT. THE CODES SHALL DETERMINE THE MINIMUM REQUIRED GUIDELINES FOR MATERIALS, METHODS, AND REQUIRED LABOR PRACTICES NOT OTHERWISE SPECIFIED IN THE SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SITE VOLTAGES PRIOR TO BIDDING AND ORDERING EQUIPMENT. REIMBURSEMENT WILL NOT BE THE RESPONSIBILITY OF THE CLIENT SHOULD THE ELECTRICAL CONTRACTOR INCUR ADDITIONAL COSTS DUE TO SUBSTITUTION OF MECHANICAL EQUIPMENT HAVING ELECTRICAL REQUIREMENTS THAT DIFFER FROM SITE CONDITIONS. THE CONTRACTOR WILL PROVIDE ALL OPERATION AND MAINTENANCE MANUALS, PREVENTATIVE MAINTENANCE MANUALS, AND ANY OTHER DOCUMENTATION NECESSARY TO MAINTAIN ALL PLUMBING AND MECHANICAL EQUIPMENT TO THE OWNER. THE CONTRACTOR WILL PROVIDE, TO THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION, EVIDENCE OF LICENSING, BONDING, AND INSURANCE. THE CONTRACTOR WILL ALSO PROVIDE ANY OTHER NECESSARY ADMINISTRATIVE FUNCTIONS REQUIRED FOR CONTRACTOR'S WORK. 0) THE CONTRACTOR SHALL FURNISH AND INSTALL INDICATED FIXTURES OR THEIR APPROVED EQUALS SHOWN ON THE SCHEDULES OF THESE PLANS. REFER TO THE ARCHITECTURAL DRAWINGS FOR REQUIRED INSTALLATION HEIGHTS AND/OR CLEARANCES. 1) THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL REQUIRED PERMITS AND SERVICE CHARGES. THE CONTRACTOR SHALL COMPLY WITH ALL NECESSARY LICENSING AND PERMITTING REQUIREMENTS THAT ARE ENFORCED BY THE LOCAL BUILDING OFFICIAL UTILITY DISTRICT AND SHALL ATTEND ALL REQUIRED INSPECTIONS FOR THE WORK PERFORMED UNDER THIS CONTRACT. 2) CUT AND PATCH CONCRETE AS REQUIRED. CUTTING OR WELDING OF STRUCTURAL MEMBERS SHALL ONLY BE DONE WITH PRIOR APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD (SEOR). PATCHING SHALL BE SUBJECT TO THE ACCEPTANCE OF THE OWNER. 3) ANY SAW CUT TRENCHES SHALL BE FULLY REPAIRED AND REINFORCED TO PREVENT DROOPING OR SAGGING. ROUGH UP THE EDGED PRIOR POURING NEW CONCRETE TO ENSURE GOOD CONTACT BETWEEN NEW AND EXISTING CONCRETE. 4) CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES TO ENSURE A COMPLETE INSTALLATION. ENSURE CONNECTION OF ALL EQUIPMENT FURNISHED BY OTHERS AS REQUIRED. INSTALLATION OF ALL WORK SHALL BE CLEAR OF STRUCTURAL AND ARCHITECTURAL MEMBERS WHEN POSSIBLE. ABOVE GRADE PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE CLEARANCE FOR DUCTWORK, EQUIPMENT, INSPECTION, AND MAINTENANCE OF SAID EQUIPMENT. 5) CONTRACTOR SHALL RESTORE ANY DAMAGED MATERIALS RESULTING FROM THEIR WORK AND LEAVE THE PREMISES IN GOOD CONDITION WHEN FINISHED WITH THE WORK. CONTRACTOR SHALL ADJUST, REPAIR, REPLACE, OR CLEAN PRODUCTS THAT HAVE BEEN DAMAGED, FINAL APPROVAL OF ADJUSTED, REPAIRED, REPLACED OR CLEANED PRODUCTS SHALL BE DETERMINED BY THE OWNER OR OWNERS REPRESENTATIVE. 6) MINOR ADJUSTMENTS SHALL BE PERMITTED TO BE MADE TO WORK WHERE REQUESTED BY OWNER. WHEN THESE ADJUSTMENTS ARE NECESSARY FOR PROPER OPERATION AND ARE WITHIN THE SCOPE OF THE CONTRACT. NOTIFY APPROPRIATE ARCHITECT AND/OR ENGINEERS OF MODIFICATIONS SO THAT PLANS MAY BE UPDATED TO REFLECT CHANGES. 7) MATERIALS AND EQUIPMENT SHALL BE NEW, OR OF LIKE-NEW CONDITION, COMMERCIAL-GRADE, AND UL-LISTED. FIXTURES SHALL BE SUITABLE FOR THE LOCATIONS AND ENVIRONMENTAL CONDITIONS WHERE THEY ARE TO BE INSTALLED. REUSE EXISTING FIXTURES AND/OR EQUIPMENT ONLY WHEN THEY ARE FOUND TO BE COMPLIANT WITH THE CONTRACT DOCUMENTS, THEY ARE IN ACCEPTABLE CONDITION, AND HAVE BEEN APPROVED BY THE ENGINEER OF RECORD. 8) INSTALLATION OF ALL EQUIPMENT, MATERIALS, AND SYSTEMS SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTALLATION REQUIREMENTS AND INSTRUCTIONS. 19) INSTALL ALL PIPING AND DUCTWORK IN A DIRECT AND LINEAR FASHION TO CREATE AN ORDERLY APPEARANCE. RUN ALL PIPE AND DUCTS PARALLEL TO THE BUILDING CONSTRUCTION AS MUCH AS POSSIBLE. MAINTAIN ADEQUATE CLEARANCE FOR MAINTENANCE, AND GRADIENTS WHERE REQUIRED. PROVIDE ADDITIONAL SPACE FOR EXPANSION AND CONTRACTION WHERE NECESSARY. 20) CONTRACTOR SHALL PROVIDE A THOROUGH AND COMPLETE START-UP TEST OF ALL SYSTEMS, EQUIPMENT, MODIFIED SYSTEMS/EQUIPMENT, TO CLEARLY DEMONSTRATE PROPER OPERATION OF SAID SYSTEMS AND EQUIPMENT, FURNISHED AND/OR INSTALLED FOR THIS CONTRACT. 1) CONTRACTOR SHALL RESTORE ANY DAMAGE THAT HAS RESULTED FROM THE WORK DONE AND LEAVE THE PROJECT SITE CLEAN AND READY FOR OCCUPATION. CLEAN, REPAIR, ADJUST, AND/OR REPLACE ANY ITEMS THAT HAVE BEEN DAMAGED DURING THE COURSE OF THE WORK PERFORMED. RESTORE/REPAIR ANY WALL AND ROOF PENETRATIONS TO MATCH THE EXISTING/SURROUNDING WALL OR ROOF RESPECTIVELY. 22) ALL MATERIALS AND EQUIPMENT PROVIDED AND INSTALLED SHALL BE GUARANTEED FREE FROM MECHANICAL/ELECTRICAL/WORKMANSHIP DEFECTS FOR AT LEAST ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES DONE TO THE PREMISES CAUSED BY BREAKS, LEAKS, AND/OR FAILURES IN FITTINGS AND PIPES INSTALLED UNDER THIS CONTRACT, AS WELL AS ANY DAMAGE RESULTING FROM ROOF PENETRATIONS THAT WERE MADE AND SEALED UNDER CONTRACTOR'S SCOPE OF WORK 3) CONTRACTOR SHALL PROVIDE DRIP PANS UNDER ALL PIPING THAT IS ROUTED ABOVE ELECTRICAL EQUIPMENT. THE PIPING AND DRIP PAN SHALL BE INSTALLED AT LEAST 6' ABOVE THE EQUIPMENT, PER NEC 110.26(E). SHOULD THE 6' CLEARANCE NOT BE ACHIEVABLE, THE PIPING SHALL BE ROUTED AROUND THE FOOT PRINT OF THE EQUIPMENT. THE DRIP PAN SHALL DISCHARGE INTO AN APPROVED FIXTURE OR FIXTURE TAILPIECE. 4) CONTRACTOR SHALL PROVIDE FLOW CONTROL DEVICES ON ALL LAVATORIES. CONTRACTOR SHALL PROVIDE ALL FIXTURES WITH STOP VALVES, SAID STOP VALVES CAN BE INTEGRAL TO THE SUPPLY FITTINGS FOR THE FIXTURE. 25) CONTRACTOR SHALL WRAP HOT WATER PIPING AND WASTE LINES AT EACH ACCESSIBLE SINK, LAVATORY, ETC, WITH 1/2" POLYETHYLENE PIPE INSULATION WITH A MINIMUM R-VALUE OF 3.21 26) CONTRACTOR SHALL INSTALL ALL CLEANOUTS TO BE AIR TIGHT. CLEANOUTS SHALL BE INSTALLED AT THE ENDS OF EVERY WASTE LINE GREATER THAN 10' AND EVERY 100' THEREAFTER TO THE BUILDING CLEAN OUT LOCATED 2' OUTSIDE OF THE FACE OF THE BUILDING. WALL CLEANOUTS SHALL BE INSTALLED AT THE BASE OF EVERY WASTE RISER. 27) ALL NEW WASTE PIPE SHALL BE INSTALLED SUCH THAT THEY MATCH THE EXISTING INVERT ELEVATION. 28) DRILLING THROUGH EXISTING CONCRETE WALLS SHALL BE PERMITTED WHERE REQUIRED TO INSTALL OR REROUTE PLUMBING WORK. ALL PENETRATIONS SHALL BE SEALED TO BE WATER TIGHT. 29) EXISTING PIPING THAT HAS BEEN FOUND TO NOT BE REQUIRED FOR NEW SCOPE OF WORK SHALL BE PERMITTED TO BE CUT, CAPPED AND ABANDONED IN PLACE SO LONG AS IT DOESN'T INTERFERE WITH THE NEW WORK TO BE DONE AND MAINTENANCE OF THE NEW PIPING, DUCTWORK, AND EQUIPMENT. 30) ALL CONTRACTORS (GENERAL CONTRACTOR AND SUB-CONTRACTORS) BIDDING THIS PROJECT ARE REQUIRED TO VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE LISTED BELOW MAY BE CONTACTED FOR ACCESS TO THE JOB SITE. 1) CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF ALL POINTS OF CONNECTION, LOCATION AND CONDITION OF ALL BUILDING (ROOF/FLOOR/CEILING) PENETRATIONS, LOCATION AND CONDITION OF ALL UTILITIES AND BUILDING SYSTEMS INCLUDING, BUT NOT LIMITED TO GAS, WATER, SEWER, VENT, ELECTRICAL, BUILDING MECHANICAL SYSTEMS, DUCT CONNECTIONS, EXHAUST/OUTSIDE AIR CONNECTIONS, SECURITY, FIRE ALARM, DATA, AND PHONE PRIOR TO SUBMISSION OF THEIR BID. 32) ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. 3) PRIOR TO PERFORMING WORK, CONTRACTOR TO COORDINATE PIPE ROUTING WITH ALL OTHER TRADES AND EXISTING FIELD CONDITIONS, EXACT PIPE SIZES, INVERT ELEVATIONS, PRESSURES FOR LOCATIONS OF ANY SEWER, WATER PIPING AND WATER METER WITH CIVIL UTILITIES DRAWINGS, AND ANY OTHER ENGINEER AS APPLICABLE. 34) ALL WATER PIPING SHALL BE INSTALLED ON INTERIOR SIDE OF THE BUILDING WALL INSULATION. 35) CONTRACTOR SHALL PROVIDE VALVES LOCATED ABOVE LAY-IN CEILING OR 24"x24" CEILING ACCESS PANEL COORDINATE FINAL LOCATION AND SIZE WITH ARCHITECT. PROVIDE BALANCING VALVES FOR HOT WATER RETURN SYSTEM AS REQUIRED. PLUMBING SHEET INDEX SHEET # DESCRIPTION P 1.01 PLUMBING COVER SHEET 9 1.02 PLUMBING REQUIREMENTS & CODE ANALYSIS P 1.03 PLUMBING CALCULATIONS, SCHEDULES & GENERAL DETAILS P 2.01 FIRST FLOOR - WATER SUPPLY LAYOUT P 2.02 SECOND FLOOR - WATER SUPPLY LAYOUT P 3.01 FIRST FLOOR - SEWER LAYOUT P 3.02 SECOND FLOOR - SEWER LAYOUT P 4.01 PLUMBING EQUIPMENT DATA SHEETS

REEN PLUMBING REQUIREMENTS

JAGE STORM WATER DRAINAGE DURING CONSTRUCTION BY ONE OF THE FOLLOWING: A. RETENTION GE SYSTEM, WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER APPROVED ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS (SWALES, WATER COLLECTION, DRAINAGE PATH. WER HEADS, THE SUM OF FLOW TO ALL THE HEADS SHALL NOT EXCEED 1.8 GPM @ 80 PSI, OR THE SHOWER THER OR SOIL BASED CONTROLLERS. IN WASTE IS TO BE RECYCLED. ASTE MANAGEMENT PLAN. CONTAINING INFORMATION FOR MAINTAINING APPLIANCES, ETC.) FOR THE OWNER AT THE TIME OF FINAL D- COMBUSTION TYPE. WOOD-STOVE OR PELLET STOVES MUST BE US EPA PHASE II RATED APPLIANCES. 'S SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE ON FOR TANK-TYPE TOILETS. RINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH. ALL OTHER URINALS SHALL NOT EXCEED 0.5 DW RATE OF NOT MORE THAN 2.0 GALLONS PER MINUTE AT 80 PSI. SHOWER HEADS SHALL BE CERTIFIED TO CATION FOR SHOWERHEADS. WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE 2.0 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER A MAXIMUM FLOW RATE OF NOT MORE THAN 0.5 GALLONS PER MINUTE AT 60 PSI. ii) KITCHEN FAUCETS T MORE THAN 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE LLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER HAN 0.20 GALLONS PER CYCLE. THE CALIFORNIA BUILDING STANDARDS COMMISSION AS SPECIFIED IN SECTION 103, THE PROVISIONS OF TIONS OR AREAS OF ALTERATIONS TO THE BUILDING. WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF SYSTEM PRIOR TO FINAL

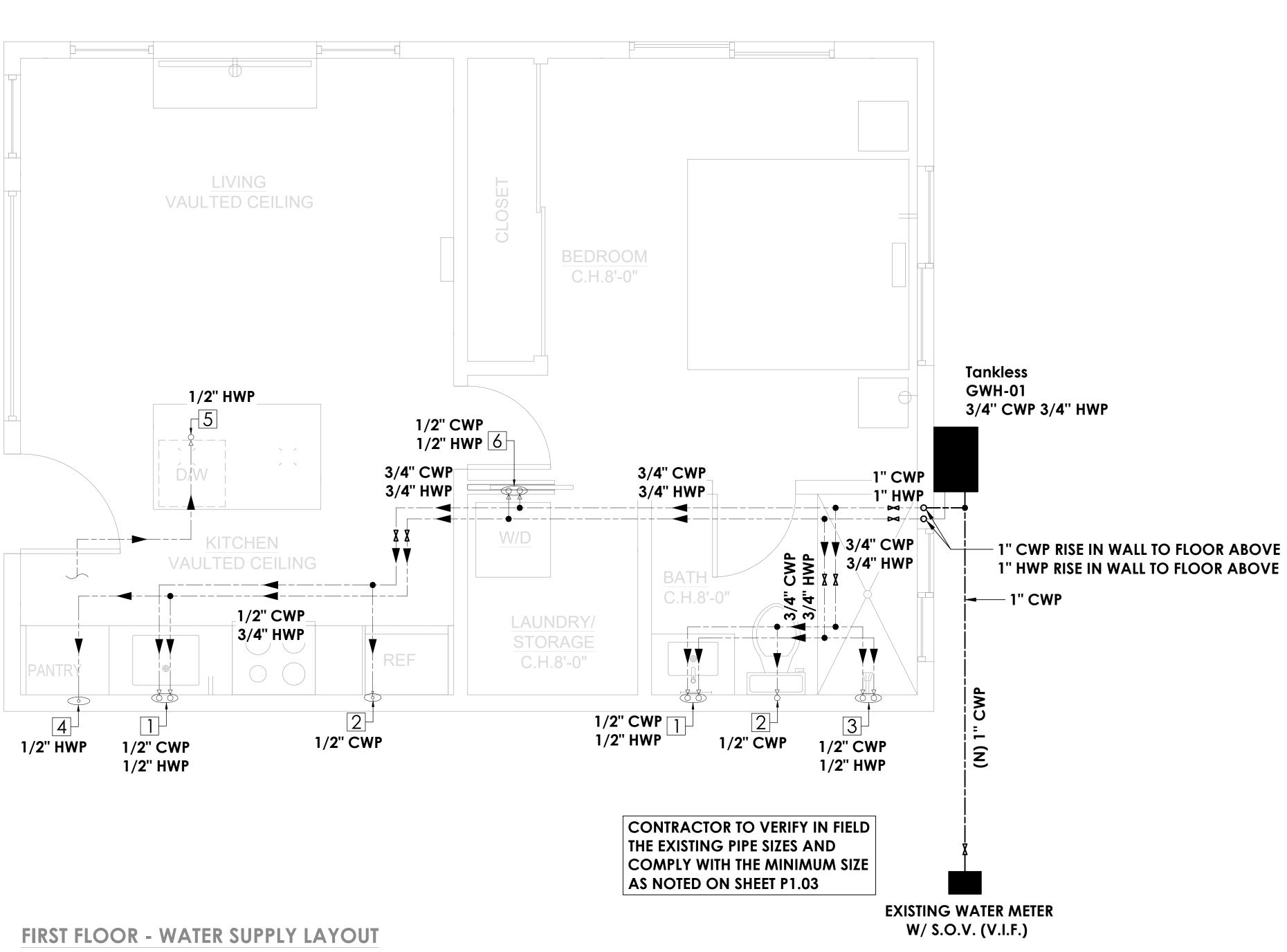
RACTORS

BURT ADU 3163 MADEIRA DR., COSTA MESA, CA 92626	GDI E 3707 (Housto Office:	DIERGE NOVATINO NGINEERING Cypress Creek Park on, TX 77068 346-509-5860 gdiengdesign.com	G SOLU	TIONS
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SHEET NO.

WATER SUPPLY KEY NOTES:

DCW, DHW DROP IN WALL TO FIXTURE.
2 DCW DROP IN WALL TO FIXTURE.
DCW, DHW DROP IN WALL TO FIXTURE WITH TEMP. / PRESSURE BALANCING VALVE.
4
5 DHW FLOOR CONNECTION TO DISHWASHER WITH WATER HAMMER ARRESTOR.
6 DCW, DHW DROP IN WALL TO WASHING MACHINE WITH WATER HAMMER ARRESTORS.



FOR APPLICABLE CODE NOTES, PLEASE REFER TO SHEET P1.02

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WATER SUPPL LAYOU	1	S					
Date: 05.24.2024	PROJ.NO.	_					
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1" HWP RISE IN WALL TO FLOOR ABOVE