

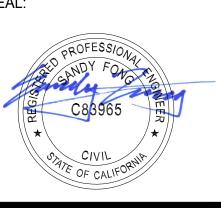


T E M E C U L A , C A 9 2 5 9 0 T E L E : 9 5 1 . 6 0 0 . 0 0 3 2 WWW.ISEENGINEERS.COM SOCAL | NORCAL | COLORADO ISE PROJECT NO.: 24-8400.32

DEPARTMENT:

| ISSUE INFOR | RMATION: |
|-------------|--------------|
| DATE: | INFORMATION: |
| 03/07/2025 | PLAN CHECK 1 |
| 07/25/2025 | BID SET |
| 08-22-25 | BID SET |
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374-193-24 AS NOTED JULY 2025



ADDITIONAL DETAILS

GENERAL NOTES

- THESE DOCUMENTS MAY NOT BE USED FOR ANY REPRODUCTION, BIDDING, OR CONSTRUCTION UNLESS AUTHORIZED, IN WRITING, BY SALAS O'BRIEN AND THE ENGINEER OF RECORD RESPONSIBLE FOR THEIR PREPARATION.
- ALL BRANCH DUCTS SHALL HAVE BALANCE DAMPERS WITH QUADRANT LOCKS.
- 3. ALL DUCT SIZES SHOWN ARE NET INSIDE DIMENSIONS.
- 4. DUCTWORK SHALL BE GALVANIZED SHEET METAL IN COMPLETE CONFORMANCE WITH C.M.C., AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS. FLEXIBLE DUCTS MAY BE USED TO CONNECT INTO AIR OUTLETS AND INLETS. MAXIMUM LENGTH OF FLEXIBLE DUCTWORK SHALL
- DUCTWORK ON ROOF SHALL BE INTERNALLY LINED AND PAINTED. ALL JOINTS AND SEAMS SHALL BE WEATHERPROOF.
- ALL BRACING OF DUCTS AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES.
- DUCTS SERVING TYPE 1 KITCHEN HOODS SHALL BE CONSTRUCTED OF MINIMUM 16 GAUGE CARBON STEEL OR MINIMUM 18 GAUGE STAINLESS STEEL WITH FULLY WELDED JOINTS. DISHWASHER EXHAUST SHALL BE MINIMUM 18 GAUGE STAINLESS STEEL.
- ALL FLEXIBLE DUCTS SHALL BE INSULATED. MINIMUM BEND RADIUS SHALL BE TWICE THE
- DUCT DIAMETER. SUPPLY AND RETURN DROPS SHALL BE LINED SHEET METAL PLENUMS.
- . DUCT AND PLENUM INSULATION SHALL BE IN ACCORDANCE WITH THE 2022 CALIFORNIA CODE OF REGULATIONS, TITLE-24, PART 6, ENERGY EFFICIENCY STANDARDS (E.E.S.), TABLE 150.1-A AND THE 2022 CALIFORNIA MECHANICAL CODE (C.M.C.) SECTION 605.0.
- ALL SHEET METAL DUCTS SHALL BE INSULATED BY MEANS OF FOIL WRAP, 3/4 LB, DENSITY FIBERGLASS INSULATION. INSULATION SHALL BE UL LISTED. DUCT LINERS SHALL BE
- NON-FIBERGLASS TYPE WITH THICKNESS AS REQUIRED TO MEET T-24 REQUIREMENTS. THERMOSTATS SHALL BE LOCATED AT 4' - 0" ABOVE FINISHED FLOOR (46" MAX. IF
- REQUIREMENTS, UNLESS NOTED OTHERWISE. 10. CONDENSATE DRAIN PIPING SHALL BE COPPER TYPE "L", AND SHALL BE ROUTED TO AN

MOUNTED OVER CASEWORK OR OTHER OBSTRUCTION) IN ACCORDANCE WITH A.D.A.

- APPROVED RECEPTOR. 11. PROVIDE FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET OF ALL FANS.
- 12. COORDINATE FINAL LOCATIONS OF AIR DISTRIBUTION DEVICES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, I.E. LIGHTS, SPEAKERS, TILES AND SPRINKLER HEADS. 13. ALL SUPPLY CEILING DIFFUSERS SHALL HAVE 4-WAY AIR FLOW DISTRIBUTION PATTERNS,

UNLESS INDICATED OTHERWISE.

- 14. COORDINATE FINAL LOCATIONS OF THERMOSTATS WITH ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FIELD COORDINATE LOCATIONS WITH OTHER
- TRADES INCLUDING ELECTRICAL, TELEPHONE, ETC. 15. FIRE/SMOKE DAMPERS SHALL BE INSTALLED ON ALL DUCTWORK PASSING THROUGH FIRE SEPÁRATING WALLS, AND SHALL BE INSTALLED AS PER 2022 CMC SECTION 606.0, 2022 CBC SECTION 717. AND UL,, LOCAL, STATE, AND N.F.P.A. FIRE CODES.
- 16. ALL ROOF PENETRATIONS, CUTTING, PATCHING, BLOCKOUTS, STRUCTURAL SUPPORT, ROOF OPENINGS, LEVELING OF PRE-FAB CURBS SHALL BE BY GENERAL CONTRACTOR. CONTRACTOR SHALL VERIFY EXACT ROOF OPENING SIZES WITH UNIT MANUFACTURER PRIOR TO START OF
- WORK AND SHALL MAKE ALL NECESSARY ADJUSTMENTS AT NO EXTRA COST TO OWNER. 17. LOCATION OF ALL MECHANICAL EQUIPMENT SHOWN ARE SCHEMATIC. CONTRACTOR SHALL FIELD COORDINATE EXACT LOCATIONS AND REQUIRED SERVICE/MAINTENANCE CLEARANCES PRIOR TO
- START OF WORK. 18. CONTRACTOR SHALL VERIFY WEIGHTS OF ALL MECHANICAL EQUIPMENT WITH THEIR MANUFACTURER PRIOR TO START OF WORK. IF DIFFERENT THAN THE WEIGHTS INDICATED ON DRAWINGS, CONTRACTOR SHALL INFORM THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR
- TO START OF WORK. 19. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS W/MFR. AND COORDINATE WITH THE ELECTRICAL CONTRACTOR AND THE MANUFACTURER PRIOR TO START OF WORK. NOTIFY THE
- ARCHITECT, IN WRITING, IN CASE OF ANY DISCREPANCIES, PRIOR TO START OF WORK. 20. ALL HVAC EQUIPMENT, APPLIANCES, AND DUCTWORK SHALL CONFORM TO THE LATEST GUIDELINES OF U.L., A.G.A., N.F.P.A., C.M.C., C.P.C., AND ALL OTHER LOCAL CODES HAVING
- 21. TEST AND BALANCE THE HVAC SYSTEM AS PER REQUIREMENTS OF THE MANDATORY HVAC MEASURES INDICATED ON THIS SHEET.
- 22. CONTRACTOR SHALL FIELD VERIFY EXACT CEILING SPACE AVAILABLE FOR ROUTING OF DUCT, PRIOR TO START OF WORK, INFORM ARCHITECT, IN WRITING, IN CASE OF ANY DISCREPANCY OR POTENTIAL CONFLICTS PRIOR TO FABRICATING AND/OR PURCHASE OF ANY DUCTWORK.
- 23. ALL HVAC UNITS SYSTEMS SUPPLYING AIR IN EXCESS OF 2000 CFM OR SERVING A COMMON AIR SPACE MUST BE INTERCONNECTED TO SHUT DOWN IMMEDIATELY UPON ALARM CONDITION FROM DUCT DETECTORS (OR FIRE ALARM SYSTEM WHEN USING AREA SMOKE DETECTORS IN LIEU OF DUCT DETECTORS) WITHOUT INTERFACE FROM EMS OR ANY OTHER SYSTEMS. ALL CONTROL RELAYS USED FÓR SHUT DOWN MUST BE CALIFORNIA STATE FIRE MARSHAL LISTED FOR RELEASING SERVICE.
- 24. ACCESS PANELS SHALL BE PROVIDED TO ALL EQUIPMENT, MANUAL VOLUME DAMPERS, ETC. LOCATED IN INACCESSIBLE AREAS.
- 25. MAINTAIN MINIMUM 10'-0" BETWEEN ALL OA INTAKES AND EXHAUST AIR DISCHARGES OR

| | | LEGEND |
|-----------------------------------|------------------|-------------------------------------------------------------------------|
| SYMBOL | ABBREV. | DESCRIPTION |
| • | FSD | FIRE SMOKE DAMPER |
| - \- | OA | OUTSIDE AIR |
| | | ROUND DUCT UP |
| ⊙ | | ROUND DUCT DOWN |
| | | CEILING SUPPLY AIR DIFFUSER (4-WAY |
| | SA | THROW UNLESS NOTED OTHERWISE) SUPPLY AIR |
| | RR/RG | RETURN AIR REGISTER/GRILLE |
| | RA RA | RETURN AIR |
| | ER/EG | EXHAUST AIR REGISTER/GRILLE |
| ⊘ - √ - - | EA | EXHAUST AIR |
| | AP | CEILING ACCESS PANEL |
| | SA | RECTANGULAR SUPPLY DUCT UP |
| | RA | RECTANGULAR RETURN DUCT UP |
| | EA | RECTANGULAR EXHAUST DUCT UP |
| | SA | RECTANGULAR SUPPLY DUCT DOWN |
| | RA | RECTANGULAR RETURN DUCT DOWN |
| | EA | RECTANGULAR EXHAUST DUCT DOWN |
| T | TSTAT | THERMOSTAT |
| | 0.0 | |
| <u>©</u> | CO | CARBON MONOXIDE SENSOR |
| SD | SD | DUCT MOUNTED SMOKE DETECTOR INTERLOCK WITH FIRE ALARM. SEE ELECT. DWGS. |
| ¢ | CFM | CUBIC FEET PER MINUTE |
| ' | ACI | AMERICAN CONCRETE INSTITUTE |
| | A.D.A. | AMERICANS WITH DISABILITIES ACT |
| | A.F.F. | ABOVE FINISH FLOOR |
| | A.G.A. | AMERICAN GAS ASSOCIATION |
| | AL | ALUMINUM |
| | AMB. | AMBIENT |
| | APRX. | APPROXIMATE(LY) |
| | ARCH. | ARCHITECT OR ARCHITECTURAL |
| | ASCE | AMERICAN SOCIETY OF CIVIL ENGINEERS |
| | BHP | BRAKE HORSEPOWER |
| | BLDG | BUILDING |
| | BTU(H) B.U.R. | BRITISH THERMAL UNIT (PER HOUR) BUILT—UP ROOFING |
| | CAP. | CAPACITY |
| | C.B.C. | CALIFORNIA BUILDING CODE |
| | C.E.C. | CALIFORNIA ENERGY COMMISSION |
| | C.M.C. | CALIFORNIA MECHANICAL CODE |
| | C.P.C. | CALIFORNIA PLUMBING CODE |
| | CD | CONDENSATE DRAIN |
| | CGBSC | CALIFORNIA GREEN BUILDING STANDARDS |
| | | COMMISSION |
| | CONC. | CONCRETE |
| | COND. CONN. | CONDITIONS CONNECTIONS |
| | COORD. | COORDINATE |
| | C.O.P. | COEFFICIENT OF PERFORMANCE |
| | CORR. | CORRIDOR |
| | CU | COPPER |
| | CW | COLD WATER |
| | DB | DRY BULB |
| | DET. | DETAIL |
| | DIM. | DIMENSIONS |
| l | DN. | DOWN |
| | DWG(S). | DRAWING(S) |
| _ | TSP | TOTAL STATIC PRESSURE |
| | TYP. | TYPICAL |
| | u/c | UNDERCUT DOOR |
| . . | U.L. | UNDERWRITER'S LABORATORIES |
| | 7 II F A | UNIFIED FACILITIES CRITERIA |
| | U.F.C. | |
| | ٧ | VOLTAGE/VOLTS |
| | | |

| | LEG | END (CONT.) |
|--------|---------------|--------------------------------------------|
| SYMBOL | ABBREV. | DESCRIPTION |
| | DX | DIRECT EXPANSION |
| | (E) | EXISTING |
| | EAT | ENTERING AIR TEMPERATURE |
| | EDB. ENT. | ENTERING DRY BULB ENTERING |
| | EQ. | EQUAL |
| | EWT | ENTERING WATER TEMPERATURE |
| | EER | ENERGY EFFICIENCY RATIO |
| | E.E.S. | ENERGY EFFICIENCY STANDARDS |
| | EFF. | EFFICIENCY |
| | ELEC. | ELECTRICAL |
| | ESP | EXTERNAL STATIC PRESSURE (INCHES OF WATER) |
| | FAB | FABRICATED |
| | F.A.R. | FREE AREA REQUIRED |
| | FLA | FULL LOAD AMPS |
| | FPM | FEET PER MINUTE |
| | FT. | FEET |
| | GA. GALV. | GAUGE GALVANIZED |
| | GALV. GPM | GALLONS PER MINUTE |
| | GSM | GALVANIZED SHEET METAL |
| | HERS | HOME ENERGY RATING SYSTEM |
| | HP | HORSEPOWER |
| | HSPF | HEATING SEASONAL PERFORMANCE FACTOR |
| | HVAC | HEATING, VENTILATION AND AIR CONDITIONING |
| | I.B.C. | INTERNATIONAL BUILDING CODE |
| | I.M.C. | INTERNATIONAL MECHANICAL CODE |
| | I.P.C. | INTERNATIONAL PLUMBING CODE |
| | IN. | INCHES |
| | KW | KILOWATT |
| | LAT LBS. | LEAVING AIR TEMPERATURE POUNDS |
| | LVG. | LEAVING |
| | MECH. | MECHANICAL |
| | MAX. | MAXIMUM |
| | мв | MACHINE BOLT |
| | мвн | 1000 BTUH |
| | MCA | MINIMUM CIRCUIT AMPACITY |
| | MFR | MANUFACTURER |
| | MIN. | MINIMUM |
| | MOCP | MAXIMUM OVERCURRENT PROTECTION |
| | MTG. MVD | MOUNTING MANUAL VOLUME DAMPER |
| | NA | NOT APPLICABLE |
| | N.F.P.A. | NATIONAL FIRE PROTECTION ASSOCIATION |
| | NIC | NOT IN CONTRACT |
| | NC | NOISE CRITERIA |
| | NO. | NUMBER |
| | OBD | OPPOSED BLADE DAMPER |
| | OPER. | OPERATING |
| | PH | PHASE |
| | QTY. | QUANTITY |
| | RPM | REVOLUTIONS PER MINUTE |
| | SEER | SEASONAL ENERGY EFFICIENCY RATIO |
| | SF SQ. | SQUARE FEET SQUARE |
| | SQ. SMACNA | SQUARE SHEET METAL AND AIR CONDITIONING |
| | SIVIACINA | CONTRACTORS' NATIONAL ASSOCIATION |
| | S.M.S. | SHEET METAL SCREW |
| | SPD | STATIC PRESSURE DROP |
| | SQFT | SQUARE FEET |
| | STRUC. | STRUCTURAL |
| | STL. | STEEL |

TEMP.

THRU

TEMPERATURE

THROUGH

MANDATORY HVAC SYSTEM MEASURES

- ALL WORK INDICATED ON DRAWINGS AND/OR SPECIFICATIONS SHALL BE COORDINATED WITH
- WORKS OF OTHER TRADES PRIOR TO START OF WORK.
- 2. ALL HVAC EQUIPMENT LISTED IN SECTION 100(H) OF THE E.E.S. MUST BE C.E.C. CERTIFIED.
- SECTIONS 1201.2 AND TABLE E 502.5, AND E.E.S. SECTION 120.3-A.

ALL PIPING INSULATION SHALL BE CONSISTENT WITH THE REQUIREMENTS OF C.M.C.

- 4. ALL DUCTWORK INSULATION SHALL BE CONSISTENT WITH THE REQUIREMENTS OF SECTIONS C.M.C. SECTION 605.0 TITLE 24 E.E.S. TABLE 150.1-A.
- 5. ALL HVAC EQUIPMENT AND APPLIANCE SHALL MEET THE REQUIREMENTS PER SECTIONS 110.1-110.2, 110.5 AND 120.1-120.7 E.E.S.
- 6. ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTION 110.2 AND
- ALL VENTILATION SYSTEMS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH
- . THE CONTRACTOR SHALL PROVIDE THE BUILDING OWNER, MANAGER, AND THE ORIGINAL OCCUPANTS A LIST OF THE HEATING, VENTILATION, AND AIR CONDITIONING FEATURES,
- MATERIALS, AND COMPONENTS INSTALLED IN THE BUILDING AND OPERATING INSTRUCTIONS. 9. INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY STANDARD PER SECTION 120.3
- 10. ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS, OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS. TESTING AND BALANCING SHALL BE DONE
- 11. ALL SYSTEMS SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY AN INDEPENDENT QUALIFIED
- TESTING AGENCY. 12. DUCT INSULATION SHALL HAVE A MINIMUM INSTALLED R-VALUE OF 8.0.

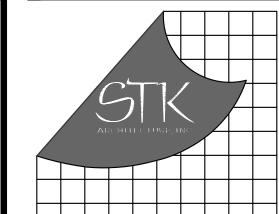
BY AN INDEPENDENT QUALIFIED AGENCY.

AND 120.4 E.E.S.

- 13. DURING CONSTRUCTION, ENDS OF DUCT OPENINGS SHALL BE SEALED AND MECHANICAL EQUIPMENT SHALL BE COVERED TO PROTECT INTEGRITY OF SYSTEM CLEANLINESS. CGBSC
- 14. PRIOR TO FINAL APPROVAL OF THE BUILDING, THE LICENSED CONTRACTOR, ARCHITECT, OR ENGINEER IN RESPONSIBLE CHARGE OF THE OVERALL CONSTRUCTION MUST COMPLETE AND SIGN THE GREEN BUILDING STANDARDS CERTIFICATION FORM AND GIVE TO THE BUILDING DEPARTMENT OFFICIAL TO BE FILED WITH THE APPROVED PLANS.
- 15. PROVIDE TEMPORARY MEANS OF BUILDING VENTILATION DURING CONSTRUCTION IN ACCORDANCE WITH CGBSC SECTION 5.504.1.
- 16. BUILDING FLUSH-OUT SHALL BE PERFORMED AND MONITORED UPON CONSTRUCTION COMPLETION IN ACCORDANCE WITH CGBSC SECTION A5.504.2.
- 17. 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.
- 18. FOR NEW BUILDINGS OVER 10,000 SQUARE FEET IN FLOOR AREA, UNLESS NOTED OTHERWISE, FUNDAMENTAL BUILDING COMMISSIONING FOR HVAC, LIGHTING AND DOMESTIC HOT WATER SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 23 08 00 AND THE CGBSC SECTION 5.410.2.
- 19. THERMOSTATIC CONTROLS FOR ALL SINGLE ZONE AIR CONDITIONERS AND HEAT PUMPS SHALL COMPLY WITH THE REQUIREMENTS OF EES SECTION 110.2(C) AND REFERENCE JOINT APPENDIX JA5. THERMOSTAT SHALL BE CAPABLE OF COMMUNICATING THROUGH EITHER (1) AT LEAST ONE EXPANSION PORT WITH A REMOVABLE MODULE TO ENABLE COMMUNICATION; OR (2) ON BOARD COMMUNICATION DEVICE.
- 20. DUCTWORK SHALL BE LEAK TESTED IN ACCORDANCE WITH SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL FOR A REPRESENTATIVE TOTAL NOT LESS THAN 10% OF INSTALLED DUCTWORK IN ACCORDANCE WITH THE REQUIREMENTS OF CMC 603.9.2.

VEHICLE EXHAUST SYSTEM NOTES

- A. THE GENERAL CONTRACTOR SHALL PROVIDE:
- 1. ADEQUATE ACCESS TO THE JOB SITE. 2. INFORMATION ON CONSTRUCTION SCHEDULING TO FACILITATE PROGRESSIVE INSTALLATION.
- 3. ELECTRICAL POWER TO THE VEHICLE EXHAUST CONTROL PANEL. (208V/3)
- 4. ELECTRICAL POWER/CONTROL WIRING FROM THE VEHICLE EXHAUST CONTROL PANEL TO THE EXHAUST FAN.
- 5. COMPRESSED AIR SOURCE WITH A MINIMUM OF 85 PSI FOR SYSTEM OPERATION.
- 6. (4) FOUR OPEN ENDED 1/4" AIR LINES FROM THE STATION AIR SOURCE TO A POSITION
- ABOVE THE ENDS OF EACH RAIL. 7. MOUNTING PROVISIONS FOR THE CONTROL PANEL.
- 8. NECESSARY STRUCTURE AND BACKING TO SUPPORT VEHICLE EXHAUST RAILS AND SUPPORT SYSTEM USING A MAXIMUM LEG SPACING OF 10 FEET. (COORDINATE WITH
- ARCHITECT.) 9. THE CODE REQUIRED FUSE DISCONNECT AT THE FAN.
- 10. LOW VOLTAGE CONDUIT FROM THE CONTROL PANEL OR PANELS TO A POINT ABOVE THE CENTER OF EACH TRACK OR RAIL.
- 11. ALL NECESSARY LINE AND LOW VOLTAGE WIRING AND CONDUIT TO CONTROL PANEL AND FROM THE CONTROL PANEL TO THE EXHAUST FAN.
- 12. EQUIPMENT PAD FOR MOUNTING THE EXHAUST FAN.
- 13. FLASHING FOR ROOF/WALL PENETRATIONS.
- 14. TREATING/FINISHING OF ALL FLASHING AND EQUIPMENT ASSOCIATED WITH EXHAUST REMOVAL SYSTEM.
- B. THE VEHICLE EXHAUST SUBCONTRACTOR SHALL PROVIDE:
- 1. STRAIGHT RAIL SYSTEMS.
- 2. RADIAL HIGH STATIC EXHAUST FAN, SIZED FOR ADEQUATE AIR FLOW FOR THE NUMBER OF DROPS, AT THE VOLTAGE AND PHASE FOR THE PARTICULAR STATION. AS REQUIRED.
- 3. CONTROL PANELS WHICH HOUSE THE MOTOR STARTER, OVERLOAD RELAYS, TIMER, STEP-DOWN TRANSFORMER. AS REQUIRED.
- 4. SENSORS TO ACTIVATE THE EXHAUST FAN UPON VEHICLE START-UP. AS REQUIRED.
- 5. COMPLETE SUPPORT STRUCTURE FOR TRACKS OR RAILS.
- 6. ALL SYSTEM DUCTWORK (MIN. 22 GAGE GALVANIZED STEEL ALL SIZES), HANGERS, AND
- 7. ALL MISC. FITTINGS, AND AIR DRYER, REGULATOR, ETC. FOR COMPLETE SYSTEM OPERATION.
- 8. INSTALLATION OF SECONDARY AIRLINES FOR COMPLETE OPERATION OF GRABBERS.
- 9. COMPLETE THE CONNECTION OF LOW VOLTAGE WIRING FROM POINT(S) ABOVE RAILS AS PROVIDED BY THE GENERAL CONTRACTOR TO THE PROVIDED PRESSURE SENSORS.
- 10. COMPLETE START-UP OF THE SYSTEM.
- 11. TRAINING OF THE FIRE FIGHTING CREWS.
- 12. TRAINING VIDEO.



42095 ZEVO DR., TEMECULA, CALIFORNIA 92590-3780 Phone: 951.296.9110 Fax: 951.296.6079 Email: stk@stkinc.com

CONSULTANT:

Vista, CA 92081 **760.560.0100** 08-22-25 #2024-03417 JO JO/ZO PP MP www.salasobrien.com

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO **COUNTY FIRE** DEPARTMENT: **FIRE STATION 227**

PROJECT # 10.10.1202

CIP #22-105 APN Part of 0154-281-01

180 W. 38TH STREET

SAN BERNARDINO,

CA 92405

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| ISSUE INFOR | RMATION: |
| DATE: | INFORMATION: |
| 9-11-24 | D.D.s |
| 10-26-24 | PROGRESS |
| 12-20-24 | 95% CDs |
| 03-14-25 | Plan Check 🗘 |
| 05-09-25 | Plan Check 🛆 |
| 0 7-25-25 | BID SET |
| 08-25-25 | BID SET |
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SHEET INFORMATION:

STK PROJECT NO.: 374-193-24 AS NOTED DATE: DECEMBER 2024 PLOT DATE:

SEAL:

DRAWING NAME:



SHEET TITLE:

MECHANICAL LEGEND AND **GENERAL** NOTES

SHEET NO.:

M0.1

| | MULTI ZONE SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------------------------------------------|-------------------------------------------------|-------|-----------|--------|--------|---------|----------|--------|---------|---------|----------|---------------|--------------|-----------------------------------|--------|-------|-----------|------------|-----------|---------|------------|------------------------|-----------|--------------|---------|---------------------------|-------------|
| | HEAT PUMP FAN COIL UNIT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MANUEACTURER | COOLI | IG NET CA | PACITY | SEER2 | HEATING | CAPACITY | Y HSPF | | | ELECTRIC | | OPER. | MANUIEACTURER | | | ESP | MIN. OA FO | OOLING HE | ATING | | ELECTRIC | | | FILTERS | OPER. WEIGHT (LBS.) | REMARKS |
| TAG | MANUFACTURER & MODEL NO. | TOTAL | SENS. | AMB. | (EER2) | SENS. | AMB. | (COP) | COND. F | AN COL | | UNITS POWER S | UPPLY WEIGHT | TAG MANUFACTURER & MODEL NO. | SERVES | CFM (| IN. W.G.) | CFM EDE | B EWB | EDB | EVAP. FAN | | POWER SL | IPPLY OT | SIZE | WEIGHT | INCIVIANNO |
| | a WOBEL NO. | (MBH) | (MBH) | (°F) | | (MBH) | (°F) | | NO. HP | FLA NO. | RLA LRA | MCA MOCP V | PH (LBS.) | a WODEL 140. | | | | (°F) | (°F) | (°F) N | 0. HP | FLA MCA | MOCP V | PH Q'' | SIZE | (LBS.) | |
| /HP\ | 0.1.0.015.0 | | | | | | | | | | | | | <u></u> | | | | | | | | | | | | | |
| $\left\langle \begin{array}{c} \Pi P \\ - \end{array} \right\rangle$ | CARRIER MCY-MAP036 | 36.9 | 24.0 | 102 | 22.8 | 40.0 | 27 | 10.52 | 2 | 1 | | 36.3 40 208 | 1 345 | FC CARRIER 5-A MMU-UP018 | GYM | 480 | 0.0 | 125 83. | 6 66.7 | 57.0 (5 | 5) (5) (| $(5) \mid (5)$ | (5) (5) | (5) 1 | 9 | 60 | 12345678910 |
| 5 | MCT-MAPU36 | | | | | | | | | | | | | 5-A/ MMU-UP018 | | | | | | | | \cup | | | | | |
| i | | | | | | | | | | | | | | <u></u> | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | FC CARRIER | GYM | 480 | 0.0 | 125 83. | 6 66.7 | 57.0 (5 | 5 (5 (| 5 (5) | (5) (5) | (5) 1 | 9 | 60 | 12345678910 |
| | | | | | | | | | | | | | | 5-B MMU-UP018 | | | | | | | | \bigcirc $ \bigcirc$ | \cup | $ \smile $ | | | |

- 1) PROVIDE REFRIGERANT PIPING AND INSULATION INCLUDING FULL REFRIGERANT CHARGE. SIZES SHALL BE BASED ON FINAL DEVELOPED LENGTH AND MANUFACTURER'S REQUIREMENTS. PROVIDE ALL REFRIGERANT ACCESSORIES AS PER MANUFACTURER'S RECOMMENDATION. VERIFY SIZING WITH MANUFACTURER'S REP. PRIOR TO INSTALLATION, SEE DETAILS 5/M5.1, 6/M5.1.
- (2) PROVIDE WITH NON-CFC REFRIGERANT BASED SYSTEM.
- (3) PROVIDE WITH PROGRAMMABLE THERMOSTAT AND GROUP CONTROL, SEE DETAIL
- (4) PROVIDE CONDENSING UNIT WITH VIBREX VIBRATION ISOLATOR TYPE RC 2"x2" NEOPRENE PADS, SEE DETAIL 8/M5.1.
- (5) INDOOR FAN COIL UNIT RECEIVES POWER FROM OUTDOOR CONDENSING UNIT.
- (6) PROVIDE WITH DISCONNECT. FOR CONTROL DIAGRAM, SEE 1/M5.3.

REQUIRED BY MANUFACTURER FOR PROPER OPERATION.

- (7) PROVIDE ALL CONTROL WIRING INSIDE CONDUIT AND ALL OTHER ACCESSORIES
- (8) FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER AND COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.
- (9) PROVIDE MANUFACTURER FILTERS.
- (10) MOUNT CASSETTE FAN COIL PER DETAIL 9/M5.2.

| | GAS FURNACE SCHEDULE | | | | | | | | | | | | | | | | | |
|-------|---------------------------------------------------------------------------------------------|----------------------------------------|-----|-----------|-------|-------|------|-----|------------|------------|-----|------|--------|-------------|-----|---------|---------------|-----------------|
| | MANUFACTURER SERVES CEM ESP MIN. OA INPUT AFUE SURDIX FAN LINIT DOWER SURDIX WEIGHT REMARKS | | | | | | | | | | | | | | | | | |
| TAG | & MODEL NO. | SERVES | CFM | (IN. WG.) |) CFM | (MBH) | | NO. | PPLY HP | FAN FLA | | MOCP | ER SUI | PPLY PH. | QTY | SIZE | WEIGHT (LBS.) | REMARKS |
| FAU 1 | CARRIER 59SU5B04 | SLEEP QTRS & TOILETS | 800 | 0.5 | 150 | 40 | 95.0 | 1 | 0.5 | 0.6 | 8.8 | 15 | 115 | 1 | 1 | 16x24x2 | 150 | 123456789101112 |
| FAU 2 | CARRIER 59SU5B04 | SLEEP QTRS | 800 | 0.5 | 160 | 40 | 95.0 | 1 | 0.5 | 0.6 | 8.8 | 15 | 115 | 1 | 1 | 16x24x2 | 150 | 123456789101112 |
| FAU 3 | CARRIER 59SU5B04 | KITCHEN & LIVING ROOM | 800 | 0.5 | 225 | 40 | 95.0 | 1 | 0.5 | 0.6 | 8.8 | 15 | 115 | 1 | 1 | 16x24x2 | 150 | 123456789101112 |
| FAU 4 | CARRIER 59SU5B04 | OFFICES/ LAUNDRY ROOMS & TOILETS | 800 | 0.5 | 130 | 40 | 95.0 | 1 | 0.5 | 0.6 | 8.8 | 15 | 115 | 1 | 1 | 16x24x2 | 150 | 123456789101112 |

- (1) FOR FURNACE MOUNTING, SEE DETAIL 7/M5.1. (2) PROVIDE WITH DUCT MOUNTED SMOKE DETECTOR. SEE FLOOR PLAN FOR LOCATION. SEE ELECTRICAL PLAN FOR POWER
- REQUIREMENTS. (3) PROVIDE UV EMITTERS. 80 WATT/120V/1PH.
- (4) PROVIDE DOOR SWITCH.

(5) PROVIDE NATURAL GAS BURNER.

- (6) PROVIDE PVC FURNACE FLUE PIPES WITH CONCENTRIC VENT TERMINATION KIT. SIZE SHALL BE BASED ON THE FINAL DEVELOPED LENGTH AND MANUFACTURER'S RECOMMENDATIONS,
- 11) PROVIDE ALL CONTROL WIRING INSIDE CONDUIT AND ALL OTHER ACCESSORIES FOR PROPER OPERATION REQUIRED BY MANUFACTURER. SEE DETAIL 3/M5.2. (12) FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH
- (7) PROVIDE WITH PROGRAMMABLE THERMOSTAT, SEE DETAIL 1/M5.1. MANUFACTURER AND COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.
- (8) PROVIDE UL 900 (CLASS 1 OR 2) (MERV-13) PLEATED FILTER. (9) PROVIDE WITH STAINLESS STEEL DRAIN PAN.
- (10) PROVIDE WITH DISCONNECT. FOR CONTROL DIAGRAM, SEE DETAIL

| - 1- | | | | | | | | | | 1447 | | | | ٥٥٥٥ | |
|----------|-----------|-----------------------------|---------------|------|-------------------|------------|------|---------------|---------------|-------------------------|-----|----|------------------|---------------------------|-----------|
| | TAG | MANUFACTURER & MODEL NO. | SERVES | CFM | ESP (IN. W.G.) | DRIVE TYPE | RPM | BHP (AMPS) | HP (WATTS) | MAX. SONES (dB(A) | ٧ | PH | FAN TYPE | OPER. WEIGHT (LBS.) | REMARKS |
| 4 | EF 1 | PLYMOVENT TEV-585-60 | PLYMOVENT | 3250 | 6.0 | BELT | 3450 | (30) | 7.5 | (69) | 230 | 3 | UTILITY SET | 190 | 121112 |
| + | EF 2 | COOK GC-622 | ELEC | 350 | 0.25 | DIRECT | 1137 | _ | (107) | 2.0 | 115 | 1 | CEILING MOUNT | 35 | 34578910 |
| (| EF 3 | COOK GC-168 | JAN | 150 | 0.25 | DIRECT | 1093 | _ | (53) | 3.0 | 115 | 1 | CEILING MOUNT | 21 | 34568910 |
| (| EF 4 | COOK GC-342 | TOILET/SHOWER | 150 | 0.25 | DIRECT | 1093 | _ | (53) | 3.0 | 115 | 1 | CEILING MOUNT | 21 | 34568910 |
| (| EF 5 | COOK GC-342 | LAUNDRY | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| 4 | EF 6 | COOK GC-342 | BATH 2 | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| * | EF 7 | COOK GC-622 | TEL | 350 | 0.25 | DIRECT | 1137 | _ | (107) | 2.0 | 115 | 1 | CEILING MOUNT | 35 | 34578910 |
| ŧ | EF 8 | COOK GC-342 | BATH 3 | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| ÷ | EF 9 | COOK GC-342 | BATH 4 | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| ÷ | EF 10 | COOK GC-342 | BATH 5 | 200 | 0.25 | DIRECT | 1620 | - | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| · | EF 11 | COOK GC-342 | ICE | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34578910 |
| * | EF 12 | COOK GC-342 | LAUNDRY | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| (| EF 13 | COOK GC-342 | BATH 1 | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| K | EF 14A | COOK GC-146 | TOILET/SHOWER | 100 | 0.25 | DIRECT | 900 | _ | (35) | 1.3 | 115 | 1 | CEILING MOUNT | 12 | 34568910 |
| K | EF 14B | COOK GC-146 | TOILET/SHOWER | 100 | 0.25 | DIRECT | 900 | _ | (35) | 1.3 | 115 | 1 | CEILING MOUNT | 12 | 34568910 |
| \ \ | EF 15 | COOK GC-342 | TOILET | 200 | 0.25 | DIRECT | 1620 | _ | (70) | 3.5 | 115 | 1 | CEILING MOUNT | 32 | 34568910 |
| • | EF 16 | COOK 165SQN17D | SCUBA | 1980 | 0.3 | DIRECT | 1002 | 0.34 | 0.75 | 10.7 | 115 | 1 | INLINE | 150 | 245891013 |
| | | | | | | | | | | | | | | | |

EXHAUST FAN SCHEDULE

| | DX | COC | DLIN | G | | LS | CHED | ULE | |
|-------------------------------------------------------------------|-----------------------------|--------------------------|---------------------------------|-----------------------|----------------------|-----|-----------------------|---------------------------|---------|
| TAG | MANUFACTURER & MODEL NO. | CAPACIT DESIGN TOTAL | Y (MBH) SN COND. SENSIBLE | DESIGN EDB (°F) | COND. EWB (°F) | CFM | S.P. DROP (IN. WC) | OPER. WEIGHT (LBS.) | REMARKS |
| CC 1 | CARRIER CAPMP | 27.6 | 19.6 | 78.3 | 63.5 | 800 | 0.5 | 70 | 123 |
| CC 2 | CARRIER CAPMP | 27.9 | 19.6 | 78.3 | 63.9 | 800 | 0.5 | 65 | 123 |
| $\left\langle \begin{array}{c} CC \\ 3 \end{array} \right\rangle$ | CARRIER CAPMP | 27.7 | 21.1 | 80.1 | 63.6 | 800 | 0.5 | 75 | 123 |
| CC 4 | CARRIER CAPMP | 27.2 | 19.7 | 78.5 | 63.4 | 800 | 0.5 | 75 | 123 |

(1) SWEAT SUCTION TUBE & LIQUID TUBE CONNECTIONS. (2) COIL LOCATED ON SUPPLY SIDE OF FORCED AIR UNIT. COIL NUMBER CORRESPONDS

WITH FURNACE NUMBER.

- (3) PROVIDE FAN COIL WITH DRAIN PAN AND SECONDARY CONDENSATE DRAIN OVERFLOW CUTOUT SWITCH
- CONDENSING UNIT (COOLING ONLY) SCHEDULE COOLING NET CAPACITY SEER2 ELECTRICAL MANUFACTURER TOTAL SENSIBLE AMB. (EER2) COMPRESSOR CONDENSER FAN UNIT POWER SUPPLY NO. RLA LRA NO. HP FLA MCA MOCP V PH WEIGHT REMARKS & MODEL NO. CARRIER DORMS , 102 |_(13.5)| 8.8 | 42.6 | 1 | 1/5 | 0.40 | 11.4 | 20 | 208 | 19.6 24SCA518 CARRIER 1 2 3 4 5 6 7 DORMS 27.9 102 (12.5) 19.6 | 10.9 | 59.5 | 1 | 1/5 | 0.60 | 14.2 | 20 | 208 24SCA524 CARRIER 1234567 , 102 | (12.0) ' 21.1 | 12.2 | 80.1 | LIVING 24SCA536 CARRIER COMMON 27.2 19.7 180 102 24SCA530
- 1) PROVIDE REFRIGERANT PIPING AND INSULATION INCLUDING FULL REFRIGERANT CHARGE. SIZE SHALL BE AS PER MFR.'S REQUIREMENT AND FINAL DEVELOPED LENGTH. PROVIDE ALL REFRIGERANT ACCESSORIES AS PER MFR.'S RECOMMENDATION. VERIFY SIZING WITH MFR.'S REP. PRIOR TO INSTALLATION, SEE DETAILS 5/M5.1 AND

(2) PROVIDE WITH CRANKCASE HEATER AND LIQUID LINE

SOLENOID VALVE FOR LONG LINE APPLICATIONS.

ISOLATION RELAY, LOW-AMBIENT CONTROL KIT AND WINTER START CONTROL KIT FOR LOW-AMBIENT COOLING APPLICATIONS. (4) MOUNT ON LEVEL PLATFORM, SEE DETAIL 8/M5.1

3 PROVIDE WITH EVAPORATOR FREEZE THERMOSTAT,

- 5 PROVIDE WITH DISCONNECT. FOR CONTROL DIAGRAM, SEE DETAIL 11/M5.1.
- (7) FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER AND COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.

BY MANUFACTURER.

6) PROVIDE ALL CONTROL WIRING INSIDE CONDUIT AND ALL

OTHER ACCESSORIES FOR PROPER OPERATION REQUIRED

| | | | | | | В | 00 | STE | R F | 1A= | 1 5 | SCHE | DUL | E |
|----|------|-----------------------------|--------------------------------|-----|-------------------|------------|------|---------------|---------------|-----|-----|----------|---------------------------|---------|
| | TAG | MANUFACTURER & MODEL NO. | SERVES | CFM | ESP (IN. W.G.) | DRIVE TYPE | RPM | HP (WATTS) | MAX. SONES | V | PH | FAN TYPE | OPER. WEIGHT (LBS.) | REMARKS |
| | BF 1 | S&P TD-100X | GYM | 60 | 0.25 | DIRECT | 2096 | (33) | N/A | 120 | 1 | INLINE | 10 | 1234567 |
| ^2 | BF 2 | S&P TD-100X | GYM | 60 | 0.25 | DIRECT | 2096 | (33) | N/A | 120 | 1 | INLINE | 10 | 1235678 |
| | BF 3 | S&P TD-150 | UTILITY ROOM DRYING CABINET | 200 | 0.25 | DIRECT | 1710 | (65) | N/A | 120 | 1 | INLINE | 20 | 1235679 |

- (1) PROVIDE WITH BACKDRAFT DAMPER.
- (2) MOUNT INLINE WITH DUCTWORK, SEE DETAIL 2/M5.3.

(3) PROVIDE THERMAL OVERLOAD PROTECTION ON FAN MOTOR.

- (4) INTERLOCK WITH FC-5-A.
- (5) PROVIDE WITH DISCONNECT SWITCH. BY OTHERS.
- (7) FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER AND COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.
- (8) INTERLOCK WITH FC-5-B.
- (6) PROVIDE WITH MANUFACTURERS FAN SPEED CONTROLLER. (9) INTERLOCK WITH DRYING CABINET OPERATION.

| | CIRCULATING CEILING FAN SCHEDULE | | | | | | | | | | | | | |
|---------------|----------------------------------|---------|----------|-----|------|--------|------|-----|------------------|---------|--|--|--|--|
| | | | VELOCITY | | ELEC | ΓRICAL | DATA | | OPER. | | | | | |
| TAG | MANUFACTURER & MODEL NO. | SERVES | (RPM) | NO. | HP | AMPS | ٧ | PH. | WEIGHT (LBS.) | REMARKS | | | | |
| $\frac{F}{1}$ | MACRO AIR MA12XL1006 | APP BAY | 84 | 1 | 1 | 10.8 | 208 | 3 | 225 | 12345 | | | | |
| F 2 | MACRO AIR MA12XL1006 | APP BAY | 84 | 1 | 1 | 10.8 | 208 | 3 | 225 | 12345 | | | | |
| $\frac{F}{3}$ | MACRO AIR MA12XL1006 | APP BAY | 84 | 1 | 1 | 10.8 | 208 | 3 | 225 | 12345 | | | | |

- 1 PROVIDE WITH MANUFACTURER'S INSTALLATION KIT. SEE 4 PROVIDE ALL CONTROL WIRING IN CONDUIT AND ALL MANUFACTURER'S INSTALLATION MANUAL FOR MOUNTING ACCESSORIES REQUIRED BY MANUFACTURER FOR
- 2 INTERLOCK WITH MANUFACTURER'S CONTROLLER. SEE 5) FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER AND COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.
- (3) PROVIDE WITH DISCONNECT SWITCH BY ELECTRICAL.

| | AIR DEV | ICE SCHE | DULE | |
|-----------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MANUFACTURER & MODEL NO. | TYPE | FRAME STYLE | OBD (YES/NO) | REMARKS |
| TITUS PMC | PERFORATED SUPPLY | BORDER TYPE 3 | NO | 1234 |
| TITUS PAR | PERFORATED RETURN/EXHAUST | BORDER TYPE 3 | NO | 124 |
| TITUS MCD | MODULAR CORE SUPPLY | BORDER TYPE 1 | YES | 12345 |
| TITUS 350RL | LOUVER FACE RETURN/EXHAUST | BORDER TYPE 3 | YES | 24 |
| TITUS 300 | LOUVER FACE SUPPLY | BORDER TYPE 1 | YES | 124 |
| TITUS PMC | PERFORATED SUPPLY | BORDER TYPE 3 | YES | 1246 |
| | & MODEL NO. TITUS PMC TITUS PAR TITUS MCD TITUS 350RL TITUS 300 TITUS | MANUFACTURER & MODEL NO. TITUS PERFORATED SUPPLY TITUS PERFORATED RETURN/EXHAUST TITUS MODULAR CORE SUPPLY TITUS LOUVER FACE RETURN/EXHAUST TITUS LOUVER FACE SUPPLY TITUS JOUVER FACE SUPPLY TITUS PERFORATED | MANUFACTURER & MODEL NO. TITUS PERFORATED BORDER TYPE 3 TITUS PERFORATED BORDER TYPE 3 TITUS MODULAR CORE SUPPLY BORDER TYPE 1 TITUS LOUVER FACE RETURN/EXHAUST BORDER TYPE 3 TITUS SUPPLY BORDER TYPE 3 TITUS LOUVER FACE RETURN/EXHAUST BORDER TYPE 3 TITUS SUPPLY BORDER TYPE 3 TITUS PERFORATED BORDER TYPE 1 | ** MODEL NO.** TYPE STYLE (YES/NO) TITUS PMC PERFORATED SUPPLY BORDER TYPE 3 NO TITUS PAR PERFORATED RETURN/EXHAUST BORDER TYPE 3 NO TITUS MODULAR CORE SUPPLY BORDER TYPE 1 YES TITUS JOUVER FACE RETURN/EXHAUST BORDER TYPE 3 YES TITUS LOUVER FACE SUPPLY BORDER TYPE 1 YES TITUS PERFORATED POPDER TYPE 3 YES |

- (1) SQUARE NECK WITH ROUND (4) SEE DETAIL 4/M5.1.
- (2) STEEL CONSTRUCTION.
- (5) PROVIDE YOUNG REGULATOR CABLE TYPE REMOTE
- 3 MODULAR CORE WITH) MODULAR CORE WITH 4-WAY DEFLECTION, U.N.O. 6 MODULAR CORE WITH 2-WAY DEFLECTION, U.N.O.
- AID DEVIGE COLIEDIUE
- MANUAL VOLUME DAMPER.

SUPPLY FAN SCHEDULE (IN. W.G.) DRIVE TYPE RPM (WATTS) (WATTS) SONES PH FAN TYPE | WEIGHT | REMARKS & MODEL NO. 1234567 TURN OUT 0.25 DIRECT 910 | 0.55 | 1/6 | INLINE 190 120SQN17D(VF) (5) PROVIDE WITH DISCONNECT SWITCH, BY ELECTRICIAN. (1) PROVIDE WITH BACKDRAFT DAMPER. 6 PROVIDE ALL CONTROL WIRING IN CONDUIT AND ALL ACCESSORIES REQUIRED BY MANUFACTURER FOR A 2) PROVIDE ALL MOUNTING HARDWARE INCLUDING SEISMIC

FOR CONTROL.

- BRACING, SEE DETAIL 2/M5.3. 3 PROVIDE THERMAL OVERLOAD PROTECTION ON FAN MOTOR.
- 4 INTERLOCK WITH WALL SWITCH, SEE DETAIL 12/M5.1. SEE FLOOR PLANS FOR THERMOSTAT LOCATION.

0.25

UTILITY ROOM | 200

1) PROVIDE WITH SPRING TYPE VIBRATION ISOLATION

GUARD AND BACKDRAFT RAIN CAP.

(2) PROVIDE WITH BACKDRAFT DAMPER.

FLOOR PLANS FOR LOCATION.

FLOOR PLANS FOR LOCATION.

HARDWARE, SILENCER, FLEXIBLE CONNECTIONS, MOTOR

(3) PROVIDE WITH INTEGRAL BACKDRAFT DAMPER AND CEILING

(4) PROVIDE ALL MOUNTING HARDWARE INCLUDING VIBRATION

ISOLATION AND SEISMIC BRACING, SEE DETAIL 9/M5.1.

(5) PROVIDE THERMAL OVERLOAD PROTECTION ON FAN MOTOR.

(6) INTERLOCK WITH WALL SWITCH, SEE DETAIL 12/M5.1. SEE

(7) INTERLOCK WITH THERMOSTAT, SEE DETAIL 12/M5.1. SEE

(8) PROVIDE WITH DISCONNECT SWITCH, BY ELECTRICIAN.

DIRECT

(7) FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER AND COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.

COMPLETE AND OPERATIONAL SYSTEM.

(70)

COMPLETE AND OPERATIONAL SYSTEM.

CONTRACTOR PRIOR TO START OF WORK.

(9) PROVIDE ALL CONTROL WIRING IN CONDUIT AND ALL

10 FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER AND COORDINATE WITH ELECTRICAL

(11) PROVIDE WITH CONTROL PANEL (PLYMOVENT MODEL

#OS-3). FAN IS RADIAL, CAST ALMAG WHEEL, CAST

MECHANICAL CONTRACTOR SHALL PROVIDE FUSED DISCONNECT AND MOTOR STARTER (COORDINATE WITH

(13) INTERLOCK WITH SCUBA EQUIPMENT OPERATION.

ÄLUMINUM HOUSING WITH FLEXIBLE CONNECTIONS AND FAN SILENCER. ENTIRE FAN ASSEMBLY SHALL BE INSTALLED

EXHAUST REMOVAL SYSTEM SUPPLIER), SEE DETAIL 10/M5.1

ACCESSORIES REQUIRED BY MANUFACTURER FOR A

| | | | | U | INIT | HEA T | <u>rer</u> | SCH | <u> IEDUL</u> | E | | | | |
|---|---------|------------------|---------|------|----------------|-----------------|------------|------|---------------|-----|-------|-----|------------------|---------|
| | | MANUFACTURER | | | | TING | AFUE | F/ | AN | ELE | CTRIC | CAL | OPER. | |
| | TAG | & MODEL NO. | SERVES | CFM | INPUT (MBH) | OUTPUT (MBH) | (%) | HP | TYPE | FLA | ٧ | PH | WEIGHT (LBS.) | REMARKS |
| | UH 1 | REZNOR UEZ-85 | APP BAY | 1200 | 85 | 79 | 93 | 1/20 | DIRECT | 2.2 | 115 | 1 | 120 | 1234 |
| I | UH 2 | REZNOR UEZ-85 | APP BAY | 1200 | 85 | 79 | 93 | 1/20 | DIRECT | 2.2 | 115 | 1 | 120 | 1234 |

- 1) PROVIDE STAINLESS STEEL HEAT EXCHANGER AND SINGLE STAGE GAS VALVE.
- 2 CONTROL BY THERMOSTAT, SEE DETAIL 5/M5.2. MOUNT THERMOSTAT PER DETAIL 1/M5.1.
- 3 PROVIDE CONCENTRIC VENT KIT. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND DETAIL 3/M5.2. (4) PROVIDE MOUNTING HARDWARE. SUPPORT PER DETAIL 6/M5.2.

CEILING

MOUNT

42095 ZEVO DR., TEMECULA, CALIFORNIA 92590-3780 Phone: 951.296.9110 Fax: 951.296.6079 Email: stk@stkinc.com

CONSULTANT:

Vista, CA 92081 **760.560.0100** 08-22-25 #2024-03417 JO JO/ZC PP MP Www.salasobrien.com

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO **COUNTY FIRE DEPARTMENT:**

FIRE STATION 227

PROJECT # 10.10.1202

APN Part of 0154-281-01

CIP #22-105

180 W. 38TH STREET SAN BERNARDINO,

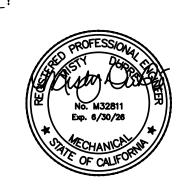
CA 92405

| ISSUE INFOR | RMATION: |
|----------------------|--------------|
| DATE: | INFORMATION: |
| 9-11-24 | D.D.s |
| 10-26-24 | PROGRESS |
| 12-20-24 | 95% CDs |
| 03-14-25 | Plan Check 🛆 |
| 05-09-25 | Plan Check 🛆 |
| 0 7-25-25 | BID SET |
| 08-25-25 | BID SET |
| | |
| | |

SHEET INFORMATION:

STK PROJECT NO.: 374-193-24 AS NOTED DATE: DECEMBER 2024 PLOT DATE: DRAWING NAME:

SEAL:



MECHANICAL SCHEDULES

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220601

Report Generated: 2025-04-15 16:02:07 Compliance ID: EnergyPro-5511-0425-0359

| CERTIFICATE OF COMPLIANC | E - NONRESID | PENTIAL PERFOR | MANCE COMPLIANCE METH | 1OD | <u> </u> | | NRCC-PRF-E |
|-----------------------------------------------|--------------|--------------------|----------------------------------------------------------------------------------------------|-------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Nonresidential Performance | Compliance I | Method | | | | | (Page 2 of 17) |
| B. PROJECT SUMMARY | | | - | _ | | | 01 |
| Table B shows which building o | components a | re included in the | e performance calculation. Ij | f ind | icated as not inc | cluded, the project must show compliance prescr | iptively if within the |
| В | uilding Comp | onents Complyir | ng via Performance | | | Building Components Complying Pre | escriptively |
| Envalone (See Table C) | Nonres | Performance | Solar Thermal Water | | Performance | The following building components are ONLY eligible for and should be documented on the NRCC form listed if | |
| Envelope (See Table G) | MultiFam | Not Included | Heating (See Table I3) | ⊠ | Not Included | permit application (i.e. compliance will not be shown | |
| Mechanical (See Table H) | Nonres | Performance | Covered Process: Commercial Kitchens (see Table J) Covered Process: Laboratory Exhaust (see | | Performance | Indoor Lighting (Unconditioned) 140.6 & 170.2(e) | NRCC-LTI-E is required |
| | MultiFam | Not Included | | | Not Included | Outdoor Lighting 140.7 & 170.2(e) NRCC rec | |
| Domestic Hot Water (See | Nonres | Performance | | | Performance | Sign Lighting 140.8 & 170.2(e) | NRCC-LTS-E is required |
| Table I) | MultiFam | Not Included | Table J) | Ø | Not Included | Building Components Complying with Man | datory Measures |
| Lighting (Indoor Conditioned, see Table K) | Nonres | Not Included | Photovoltaics (see Table F) | Ø | Performance | Electrical power systems, commissioning, sola escalator requirements are mandatory and sho on the NRCC form listed if applicable (i.e. con shown on the NRCC-PRF-E. | ould be documented appliance will not be |
| 20 | MultiFam | Not Included | | | Not Included | Electrical Power Distribution 110.11 | NRCC-ELC-E is required |
| • | | | Potton (see Table 5) | | Performance | Commissioning 120.8 | NRCC-CXR-E is required |
| | | | Battery (see Table F) | Ø | Not Included | Solar and Battery 110.10 | NRCC-SAB-E is required |

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000

Schema Version: rev 20220601

Report Generated: 2025-04-15 16:02:07 Compliance ID: EnergyPro-5511-0425-0359

NRCC-PRF-E CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD Nonresidential Performance Compliance Method (Page 3 of 17) C1. COMPLIANCE SUMMARY COMPLIES³ Time Dependent Valuaton (TDV) Source Energy Use Efficiency¹ (kBtu/ft² - yr) Total² (kBtu/ft² - yr) Total² (kBtu/ft² - yr) Standard Design 199.56 183.69 16.8 Proposed Design 133.27 133.27 13.15 Compliance Margins 66.29 50.42 3.65 Pass ¹ Efficiency measures include improvements like a better building envelope and more efficient equipment ² Compliance Totals include efficiency, photovoltaics and batteries ³ Building complies when efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Report Generated: 2025-04-15 16:02:07 Schema Version: rev 20220601 Compliance ID: EnergyPro-5511-0425-0359

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E Nonresidential Performance Compliance Method (Page 4 of 17)

| | COMPLIES ² | | |
|-----------------------------|-----------------------|-----------------------|-------------------------|
| Energy Component | Standard Design (TDV) | Proposed Design (TDV) | Compliance Margin (TDV) |
| Space Heating | 8.66 | 12.06 | -3.4 |
| Space Cooling | 56.32 | 53.54 | 2.78 |
| Indoor Fans | 91.28 | 27.93 | 63.35 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 8.71 | 5.15 | 3.56 |
| Indoor Lighting | 34.59 | 34.59 | 0 |
| Flexibility | 19861 | 7225 | 622 |
| EFFICIENCY COMPLIANCE TOTAL | 199.56 | 133.27 | 66.29 (33.2%) |
| Photovoltaics | -15.87 | (MAM.) | -15.87 |
| Batteries | :2755) | 85059 | |
| TOTAL COMPLIANCE | 183.69 | 133.27 | 50.42 (27.4%) |

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Nonresidential Performance Compliance Method

Schema Version: rev 20220601

Report Generated: 2025-04-15 16:02:07 Compliance ID: EnergyPro-5511-0425-0359

NRCC-PRF-E

(Page 7 of 17)

| CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANC | E COMPLIANCE METHOD | | NRCC-PR |
|------------------------------------------------------------------|-----------------------|-----------------------|--------------------------------------|
| Nonresidential Performance Compliance Method | | | (Page 5 of |
| C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS ¹ | | • | \rightarrow |
| Non-Regulated Energy Component | Standard Design (TDV) | Proposed Design (TDV) | Compliance Margin (TDV) ¹ |
| Receptacle | 90.73 | 90.73 | _ |
| Process | 28.75 | 28.75 | - |
| Other Ltg | 200 | | |
| Process Motors | 244F | | / 2444 |
| TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS) | 303.17 | 252.75 | 50.42 (16.6%) |
| Notes: This table is not used for Energy Code Compliance. | | | |
| Notes: This table is not used for Energy Code Compliance. | | | |

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E Nonresidential Performance Compliance Method (Page 8 of 17)

| Non-Regulated Energy Component | Standard Design (SOURCE) | Proposed Design (SOURCE) | Compliance Margin (SOURCE) ¹ |
|-----------------------------------------------------------|--------------------------|-----------------------------|-----------------------------------------|
| Receptacle | 11.44 | 11.44 | |
| Process | 3.17 | 3.17 | 70.00 |
| Other Ltg | 1223 | -223) | S |
| Process Motors | | *** | 3 |
| TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS) | 31.41 | 27.76 | 3.65 (11.6%) |
| Notes: This table is not used for Energy Code Compliance. | * | | 8. |
| | - | | |
| C6. 'ABOVE CODE' QUALIFICATIONS | | | |
| ☐ This project is pursuing CalGreen Tier 1 | ☐ This project | is pursuing CalGreen Tier 2 | |

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000

Schema Version: rev 20220601

Report Generated: 2025-04-15 16:02:07 Compliance ID: EnergyPro-5511-0425-0359

| Energy Component | Standard Design Site (MWh) | Proposed Design Site (MWh) | Margin (MWh) | Standard Design Site (MBtu) | Proposed Design Site (MBtu) | Margin (MBtu) |
|---------------------|-------------------------------|-------------------------------|-------------------|--------------------------------|--------------------------------|------------------|
| Space Heating | 1.3 | 0.2 | 1.1 | 1225 | 17.9 | 1 <u>222</u> |
| Space Cooling | 7.6 | 7.3 | 0.3 | Aug | | - |
| Indoor Fans | 15.2 | 4.7 | 10.5 | inde. | | |
| Heat Rejection | (7000) | 585 | 53754 | 27792 | THE | Sect. |
| Pumps & Misc. | (555) | | | (707-) | THEST | £700 |
| Domestic Hot Water | 0.5 | 200 | 7272 | 10.9 | 9.6 | 1.3 |
| Indoor Lighting | 6.4 | 6.4 | 0 | | | 2522 |
| Flexibility | ::: | - | | seres: | | *** |
| EFFICIENCY TOTAL | 31 | 18.6 | 12.4 | 10.9 | 27.5 | -16.6 |
| Photovoltaics | -3.6 | 200 | 1 <u>520</u> 21 | <u>1945</u> | 866 | 7222 |
| Batteries | | ACC | 5000 | (444) | | *** |
| ENERGY USE SUBTOTAL | 27.4 | 18.6 | 8.8 | 10.9 | 27.5 | -16.6 |
| Receptacle | 13.9 | 13.9 | 0 | 32.3 | 32.3 | 0 |
| Process | 4.8 | 4.8 | 0 | 1000 | 220 | *** |
| Other Ltg | | | :3043 | rate: | 212 | |
| Process Motors | ATTEN. | | : :::: | | | Serve: |
| ENERGY USE TOTAL | 46.1 | 37.3 | 8.8 | 43.2 | 59.8 | -16.6 |

| Nonresidential Performance Compliance Method | | | (Page 6 of 1 |
|--------------------------------------------------------------|-------------------------------------------|--------------------------|---------------------------|
| | | | |
| C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COM | MPONENTS (Annual SOURCE Energy Use, kBtu | /ft² /yr) | |
| | COMPLIES ² | | 40 |
| Energy Component | Standard Design (SOURCE) | Proposed Design (SOURCE) | Compliance Margin (SOURCE |
| Space Heating | 1.32 | 3.66 | -2.34 |
| Space Cooling | 2.53 | 2.39 | 0.14 |
| Indoor Fans | 8.55 | 2.62 | 5.93 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 2.39 | 1.86 | 0.53 |
| Indoor Lighting | 2.62 | 2.62 | 0 |
| Flexibility | 1582 | 9200 | 622 |
| EFFICIENCY COMPLIANCE TOTAL | 17.41 | 13.15 | 4.26 (24.5%) |
| Photovoltaics | -0.61 | (MAR) | -0.61 |
| Batteries | :2759 | 65594 | USSES. |
| TOTAL COMPLIANCE | 16.8 | 13.15 | 3.65 (21.7%) |
| Notes: This number in parenthesis following the Compliance M | arain in column 4. represents the Percent | Better than Standard | - |

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E Nonresidential Performance Compliance Method (Page 9 of 17)

| | Standard Design (kBtu/ft² / yr) | Proposed Design (kBtu/ft² / yr) | Margin (kBtu/ft ² / yr) | Margin Percentage |
|------------------------|---------------------------------|---------------------------------|------------------------------------|-------------------|
| GROSS EUI ¹ | 44.9 | 39.47 | 5.43 | 12.09 |
| NET EUI ¹ | 42.31 | 39.47 | 2.84 | 6.71 |

D1. EXCEPTIONAL CONDITIONS

• The project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(d) Automatic Daylighting Controls

in Secondary Daylit Zones is required. • Project is claiming Exception 1 to Section 140.10(b): No battery storage system is required if the installed PV system size is less than 15 percent of the size determined by Equation 140.10-A.

 Project is claiming Exception 3 to Section 140.10(b): No battery storage system required for tenant spaces less than or equal to 5,000 ft2.
 PV/Battery Building Type has been modified from software defaults for one or more spaces. Review project's PV/Battery Building Type(s) with documentation author. Refer to Energy Code section 140.10 for Nonresidential or 170.2(g) for more information.

| F1. REQUIRED | PV SYSTEMS | | | | | | | | | | • |
|--------------------------|------------------------|-------------|------------|----------------------|-----|------------------|------------|----------------------|-----------------|----------------------|----------------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
| DC System Size (kWdc) | Exception ¹ | Module Type | Array Type | Power Electronics | CFI | Azimuth (deg) | Tilt Input | Array Angle (deg) | Tilt: (x in 12) | Inverter Eff. (%) | Annual Solar Access (%) |

¹See Table D1 for any PV exceptions used.

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000

Schema Version: rev 20220601

Report Generated: 2025-04-15 16:02:07 Compliance ID: EnergyPro-5511-0425-0359

42095 ZEVO DR., TEMECULA, CALIFORNIA 92590-3780 Phone: 951.296.9110 Fax: 951.296.6079 Email: stk@stkinc.com

CONSULTANT:

Vista, CA 92081 **760.560.0100**O8-22-25 #2024-03417 www.salasobrien.com

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

SAN BERNARDINO COUNTY FIRE **DEPARTMENT: FIRE STATION 227**

> PROJECT # 10.10.1202 CIP #22-105

APN Part of 0154-281-01

180 W. 38TH STREET SAN BERNARDINO,

CA 92405

| ISSUE INFOR | RMATION: |
|----------------------|--------------|
| DATE: | INFORMATION: |
| 9-11-24 | D.D.s |
| 10-26-24 | PROGRESS |
| 12-20-24 | 95% CDs |
| 03-14-25 | Plan Check 🛆 |
| 05-09-25 | Plan Check 🛆 |
| 0 7-25-25 | BID SET |
| 08-25-25 | BID SET |

SHEET INFORMATION: STK PROJECT NO.: 374-193-24

AS NOTED DATE: DECEMBER 2024 PLOT DATE:

DRAWING NAME:



TITLE 24

Report Generated: 2025-04-15 16:02:07

Compliance ID: EnergyPro-5511-0425-0359

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000

| Nonresidentia | Performance Co | mpliance Me | ethod | | | | | | (Pa _l | ge 11 of 17 | | | | | | |
|----------------------|----------------------|--------------|---------------------|---------|----------|------------|----------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|--------------------------------|---------------------|--|----------|--|
| G4. NONRESIDEI | NTIAL AIR BARRIER | | | | | | | | | | | | | | | |
| | | 01 | | | | | | | 02 | | | | | | | |
| | | Building Sto | H-POSTAGE ASSESSED. | | | | | | Air Barrier | | | | | | | |
| | | Com-Level : | HAMING NO. | | | - | | | No air barrier No air barrier | | | | | | | |
| | | COIII-LEVEL. | I + NOOI | | | | | | NO all barrier | | | | | | | |
| G5. OPAQUE SUI | RFACE ASSEMBLY S | UMMARY | | | | | | | | | | | | | | |
| 01 | 02 | 03 | 04 | 05 | 0 | 6 | 07 08 | | 07 08 | | 07 08 | | 07 (| | 07 08 09 | |
| Surface Name | Construction | Area (ft²) | Framing | Cavity | Continuo | ıs R-Value | Units | | | | | Description of Assembly Layers | Status ¹ | | | |
| ourrace runne | Туре | Alea (it) | Туре | R-Value | Interior | Exterior | | · · · · · · · · · · · · · · · · · · · | Table Description of Assembly 22 years | Julus | | | | | | |
| R-21 Wall8 | Exterior Wall | 2,663 | Wood | 21 | N/A | N/A | U-factor | 0.0691 | Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Composite-1 Gypsum Board - 1/2 in. | N | | | | | | |
| R-30 Roof Attic14 | Roof | 4,739 | Wood | 30 | N/A | N/A | U-factor | 0.0383 | AsphaltShingles0_25In Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Composite-2 Gypsum Board - 1/2 in. | N | | | | | | |
| Slab On Grade16 | Underground Floor | 4,739 | N/A | 0 | N/A | N/A | F-factor | 0.73 | Slab Type =Unheated slab on grade Insulation Orientation =None Insulation R-Value =none | N | | | | | | |
| | v, A - Altered, E - | Evictina | | | 2 (1 | | | | Insulation R-Value =none | 10 | | | | | | |

| | ON ASSEMBLY SUMMAI | | o z i t i i i z i | | 9 | NAMES | T 1995 T | 1970 | T | - | 7200 |
|-------------------------------|------------------------------------------------------------------|------------------------------------|----------------------------------------|---------------------------------|--------------------|--------------------------------------|----------------------------------------|---------------------|--------------|------------------------------------|---------------------|
| 01 | | 02 | | 03 | | 04 | 05 | 06 | 07 | 08 | 09 |
| Fenestration Assembly Name | Fenestration Type | e/ Product Ty | /pe / Frame Type | Certific Meth | Ι Δ | ssembly Method | Area (ft ²) | Overall U-factor | Overall SHGC | Overall VT | Status ² |
| SBFS Window | | cal fenestra ixed windov N/A | | NFF | RC | Manufactured | 326 | 0.5 | 0.4 | 0.5 | N |
| | I in the analysis. A - Altered, E - Existin QUIPMENT (FURNACES | | LING UNITS, HEAT | F PUMPS, VRF, | ECONOMIZERS | ETC.) | 08 | 09 | 10 | 11 | 12 |
| 01 | 02 | 03 | 0, | | eting | 1 0 | 00 | Cooling | 10 | *** | 12 |
| Equipment Name | Equipment Type | Qty | Total Heating Output (kBtu/h) | Supp Heat Output (kBtu/h) | Efficiency Unit | Efficiency | Total Cooling Output (kBtu/h) | Efficiency Unit | Efficiency | Economizer Type (if present) | Status ¹ |
| CU/CC/FAU-1 | Single Zone Air Conditioner (SZAC) Air System | 1 | 24 | 0 | AFUE | 90 | 23.04 | EER SEER | 12.5 16 | No Economizer | N |
| CU/CC/FAU-2 | Single Zone Air Conditioner (SZAC) Air System | 1 | 24 | 0 | AFUE | 90 | 23.04 | EER SEER | 12.5 16 | No Economizer | Ν |
| CU/CC/FAU-3 | Single Zone Air Conditioner (SZAC) Air System | 1 | 36 | 0 | AFUE | 90 | 34.56 | EER SEER | 12.5 16 | No Economizer | N |
| Status: N - New, | A - Altered, E - Existii | ng | | | | | | • | | | |
| CA Building Ener | gy Efficiency Standard | ds - 2022 No | onresidential Co | ompliance | | sion: 2022.0.000 rsion: rev 20220 | | Cc | | ated: 2025-04- nergyPro-5511 | |

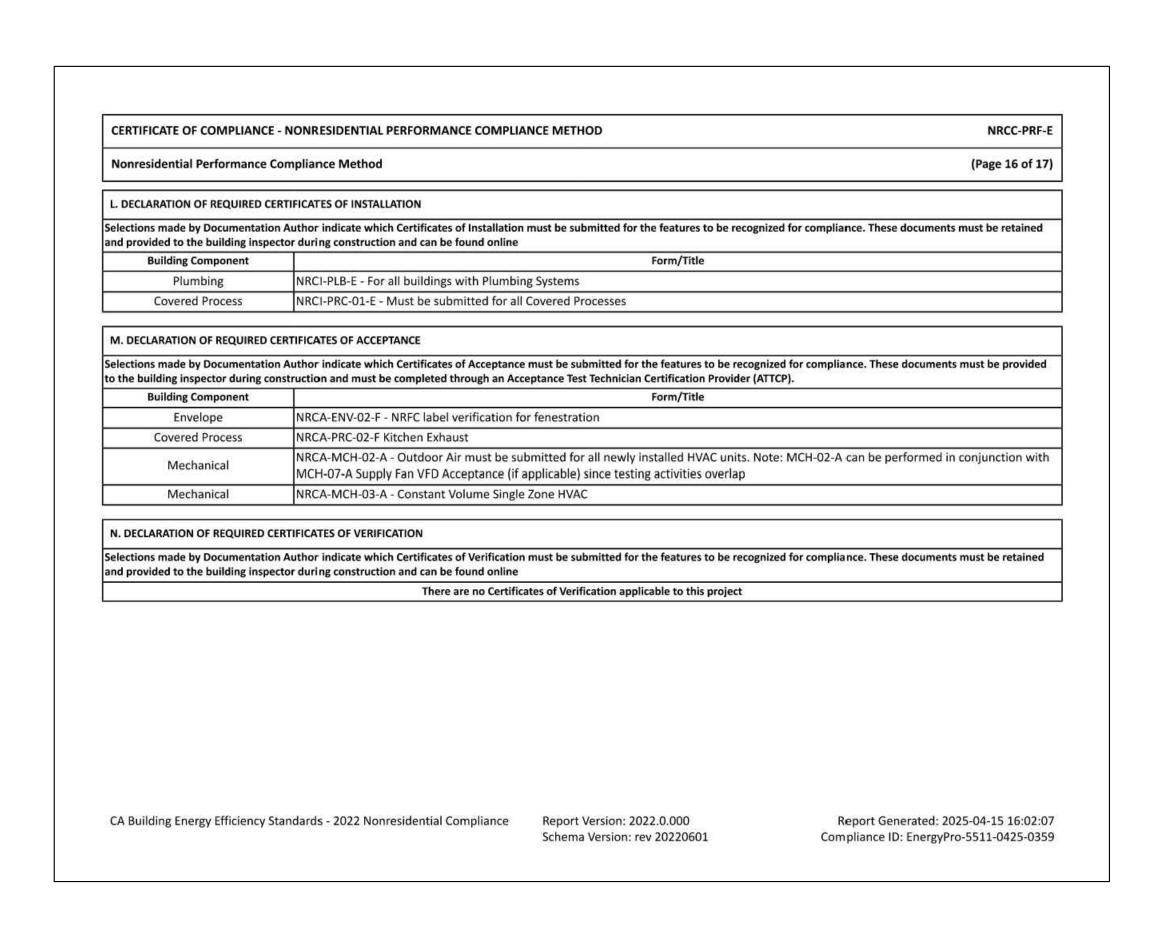
CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD

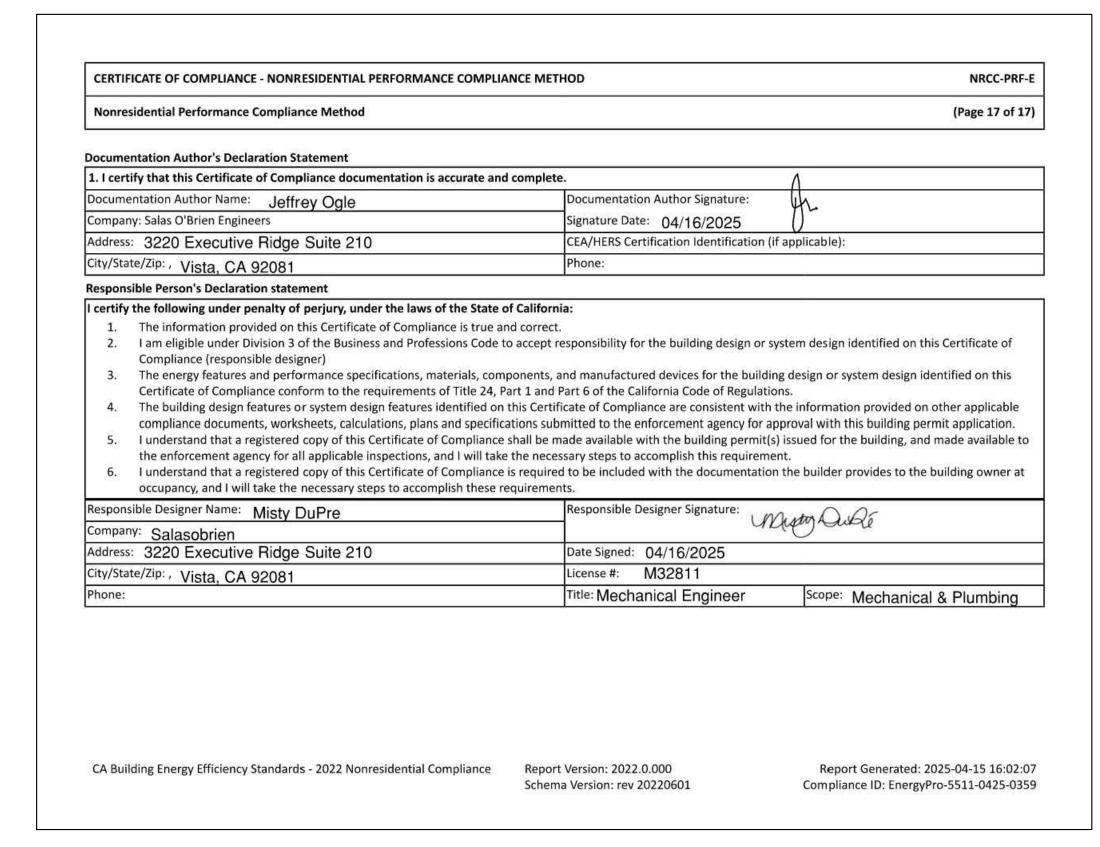
| H1. DRY SYSTEM E | 02 | URNACES, A | 03 | 04 | We record notice a week- | 05 CON | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|------------------------|----------------------------------------|---------------------|-----|--------------------------------|--------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------|--------------------|------------|------------------------------------|-----------------------|
| | | - | | | Heating | | | Cooling | | | | | |
| Equipment Name | Equipment | Туре | Qty | Tota Heati Outp (kBtu | ng Sul ut C | op Heat Eff | iciency Unit | Efficiency | Total Cooling Output (kBtu/h) | Efficiency Unit | Efficiency | Economizer Type (if present) | Status ¹ |
| CU/CC/FAU-4 | Single Zor Conditio (SZAC) Air S | ner | 1 | 36 | | 0 4 | AFUE | 90 | 34.56 | EER SEER | 12.5 16 | No Economizer | N |
| FC-5A/B | Single Zone Pump (SZF Syster | P) Air | 2 | 25 | | 0 | N/A | NA | 23.04 | EER SEER | 12.2 15 | No Economizer | N |
| 01 | 02 | 03 Design OA | + | 04 | 05 Sup | 06 oly Fan | 07 | 08 | 09 | Return / Reli | ef Fan | 12 | 13 |
| Name or Item T | ag Qty | CFM | 7 | FM | Power | Power Units | Contr | ol Fan Typ | e CFM | Power | Power Un | its Control | - Status ¹ |
| CU/CC/FAU-1 | 1 1 | 150.6 | 7 | 00 | 0.1 | ВНР | Constan | t Vol N/A | N/A | N/A | N/A | N/A | N |
| and the second and the | | 160.5 | 8 | 300 | 0.1 | ВНР | Constan | t Vol N/A | N/A | N/A | N/A | N/A | N |
| CU/CC/FAU-2 | 3 1 | 225.5 | _ | 050 | 0.15 | ВНР | Constan | | N/A | | N/A | N/A | N |
| CU/CC/FAU-3 | | 10 G 10 PER 10 E-15 | 1 | 050 | 0.2 | ВНР | Constan | | N/A | N/A | N/A | N/A | N |
| CU/CC/FAU- | | 128.25 | _ | 200000 P | scatter- | | ■ 1.00 m | | 22.72 | 0.202.00420 | 41/4 | 0.170 | |
| CU/CC/FAU-3 | 1 2 | 128.25 43.5 | _ | 000 | 0.1 | ВНР | Constan | t Vol N/A | N/A | N/A | N/A | N/A | N |

Schema Version: rev 20220601

| Nonresidential Perforr | mance Compliance M | ethod | | | | | (Page 14 of 1 | | |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------|-------------------------------|--------------------------------|-----------------------------------|-----------------------------------------------------------------|--|--|
| | | | | | | | | | |
| H5. GENERAL EXHAUST F | AN SUMMARY | | | | | | | | |
| 01 | 02 | 03 | 04 | 04 05 06 | | 07 | 08 | | |
| System ID | Zone Name | Qty | CFM | Power | Power Ur | Continuous Operation? | Status ¹ | | |
| Main Room24 | 3-Main Room | 2 | 600 | 0.1 | ВНР | No | N | | |
| ¹ Status: N - New, A - Alter | ed, E - Existing | | | • | | | | | |
| | | | | | | | | | |
| H8. SYSTEM SPECIAL FEAT | TURES | | | | | | | | |
| 01 | | ાઉ | 2 | | 03 | | 04 | | |
| System N | ame | Equipm | ent Type | Interle | ocks per 140.4(n) ¹ | Other Special | Other Special Features and Controls | | |
| WH-11 - | SHW | Service H | lot Water | | N/A | Fixed Ten | Fixed Temperature Control | | |
| Notes: This table includes controls related to the performance pat | | | For projects using the pre | e controls requirements are a | documented on the | | | | |
| NRCC-MCH-E. | 5 W 5 '95' W W | ICSSD-WILLSRAW | -te: 10 | | | | | | |
| ¹ Yes = interlocks are provid | ded, No = interlocks are | not provided, NA mean | s no operable openings. | | | | | | |
| | | | | | | | | | |
| H9. NONRESIDENTIAL / C | OMMON USE AREA & F | HOTEL/MOTEL VENTILA | TION | X | | | Ü | | |
| H9. NONRESIDENTIAL / C | OMMON USE AREA & F | HOTEL/MOTEL VENTILA | C (200-200-450 | 04 | 05 | 06 | 07 | | |
| 01 | | 03 | C (200-200-450 | 04 | 05 | 3 | 07 DCV or Occupant Senso | | |
| | | 03 | Mechanical Ventilation | OA CFM | 05 Exhaust CFM | 06 Conditioned Area (sf) | | | |
| 01 | 02 Ventilation Function | 03 On # of Peop | Mechanical Ventilation ole Supply | | | 3 | DCV or Occupant Senso | | |
| O1 Zone Name 1-Sleeping Quarters 1-3 | Ventilation Function | 03 non # of Peop | Mechanical Ventilation ple Supply | OA CFM | Exhaust CFM | Conditioned Area (sf) | DCV or Occupant Senso Controls, or Both | | |
| Zone Name 1-Sleeping Quarters 1-3 and 2-Sleeping Quarters 4-9 3-Main Room | Ventilation Function Misc - All others Misc - All others Exhaust - Kitchene | 03 on # of Peop 5 5.02 5 5.35 tttes 3.08 | Mechanical Ventilation ple Supply 15 | OA CFM | Exhaust CFM 0 | Conditioned Area (sf) | DCV or Occupant Senso Controls, or Both N/A N/A N/A | | |
| Zone Name 1-Sleeping Quarters 1-3 and 2-Sleeping Quarters 4-9 3-Main Room | Ventilation Function Misc - All others Misc - All others Exhaust - Kitchener Office - Office spa | 03 on # of Peop 5 5.02 5 5.35 ttes 3.08 4.28 | Mechanical Ventilation ple Supply 15 | OA CFM 80.6 | Exhaust CFM 0 0 | Conditioned Area (sf) 1004 1070 | DCV or Occupant Senso Controls, or Both N/A N/A | | |
| Zone Name 1-Sleeping Quarters 1-3 and 2-Sleeping Quarters 4-9 | Ventilation Function Misc - All others Misc - All others Exhaust - Kitchene | 03 on # of Peop 5 5.02 5 5.35 ttes 3.08 ice 4.28 | Mechanical Ventilation ole Supply 15 | OA CFM 80.6 60.5 | 0 0 1200 | 1004 1070 1230 | DCV or Occupant Senso Controls, or Both N/A N/A N/A | | |

| CERTIFICATE C | F COMPLIANCE - N | IONRESIDENTIAL F | PERFOR | MANCE | COMPLIA | NCE MET | HOD | | | | | | | NRC | C-PRF-I |
|-----------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|------------------------------------------|------------------------------------------------|---------------------------------------|------------------------------|------------------|-----------------------------------------|--------------------------|-------------|-----------------------------|-----------------------------------|----------------|--------------|-----------|
| Nonresidentia | l Performance Con | npliance Method | | | | | | | | | | | | (Page 1 | 5 of 17 |
| H11. ZONAL SYS | TEM AND TERMINAL | . UNIT SUMMARY | | | | | - | | | | | 10: | | | |
| 01 | | 02 | | 03 | 04 | 05 | | 06 | 07 | 0 | 8 | 09 | 10 | 11 | 12 |
| | | | 1 | | Rated Ca | pacity (kB | uh) | Air | rflow (cfm) | Ď, | | | Fan | | |
| System ID | | System Type | | Qty | Heating | Cool | ing De | sign | MIn. | Min. | Ratio | Power | Power Units | Cycles | VSC |
| 1-Sleeping Q and-1 | | Uncontrolled | | 1 | N/A | N/ | A 7 | 00 | N/A | (| , | N/A | N/A | N/A | |
| 2-Sleeping Qua | rters 4-9-Trm | Uncontrolled | | 1 | N/A | N/ | A 8 | 00 | N/A | (|) | N/A | N/A | N/A | |
| 3-Main Ro | om-Trm | Uncontrolled | | 1 | N/A | N/ | Α 1, | 050 | N/A | (|) | N/A | N/A | N/A | |
| 4-Lobby/Offic Trn | | Uncontrolled | | 1 | N/A | N/ | A 1, | 050 | N/A | (|) | N/A | N/A | N/A | |
| 5-Fitnes | s-Trm | Uncontrolled | Ī | 2 | N/A | N/ | Α 1, | 400 | N/A | (| | N/A | N/A | N/A | |
| 01 Name | Heater Element Type | 03 Tank Type | 04 Qty | Tank Vol (gal) | 06 Rated Input | 07 Rated Input Unit | 08 Efficiency | 69 Efficiend Unit | Tar cy Insula R-va | nk ntion | Standby Loss Fraction | 1st Hr. Rating or Flow Rate | | Tank Loc | pient |
| 0.000.00000 | | | | | | GARAGE | | 7247 | Int/ | | ATTACES ENGLIS | (gal) | 1 | 5308333 | 000600000 |
| WH-12 | Natural Gas | Storage | 1 | 60 | 120 | kBtu/Hr | 8.0 | TE | N/ | A | 0.01 | N/A | N/A | N, | /A |
| | OF REQUIRED CERT | uthor indicate which | n Certifi | | | must be s | ubmitted fo | the featu | res to be re | ecognize | ed for com | pliance. Thes | e documents | s must be re | tained |
| elections made | the building inspecto | r during constructio | ii aliu c | | | | | Form/T | itle | | | | | | |
| elections made and provided to Building | the building inspecto Component | | | | | | | ACCOUNT OF A C | CHEC | | | | | | |
| elections made and provided to Building | the building inspecto | NRCI-ENV-01-E - I | Must b | e submit | | buildings | | 35550-53,30 5 455 | Contract | | | | | | |
| elections made and provided to Building En | the building inspector Component velope velope | NRCI-ENV-01-E - I NRCI-ENV-E - Env | Must be | e submit for all bu | ıildings) | | | | etakan o | | | | | | |
| elections made and provided to Building En En | the building inspector Component velope velope thanical | NRCI-ENV-01-E - I NRCI-ENV-E - Env NRCI-MCH-01-E - | Must be elope (Must b | e submit for all bu se submi | iildings) tted for al | l building | s | | | | | | | | |
| elections made and provided to Building En En | the building inspector Component velope velope | NRCI-ENV-01-E - I NRCI-ENV-E - Env | Must be elope (Must be all bui | e submit for all bu be submi ldings w | uildings) tted for al ith Mecha | l building | s ems | 000000000000000000000000000000000000000 | 34,00 | | | | | | |







NRCC-PRF-E

Salas
OBrien
3220 Executive Ridge, Suite 210
Vista, CA 92081
760.560.0100

JO JO/ZC PP MP

OB-22-25 #2024-03417
www.salasobrien.com

PROJECT ADMINISTERED BY:
SAN BERNARDINO COUNTY
PROJECT & FACILITIES
MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

COUNTY FIRE DEPARTMENT:
FIRE STATION 227

PROJECT # 10,10,1202 CIP #22-105

APN Part of 0154-281-01

I80 W. 38TH STREET SAN BERNARDINO, CA 92405

| ISSUE INFO | RMATION: |
|------------|--------------|
| DATE: | INFORMATION: |
| 9-11-24 | D.D.s |
| 10-26-24 | PROGRESS |
| 12-20-24 | 95% CDs |
| 03-14-25 | Plan Check 🛆 |
| 05-09-25 | Plan Check 🛕 |
| 07-25-25 | BID SET |
| 08-25-25 | BID SET |
| | |

SHEET INFORMATION:

STK PROJECT NO.: 374-193-24
SCALE: AS NOTED
DATE: DECEMBER 2024
PLOT DATE: —
DRAWING NAME:

SEAL

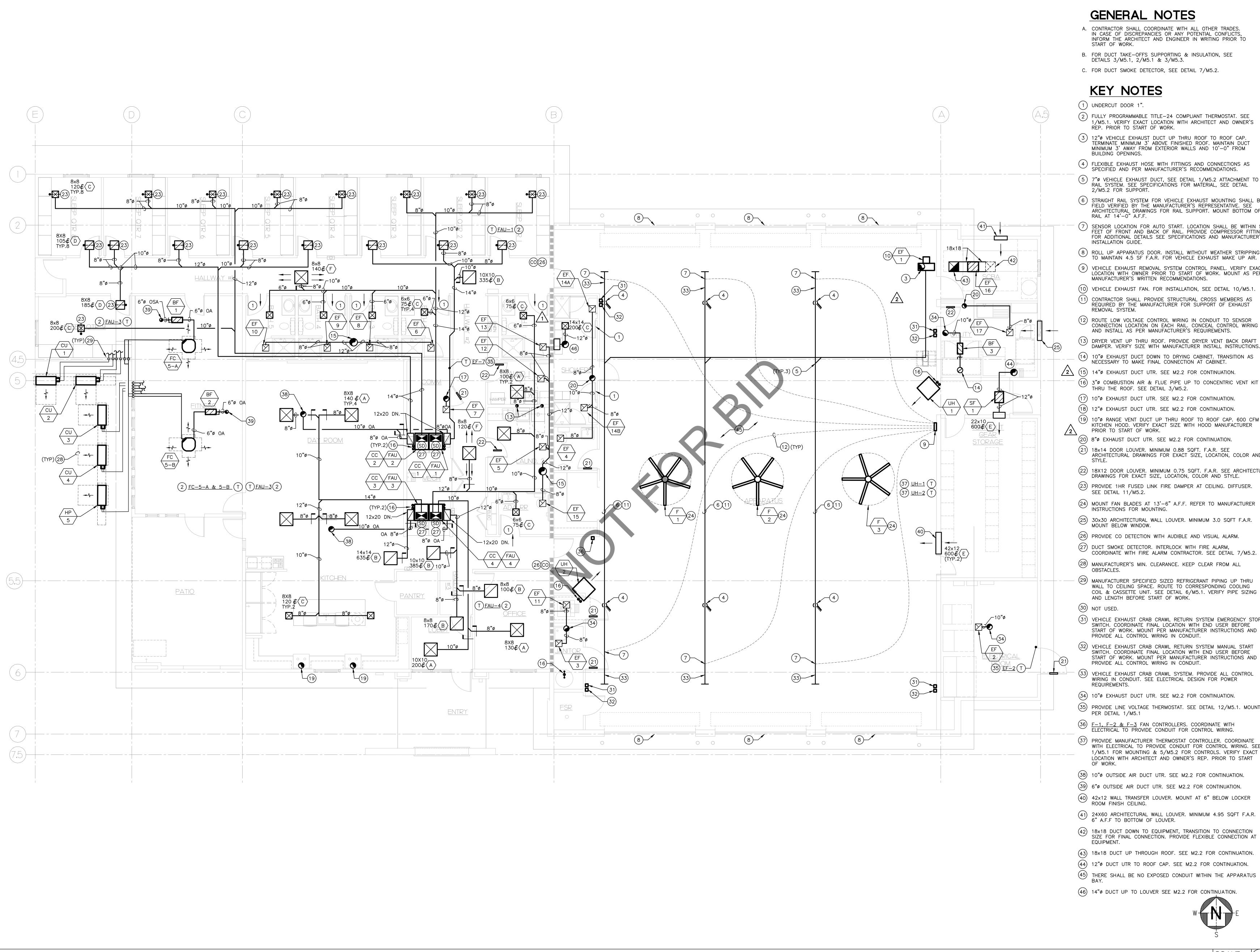


SHEET TITLE:

TITLE 24

SHEET NO

M0.4



MECHANICAL FLOOR PLAN

GENERAL NOTES

- A. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO
- B. FOR DUCT TAKE-OFFS SUPPORTING & INSULATION, SEE
- DETAILS 3/M5.1, 2/M5.1 & 3/M5.3.

KEY NOTES

- (2) FULLY PROGRAMMABLE TITLE-24 COMPLIANT THERMOSTAT. SEE 1/M5.1. VERIFY EXACT LOCATION WITH ARCHITECT AND OWNER'S REP. PRIOR TO START OF WORK.
- 3 12"0 VEHICLE EXHAUST DUCT UP THRU ROOF TO ROOF CAP. TERMINATE MINIMUM 3' ABOVE FINISHED ROOF. MAINTAIN DUCT MINIMUM 3' AWAY FROM EXTERIOR WALLS AND 10'-0" FROM
- 4 FLEXIBLE EXHAUST HOSE WITH FITTINGS AND CONNECTIONS AS SPECIFIED AND PER MANUFACTURER'S RECOMMENDATIONS.
- 7"ø VEHICLE EXHAUST DUCT, SEE DETAIL 1/M5.2 ATTACHMENT TO RAIL SYSTEM. SEE SPECIFICATIONS FOR MATERIAL, SEE DETAIL 2/M5.2 FOR SUPPORT.
- 6 STRAIGHT RAIL SYSTEM FOR VEHICLE EXHAUST MOUNTING SHALL BE FIELD VERIFIED BY THE MANUFACTURER'S REPRESENTATIVE. SEE ARCHITECTURAL DRAWINGS FOR RAIL SUPPORT. MOUNT BOTTOM OF
- (7) SENSOR LOCATION FOR AUTO START. LOCATION SHALL BE WITHIN 5 FEET OF FRONT AND BACK OF RAIL. PROVIDE COMPRESSOR FITTING FOR ADDITIONAL DETAILS SEE SPECIFICATIONS AND MANUFACTURER'S INSTALLATION GUIDE.
- 8 ROLL UP APPARATUS DOOR. INSTALL WITHOUT WEATHER STRIPPING TO MAINTAIN 4.5 SF F.A.R. FOR VEHICLE EXHAUST MAKE UP AIR.
- 9 VEHICLE EXHAUST REMOVAL SYSTEM CONTROL PANEL. VERIFY EXACT LOCATION WITH OWNER PRIOR TO START OF WORK. MOUNT AS PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- (10) VEHICLE EXHAUST FAN. FOR INSTALLATION, SEE DETAIL 10/M5.1. (11) CONTRACTOR SHALL PROVIDE STRUCTURAL CROSS MEMBERS AS REQUIRED BY THE MANUFACTURER FOR SUPPORT OF EXHAUST
- ROUTE LOW VOLTAGE CONTROL WIRING IN CONDUIT TO SENSOR CONNECTION LOCATION ON EACH RAIL. CONCEAL CONTROL WIRING AND INSTALL AS PER MANUFACTURER'S REQUIREMENTS.
- (13) DRYER VENT UP THRU ROOF. PROVIDE DRYER VENT BACK DRAFT DAMPER. VERIFY SIZE WITH MANUFACTURER INSTALL INSTRUCTIONS.
- 10" EXHAUST DUCT DOWN TO DRYING CABINET. TRANSITION AS NECESSARY TO MAKE FINAL CONNECTION AT CABINET. 2 (15) 14"ø EXHAUST DUCT UTR. SEE M2.2 FOR CONTINUATION.
 - (16) 3"ø COMBUSTION AIR & FLUE PIPE UP TO CONCENTRIC VENT KIT THRU THE ROOF. SEE DETAIL 3/M5.2.
 - (17) 10" EXHAUST DUCT UTR. SEE M2.2 FOR CONTINUATION.
 - 18) 12"ø EXHAUST DUCT UTR. SEE M2.2 FOR CONTINUATION. (19) 10"ø RANGE VENT DUCT UP THRU ROOF TO ROOF CAP. 600 CFM KITCHEN HOOD. VERIFY EXACT SIZE WITH HOOD MANUFACTURER
 - (20) 8"ø EXHAUST DUCT UTR. SEE M2.2 FOR CONTINUATION. (21) 18×14 DOOR LOUVER. MINIMUM 0.88 SQFT. F.A.R. SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZE, LOCATION, COLOR AND
- 22) 18X12 DOOR LOUVER. MINIMUM 0.75 SQFT. F.A.R. SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZE, LOCATION, COLOR AND STYLE.
- (23) PROVIDE 1HR FUSED LINK FIRE DAMPER AT CEILING. DIFFUSER. SEE DETAIL 11/M5.2.
- (24) MOUNT FAN BLADES AT 13'-6" A.F.F. REFER TO MANUFACTURER INSTRUCTIONS FOR MOUNTING.
- 25) 30×30 ARCHITECTURAL WALL LOUVER. MINIMUM 3.0 SQFT F.A.R. MOUNT BELOW WINDOW.
- (27) DUCT SMOKE DETECTOR. INTERLOCK WITH FIRE ALARM,
- COORDINATE WITH FIRE ALARM CONTRACTOR. SEE DETAIL 7/M5.2.
- (28) MANUFACTURER'S MIN. CLEARANCE. KEEP CLEAR FROM ALL
- (29) MANUFACTURER SPECIFIED SIZED REFRIGERANT PIPING UP THRU WALL TO CEILING SPACE. ROUTE TO CORRESPONDING COOLING COIL & CASSETTE UNIT. SEE DETAIL 6/M5.1. VERIFY PIPE SIZING AND LENGTH BEFORE START OF WORK.
- 30 NOT USED. (31) VEHICLE EXHAUST CRAB CRAWL RETURN SYSTEM EMERGENCY STOP SWITCH. COORDINATE FINAL LOCATION WITH END USER BEFORE
- START OF WORK. MOUNT PER MANUFACTURER INSTRUCTIONS AND PROVIDE ALL CONTROL WIRING IN CONDUIT. (32) VEHICLE EXHAUST CRAB CRAWL RETURN SYSTEM MANUAL START SWITCH. COORDINATE FINAL LOCATION WITH END USER BEFORE
- PROVIDE ALL CONTROL WIRING IN CONDUIT. (33) VEHICLE EXHAUST CRAB CRAWL SYSTEM. PROVIDE ALL CONTROL WIRING IN CONDUIT. SEE ELECTRICAL DESIGN FOR POWER
- (34) 10"ø EXHAUST DUCT UTR. SEE M2.2 FOR CONTINUATION. (35) PROVIDE LINE VOLTAGE THERMOSTAT. SEE DETAIL 12/M5.1. MOUNT PER DETAIL 1/M5.1
- (36) F-1, F-2 & F-3 FAN CONTROLLERS. COORDINATE WITH ELECTRICAL TO PROVIDE CONDUIT FOR CONTROL WIRING.
- 37) PROVIDE MANUFACTURER THERMOSTAT CONTROLLER. COORDINATE WITH ELECTRICAL TO PROVIDE CONDUIT FOR CONTROL WIRING. SEE 1/M5.1 FOR MOUNTING & 5/M5.2 FOR CONTROLS. VERIFY EXACT LOCATION WITH ARCHITECT AND OWNER'S REP. PRIOR TO START OF WORK.
- (38) 10"ø OUTSIDE AIR DUCT UTR. SEE M2.2 FOR CONTINUATION.
- (39) 6"ø OUTSIDE AIR DUCT UTR. SEE M2.2 FOR CONTINUATION.
- 40 42x12 WALL TRANSFER LOUVER. MOUNT AT 6" BELOW LOCKER ROOM FINISH CEILING.
- 18x18 DUCT DOWN TO EQUIPMENT, TRANSITION TO CONNECTION AT SIZE FOR FINAL CONNECTION. PROVIDE FLEXIBLE CONNECTION AT
- (43) 18x18 DUCT UP THROUGH ROOF. SEE M2.2 FOR CONTINUATION.
- (44) 12"ø DUCT UTR TO ROOF CAP. SEE M2.2 FOR CONTINUATION.
- (45) THERE SHALL BE NO EXPOSED CONDUIT WITHIN THE APPARATUS
- (46) 14"ø DUCT UP TO LOUVER SEE M2.2 FOR CONTINUATION.



SCALE:

3/16"=1'-0"



CONSULTANT:

Vista, CA 92081 **760.560.0100**08-22-25 #2024-03417

JO JO/ZC PP MP

WWw.salasobrien.com

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO **COUNTY FIRE** DEPARTMENT: FIRE STATION 227

PROJECT # 10.10.1202 CIP #22-105

APN Part of 0154-281-01

180 W. 38TH STREET SAN BERNARDINO, CA 92405

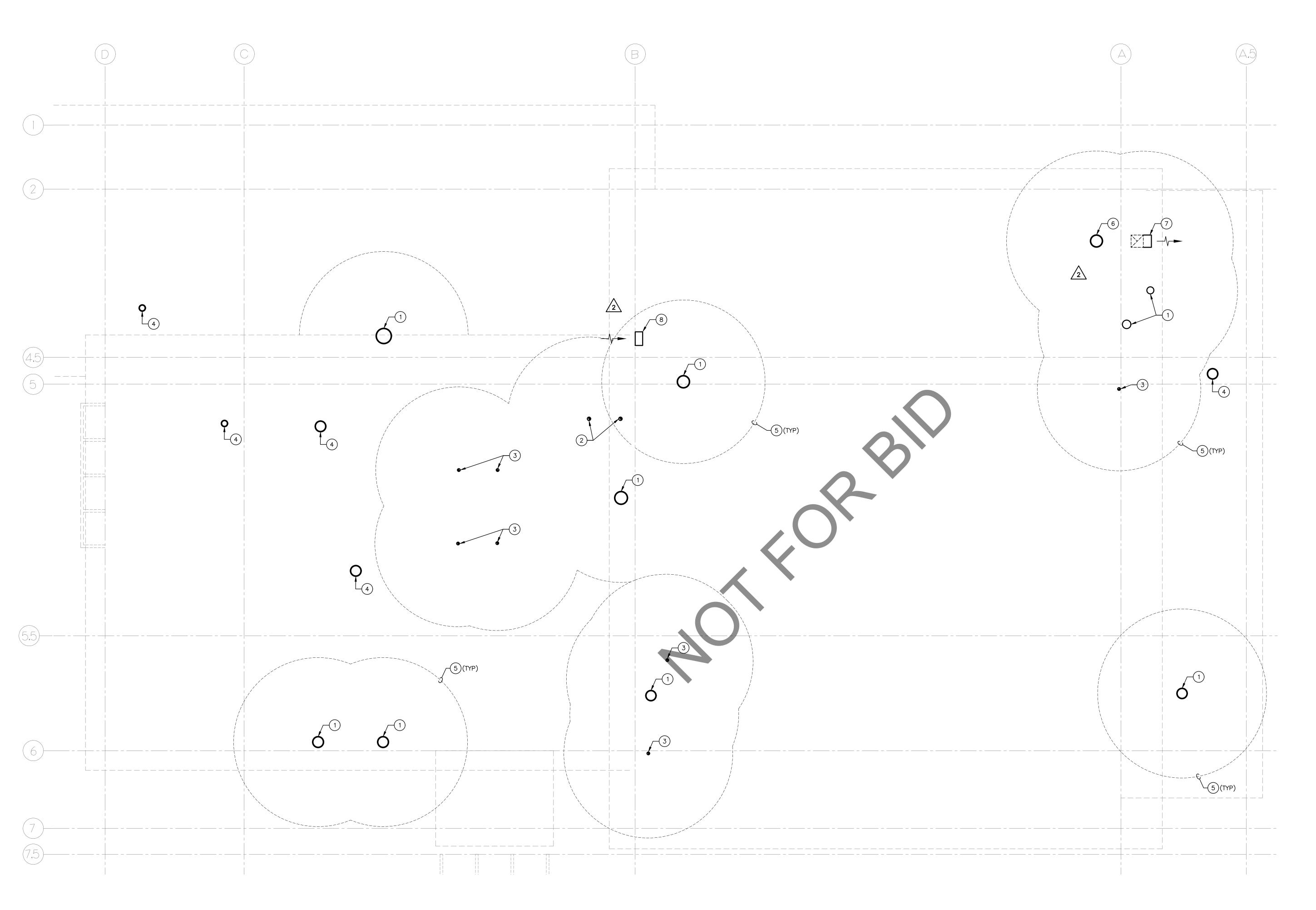
| ISSUE INFOR | RMATION: |
|----------------------|--------------|
| DATE: | INFORMATION: |
| 9-11-24 | D.D.s |
| 10-26-24 | PROGRESS |
| 12-20-24 | 95% CDs |
| 03-14-25 | Plan Check 🛆 |
| 05-09-25 | Plan Check 🛕 |
| 0 7-25-25 | BID SET |
| 08-25-25 | BID SET |
| | |

SHEET INFORMATION:

STK PROJECT NO.: 374-193-24 DATE: DECEMBER 2024 PLOT DATE: DRAWING NAME:



MECHANICAL FLOOR PLAN



GENERAL NOTES

A. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS,
DETERMINING EXTENT OF DEMOLITION, AND COORDINATE WITH ALL
OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL
CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING
PRIOR TO START OF WORK.

KEY NOTES

- 1) EXHAUST ROOF CAP. SEE DETAIL 4/M5.2.
- 2) DRYER VENT ROOF CAP. SEE DETAIL 10/M5.2.
- (3) CONCENTRIC FLUE AND COMBUSTION AIR TERMINATION KIT. SEE DETAIL 3/M5.2.
- 4) OUT SIDE AIR ROOF CAP. SEE DETAIL 4/M5.2.
- (5) MAINTAIN MINIMUM 10'-0" FROM ALL OUTSIDE AIR INTAKES.
- (6) MANUFACTURER'S VEHICLE EXHAUST ROOF CAP.
- (7) EXHAUST TERMINATION AT ROOF. SEE DETAIL 6/M5.3.
- 8 20x20 EXTERIOR WALL MOUNTED MAKE UP AIR LOUVER. MOUNT AT 16' A.F.F. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND COORDINATE ON SITE BEFORE FINAL PLACEMENT.

42095 ZEVO DR., TEMECULA, CALIFORNIA 92590-3780 Phone: 951.296.9110 Fax: 951.296.6079 Email: stk@stkinc.com

CONSULTANT: Vista, CA 92081
760.560.0100

| JO | JO/ZC| PP | MP | MP | MP | MP | Www.salasobrien.com

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

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PROJECT # 10.10.1202 CIP #22-105

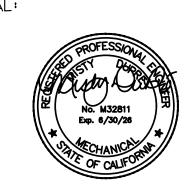
APN Part of 0154-281-01

180 W. 38TH STREET SAN BERNARDINO, CA 92405

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| 0 7-25-25 | BID SET |
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| | |

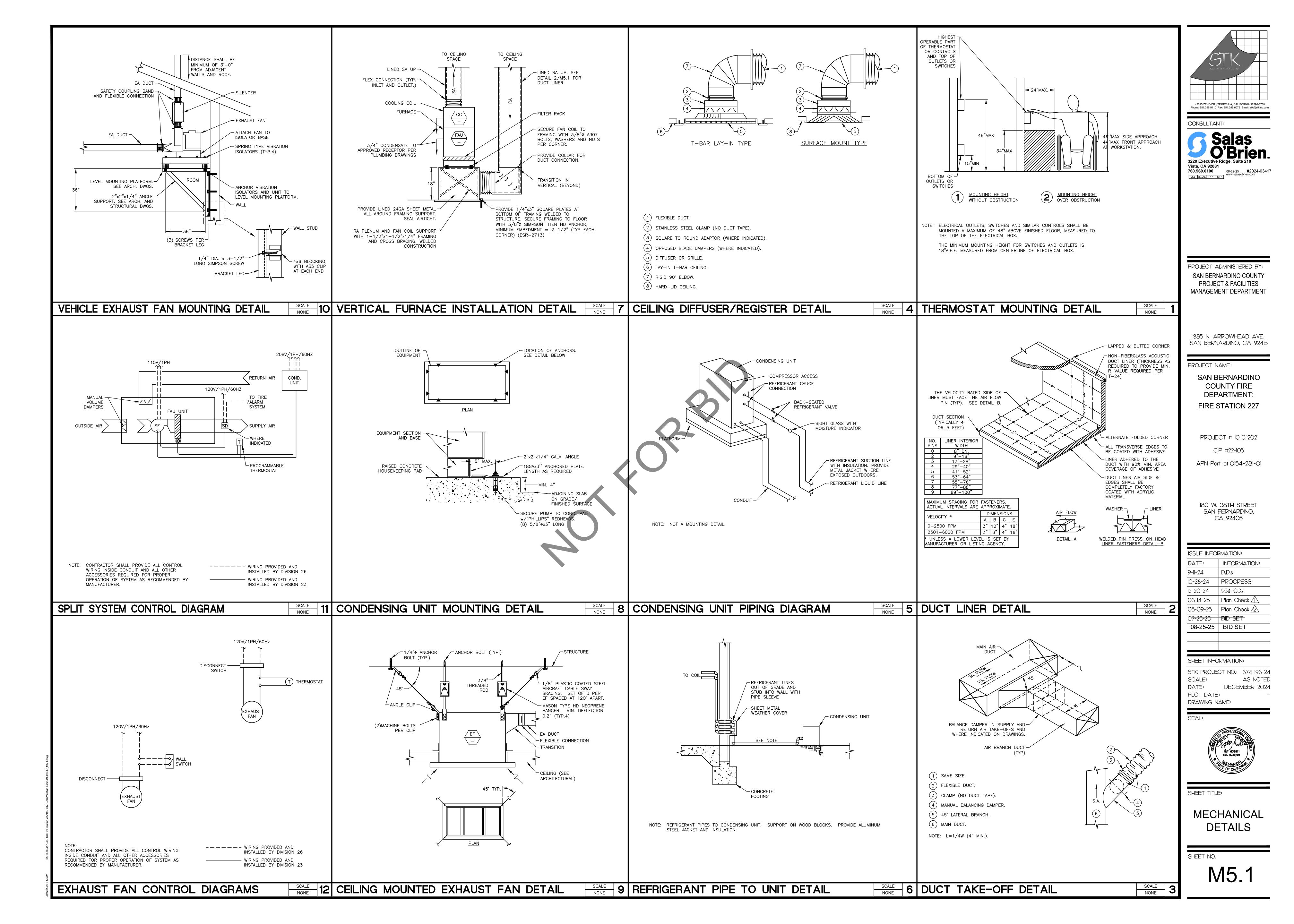
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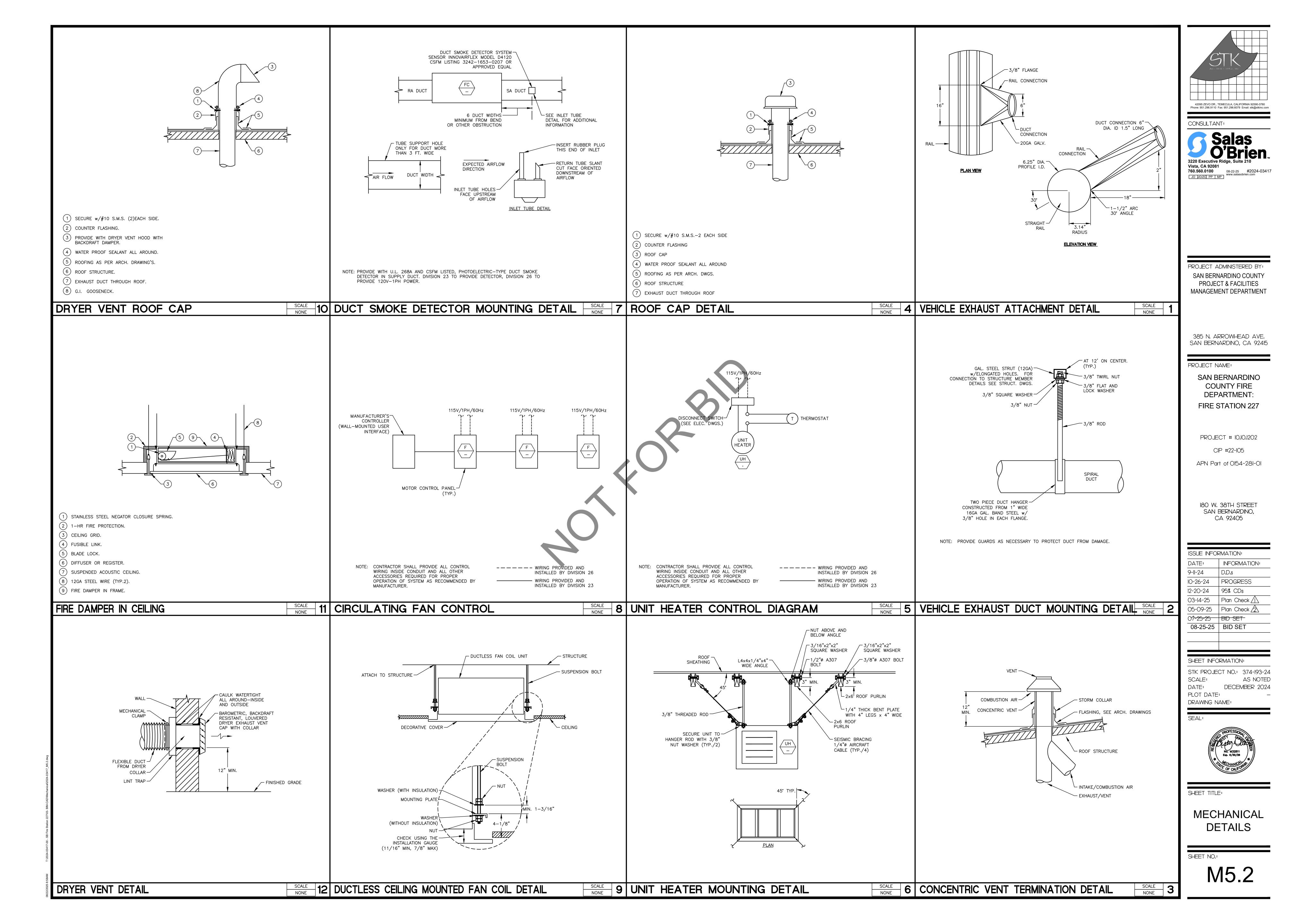
DECEMBER 2024

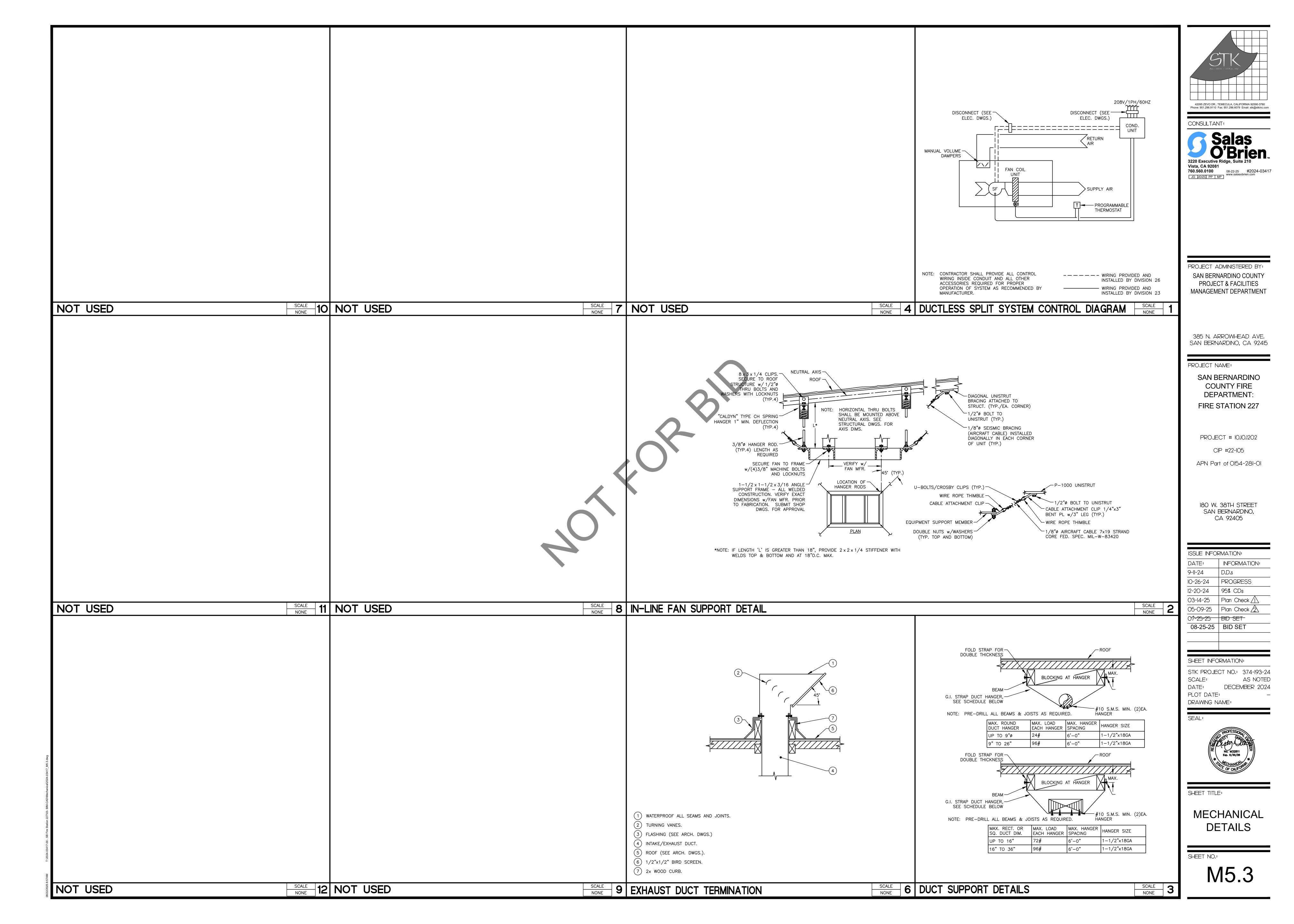


MECHANICAL **ROOF PLAN**

M2.2







| | | PLUMBING LE | GEND | |
|----------------------------------------|--------------|---------------------------------------|----------------------|-------------------------------------------------------------------------------------------------|
| SYMBOL | ABBREVIATION | DESCRIPTION | ABBREVIATION | DESCRIPTION |
| | S | SEWER PIPE | ABV A/C | ABOVE ABOVE CEILING |
| ow | OW | OILY WASTE PIPE | AGA ANSI | AMERICAN GAS ASSOCIATION AMERICAN NATIONAL STANDARD INSTITUTE |
| GW | GW | GREASE WASTE PIPE | ASME ASSE ASTM | AMERICAN SOCIETY FOR MECHANICAL ENGINEERS AMERICAN SOCIETY FOR SANITARY ENGINEERS |
| ———PW——— | PW | PUMPED (FORCED) WASTE PIPE | ADA AFF | AMERICAN SOCIETY FOR TESTING AND MATERIALS AMERICANS WITH DISABILITIES ACT ABOVE FINISHED FLOOR |
| IW | IW | INDIRECT WASTE PIPE | AFG A/G | ABOVE FINISHED GRADE ABOVE GRADE |
| | V | VENT PIPE | AP ARCH | ACCESS PANEL ARCHITECT OR ARCHITECTURAL |
| | CW | COLD WATER PIPE | BT BEL | BATH TUB BELOW |
| ICW | ICW | INDUSTRIAL COLD WATER PIPE | B/F B/G | BELOW FLOOR BELOW GRADE |
| SCW | SCW | SOFT COLD WATER PIPE | BOP B/S BTU | BOTTOM OF PIPE BELOW SLAB BRITISH THERMAL UNIT |
| | HW | HOT WATER PIPE | BTUH CBC | BRITISH THERMAL UNITS PER HOUR CALIFORNIA BUILDING CODE |
| IHW | IHW | INDUSTRIAL HOT WATER PIPE | CEC CFC | CALIFORNIA ELECTRICAL CODE CALIFORNIA FIRE CODE |
| | HWR | HOT WATER RETURN PIPE | CMC CPC | CALIFORNIA MECHANICAL CODE CALIFORNIA PLUMBING CODE |
| 140 | 140 | 140°F HOT WATER PIPE | CI CISPI | CAST IRON CAST IRON SOIL PIPE INSTITUTE |
| | | | CLG CP | CEILING CIRCULATION PUMP |
| R | R | RECLAIMED WATER PIPE | CL CLR CONC | CLARIFIER CLEAR CONCRETE |
| G | G | LOW PRESSURE NATURAL GAS PIPE | CONC CONN CONTR | CONNECT OR CONNECTION CONTRACTOR |
| MPG- | MPG | MEDIUM PRESSURE NATURAL GAS PIPE | CFH CFM | CUBIC FEET PER HOUR CUBIC FEET PER MINUTE |
| ——HPG—— | HPG | HIGH PRESSURE NATURAL GAS PIPE | *C *F | DEGREES CELSIUS DEGREES FAHRENHEIT |
| ——LPG—— | LPG | LIQUEFIED PETROLEUM GAS PIPE | DIV DWG(S) | DIVISION DRAWING(S) |
| CD | CD | CONDENSATE DRAIN PIPE | EA (E) | EACH EXISTING |
| SCD | SCD | SECONDARY CONDENSATE DRAIN PIPE | ÉLÉC ELEV | ELECTRICAL ELEVATION EXPANSION TANK |
| PCD | PCD | PUMPED CONDENSATE DRAIN PIPE | ET FF FPM | EXPANSION TANK FINISHED FLOOR FEET PER MINUTE |
| RD | RD | ROOF DRAIN PIPE | FLR FT | FLOOR FEET OR FOOT |
| ORD | ORD | OVERFLOW ROOF DRAIN PIPE | FU FOG | FIXTURE UNIT FAT, OIL, AND GREASE |
| CA | CA | COMPRESSED AIR PIPE | GA GALV | GAUGE GALVANIZED |
| ф | FCO | FLOOR CLEAN OUT | GPC GPF | GALLONS PER CYCLE GALLONS PER FLUSH |
| ————— | GCO | GRADE CLEAN OUT | GPH GPM | GALLONS PER HOUR GALLONS PER MINUTE |
| <u></u> | wco | WALL CLEAN OUT | GD HD GI | GARBAGE DISPOSAL HEAD GREASE INTERCEPTOR |
| | FC | FLEXIBLE CONNECTION | HDR HR | HEADER HOUR |
| ——₩—— | SOV | SHUT OFF VALVE | IM IES | ICE MAKER SUPPLY BOX ILLUMINATING ENGINEERS SOCIETY |
| ———— | GC | GAS COCK | IND IAPMO | INDIRECT INTERNATIONAL ASSOCIATION OF |
| | CV | CHECK VALVE | IBC | PLUMBERS AND MECHANICAL OFFICIALS INTERNATIONAL BUILDING CODE |
| <u></u> | BV | BALL VALVE | IMC IPC | INTERNATIONAL MECHANICAL CODE INTERNATIONAL PLUMBING CODE |
| | PRV | PRESSURE REDUCING VALVE | INV IE KEC | INVERT INVERT ELEVATION KITCHEN EQUIPMENT CONTRACTOR |
| | BLV | BALANCING VALVE | KG KPQ | KILOPASCALS |
| PTR ────────── | PTR | PRESSURE AND TEMPERATURE RELIEF VALVE | LS KS | KITCHEN SINK LAUNDRY SINK |
| | U | UNION | L, LAV L/S | LAVATORY LITERS PER SECOND |
| т | | CAPPED PIPE | LPF MH | LITERS PER FLUSH MANHOLE |
| | CONT | CONTINUED OR CONTINUATION | MFR MSS MAX | MANUFACTURER MANUFACTURERS STANDARDIZATION SOCIETY MAXIMUM |
| | | | MECH MSA | MECHANICAL MEDIUM PRESSURE GAS METER SET ASSEMBLY |
| TP | TP | TRAP PRIMER LINE | MIL mm | 0.001 INCH MILLIMETER |
| | WHA | WATER HAMMER ARRESTOR | MIN MS | MINIMUM MOP SINK |
| —————————————————————————————————————— | RPBP | REDUCED PRESSURE BACKFLOW PREVENTER | MTD NSF | MOUNTED NATIONAL SANITATION FOUNDATION |
| | HB | HOSE BIBB | NPSH NOM NIC | NET POSITIVE SUCTION HEAD NOMINAL NOT IN CONTRACT |
| | | PIPE DOWN OR DROP | NTS NO | NOT IN CONTRACT NOT TO SCALE NUMBER |
| <u> </u> | | PIPE UP OR RISE | PLBG PDI | PLUMBING PLUMBING AND DRAINAGE INSTITUTE |
| <u>\$</u> | | VALVE ON DROP | PE LBS | POLYETHYLENE POUNDS |
| X | | VALVE ON RISE | PSIG PD | POUNDS PER SQUARE INCH GAUGE PRESSURE DROP |
| | Т | THERMOMETER | QTY REQ'D | QUANTITY REQUIRED |
| <u></u> | AS | AQUASTAT | RI SCH SH | ROUGH-IN SCHEDULE SHOWER |
| lacksquare | P.O.D. | POINT OF DISCONNECT | SH SOV SPEC | SHOWER SHUT—OFF VALVE SPECIFICATION |
| • | POC | POINT OF CONNECTION | SF SS | SPECIFICATION SQUARE FEET STAINLESS STEEL |
| (1) | AD, FD | AREA DRAIN OR FLOOR DRAIN | STRUC TEMP | STRUCTURAL TEMPERATURE |
| | FS, RR | FLOOR SINK OR ROOF RECEPTOR | MBH THRU | THOUSANDS OF BRITISH THERMAL UNITS PER HOUR THROUGH |
| 0 | VTR | VENT THROUGH ROOF | TDH TDL | TOTAL DEVELOPED HEAD TOTAL DEVELOPED LENGTH |
| | DEMO | DEMOLITION OR DEMOLISH | TEL TYP | TOTAL EQUIVALENT LENGTH TYPICAL LINESS NOTED OTHERWISE |
| | RELO | RELOCATE | UNO UL UBC | UNLESS NOTED OTHERWISE UNDERWRITERS LABORATORIES UNIFORM BUILDING CODE |
| +⊘ + | CIRC PUMP | CIRCULATING PUMP | UMC UPC | UNIFORM BUILDING CODE UNIFORM MECHANICAL CODE UNIFORM PLUMBING CODE |
| ø | DIA, DIAM | DIAMETER | UR VCP | URINAL VITRIFIED CLAY PIPE |
| | | | V/PH/Hz WB, WSB | VOLTS/PHASE/HERTZ WASHING MACHINE SUPPLY BOX |
| | | | WC WHA | WATER CLOSET WATER HAMMER ARRESTOR |
| | | | WH | WATER HEATER |

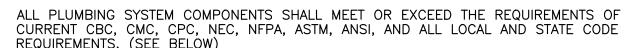
PLUMBING GENERAL NOTES:

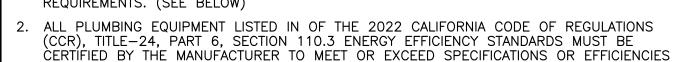
- THESE DOCUMENTS MAY NOT BE USED FOR ANY REPRODUCTION, BIDDING, OR CONSTRUCTION UNLESS AUTHORIZED, IN WRITING, BY SALAS O'BRIEN AND THE ENGINEER OF RECORD RESPONSIBLE FOR THEIR PREPARATION.
- CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL EXISTING UTILITY PIPES PRIOR TO START OF WORK. NECESSARY ADJUSTMENTS TO THE PLUMBING LAYOUT SHALL BE DONE AT
- CONTRACTOR SHALL NOTIFY ALL LOCAL UTILITY COMPANIES INCLUDING BUT NOT LIMITED TO THE GAS COMPANY, ELECTRIC COMPANY, TELEPHONE COMPANY, AND THE WATER DEPARTMENT, ABOUT THE EXTENT OF PLUMBING WORK. ALL EXCAVATION WORK SHALL BE APPROVED BY ALL UTILITY COMPANIES TO ASSURE PREVENTION OF INTERRUPTION OF EXISTING SERVICES PRIOR TO START OF WORK.
- ALL PLUMBING WORK SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CALIFORNIA PLUMBING CODE, CALIFORNIA BUILDING CODE, CALIFORNIA MECHANICAL CODE, CALIFORNIA ADMINISTRATIVE CODE. TITLE 24, AMERICANS WITH DISABILITIES ACT (ADA), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), THE LOCAL CITY AND COUNTY CODES, AND ALL OTHER CODES HAVING JURISDICTION. IN CASE OF CONFLICT, THE MORE STRICT REGULATIONS SHALL
- ALL PLUMBING WORK SHALL BE COORDINATED WITH THE WORKS OF OTHER TRADES PRIOR TO START OF WORK. NECESSARY ADJUSTMENTS SHALL BE MADE AT NO EXTRA COST.
- FOR MINIMUM PIPE SIZE CONNECTIONS TO EACH PLUMBING FIXTURE SEE PLUMBING FIXTURE SCHEDULE. THESE VALUES ARE MINIMUM; LARGER CONNECTIONS MAY RESULT BASED ON THE DIFFERENT MANUFACTURER'S RECOMMENDATIONS.
- MANUFACTURER'S NAMES AND MODEL NUMBERS SHOWN FOR PLUMBING FIXTURES AND EQUIPMENT ARE FOR REFERENCE ONLY. OTHER MANUFACTURERS WHICH CAN MEET THE DESIGN REQUIREMENTS OF THE PLUMBING SYSTEM MAY BE SUBSTITUTED UPON APPROVAL FROM THE ARCHITECT AND THE OWNER.
- PROVIDE DIELECTRIC FITTINGS FOR DISSIMILAR METALS IN CONTACT.
- PROVIDE HANGERS AND SUPPORTS FOR PIPING IN ACCORDANCE WITH THE RECOMMENDATIONS OF MSS SP-69-2003.
- 10. PROVIDE VALVES AT THE FOLLOWING LOCATIONS:
- A. WATER MAIN SHUT-OFF VALVE IN VALVE BOX.
- B. VALVE WITH HOSE CONNECTION ON DOWNSTREAM SIDE OF THE MAIN SHUT-OFF VALVE. C. SHUT-OFF VALVE ON EACH SUPPLY TO EACH FIXTURE AND EQUIPMENT ITEM NOT PROVIDED WITH CONTROL STOP OR OTHER AUXILIARY SHUT-OFF VALVE. INSTALL SHUT-OFF VALVES SO THAT STEMS EITHER ARE VERTICAL WITH HANDWHEELS OR OPERATORS ON TOP OR ARE HORIZONTAL AND SO THAT VALVES ARE EASILY ACCESSIBLE FOR OPERATION, SERVICE, REMOVAL AND REPLACEMENT.
- 1. PROVIDE SLEEVES FOR ALL PIPE AND TUBING PASSING THROUGH FLOORS, ROOFS, AND WALLS. PACK CAULK INTO THE SPACE AROUND THE PIPE OR TUBING. PROVIDE FLASHING FOR ALL PIPES EXTENDING THROUGH THE ROOF.
- 12. ALL VENT TERMINATIONS AT ROOF SHALL BE AT LEAST 10 FEET AWAY FROM OUTSIDE AIR INTAKES, OPERABLE WINDOWS, AND BUILDING OPENINGS.
- 13. FOR SEWER CLEANOUT SIZING REFER TO CPC 2022 TABLE 707.1. 14. FILL CRACKS BETWEEN FIXTURES AND WALL/FLOORS WITH SILICONE RUBBER SEALANT.
- 15. LOCATE, SIZE, AND INSTALL WATER HAMMER ARRESTERS IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE STANDARD NO. WH-201.
- 16. INSTALL FIXTURES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES. SECURE FLOOR OUTLET OF FLOOR-MOUNTED FIXTURES TO DRAINAGE CONNECTIONS AND FLOOR IN A RIGID MANNER. RIGIDLY SUPPORT WALL-HUNG FIXTURES BY MEANS OF METAL SUPPORTING MEMBERS. USE CHROMIUM-PLATED BRASS BOLTS, NUTS, AND WASHERS WHERE EXPOSED. ALL CONNECTIONS SHALL BE MADE GAS—TIGHT AND WATER-TIGHT. USE OF PUTTY AND PLASTICS FOR GASKETS WILL NOT BE PERMITTED.
- . PROVIDE ALL FIXTURE COMPONENTS AS INDICATED ON DRAWINGS. PROVIDE ADDITIONAL COMPONENTS AS PER MANUFACTURER'S RECOMMENDATIONS FOR PROPER OPERATION OF THE
- 18. PROVIDE EACH PLUMBING FIXTURE (INCLUDING HOSE BIBBS) WITH AN INDIVIDUAL STOP OR SSION VALVE OF POLISHED CHROME-PLATED LOOSE KEY TYPE. 19. WHERE DEPTHS OR INVERTS ELEVATIONS ARE NOT INDICATED, PROVIDE MINIMUM COVERAGE (ABOVE TOP OF PIPES) AS FOLLOWS:
- A. ANY PIPING UNDER SLAB (TOP OF PIPE TO UNDERSIDE OF SLAB): 18 INCHES. CAST IRON AND COPPER PIPES IN OTHER LOCATIONS: 18 INCHES.
- EXCAVATE TO UNDISTURBED EARTH: CUT LEVEL AND FORM TRUE. REMOVE DEBRIS, RUBBISH AND SOFT MATERIAL (SUCH AS MUD). WHERE ROCK IS ENCOUNTERED, UNDERCUT TRENCHES 6-INCHES AND FILL WITH WELL TAMPED NEUTRAL SAND AND PEA GRAVEL TO PROPER PIPE ELEVATION. DURING EXCAVATION FREE OF STANDING WATER. UNDERCUT TRENCH 6-INCHES AND INSTALL PIPING IN A 6-INCH NEUTRAL SAND
- 19. BACKFILL TO A POINT 12-INCHES ABOVE TOP OF PIPING WITH EARTH (EXCAVATED MATERIAL MAY BE USED) FREE OF CLAY, DEBRIS, RUBBISH, ROCKS, OR CLODS OVER 4-INCHES IN THE GREATEST DIMENSION. BACKFILL ABOVE 12-INCHES FROM TOP OF PIPING MAY BE WITH EXCAVATED MATERIAL. APPLY BACKFILL BY HAND IN 6-INCH DEEP LAYERS THE FULL WIDTH OF THE TRENCH. MOISTEN EACH LAYER (DO NOT FLOOD OR PUDDLE). AND HAND TAMP TO A MINIMUM 90 PERCENT COMPACTION BEFORE PROCEEDING WITH THE NEXT LAYER OF
- 20. DO NOT EXCAVATE UNDER FOUNDATIONS OR FOOTINGS EXCEPT IN MANNER PERMITTED BY THE ARCHITECT. DO NOT BACKFILL UNTIL INSTALLED PIPING HAS BEEN SUCCESSFULLY
- 21. VERIFICATION OF WATER AGENCY APPROVAL SHALL BE SUBMITTED TO THE BUILDING AND SAFETY DIVISION PRIOR TO ISSUANCE OF A PLUMBING PERMIT FOR THIS PROJECT.
- 22. ALL PENETRATIONS THRU FIRE RATED ASSEMBLIES SHALL BE PACKED WITH APPROVED FIRE PROOFING. FOR LOCATIONS OF FIRE RATED ASSEMBLIES, SEE ARCHITECTURAL PLANS.
- 23. ROUTE ALL PIPES AS HIGH AS POSSIBLE IN EXPOSED LOCATIONS. COORDINATE ROUTING WITH ALL OTHER TRADES PRIOR TO START OF WORK.
- 24. NO SPRAY FOAM INSULATION SHALL BE APPLIED TO AREAS CONTAINING PEX PIPING.

PLUMBING MANDATORY MEASURES

- REQUIREMENTS. (SEE BELOW)
- (CCR), TITLE-24, PART 6, SECTION 110.3 ENERGY EFFICIENCY STANDARDS MUST BE
- ADOPTED BY THE CEC.
- RESIDENTIAL NON-RESIDENTIAL.
- EFFICIENCY STANDARDS, SECTION 120.3 AND TABLE 4-15.
- REQUIREMENTS OF 2022 CBC, PART 1, SECTION 720 AND 2022 CMC. SECTION 602.2.
- B. ALL PIPES, FITTINGS AND FIXTURES USED TO CONVEY POTABLE WATER SHALL BE LEAD FREE IN COMPLIANCE WITH CPC SECTION 604.2.
- 9. ALL FIXTURES REQUIRED TO BE ACCESSIBLE SHALL BE INSTALLED AS PER THE LATEST
- O. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER
- SUPPLIED APPLIANCES AND EQUIPMENT (OTHER THAN THOSE LISTED IN INFORMATION
- 11. A WATER HEATER PRESSURE AND TEMPERATURE RELIEF DRAIN THAT TERMINATES OUTSIDE THE BUILDING SHALL COMPLY WITH CPC SECTION 608.5.
- 12. WATER HEATER SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION PER CPC SECTION 507.2. 13. WATER HEATER SHALL COMPLY WITH CPC SECTION 608.3, FOR THERMAL EXPANSION
- 15. TUB AND SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER CPC
- 16. SHOWERHEADS SHALL BE 1.8 GPM AT 80PSI.
- 18. KITCHEN FAUCETS AND WASH FOUNTAINS SHALL BE 1.8 GPM MAXIMUM.
- 19. METERING FAUCETS SHALL BE 0.2 GPC MAXIMUM.
- ELECTROMECHANICAL HYDRAULIC TYPE) SHALL BE 1.28 GPF MAXIMUM.
- 22. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE
- 23. ALL INSTALLATION OF PEX PIPE INSTALLED IN NEW CONSTRUCTION SHALL BE FLUSHED
- 1) AT THE TIME OF FILL, EACH NEW PLUMBING FIXTURE SHALL HAVE A REMOVABLE TAG APPLIED STATING:
- DATE ABOVE, IF THIS SYSTEM IS USED EARLIER THAN ONBE WEEK AFTER THE FILL DATE, THE WATER MUST BE ALLOWED TO RUN FOR AT LEAST TWO MINUTES PRIOR TO USE FOR HUMAN CONSUMPTION. THE TAG MAY NOT BE REMOVED PRIOR TO THE COMPLETION OF THE REQUIRED SECOND FLUSHING, EXCEPT BY BUILDING OWNER OR
- SHALL REQUIRE AS PART OF THE PERMITTING PROCESS THAT THE CONTRACTOR: OR THE APPROPRIATE PLUMBING SUBCONTRACTORS, PROVIDE WRITTEN CERTIFICATION THAT HE OR
- 3) THE BUILDING OFFICIAL SHALL NOT GIVE FINAL PERMIT APPROVAL FOR ANY PEX REQUIREMENTS TO FLUSH AND TAG THE SYSTEMS.
- 4) ANY CONTRACTOR OR SUBCONTRACTOR FOUND TO HAVE FAILED TO COMPLY WITH THE PEX FLUSHING REQUIREMENTS SHALL BE SUBJECT TO THE PENALTIES IN HEALTH AND

- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), CCR PART 1, TITLE 24
- 2022 CALIFORNIA BUILDING CODE (CBC), CCR TITLE 24, PARTS 1 & 2 (BASED ON THE
- 2022 CALIFORNIA ELECTRICAL CODE (CEC), CCR TITLE 24, PART 3 (BASED ON THE 2020
- EDITION NATIONAL ELECTRICAL CODE WITH CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA PLUMBING CODE (CPC), CCR TITLE 24, PART 5, (BASED ON THE 2021
- 2022 CALIFORNIA ENERGY CODE (CEC), CCR TITLE 24, PART 6, AND ASSOCIATED
- 2022 CALIFORNIA FIRE CODE (CFC), CCR TITLE 24, PART 9 (BASED ON THE 2021 EDITION INTERNATIONAL FIRE CODE WITH CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), CCR TITLE 24, PART 10, (BASED ON
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen), CCR TITLE 24, PART 11
- 2022 CALIFORNIA REFERENCED STANDARDS CODE, CCR TITLE 24, PART 12



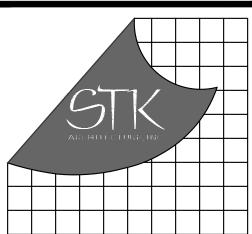


- ALL HEATERS FOR DOMESTIC HOT WATER MUST BE CERTIFIED BY THE MANUFACTURER TO MEET THE SPECIFICATIONS OR EFFICIENCIES AS ADOPTED BY THE CEC IN ACCORDANCE WITH THE 2022 CALIFORNIA CODE OF REGULATIONS (CCR), TITLE-24, PART 6, SECTION 110.3
- . ALL INSULATING MATERIALS INSTALLED MUST BE CERTIFIED BY CALIFORNIA ENERGY COMMISSION TO MEET 2022 CALIFORNIA CODE OF REGULATIONS, TITLE-24, PART 6, ENERGY
- ALL INSULATION INSTALLED SHALL MEET THE FLAME SPREAD AND SMOKE DENSITY
- 5. ALL PIPING EXPOSED TO WEATHER SHALL BE METALLIC.
- 7. ALL FERROUS PIPING EXPOSED TO WEATHER SHALL BE GALVANIZED AND PAINTED.
- REQUIREMENTS OF TITLE 24 AND ADA (AMERICANS WITH DISABILITIES ACT).

- REQUIREMENTS. 14. LAVATORY FAUCETS IN PUBLIC RESTROOM SHALL BE SELF CLOSING TYPE.
- SECTION 408.3.
- 17. NONRESIDENTIAL LAVATORY FAUCETS SHALL BE 0.4 GPM MAXIMUM.
- 20. WATER CLOSETS (GRAVITY TANK TYPE, FLUSHOMETER TANK, FLUSHOMETER VALVE AND
- 21. FLOOR-MOUNT URINALS SHALL BE 0.5 GPF MAXIMUM. WALL-MOUNT URINALS SHALL BE 0.125 GPF MAXIMUM.
- ACCORDING TO THE METHOD SET IN SECTION 609.9 OF THE PLUMBING CODE.
- TWICE OVER A PERIOD OF AT LEAST ONE WEEK PER CPC SECTION 604.1.2. PEX.
- a. THIS NEW PLUMBING SYSTEM SHALL BE FIRST FILLED AND FLUSHED ON _____(DATE) BY _____(NAME). THE STATE OF CALIFORNIA REQUIRES THAT THE SYSTEM BE FLUSHED AFTER STANDING AT LEAST ONE WEEK AFTER THE FILL DATE SPECIFIED ABOVE. IF THIS SYSTEM IS USED EARLIER THAN ONE WEEK AFTER THE FILL
- OCCUPANT. 2) PRIOR TO ISSUING A BUILDING PERMIT TO INSTALL PEX PIPE, THE BUILDING OFFICIAL
- SHE WILL COMPLY WITH THE FLUSHING PROCEDURES SET FORTH BY CODE.
- PLUMBING INSTALLATION UNLESS HE OR SHE FINDS THAT THE MATERIAL HAS BEEN INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CODE, INCLUDING THE
- SAFETY CODE, DIVISION 13, PART 1.5, CHAPTER 6 (SECTION 17995, et seq.).

APPLICABLE CODES

- 2021 EDITION INTERNATIONAL BUILDING CODE, VOLS. 1 & 2)
- 2022 CALIFORNIA MECHANICAL CODE (CMC), CCR TITLE 24, PART 4, TITLE 24 CCR (BASED ON THE 2021 EDITION UNIFORM MECHANICAL CODE WITH CALIFORNIA AMENDMENTS)
- EDITION UNIFORM PLUMBING CODE WITH CALIFORNIA AMENDMENTS)
- ADMINISTRATIVE REGULATION IN PART 1.
- THE 2021 EDITION INTERNATIONAL EXISTING BUILDING CODE WITH CALIFORNIA AMENDMENTS)
- TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS



Phone: 951.296.9110 Fax: 951.296.6079 Email: stk@stkinc.com

CONSULTANT: Vista, CA 92081 **760.560.0100** 08-22-25 #2024-03417

JO JO/ZC PP MP www.salasobrien.com

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO **COUNTY FIRE DEPARTMENT:**

FIRE STATION 227

PROJECT # 10.10.1202

CIP #22-105

APN Part of 0154-281-01

180 W. 38TH STREET SAN BERNARDINO,

CA 92405

| ISSUE INFOR | RMATION: |
|----------------------|--------------|
| DATE: | INFORMATION: |
| 9-11-24 | D.D.s |
| 10-26-24 | PROGRESS |
| 12-20-24 | 95% CDs |
| 03-14-25 | Plan Check 🛆 |
| 05-09-25 | Plan Check 🖄 |
| 07 -25-25 | BID SET |
| 08-25-25 | BID SET |
| | |

DRAWING NAME:

SHEET INFORMATION: STK PROJECT NO.: 374-193-24 AS NOTED DATE: DECEMBER 2024 PLOT DATE:



PLUMBING LEGEND AND **GENERAL** NOTES

SHEET NO.:

P0.1

| MANDATORY CALGREEN CHECKL | IST |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| WATER EFFICIENCY AND CONSERVATION INDOOR WATER USE | MANDATORY |
| 5.303.1 METERS. SEPARATE METERS SHALL BE INSTALLED FOR THE USES DESCRIBED | |
| IN SECTIONS 5.303.1.1 AND 3.303.1.2. 5.303.1.1 BUILDINGS IN EXCESS OF 50,000 SQUARE FEET. SEPARATE | |
| SUBMETERS SHALL BE INSTALLED AS FOLLOWS: | |
| FOR EACH INDIVIDUAL LEASED, RENTED OR OTHER TENANT SPACE WITHIN THE BUILDING PROJECTED TO CONSUME MORE THAN 100GAL/DAY. | |
| 2. WHERE SEPARATE SUBMETERS FOR INDIVIDUAL BUILDINGS TENANTS ARE | |
| UNFEASABLE, FOR WATER SUPPLIED TO THE FOLLOWING SUBSYSTEMS: | |
| a. MAKEUP WATER FOR COOLING TOWERS WHERE FLOW THROUGH IS GREATER THAN 500 GPM (30L/S) | |
| b. MAKEUP WATER FOR EVAPÔRATIVÉ COOLERS GREATER THAN 6 GPM | |
| (0.04 L/S) | |
| c. STEAM AND HOT-WATER BOILERS WITH ENERGY INPUT MORE THAN 500,000 Btu/h (147 kW) | |
| 5.303.1.2 EXCESS CONSUMPTION. ANY BUILDING OR A SPACE WITHIN A BUILDING | |
| THAT IS PROJECTED TO CONSUME MORE THAN 1,000 GAL/DAY (3800 L/DAY) 5.303.2 20 PERCENT SAVINGS. A SCHEDULE OF PLUMBING FIXTURES AND FIXTURE | |
| FITTINGS THAT WILL REDUCE THE OVERALL USE OF POTABLE WATER WITHIN THE | |
| BUILDING BY 20 PERCENT SHALL BE PROVIDED. | |
| (CALCULATE SAVINGS BY WATER USE WORKSHEETS) 5.303.2.1 MULTIPLE SHOWERHEADS SERVING ONE SHOWER. WHEN A SHOWER IS | |
| SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL | |
| THE SHOWERHEADS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED THE | |
| MAXIMUM FLOW RATE AT ≥ 20 PERCENT REDUCTION CONTAINED IN TABLE 5.303.2.3 OR THE SHOWER SHALL BE DESIGNED TO ONLY ALLOW ONE | |
| SHOWERHEAD TO BE IN OPERATION AT A TIME. | |
| 5.303.4 WASTEWATER REDUCTION. EACH BUILDING SHALL REDUCE THE GENERATION OF WASTEWATER BY ONE OF THE FOLLOWING METHODS: | |
| 1. THE INSTALLATION OF WATER—CONSERVING FIXTURES OR | |
| 2. UTILIZING NONPOTABLE WATER SYSTEMS. | |
| 5.303.6 PLUMBING FIXTURES AND FITTINGS. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH | |
| THE REQUIREMENTS LISTED FOR EACH TYPE IN ITEMS LISTED IN TABLE 5.303.6. | |
| 1. WATER CLOSETS (TOILETS) — FLUSHOMETER TYPE | |
| 2. WATER CLOSETS (TOILETS) — TANK TYPE 3. URINALS | |
| 4. PUBLIC LAVATORY FAUCETS | |
| 5. PUBLIC METERING SELF—CLOSING FAUCETS | |
| 6. RESIDENTIAL BATHROOM LAVATORY SINK FAUCETS 7. RESIDENTAL KITCHEN FAUCETS | |
| 8. RESIDENTIAL SHOWER HEADS | |
| 9. SINGLE SHOWER FIXTURES SERVED BY MORE THAN ONE SHOWERHEAD | |

| WATER REDUCTION FIXTURE FLOW RATES PER 2022 CALIFORNIA GREEN BUILDING CODE - TABLE A5.303.2.3.1 | | | | | |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------|--|--|--|--|
| FIXTURE TYPE | MAXIMUM FLOW RATE | | | | |
| KITCHEN FAUCETS | 1.8 GPM AT 60 PSI | | | | |
| WASH FOUNTAINS | 1.8 [RIM SPACE (IN.)/20 GPM AT 60 PSI] | | | | |
| METERING FAUCETS | 0.20 GALLONS/CYCLE | | | | |
| METERING FAUCETS FOR WASH FOUNTAINS | 0.20 GALLONS/CYCLE/20 [RIM SPACE (IN.)@ 60 PSI] | | | | |
| EACH PLUMBING FIXTURE AND FITTING SHALL MEE GREEN TABLE A5.303.2.3.1 | T THE FLOW RATE SPECIFIED IN 2022 CAL | | | | |

| WATER CONSERVATION FIXTURE FLOW RATION PER 2022 CALIFORNIA GREEN BUILDING CODE SECTION 5.303.3 | | | | | |
|------------------------------------------------------------------------------------------------|-----------------------------|--|--|--|--|
| FIXTURE TYPE | MAXIMUM BASELINE FLOW RATE | | | | |
| WATER CLOSETS | 1.28 GALLONS PER FLUSH | | | | |
| URINALS (FLOOR-MOUNT/WALL-MOUNT) | 0.5/0.125 GALLONS PER FLUSH | | | | |
| SHOWERHEADS | 1.8 GPM AT 80 PSI | | | | |

PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH 5.303.3.

| | AND FIXTURE FITTINGS |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| PER 2022 CALIFORNIA PLUN | MBING CODE — TABLE 1701.1 |
| REQUIRED | STANDARDS |
| WATER CLOSETS (TOILETS) — FLUSHOMETER VALVE TYPE SINGLE FLUSH, MAXIMUM FLUSH VOLUME | ASME A 112.19.2/CSA B45.1 — 1.28 GPF (4.8 L) |
| WATER CLOSETS (TOILETS) — FLUSHOMETER VALVE TYPE DUAL FLUSH, MAXIMUM FLUSH VOLUME | ASME A 112.19.2 AND USEPA WATERSENSE TANK—TYPE HIGH—EFFICIENCY TOILET SPECIFICATION — 1.28 GPF (4.8 L) |
| WATER CLOSETS (TOILETS) — TANK TYPE | U.S. EPA WATERSENSE TANK-TYPE HIGH EFFICIENCY TOILET SPECIFICATION |
| URINALS, MAXIMUM FLUSH VOLUME | ASME A 112.19.2/CSA B45.1 - 0.5 GPF (1.9 L) |
| URINALS, NONWATER URINALS | ASME A 112.19.19 (VITREOUS CHINA) ANSI Z124.9-2004 OR IAPMO Z124.9 (PLASTIC) |
| PUBLIC LAVATORY FAUCETS: MAXIMUM FLOW RATE — 0.5 GPM (1.9 L/MIN.) | ASME A 112.18.1/CSA B125.1 |
| PUBLIC METERING SELF—CLOSING FAUCETS: MAXIMUM FLOW RATE — 0.25 (1.0 L) PER METERING CYCLE | ASME A 112.18.1/CSA B125.1 |
| RESIDENTIAL BATHROOM LAVATORY SINK FAUCETS: MAXIMUM FLOW RATE — 1.5 GPM (5.7L/MIN) | ASME A 112.18.1/CSA B125.1 |

PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL MEET THE STANDARDS REFERENCED IN TABLE 5.303.6.

| | P | LUMBING PIPE MATERIAL SCHEDULE | |
|-------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| SERVICE | LOCATION | PIPE MATERIAL | SLOPE |
| WATER | ABOVE GRADE | ASTM B88 TYPE "L" HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS. | 1/32" PER 1' |
| WAILK | BELOW GRADE | ASTM B88 TYPE "K" HARD DRAWN COPPER, FACTORY INSULATED, WITH WROUGHT COPPER FITTINGS. | 1/32" PER 1' |
| SEWER AND VENT | ABOVE GRADE | ASTM A888 HUBLESS CAST IRON PIPE AND DWV FITTINGS SHALL CONFORM TO CPC AND BEAR THE COLLECTIVE TRADEMARK OF CISPI AND NSF. | 1/4" PER 1' |
| | BELOW GRADE | SOLID CORE PVC-DWV PER ASTM D1785/D2665. PVC SOCKET FITTINGS PER ASTM D2665. | 1/4" PER 1' |
| ROOF DRAIN | ABOVE GRADE | ASTM A888 HUBLESS CAST IRON PIPE AND DWV FITTINGS SHALL CONFORM TO CPC AND BEAR THE COLLECTIVE TRADEMARK OF CISPI AND NSF. | 1/4" PER 1' |
| ROOF DRAIN | BELOW GRADE | SOLID CORE PVC-DWV PER ASTM D1785/D2665. PVC SOCKET FITTINGS PER ASTM D2665. | 1/4" PER 1' |
| | ABOVE GRADE | ASTM A53 SCHEDULE 40 "BLACK STEEL" PIPE AND FITTINGS SHALL CONFORM TO CPC. EXPOSED PIPING SHALL BE PAINTED. | 1/4" PER 15' |
| NATURAL GAS | BELOW FLOOR (INTERIOR) | ASTM A53 SCHEDULE 40 GALVANIZED STEEL "BLACK" PIPE AND FITTINGS SHALL CONFORM TO CPC. PIPING INSTALLED UNDERGROUND BENEATH BUILDING SHALL CONFORM TO CPC 1210.1.6. | 1/4" PER 15' |
| | BELOW GRADE (EXTERIOR) | ASTM D2513—16a POLYETHYLENE "PE" PIPE. ALL FITTINGS SHALL BE AS PER CPC. | 1/4" PER 15' |
| CONDENSATE | ABOVE GRADE | ASTM B88 TYPE "L" HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS. | 1/4" PER 1' |
| COMPRESSED | ABOVE GRADE | ASTM B88 TYPE "L" HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS. | |
| AIR | BELOW GRADE | ASTM B88 TYPE "K" HARD DRAWN COPPER, FACTORY INSULATED, WITH WROUGHT COPPER FITTINGS. | |

| | PI | PE INSU PER 2022 CAL | | | | | SS | | |
|--------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------|-------------------|------------|-----|------------|--------------------------------|------------|--------------|
| FLUID | INSUL | ATION | | | | NOMINAL | PIPE DIAMETER | R(INCHES) | |
| OPERATING TEMPERATURE | CONDUCTIVITY | CTIVITY MEAN RATING | | <1 | | 1 - < 1.5 | 1.5 - < 4 | 4 - < 8 | 8 AND LARGER |
| RANGE (°F) | (IN BTU-IN/H PER SQ. FT ² *F) | TEMPERATURE (°F) | | | | INSULATIO | ON THICKNESS (IN INCHES) | REQUIRED | |
| SPACE HEATIN (STEAM, STEAM CO | ΓING, | MINIMUM PIPE INSULATION REQUIRED (THICKNESS IN INCHES OR R-VALUE) | | | | | | | |
| ABOVE 350 | 0.32 - 0.34 | 250 | INCHES | 4.5 | | 5.0 | 5.0 | 5.0 | 5.0 |
| ABOVE 330 | BOVE 350 0.32 - 0.34 25 | | R-VALUE | R37 | | R41 | R37 | R27 | R23 |
| 251-350 | 0.29 - 0.31 | 200 | INCHES | 3.0 | | 4.0 | 4.5 | 4.5 | 4.5 |
| | | | R-VALUE INCHES | R24 2.5 | | R34 2.5 | R35 2.5 | R26 3.0 | R22 3.0 |
| 201-250 | 0.27 - 0.30 | 150 | R-VALUE | R21 | | R20 | R17.5 | R17 | R14.5 |
| | | | INCHES | 1.5 | | 1.5 | 2.0 | 2.0 | 2.0 |
| 141-200 | 0.25 - 0.29 | 125 | R-VALUE | R11. | | R11 | R14 | R11 | R10 |
| 105 140 | 0.00 0.00 | 100 | INCHES | 1.0 | | 1.5 | 1.5 | 1.5 | 1.5 |
| 105–140 | 0.22 - 0.28 | 100 | R-VALUE | R7.7 | 7 | R12.5 | R11 | R9 | R8 |
| | | | | | | NOMINAL | PIPE DIAMETER | R(INCHES) | |
| | | | | <= | 1 | 1 - < 1.5 | 1.5 - < 4 | 4 - < 8 | 8 < |
| SPACE COOLING SYSTEMS (CHILLED WATER, REFRIGERANT AND BRINE) | | | | | | | PIPE INSULATION S IN INCHES OF | | |
| 40-60 | 0.21 - 0.27 | 75 | INCHES | NONRES | RES | NONRES RES | 1.0 | 1.0 | 1.0 |
| | | | | 0.5 | 0.5 | 0.5 0.5 | 1.0 | 1.0 | 1.0 |
| | | | R-VALUE | R3 | R6 | R3 R5 | | | |
| BELOW 40 | 0.20 - 0.26 | 50 | INCHES | 1.0 | | 1.5 | 1.5 | 1.5 | 1.5 |
| | | | R-VALUE | R8.5 | 5 | R14 | R12 | R10 | R9 |

| | 077 | 0.511 | TOTAL OBLI | | | | |
|-------------------------------|-----|-------|--------------|--|--|--|--|
| FIXTURE | QTY | GPH | TOTAL GPH | | | | |
| LAVATORY | 7 | 3 | 35 | | | | |
| SHOWER | 7 | 20 | 20 | | | | |
| EXTRACTOR | 1 | 75 | 75 | | | | |
| DECON SERVICE SINK | 1 | 15 | 15 | | | | |
| COFFEE SINK | 1 | 10 | 10 | | | | |
| KITCHEN SINK | 1 | 10 | 10 | | | | |
| MOP SINK | 1 | 20 | 20 | | | | |
| LAUNDRY SINK | 1 | 15 | 15 | | | | |
| SMALL CLOTH WASHER | 2 | 20 | 40 | | | | |
| DISH WASHER | 2 | 21 | 42 | | | | |
| SCBA CLEANING MACHINE | 1 | 29 | 42 | | | | |
| TOTAL DOMESTIC HOT WATER DEMA | AND | | 417 | | | | |
| DEMAND FACTOR | | | 100% | | | | |
| INCOMING CW TEMP. | | | 60* | | | | |
| STORAGE TEMP. | | | 140° | | | | |
| GAS REQUIRED TO HEAT WATER | | 402X8 | .33X(140-60) | | | | |
| GPH X 8.33 X TEMP RISE 80° | | | | | | | |

| | | FU' | TURE F | IXTURE | DATA | 4 | | |
|------------------------------------------------------------------|------------------------------|--------------|------------|------------|--------------|--------------|------------|------------------------|
| | | | DOMESTI | | | | SEWER | |
| SYMBOL | DESCRIPTION | NO. OF UNITS | F.U. PER 1 | TOTAL FIXT | URE UNITS HW | NO. OF UNITS | F.U. PER 2 | TOTAL FIXTURE UNITS |
| BT 1 | BATHTUB | 0 | 4.0 | 0.0 | 0.0 | 0 | 2.0 | 0.0 |
| WB 1 | CLOTHES WASHER SUPPLY BOX | 2 | 4.0 | 8.0 | 6.0 | 2 | 3.0 | 6.0 |
| EX 1 | EXTRACTOR | 1 | 6.0 | 6.0 | 4.5 | 1 | INDIRECT | |
| DW 1 | DISHWASHER | 2 | 1.5 | 3.0 | 2.3 | 2 | INDIRECT | |
| DF 1 | DRINKING FOUNTAIN | 0 | 0.5 | 0.0 | | 0 | 0.5 | 0.0 |
| HB 1 | HOSE BIBB | 1 | 2.5 | 2.5 | | 1 | | |
| HB 1 | ADDITIONAL HOSE BIBB | 6 | 1.0 | 6.0 | | 6 | | |
| L 1 | LAVATORY | 7 | 1.0 | 7.0 | 5.3 | 7 | 1.0 | 7.0 |
| $\left\langle \begin{array}{c} S \\ 2 \end{array} \right\rangle$ | COFFEE COUNTER SINK | 0 | 1.5 | 0.0 | 0.0 | 0 | 2.0 | 0.0 |
| KS 1 | KITCHEN SINK | 1 | 1.5 | 1.5 | 1.1 | 1 | 2.0 | 2.0 |
| LS 1 | LAUNDRY SINK | 1 | 1.5 | 1.5 | 1.1 | 1 | 2.0 | 2.0 |
| MS 1 | SERVICE/MOP BASIN SINK | 1 | 3.0 | 3.0 | 2.3 | 1 | 3.0 | 3.0 |
| <u> </u> | WASHUP | 1 | 2.0 | 2.0 | 1.5 | 1 | 2.0 | 2.0 |
| SH 1 | SHOWER | 7 | 2.0 | 14.0 | 10.5 | 7 | 2.0 | 14.0 |
| UR 1 | URINAL | 1 | 20.0 | 20.0 | | 1 | 2.0 | 2.0 |
| WC 1 | WATER CLOSET (TANK) | 7 | 2.5 | 17.5 | | 7 | 4.0 | 28.0 |
| WC 1 | WATER CLOSET (VALVE) | 0 | 5.0 | 0.0 | | 0 | 4.0 | 0.0 |
| | SCBA | 1 | 12 | 12.0 | | 0 | 0.0 | 0.0 |
| FD 1 | FLOOR DRAIN | 12 | | | | 12 | 0.0 | 0.0 |
| FS 1 | FLOOR SINK | 3 | | | | 3 | 2.0 | 6.0 |
| FS 2 | FLOOR SINK | 1 | | | | 1 | 3.0 | 3.0 |
| | TOTAL | | | 104.0 | 34.5 | | | 75.0 |

| _ | | | | | | | | | _ | | | | | | | | |
|------------|---------|---------|-------|-----|-----|-------|---|-------|-----|---------|---------|-------|-----|-----|-------|-------|--|
| \bigcirc |) WATER | FIXTURE | UNITS | PER | CPC | TABLE | Α | 103.1 | (2) |) SEWER | FIXTURE | UNITS | PER | CPC | TABLE | 702.1 | |

| DOMESTIC COLD WATER PRESSUR | | JLATIC | N | DON | MESTIC C | OLD WAT | ER SIZIN | G |
|----------------------------------------------------------------------------------------------------|---------|--------|-------------------|-----------------------------------------|---------------|----------------|-------------|-------|
| (AVG PSI / 100 FT |) | | | FRICTION LOS | | PER 100 FT | T AVG, AT 8 | B FPS |
| CONTRACTOR TO FIELD VERIFY STREET WATER PRESSURE CASE OF ANY DISCREPANCIES NOTIFY ARCHITECT/ENGINE | | | | MAX. VELOCIT | | FU | | |
| · | | | | PIPE SIZE | FLUSH TANK | FLUSH VALVE | GPM | FPS |
| MAX. SYSTEM INLET PRESSURE [AT WATER METER INLET] | = | 52 | PSI | 1/2" | 1 | - | 2 | 2.6 |
| MIN. SYSTEM INLET PRESSURE | = | 50 | PSI | 3/4" | 6 | _ | 5 | 3.4 |
| AT PRESSURE REDUCING VALVE INLET] | | | | 1" | 15 | _ | 11 | 4.1 |
| CYCTEM DDECCUDE LACCEC | | | | 1-1/4" | 19 | _ | 19 | 4.8 |
| SYSTEM PRESSURE LOSSES 2" WATER METER @ 38 GPM | = | 4 | PSI | 1-1/2" | 49 | 13 | 30 | 5.4 |
| 2" BACKFLOW PREVENTER | = | 13 | PSI | 2" | 165 | 68 | 64 | 6.6 |
| 2" PRESSURE REDUCING VALVE | = | 5 | PSI | 2-1/2" | 400 | 279 | 115 | 7.7 |
| TOTAL OF SYSTEM PRESSURE LOSSES | | 22.0 | PSI | 3" | 710 | 605 | 170 | 8.0 |
| RESIDUAL PRESSURE AT PRV | | 28 | | | | | | |
| PRESSURE REDUCING VALVE SETPOINT | = | 52 | PSI | | MECTIC | LOT WATE | | |
| | | | | DO | MESTIC H | HOI WATE | R SIZINO | خ |
| STATIC HEIGHT PRESSURE LOSS (25' x .433) | = | 10.8 | PSI | FRICTION LOS | | PER 100 FT | AVG, AT 5 | 5 FPS |
| RESIDUAL PRESSURE REQUIRED AT GOVERNING FIXTURE WATER CLOSET 25 PSI, EXTRACTOR 30 PSI] | = | 30 | PSI | W V V V V V V V V V V V V V V V V V V V | 1 | FU | | |
| WATER CLOSET 20 TSI, EXTRACTOR 30 TSI | | | | PIPE SIZE | FLUSH TANK | FLUSH VALVE | GPM | FPS |
| TOTAL SYSTEM PRESSURE LOSSES (DOWNSTREAM OF PRV) | = | 40.8 | PSI | 1/2" | 1 | _ | 2 | 2.6 |
| | | | | 3/4" | 6 | 1 | 5 | 3.4 |
| PRESSURE AVAILABLE FOR PIPE SIZING | | | | 1" | 15 | 1 | 11 | 4.1 |
| (PRV SETPOINT — TOTAL SYSTEM PRESSURE LOSSES DOWNSTREAM OF PRV) | = | 9.2 | PSI | 1-1/4" | 19 | - | 19 | 4.8 |
| | | | | 1-1/2" | 49 | 1 | 28 | 5.0 |
| ACTUAL LENGTH OF SYSTEM | = | 260 | | 2" | 119 | 1 | 48 | 5.0 |
| DEVELOPED LENGTH OF SYSTEM (260' X 1.5) | = | 390 | FT | | | | | |
| AVERAGE PRESSURE DROP | | | | | | | | |
| (PRESSURE AVAILABLE FOR PIPE SIZING) X 100 FT / (DEVELOPED LENGTH OF SYSTEM) | (9.2PSI | ×100 | / 390) | | | | | |
| (| | 2.4 | DCI /100 FT | | | | | |
| | = | 2.4 | PSI/100 FT AVG | | | | | |



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08-22-25 #2024-03417

JO JO/ZC PP MP

PROJECT ADMINISTERED BY: SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE. SAN BERNARDINO, CA 92415

SAN BERNARDINO **COUNTY FIRE** DEPARTMENT:

FIRE STATION 227

PROJECT # 10.10.1202

APN Part of 0154-281-01

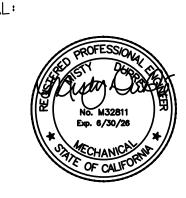
CIP #22-105

180 W. 38TH STREET SAN BERNARDINO, CA 92405

| ISSUE INFO | RMATION: |
|------------|--------------|
| DATE: | INFORMATION: |
| 9-11-24 | D.D.s |
| 10-26-24 | PROGRESS |
| 12-20-24 | 95% CDs |
| 03-14-25 | Plan Check 🛆 |
| 05-09-25 | Plan Check 🛕 |
| 07-25-25 | BID SET |
| 08-25-25 | BID SET |
| | |
| | |

SHEET INFORMATION: STK PROJECT NO.: 374-193-24 AS NOTED DECEMBER 2024 DATE: PLOT DATE:

DRAWING NAME:



PLUMBING SCHEDULES

P0.2