

San Joaquin Valley Pulmonary
5801 Truxtun Ave
Bakersfield Ca 93309

#05-1-19504

Klassen Corporation
2021 Westwind Drive
Bakersfield, CA 93301

ADDENDUM NUMBER 01
09/06/19

NOTICE TO CONTRACTORS FIGURING THIS WORK

BID DATE:	Date:	September 9, 2019
	Time:	2:00 PM
	Place:	Klassen Corporation 2021 Westwind Drive Bakersfield, CA 93301

You are hereby notified of the following additions and/or changes in the Plans and Specifications, which shall take precedence over anything contrary therein. Clarifications, revisions and additions are categorized under date headings based upon Pre-Bid Requests for Information received.

Item 1: Refer to the enclosed Plumbing, Mechanical, and Electrical Plans:

- a. **REPLACE:** Replace sheet for sheet within the bid set of PME plans with the enclosed PME plans dated "09/06/19 Addendum 01".

Item 2: Refer to Electrical Plan sheet E5.0:

- a. **CLARIFICATION:** Panels "M" and "XR" are new panels.

Item 3: Refer to Electrical Plan sheet E8.0:

- a. **CLARIFICATION:** One Line Diagram provided.

Item 4: Refer to Electrical Plans:

- a. **CLARIFICATION:** Data cabling to be supported above ceiling by J-Hooks.
- b. **CLARIFICATION:** Using the same manufacture for light fixtures and lighting controls is acceptable. Contractor can provide alternate supplier, as long as it meets to be an equal of what is identified on plans.
- c. **CLARIFICATION:** Please see attached photo of existing fire alarm panel for clarification purposes.
- d. **CLARIFICATION:** There is no demo required at the existing IT room shown on plans (room #147). This equipment is existing to remain; it services the tenants in the existing adjacent space.

Item 5: Refer to Plumbing Plan Sheet P5.0, Detail #1&2:

- a. **CLARIFICATION:** Manifold to provide Oxygen and Nitrous Oxide; Bottle rack to account for (4) total units as shown on plan.
- b. **REPLACE:** 1x1 Manifold identified with code compliant manifold.
- c. **CLARIFICATION:** Medical gas area gas alarm for ONE module to be provided.

Item 6: Refer to Demo Floor Plan on sheet D2.01:

- a. **CLARIFICATION:** Keynote #5 identified on the floor plan should read keynote #4. The shading keynoted is delineating the area existing floor slab to be removed for new construction.
- b. **CLARIFICATION:** Both the flooring and demo subcontractors to provide pricing as add alternates for the removal and storage of the existing carpet.

Item 7: Refer to Site Plan sheet A1.01:

- a. **ADD:** The demo of concrete as needed to install the new warning surface domes as shown. Existing flatwork to be removed.

Item 8: Refer to Floor Plan sheet A2.01:

- a. **CLARIFICATION:** Refer to 'Plan Legend', wall type #5, Lead-lined gyp. Bd. to be 2lb.

Item 9: Refer to Finish Plan sheet A7.01:

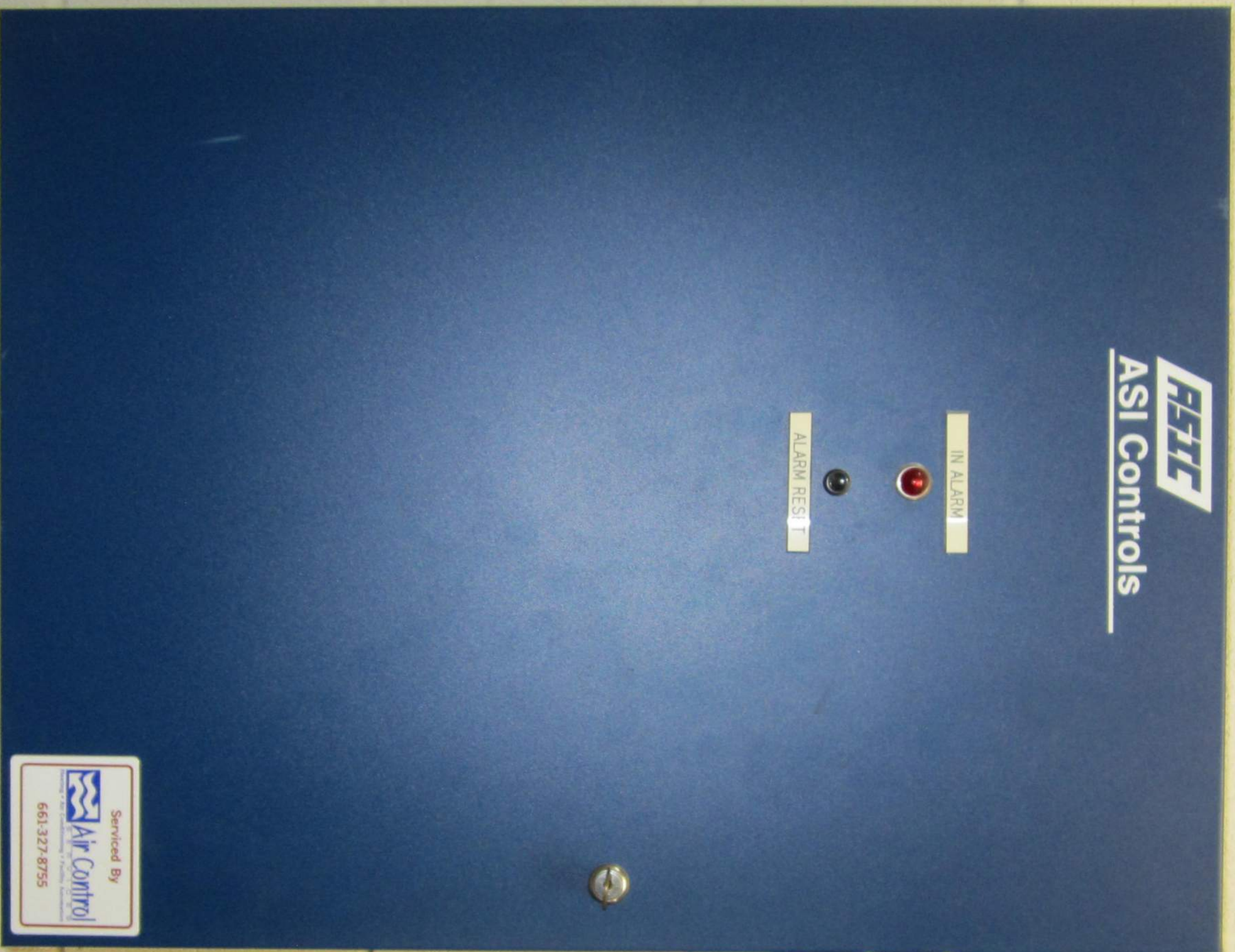
- a. **CLARIFICATION:** Refer to 'WS' door tag; Contractor to field verify door stain finish and match existing stain for new wood doors.
- b. **CLARIFICATION:** Room #146 & #147 flooring is existing to remain, do not remove. Room #145 flooring is existing to be removed, salvaged, and protected for re-installation.
- c. **ADD: Reception room #101 ALL counters to be solid surface quarts; 'Ceasarstone' "Calacatta" price point, or equal.**

Item 10: Refer to Door & Window sheet A7.02:

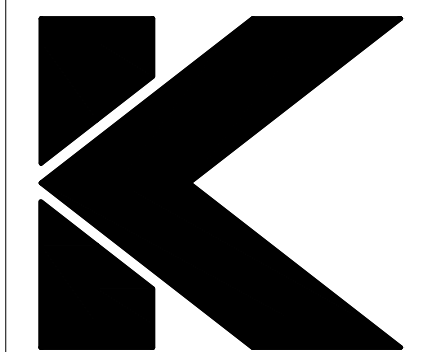
- a. **CLARIFICATION:** Refer to Finish Hardware note #2.2 'Keying Requirements'; Contractor to hire a locksmith for rekeying of existing doors.

END OF ADDENDA 1

 _____
Edgar L. Childres Project Architect 9/6/19 Date



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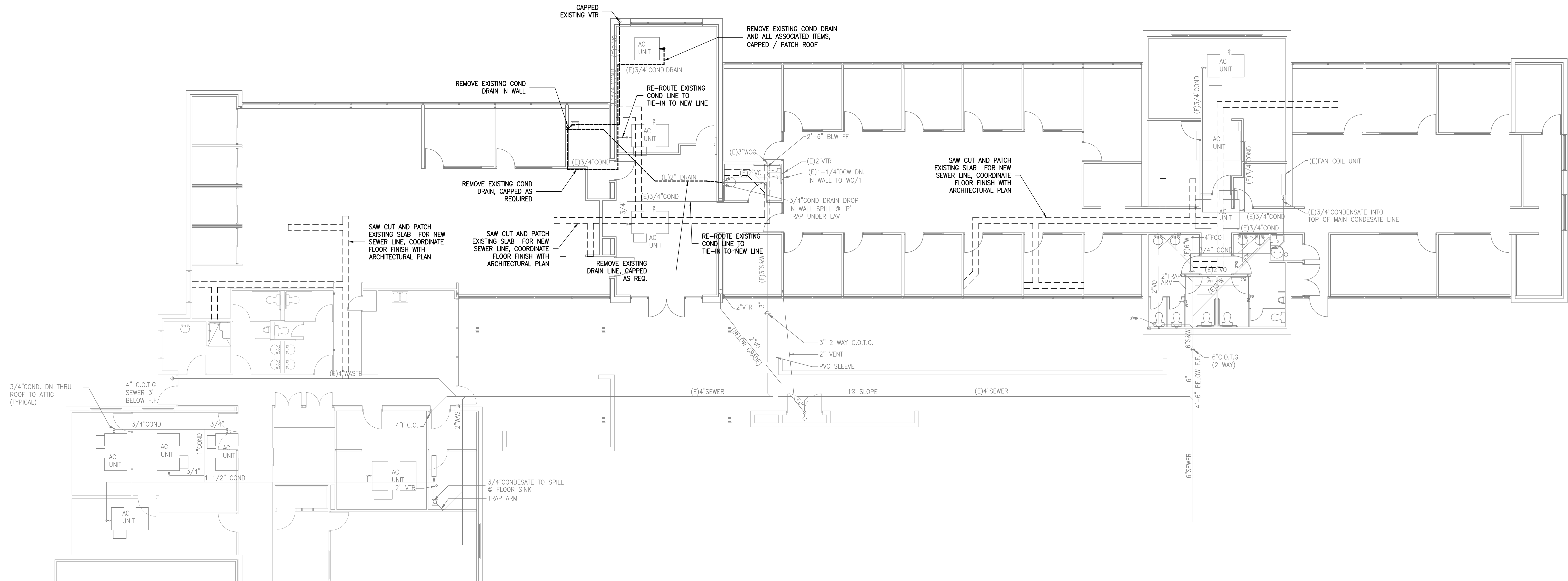
Klassen
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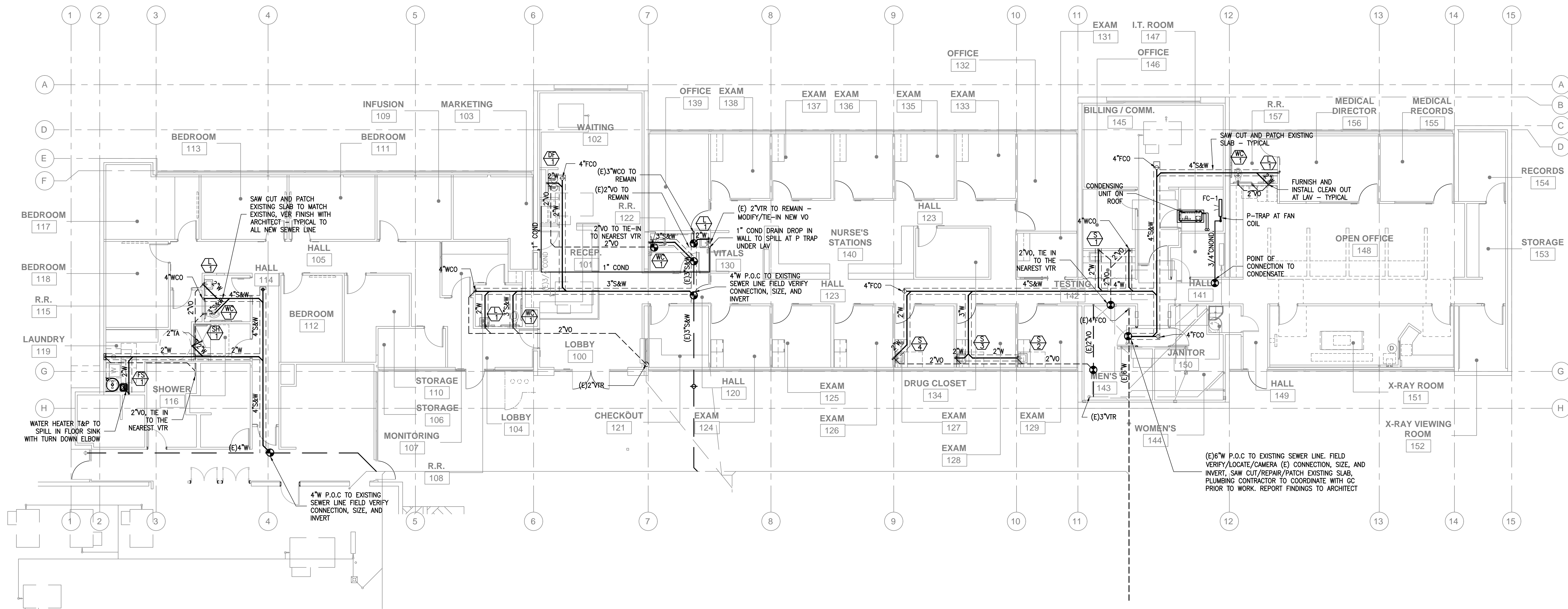
The above drawings and specifications and their design and arrangements represented hereby are and shall remain the property of the architect and no part thereof shall be copied, disclosed to others or used in connection with any work or project other than the specific project for which they have been prepared and developed without the written consent of the architect. Visual contact with these drawings or specifications shall constitute conclusive evidence of acceptance of these restrictions.
Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and the office must be notified of any variations from the dimensions and conditions shown on these drawings. Shop drawings must be submitted to this office for approval before proceeding with fabrication.

TENANT IMPROVEMENTS
SAN JOAQUIN VALLEY PULMONARY
5801 TRUXTUN AVE, BAKERSFIELD CA 933309



PLUMBING DEMOLITION PLAN - SEWER

SCALE: 1/8" = 1'-0"



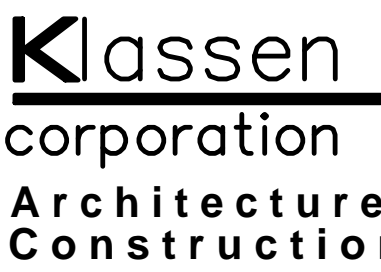
PLUMBING PLAN - SEWER / DRAIN / VENT

SCALE: 1/8" = 1'-0"

DATE	ISSUED FOR	MARK
9/6/19	ADDENDUM 01	1
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Project No. : C19-148
PLUMBING PLANS

P2.0



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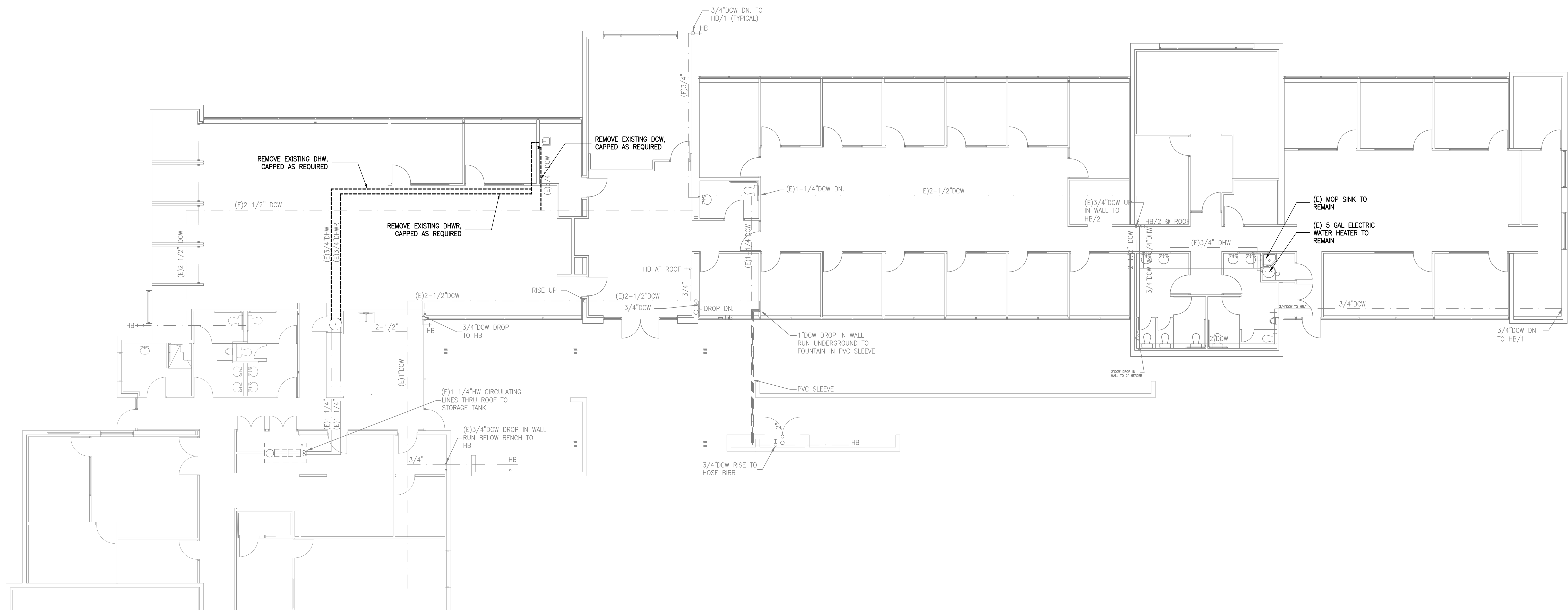
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Project No. : C19-148

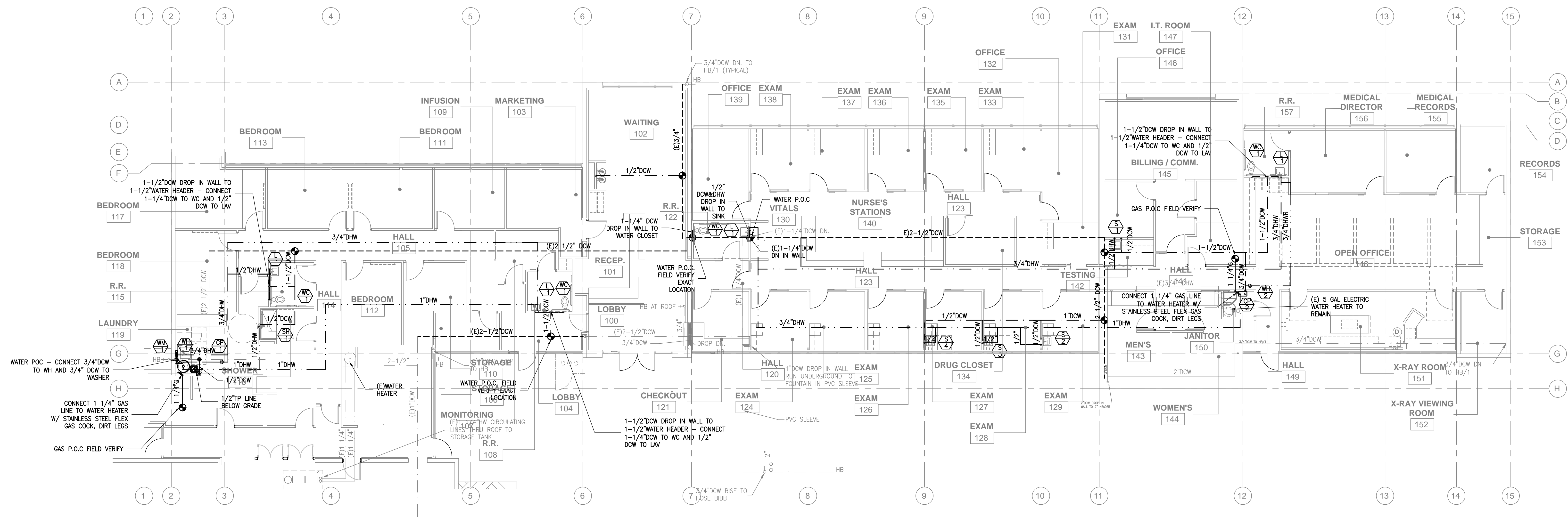
PLUMBING PLANS

P3.0



PLUMBING DEMOLITION PLAN - WATER

SCALE: 1/8" = 1'-0"

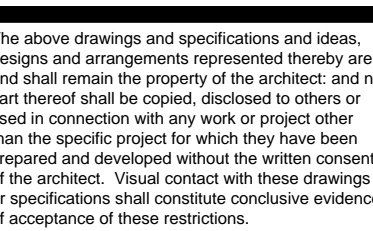


PLUMBING PLAN - DCW / DHW

SCALE: 1/8" = 1'-0"



**2021 Westwind Drive
Bakersfield, CA 93301**

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Any variations from the dimensions and conditions shown by these drawings. Shop details must be submitted to this office for approval before proceeding with fabrication.

TENANT IMPROVEMENTS
SAN JOAQUIN VALLEY PULMONARY
5801 TRUXTUN AVE, BAKERSFIELD CA 933309



SCALE: 1/8" = 1'-0"

WATER SERVICE CALCULATIONS PER CPC 1016				
FIXTURE	NO.	RX. UNIT	TOTAL GCD	TOTAL HOT WATER
WATER CLOSET FV (1.28GPF)	11.0	-	175.0	0.0
URINAL (0.5 GPF)	2.0	-	35.0	0.0
HOSE BIBB	0.0	2.5	0.0	-
HOSE BIBB (ADDITIONAL)	0.0	1.0	0.0	-
LAWN SPRINKLERS	0.0	1.0	0.0	-
WASH/QUATRAIN(CIRCULAR SPRAY)(20GPM)	0.0	4.0	0.0	0.0
TUB/SHOWER	0.0	4.0	0.0	0.0
SHOWER PER HEAD (2.0GPM)	2.0	2.0	4.0	3.0
CLOTHES WASHER	1.0	4.0	4.0	3.0
SERVICE SINK OR MOP BASIN (2 GPM)	1.0	3.0	3.0	2.3
CUNIC FOUNT	0.0	3.0	0.0	0.0
WATER CLOSET GT (1.28GPF)	6.0	2.5	15.0	0.0
DENTAL UNIT CUSPIDOR	0.0	1.0	0.0	0.0
DISHWASHER DOMESTIC	0.0	1.5	0.0	0.0
WASHUP SINK, EACH SET OF FAUCETS	0.0	2.0	0.0	0.0
BAR SINK (1.5GPM)	0.0	2.0	0.0	0.0
KITCHEN SINK (1.8GPM)	3.0	1.5	4.5	3.4
LAUNDRY (2 GPM)	0.0	1.5	0.0	0.0
LAUNDRY (2.0GPM PER CYCLE)	13.0	1.0	13.0	9.8
DRINKING FOUNTAIN OR WATERCOOLER	1.0	0.5	0.5	0.0
TOTAL FIXTURE UNITS			254.0	21.4
TOTAL GPM CPC CHARTS A 103 (1/1) & 103 (1/2)				96.2
MAIN LINE SIZE				3"
WATER METER SIZE				3"
TOTAL ENVELOPED LENGTH (FROM METER TO MOST REMOTE FIXTURE IN FT.)				200.00'
PRESSURE LOSS IN PSI				
TOTAL RISE FOR HEAD LOSS	43 x 10.00			4.3
PSI REQUIRED FOR WATER CLOSET(URINAL, (FV)=15 (FTH=0 PSI)				1.5
PSI FLOW LOSS THROUGH WATER METER CPC CHART A 102.2				5.5
PSI FLOW LOSS THROUGH BACKFLOW PREVENTOR				12.0
TOTAL PRESSURE LOSS IN SYSTEM				
MINIMUM PSI AVAILABLE @ JOB SITE (PLUMBER TO VERIFY)				36.8
REMAINING PSI AVAILABLE (IF NEGATIVE USE BOOSTER PUMP)				21.2
PSI DROP PER 100' AVAILABLE				11.6
CALIFORNIA PLUMBING CODE SECTION 610.12				
DOMESTIC HOT WATER MAX. (8) FOOT PER SECOND				
DOMESTIC HOT WATER MAX. (5) FOOT PER SECOND				

GAS SERVICE CALCULATIONS		
LOW PRESSURE - GPC TABLE 12R (11)		
AC/1	1.0	74,000
AC/2	1.0	125,000
AC/3	1.0	125,000
AC/4	1.0	125,000
AC/5	1.0	74,000
AC/6	1.0	74,000
AC/7	1.0	74,000
AC/8	1.0	74,000
AC/9	1.0	32,800
AC/10	1.0	74,000
WH.1	1.0	195,000
WH.2	1.0	195,000
WATER HEATER 1		120,000
WATER HEATER 2		180,000
EXISTING WATER HEATER		120,000
TOTAL BTU/HR INPUT		1,669,800
TOTAL CFH - BTU/HR (BTU/CF)		1,669.8
MAIN LINE SIZE - GPC TABLE 12-3		3"
WATER COLUMN (SG 60)		
TOTAL ENVELOPED LENGTH		150.0'

WASTE SERVICE CALCULATION			
DRINKING FOUNTAIN OR WATERCOOLER	1.0	0.5	3.0
LAVATORY (25GPM PER CYCLE)	3.0	1.0	4.0
(E) LAVATORY (25GPM PER CYCLE)	10.0	1.0	10.0
KITCHEN SINK (1.8GPM)	1.0	1.5	1.5
(E) KITCHEN SINK (1.8GPM)	2.0	1.5	3.0
SERVICE SINK OR MOP BASIN	1.0	3.0	3.0
(E) JURNAL (0.5 GPF)	2.0	2.0	4.0
(E) SHOWER	1.0	2.0	2.0
SHOWER	1.0	2.0	2.0
(E) WATER CLOSET FV (1.28GPF)	8.0	4.0	32.0
WATER CLOSET FV (1.28GPF)	3.0	4.0	12.0
WATER CLOSET GT (1.28GPF)	6.0	3.0	18.0
FLOOR DRAIN (EMERGENCY)	2.0	0.0	0.0
FLOOR DRAIN	1.0	2.0	2.0
CLOTHES WASHER	1.0	4.0	4.0
			0.0
			0.0
TOTAL FIXTURE UNITS			97.0
MAIN LINE SIZE PER CFS TABLE			4"
BASED ON SLOPE OF 1/4" PER FOOT			
FV - FLUSH VALVE			

PLUMBING FIXTURE SCHEDULE							
MARK	FIXTURE	DOW	DHW	S&W	TRAP	VENT	DESCRIPTION
WC 1	ACCESSIBLE TOILET	1 1/4"	-	4"	INT.	2"	ZURN #Z5665-BWL ECOVANTAGE TOILET - FLOOR MOUNTED - ELONGATED BOWL - ADA 16.75"HT - 1.28 GPF - SIPHON JET ACTION - SLOAN #0111-1.28 BATTERY POWERED SENSOR OPERATED FLUSH VALVE - OLSONITE #95 OPEN FRONT SEAT LESS COVER (2) BOLT CAPS
WC 2	LAVATORY	1/2"	-	2"	1-1/4"	2"	AMERICAN STANDARD LUCERNE #0355.012 - WALL MTD - VITREOUS CHINA - CHICAGO FAUCET #3300-ABCP - 5 GPM, MIN. - LA PATER P-TRAP W/ ACCESSIBLE INSULATION WRAP BY PLUMBEREX "HANDY SHIELD MAXX" #2003 - MEETS AST E84-07 TESTING STANDARD - CHICAGO SUPPLY & STOPS # 1017-ABCP - JR SMITH CARRIER #0723 - VERIFY HOLE DRILLING FOR FAUCET - LAVATORY SHALL BE ADA COMPLIANT & MEET CALGREEN MAX. 4 GPM FLOW RATE (OR EQUIVALE)
CP 1	CIRCULATOR PUMP	-	-	-	-	-	BELL & GOSSETT #BNF-8S/LW CIRCULATOR PUMP - 8.5 GPM @ 8 FT HD - BRONZE CONSTRUCTION - 39 WATTS - 115v - 9 LBS - CONTROL WITH AQUASTAT
FS 1	FLOOR SINK	-	-	2"	2"	2"	PROFLO #PF906K - CAST IRON - DOME BOTTOM STRAINER - NO HUB OUTLET - 2" P" TRAP
TP 1	TRAP PRIMER	1/2"	-	-	-	-	PRECISION PLUMBING PRODUCTS #P2-500 TRAP PRIMER MOUNTED IN WALL BOX WITH HINGED COVER PRIMER LINE BELOW FLOOR TO FLOOR DRAIN (MAX. 4 FLOOR DRAINS PER TRAP PRIMER)
WA 1	TANK WATER HEATER	1-1/2"	1-1/2"	-	-	-	A.O SMITH #6TH-120 MXI GAS WATER HEATER - 60 GAL - 120,000 BTU/HR - 172 GPH AT 80°F RISE, (VERIFY SITE VOLTAGE PRIOR TO ORDERING) PRESSURE RELIEF VALVE, WEIGHT 460 LBS.
SS 1	SINK	3/4"	3/4"	2"	1-1/2"	2"	JUST #SLN-ADA-1921-A-GR - 19"X21"X4" - SINGLE COMPARTMENT TYPE 304 STAINLESS STEEL SELF-RIMMING SINK - JUST #J-35 DRAIN - CHICAGO #350-317CP FAUCET
WA 1	WASHER BOX	3/4"	3/4"	2"	2"	2"	GUY GRAY WASHING MACHINE HOOKUP w/ 1/4 TURN ANGLE STOP, WATER HAMMER ARRESTOR, DRAIN INLET w/P-TRAP PLUMBED INTO WALL, VALVE BOX & FLANGE
WA 2	TANKLESS WATER HEATER	1"	1"	-	-	-	RINNAI #REU-KB023A4FFD-U3X CONDENSING INDOOR TANKLESS WATER HEATER - TEMPERATURE CONTROLLED FORCED COMBUSTION - VIN. 15,200 BTUH & MAX. 180,000 BTUH NATURAL GAS RATE INPUT - .4 TO 9.0 GPM FLOW RATE @ 50°F RISE - WATER TEMP. TO BE SET @ MAX. 120° PLUMBING INSTALLATION KIT - 70 LBS
DF 1	ACCESSIBLE DRINKING FOUNTAIN	1/2"	-	2"	1-1/4"	-	ELKAY #EZ5LBC BARRIER FREE WALL MOUNTED "hi-lo" ELECTRIC DRINKING FOUNTAIN - WALL MOUNTED - DUAL HEIGHT FOUNTAINS - WALL MOUNT SUPPORT CARRIER - PUSH BUTTON OPERATED VANDAL RESISTANT BUBBLER HEADS WITH INTEGRAL LAMINAR ANTI-SQUIRT FLOW - VANDAL RESISTANT FOR WASTE STRAINERS AND BOTTOM PLATES - 18GA. TYPE 304

[illegible]

Project No. : C19-148

PLUMBING
ROOF PLAN,
SCHEDULES

P4.0

GENERAL NOTES

- PIPE JOINTS AND FITTINGS SHALL BE BRAZED BY A CERTIFIED WELDER. VERIFICATION WILL BE REQUIRED. (CPC 1306.0, 1307.0)
- THE MEDICAL GAS SYSTEMS SHALL BE CERTIFIED BY AN INDEPENDENT THIRD PARTY CERTIFICATION AGENCY, WHICH SPECIALIZES IN THIS WORK. THE RESULTS SHALL BE SUBMITTED TO THE LOCAL BUILDING DEPARTMENT. (CPC 1319.12.2)
- TUBES FOR MEDICAL GAS SYSTEM: HARD DRAWN SEAMLESS COPPER ASTM B819 MEDICAL GAS TUBE, TYPE L TUBING SHALL BE CLEANED AND DELIVERED TO THE SITE AND EITHER CAPPED OR PLUGGED. FITTINGS, VALVES, AND OTHER DEVICES SHALL BE CLEANED, SEALED, AND MARKED PRIOR TO DELIVERY TO THE SITE. (CPC 1308.3/1308.4) TYPE K SHALL BE USED WHERE OPERATING PRESSURE EXCEED A GAUGE PRESSURE OF 180 PSI AND THE PIPE SIZES EXCEED DN80 (3 1/8 INCHES O.D.)
 - MEDICAL GAS TUBE SHALL BE IDENTIFIED BY THE MANUFACTURER'S MARKING "OXY," "MED," "OXY/MED," "OXY/ACR," OR "ACR/MED" IN BLUE (TYPE L) OR GREEN (TYPE K).
- PIPING SHALL BE CUT SQUARE, DEBARRED, AND CLEANED THOROUGHLY. NO FLEXIBLE CONNECTIONS EXCEPT WHERE ABSOLUTELY NECESSARY. (CPC 1309.3.5)
- MEDICAL GAS AND VACUUM PIPING SHALL NOT BE INSTALLED IN KITCHENS OR ELECTRICAL SWITCHGEAR ROOMS. (CPC 1310.4.1)
- VALVES: (CPC 1312.0)
 - SHALL BE 3-PIECE FULL WAY BALL VALVES WITH BRAZED EXTENSIONS AND OPEN/CLOSE WITH 1/4 TURN OF THE HANDLE.
 - SHALL BE OIL-FREE AND LABELED.
 - INSTALLED DOWN STREAM OF SUPPLY SOURCE, AT EACH MANIFOLD, AT EACH PIECE OF EQUIPMENT, AND OUTSIDE EACH OPERATING ROOM.
 - AT THE SOURCE OF SUPPLY AND AT EACH SUPPLY MANIFOLD, LOCATED UPSTREAM OF THE BUILDING SUPPLY VALVE IN THE IMMEDIATE VICINITY OF THE SOURCE EQUIPMENT.
 - ZONE VALVES SHALL BE IN ENCLOSURES WITH TRANSPARENT, COLOR CODED, REMOVABLE WINDOWS AND INSTALLED WITHIN ALL NURSING STATIONS, INSIDE EACH SPECIAL CARE AREA, AND IN ANESTHETIZING AREAS OR ROOMS.
- EACH SYSTEM SHALL HAVE A PRESSURE RELIEF VALVE SET AT 50% ABOVE NORMAL OPERATING PRESSURE. (CPC 1316.2.1)
- PRESSURE GAUGES ARE TO BE INSTALLED IN THE MAIN LINE ADJACENT TO AN ALARM ACTIVATING SWITCH AND SHALL BE LABELED AND READABLE FROM A STANDING POSITION. (CPC 1316.3)
- ALL PIPING, VALVES, AND MANIFOLDS SHALL BE PERMANENTLY LABELED WITH LETTERS 3/8" MINIMUM IN HEIGHT EVERY 20', ONCE IN EACH ROOM, AT OUTLETS AND INLETS, AND ON EACH SIDE OF A BARRIER. VALVES AND MANIFOLDS SHALL HAVE METAL TAGS. (CPC 1310.11) COLOR CODES SHALL BE PER CPC TABLE 1305.1 FOR COLORS.

A. OXYGEN - COLORS (BACKGROUND/TEXT) GREEN/WHITE OR WHITE/GREEN
- ALARM SYSTEMS SHALL HAVE AN AUDIBLE AND NON-CANCELABLE VISUAL SIGNAL FOR EACH SYSTEM WITH TWO SEPARATE PANEL LOCATIONS, ONE TO BE UNDER CONSTANT SURVEILLANCE. (CPC 1318.2)
- TESTING: (CPC 1319.5)
 - ALL PIPING TO BE CLEANED AND PURGED PRIOR TO TEST AND TESTING TO BE WITH OIL-FREE NITROGEN.
 - TEST AT ROUGH TO BE 1 1/2 TIMES WORKING PRESSURE OR 150 PSIG, WHICHEVER IS GREATER.
 - TEST AT FINAL TO BE 24-HOUR STANDING PRESSURE AT 20% ABOVE NORMAL OPERATING PRESSURE WITH NO PRESSURE LOSS.
 - RETEST REQUIRED IF THERE ARE ANY LEAKS.
 - JOINTS MAY BE REPAIRED ONLY ONCE.
- SYSTEMS CERTIFICATION SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING AGENCY TO CERTIFY THAT SYSTEMS COMPLEES WITH SECTION 1320.0. THE RESULTS SHALL BE SUBMITTED TO THE CITY OF BAKERSFIELD BUILDING DEPARTMENT PLUMBING SECTION PRIOR TO FINAL INSPECTION. (CPC 1320.0)
- MEDICAL GAS ROOMS WHICH CONTAIN OTHER THAN PRESSURIZED ATMOSPHERIC AIR AND VACUUM SYSTEMS SHALL HAVE ELECTRICAL EQUIPMENT THAT MEETS THE REQUIREMENTS OF CEC 501 FOR CLASS 1, DIVISION 2, AND ROOM THAT USE MEDICAL GAS SHALL MEET THE REQUIREMENTS FOR CLASS 1, DIVISION 1.
- PIPING RISERS SHALL BE INSTALLED IN PIPE SHAFTS WHERE PROTECTED FROM PHYSICAL DAMAGE, EFFECTS OF EXCESSIVE HEAT, CORROSION, OR CONTACT WITH OIL. (NFPA 99-5.1.10.11.3.1)
- EXPOSED PIPING IN DAMP LOCATION: IN DAMP LOCATIONS, COPPER TUBE HANGERS OR SUPPORT THAT ARE IN CONTACT WITH TUBE SHALL BE PLASTIC-COATED OR OTHERWISE BE ELECTRICALLY INSULATED FROM THE TUBE BY A MATERIAL THAT WILL NOT ABSORB MOISTURE. (NFPA 99-5.1.10.11.4.4.5.3.6.12.4)
- PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE. HANGERS AND SUPPORTS FOR COPPER TUBE SHALL BE IN ACCORDANCE WITH CPC TABLE 1310.5.4(1). HANGER SPACING AT 5 FEET ON CENTER. MAXIMUM SUPPORT SPACING FOR PLASTIC PIPE SHALL BE IN ACCORDANCE WITH CPC TABLE 1310.5.4(2). HANGER SPACING AT 4 FEET ON CENTER.

IN-LINE SHUTOFF VALVE(S) SHALL BE LABELED IN SUBSTANCE AS FOLLOW:

CAUTION
IN-LINE SHUTOFF VALVE FOR THE
(MEDICAL GAS / VACUUM NAME)
DO NOT CLOSE EXCEPT IN EMERGENCY
THIS VALVE CONTROL SUPPLY TO
(NAME OF THE AREA/BUILDING
SERVED BY THE PARTICULAR VALVE)

MAIN LINE VALVE(S) SHALL BE LABELED IN SUBSTANCE AS FOLLOW:

01 MAIN LINE VALVE FOR THE
(MEDICAL GAS/VACUUM NAME)
SERVING
(NAME OF BUILDING)

RISER VALVE(S) SHALL BE LABELED IN SUBSTANCE AS FOLLOW:

02 RISER FOR THE
(MEDICAL GAS/VACUUM NAME)
SERVING
(NAME OF AREA/BUILDING
SERVED BY THE PARTICULAR
RISER)

SERVICE VALVE(S) SHALL BE LABELED IN SUBSTANCE AS FOLLOW:

03 SERVICE VALVE FOR THE
(MEDICAL GAS/VACUUM NAME)
SERVING
(NAME OF AREA/BUILDING
SERVED BY THE PARTICULAR
VALVE)

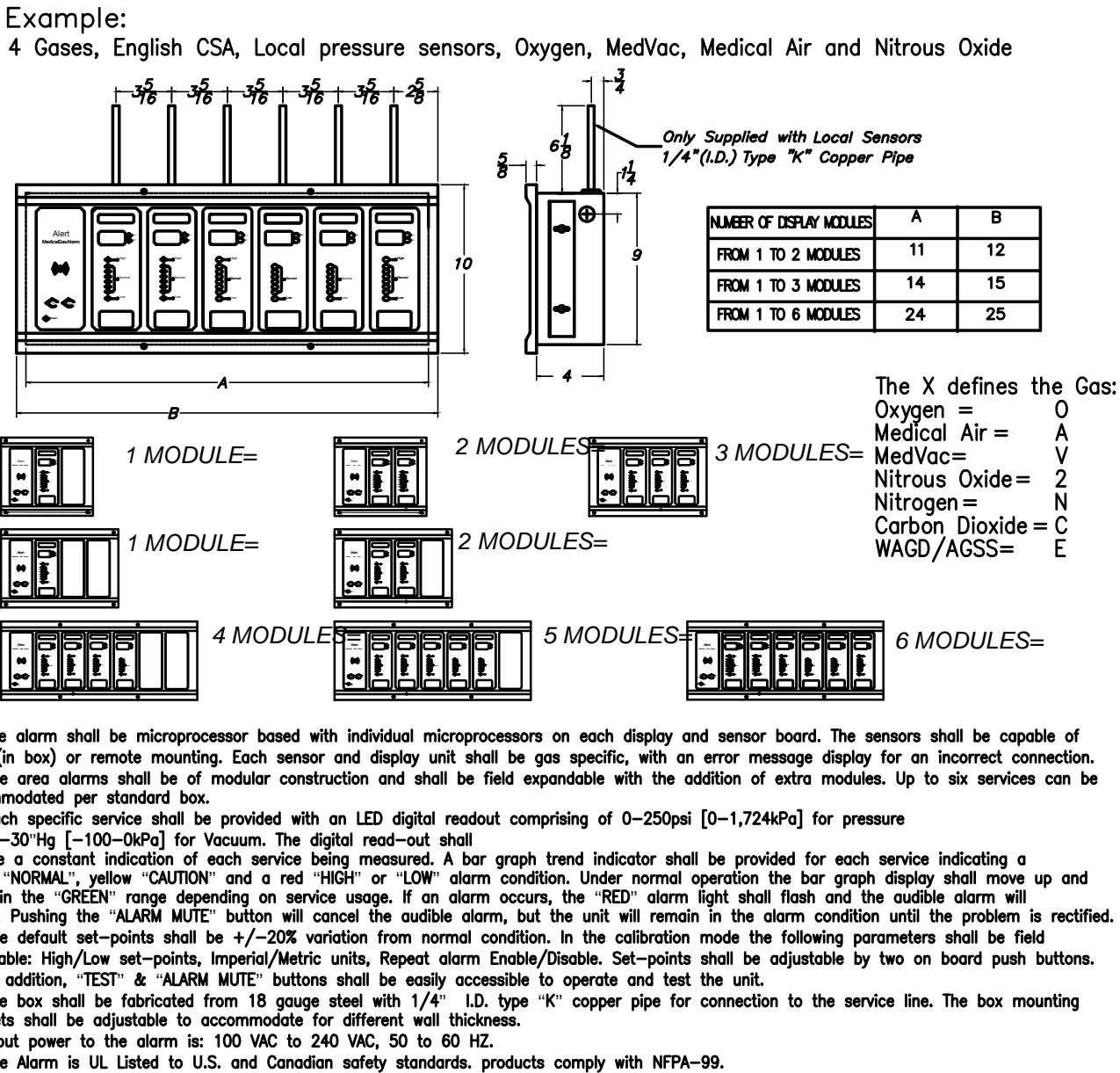
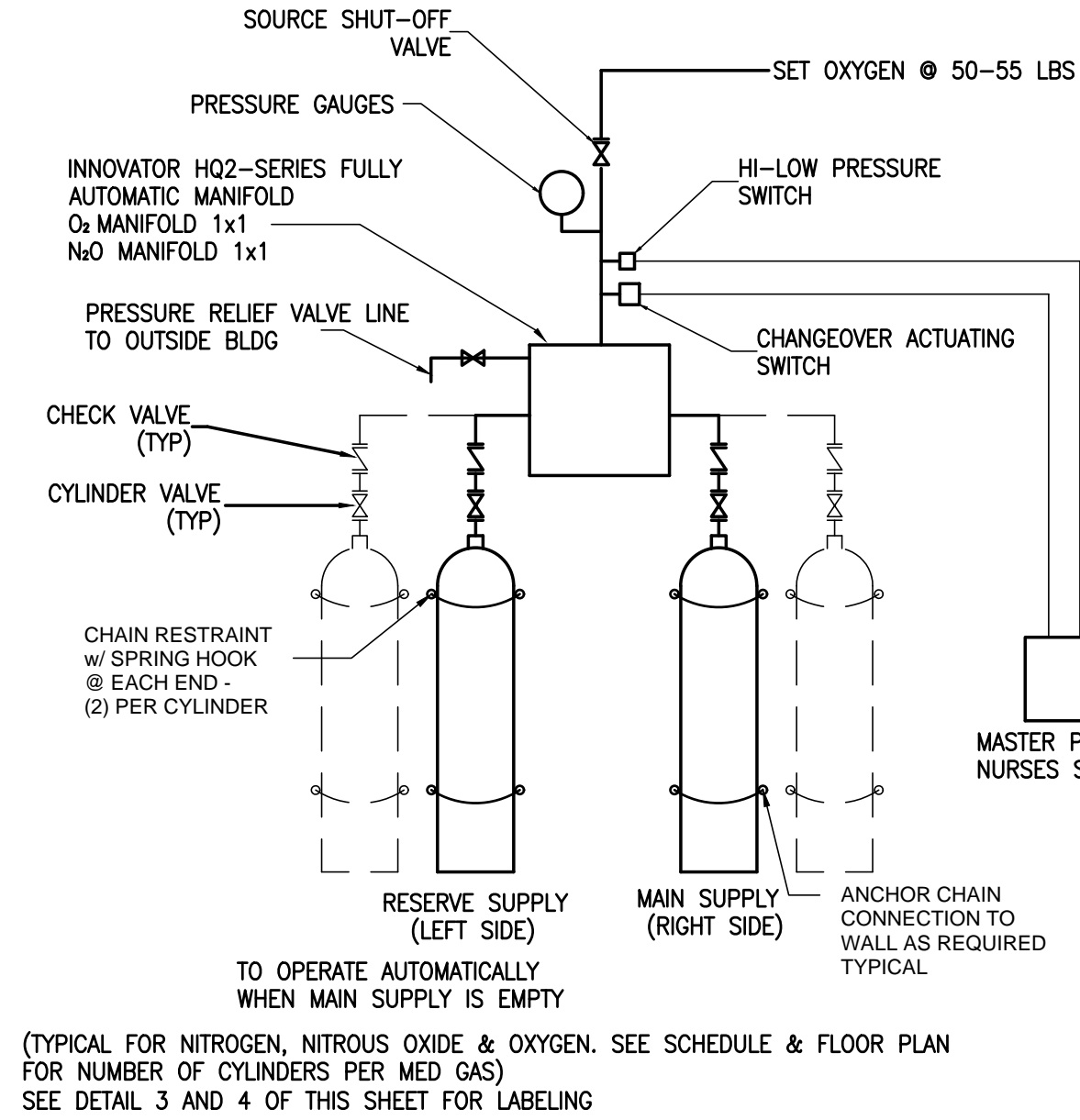
4 LABELING

3 LABELING

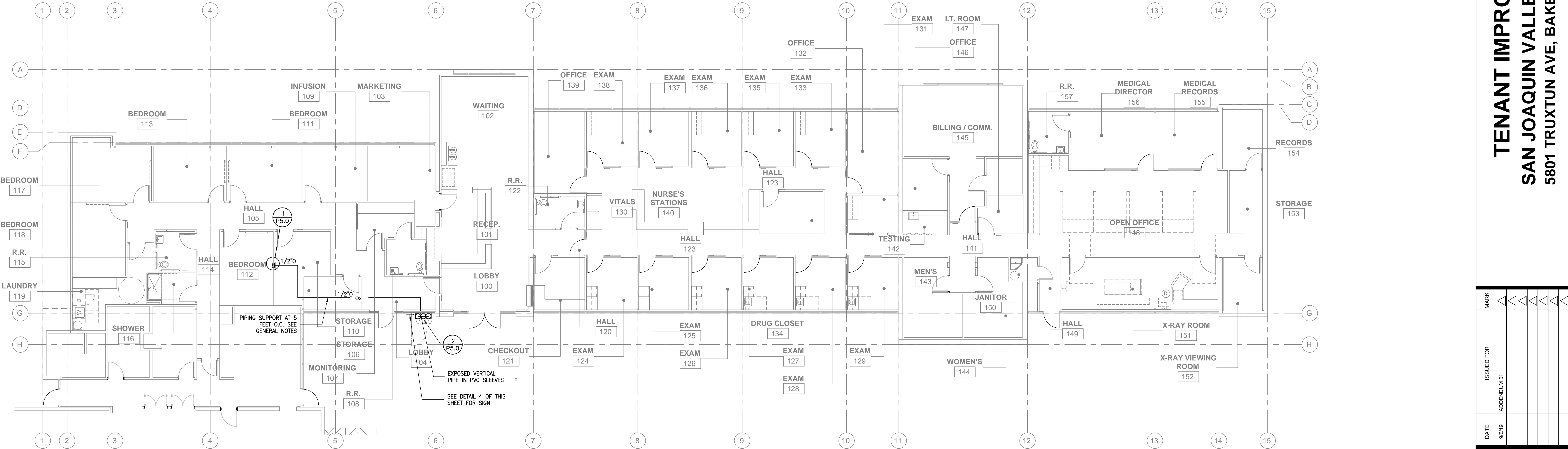
2 O2 AND N2O PIPING

N.T.S. 1 MULTIPLE ZONE VALVE BOX

N.T.S.



- Example:
4 Gases, English CSA, Local pressure sensors, Oxygen, MedVac, Medical Air and Nitrous Oxide
- The X defines the Gas:
Oxygen = O
Medical Air = A
MedVac = V
Nitrogen = N
Carbon Dioxide = C
WAGO/AGSS = E
- 1) The alarm shall be microprocessor based with individual microprocessors on each display and sensor board. The sensors shall be capable of local (in box) or remote mounting. Each sensor and display unit shall be gas specific, with an error message display for an incorrect connection.
2) The area alarms shall be of modular construction and shall be field expandable with the addition of extra modules. Up to six services can be accommodated per manifold box.
3) Each specific service shall be provided with an LED digital readout comprising of 0-250psi (0-1724kPa) for pressure and 0-30"hg (0-1000kPa) for Vacuum. The digital read-out shall provide a constant indication of each service being measured. A bar graph trend indicator shall be provided for each service indicating a green "NORMAL", yellow "CAUTION" and a red "HIGH" or "LOW" alarm condition. Under normal operation the bar graph display shall move up and down in the "GREEN" range depending on service usage. If an alarm occurs, the "RED" alarm light shall flash and the audible alarm will sound. Pushing the "ALARM MUTE" button will cancel the audible alarm, but the unit will remain in the alarm condition until the problem is rectified.
4) The default set-points shall be 1/2-225 variation from normal condition. In the calibration mode the following parameters shall be field adjustable: High/Low set-points, Imperial/Metric units, Repeat alarm Enable/Disable. Set-points shall be adjustable by two on board push buttons.
5) In addition, "TEST" & "MUTE" buttons shall be easily accessible to operate and test the unit.
6) The box shall be fabricated from 18 gauge steel with 1/4" LD, type "K" copper pipe for connection to the service line. The box mounting brackets shall be adjustable to accommodate for different wall thicknesses.
7) Input power to the alarm is 100 VAC to 240 VAC, 50 to 60 HZ.
8) The Alarm is UL Listed to U.S. and Canadian safety standards, products comply with NFPA-99.



PLUMBING PLAN - MEDICAL GAS(OXYGEN)

SCALE: 1/8" = 1'-0"

TENANT IMPROVEMENTS
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MARK	◀◀◀◀◀◀
ISSUED FOR	ADDENDUM 01
DATE	9/6/19

Project No. : C19-148
PLUMBING PLAN -
MEDICAL GAS
(OXYGEN)

P5.0

		<p>VENT THRU ROOF TO TERMINATE NOT LESS THAN (10) FEET FROM OR AT LEAST (3) FEET ABOVE ANY WINDOW, DOOR, OPENING, AIR-INTAKE OR VENT SHAFT, NOR LESS THAN (3) FEET IN EVERY DIRECTION FROM ANY LOT LINE: ALLEY AND STREET EXCEPTED.</p> <p>AGGREGATE VENT AREA TO BE EQUAL TO REQUIRED SEWER SIZE PER C.P.C. 2007 SEC. 904.1 SEE PLUMB. SHTS.</p> <p>FOR VENT THRU ROOF SEAL WATER TIGHT ALL AROUND PIPE</p> <p>24GA. GALV. S.M. FLASHING</p> <p>ROOF</p> <p>PIPE THRU ROOF</p> <p>VENT THRU ROOF</p>	<p>EQUIP MFG'S VENT CAP TO MEET ALL LOCAL CODES & CMC</p> <p>STORM COLLAR</p> <p>24 GA FLASHING</p> <p>FLASHING TO BE SEALED TO ROOF AS PER ROOFING MFG'S REC</p> <p>2x BLOCKING (TYP)</p> <p>SUPPORT VENT PIPE AS PER MFG'S REC</p> <p>PVC INTAKE/COMBUSTION AIR</p> <p>PVC VENT/EXHAUST</p> <p>NOTE! INTAKE/COMBUSTION AIR & VENT/EXHAUST TO BE SIZED & INSTALLED PER MFG'S RECOMMENDATIONS FOR LENGTH OF RUN, NUMBER OF ELBOWS ETC.</p> <p>TERMINATION POINT SHALL BE AT LEAST 3 FT ABOVE ANY FORCED AIR INLET INTO THE BLDG LOCATED WITHIN 10 FT. AND SHALL BE 4 FT AWAY FROM THE PROPERTY LINE.</p>	<p>INTAKE/EXHAUST THRU ROOF SEE PLAN - INSTALL AS PER MFG'S REC.</p> <p>GATE VALVE (TYP.)</p> <p>D.H.W. - SEE PLAN FOR SIZE</p> <p>TEMP CONTROL VALVE</p> <p>1 1/4" TEMPERED WATER TO HAND SINK</p> <p>18 GA x 2" GALV. STRAP w/ 3/8"x3" LAG OR "REDHEAD" ANCHOR TO STRUCTURE (TYP-2)</p> <p>SECONDARY DRAIN PAN</p> <p>GAS SUPPLY w/ GAS COCK (IF USED) SEE PLAN FOR SIZE</p> <p>COLD WATER VACUUM BREAK PER CPC 2007.7 INSTALL AT HIGH POINT</p> <p>DOW - SEE PLAN FOR SIZE</p> <p>GATE VALVE (TYP.)</p> <p>CK. VALVE (TYP.)</p> <p>AMTROL 5 GAL. EXPANSION TANK ANCHORED TO WALL (2) 1/2"x3" HILTI'S</p> <p>3/4" RELIEF LINE TO SPILL OUT SIDE PER CPC 2007 SECTION 608.5</p> <p>CONSTRUCT ANGLE RESTRAINT @ SIDE TO PREVENT LATERAL MOVEMENT (TYP-2)</p> <p>SECONDARY DRAIN LINE</p>	
17	13	9 VENT/PIPE THRU ROOF	5 WH CONCENTRIC VTR	1 WATER HEATER PIPING & MOUNTING N.T.S.	
		<p>1/2" TRAP PRIMER SUPPLY</p> <p>DOMESTIC WATER LINE</p> <p>FULL-PORT SHUT OFF VALVE</p> <p>TRAP PRIMER VALVE</p> <p>PROVIDE ACCESS DOOR AT T.P. ASSEMBLY</p> <p>1/2" TRAP PRIMER LINE FLOOR DRAIN SEE DETAIL 6</p> <p>FLOOR SLAB</p> <p>SLEEVE THRU SLAB</p> <p>APPROVED AIR GAP OUTLET SIDE OF TRAP PRIMER [CPC, 1007 & 607.7]</p> <p>DISTRIBUTION UNIT. FOR S LINES</p>	<p>MAY EXTEND AS WASTE OR VENT</p> <p>CLEANOUT FLUSH TO FINISH WALL</p> <p>CLEANOUT PLUG</p> <p>COUNTERSUNK SCREW</p> <p>POLISHED S.S. ACCESS COVER</p> <p>C.I. CLEANOUT TEE</p> <p>FOR WALL CONSTRUCTION SEE ARCH. DRAWINGS</p> <p>WASTE LINE LENGTH TO SUIT</p> <p>COMBINATION 1/8" BEND AND "WYE"</p> <p>CONCRETE ENCASEMENT</p> <p>WASTE LINE</p> <p>V.C. STOPPER AT END OF LINE AS NEEDED</p> <p>FLOW</p>	<p>NOTE:</p> <p>1. FITTINGS FOR CLEANOUT SHALL BE SUITABLE FOR PIPE MATERIALS USED</p> <p>2. 2-WAY COTG IS SIMILAR INSTALL 2 GOTG IN OPPOSING FLOW DIRECTIONS - TYP.</p> <p>COVER</p> <p>FINISHED FLOOR</p> <p>CLEANOUT PLUG AND BODY. SEE SPECIFICATIONS</p> <p>ADJUSTING COLLAR</p> <p>RISER</p> <p>1/8 BEND FULL SIZE, 4" MAX.</p> <p>PLUG IF END OF LINE</p> <p>V.C. STOPPER AT END OF LINE</p> <p>CONCRETE ENCASEMENT</p> <p>FLOW</p>	<p>CLEANOUT PLUGS & AT EACH CHANGE IN DIRECTION TOWARDS DISCHARGE.</p> <p>FULL SIZE VENT (OPEN END)</p> <p>12"</p> <p>45 DEG. CUT.</p> <p>SPILL TO DRAIN, OR GRADE VIA SPLASH BLOCK</p> <p>ROUTE DRAIN PIPING TO CLOSEST FLOOR OR HUB DRAIN UNLESS ROUTING TO FARTHER FLOOR OR HUB DRAIN PREVENTS A TRIP HAZARD OR ACCESS INTERFERENCE TO EQUIP. SIZE SHALL BE FULL SIZE OF AIR HANDLING UNIT'S DRAIN OUTLET, UNLESS NOTED OTHERWISE. SIZE SHALL BE 1" FOR DUCT-MOUNTED COOLING COILS, UNLESS NOTED OTHERWISE.</p> <p>"A" SHALL BE EQUAL TO THE PLENUM NEGATIVE STATIC PRESSURE.</p> <p>"B" SHALL BE EQUAL TO 1/2 THE PLENUM MAX. NEGATIVE STATIC PRESSURE.</p> <p>PIPE MATL: DWV CLASS PVC OR TYPE M COPPER</p> <p>COUPLING OR UNION FOR LONG DRAIN LINES.</p> <p>DRAIN LINE PIPING SHALL NOT INTERFERE WITH ACCESS TO EQUIP.</p> <p>COOLING COIL DRIP PAN DRAIN.</p>
18	14 TRAP PRIMER N.T.S.	10 WALL CLEAN OUT (WCO) N.T.S.	6 FLOOR CLEANOUT (FCO) N.T.S.	2 CONDENSATE DRAIN PAN	
		<p>BUILDING EXTERIOR WALL</p> <p>FINISH GRADE</p> <p>BUILDING FOOTING</p> <p>EXISTING SLAB</p> <p>FINISH FLOOR</p> <p>4" CONCRETE SLAB</p> <p>#4 REBAR AT 24" OC EMBEDDED 4" TO EXISTING SLAB WITH CONCRETE EPOXY</p> <p>PIPE TRENCH</p> <p>BACKFILL</p> <p>UNDISTURBED SOIL</p> <p>SEWER PIPE</p> <p>BOTTOM OF TRENCH</p> <p>PER. 2016 C.P.C.</p> <p>ALL TRENCHES DEEPER THAN THE FOOTING OF ANY BUILDING OR STRUCTURE AND PARALLELING THE SAME SHALL BE AT LEAST FOURTY-FIVE (45) DEGREES (075.00) THERE FROM, UNLESS PERMISSION IS OTHERWISE GRANTED BY THE ADMINISTRATIVE AUTHORITY.</p>		<p>COMBUSTION AIR PIPE</p> <p>WH/1</p> <p>CONDENSATE COLLECTOR MUST BE INSTALLED WITHIN 5'-0" OF CONTINUUM 2402</p> <p>CONDENSATE COLLECTOR (TO FLOOR DRAIN)</p> <p>VENTS EXTENSION</p> <p>VERTICAL DISCHARGE ADAPTER</p> <p>ROOF TERMINAL ASSEMBLY</p> <p>ROOF DECK</p> <p>EXHAUST PIPE</p> <p>NOTES:</p> <p>1. INSTALL 1 PIPE CLAMP ADJACENT TO EACH JOINT IN THE VENTING SYSTEM.</p> <p>2. TOTAL "EQUIVALENT LENGTH" OF VENT SYSTEM IS LIMITED TO 41' EQUIVALENT LENGTH, WHERE A 90 DEG. ELBOW IS EQUIVALENT TO 6' OF VENT PIPE AND A 45 DEG. ELBOW IS EQUIVALENT TO 1.5' OF VENT PIPE.</p> <p>3. REGARDLESS OF THE CALCULATED "EQUIVALENT LENGTH" OF VENT SYSTEM, THE MAXIMUM HEIGHT FROM TOP THE WATER HEATER TO THE TOP OF THE HIGHEST POINT IN THE VENT SYSTEM IS LIMITED TO 21 FEET.</p>	
19	15	11 TRENCH DETAIL		3 TANKLESS WATER HEATER FLUE N.T.S.	
				<p>WALL</p> <p>LAVATORY</p> <p>NEOPRENE HOSE & CLAMP</p> <p>SEE ARCH. SHEETS</p> <p>SLIP JOINT FITTING</p> <p>PROTECTIVE WRAP @ HW SUPPLY & "P" TRAP ADA COMPLAINT</p> <p>TRAP</p> <p>SEE ARCH. SHEETS</p> <p>FIN. FLR.</p> <p>2'-5" MIN. SEE ARCH. SHEETS FOR MOUNTING HT.</p>	
20	16	12 FLOOR DRAIN	8 FLOOR DRAIN	4 CONDENSATE TO TAILPIECE	

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Written dimensions on these drawings shall have precedence over scaled dimension. Contractors shall verify and be responsible for all dimensions and conditions on the job and the office must be notified of any variance from the dimensions and conditions shown on the drawings. The drawings must be submitted to this office for approval before proceeding with fabrication.

TENANT IMPROVEMENTS
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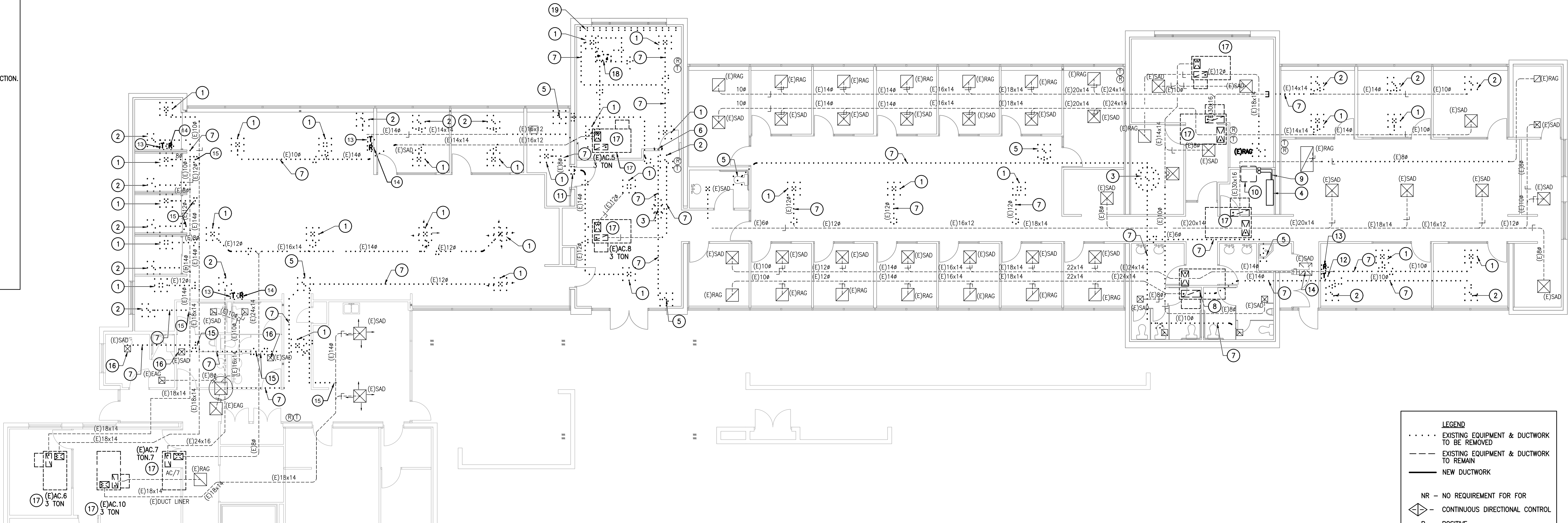
Project No. : C19-148

PLUMBING
DETAILS

P6.0

DEMOLITION KEYNOTES.

- 1 REMOVE (E) SAD, CAPPED, EXTEND AND MODIFY DUCTS AS REQUIRED. SEE MECHANICAL FLOOR PLAN FOR NEW LAYOUT.
- 2 REMOVE (E) RAG, CAPPED, EXTEND AND MODIFY DUCTS AS REQUIRED. SEE MECHANICAL FLOOR PLAN FOR NEW LAYOUT.
- 3 REMOVE (E) EXHAUST FAN
- 4 (E) 2 TON WALL MOUNTED FAN COIL TO REMAIN
- 5 REMOVE (E) EAG
- 6 REMOVE (E) WALL MOUNTED EAG ABOVE CEILING
- 7 REMOVE (E) DUCT, MODIFY/CAPPED AS REQUIRED.
- 8 CAPPED (E) RA DTR TRANSITION FROM (E) AC UNIT RA CONNECTION.
- 9 (E) REFRIG PIPING CONNECTION TO (E) FAN COIL TO REMAIN
- 10 (E) 2 TON CONDENSING UNIT AT ROOF TO REMAIN.
- 11 CAPPED (E) SA DROP IN STUD WALL
- 12 RELOCATE (E) THERMOSTAT AND ALL ASSOCIATED ITEM - SEE MECHANICAL FLOOR PLAN FOR NEW LOCATION
- 13 RELOCATE (E) SMOKE DETECTOR AND ALL ASSOCIATED ITEM - SEE MECHANICAL FLOOR PLAN FOR NEW LOCATION
- 14 CUT/CAPPED DISCONTINUE PORTION OF EXISTING DUCT.
- 15 DISCONNECT SECTION OF (E) DUCT, CAPPED END JOINT.
- 16 EXISTING SAD TO REMAIN, SEE MECHANICAL FLOOR PLAN FOR NEW DUCT LAYOUT.
- 17 EXISTING AC UNIT TO REMAIN
- 18 REMOVE (E) 2 TON AC UNIT, REPLACE WITH 3 TON COMMERCIAL GRADE WITH ADDITION OF HEPA FILTER
- 19 REMOVE/DISCONNECT EXISTING LINEAR GRILLE, DUCT AT CEILING. PATCH/REPAIR CEILING TO MATCH EXISTING. VERIFY FINISH WITH ARCHITECT.

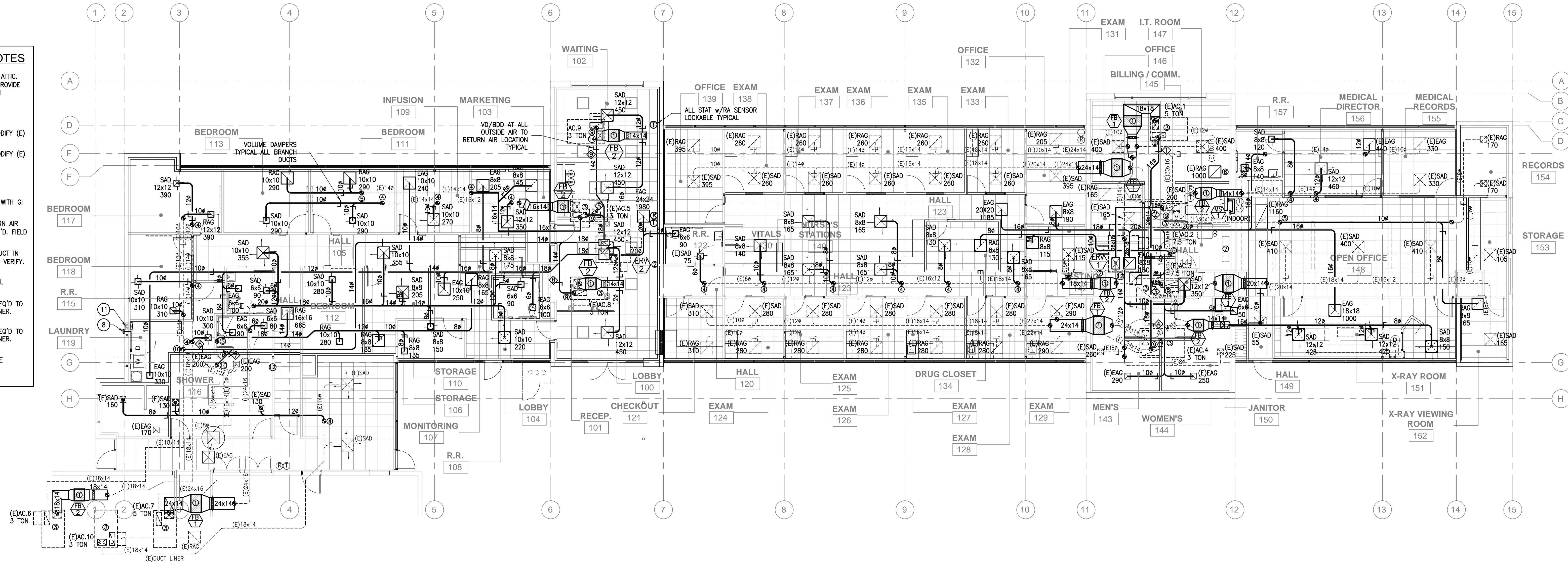


MECHANICAL DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

MECHANICAL FLOOR PLAN KEYNOTES

- 1 90% FILTER BANK MTD IN (E) SUPPLY AIR FROM UNIT IN ATTIC. MODIFY & TRANSITION DUCTWORK AS REQ'D. LOCATE TO PROVIDE ACCESS THRU CEILING. FIELD VERIFY FOR EXACT LOCATION
- 2 GREENECK ENERGY RECOVERY VENTILATOR
- 3 EXISTING AC UNIT TO REMAIN
- 4 ATTACHED NEW SAD DUCT TO EXISTING DUCT, EXTEND, MODIFY (E) DUCT AS REQUIRED. SEE PLAN FOR DIFFUSER SIZE.
- 5 ATTACHED NEW RAG DUCT TO EXISTING DUCT, EXTEND, MODIFY (E) DUCT AS REQUIRED. SEE PLAN FOR GRILLE SIZE.
- 6 RELOCATED (E) RAG. FIELD VERIFY
- 7 EXISTING MINI SPLIT TO REMAIN
- 8 EXHAUST DUCT AT DRYER VENT THROUGH EXTERIOR WALL WITH GI FLAPPER TYPE PORT AND VERMIN RESISTANT SCREEN
- 9 OSA DUCT FROM ERV TO CONNECT TO (E) AC UNIT RETURN AIR DUCT IN ATTIC. MODIFY (E) DUCT AND TRANSITION AS REQ'D. FIELD VERIFY.
- 10 OSA DUCT FROM ERV TO CONNECT TO (E) RETURN AIR DUCT IN ATTIC. MODIFY (E) DUCT AND TRANSITION AS REQ'D. FIELD VERIFY.
- 11 COMBUSTION AIR DUCT SHALL BE OF GALVANIZED STEEL, CORROSION RESISTANT, HAVE A MINIMUM CROSS-SECTIONAL DIMENSION OF 3 INCHES. TERMINATE IN AN ATTIC SPACE.
- 12 24x16 SA & 24x24 RA DTR FROM ERV. TRANSITION AS REQ'D TO UNIT CONNECTIONS. INSULATE EXTERIOR OF DUCTS. NO LINER. FIELD VERIFY LOCATIONS OF EXIST ROOF FRAMING.
- 13 22x14 SA & 22x22 RA DTR FROM ERV. TRANSITION AS REQ'D TO UNIT CONNECTIONS. INSULATE EXTERIOR OF DUCTS. NO LINER. FIELD VERIFY LOCATIONS OF EXIST ROOF FRAMING.
- 14 SA & RA DTR SAME SIZE AS UNIT CONNECTIONS. INSULATE EXTERIOR OF DUCTS. NO LINER.



MECHANICAL FLOOR PLAN

SCALE: 1/8" = 1'-0"

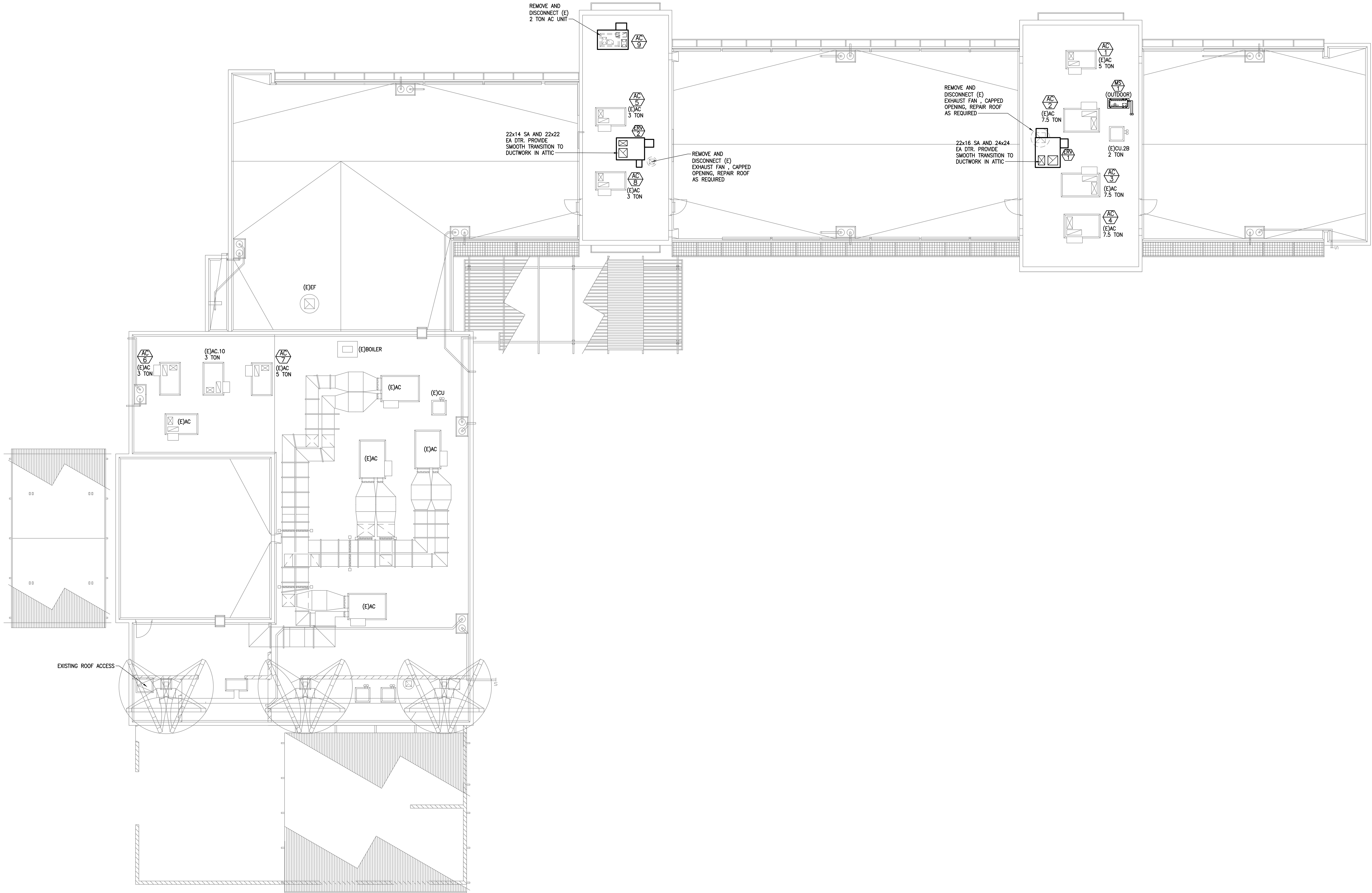


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Where dimensions on these drawings shall have precedence over scaled dimensions, contractors shall verify and be responsible for all dimensions and conditions on the job and this office must be notified of any variations from the dimensions and conditions shown on these drawings. Shop details must be submitted to this office for approval before proceeding with fabrication.

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MARK	ISSUED FOR	DATE
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Project No. : C19-148		
MECHANICAL PLANS		



MECHANICAL ROOF PLAN

SCALE: 1/8" = 1'-0"

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TENANT IMPROVEMENTS

SAN JOAQUIN VALLEY PULMONARY

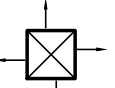
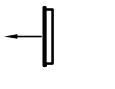




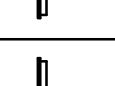
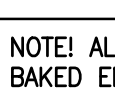
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Project No. : C19-148
MECHANICAL ROOF
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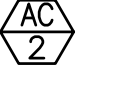
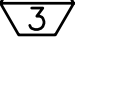
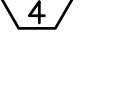



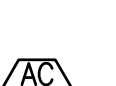

OUTSIDE AIR SETTINGS	
◇	AC-1 : 740 CFM
◇	AC-2 : 1100 CFM
◇	AC-3 : 1260 CFM
◇	AC-4 : 1000 CFM
◇	AC-5 : 475 CFM
◇	AC-6 : 300 CFM
◇	AC-7 : 570 CFM
◇	AC-8 : 900 CFM
◇	AC-9 : 900 CFM

REGISTER SCHEDULE		
SIZE CFM		SAD-SUPPLY AIR CEILING DIFFUSER
SIZE CFM		SAR-SUPPLY AIR WALL REGISTER
SIZE CFM		LRR-LINEAR RETURN AIR SLOT REGISTER
SIZE CFM		RAG-RETURN AIR CEILING REGISTER
SIZE CFM		FRAG-FILTERED RETURN AIR CEILING REGISTER
SIZE CFM		EAG-EXHAUST AIR WALL REGISTER
SIZE CFM		EAG-EXHAUST AIR WALL REGISTER
SIZE		TG-TRANSFER GRILLE
NOTE! ALL REGISTERS AND DIFFUSERS ARE TO BE FINISHED WITH FACTORY-APPLIED BAKED ENAMEL PAINT OVER A RUST-PROOFING PRIMER. WHERE FIELD PAINTING IS TO BE DONE, A RUST-PROOFING PRIMER MUST BE PROVIDED.		

FILTER BANKS	
MARK	DESCRIPTION
	FARR #3P GLIDE/PACK FILTER BANK CABINET & DOORS – WEATHERPROOF FOR OUTSIDE INSTALLATION, INSULATED, PRIMED FOR PAINTING – 36”wX27.25”hX21”L (1) 24x24x12 & (1) 24x12x12 RIGA-FLO 200 FILTERS – ASHRAE 52.1-1992 90-95% EFF. ASHRAE 52.2-1999 MERV 14 – DRYER FILTER GAGE; INSTALL ACROSS THE FILTER BED. GAUGE SHALL BE RED LINED TO INDICATE WHEN THE RECOMMENDED MAXIMUM STATIC PRESSURE DROP HAS BEEN REACHED. (2016 CMC 408.1.1) FILTERS SHALL MEET ASHRAE STANDARDS AS PER CMC, CHAPTER 4, TABLE 4-8 – 225 LBS
	FARR #3P GLIDE/PACK FILTER BANK CABINET & DOORS – WEATHERPROOF FOR OUTSIDE INSTALLATION, INSULATED, PRIMED FOR PAINTING – 24”wX27.25”hX21”L (1) 24x24x12 RIGA-FLO 200 FILTER ASHRAE 52.1-1992 90-95% EFF. ASHRAE 52.2-1999 MERV 14 – DRYER FILTER GAGE; INSTALL ACROSS THE FILTER BED. GAUGE SHALL BE RED LINED TO INDICATE WHEN THE RECOMMENDED MAXIMUM STATIC PRESSURE DROP HAS BEEN REACHED. (2016 CMC 408.1.1) FILTERS SHALL MEET ASHRAE STANDARDS AS PER CMC, CHAPTER 4, TABLE 4-8 150 LBS

MINI-SPLIT UNITS	
MARK	DESCRIPTION
	FLUTSU #18RLXFW1 MINI-SPLIT HEAT PUMP SYSTEM NOM. 1.5 TON 600CFM 0”ESP 1/10HP – 20 SEER INDOOR UNIT WALL MOUNTING BRACKET – CONDENSATE PUMP – FURNISH FOR COMPLETE OPERATION – 14.5 MCA @ 220-230V/1Ø – REC. 20 AMP FUSE SIZE INDOOR UNIT 31 LBS, OUTDOOR UNIT 134 LBS

ENERGY RECOVERY AC UNIT	
MARK	DESCRIPTION
	GREENHECK #Erve=45–30L ROOF MOUNTED ENERGY RECOVERY VENTILATOR OUTDOOR AIR: 4100 CFM AT .8”ESP– 5 HP – EXHAUST: 4025 CFM AT .8” ESP 3 HP BELT DRIVE 2” PLEATED MERV 8 FILTERS FOR OUTDOOR AND EXHAUST AIR HINGED DOORS INSULATED CASING – WEATHER HOODS DOUBLE WALL CONSTRUCTION SINGLE POINT POWER – FACTORY WIRED NON-FUSED DISCONNECT SWITCH – FACTORY SLOPED ROOF CURB 32.7 MCA @ 208/230v/3ø, 45 MOP – 1930 LBS
	GREENHECK #Erve=35–30L ROOF MOUNTED ENERGY RECOVERY VENTILATOR OUTDOOR AIR: 3145 CFM AT .8”ESP– 3 HP – EXHAUST: 3385 CFM AT .8” ESP 3 HP BELT DRIVE 2” PLEATED MERV 8 FILTERS FOR OUTDOOR AND EXHAUST AIR HINGED DOORS INSULATED CASING – WEATHER HOODS DOUBLE WALL CONSTRUCTION SINGLE POINT POWER – FACTORY WIRED NON-FUSED DISCONNECT SWITCH – FACTORY SLOPED ROOF CURB 24.5 MCA @ 208/230v/3ø, 35 MOP – 1640 LBS

PACKAGED ROOFTOP UNITS	
MARK	DESCRIPTION
	EXISTING 5 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 2000 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	EXISTING 7.5 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 3000 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	EXISTING 7.5 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 3000 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	EXISTING 7.5 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 3000 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	EXISTING 3 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 1200 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	EXISTING 3 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 1200 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	EXISTING 5 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 2000 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	EXISTING 3 TON SINGLE PACKAGE ROOFTOP UNIT – ELECTRIC CLG & GAS HTG SET @ 900 CFM @ 1.8”ESP – PROVIDE HIGH STATIC MOTOR, DRIVES & BELT AS REQ'D TO MEET DESIGN – UNIT POWER EXHAUST & ECONOMIZER TO BE DISCONNECTED AND REMOVED – CAP OSA AND EXHAUST OPENINGS – FIELD VERIFY FOR ALL REQ'D MODIFICATIONS PER MFG’RS RECOMMENDATIONS
	NOM. 3.0 TON – CARRIER #48HCD04A3A5-A0A0A0 SINGLE-PACKAGE ROOFTOP UNIT ELECTRIC CLG & GAS HTG – 15.0 SEER – 900 CFM @ 1.6”ESP – HIGH STATIC BELT DRIVE – 1 STAGE COOLING @ AHRF RATINGS – HTG: 80,000 BTUH GAS INPUT, 49,000 BTUH OUTPUT – MICROMETL SLOPED ROOF CURB – FLUE DEFLECTOR – 20 MCA @ 208/230v/3øh, 25 MOPC – 760 LBS

ROOM VENTILATION SCHEDULE - CMC TABLE 4-A														
ROOM	A (AREA SF)	B (CEILING HT. FEET)	C (VOLUME CU.FT.) (A X B)	D TOTAL ACH PER HR. (TABLE 4-A)	E MIN SYSTEM CFM (SA)	F MIN. OUTDOOR ACH PER HR. (TABLE 4-A)	G	DESIGN CFM				PRESSURE		
							MIN OSA	SA	RA	OSA	EXH			
AC-1 (EX 5 TON)														
145 BILLING DEPT.	438	10	4380	4	292	2	146	1000	1000	370	-		NR	
146 OFFICE	92	10	920	4	61	2	31	165	165	61	-		NR	
143 MEN'S	170	10	1700	10	283	NR	-	260	-	-	-		290	N
144 WOMEN'S	151	10	1510	10	252	NR	-	225	-	-	-		260	N
142 TESTING	78	10	780	6	78	2	26	150	-	56	150			
141 HALL	114	10	1140	4	76	2	38	200	95	74	-		NR	
150 JANITOR	27	10	270	10	45	NR	-	-	-	-	50		NR	
TOTALS	1070				1087		241	2000	1260	740	740			
AC-2 (EX 7.5 TON)														
155 MEDICAL RECORDS	149	10	1490	4	99	2	50	330	-	123	330		NR	
156 MEDICAL DIRECTOR	194	10	1940	4	129	2	65	460	-	167	440		NR	
157 R.R.	74	10	740	10	123	NR	-	120	-	-	140		N	
132 OFFICE	172	10	1720	4	115	2	57	395	205	145	190		NR	
133 EXAM	113	10	1130	6	113	2	38	260	260	95	-		NR	
135 EXAM	113	10	1130	6	113	2	38	260	260	95	-		NR	
136 EXAM	113	10	1130	6	113	2	38	260	260	95	-		NR	
137 EXAM	113	10	1130	6	113	2	38	260	260	95	-		NR	
138 EXAM	113	10	1130	6	113	2	38	260	260	95	-		NR	
139 OFFICE	172	10	1720	4	115	2	57	395	395	145	-		NR	
TOTALS	1326				1146		419	3000	1900	1100	1100			
AC-3 (EX 7.5 TON)														
154 RECORDS	113	10	1130	4	75	2	38	170	170	72	-		NR	
153 STORAGE	93	10	930	4	62	2	31	105	*	44	-		NR	
148 OPEN OFFICE	704	10	7040	4	469	2	235	1220	*	512	**		NR	
149 HALL	47	10	470	4	31	2	16	55	*	23	**		NR	
152 X-RAY VIEWING ROOM	103	10	1030	6	103	2	34	165	165	69	-		NR	
131 EXAM	78	10	780	6	78	2	26	115	115	48	-		NR	
134 DRUG CLOSET	104	10	1040	4	69	2	35	130	130	55	-		NR	
140 NURSE'S STATION	214	10	2140	6	214	2	71	315	*	132	**		NR	
130 VITALS	22	10	220	6	22	2	7	30	**	13	**		NR	
123 HALL	565	10	5650	4	377	2	188	620	*	260	**		NR	
122 R.R.	67	10	670	10	112	NR	-	75	-	32	90		N	
TOTALS	2110				1613		681	3000	1740	1260	1185			
AC-4 (EX 7.5 TON)														
121 CHECKOUT	112	10	1120	6	112	2	37	310	310	104	-		NR	
124 EXAM	108	10	1080	6	108	2	36	280	280	94	-		NR	
125 EXAM	108	10	1080	6	108	2	36	280	280	94	-		NR	
126 EXAM	108	10	1080	6	108	2	36	280	280	94	-		NR	
127 EXAM	108	10	1080	6	108	2	36	280	280	94	-		NR	
128 EXAM	108	10	1080	6	108	2	36	280	280	94	-		NR	
129 EXAM	112	10	1120	6	112	2	37	290	290	94	-		NR	
151 XRAY ROOM	331	10	3310	6	331	2	110	1000	-	332	1000		NR	
TOTALS	1095				1095		364	3000	2000	1000	1000			
AC-5 (EX 3 TON)														
103 MARKETING	183	10	1830	6	183	2	61	350	145	139	205		NR	
109 INFUSION	141	10	1410	6	141	2	47	270	-	107	240		P	
111 BEDROOM	162	9	1458	4	97	2	49	290	290	115	-		NR	
113 BEDROOM	162	9	1458	4	97	2	49	290	290	115	-		NR	
TOTALS	648				518		205	1200	725	475	445			
AC-6 (EX 3 TON)														
118 BEDROOM	162	10	1620	4	108	2	54	310	310	93	-		NR	
117 BEDROOM	204	10	2040	4	136	2	68	390	390	117	-		NR	
119 JANITOR/LAUNDRY	159	10	1590	10	265	NR	-	300	-	90	330		N	
TOTALS	525				509		122	1000	700	300	330			
AC-7 (EX 5 TON)														
105 HALL	329	9	2961	4	197	2	99	525	260	150	185		NR	
107 MONITORING	93	10	930	6	93	2	31	175	165	50	-		NR	
108 R.R.	57	10	570	10	95	NR	-	90	-	-	100		N	
114 HALL	115	9	1035	4	69	2	35	185	185	53	65		NR	
110 STORAGE	127	10	1270	2	42	NR	-	205	165	58	185		P	
106 STORAGE	81	10	810	10	135	NR	-	150	135	43	-		P	
112 BEDROOM	150	9	1350	4	90	2	45	280	280	80	-		NR	
115 R.R.	62	9	558	10	93	NR	-	90	-	-	100		N	
116 SHOWER	60	9	540	10	90	NR	-	80	-	-	90		N	
104 LOBBY	106	10	1060	4	71	2	36	220	220	63	-		NR	
TOTALS	1180				975		246	2000	1430	570	540			
AC-9 / AC-8 (EX 3 TON)														
100 LOBBY/102 WAITING	901	10	9010	10	1502	10	1502	1800	-	1800	1980		N	
TOTALS	901				1502		1502	1800	0	1800	1980			
MS-1														
158 IT ROOM	56	10	560	10	93	10	19						NR	
TOTALS	56				93		19	0		0	0			
NOTES:														
* RETURN AIR INCLUDED WITH OVERALL RAG IN OPEN AREA.														
** EXHAUST AIR INCLUDED WITH OVERALL RAG														

		<div><p>LEGEND</p><p>E FURNISHED, INSTALLED, & WIRED BY ELECTRICAL CONTRACTOR</p><p>M FURNISHED, INSTALLED, & WIRED BY MECHANICAL CONTRACTOR</p><p>ALL CONTROL WIRING & CONDUIT INCLUDING LINE & LOW VOLTAGE FURNISHED & INSTALLED BY MECHANICAL CONTRACTOR</p><p>ALL POWER WIRING & CONDUIT INCLUDING LINE & LOW VOLTAGE FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR</p><p>MS.2 TO BE SET TO RUN 24/7.</p></div> <div></div>	<div><p>1/2"Ø BOLT (TYPICAL)</p><p>2"x2"x16 GA ANGLE HANGER EACH SIDE OF DUCT-6" o/c</p><p>2"x2"x16 GA ANGLE (TYPICAL)</p><p>2"x2"x16 GA ANGLE DIAGONAL BRACING-6" o/c</p><p>1/4"Ø BOLT (TYPICAL Ø ALL CONNECTIONS)</p><p>3-No. 12 SM SCREWS PER SIDE (TYPICAL)</p><p>SECTION A-A</p><p>TYPICAL FOR RECT. DUCT LARGER THAN 28"sq</p><p>DETAIL SHOWN FOR REFERENCE ONLY - CONTRACTOR TO INSTALL PER 2016 CMC CHAPTER 6 & SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS & PLUMBING PIPING SYSTEMS.</p></div> <div></div>	<div><p>16 GA STEEL HOLD DN BRACKET (TYP FOR 6)</p><p>ATTACH BRACKET TO UNIT w/4-#10x1/2" TEK SCREWS</p><p>PREFAB MT'L CURB ANCHOR TO MT'L FILLER OR MT'L DECK w/#10 SMS Ø 12"o/c</p><p>ST'L FRAMING (SEE PLAN) NOTE: CONNECTORS BETWEEN DECK & FRAMING NOT REQUIRED AS SHOWN ABOVE</p><p>GASKET HOLD DN BRACKET-3 PER SIDE(TOTAL 6) ATTACH TO UNIT w/4-#10x1/2" TEK SCREWS</p><p>24 GA.COUNTER FLASHING</p><p>RIGID INSULATION</p><p>CANT STRIP (BY GC)</p><p>HOT MOP CURB ROOFING TO EXISTING</p><p>ROOF INSULATION-CUT BACK AS REQ'D-MATCH EXIST</p><p>EXIST ROOFING</p><p>EXIST METAL DECK</p><p>16 GA. CONT. SHIT MT'L FILLER w/(2) ROWS OF #10 SMS Ø 24"o/c TO (5) MT'L DECK WHERE CURB WOULD NOT OTHERWISE BEAR ON MT'L DECK FLUTE</p></div> <div></div>								
17	N.T.S.	13	N.T.S.	9	CONTROL DIAGRAM - MINI SPLIT-TYP	N.T.S.	5	DUCT HANGER - TYP.	N.T.S.	1	AC UNIT MOUNTING	N.T.S.
		<div><p>NOTE</p><p>1. SUPPLY AIR FAN TO BE WIRED TO RUN CONTINUOUS DURING OCCUPIED HOURS</p><p>2. INTERLOCK RELATED EXHAUST FAN TO RUN AT THE SAME TIME AS THE UNIT SUPPLY FAN</p><p>3. ALL CONTROL WIRING & CONDUIT INCLUDING LINE & LOW VOLTAGE FURNISHED & INSTALLED BY MECHANICAL CONTRACTOR</p><p>4. ALL POWER WIRING & CONDUIT INCLUDING LINE & LOW VOLTAGE FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR</p><p>LEGEND</p><p>E FURNISHED, INSTALLED, & WIRED BY ELECTRICAL CONTRACTOR</p><p>M FURNISHED, INSTALLED, & WIRED BY MECHANICAL CONTRACTOR</p><p>ME FURNISHED & INSTALLED BY MECHANICAL & WIRED BY ELECTRICAL</p></div> <div></div>		<div><p>ROOF STRUCT MEMBER SEE ARCH/STRUCT DWGS</p><p>1/2"Ø BOLT (TYPICAL)</p><p>DUCT SIZE</p><p>DIAGONAL & LONGITUDINAL BRACING SHALL HAVE SAME CONNECTION AS HANGER</p><p>1/2"Ø BOLT (TYPICAL)</p><p>4"x4"x14 GA. LONGITUDINAL 'L' BRACE EACH SIDE AS REQUIRED (SHOWN DOTTED)</p><p>2 1/2"x12 GA. STRAP</p><p>3"x3"x16 GA. VERTICAL 'L'</p><p>4"x4"x14 GA. DIAGONAL 'L'</p><p>1/2" MACHINE BOLT TYP.</p><p>L3"x3"x1/4"x0'-3"</p><p>2 1/2"x14 GA. STRAP</p><p>3"x3"x5/16" PLATE WASHER</p><p>TYPICAL FOR ROUND DUCT LARGER THAN 26"Ø</p><p>DETAIL SHOWN FOR REFERENCE ONLY - CONTRACTOR TO INSTALL PER 2016 CMC CHAPTER 6 & SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS & PLUMBING PIPING SYSTEMS.</p></div> <div></div>		<div><p>16 GA STEEL HOLD DN BRACKET (TYP FOR 6)</p><p>ATTACH BRACKET TO UNIT w/4-#10x1/2" TEK SCREWS</p><p>PREFAB MT'L CURB ANCHOR TO MT'L FILLER OR MT'L DECK w/#10 SMS Ø 12"o/c</p><p>ST'L FRAMING (SEE PLAN) NOTE: CONNECTORS BETWEEN DECK & FRAMING NOT REQUIRED AS SHOWN ABOVE</p><p>GASKET HOLD DN BRACKET-3 PER SIDE(TOTAL 6) ATTACH TO UNIT w/4-#10x1/2" TEK SCREWS</p><p>24 GA.COUNTER FLASHING</p><p>RIGID INSULATION</p><p>CANT STRIP (BY GC)</p><p>HOT MOP CURB ROOFING TO EXISTING</p><p>ROOF INSULATION-CUT BACK AS REQ'D-MATCH EXIST</p><p>EXIST ROOFING</p><p>EXIST METAL DECK</p><p>16 GA. CONT. SHIT MT'L FILLER w/(2) ROWS OF #10 SMS Ø 24"o/c TO (5) MT'L DECK WHERE CURB WOULD NOT OTHERWISE BEAR ON MT'L DECK FLUTE</p></div> <div></div>						
18	N.T.S.	14	N.T.S.	10	CONTROL DIAGRAM	N.T.S.	6	DUCT HANGER - TYP	N.T.S.	2	ERV UNIT MOUNTING	N.T.S.
		<div><p>NOTE</p><p>1. SUPPLY AIR FAN TO BE WIRED TO RUN CONTINUOUS DURING OCCUPIED HOURS</p><p>2. INTERLOCK RELATED EXHAUST FAN TO RUN AT THE SAME TIME AS THE UNIT SUPPLY FAN</p><p>3. ALL CONTROL WIRING & CONDUIT INCLUDING LINE & LOW VOLTAGE FURNISHED & INSTALLED BY MECHANICAL CONTRACTOR</p><p>4. ALL POWER WIRING & CONDUIT INCLUDING LINE & LOW VOLTAGE FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR</p><p>LEGEND</p><p>E FURNISHED, INSTALLED, & WIRED BY ELECTRICAL CONTRACTOR</p><p>M FURNISHED, INSTALLED, & WIRED BY MECHANICAL CONTRACTOR</p><p>ME FURNISHED & INSTALLED BY MECHANICAL & WIRED BY ELECTRICAL</p></div> <div></div>		<div><p>ROOF STRUCT MEMBER SEE ARCH/STRUCT DWGS</p><p>#10x1 1/4" S.M. SCREW (TYP-2)</p><p>1"x20 GA STRAP FOR DUCT UP TO 26" MAX. 10" O.C.</p><p>1/4" BOLT</p><p>1"x 20 GA. DRAW BAND</p><p>1" MIN.</p><p>TYPICAL FOR RECT. DUCT TO 28"sq</p><p>TYPICAL FOR ROUND DUCT TO 26"Ø</p><p>DETAIL SHOWN FOR REFERENCE ONLY - CONTRACTOR TO INSTALL PER 2016 CMC CHAPTER 6 & SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS & PLUMBING PIPING SYSTEMS.</p></div> <div></div>		<div><p>3/8"Ø BOLT (TYP-4)</p><p>3/8"Ø MIN. 2.5"EMBED SCREWS BEDDED IN SEALER WATER TIGHT</p><p>26 GA GALV MT'L CAP FLASH'G. w/END CLOSURE</p><p>24 GA. GALV. SHEET METAL CAP</p><p>SLEEPER BY GEN CONTR MECH TO COORDINATE</p><p>ROOF</p><p>1-1/2"x1-1/2"x1/8" ANGLE FRAME ALL WELDED CONSTR 2 COATS OF RUST RESISTANT PAINT (4 SIDES)</p><p>FILTER CABINET 200 LBS</p></div> <div></div>						
19	N.T.S.	15	N.T.S.	11	EXISTING AC UNIT CONTROL DIAGRAM	N.T.S.	7	DUCT HANGER - TYP	N.T.S.	3	FILTER CABINET MTG - TYP	N.T.S.
				<div><p>EXIST ROOF MTD AC UNIT</p><p>EXIST SA DTR-FIELD VERIFY FOR SIZE & LOCATION</p><p>(E) ROOF</p><p>1</p><p>2</p><p>3</p><p>4</p><p>5</p><p>6</p><p>7</p><p>8</p><p>9</p><p>PROVIDE CLG ACCESS FOR FILTER SERVICE FIELD VERIFY LOCATION IN EXIST ATTIC SPACE ACCESS AS PER CLG RATING</p><p>ELEVATION</p><p>FINAL FILTER BANK #2</p><p>PRESSURE DROP = 1.0"SP CLEAN FILTER 1.4"SP DIRTY FILTER</p><p>DIFFERENTIAL PRESSURE TRANSMITTER (MEASURES PRESSURE DROP ACROSS FILTER AND DAMPER - REPORTS TO CONTROLLER)</p><p>AO A1</p><p>CONTROLLER OPERATES ACTUATOR TO MAINTAIN A 2.0"SP DROP THRU FILTER AND DAMPER</p><p>CONTROL DIAGRAM</p><p>120V</p><p>DISC SW</p><p>ACTUATOR</p><p>SUPPLY AIR TO CONDITIONED SPACE</p><p>PRESSURE COMPENSATION DAMPER (OPPOSED) BLADE DAMPER w/ ACTUATOR (RUSKIN OR EQUAL)</p></div> <div></div>		<div><p>TURNING VANES.</p><p>FILTER GAUGE - RED LINE FOR FINAL FILTER CHANGE-OUT</p><p>DOWNSTREAM BOX FILTERS</p><p>GALVANIZED SHEET METAL TRANSITION FROM AC UNIT TO FILTER SECTION</p><p>GALVANIZED SHEET METAL TRANSITION SEE PLAN FOR SIZE</p><p>FINISHED CEILING. VERIFY RATING</p><p>GALVANIZED SHEET METAL SEE PLAN FOR SIZE AND ROUTING</p><p>FLEXIBLE DUCT CONNECTION</p><p>PRESSURE COMPENSATING DAMPER</p></div> <div></div>		<div><p>CEILING</p><p>FAN-COIL UNIT (26 LBS)</p><p>FACTORY MOUNTING PLATE</p><p>(6)#12x2" WOOD SCREWS INTO WALL FRAMING</p><p>4x BLOCK W/ A34 EA END(TYP)</p><p>INDOOR UNIT</p></div> <div></div>				
20	N.T.S.	16	N.T.S.	12	STATIC CONTROL DPR - TYP	N.T.S.	8	STATIC CONTROL DPR - TYP	N.T.S.	4	FAN-COIL UNIT MTG - MS-1	N.T.S.

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REGISTERED PROFESSIONAL ARCHITECT

NO. 21190

ARCHITECTURE

STATE OF CALIFORNIA

The above drawings and specifications and their design and arrangements represented thereby are to be used by the contractor for the construction of the project and no part thereof shall be copied, disclosed to others or used in connection with any work or project other than the specific project for which they have been prepared and developed without the written consent of the architect. Visual contact with these drawings or specifications shall constitute conclusive evidence of acceptance of these restrictions.

Where dimensions on these drawings shall have precedence over scaled dimension, contractors shall verify and be responsible for all dimensions and conditions on the job and this office must be notified of any variations from the dimensions and conditions shown on these drawings. Shop details must be submitted to this office for approval before proceeding with fabrication.

TENANT IMPROVEMENTS

SAN JOAQUIN VALLEY PULMONARY

5801 TRUXTUN AVE, BAKERSFIELD CA 933309

MARK

ISSUED FOR

DATE





















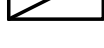








































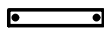















9/8/19

ADDENDUM 01

Project No. : C19-148

MECHANICAL DETAILS

M5.0

SYMBOLS			
LIGHT FIXTURES	POWER/COMM	CONDUIT/WIRE	MISCELLANEOUS
 CEILING SURFACEMOUNT	 SINGLE RECEPT	 NEW	 MOTOR
 WALL SURFACEMOUNT	 DUPLEX RECEPT	 UNDERGROUND	 THERMOPLASTIC A.F.F. TO TOP OF UNIT
 PENDANT MOUNT	 DUPLEX-HALF SWITCHED	 NEW POWER HOMERUN (3 HOTS & NEUT SHOWN)	 FUSIBLE SWITCH
 RECESSED DOWNLIGHT	 DOUBLE DUPLEX	 ISOLATED GROUND	 GROUND
 RECESSED WALLWASH	 SPECIAL CONFIGURATION	 (E) POWER HOMERUN	 PHASE
 RECESSED	 FLOORMOUNT 208V, 1ø RECEPT	 WIRE LINE-CONTINUES	 CLOCK
 SURFACE	 DUPLEX-FLOOR OUTLET	 CONDUIT STUB (W/MARKER)	 CLOCK/SPEAKER COMBINATION
 STRIP LION	 GROUND FAULT CIRCUIT INTERRUPT	 VERTICAL CONDUIT RUN	 WALL MOUNTED CLOCK
 TRACK LIGHT	 JUNCTION BOX	 CONDUIT SEAL	 PUSHBUTTON
 DIRECTIONAL FLOOD	 SPECIAL SYSTEM JUNCTION BOX	 FLEXIBLE CONNECTION	 FLUSHMOUNT PANEL
 EMERGENCY FIXTURE	 DATA - J-BOX w/ 3/4" C. TO ATTIC SPACE	 SURFACEMOUNT RACEWAY	 FLUSHMOUNT PANEL
 POLE LIGHT	 PHONE - J-BOX w/ 3/4" C. TO ATTIC SPACE	 INDICATES LINE CONTINUES	 SURFACEMOUNT PANEL
 POLE LIGHT-DECORATIVE	 PHONE & DATA - J-BOX w/ 3/4" C. TO ATTIC SPACE	 CORD W/PLUG	 DAMPER MOTOR
 UPLIGHT-FLUSH IN GRADE	 (1)RG-6/U CABLE (1)F-CONNECTOR		 HUMIDISTAT
 BOLLARD	 SAFETY DISCONNECT		 MAGNETIC CONTACTOR
 TANDEM-WIRED LAMPS	 DROP CORD RECEPT		 COMBINATION STARTER
 UNDERCABINET LIGHT	 ABOVE-CLGMOUNT J-BOX		
 WALL SURFACEMOUNT LINEAR TYPE	 TV OUTLET-FLOORMOUNT		
 PENDANT LINEAR	 TELEPHONE FLOOR OUTLET		
 RECESSED WALLMOUNT	 DATA FLOOR OUTLET		
 WALLPACK	 WIRELESS ACCESS POINT IN CEILING		
 EMERGENCY WALLPACK	 MOUNT DEVICE ABOVE COUNTER PER ARCHITECTURAL REQUIREMENTS		
 EXIT LIGHT-WALL			
 EXIT LIGHT-CEILING (ARROW INDICATES DIRECTION)			
 LETTER ADJACENT INDICATES FIXTURE TYPE			
 "E" LETTER ADJACENT INDICATES EMERGENCY FIXTURE TYPE			

GENERAL ELECTRICAL NOTES

GENERAL LIGHTING PLAN NOTES

- DUAL LEVEL SWITCHING: IN ROOMS 100 SQ. FT. OR LARGER, OR WHERE INDICATED ON PLANS, CONTROL INBOARD LAMPS BY ONE SWITCH AND OUTBOARD LAMPS BY OTHER SWITCH
- NIGHT LIGHT (NL) DESIGNATED LUMINAIRES IN INTERIOR LOCATIONS SHALL HAVE ONE BALLAST CONTINUOUSLY ENERGIZED. LUMINAIRES IN EXTERIOR LOCATIONS SHALL BE AUTOMATICALLY CONTROLLED TO BE ON FROM DUSK TO DAWN
- LIGHTING FIXTURE LOCATIONS SHOWN ARE SCHEMATIC. REFER TO ARCHITECTURAL PLANS (REFLECTED CEILING, ELEVATIONS, ETC.) FOR EXACT LOCATIONS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN
- REFER TO ARCHITECT'S REFLECTED CEILING PLAN(S) FOR CEILING HEIGHTS, TYPES, FINISHES, ETC. IN EACH AREA. VERIFY FLANGE TYPES, TRIM KITS, STEM LENGTHS, ETC. FOR ALL FIXTURES PRIOR TO SUBMITTALS.
- CONFIRM LOCATION OF ALL DOORS SWINGS WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN OF SWITCHES.
- PROVIDE UNSWITCHED HOT LEG OF ROOM LIGHTING BRANCH CIRCUIT TO EACH BATTERY POWERED EMERGENCY LIGHT AND EXIT SIGN FOR CONTINUOUS CHARGING

GENERAL POWER PLAN NOTES

- FUSING: ALL FUSIBLE SAFETY DISCONNECT SWITCHES SHALL BE PROVIDED WITH DUAL-ELEMENT TIME DELAY TYPE FUSES SIZED AND RATED PER EQUIPMENT MANUFACTURERS' RECOMMENDATIONS. VERIFY WITH EQUIPMENT NAMEPLATE BEFORE INSTALLATION.
- INSTALL SEPARATE NEUTRALS FOR EACH BRANCH CIRCUIT SERVING ISOLATED GROUND RECEPTACLES.
- MOTOR OVERLOAD PROTECTION: WHERE REQUIRED BY NEC ARTICLE 430 PART C AND NOT SHOWN ON PLAN OR PROVIDED INTEGRAL WITH EQUIPMENT, PROVIDE AND INSTALL THERMAL OVERLOAD PROTECTION FOR ALL MOTORS.
- SPARE CONDUIT FOR RECESSED PANELS: PROVIDE (1) 3/4" SPARE CONDUIT STUB UP TO ACCESSIBLE ABOVE CEILING SPACE AND/OR ACCESSIBLE SPACE BELOW FOR EVERY (3) SPARE BREAKER SPACES AS INDICATED ON PANEL SCHEDULES.
- DEVICE LOCATIONS SHOWN ARE SCHEMATIC AND APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED DURING ROUGH-IN WITH ARCHITECTURAL ELEVATIONS, CASEWORK SHOP DRAWINGS, FURNITURE, ETC. AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT WITH OTHER EQUIPMENT.
- ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN THE SAME LOCATION, SHALL BE MOUNTED ON OPPOSITE SIDES OF THE SAME STUD, COORDINATE BETWEEN ELECTRICAL AND COMMUNICATIONS PLANS.

GENERAL COMMUNICATION PLAN NOTES

- SIGNAL AND COMMUNICATIONS SYSTEMS RACEWAYS AND BOXES: PROVIDE AND INSTALL 4" SQUARE RECESSED JUNCTION BOX WITH 1-GANG RING AND (1) 3/4" CONDUIT STUB TO ACCESSIBLE CEILING SPACE AT EACH WALL TELEPHONE (VOICE), TELEVISION AND DATA OUTLET LOCATION SHOWN ON THE PLANS UNLESS OTHERWISE NOTED. FOR EACH COMBINATION VOICE/DATA OUTLET, PROVIDE AND INSTALL (2) 3/4" CONDUIT STUBS TO ACCESSIBLE CEILING SPACE.
- BEFORE CONSTRUCTION, COORDINATE AND VERIFY ALL DATA AND TELEPHONE LOCATIONS WITH OWNER OR ARCHITECT
- TELEPHONE WIRING: EACH TELEPHONE OUTLET LOCATION SHOWN ON THE PLANS SHALL HAVE A 4 PAIR, 24 GAUGE CONTINUOUS CABLE, CATEGORY 6 (BERK-TEX LANMARK SERIES OR APPROVED EQUAL), HOMERUN TO THE TELEPHONE TERMINAL BOARD. "TIB" TERMINATE AT OUTLET LOCATION WITH OWNER APPROVED JACK, VERIFY LOCATIONS WITH OWNER OR ARCHITECT PRIOR TO CONSTRUCTION.
- TELEVISION PREWIRE: EACH TELEVISION OUTLET SHOWN ON THE PLANS SHALL HAVE AN RG6 (WITH QUAD SHIELD) COAXIAL CABLE HOMERUN PREWIRED TO THE CAVY TERMINAL BOARD LABEL AND LEAVE ADEQUATE SLACK FOR UTILITY CONNECTION.
- VOICE/DATA WIRING: EACH VOICE/DATA OUTLET LOCATION SHOWN ON THE PLANS SHALL HAVE (4) 4 PAIR, 24 GAUGE, CATEGORY 6, UTP CABLES (BERK-TEX LANMARK SERIES OR APPROVED EQUAL) HOMERUN TO THE TELEPHONE TERMINAL BOARD. TERMINATE AT OUTLET LOCATION WITH OWNER APPROVED JACK, VERIFY SYSTEM REQUIREMENTS WITH OWNER OR ARCHITECT PRIOR TO CONSTRUCTION.
- DEVICE LOCATIONS SHOWN ARE SCHEMATIC AND APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED DURING ROUGH-IN WITH ARCHITECTURAL ELEVATIONS, CASEWORK SHOP DRAWINGS, FURNITURE, ETC. AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT WITH OTHER EQUIPMENT.
- ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN THE SAME LOCATION, SHALL BE MOUNTED ON OPPOSITE SIDES OF THE SAME STUD, COORDINATE BETWEEN ELECTRICAL AND COMMUNICATIONS PLANS.

ROOF PLAN NOTES

- ALL EQUIPMENT SHOWN ABOVE ROOF IS NEMA 3R.
- VERIFY EXACT EQUIPMENT LOCATIONS AND POINTS OF CONNECTION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN
- CONDUIT SHOWN IS ROUTED IN CEILING SPACE BELOW ROOF DECK
- NO ROOF MOUNT CONDUIT IS ALLOWED UNLESS OTHERWISE NOTED
- FUSE DISCONNECT SWITCHES PER EQUIPMENT NAMEPLATE RATING
- ALL ROOF PENETRATIONS SHALL BE MADE WITH ROOF JACKS, SEAL ALL PENETRATIONS PER THE WATER PROOF MEMBRANE MANUFACTURER'S RECOMMENDATIONS.

GENERAL NOTES

- CODE COMPLIANCE: ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH CODES, STANDARDS AND ORDINANCES AS SET FORTH BY THE AUTHORITIES HAVING JURISDICTION AND THEIR LATEST ADOPTED EDITIONS (IN EFFECT AT TIME OF BUILDING PERMIT APPLICATION) OF THE FOLLOWING PUBLICATIONS:
 - CALIFORNIA CODE OF REGULATIONS TITLE 24: 2016 CALIFORNIA ELECTRICAL CODE, NEC 2014, NFPA 2016 CALIFORNIA BUILDING CODE, UNIFORM BUILDING CODE, AMERICANS WITH DISABILITIES ACT (ADA), AND OTHER LOCAL AMENDMENTS AS APPLICABLE.
 - SAFETY: THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EQUIPMENT IN A SAFE AND RESPONSIBLE MANNER. KEEP DEAD FRONT EQUIPMENT IN PLACE WHILE EQUIPMENT IS ENERGIZED. CONDUCT ALL CONSTRUCTION OPERATIONS IN A SAFE MANNER FOR EMPLOYEES AS WELL AS OTHER WORKPERSONS OR ANYONE VISITING THE JOB SITE. PROVIDE BARRIERS, FLAGS, TAPE, ETC. AS REQUIRED FOR SAFETY. THE CONTRACTOR SHALL HOLD ALL PARTIES HARMLESS OF NEGLIGENT SAFETY PRACTICES, WHICH MAY CAUSE INJURY TO OTHERS ON OR NEAR THE JOB SITE.
 - FIRE RATED ASSEMBLIES SHALL MAINTAIN RATINGS AS SPECIFIED IN THE CALIFORNIA BUILDING CODE CHAPTER 7. CONTRACTOR SHALL PROVIDE AND INSTALL PHYSICAL ENCLOSURE AROUND FIXTURES, PANELS, ETC. AS REQUIRED. ALL ASSEMBLIES TO BE PENETRATED SHALL BE INSTALLED WITH APPLICABLE THROUGH-PENETRATION FIRESTOP SYSTEM AS DETERMINED BY UL CLASSIFICATION. BEFORE CONSTRUCTION, VERIFY AND COMPLY WITH REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION.
 - MOUNTING HEIGHTS IN INCHES ABOVE FINISH FLOOR SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

FROM BOTTOM OF PLATE +18" MIN. & FROM TOP OF BOX 44" MAX. OVER THE OBSTRUCTIONS AFF: RECEPTACLES, TELEPHONE, TV & DATA OUTLETS FROM TOP OF SWITCH PLATE +48" MAX. AFF: LIGHT SWITCHES

FROM TOP OF BOX +48" AFF: T-STATS

FROM TOGGLE +48" MAX. AFF: FIRE ALARM MANUAL PULL STATIONS

FROM THE LOWER OF +80" AFF OR 6" BELOW CEILING: FIRE ALARM VISUALS & AUDIBLE DEVICES UNLESS MOUNTED ON CEILING
 - LABEL: PANELS, CABINETS, BACKBOARDS, MAIN DEVICES, SAFETY SWITCHES, CONTACTORS AND OTHER SPECIFICALLY DESIGNATED EQUIPMENT SHOWN ON PLANS, USE ENGRAVED LAMINATED PLASTIC NAMEPLATES ATTACHED BY SCREWS OR RIVETS. FOR FEEDERS, NEATLY AND INDELEBLY LABEL CONDUIT DESTINATIONS ON BOTH VISIBLE ENDS OF CONDUIT RUNS WHERE CONDUITS TERMINATE AT DESIGNATED ENCLOSURES, STRUCTURES OR EQUIPMENT (INCLUDING PULL AND SPLICE BOXES)
 - EQUIPMENT ANCHORAGE: BRACE OR ANCHOR ALL ELECTRICAL EQUIPMENT TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION. USE THE FOLLOWING CRITERIA FOR DETERMINING:

A. FIXED EQUIPMENT ON GRADE 30% OF OPERATING WEIGHT.

B. FIXED EQUIPMENT ON STRUCTURE 45% OF OPERATING WEIGHT.

C. EMERGENCY POWER EQUIPMENT ON GRADE 40% OF OPERATING WEIGHT.

D. EMERGENCY POWER EQUIPMENT ON STRUCTURE 60% OF OPERATING WEIGHT.

EXCEPTIONS: FOR FLEXIBLY MOUNTED EQUIPMENT USE 4X THE ABOVE VALUES; FOR SIMULTANEOUS VERTICAL FORCE, USE 1/3 HORIZONTAL FORCE. SEE STRUCTURAL PLANS FOR ANCHORAGE DETAILS AND WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE AUTHORITY HAVING JURISDICTION. SHOULD SAID APPROVAL BE WITHHELD, ELECTRICAL CONTRACTOR SHALL, AT NO EXTRA COST TO THE OWNER, MODIFY AND JUSTIFY INSTALLATION AS REQUIRED TO GAIN APPROVAL.

MECHANICAL SYSTEMS

- MECHANICAL UNIT CONDUITS: TO PREVENT DAMAGE DUE TO VIBRATION, BOTH POWER AND CONTROL WIRING CONDUITS FEEDING EXTERIOR MECHANICAL UNITS SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR WITH LIQUID TIGHT FLEXIBLE TYPE AT FINAL CONNECTION
- NOT USED
- T-STAT J-BOXES: PROVIDE AND INSTALL 4" SQUARE JUNCTION BOX WITH 1-GANG RING AND 1/2" CONDUIT TO ACCESSIBLE CEILING SPACE ABOVE AT EACH THERMOSTAT LOCATION
- EXHAUST FANS SHALL BE PROVIDED & INSTALLED BY MECHANICAL CONTRACTOR WITH WIRING CONNECTIONS MADE BY ELECTRICAL CONTRACTOR
- MECHANICAL EQUIPMENT CONTROLS: MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOW VOLTAGE WIRE AND CONNECTIONS (BELOW 120 VOLT) TO AND FROM ALL MECHANICAL CONTROL DEVICES. ALL LOW VOLTAGE CONTROL WIRE SHALL BE IN CONDUIT, UNLESS OTHERWISE NOTED.
- PULL ROPES: ANY RACEWAY WITHOUT CABLE OR WIRE SHALL BE INSTALLED WITH MINIMUM 200 POUND TEST PULL LINE AND LARGER IF REQUIRED BY SERVING UTILITY COMPANY. ANY NEW OR EXISTING COMMUNICATION OR SIGNAL RACEWAY ROUTED BETWEEN BUILDINGS, SIGNAL CABINETS, AND/OR SIGNAL CLOSETS WITH FUTURE CAPACITY SHALL BE INSTALLED WITH MINIMUM 200 POUND TEST PULL LINE AS WELL AS THE CALLED FOR CABLE
- ELECTRICAL SWITCHES: WHERE A REACH IS UNOBSTRUCTED, CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED 48 INCHES MAXIMUM (44 INCHES MAXIMUM WHERE A REACH IS OBSTRUCTED), MEASURED TO THE TOP OF THE OUTLET BOX; AND 15 INCHES MINIMUM, MEASURED TO THE BOTTOM OF THE OUTLET BOX, ABOVE THE FINISH FLOOR OR GROUND.
- ELECTRICAL RECEPTACLE OUTLETS: WHERE A REACH IS UNOBSTRUCTED, ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED 48 INCHES MAXIMUM (44 INCHES MAXIMUM WHERE A REACH IS OBSTRUCTED), MEASURED TO THE TOP OF THE OUTLET BOX; AND 15 INCHES MINIMUM, MEASURED TO THE BOTTOM OF THE OUTLET BOX, ABOVE THE FINISH FLOOR OR GROUND.

ELECTRICAL ABBREVIATIONS			
A AMPERE	DA DIAMETER	GRS GALVANIZED RIGID STEEL	N3R NEMA 3R
AB AMP BREAKER	DISC DISCONNECT	GWS GANG WITH SWITCH	NC NORMALLY CLOSED
ABAND ABANDONED	DIST DISTRIBUTION	H HEIGHT, HIGH	NEC NATIONAL ELECTRICAL CODE
ABV ABOVE	DPST DOUBLE POLE SINGLE THROW	HACR HEATING, AC & REFRIG	NEMA NAT'L ELEC MANUFACTURER'S ASSOC
AC ALTERNATING CURRENT	DW DISHWASHER	HID HIGH INTENSITY DISCHARGE	NIC NOT IN CONTRACT
AC-# AIR CONDITIONER	EM EMERGENCY	HO HIGH OUTPUT	NL NIGHT LIGHT
ADJ ADJACENT	(E) EXISTING	HOA HAND-OFF-AUTO	NO NORMALLY OPEN
AF AMP FUSE, AMP FRAME	EA EACH	hp HORSEPOWER	NPF NORMAL POWER FACTOR
AFF ABOVE FINISH FLOOR	EB ELECTRONIC BALLAST	HPS HIGH POWER FACTOR	NTS NOT TO SCALE
AFG ABOVE FINISH GRADE	EC ELECTRICAL CONTRACTOR	HPS HIGH PRESSURE SODIUM	OC ON CENTER
ANC AMPERES INTERRUPTING CAPACITY	EC-# EVAPORATIVE COOLER	IC INTERCOM	OCP OVERCURRENT PROTECTION
AL ALUMINUM	EF-# EXHAUST FAN	ID IDENTIFICATION	OD OUTSIDE DIAMETER
AS AMP SWITCH RATING	EL EVENING LIGHT	IF INSIDE FROST	OH OVERHEAD
ATS AUTOMATIC TIME SWITCH	ELEC ELECTRICAL	IG ISOLATED GROUND	OSA OFFICE OF THE STATE ARCHITECT
ATS AUTOMATIC TRANSFER SWITCH	J-BOX JUNCTION BOX	J-BOX JUNCTION BOX	OSHPD OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
AV AUDIBLE/AUDIO VISUAL	KVA KILOWATT	KVA KILOWATT	OVLD OVERLOAD
AWG AMERICAN WIRE GAGE	EMB EMERGENCY BALLAST	LC LIGHTING CONTACTOR	P POLE
BFG BELOW FINISH GRADE	EMERG EMERGENCY	LPS LOW PRESSURE SODIUM	PA PUBLIC ADDRESS
BIL BASIC IMPULSE LEVEL	EOL END OF LINE	LRA LOCKED ROTOR AMPS	PB PULLBOX
BLDG BUILDING	EQPT EQUIPMENT	LS LIFE SAFETY BRANCH	PC PULL CHAIN
C CONDUIT	(E) (E) IN (N) LOCATION	LT LIGHT	PC PHOTOCELL
—C— CATV CONDUIT	(EXR) (E) TO BE (R)	LTG LIGHTING	PH PHASE
CABT CABINET	EXT EXTERIOR	LV LOW VOLTAGE	PNL PANEL
CATV CABLE TELEVISION	F FLOURESCENT	MC MECHANICAL CONTRACTOR	POC POINT OF CONNECTION
CB CIRCUIT BREAKER, CODE BLUE	(F) FUTURE	MCA MINIMUM CKT AMPS	—PP— POWER PRIMARY
CBC CA. BUILDING CODE	FURN FURNACE	MCB MAIN CIRCUIT BREAKER	—PS— POWER SECONDARY
CEC CA. ELECTRICAL CODE	FA FIRE ALARM	MCTB MAIN CATV TERMINAL BOARD	(R) RELOCATE(D)
CF COMPACT FLUORESCENT	FACP FIRE ALARM CONTROL PANEL	MCTC MAIN CATV TERMINAL CABINET	RECEPT RECEPTACLE
CFC CALIFORNIA FIRE CODE	FAT FIRE ALARM TERMINAL	MCH MECHANICAL	REF REFRIGERATOR
CLG CEILING	FAU FORCED AIR UNIT	MFR MANUFACTURER	REQ'D REQUIRED
CL CENTER LINE	FBO FURNISHED BY OTHERS	MFS MAIN FUSIBLE SWITCH	R/LA RATED LOAD AMPS
CKT CIRCUIT	FC-# FAN COIL	MH METAL HALIDE	RM ROOM
CNTR CONTRACTOR	FLA FULL LOAD AMPS	MLO MAIN LUGS ONLY	RMC RIGID METAL CONDUIT
C.O. CONDUIT ONLY (W/PULLROPE)	FLR FLOOR	MOCF MAXIMUM OCP	RMV REMOVE
COND CONDUIT, CONDUCTOR	FS FUSIBLE SWITCH	MSB MAIN SWITCHBOARD	RPLC REPLACE
CR CRITICAL BRANCH	FVR FULL VOLTAGE NON-REVERSING	MT MOUNT	RS RAPID START
CSFM CALIFORNIA SFM	G GROUNDING CONDUCTOR	MT HT MOUNTING HEIGHT	SC SIGNAL CABINET
CT CURRENT TRANSFORMER	GC GENERAL CONTRACTOR	MTS MANUAL TRANSFER SWITCH	SCC SHORT CKT CURRENT
CU COPPER	GD GARBAGE DISPOSAL	MTTB MAIN TELEPHONE TERMINAL BOARD	SFM STATE FIRE MARSHAL
CU-# CONDENSING UNIT	GFI GROUND FAULT CIRCUIT INTERRUPTER	MTTC MAIN TELEPHONE TERMINAL CABINET	SHT SHEET
D DEPTH	GFI GROUND FAULT CIRCUIT INTERRUPTER	NW MICROWAVE	SL SUBLINE, SWITCH LEG
DC DIRECT CURRENT	GND GROUND	N NEUTRAL (GROUNDED CONDUCTOR)	SPEC SPECIFICATION
DF DRINKING FOUNTAIN		(N) NEW	SPST SINGLE POLE SINGLE THROW

TITLE 24 CODES

2016 CALIFORNIA ADMINISTRATIVE CODE (CAC) (PART 1, TITLE 24, CCR)

2016 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 & 2 . . (PART 2, TITLE 24, CCR)
(2015 EDITION INTERNATIONAL BUILDING CODE WITH 2016 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24, CCR)
(2014 EDITION NATIONAL ELECTRICAL CODE WITH 2016 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA MECHANICAL CODE (CMC). (PART 4, TITLE 24, CCR)
(2015 EDITION IAPMO UNIFORM MECHANICAL CODE WITH 2016 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA PLUMBING CODE (CPC) (PART 5, TITLE 24, CCR)
(2015 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2016 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA ENERGY CODE (PART 6, TITLE 24, CCR)

2016 CALIFORNIA FIRE CODE (CFC) (PART 9, TITLE 24, CCR)
(2015 EDITION OF INTERNATIONAL FIRE CODE WITH 2016 CALIFORNIA AMENDMENTS)

2016 CALIFORNIA EXISTING BUILDING CODE (CEBC) (PART 10, TITLE 24, CCR)
(2015 EDITION INTERNATIONAL EXISTING BUILDING CODE WITH 2016 CALIFORNIA AMENDMENTS)

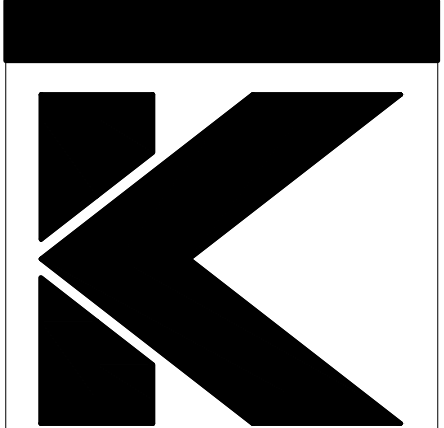
2016 CALIFORNIA GREEN CODE (PART 11, TITLE 24, CCR)

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS.

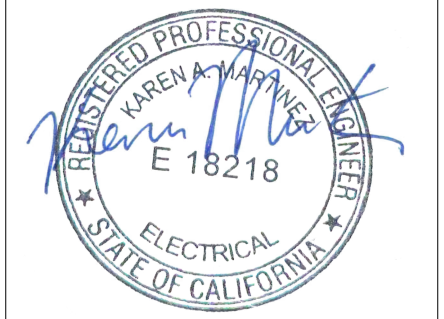
2013 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS & ESCALATORS

2016 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24, CCR)

NFPA 13	— 2016
NFPA 14	— 2013
NFPA 17	— 2013
NFPA 17A	— 2013
NFPA 20	— 2016
NFPA 22	— 2013
NFPA 24	— 2016
NFPA 80	— 2016
NFPA 2001	— 2015
UL 300	— 2005
UL 464	— 2003
UL 521	— 1999
UL 1971	— 2002
ICC 300	— 2012
NFPA 72	— 2016
REFERENCED CODE SECTIONS FOR APPLICABLE STANDARDS	
2016 CBC, CHAPTER 35	
2016 CFC, CHAPTER 80	



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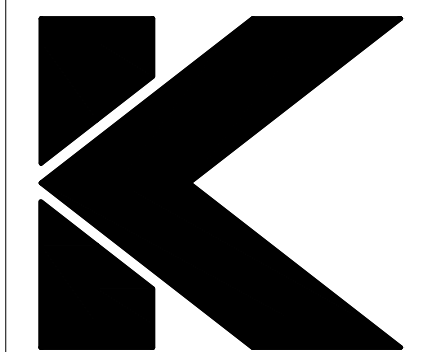
Where dimensions on these drawings shall have precedence over scaled dimensions, contractors shall verify and be responsible for all dimensions and conditions on the job and the drawings and conditions of any variations from the drawings and conditions shall be the responsibility of the contractor. These drawings shall be submitted to this office for approval before proceeding with fabrication.

TENANT IMPROVEMENTS
SAN JOAQUIN VALLEY PULMONARY
5801 TRUXTUN AVE, BAKERSFIELD CA 93309

MARK	ISSUED FOR	DATE
1	ADDENDUM 01	9/6/19
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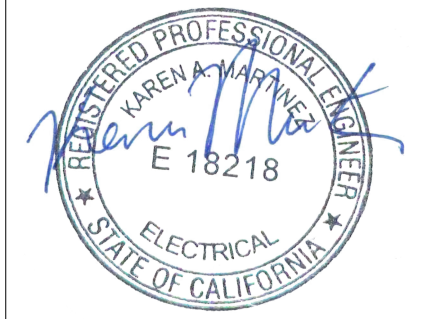
Project No. : C19-148
ELECTRICAL
GENERAL
NOTES

E1.0



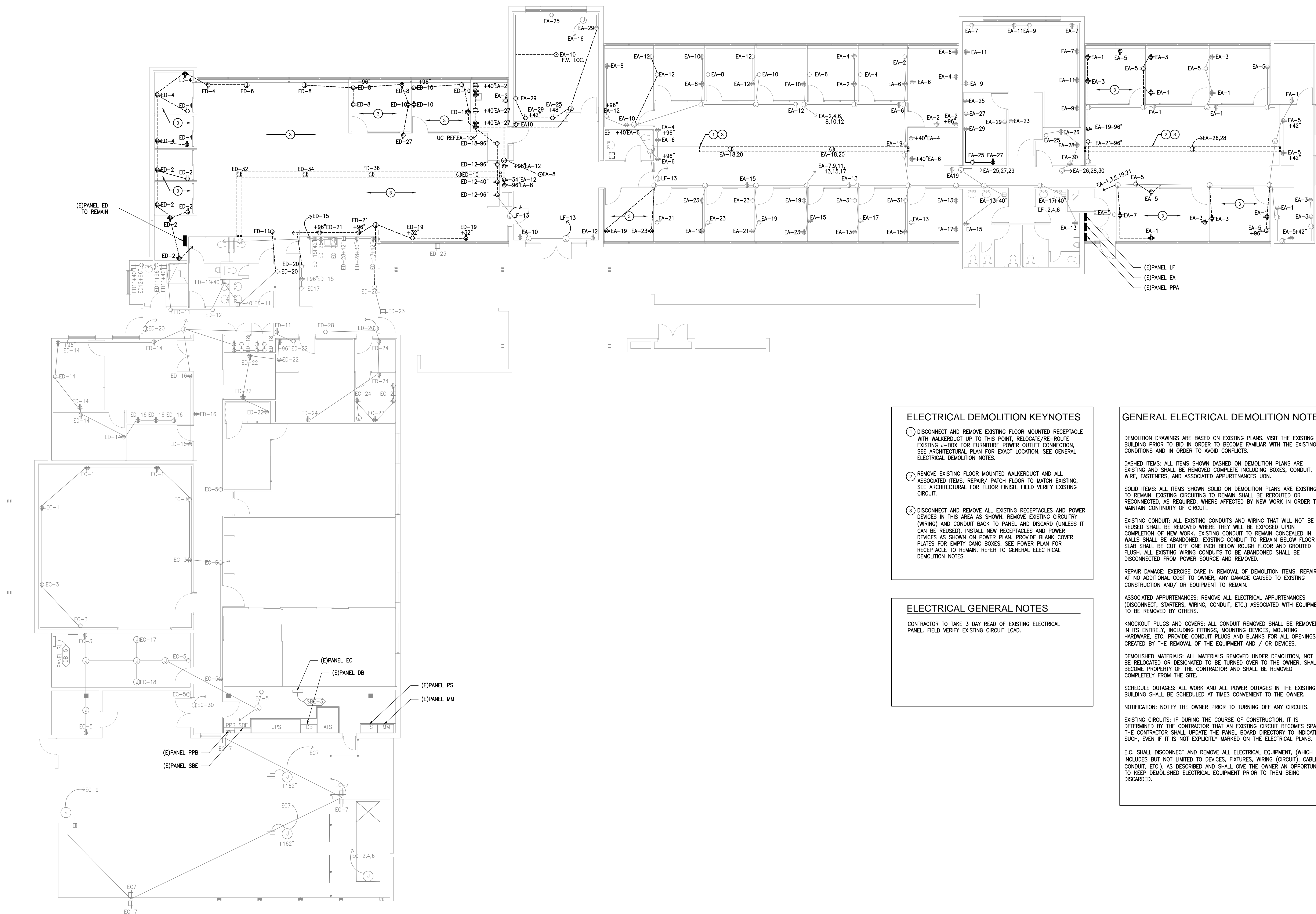
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POWER DEMOLITION FLOOR PLAN

SCALE: 1/8" = 1'-0"

DATE	ISSUED FOR	MARK
9/6/19	ADDENDUM 01	1
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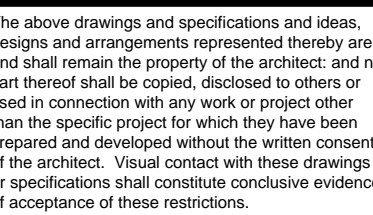
Project No. : C19-148

POWER
DEMOLITION FLOOR
PLAN

E2.0



**2021 Westwind Drive
Bakersfield, CA 93301**



TENANT IMPROVEMENTS
SAN JOAQUIN VALLEY PULMONARY
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SCALE: $1/8" = 1'-0"$

1 DISCONNECT AND REMOVE ALL EXISTING LIGHTS AND LIGHTING CONTROLS IN THIS AREA AS SHOWN. REMOVE EXISTING CIRCUITRY (WIRING) AND CONDUIT BACK TO PANEL AND DISCARD. INSTALL NEW LIGHTS AND LIGHTING CONTROL AS SHOWN ON NEW ELECTRICAL LIGHTING PLAN. PROVIDE BLANK COVER PLATES FOR EMPTY GANG BOXES. REFER TO GENERAL ELECTRICAL DEMOLITION NOTES.

DEMOLITION DRAWINGS ARE BASED ON EXISTING PLANS. VISIT THE EXISTING BUILDING PRIOR TO BID IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND IN ORDER TO AVOID CONFLICTS.

DEMOLITION DRAWINGS ARE BASED ON EXISTING PLANS. VISIT THE EXISTING BUILDING PRIOR TO BID IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND IN ORDER TO AVOID CONFLICTS.

DASHED ITEMS: ALL ITEMS SHOWN DASHED ON DEMOLITION PLANS ARE EXISTING AND SHALL BE REMOVED COMPLETE INCLUDING BOXES, CONDUIT, WIRE, FASTENERS, AND ASSOCIATED APPURTENANCES UON.

SOLID ITEMS: ALL ITEMS SHOWN SOLID ON DEMOLITION PLANS ARE EXISTING TO REMAIN. EXISTING CIRCUITING TO REMAIN SHALL BE REROUTED OR RECONNECTED, AS REQUIRED, WHERE AFFECTED BY NEW WORK IN ORDER TO MAINTAIN CONTINUITY OF CIRCUIT.

EXISTING CONDUIT: ALL EXISTING CONDUITS AND WIRING THAT WILL NOT BE REUSED SHALL BE REMOVED WHERE THEY WILL BE EXPOSED UPON COMPLETION OF NEW WORK. EXISTING CONDUIT TO REMAIN CONCEALED IN WALLS SHALL BE ABANDONED. EXISTING CONDUIT TO REMAIN BELOW FLOOR SLAB SHALL BE CUT OFF ONE INCH BELOW ROUGH FLOOR AND GROUTED FLUSH. ALL EXISTING WIRING CONDUITS TO BE ABANDONED SHALL BE DISCONNECTED FROM POWER SOURCE AND REMOVED.

REPAIR DAMAGE: EXERCISE CARE IN REMOVAL OF DEMOLITION ITEMS. REPAIR AT NO ADDITIONAL COST TO OWNER, ANY DAMAGE CAUSED TO EXISTING CONSTRUCTION AND/ OR EQUIPMENT TO REMAIN.

ASSOCIATED APPURTENANCES: REMOVE ALL ELECTRICAL APPURTENANCES (DISCONNECT, STARTERS, WIRING, CONDUIT, ETC.) ASSOCIATED WITH EQUIPMENT TO BE REMOVED BY OTHERS.

KNOCKOUT PLUGS AND COVERS: ALL CONDUIT REMOVED SHALL BE REMOVED IN ITS ENTIRETY, INCLUDING FITTINGS, MOUNTING DEVICES, MOUNTING HARDWARE, ETC. PROVIDE CONDUIT PLUGS AND BLANKS FOR ALL OPENINGS CREATED BY THE REMOVAL OF THE EQUIPMENT AND / OR DEVICES.

DEMOLISHED MATERIALS: ALL MATERIALS REMOVED UNDER DEMOLITION, NOT BE RELOCATED OR DESIGNATED TO BE TURNED OVER TO THE OWNER, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED COMPLETELY FROM THE SITE.

SCHEDULE OUTAGES: ALL WORK AND ALL POWER OUTAGES IN THE EXISTING BUILDING SHALL BE SCHEDULED AT TIMES CONVENIENT TO THE OWNER.

NOTIFICATION: NOTIFY THE OWNER PRIOR TO TURNING OFF ANY CIRCUITS.

EXISTING CIRCUITS: IF DURING THE COURSE OF CONSTRUCTION, IT IS DETERMINED BY THE CONTRACTOR THAT AN EXISTING CIRCUIT BECOMES SPARE, THE CONTRACTOR SHALL UPDATE THE PANEL BOARD DIRECTORY TO INDICATE SUCH, EVEN IF IT IS NOT EXPLICITLY MARKED ON THE ELECTRICAL PLANS.

LIGHTS: ELECTRICAL CONTRACTOR (E.C.) SHALL REMOVE ALL LIGHT FIXTURES AS INDICATED ON DRAWINGS. IF ANY LIGHT FIXTURE BALLASTS ARE FOUND TO CONTAIN PRINTED CIRCUIT BOARD (PCB'S) THE ELECTRICAL CONTRACTOR SHALL REMOVE BALLAST FROM LIGHT FIXTURES AND DISPOSE OF IN APPROVED DISPOSAL CONTAINERS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL PER LOCAL, STATE AND FEDERAL LAWS AND PAY FOR ALL ASSOCIATED COST OF DISPOSAL.

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF REMAINING LUMINAIRE PARTS AND ANY NON-PCB FIXTURES PER LOCAL, STATE, AND FEDERAL REGULATIONS AND PAY FOR ALL ASSOCIATED COST OF DISPOSAL.

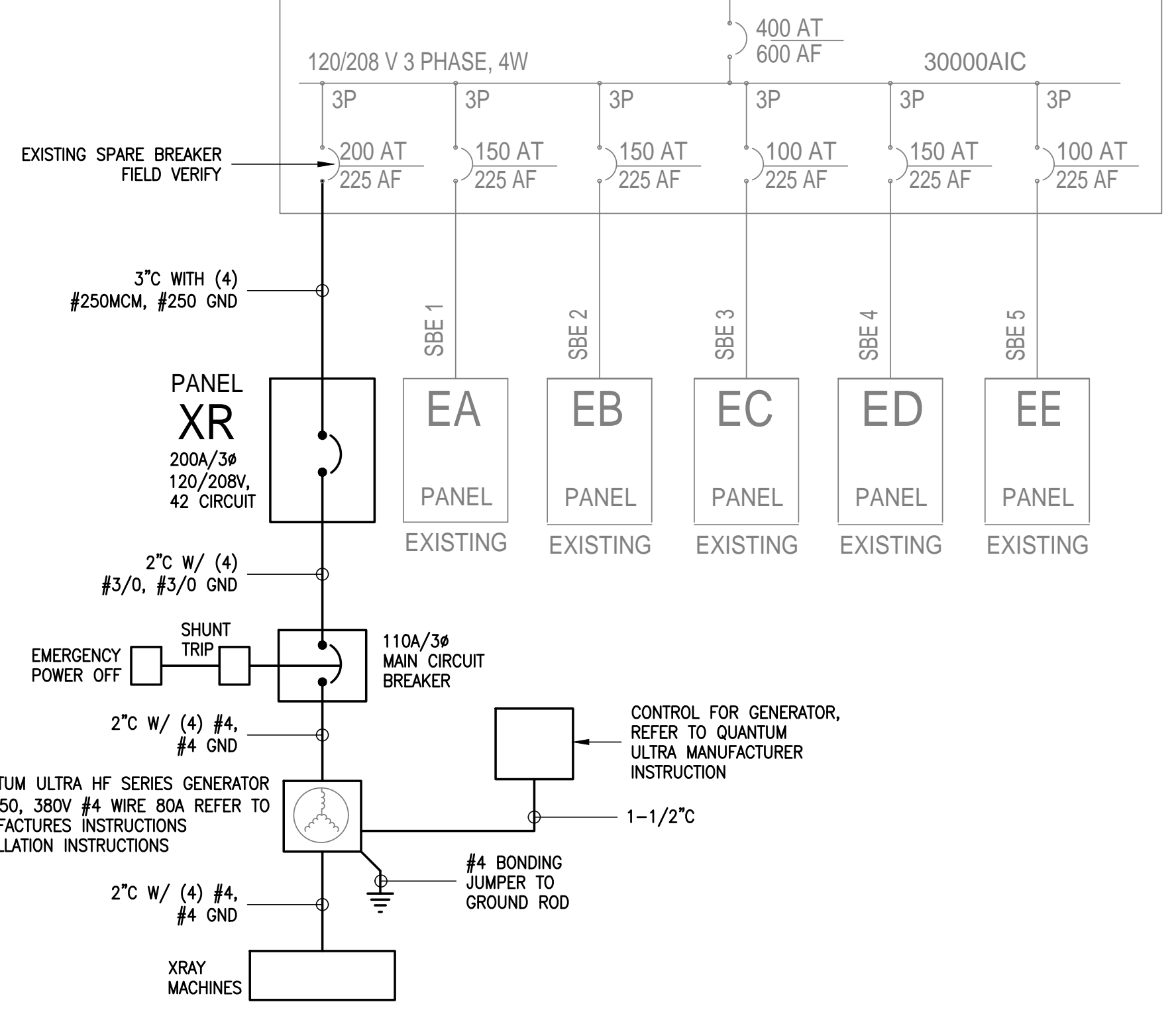
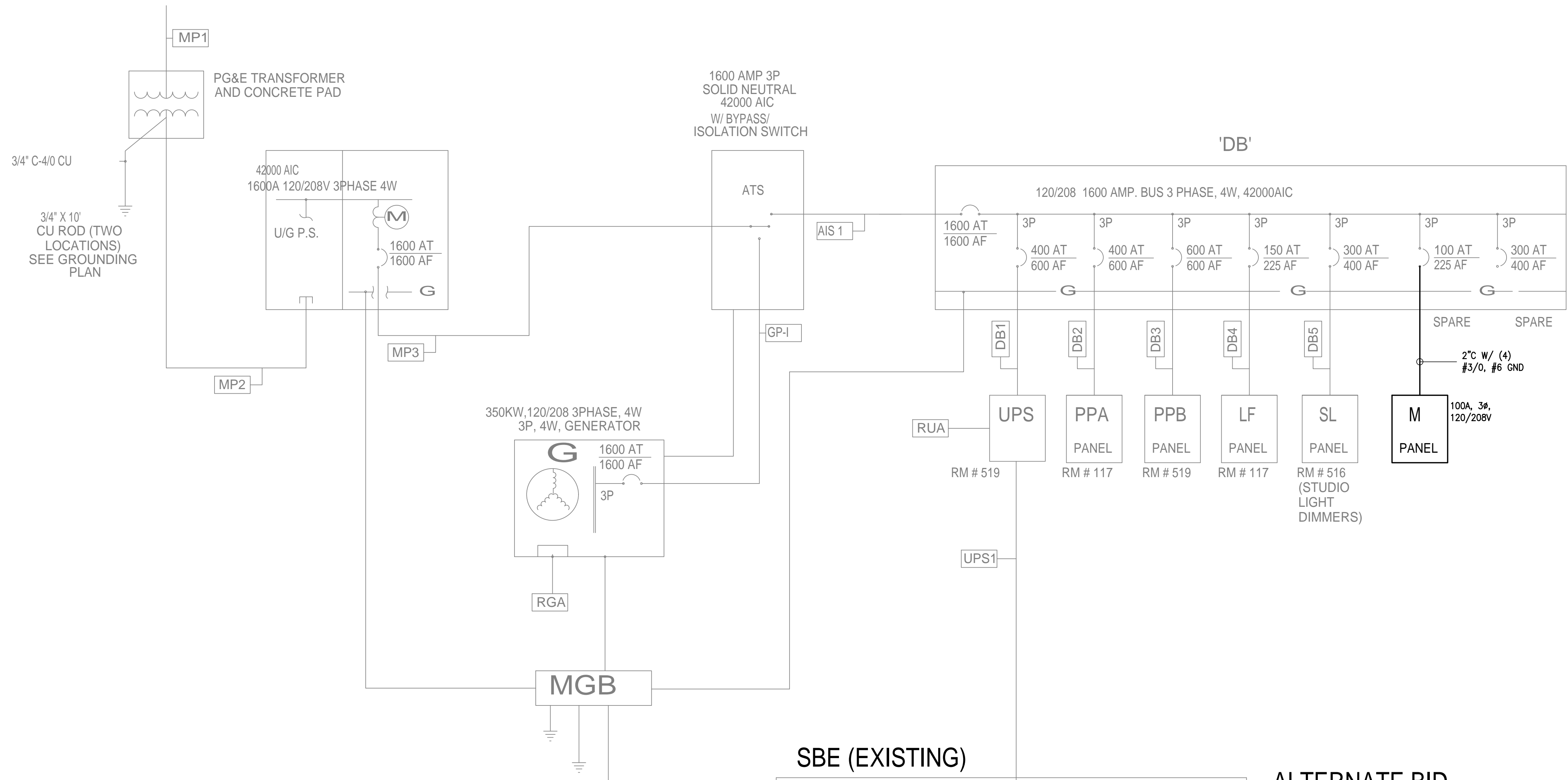
ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL EQUIPMENT, (WHICH INCLUDES BUT NOT LIMITED TO DEVICES, FIXTURES, WIRING (CIRCUIT), CABLING, CONDUIT, ETC.), AS DESCRIBED AND SHALL GIVE THE OWNER AN OPPORTUNITY TO KEEP DEMOLISHED ELECTRICAL EQUIPMENT PRIOR TO THEM BEING DISCARDED.

DATE	ISSUED FOR	MARK
9/6/19	ADDENDUM 01	△
		△
		△
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Project No. : C19-148

LIGHTING
DEMOLITION FLOOR
PLAN

E3.0



SINGLE LINE DIAGRAM

ALTERNATE BID
REPLACE PANEL SBE IF NO SPARE
EXIST. RECONNECT ALL EXISTING
LOAD. ADD SPACE FOR PANEL XR PER
SINGLE LINE DIAGRAM

PANEL " EA " EXISTING																															
SERVICE: 120/208V 3Ø 4W MAIN BKR: 150A														BUS: 225A							LOC.: SEE PLAN										
PANELBOARD																					MTG.: FLUSH										
REMARKS		LOAD	ØA	ØB	ØC	R	E	L	T	M	TRIP	POLE	WIRE	C	I	C	WIRE	POLE	TRIP	R	E	L	T	M	I	ØA	ØB	ØC	REMARKS		
RECEPTACLE	1000										20	1	12	1	2	2	12	1	20							1000				RECEPTACLE	
RECEPTACLE		1000									20	1	12	3	4	4	12	1	20											RECEPTACLE	
RECEPTACLE					1000						20	1	12	5	6	6	12	1	20							1000		1000		RECEPTACLE	
RECEPTACLE		1000									20	1	12	7	8	8	12	1	20							1000				RECEPTACLE	
RECEPTACLE					1000						20	1	12	9	10	10	12	1	20							1000		1000		RECEPTACLE	
RECEPTACLE					1000						20	1	12	11	12	12	12	1	20									1000		RECEPTACLE	
RECEPTACLE		1000									20	1	12	13	14	14	12	1	20							1000				RECEPTACLE	
RECEPTACLE					1000						20	1	12	15	16	16	12	1	20								1000			RECEPTACLE	
RECEPTACLE					1000						20	1	12	17	18	18	12	1	20											RECEPTACLE	
RECEPTACLE					1000						20	1	12	19	20	20	12	1	20							1000				RECEPTACLE	
RECEPTACLE					1000						20	1	12	21	22	22	12	1	20											RECEPTACLE	
RECEPTACLE											20	1	12	23	24	24	12	1	20									1000			RECEPTACLE
RECEPTACLE		1000									20	1	12	25	26	26	12	1	20							1000					RECEPTACLE
RECEPTACLE					1000						20	1	12	27	28	28	12	1	20								1000		1000		RECEPTACLE
RECEPTACLE					1000						20	1	12	29	30	30	12	1	20										1000		RECEPTACLE
RECEPTACLE					1000						20	1	12	31	32	32	12	1	20								500				RECEPTACLE
RECEPTACLE					1000						20	1	12	33	34	34	12	1	20									500			RECEPTACLE
RECEPTACLE					1000						20	1	12	35	36	36	12	1	20									500			RECEPTACLE
RECEPTACLE					1000						20	1	12	37	38	38	12	1	20								500				RECEPTACLE
RECEPTACLE					1000						20	1	12	39	40	40	12	1	20								500				RECEPTACLE
RECEPTACLE					1000						20	1	12	41	42	42	12	1	20								500				RECEPTACLE
TOTAL WATTS=		39000																										6000			6000
AMPS=		108.25																										13000			13000
ØA=13000														ØB=13000					ØC=13000					MINIMUM BKR				A.I.C. RATING= EXISTING			

PANEL "LF" EXISTING																									
SERVICE: 120/208V 3Ø 4W										MAIN BKR: 150A										BUS: 225A					LOC: SEE PLAN
PANELBOARD																									MTG: FLUSH
REMARKS		LOAD		R	L	T	TRIP	POLE	C	C	POLE	TRIP	R	L	T	LOAD	REMARKS								
	ØA	ØB	ØC	E	M			WIRE		WIRE			E	M		ØA	ØB	ØC							
LIGHTS	800						20	1	12	1	2	12	1	20					EX WATER HEATER						
LIGHTS		1000					20	1	12	3	4	12	1	20			2500	2500							
LIGHTS			700				20	1	12	5	6	12	1	20				2500							
LIGHTS	700						20	1	12	7	8	12	1	20					SPARE						
LIGHTS		500					20	1	12	9	10	12	1	20					SPARE						
LIGHTS			1000				20	1	12	11	12	12	1	20					EX PHOTOCCELL						
LIGHTS	600						20	1	12	13	14	12	1	20			800		EX RECEPTACLE AT ROOF						
LIGHTS		500					20	1	12	15	16	12	1	20			600		EX EXTERIOR SIGN/LIGHT						
LIGHTS			900				20	1	12	17	18	12	1	20			840		EX FOUNTAIN PUMP/LIGHT						
LIGHTS	800						20	1	12	19	20	12	1	20			800		EX PARKING LIGHTS/SIGN						
LIGHTS		900					20	1	12	21	22	12	1	20			2400		EX LANDSCAPE LIGHTS						
LIGHTS			700				20	1	12	23	24	12	1	20			800		EX EXTERIOR YARD LIGHTS						
LIGHTS	500						20	1	12	25	26	12	1	20					SPARE						
LIGHTS		1000					20	1	12	27	28	12	1	20			1000		EGRESS/EXIT LIGHT						
LIGHTS			700				20	1	12	29	30	12	1	20				800	EXTERIOR EGRESS LIGHT						
LIGHTS	1000						20	1	12	31	32	12	1	20			1000		DRYER						
LIGHTS		800					20	1	12	33	34	12	1	20			1000		DRYER						
LIGHTS			700				20	1	12	35	36	12	1	20				1000	DRYER						
LIGHTS	800						20	1	12	37	38	12	1	20			2000		WASHER						
LIGHTS		800					20	1	12	39	40	12	1	20			1000		WATER HEATER						
LIGHTS			700				20	1	12	41	42	12	1	20				1000	WATER HEATER						
TOTAL WATTS=		38640		ØA=12300					ØB=14000					ØC=12340											
AMPS=		107.25							MINIMUM BKR					A.I.C. RATING= EXISTING											

PANEL "PPA" EXISTING																																
SERVICE: 120/208V 3Ø 4W PANELBOARD														MAIN BKR: 400A BUS: 600A										LOC.: SEE PLAN MTG.: FLUSH								
REMARKS		LOAD	ØA	ØB	ØC	R	E	L	T	M	TRIP	POLE	WIRE	C	C	POLE	TRIP	R	E	L	T	M	TRIP	POLE	WIRE	C	LOAD	ØA	ØB	ØC	REMARKS	
EXISTING AC.4 (7.5 TONS)		7700									75		1	2														3700				EXISTING AC.5 (3 TONS)
EXISTING AC.3 (7.5 TONS)		7700									75		3	5	4													3700				EXISTING AC.9 (2 TONS)
EXISTING AC.2 (7.5 TONS)		7700									75		3	11	12													3700				SPARE
EXISTING AC.1 (5 TONS)		5400									60		3	17	18													3700				EXISTING AC.8 (3 TONS)
SPARE											5400		3	23	24																	SPARE
SPARE											20	1	12	25	26													500				EXISTING CU-2B (2 TONS)
SPARE											20	1	12	27	28													500				EXISTING FC-2B
SPARE											20	1	12	29	30																	SPARE
EXISTING EF.3											20	1	12	31	32																	SPARE
SPARE											20	1	12	33	34																	SPARE
EXISTING EF.2											20	1	12	35	36																	SPARE
SPARE											20	1	12	37	38																	SPARE
SPARE											20	1	12	39	40																	SPARE
SPARE											20	1	12	41	42																	SPARE
TOTAL WATTS=		120300	ØA= 39700										ØB= 42200										ØC= 38400									
AMPS=		333.92											MINIMUM BKR										A.I.C. RATING= EXISTING									

Project Name:SAN JOAQUIN PULMONARY

Project Address:22-38, Sun, Aug 11, 2019

Compliance Scope:NewComplete

NRCC-PRF-01-E

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Input File Name:c19-148.cbdt6x

1stIndoor Fans: Check envelope and mechanical

2ndIndoor Lighting: Check lighting

3rdHeat Rejection: Check envelope and mechanical

4thPumps & Misc.: Check mechanical

5thDomestic Hot Water: Check mechanical

6thSpace Heating: Check envelope and mechanical

7thSpace Cooling: Check envelope and mechanical

Indoor Fans

Indoor Lighting

Heat Rejection

Pumps & Misc.

Domestic Hot Water

Space Heating

Space Cooling

Penalty

Energy Credit

D. EXCEPTIONAL CONDITIONS

This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation from NRCC-LT-02-E for the requirements of section 140.6(a) Automatic Daylighting Controls in Secondary Daylit Zones is required.

This project includes Domestic Hot Water in the analysis. Please verify that Domestic Hot Water is included in the design for the permitted scope of work.

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

None Provided

Project Name:SAN JOAQUIN PULMONARY

Project Address:22-38, Sun, Aug 11, 2019

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCC/NRCA/NRVC) – Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify). See Tables G, and H, in MCH and UT Details Sections for Acceptance Tests and forms by equipment.

Building Component

Compliance Forms (required for submit)

Pass

Fail

Envelope

☒ NRCC-ENV-01-E – For all buildings

☐ NRCA-ENV-02-F: NRCC label verification for fenestration

☐ NRCA-MCH-01-E – For all buildings with Mechanical Systems

☐ NRCA-MCH-02-A: Outdoor Air

☐ NRCA-MCH-03-A – Constant Volume Single Zone HVAC

☐ NRCA-MCH-04-H: Air Distribution Duct Leakage

☐ NRCA-MCH-05-A: Air Economizer Controls

☐ NRCA-MCH-06-A: Demand Control Ventilation

☐ NRCA-MCH-07-A: Supply Fan Variable Flow Controls

☐ NRCA-MCH-08-A: Valve Leakage Test

☐ NRCA-MCH-09-A: Supply Water Temp Reset Controls

☐ NRCA-MCH-10-A: Hydronic System Variable Flow Controls

☐ NRCA-MCH-11-A: Auto Demand Shed Controls

☐ NRCA-MCH-12-A: Packaged Direct Expansion Units

☐ NRCA-MCH-13-A: Air Handling Units and Zone Terminal Units

☐ NRCA-MCH-14-A: Distributed Energy Storage

☐ NRCA-MCH-15-A – Thermal Energy Storage

☐ NRCA-MCH-16-A: Supply Air Temp Reset Controls

☐ NRCA-MCH-17-A: Condensate Water Temp Reset Controls

☐ NRCA-MCH-18-A: Energy Management Controls Systems

☐ NRVC-MCH-04-H: Duct Leakage Test

Mechanical

☐ NRCC-ENV-01-E – For all buildings

☐ NRCA-ENV-02-F: NRCC label verification for fenestration

☐ NRCA-MCH-01-E – For all buildings with Mechanical Systems

☐ NRCA-MCH-02-A: Outdoor Air

☐ NRCA-MCH-03-A – Constant Volume Single Zone HVAC

☐ NRCA-MCH-04-H: Air Distribution Duct Leakage

☐ NRCA-MCH-05-A: Air Economizer Controls

☐ NRCA-MCH-06-A: Demand Control Ventilation

☐ NRCA-MCH-07-A: Supply Fan Variable Flow Controls

☐ NRCA-MCH-08-A: Valve Leakage Test

☐ NRCA-MCH-09-A: Supply Water Temp Reset Controls

☐ NRCA-MCH-10-A: Hydronic System Variable Flow Controls

☐ NRCA-MCH-11-A: Auto Demand Shed Controls

☐ NRCA-MCH-12-A: Packaged Direct Expansion Units

☐ NRCA-MCH-13-A: Air Handling Units and Zone Terminal Units

☐ NRCA-MCH-14-A: Distributed Energy Storage

☐ NRCA-MCH-15-A – Thermal Energy Storage

☐ NRCA-MCH-16-A: Supply Air Temp Reset Controls

☐ NRCA-MCH-17-A: Condensate Water Temp Reset Controls

☐ NRCA-MCH-18-A: Energy Management Controls Systems

☐ NRVC-MCH-04-H: Duct Leakage Test

Project Name:SAN JOAQUIN PULMONARY

Project Address:22-38, Sun, Aug 11, 2019

Compliance Scope:NewComplete

NRCC-PRF-01-E

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Calculation Date/Time:22-38, Sun, Aug 11, 2019

Input File Name:c19-148.cbdt6x

M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information)

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TENANT IMPROVEMENTS
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DATE	9/6/11					
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TITLE 24

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