

**ATLAS**  
**9085-B AERO DRIVE**  
**SAN DIEGO, CALIFORNIA 92123**

**PLAN CHECK**  
**MAY 5, 2023**



**SCHALL**  
**ARCHITECTS**

5173 WARING ROAD - SUITE 91  
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**TABLE 11B-703.5.5 VISUAL CHARACTER HEIGHT**

HEIGHT TO FINISH FLOOR OR GROUND FROM BASELINE OF CHARACTER	HORIZONTAL VIEWING DISTANCE	MINIMUM CHARACTER HEIGHT
40 inches (1016 mm) to less than or equal to 70 inches (1778 mm)	less than 72 inches (1829 mm)	$\frac{1}{4}$ inch (15.9 mm)
Greater than 70 inches (1778 mm) to less than or equal to 120 inches (3048 mm)	72 inches (1829 mm) and greater	$\frac{1}{4}$ inch (15.9 mm), plus $\frac{1}{8}$ inch (3.2 mm) per foot (305 mm) of viewing distance above 72 inches (1829 mm)
Greater than 120 inches (3048 mm)	less than 180 inches (4572 mm) and greater	2 inches (51 mm)
	180 inches (4572 mm) and greater	2 inches (51 mm), plus $\frac{1}{8}$ inch (3.2 mm) per foot (305 mm) of viewing distance above 180 inches (4572 mm)
	less than 21 feet (6401 mm)	3 inches (76 mm)
	21 feet (6401 mm) and greater	3 inches (76 mm), plus $\frac{1}{8}$ inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6401 mm)

**11B-703.7.2.1 International Symbol of Accessibility.** The International Symbol of Accessibility shall comply with Figure 11B-703.7.2.1. The symbol shall consist of a white figure on a blue background. The blue shall be Color No. 15090 in Federal Standard 595B.

Exception: The appropriate enforcement agency may approve other colors to complement décor or unique design. The symbol contrast shall be light on dark or dark on light.

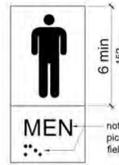


FIGURE 11B-703.8.1 PICTOGRAM FIELD



FIGURE 11B-703.7.2.1 INTERNATIONAL SYMBOL OF ACCESSIBILITY

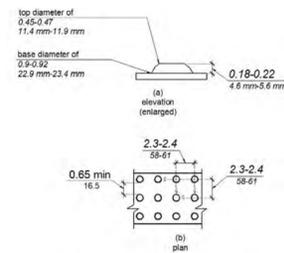


FIGURE 11B-705.1 SIZE AND SPACING OF TRUNCATED DOMES

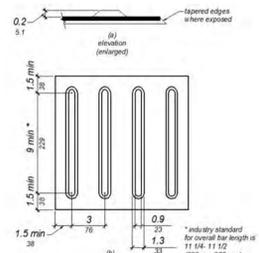


FIGURE 11B-705.2 DETECTABLE DIRECTIONAL TEXTURE

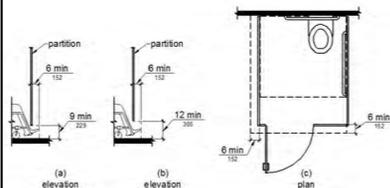


FIGURE 11B-604.8.1.4 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT TOE CLEARANCE

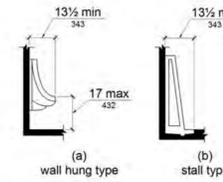


FIGURE 11B-605.2 HEIGHT AND DEPTH OF URINALS

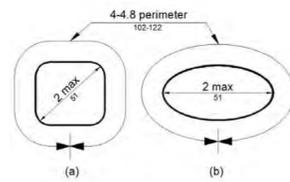


FIGURE 11B-609.2.2 GRAB BAR NON-CIRCULAR CROSS SECTION

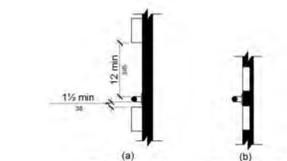


FIGURE 11B-609.3 SPACING OF GRAB BARS

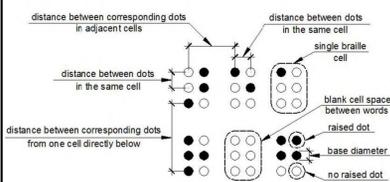


FIGURE 11B-703.3.1 BRAILLE MEASUREMENT

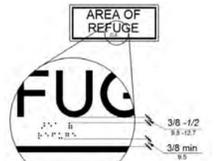


FIGURE 11B-703.3.2 POSITION OF BRAILLE

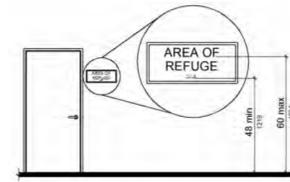


FIGURE 11B-703.4.1 HEIGHT OF TACTILE CHARACTERS ABOVE FINISH FLOOR OR GROUND

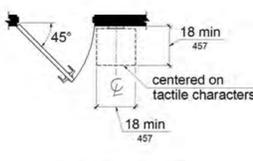


FIGURE 11B-703.4.2 LOCATION OF TACTILE SIGNS AT DOORS

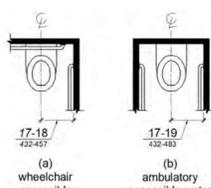


FIGURE 11B-604.2 WATER CLOSET LOCATION

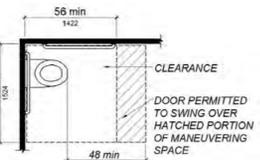


FIGURE 11B-604.3.1 SIZE OF CLEARANCE AT WATER CLOSETS

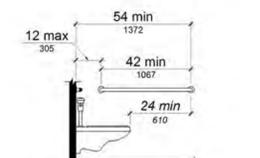


FIGURE 11B-604.5.1 SIDE WALL GRAB BAR AT WATER CLOSETS

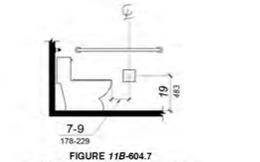


FIGURE 11B-604.7 DISPENSER OUTLET LOCATION

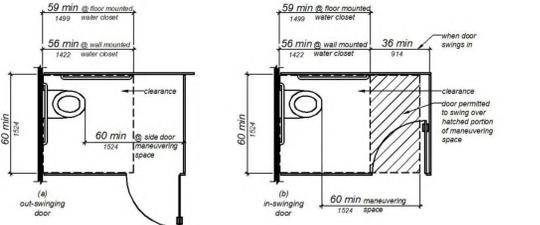


FIGURE 11B-604.8.1.1.2 MANEUVERING SPACE WITH SIDE-OPENING DOOR

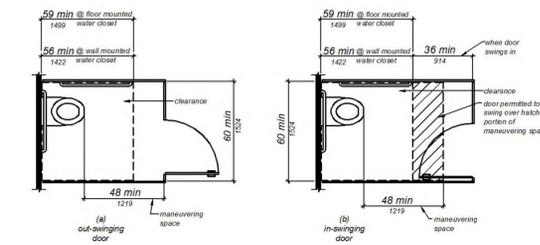


FIGURE 11B-604.8.1.1.3 MANEUVERING SPACE WITH END-OPENING DOOR

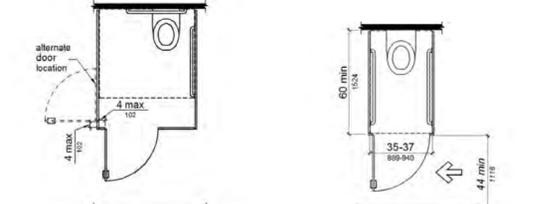


FIGURE 11B-604.8.1.2 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT DOORS

**TABLE 11B-604.9 SUGGESTED DIMENSIONS FOR CHILDREN'S USE**

	SUGGESTED DIMENSIONS FOR WATER CLOSETS SERVING CHILDREN AGES 3 THROUGH 12		
	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
Water Closet Centerline	12 inches (305 mm)	12 to 15 inches (305 to 381 mm)	15 to 18 inches (381 to 457 mm)
Toilet Seat Height	11 to 12 inches (279 to 305 mm)	12 to 15 inches (305 to 381 mm)	15 to 17 inches (381 to 432 mm)
Grab Bar Height	18 to 20 inches (457 to 508 mm)	20 to 25 inches (508 to 635 mm)	25 to 27 inches (635 to 686 mm)
Dispenser Height	14 inches (356 mm)	14 to 17 inches (356 to 432 mm)	17 to 19 inches (432 to 483 mm)

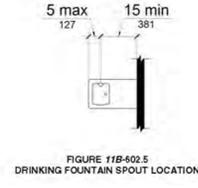


FIGURE 11B-602.5 DRINKING FOUNTAIN SPOUT LOCATION

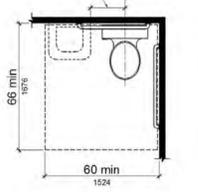


FIGURE 11B-604.3.2 (EXCEPTION) OVERLAP OF WATER CLOSET CLEARANCE IN RESIDENTIAL DWELLING UNITS

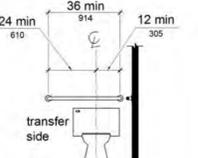


FIGURE 11B-604.5.2 REAR WALL GRAB BAR AT WATER CLOSETS

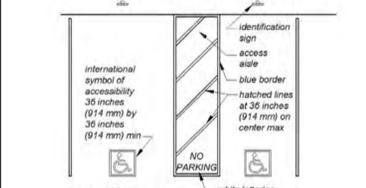


FIGURE 11B-502.3.3 ANGLED AND PERPENDICULAR PARKING IDENTIFICATION

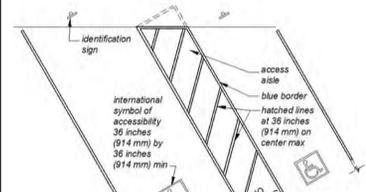


FIGURE 11B-503 PASSENGER DROP-OFF AND LOADING ZONE ACCESS AISLE

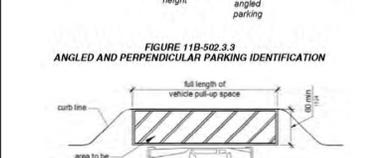


FIGURE 11B-504.5 STAIR NOSINGS

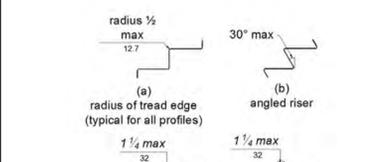


FIGURE 11B-504.4 HANDRAIL HEIGHT

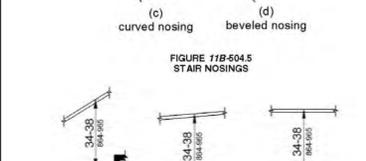


FIGURE 11B-505.5 HANDRAIL CLEARANCE

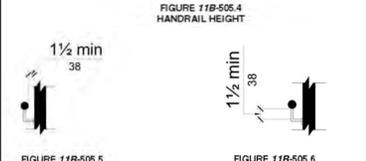


FIGURE 11B-505.6 HORIZONTAL PROJECTIONS BELOW GRIPPING SURFACE

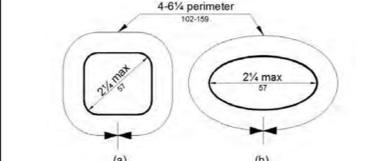


FIGURE 11B-505.7.2 HANDRAIL NON-CIRCULAR CROSS SECTION

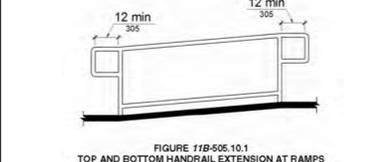


FIGURE 11B-505.10.1 TOP AND BOTTOM HANDRAIL EXTENSION AT RAMP

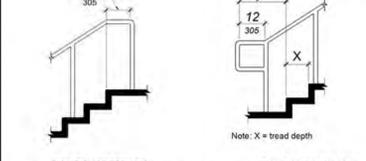


FIGURE 11B-505.10.2 TOP HANDRAIL EXTENSION AT STAIRS



FIGURE 11B-505.10.3 BOTTOM HANDRAIL EXTENSION AT STAIRS

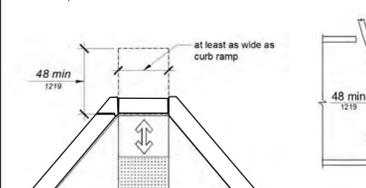


FIGURE 11B-406.5.3 LANDINGS AT THE TOP OF CURB RAMP

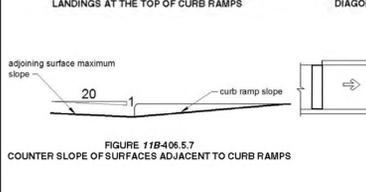


FIGURE 11B-406.5.10 DIAGONAL OR CORNER TYPE CURB RAMP

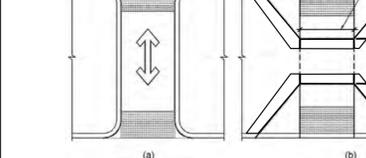


FIGURE 11B-406.5.7 COUNTER SLOPE OF SURFACES ADJACENT TO CURB RAMP

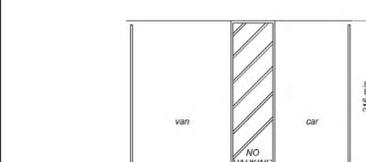


FIGURE 11B-406.3.2 PARALLEL CURB RAMP

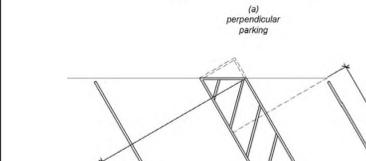


FIGURE 11B-406.6 ISLANDS IN CROSSINGS

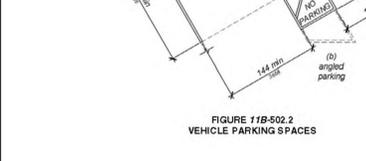


FIGURE 11B-502.2 VEHICLE PARKING SPACES

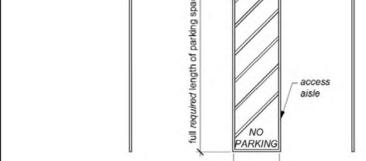


FIGURE 11B-502.3 PARKING SPACE ACCESS AISLE

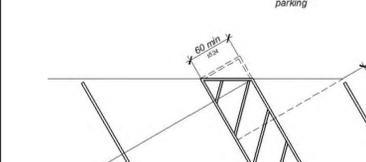


FIGURE 11B-502.3 PARKING SPACE ACCESS AISLE



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05-05-23 PLAN CHECK

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**ATLAS**

**9085-B AERO DRIVE**

**SAN DIEGO, CALIFORNIA 92123**

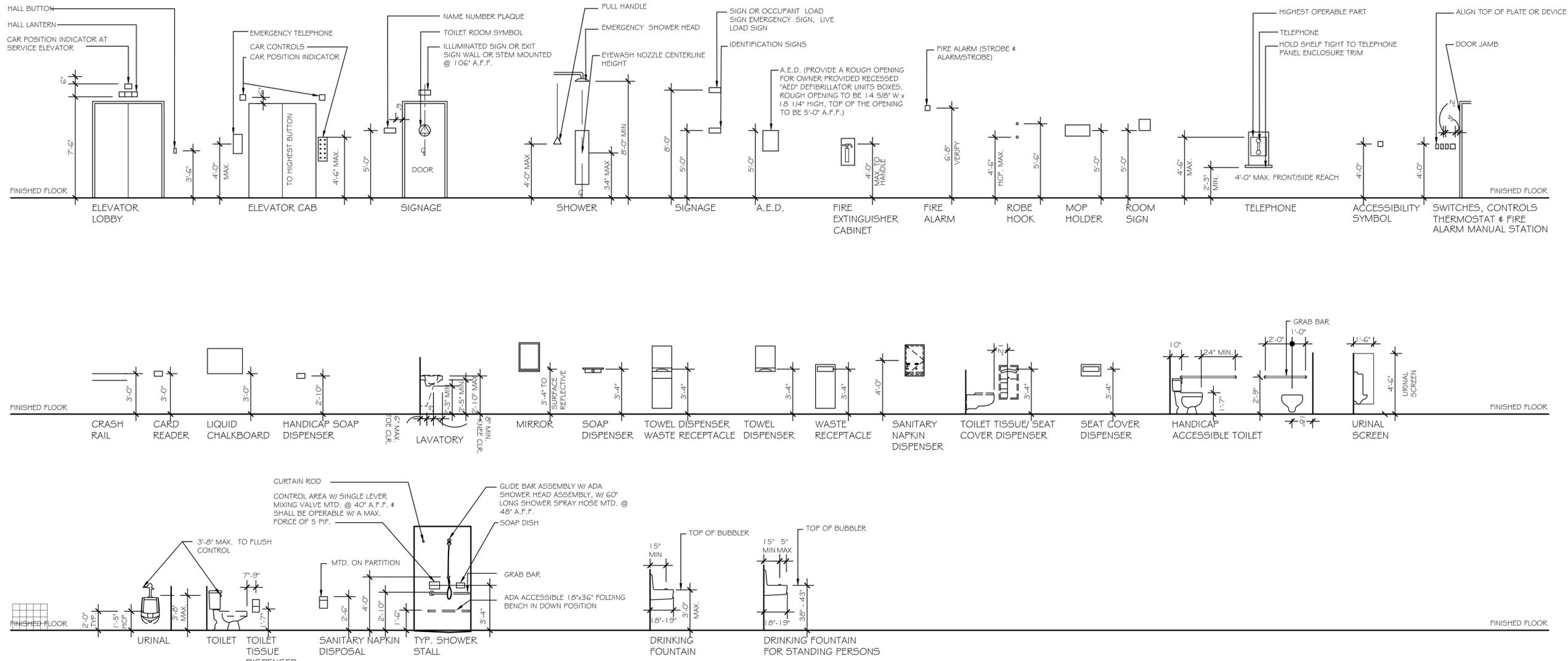
PROJECT NO:  
2022170

SHEET TITLE  
ACCESSIBILITY  
NOTES AND  
DETAILS

SHEET NO.

TS2

# ACCESSORY MOUNTING HEIGHTS



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05-05-23 PLAN CHECK

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**ATLAS**  
**9085-B AERO DRIVE**  
**SAN DIEGO, CALIFORNIA 92123**

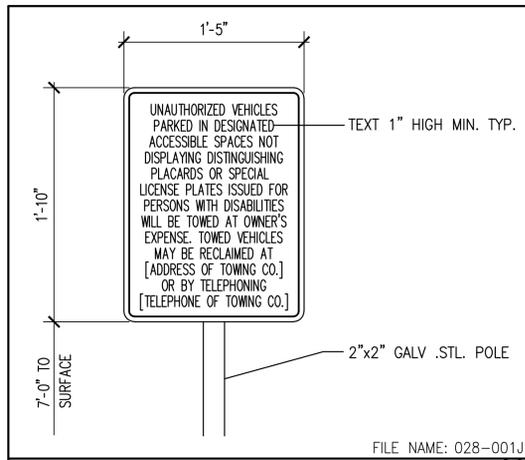
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SHEET TITLE  
ACCESSIBILITY  
MOUNTING  
HEIGHTS

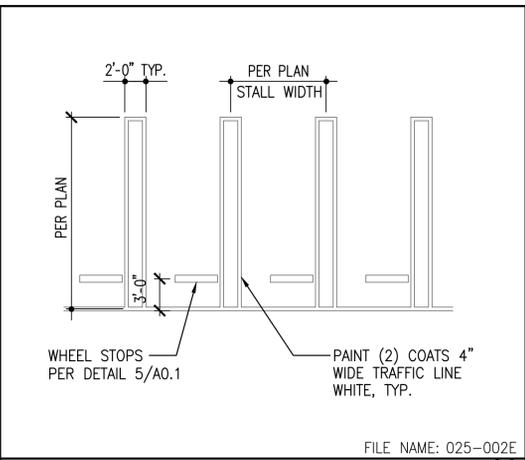
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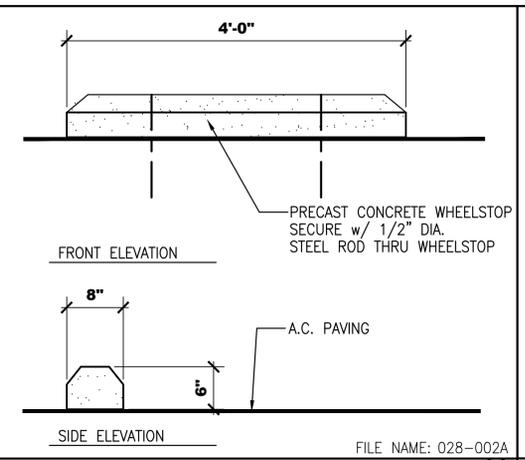
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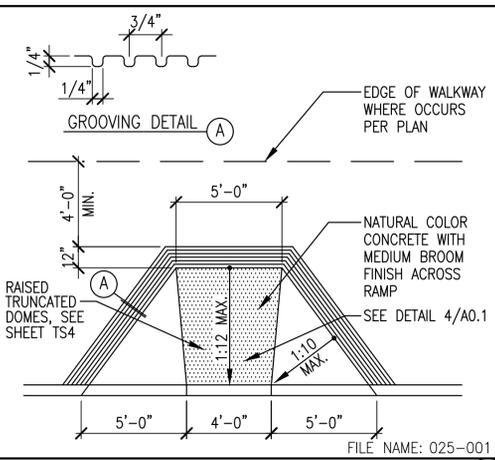
**SIGN • EACH PARKING ENTRANCE** 1 1/2" = 1'-0" 7



**EXISTING PARKING STRIPING** 1/8" = 1'-0" 6



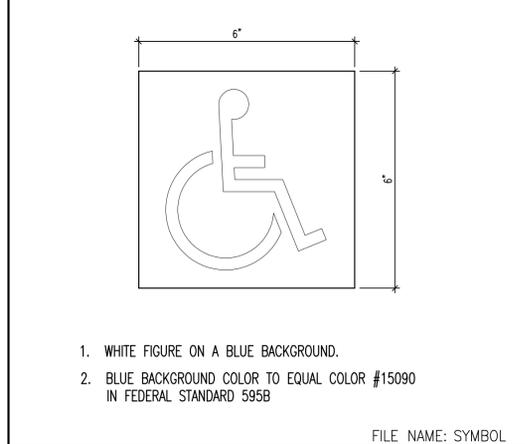
**CONCRETE WHEEL STOP** 1" = 1'-0" 5



**EXISTING HDPC CURB RAMP** 1/4" = 1'-0" 4

- KEYNOTES:**
- EXISTING DISABLED PERSON PARKING STALL (TYPICAL), SEE DETAIL 3/A0.1. DISABLED PARKING SERVING THE AREA OF BUILDING REMODEL MEETS CURRENT TITLE 24 ACCESS PROVISIONS.
  - HATCH INDICATES AREA OF TENANT IMPROVEMENT.
  - THE PRIMARY ENTRANCE SERVING THE AREA OF REMODEL MEETS CURRENT TITLE 24 ACCESS PROVISIONS.
  - EXISTING TRASH ENCLOSURE TO REMAIN.
  - ACCESSIBLE ROUTE TO ACCESSIBLE ENTRY.
  - EXISTING DETECTABLE WARNING DEVICE TO REMAIN.

- NOTES:**
- PATH OF TRAVEL NOT TO EXCEED 2% CROSS SLOPE



**INTERNATIONAL SYMBOL OF ACCESSIBILITY** N.T.S. 8

THIS PROJECT SHALL COMPLY WITH ALL CURRENT REQUIREMENTS OF THE STATE PERMIT, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (SRWQCB), SAN DIEGO MUNICIPAL STORM WATER PERMIT, THE CITY OF SAN DIEGO LAND DEVELOPMENT CODE, AND THE STORM WATER STANDARDS MANUAL.

- NOTES BELOW REPRESENT KEY MINIMUM REQUIREMENTS FOR CONSTRUCTION BMP'S
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT & MUD ON ADJACENT STREET(S), DUE TO CONSTRUCTION VEHICLES OR ANY OTHER CONSTRUCTION ACTIVITY, AT THE END OF EACH WORKDAY, OR AFTER A STORM EVENT THAT CAUSES A BREACH IN INSTALLED CONSTRUCTION BMP'S WHICH MAY COMPROMISE STORM WATER QUALITY WITHIN ANY STREET(S). A STABILIZED CONSTRUCTION EXIT MAY BE REQUIRED TO PREVENT CONSTRUCTION VEHICLES OR EQUIPMENT FROM TRACKING MUD OR SILT ONTO THE STREET.
  - ALL STOCK PILES OF SOIL AND/OR BUILDING MATERIALS THAT ARE INTENDED TO BE LEFT FOR A PERIOD GREATER THAN SEVEN CALENDAR DAYS ARE TO BE COVERED. ALL REMOVABLE BMP DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN 5 DAY RAIN FORECAST EXCEEDS 40%.
  - A CONCRETE WASHOUT SHALL BE PROVIDED ON ALL PROJECTS WHICH PROPOSE THE CONSTRUCTION OF ANY CONCRETE IMPROVEMENTS THAT ARE TO BE POURED IN PLACE ON THE SITE.
  - THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER AFTER EACH RUN-OFF PRODUCING RAINFALL OR AFTER ANY MATERIAL BREACH IN EFFECTIVENESS.
  - ALL SLOPES THAT ARE CREATED OR DISTURBED BY CONSTRUCTION ACTIVITY MUST BE PROTECTED AGAINST EROSION AND SEDIMENT TRANSPORT AT ALL TIMES.
  - THE STORAGE OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT MUST BE PROTECTED AGAINST POTENTIAL RELEASE OF POLLUTANTS INTO THE ENVIRONMENT.

**BMP NOTES** UPDATED 09/09/15 9

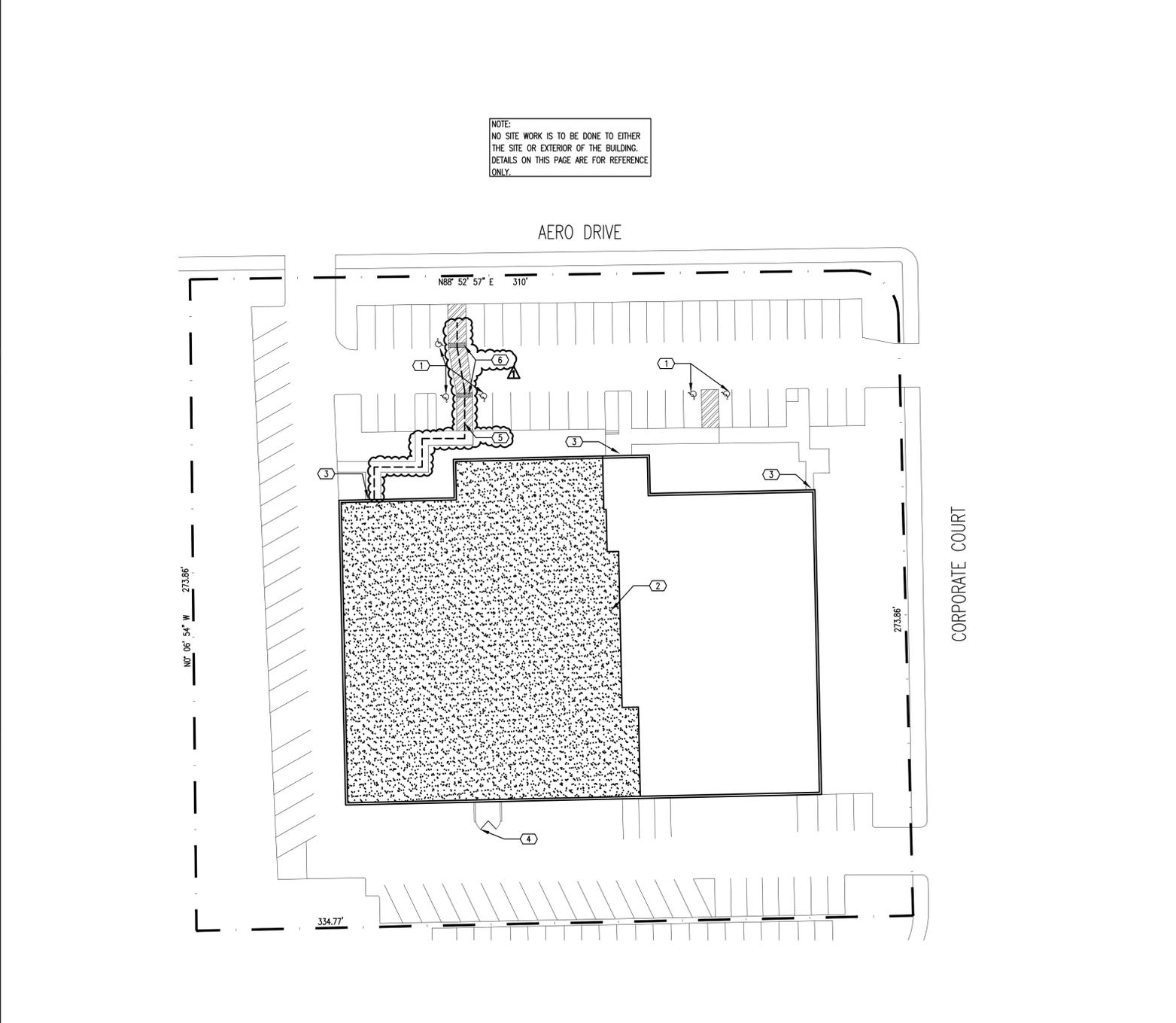
I AM THE OWNER/DESIGNER IN RESPONSIBLE CHARGE OF THIS PROJECT. I HAVE INSPECTED THE SITE/PREMISES AND DETERMINED THAT EXISTING CONDITIONS ARE IN FULL COMPLIANCE WITH CURRENT ACCESSIBILITY REQUIREMENTS TO THE EXTENT REQUIRED BY LAW.

SIGNATURE: *Trevin Schall* (TREVIN SCHALL)  
DATE: MAY 05, 2023

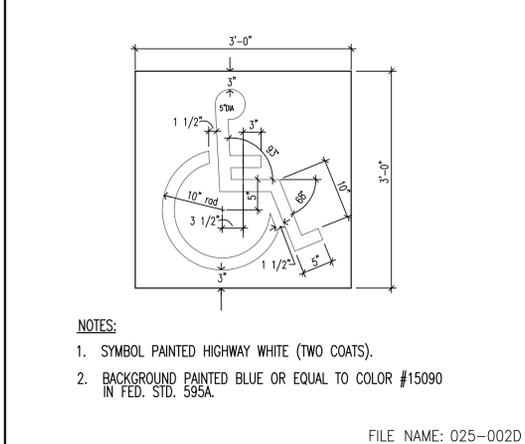
I AM THE OWNER/DESIGNER IN RESPONSIBLE CHARGE OF THIS PROJECT. I HAVE INSPECTED THE RESTROOMS AND DETERMINED THAT EXISTING CONDITIONS ARE IN FULL COMPLIANCE WITH CURRENT SITE ACCESSIBILITY REQUIREMENTS TO THE EXTENT REQUIRED BY LAW.

SIGNATURE: *Trevin Schall* (TREVIN SCHALL)  
DATE: MAY 05, 2022

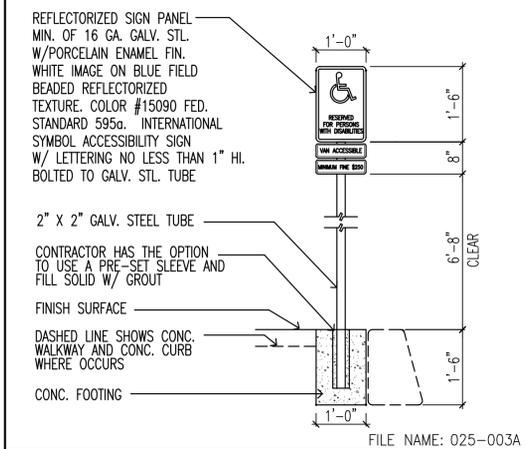
IF THE BUILDING INSPECTOR DETERMINES NONCOMPLIANCE WITH ANY ACCESSIBILITY PROVISIONS HE/SHE SHALL REQUIRE COMPLETE, DETAILED PLANS CLEARLY SHOWING ALL EXISTING NON COMPLYING CONDITIONS AND THE PROPOSED MODIFICATIONS TO MEET CURRENT ACCESSIBILITY PROVISIONS AFFECTED BY THE REMODEL (INCLUDING SITE PLAN, FLOOR PLANS, DETAILS, ETC.). THE PLANS MUST BE STAMPED BY THE FIELD INSPECTOR AND RESUBMITTED TO THE BUILDING DEVELOPMENT REVIEW DIVISION.



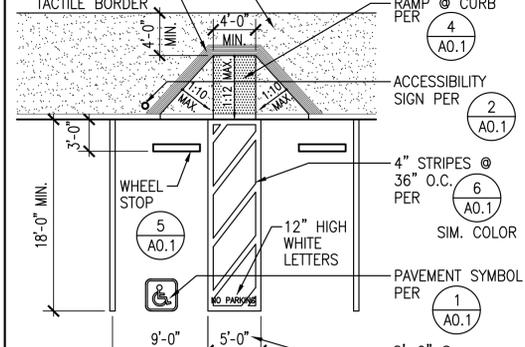
**16 SITE PLAN** SCALE: 1" = 30'-0" NORTH



**DISABLED PARKING SYMBOL** N.T.S./1 1



**EXISTING DISABLED PARKING SIGN** N.T.S. 2



**TYPICAL H.C. PARKING STALL** 1/8" = 1'-0" 3



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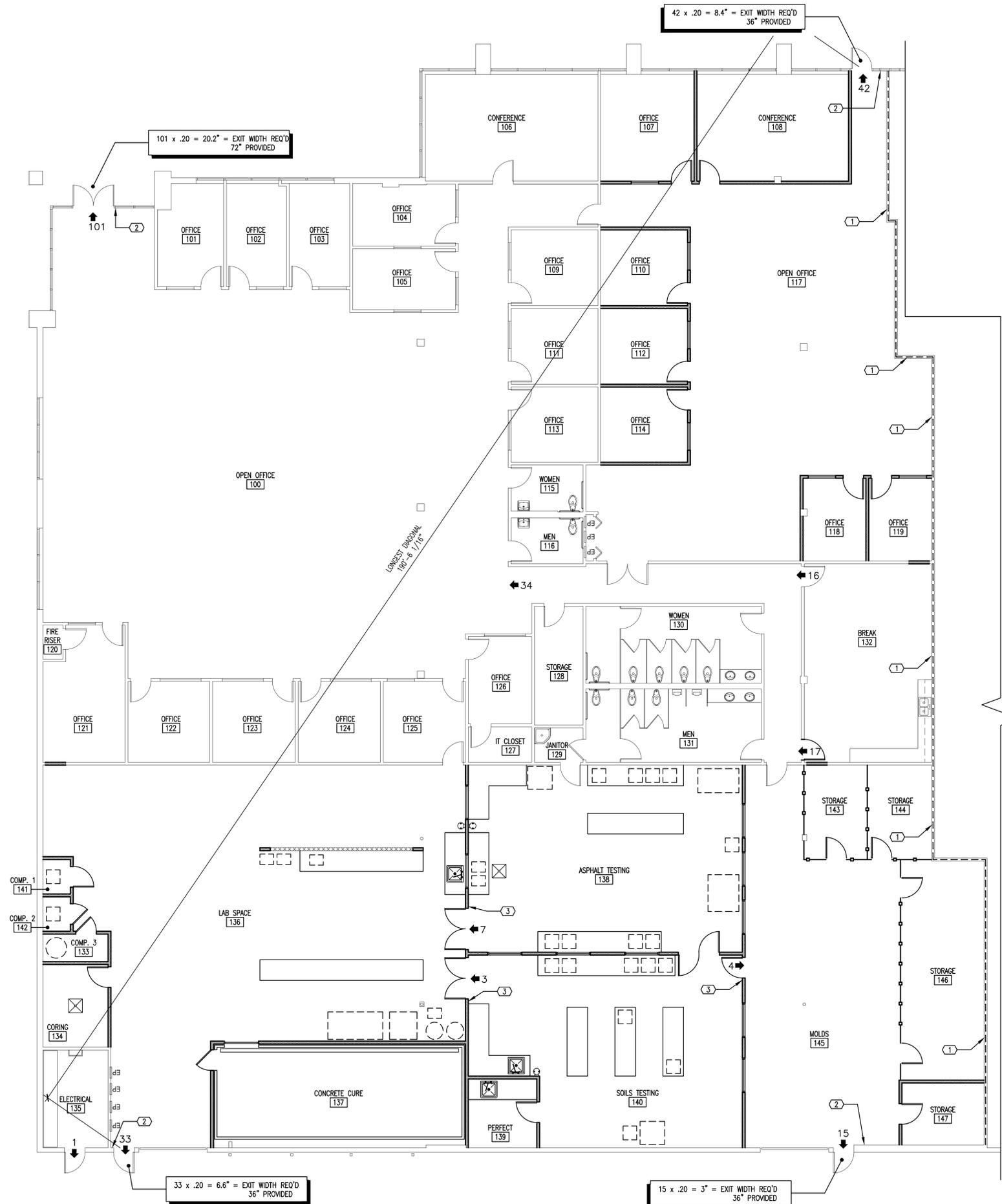
05-05-23 PLAN CHECK  
7-31-23 PLAN CHECK  
RE-SUBMITTAL (ADD001)

**ATLAS**  
**9085-B AERO DRIVE**  
**SAN DIEGO, CALIFORNIA 92123**

PROJECT NO:  
2022170  
SHEET TITLE  
SITE PLAN AND DETAILS  
SHEET NO.

A0.1

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KEYNOTES:

- 1. EXISTING 1-HOUR RATED WALL TO REMAIN.
- 2. TACTILE EXIT SIGN, "EXIT" CHARACTERS SHALL BE SANS SERIF UPPERCASE ACCOMPANIED BY GRADE 2 BRAILLE AND SIZED PER CBC 11B-703.
- 3. TACTILE EXIT SIGN, "EXIT ROUTE" CHARACTERS SHALL BE SANS SERIF UPPERCASE ACCOMPANIED BY GRADE 2 BRAILLE AND SIZED PER CBC 11B-703.

OCCUPANT LOAD ANALYSIS

ROOM #	ROOM NAME	ROOM AREA	OCC. LOAD	# OF OCC.
100	OPEN OFFICE	3,786	150	26
101	OFFICE	137	150	1
102	OFFICE	131	150	1
103	OFFICE	133	150	1
104	OFFICE	134	150	1
105	OFFICE	133	150	1
106	CONFERENCE	390	15	26
107	OFFICE	211	150	2
108	CONFERENCE	343	15	23
109	OFFICE	139	150	1
110	OFFICE	139	150	1
111	OFFICE	139	150	1
112	OFFICE	139	150	1
113	OFFICE	138	150	1
114	OFFICE	138	150	1
115	WOMEN	71	N/A	0
116	MEN	70	N/A	0
117	OPEN OFFICE	1,747	150	12
118	OFFICE	110	150	1
119	OFFICE	110	150	1
120	FIRE RISER	14	N/A	0
121	OFFICE	221	150	2
122	OFFICE	140	150	1
123	OFFICE	142	150	1
124	OFFICE	141	150	1
125	OFFICE	141	150	1
126	OFFICE	117	150	1
127	IT CLOSET	48	300	1
128	STORAGE	122	300	1
129	JANITOR	35	300	1
130	WOMEN	274	N/A	0
131	MEN	257	N/A	0
132	BREAK	492	15	33
133	COMP. 3	38	200	1
134	CORING	114	150	1
135	ELECTRICAL	134	300	1
136	LAB SPACE	2,329	150	16
137	CONCRETE CURE	465	300	2
138	ASPHALT TEST	882	150	6
139	PERFECT	70	150	2
140	SOILS TESTING	812	150	5
141	COMP. 1	20	200	1
142	COMP. 2	20	200	1
143	STORAGE	119	300	1
144	STORAGE	124	300	1
145	MOLDS	1,048	200	6
146	STORAGE	382	300	2
147	STORAGE	108	300	1
TOTAL OCCUPIED AREA IN S.F.		17,147	TOTAL # OF OCCUPANTS	192
TOTAL SUITE AREA IN S.F.		19,678		
TOTAL EXITS REQUIRED			2	
TOTAL EXITS PROVIDED			4	
EXIT DOOR WIDTH				
REQUIRED: 192 OCCUPANTS		192 x 0.2 EACH =	38.4"	
PROVIDED: 4 DOORS		36"+36"+36"+72" =	180"	

GENERAL NOTES:

- 1. AFTER THE BUILDING IS OCCUPIED, ANY CHANGE IN USE OR OCCUPANCY WHICH CAUSES AN INCREASE IN OCCUPANT LOAD SHALL COMPLY WITH ALL OF THE REQUIREMENTS FOR THE INCREASED LOAD.
- 2. TACTILE EXIT SIGNS (CBC SEC. 1011.4 & 11B703.1) SHALL BE REQUIRED AT THE FOLLOWING LOCATIONS:
  - A) EACH GRADE-LEVEL EXTERIOR DOOR SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORD, "EXIT".
  - B) EACH EXIT DOOR THAT LEADS DIRECTLY TO A GRADE-LEVEL EXTERIOR EXIT BY MEANS OF EXIT ENCLOSURES THAT DOES NOT UTILIZE A STAIR OR RAMP, OR BY MEANS OF AN EXIT PASSAGEWAY, SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "EXIT ROUTE".
  - C) EACH EXIT ADDRESS FROM AN INTERIOR ROOM OR AREA THAT IS REQUIRED TO HAVE A VISUAL EXIT SIGN, SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "EXIT ROUTE".
- 3. ALL EXTERIOR LIGHTING TO COMPLY WITH SAN DIEGO COUNTY LIGHTING ORDINANCE.

20 EGRESS PLAN  
SCALE: 1/8"=1'-0"

19,678 S.F.



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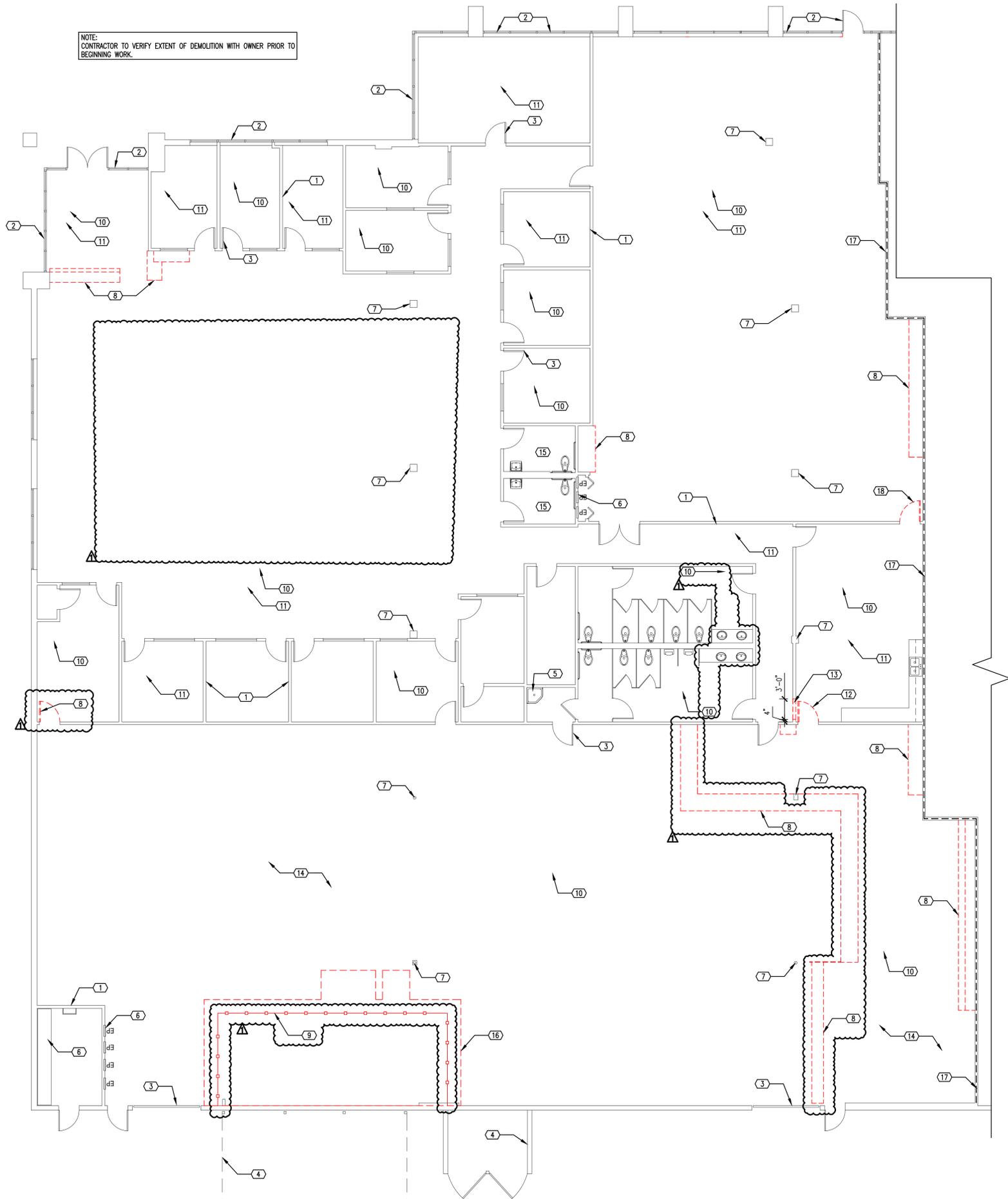
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EGRESS PLAN

SHEET NO.

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NOTE:  
CONTRACTOR TO VERIFY EXTENT OF DEMOLITION WITH OWNER PRIOR TO BEGINNING WORK.



KEYNOTES:

- 1 EXISTING WALL TO REMAIN; TYPICAL.
- 2 EXISTING ALUMINUM STOREFRONT SYSTEM TO REMAIN; TYPICAL.
- 3 EXISTING DOOR TO REMAIN; TYPICAL.
- 4 EXISTING EXTERIOR CANOPY AND TRASH ENCLOSURE TO REMAIN.
- 5 EXISTING MOP SINK TO REMAIN.
- 6 EXISTING ELECTRICAL TO REMAIN.
- 7 EXISTING COLUMN AND OR ENCLOSURE TO REMAIN.
- 8 DEMO EXISTING DOOR.
- 9 EXISTING CHAIN LINK FENCE TO BE REMOVED.
- 10 REMOVE EXISTING FINISHES TO REMAIN.
- 11 EXISTING CEILING GRID, TILES, AND LIGHT FIXTURES TO REMAIN; TYPICAL.
- 12 REMOVE EXISTING DOOR, SALVAGE FOR REINSTALLATION PER PLAN.
- 13 REMOVE EXISTING WALL TO RECEIVE NEW DOOR PER DOOR SCHEDULE.
- 14 REMOVE EXISTING LOCKERS AND CHAIN LINKED CAGES IN WAREHOUSE AREA.
- 15 NOT USED.
- 16 DASHED LINE INDICATES EXISTING CONCRETE SLAB TO BE REMOVED. REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION.
- 17 EXISTING 1-HOUR RATED WALL TO REMAIN.
- 18 REMOVE EXISTING DOOR AND SALVAGE; TO BE REUSED.



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RE-SUBMITTAL (ADD001)

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SHEET TITLE  
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PLAN

SHEET NO:

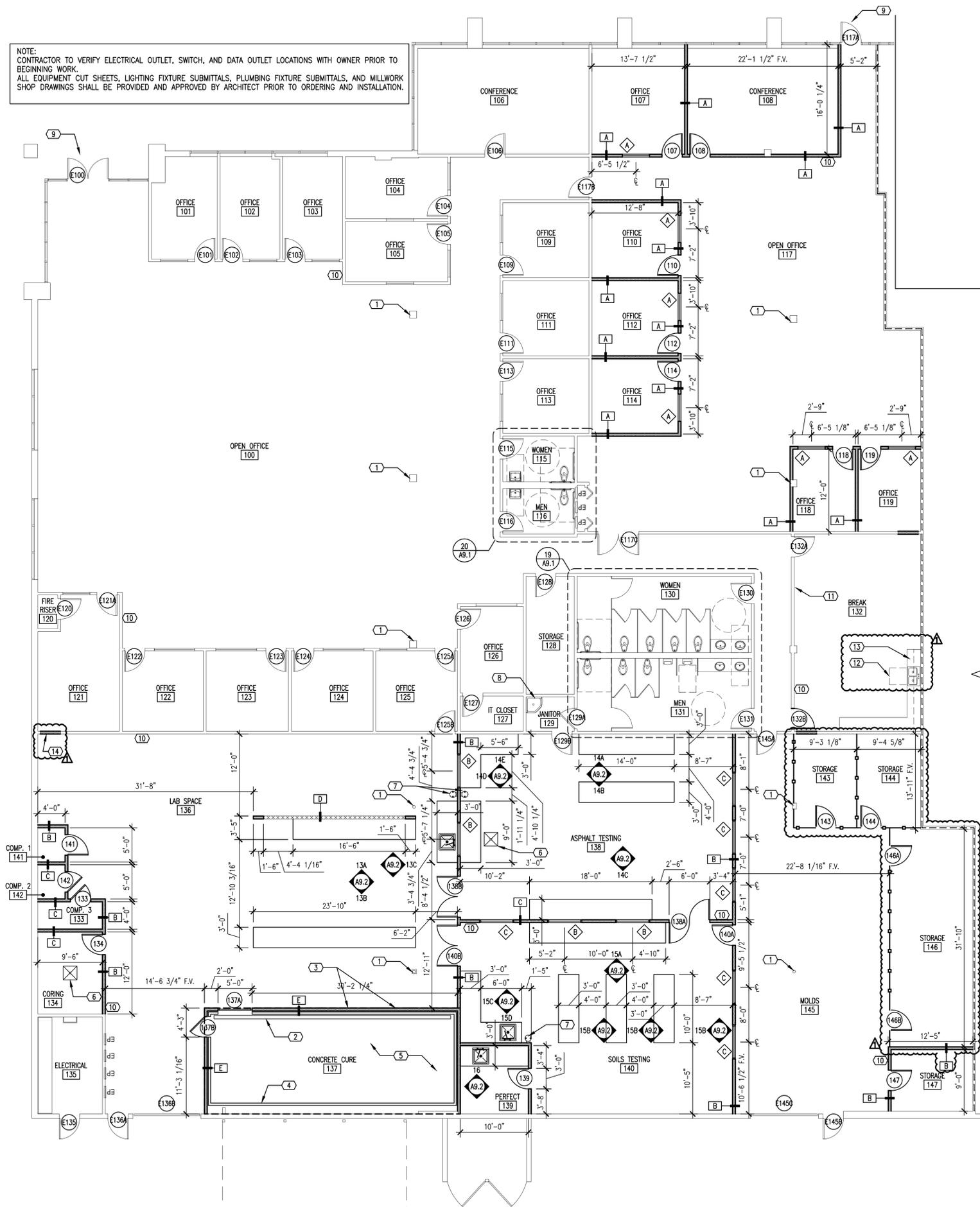
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20 DEMOLITION PLAN  
SCALE: 1/8"=1'-0"



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NOTE:  
CONTRACTOR TO VERIFY ELECTRICAL OUTLET, SWITCH, AND DATA OUTLET LOCATIONS WITH OWNER PRIOR TO BEGINNING WORK.  
ALL EQUIPMENT CUT SHEETS, LIGHTING FIXTURE SUBMITTALS, PLUMBING FIXTURE SUBMITTALS, AND MILLWORK SHOP DRAWINGS SHALL BE PROVIDED AND APPROVED BY ARCHITECT PRIOR TO ORDERING AND INSTALLATION.



**20 FLOOR PLAN**  
SCALE: 1/8"=1'-0"

**KEYNOTES:**

- 1 EXISTING COLUMN TO REMAIN.
- 2 TRENCH DRAIN. REFER TO STRUCTURAL AND PLUMBING DWGS.
- 3 ISOLATED CONCRETE FOOTING FOR OWNER PROVIDED EQUIPMENT; REFER TO STRUCTURAL DWGS.
- 4 WALK-IN COOLER SYSTEM; REFER TO MEP DWGS. FOR MORE INFO.
- 5 NEW SLOPED CONCRETE SLAB PER STRUCTURAL DWGS.
- 6 NEW FLOOR SINK PER PLUMBING DWGS.
- 7 EYE WASH STATION PER PLUMBING DWGS.
- 8 EXISTING MOP SINK TO REMAIN.
- 9 THE PRIMARY ENTRANCE SERVING THE AREA OF THE REMODEL MEETS CURRENT TITLE 24 ACCESS PROVISIONS.
- 10 SEMI RECESSED 2A10BC FIRE EXTINGUISHER MIN. 5 LBS.
- 11 OWNER TO PROVIDE WATER STATION FOR EMPLOYEES AND CUSTOMERS.
- 12 30"x48" CLEAR FLOOR SPACE AT EXISTING SINK. SECTION AT THIS EXISTING SINK LOCATION MATCHES DETAIL 9/A7.2 WITH INTEGRAL TOE KICK. MIN. 36" WIDE CLEARANCE PROVIDE AT EXISTING SINK.
- 13 EXISTING COUNTER AT BREAK TO REMAIN WITH THE 2'-10" COUNTER HEIGHT.
- 14 INFILL WALL WITH METAL STUDS AND GYPSUM BOARD TO MATCH ADJACENT WALLS.

THE OWNER AND GENERAL CONTRACTOR TO ENSURE COMPLIANCE DURING INSTALLATION AND OPERATIONS OF INDUSTRIAL OVENS AND FURNACES AS OUTLINED IN THE CBC CHAPTER 30 - INDUSTRIAL OVENS AS LISTED BELOW.

**CHAPTER 30 - INDUSTRIAL OVENS**

- 3001.1 Scope**  
This chapter shall apply to the installation and operation of industrial ovens and furnaces. Industrial ovens and furnaces shall comply with the applicable provisions of NFPA 86, the International Fuel Gas Code, California Mechanical Code and this chapter. The terms "ovens" and "furnaces" are used interchangeably in this chapter.
- 3001.2 Permits**  
Permits shall be required as set forth in Sections 105.6 and 105.7.
- Section 3002 Definitions**
- 3002.1 Definitions**  
The following terms are defined in Chapter 2:  
FURNACE CLASS A.  
FURNACE CLASS B.  
FURNACE CLASS C.  
FURNACE CLASS D.
- Section 3003 Location**
- 3003.1 Ventilation**  
Enclosed rooms or basements containing industrial ovens or furnaces shall be provided with combustion air in accordance with the California Mechanical Code and the International Fuel Gas Code, and with ventilation air in accordance with the California Mechanical Code.
- 3003.2 Exposure**  
When locating ovens, oven heaters and related equipment, the possibility of fire resulting from overheating or from the escape of fuel gas or fuel oil and the possibility of damage to the building and injury to persons resulting from explosion shall be considered.
- 3003.3 Ignition Source**  
Industrial ovens and furnaces shall be located so as not to pose an ignition hazard to flammable vapors or mists or combustible dusts.
- 3003.4 Temperatures**  
Roofs and floors of ovens shall be insulated and ventilated to prevent temperatures at combustible ceilings and floors from exceeding 160°F (71°C).
- Section 3004 Fuel Piping**
- 3004.1 Fuel-Gas Piping**  
Fuel-gas piping serving industrial ovens shall comply with the International Fuel Gas Code. Piping for other fuel sources shall comply with this section.
- 3004.2 Shutoff Valves**  
Each industrial oven or furnace shall be provided with an approved manual fuel shutoff valve in accordance with the California Mechanical Code or the International Fuel Gas Code.
- 3004.2.1 Fuel Supply Lines**  
Valves for fuel supply lines shall be located within 6 feet (1829 mm) of the appliance served. Exception: Where approved and the valve is located in the same general area as the appliance served.
- 3004.3 Valve Position**  
The design of manual fuel shutoff valves shall incorporate a permanent feature that visually indicates the open or closed position of the valve. Manual fuel shutoff valves shall not be equipped with removable handles or wrenches unless the handle or wrench can only be installed parallel with the fuel line when the valve is in the open position.
- Section 3005 Interlocks**
- 3005.1 Shut Down**  
Interlocks shall be provided for Class A ovens so that conveyors or sources of flammable or combustible materials shall shut down if either the exhaust or recirculation air supply fails.
- Section 3006 Fire Protection**
- 3006.1 Required Protection**  
Class A and B ovens that contain, or are utilized for the processing of, combustible materials shall be protected by an approved automatic fire-extinguishing system complying with Chapter 9.
- 3006.2 Fixed Fire-Extinguishing Systems**  
Fixed fire-extinguishing systems shall be provided for Class C or D ovens to protect against such hazards as overheating, spillage of molten salts or metals, quench tanks, ignition of hydraulic oil and escape of fuel. It shall be the user's responsibility to consult with the fire code official concerning the necessary requirements for such protection.
- 3006.3 Fire Extinguishers**  
Portable fire extinguishers complying with Section 906 shall be provided not closer than 15 feet (4572 mm) or not more than 50 feet (15 240 mm). This shall apply to the oven and related equipment.
- Section 3007 Operation and Maintenance**
- 3007.1 Furnace System Information**  
An approved, clearly worded, and prominently displayed safety design data form or manufacturer's nameplate shall be provided stating the safe operating condition for which the furnace system was designed, built, altered or extended.
- 3007.2 Oven Nameplate**  
Safety data for Class A solvent atmosphere ovens shall be furnished on the manufacturer's nameplate. The nameplate shall provide the following design data:  
The solvent used.  
The number of gallons (L) used per batch or per hour of solvent entering the oven.  
The required purge time.  
The oven operating temperature.  
The exhaust blower rating for the number of gallons (L) of solvent per hour or batch at the maximum operating temperature.  
Exception: For low-oxygen ovens, the maximum allowable oxygen concentration shall be included in place of the exhaust blower ratings.
- 3007.3 Training**  
Operating, maintenance and supervisory personnel shall be thoroughly instructed and trained in the operation of ovens or furnaces.
- 3007.4 Equipment Maintenance**  
Equipment shall be maintained in accordance with the manufacturer's instructions.

**WALL LEGEND:**

1. ALL WALLS ARE 5/8" GYPSUM BOARD PER WALL TYPE ON A7 SHEETS U.N.O.
- NEW METAL STUD NON-RATED WALL - SEE DETAIL A7 SHEET
  - NEW 8'-0" TALL CHAIN LINK FENCE
  - EXISTING WALL TO REMAIN
  - EXISTING 1-HOUR RATED WALL TO REMAIN

**DIMENSION LEGEND:**

- DENOTES A DIMENSION FROM THE FINISHED SURFACE TO THE CENTERLINE OF AN OBJECT
- DENOTES A DIMENSION FROM THE FINISHED SURFACE TO THE FACE OF AN OBJECT

**GENERAL NOTES:**

1. ALL DIMENSIONS ARE TO FACE OF FINISH OR CENTER LINE OF COLUMN/WALL U.N.O.
2. FLOOR LEVEL =  $\phi$  0'-0" UNLESS NOTED OTHERWISE.
3. GENERAL CONTRACTOR TO PROVIDE PORTABLE FIRE EXTINGUISHER AND CABINETS THROUGHOUT PER SECTION 906 OF THE CBC.



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7-31-23 PLAN CHECK  
RE-SUBMITTAL (A0001)

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PROJECT NO:  
2022170

SHEET TITLE

PLAN

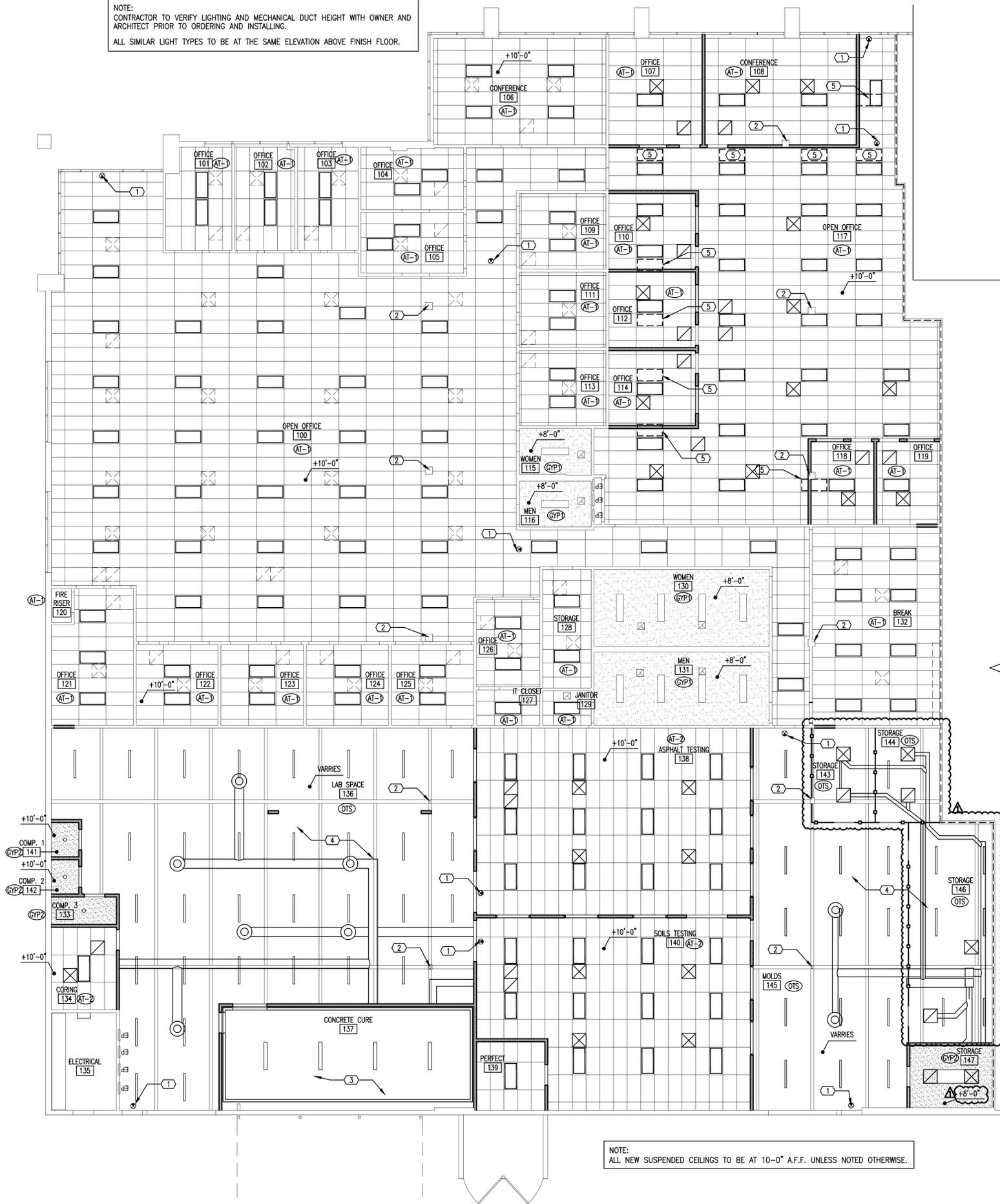
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NOTE:  
CONTRACTOR TO VERIFY LIGHTING AND MECHANICAL DUCT HEIGHT WITH OWNER AND ARCHITECT PRIOR TO ORDERING AND INSTALLING.  
ALL SIMILAR LIGHT TYPES TO BE AT THE SAME ELEVATION ABOVE FINISH FLOOR.



NOTE:  
ALL NEW SUSPENDED CEILINGS TO BE AT 10'-0" A.F.F. UNLESS NOTED OTHERWISE.

KEYNOTES:

- 1 NEW EXIT SIGN PER LIGHTING SCHEDULE; REFER TO ELECTRICAL FOR MORE INFO.
- 2 EXISTING STRUCTURAL COLUMN TO REMAIN.
- 3 CEILING SYSTEM OF WALK-IN UNIT PER MANUFACTURER.
- 4 EXISTING STRUCTURE ABOVE TO REMAIN.
- 5 EXISTING FIXTURE TO BE REMOVED AND REUSED.

SYMBOL LEGEND:

EXISTING LIGHTING FIXTURE PER ELECTRICAL			
2'X4' LIGHT	1'X4' LIGHT		
NEW LIGHTING FIXTURE PER ELECTRICAL			
6" CAN LIGHT	EXIT LIGHT	2'X4' LIGHT	4' LIGHT BY WALK-IN PER MANUFACTURER
NEW DIFFUSERS PER MECHANICAL		EXISTING DIFFUSERS PER MECHANICAL	
AIR SUPPLY	AIR RETURN	EXHAUST	AIR SUPPLY AIR RETURN EXHAUST

GENERAL NOTES:

- +9'-0" FINISH ELEVATION ABOVE FINISH FLOOR (A.F.F.), U.N.O.
- 1. WALL & CEILING MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CBC.
- 2. SEE DETAILS ON A7.2 FOR SUSPENDED CEILING INSTALLATION DETAILS.
- 3. SUSPENDED CEILING GRIDS TO BE CENTERED IN SPACE (BOTH DIRECTIONS) U.N.O.
- 4. SUSPENDED CEILINGS SHALL COMPLY WITH ASTM C 635 & ASTM C 636 - SEE CEILING DETAILS ON A7.2.
- 5. SUSPENDED CEILINGS SYSTEM DETAILS AND CONNECTION DETAILS ARE PER ASCE 7-10, SECTION 13.5.6 AND CISCA 3-4 FOR SEISMIC DESIGN CATEGORY "E".
- 6. FOR SUSPENDED CEILINGS A HEAVY DUTY T-BAR GRID SYSTEM SHALL BE USED IN SEISMIC DESIGN CATEGORIES D THROUGH F (ASCE SEC. 13.5.6.2.2) - SEE CEILING DETAILS ON A7.2.
- 7. EXISTING LIGHTS SHALL BE RELOCATED TO ACCOMMODATE NEW WALLS AS REQUIRED.
- 8. THE MEANS OF EGRESS, INCLUDING EXIT DISCHARGE, WILL BE ILLUMINATED TO A LEVEL NOT LESS THAN ONE FOOT-CANDLE AT THE WALKING SURFACE AT ALL TIMES THE BUILDING SPACE SERVED BY THE MEANS OF EGRESS IS OCCUPIED. (CBC SEC. 1006.1 AND 1006.2)
- 9. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED AT ALL TIMES AND SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM (BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR) THAT WILL AUTOMATICALLY ILLUMINATE THE EXIT SIGNS FOR A DURATION OF NOT LESS THAN 90 MINUTES, (CBC 1013)
- 10. MECHANICAL CONTRACTOR IS TO FIELD VERIFY EXISTING HVAC SYSTEM AND REWORK AS NECESSARY FOR NEW LAYOUT AND EXISTING HVAC UNIT LOCATIONS ARE TO BE VERIFIED.
- 11. LIGHT FIXTURES, EXIT SIGNS, SPRINKLERS AND OTHER CEILING ELEMENTS ARE TO BE CENTERED IN CEILING TILE, UNLESS NOTED OTHERWISE.
- 12. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONFLICTS BETWEEN LIGHT FIXTURE LOCATIONS, MAIN RUNNERS, DUCTS, BUILDING STRUCTURE, ETC.
- 13. PROVIDE CEILING ACCESS AS REQUIRED FOR ACCESS TO EQUIPMENT FOR SYSTEM MAINTENANCE IN SUSPENDED AND GYPSUM BOARD CEILINGS. IDENTIFY ACCESS TILES OR PANELS WITH PLASTIC HEAD MAP TACKS (COLOR WHITE).
- 14. EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTION, SPRINKLERS AND OTHER CEILING PENETRATIONS REQUIRE MIN. 2" RINGS, SLEEVES OR ADAPTERS THAT WILL ALLOW A MIN. 1" CEILING MOVEMENT IN ALL HORIZONTAL DIRECTIONS. ALTERNATIVELY, SWING JOINT CAN BE PROVIDED AT THE TOP OF THE SPRINKLER DROP TO ACCOMMODATE THE 1" MOVEMENT. ASCE 7, SEC. 13.5.6.2.2

20 REFLECTED CEILING PLAN  
SCALE: 1/8"=1'-0"



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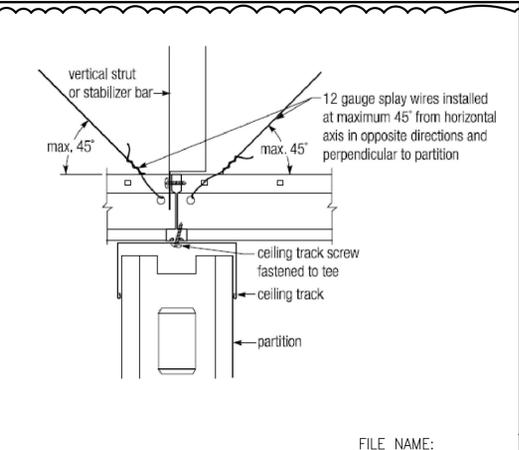
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CEILING PLAN

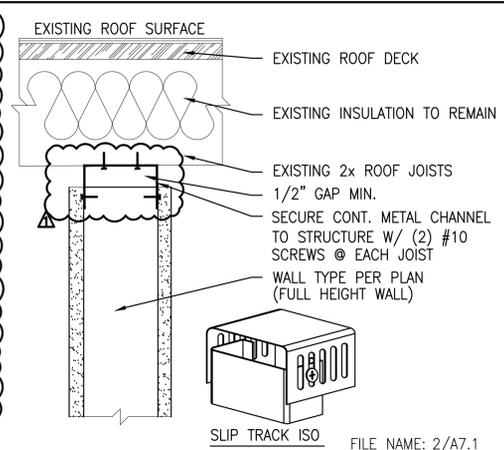
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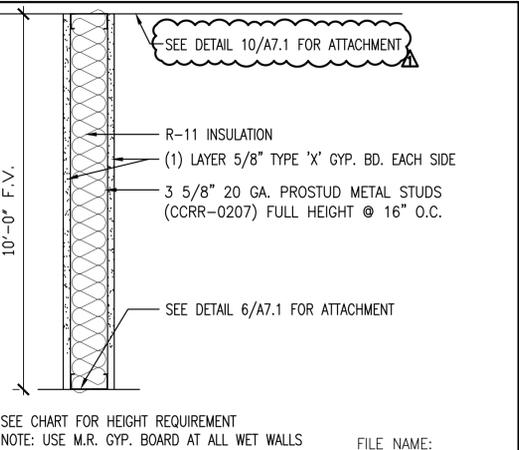
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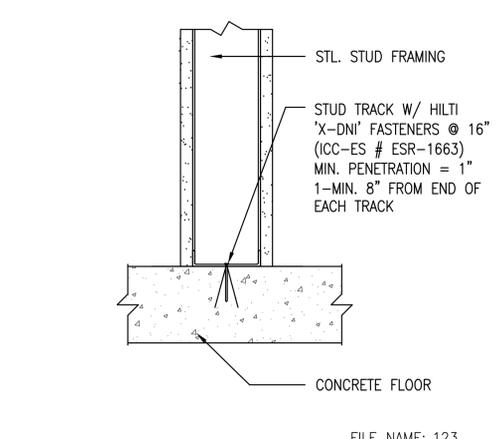
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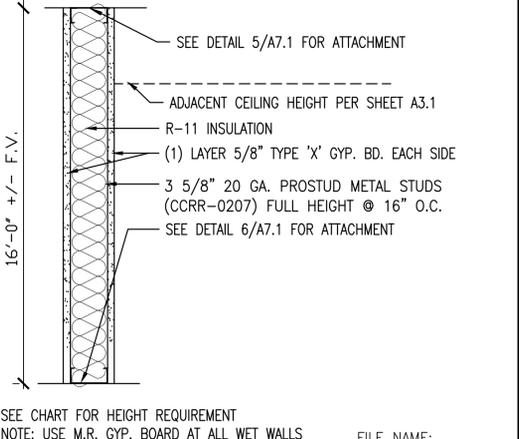
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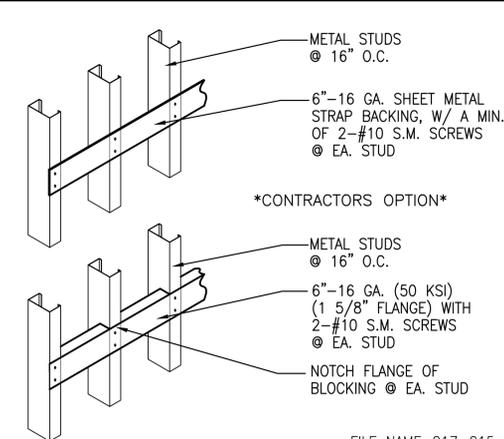
SEE CHART FOR HEIGHT REQUIREMENT  
NOTE: USE M.R. GYP. BOARD AT ALL WET WALLS  
FILE NAME: WALL TYPE 'A' 3" = 1'-0" 1



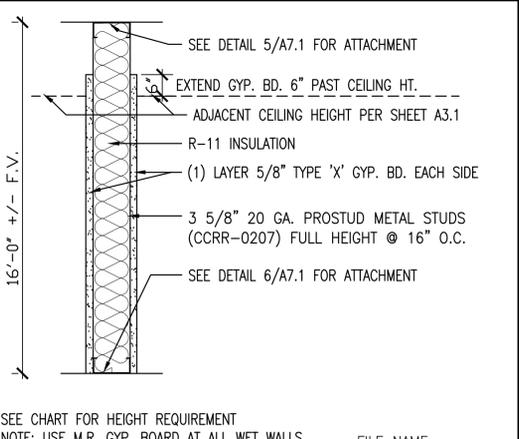
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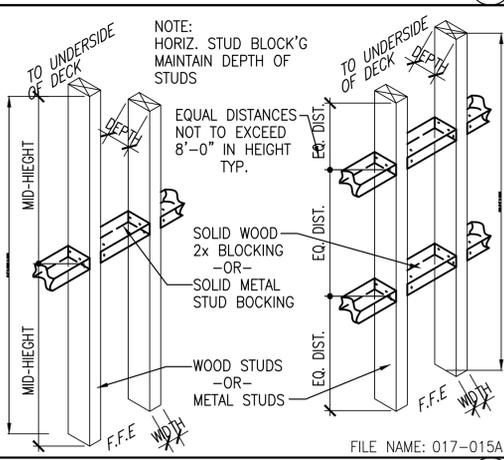
SEE CHART FOR HEIGHT REQUIREMENT  
NOTE: USE M.R. GYP. BOARD AT ALL WET WALLS  
FILE NAME: WALL TYPE 'B' 3" = 1'-0" 2



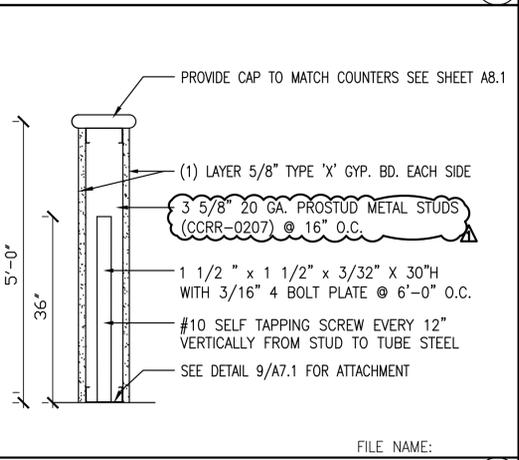
FILE NAME: 017-015 TYPICAL BACKING PLATE NO SCALE 7



SEE CHART FOR HEIGHT REQUIREMENT  
NOTE: USE M.R. GYP. BOARD AT ALL WET WALLS  
FILE NAME: WALL TYPE 'C' 3" = 1'-0" 3



FILE NAME: 017-015A TYPICAL STUD WALL FIRE BLOCKING NO SCALE 8

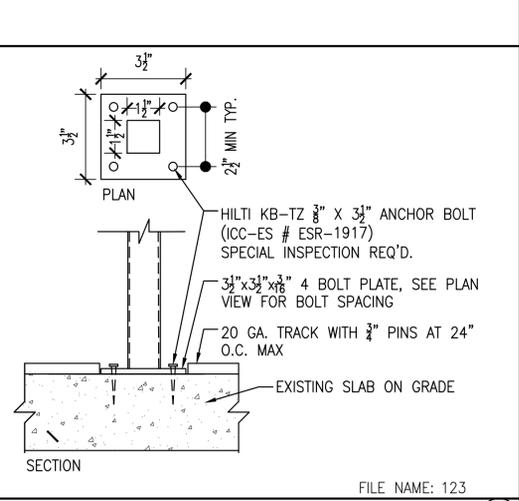


FILE NAME: WALL TYPE 'D' 3" = 1'-0" 4

ClarkeDietrich ProSTUD Non-Composite Limiting Heights - FULLY BRACED

Depth (ft)	Stud member	Design (kips/ft)	Yield (kips/ft)	Limiting Height (ft)													
				4 psf		8 psf		10 psf		12 psf		15 psf					
		Spacing (O.C. in)		L/120	L/120	L/120	L/120	L/120	L/120	L/120	L/120	L/120	L/120	L/120	L/120		
3.5-8	ProSTUD 25 362PDS125-15	0.0158	50	12	10	10	10	10	10	10	10	10	10	10	10	10	
				12	10	10	10	10	10	10	10	10	10	10	10	10	10
	ProSTUD 20 362PDS125-19	0.0200	65	12	10	10	10	10	10	10	10	10	10	10	10	10	
				12	10	10	10	10	10	10	10	10	10	10	10	10	10
	ProSTUD 20XD 362PDS125-22	0.0232	57	12	10	10	10	10	10	10	10	10	10	10	10	10	10
				12	10	10	10	10	10	10	10	10	10	10	10	10	10

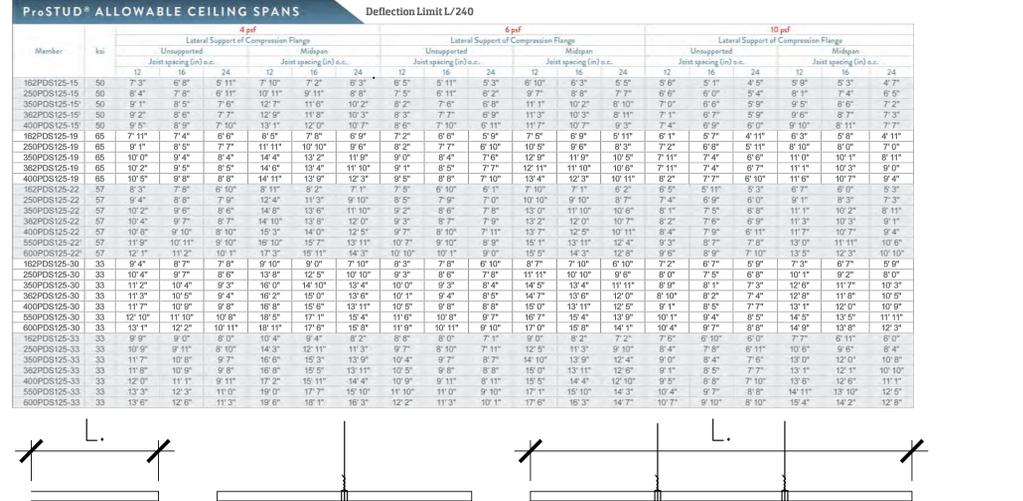
- NOTES
- SPAN TABLES FOR NON-BEARING STUDS BASED ON CLARK DIETRICH PROSTUD (ICC-ES EVALUATION REPORT ESR-2457)
  - STUD GAUGES/SIZES SPECIFIED IN THE STRUCTURAL DRAWINGS SHALL GOVERN OVER THOSE GIVEN IN THESE TABLES.
  - SEE STRUCTURAL DRAWINGS FOR ALL EXTERIOR WALL STEEL STUD GAUGES, SIZES, SPACING.
  - ALL INTERIOR NON-BEARING STEEL STUDS SHALL BE 20 GAUGE MINIMUM.
  - WALLS MAY BE BRACED ABOVE CEILINGS AND IN CONCEALED AREAS TO REDUCE SPANS.
  - FOR SPANS OVER 43', PROVIDE BRACE FROM BELOW DECK TO HORIZONTAL CHANNEL INSTALLED ON TOP OF GYP. BD. @ WALL.
  - METAL STUDS SHALL BE APPROVED BY THE INTERNATIONAL CODE COUNCIL OR OTHER APPROVED AGENCY & INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
  - HEIGHTS ARE BASED ON 2007 NORTH AMERICAN SPECIFICATION S100-07 USING STEEL PROPERTIES ALONE.
  - ABOVE LISTED NON-COMPOSITE LIMITING HEIGHTS ARE APPLICABLE WHEN THE UNBRACED LENGTH IS LESS THAN OR EQUAL TO LU.
  - HEIGHTS ARE LIMITED BY MOMENT, DEFLECTION, SHEAR AND WEB CRIPPLING (ASSUMING 1" END REACTION BEARING).



FILE NAME: 123 LOW WALL ATTACHMENT TO SLAB NOT TO SCALE 9

ProSTUD ALLOWABLE CEILING SPANS Deflection Limit L/240

Member	ksi	Lateral Support of Compression Flange						Lateral Support of Compression Flange						Lateral Support of Compression Flange					
		Unsupported		Midspan		Midspan		Unsupported		Midspan		Midspan		Unsupported		Midspan		Midspan	
		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.		Joint spacing (ft) o.c.	
362PDS125-15	50	7'3"	6'8"	5'11"	7'10"	7'2"	6'3"	5'11"	5'3"	6'10"	6'3"	5'5"	5'6"	5'1"	4'5"	5'9"	5'3"	4'7"	5'3"
362PDS125-19	50	8'4"	7'6"	6'11"	10'11"	9'11"	8'5"	6'5"	6'11"	6'2"	6'9"	6'3"	5'5"	5'6"	5'1"	4'5"	5'9"	5'3"	4'7"
362PDS125-22	57	9'1"	8'5"	7'6"	12'7"	11'6"	10'2"	8'2"	7'6"	6'8"	11'1"	10'2"	7'0"	6'6"	5'9"	5'6"	5'1"	4'5"	4'7"
362PDS125-15	50	8'2"	6'6"	7'7"	12'9"	11'8"	10'3"	8'3"	7'7"	6'9"	11'3"	10'3"	8'11"	7'1"	6'7"	5'9"	5'6"	5'1"	4'5"
362PDS125-19	50	9'5"	8'5"	7'9"	13'11"	12'9"	10'7"	8'6"	7'9"	6'10"	11'7"	10'7"	8'5"	7'4"	6'9"	6'0"	5'11"	4'11"	3'7"
362PDS125-19	65	7'11"	7'4"	6'6"	8'9"	7'8"	6'9"	6'2"	6'9"	5'9"	7'5"	6'9"	5'11"	6'1"	5'7"	4'11"	6'3"	5'8"	4'11"
362PDS125-19	65	8'1"	8'5"	7'7"	11'11"	10'10"	9'6"	6'2"	7'7"	6'10"	10'5"	9'6"	8'3"	7'2"	6'8"	5'11"	8'10"	8'0"	7'0"
362PDS125-19	65	10'0"	9'4"	8'4"	14'4"	13'2"	11'9"	9'0"	8'4"	7'10"	12'9"	11'9"	10'5"	7'11"	7'4"	6'8"	11'0"	10'1"	8'11"
362PDS125-19	65	10'2"	9'5"	8'5"	14'6"	13'4"	11'10"	9'1"	8'5"	7'7"	12'11"	11'10"	10'6"	7'11"	7'4"	6'7"	11'1"	10'3"	9'0"
400PDS125-19	65	10'5"	9'8"	8'8"	14'11"	13'9"	12'3"	9'5"	8'8"	7'10"	13'4"	12'3"	10'11"	8'2"	7'7"	6'10"	11'6"	10'7"	9'4"
362PDS125-22	57	8'2"	6'6"	6'10"	8'11"	8'2"	7'5"	6'10"	6'10"	5'11"	11'7"	10'7"	9'5"	8'11"	7'5"	6'11"	6'0"	5'3"	4'7"
362PDS125-22	57	9'4"	8'8"	8'2"	12'4"	11'3"	10'0"	7'9"	7'0"	10'10"	9'10"	8'7"	7'4"	6'9"	6'0"	5'11"	8'3"	7'3"	6'3"
362PDS125-22	57	10'2"	9'6"	8'6"	14'8"	13'6"	11'10"	9'2"	8'6"	7'8"	13'0"	11'10"	10'6"	8'11"	7'5"	6'8"	11'1"	10'2"	8'11"
362PDS125-22	57	10'4"	9'8"	8'7"	14'10"	13'8"	12'0"	9'3"	8'7"	7'9"	13'2"	12'0"	10'7"	8'2"	7'6"	6'9"	11'3"	10'3"	9'11"
400PDS125-22	57	10'8"	9'10"	8'10"	15'3"	14'0"	12'6"	9'5"	8'7"	7'11"	13'7"	12'5"	10'11"	8'4"	7'8"	6'11"	11'7"	10'7"	9'4"
550PDS125-22	57	11'9"	10'11"	9'10"	16'10"	15'7"	13'11"	10'7"	9'10"	8'9"	15'1"	13'11"	12'4"	9'3"	8'7"	7'8"	13'0"	11'11"	10'6"
550PDS125-22	57	12'1"	10'13"	9'12"	17'2"	15'9"	14'2"	10'10"	9'12"	8'11"	16'4"	14'2"	12'8"	9'6"	8'9"	7'10"	13'6"	12'6"	11'11"
362PDS125-30	33	9'4"	8'7"	7'8"	9'10"	8'10"	7'8"	7'9"	7'0"	10'10"	9'10"	8'7"	7'4"	6'9"	6'0"	5'11"	8'3"	6'7"	5'9"
362PDS125-30	33	10'4"	9'7"	8'6"	13'8"	12'8"	10'10"	8'3"	8'6"	7'8"	11'11"	10'10"	9'8"	8'0"	7'5"	6'8"	10'1"	9'2"	8'0"
362PDS125-30	33	11'2"	10'4"	9'4"	14'0"	13'4"	10'9"	8'10"	8'4"	7'9"	12'9"	11'9"	10'7"	8'2"	7'6"	6'9"	11'3"	10'3"	9'11"
362PDS125-30	33	11'3"	10'5"	9'4"	14'2"	13'6"	10'11"	8'4"	8'5"	7'7"	13'6"	12'6"	10'8"	8'2"	7'4"	6'8"	11'8"	10'8"	9'5"
400PDS125-30	33	11'7"	10'9"	9'8"	14'8"	13'8"	11'11"	10'5"	9'8"	8'8"	14'9"	13'11"	12'5"	9'1"	8'5"	7'7"	13'1"	12'0"	10'9"
550PDS125-30	33	12'10"	11'11"	10'11"	15'11"	14'11"	12'11"	11'9"	10'11"	9'11"	16'4"	14'11"	12'10"	9'5"	8'9"	7'10"	13'6"	12'6"	11'11"
600PDS125-30	33	13'1"	12'2"	10'11"	16'11"	15'8"	13'11"	11'9"	10'11"	9'10"	17'0"	15'8"	14'1"	10'4"	9'7"	8'8"	14'11"	13'10"	12'5"
162PDS125-33	33	9'0"	8'0"	7'0"	8'0"	7'0"	6'0"	6'0"	6'0"	7'1"	9'0"	8'2"	7'0"	6'0"	5'10"	6'0"	7'7"	6'11"	6'0"
362PDS125-33	33	10'9"	9'11"	8'10"	14'3"	12'11"	11'3"	9'7"	8'10"	7'11"	12'5"	11'3"	9'10"	8'4"	7'8"	6'11"	10'8"	9'6"	8'4"
362PDS125-33	33	11'7"	10'8"	9'7"	14'6"	13'3"	11'9"	9'7"	8'7"	7'14"	14'10"	13'9"	12'4"	9'0"	8'4"	7'6"	12'0"	12'0"	10'8"
362PDS125-33	33	11'8"	10'9"	9'8"	14'8"	13'5"	11'11"	10'5"	9'8"	8'8"	15'0"	13'11"	12'6"	9'11"	8'5"	7'7"	13'1"	12'1"	10'10"
400PDS125-33	33	12'0"	11'1"	9'11"	15'11"	14'8"	12'11"	10'9"	9'11"	8'11"	15'11"	14'4"	12'10"	9'5"	8'9"	7'10"	13'6"	12'6"	11'11"
550PDS125-33	33	13'3"	12'3"	11'0"	16'0"	14'7"	15'10"	11'10"	11'0"	9'10"	17'1"	15'10"	14'3"	10'4"	9'7"	8'8"	14'11"	13'10"	12'5"
600PDS125-33	33	13'6"	12'6"	11'3"	16'3"	14'9"	15'11"	11'3"	10'11"	10'11"	17'6"	15'3"	14'7"	10'11"	9'10"	8'10"	14'10"	14'2"	12'8"



FILE NAME: 123 LOW WALL ATTACHMENT TO SLAB NOT TO SCALE 9



05-05-23 PLAN CHECK  
7-31-23 PLAN CHECK  
RE-SUBMITTAL (A0001)

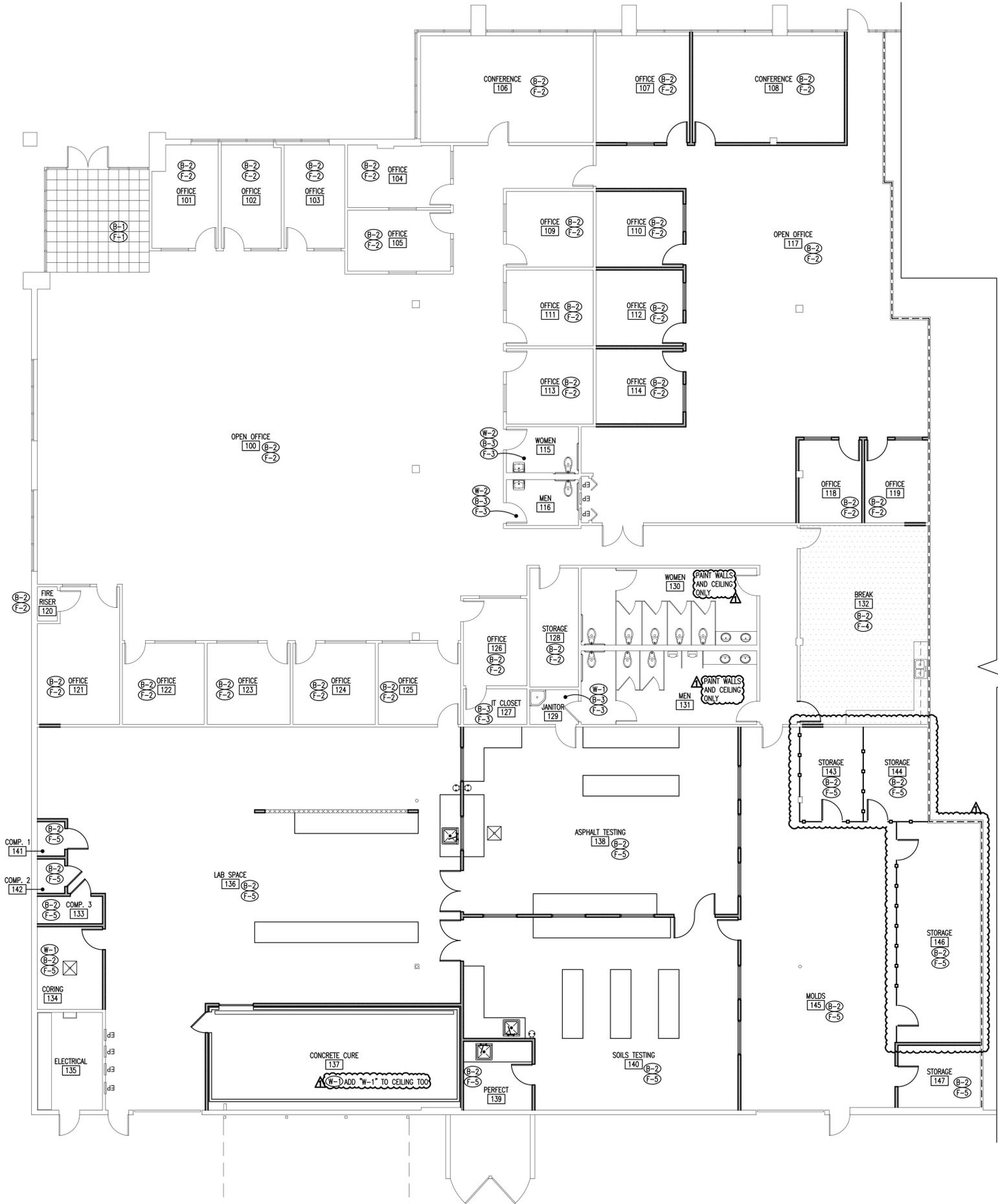
**ATLAS**  
**9085-B AERO DRIVE**  
**SAN DIEGO, CALIFORNIA 92123**

PROJECT NO:  
2022170  
SHEET TITLE  
DETAILS  
SHEET NO.

A7.1



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- FINISH LEGEND:**
- PAINT - FLAME SPREAD RATING: CLASS A (0-25) OVER NON-COMBUSTIBLE SURFACES.**
  - ALL PAINT LOCATIONS: TREE COAT SYSTEM 1-PRIMER COAT, 2-PAINT COATS PER FINISH SCHEDULE.
  - ALL EXISTING WALLS TO BE PATCHED AND SANDED SMOOTH PRIOR TO PAINTING.
  - (F-1) FIELD COLOR - TBD
  - FLOOR MATERIAL:**
  - (F-1) CERAMIC TILE - TBD
  - (F-2) COMMERCIAL GRADE DIRECT GLUE CARPET.
  - (F-3) SHEET VINYL FLOORING - TBD
  - (F-4) FLOAT DAMAGED AREAS OF EXISTING FLOOR WITH CONCRETE PATCH AND INSTALL VCT TO MATCH EXISTING.
  - (F-5) EXISTING FINISH TO REMAIN.
  - WALL BASE:**
  - (B-1) CERAMIC BASE TO MATCH F-1
  - (B-2) 4" RUBBER BASE - TBD
  - (B-3) INTEGRAL COVED BASE SHEET VINYL TO MATCH F-3
  - CEILING:**
  - (AT-1) EXISTING 2X4 GRID TO REMAIN; PAINT; REPLACE WITH NEW 2X4 CEILING TILE.
  - (AT-2) 2X4 CEILING GRID AND TILE (ARMSTRONG ESR-1308); PROVIDE R-30 INSULATION WITH VINYL SCRIM AT ROOF STRUCTURE ABOVE.
  - (GYP) EXISTING GYPSUM CEILING TO REMAIN; REPAIR ANY DAMAGE; SAND, PRIME, AND PAINT.
  - (GYP2) GYPSUM (HARD-LID) CEILING; SAND, PRIME, AND PAINT. PROVIDE R-30 INSULATION WITH VINYL SCRIM AT ROOF ABOVE.
  - (GYP3) OPEN TO STRUCTURE ABOVE. PROVIDE R-30 INSULATION WITH VINYL SCRIM AT ROOF ABOVE.
  - WAINSCOT:**
  - (W-1) FULL HEIGHT FRP WAINSCOT (ALL WALLS WITHIN ROOM) - TBD
  - (W-2) 4'-0" HIGH FRP WAINSCOT (ALL WALLS WITHIN ROOM) - TBD
  - CASEWORK:**
  - (PL-1) PLASTIC LAMINATE (CABINETS) - TBD
  - (SS-1) SOLID SURFACE (COUNTERTOPS) -TBD
  - (SS-2) SOLID SURFACE (RECEPTION COUNTER) - TBD

- INTERIOR FINISH NOTES:**
- ALL INTERIOR FINISHES MUST COMPLY WITH CHAPTER 8 OF THE CBC.
1. DECORATIVE MATERIALS AND TRIM INSTALLED IN BUILDINGS GOVERNED BY THE SFM SHALL COMPLY WITH THE PROVISIONS OF CBC 806.
  2. INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS SHALL COMPLY WITH CBC 804.2 THROUGH 804.4.1.
  3. FOAM PLASTICS SHALL NOT BE AS INTERIOR FINISH EXCEPT AS PROVIDED IN CBC SECTIONS 2603.9 OR 2604. (CBC 801.2.2).
  4. TOILET AND BATHING ROOM FLOORS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE SUCH AS PORTLAND CEMENT, CERAMIC TILE OR OTHER APPROVED MATERIAL THAT EXTENDS UPWARD ONTO THE WALLS AT LEAST 6" (CBC 1210.0).
  5. WALLS WITHIN 2' OF THE FRONT AND SIDES OF URINALS AND WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE SUCH AS PORTLAND CEMENT, CERAMIC TILE OR OTHER APPROVED MATERIAL SURFACE TO A HEIGHT OF 4', AND EXCEPT FOR STRUCTURAL ELEMENTS, THE MATERIALS USED IN SUCH WALLS SHALL BE OF A TYPE THAT IS NOT ADVERSELY AFFECTED BY MOISTURE (CBC 1210.2).
  6. ALL FINISHES TO COMPLY DIVISION 5 OF THE CALIFORNIA BUILDING STANDARDS CODE.
  7. ALL FINISHES TO COMPLY WITH THE VOC LIMITS PROVIDED IN THE CALIFORNIA BUILDING STANDARDS CODE TABLES 5.504.4.1, 5.504.4.2, AND 5.504.4.3.
  8. WALL, FLOOR AND CEILING FINISHES AND MATERIALS SHALL NOT EXCEED THE INTERIOR FINISH CLASSIFICATIONS IN CBC TABLE 803.9 AND SHALL MEET THE FLAME PROPAGATION PERFORMANCE CRITERIA OF THE CA. CODE OR REGULATIONS, TITLE 19, DIVISION 1. DECORATIVE MATERIALS SHALL BE PROPERLY TREATED BY A PRODUCT OR PROCESS APPROVED BY THE STATE FIRE MARSHALL WITH APPROPRIATE DOCUMENTATION PROVIDED TO THE A.H.I.
- GENERAL NOTES:**
1. CONTRACTOR TO PROVIDE OWNER SAMPLES OF ALL MATERIALS FOR APPROVAL PRIOR TO ORDERING AND INSTALLING.
  2. CHANGE IN MATERIALS TO OCCUR AT CENTERLINE OF DOOR WHEN IN CLOSED POSITION.

**20** FINISH PLAN  
SCALE: 1/8"=1'-0"



**SCHALL ARCHITECTS**

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05-05-23 PLAN CHECK  
7-31-23 PLAN CHECK  
RE-SUBMITTAL (ADD001)

**ATLAS**  
**9085-B AERO DRIVE**  
**SAN DIEGO, CALIFORNIA 92123**

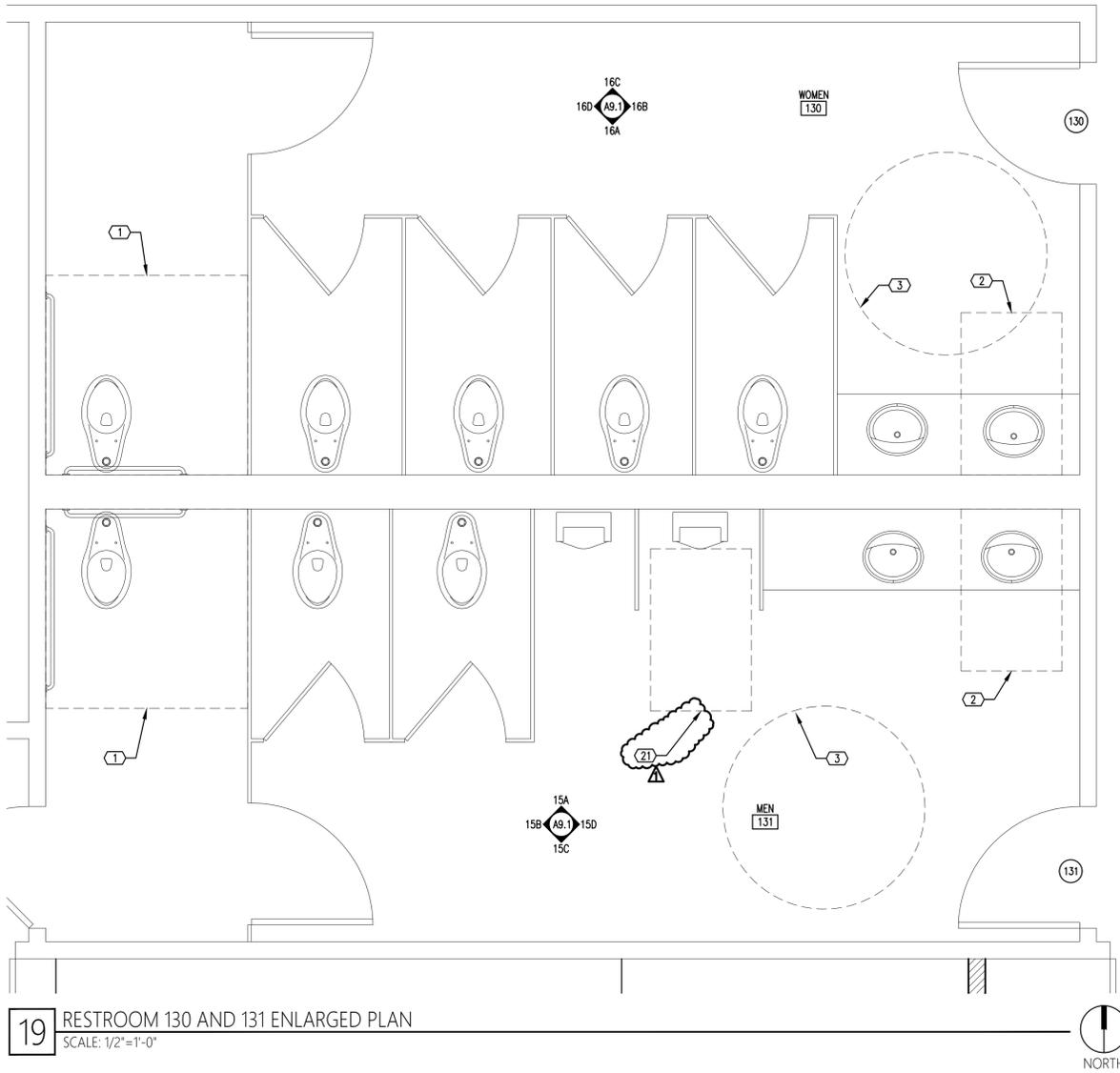
PROJECT NO:  
2022170

SHEET TITLE  
.....  
PLAN

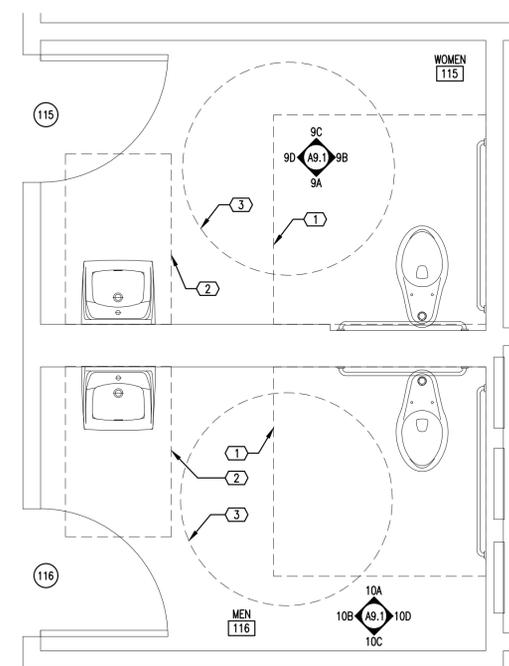
SHEET NO.

**A8.1**

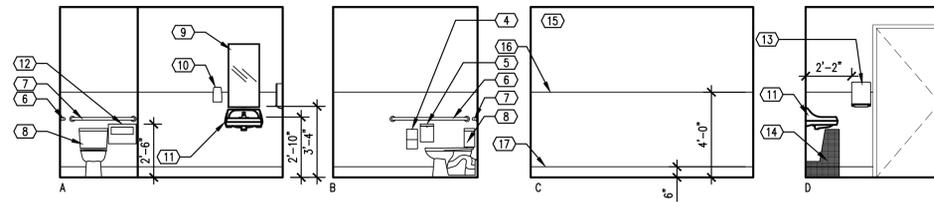
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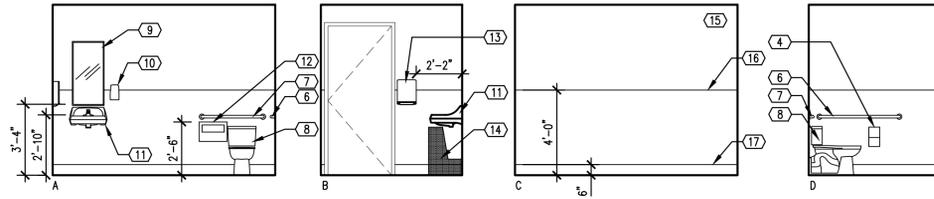
19 RESTROOM 130 AND 131 ENLARGED PLAN  
SCALE: 1/2"=1'-0"



20 RESTROOM 115 AND 116 ENLARGED PLAN  
SCALE: 1/2"=1'-0"

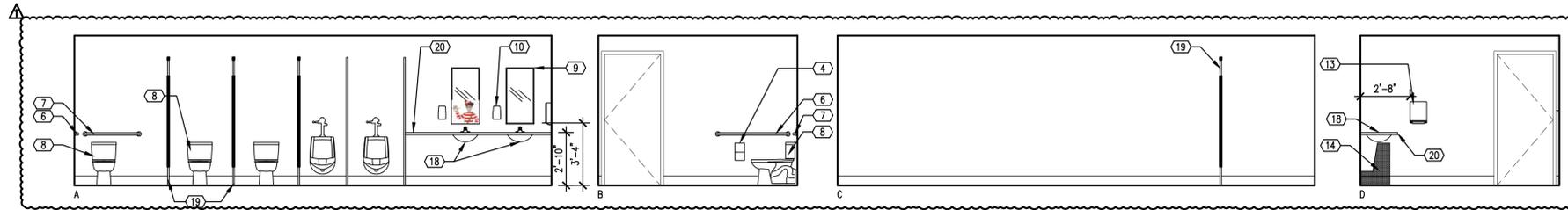


9 RESTROOM 115 ELEVATIONS  
SCALE: 1/4"=1'-0"

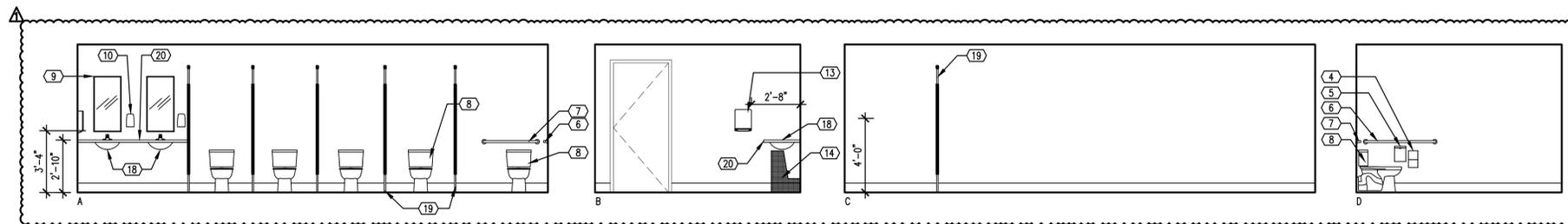


10 RESTROOM 116 ELEVATIONS  
SCALE: 1/4"=1'-0"

NOTE:  
ALL EXISTING COMPONENTS IN EACH OF THE 4 RESTROOMS ARE TO BE REMOVED AND SLAVAGED TO BE REINSTALLED AFTER NEW FINISH HAVE BEEN APPLIED. IF THE COMPONENTS ARE NOT IN GOOD WORKING ORDER THEN THEY ARE TO BE REPLACED. COORDINATE WITH OWNER.



15 RESTROOM 131 ELEVATIONS  
SCALE: 1/4"=1'-0"



16 RESTROOM 130 ELEVATIONS  
SCALE: 1/4"=1'-0"

KEYNOTES:

- 1 59"x60" CLEAR SPACE AT FLOOR MOUNTED TOILET.
- 2 30"x48" CLEAR SPACE AT LAVATORY.
- 3 5'-0" DIAMETER DISABLED PERSON TURNAROUND.
- 4 EXISTING SURFACE MOUNTED TOILET PAPER DISPENSER.
- 5 NEW SURFACE MOUNTED SANITARY NAPKIN DISPOSAL.
- 6 EXISTING 48" LONG GRAB BAR, TOP OF GRAB BAR 2'-9" A.F.F.
- 7 EXISTING 36" LONG GRAB BAR, TOP OF GRAB BAR 2'-9" A.F.F.
- 8 EXISTING FLOOR MOUNTED TOILET.
- 9 EXISTING MIRROR - 18"x36" MOUNTED 3'-4" A.F.F. TO REFLECTED SURFACE.
- 10 EXISTING SURFACE MOUNTED SOAP DISPENSER.
- 11 EXISTING WALL HUNG LAVATORY; TOP OF LAVATORY TO BE AT 2'-10" A.F.F. MAX.
- 12 NEW SURFACE MOUNTED SEAT COVER DISPENSER; AT ACCESSIBLE TOILET, MOUNT AT 2'-6" A.F.F.
- 13 EXISTING PAPER TOWEL DISPENSER MOUNTED AT 3'-4" A.F.F.
- 14 KNEE AND TOE CLEAR SPACE PER 11B-306. WRAP HOT AND COLD WATER PIPES. TYPICAL.
- 15 MOISTURE RESISTANT GYPSUM BOARD; TAPE, SAND, AND PAINT PER FINISH LEGEND.
- 16 4'-0" HIGH WAINSCOT, TYPICAL AT RESTROOM; PER FINISH LEGEND.
- 17 WALL BASE PER FINISH PLAN.
- 18 EXISTING RIM SET LAVATORY; TOP OF LAVATORY TO BE AT 2'-10" A.F.F. MAX.
- 19 EXISTING TOILET PARTITION TO REMAIN.
- 20 EXISTING COUNTERTOP TO REMAIN.
- 21 30"x48" CLEAR SPACE AT URINAL. HAND OPERATED FLUSH CONTROL SHALL BE MOUNTED AT A MAXIMUM HEIGHT OF 44" A.F.F.

GENERAL RESTROOM NOTES:

1. TOILET PAPER DISPENSERS THAT CONTROL DELIVERY OR THAT DO NOT PERMIT CONTINUOUS PAPER FLOW SHALL NOT BE USED.
2. SEE TSS FOR MOUNTING HEIGHT DIAGRAMS.
3. WHERE A TANK-TYPE TOILET IS USED WHICH OBSTRUCTS PLACEMENT OF THE REAR GRAB BAR AT 33", THE REAR GRAB BAR ONLY MAY BE INSTALLED AS HIGH AS 36".
4. THE FORCE REQUIRED TO ACTIVATE THE WATER CLOSET, MECHANISM CONTROLS, SHALL BE NO GREATER THAN 5 LBF.

GENERAL MILLWORK NOTES:

1. ALL CASWORK SHOP DRAWINGS SHALL BE APPROVED BY OWNER AS WELL AS SIGNED AND STAMPED BY ARCHITECT BEFORE BEGINNING PRODUCTION.
2. SEE DETAIL 11/47.2 FOR TYPICAL DETAIL OF BASE AND UPPER CABINETS.

DIMENSION LEGEND:

- DIM DENOTES A DIMENSION FROM THE FINISHED SURFACE TO THE CENTERLINE OF AN OBJECT
- DIM DENOTES A DIMENSION FROM THE FINISHED SURFACE TO THE FACE OF AN OBJECT



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05-05-23 PLAN CHECK  
7-31-23 PLAN CHECK  
RE-SUBMITTAL (A0001)

**ATLAS**  
**9085-B AERO DRIVE**  
**SAN DIEGO, CALIFORNIA 92123**

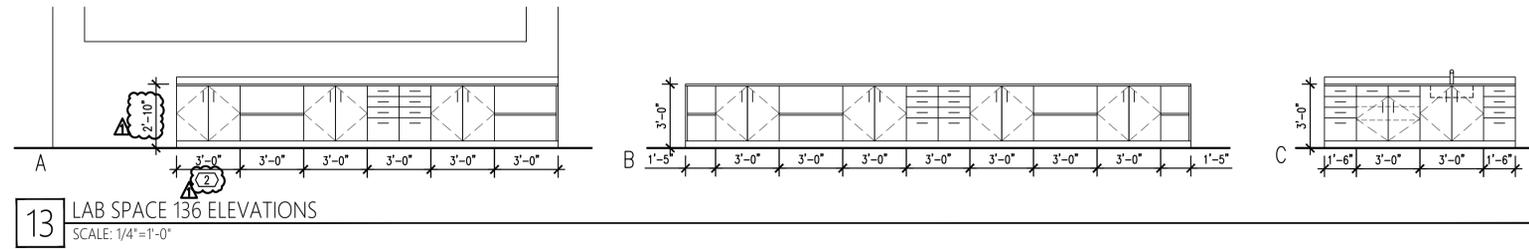
PROJECT NO:  
2022170

SHEET TITLE  
INTERIOR  
ELEVATIONS

SHEET NO:

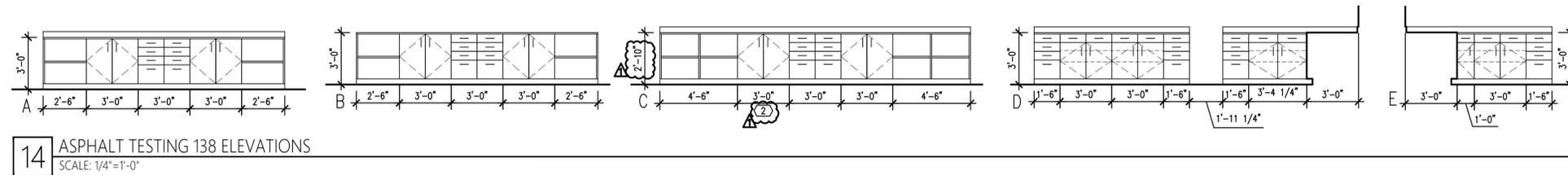
A9.1

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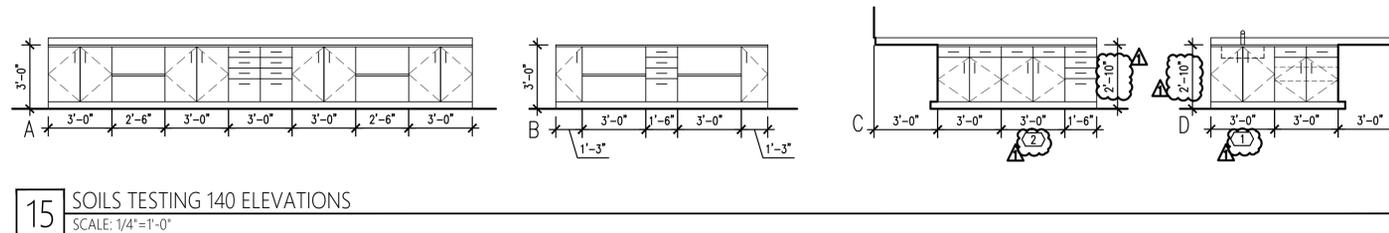


13 LAB SPACE 136 ELEVATIONS  
SCALE: 1/4"=1'-0"

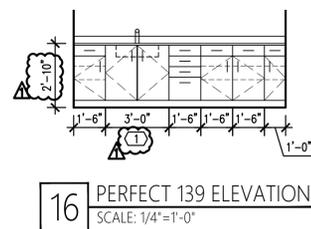
KEYNOTES:  
 ① SEE DETAIL 9/A7.2 FOR ADA COMPLIANCE AT BASE CABINET WITH HAND SINK. PROVIDE 48"x30" CLEAR FLOOR SPACE IN FRONT OF SINK.  
 ② DETAIL AT THIS LOCATION TO BE SIMILAR TO 9/A7.2.



14 ASPHALT TESTING 138 ELEVATIONS  
SCALE: 1/4"=1'-0"



15 SOILS TESTING 140 ELEVATIONS  
SCALE: 1/4"=1'-0"



16 PERFECT 139 ELEVATIONS  
SCALE: 1/4"=1'-0"

GENERAL MILLWORK NOTES:  
 1. ALL CASEWORK SHOP DRAWINGS SHALL BE APPROVED BY OWNER AS WELL AS SIGNED AND STAMPED BY ARCHITECT BEFORE BEGINNING PRODUCTION.  
 2. SEE DETAIL 11/A7.2 FOR TYPICAL DETAIL OF BASE AND UPPER CABINETS.

DIMENSION LEGEND:  
 DIM DENOTES A DIMENSION FROM THE FINISHED SURFACE TO THE CENTERLINE OF AN OBJECT  
 DIM DENOTES A DIMENSION FROM THE FINISHED SURFACE TO THE FACE OF AN OBJECT



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 7-31-23 PLAN CHECK  
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ATLAS  
 9085-B AERO DRIVE  
 SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
 2022170

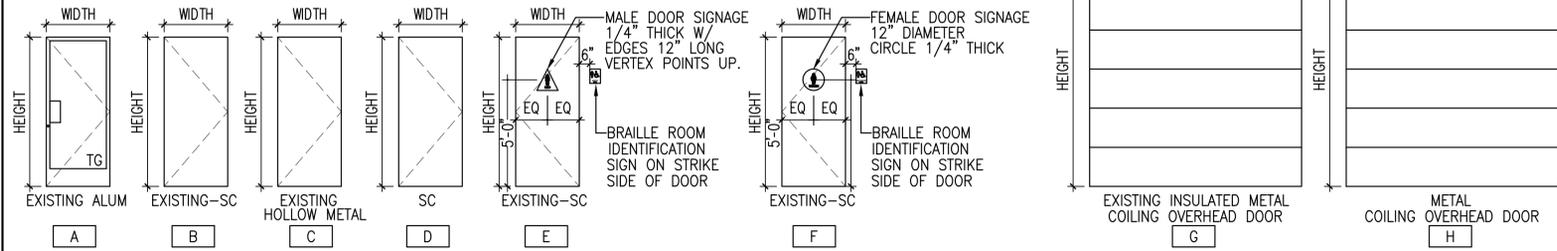
SHEET TITLE  
 INTERIOR ELEVATIONS

SHEET NO.

A9.2

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DOOR TYPES:



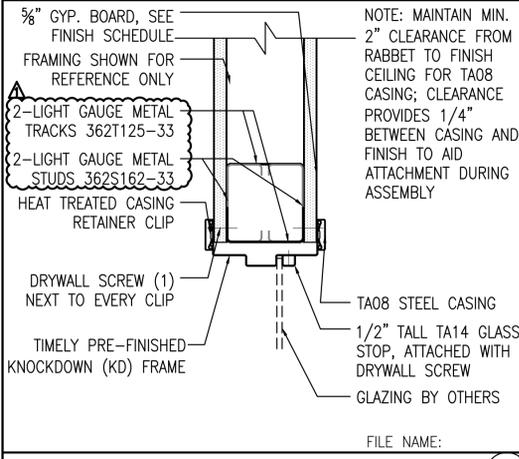
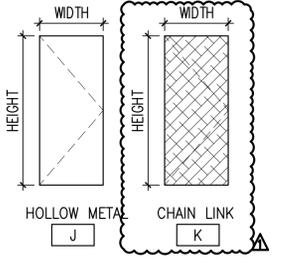
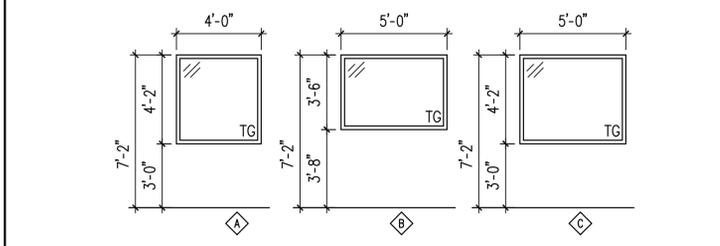
"E" IN FRONT OF DOOR NUMBER INDICATES DOOR IS EXISTING. DOOR SCHEDULE

MARK	TYPE	DOOR				FRAME		DETAIL				GLASS TYPE	UL RATING	REMARKS	
		WIDTH	HEIGHT	THICK	PAIR	MATERIAL	FINISH	MATERIAL	FINISH	HEAD	JAMB/HINGE				JAMB/STRIKE
FIRST FLOOR															
E100	A	6'-0"	7'-0"	1-3/4"	Y	ALUM	FF	ALUM	FF	N/A	N/A	N/A	TG	N/A	1, 2
E101	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E102	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E103	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E104	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E105	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E106	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
107	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
108	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E109	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
110	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E111	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
112	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E113	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
114	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E115	E	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	3A, 4
E116	F	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	3B, 4
E117A	A	3'-0"	7'-0"	1-3/4"	N	ALUM	FF	ALUM	FF	N/A	N/A	N/A	TG	N/A	1, 2
E117B	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E117C	B	6'-0"	7'-0"	1-3/4"	Y	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
118	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
119	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E120	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E121A	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E122	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E123	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E124	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E125A	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E125B	C	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E126	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E127	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E128	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E129A	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E129B	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
E130	F	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	3B, 4
E131	E	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	3A, 4
E132A	B	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
132B	D	3'-0"	7'-0"	1-3/4"	N	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
133	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
134	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E135	C	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	2
E136A	C	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	2
E136B	G	10'-0"	9'-0"	N/A	N	M	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
137A	H	5'-0"	8'-0"	N/A	N	M	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
137B	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
138A	D	6'-0"	7'-0"	1-3/4"	Y	WD	PT	STL	PT	15/A10.1	11/A10.1	N/A	12/A10.1	N/A	5
138B	D	6'-0"	7'-0"	1-3/4"	Y	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
139	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
140A	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
140B	D	6'-0"	7'-0"	1-3/4"	Y	WD	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
141	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
142	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
143	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
144	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E145A	C	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
E145B	C	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	2
E145C	G	10'-0"	9'-0"	N/A	N	M	PT	STL	PT	N/A	N/A	N/A	N/A	N/A	
146A	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
146B	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A
147	J	3'-0"	7'-0"	1-3/4"	N	M	PT	STL	PT	15/A10.1	11/A10.1	16/A10.1	12/A10.1	N/A	N/A

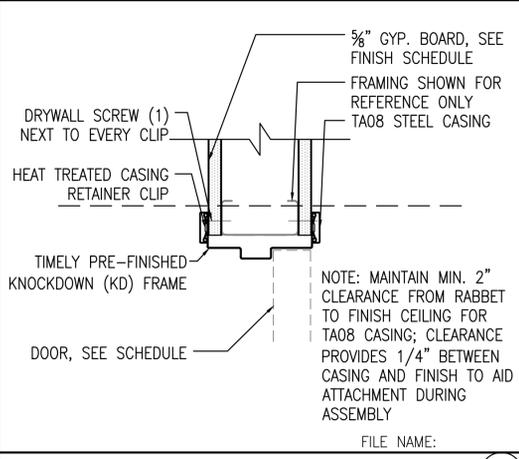
WINDOW SCHEDULE

TYPE	WINDOW			FRAME		DETAILS		
	WIDTH	HEIGHT	SILL HT	GLAZING	FIRE RATING	MATERIAL	FINISH	HEAD
A	4'-0"	4'-2"	3'-0"	1/4" TG	N/A	STL	ALUMATONE	19/A10.2
B	5'-0"	3'-6"	3'-8"	1/4" TG	N/A	STL	ALUMATONE	20/A10.2
C	5'-0"	4'-2"	3'-0"	1/4" TG	N/A	STL	ALUMATONE	20/A10.2

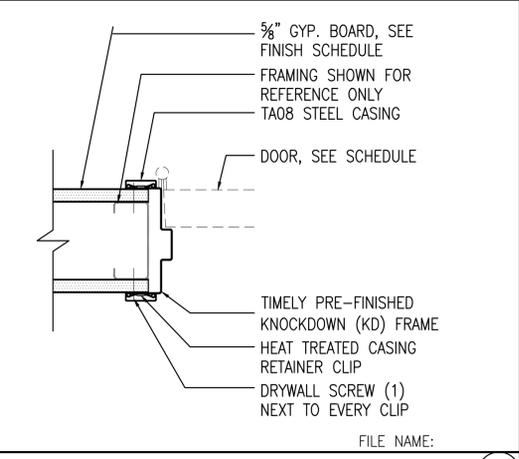
WINDOW TYPES



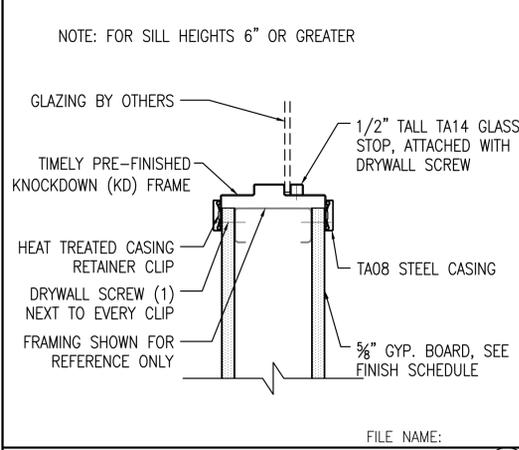
TYP. HEADER W/ GLAZING SCALE: 3"=1'-0" 19



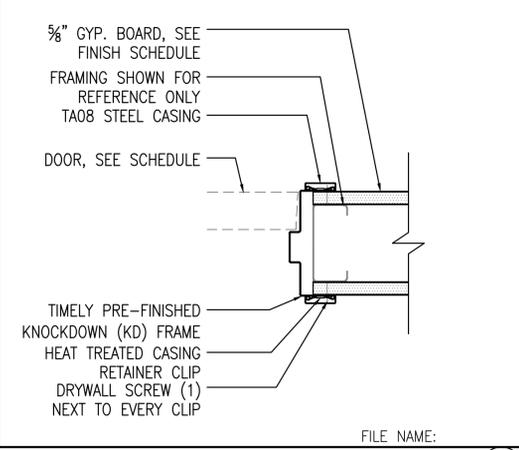
TYP. HEADER SCALE: 3"=1'-0" 15



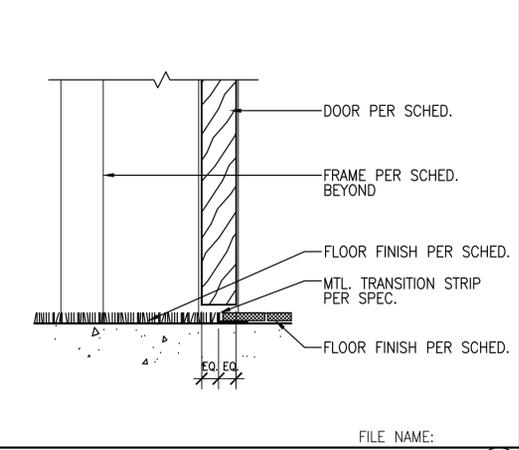
TYP. JAMB - HINGE SCALE: 3"=1'-0" 11



TYP. JAMB AND SILL W/ GLAZING SCALE: 3"=1'-0" 20



TYP. JAMB - STRIKE SCALE: 3"=1'-0" 16



DOOR THRESHOLD SCALE: 3"=1'-0" 12

ABBREVIATIONS:  
 HM = HOLLOW METAL    STL = STEEL    GL = GLASS    PT = PAINT (SEE FINISH LEGEND)    FF = FACTORY FINISH  
 ALUM = ALUMINUM    M = METAL    WD = WOOD    TG = TEMPERED GLASS    SC = SOLID CORE

DOOR SCHEDULE REMARKS:  
 1. SIGN OVER FRONT ENTRY DOORS (INTERIOR SIDE) TO READ "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" PER SECTION 1008.1.9.3, 2.2.  
 2. EXTERIOR DOORS ARE TO BE SELF CLOSING AND TIGHT FITTING.  
 3. PROVIDE COMPLYING HANDICAPPED ACCESSIBILITY SIGN @ 5'-0" A.F.F. (CENTER); PROVIDE BRAILLE SIGN ADJACENT TO DOOR. A. "MEN" B. "WOMEN" C. "UNISEX"  
 4. TOILET ROOM DOORS TO BE SELF CLOSING.  
 5. DOUBLE ACTING DOOR.

GENERAL DOOR SCHEDULE NOTES:  
 1. DOORS IN THE MEANS OF EGRESS SYSTEM TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.  
 2. ALL DOOR HARDWARE TO BE LEVER TYPE AND ADA COMPLIANT.  
 3. 2 EXISTING DOOR PANELS REMOVED DURING DEMOLITION TO BE REUSED.  
 4. SOME DOORS ARE TO BE ACCESS CONTROLLED. COORDINATE WITH OWNER LOCATIONS.



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05-05-23 PLAN CHECK  
 7-31-23 PLAN CHECK  
 RE-SUBMITTAL (A0001)

**ATLAS**  
**9085-B AERO DRIVE**  
**SAN DIEGO, CALIFORNIA 92123**

PROJECT NO:  
2022170

SHEET TITLE  
DOOR SCHEDULE AND DETAILS

SHEET NO.

A10.1

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### SPECIAL CONDITIONS, REQUIREMENTS AND NOTES TO OWNER, DEVELOPER AND CONTRACTOR:

1. CONTRACTOR, BUILDER AND SUBCONTRACTORS INVOLVED IN ANY FORM OF CONSTRUCTION USING THESE CONTRACT DOCUMENTS SHALL BE INFORMED OF THE FOLLOWING RESPONSIBILITIES, PERFORMANCE CRITERIA, LIMITATIONS AND RISKS ASSOCIATED WITH CONSTRUCTION. IF THE OWNER, DEVELOPER OR CONTRACTOR IS NOT ABLE TO ACHIEVE THE RESPONSIBILITY OR PERFORMANCE CRITERIA AND LIMITATIONS, NOTIFY THE ENGINEER OF RECORD OR ARCHITECT PRIOR TO START OF CONSTRUCTION. IT SHALL BE EXPRESSLY UNDERSTOOD THAT THE ENGINEER IS NOT RESPONSIBLE OR LIABLE FOR THE LACK OF PERFORMANCE OF MATERIALS, SYSTEMS OR DESIGNS NOT BEING LIMITED TO ITEMS OUTLINED BELOW. CONTRACTORS AND SUBCONTRACTORS SHALL THOROUGHLY REVIEW ALL CONDITIONS AND RESPONSIBILITIES STATED IN THESE NOTES, PLANS, SECTIONS / DETAILS, AND SHALL NOTIFY THE ENGINEER AND OWNER IN WRITING PRIOR TO CONSTRUCTION OF ANY CONDITIONS OR RESPONSIBILITIES WHICH ARE NOT ACCEPTABLE OR NOT UNDERSTOOD.

2. THE CONTRACTOR SHALL USE ALL STANDARD MEANS TO ENSURE PROPER PROTECTION AND CURING OF ALL CEMENTITIOUS MATERIALS TO REDUCE CRACKING OR SURFACE SPALLING. PLAIN CONCRETE, REINFORCED CONCRETE, OR CONCRETE MASONRY LEVEL OF CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE, CREEP AND RESTRAINING EFFECTS. CRACKS ARE NORMALLY COSMETIC AND THE SYSTEM MAINTAINS SERVICEABILITY AND STRENGTH REQUIREMENTS. JOINTS MAY BE INDICATED TO CONTROL CRACKING, BUT ARE NOT MEANT TO ELIMINATE ALL CRACKING, AS THIS IS NOT PRACTICAL. EXTREME CRACKING MAY BE CAUSED BY POOR MATERIAL OR PLACEMENT. CONTACT THE ENGINEER OF RECORD FOR POSSIBLE REPAIR REQUIREMENTS.

3. FOUNDATION SETTLEMENT MAY CAUSE DISTORTION AND STRESS TO THE SUPPORTED STRUCTURE AS WELL AS ADJACENT UTILITIES, SLABS, FOUNDATIONS, ETC. THE GEOTECHNICAL REPORT MAY INDICATE A LEVEL OF DISPLACEMENT. ATTENTION TO PROPER SOIL PREPARATION AND GRADING, AS WELL AS PROPER DRAINAGE AWAY FROM STRUCTURE IS ESSENTIAL IN REDUCING EXPECTED SETTLEMENT. ALL REQUIREMENTS WITHIN THE GEOTECHNICAL REPORT ARE TO BE FOLLOWED. INFORM THE ENGINEER OF RECORD OF ANY CONFLICTS BETWEEN THE REPORT AND THE DRAWINGS.

4. VARIATION IN DIMENSIONS MAY OCCUR AS A RESULT OF THERMAL INFLUENCES, NATURAL DEFLECTIONS AND/OR CAMBERS OF MEMBERS. AS A RESULT, QUANTITIES MAY VARY AND ARCHITECTURAL FINISHES MAY BE AT RISK OF COSMETIC VARIATION OR DAMAGE.

5. THE ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR VARIATIONS TO PLANS BETWEEN BID PROCESS AND FINALIZED APPROVED DOCUMENTS RELEASED FOR CONSTRUCTION UNLESS SUCH VARIATIONS ARE ISSUED BY THE ENGINEER. ADDITIONS AND ALTERATIONS MAY BE MADE BY THE ENGINEER BETWEEN RELEASE OF BID DOCUMENTS AND FINALIZED CONSTRUCTION DOCUMENTS.

6. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THEY NECESSARILY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR, SUBCONTRACTOR AND/OR WORKPERSONS WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL WORK EXPLICITLY SHOWN.

7. CALCULATION AND DESIGN OF MISCELLANEOUS NON-STRUCTURAL ITEMS, SUCH AS RAILINGS, NON-STRUCTURAL WALLS AND PREFABRICATED STRUCTURAL ITEMS, SUCH AS CANOPIES, ARE NOT INCLUDED AND ARE TO BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS.

8. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORMWORK, ETC. AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.

9. CONSTRUCTION MATERIALS SHALL BE UNIFORMLY SPREAD OUT SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS STATED HEREIN IS NOT EXCEEDED. VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT AND SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATIONS AND SAFETY REQUIREMENTS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, CONDITIONS AND ELEVATIONS WITH OTHER DISCIPLINES DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT AND ENGINEER OF RECORD IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCY, OMISSION OR VARIATION NOT REPORTED BEFORE THE START OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

12. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.

13. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS USED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES AND SHALL COORDINATE ALL DETAILS.

14. TYPICAL GENERAL STRUCTURAL NOTES AND DETAILS SHALL APPLY, THOUGH NOT NECESSARILY AT A SPECIFIC LOCATION UNLESS OTHERWISE SHOWN. CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY ONLY SHOW ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY. WHERE DISCREPANCIES OCCUR IN THESE DRAWINGS, SPECIFIC NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.

15. ALL OPENINGS ARE NOT SHOWN ON THESE DRAWINGS. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES. DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. OPENINGS MAY REQUIRE ADDITIONAL REINFORCING OR SUPPORTS AS SHOWN ON TYPICAL DETAILS. IF TYPICAL DETAILS FOR ALL CONDITIONS ARE NOT INCLUDED HEREIN, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REQUEST IN WRITING ADDITIONAL INFORMATION.

16. ALL INSPECTIONS REQUIRED BY THE BUILDING CODES, LOCAL BUILDING OFFICIALS, OR BY THESE PLANS SHALL BE PROVIDED BY AN INDEPENDENT INSPECTION COMPANY OR THE BUILDING DEPARTMENT. SPECIAL INSPECTION REQUIREMENTS STATED HEREIN ARE PARTIAL. COMPLETE INSPECTION REQUIREMENTS SHALL BE AS DIRECTED BY THE LOCAL BUILDING DEPARTMENT. SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE A SPECIAL INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR.

17. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS. SHOP DRAWINGS ARE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. REVIEW DOES NOT INDICATE THAT THE SHOP DRAWINGS ARE CORRECT OR COMPLETE. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE FOREMENTIONED SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW UNLESS SPECIFICALLY NOTED ACCORDINGLY. THE SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE ORIGINAL CONTRACT DRAWINGS. ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN APPROPRIATELY REGISTERED ENGINEER. THE ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF ENGINEERING DESIGNS PERFORMED BY OTHERS. ALLOW A MINIMUM OF 10 WORKING DAYS FOR THE ENGINEER'S REVIEW. ONE COPY OF EACH SUBMITTAL WILL BE RETAINED FOR THE ENGINEER'S RECORDS.

### DEFERRED SUBMITTALS:

1. IN ACCORDANCE WITH THE IBC SECTION 106.3.4.2, SPECIALTY ITEMS, PRE-ENGINEERED COMPONENTS, AND DESIGN BUILD ELEMENTS MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL BY DEFERRED SUBMITTAL. SUCH ITEMS ARE DEFINED AS THOSE SPECIFIED IN CONSTRUCTION DOCUMENTS BUT WHICH REQUIRE DESIGN BY THE MANUFACTURER, SUPPLIER, OR INSTALLER.

2. SUBMITTALS ARE REQUIRED FOR THE FOLLOWING:

- A. CONCRETE MIX DESIGNS
- B. REBAR SHOP DRAWINGS
- C. SIMPSON STRONG-TIE, OR EQUAL, HARDWARE (INCLUDING ALL TRUSS HANGERS)

3. SUBMITTALS SHALL INCLUDE:

- A. CALCULATIONS PREPARED AND SEALED BY AN APPROPRIATELY REGISTERED ENGINEER (THE "SPECIALTY ENGINEER")
- B. DIAGRAM PREPARED AND SEALED BY THE SPECIALTY ENGINEER, SHOWING LOAD MAGNITUDES AND LOCATIONS - SEPARATED INTO DEAD, LIVE, WIND AND/OR SEISMIC COMPONENTS - THAT ARE APPLIED TO THE PRIMARY STRUCTURE.
- C. ERECTION OR DESIGN DRAWINGS BEARING THE SPECIALTY ENGINEER'S SEAL AND THE ARCHITECT'S STAMP INDICATING HIS REVIEW.

4. SUBMIT (1) REPRODUCIBLE COPY, ONE (1) WET SEALED COPY FOR THE STRUCTURAL ENGINEER OF RECORD'S FILE, AND ADDITIONAL COPIES AS ARE NECESSARY FOR THE BUILDING DEPARTMENT. SUBMITTALS CONTAINING EXCEPTIONS, CORRECTIONS, OR OTHER REVIEW COMMENTS ARE NOT ACCEPTABLE FOR SUBMITTAL TO THE BUILDING DEPARTMENT.

5. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW IS STRICTLY LIMITED TO THE FOLLOWING:

- A. THE DRAWINGS AND CALCULATIONS ARE PROPERLY SEALED.
- B. THE LOAD CRITERIA IS CONSISTENT WITH THE CONTRACT DOCUMENTS AND INTERNATIONAL BUILDING CODE REQUIREMENTS.
- C. THE CONNECTIONS TO THE PRIMARY STRUCTURE ARE CONSISTENT WITH THE PRIMARY DESIGN.
- D. THE BASE STRUCTURE IS CAPABLE OF SUPPORTING THE IMPOSED LOADS.

6. IF THE LOADS IMPOSED ON THE STRUCTURE EXCEED THE LOAD ALLOWANCE PROVIDED THE STRUCTURAL ENGINEER OF RECORD WILL REJECT THE SUBMITTAL. ONLY AT THE OWNER'S WRITTEN DIRECTION WILL MODIFICATIONS TO THE BASE STRUCTURE TO ACCOMMODATE THE SPECIALTY ITEMS BE MADE BY THE ENGINEER OF RECORD. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL HAVE APPROVED SUBMITTAL DOCUMENTS.

### CONCRETE:

1. MINIMUM 28 DAY STRENGTH (F<sub>c</sub>) AS FOLLOWS:

USE TYPE	STRENGTH	ACI EXPOSURE CLASSIFICATIONS
FOUNDATIONS	4000 PSI	F1 S0 W0 CO
INTERIOR SLAB ON GROUND	4000 PSI	F0 S0 W0 C0
2. A MIX DESIGN SHALL BE SUBMITTED FOR REVIEW FOR EACH MIX TYPE AND SHALL INCLUDE ALL MATERIALS TO BE USED, SIEVE ANALYSIS OF AGGREGATE, AND DATA FOR ALL PRODUCTS.
3. AIR ENTRAINMENT AS FOLLOWS:
  - A. EXTERIOR CONCRETE SHALL BE PER ASTM C686 2% +1.5%
  - B. INTERIOR CONCRETE SHALL BE LIMITED TO 3% IN ACCORDANCE WITH ACI 302.1R
4. FLY ASH MAY BE USED AT CONTRACTOR'S OPTION. IF USED IT SHALL BE LIMITED TO 20% AND MEET ASTM 6618, CLASS C OR F.

5. CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE ENGINEER ACCORDING TO ACI 301.
6. THE CONCRETE SUPPLIER SHALL STATE THE SLUMP AND ADDITIVES USED IN THE MIX DESIGN.
  - A. MAXIMUM SLUMP FOR EXTERIOR SLABS SHALL BE 4" +1".
  - B. MAXIMUM SLUMP FOR ALL OTHER CONCRETE SHALL BE 3" +1".
  - C. WATER SHALL BE CLEAN AND POTABLE. IF ADDITIONAL FLOWABILITY IS REQUIRED FOR PLACEMENT OF ANY CONCRETE MIX, A WATER-REDUCING ADDITIVE CONFORMING TO ASTM C494, TYPE A OR F, SHALL BE USED. NO ADDITIONAL WATER MAY BE ADDED TO THE MIX. THE ONLY WATER WHICH MAY BE ADDED ON-SITE IS MIX WATER THAT HAS BEEN LEFT OUT AT THE BATCH PLANT.
  - D. CONCRETE DELIVERY TICKET SHALL CLEARLY INDICATE THE AMOUNT OF MIX WATER WHICH HAS BEEN LEFT OUT. MAXIMUM SLUMP SHALL BE 8" FOR CONCRETE WITH VERIFIED SLUMP OF 2" TO 4" BEFORE ADDING HIGH-RANGE WATER-REDUCING ADMIXTURE OR PLASTICIZING ADMIXTURE. SEE DIVISION 3 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

7. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 TYPE II CEMENT. CALCIUM CHLORIDE IS NOT ALLOWED.

8. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT, UNLESS APPROVED BY THE ENGINEER OR AUTHORIZED TESTING AGENCY.

9. CONCRETE MIXING, PLACEMENT AND QUALITY SHALL BE PER IBC SECTION 1904, ASTM C 94, ASTM C 895, AND ACI 302 MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT SLABS ON GROUND NEED ONLY BE VIBRATED OR THOROUGHLY RODDED AROUND EMBEDDED STRAPS OR HARDWARE, BOLTS FOR UPLIFT ANCHORS, CURBS AND EDGES OF SLAB STEPS AND UNDER FLOOR DUCTS OR SIMILAR ELEMENTS. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.

10. ALL ITEMS THAT ARE CAST INTO CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, EMBEDS, INSERTS, ETC. SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE. SUPPORT ALL REINFORCING WITH CHAIRS AS REQUIRED. FLOATING IN OF THESE ITEMS IS NOT PERMITTED. REINFORCING, DOWELS, EMBEDS, AND INSERTS SHALL BE CLEAN OR RUST, OILS, AND DIRT PRIOR TO CASTING.

11. CONCRETE SLAB ON GROUND CONTROL JOINTS SHALL BE AS SHOWN ON THE FOUNDATION PLAN OR TYPICAL DETAILS. WHERE CONTROL JOINTS ARE NOT SHOWN ON PLANS, ALL CONCRETE SLABS ON GROUND SHALL BE BOUND BY KEYS, DOWELED OR SAWCUT CONTROL JOINTS SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 144 SQUARE FEET. RATIO OF BOUNDARY DIMENSIONS SHALL NOT EXCEED 1.5:1. LOCATE CONTROL JOINTS OFF OF CORNERS OR DIAMOND ISOLATION LEAVE OUTS AND RE-ENTRANT CORNERS. KEYS OR DOWELED CONSTRUCTION JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING. ALL OTHER JOINTS MAY BE SAWCUT. SAWCUT JOINTS SHALL BE CUT IN SLABS ON GROUND AS SOON AS POSSIBLE WITHIN 24 HOURS AFTER SLAB FINISHING AS MAY BE SAFELY DONE WITHOUT DISLOGGING AGGREGATE.

12. PIPES OTHER THAN ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY THE ENGINEER. MAXIMUM PIPE SIZE SHALL BE 1/3 OF THE SLAB THICKNESS AND LOCATED AT MID-DEPTH. MINIMUM SPACING SHALL BE 3 TIMES THE OUTSIDE PIPE DIAMETER. PIPES SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.

13. PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH DUE TO HOT OR COLD WEATHER IN ACCORDANCE WITH ACI 305 AND IBC SECTION 1905. WHERE DOWELS, BOLTS OR INSERTS ARE CALLED TO BE ANCHORED TO CAST IN PLACE CONCRETE ELEMENTS USING EPOXY ADHESIVES, FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS. ALTERNATE ANCHORAGE SYSTEMS MAY BE USED WITH ENGINEER'S PRIOR APPROVAL.

### FOUNDATIONS:

1. GEOTECHNICAL REPORT: N/A

PROJECT NO.: N/A

2. THE OWNER SHALL EMPLOY A GEOTECHNICAL ENGINEER TO PROVIDE SOIL TESTING AND REVIEW DURING CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE THE FOUNDATION REQUIREMENTS OF THE CONTRACT DOCUMENTS. IF CONDITIONS VARY FROM THAT INDICATED HEREIN, THEN THE GEOTECHNICAL ENGINEER SHALL NOTIFY THE ARCHITECT AND ENGINEER PRIOR TO FOUNDATION CONSTRUCTION.

3. THE BACKFILL SHALL BE PLACED AND COMPACTED ON EACH SIDE OF FOUNDATION WALLS SUCH THAT NO UNBALANCED LATERAL LOADS ARE INDUCED TO THE WALL. PROVIDE CLEAN CRUSHED STONE BACKFILL PER GEOTECH REPORT.

4. BACKFILL SHALL BE PLACED EVENLY AGAINST EACH SIDE OF SUBGRADE STRUCTURAL ELEMENTS TO PRODUCE APPROXIMATELY EQUAL AND OPPOSITE LATERAL PRESSURES.

### SLAB ON GRADE SUPPORT:

1. SLAB ON GROUND SUPPORT: MINIMUM 4" LAYER OF GRANULAR BASE CONSISTING OF AN OPEN GRADED CRUSHED STONE (ASTM C33, #57 STONE OR SIMILAR), PER GEOTECHNICAL REPORT.

2. UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT, CONCRETE SLABS ON GROUND SHALL BE SUPPORTED ON SELECT FILL MATERIAL AS NOTED ABOVE. FILL MATERIAL SHOULD BE MOISTENED, BUT NOT SATURATED JUST PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN IN PLACING SLABS ON GRADE SO AS NOT TO DISTURB FILL MATERIAL OR REINFORCING. THE FILL MATERIAL SHALL BE COMPACTED TO NO LESS THAN 95% COMPACTON AT MOISTURE CONTENT RANGE OF 3% BELOW TO 3% ABOVE OPTIMUM MOISTURE CONTENT BEFORE PLACEMENT OF SLABS. REFER TO GEOTECHNICAL REPORT FOR ANY ADDITIONAL REQUIREMENTS.

### SHALLOW SPREAD FOOTINGS:

1. MINIMUM DEPTH IS 12" BELOW GRADE.
2. ALLOWABLE FOOTING BEARING CAPACITY IS 1500 PSF (ASSUMED).
3. ALL FOOTINGS SHALL EXTEND TO DEPTH NOTED ABOVE UNLESS NOTED OTHERWISE ON PLANS OR DETAIL. GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOOTINGS, AND LOWEST ADJACENT COMPACTED SUBGRADE (PAD GRADE BEFORE LANDSCAPING) OR NATURAL GRADE WITHIN 5 FEET OF BUILDING PERIMETER FOOTINGS. GRADE IS DEFINED AS TOP OF EXTERIOR PAVING OR CONCRETE WHERE EXTERIOR PAVING OR CONCRETE IS PERMANENTLY LOCATED DIRECTLY ADJACENT TO BUILDING AND EXTENDS AT LEAST 5 FEET FROM BUILDING.
4. FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE FROM LOOSE DEBRIS, STANDING WATER, OR UNCOMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.
5. EXCAVATION FOR FOOTINGS SHALL BE CUT TO ACCURATE SIZE AND DIMENSIONS AS SHOWN ON PLANS. ALL SOIL BELOW SLABS AND FOOTINGS SHALL BE PROPERLY COMPACTED AND SUBGRADE BROUGHT TO A REASONABLE TRUE AND LEVEL PLANE BEFORE PLACING CONCRETE.
6. SITE PREPARATION AND GRADING REQUIREMENTS OF THE GEOTECHNICAL REPORT AND ANY ADDENDA SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF FOUNDATIONS. ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE GEOTECHNICAL ENGINEER SHALL BE PERFORMED PRIOR TO PLACEMENT OF FOUNDATION REINFORCING STEEL OR CONCRETE. ALTERATIONS TO SITE PREPARATION OR GRADING SHALL BE REPORTED TO THE ENGINEER PRIOR TO FOUNDATION CONSTRUCTION.

### ELECTRONIC FILES:

ELECTRONIC FILES CREATED BY METTEMAYER ENGINEERING, LLC, ARE AVAILABLE FOR USE BY THE GENERAL CONTRACTOR, SUBCONTRACTORS, OR OTHERS INVOLVED IN ANY FORM OF CONSTRUCTION AND BIDS ON THE PROJECT BASED ON THE FOLLOWING TERMS AND CONDITIONS.

BY USING THIS COMPUTER-GENERATED DRAWING, YOU WILL INDICATE YOUR ACCEPTANCE OF THE FOLLOWING TERMS AND CONDITIONS. THE PURPOSE OF THIS AGREEMENT IS TO SET FORTH THE CONDITIONS FOR THE USE BY A SECOND PARTY (USER) OF COMPUTER-GENERATED DRAWINGS PREPARED BY METTEMAYER ENGINEERING, LLC. METTEMAYER ENGINEERING, LLC RETAINS OWNERSHIP OF THE INFORMATION CONTAINED ON THE DRAWINGS. PERMISSION TO USE THESE MATERIALS IS GIVEN ONLY SUBJECT TO THE TERMS OF THIS AGREEMENT.

ARTICLE 1. THE INFORMATION RECORDED ON COMPUTER-GENERATED DRAWINGS REPRESENTS A PORTION OF STRUCTURAL ENGINEERING SERVICES PERFORMED BY METTEMAYER ENGINEERING, LLC. NO REPRESENTATION IS MADE BY METTEMAYER ENGINEERING, LLC THAT THE DATA IS WITHOUT INACCURACY. METTEMAYER ENGINEERING, LLC GRANTS PERMISSION TO USE ITS COMPUTER-GENERATED DRAWINGS WITH THIS UNDERSTANDING AND WITH NO LIABILITIES EITHER EXPRESSED OR IMPLIED FOR ACCURACY OR COMPLETENESS. THE USER AGREES TO HOLD HARMLESS AND DEFEND METTEMAYER ENGINEERING, LLC IN THE EVENT OF ANY ACTION AGAINST OR BY THE USER FOR THE PREPARATION OF INFORMATION GENERATED THROUGH THE USE OF COMPUTER-GENERATED DRAWINGS PREPARED BY METTEMAYER ENGINEERING, LLC. FURTHER, IN THE EVENT OF SUCH LEGAL ACTION, THE USER AGREES TO PAY REASONABLE ATTORNEY'S FEES AND EXPENSES INCURRED BY METTEMAYER ENGINEERING, LLC IN RESOLVING THE MATTER.

ARTICLE 2. COMPUTER-GENERATED DRAWINGS ARE MADE AVAILABLE SOLELY FOR THE FACILITATION OF THE USER'S WORK ON THE SPECIFIC PROJECT IDENTIFIED BELOW AND NO PERMISSION IS GRANTED HEREIN FOR COPYING OR REUSE. THE USER'S ACCEPTANCE OF THESE TERMS, WHICH IS COMMUNICATED BY OPENING OR USING THIS DRAWING, CONSTITUTES A WAIVER OF LIABILITY AND THE ACCEPTANCE OF RESPONSIBILITIES FOR THE COORDINATION OF ANY REVISIONS AND COMPUTER-GENERATED INTERLINEATIONS MADE TO THE INFORMATION TRANSMITTED.

ARTICLE 3. UTILIZATION OF COMPUTER-GENERATED DRAWINGS NOT IN ACCORDANCE WITH THE TERMS OF THIS AGREEMENT SHALL CONSTITUTE A BREACH OF THIS AGREEMENT. METTEMAYER ENGINEERING, LLC WILL AT SUCH TIME DEMAND RETURN OF ITS PROPERTY AND MAY SEEK LEGAL RECOURSE AND THE COST OF REASONABLE FEES.

### REINFORCING STEEL (FOR CONCRETE AND MASONRY):

1. REINFORCED CONCRETE IS DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) BY THE AMERICAN CONCRETE INSTITUTE.
2. REINFORCING BAR DETAILING, FABRICATING, AND PLACING SHALL CONFORM TO THE "ACI STANDARD" DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI 315) AND THE "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" (ACI 315R) BY THE AMERICAN CONCRETE INSTITUTE. THE CODE REFERENCED EDITIONS OF CONCRETE REINFORCING STEEL INSTITUTES' "REINFORCING BAR DETAILING" AND "PLACING REINFORCING BARS" MAY ALSO BE USED.
3. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615. REINFORCING SHALL BE GRADE 60 (F<sub>y</sub> = 60 KSI) DEFORMED BARS FOR ALL REINFORCING BARS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS. ALL REINFORCING SHALL BE WELDED SHALL BE ASTM A706 GRADE 60 LOW ALLOY WELDABLE STEEL.
4. WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SUCH THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRE OF EACH FABRIC SHEET, IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.
5. ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR" OR "CLR" ARE TO CENTER OF STEEL. MINIMUM COVER FOR NON-PRESTRESSED CONCRETE REINFORCING SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE ON PLANS OR DETAILS:

EXPOSURE CONDITION	MINIMUM COVER	TOLERANCES (+/-)
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"	3/8"

EXPOSED TO EARTH OR WEATHER:

#2 AND SMALLER	1 1/2"	3/8"
#6 AND LARGER	2"	3/8"

SLABS ON GRADE: 1 1/2" 1/4"

6. LAP SPLICES OF REINFORCING STEEL IN ALL CONCRETE SHALL BE ACCORDING TO ACI 318 (CLASS B SPLICE), UNLESS NOTED OTHERWISE. STAGGER SPLICES A MINIMUM OF ONE LAP IN LENGTH. NO TACK WELDING OF REINFORCING BARS IS ALLOWED. CODE REFERENCED ACI CODE AND DETAIL MANUAL APPLY. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. SPLICE TOP BARS AT CENTER LINE OF SPAN AND BOTTOM BARS AT THE SUPPORT IN SPANDRLES, BEAMS, GRADE BEAMS, ETC. UNLESS NOTED OTHERWISE.

7. ALL CONSTRUCTION JOINTS SHOWN ON THE DRAWINGS SHALL BE INCORPORATED IN THE STRUCTURE UNLESS THEIR ELIMINATION IS APPROVED BY THE ENGINEER. ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON SHOP DRAWINGS. WHEN CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS ARE REQUIRED, THE REINFORCEMENT SHALL PASS CONTINUOUSLY THROUGH THE JOINT AND A KEY SHALL BE PROVIDED FOR ADEQUATE SHEAR TRANSFER.

8. ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE STRAIGHTENED AND RE-BENT. FIELD BENDING OF REBAR SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED OTHERWISE.

9. WELDING OF REINFORCING BARS, METAL INSERTS, AND CONNECTIONS SHALL CONFORM WITH IBC STANDARD 19-2, AND SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS.

10. REINFORCING BAR SPACING SHOWN ON PLANS ARE AT MAXIMUM ON CENTERS. ALL BARS SHALL BE DETAILED AND PLACED PER CONCRETE REINFORCING STEEL INSTITUTE (CRSI) SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

11. AT CORNERS OF FOOTINGS SUPPLY CORNER BARS 4"0" LONG MINIMUM (2"0" EACH LEG, OR 30 BAR DIAMETERS).

12. STANDEES/CHAIRS SHALL BE AS SPECIFIED IN CODE REFERENCED EDITION OF CRSI DESIGN HANDBOOK. MAXIMUM STANDEE/CHAIR SPACING SHALL BE 4"0" ON CENTER.

13. AT ALL HOLES IN CONCRETE WALLS AND SLABS, ADD 2-#4 BARS (LENGTH IS OPENING DIMENSION PLUS 3'0" LONG EACH WAY) AT EACH OF FOUR SIDES AND ADD 2-#6'S 0" DIAGONALLY AT EACH OF THE FOUR CORNERS OF THE HOLE. IN 8" WALL OPENINGS REFERENCE SAME, BUT 1-#4 BAR INSTEAD OF 2-#4 BARS, RESPECTIVELY. MECHANICAL SPLICE COUPLERS, FLANGE COUPLERS, THREADED COUPLERS, ETC. SHALL HAVE CURRENT ICC APPROVAL AND SHALL BE CAPABLE OF DEVELOPING 125% OF THE STRENGTH OF THE BAR.

### POST-INSTALLED ANCHORS:

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR APPROVED BY E OR R OR PT DESIGN ENGINEER. SPECIAL INSPECTIONS ARE REQUIRED PER THE PROVISIONS SET FORTH IN BELOW REFERENCED IBC CODE REPORTS. ANCHORS ARE TO BE INSTALLED BY EXPERIENCED INSTALLERS OR CONTRACTOR TO CONTACT MANUFACTURER'S REPRESENTATIVE FOR PROPER PRODUCT INSTALLATION TRAINING ON INITIAL ANCHORS. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE.

### 2. CONCRETE ANCHORS:

- A. MECHANICAL ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 305.2 AND ICC-ES AC109. PRE-APPROVED MECHANICAL ANCHORS INCLUDE: SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713), HILTI HIT-KW HUS-EZ "KH-EZ" (ICC-ES ESR-3027).
- B. ADHESIVE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC308. PRE-APPROVED ADHESIVE ANCHORS INCLUDE: SIMPSON STRONG-TIE "GT" (ICC-ES ESR-2508), HILTI HIT-HY 200-A (ICC-ES ESR-3187).

3. MASONRY ANCHORS (ANCHORAGE TO SOLID-GROUTED CONCRETE MASONRY):

- A. MECHANICAL AND CONCRETE SREW ANCHORS FOR USE IN SOLID-GROUTED CONCRETE MASONRY SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC101 OR AC106. RESPECTIVELY. PRE-APPROVED MECHANICAL AND CONCRETE SREW ANCHORS INCLUDE: SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056), HILTI "KH-EZ" CRC (ICC-ES ESR-3056).
- B. ADHESIVE ANCHORS FOR USE IN SOLID-GROUTED CONCRETE MASONRY SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC68. PRE-APPROVED ADHESIVE ANCHORS INCLUDE: SIMPSON STRONG-TIE "GT" (ICC-ES ESR-1772), HILTI HIT-HY 200-A (ICC-ES ESR-3963).

### CONFLICTING REQUIREMENTS:

1. ANY AND ALL CONFLICTS WITHIN THE CONTRACT DOCUMENTS (PLANS, SPECIFICATIONS AND OTHER DOCUMENTS), OR BETWEEN THE DOCUMENTS AND EXISTING PROJECT CONDITIONS SHALL BE QUANTIFIED BY THE CONTRACTOR(S), AND ALL ASSOCIATED COSTS MUST BE INCLUDED IN THE CONTRACTOR(S) BASE BID, OR ANY AND/OR ALL COSTS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR(S). IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR(S) TO BRING EACH CONFLICT TO THE ATTENTION OF THE ENGINEER OF RECORD. ALL CONFLICTS SHALL BE IDENTIFIED IN WRITTEN FORM AND SUBMITTED THROUGH THE "REQUEST FOR INFORMATION" (RFI) PROCESS DURING BIDDING. THE ENGINEER OF RECORD SHALL REVIEW ALL IDENTIFIED CONFLICTS AND RENDER TO THE CONTRACTOR(S) THEIR DECISION.
2. IF THE CONTRACTOR(S) DO NOT SUBMIT AN RFI AND/OR DO NOT RECEIVE A DIRECTIVE OR CLARIFICATION IN WRITING FROM THE ENGINEER OF RECORD THROUGH NO FAULT OF THEIR OWN, CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH THE MORE STRINGENT STANDARD, OR HIGHER LEVEL OF QUALITY AT NO ADDITIONAL COSTS TO THE OWNER.
3. IF COMPLIANCE WITH TWO OR MORE STANDARDS IS SPECIFIED AND THE STANDARDS ESTABLISHES A DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, COMPLY WITH THE MOST STRINGENT REQUIREMENT.

### STRUCTURAL LUMBER:

#### DIMENSIONAL LUMBER / WOOD FRAMING

1. LUMBER SHALL BE GOOD, SOUND, WELD, SEASONED, S4S, WITH A MOISTURE CONTENT OF 15% MAXIMUM AND THE FOLLOWING ALLOWABLE STRESSES:

BEAMS & JOISTS:	TREATED BEAMS & JOISTS:	ENGINEERED LUMBER:
#2 HEM-FIR OR BETTER	#2 SOUTHERN YELLOW PINE	MICROLAM LVL 1.9E
A. F <sub>b</sub> = 975 PSI	A. F <sub>b</sub> = 1,000 PSI	A. F <sub>b</sub> = 2,510 PSI
B. F <sub>c</sub> = 1,350 PSI	B. F <sub>c</sub> = 1,400 PSI	C. F <sub>v</sub> = 285 PSI
C. F <sub>v</sub> = 150 PSI	C. F <sub>v</sub> = 175 PSI	D. E = 1,900,000 PSI
D. E = 1,500,000 PSI	D. E = 1,700,000 PSI	

A. PLATES IN CONTACT WITH CONCRETE SHALL BE TREATED #2 SOUTHERN YELLOW PINE (S Y P).

- B. CONTRACTOR MAY SUBSTITUTE AN ALTERNATE SPECIES ONLY WITH WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
- C. LUMBER SHALL BE SELECTED SUCH THAT NO PIECES WITH LARGE KNOTS, WARPS, SPLITS, OR DEFECTS ARE USED.

2. FRAMING, ROUGH CARPENTRY, AND MISCELLANEOUS CARPENTRY WORK SHALL BE GOVERNED BY THE INTERNATIONAL BUILDING CODE REQUIREMENTS. ALL SUCH WORK SHALL COMPLY WITH CONSTRUCTION, CONNECTION, AND GENERAL REQUIREMENTS OF CHAPTER 23 OF THE CODE. IT SHALL BE A REQUIREMENT OF THIS CONTRACT THAT THE GENERAL CONTRACTOR / PROJECT MANAGER PROVIDE A COPY OF THIS CHAPTER TO ALL PERTINENT PARTIES.

3. THE GENERAL CONTRACTOR / PROJECT MANAGER AND FRAMING SUB-CONTRACTOR ARE RESPONSIBLE FOR INSTALLING THE CORRECT NAIL SIZE AS SPECIFIED ON THE CONTRACT DOCUMENTS AND/OR ON APPROVED TRUSS SHOP DRAWINGS. COMMON NAIL SIZES ARE AS FOLLOWS AND SHOULD BE CONSIDERED AS MINIMUMS.

DESIGNATION	DIAMETER	LENGTH
8D	0.131"	3"
10D	0.148"	3"
12D	0.148"	3 1/4"
16D	0.162"	3 1/2"

4. THE GENERAL CONTRACTOR / PROJECT MANAGER AND FRAMING SUB-CONTRACTOR ARE RESPONSIBLE FOR VERIFYING THE APPROPRIATE NAIL SIZE WHEN USING NAIL GUNS. FAILURE TO USE CORRECT NAIL SIZES, AS STATED ABOVE, MAY RESULT IN THE REMOVAL OF ALL CONSTRUCTION TO DATE AND RECONSTRUCTING AT FRAMING CONTRACTOR'S EXPENSE.

5. THE USE OF NAIL GUNS FOR JOIST HANGERS IS LIMITED PER MANUFACTURER'S RECOMMENDATIONS.

6. DRIVING NAILS INTO EXISTING HOLES IS NOT ACCEPTABLE UNLESS THE ORIGINAL NAIL SIZE IS 75% OF THE DIAMETER OF THE NEW NAIL.

7. HOLES DRILLED IN EXTERIOR WALLS, SHEAR WALLS, AND INTERIOR LOAD BEARING WALLS FOR WIRING AND/OR PLUMBING SHALL BE CENTERED. NO OTHER HOLES OR NOTCHES ARE PERMITTED. ALLOWED HOLE SIZES ARE AS FOLLOWS:

STUD OR PLATE SIZE	MAXIMUM HOLE DIAMETER
2x4	3"
2x6	3 1/4"

8. HOLES DRILLED IN NON-LOAD BEARING INTERIOR WALL STUDS FOR WIRING AND/OR PLUMBING SHALL BE CENTERED. NO OTHER HOLES OR NOTCHES ARE PERMITTED. ALLOWED HOLE SIZES ARE AS FOLLOWS:

STUD OR PLATE SIZE	MAXIMUM HOLE DIAMETER
2x4	1"
2x6	1 1/2"

9. HOLES OR NOTCHES IN JOISTS AND RAFTERS ARE NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. CONTRACTOR SHALL PROVIDE PROPOSED HOLE OR NOTCH SIZES AND LOCATIONS FOR REVIEW.

10. MULTIPLE LAMINATIONS (TRIPLE 2x MAXIMUM) SHALL BE NAILED TOGETHER WITH 2 ROWS OF 1.62x3 1/2" NAILS EACH FACE FOR THREE PLY

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**STRAIGHT DOWEL DEVELOPMENT LENGTHS (INCHES)**  
Fy = 60,000 PSI

BAR SIZE	TENSION												COMPRESSION		
	OTHER BARS						TOP BARS						3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI-10,000 PSI CONCRETE
	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE	7000 PSI CONCRETE	8000 PSI CONCRETE	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE	7000 PSI CONCRETE	8000 PSI CONCRETE			
#3	17	15	13	12	12	12	22	19	17	16	14	14	9	8	8
#4	22	19	17	16	15	14	29	25	23	21	19	18	11	10	9
#5	28	24	22	20	18	17	36	31	28	26	24	22	14	12	12
#6	33	29	26	24	22	21	43	37	34	31	28	27	17	15	14
#7	48	42	38	34	32	30	63	54	49	45	41	39	20	17	16
#8	55	48	43	39	36	34	72	62	56	51	47	44	22	19	18
#9	62	54	48	44	41	38	81	70	63	57	53	50	25	22	21
#10	70	61	54	50	46	43	91	79	71	64	60	56	28	25	23
#11	78	67	60	55	51	48	101	87	78	71	66	62	31	27	26
#14	93	81	72	66	61	57	121	105	94	86	79	74	38	33	31
#18	124	108	96	88	81	76	161	140	125	114	106	99	50	43	41

NOTES:  
1. TOP BARS ARE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.  
2. DEVELOPMENT LENGTHS IN TENSION ARE BASED ON THE FOLLOWING. NOTIFY ENGINEER IF ONE OF THE FOLLOWING CRITERIA IS NOT MET:  
A. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED IS NOT LESS THAN THE BAR DIAMETER, CLEAR COVER NOT LESS THAN THE BAR DIAMETER, AND STIRRUPS OR TIES THROUGHOUT THE DEVELOPMENT LENGTH NOT LESS THAN THE CODE MINIMUM, OR  
B. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2 TIMES THE BAR DIAMETER AND CLEAR COVER NOT LESS THAN THE BAR DIAMETER.

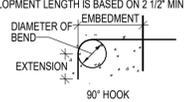
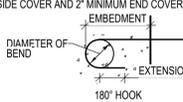
**LAP SPlice LENGTHS (INCHES)**  
Fy = 60,000 PSI

BAR SIZE	TENSION (CLASS B SPLICE)												3000 PSI-10,000 PSI CONCRETE
	OTHER BARS						TOP BARS						
	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE	7000 PSI CONCRETE	8000 PSI CONCRETE	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE	7000 PSI CONCRETE	8000 PSI CONCRETE	
#3	23	20	17	16	15	15	29	25	23	21	19	19	12
#4	29	25	23	21	20	19	38	33	30	28	25	24	15
#5	37	32	29	26	24	23	47	41	37	34	32	29	19
#6	43	38	34	32	29	28	56	49	45	41	37	36	23
#7	63	55	50	45	42	39	82	71	64	59	54	51	27
#8	72	63	56	51	47	45	94	81	73	67	62	58	30
#9	81	71	63	58	54	50	106	91	82	75	69	65	34
#10	91	80	71	65	60	56	119	103	93	84	78	73	39
#11	102	88	78	72	67	63	132	114	102	93	86	81	43
#14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	51
#18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68

NOTES:  
1. TOP BARS ARE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.  
2. DEVELOPMENT LENGTHS IN TENSION ARE BASED ON THE FOLLOWING. NOTIFY ENGINEER IF ONE OF THE FOLLOWING CRITERIA IS NOT MET:  
A. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED IS NOT LESS THAN THE BAR DIAMETER, CLEAR COVER NOT LESS THAN THE BAR DIAMETER, AND STIRRUPS OR TIES THROUGHOUT THE DEVELOPMENT LENGTH NOT LESS THAN THE CODE MINIMUM, OR  
B. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2 TIMES THE BAR DIAMETER AND CLEAR COVER NOT LESS THAN THE BAR DIAMETER.

**HOOKED DOWEL DEVELOPMENT LENGTHS IN TENSION (INCHES)**  
Fy = 60,000 PSI

BAR SIZE	EMBEDMENT						EXTENSION		MINIMUM BEND DIAMETER (IN.)
	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE	7000 PSI CONCRETE	8000 PSI CONCRETE	90° HOOK	180° HOOK	
#3	6	6	6	6	6	6	5	3	3
#4	8	7	6	6	6	6	6	3	4
#5	10	8	7	7	6	6	8	3	5
#6	12	10	9	8	8	7	9	3	6
#7	13	12	10	9	9	8	11	4	7
#8	15	13	12	11	10	9	12	4	8
#9	17	15	13	12	11	11	14	5	12
#10	19	17	15	14	13	12	16	6	13
#11	22	19	17	15	14	13	17	6	15

NOTES:  
1. DEVELOPMENT LENGTH IS BASED ON 2 1/2" MINIMUM SIDE COVER AND 2" MINIMUM END COVER.  



**SUSPENDED CEILING SYSTEMS**

CBC TABLE 1705A.12.5

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS, CEILINGS AND INTERIOR AND EXTERIOR VENEER IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E, OR F.	-	X

**WOOD CONSTRUCTION**

IBC TABLE 1705.5

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. HIGH-LOAD DIAPHRAGMS (NAIL SPACING LESS THAN 6" O.C. AT EDGES):		
A. VERIFY STRUCTURAL PANEL SHEATHING GRADE AND THICKNESSES COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
B. VERIFY THE NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
C. VERIFY THE NAIL DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS AGREE WITH THE APPROVED CONSTRUCTION DOCUMENTS.	-	X
2. METAL-PLATE-CONNECTED WOOD TRUSSES:		
A. VERIFY THE INSTALLATION OF THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.	-	X
B. VERIFY DURING CONSTRUCTION THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING IS INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.	-	X
3. ATTACHMENT OF BRICK SHELF ANGLE TO WOOD:		
A. VERIFY SIZE AND SPACING OF SCREWS.	X	-
B. VERIFY CENTERLINE OF SCREWS INTO STUDS ARE AT CENTERLINE OF 1 WIDTH OF STUD.	X	-
4. SHEAR WALL CONSTRUCTION		
A. VERIFY STRUCTURAL PANELS GRADE & THICKNESS. COMPLY W/ THE APPROVED CONSTRUCTION.	X	-
B. VERIFY THE NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS.		X
C. VERIFY THE NAIL DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS AGREE WITH THE APPROVED CONSTRUCTION DOCUMENTS.		X
D. VERIFY SILL PLATE ANCHORAGE CONNECTIONS @ EA. FLOOR COMPLY W/ APPROVED CONSTRUCTION DOCUMENTS.		X
E. VERIFY HOLD-DOWN SIZE, POST & FASTENERS COMPLY W/ APPROVED CONSTRUCTION DOCUMENTS.		X
F. VERIFY STRAP SIZE, POST & FASTENERS COMPLY W/ APPROVED CONSTRUCTION DOCUMENTS.		X
5. HEADERS & JOIST FRAMING		
A. VERIFY STRUCTURAL HEADER & JOIST SIZES, GRADE, & SPACING COMPLY W/ APPROVED CONSTRUCTION DOCUMENTS.		X
B. VERIFY QUANTITY OF JACK & KING STUDS PER SCHEDULE COMPLY W/ APPROVED CONSTRUCTION DOCUMENTS.		X
B. VERIFY HANGER CONNECTIONS COMPLY W/ APPROVED CONSTRUCTION DOCUMENTS.		X

- BASIS FOR DESIGN:**
- BUILDING CODE: CALIFORNIA BUILDING CODE 2022 RISK CATEGORY II
  - DEAD LOADS  
A. TYPICAL ROOF .....10 PSF (ASSUMED)
  - LIVE LOADS  
A. ROOF (NO REDUCTION).....20 PSF
  - SNOW LOAD  
A. GROUND SNOW, Pg = 3 PSF  
B. FLAT ROOF SNOW LOAD, Pf = 3 PSF  
C. SLOPED ROOF SNOW LOAD, Ps = 3 PSF  
D. EXPOSURE FACTOR, Ce = 1.0  
E. IMPORTANCE FACTOR, Is = 1.0  
F. THERMAL FACTOR, Ct = 1.0  
G. RAIN ON SNOW = 5 PSF (FLAT ROOF)  
H. SNOW DRIFT (TO BE CONSIDERED IN ADDITION TO FLAT ROOF SNOW LOAD) = N/A
  - SEISMIC LOAD  
A. IMPORTANCE FACTOR, Ie = 1.0  
B. Ss = 1.180  
C. Si = 0.370  
D. SITE CLASS = D  
E. Sps = 0.910  
F. S01 = 0.610  
G. SEISMIC DESIGN CATEGORY = D  
H. BASIC SEISMIC FORCE RESISTING SYSTEM = N/A (NOT USED IN DESIGN)  
I. DESIGN BASE SHEAR = N/A  
J. RESPONSE MODIFICATION COEFFICIENT(S), R = N/A  
K. SEISMIC RESPONSE COEFFICIENT(S), Cs = N/A  
L. ANALYSIS PROCEDURE = NOT CONSIDERED (MODIFICATIONS DO NOT AFFECT EXISTING MEMBERS)
  - WIND LOAD  
A. BASIC WIND SPEED (3-SECOND GUST)  
a. ULTIMATE DESIGN WIND SPEED = 96 MPH  
b. SERVICE DESIGN WIND SPEED = 76 MPH  
B. RISK CATEGORY = 1  
C. EXPOSURE = "C"  
D. INTERNAL PRESSURE COEFFICIENT = ±0.18  
E. WIND DESIGN PRESSURES (COMPONENTS & CLADDING):  
A. ROOF  
1. CORNER = 7.4, -38.2 PSF  
2. EDGE = 7.4, -28.9 PSF  
3. INTERIOR = 7.4, -19.6 PSF  
B. WALL  
1. EDGE = 19.1, -24.1 PSF  
2. INTERIOR = 19.1, -21.0 PSF

**STATEMENT OF SPECIAL INSPECTIONS**

- SPECIAL INSPECTIONS ARE REQUIRED FOR THIS PRIMARY BUILDING FRAME / MAIN FORCE RESISTING SYSTEM PER THE LATEST EDITION OF THE IBC.
- REFER TO THE IBC FOR ADDITIONAL INFORMATION RELATED TO THESE TABLES.
- INSPECTIONS AND TESTING SHALL BE PROVIDED BY A QUALIFIED TESTING LABORATORY, RETAINED BY THE OWNER AND APPROVED BY THE ENGINEER OF RECORD.
- REPORTS SHALL INDICATE THAT WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECT, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE ENGINEER OF RECORD PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
- A LETTER OF SUBSTANTIAL COMPLETION SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT BY THE SPECIAL INSPECTOR PRIOR TO THE FINAL INSPECTION.

**SOILS**

IBC TABLE 1705.6

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

**CONCRETE CONSTRUCTION**

IBC TABLE 1705.3

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT.		
	-	X
2. REINFORCING BAR WELDING:		
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706.	-	X
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16".	-	X
C. INSPECT ALL OTHER WELDS.	X	-
3. INSPECT ANCHORS CAST IN CONCRETE.		
	-	X
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:		
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED	X	-
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	-	X
5. VERIFY USE OF REQUIRED DESIGN MIX.		
	-	X
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.		
	X	-
7. INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.		
	X	-
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		
	-	X
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		
	-	X



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5-05-23 PLAN CHECK  
7-31-23 PLAN CHECK  
RE-SUBMITTAL (ADD001)

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
23-0336

SHEET TITLE

**SCHEDULES,  
SPECIAL  
INSPECTIONS,  
& B.F.D.**

SHEET NO:

**S001**

# GENERAL PLAN NOTES

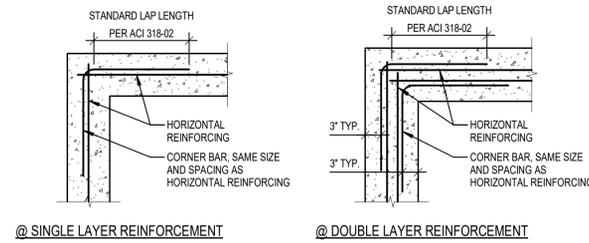
- SEE SHEET S000 FOR GENERAL NOTES. SEE SHEET S001 FOR SPECIAL INSPECTION TABLES, SCHEDULES, AND BASIS FOR DESIGN CRITERIA.
- TYPICAL SLAB-ON-GRADE SHALL BE 4" THICK REINFORCED W/ 6x6-W2.1xW2.1 WWR OVER 10-MIL VAPOR BARRIER. WWR SHALL BE SUPPORTED ON CHAIRS & LOCATED 1 1/2" FROM T/SLAB. PROVIDE (1) #4 BAR CONTINUOUS AT PERIMETER OF SLAB.
- PROVIDE (2) #4x4'-0" RE-ENTRANT CORNER BARS @ 4" THICK SLABS AND (2) #5x4'-0" RE-ENTRANT CORNER BARS @ 5" THICK OR THICKER SLABS, TYPICAL.
- CJ - CONTROL OR CONSTRUCTION JOINT IN FLOOR SLAB, SEE DETAILS ON TYPICAL DETAILS SHEETS FOR ADDITIONAL INFORMATION.
- SLOPE SLAB TO FLOOR DRAINS. REFER TO ARCH FOR LOCATIONS.
- REFER TO ARCHITECTURAL AND PLUMBING SHEETS FOR WATER-PROOFING, PERIMETER DRAINAGE AND STORM WATER DRAINAGE REQUIREMENTS.
- T/SLAB ELEVATION = 100'-0". U.N.O. REFERENCE THE FOUNDATION PLAN AND CIVIL FOR THE USGS ELEVATION.

PAD FOOTING SCHEDULE					
PAD FOOTING MARK	WIDTH	LENGTH	THICKNESS	REINFORCEMENT	REMARKS
F4	4'-0"	4'-0"	1'-0"	(8) #5 BARS, 1/2 EACH WAY, BOTTOM	
F4x8	4'-0"	8'-0"	1'-0"	(4) #5 BARS, LONG WAY, BOTTOM (8) #5 BARS, SHORT WAY, BOTTOM	

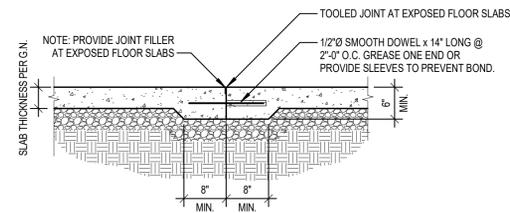
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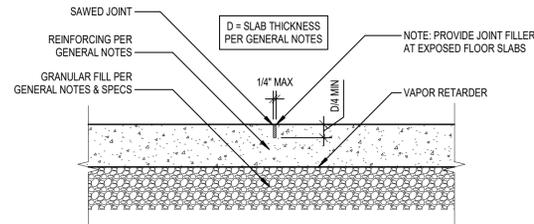
NOTE:  
SEE PAD FOOTING SCHEDULE FOR SIZES AND REINFORCEMENT.



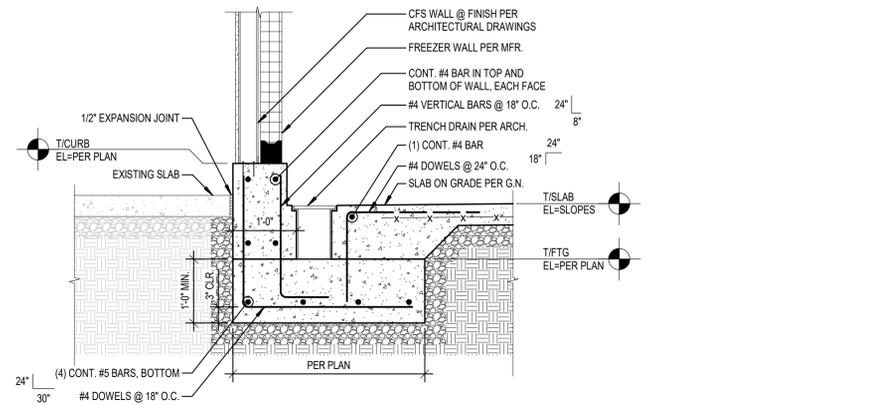
**H CORNER BARS (TYPICAL)**  
Scale: 3/4" = 1'-0"



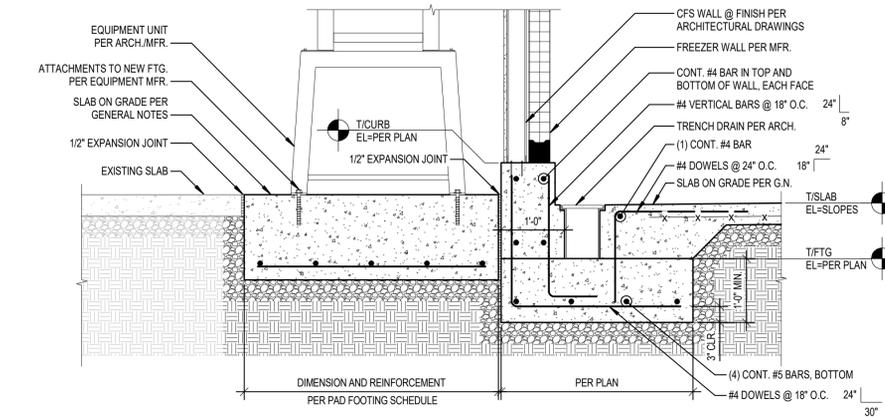
**G CONSTRUCTION JOINT (TYPICAL)**  
Scale: 3/4" = 1'-0"



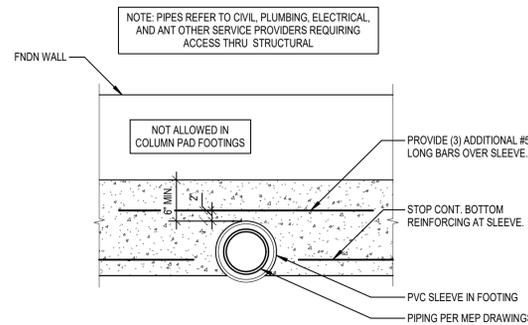
**F CONTROL JOINT (TYPICAL)**  
Scale: 1 1/2" = 1'-0"



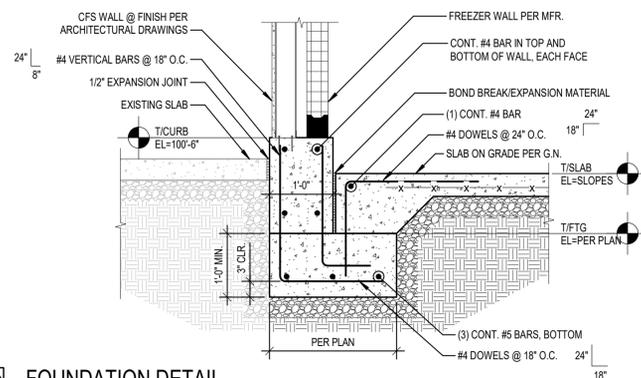
**C FOUNDATION DETAIL**  
Scale: 3/4" = 1'-0"



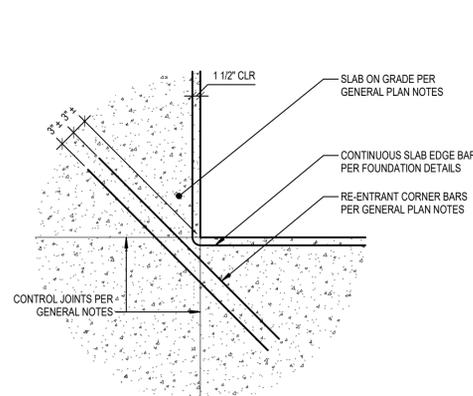
**B FOUNDATION DETAIL**  
Scale: 3/4" = 1'-0"



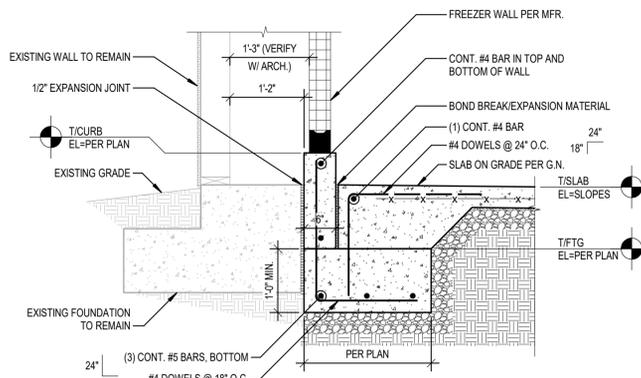
**K TYPICAL PIPE PENETRATION @ FOUNDATION**  
Scale: 3/4" = 1'-0"



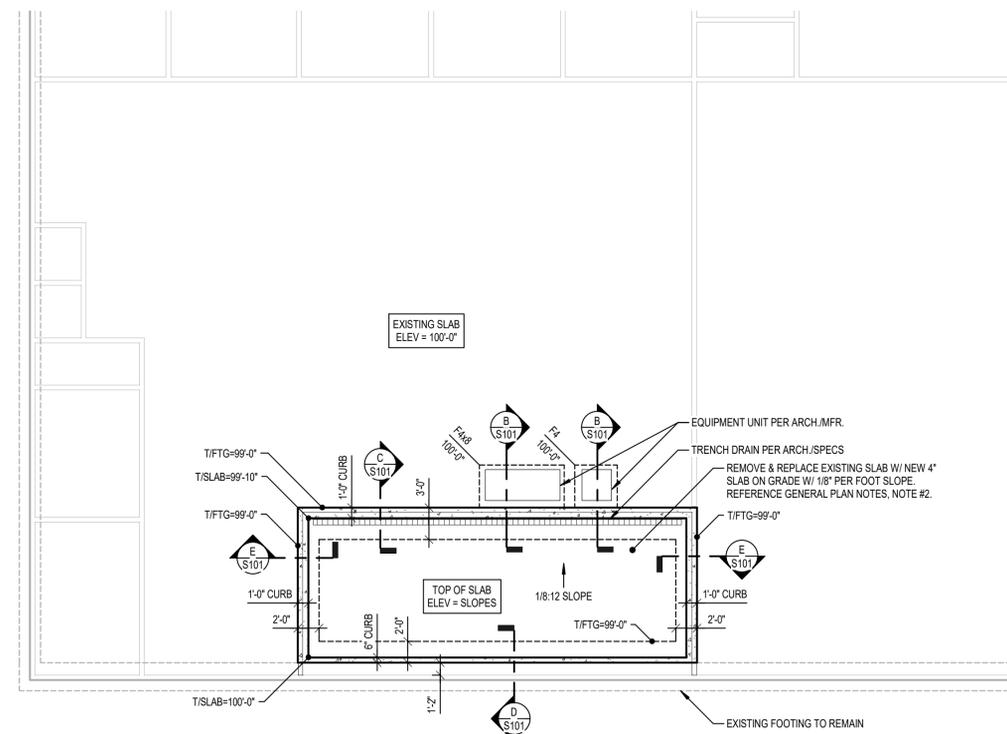
**E FOUNDATION DETAIL**  
Scale: 3/4" = 1'-0"



**J TYPICAL RE-ENTRANT CORNER BARS**  
Scale: 3/4" = 1'-0"



**D FOUNDATION DETAIL**  
Scale: 3/4" = 1'-0"



**A FOUNDATION PLAN**  
Scale: 1/8" = 1'-0"



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MAY 5, 2023

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
23-0336

SHEET TITLE

**FOUNDATION PLAN & TYPICAL DETAILS**

SHEET NO:

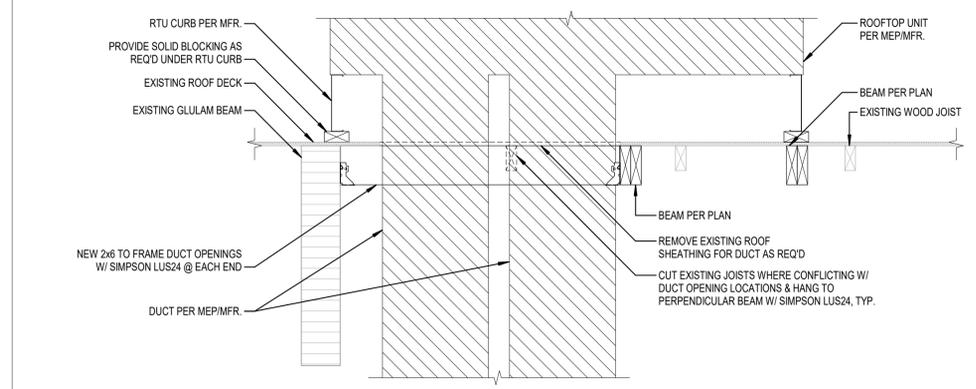
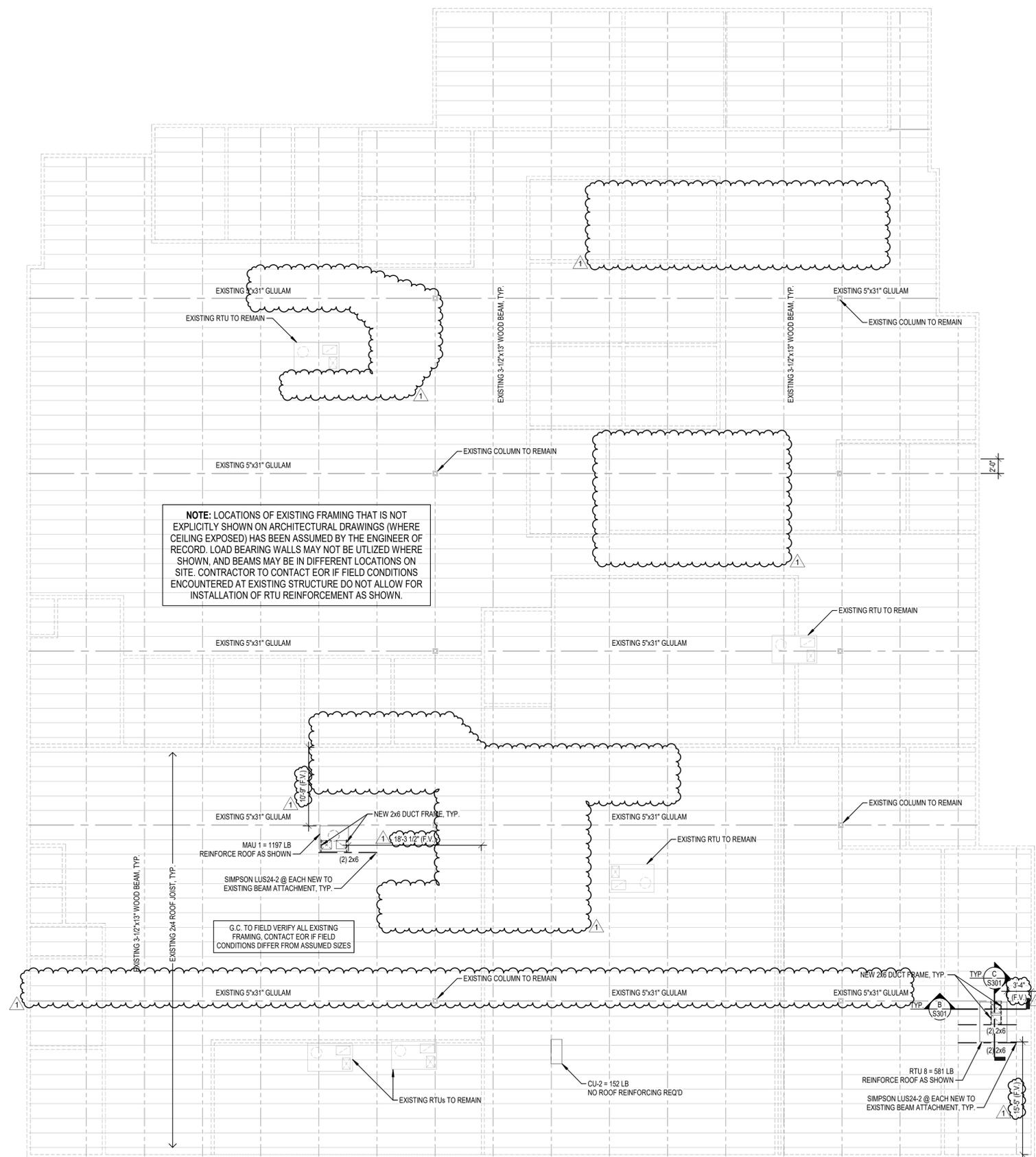
**S101**

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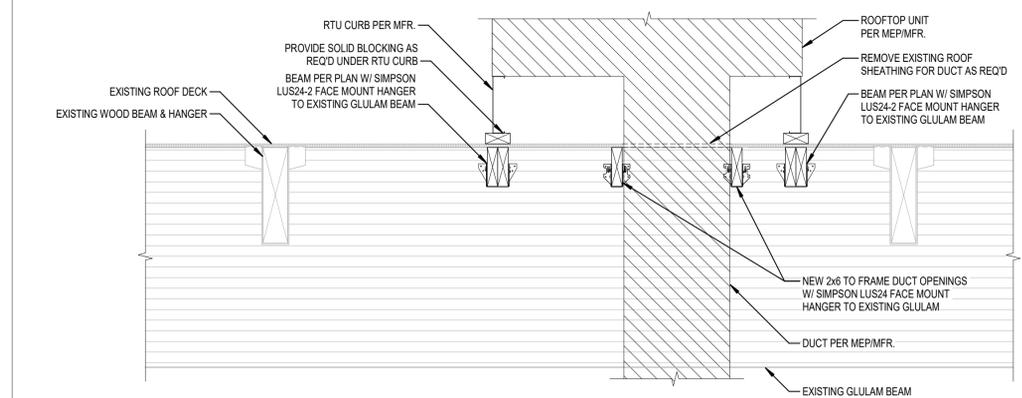
**GENERAL PLAN NOTES**

- 1 SEE SHEET S000 FOR GENERAL NOTES. SEE SHEET S001 FOR SPECIAL INSPECTION TABLES, SCHEDULES, AND BASIS FOR DESIGN CRITERIA.
- 2 NOT ALL MECHANICAL OPENINGS AND / OR PENETRATIONS MAY BE INDICATED. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 3 WOOD BEAMS AND HEADERS ARE DEFINED IN THE WOOD BEAM SCHEDULE. PROVIDE NUMBER OF STUDS SHOWN IN SCHEDULE AT EACH END IF STEEL COLUMN IS NOT PRESENT.
- 4 FLOOR/ROOF TRUSS BEARING ELEVATION = PER ARCHITECTURAL DRAWINGS.
- 5 MECHANICAL UNITS ARE NOT TO BE LOCATED OFF STRUCTURAL DRAWINGS. LOCATIONS OF ALL EXISTING FRAMING SHOWN IS ASSUMED BASED ON INFORMATION GIVEN IN DESIGN PHASE. GENERAL CONTRACTOR TO COORDINATE WITH ARCHITECT, MECHANICAL ENGINEER, AND EXISTING CONDITIONS TO CONFIRM LOCATIONS OF ROOFTOP UNITS SHOWN ON PLANS AND CONTACT EOR IF FIELD CONDITIONS DIFFER FROM SHOWN.

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**C FRAMING DETAIL**  
Scale: 1" = 1'-0"



**B FRAMING DETAIL**  
Scale: 1" = 1'-0"

**A ROOF FRAMING PLAN**  
Scale: 1/8" = 1'-0"



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5-05-23 PLAN CHECK  
7-31-23 PLAN CHECK  
RE-SUBMITTAL (ADD001)

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
23-0336

SHEET TITLE

**ROOF FRAMING PLAN**

SHEET NO:

**S301**

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## GREEN BUILDING CODE NOTES

- THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, RETURN AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992 SHALL BE USED. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION. (CAL GREEN SECTION: 5.504.1)
- AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM. (CAL GREEN SECTION: 5.504.3)
- IN MECHANICAL VENTILATED BUILDINGS, REGULARLY OCCUPIED AREAS OF THE BUILDING SHALL BE PROVIDED WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL. (CAL GREEN SECTION: 5.504.5.3). INSTALLED FILTERS SHALL BE CLEARLY LABELED BY THE MANUFACTURER INDICATING THE MERV RATING.
- EXCEPTION TO CAL GREEN SECTION: 5.504.5.3: 1- AN ASHRAE 10% TO 15-% EFFICIENCY FILTER SHALL BE PERMITTED FOR AN HVAC UNIT MEETING THE 2022 CALIFORNIA ENERGY CODE HAVING 60,000 BTU/H OR LESS CAPACITY PER FAN COIL, IF THE ENERGY USE OF THE AIR DELIVERY SYSTEM IS 0.4 W/CFM OR LESS AT DESIGN AIRFLOW. 2- EXISTING MECHANICAL SYSTEM.
- WHERE OUTDOOR AREAS ARE PROVIDED FOR SMOKING, PROHIBIT SMOKING WITHIN 25 FEET OF BUILDING ENTRIES, OUTDOOR AIR INTAKES AND OPERABLE WINDOWS AND WITHIN THE BUILDING AS ALREADY PROHIBITED BY OTHER LAWS OR REGULATIONS OR AS ENFORCED BY ORDINANCES, REGULATIONS, OR POLICIES OF ANY CITY, COUNTY, CITY AND COUNTRY, CALIFORNIA COMMUNITY COLLEGE, CAMPUS OF THE CALIFORNIA STATE STATE UNIVERSITY, OR CAMPUS OF THE UNIVERSITY OF CALIFORNIA, WHICHEVER ARE MORE STRINGENT. WHEN ORDINANCES, REGULATIONS, OR POLICIES ARE NOT IN PLACE, POST SIGNAGE TO INFORM BUILDING OCCUPANTS OF THE PROHIBITIONS. (CAL GREEN SECTION: 5.504.7)
- FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS SHALL MEET THE MINIMUM REQUIREMENTS OF SECTION 120.1 (REQUIREMENTS OF VENTILATION) OF THE 2022 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8. (CAL GREEN SECTION: 5.506.1)
- FOR BUILDINGS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2022 CALIFORNIA ENERGY CODE SECTION 120(C)(4). (CAL GREEN SECTIONS: 5.506.2)
- INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2. HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CHLOROFLUOROCARBONS (CFCs) AND SHALL NOT CONTAIN HALONS (SECTION: 5.508.1)
- IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS, THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS, OR ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS.
- PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTEES/WARRANTIES FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142, OTHER RELATED REGULATIONS, AND CGBSC 5.410.4.5
- SYSTEMS REQUIRING TESTING AND ADJUSTING: XXX. CONDUCT START-UP PROCEDURES FOR EACH PIECE OF EQUIPMENT PER THE MANUFACTURERS START-UP PROCEDURE AND COMPLETE THE MANUFACTURER'S TART-UP FORM FOR EACH ITEM. PERFORM BALANCING OF XXX IN ACCORDANCE WITH NEBB PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS (OR TABB OR AABC EQUIVALENT STANDARDS). AFTER COMPLETION OF TESTING, ADJUSTMENT, AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES IN ACCORDANCE WITH CGBSC 5.410.4.4
- INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY (SEC 5.401.4.5.1).

## DUCT INSULATION NOTES

- ALL DUCTWORK (INCLUDING FLEXTAILS AND FLEXIBLE DUCTWORK SHALL BE INSULATED CONSISTENT WITH 2022 CEC AND AS FOLLOWS:
- DUCTWORK EXPOSED WITHIN THE CONDITIONED SPACE (I.E. NO CEILING, EXPOSED TO STRUCTURE) - NO INSULATION REQUIRED
  - DUCTWORK INSTALLED ABOVE AN UNINSULATED CEILING AND BELOW AN INSULATED ROOF OR FLOOR ABOVE (AND WITH NO VENT OPENINGS TO THE EXTERIOR) - R-4.2
  - DUCTWORK INSTALLED EXPOSED TO WEATHER OR INSTALLED ABOVE AN INSULATED CEILING/BELOW AN UNINSULATED ROOF OR INSTALLED WHERE VENTS ALLOW OUTSIDE AIR TO REACH DUCT SURFACE - R-8.0.

## DIFFUSER AND REGISTER SCHEDULE

TAG	MANUFACTURER & MODEL	SERVICE	CFM RANGE	SIZE (NECK)	REMARKS
A	TITUS PCS	CEILING SUPPLY AIR	0-100	6"Ø	USE -NT BORDER WITH FINELINE GRID CEILING SYSTEMS (TYPICAL FOR ALL)
A	TITUS PCS	CEILING SUPPLY AIR	100-240	8"Ø	
A	TITUS PCS	CEILING SUPPLY AIR	240 - 400	10"Ø	
A	TITUS PCS	CEILING SUPPLY AIR	400 - 550	12"Ø	
A	TITUS PCS	CEILING SUPPLY AIR	550 - 740	14"Ø	
A	TITUS PCS	CEILING SUPPLY AIR	740 - 950	16"Ø	
B	TITUS PAR	CEILING RETURN AIR	0-100	6"Ø	USE -NT BORDER WITH FINELINE GRID CEILING SYSTEMS (TYPICAL FOR ALL)
B	TITUS PAR	CEILING RETURN AIR	100 -210	8"Ø	
B	TITUS PAR	CEILING RETURN AIR	210 - 330	10"Ø	
B	TITUS PAR	CEILING RETURN AIR	330 - 450	12"Ø	
B	TITUS PAR	CEILING RETURN AIR	450 - 650	14"Ø	
B	TITUS PAR	CEILING RETURN AIR	650 - 840	16"Ø	
C	TITUS PAR	CEILING SUPPLY AIR	< 900	16"Ø	SERVER ROOM SUPPLY ONLY
D	TITUS FL-20-1 SLOT	LINEAR SUPPLY AIR	90 CFM/LF	12"Ø	BORDER TYPE 22
E	EXISTING TO REMAIN	CEILING AIR DISTRIBUTION	-	-	
R	RELOCATED EXISITNG	CEILING AIR DISTRIBUTION	-	-	

NOTE: DIFFUSERS SHALL BE SIZED AT A MAX NC OF 30.  
 ANY DIFFUSERS LOCATED IN AREAS OF HIGH HUMIDITY SHALL BE OF ALUMINUM CONSTRUCTION. DIFFUSER FRAME SHALL MATCH CEILING GRID. SEE ARCHITECTURAL PLANS.  
 CONFERENCE ROOM RETURN DIFFUSERS SHALL HAVE SOUND BOOTS.  
 FOR TESTING AREAS PROVIDE RETURNS WITH FILTER CHANGE THRU FACE.

## MECHANICAL PLAN CHECK NOTES

- ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTION 110.2 & 120.2 OF THE STATE OF CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARD (E.E.S).
- ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED AND TESTED IN ACCORDANCE WITH THE STANDARDS ADOPTED BY SMACNA AND CHAPTER 6 OF THE 2022 C.M.C.
- ALL DUCTWORK AND PIPING SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 120.3, 120.4 AND 120.7 TITLE 24 ENERGY STANDARDS AND CHAPTER 6 OF THE CMC.
- DOORS AND WINDOWS SHALL MEET THE MINIMUM INFILTRATION REQUIREMENTS PER SECTION 110.6 AND 110.7 E.E.S.
- ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTIONS 110.1-110.3, 110.5 & 120.1-120.4 TITLE 24 ENERGY STANDARDS.
- INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY STANDARD PER SECTION 110.8 EES.
- ALL HVAC SYSTEMS SHALL MEET THE VENTILATION REQUIREMENTS PER SECTION 120.1 E.E.S. FOR AIR HANDLERS MOVING GREATER THAN 1800 CFM, PROVIDE AUTOMATIC DAMPERS INTERLOCKED & CLOSED ON FAN SHUT DOWN. ON GRAVITY VENTILATION EITHER AUTOMATIC OR ACCESSIBLE, MANUALLY OPERATED DAMPERS SHALL BE INSTALLED WITH AIR OPENINGS TO THE OUTSIDE, OTHER THAN COMBUSTION AIR OPENINGS.
- AREA SEPARATION WALLS:
  - WHERE NONMETALLIC PIPING PENETRATES AREA SEPARATION WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND THE FIXTURE CONNECTIONS THERETO SHALL BE OF METAL ONLY. FIRE STOPPING SHALL BE 2022 C.B.C., SECTION 4304 (E).
  - NO RANGE HOOD VENTS, DRYER VENTS, COMBUSTION VENTS, OR HEATING DUCTS ARE PERMITTED IN AREA SEPARATION WALLS.
  - PROVIDE SMOKE DETECTORS IN MAIN SUPPLY AIR DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2000 CFM PER SECTION 608.0 CMC.
- HVAC SYSTEMS SERVING A SPACE WITH OVER 2,000 CFM SHALL CONFORM TO CMC SECTION 608.1 - SHUTOFF FOR SMOKE CONTROL. REFERENCE "AIR MOVING SYSTEM" DEFINITION IN UMC SECTION 203.
- A WATER TIGHT PAN OF CORROSION RESISTANT MATERIAL SHALL BE PROVIDED BENEATH HVAC UNITS PER SECTION 309.2 CMC.
- ALL ENVELOPE AND MECHANICAL CERTIFICATE OF ACCEPTANCE FORMS AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.
- ROOF ACCESS LADDER SHALL COMPLY WITH SECTION 304 CMC.
- WATER HEATER (WH-1) IS A LISTED, NON-STORAGE, INSTANTANEOUS HEATER HAVING AN INSIDE DIAMETER OF NOT MORE THAN 3 INCHES.
- CALIFORNIA MECHANICAL CODE 2022 (CMC 2022), CALIFORNIA PLUMBING CODE 2022 (CPC 2022) AND 2022 TITLE 24 ENERGY STANDARDS ARE THE CURRENT CODES/STANDARDS THAT ARE APPLICABLE TO THIS PROJECT.
- EXHAUST DUCTS UNDER POSITIVE PRESSURE SHALL NOT EXTEND INTO OR THROUGH DUCTS OR PLENUMS PER SECTIONS 504.1 & 602.1 CMC.
- MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2 CMC."

## MECHANICAL GENERAL NOTES

- ALL BRANCH DUCTS TO HAVE BALANCE DAMPERS WITH QUADRANT LOCKS
- ALL DUCT SIZES SHOWN ARE NET INSIDE DIMENSIONS.
- FACTORY-MADE FLEXIBLE AIR DUCTS AND CONENCTORS SHALL NOT BE MORE THAN 5 FEET IN LENGTH PER SECTION 603.4.1 CMC. MINIMUM BEND RADIUS SHALL BE TWICE DUCT DIAMETER
- DUCTWORK SHALL BE SHEET METAL CONSTRUCTED IN COMPLETE CONFORMANCE WITH C.M.C. LATEST EDITION, SECTIONS 601 THROUGH 604 AND THE LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
- DUCT AND PLENUM INSULATION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA ENERGY COMMISSION (CEC) LATEST EDITION TABLE 2-53B, THE STATE MECHANICAL CODE PART 4, TITLE 24, CALIFORNIA ADMINISTRATIVE CODE AND THE LATEST EDITION OF THE CALIFORNIA MECHANICAL CODE (CMC) SECTION 605. SEE SPECIFICATIONS FOR MINIMUM THICKNESS AND TYPE. MATERIAL EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2 CMC.
- THERMOSTATS SHALL BE LOCATED AT 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- PROVIDE FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET OF ALL FANS.
- GENERAL CONTRACTOR SHALL UNDERCUT DOORS SHOWN 1" TO PROVIDE TRANSFER AIR FLOW.
- COORDINATE FINAL LOCATIONS OF AIR DISTRIBUTION WITH REFLECTED CEILING PLAN, I.E. LIGHTS, SPEAKERS, TILES, AND SPRINKLER HEADS.
- FIRE/SMOKE DAMPERS: REVIEW BOTH THE MECHANICAL AND ARCHITECTURAL PLANS FOR FIRE/SMOKE DAMPER REQUIREMENTS. FIRE/SMOKE DAMPERS SHALL BE INSTALLED AND BE READILY ACCESSIBLE FOR SERVICING IN THE LOCATIONS LISTED IN THE C.B.C., SECTION 713 AND SHALL BE IN ACCORDANCE WITH C.M.C., SECTION 606.
- FIRE/SMOKE DAMPER ASSEMBLIES, INCLUDING SLEEVES, AND INSTALLATION PROCEDURES SHALL BE APPROVED BY THE BUILDING INSPECTOR PRIOR TO INSTALLATION.

## SHEET INDEX

M001	MECHANICAL TITLE SHEET
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M003	MECHANICAL DETAILS
M004	MECHANICAL SPECIFICATIONS
M005	MECHANICAL SPECIFICATIONS
M006	MECHANICAL TITLE-24
M007	MECHANICAL TITLE-24
M008	MECHANICAL ZONING PLAN
M211	MECHANICAL FLOOR PLAN
M221	MECHANICAL ROOF PLAN

## MECHANICAL LEGEND

SYMBOL	ABBR.	DESCRIPTION
	C.D.	CEILING DIFFUSER - SUPPLY AIR
	R.G.	RETURN AIR GRILLE
	E.G.	EXHAUST AIR GRILLE
	S.A.	SUPPLY AIR DUCT
	R.A.	RETURN AIR DUCT
	E.A.	EXHAUST AIR DUCT
	-	DUCT WITH SOUND INSULATION
	FSD	FIRE SMOKE DAMPER
	M.V.D.	MANUAL VOLUME DAMPER
	-	FLEXIBLE DUCT CONNECTION
	-	CAPPED DUCT OR PIPE
	-	FLEXIBLE DUCT WORK
	-	EXISTING DUCT WORK
	-	DUCT WORK TRANSITION
	U.C.	UNDERCUT DOOR 1"
	-	THERMOSTAT & EQUIP. MASK NUMBER
	-	SMOKE DETECTOR
	O.A.	OUTSIDE AIR
	N.O.	NORMALLY OPEN
	N.C.	NORMALLY CLOSED
	C.A.	COMBUSTION AIR
	A.F.F.	ABOVE FINISHED FLOOR
	U.T.R.	UP THROUGH ROOF
	W/	WITH
	U.N.O.	UNLESS NOTED OTHERWISE
	-	PIPE TURNED UP
	-	PIPE TURNED DOWN
	C.W.S.	CONDENSER WATER SUPPLY
	C.W.R.	CONDENSER WATER RETURN
	G.V.	GATE VALVE
	B.V.	BALL VALVE
	C.V.	CONTROL VALVE
	P.R.V.	PRESSURE REDUCING VALVE
	P.&T.R.V.	PRESSURE & TEMPERATURE RELIEF VALVE
	CH.V.	CHECK VALVE
	RED.	REDUCER
	-	STRAINER
	-	UNION
	-	AIR VENT
	-	PRESSURE GAUGE
	-	THERMOMETER
	-	PIPE TEE
	-	PRESSURE & TEMPERATURE WELL
	P.O.C.	POINT OF CONNECTION
	E	EXISTING
	R	RELOCATED
EQUIPMENT TYPE		FC 3-1 FLOOR NUMBER - EQUIPMENT NUMBER

## TITLE - 24 NOTES

NO CHANGES TO EXISTING ENVELOPE. PREVIOUS ENVELOPE COMPLIANCE.

## MECHANICAL SCOPE OF WORK

SECOND GENERATION TENANT IMPROVEMENT PROJECT - NEW DUCT WORK, (1) NEW EXHAUST FANS, (1) SPLIT & (7) NEW ROOFTOP HEAT PUMPS



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APRIL 12, 2023

▲ JULY 31, 2023 CORRECTIONS

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**MECHANICAL  
TITLE  
SHEET**

SHEET NO:

**M001**

### DEDICATED OUTSIDE AIR SYSTEM (HEAT PUMP)

TAG	MANUFACTURER	MODEL	RETURN AIR CFM	SUPPLY AIR CFM	OUTSIDE AIR (DEG F DB)	OUTSIDE AIR (DEG F WB)	LEAVING AIR (DEG F DB)	LEAVING AIR (DEG F WB)	TOTAL COOLING CAPACITY (MBH)	SENS COOLING CAPACITY (MBH)	IEER	HOT GAS REHEAT CAPACITY (MBH)	LEAVING AIR (DEG F DB)	LEAVING AIR (DEG F WB)	SUPPLEMENTAL ELEC HEAT (KW)	TEMPERATURE RISE (DEG F)	ELECTRICAL				WEIGHT LBS	REMARKS
																	VOLTAGE	PHASE	MCA	MOCP		
MAU-1	CAPTIVEAIRE	CASRTU1-E.104-13-5T-DOAS	0	1,200	83	70	58.5	57.0	65.9	40.0	19.5	53	70.0	62.4	9	31	460	3	14.4	15	1180	1, 2

1. INVERTER SCROLL COMPRESSOR, DIRECT DRIVE PLENUM BLOWER, EC MOTOR CONDENSING FANS, ELECTRONIC EXPANSION VALVE, FULLY MODULATING HOT GAS REHEAT, ELECTRIC HEAT IS SECONDARY AND ONLY FUNCTIONS BELOW 42 DEG F. COIL COATING ON CONDENSER AND EVAPORATOR, 2" MERV 8 PREFILTERS, 2" MERV 13 FINAL FILTERS, DOWN DISCHARGE, ROOF CURB. CONTROL SHALL BE INTERLOCKED WITH EF-25. DISCHARGE TEMPERATURE SET TO 68 DEG F, 50% RH WHEN OUTSIDE AIR TEMPERATURE IS BELOW 65 DEG F AND DISCHARGE AIR SET TO 60 DEG F, 65 % RH WHEN OUTSIDE TEMPERATURE IS ABOVE 70 DEG, WITH A 5 DEG F DEAD BAND.
2. PROVIDE DUCT MOUNTED SMOKE DETECTOR FOR UNIT SHUTDOWN.

### NEW AIR COOLED AIR CONDITIONING UNIT SCHEDULE

TAG	LOCATION	CONDENSING UNIT								AIR HANDLING UNIT										REMARKS
		NOMINAL CAPACITY (BTU/HR) @ ARI CONDITION		ELECTRICAL			SEER	HSPF	MAKE MODEL	OPER. WT (LBS)	TAG	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. S.P. (IN W.G.)	ELECTRICAL			MAKE MODEL	OPER. WT (LBS)	
		COOLING	HEATING	MCA	V/P	MAX. FUSE (AMP.)									MCA	MAX. FUSE (AMP.)	V/P			
CU-2	ROOF	18,000	18,000	12.8	208/1	15	20.0	10.5	FUJITSU AOU18RLX	152	FC-2	600	15	0.12	1.22	15	208/1	FUJITSU ASU18	40	1
CU-3	ROOF	18,000	18,000	12.8	208/1	15	20.0	10.5	FUJITSU AOU18RLX	152	FC-3	600	0	0.12	1.22	15	208/1	FUJITSU ASU18RLF	40	1

1. NEW UNIT, DUCTLESS FAN COIL AND PROVIDE CONDENSATE DRAIN PUMP WITH 20 FT HEAD CAPACITY.
2. PROVIDE FAN COIL WITH OSA KNOCK OUT HOLE.

### ROOFTOP PACKAGE HEAT PUMP UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	CFM	OSA CFM	ESP	COOLING CAPACITY (MBH)	SEER	HEATING CAPACITY (MBH)	HSPF	ELECTRICAL			LBS	REMARKS
										V/P	MCA	MOCP		
RTU-8	CARRIER	50FCQA04A2A5	1200	275	0.5	36.0	14	60.0	8.2	460/3	10	15	581	2
RTU-10	CARRIER	50FCQA06A2A6	2000	271	0.5	60.0	14	60.0	8.2	460/3	13	20	698	2, 3, 4
RTU-12	CARRIER	50FCQA04A2A5	1200	90	0.5	36.0	14	36.0	8.2	460/3	10	15	581	2
RTU-13	(E) RHEEM	RJPL-A060	2000	E	E	60.0	E	E	E	460/3	13	20	E	1
RTU-14	CARRIER	50FCQM08A2A6	2800	645	0.5	89.0	14	85.0	8.2	460/3	19	20	969	2, 3, 4
RTU-16	(E) RHEEM	RJNL-A060	2000	E	E	60.0	E	E	E	208/3	26	40	E	1
RTU-17	(E) CARRIER	50TCQA05A	1600	E	E	48.0	E	E	E	460/3	11.2	15	E	1
RTU-18	CARRIER	50FCQA05A2A5	1600	160	0.5	48.0	14	48.0	8.2	460/3	11	15	587	2
RTU-19	CARRIER	50FCQM12A2A6	4000	549	0.5	125.0	14	116.0	8.2	460/3	28	30	1119	2, 3, 4
RTU-21	(E) CARRIER	50TCQA05A	1600	E	E	48.0	E	E	E	208/3	24	30	E	1
RTU-22	(E) CARRIER	50TCQA05A	1600	E	E	48.0	E	E	E	208/3	24	30	E	1

1. EXISTING UNIT TO REMAIN
2. REPLACE EXISTING HP NEW UNIT (SAME CAPACITY), PROVIDE NEW ROOF CURB, FILTER RACK, AND NEW THERMOSTAT. PROVIDE MERV-13 FILTERS.
3. PROVIDE ECONOMIZER WITH FAULT DETECTION DIAGNOSTIC. 2 STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR.
4. PROVIDE DUCT MOUNTED SMOKE DETECTOR FOR UNIT SHUTDOWN. PROVIDED BY MECHANICAL, POWERED BY ELECTRICIAN.

### NEW EXHAUST FAN SCHEDULE

TAG	MANUFACTURER & MODEL NO.	AREA SERVICED	CFM	ESP (IN. WG)	POWER	V	PH	WT (LB.)	CFM/SQ FT	REMARKS
EF-25	TWIN CITY BSV-150-SWSI	136	1200	1.0	1/2HP, 1800 RPM	115V	1	166	1.0	1

1. ROOF UTILITY SET EXHAUST FAN, AMCA B SPARK RESISTANT CONSTRUCTION, WITH BACKDRAFT DAMPER. TO BE INTERLOCKED WITH EXHAUST HOOD AND MAKE UP AIR UNIT MAU-1.



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APRIL 12, 2023

▲ JULY 31, 2023 CORRECTIONS

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**MECHANICAL SCHEDULES**

SHEET NO:

**M002**

**PLUM ENGINEERING INC.**  
www.plumengineering.com  
T 858-672-2100

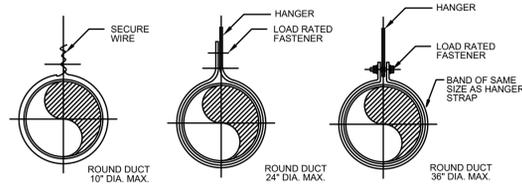
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**SEISMIC BRACING REQUIREMENTS:**  
 PROVIDE SEISMIC BRACING FOR DUCTS WITH A CROSS SECTIONAL AREA OF 6 SQ FT AND ALL DUCT RUNS SUPPORTED BY ANY ONE HANGER EXCEEDING 12" IN LENGTH (ASCE 7-16, SECTION 13.6.7).

**UPPER ATTACHMENT:**  
 FOR ATTACHMENT TO 3" PAN DECK WITH 2000 TO 4000 PSI CONCRETE WITH A MIN 3-1/4" THICKNESS, USE THE FOLLOWING UPPER ATTACHMENT: ROUND DUCT UP TO 28" Ø, ATTACH USING HILTI X-U (WASHER) WITH MINIMUM 1.5" EMBEDMENT IN UPPER FLUTE. RECTANGULAR DUCT UP TO P=120", ATTACH USING HILTI X-U (WASHER) WITH MINIMUM 1.5" EMBEDMENT IN UPPER FLUTE. FOLLOW HILTI INSTALLATION INSTRUCTIONS FOR POWDER DRIVEN FASTENERS.

**NOTE:**  
 PROVIDE SUPPORT AT BOTH SIDES OF EVERY TURN AND AS BELOW.

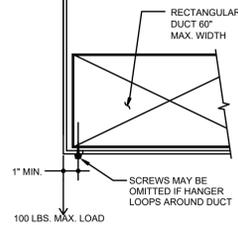


ROUND DUCT HANGERS MIN SIZE

DUCT DIA (IN)	MAXIMUM SPACING	WIRE DIA.	ROD	STRAP
10	12 FT	ONE 12 GA	1/4"	1" x 22 GA.
11 - 18	12 FT	TWO 12 GA OR ONE 8 GA	1/4"	1" x 22 GA.
19 - 24	12 FT	TWO 10 GA	1/4"	1" x 22 GA.
25 - 36	12 FT	TWO 8 GA	TWO 3/8"	1" x 20 GA.
37 - 50	12 FT	-	TWO 3/8"	TWO 1" x 20 GA
51 - 60	12 FT	-	TWO 3/8"	TWO 1" x 18 GA

FOR STANDARD WEIGHT AND GAUGE DUCT.

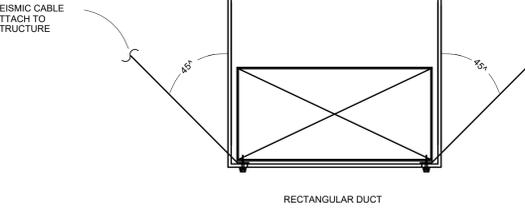
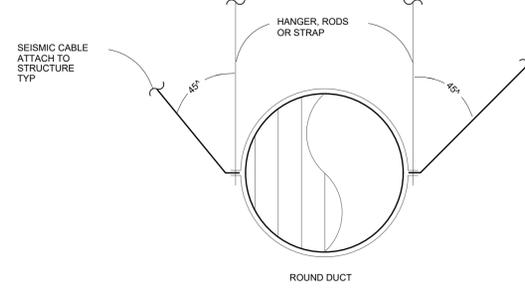
HANGER WIRE, STRAP, OR WIRE SIZE SHALL CONFORM TO UMC STANDARD 6-2, TABLE A6-2A



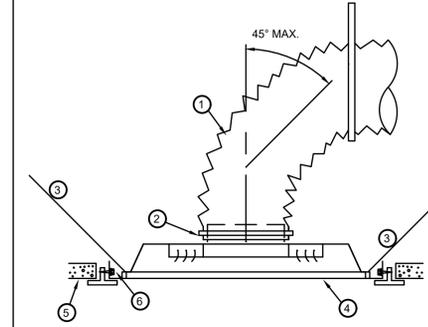
RECTANGULAR DUCT HANGERS MIN SIZE

MAXIMUM HALF OF DUCT PERIMETER	PAIR AT 10 FT. SPACING		PAIR AT 8 FT. SPACING		PAIR AT 5 FT. SPACING		PAIR AT 4 FT. SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2 = 30"	1" x 22 GA.	10 GA. (.135")	1" x 22 GA.	10 GA. (.135")	1" x 22 GA.	12 GA. (.106")	1" x 22 GA.	12 GA. (.106")
P/2 = 72"	1" x 18 GA.	3/8"	1" x 20 GA.	1/4"	1" x 22 GA.	1/4"	1" x 22 GA.	1/4"
P/2 = 96"	1" x 16 GA.	3/8"	1" x 18 GA.	3/8"	1" x 20 GA.	3/8"	1" x 22 GA.	1/4"
P/2 = 120"	1 1/2" x 16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 18 GA.	3/8"	1" x 20 GA.	1/4"
P/2 = 168"	1 1/2" x 16 GA.	1/2"	1 1/2" x 16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 18 GA.	3/8"
P/2 = 192"	NOT GIVEN	1/2"	1 1/2" x 16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 16 GA.	3/8"

WHEN STRAPS ARE LAP JOINED USE: 1" X 18, 20, 22 GA - TWO #10 OR ONE 1/4" BOLT 1" X 16 GA. - TWO 1/4" DIA., 1-1/2" X 16 GA. - TWO 3/8" DIA. PLACE FASTENERS IN SERIES FOR STANDARD WEIGHT AND GA DUCT.



- 1 FLEXIBLE DUCT, 5-FT MAX. LENGTH
- 2 CLAMP (NO DUCT TAPE)
- 3 12 GA CEILING WIRE (TYP/2)
- 4 DIFFUSER OR GRILLE
- 5 LAY-IN T-BAR CEILING
- 6 ATTACH DIFFUSER TO GRID USING (2) #10 SHEET METAL SCREWS.



DUCT SUPPORT DETAIL

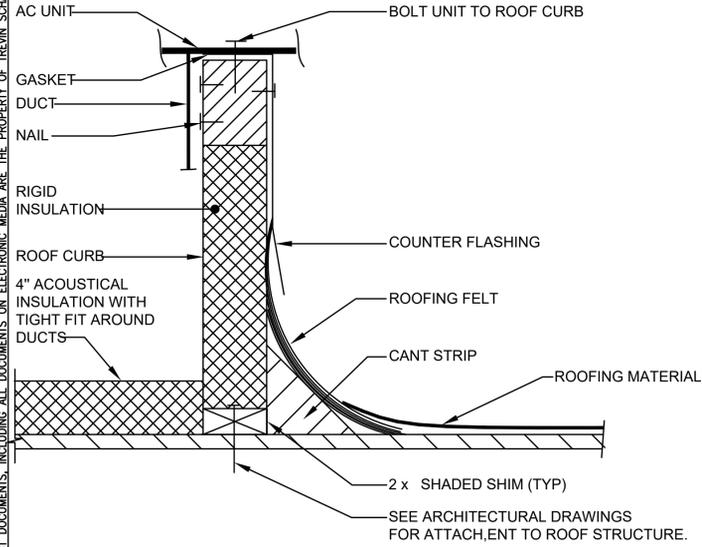
SCALE NONE

2

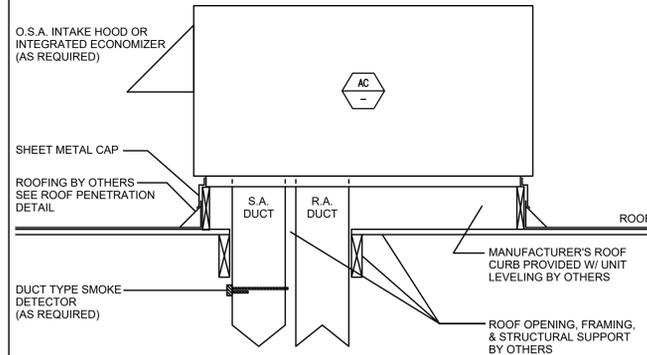
CEILING DIFFUSER DETAIL

SCALE NONE

1



- NOTES:**
1. ALL AC UNITS SHALL BE INSTALLED LEVEL.
  2. SEE ROOF & FLOOR PLANS FOR S.A. & R.A. DUCT CONFIGURATIONS.



A/C UNIT MOUNTING DETAIL

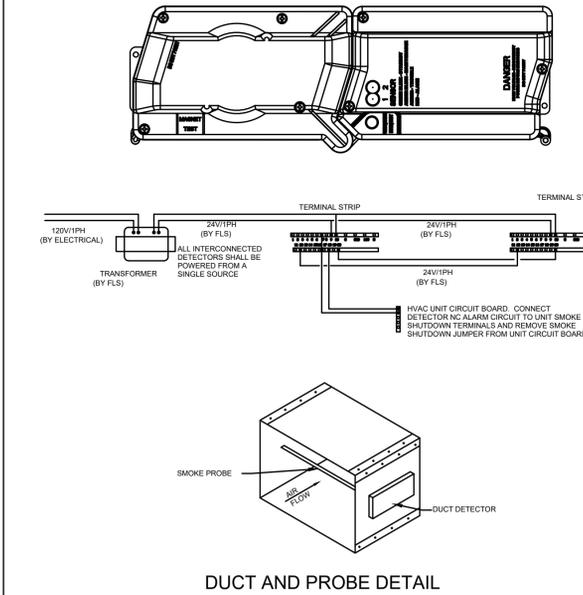
SCALE NONE

6

AC UNIT INSTALLATION

SCALE NONE

5

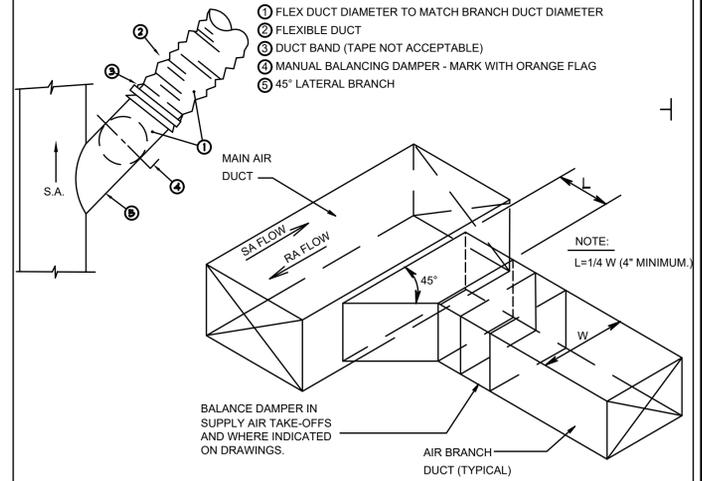


DUCT AND PROBE DETAIL

DUCT SMOKE DETECTOR

SCALE NONE

4



DUCT TAKEOFF DETAIL

SCALE NONE

3



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APRIL 12, 2023

JULY 31, 2023 CORRECTIONS

**ATLAS**  
 9085-B AERO DRIVE  
 SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
 2022170

SHEET TITLE  
**MECHANICAL DETAILS**

SHEET NO:

**M003**

**PLUM ENGINEERING INC.**  
 www.plumengineering.com  
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PART 1- GENERAL

A. CONDITIONS

1. GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, SPECIAL CONDITIONS AND OTHER RELATED PORTIONS OF DIVISION 1 APPLY TO THIS SECTION

B. SUMMARY OF WORK

1. THE WORK INCLUDED CONSISTS OF FURNISHING LABOR, MATERIALS AND EQUIPMENT FOR THE INSTALLATION. IT ALSO INCLUDES PLACING INTO OPERATION A COMPLETE AND OPERABLE HEATING, VENTILATING AND AIR CONDITIONING SYSTEM AS SPECIFIED AND SHOWN. THIS INCLUDES, BUT IS NOT LIMITED TO: HVAC UNITS, EXHAUST FANS, DUCTLESS SPLIT-SYSTEMS, DUCTWORK, AIR DISTRIBUTION, CONTROLS AND ACCESSORIES, EXCEPT AS OTHERWISE NOTED.

C. REGULATIONS, CODES, PERMITS AND INSPECTIONS

1. COMPLY WITH NATIONAL, STATE, COUNTY, AND CITY CODES, ORDINANCES, ETC., HAVING JURISDICTION. THIS INCLUDES RULES AND REQUIREMENTS OF UTILITY SERVING AGENCIES.

2. INCORPORATED CODES, ORDINANCES, ETC., INTO THE BASE BID AND INSTALLATION OF WORK. NO ADDITIONAL FUNDS WILL BE ALLOCATED FOR WORK REQUIRED TO CONFORM TO REGULATIONS AND REQUIREMENTS OR TO OBTAIN APPROVAL OF WORK.

3. OBTAIN AND PAY FOR REQUIRED PERMITS AND LICENSES. WHEN REQUIRED BY CODE, WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES. PRIOR TO FINAL APPROVAL, FURNISH ARCHITECT WITH CERTIFICATES OF INSPECTION AND APPROVALS BY LOCAL AUTHORITIES.

4. IN ADDITION, THE LATEST ADOPTED EDITION OF THE FOLLOWING CODES AND PUBLISHED STANDARDS SHALL BE ADHERED TO:

- A. 2022 CALIFORNIA BUILDING CODE (CBC)
B. 2022 CALIFORNIA MECHANICAL CODE (CMC)
C. NFPA STANDARDS
D. ASHRAE HANDBOOKS
E. SMACNA DUCT CONSTRUCTION STANDARDS
F. 2022 CALIFORNIA PLUMBING CODE (CPC)
G. 2022 CALIFORNIA ELECTRIC CODE (CEC)
H. 2022 CAL GREEN
I. 2022 CALIFORNIA ENERGY CODE

D. DESIGN DRAWINGS

1. DESIGN DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED ONLY TO DEFINE THE BASIC FUNCTIONS REQUIRED. PROVIDE LABOR, MATERIAL, ETC., NECESSARY TO ACCOMPLISH THESE REQUIREMENTS. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED A PART OF THE WORK INCLUDED. NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE PERMITTED. DO NOT SCALE THE DESIGN DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

2. IF A CONFLICT OCCURS BETWEEN THE DESIGN DRAWINGS AND SPECIFICATIONS, PROMPTLY NOTIFY THE ARCHITECT AND/OR ENGINEER. AT THAT POINT, AND INTERPRETATION WILL BE MADE BY THE ARCHITECT AND/OR ENGINEER AND SAID DECISION SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.

E. QUALIFICATIONS OF CONTRACTOR AND WORKMEN

1. CONTRACTOR SHALL BE PROPERLY LICENSED TO PERFORM THE WORK.

2. USE SUFFICIENT JOURNRYMEN, CRAFTSMEN AND SUPERVISORS TO ENSURE PROMPT, PROPER AND SAFE EXECUTION.

F. BASE BID

1. BASE BID SHALL INCLUDE MATERIALS AND EQUIPMENT SPECIFIED OR SCHEDULED ON THE DRAWINGS. REQUESTS FOR SUBSTITUTION OF MATERIALS AND EQUIPMENT SHALL BE BY ADDITIVE OR DEDUCTIVE ALTERNATE BID ONLY. THE FOLLOWING DATA MUST BE CLEARLY WRITTEN AT THE BEGINNING OF THE ALTERNATE FOLLOWAL:

- A. ADDITIVE OR DEDUCTIVE AMOUNT CLEARLY WRITTEN IN WORDS AND NUMERALS.
B. INCREASED OR REDUCED CONSTRUCTION TIME IN DAYS.
C. OTHER DEMONSTRABLE BENEFIT, FOR WHICH THE SUBSTITUTION OF SUCH ITEM WILL BE IN THE OWNER'S INTEREST.

2. ONLY THOSE MATERIALS AND EQUIPMENT WHICH ARE SUBMITTED AS AN ALTERNATE BID, WHICH ARE ACCOMPANIED BY THE SUPPORTING DATA INDICATED BELOW WILL BE REVIEWED AND CONSIDERED.

G. SUBSTITUTIONS

1. MATERIALS AND EQUIPMENT THAT ARE A SUBSTITUTE FROM THE LISTED MANUFACTURER MAY BE CONSIDERED. PRIOR TO PROPOSING ANY SUBSTITUTE ITEM, CONTRACTOR SHALL SATISFY HIMSELF THAT THE ITEM PROPOSED IS, IN FACT, EQUAL TO THAT SPECIFIED, THAT SUCH ITEM WILL FIT INTO THE SPACE ALLOCATED, THAT SUCH ITEM AFFORDS COMPARABLE EASE FOR OPERATION, MAINTENANCE AND SERVE, THAT THE APPEARANCE, LONGEVITY, CAPACITY, SUITABILITY, AND ELECTRICAL CHARACTERISTICS ARE COMPARABLE, THAT BY REASON OF COST SAVINGS, REDUCED CONSTRUCTION TIME, OR SIMILAR DEMONSTRABLE BENEFIT, THE SUBSTITUTION OF SUCH ITEM WILL BE IN THE OWNER'S INTERESTS.

2. THE BURDEN OF PROOF OF EQUALITY OF A PROPOSED SUBSTITUTION FOR A SPECIFIED ITEM SHALL BE UPON THE CONTRACTOR. CONTRACTOR SHALL SUPPORT HIS REQUEST WITH SUFFICIENT TEST DATA AND OTHER MEANS TO PERMIT THE ENGINEER TO MAKE A FAIR AND EQUITABLE DECISION ON THE MERITS OF THE PROPOSED SUBSTITUTION. INSUFFICIENT SUBMITTAL DATA WILL RESULT IN REJECTION OF THE PROPOSED SUBSTITUTION. ANY ITEM BY A MANUFACTURER OTHER THAN THOSE SPECIFIED, OR OF BRAND NAME, MODEL NUMBER, OR OF GENERIC SPECIES OTHER THAN THOSE SPECIFIED, WILL BE CONSIDERED A SUBSTITUTION. ENGINEER WILL BE THE SOLE JUDGE OF WHETHER OR NOT THE SUBSTITUTION IS EQUAL IN QUALITY, UTILITY AND ECONOMY TO THAT SPECIFIED.

3. APPROVAL OF A SUBSTITUTION SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE CONTRACT. CONTRACTOR SHALL BEAR THE EXPENSE FOR ANY CHANGES IN OTHER PARTS OF THIS WORK OR OTHER WORK CAUSED BY THE PROPOSED SUBSTITUTION, INCLUDING BUT NOT LIMITED TO STRUCTURAL, ELECTRICAL, PLUMBING, AND ACCESS REQUIREMENTS.

4. IF ENGINEER REJECTS CONTRACTOR'S SUBSTITUTE ITEM ON THE FIRST SUBMITTAL, CONTRACTOR MAY MAKE ONLY ONE ADDITION REQUEST FOR SUBSTITUTION IN THE SAME

CATEGORY.

5. ANY EQUIPMENT SUBSTITUTED WITHOUT THE ENGINEER'S WRITTEN APPROVAL WILL BE REMOVED AND REPLACED WITH THE SPECIFIED EQUIPMENT AT THE CONTRACTOR'S EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER.

H. SUBMITTALS

1. EQUIPMENT AND MATERIALS:

A. CONTRACTOR SHALL HAVE APPROVED SUBMITTALS PRIOR TO FABRICATION OR DELIVERY OF ANY MATERIAL AND/OR EQUIPMENT TO THE JOB SITE. SUBMIT A MINIMUM OF 8 (EIGHT) COPIES, COMPREHENSIVELY INDEXED SUBMITTALS IN A 3-RING BINDER, COMPLETELY DESCRIBING EACH MAJOR SYSTEM, MATERIAL AND EQUIPMENT PROPOSED TO BE USED. ANY PIECE OF EQUIPMENT PLACED ON THE JOB WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL AT THE SOLE EXPENSE OF THE CONTRACTOR.

B. SUBMITTALS ARE FOR INFORMATION AND COORDINATION ONLY. REVIEW OF MATERIAL AND/OR EQUIPMENT SUBMITTALS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH PLANS AND SPECIFICATIONS REQUIREMENTS. POINTS OF NON-COMPLIANCE WHICH ARE NOT NOTED SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF THE NON-COMPLIANCE. SUBMITTALS SHALL CLEARLY STATE WHERE EQUIPMENT DOES NOT AGREE WITH THE CONTRACT DOCUMENTS.

C. SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, PHYSICAL DIMENSIONS, WEIGHTS AND RATINGS OF EQUIPMENT SUBMITTED. INDICATE EQUIPMENT LAYOUTS, ELECTRICAL CHARACTERISTICS, WIRING AND CONTROL DIAGRAMS, SIZES AND LOCATIONS OF PIPING, DUCT, CONDUITS, AND OTHER CONNECTION SIZES AND LOCATIONS.

2. SHOP DRAWINGS:

CONTRACTOR SHALL PREPARE AND SUBMIT DETAILED 1/4"=1'-0" SCALE DRAWINGS THAT HAVE BEEN PROPERLY COORDINATED WITH OTHER TRADES. INDICATE EQUIPMENT LAYOUTS, ELECTRICAL CHARACTERISTICS, WIRING AND CONTROL DIAGRAMS, SIZES AND LOCATION OF PIPING, DUCTS, CONDUITS, AND OTHER ITEMS WHICH EFFECT THE SPACE AVAILABLE. SUBMIT ITEMS AT ONE TIME IN A NEAT AND ORDERLY MANNER WITHIN 15 DAYS OF AWARD OF CONTRACT. PARTIAL LIST WILL NOT BE ACCEPTABLE. SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, PHYSICAL DIMENSIONS, WEIGHTS AND RATINGS OF EQUIPMENT SUBMITTED. SUBMITTALS SHALL BE INDEXED AND SECURELY BOUND IN A SUITABLE MANNER. SUBMIT THE FOLLOWING ITEMS FOR APPROVAL: 1) CLEANOUTS 2) PIPING AND FITTINGS 3) VALVES

3. AS BUILT DRAWINGS:

MAINTAIN ACCURATE RECORDS OF ANY CHANGES FROM THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. UPON COMPLETION OF THE PROJECT, DELIVER TO THE ENGINEER 1 (ONE) SET OF LEGIBLE REPRODUCIBLES AND 3 (THREE) BLUELINE SETS OF THESE RECORD DRAWINGS.

4. WARRANTY:

UNLESS SPECIFIED OTHERWISE BY ARCHITECT, ENGINEER, OWNER OR OWNER'S REPRESENTATIVE, UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER A WRITTEN 1 (ONE) YEAR WARRANTY ON THE SYSTEMS, MATERIALS AND ALL WORK PERFORMED. THIS INCLUDES THE ENTIRE COST, INCLUDING MATERIALS AND/OR LABOR, OF CORRECTIVE WORK REQUIRED AND NECESSITATED BY DEFECTS IN MATERIALS AND/OR WORKMANSHIP. CONTRACTOR SHALL ALSO PRESENT THE OWNER WITH A COPY OF ALL MANUFACTURER'S WARRANTIES THAT EXCEED THE WARRANTY PERIOD, SUCH AS AC UNIT COMPRESSORS.

5. OPERATION AND MAINTENANCE INSTRUCTIONS:

UPON THE COMPLETION OF THE PROJECT, DELIVER TO THE OWNER THE REQUIRED NUMBER OF COPIES OF HARD BOUND O & W MANUALS. INCLUDE IN THE MANUAL INSTRUCTIONS PREPARED SPECIFICALLY FOR THE SYSTEMS PROVIDED, ALONG WITH DESCRIPTIONS, PARTS LIST, INSTRUCTIONS, AND WARRANTIES. START-UP REPORTS FOR ALL EQUIPMENT WILL BE DELIVERED WITH THE MATERIALS AND EQUIPMENT UTILIZED IN THE PROJECT IDENTIFY EACH ITEM BY THE DESIGNATION APPEARING ON THE DRAWINGS.

6. OWNER TRAINING:

AT A TIME DESIGNATED BY THE OWNER, PROVIDE A SUITABLE TECHNICIAN, MECHANIC OR ENGINEER TO REVIEW THE SYSTEMS WITH OWNER'S REPRESENTATIVE TO THOROUGHLY FAMILIARIZE HIM WITH THE OPERATIONS AND MAINTENANCE OF THE SYSTEMS. UP TO 8 (EIGHT) HOURS TOTAL TRAINING TIME SHALL BE REQUIRED WITHOUT ADDITIONAL COST TO THE OWNER. PRIOR TO TRAINING THE OWNER SHALL HAVE TAKEN POSSESSION OF THE O & M MANUALS, AND SHALL HAVE HAD A REASONABLE AMOUNT OF TIME FOR THE PERSONNEL TO FAMILIARIZE THEMSELVES WITH THE CONTENTS OF THE MANUALS.

PART II - PRODUCTS

A. GENERAL PRODUCTS

1. SEISMIC RESTRAINTS:

- A. WHERE REQUIRED BY THE BUILDING OFFICIALS/BUILDING CODES, FURNISH AND INSTALL SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, AND EQUIPMENT. SEISMIC RESTRAINTS SHALL BE DESIGNED TO RESIST SEISMIC FORCES PRESCRIBED IN THE BUILDING CODES FOR THE PROJECT LOCATION.
B. WHERE REQUIRED BY THE BUILDING OFFICIAL, PROVIDE STRUCTURAL CALCULATIONS SEALED AND SIGNED BY A LICENSED STRUCTURAL ENGINEER.
C. REFERENCE THE LATEST EDITION OF THE SMACNA SEISMIC RESTRAINT MANUAL FOR GUIDELINES.

2. FURNISH AND INSTALL NEW PRODUCTS OF ESTABLISHED AND REPUTABLE MANUFACTURERS. SEE LIST OF ACCEPTABLE MANUFACTURERS ELSEWHERE IN THESE SPECIFICATIONS. MAKE NO EQUIPMENT SUBSTITUTIONS THAT WOULD LEAVE INADEQUATE OPERATING OR SERVICING SPACE. REFER TO "SUBSTITUTIONS" SECTION OF THE SPECIFICATION.

3. ACCESSORIES REQUIRED FOR PROPER OPERATION OF THE SYSTEMS, EVEN THOUGH NOT SPECIFICALLY INDICATED, SHALL BE INCLUDED AND INSTALLED. SUCH ACCESSORIES MAY INCLUDE, BUT ARE NOT LIMITED TO, FILTERS, CONDENSATE DRAINS, RELIEF VALVES, SERVICE VALVES, THERMOSTATS, VIBRATION ISOLATORS, ETC. MOTOR STARTERS FOR PREWIRED EQUIPMENT AND OTHER PROTECTION AND CONTROL DEVICES ARE TO BE FURNISHED UNDER THE MECHANICAL CONTRACTOR'S SCORE OF WORK. STARTERS FOR NON-PREWIRED EQUIPMENT, I.E., FANS, PUMPS, ETC. ARE UNDER THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK, UNLESS NOTED OTHERWISE.

4. SPECIFIC REFERENCE TO A MANUFACTURER'S PRODUCT IS ONLY TO ESTABLISH TYPE, QUALITY, AND PERFORMANCE REQUIRED. THESE QUALIFICATIONS ARE IN ADDITION TO THE REQUIREMENTS SHOWN ON THE PLANS AND ELSEWHERE IN THESE SPECIFICATIONS. LISTING OF ALTERNATE EQUIPMENT MANUFACTURERS SHALL NOT BE CONSTRUED AS AN UNCONDITIONAL APPROVAL OF THE PRODUCTS OF THOSE MANUFACTURERS.

B. AIR CONDITIONING UNITS

1. FURNISH AND INSTALL HEATING/COOLING UNITS WITH CAPACITIES AS SCHEDULED. UNITS SHALL BE COMPLETE WITH HERMETICALLY SEALED COMPRESSOR WITH HIGH AND LOW PRESSURE CUT-OFFS, COILS, HEATING SECTION, BLOWERS, NECESSARY REFRIGERANT PIPING, INSULATED COMPRESSOR COMPARTMENT, AIR COOLED CONDENSER, CONDENSER BLOWER OR FAN, AUTOMATIC CONTROLS, CONTROL PANEL WITH STARTERS, RELAYS, ETC. FOR SINGLE POINT POWER CONNECTION, WITHIN A WEATHERPROOF, INSULATED DECORATIVE CASING. UNITS SHALL BE FURNISHED WITH ONE (1) CONSTRUCTION SET OF FILTERS. INSTALLED PRIOR TO START-UP. REPLACE FILTERS AT SUBSTANTIAL COMPLETION BEFORE TEST AND BALANCE ACTIVITIES COMMENCE. FURNISH ONE COMPLETE SET OF SPARE FILTERS TO OWNER. FURNISH ONE COMPLETE SET OF BELTS.

2. UNITS SHALL BE COMPLETELY FACTORY WIRED FOR TERMINAL CONNECTIONS OF THERMOSTAT WITH FAN-AUTO /MANUAL SWITCH AND A SYSTEM HEAT/OFF/COOL/AUTO SWITCH. UNITS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS. COMPLETE WITH ALL SCHEDULED AND NECESSARY ACCESSORIES FOR EFFICIENT AND PROPER OPERATION.

C. EXHAUST FANS AND VENTS

1. FURNISH AND INSTALL DIRECT DRIVE CENTRIFUGAL ROOF EXHAUST FANS WITH CAPACITIES AS SCHEDULED. UNITS SHALL BE COMPLETE WITH ALUMINUM HOUSING, BACKWARD INCLINED WHEEL, ALUMINUM CURB CAP WITH PREPUNCHED MOUNTING HOLES, BIRDSCREEN, BALL BEARING MOTORS, SLEEVE BEARING MOTORS, MOTOR ISOLATED ON SHOCK MOUNTS, CORROSION RESISTANT FASTENERS, ETC.

2. FURNISH AND INSTALL BELT DRIVE UPBLAST CENTRIFUGAL ROOF EXHAUST FANS WITH CAPACITIES AS SCHEDULED. UNITS SHALL BE COMPLETE WITH ALUMINUM HOUSING, BACKWARD INCLINED ALUMINUM WHEEL, MOTOR AND DRIVES ISOLATED ON SHOCK MOUNTS, DRAIN TROUGH, ADJUSTABLE MOTOR PULLEY, ADJUSTABLE MOTOR PLATE, FAN SHAFT MOUNTED IN BALL BEARING PILLOW BLOCKS, BEARINGS THAT MEET OR EXCEED TEMPERATURE RATING OF FAN, STATIC RESISTANT BELTS, CURB CAP WITH PREPUNCHED MOUNTING HOLES, BALL BEARING MOTORS, CORROSION RESISTANT FASTENERS, ETC.

3. UNITS SHALL BE COMPLETELY FACTORY WIRED AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS, COMPLETE WITH ALL SCHEDULED AND NECESSARY ACCESSORIES FOR EFFICIENT AND PROPER OPERATION.

D. DUCTWORK

1. PROVIDE A COMPLETE SYSTEM OF DUCTWORK FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST VERSIONS OF THE ASHRAE FUNDAMENTALS HANDBOOK AND SMACNA DUCT CONSTRUCTION STANDARDS. DUCT SYSTEM SHALL BE CONSTRUCTED AS REPRESENTED ON THESE DRAWINGS AND AS COORDINATED IN DETAIL ON THE APPROVED DUCTWORK SHOP DRAWINGS. IF ADDITIONAL CHANGES IN DUCT ARRANGEMENT OR IN DUCT SIZES ARE REQUIRED, THEY SHALL BE MADE ONLY AFTER WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER.

2. MAIN AND BRANCH DUCTS SHALL BE RECTANGULAR, ROUND, OR FLAT-OVAL, AND SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL UNLESS NOTED OTHERWISE. DUCT SIZES SHOWN ON THE DRAWINGS ARE NET OPENINGS AND SHALL BE INCREASED TO ACCOMMODATE DUCT LINING WHERE APPLICABLE.

3. FLEXIBLE DUCT SHOWN AT CONNECTION TO AIR DISTRIBUTION DEVICES SHALL BE A FABRICATED ASSEMBLY WITH AN ACOUSTICALLY-RATED CORE CONSISTING OF AN INNER SLEEVE, 2-INCH THICK FIBERGLASS INSULATION, WITH AN R-6.0 MINIMUM AND AN OUTER VAPOR BARRIER COVERING EQUAL TO THERMAFLEX M-KE.

4. WHETHER SHOWN ON PLANS OR NOT, PROVIDE MANUAL VOLUME DAMPERS IN EACH RUNOUT TO EACH SUPPLY DIFFUSER OR REGISTER, RETURN AND EXHAUST GRILLE AND ALSO AS REQUIRED FOR A PROPERLY BALANCED SYSTEM. PROVIDE ACCESS PANELS TO DAMPERS LOCATED ABOVE HARD CEILINGS.

5. VOLUME DAMPERS FOR RECTANGULAR DUCTS SHALL BE CONSTRUCTED OF 16 GAUGE GALVANIZED STEEL. BE OF THE OPPOSED BLADE TYPE AND BE FURNISHED WITH LOCKING AND INDICATING QUADRANTS. DAMPERS FOR ROUND DUCTS SHALL BE SINGLE-BLADE TYPE UP TO 30" DIA. USE CONTINUOUS ROD ON 2" W.G. CLASS DAMPERS FROM 12-28" DIA., AND RECTANGULAR DUCTS FROM 18"-48" WIDE.

6. ROUND TAPS FOR FACTORY-MADE AIR DUCTS IN SECTIONS OF ROUND SHEET METAL DUCTS SHALL BE MADE WITH ANY OF THE FITTINGS LISTED BELOW:

- A. CONICAL TEE
B. CONICAL SADDLE TAP
C. ELBOW (IF LAST FITTING)
D. 45° TEE OR SADDLE TAP

7. ROUND TAPS FOR FACTORY-MADE AIR DUCTS IN SECTIONS OF



SCHALL ARCHITECTS

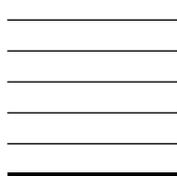
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APRIL 12, 2023

JULY 31, 2023 CORRECTIONS



ATLAS
9085-B AERO DRIVE
SAN DIEGO, CALIFORNIA 92123

PROJECT NO: 2022170

SHEET TITLE

MECHANICAL SPECIFICATIONS

SHEET NO:

M004

PLUM ENGINEERING INC.
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CONTINUED:

- 7. ROUND TAPS FOR FACTORY-MADE AIR DUCTS IN SECTIONS OF RECTANGULAR SHEET METAL DUCTS SHALL BE MADE WITH ANY OF THE FITTINGS LISTED BELOW:
  - A. COLLAR (CONICAL)
  - B. COLLAR (STRAIGHT, ONLY WHEN SHOWN ON DRAWINGS)
- 8. DOVETAILED CUTOFFS ARE NOT ACCEPTABLE. DUCT TAPE OR OTHER PRESSURE SENSITIVE TAPES ARE NOT ACCEPTABLE.
- 9. TAPS IN SECTIONS OF ROUND FACTORY-MADE FLEXIBLE AIR DUCTS (WHEN ALLOWED) SHALL BE MADE BY INSERTING, IN THE FLEXIBLE DUCT SECTION, ANY OF THE SHEET METAL FITTINGS LISTED BELOW:
  - A. 90 DEGREE CONICAL STRAIGHT TEE
  - B. 45 DEGREE STRAIGHT LATERAL
  - C. 45 DEGREE STRAIGHT LATERAL WITH 45 DEGREE ELBOW
  - D. 45 DEGREE STRAIGHT LATERAL CROSS
  - E. Y BRANCH WITH 45 DEGREE ELBOW
- E. DUCT INSULATION

- 1. THERMAL INSULATION:
  - A. CONCEALED SUPPLY DUCTS AND RETURN DUCTS ABOVE CEILING OR IN FURRED SPACES SHALL BE THERMALLY INSULATED.
  - B. THERMAL INSULATION SHALL BE FLEXIBLE BLANKET GLASS FIBER INSULATION WITH FACTORY APPLIED FLAME RETARDANT, FOIL-SCRIM-KRAFT VAPOR BARRIER (FSK), MAXIMUM K OF 0.30 AT 75 DEGREES F MEAN TEMPERATURE MINIMUM .75 POUND DENSITY. INSULATION SHALL BE 1.5" THICK.
  - C. INSULATION SHALL BE APPLIED OVER SURFACES WITH HAVE BEEN WIPED CLEAN AND DRY AND SHALL HAVE 3-INCH MINIMUM OVERLAP ON BOTH LONGITUDINAL AND TRANSVERSE SEAMS.
  - D. SUPPLY AND RETURN DUCTS LOCATED OUTSIDE SHALL BE LINED WITH 2" ACOUSTICAL LINER AND SEALED WATER TIGHT, OR INSULATED EXTERNALLY WITH 2" RIGID BOARD AND ALUMINUM LAGGING SEALED WATER TIGHT.

F. AIR FILTERS

- 1. REPLACEABLE (THROWAWAY) PANEL FILTERS:
  - A. PROVIDE FACTORY-FABRICATED, VISCOUS-COATED, FLAT PANEL TYPE REPLACEABLE AIR FILTERS WITH HOLDING FRAMES AS INDICATED, IN SIZES INDICATED, WITH 2" THICK UL CLASS 2 THROWAWAY MEDIA MATERIAL, CONSTRUCT MEDIA OF INTERLACED GLASS FIBERS, SPRAY WITH NON-FLAMMABLE ADHESIVE, FRAME IN THROWAWAY FIBERBOARD CASINGS AND SANDWICH BETWEEN PERFORATED METAL GRILLES.
  - B. CONSTRUCT DUCTWORK-HOLDING FRAMES OF 20-GA. GALVANIZED STEEL, CAPABLE OF HOLDING MEDIA AND MEDIA FRAME IN PLACE, AND GASKETED TO PREVENT UNFILTERED AIR BY-PASSING BETWEEN MEDIA FRAMES AND HOLDING MEMBERS.
  - C. PROVIDE FILTERS WITH RATE FACE VELOCITY OF 500 FPM, INITIAL RESISTANCE OF OT GREATER THAN 0.30" W.G., FINAL RATED RESISTANCE OF 0.50" W.G., AND AVERAGE ARRESTANCE OF 80%.

G. LIST OF ACCEPTABLE MANUFACTURERS

- 1. FOLLOWING IS A LIST OF MANUFACTURERS WHOSE EQUIPMENT IS ACCEPTABLE AS TO MANUFACTURE, SUBJECT TO CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS. CAREFUL CHECKING MUST BE MADE TO VERIFY THAT EQUIPMENT WILL MEET CAPACITIES, REQUIREMENTS, SPACE AND WEIGHT ALLOCATIONS.
  - A. HVAC PACKAGED EQUIPMENT: YORK OR APPROVED EQUAL BY ARCHITECT/ENGINEER
  - B. FANS: GREENHECK, COOK, ACME, PENN, PRICE
  - C. AIR DEVICES: TITUS, KREUGER, METAL-AIRE, PRICE
  - D. INSULATION: CERTAINTEED, OWENS-CORNING, MANVILLE, KNAUF
  - E. UNIT HEATERS: CHROMOLOX, REZNOR, Q-MARK, MARKET
  - F. DUCT SEALANT: DESIGN POLYMERICS, MCGILL AIRFLOW, CANVAS TAPE AND ARABOL
  - G. SPRING ISOLATION RAILS: PROVENT
  - H. SPLIT SYSTEM HEAT PUMP UNITS: MITSUBISHI, CARRIER, TRANE, SANYO
  - I. AIR FILTERS: AFF, FARR OR FLANDERS

PART III - EXECUTION

A. GENERAL

- 1. INSTALL MATERIALS AND EQUIPMENT IN AN ARRANGEMENT THAT WILL GIVE THE GREATEST PRACTICAL EASE OF OPERATION AND SERVICE TO THE OWNER.
- 2. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
- 3. PERFORM WORK IN ACCORDANCE WITH THE BEST TRADE PRACTICES. INSTALL MATERIALS AND EQUIPMENT SQUARELY WITH THE BUILDING LINES. PROVIDE RIGID PERMANENT BASES AND SUPPORTS FOR WORK.
- 4. CONSTRUCT AND BRACE EQUIPMENT, PIPING, ETC. SO THAT THERE WILL BE NO VIBRATION AND/OR RATTLING WHEN THE SYSTEM IS IN OPERATION.
- 5. COVER AND PROTECT EQUIPMENT AND MATERIALS FROM WEATHER, THEFT, ETC., UNTIL DATE OF COMPLETION. PLUG AND/OR CAP OPEN ENDS OF INSTALLED PIPING AND/OR DUCTWORK PENDING EXTENSION OR FINAL CONNECTION.

B. DUCTWORK

- 1. CONSTRUCT DUCTWORK WITH MATERIAL, GAUGES, JOINTS, BRACING AND SUPPORTS IN ACCORDANCE WITH LATEST SMACNA STANDARDS.
- 2. DUCTWORK SHALL BE RIGIDLY CONSTRUCTED AND SUBSTANTIALLY AIR-TIGHT. SEAL ALL DUCTWORK WITH A WATER-BASED DUCT SEALANT (DESIGN POLYMERICS DP-1010 OR EQUAL) OR ARABOL AND CANVAS TAPE. DO NOT UTILIZE PRESSURE SENSITIVE TAPES. SEAL DUCTWORK IN ACCORDANCE WITH TABLE 4-1 "APPLICABLE LEAKAGE OF CLASSES" OF THE LATEST SMACNA HVAC LEAKAGE TEST MANUAL.
- 3. MAKE CONNECTIONS BETWEEN FLEXIBLE DUCTS AND RIGID TRUNK DUCTS WITH FACTOR FABRICATE FITTINGS WITH DAMPER. SECURE FLEX DUCT TO FITTING WITH CLAMPS OR PANDUIT STRAPS INSTALLED TO FACTORY RECOMMENDED TENSION. INSTALL CLAMPS ON LINER AND SECOND CLAMP OVER JACKET. JOB INSPECTION MAY REQUIRE REMOVAL AND REPLACEMENT OF A RANDOM SAMPLING OF CONNECTIONS.
- 4. ELBOWS SHALL HAVE A THROAT RADIUS EQUAL TO 1-1/2 TIMES THE DUCT WIDTH. SQUARE

ELBOWS SHALL HAVE TURNING VANES OR SPLITTER. TRANSITIONS SHALL NOT EXCEED 4 TO 1 ASPECT RATIO.

C. AUTOMATIC TEMPERATURE CONTROLS AND AUTOMATIC SHUT-OFF

- 1. ROOFTOP AC UNITS SHALL BE TURNED ON/OFF WITH PROGRAMMABLE 7-DAY THERMOSTATS. THERMOSTATS SHALL BE SET FOR CONTINUOUS FAN OPERATION.
- 2. EXHAUST FANS ARE CONTROLLED AS SPECIFIED IN THE EXHAUST FAN SCHEDULE.
- 3. AIR CONDITIONING UNITS SHALL BE EQUIPPED WITH IONIZATION TYPE DUCT DETECTOR, UNLESS INDICATED OTHERWISE.
- 4. DUCT SMOKE DETECTOR SHALL BE LOCATED IN THE MAIN SUPPLY AIR DUCT AHEAD OF ANY BRANCH TAKE-OFFS, AND INSTALLED PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
- 5. WHERE REQUIRED BY BUILDING OFFICIALS, ACTIVATION OF ANY SMOKE DETECTOR SHALL CAUSE THE AIR-MOVING EQUIPMENT TO AUTOMATICALLY SHUT DOWN. WHERE A SYSTEM CONSISTS OF MORE THAN ONE AIR CONDITIONER, ACTIVATION OF ANY OF THE SMOKE DETECTORS IN ANY OF THE AIR CONDITIONERS SERVING THE COMMON ARE SHALL CAUSE ALL AIR-MOVING EQUIPMENT SERVING THAT COMMON AREA TO SHUT DOWN.

6. WIRING OF THE SMOKE DETECTORS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC AND ELECTRICAL SECTIONS OF THE SPECIFICATION.

7. FIRE ALARM CONTRACTOR SHALL CONNECT ALL FIRE/SMOKE DAMPERS TO THE FIRE CONTROL SYSTEM, AS REQUIRED BY LOCAL BUILDING AUTHORITY. THE FIRE ALARM CONTRACTOR SHALL PROVIDE AND INSTALL THE CEILING MOUNTED SMOKE DETECTOR STATUS LIGHTS.

D. TESTING AND BALANCING

- 1. THE TESTS SHALL INCLUDE THOSE COMPONENTS NORMALLY INCLUDED AS PART OF THE AIR DISTRIBUTION AND TRANSMISSION SYSTEM.
- 2. A COMPLETE BALANCING REPORT SHALL BE SUBMITTED TO THE ENGINEER UPON COMPLETION. THE BALANCING REPORT SHALL INCLUDE DESIGN QUANTITIES AND ACTUAL (MEASURED) QUANTITIES FOLLOWING BALANCING. BALANCING SHALL BE COMPLETED TO THE SATISFACTION OF THE ENGINEER, T.A.B. CONTRACTOR SHALL BE A.A.B.C. OR N.E.E.B, CERTIFIED, OR COMPANY APPROVED BY ENGINEER.
- 3. INCLUDE IN BID, AS PART OF THE WORK IN THIS CONTRACT, ANY ADJUSTMENTS TO OR REPLACEMENT OF PULLEYS, BELTS, MOTORS, DAMPERS, ETC., REQUIRED FOR CORRECT BALANCING OF SYSTEMS. CONTRACTOR OR EQUIPMENT SUPPLIERS TO FURNISH THE ABOVE LISTED ITEMS TO T.A.B. CONTRACTOR TO INSTALL.
- 4. TEST AND ADJUST AIR DEVICES TO WITHIN PLUS OR MINUS 5 PERCENT OF DESIGN REQUIREMENTS.
- 5. T.A.B. CONTRACTOR SHALL ADJUST THE DEFLECTION OF ALL APPLICABLE SUPPLY AIR DISTRIBUTION FOR PROPER AIR FLOW DIRECTION AND CHARACTERISTICS AS RECOMMENDED BY THE MANUFACTURER AND/OR TO THE SATISFACTION OF THE ENGINEER AND OWNER.

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APRIL 12, 2023

▲ JULY 31, 2023 CORRECTIONS

Blank lines for notes or corrections.

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**MECHANICAL SPECIFICATIONS**

SHEET NO:

**M005**

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STATE OF CALIFORNIA  
**Mechanical Systems**  
 CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
 Project Name: ATLAS Report Page: (Page 1 of 30)  
 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**A. GENERAL INFORMATION**

01 Project Location (city)	SAN DIEGO	04 Total Conditioned Floor Area	13778
02 Climate Zone	7	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1
<input checked="" type="checkbox"/> Convention Center <input checked="" type="checkbox"/> Office <input checked="" type="checkbox"/> All Other Occupancies			

**B. PROJECT SCOPE**

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input checked="" type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input checked="" type="checkbox"/> Electric Resistance Heat
Mechanical Controls	<input type="checkbox"/> System Piping	<input checked="" type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input checked="" type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input checked="" type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
 Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101  
 Documentation Software: EnergyPro  
 Compliance ID: EnergyPro-8004-0523-0068 Report Generated: 2023-05-05 12:15:18

STATE OF CALIFORNIA  
**Mechanical Systems**  
 CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
 Project Name: ATLAS Report Page: (Page 4 of 30)  
 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)**

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).										
Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)										
01	02	03	04	05	06	07	08	09	10	11

Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Heating Mode		Cooling Mode		
				Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	
CU-2	<65,000		HSPF	8.2	10.3	SEER	14.0	18.5
MAU-1	<65,000					SEER	14.0	14.3
HP-8	<65,000		HSPF	8	8.2	SEER	14.0	14.3
HP-10	<65,000		HSPF	8	8.2	SEER	14.0	14.3
HP-12	<65,000		HSPF	8	8.2	SEER	14.0	14.3
HP-14	>=65,000 and <135,000		COP	3.4	6	EER	11	12
HP-18	<65,000		HSPF	8	8.2	SEER	14.0	14.3
HP-19	>=65,000 and <135,000		COP	3.4	6	EER	11	12

**Electric Resistance Heating**

01	02	03	04
Name or Item Tag	Equipment Description	Output Capacity (kW)	Applicable Exception to 140.4(g) Allowing Electric Resistance Heating
MAU-1	Other	18	Exception3: Total capacity of electric-resistance heating systems serving the entire building is less than 10% of the total design output capacity of all heating equipment serving the entire building

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STATE OF CALIFORNIA  
**Mechanical Systems**  
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**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
 Project Name: ATLAS Report Page: (Page 7 of 30)  
 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**H. FAN SYSTEMS & AIR ECONOMIZERS**

System Name	HP-8	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,200	Site Elevation	477	Economizer	NA: Special OA filtration
Fan Name or Item Tag	Fan Type	Qty	Component		Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm) <sup>3</sup>	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)				
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away		1,200		278	167	Manufacturer provided		0.45				
			MERV 13-16 Filter upstream of thermal conditioning equipment		1,200		167	167	Manufacturer provided		0.45				
			Hydronic/DX cooling coil or heat pump coil		1,200		167	167	Manufacturer provided		0.45				
RF	Return	1	Exhaust System Base Allowance		1,200		223	223	Manufacturer provided		0.45				
Fan System Allowance (kW) <sup>3</sup>											Fan System Electrical Output (kW)				

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STATE OF CALIFORNIA  
**Mechanical Systems**  
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**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
 Project Name: ATLAS Report Page: (Page 2 of 30)  
 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**C. COMPLIANCE RESULTS**

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09
System Summary	Pumps	Fans/Economizers	System Controls	Ventilation	Terminal Box Controls	Distribution	Cooling Towers	Compliance Results
110.1, 110.2, 140.4, 170.2(c)	140.4(k), 170.2(c)(4)	140.4(c), 140.4(e), 170.2(c)	110.2, 120.2, 140.4(f), 170.2(c)	120.1, 160.2	140.4(d), 170.2(c)(4B)	120.3, 140.4(i), 160.2, 160.3	110.2(e)2	
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	
Yes	AND	AND	Yes	AND	Yes	AND	Yes	AND
Mandatory Measures Compliance (See Table Q for Details)								COMPLIES

**D. EXCEPTIONAL CONDITIONS**

This table is auto-filled with unedited comments because of selections made or data entered in tables throughout the form.

**E. ADDITIONAL REMARKS**

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

**F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)**

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
CU-2	1	Single zone	New/ Addition		<input type="checkbox"/>
MAU-1	1	Single zone	New/ Addition		<input type="checkbox"/>
HP-8	1	Single zone	New/ Addition		<input type="checkbox"/>
HP-10	1	Single zone	New/ Addition		<input type="checkbox"/>

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
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STATE OF CALIFORNIA  
**Mechanical Systems**  
 CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
 Project Name: ATLAS Report Page: (Page 5 of 30)  
 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**G. PUMPS**

This section does not apply to this project.

**H. FAN SYSTEMS & AIR ECONOMIZERS**

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	CU-2	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	600	Site Elevation	477	Economizer	NA: <=33 kBtu/h cooling
Fan Name or Item Tag	Fan Type	Qty	Component		Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm) <sup>3</sup>	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)				
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away		600		139	83	Manufacturer provided		0.06				
			MERV 13-16 Filter upstream of thermal conditioning equipment		600		83	83	Manufacturer provided		0.06				
			Hydronic/DX cooling coil or heat pump coil		600		83	83	Manufacturer provided		0.06				
Fan System Allowance (kW) <sup>3</sup>											Fan System Electrical Output (kW)				

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**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
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 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**H. FAN SYSTEMS & AIR ECONOMIZERS**

System Name	HP-10	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	2,000	Site Elevation	477	Economizer	Differential Enthalpy
Fan Name or Item Tag	Fan Type	Qty	Component		Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm) <sup>3</sup>	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)				
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away		2,000		464	278	Manufacturer provided		0.61				
			MERV 13-16 Filter upstream of thermal conditioning equipment		2,000		278	278	Manufacturer provided		0.61				
			Hydronic/DX cooling coil or heat pump coil		2,000		278	278	Manufacturer provided		0.61				
			Economizer Return Damper		2,000		92	92	Manufacturer provided		0.61				
RF	Return	1	Exhaust System Base Allowance		2,000		372	372	Manufacturer provided		0.61				
Fan System Allowance (kW) <sup>3</sup>											Fan System Electrical Output (kW)				

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STATE OF CALIFORNIA  
**Mechanical Systems**  
 CALIFORNIA ENERGY COMMISSION

**CERTIFICATE OF COMPLIANCE** NRCC-MCH-4  
 Project Name: ATLAS Report Page: (Page 3 of 30)  
 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)**

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
HP-12	1	Single zone	New/ Addition		<input type="checkbox"/>
HP-14	1	Single zone	New/ Addition		<input type="checkbox"/>
HP-18	1	Single zone	New/ Addition		<input type="checkbox"/>
HP-19	1	Single zone	New/ Addition		<input type="checkbox"/>

**Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)**

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3a1	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available <sup>1</sup> 140.4(a) and 170.2(c)1	Heating Output <sup>2,3</sup>		Cooling Output <sup>2,3</sup>		Load Calculations <sup>3,4</sup>		
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
CU-2	Unitary Heat Pumps	Air-cooled, split (3 phase)	Yes	15.75	21.6	0	17.83	14.93	-0.27	17.77
MAU-1	Unitary AC/ Condensers	AC, air-cooled pkg (3 phase)	Yes	60	60	0	55.09	46.12	54.82	55.36
HP-8	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	39.12	36	12.87	29.59	27	19.51	34.99
HP-10	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	56.62	60	12.87	49.95	46.12	37.37	51.86
HP-12	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	39.12	36	12.87	28.83	27	19.85	36.49
HP-14	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	74.13	84	12.87	69.22	63	45.89	77.04
HP-18	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	47.87	48	12.87	38.48	36	16	31.19
HP-19	Unitary Heat Pumps	Air-cooled, pkg (3 phase)	Yes	100.38	120	12.87	96.72	90	48.71	109.67

<sup>1</sup> FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are exempt.  
<sup>2</sup> It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.  
<sup>3</sup> If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.

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**H. FAN SYSTEMS & AIR ECONOMIZERS**

System Name	MAU-1	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	2,000	Site Elevation	477	Economizer	Differential Enthalpy
Fan Name or Item Tag	Fan Type	Qty	Component		Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm) <sup>3</sup>	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)				
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away		2,000		464	278	Manufacturer provided		0.89				
			MERV 13-16 Filter upstream of thermal conditioning equipment		2,000		278	278	Manufacturer provided		0.89				
			Electric heat		2,000		92	92	Manufacturer provided		0.89				
			Hydronic/DX cooling coil or heat pump coil		2,000		278	278	Manufacturer provided		0.89				
			Economizer Return Damper		2,000		92	92	Manufacturer provided		0.89				
Fan System Allowance (kW) <sup>3</sup>											Fan System Electrical Output (kW)				

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STATE OF CALIFORNIA  
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 CALIFORNIA ENERGY COMMISSION

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 Project Address: 9085-B AERO DRIVE Date Prepared: 5/5/2023

**H. FAN SYSTEMS & AIR ECONOMIZERS**

System Name	HP-12	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,200	Site Elevation	477	Economizer	NA: Special OA filtration
Fan Name or Item Tag	Fan Type	Qty	Component		Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm) <sup>3</sup>	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)				
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away		1,200		278	167	Manufacturer provided		0.45				
			MERV 13-16 Filter upstream of thermal conditioning equipment		1,200		167	167	Manufacturer provided		0.45				
			Hydronic/DX cooling coil or heat pump coil		1,200		167	167	Manufacturer provided		0.45				
RF	Return	1	Exhaust System Base Allowance		1,20										

I. SYSTEM CONTROLS  
This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats 110.2(b) & (c), 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
CU-2	Single zone	<= 25,000 ft²	EMCS	NA: 7 day per 120.2(e)1	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
MAU-1	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Healthcare only	NA: HRR dwelling unit
HP-8	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Healthcare only	NA: HRR dwelling unit
HP-10	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Healthcare only	NA: HRR dwelling unit
HP-12	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Healthcare only	NA: HRR dwelling unit
HP-14	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Healthcare only	NA: HRR dwelling unit
HP-18	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Healthcare only	NA: HRR dwelling unit
HP-19	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Healthcare only	NA: HRR dwelling unit

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J. VENTILATION AND INDOOR AIR QUALITY

04	05	06	07					
System Name	HP-10	System Design OA CFM Airflow¹	419	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
HP-10	Office space	436			65.4	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
HP-10	Conference/ meeting	412			206	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		271	18	Ventilation for this System Complies?		Yes	
04	05	06	07					
System Name	HP-12	System Design OA CFM Airflow¹	90	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
HP-12	Office space	436			65.4	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		271	18	Ventilation for this System Complies?		Yes	

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J. VENTILATION AND INDOOR AIR QUALITY

¹ 120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, and open areas in warehouses, library book stock aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

² Multifamily Dwelling Unit Ventilation Systems

19	20	21	22	23	24	25	26	27
Space Name or Item Tag	Conditioned Floor Area (ft²)	# of Bedrooms	# of Dwelling Units	Required Min OA CFM²	Supply Air CFM	Exhaust CFM	Local Exhaust	Air Filtration per 120.1(c) & 160.2(b)1
28	Is this a balanced system³		29	Meeting Outside Air Requirements?				

³ FOOTNOTES: Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.  
⁴ Kitchen range hood will be verified per NA7.18.1 to confirm model is rated by HVI or AHAM.  
⁵ Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.  
⁶ A balanced ventilation system provides ventilation airflow to each dwelling-unit at a rate equal to or greater than the required minimum rate, but not more than twenty percent.

K. TERMINAL BOX CONTROLS  
This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK AND PIPING)  
This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	02
Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.	

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I. SYSTEM CONTROLS  
¹ FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY  
This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(c)3B 140.4(p) and 140.4(n) for all nonresidential and hotel/motel and §124rethnlk/160.2, 160.3(a)3D, 170.2(c)4M, 170.2(c)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	02	03	04	05	06	07	08	09
System Name	CU-2	System Design OA CFM Airflow¹	0	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
FC-2	All others	100			0	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		0	18	Ventilation for this System Complies?		Yes	

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J. VENTILATION AND INDOOR AIR QUALITY

04	05	06	07					
System Name	HP-12	System Design OA CFM Airflow¹	683	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
HP-14	Office space	3187			478	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		478	18	Ventilation for this System Complies?		Yes	
04	05	06	07					
System Name	HP-18	System Design OA CFM Airflow¹	229	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
HP-18	Office space	1068			160.2	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		160	18	Ventilation for this System Complies?		Yes	

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L. DISTRIBUTION (DUCTWORK AND PIPING)  
Duct Leakage Testing

11	12	13	14	15	16	17	18	19	20	21
The answers to the questions below apply to the following duct systems:		CU-2	NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No						
The answers to the questions below apply to the following duct systems:		MAU-1	NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No						

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J. VENTILATION AND INDOOR AIR QUALITY

04	05	06	07					
System Name	MAU-1	System Design OA CFM Airflow¹	900	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
MAU-1	Office space	2491			373.6	0	900	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		374	18	Ventilation for this System Complies?		Yes	
04	05	06	07					
System Name	HP-8	System Design OA CFM Airflow¹	274	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
HP-8	Office space	1824			273.6	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		274	18	Ventilation for this System Complies?		Yes	

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J. VENTILATION AND INDOOR AIR QUALITY

04	05	06	07					
System Name	HP-19	System Design OA CFM Airflow¹	549	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21²	Provided	
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Occupancy Type⁴	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people³	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3³ 160.2(c)5D 160.2(c)5E 160.2(c)5D
HP-19	Office space	3660			549	0	0	DCV NA: Not required per §120.1(d)3 NA: Not required space type
17	Total System Required Min OA CFM		549	18	Ventilation for this System Complies?		Yes	

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system  
² Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.  
³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.  
⁴ See Standards Tables 120.1-A and 120.1-B.  
⁵ For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  
I certify that this Certificate of Compliance documentation is accurate and complete.

11	12	13	14	15	16	17	18	19	20	21
Documentation Author Name:		Brandon T. Plum, PE		Documentation Author Signature:						
Company:		Plum Engineering, Inc.		Signature Date:		2023-05-05				
Address:		426 Vars Way		ICAV/IBES Certification Identification (if applicable):		M32374				
City/State/Zip:		Alpine CA 91901		Phone:		858-672-2100				
Responsible Person's Name:		Brandon T. Plum, PE		Responsible Designer Signature:						
Company:		Plum Engineering, Inc.		Date Signed:		2023-05-05				
Address:		11835 Carmel Mountain Road		License:		M32374				
City/State/Zip:		San Diego CA 92128-4609		Phone:		858-672-2100				

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APRIL 12, 2023  
JULY 31, 2023 CORRECTIONS

ATLAS  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
MECHANICAL  
TITLE-24

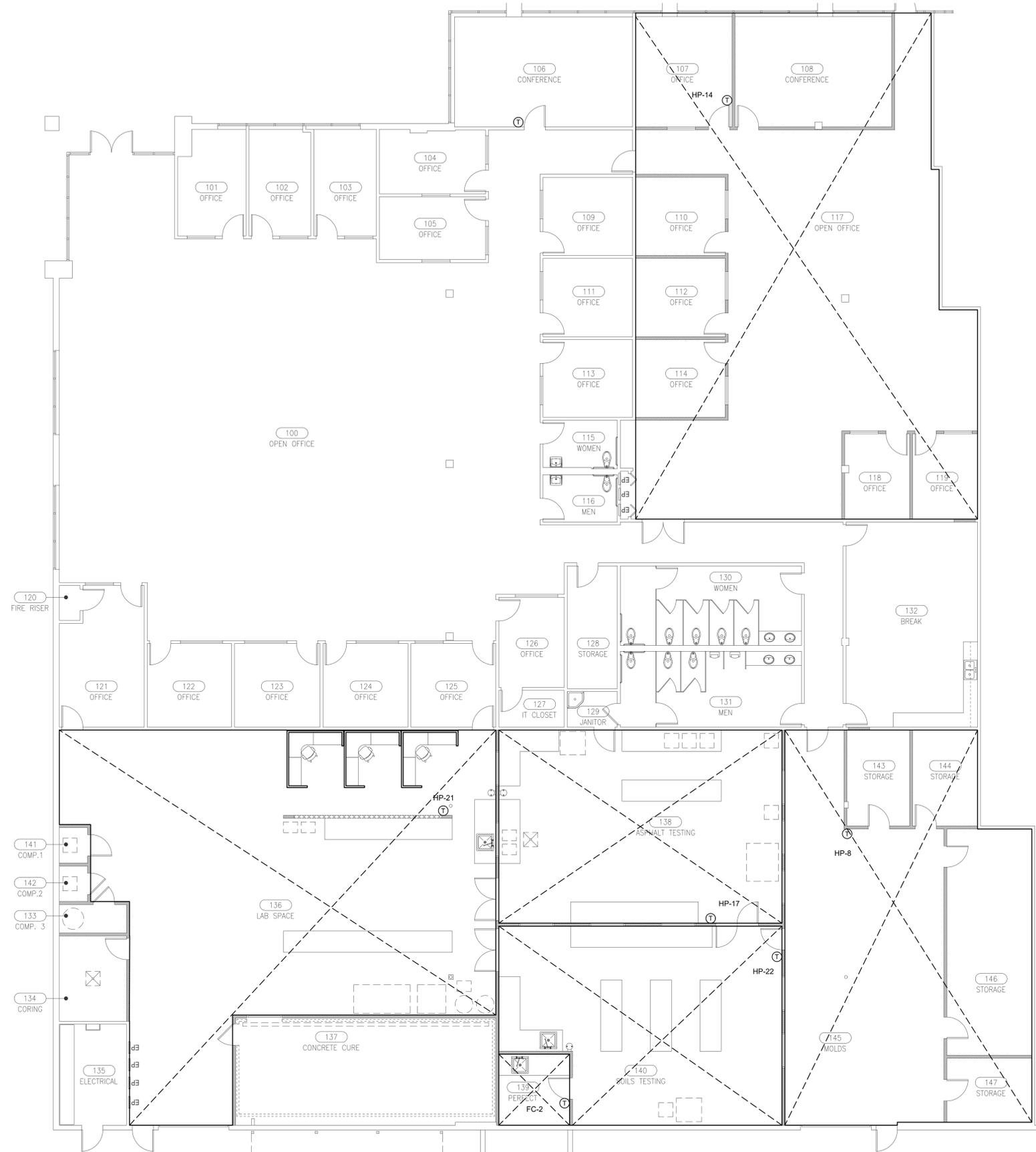
SHEET NO:

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PLAN NOTES

- ① PROVIDE ALL NEW PROGRAMMABLE THERMOSTATS (TYP)

1ST FLOOR - MECHANICAL ZONING PLAN

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



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APRIL 12, 2023

JULY 31, 2023 CORRECTIONS

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
MECHANICAL  
ZONING  
PLAN

SHEET NO:

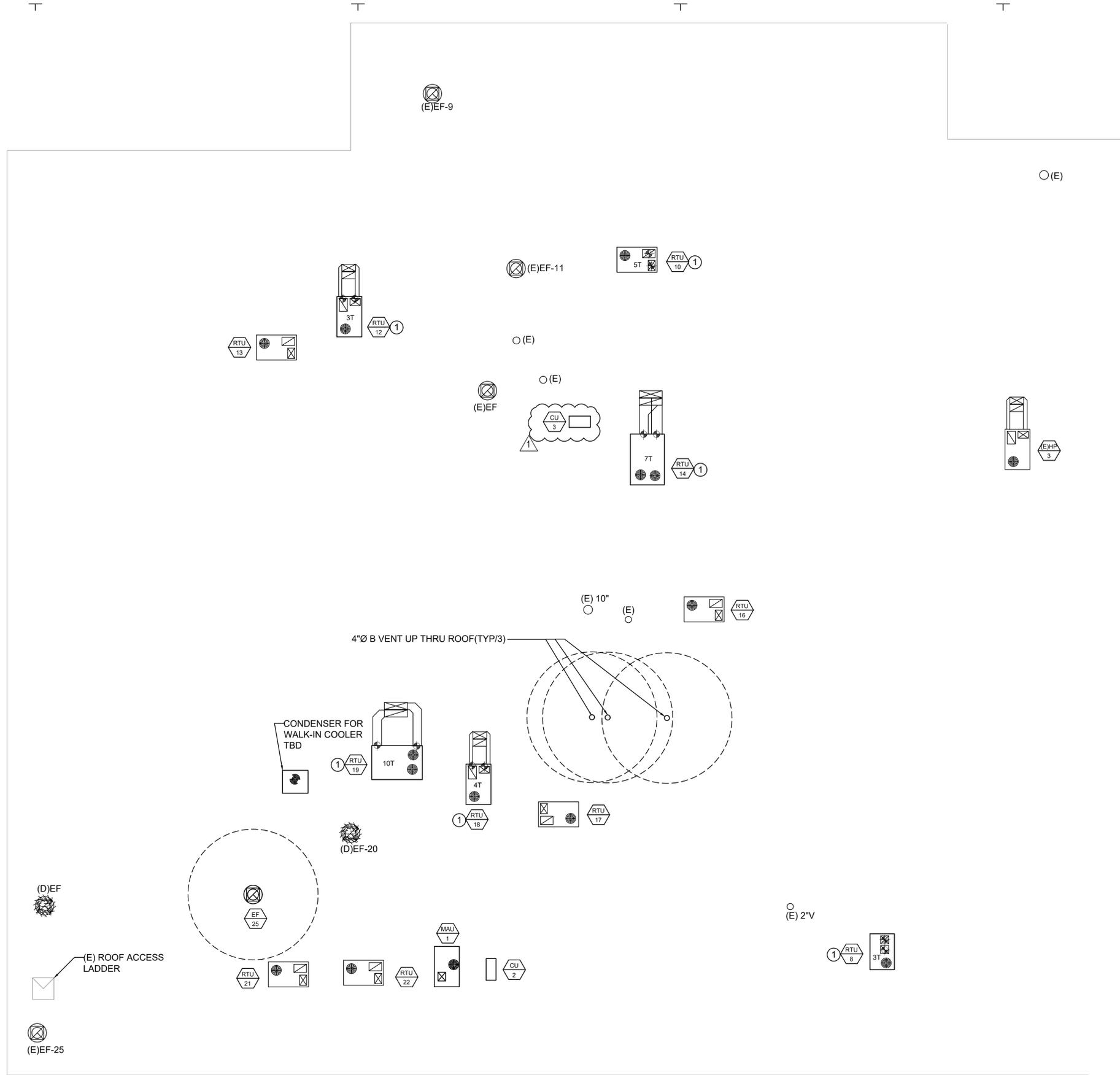
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**PLAN NOTES**

- ① EXISTING ROOF TOP UNIT TO BE REPLACED DUE TO AGE, SAME CAPACITY

**ROOF - MECHANICAL PLAN**

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



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APRIL 12, 2023

JULY 31, 2023 CORRECTIONS

**ATLAS**  
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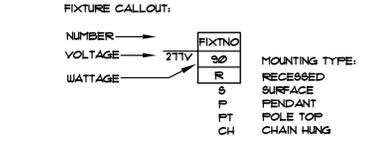
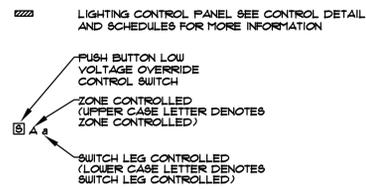
PROJECT NO:  
 2022170

SHEET TITLE  
**MECHANICAL ROOF PLAN**

SHEET NO:

**M221**

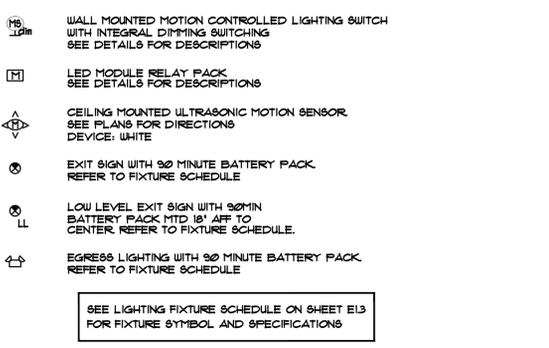
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6ab ALL INTERIOR OFFICES SHALL BE PROVIDED WITH DECORA TYPE SWITCHES, SINGLE POLE 20A, MTD 48" AFF TO TOP DESIGNATED TO CONTROL LIGHTING IN CIRCUIT LEGS. DEVICE, WHITE COVER PLATE, WHITE

2- DOUBLE POLE K - KEYSWITCH  
3- THREE WAY M - HORSEPOWER RATED MOTOR SWITCH  
4- FOUR WAY MTO - MANUAL MOTOR STARTER WITH THERMAL OVERLOADS  
FL - PILOT LIGHT DIM - LOAD RATED DIMMER  
T - ROTARY TIMER PB - PUSH-BUTTON

**LAB AREA DEVICE TYPES**  
100% OF ALL LAB WALL SWITCHES TO BE 90ST TYPE WITH STAINLESS STEEL COVERPLATES



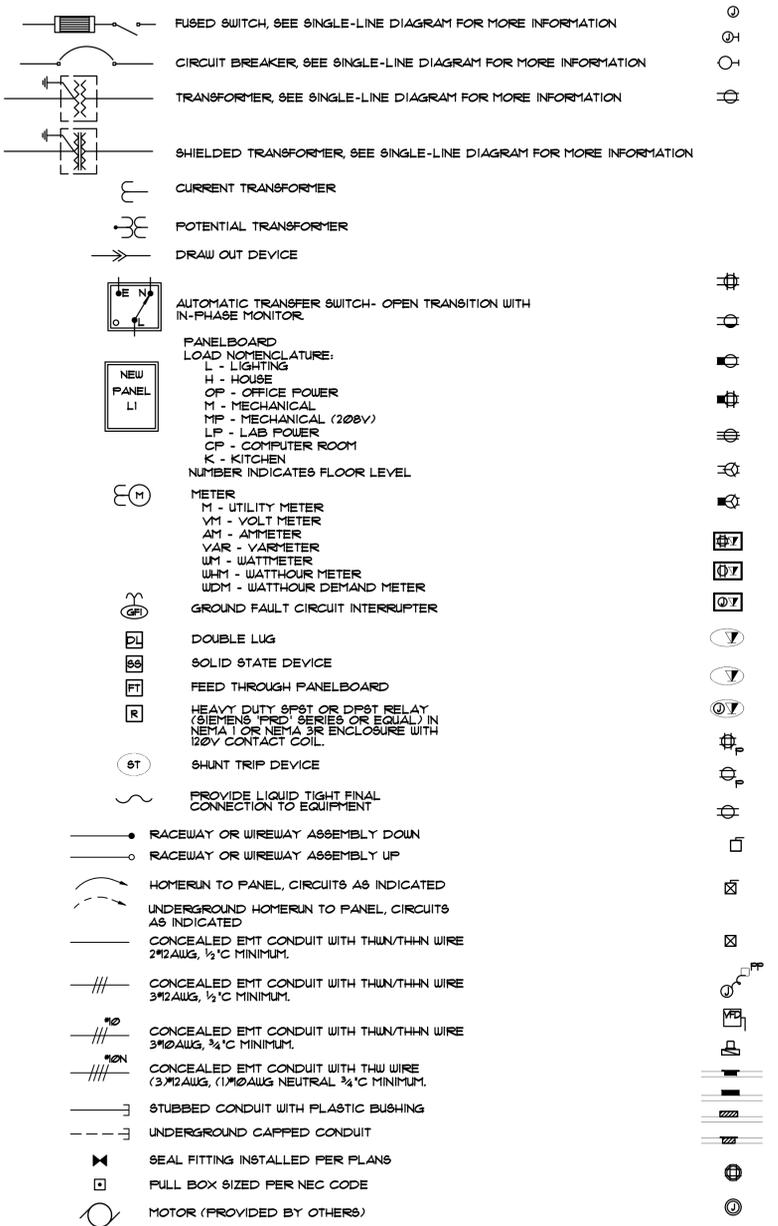
**LIGHTING SYMBOLS**

- ALL CONDUCTORS SHALL BE STRANDED COPPER FOR SIZES ABOVE #10AWG. CONDUCTORS #10AWG AND SMALLER SHALL BE SOLID. AC CABLE IS NOT ALLOWED AND SHALL NOT BE INSTALLED. AN EQUIPMENT GROUND CONDUCTOR SHALL BE INSTALLED IN ALL FLEXIBLE CONDUITS. ALL BRANCH CIRCUITS SHALL BE INSTALLED WITH A GREEN GROUND CONDUCTOR.
- ELECTRICAL CONTRACTOR TO REVIEW OTHER DISCIPLINE DRAWINGS AND INDICATE CONFLICTS OF CONDUIT ROUTING, UNDERGROUND COORDINATION AND CEILING HEIGHT CONFLICTS.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING SPACES ADJACENT TO WORK DURING THE COURSE OF DEMOLITION AND NEW WORK. ALL REPAIRS OF DAMAGED AREAS ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- ALL ELECTRICAL DEVICES, EQUIPMENT, AND LIGHT FIXTURES SHALL BE INSTALLED PER CALIFORNIA A.D.A. REQUIREMENTS.
- ALL ELECTRICAL AND TEL/DATA CONDUIT AND RELATED FITTINGS SHALL BE CONCEALED. ANY LOCATIONS IN PUBLIC VIEW SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER AND APPROVED PRIOR TO INSTALLATION. ALL CONDUIT RUNS TO BE SHOWN ARE DIAGNOSTIC, COORDINATE ALL CONDUIT RUNS WITH OTHER DISCIPLINES.
- ELECTRICAL WORK INSTALLED UNDER THIS PERMIT TO COMPLY WITH 2022 CALIFORNIA ELECTRICAL CODE, LOCAL AND STATE ENERGY STANDARDS AND ALL OTHER APPLICABLE CODES.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL WEATHERPROOF DEVICES, JUNCTION BOXES, FITTINGS, CONDUIT AND PULLBOXES AT ALL DAMP AND WET LOCATIONS.
- ELECTRICAL CONTRACTOR SHALL COORDINATE REQUIRED ELECTRICAL SHUTDOWNS WITH OWNER 1 DAYS PRIOR TO SHUTDOWN. ALL SCHEDULED UTILITY SHUTDOWNS SHOULD BE SCHEDULED FOR AFTER HOURS WORK FOR OCCUPIED BUILDINGS. THE CONTINUITY OF POWER FOR AREAS OUTSIDE THE PERMITTED WORK SHALL BE MAINTAINED UNLESS A SHUTDOWN IS SCHEDULED.
- ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS PRIOR TO BID COMPLETION.
- ELECTRICAL CONTRACTOR SHALL COORDINATE REQUIRED UTILITY METER APPLICATIONS AND ASSIST OWNER FOR PROPER METER RELEASE SCHEDULE.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL REQUIRED MATERIALS FOR JOB COMPLETION. ELECTRICAL CONTRACTOR SHALL COORDINATE PROCUREMENT OF LONG LEAD ITEMS AND COORDINATE STORAGE OF MATERIALS TO AVOID DAMAGE PRIOR TO INSTALLATION.
- ALL EMPTY CONDUITS ARE TO BE PROVIDED WITH FULL ROPES. LABEL EACH END OF CONDUIT TO INDICATE EXACT DESTINATION.
- ELECTRICAL PANELS SHALL NOT BE LOCATED WITHIN FIRE-RATED CORRIDORS.
- ALL MATERIALS USED UNDER THIS PERMIT SHALL BE NEW AND BEAR THE APPROPRIATE UL LABEL. USED OR RE-CONDITIONED MATERIALS ARE PROHIBITED.
- ALL PERMANENTLY INSTALLED EQUIPMENT SHALL BEAR A UL LABEL OR NATIONALLY RECOGNIZED TESTING AGENCY CERTIFICATION.
- PROVIDE AND INSTALL CLEAR ADHESIVE LABELS INDICATING PANEL AND CIRCUIT NUMBER ON ALL OUTLETS AND SWITCHES, LETTER HEIGHT TO BE 1/4"
- ALL SYSTEMS FURNITURE CIRCUITS AND HOMERUNS TO BE PROVIDED WITH DEDICATED NEUTRAL CONDUCTORS PER CIRCUITS.
- ALL MULTIWIRE BRANCH CIRCUITS SHALL BE INSTALLED WITH AN IDENTIFIED HANDLE TIE OR A 2-POLE/3-POLE CIRCUIT BREAKER PROVIDES THE REQUIRED SIMULTANEOUS OPENING OF THE UNGROUNDED CONDUCTORS PER NEC 240.10 (B)
- ALL OUTLET DEVICES TO HAVE CLEAR ADHESIVE LABEL INDICATING PANEL AND CIRCUIT NUMBER ON INSIDE OF BOX AND OUTSIDE OF COVERPLATE.

**GENERAL NOTES**

- DATA OUTLET WITH TRIM RING, FULL STRING TO ACCESSIBLE CEILING SPACE. 18" AFF. TO CENTER
- TELEPHONE OUTLET WITH TRIM RING, FULL STRING TO ACCESSIBLE CEILING SPACE. 18" AFF. TO CENTER
- TELECOMMUNICATIONS OUTLET WITH TRIM RING, FULL STRING TO ACCESSIBLE CEILING SPACE. 18" AFF. TO CENTER
- TELECOMMUNICATIONS OUTLET WITH TRIM RING, FULL STRING WITH (1) 1" FLEX CONDUIT TO ACCESSIBLE CEILING SPACE. 18" AFF. TO CENTER
- TELECOMMUNICATION OUTLET FLUSH FLOOR MOUNTED ON FIRE RATED POKE-THRU.
- TELECOMMUNICATIONS CONDUIT ONLY, 1" C.O. U.O.N.
- ELECTROMAGNETIC DOOR HOLDER
- INTERCOM LOCATION
- CARD READER
- ELECTRIC DOOR STRIKE
- 3/4" FIRE RATED PLYWOOD BACKBOARD WITH #6AWG GROUND TO BUILDING SYSTEM GROUND.
- CLOSED SIDE CABLE TRAY PER PLANS. COORDINATE ROUTING WITH OTHER DISCIPLINES

**TEL/DATA SYMBOLS**



**POWER SYMBOLS**

- JUNCTION BOX
- WALL MOUNTED JUNCTION BOX
- 15-30R 120V RECEPTACLE NEMA CONFIGURATION AS NEEDED
- DUPLEX RECEPTACLE MTD 18" AFF TO CENTER COVER PLATE COLOR: WHITE
- DEVICE TYPE DEVICE COLOR
- IG STANDARD WHITE
- D ISOLATED GROUND ORANGE WITH TRIANGLE IDENTIFICATION
- D DEDICATED 20A RATED 5-20R GRAY
- GFI 20A GFI RATED WHITE
- UPS 15A OR 20A UPS GRAY
- EG EMERGENCY RED
- TVSS 80-150 JOULE TVSS BLUE
- LAB AREA DEVICE TYPES 100% OF ALL LAB RECEPTACLES TO BE 20A RATED 5-20R WITH STAINLESS STEEL COVERPLATES
- DOUBLE DUPLEX RECEPTACLE MTD 18" AFF TO CENTER SCHEDULE AS NOTED ABOVE
- SPLIT WIRED 1BA 1/2 HOT, 1/2 SWITCHED OUTLET COLOR: WHITE
- SURFACE MOUNTED DUPLEX RECEPTACLE PROVIDE CAST BOX AND STAINLESS STEEL COVER PLATE
- SURFACE MOUNTED DOUBLE DUPLEX RECEPTACLE PROVIDE CAST BOX AND STAINLESS STEEL COVER PLATE
- 208V/1Ø RECEPTACLE NEMA CONFIGURATION AS NOTED
- 208V/3Ø RECEPTACLE NEMA CONFIGURATION AS NOTED
- SURFACE MOUNTED 208V/3Ø RECEPTACLE NEMA CONFIGURATION AS NOTED
- FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE AND SINGLE GANG TEL/DATA RECEPTACLE
- FLOOR BOX WITH DUPLEX RECEPTACLE AND SINGLE GANG TEL/DATA RECEPTACLE
- SPECIALTY FLOOR BOX PER PLANS MULTIPLE GANG BOX. SEE SPECS
- POKE THROUGH BOX WITH DOUBLE DUPLEX RECEPTACLE AND SINGLE GANG TEL/DATA RECEPTACLE
- POKE THROUGH BOX WITH DUPLEX RECEPTACLE AND SINGLE GANG TEL/DATA RECEPTACLE
- SPECIALTY POKE THROUGH BOX PER PLANS MULTIPLE GANG BOX. SEE SPECS
- PEDESTAL MOUNTED DOUBLE DUPLEX RECEPTACLE MANUF: HUBBELL 3A6688 W/STAINLESS STEEL COVER PLATES
- PEDESTAL MOUNTED DUPLEX RECEPTACLE MANUF: HUBBELL 3A6686 W/STAINLESS STEEL COVER PLATES
- ROOF MOUNTED WEATHERPROOF, GFI WORK OUTLET PROVIDE CAST BOX W/STAINLESS STEEL WP COVER
- EXTERNALLY OPERATED FUSED DISCONNECT SWITCH PROVIDE PER NEMA RATING REQUIRED
- COMBINATION FVNR MAGNETIC MOTOR STARTER AND DISCONNECT RATING AND POLES AS INDICATED. PROVIDE WITH OVERLOAD PER HORSEPOWER REQUIREMENTS, CPT, H.O.A. WITH PILOT LIGHTS PROVIDE WITH (1) EACH N.O., AND N.C. AUX CONTACTS
- FVNR MAGNETIC STARTER WITH OVERLOAD PER HORSEPOWER REQUIREMENTS, CPT, H.O.A. WITH PILOT LIGHTS PROVIDE WITH (1) EACH N.O., AND N.C. AUX CONTACTS
- DUAL CHASE POWER POLE
- VARIABLE FREQUENCY DRIVE/(PROVIDED BY OTHERS)
- WALL MOUNTED UTILITY METER AND SERVICE DISCONNECT
- FLUSH MOUNTED PANELBOARD
- SURFACE MOUNTED PANELBOARD
- SURFACE MOUNTED LIGHTING CONTROL PANEL, U.O.N.
- FLUSH MOUNTED LIGHTING DIMMING PANEL, U.O.N.
- FIRE RATED DOUBLE DUPLEX POKE THROUGH SEE DETAILS FOR MORE INFORMATION
- FIRE RATED SYSTEMS FURNITURE FEED POKE THROUGH SEE DETAILS FOR MORE INFORMATION

**NOTE SHEET**

A	AMPERES	INCAND	INCANDESCENT
AC	ALTERNATING CURRENT	INV.	INVERTER
AIC	AMPERES INTERRUPTING CAPACITY	J-BOX	JUNCTION BOX
AFF	ABOVE FINISHED FLOOR	KS	KNEE SPACE
AFG	ABOVE FINISHED GRADE	KVA	KILO-VOLT-AMPERE
AF	AMP FRAME/AMP FUSE	KW	KILO-WATT
AL	ALUMINUM	KWH	KILO-WATT-HOUR
ARCH	ARCHITECT OR ARCHITECTURAL	LB	POUNDS
AS	AMP SWITCH	LF	LINEAL FEET
AT	AMP TRIP	LTG	LIGHTING
ATS	AUTOMATIC TRANSFER SWITCH	LV	LOW VOLTAGE
AUX	AUXILIARY	MANUF	MANUFACTURER
AWG	AMERICAN WIRE GAUGE	MAX	MAXIMUM
BACKBD	BACKBOARD	MCB	MAIN CIRCUIT BREAKER
C	CONDUIT WITH WIRE	MC	MECHANICAL CONTRACTOR
CATV	CABLE TELEVISION	MCC	MOTOR CONTROL CENTER
CCTV	CLOSED CIRCUIT TELEVISION	MCP	MOTOR CIRCUIT PROTECTION
CB	CIRCUIT BREAKER	MECH	MECHANICAL
CLF	CURRENT LIMITING FUSE	MIN	MINIMUM
C.O.	CONDUIT ONLY WITH NYLON FULL CORD	MH	METAL HALIDE
CONTR	CONTRACTOR	MLO	MAIN LUGS ONLY
CPT	CONTROL POWER TRANSFORMER	MTG	MOUNTING
CJ	COPPER	MY	MERCURY VAPOR
CT	CURRENT TRANSFORMER	N	NEUTRAL
CW	COLD WATER	NC	NORMALLY CLOSED
D	DEDICATED OUTLET	NEC	NATIONAL ELECTRIC CODE
DC	DIRECT CURRENT	NIC	NOT IN CONTACT
DIA	DIAMETER	NL	NIGHT LIGHT
DISC	DISCONNECT	NTS	NOT TO SCALE
DI8T	DISTRIBUTION	NO	NORMALLY OPEN
DIUGS	DRAWINGS	OC	ON CENTER
EA	90-MINUTE BATTERY CONNECTED TO UNIT	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
EB	ELECTRICAL CONTRACTOR	OFOI	OWNER FURNISHED OWNER INSTALLED
ED	'IOTA' LED EMERGENCY DRIVER (IF AC DRIVER IS EXTERNAL) OR 'IOTA' MICRO INVERTER (IF DRIVER IS INTERNAL TO FIXTURE) QUANTITY OF MICRO INVERTERS PER INVERTER DIVIDED BY FIXTURE WATTAGE) PROVIDE ADDITIONAL VOLTAGE SENSING CIRCUIT FOR SWITCHED FIXTURES	P	FEDESTAL MOUNT
EG	EMERGENCY GENERATOR CONNECTION	FB	FULL BOX
EGS	EMERGENCY GENERATOR AND 90-MINUTE BATTERY BACKUP	FC	PHOTOCELL CONTROL
EF	EXHAUST FAN	FCCTC	PHOTOCELL/TIMECLOCK CONTROL
ELECT	ELECTRICAL	FF	POWER FACTOR
ELEV	ELEVATION/ELEVATOR	PH	PHASE
EMT	ELECTRO-METALIC TUBING	PV	PILOT INDICATING VALVE
EXIST	EXISTING	PL	PILOT LIGHT
EXO	EXTERNALLY OPERATED CIRCUIT BREAKER	PVC	POLYVINYL CHLORIDE
FA	FIRE ALARM	PUR	POWER
FC	FOOT CANDLE	PP	POWER POLE
FF	FURNITURE FEED	PT	POTENTIAL TRANSFORMER
FIXT	FIXTURE	QR	FIXTURE WITH QUARTZ RESTRIKE
FLUOR	FLUORESCENT	QTY	QUANTITY
FT	FEET OR FOOT	RECEPT	RECEPTACLE
FVNR	FULL VOLTAGE NON-REVERSING	REFER	REFRIGERATOR
G	GROUND BUS OR WIRE	RS	RIGID GALVANIZED STEEL
GALV	GALVANIZED	SD	SMOKE DETECTOR
GC	GENERAL CONTRACTOR	SPEC	SPECIFICATION
GD	GARBAGE DISPOSAL	SQ FT	SQUARE FEET OR SQUARE FOOT
GEN	GENERATOR	SW	SWITCH
GFI	GROUND FAULT CURRENT INTERRUPTER	SUBD	SUBBOARD
GFR	GROUND FAULT RELAY	SUWR	SWITCHGEAR
GG	GREEN GROUND WIRE	TEMP	TEMPERATURE OR TEMPORARY
GRD	GROUND	TV	TELEVISION
HID	HIGH INTENSITY DISCHARGE	TEL	TELEPHONE
HOA	HAND-OFF-AUTOMATIC	TC	TIME CLOCK
HP	HORSEPOWER	TL	TUJST LOCK
HPS	HIGH PRESSURE SODIUM	TRANSF	TRANSFORMER
HR	HEIGHT	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
HT	HOUR	TYP	TYPICAL
HV	HIGH VOLTAGE	UL	UNDERGROUND FULL SECTION UNDERWRITERS LABORATORIES UNLESS NOTED OTHERWISE UNINTERRUPTIBLE POWER SUPPLY
HZ	HERTZ	UNO	UNLESS NOTED OTHERWISE UNINTERRUPTIBLE POWER SUPPLY
IG	ISOLATED GROUND BUS OR WIRE	UPS	VOLTS
IMC	INTERMEDIATE METAL CONDUIT	V.A	VARIABLE FREQUENCY DRIVE
		VFD	VARIABLE FREQUENCY DRIVE
		WH	WATER HEATER
		WP	WEATHER PROOF DEVICE OR COVER
		X	EXISTING
		XFMR	TRANSFORMER
		XL	EXISTING TO BE RELOCATED
		XN	NEW LOCATION OF RELOCATED FIXTURE OR DEVICE
		XR	EXISTING TO BE RELOCATED

**ABBREVIATIONS**

SHEET NO.	DESCRIPTION	SHEET SCALE
E001	NOTE SHEET	NONE
E002	LIGHTING DETAIL SHEET	NONE
E101	DEMO PLAN	1/8" = 1'-0"
E201	LIGHTING PLAN	1/8" = 1'-0"
E202	EGRESS PHOTOMETRIC PLAN	1/8" = 1'-0"
E301	POWER PLAN	1/8" = 1'-0"
E302	EQUIPMENT LIST	NONE
E401	MECHANICAL PLAN	1/8" = 1'-0"
E501	SINGLELINE AND PANEL SCHEDULES	NONE
E601	DETAIL SHEET	NONE
ET01	TITLE 24	NONE

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MAY 6, 2023  
JULY 31, 2023 ADDENDUM 001

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

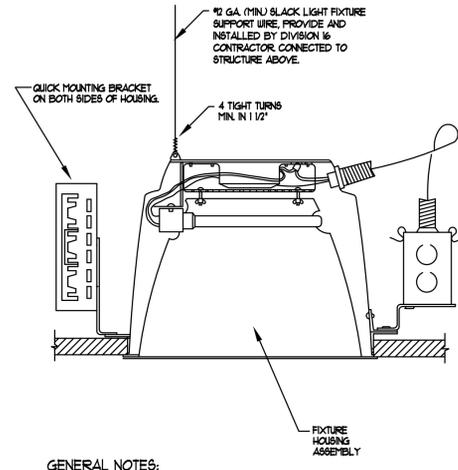
SHEET TITLE

**NOTE SHEET**

SHEET NO.

**E001**

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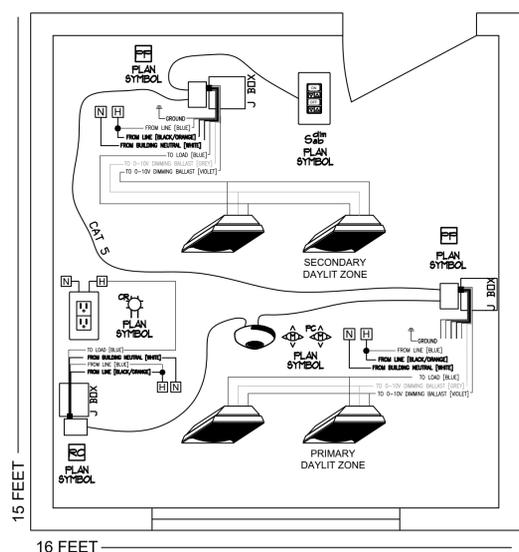


**GENERAL NOTES:**

1. LIGHT FIXTURE MUST BE CONNECTED TO (1) VERTICAL DGA WIRE ATTACHED TO OPPOSING CORNERS ALONG THE FIXTURE'S DIAGONAL. WIRES MAY BE BLACK PER CBC STANDARD NO. 250(A)5.42, 250(A)5.8
2. LIGHT FIXTURE SAFETY WIRE SHALL CONFORM WITH UBC TABLE 25-A.

16511-03A

RECESSED CAN LIGHT FIXTURE SUPPORT DETAIL 6



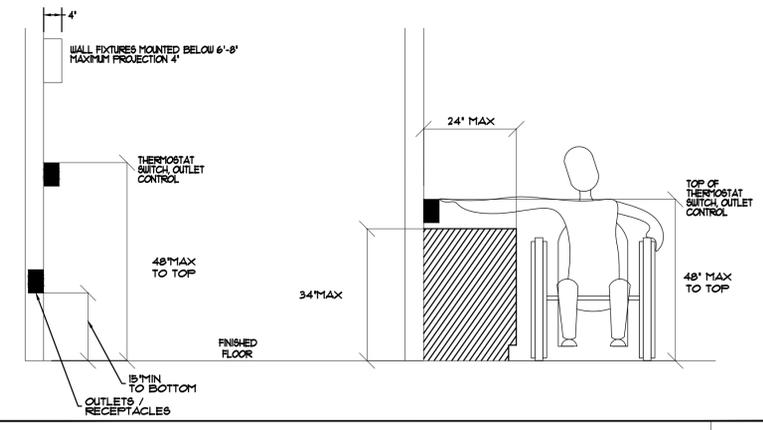
- ✓ SWITCH WITH ON/OFF RAISE/LOWER \*per section 130.1(A)
- ✓ RELAY MODULE WITH ON/OFF DIMMING 0-10V \*per section 130.1(B)
- ✓ OCCUPANCY SENSOR \*per section 130.1(C)
- ✓ DAYLIGHT HARVESTING \*per section 130.1(D)
- ✓ AUTOMATIC DEMAND RESPONSE \*per section 130.1(E)
- ✓ PLUG LOAD CONTROL (D) \*per section 130.5

PRODUCT #	DESCRIPTION
nPODM 2P DX WH	2 CHANNEL ON/OFF TOGGLE WITH DIMMING
nWSX PDT LV DX	OCCUPANCY ON/OFF SENSOR WITH DIMMING
nPP16 D	16 AMP RELAY PACK WITH 0-10V DIMMING CONTROL, CHASE NIPPLE MOUNTING
nPP16 PL T24	16 AMP RELAY PACK FOR PLUG LOAD CONTROL, CHASE NIPPLE MOUNTING
nCM PDT 9 ADCX	STANDARD RANGE 300° SENSOR-CEILING MOUNT, LOW VOLTAGE, DUAL TECHNOLOGY (PDT: PHOTOCELL W/ DIMMING (NO WIRES))
nBRG 8	nLIGHT BRIDGE
nGWY 2	nLIGHT GATEWAY INTERFACE CONTROLLER
nADR L2ADR	nLIGHT INTERFACE

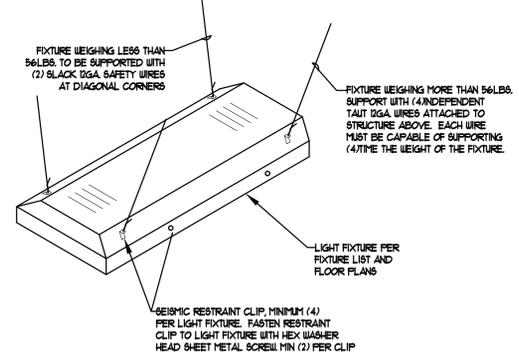
TYPICAL LIGHTING WIRING DIAGRAM 5

TYPE	MOUNTING	DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	INITIAL LUMENS	EGRESS LUMENS	COLOR TEMP	MIN. ORI	VOLTAGE	INPUT WATTS	DIMMING	NOTES
F1	RECESSED GRID	2X4 RECESSED TROFFER WITH PRISMATIC #12 PATTERN, 0.125" THICK LENS, 22 GAUGE COLD-ROLLED STEEL HOUSING WITH FLUSH DOOR IN WHITE FINISH. DAMP LISTED.	LITHONIA	ZGTL-4-48L-A12125-GZ1D-LP835	LED	4800L		3500K	80	MVOLT	35W	0-10V 100%-10%	ARCHITECT TO CONFIRM LIGHT FIXTURE
F1E	RECESSED GRID	2X4 RECESSED TROFFER WITH PRISMATIC #12 PATTERN, 0.125" THICK LENS, 22 GAUGE COLD-ROLLED STEEL HOUSING WITH FLUSH DOOR IN WHITE FINISH. DAMP LISTED.	LITHONIA	ZGTL-4-48L-A12125-GZ1D-LP835 E: E114L	LED	4800L	1400L	3500K	80	MVOLT	35W	0-10V 100%-10%	
F2	PENDANT MOUNT	4FT LED STRIPLIGHT, DAMP LISTED.	LITHONIA	ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-X	LED	3000L		3500K	80	MVOLT	25W	0-10V 100%-10%	ARCHITECT TO CONFIRM LIGHT FIXTURE
F2E	PENDANT MOUNT	4FT LED STRIPLIGHT, DAMP LISTED.	LITHONIA	ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-X E: E10VLCF	LED	3000L	1400L	3500K	80	MVOLT	25W	0-10V 100%-10%	
F3	RECESSED	6IN DIAMETER, RECESSED DOWNLIGHT, GALVANIZED STEEL MOUNTING/PLASTER FRAME, SPUN ALUMINUM REFLECTOR IN MATTIE DIFFUSE FINISH WITH MATCHING TRIM, 55 DEGREE WIDE BEAM OPTICS. DAMP LISTED.	LITHONIA	LDN6-35/15-L06-AR-LD-MVOLT-GZ1D	LED	1500L		3500K	80	MVOLT	17.5W	0-10V 100%-10%	ARCHITECT TO CONFIRM LIGHT FIXTURE
F4	SURFACE MOUNT	SURFACE MOUNTED VAPOR TIGHT LED STRIPLIGHT, WET LOCATION & VAPOR LISTED.	LITHONIA	CSVT-L48-4000LM-MVOLT-35-80CRI	LED	4000L		3500K	80	MVOLT	34W		ARCHITECT TO CONFIRM LIGHT FIXTURE
F5	UNIVERSAL	SINGLE FACE, LED EDGE LIT EXIT SIGN, CLEAR/MIRROR FACE WITH GREEN LETTERING, FACES AND CHEVRONS PER EGRESS PLANS, CONNECTED TO BUILDING EMERGENCY POWER, UL924 RATED, NICKEL-CADMIUM BATTERY WHEN REQUIRED.	TBD	MATCH EXISTING OR BUILDING STANDARD	LED			TBD		UNV	4.5W		PROVIDE UNIVERSAL MOUNTING KIT FOR TOP, END AND SIDE MOUNTING, COORDINATE ON-SITE. SIGNS OVER DOOR SHALL BE CENTERED.

FIXTURE LIST 1



ADA MOUNTING HEIGHT DETAIL 4



**GENERAL NOTES:**

1. LIGHT FIXTURE MUST BE CONNECTED TO (1) VERTICAL DGA WIRE ATTACHED TO OPPOSING CORNERS ALONG THE FIXTURE'S DIAGONAL. WIRES MAY BE BLACK PER CBC STANDARD NO. 250(A)5.42, 250(A)5.8
2. LIGHT FIXTURE SAFETY WIRE SHALL CONFORM WITH UBC TABLE 25-A.
3. INSTALL (4) METAL SCREWS, (2) ON EACH SIDE THROUGH FIXTURE INTO MAIN 1" BAR RANER.

16511-03

FIXTURE SEISMIC SUPPORT DETAIL 3

**AREA CONTROL**  
ALL LUMINAIRES SHALL BE FUNCTIONALLY CONTROLLED WITH MANUAL ON AND OFF LIGHTING CONTROLS. EACH AREA ENCLOSED BY CEILING-HEIGHT PARTITIONS SHALL BE INDEPENDENTLY CONTROLLED.

**MULTI-LEVEL LIGHTING CONTROLS**  
THE GENERAL LIGHTING OF ANY ENCLOSED AREA 1000SF OR LARGER, WITH A CONNECTED LIGHTING LOAD THAT EXCEEDS 0.9 WATTS PER SQUARE FOOT SHALL PROVIDE MULTI-LEVEL LIGHTING CONTROLS. DIMMABLE LUMINAIRES SHALL BE CONTROLLED BY A DIMMER CONTROL THAT IS CAPABLE OF CONTROLLING LIGHTING THROUGH ALL REQUIRED LIGHTING CONTROL STEPS AND THAT ALLOWS THE MANUAL ON AND OFF FUNCTIONALITY REQUIRED BY SECTION 130.1(A)

**SHUT-OFF CONTROLS**  
LUMINAIRES SHALL BE CONTROLLED WITH AN OCCUPANT SENSING CONTROL, AUTOMATIC TIME SWITCH CONTROL, OR OTHER CONTRL CAPABLE OF AUTOMATICALLY SHUTTING OFF ALL OF THE LIGHTING WHEN THE SPACE IS UNOCCUPIED.

**AUTOMATIC CONTROL DEVICES CERTIFIED**  
ALL AUTOMATIC CONTROL DEVICES SPECIFIED ARE CERTIFIED, ALL ALTERNATE EQUIPMENT SHALL BE CERTIFIED AND INSTALLED AS DIRECTED BY THE MANUFACTURER.

**OCCUPANT SENSING LIGHTING CONTROLS**  
OFFICES EQUAL OR UNDER THAN 2500SFT  
-CONFERENCE ROOMS OF ANY SIZE  
-MULTIPURPOSE ROOMS UNDER 10000SFT  
-CLASSROOMS OF ANY SIZE  
-SECONDARY SPACES  
-INDOOR PARKING AREAS  
INDOOR PARKING AREAS, INCLUDING PARKING GARAGES, AND SECONDARY SPACES ARE NEW ADDITIONS

**SECONDARY SPACES**  
UNDER THE 20% CODE, OCCUPANT SENSING CONTROLS MUST AUTOMATICALLY REDUCE LIGHTING POWER BY 50% IN THESE AREAS WHEN THEY ARE UNOCCUPIED:  
-CORRIDORS AND STAIRWELLS  
-WAREHOUSE AISLES AND OPEN AREAS  
-LIBRARY BOOK STACK AISLES 10 FT IN LENGTH AND ACCESSIBLE FROM ONLY ONE END AND THOSE 20 FT IN LENGTH AND ACCESSIBLE FROM BOTH ENDS

**INDIVIDUAL ROOMS IN AREAS LARGER THAN 1000FT MUST:**  
-INCORPORATE MULTI-LEVEL LIGHTING CONTROLS OR CONTINUOUS DIMMING, DEPENDING ON THE LAMP TYPE  
-MEET THE UNIFORMITY REQUIREMENTS IN TABLE 130.1-A  
-HAVE AT LEAST ONE OF THE FOLLOWING TYPES OF CONTROLS FOR EACH LUMINAIRE:  
-MANUAL CONTINUOUS DIMMING AND ON / OFF CONTROL (SECTION 130.1(A))  
-LUMEN MAINTENANCE (SECTION 100.1)  
-TUNING (SECTION 100.1)  
-AUTOMATIC DAYLIGHTING CONTROLS (SECTION 130.1(D))  
-DEMAND RESPONSE CONTROLS (SECTION 130.1(E))

**DAYLIT AREA CONTROL**  
ALL ROOMS WITH WINDOWS AND SKYLIGHTS, THAT ARE GREATER THAN 250 SQUARE FEET, AND THAT ALLOW FOR THE EFFECTIVE USE OF DAYLIGHT IN THE AREA SHALL BE CAPABLE OF DIMMING IN THAT DAYLIT AREA.

**DEMAND RESPONSE**  
ALL NON-RESIDENTIAL BUILDINGS LARGER 10000 SQFT BE CAPABLE OF:  
-AUTOMATICALLY RESPONDING TO A D.R. SIGNAL, SO THAT TOTAL ENERGY USE FOR LIGHTING CAN AUTOMATICALLY DROP TO A LEVEL AT LEAST 15% BELOW THE BUILDING'S MAXIMUM TOTAL LIGHTING POWER  
-LIGHTING IS REDUCED IN A MANNER CONSISTENT WITH REQUIREMENTS FOR UNIFORM ILLUMINATION LEVELS (LISTED IN TABLE 130.1-A)

**OUTDOOR LIGHTING**  
NOT IN SCOPE.

3

2022 TITLE 24 MANDATORY NOTES 2



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MAY 6, 2023

▲ JULY 31, 2023 ADDENDUM 001

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE

**LIGHTING  
DETAIL SHEET**

SHEET NO:

**E002**

**mpe consulting**  
ELECTRICAL ENGINEERS

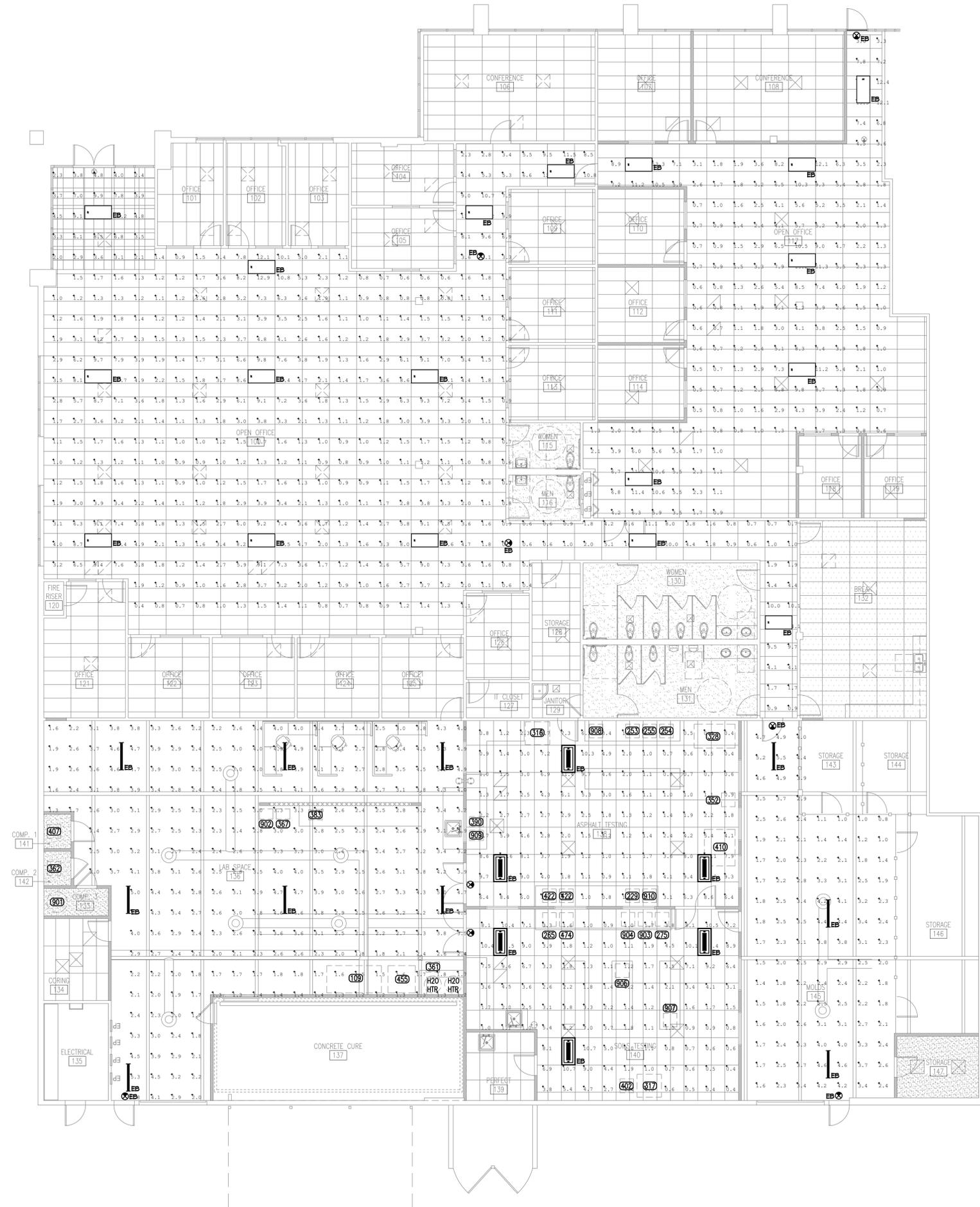
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Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ASPHALT TESTING 138 Workplane	Illuminance	Fc	3.60	13.2	0.4	9.00	33.00
LAB SPACE 138 Workplane	Illuminance	Fc	2.97	12.3	1.2	10.25	10.25
MOLDS 145 Workplane	Illuminance	Fc	2.71	5.5	0.8	3.39	6.88
OPEN OFFICE 100 Workplane	Illuminance	Fc	3.45	15.2	0.4	8.63	38.00
OPEN OFFICE 117 Workplane	Illuminance	Fc	4.05	15.4	0.9	9.10	28.89
SOIL TESTING 140 Workplane	Illuminance	Fc	3.72	13.5	0.4	9.30	33.75

EGRESS PHOTOMETRIC PLAN

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

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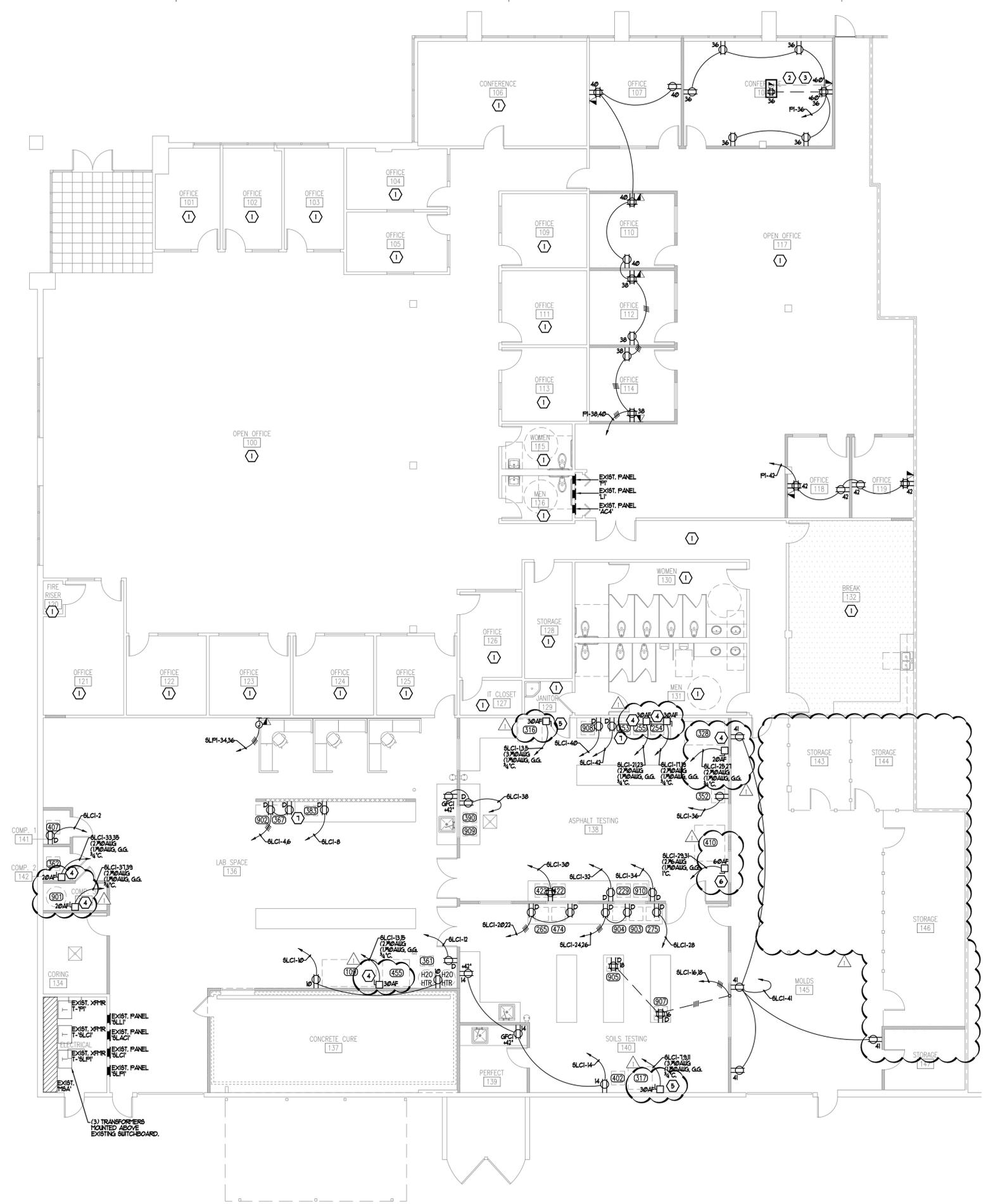
PROJECT NO:  
2022170

SHEET TITLE  
EGRESS  
PHOTOMETRIC  
PLAN

SHEET NO:

E202

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(3) TRANSFORMERS MOUNTED ABOVE EXISTING SWITCHBOARD.

- GENERAL NOTES:**
1. ARCHITECT VERIFICATION CONTRACTOR TO REVIEW ARCHITECTURAL PLANS AND CASEWORK ELEVATIONS FOR ALL FINAL DEVICE AND FIXTURE TYPE REQUIREMENTS, FINAL SWITCH LOCATIONS, AND FINAL OUTLET PLACEMENTS. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO ROUGH-IN.
  2. PROVIDE 120V CONNECTION TO DOOR HARDWARE/CONTROLLER AS REQUIRED. COORDINATE FINAL REQUIREMENTS WITH HARDWARE AND SECURITY VENDORS.
  3. ALL EXPOSED/SURFACE MOUNTED ELECTRICAL JUNCTION BOXES TO BE CAST TYPE.
  4. IF RELOCATING ANY ELECTRICAL PANELS, INTERCEPT AND EXTEND EXISTING BRANCH CIRCUITS AS NECESSARY.
  5. CONTRACTOR TO PROVIDE GFCI PROTECTION WHERE RECEPTACLES ARE INSTALLED WITHIN 6FT OF THE OUTSIDE EDGE OF ANY SINK. PROVIDE A GFCI CIRCUIT BREAKER AT PANEL BOARD FOR ALL CIRCUITS WHERE LAB SINKS ARE LOCATED AT BENCH TOP. IN ACCORDANCE WITH NEC 210.8.
  6. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL EQUIPMENT INCLUDING DEVICES, CONDUIT RIMS, ETC. WITH ARCHITECTURAL, MECHANICAL, STRUCTURAL, PLUMBING, AND ALL APPROPRIATE DISCIPLINES PRIOR TO INSTALLATION.
  7. REFER TO SINGLE LINE DIAGRAMS AND PANEL SCHEDULES FOR FURTHER ELECTRICAL SYSTEM INFORMATION.
  8. REFER TO MECHANICAL AND PLUMBING PLANS FOR FINAL LOCATIONS OF EQUIPMENT.
  9. REFER TO MECHANICAL AND PLUMBING EQUIPMENT CONNECTION SCHEDULE FOR POWER CONNECTION REQUIREMENTS AND MAXIMUM OVERCURRENT PROTECTION DEVICE.
  10. ALL ELECTRICAL EQUIPMENT, DEVICES, AND BOXES SHALL BE IN WEATHERPROOF TYPE ENCLOSURE FOR OUTDOOR APPLICATIONS.
  11. ALL MULTIWIRE BRANCH CIRCUITS (INCLUDING SYSTEM FURNITURE) SHALL BE INSTALLED WITH DEDICATED NEUTRALS ROUTED IN HORIZON TO THE PANEL FOR EACH CIRCUIT BEING UTILIZED OR HANDLE TIES IF ACCEPTABLE WITH LOCAL AHJ PER NEC 210.4(D).

- SHEET NOTES:**
1. EXISTING ELECTRICAL IN THIS AREA TO REMAIN UNCHANGED.
  2. CONFIRM ADDITIONAL REQUIREMENTS WITH TENANT AV VENDOR.
  3. PROVIDE CLOCK STYLE OUTLETS IN THIS AREA. COORDINATE ADDITIONAL REQUIREMENTS WITH TENANT AV VENDOR.
  4. NEMA 1 30A 2P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH EQUIPMENT MANUFACTURER.
  5. NEMA 1 30A 3P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH EQUIPMENT MANUFACTURER.
  6. NEMA 1 60A 2P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH EQUIPMENT MANUFACTURER.
  7. CONFIRM RECEPTACLE TYPE WITH EQUIPMENT MANUFACTURER.



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**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**POWER PLAN**

SHEET NO:  
**E301**

**mpe consulting**  
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POWER PLAN

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Name	Model	Asset Identification Number	Location	Display Picture	Serial Number	Electrical Requirements	Ventilation Requirements	Footing Requirements	Other Requirements
COX & Sons Kneading Compactor	CS 1000-B	316	San Diego Office		006-86	240v, 30A	No	No	43" L x 40" W x 78" H
COX & Sons Kneading Compactor	CS 1000-B	317	San Diego Office			240v, 30A	No	No	43" L x 40" W x 78" H
HUMBOLDT Pneumatic Direct Shear	HM-2560A-3F	285	San Diego Office		1302339	120v, 20A	No	No	Pneumatic
HUMBOLDT Cosmatic IPC	HM-2470A-3F	474	San Diego Office		1210509	120v, 20A	No	No	Pneumatic
Quincy Lab Oven	400C	275	San Diego Office		04-003732	115V, 15A	No	No	
Test Mark Compaction Machine	CM-0000-CBR	407	San Diego Office		25804	115V, 15A	No	Anchored to slab	
HUMBOLDT Master Loader	HM-3000-3F	422	San Diego Office		509289	115V, 15A	No	No	
HUMBOLDT Master Loader	HM-3000-3F	422	San Diego Office		1357388	115V, 15A	No	No	
Test Mark Compaction Machine	CM-400P-SD	109	San Diego Office		30305	115V, 15A	No	Anchored to slab	
FORNEY Rebar & Compression Machine	LT-900	455	San Diego Office		55140	240V, 30A	No	Yes, 4L x 4W x 3D	97" tall
Gison Agglator	GS-18	229	San Diego Office		D-584	115V, 20A	No	Anchored to Bench/Table	

Supremecold U.S.A. Rebar Bender	RB-32	361	San Diego Office		PENDING	110V, 20A	No	No	
Quincy Lab Oven	21-350	367	San Diego Office		823ERS-00225	120v, 20A	No	No	
NCAT Asphalt Content Furnace	F8500-30	254	San Diego Office		1-275056+12	240V, 30A	Yes	No	Exhaust vent Not to exceed 10' minimum 3" I.D. stainless steel tubing
NCAT Asphalt Content Furnace	F8500-30	255	San Diego Office			240V, 30A	Yes	No	Exhaust vent Not to exceed 10' minimum 3" I.D. stainless steel tubing
Quincy Lab Oven	31-350S	353	San Diego Office			115V, 20A	No	No	
Bellevue Lab Oven	SA-350	328	San Diego Office		610194	230V, 20A	Yes	No	78" L x 41" W x 75" H
Fine Gyatory Compactor	AFC2AS	359	San Diego Office		3254	115V, 12A	No	No	
Gison Testing Screen	TS-1	407	San Diego Office		13881	120v, 20A	No	Anchored to slab	
TROXLER Hamburg Wheel Tracker	FMV Wheel Tracker	410	San Diego Office		57548	240V, 50A	No	Anchored to slab	Pneumatic, 64" L x 54" W x 85" H, requires water input 86" & 60"
LA Rattler	B0890-EX1010	359	San Diego Office		H-73-39944-18	220V, 20A	No	Anchored to slab	
Air Compressor	Granger SS3L3	901	San Diego Office		CBV85873	240V, 20A		Anchored to concrete	80 Gallon

Proctor Machine	Compactor M100-2	907	San Diego Office		1243	120v, 20A	No	Anchored to concrete	
Tri-Flex 2 Master Control Panel	25-0696/02	903	San Diego Office		H130701		No	No	
Tri-Flex 2 Auxiliary Control Panel	25-0699	904	San Diego Office		H121202		No	No	
Scale	AS3102	905	San Diego Office		8028171047	120v, 20A	No	No	
Scale	AX8201/E	906	San Diego Office		5842619678	120v, 20A	No	No	
Water Bath	97014-16	907	San Diego Office			120v, 20A	No	No	
Scale	GP-20K	485	San Diego Office		14211937	120v, 20A	No	No	
Scale	Explorer EDP 110	908	San Diego Office		F173120152267	120v, 20A	No	No	
Specific Gravity Tank	SGA-122	909	San Diego Office				No	Needs a base/stand	connected to drain
Scale	EPI2001	910	San Diego Office		112715026	120v, 20A	No	No	
Solis Microwave	EM525AJW-P1	910	San Diego Office		EB0236858101690911103	120v, 20A	No	No	
Scale	HW-60KGL	933	San Diego Office		M7307199	120v, 20A	No	No	

EQUIPMENT LIST



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**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**EQUIPMENT LIST**

SHEET NO:

**E302**

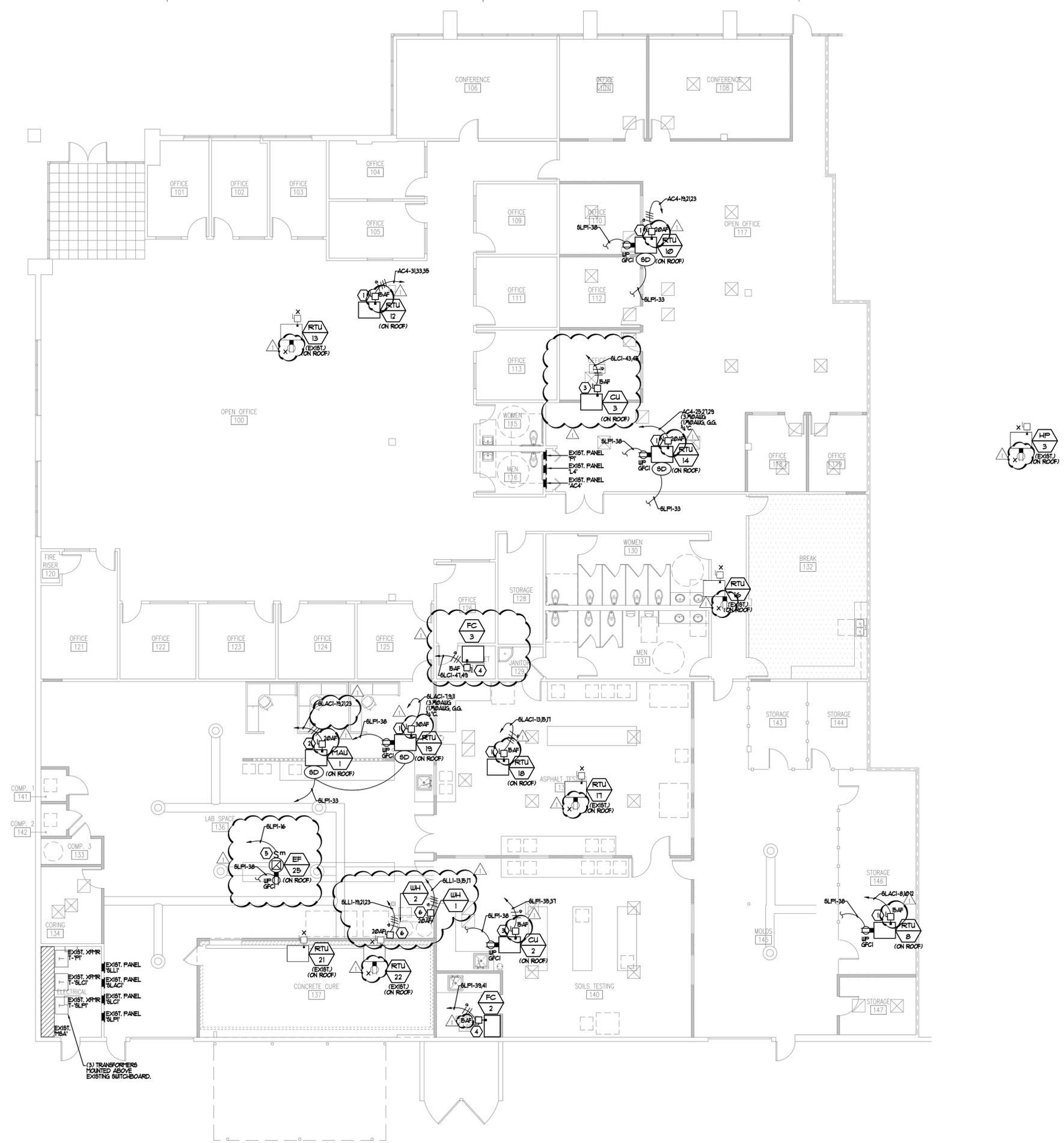
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**ROOF NOTES:**

1. PROVIDE LIQUID TIGHT FINAL CONNECTION TO MECHANICAL UNIT.
2. COORDINATE FINAL LOCATION OF ALL ELECTRICAL FEED LOCATIONS WITH MECHANICAL. ROOF PENETRATIONS TO BE LOCALIZED TO FEED LOCATIONS. ROOF MOUNTED CONDUIT AND SLEEPER ARE NOT TO BE INSTALLED.
3. ALL STARTERS ARE FULL VOLTAGE NON-REVERING UNLESS NOTED OTHERWISE. STARTERS TO BE PROVIDED WITH HOA AND 24V CONTROL TRANSFORMER.
4. COORDINATE FINAL CONTROL POWER AND CONDUIT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
5. PROVIDE ROOF PENETRATION AND FLASHING PER ARCHITECTURAL ROOFING DETAILS. COORDINATE ALL ROOF PENETRATIONS WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
6. COORDINATE EXACT WEIGHT OF ALL ELECTRICAL EQUIPMENT OVER 500LBS WITH STRUCTURAL ENGINEER.

**GENERAL NOTES:**

1. ARCHITECT VERIFICATION CONTRACTOR TO REVIEW ARCHITECTURAL PLANS AND CASEWORK ELEVATIONS FOR ALL FINAL DEVICE AND FIXTURE TYPE REQUIREMENTS, FINAL SWITCH LOCATIONS, AND FINAL OUTLET PLACEMENTS. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO ROUGH-IN.
2. PROVIDE 120V CONNECTION TO DOOR HARDWARE/CONTROLLER AS REQUIRED. COORDINATE FINAL REQUIREMENTS WITH HARDWARE AND SECURITY VENDORS.
3. ALL EXPOSED/SURFACE MOUNTED ELECTRICAL JUNCTION BOXES TO BE CAST TYPE.
4. IF RELOCATING ANY ELECTRICAL PANELS, INTERCEPT AND EXTEND EXISTING BRANCH CIRCUITS AS NECESSARY.
5. CONTRACTOR TO PROVIDE GFCI PROTECTION WHERE RECEPTACLES ARE INSTALLED WITHIN 6FT OF THE OUTSIDE EDGE OF ANY SINK. PROVIDE A GFCI CIRCUIT BREAKER AT PANEL BOARD FOR ALL CIRCUITS WHERE LAB SINKS ARE LOCATED AT BENCH TOP. IN ACCORDANCE WITH NEC 210.8.
6. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL EQUIPMENT INCLUDING DEVICES, CONDUIT RIMS, ETC. WITH ARCHITECTURAL, MECHANICAL, STRUCTURAL, PLUMBING, AND ALL APPROPRIATE DISCIPLINES PRIOR TO INSTALLATION.
7. REFER TO SINGLE LINE DIAGRAMS AND PANEL SCHEDULES FOR FURTHER ELECTRICAL SYSTEM INFORMATION.
8. REFER TO MECHANICAL AND PLUMBING PLANS FOR FINAL LOCATIONS OF EQUIPMENT.
9. REFER TO MECHANICAL AND PLUMBING EQUIPMENT CONNECTION SCHEDULE FOR POWER CONNECTION REQUIREMENTS AND MAXIMUM OVERCURRENT PROTECTION DEVICE.
10. ALL ELECTRICAL EQUIPMENT, DEVICES, AND BOXES SHALL BE IN WEATHERPROOF TYPE ENCLOSURE FOR OUTDOOR APPLICATIONS.
11. ALL MULTIFURC BRANCH CIRCUITS (INCLUDING SYSTEM FURNITURE) SHALL BE INSTALLED WITH DEDICATED NEUTRALS ROUTED IN HOVERIN TO THE PANEL FOR EACH CIRCUIT BEING UTILIZED OR HANDLE TIES IF ACCEPTABLE WITH LOCAL AHJ PER NEC 210.4(d).

**SHEET NOTES:**

1. NEMA 3R 30A 3P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH MECHANICAL.
2. NEMA 3R 60A 3P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH MECHANICAL.
3. NEMA 3R 30A 2P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH MECHANICAL.
4. NEMA 1 30A 2P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH MECHANICAL.
5. NEMA 3R TOGGLE FRACTIONAL HORSEPOWER RATED MANUAL MOTOR STARTER. PROVIDE WITH THERMAL OVERLOADS. TO BE INTERLOCKED WITH EXHAUST HOOD AND MAIN. COORDINATE FINAL CONTROLS WITH MECHANICAL.
6. NEMA 1 30A 3P FUSED DISCONNECT. COORDINATE FINAL FUSE SIZE WITH PLUMBING.



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**ATLAS**  
 9085-B AERO DRIVE  
 SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**MECHANICAL PLAN**

SHEET NO:  
**E401**

**mpe consulting**  
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MECHANICAL PLAN

SCALE:  
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**ATLAS**  
9085-B AERO DRIVE  
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PROJECT NO:  
2022170  
SHEET TITLE  
TITLE 24

SHEET NO:  
ET01

73-96

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STATE OF CALIFORNIA  
**Indoor Lighting**  
CERTIFICATE OF COMPLIANCE  
Project Name: ATLAS Report Page: (Page 3 of 7)  
Project Address: 9085-B AERO DRIVE Date Prepared: 7/31/2023

**F. INDOOR LIGHTING FIXTURE SCHEDULE**  
This table includes all planned permanent and portable lighting other than dwelling unit/hotel/motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. (If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.)

Designed Wattage: Conditioned Spaces									
01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change	Watts per luminaire <sup>2</sup>	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)(3) / 170.2(a)(2)	Design Watts	Field Inspector
F1/F1E	F1/F1E - 35W LED	No	NA	35	Mfr Spec	35	No	1,225	Pass
F2/F2E	F2/F2E - 25W LED	No	NA	25	Mfr Spec	53	No	1,325	Pass
F3	F3 - 17.5W LED	No	NA	17.5	Mfr Spec	3	No	52.5	Pass
F4	F4 - 34W LED	No	NA	34	Mfr Spec	4	No	136	Pass
Total Designed Watts: CONDITIONED SPACES									2,738

<sup>2</sup>FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)(4) / 170.2(e)(2) is adjusted to be 75% / 80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

<sup>3</sup>Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

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**C. COMPLIANCE RESULTS**  
If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)					Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)			Compliance Results	
01	02	03	04	05	06	07	08	09	
Complete Building 140.6(c)(1)	Area Category 140.6(c)(2) / 170.2(e)(4)	Area Category Additional 140.6(c)(2) / 170.2(e)(4)Av (+)	Tailored 140.6(c)(3) / 170.2(e)(4)B (+)	Total Allowed (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)(2) / 170.2(e)(1)B (-)	Total Adjusted (Watts) *Includes Adjustments	05 must be >= 08 140.6 / 170.2(e)	
(See Table I)	(See Table I)	(See Table I)	(See Table K)	6,788.6	2,738	0	2,738	COMPLIES	
Conditioned					Controls Compliance (See Table H for Details)			COMPLIES	
Unconditioned					Rated Power Reduction Compliance (See Table Q for Details)			COMPLIES	

**D. EXCEPTIONAL CONDITIONS**  
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

**E. ADDITIONAL REMARKS**  
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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**H. INDOOR LIGHTING CONTROLS (Not including PAFs)**  
This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls		
01	02	03
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)(4)C	Field Inspector
Required >= 4,000W subject to multilevel	See Area/Space Level Controls	Pass
		Fail

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**I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS**

STORAGE/COMP	All Other Space Types	0.4	881	352.4	No	No
LAB AREAS	Laboratory Area, Scientific	0.9	6,387	5,748.3	No <td>No</td>	No
TOTALS:			8,326	6,788.6	See Tables J, or P for detail	

**J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM**  
This section does not apply to this project.

**K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE**  
This section does not apply to this project.

**L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY**  
This section does not apply to this project.

**M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING**  
This section does not apply to this project.

**N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS**  
This section does not apply to this project.

**O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE**  
This section does not apply to this project.

**P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))**  
This section does not apply to this project.

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**Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS**  
This section does not apply to this project.

**R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS**  
This section does not apply to this project.

**S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)**  
This section does not apply to this project.

**T. DWELLING UNIT LIGHTING**  
This section does not apply to this project.

**U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-E - Must be submitted for all buildings	
	OFFICE ; CONFERENCE; STORAGE; LABE AREA; Whole Building Demand Response;

**V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	

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**A. GENERAL INFORMATION**

01 Project Location (city)	SAN DIEGO	04 Total Conditioned Floor Area (ft <sup>2</sup> )	8,326
02 Climate Zone	7	05 Total Unconditioned Floor Area (ft <sup>2</sup> )	0
03 Occupancy Types Within Project (select all that apply):		06 # of Stories (Habitable Above Grade)	
• Office • All Other Occupancies		1	

**B. PROJECT SCOPE**  
This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)(2) / 180.2(b)(4) for alterations.

Scope of Work	Conditioned Spaces	Unconditioned Spaces
01	02	03
My Project Consists of (check all that apply):	Calculation Method	Calculation Method
<input type="checkbox"/> New Lighting System	Area (ft <sup>2</sup> )	Area (ft <sup>2</sup> )
<input type="checkbox"/> New Lighting System - Parking Garage		
<input checked="" type="checkbox"/> Altered Existing System	Area Category Method	Area Category Method
	8326	0
Total Area of Work (ft <sup>2</sup> )		

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**H. INDOOR LIGHTING CONTROLS (Not including PAFs)**  
Area Level Controls

04	05	06	07	08	09	10	11	12
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)(4)A	Multi-Level Controls 130.1(b) / 160.5(b)(4)B	Shut-Off Controls 130.1(c) // 160.5(b)(4)C	Primary/Sky Light Daylighting 130.1(d) / 160.5(b)(4)D	Secondary Daylighting 140.6(a)(1) / 170.2(e)(2)A	Interlocked Systems 140.6(a)(2) / 170.2(e)(1)B	Field Inspector
OFFICE	Office (>250 square feet)	Readily Accessible	Dimmer	See Building Level	Included	Included	No	Pass
CONFERENCE	Convention, Conference, Multipurpose and Meeting Center	Readily Accessible	Dimmer	See Building Level	Included	Included	No	Pass
STORAGE	All Other Space Types	Readily Accessible	Dimmer	See Building Level	Included	Included	No	Pass
LABE AREA	Laboratory Area, Scientific	Readily Accessible	Dimmer	See Building Level	Included	Included	No	Pass
13 Plan Sheet Showing Daylit Zones:								

**I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS**  
Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(e) are being used.

Conditioned Spaces						
01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft <sup>2</sup> )	Area (ft <sup>2</sup> )	Allowed Wattage (Watts)	Additional Allowance / Adjustment	PAF
OFFICE	Office (>250 square feet)	0.6	704	422.4	No	No
CONFERENCE	Convention, Conference, Multipurpose and Meeting Center	0.75	354	265.5	No	No

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**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: DAN MAYORGAS  
Company: MPE CONSULTING INC.  
Address: 10807 THORNMINT RD SUITE 200  
City/State/Zip: SAN DIEGO CA 92127  
Phone: 858-643-4445

Registration Date: 2023-07-31  
Signature: [Signature]

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 1 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 2, and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: DAN MAYORGAS  
Company: MPE CONSULTING INC.  
Address: 10807 THORNMINT RD SUITE 200  
City/State/Zip: SAN DIEGO CA 92127  
Phone: 858-643-4445

Date Signed: 2023-07-31  
Signature: [Signature]

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
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## GREEN CODE NOTES

1. PROVIDE LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 0.4 GALLONS PER MINUTE (GPM). LAVATORY FAUCETS IN PUBLIC RESTROOMS SHALL BE THE SELF CLOSING TYPE AND SHALL NOT EXCEED A WATER FLOW OF 0.20 GAL PER USE.
2. PROVIDE SHOWER HEADS WITH A MAXIMUM FLOW OF 1.5 GALLONS PER MINUTE (GPM).
3. PROVIDE KITCHEN FAUCETS WITH A MAXIMUM FLOW OF 1.5 GALLONS PER MINUTE (GPM).
4. WATER CLOSETS SHALL BE 1.28 GALLONS PER FLUSH (GPF) MAX.
5. URINALS SHALL BE 0.125 GALLONS PER FLUSH (GPF) MAX.
6. PLUMBING FIXTURES AND FITTINGS WILL BE WATER CONSERVING AND WILL COMPLY WITH THE 2022 CGBSC SEC.5.303.3.
7. PER CGBSC SEC 5.303.6 PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC) AND TABLE 1701.1 OF THE CPC
8. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL MEET THE STANDARDS REFERENCED IN CAL GREEN SECTION 5.303.3.

## SHEET INDEX

P001	PLUMBING TITLE SHEET
P002	PLUMBING SCHEDULES
P003	PLUMBING DETAILS
P004	PLUMBING SPECIFICATIONS
P005	PLUMBING SPECIFICATIONS
P006	PLUMBING SPECIFICATIONS
P211	PLUMBING FLOOR PLAN
P212	PLUMBING FLOOR PLAN

## PLUMBING NOTES

1. ALL WORK SHALL CONFORM TO THE 2022 CALIFORNIA PLUMBING CODE (CPC), 2022 CALIFORNIA MECHANICAL CODE (CMC), 2022 CALIFORNIA BUILDING CODE (CBC), 2022 CALIFORNIA GREEN CODE, AND 2022 CALIFORNIA FIRE CODE.
2. THE WORK SHOWN ON THESE PLANS IS DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS ALONG WITH THE PLANS OF OTHER TRADES PRIOR TO BID TO UNDERSTAND THE COMPLETE SCOPE OF WORK.
3. EQUIPMENT LOCATIONS AS SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS AND COORDINATE WITH OTHER TRADES PRIOR TO INSTALLATION OF ANY WORK. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK, INCLUDING STRUCTURAL MEMBERS, POINTS OF CONNECTION (POC'S), INVERT ELEVATIONS, UTILITY LOCATIONS, AND VOLTAGES. CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO START OF WORK OR ORDERING OF ANY EQUIPMENT.
4. ALL EQUIPMENT AND MATERIAL INSTALLATIONS SHALL CONFORM TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND SHALL PROVIDE A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
5. CONTRACTOR SHALL VERIFY ALL EQUIPMENT AND FIXTURE INSTALLATION LOCATIONS AND HEIGHTS WITH ARCHITECTURAL DRAWINGS.
6. ALL PLUMBING LINES SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE WHEREVER POSSIBLE.
7. ALL PLUMBING SYSTEMS SHALL BE SEISMICALLY BRACED PER CBC.
8. VALVES AND PLUMBING EQUIPMENT REQUIRING SERVICE OR MAINTENANCE SHALL BE INSTALLED READILY ACCESSIBLE. WHERE NOT READILY ACCESSIBLE, AN ACCESS PANEL SHALL BE PROVIDED.
9. THE FIRST 8 LINEAR FEET OF ALL CONDENSATE DRAIN PIPING INSTALLED INDOORS SHALL BE INSULATED.
10. WASTE, VENT, STORM DRAIN, AND CONDENSATE DRAIN PIPING SHALL SLOPE AT 1/8" PER FT MINIMUM, UNLESS NOTED OTHERWISE.
11. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH SECTIONS 701.0 AND 903.0 OF THE CALIFORNIA PLUMBING CODE.
12. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
13. ALL HOSE BIBBS SHALL HAVE PERMANENTLY MOUNTED VACUUM BREAKERS..
14. INSULATING MATERIALS INSTALLED SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION TO MEET C.E.C. ENERGY EFFICIENCY STANDARDS (EES) SECTIONS 118, 123, & 124.
15. LAVATORY FAUCETS IN RESTROOMS SHALL BE THE SELF CLOSING TYPE AND SHALL NOT EXCEED A WATER FLOW OF 0.2 GAL/CYCLE.
16. A MAINTENANCE LABEL SHALL BE AFFIXED TO ALL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNER'S USE. THE LABEL SHALL INDICATE ROUTINE MAINTENANCE REQUIRED OR SHALL REFERENCE BY NUMBER WHICH OPERATING MANUALS EXPLAIN THE MAINTENANCE REQUIREMENTS IN GREATER DETAIL.
17. ALL EQUIPMENT SHALL COMPLY WITH THE STATE OF CALIFORNIA CEC. COMPLIANCE CERTIFICATES SHALL BE PROVIDED WITH EQUIPMENT SUBMITTALS.
18. FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS.
19. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT (OTHER THAN THOSE LISTED IN INFORMATION BULLETIN 103 OF THE SAN DIEGO MUNICIPAL CODE).
20. WHERE NONMETALLIC PIPING PENETRATES AREA SEPARATION WALLS, THE PIPE SECTION PASSING THRU THE WALLS AND FIXTURE CONNECTIONS THERETO SHALL BE OF METAL ONLY. FIRE STOPPING SHALL BE PER CBC SECTION 706.9. NO RANGE HOOD VENTS, DRYER VENTS, COMBUSTION VENTS, OR HEATING DUCTS ARE PERMITTED IN AREA SEPARATION WALLS.
21. WATER HEATERS SHALL COMPLY WITH 2022 CPC SECTION 608.3 FOR THERMAL EXPANSION REQUIREMENTS. PROVIDE EXPANSION TANK OR OTHER APPROVED METHOD OF RELIEVING PRESSURE. A MINIMUM OF DISTANCE OF 4" MUST BE MAINTAINED ABOVE THE CONTROLS WITH THE LOWER SEISMIC STRAP OF THE WATER HEATER.
22. STATE & HEALTH SAFETY CODE SEC 17921.9 BANS THE USE OF CHLORINATED POLYVINYL CHLORIDE (CPVC) OR "PEX" PIPING FOR INTERIOR WATER SUPPLY PIPING.
23. ALL FLOOR SINKS SHALL BE USED FOR AIR CONDITIONING CONDENSATE, P&T RELIEF VALVES, AND EQUIPMENT DRAINS ONLY. NO OTHER USES SHALL BE ALLOWED UNLESS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
24. EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES ABOVE THE FLOOD RIM ELEVATION OF THE FIXTURE SERVED BEFORE OFFSETTING HORIZONTALLY OR BEING CONNECTED TO ANY OTHER VENT.
25. EACH FAUCET SHALL NOT EXCEED A WATER FLOW OF 1.8 GPM.
26. INSTALLATION OF SOIL AND DRAIN PIPES IN FOOD HANDLING ESTABLISHMENTS WILL COMPLY WITH SECTION 317.0 CPC.
27. EACH FIXTURE TRAP SHALL HAVE A PROTECTING VENT SO LOCATED THAT THE DEVELOPED LENGTH OF THE TRAP ARM FROM THE TRAP WEIR TO THE INNER EDGE OF THE VENT SHALL BE WITHIN THE DISTANCE GIVEN IN TABLE 1002.2 CPC, BUT IN NO CASE LESS THAN TWO TIMES THE DIAMETER OF THE TRAP ARM.
28. EACH PLUMBING FIXTURE THAT CONNECTS TO THE SANITARY SEWER SYSTEM SHALL BE PROPERLY TRAPPED AND VENTED IN ACCORDANCE WITH THE 2022 CALIFORNIA PLUMBING CODE.
29. WATER HEATER SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION PER SECTION 507.2 CPC.
30. VENTING FOR ISLAND SINKS SHALL COMPLY WITH SEC 909.0 CPC.

## PLUMBING LEGEND

SYMBOL	ABBR.	DESCRIPTION
	W./S.	NEW WASTE OR SOIL PIPING BELOW GRADE
	W./S.	NEW WASTE OR SOIL PIPING ABOVE GRADE.
	V	VENT PIPING
	W./S.	EXISTING WASTE OR SOIL PIPING BELOW GRADE.
	CW	COLD WATER PIPING
	HW	HOT WATER PIPING
	HWR	HOT WATER RETURN PIPING
	COND.	CONDENSATE DRAIN PIPING
	S.O.V.	SHUT-OFF VALVE
	PV	PLUG VALVE
	CV	CHECK VALVE
	PRV	PRESSURE REDUCING VALVE
		DIRECTION OF FLOW
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
	POC	POINT OF CONNECTION
	VTR	VENT THRU ROOF
	B.V.	BALANCING VALVE
	WHA	WATER HAMMER ARRESTOR
	TP	TRAP PRIMER LINE

## PIPE MATERIALS SCHEDULE

<b>SANITARY WASTE &amp; VENT LINES:</b> (ABOVE AND BELOW GRADE)	DWV - ABS. BELOW GRADE WASTE SHALL BE LABELED EVERY 5 FT.
<b>VENT PIPING:</b>	SAME AS SANITARY WASTE.
<b>DOMESTIC COLD &amp; HOT WATER:</b> (ABOVE GRADE)	TYPE "L" HARD DRAWN COPPER PIPE AND FITTINGS WITH LEAD FREE SOLDER JOINTS. INSULATE HOT WATER PIPING WITH FIBERGLASS INSULATION HAVING A MAXIMUM CONDUCTIVITY OF 0.29 (BTU*IN/HR*SQFT*DEGF) PIPES UP TO 1" DIAMETER, USE 1" THICK INSULATION PIPES 1-1/4" TO 1-1/2" USE 1-1/2" THICK INSULATION).  DOMESTIC HOT WATER PIPING SHALL BE INSULATED PER SECTION 609.11 CPC.

## GENERAL NOTE

ALL PLUMBING FIXTURES, EQUIPMENT, AND TRIM SHALL BE OF LEAD FREE CONSTRUCTION COMPLYING WITH AB-1953 STANDARDS.

## PLUMBING SCOPE OF WORK

SECOND GENERATION TENANT IMPROVEMENT PROJECT - REINSTALL FIXTURES IN RESTROOMS AND PROVIDE (3) NEW SINKS



**SCHALL ARCHITECTS**

5173 WARING ROAD, SUITE 91  
SAN DIEGO, CA 92120-2705  
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APRIL 12, 2023

▲ JULY 31, 2023 CORRECTIONS

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**PLUMBING  
TITLE  
SHEET**

SHEET NO:

**P001**

**PLUM  
ENGINEERING  
INC.**  
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### FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	MINIMUM PIPE CONNECTION				MANUFACTURER / MODEL NUMBER	REMARKS
		C.W.	H.W.	WASTE	VENT		
WC-1	WATER CLOSET	3/4"	-	4"	2"	EXISTING REMOVE AND REINSTALL FOR NEW FLOORING	
L-1	LAVATORY- TOP MOUNT	1/2"	1/2"	2"	2"	EXISTING REMOVE AND REINSTALL FOR NEW FLOORING	EACH FAUCET SHALL NOT EXCEED A WATER FLOW OF 0.2 GPM
S-1	SINK- BREAK ROOM COUNTER MOUNT	1/2"	1/2"	2"	2"	ELKAY DLR191910 SINGLE BOWL LAUNDRY SINK W/ CHICAGO 786-245 ABCP DECK MOUNT FAUCET AND PERMANENT VACUUM BREAKER	EACH FAUCET SHALL NOT EXCEED A WATER FLOW OF 1.5 GPM
FD-1	FLOOR DRAIN	-	-	2"	2"	SQUARE, BRUSHED STAINLESS STEEL AND TRAP PRIMER CONNECTION.	
FS-1	FLOOR SINK	-	-	2"	2"	ZURN 8"X8" FLOOR SINK WITH 6" DEPTH, 3/4" GRATE, TRAP PRIMER CONNECTION.	
EEW-1	EMERGENCY EYE WASH	-	-	-	-	WALL MOUNTED SELF CONTAINED STATION.	

### PLUMBING EQUIPMENT SCHEDULE

MARK	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER	REMARKS
WH 1	WATER HEATER ELECTRIC	LAB 136	RHEEM ELD-80, 4.5KW, 460/3/60, 80 GALLON, WITH RE-CIRCULATION PUMP.	ROUTE 3/4" P&T TO FLOOR SINK
WH 2	WATER HEATER ELECTRIC	LAB 136	RHEEM ELD-80, 4.5KW, 460/3/60, 80 GALLON, WITH RE-CIRCULATION PUMP. FOR USE WITH TENANT RADIANT HEATING SYSTEM.	ROUTE 3/4" P&T TO FLOOR SINK



**SCHALL ARCHITECTS**

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APRIL 12, 2023

▲ JULY 31, 2023 CORRECTIONS

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

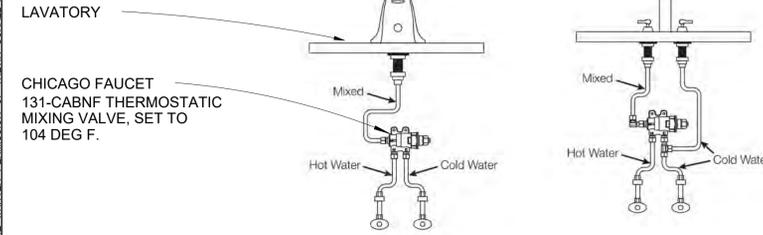
SHEET TITLE  
**PLUMBING SCHEDULES**

SHEET NO:

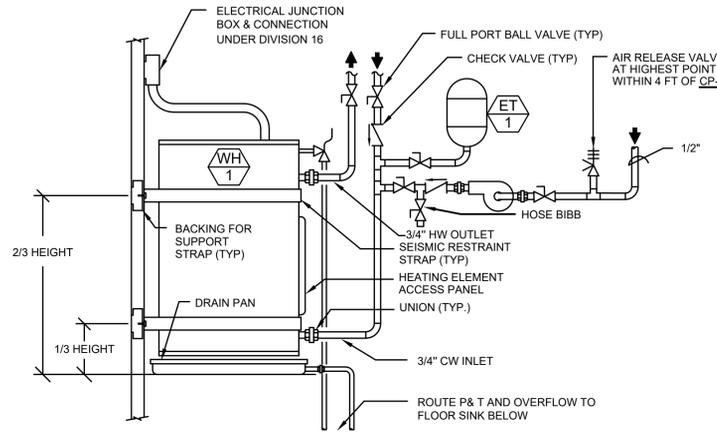
**P002**



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NOTE:  
MIXING VALVE SHALL BE LEAD FREE AND COMPLY WITH ASSE 1070



"WATER HEATER SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION PER SECTION 507.2 CPC."

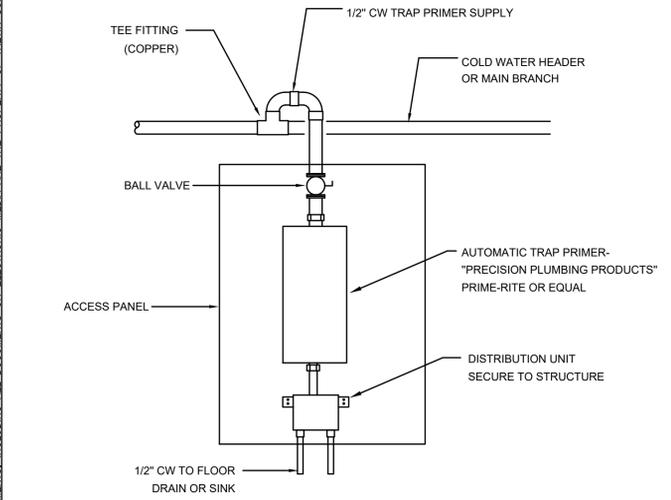
PROVIDE AN EXPANSION TANK OR OTHER APPROVED METHOD OF RELIEVING PRESSURE PER SECTION 608.3 OF 2016 CPC.

WATER HEATER SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION PER 507.2 CPC.

THERMOSTATIC MIXING VALVE DETAIL

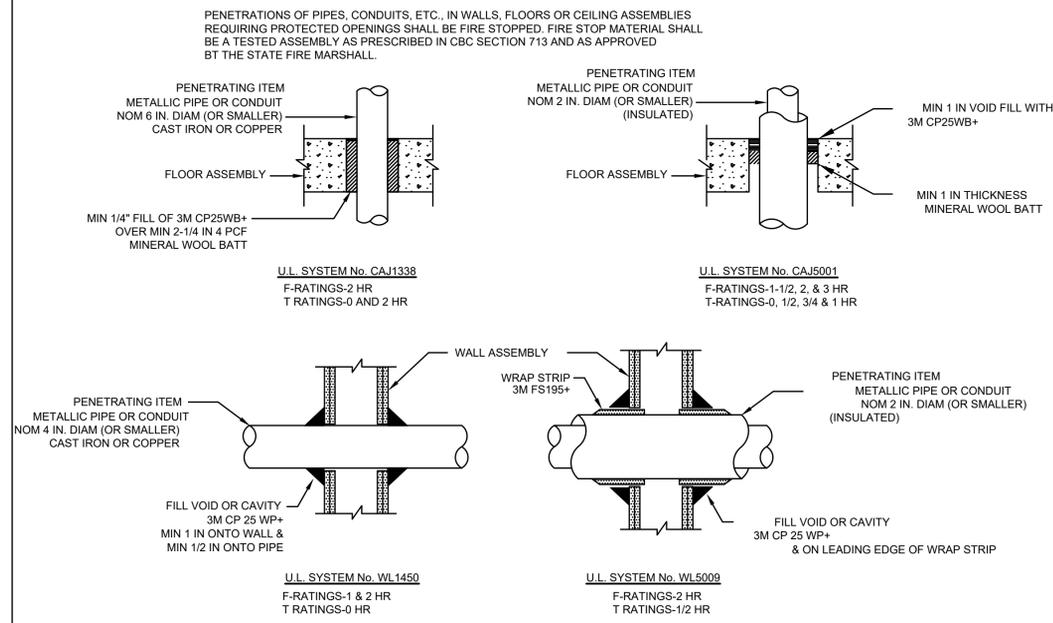
2 WATER HEATER DETAIL (WITH CIRC PUMP)

SCALE NONE 1



TRAP PRIMER DETAIL

SCALE NONE 4



4 THRU PENETRATION DETAIL - METAL PIPE

SCALE NONE 3

SCHEDULE OF SPECIAL INSPECTIONS	
COMPONENT	ASTM REFERENCE
THROUGH-PENETRATIONS, MEMBRANE PENETRATIONS FIRESTOPS, FIRE-RESISTANT JOINTS SYSTEMS AND PERIMETER FIRE BARRIER SYSTEMS	E 814



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APRIL 12, 2023

1 JULY 31, 2023 CORRECTIONS

**ATLAS**  
9085-B AERO DRIVE  
SAN DIEGO, CALIFORNIA 92123

PROJECT NO:  
2022170

SHEET TITLE  
**PLUMBING DETAILS**

SHEET NO:

**P003**

**PLUM ENGINEERING INC.**  
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PLUMBING

PART 1 GENERAL

1.01 WORK INCLUDED

A. FURNISH ALL LABOR, MATERIALS, SERVICES, TESTING, TRANSPORTATION AND EQUIPMENT NECESSARY FOR THE PROPER AND SATISFACTORY INSTALLATION OF THE PLUMBING AND PIPING AS INDICATED ON DRAWINGS AND SPECIFIED HEREIN. WORK MATERIALS AND EQUIPMENT NOT INDICATED OR SPECIFIED WHICH IS NECESSARY FOR THE COMPLETE AND PROPER OPERATION OF THE WORK OF THIS SECTION IN ACCORDANCE WITH THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS SHALL BE PROVIDED AND INCORPORATED AT NO ADDITIONAL COST TO THE OWNER.

1.02 QUALITY ASSURANCE

A. CODE REQUIREMENTS: ALL WORK COVERED BY THIS SECTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE STATE DIVISION OF INDUSTRIAL SAFETY, CALIFORNIA PLUMBING CODE, CITY BUILDING DEPARTMENT, CALIFORNIA FIRE CODE, CALIFORNIA GREEN CODE AND THE REQUIREMENTS OF ANY OTHER LEGALLY CONSTITUTED BODY HAVING JURISDICTION THEREOF.

B. NOTHING IN THE SPECIFICATIONS OR DRAWINGS SHALL BE CONSTRUED TO PERMIT DEVIATION FROM THE REQUIREMENTS OF GOVERNING CODES UNLESS APPROVED FOR SAID DEVIATION HAS BEEN OBTAINED FROM THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION AND FROM THE OWNER'S REPRESENTATIVE.

1.03 DRAWINGS

A. BECAUSE OF THE SMALL-SCALE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE CONDITIONS SURROUNDING INSTALLATION OF HIS WORK, FURNISHING THE NECESSARY PIPING, FITTINGS, VALVES, TRAPS, AND OTHER DEVICES WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION.

B. THE DESIGN DOCUMENTS ARE DIAGRAMMATIC. HOWEVER THE GENERAL ARRANGEMENT INDICATED ON THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. COORDINATE WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO INSTALLATION OF PIPING FIXTURES AND EQUIPMENT TO VERIFY ADEQUATE SPACE AVAILABLE FOR INSTALLATION OF THE WORK SHOWN. IN THE EVENT A FIELD CONDITION ARISES WHICH MAKES IT IMPOSSIBLE TO INSTALL THE WORK AS INDICATED, SUBMIT, IN WRITING, THE PROPOSED DEPARTURES TO THE ARCHITECT FOR HIS APPROVAL. ONLY WHEN ARCHITECT'S APPROVAL IS GIVEN, IN WRITING, SHALL CONTRACTOR PROCEED WITH INSTALLATION OF THE WORK.

C. SPECIAL NOTE: SHOULD THE CONTRACTOR MAKE CHANGES IN THE INSTALLATION DIFFERING FROM WHAT IS INDICATED ON THE CONTRACT DRAWINGS AND NOT NECESSITATED DUE TO FIELD CONDITIONS AS INDICATED HEREINABOVE, THE CONTRACTOR SHALL BE REQUIRED TO RE-INSTALL THE WORK TO COMPLY WITH WHAT HAS BEEN INDICATED ON THE CONTRACT DRAWINGS. SHOULD IT BE IMPOSSIBLE TO RE-INSTALL THE WORK AND THE INSTALLATION IS IN ACCORDANCE WITH ALL GOVERNING AUTHORITIES, THE ARCHITECT MAY PERMIT THE INSTALLATION TO REMAIN HOWEVER, ALL COSTS INCURRED TO REVISE THE CONTRACT DRAWINGS BY THE ENGINEER FOR RE-SUBMITTAL TO THE BUILDING DEPARTMENT INDICATING THE AS-INSTALLED CONDITION SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.

D. IN CASE OF A DIFFERENCE IN THE SPECIFICATIONS OR BETWEEN THE SPECIFICATIONS AND THE DRAWINGS, THE CONTRACTOR SHALL FIGURE THE MOST EXPENSIVE ALTERNATE AND AFTER AWARD OF CONTRACT, SHALL SECURE DIRECTION FROM THE ARCHITECT.

1.04 PERMITS, INSPECTIONS AND LICENSES

A. ALL PERMITS, INSPECTIONS AND LICENSES REQUIRED BY THE LEGALLY CONSTITUTED AUTHORITIES FOR INSTALLATION OF THE WORK ACCORDING TO THE PLANS AND SPECIFICATIONS SHALL BE OBTAINED AND PAID AS A PART OF THE WORK OF THIS SECTION.

1.05 UTILITIES

A. SEE DRAWINGS FOR POINTS OF CONNECTION.

B. CERTAIN UTILITIES ARE TO BE CONNECTED TO AND EXTENDED. BEFORE LAYING OF ANY PIPE OR DIGGING OF ANY TRENCHES, CONTRACTOR SHALL DETERMINE BY ACTUAL EXCAVATION AND MEASUREMENT EXACT LOCATION AND DEPTH OF LINES TO WHICH HE IS TO CONNECT. IN EVENT DEPTH OF LINES IS NOT SUFFICIENT TO PERMIT CONNECTION IN MANNER INDICATED, CONTRACTOR SHALL OBTAIN DIRECTION FROM THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THIS WORK.

C. WATER SERVICE (DOMESTIC): CONTRACTOR SHALL PROVIDE NECESSARY TAP-IN CONNECTIONS IN WATER MAIN FOR STERILIZING OF DOMESTIC WATER SYSTEM.

1.06 EXAMINATION OF PREMISE

A. BEFORE BIDDING ON THIS WORK, CONTRACTORS SHALL MAKE A CAREFUL EXAMINATION OF THE PREMISE AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE REQUIREMENTS OF THE CONTRACT. BY THE ACT OF SUBMITTING A PROPOSAL FOR THE WORK INCLUDED IN THIS CONTRACT, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION, AND THAT HE IS FAMILIAR WITH AND ACCEPTS ALL CONDITIONS OF THE SITE.

1.07 PROTECTION

A. ALL WORK, EQUIPMENT AND MATERIALS SHALL BE PROTECTED AT ALL TIMES CONTRACTOR SHALL MAKE GOOD ALL DAMAGE CAUSED EITHER DIRECTLY OR INDIRECTLY BY HIS OWN WORKMEN. CONTRACTOR SHALL ALSO PROTECT HIS OWN WORK FROM DAMAGE. HE SHALL CLOSE ALL PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. HE SHALL PROTECT ALL HIS EQUIPMENT AND MATERIALS AGAINST DIRT, WATER, CHEMICAL AND MECHANICAL INJURY. UPON COMPLETION, ALL WORK SHALL BE THOROUGHLY CLEANED AND DELIVERED IN A NEW CONDITION.

B. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO EQUIPMENT AND MATERIALS UNTIL HE HAS RECEIVED WRITTEN NOTICE FROM THE ARCHITECT OR ENGINEER THAT HIS WORK HAS BEEN ACCEPTED.

1.08 LOCATIONS

A. THE LOCATIONS OF APPARATUS, PIPING AND EQUIPMENT INDICATED ON THE DRAWINGS ARE APPROXIMATE. PIPING AND EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID ALL OBSTRUCTION, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGES CLEARED. THE LOCATIONS OF AND MOUNTING HEIGHTS OF ALL FIXTURES SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS AND ROOM ELEVATIONS.

B. CLEARANCES AND OPENINGS: CONTRACTOR SHALL COOPERATE AND COORDINATE HIS WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS AND PERMIT FOR A NEAT AND ORDERLY APPEARANCE OF THE ENTIRE INSTALLATION. THE CONTRACTOR SHALL, IN ADVANCE OF THE WORK, FURNISH INSTRUCTIONS TO THE GENERAL CONTRACTOR AS TO HIS REQUIREMENTS FOR EQUIPMENT AND MATERIAL INSTALLATION OF ANY KIND, WHETHER OR NOT SPECIFICALLY

MENTIONED ON DRAWINGS OR IN THE SPECIFICATIONS, AND SHALL INCLUDE RECESSES, CHASES IN WALLS, AND ALL REQUIRED OPENINGS IN THE STRUCTURE. SHOULD FURNISHING THIS INFORMATION BE NEGLECTED, DELAYED OR INCORRECT AND ADDITIONAL CUTTINGS ARE FOUND TO BE REQUIRED, THE COST OF THE SAME SHALL BE CHARGED TO THIS CONTRACTOR.

1.09 SUBMITTAL DATA

A. FURNISH, ALL AT ONE TIME, PRIOR TO ANY INSTALLATION, WITHIN THE TIME NOTED BELOW, SIX (6) COPIES OF VALID SUBMITTAL DATA ON ALL FIXTURES, MATERIAL, EQUIPMENT AND DEVICES. EACH SUBMITTAL ITEM SHALL BE INDEXED AND REFERENCED TO THESE SPECIFICATIONS AND TO PUT IDENTIFICATION NUMBERS ON FIXTURES AND EQUIPMENT SCHEDULES.

B. MANUFACTURERS SUBMITTAL LITERATURE AND SHOP DRAWINGS ARE REQUIRED ON ALL ITEMS TO ENSURE THE LATEST AND MOST COMPLETE MANUFACTURER'S DATA IS AVAILABLE FOR REVIEW. REQUIREMENTS OF THE SUBMITTALS AND ENGINEER'S SUBMITTAL NOTES ARE A PART OF THE WORK OF THIS DIVISION EXCEPT THAT ENGINEER'S NOTES MAY NOT BE USED AS A MEANS OF INCREASING THE SCOPE OF WORK OF THIS DIVISION.

C. SUBMITTALS WILL BE CHECKED FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT BUT THE REVIEW DOES NOT GUARANTEE QUANTITIES SHOWN AND DOES NOT SUPERSEDE REQUIREMENTS OF THIS DIVISION TO PROPERLY INSTALL WORK.

D. A LIST OF NAMES IS NOT A VALID SUBMITTAL. TO BE VALID, ALL SUBMITTALS MUST:

1. BE DELIVERED TO THE ARCHITECT'S OFFICE WITHIN THIRTY-FIVE (35) DAYS OF AWARD OF THE CONTRACT. CORRECTIONS OR CHANGES IN SUBMITTALS RETURNED AS INADEQUATE OR INCOMPLETE SHALL BE ACCOMPLISHED WITHIN THIS TIME LIMIT.

2. INCLUDE ALL PERTINENT CONSTRUCTION, INSTALLATION, PERFORMANCE AND TECHNICAL DATA.

3. HAVE ALL COPIES MARKED TO INDICATE CLEARLY THE INDIVIDUAL ITEMS BEING SUBMITTED.

4. HAVE EACH ITEM CROSS-REFERENCED TO THE CORRESPONDING SPECIFIED ITEM AND BE MARKED TO SHOW HOW DIFFERENCE WILL BE ACCOMMODATED.

5. CONTAIN CALCULATIONS AND OTHER DETAILED DATA JUSTIFYING HOW THE ITEM WAS SELECTED FOR PROPOSAL. DATA MUST BE COMPLETED ENOUGH TO PERMIT DETAILED COMPARISON OF EVERY SIGNIFICANT CHARACTERISTIC FOR WHICH THE SPECIFIED ITEM WAS ANALYZED DURING DESIGN.

6. INCLUDE, FOR EVERY ITEM WHICH DIFFERS IN SIZE, CONFIGURATION, CONNECTIONS, SERVICE, ACCESSIBILITY OR ANY OTHER SIGNIFICANT WAY, A DRAWING TO THE SAME (OR LARGER) SCALE AS TO THE PERTINENT PORTIONS OF THE CONTRACT DRAWINGS. IN THIS DRAWING SHOW A COMPLETE LAYOUT OF THE SYSTEM EXCEPT THAT WHICH IS IDENTICAL TO THE CONTRACT DRAWINGS UNLESS THE UNCHANGED PORTIONS MUST BE SHOWN TO INDICATE SUCH THING AS CLEARANCES. THIS DRAWING, TOGETHER WITH THE CONTRACT DESIGN DRAWINGS MUST SHOW THE COMPLETE SYSTEM AS REVISED TO ACCOMMODATE THE PROPOSED ALTERNATE

7. IN ADDITION TO THE MATERIAL AND EQUIPMENT SUBMITTALS, THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE WATER SERVICE AND THE GAS SERVICE COMPLETE WITH ALL APPURTENANCES AND INDICATE EXACT LOCATION BY DIMENSION TO GRADING PLAN, SUBMIT FOR APPROVAL PRIOR TO INSTALLATION.

1.10 UNINSPECTED WORK

A. CONTRACTOR SHALL NOT ALLOW OR CAUSE ANY OF HIS WORK TO BE COVERED UP BEFORE IT HAS BEEN DULY INSPECTED, TESTED AND APPROVED BY THE OWNER, ARCHITECT OR ANY OTHER AUTHORIZED INSPECTORS HAVING LEGAL JURISDICTION OVER HIS WORK. SHOULD HE FAIL TO OBSERVE THE ABOVE, HE SHALL UNCOVER THE WORK AND, AFTER IT HAS BEEN INSPECTED, TESTED AND APPROVED, RECOVER IT AT HIS OWN EXPENSE.

1.11 SUBSTITUTIONS (ALSO SEE GENERAL CONDITIONS)

A. THE CONTRACTOR ASSUMES FULL RESPONSIBILITY THAT ALTERNATE ITEMS AND PROCEDURES WILL MEET THE JOB REQUIREMENTS AND IS RESPONSIBLE FOR COST OF REDESIGN AND OF MODIFICATIONS TO THIS AND OTHER PARTS OF WORK CAUSED BY ALTERNATE ITEMS FURNISHED UNDER WORK IN THIS SECTION. IN VIEW OF THESE RESPONSIBILITIES, IT IS THE PURPOSE OF THE SPECIFICATIONS TO ESTABLISH PROCEDURE WHICH ENSURE THAT THE CONTRACTOR HAS CONSIDERED AND IS RESPONSIBLE FOR ALL THE RAMIFICATIONS OF PROPOSED ALTERNATES BEFORE SUBMITTING THEM FOR REVIEW. SUBMITTALS WHICH DO NOT COMPLY WITH THE REQUIREMENTS OF THESE SPECIFICATIONS OR WHICH INDICATE PROPOSED ALTERNATES WERE SELECTED WITHOUT PROPER REGARD TO THE REQUIREMENTS OF THE JOB, WILL NOT BE APPROVED. NO MORE THAN ONE PROPOSED ALTERNATE WILL BE CONSIDERED FOR EACH ITEM.

B. ALTERNATE ITEMS INSTALLED WITHOUT ENGINEER'S APPROVAL WILL BE REPLACED WITH SPECIFIED ITEMS AT CONTRACTOR'S EXPENSE.

C. PROVIDE OR PERFORM TESTS REQUIRED BY ENGINEER FOR PURPOSE OF JUDGING ACCEPTABILITY OF PROPOSED SUBSTITUTIONS.

D. THIS CONTRACTOR IS RESPONSIBLE TO PROVIDE SUFFICIENT INFORMATION TO ALLOW THE ENGINEER TO ANALYZE ANY PROPOSED ALTERNATE. IF INADEQUATE INFORMATION IS PROVIDED, THE PROPOSAL WILL NOT BE APPROVED AND RE-SUBMITTAL WILL NOT BE ALLOWED.

E. THE ARCHITECT OR HIS AUTHORIZED REPRESENTATIVE SHALL BE THE SOLE JUDGE AS TO THE QUALITY AND SUITABILITY OF PROPOSED ALTERNATE EQUIPMENT, FIXTURES OR MATERIALS AND DECISIONS OF THE ARCHITECT OR THAT OF HIS REPRESENTATIVE SHALL BE FINAL AND CONCLUSIVE.

1.12 RECORD DRAWINGS (ALSO SEE GENERAL CONDITIONS)

A. CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE "AS-BUILT" RECORD SET OF BLUELINE PRINTS WHICH SHALL SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND THE EXACT "AS-BUILT" LOCATIONS AND SIZES OF THE WORK PROVIDED UNDER THE SECTION OF SPECIFICATIONS. THIS ET SHALL INCLUDE LOCATIONS, DIMENSIONS, DEPTH OF BURIED PIPING, CLEANOUTS, SHUT-OFF VALVES, SEWER INVERT LOCATIONS, PLUGGED WYES, TEES, ETC. ON COMPLETION OF THE WORK, THE CONTRACTOR SHALL INCORPORATE ALL AS-BUILT INFORMATION ON A SET OF REPRODUCIBLE TRACINGS PROVIDED BY THE ARCHITECT AND THIS SET OF REPRODUCIBLES SHALL BE DELIVERED TO THE ARCHITECT.

1.13 GUARANTEES (ALSO SEE GENERAL CONDITIONS)

A. CONTRACTOR SHALL GUARANTEE THE ENTIRE PLUMBING AND PIPING SYSTEMS UNCONDITIONALLY FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE. IF, DURING THIS PERIOD, ANY MATERIALS, EQUIPMENT, OR ANY PART OF THE SYSTEMS FAIL TO FUNCTION PROPERLY, THE CONTRACTOR SHALL MAKE GOOD THE DEFECTS PROMPTLY AND WITHOUT ANY EXPENSE TO THE OWNER.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSED BY LEAKS IN PIPELINES OR EQUIPMENT FURNISHED AND INSTALLED UNDER THIS SECTION FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE OF HIS WORK.

C. ALL EQUIPMENT AND FIXTURES SHALL CARRY MANUFACTURER'S WARRANTY AGAINST DEFECTIVE PARTS OR POOR WORKMANSHIP AND SHALL NOT BE LESS THAN ONE (1) YEAR. SEE

SPECIFIC EQUIPMENT SPECIFICATIONS FOR EXTENDED WARRANTY REQUIREMENTS.

PART 2 PRODUCTS

2.01 PIPE MATERIALS AND EQUIPMENT (SEE SCHEDULES ON DRAWINGS)

A. GENERAL: ALL MATERIALS, AS SPECIFIED OR REQUIRED IN THE WORK, SHALL BE NEW, FREE FROM DEFECTS AND IMPERFECTIONS. ALL EXPOSED PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED YELLOW BRASS EXCEPT EXPOSED PIPES IN SHOP OR UTILITY AREAS. UNIONS OR FLANGES SHALL BE FURNISHED AND INSTALLED AT EACH THREADED CONNECTION. THE UNIONS OR FLANGES SHALL BE LOCATED SO THAT THE PIPING CAN BE EASILY DISCONNECTED FOR REMOVAL OF THE EQUIPMENT, TANK, OR VALVE, AND SHALL BE OF THE TYPE SPECIFIED IN THE FOLLOWING SCHEDULE. ALL PARTS OF THE DOMESTIC WATER SYSTEM SHALL BE MADE WITH APPROVED LEAD-FREE COMPONENTS THAT COMPLY WITH AB1953 AND IF ANY COMPONENT SPECIFIED DOES NOT COMPLY THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN AN APPROVED ALTERNATE. ALL CAST IRON PIPE AND FITTINGS SHALL BE CISPI MARKED AND NSF LISTED. ALL NO-HUB COUPLINGS SHALL MEET CISPI 310 REQUIREMENTS AND BE NSF CERTIFIED.

A. UNIONS:

1) BLACK STEEL PIPE: 250 POUND SCREWED BLACK MALLEABLE IRON, GROUND JOINT, BRASS TO IRON SEAT.

2) GALVANIZED STEEL PIPE: 250 POUND SCREWED GALVANIZED MALLEABLE IRON, GROUND JOINT, BRASS TO IRON SEAT.

3) COPPER OR BRASS TUBING: 150 POUND CAST BRONZE OR COPPER, GROUND JOINT, NONFERROUS SEAT WITH ENDS, BY WALSEA, NIBCO OR MUELL.

B. VALVES:

1. GENERAL:

A. PIPING SYSTEMS SHALL BE SUPPLIED WITH VALVES ARRANGED SO AS TO GIVE COMPLETE AND REGULATING CONTROL OF EACH BUILDING AND PIPING SYSTEMS THROUGHOUT THE BUILDING, AND LOCATED SO ALL PARTS ARE EASILY ACCESSIBLE AND MAINTAINED.

B. END CONNECTION: 2" AND SMALLER SHALL BE SOLDERED OR THREADED. 2-1/2 INCHES AND LARGER CAN BE FLANGED.

C. SIZES: SAME SIZE AS UPSTREAM PIPE, UNLESS OTHERWISE INDICATED.

D. ALL WATER VALVES SHALL BE LEAD FREE.

E. ALL VALVES SHALL BE BALL VALVES UNLESS OTHERWISE INDICATED ON THE PLANS.

2. APPROVED MANUFACTURERS:

A. APOLLO, NIBCO OR HAMMOND.

3. BALL VALVES:

A. NIBCO NO. S-685-80-LF, 2" AND SMALLER: RATED FOR 150 PSI SATURATED STEAM PRESSURE, 600 PSI WOG PRESSURE (LEAD FREE).

4. CHECK VALVES: (SWING CHECK)

A. NIBCO NO. S-413-T, 1/2" TO 4": RATED FOR 200 PSI SATURATED STEAM PRESSURE, 600 PSI WOG PRESSURE (LEAD FREE).

5. VALVES FOR GAS SERVICE

A. HAMMOND "BUTTERBALL" VALVE, 2-INCH AND SMALLER: RATED AT 175 PSI WOG; UL LISTED, BRONZE BODY, STAINLESS STEEL DISC, VITON SEAL AND THREADED ENDS. VALVE SHALL BE A. G. A CERTIFIED.

B. MILWAUKEE #BB2-100 PLUG VALVES, 2-1/2 INCH AND LARGER: MSS SP-78; RATED AT 175 PSI WOG; LUBRICATED PLUG TYPE, WITH BRONZE BODY, SINGLE GLAND, WRENCH OPERATED, AND FLANGED ENDS.

6. COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVES: SHALL BE McDONALD, WATTS, OR APPROVED EQUAL, BRONZE BODY, TEST LEVER, THERMOSTAT, COMPLYING WITH ANSI Z21.22 LISTING REQUIREMENTS FOR TEMPERATURE DISCHARGE CAPACITY. RELIEF VALVES SHALL BE FACTORY SET.

C. TRAPS, STRAINERS AND TAILPIECES: EVERY SANITARY FIXTURE, UNLESS OTHERWISE SPECIFIED, SHALL BE PROVIDED WITH A SEVENTEEN (17) GAUGE TAILPIECE CHROMIUM TAILPIECE, A LOS ANGELES PATTERN CHROME PLATED CAST-BRASS TRAP, AND WALL FLANGES. PROVIDE CHROMIUM PLATED BRASS CASING BETWEEN THE TRAP AND WALL FLANGES WITH EACH FIXTURE.



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APRIL 12, 2023

▲ JULY 31, 2023 CORRECTIONS

Blank lines for corrections or notes.

ATLAS 9085-B AERO DRIVE SAN DIEGO, CALIFORNIA 92123

PROJECT NO: 2022170

SHEET TITLE PLUMBING SPECIFICATIONS

SHEET NO:

P004



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CONTINUED:

D. CLEANOUTS: SHALL BE J.R. SMITH, ZURN OR JOSAM

1. GENERAL: PROVIDE CAST-IRON FERRULE AND COUNTERSUNK BRASS CLEAN-OUT PLUG WITH ROUND CAST IRON ACCESS FRAME AND HEAVY DUTY SECURED TOP COVER.
2. WALL CLEANOUTS: ZURN NO. Z-1468-NH FOR STEEL PIPE AND ZURN NO Z-1446-NH FOR CAST IRON PIPE.
3. FLOOR CLEANOUTS: ZURN NO. Z-N-1400-NH, BRONZE PLUG AND NON-SKID NICKEL BRONZE TOP.

E. ACCESS PANELS: ZURN, J.R. SMITH OR JOSAM. WALL ACCESS PANELS SHALL BE MINIMUM 12" X 12" FOR CONCEALED VALVES AND OTHER EQUIPMENT UNLESS OTHERWISE SPECIFIED OR INDICATED. CEILING ACCESS PANELS SHALL BE 18" X 18" MINIMUM.

1. WALL PANELS: ZURN NO Z-1462 NICKEL BRONZE, VANDAL PROOF FOR ALL WALLS.
2. CEILING PANELS: POTTORFF MODEL WB OR PW, PRIME COATED STEEL, TYPE AS REQUIRED FOR PLASTER, OR DRY WALL CEILINGS.

F. ROOF FLASHING: STONEMAN NO. 1100-5, ONE (1) PIECE, FOUR (4) POUND, SERIES WITH REINFORCING STEEL BOOT COUNTER FLASHED WITH CAST IRON FLASHING SLEEVE AND EQUIPPED WITH VANDAL-PROOF HOOD FOR ALL VENT PIPING. SEAL JOINT BETWEEN FLASHING AND PIPE WITH WATERPROOFING COMPOUND. COORDINATE ALL ROOF WORK WITH LANDLORDS ROOFING CONTRACTOR TO MAINTAIN ROOF WARRANTY INCLUDING WORK PERFORMED, MATERIALS, ETC.

G. ESCUTCHEONS: SHALL BE CHROME PLATED CAST BRASS WITH SET SCREW LOCKING DEVICE.

H. DIELECTRIC UNION ISOLATORS: WHERE INCOMPATIBLE MATERIALS MEET IN CONTACT, ISOLATE FROM EACH OTHER WITH MATERIAL BET SUITED FOR THE CHARACTERISTICS OF MATERIALS TO BE ISOLATED. DIELECTRIC UNION ISOLATOR FOR CONNECTION PIPING OR NON-COMPATIBLE MATERIALS SHALL BE OF STANDARD COMMERCIAL DESIGN WITH THREADED CONNECTIONS.

I. PIPE SUPPORTS: UNLESS OTHERWISE INDICATED ON THE DRAWINGS, SHALL BE AS FOLLOWS:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MISCELLANEOUS IRON WORK INCLUDING ANGLES, CHANNELS, ETC., REQUIRED TO APPROPRIATELY SUPPORT THE VARIOUS PIPING SYSTEMS. HANGER SPACING AND LOCATION SHALL CONFORM TO CALIFORNIA PLUMBING CODE REQUIREMENTS.

2. ALL HORIZONTAL RUNS OF PIPING WITHIN THE BUILDING TO BE SUPPORTED FROM THE STRUCTURAL FRAMING WITH STEEL RODS AND SPLIT ROD HANGERS, B-LINE, GRINNELL COMPANY, TOLCO, OR APPROVED EQUAL. STEEL RODS SHALL BE SECURED TO OVERHEAD FRAMING WITH SIDE BEAM CONNECTORS. WHERE NECESSARY, INSTALL ANGLE IRON BETWEEN FRAMING TO ACCOMMODATE HANGER RODS. WHERE SEVERAL PIPES ARE RUNNING TOGETHER, UNISTRUT, B-LINE OR POWERSTRUT CHANNELS WITH CLAMPS MAY BE USED IN LIEU OF INDIVIDUAL PIPE HANGERS, AND SUPPORTED FROM STRUCTURE AS HEREIN SPECIFIED. SUBMIT TEST DATA FOR TYPE OF HANGER SUPPORTS TO BE PROVIDED. FOR SUPPORT CONDITIONS OTHER THAN SPECIFIED HEREIN, THE CONTRACTOR SHALL SUBMIT METHOD OF SUPPORT FOR APPROVAL PRIOR TO ANY INSTALLATION.

3. HORIZONTAL PIPING HANGERS AND SUPPORTS:

A. GENERAL: PROVIDE FACTORY FABRICATED HORIZONTAL HANGERS AND SUPPORTS IN ACCORDANCE WITH MSS SP-69 AND MANUFACTURER'S PUBLISHED PRODUCT INFORMATION.

4. VERTICAL -PIPING CLAMPS:

- A. GENERAL: PROVIDE FACTORY FABRICATED VERTICAL-PIPING CLAMPS IN ACCORDANCE WITH MSS SP-69 AND MANUFACTURER'S PUBLISHED PRODUCT INFORMATION.
- B. TWO-BOLT RISER CLAMPS: (MSS TYPE 8) B-LINE B3373

5. HANGER-ROD ATTACHMENTS:

- A. GENERAL: PROVIDE FACTORY FABRICATED HANGER-ROD ATTACHMENTS B-LINE, TOLCO OR APPROVED EQUAL, SELECTED BY INSTALLER TO SUIT HORIZONTAL-PIPING HANGERS AND BUILDING ATTACHMENTS, IN ACCORDANCE WITH MSS SP-58 AND MANUFACTURER'S PUBLISHED PRODUCT INFORMATION. SELECT SIZE OF HANGER-ROD ATTACHMENT TO SUIT HANGER RODS.
- B. SIDE BEAM EYE SOCKET, TOLCO FIG. #57 FOR ROD SIZES 3/8" DIA. AND TOLCO FIG. #25-30-251 FOR ROD SIZES 1/2." DIA.

6. BUILDING ATTACHMENTS:

A. GENERAL: PROVIDE FACTORY FABRICATED BUILDING ATTACHMENTS, SELECTED BY INSTALLER TO SUIT BUILDING STRUCTURAL FRAMING CONDITIONS, IN ACCORDANCE WITH MSS SP-69 AND MANUFACTURER'S PUBLISHED PRODUCT INFORMATION. SELECT SIZE OF BUILDING ATTACHMENTS TO SUIT HANGER RODS.

7. HANGER RODS AND SPACING SHALL CONFORM TO THE FOLLOWING TABLE:

PIPE SIZES	SPACING	RODS
2 INCH AND SMALLER	6 FEET	3/8 INCH
2-1/2 INCH TO 3 INCH	8 FEET	1/2 INCH
4 INCH AND LARGER	8 FEET	5/8 INCH

8. HANGERS AND SUPPORTS SHALL BE ADEQUATE TO MAINTAIN ALIGNMENT AND PREVENT SAGGING AND SHALL BE PLACED WITHIN 18 INCHES OF JOINT. SUPPORT SHALL BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION.

9. AT CONTRACTOR'S OPTION, "ACOUSTO-PLUMB SYSTEM" MAY BE PROVIDED AS A SUPPORT SYSTEM WHEN SECURING PIPING DIRECT BY THE WALL FRAMING.

10. PROVIDE LATERAL BRACING AS MANUFACTURED BY B-LINE OR APPROVED EQUAL FOR ALL PIPING TO PREVENT SWAYING OR MOVEMENT IN ACCORDANCE WITH SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF PIPING SYSTEMS". PIPING SMALLER THAN INDICATED IN THE GUIDELINES SHALL BE PROVIDED WITH BRACING AS SPECIFIED FOR THE SMALLEST SIZE INDICATED. THE ENTIRE WATER DISTRIBUTION SYSTEM SHALL BE PROPERLY BRACED AND WILL NOT MOVE DUE TO THE ACTION OF QUICK CLOSING OF VALVES.

11. MISCELLANEOUS SUPPORTS, WALL BRACKETS, ETC.: PROVIDE WHERE REQUIRED IN ACCORDANCE WITH THE BEST STANDARD PRACTICES OF THE TRADE. SUBMIT SHOP DRAWINGS FOR ALL FABRICATED SUPPORTS.

12. ISOLATORS: ALL PIPING WHICH IS NOT ISOLATED FROM CONTACT WITH THE BUILDING BY ITS INSULATION SHALL BE ISOLATED AND INSTALLED WITH A MANUFACTURED TYPE ISOLATOR. ISOLATORS SHALL BE B-LINE VIBRA CLAMP AND CUSHION, SUPER STRUT, STONEMAN, "TRISOLATOR", OR APPROVED EQUAL. PIPING SHALL BE INSTALLED AND SUPPORTED IN A MANNER TO PROVIDE FOR EXPANSION WITHOUT STRAINS. GUIDES SHALL BE PROPERLY INSTALLED TO ENSURE THIS. ALL PIPE SUPPORTS ATTACHED TO METAL STUDS SHALL BE ISOLATED FROM THE STRUCTURE WITH FELT PADS.

J. INSULATION:

1. HOT WATER PIPE INSULATION: ALL HOT WATER SUPPLY AND RETURN PIPING, EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES, FLANGES AND UNIONS SHALL BE INSULATED WITH "ASTM C547, CLASS I, "MANVILLE", "MICRO-LOCK" 850-APT, OWENS-CORNING FIBERGLASS CORP., ASJ/SL-11 OR APPROVED EQUAL, 1" THICK FOR SIZES UP TO 2" AND 1-1/2" THICK FOR SIZES 2" OR LARGER. INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50 PER CMC SEC. 1201.1.1.8.

2. CONDENSATE PIPE INSULATION: ALL CONDENSATE PIPING ABOVE THE CEILING SHALL BE INSULATED WITH "ARMSTRONG" ARMOFLEX" INSULATING TAPE.

3. ALL FIXTURES FOR USE BY THE HANDICAPPED SHALL HAVE AN OFF-SET GRID DRAIN PERMITTING THE TRAP TO BE INSTALLED FLUSH WITH THE WALL. IN ADDITION, PROVIDE PROWRAP INSULATION KIT FOR EXPOSED HOT WATER PIPE, TAILPIECE, AND TRAP AS MANUFACTURED BY MCGUIRE AND SECURED PER MANUFACTURERS RECOMMENDATIONS.

K. EQUIPMENT AND FIXTURES:

1. SEE SCHEDULE ON DRAWINGS.

2. FIXTURES:

A. PLUMBING FIXTURES SHALL BE AS SPECIFIED BY OWNER AND AS NOTED ON THE DRAWINGS.

B. FURNISH COMPLETE WITH NECESSARY TRIM, INCLUDING STOPS. ALL TRIM AND EXPOSED FITTINGS SHALL BE CHROME PLATED BRASS INCLUDING HANDLES, SUPPLY TAILPIECES, TRAPS AND ESCUTCHEONS.

C. CONNECTIONS TO FIXTURES SHALL BE IN ACCORDANCE WITH CODE REQUIREMENTS EXCEPT AS EXCEEDED HEREIN OR ON THE DRAWINGS AND IN NO CASE LESS THAN THE SUPPLY STOP SIZE.

D. ALL PLUMBING FIXTURE FAUCETS SUBMITTED FOR REVIEW SHALL HAVE IDENTIFICATION LABEL OR CERTIFICATION SHOWING COMPLIANCE WITH CALIFORNIA TITLE 24, PART 5, ARTICLE I, "ENERGY CONSERVATION STANDARDS". ARTICLE I, T20-1406; ARTICLE 2, T20-1525 AND ARTICLE 4, 1604 AND 1606. MINIMUM WASTE SIZES SHALL BE FOUR INCH (4") FOR WATER CLOSETS AND TWO INCH (2") FOR LAVATORIES.

E. STEEL PLATE SUPPORTS SHALL BE PROVIDED FOR ALL WALL HUNG FIXTURES. SUPPORTS SHALL BE 3/8-INCH-THICK X 6-INCH-WIDE STEEL PLATES RECESSED AND LAG SCREWED TO WOOD STUDS OR WELDED TO STEEL STUDS AND TAPPED FOR FIXTURE BOLTS. LENGTH AND NUMBER OF PLATES AS REQUIRED TO SATISFACTORILY SUPPORT THE FIXTURES INSTALLED.

L. WATER HEATERS (SEE EQUIPMENT SCHEDULE ON DRAWINGS):

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

A. LOCATIONS AND ACCESSIBILITY: INSTALL EQUIPMENT FOR EASE OF MAINTENANCE AND REPAIR. IF CHANGES IN THE INDICATED LOCATIONS OR ARRANGEMENTS ARE MADE BY THE CONTRACTOR, THEY SHALL BE MADE WITHOUT ADDITIONAL CHARGES.

B. OPENINGS: FURNISH INFORMATION TO THE OTHER TRADES ON SIZE AND LOCATION WHICH ARE REQUIRED IN WALLS, SLABS, ROOF. FOR PIPING AND EQUIPMENT AT THE PROPER TIMES.

C. CLOSING-IN UNINSPECTED WORK: DO NOT ALLOW OR CAUSE ANY OF THE WORK TO BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN INSPECTED, TESTED, AND APPROVED BY THE ARCHITECT. ANY WORK ENCLOSED OR COVERED PRIOR TO SUCH INSPECTION AND TEST SHALL BE UNCOVERED AND, AFTER IT HAS BEEN INSPECTED, TESTED AND APPROVED, MAKE ALL REPAIRS WITH SUCH MATERIALS AS MAY BE NECESSARY TO RESTORE ALL WORK, INCLUDING THAT OF OTHER TRADES, TO ITS ORIGINAL AND PROPER CONDITION.

D. BEFORE LAYING OF ANY PIPE OR DIGGING OF ANY TRENCHES, CONTRACTOR SHALL DETERMINE BY ACTUAL EXCAVATION AND MEASUREMENT EXACT LOCATIONS AND DEPTH OF EXISTING UTILITY AND SERVICE LINES TO WHICH HE IS GOING TO CONNECT. IN EVENT DEPTH OF EXISTING SEWER MAIN IS NOT SUFFICIENT TO PERMIT INSTALLATION OF PIPING AS DETAILED ON DRAWINGS OR TO MAKE CONNECT IN MANNER INDICATED, CONTRACTOR SHALL CONFER WITH THE ARCHITECT, OWNER'S REPRESENTATIVE AND ENGINEER FOR DIRECTION.

E. EXCAVATION, TRENCHING AND BACKFILL: DO ALL NECESSARY TRENCH EXCAVATION, SHORING, BACKFILLING AND COMPACTION REQUIRED FOR THE PROPER LAYING OF THE PIPE LINES.

1. BACKFILL SHALL BE CLEAN SOIL FREE FROM ROCKS AND DEBRIS. COMPACT TO NINE PERCENT (90%0 OF SURROUNDING SOIL. ALL PIPING SHALL BE INSTALLED IN A MINIMUM 6" SAND BED AND COVERED WITH 6" OF SAND PRIOR TO BACKFILL. CONTINUE BACKFILL WITH MATERIALS FREE OF ROCKS AND DEBRIS, PROPERLY MOISTENED AND MECHANICALLY TAPERED AND COMPACTED TO 90% OF SURROUNDING SOIL.

2. PIPING SHALL HAVE EIGHTEEN (18) OF COVER MINIMUM UNLESS OTHERWISE NOTED ON THE DRAWINGS OR AS REQUIRED TO CONNECT INTO UNDERGROUND UTILITIES PROVIDED UNDER ANOTHER SECTION OF THESE SPECIFICATIONS. THE CONTRACTOR SHALL MAKE FINAL CONNECTIONS INTO UNDERGROUND UTILITIES.

3. BOTTOM OF TRENCHES: CUT TO GRADE AND EXCAVATE BELL HOLES TO ENSURE THE PIPES BEARING FOR THEIR ENTIRE LENGTH UPON THE OUTSIDE PERIPHERY OF THE LOWER THIRD OF THE PIPE.

4. WATER PIPING SHALL NOT BE RUN IN THE SAME TRENCH WITH SEWER OR DRAINAGE PIPING UNLESS SEPARATED AS REQUIRED BY THE CPC.

5. NO PIPING SHALL RUN IN, THROUGH OR ABOVE ANY ELECTRICAL EQUIPMENT ROOMS OR SPACES AT ANY TIME.

6. HORIZONTAL SOIL AND WASTE PIPING SHALL BE INSTALLED TO A UNIFORM GRADE OF NOT LESS THAN ONE-FOURTH INCH (1/4") PER FOOT, UNLESS OTHERWISE INDICATED ON PLANS.

F. PIPING INSTALLATION:

1. ALL PIPING SHALL BE CONCEALED IN FINISHED PORTION OF THE BUILDING EXCEPT WHERE OTHERWISE INDICATED OR DIRECTED AT THE TIME THE WORK IS DONE. ALL PIPING SHALL BE INSTALLED TO CLEAR ALL FRAMING MEMBERS AND BEAMS, EVEN IF DRAWINGS DO NOT INDICATE SAME. CONTRACTOR SHALL CONSTANTLY CHECK THE WORK OF OTHER TRADES SO AS TO PREVENT ANY INTERFERENCE WITH THE INSTALLATION OF THIS WORK.

2. ALL PIPING INTO STEM WALLS AND FOOTINGS SHALL BE DOUBLE HALF LAP WRAPPED WITH 1/8" THICK "ARMOFLEX" INSULATION. THE CONTRACTOR SHALL ALSO PROVIDE BLOCKED OUT AREAS IN STEM WALL AND FOOTING AS REQUIRED FOR THE INSTALLATION OF THE PIPING. ALL PIPING SHALL AVOID THE LOWER 8" OF THE FOOTING AND THE CONTRACTOR SHALL COORDINATE AND PROVIDE DROPPED FOOTINGS AS REQUIRED FOR THE INSTALLATION OF THE PIPING.

3. UNIONS SHALL BE INSTALLED ON ONE SIDE OF ALL SCREWED SHUT-OFF VALVES, AT BOTH SIDES OF SCREWED AUTOMATIC VALVES AND ON ALL BY-PASSES, AT ALL EQUIPMENT CONNECTIONS AND ELSEWHERE AS INDICATED OR REQUIRED FOR EASE OF INSTALLATION AND DISMANTLING.

4. CONNECTIONS BETWEEN COPPER TUBING AND EQUIPMENT SHALL BE WITH MUELLER BRASS COMPANY, OR APPROVED EQUAL, BRASS STREAM LINE COPPER TO P.P.S. GROUND JOINT UNIONS.

5. HOT AND COLD WATER SUPPLIES TO LAVATORIES AND SINKS SHALL BE PROVIDED WITH NINETY (90) DROP-EAR COPPER TO PIPE THREAD ELBOWS. BOLT SECURELY TO BACKING PLATES LOCATED BETWEEN WALL STUDS TO PROVIDE A RIGID ANCHOR FOR EXPOSED SUPPLY PIPES AND STOPS.

6. CORROSION PROTECTION: (IF REQUIRED)

A. ALL BELOW GROUND METALLIC FITTINGS, VALVES, FLANGES, BOLTS, SHALL BE PROTECTED AGAINST CORROSION AS FOLLOWS:

1. AS A MINIMUM ALL METALLIC COMPONENTS AS DESCRIBED ABOVE SHALL RECEIVE A HEAVY COATING OF "HENRY'S" OIL BASE ROOF MASTIC.

2. AFTER MASTIC COATING IS COMPLETED AND INSPECTED, WRAP ENTIRE METALLIC COMPONENT WITH A MINIMUM OF 10 MIL. POLYETHYLENE TO BE SECURED TO PIPING. THE OVERLAP SEAM SHALL BE LOCATED TO AVOID BACKFILL MATERIAL FROM ENTERING THE ENCAPSULATED AREA. THE ENDS AND SEAM OF THE POLYETHYLENE MATERIAL SHALL BE SECURED TO THE PIPING AND SEATED WITH 3M SCOTCH/WRAP N. 50, 10 MIL., 2" WIDE, PRINTED, PIPE WRAP SEALING TAPE.

3. THE MASTIC COATING SHALL BE INSPECTED AND APPROVED PRIOR TO THE FINISH APPLICATION OF THE POLYETHYLENE MATERIAL, WHICH SHALL BE INSPECTED.

G. SLEEVES: SHALL BE PLASTIC OR GALVANIZED STEEL WHERE PIPES PASS THROUGH CONCRETE WALL OR FLOOR SLABS PER LANDLORD'S CRITERIA.

1. ISOLATE PIPES THROUGH GROUND FLOOR SLABS WITH KRAFT PAPER, PLASTIC TAPE OR SIMILAR MATERIALS UNLESS CONDUIT IS SPECIFIED OR INDICATED.

2. SLEEVES FOR PIPES THROUGH EXTERIOR WALLS SHALL BE STANDARD WEIGHT GALVANIZED PIPE. PACK SPACE BETWEEN PIPE AND SLEEVES WITH CERAMIC FIBER ROPE SO AS TO BE ABSOLUTELY WATERTIGHT.

3. SLEEVES ARE REQUIRED IN OR THROUGH FIRE RATED WALLS AND FLOORS AND SHALL BE MADE WITH U.L. APPROVED FIRE RESISTANCE SYSTEMS. SEE ARCHITECTURAL PLANS FOR ALL LOCATIONS OF RATED WALLS AND FLOORS PRIOR TO BID.

H. CONTRACTION AND EXPANSION: INSTALL ALL WORK IN SUCH A MANNER THAT ITS CONTRACTION AND EXPANSION WILL NOT DO ANY DAMAGE TO THE PIPES, THE CONNECTED EQUIPMENT, OR THE BUILDING. INSTALL OFFSETS, SWING JOINTS, EXPANSION JOINTS, SEISMIC JOINTS, ANCHORS, ETC. AS REQUIRED TO PREVENT EXCESSIVE STRAINS IN THE PIPE WORK. ALL SUPPORTS SHALL BE INSTALLED TO PERMIT THE MATERIALS TO CONTRACT AND EXPAND FREELY WITHOUT PUTTING ANY STRAIN OR STRESS ON ANY PART OF THE SYSTEM. PROVIDE ANCHORS AS NECESSARY.

I. PIPE JOINTS AND CONNECTIONS:

1. COPPER TUBING AND BRASS PIPE WITH THREADLESS FITTINGS:

A. SOLDER JOINTS FOR COPPER SHALL BE MADE WITH LEAD FREE SOLDER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR THE SERVICE INTENDED.

B. USE THREADED ADAPTERS ON COPPER TUBING WHERE THREADED CONNECTIONS ARE REQUIRED.

J. ALL CLOSET BENDS SHALL BE ADEQUATELY BLOCKED AND SECURED. TRAP ARMS AND SIMILAR CONNECTIONS INSTALLED BELOW THE FLOOR LEVEL OR UNDER CONCRETE SLABS SHALL BE ADEQUATELY SUPPORTED AND ANCHORED TO PREVENT MOTION IN ANY DIRECTION. ALL PIPING INSTALLED ABOVE GRADE WITHIN BUILDINGS SHALL BE SECURED TO STRUCTURAL FRAMING WITH UNISTRUT OR PIPE CLAMPS TO PROVIDE A RIGID INSTALLATION PIPING UTILIZING GASKETS AS A SEAL SHALL BE GIVEN PRIME CONSIDERATION TO PROVIDING ADEQUATE STABILITY THROUGH PROPER SUPPORTS AND ANCHORS BECAUSE OF ITS FLEXIBLE NATURE.

K. FLEXIBLE PIPING OF ANY KIND WILL NOT BE PERMITTED EXCEPT WHEN INDICATED ON DRAWINGS.

L. EACH PIPE PENETRATION OF THE ROOF SHALL BE SEPARATED FROM OTHER PIPING AND ANY ROOF EQUIPMENT BY A MINIMUM OF 18" TO INSURE A PROPER PIPE FLASHING INSTALLATION.

M. FLOOR, WALL AND CEILING PLATES: WHERE PIPES PIERCE FINISHED SURFACES, C.P. BRASS SPLIT FLANGES WITH SET SCREW LOCK SHALL BE PROVIDED.

N. ROOF FLASHINGS: EXTEND PIPE A MINIMUM OF SEVEN INCHES (7") ABOVE FINISHED ROOF LINE, EXCEPT WHERE A VANDAL PROOF HOOD IS REQUIRED IN WHICH CASE PIPE SHALL EXTEND TO A HEIGHT REQUIRED TO RECEIVE THE HOOD AND ALSO WHERE SPECIFICALLY REQUIRED TO EXCEED THIS DIMENSION BY THE LOCAL AUTHORITY DUE TO SNOW CONDITIONS.

O. INSTALLATION OF PLUMBING FIXTURES:



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SHEET NO:

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CONTINUED:

1. INSTALL EACH FIXTURE AT THE EXACT HEIGHT AND LOCATION SHOWN ON THE ARCHITECTURAL DRAWINGS.
2. SET FIXTURES, SUPPLIES, TRAP AND TRAP OUTLET SQUARE WITH THE WALL, IN LINE WITH FIXTURE OUTLETS WITHOUT ANY OFFSETS, ANGLES, OR BENDS.
3. GROUT JOINT BETWEEN THE FIXTURES AND THE WALLS OR FLOORS WITH POLYSULFIDE OR SILICONE SEALANT TO BE SMOOTH, EVEN AND WATERTIGHT.
4. WATERTIGHT JOINTS FOR DRAINAGE CONNECTIONS TO ALL FIXTURES SHALL BE MADE IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE.

D. LANDLORD OR MALL CRITERIA:

1. THE ENTIRE INSTALLATION SHALL COMPLY WITH LANDLORD CRITERIA PACKAGE. CONTRACTOR SHALL OBTAIN A COPY OF THE REQUIREMENTS PRIOR TO BID.

Q. COMPLETION OF INSTALLATION:

1. CLEANING AND FLUSHING: CLEAN ALL EQUIPMENT AND MATERIALS THOROUGHLY. LEAVE SURFACE TO BE PAINTED SMOOTH AND CLEAN, READY FOR PAINTING.
2. FLUSH EACH UNIT OF WATER SUPPLY AND DISTRIBUTION SYSTEM THOROUGHLY WITH CLEAN WATER AT THE HIGHEST VELOCITIES ATTAINABLE.
3. CLEAN ALL PIPING, VALVES, TRAPS, WATER HEATERS, FIXTURES AND OTHER DEVICES THOROUGHLY AND FLUSH OR BLOW OUT UNTIL FREE OF SCALE, OIL SILT, SAND, SEDIMENT, PIPE DOPE AND FOREIGN MATTER OF ANY KIND.

R. PIPE MARKING AND IDENTIFICATION:

ALL PLUMBING PIPING SYSTEMS SHALL BE MARKED CONSISTING OF THE CONTENTS NAME AND A DIRECTION OF FLOW ARROW. MARKING SHALL BE PROVIDED AT ALL VALVES, AT ALL WALL, FLOOR OR CEILING PENETRATIONS, AT EACH CHANGE OF DIRECTION, AND AT A MINIMUM OF EVERY TWENTY FEET THROUGHOUT THE PIPING RUN WITH PROPER C.G.A. COLOR CODED LABELS AND FLOW ARROWS.

S. POINTS OF CONNECTION:

ALL PLUMBING PIPING POINTS OF CONNECTION SHALL BE MADE WITH VALVES TO ISOLATE THE NEW PIPING FROM THE OLD AND FOR STERILIZATION AS REQUIRED. ALL FREEING OF PIPING (IF REQUIRED) SHALL BE INCLUDED AS REQUIRED TO COMPLETE THE WORK.

3.02 STERILIZATION OF DOMESTIC WATER LINES

- A. STERILIZE WATER LINES BY FILLING WITH A SOLUTION CONTAINING FIFTY (50) PARTS OF CHLORINE PER MILLION PARTS WATER AND HOLDING THE SOLUTION THEREIN FOR AT LEAST TWENTY-FOUR (24) HOURS WITH A WATER HEAD OF AT LEAST FIVE FEET (5') ABOVE THE HIGHEST POINT IN THE SYSTEM. UNLESS OTHERWISE DIRECTED, THOROUGHLY FLUSH EACH LINE PRIOR TO STERILIZATION. INTRODUCTION OF STERILIZING SOLUTION OR MATERIALS INTO THE LINES SHALL BE SUCH AS TO PROVIDE THOROUGH AND UNIFORM DISTRIBUTION THROUGHOUT THE SYSTEM.
- B. OPERATE ALL VALVES DURING THE RETENTION PERIOD. FOLLOWING RETENTION PERIOD, THE HEAVY CHLORINATED WATER SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAN WATER.
- C. CONTINUE FLUSHING UNTIL THE RESIDUAL CHLORINE AT THE END OF 24 HOURS IS AS REQUIRED BY C.P.C.
- D. ALL WORK AND CERTIFICATION OF PERFORMANCE MUST BE DONE BY AN APPROVED LABORATORY UTILIZING QUALIFIED APPLICATIONS AND PERSONNEL.

3.03 TESTING

- A. NO PIPING WORK SHALL BE CONCEALED OR COVERED UNTIL PIPING HAS BEEN TESTED, INSPECTED AND APPROVED BY THE INSPECTOR. ALL PIPING FOR PLUMBING SYSTEMS SHALL BE COMPLETELY INSTALLED AND TESTED AS REQUIRED BY THE CALIFORNIA PLUMBING CODE. TEST PRESSURES AND TIMES INDICATED ARE A MINIMUM ONLY. ALL TESTS SHALL BE AS REQUIRED BY THE GOVERNING AUTHORITY AS WELL.

SCHEDULE OF TEST PRESSURES:

SYSTEM TESTED	GAUGE	DURATION	TEST
WATER	100 POUNDS	4 HOURS	WATER
WATER/VENT/STORM	10 FEET OF HEAD	4 HOURS	WATER
GAS	100 POUNDS	4 HOURS	AIR

3.04 OPERATION INSTRUCTION

- A. PRIOR TO OCCUPANCY OR PRIOR TO THE DATE OF FINAL INSPECTION, WHICHEVER MAY OCCUR FIRST, THE CONTRACTOR SHALL PREPARE TWO (2) SETS OF TYPEWRITTEN INSTRUCTIONS FOR THE OPERATION OF ALL EQUIPMENT, VALVES, ETC. SPECIFIED AND FURNISHED AS A PART OF THE WORK UNDER THIS SECTION, AND SHALL ASSIGN A COMPETENT PERSON, THOROUGHLY FAMILIAR WITH THE JOB, TO DEMONSTRATE AND INSTRUCT A REPRESENTATIVE OF THE OWNER IN THE OPERATION OF THE EQUIPMENT. THE TIME OF SAID DEMONSTRATION AND INSTRUCTIONS SHALL BE ARRANGED WITH THE OWNER'S REPRESENTATIVE APPROXIMATELY ONE (1) WEEK IN ADVANCE. VERBAL INSTRUCTIONS SHALL INCLUDE SHUT-OFF LOCATION OF GAS AND WATER. THE CONTRACTOR SHALL ASSEMBLE ALL OPERATION AND MAINTENANCE DATA SUPPLIED BY THE MANUFACTURERS OF THE VARIOUS PIECES OF EQUIPMENT, ALL KEYS AND SPECIAL WRENCHES REQUIRED TO OPERATE AND SERVICE THE EQUIPMENT (INCLUDING KEYS FOR YARD BOXES, GAS STOPS AND FIXTURE STOPS), AND ALL EQUIPMENT WARRANTIES AND DELIVER SAME TO THE REPRESENTATIVE OF THE OWNER ON DATE OF SAID INSTRUCTIONS.

END OF SECTION

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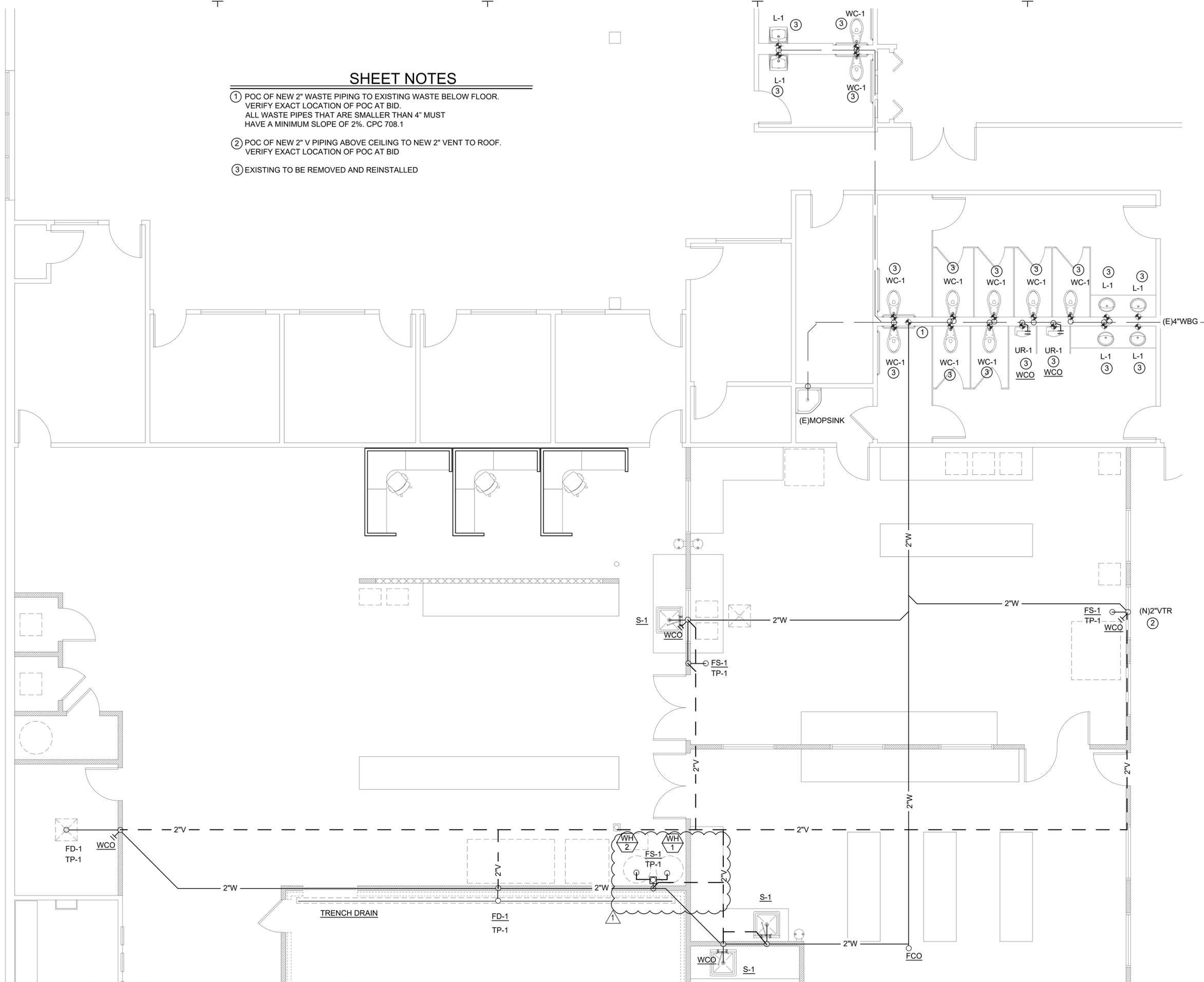


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### SHEET NOTES

- ① POC OF NEW 2" WASTE PIPING TO EXISTING WASTE BELOW FLOOR. VERIFY EXACT LOCATION OF POC AT BID. ALL WASTE PIPES THAT ARE SMALLER THAN 4" MUST HAVE A MINIMUM SLOPE OF 2%. CPC 708.1
- ② POC OF NEW 2" V PIPING ABOVE CEILING TO NEW 2" VENT TO ROOF. VERIFY EXACT LOCATION OF POC AT BID
- ③ EXISTING TO BE REMOVED AND REINSTALLED



1ST FLOOR - PLUMBING PLAN - WASTE & VENT

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



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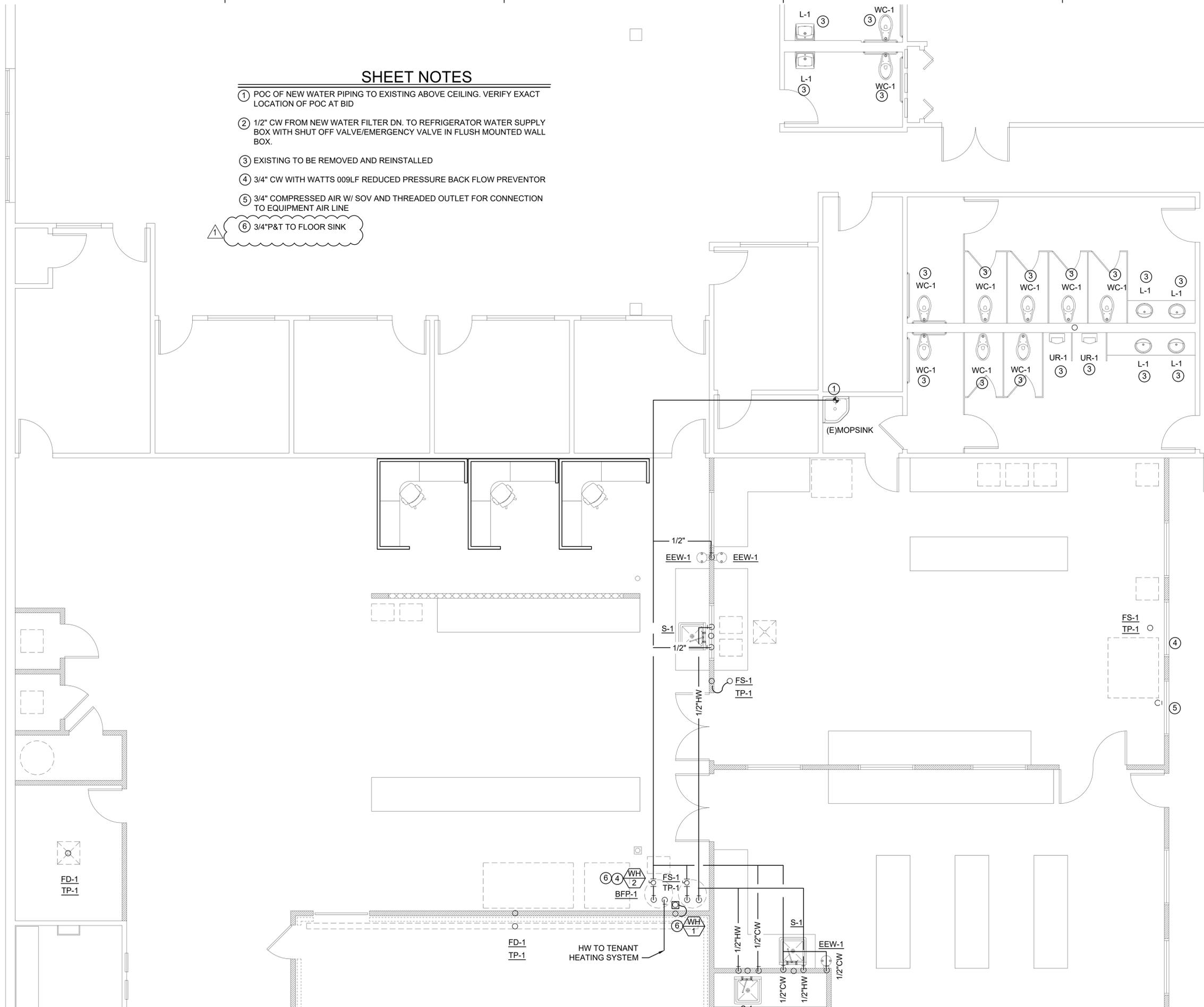


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### SHEET NOTES

- ① POC OF NEW WATER PIPING TO EXISTING ABOVE CEILING. VERIFY EXACT LOCATION OF POC AT BID
- ② 1/2" CW FROM NEW WATER FILTER DN. TO REFRIGERATOR WATER SUPPLY BOX WITH SHUT OFF VALVE/EMERGENCY VALVE IN FLUSH MOUNTED WALL BOX.
- ③ EXISTING TO BE REMOVED AND REINSTALLED
- ④ 3/4" CW WITH WATTS 009LF REDUCED PRESSURE BACK FLOW PREVENTOR
- ⑤ 3/4" COMPRESSED AIR W/ SOV AND THREADED OUTLET FOR CONNECTION TO EQUIPMENT AIR LINE
- ⑥ 3/4" P&T TO FLOOR SINK



1ST FLOOR - PLUMBING PLAN - WATER

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



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