# OPERATIONS / PURCHASING TENANT IMPROVEMENT

FOR

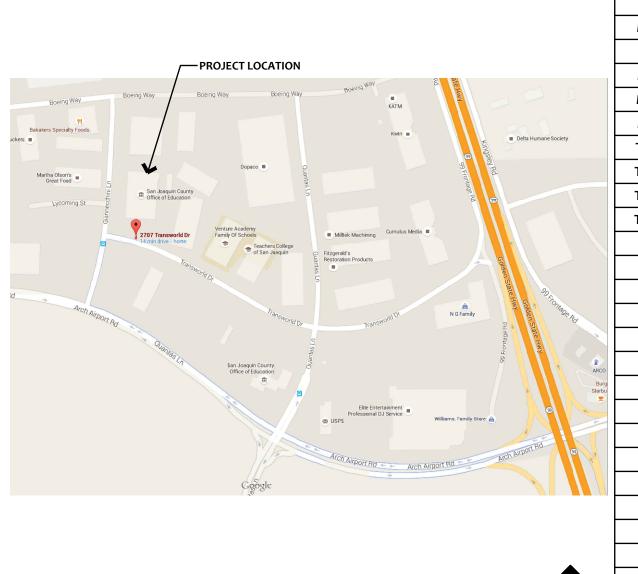
# SAN JOAQUIN COUNTY OFFICE OF EDUCATION

2707 TRANSWORLD DRIVE

STOCKTON, CALIFORNIA

GENERAL NOTES DEFERRED SUBMITTALS **DESIGN TEAM** PROJECT DESCRIPTION 2707 TRANSWORLD DRIVE **DESIGNER** STOCKTON, CALIFORNIA PROGRESSIVE DESIGNS THESE PLANS SHOULD BE PROVIDED BY THE INSTALLING FIRE SPRINKLER CONTRACTOR. THEY MUST 179-24-016 COMPLY WITH THE STATE FIRE MARSHALL'S REQUIREMENTS FOR THE STATED OCCUPANCIES & WILL BE ACRES: P.O. BOX 477 TYPE OF CONSTRUCTION III-B (EXISTING - NO CHANGE) MANTECA, CALIFORNIA 95336 OCCUPANCY GROUP: A, B, S-2 PHONE: (209) 239-1229 NUMBER OF STORIES: FIRE SPRINKLERS: FAX: (209) 239-4880 LOCAL CODES AND ORDINANCES IN FEFFCT AT THE TIME OF CONSTRUCTION **GENERAL PLAN DESIGNATION** MICHAEL LOUREIRO THIS PROJECT TO COMPLY WITH 2022 CBC, CPC, CMC, CFC, CEC, CEES & 6. THE TYPICAL DETAILS SHOWN IN THESE PLANS SHALL APPLY IN ALL SIMILAR CASES UNLESS SPECIFICALL **ELECTRICAL** MECHANICAL/PLUMBING IERWISE. WHERE NO DETAIL IS SHOWN, CONSTRUCTION SHALL BE AS INDICATED FOR OTHEF BORRELLI & ASSOCIATES, INC. **BOUDREAU ENGINEERING, INC** THIS PROJECT IS A NON-STRUCTURAL TENANT IMPROVEMENT FOR THE THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF INSTALLATION, INSPECTION, AND 2032 N. GATEWAY BOULEVARD SAN JOAOUIN COUNTY OFFICE OF EDUCATION'S OPERATIONS OFFICE FRESNO, CALIFORNIA 93727 MANTECA, CALIFORNIA 95336 AREA. SCOPE OF WORK TO INCLUDE NEW PARTITION WALLS, RELOCATION & ADDITION OF ELECTRICAL, MECHANICAL, PLUMBING PHONE: (559) 233-4138 PHONE: (209) 606-7052 8. VERIFY ALL DIMENSIONS, EXISTING CONDITIONS, AND METHODS OF CONSTRUCTION PRIOR TO AND FIRE SPRINKLERS. COMMENCING WORK. NOTIFY DESIGN TEAM OF ANY DISCREPANCIES. JOHN BORRELLI, P.E. BRYAN BOUDREAU, P.E. a. IT IS NOT THE INTENT OF THESE DOCUMENTS TO SEPARATE THE WORK INTO SUBTRADE DIVISIONS. IT OFFICE AREA (EXISTING): 1,554 SQ. FT. SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO DIVIDE AND ORGANIZE THE WORK AS WAREHOUSE (EXISTING): 2,153 SQ. FT. REQUIRED TO COMPLETE THE WORK AS INTENDED BY THESE DOCUMENTS. CLIENT TOTAL EXISTING: io. ALL SITE WORK SHALL COMPLY WITH THE STATE OF CALIFORNIA TITLE 24 ENERGY EFFICIENCY STANDARDS, CBC CHAPTER 11B ACCESSIBILITY TO PUBLIC BUILDINGS, PUBLIC ACCOMMODATIONS & COMMERCIAL SAN JOAQUIN COUNTY OFFICE BUILDINGS AND ALL APPLICABLE CODES, ORDINANCES, AND ZONING REGULATIONS. OFFICE (REMODELED): 1,415 SQ. FT. OF EDUCATION THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL OFFICE (NEW): UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR 2901 ARCH-AIRPORT ROAD STORAGE (NEW): THE LOCATION AND PRESERVATION OF ALL SUCH FACILITIES IN THE AREA OF CONSTRUCTION, AND SHALL STOCKTON, CALIFORNIA TOTAL NEW: 3,681 SQ. FT. NOTIFY UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION. PHONE: (209) 468-4800 A. MINIMUM MANEUVERING CLEARANCES AT DOORS SHALL BE AS SHOWN IN FIGURES 11B-26A AND 11B-26B. THE FLOOR OR GROUND AREA WITHIN THE REQUIRED CLEARANCES SHALL BE LEVEL AND B. THE LEVEL LANDING SHALL HAVE A LENGTH IN THE DIRECTION OF DOOR SWING OF AT LEAST 60 KEY PLAN VICINITY MAP INCHES AND THE LENGTH OPPOSITE THE DIRECTION OF THE DOOR SWING OF 48 INCHES AS MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION. CBC SECTION

> **LOCATION** WENTWORTH EDUCATION CENTER (WEC) **2707 TRANSWORLD DRIVE FIRST FLOOR**



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PARTIAL POWER & SIGNAL FLOOR PLANS

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TYPICAL ELECTRICAL DETAILS

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**POWER TITLE 24** 

**DEMOLITION FLOOR** 

**NEW FLOOR PLAN** 

SHEET

E4.02

E5.05

DATE 15 OCT 24 SCALE AS NOTED JOB 658-23-15

20. CONTRACTOR SHALL FLUSH ALL WATER, SEWER, AND DRAIN LINES PRIOR TO HOOK UP.

21. DO NOT SCALE THE DRAWINGS.

EXCEPTION: THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING SHALL BE A MINIMUM

OF 44 INCHES WHERE THE DOOR HAS NO CLOSER AND APPROACH TO THE DOOR BY A PERSON IN A WHEELCHAIR CAN BE MADE FROM LATCH SIDE, OR THE DOOR HAS NEITHER LATCH NOR CLOSER AND THE APPROACH CAN BE MADE FROM THE HINGE SIDE. SEE CBC

C. THE WIDTH OF THE LEVEL LANDING ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24 INCHES PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18 INCHES PAST THE

WHENEVER EXISTING FACILITIES OR MATERIALS ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF WORK COVERED BY DRAWINGS AND SPECIFICATIONS, SAID FACILITIES AND MATERIALS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SAID FACILITIES OR MATERIALS SHALL BE EQUAL TO OR BETTER THAN THE ORIGINAL FACILITIES OR MATERIALS. THE FINISH PRODUCT SHALL COMPLY WITH

14. NO CONSTRUCTION WORK SHALL COMMENCE AT THE SITE BEFORE A BUILDING PERMIT IS FULLY EXECUTED

. PROVIDE CONTINUOUS 16ga x REQUIRED WIDTH (6" MIN.) FLAT BACKING STRAP @ WALLS W/ WALL

16. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONTRACT DOCUMENTS AND THE EXISTING FIELD CONDITIONS, AND SHALL REPORT TO THE DESIGN TEAM ANY ERROR, INCONSISTENCY, OR

OMISSION. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK AT ANY TIME WITHOUT APPROVED CONTRACT DOCUMENTS OR WHERE REQUIRED, APPROVED SHOP DRAWINGS, PRODUCT

EXISTING FACILITY IN ACCORDANCE WITH THE APPLICABLE CODES AND ORDINANCES. SHOULD ANY CONDITION BE UNCOVERED OR DEVELOP DURING THE EXECUTION OF THESE DOCUMENTS. WHICH IS NOT DEFINED HEREIN. THE CONTRACTOR SHALL CEASE WORK AND NOTIFY THE DESIGN TEAM AT ONCE.

18.  $\,$  THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, FITTING, OR PATCHING THAT MAY BE REQUIRED TO COMPLETE THE INTENT OF THESE CONSTRUCTION DOCUMENTS, TO MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY. THE CONTRACTOR SHALL PATCH ARCHITECTURAL FINISHES AS

. DUE TO THE DIFFICULTY OF ANTICIPATING EVERY AS-BUILT CONDITION WHICH MAY EXIST IN CONNECTION WITH THE EXISTING WORK WHERE ALTERATION OR RECONSTRUCTION WORK IS PROPOSED, IT SHALL BE

NECESSARY TO ACCOMPLISH WORK DEFINED IN STRUCTURAL MECHANICAL PLUMBING, ELECTRICAL AND

ARCHITECTURAL DRAWINGS. PAINT TO MATCH EXISTING IF CONTACT AREA IS NOT TO RECEIVE NEW FINISH.

EXISTING FIELD CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AND ACCEPTED AS CONDITIONS OF

ig. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PG&E FOR ANY NEW SERVICE INSTALLATIONS. THE CONTRACTOR SHALL COORDINATE THE SHUT DOWN OF THE FACILITIES WITH THE OWNER FOR AS

MINIMAL DURATION AS POSSIBLE. INTERCEPT THE EXISTING SERVICE CONDUIT. EXTEND IT TO NEW TRANSFORMERS & PAD (TO BE INSTALLED BY CONTRACTOR) AND EXTEND SECONDARY CONDUITS TO NEW SWITCHBOARD. COORDINATE WITH OWNER TO VERIFY LOCATIONS. PROVIDE TRAFFIC BARRIER POSTS PER

FIGURES 11B-26A AND 11B-26B

AND AVAILABLE FOR POSTING AT THE JOB SITE.

3. GENERAL DEMOLITION NOTE:

STRIKE EDGE FOR INTERIOR DOORS. CBC SECTION 1133B.2.4.3

MOUNTED EQUIPMENT, CASEWORK AND/OR ACCESSORIES - TYPICAL U.O.N.

LITERATURE, DATA, SAMPLES, OR INSTALLATION INSTRUCTIONS.

THE 2010 CALIFORNIA BUILDING CODE AND CITY AND/OR COUNTY MUNICIPAL CODE.

B. GENERAL CONTRACTOR, CONTRACTOR, SUBCONTRACTOR: GENERAL CONTRACTOR WHO IS THE PRIMARY LEGAL PARTY TO THE CONTRACT FOR CONSTRUCTION WITH OWNER: OR SUBCONTRACTOR NORMALLY ENGAGED IN & RESPONSIBLE FOR SPECIFIC TRADES AND/OR PORTIONS OF THE WORK. IN ALL CASES, ULTIMATE RESPONSIBILITY FOR THE WORK PERFORMED UNDER THE CONTRACT SHALL BE WITH THE GENERAL CONTRACTOR. MAY BE

#### 1.02 WARRANTY & GUARANTEE OF WORK

- A. THE GC WARRANTS TO T/O THAT ALL MATERIALS & EQUIPMENT FURNISHED UNDER ALL PARTS OF THE SPECIFICATIONS WILL BE NEW, UNLESS OTHERWISE SPECIFIED. & THAT ALL WORK WILL BE OF GOOD QUALITY. FREE FROM FAULTS & DEFECTS & IN CONFORMANCE WITH THESE CONSTRUCTION SPECIFICATIONS. ALL WORK NOT CONFORMING TO THESE REQUIREMENTS, INCLUDING SUBSTITUTIONS NOT PROPERLY APPROVED & AUTHORIZED, MAY BE CONSIDERED DEFECTIVE. IF REQUIRED, THE GC SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND & QUALITY OF MATERIALS & EQUIPMENT.
- B. EXCEPT AS OTHERWISE SPECIFIED, ALL WORK SHALL BE GUARANTEED BY THE GC AGAINST DEFECTS IN MATERIALS, EQUIPMENT, OR WORKMANSHIP FOR ONE (1) YEAR FROM THE DATE OF SATISFACTORY COMPLETION OF THE "PUNCH LIST" ITEMS & FINAL ACCEPTANCE BY T/O.
- C. IF, WITHIN THE GUARANTEE PERIOD, REPAIRS OR CHANGE ARE REQUIRED IN CONNECTION WITH THE WORK WHICH, IN THE OPINION OF T/O, ARISE FROM DEFECTS IN SUCH MATERIALS, EQUIPMENT OR WORKMANSHIP, THE GC SHALL PROMPTLY CORRECT SAME UPON RECEIPT OF NOTICE FROM T/O & WITHOUT COST OR EXPENSE TO T/O IN ACCORDANCE WITH THE FOLLOWING:
  - PLACE IN SATISFACTORY CONDITION IN EVERY PARTICULAR OF SUCH GUARANTEED WORK, CORRECT ALL DEFECTS THEREIN; &
  - MAKE GOOD ALL DAMAGE TO THE BUILDING, SITE, OR EQUIPMENT & CONTENTS THEREOF WHICH RESULT FROM SUCH DEFECT; & MAKE GOOD ANY WORK OR MATERIALS, OR THE EQUIPMENT & CONTENTS OF SAID BUILDING OR SITE DISTURBED IN FULFILLING ANY SUCH
- D. IN ANY CASE WHEREIN FULFILLING THE REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS OR OF ANY GUARANTEE, EMBRACED IN OR REQUIRED THEREBY, THE CONTRACTOR DISTURBS ANY WORK GUARANTEED UNDER ANOTHER CONTRACT, HE SHALL RESTORE SUCH DISTURBED WORK TO A CONDITION SATISFACTORY TO T/O & GUARANTEE SUCH RESTORED WORK TO THE SAME EXTENT AS IT WAS GUARANTEED UNDER SUCH OTHER CONTRACT.
- E. IF THE GC, AFTER NOTICE, WHETHER WRITTEN OR VERBAL, FAILS TO PROCEED PROMPTLY WITHIN THIRTY (30) DAYS TO COMPLY WITH THE TERMS OF THE GUARANTEE, T/O MAY HAVE THE DEFECTS CORRECTED, & THE GC SHALL REIMBURSE RAC WITHIN THIRTY (30) DAYS FOR ALL EXPENSES INCURRED.
- F. ALL SPECIAL GUARANTEES APPLICABLE TO SPECIFIC PARTS OF THE WORK THAT MAY BE STIPULATED IN THE SPECIFICATIONS OR OTHER PAPERS FORMING A PART OF THE LEASE OR CONTRACT SHALL BE SUBJECT TO THE TERMS OF THIS PARAGRAPH DURING THE FIRST YEAR OF THE LIFE OF SUCH SPECIAL

#### 1.03 SUPERVISION OF CONSTRUCTION PROCEDURES

- A. THE GC SHALL SUPERVISE & DIRECT THE WORK, USING HIS BEST SKILL & ATTENTION. THE GC SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION SITE SAFETY, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES & PROCEDURES & FOR COORDINATING ALL PORTIONS OF THE WORK UNDER ALL
- PARTS OF THESE SPECIFICATIONS. THE GC SHALL BE RESPONSIBLE TO T/O FOR THE ACTS & OMISSIONS OF HIS EMPLOYEES, SUBCONTRACTORS & THEIR AGENTS & EMPLOYEES, & OTHER PERSONS PERFORMING ANY OF THE WORK UNDER THESE SPECIFICATIONS

#### 1.04 LABOR & MATERIALS

A. UNLESS OTHERWISE PROVIDED, THE GC SHALL PROVIDE & PAY FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT & MACHINERY, WATER, HEAT, UTILITIES, TRANSPORTATION, & OTHER FACILITIES & SERVICES NECESSARY FOR THE PROPER EXECUTION & COMPLETION OF THE WORK, WHETHER TEMPORARY OR PERMANENT, & WHETHER OR NOT INCORPORATED OR TO BE INCORPORATED IN THE WORK.

#### 1.05 NOTICES

- A. THE GC SHALL GIVE ALL NOTICES & COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS & LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK.
- B. IT IS THE RESPONSIBILITY OF THE GC TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN ACCORDANCE WITH APPLICABLE LAWS, STATUTES, BUILDING CODES & REGULATIONS. IF THE GC OBSERVES THAT ANY OF THE CONSTRUCTION SPECIFICATIONS WERE AT VARIANCE THERE WITH IN ANY RESPECT. HE SHALL PROMPTLY NOTIFY THE DESIGN TEAM IN WRITING, & ANY NECESSARY CHANGES SHALL BE ACCOMPLISHED BY APPROPRIATE MODIFICATION WITH
- IF THE GC PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO SUCH LAWS, ORDINANCES, RULES & REGULATIONS, & WITHOUT SUCH WRITTEN NOTICE TO T/O, HE SHALL ASSUME FULL RESPONSIBILITY THEREFORE & SHALL BEAR ALL COSTS ATTRIBUTABLE THERETO
- 1.06 THE INTENT OF THE CONSTRUCTION DOCUMENTS IS TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH ALL LATEST APPLICABLE CODES, ORDINANCES, AND REGULATIONS. FURTHERMORE, CONTRACTOR SHALL FURNISH WITHOUT EXTRA CHARGE ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED FOR COMPLIANCE WITH THE ABOVE MENTIONED REGULATIONS, EVEN THOUGH, WORK MAY NOT BE MENTIONED OR SHOWN IN THE CONSTRUCTION DOCUMENTS.
- 1.07 ALL PHASES OF THE WORK OF THE PROJECT SHALL BE SCHEDULED AND SEQUENCED PRIOR TO THE BEGINNING OF ANY WORK. THE CONTRACTOR SHALL CREATE AND SUBMIT A COPY OF THE WORK SCHEDULE TO THE OWNER AND THE ARCHITECT FOR REVIEW AND ACCEPTANCE. THE SCHEDULE SHALL BE MAINTAINED CURRENT AT ALL TIMES.
- 1.08 THE CONTRACTOR SHALL BE RESTRICTED TO THE USE AND AREA OF THE SITE AS DESIGNATED BY THE OWNER. CONTRACTOR SHALL COORDINATE THIS REQUIREMENT WITH THE OWNER AT THE SITE REVIEW DURING BIDDING.
- 1.09 THE CONTRACTOR IS REMINDED THAT THE OWNER'S NORMAL BUSINESS OPERATIONS MAY BE CONDUCTED WHILE THE PROJECT IS BEING CONSTRUCTED AND EVERY EFFORT SHALL BE MADE TO PROTECT EXISTING BUILDINGS, UTILITIES, OTHER IMPROVEMENTS, OWNER'S EMPLOYEES AND PERSONAL PROPERTY, ETC. FROM ANY DAMAGE OR HARM. PROVIDE ALL MEASURES REQUIRED TO LIMIT THE DUST, NOISE, PHYSICAL POLLUTION OF THE AIR, GROUND AND WATER, WITHIN & ADJACENT TO THE PROJECT SITE.

- SUBMITTALS SHALL BE COMPLETE IN EVERY RESPECT, BOUND IN SETS, & SHALL BE ACCOMPANIED BY A LETTER OF TRANSMITTAL LISTING THE NUMBERS & DATES OF ALL ITEMS SUBMITTED. ALL SUBMITTALS SHALL BEAR THE STAMP OF THE CONTRACTOR AS EVIDENCE THAT THE SUBMITTAL MATERIALS HAVE BEEN RECORDED & CHECKED BY THE CONTRACTOR FOR CONFORMANCE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. IF THE SUBMITTALS INDICATE VARIATIONS FROM THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS FOR ANY REASON, IT IS THE CONTRACTORS' RESPONSIBILITY TO MAKE SPECIFIC MENTION OF SUCH VARIATIONS IN THE LETTER OF TRANSMITTAL.
- B. PREPARE AND TRANSMIT EACH SUBMITTAL TO THE DESIGN TEAM SUFFICIENTLY IN ADVANCE OF PERFORMING THE RELATED WORK OR OTHER APPLICABLE ACTIVITIES. ALLOW (10) NORMAL WORKING DAYS FOR THE DESIGN TEAM TO REVIEW AND TRANSMIT THE SUBMITTALS. SUBMIT A MINIMUM OF 6 COPIES

#### 1.11 SUBSTITUTIONS

WHEN THE TERM "OR APPROVED EQUAL" IS USED IN THE CONSTRUCTION DOCUMENTS, THE DEFINITION SHALL BE IN KEEPING WITH THE FOLLOWING INTENDED DEFINITION. THE TERM IS USED TO INDICATE TO THE CONTRACTOR THAT IF THE CONTRACTOR FEELS THAT HE HAS A PRODUCT COMPARABLE IN FUNCTION, FORM, AND APPEARANCE TO THE PRODUCT SPECIFIED, HE SHALL BE ALLOWED TO SUBMIT THE ITEM FOR ACCEPTANCE BY THE DESIGN TEAM. THE CONTRACTOR SHALL SO NOTIFY THE DESIGN TEAM IN ADVANCE BEFORE THE SUBMITTAL IS FIRST REVIEWED. IN THE CASE OF REJECTION OF THE SUBMITTAL BY THE DESIGN TEAM. THE CONTRACTOR SHALL PROVIDE THE MATERIAL SPECIFIED. IF PERMISSION TO THE SUBSTITUTION IS GRANTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION OF DIMENSION, LOCATION, CONNECTIONS, SIZES, OPENINGS, ETC. THE CONTRACTOR SHALL FURNISH AND INSTALL ANY AND ALL ADDITIONAL MATERIALS AS MAY BE REQUIRED TO PERFORM A COMPLETE JOB WITHOUT ADDITIONAL COST TO THE OWNER.

#### 1.12 CONTRACT CLOSEOUT

- A. WHEN THE CONTRACTOR CONSIDERS THE WORK OR DESIGNATED PORTION THEREOF IS SUBSTANTIALLY COMPLETE THE DESIGN TEAM SHALL BE NOTIFIED OF SUCH AND THUS WILL INSPECT THE PROJECT ALONG WITH ALL CONSULTANTS AND THE OWNER PRESENT. SHOULD THE DESIGN TEAM DETERMINE THAT THE WORK IS SUBSTANTIALLY COMPLETE HE SHALL PREPARE A NOTICE OF SUBSTANTIAL COMPLETION AND ATTACH A LIST OF ITEMS (PUNCH LIST) TO BE COMPLETED OR CORRECTED BY THE CONTRACTOR. UPON COMPLETION OF ALL ITEMS LISTED THE CONTRACTOR SHALL NOTIFY THE DESIGN TEAM FOR FINAL COMPLETION REVIEW IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT.
- B. AS PART OF THE WORK, THE CONTRACTOR SHALL MAINTAIN AT THE SITE ONE RECORD COPY OF AS-BUILT DRAWINGS LEGIBLY MARKED TO RECORD ACTUAL CONSTRUCTION, CONDITIONS, PLACEMENT, ETC. OF THE WORK. RECORD ALL INFORMATION CONCURRENTLY WITH CONSTRUCTION PROGRESS AND DO NOT CONCEAL ANY WORK UNTIL REQUIRED INFORMATION IS RECORDED.
- AS PART OF THE CLOSEOUT SUBMITTALS THE CONTRACTOR SHALL DELIVER TO THE DESIGN TEAM ALL EVIDENCE OF COMPLIANCE WITH REQUIREMENTS OF GOVERNING AUTHORITIES, PROJECT RECORD AS-BUILT DOCUMENTS, OPERATION & MAINTENANCE DATA, WARRANTIES AND BONDS, EVIDENCE OF PAYMENT & RELEASE OF LIENS, CONSENT OF SURETY TO FINAL PAYMENT, EXTRA STOCK OF MATERIALS, ETC.

### **DIVISION 2: EXISTING CONDITIONS**

## SECTION 02050 DEMOLITION

- 1.01 ALL MATERIALS INDICATED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM OUTSIDE OF THE PROJECT SITE. CONTRACTOR SHALL NOT DISPOSE REMOVED MATERIALS BY SALE, GIFT, OR IN ANY OTHER MANNER TO THE GENERAL PUBLIC, AT THE SITE. PRIOR TO COMMENCEMENT OF SUCH DEMOLITION, THE OWNER SHALL INDICATE TO THE CONTRACTOR WHICH ITEMS THE OWNER WANTS TO HOLD FOR FUTURE USE. THOSE ITEMS INDICATED TO BE HELD FOR THE OWNER SHALL BE CAREFULLY STORED AWAY BY THE CONTRACTOR AT A PREDETERMINED LOCATION ON THE SITE.
- 1.02 ERECT AND MAINTAIN TEMPORARY BRACING, SHORING, LIGHTS, BARRICADES, WARNING SIGNS, ETC. TO PROTECT THE PUBLIC, OWNER'S EMPLOYEES, EXISTING CONSTRUCTION TO REMAIN, ETC. ALL IN ACCORDANCE WITH APPLICABLE CODES. IF KNOWN OR SUSPECTED HAZARDOUS MATERIALS ARE ENCOUNTERED DURING OPERATIONS, STOP WORK IMMEDIATELY AND NOTIFY THE OWNER AND DESIGN TEAM. DO NOT CUT OR ALTER EXISTING STRUCTURAL MEMBERS UNLESS INDICATED TO DO SO IN THE CONSTRUCTION DOCUMENTS, OR BY WRITTEN APPROVAL FROM THE ENGINEER OF RECORD. IF EXISTING WORK THAT IS TO REMAIN IS CUT. ALTERED OR DAMAGED DURING DEMOLITION OR NEW CONSTRUCTION, UNLESS SPECIFICALLY REQUIRED TO BE DISTURBED, REPAIR OR REPLACE IN KIND TO A CONDITION AS GOOD AS BEFORE AT NO EXTRA COST TO THE OWNER. NOTIFY OWNER OF ANY UTILITY DISTURBANCES THAT MAY AFFECT ONGOING BUSINESS.
- 1.03 COMPLETELY REMOVE ALL UNUSED MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS IN ATTIC THAT WILL NOT BE USED. REPAIR AND/OR REPLACE ANY EXIST. DEFECTIVE CONDITIONS ENCOUNTERED WHETHER SPECIFICALLY MENTIONED IN THESE DOCUMENTS OR NOT. NOTIFY DESIGN TEAM & BLDG. DEPT. OF ANY SUCH CONDITIONS PRIOR TO ANY REPAIRS OR REPLACEMENTS

#### DIVISION 3: CONCRETE

NOT APPLICABLE

#### **DIVISION 4: MASONRY**

NOT APPLICABLE

#### **DIVISION 5: METALS**

NOT APPLICABLE

#### **DIVISION 6: WOOD, PLASTICS, AND COMPOSITES**

#### SECTION 06100 ROUGH CARPENTRY

1.01 MISC. WOOD FRAMING SHALL BE MIN. NO. 2 D.F. FOR 2x FRAMING, & NO. 1 D.F. FOR POSTS & HEADERS

#### SECTION 06400 CASEWORK

- 1.01 ALL CASEWORK SHALL MEET THE MINIMUM SPECIFICATIONS OF WOODWORK INSTITUTE OF CALIFORNIA (WIC) "MANUAL OF MILLWORK". LATEST EDITION. CUSTOM GRADE, WITH REVISIONS FOR CONSTRUCTION DETAILS. CONTRACTOR TO COORDINATE NEW CASEWORK WITH THE T/O.
- 1.02 SUBMIT TO THE DESIGNER FOR REVIEW FULLY DETAILED SHOP DRAWINGS SHOWING FABRICATION, INSTALLATION, AND ANCHORAGE DETAILS. ALL EXPOSED SURFACES SHALL BE AS SELECTED BY TENANT W/ EDGE BANDING OR 'T' MOLDING AT ALL COUNTER EXPOSED EDGES.

#### DIVISION 7: THERMAL AND MOISTURE PROTECTION

#### SECTION 07210 BUILDING INSULATION

- 1.01 AT ALL NEW INTERIOR CONDITIONED TO UNCONDITIONED AREA DEMISING WALLS & RESTROOM WALLS: FIBERGLASS, UNFACED, BLANKET FORM, TYPE 1 PER ASTM C665 AND ASTM E136, 3 1/2" THICK FOR FULL HEIGHT OF WALL.
- 1.02 REPLACE IN-KIND ANY EXISTING DAMAGED BUILDING SHELL THERMAL BATT INSULATION TO RESTORE ORIGINAL CONDITIONS. NO BATT INSUL. PAPER FACINGS SHALL BE EXPOSED IN ATTIC SPACES. VERIFY WITH ENERGY CALCS REQUIREMENT(S) FOR ADDITIONAL OR NEW THERMAL BATT INSULATION.
- 1.03 PROVIDE FLAME SPREAD CLASSIFICATION AND SMOKE DENSITY PER SEC. 707.

#### SECTION 07510 BUILT-UP BITUMINOUS ROOFING

- 1.01 SUBMIT MANUFACTURER'S LITERATURE DESCRIBING BUILT-UP BITUMINOUS ROOFING SYSTEM. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDED SPECIFICATIONS & CHAPTER 15 OF THE CBC REGARDING DELIVERY, STORAGE, HANDLING, PROJECT CONDITIONS, EXAMINATION, APPLICATION, FIELD QUALITY CONTROL, CLEANING, ETC. CONTRACTOR SHALL VERIFY & CONTACT ORIGINAL MANUFACTURER OF EXIST. ROOF SYSTEM, & COORDINATE NEW PATCH WORK WITH THEM TO PRESERVE EXIST. ROOF WARRANTIES AND GUARANTY'S.
- 1.02 PROVIDE BUILT-UP ROOF CRICKETS AT SIDE OF NEW MECH. UNIT CURBS TO SHED WATER IN DIRECTION OF ROOF SLOPE.
- 1.03 MATERIALS FOR BUILT-UP BITUMINOUS ROOFING SYSTEM SHALL BE A CLASS 'A' FIRE HAZARD CLASSIFICATION. MATERIALS SHALL BE CLEARLY LABELED WITH ALL PERTINENT INFORMATION, INCLUDING MANUFACTURER'S LABELS, UNDERWRITERS' LABORATORIES, INC.(UL), AND APPLICABLE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) DESIGNATION.

#### SECTION 075423 SINGLE-PLY ROOFING

- 1.01 SUBMIT MANUFACTURER'S LITERATURE DESCRIBING SINGLE-PLY ROOFING SYSTEM. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDED SPECIFICATIONS & CHAPTER 15 OF THE CBC REGARDING DELIVERY, STORAGE, HANDLING, PROJECT CONDITIONS, EXAMINATION, APPLICATION, FIELD OUALITY CONTROL, CLEANING, ETC. CONTRACTOR SHALL VERIFY & CONTACT ORIGINAL MANUFACTURER OF EXIST. ROOF SYSTEM, & COORDINATE NEW WORK WITH THEM TO PRESERVE EXIST. ROOF WARRANTIES AND GUARANTY'S. IF APPLICABLE.
- 1.02 SINGLE-PLY ROOFING MATERIAL SHALL BE FABRIC-REINFORCED THERMOPLASTIC POLYOLEFIN (TPO) CONFORMING TO ASTM D 6878 WITH A MINIMUM THICKNESS OF 60 MILS, NOMINAL.
- 1.03 MATERIALS FOR SINGLE-PLY ROOFING SYSTEM SHALL BE A CLASS 'A' FIRE HAZARD CLASSIFICATION. MATERIALS SHALL BE CLEARLY LABELED WITH ALL PERTINENT INFORMATION, INCLUDING MANUFACTURER'S LABELS, UNDERWRITERS' LABORATORIES, INC.(UL), AND APPLICABLE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) DESIGNATION.
- 1.04 INSTALLATION CAN BE EITHER MECHANICALLY FASTENED OR FULLY ADHERED TO MATCH EXISTING CONDITIONS. SUBSTRATE SHALL BE FIELD VERIFIED TO MEET THE REQUIREMENTS OF THE ROOFING SYSTEM MANUFACTURER.
  - A. FASTENERS: FACTORY-COATED STEEL FASTENERS AND METAL OR PLASTIC PLATES MEETING CORROSION-RESISTANCE PROVISIONS IN FMG 4470, DESIGNED FOR FASTENING MEMBRANE TO SUBSTRATE, AND ACCEPTABLE TO MEMBRANE MANUFACTURER.
- B. BONDING ADHESIVE: MANUFACTURER'S STANDARD WATER-BASED BONDING ADHESIVE FOR MEMBRANE, AND SOLVENT-BASED BONDING ADHESIVE FOR

#### SECTION 07600 FLASHING & SHEET METAL

1.01 GALVANIZED SHEFT METAL SHALL BE FURNISHED IN MINIMUM GAUGES AS SHOWN OR REQUIRED. COORDINATE INSTALLATION OF ALL SHEFT METAL WORK WITH OTHER TRADES TO PROVIDE A WATERPROOF CONDITION AT NEW WORK AREAS. LEAD FLASHING SHALL BE PURE LEAD ALLOY, 4 POUND SHEET. ALL SUCH WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS FOUND IN THE 'SMACNA' MANUAL, LATEST EDITION

#### SECTION 07900 CAULKING AND SEALANTS

1.01 CONTRACTOR SHALL PROVIDE SEALANTS AT ALL APPLICABLE PORTIONS OF INTERIOR AND EXTERIOR CONDITIONS OF NEW WORK TO PROVIDE A BARRIER AGAINST THE PENETRATION OF AIR, SMOKE, HEAT, OR MOISTURE AT JOINTS BETWEEN ELEMENTS WHERE SEALANTS ARE ESSENTIAL TO THE CONTINUED INTEGRITY OF SUCH A BARRIER. ADDITIONALLY, IT SHALL BE USED TO FINISH DISSIMILAR CONSTRUCTION OR MATERIALS. SEALANTS SHALL BE SELECTED AND APPLIED FOR THE APPROPRIATE SURFACES INVOLVED AS RECOMMENDED BY THE MANUFACTURER OF THE SEALANT MATERIAL. IN ADDITION, CONTRACTOR SHALL ALSO REFER TO THE CONSTRUCTION RECOMMENDATIONS OF THE ACOUSTICAL CONSULTANT'S REPORT (IF APPLICABLE).

#### **DIVISION 8: OPENINGS**

- 1.01 STEEL DOOR & WINDOW FRAMES SHALL BE MANUFACTURED AND INSTALLED TO MEET THE MINIMUM RECOMMENDED SPECIFICATIONS OF THE STEEL DOOR INSTITUTES (SDI) STANDARDS FOR STEEL DOORS AND FRAMES SDI-100 AND SDI-105. EXTERIOR STEEL FRAMES SHALL BE 16 GA. PRESSED STEEL FRAMES, WELDED UNIT TYPE. INTERIOR FRAMES SHALL BE KNOCKED DOWN, SITE ASSEMBLED, PRE-FINISHED TYPE.
- 1.02 STEEL FRAMES USED IN PART OF A FIRE RATED ASSEMBLY SHALL BEAR AN APPROVED TESTING AGENCY LABEL.
- A. COLD-ROLLED STEEL, FOR INTERIOR FRAMES IN NORMAL ATMOSPHERIC EXPOSURES. B. ELECTRO GALVANIZED STEEL FOR ALL FRAMES USED IN THE FOLLOWING LOCATIONS:
- EXTERIOR LOCATIONS PUBLIC AND PRIVATE RESTROOMS
- 1.04 FRAME UNITS SHALL BE PRE-FINISHED WITH FACTORY APPLIED IMPACT RESISTANT, POLYESTER BAKED ENAMEL FINISH OR OPTIONAL ELECTROSTATIC APPLIED WATER BASED PAINT SYSTEM. COLOR SHALL BE CUSTOM MATCHED TO EXISTING DOORS AND FRAMES.
- 2.01 ACCEPTABLE MANUFACTURERS
  - A. TIMELY INDUSTRIES, A DIVISION OF SDS INDUSTRIES, INC.
  - 10241 NORRIS AVENUE, PACOIMA, CA 91331-2292 PH: 800.247.6242, FAX: 818.492.3530
  - B. PROVIDE ALL INTERIOR FRAMES FOR THE PROJECT FROM SAME MANUFACTURER.
- C. SUBSTITUTIONS: REFER TO SECTION 1.11.

#### 2.02 FRAME PROFILES

- "S" SERIES, 0.9mm (20 GAGE) THICK, STANDARD INTERIOR FRAMES
- "C" SERIES, 1.2mm (18 GAGE) THICK, NON STANDARD JAMB DEPTHS "CK" SERIES, 1.2mm (18 GAGE) THICK, WITH KERF FOR DOOR SEAL/GASKET

1. STANDARD STEEL - TA-8 WITH 1/4 INCH REVEAL. FIT FACTORY ASSEMBLED UNITS WITH MITERGARD CORNER ALIGNMENT CLIPS.

#### SECTION 08200 FLUSH WOOD DOORS

- 1.01 THIS SECTION INCLUDES SOLID-CORE FLUSH WOOD DOORS WITH WOOD VENEER AND PAINT GRADE FACES. FURNISH ALL MATERIALS AND LABOR NECESSARY O COMPLETE INSTALLATION PER THE CONTRACT DOCUMENTS
- 1.02 PRIOR TO ORDERING, PREPARE SHOP DRAWINGS AND SUBMIT TO DESIGN TEAM IN ACCORDANCE WITH SECTION 1.10. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS REGARDING DELIVERY, STORAGE, HANDLING, PROJECT CONDITIONS, EXAMINATION, APPLICATION, FIELD QUALITY CONTROL, INSTALLATION, CLEANING, ETC
- 1.03 ALL FIRE-RATED DOORS SHALL BEAR AN APPROVED TESTING AGENCY LABEL.
- 2.01 ACCEPTABLE MANUFACTURERS
- A. LOCAL SUPPLIER, PER GENERAL CONTRACTOR. SUBMIT MANUFACTURER'S LITERATURE FOR APPROVAL IN ACCORDANCE WITH SECTION 1.10.
- 2.02 DOOR FINISH AND INSTALLATION SHALL MATCH AS CLOSELY AS POSSIBLE EXISTING DOORS AS VERIFIED IN THE FIELD.

#### SECTION 08700 HARDWARE

- 1.01 ALL DOOR HARDWARE SHALL BE INSTALLED BY THE GENERAL CONTRACTOR. INSTALLATION SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- 1.02 TYPICAL HARDWARE FINISH SHALL MATCH AS CLOSELY AS POSSIBLE TO THE EXISTING DOOR HARDWARE AS VERIFIED IN THE FIELD, OR AS SELECTED BY DESIGNER / OWNER. REVIEW W/ DESIGNER ALL FUNCTION & KEYING REQUIREMENTS PRIOR TO ORDERING HARDWARE. HARDWARE USED IN PART OF A FIRE RATED ASSEMBLY SHALL BEAR AN APPROVED TESTING AGENCY DESIGNATION. COORDINATE ALL HARDWARE & FUNCTIONS W/ T/O.
- 1.03 MAX. OPERATING PRESSURE (INT/EXT.) = 5 LBS MAX.; 15 LBS MAX. @ OFFICE DOORS AS ALLOWED BY FIRE MARSHALL.

#### **DIVISION 9: FINISHES**

#### SECTION 09250 GYPSUM BOARD

1.01 ALL GYPSUM BOARD SHALL BE INSTALLED AND FINISH TO MEET THE MINIMUM RECOMMENDED SPECIFICATIONS OF ASTM C 840, STANDARD SPECIFICATION FOR APPLICATION AND FINISH OF GYPSUM BOARD, AND GYPSUM ASSOCIATION GA 216, APPLICATION AND FINISHING OF GYPSUM BOARD, LATEST EDITIONS. ALL NEW GYPSUM BOARD SHALL BE 5/8" GYPSUM BOARD, WATER-RESISTANT TYPE AT WALLS SUBJECT TO WATER SPLASH. PROVIDE FASTENERS, METAL ACCESSORIES, JOINT REINFORCING, ETC. AS REQUIRED. FINISH TEXTURE SHALL MATCH AS CLOSELY AS POSSIBLE TO THE EXISTING AS VERIFIED IN THE FIELD.

#### SECTION 09600 FLOORING

- 1.01 RESILIENT FLOORING SHALL (SLIP RESISTENT, STABLE, FIRM) BE AS SELECTED & APPROVED BY THE BUILDING OWNER. PROVIDE ALL ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION TO EXISTING FLOOR SUBSTRATE. CONSULT WITH FLOORING MANUFACTURER TO OBTAIN RECOMMENDATIONS ON INSTALLATIONS OVER EXISTING CONCRETE SLABS-ON GRADE. DO NOT BEGIN INSTALLATION OF RESILIENT FLOORING UNTIL UNDERLYING PREPATORY WORK TO EXISTING SLAB IS COMPLETE. CONTRACTOR SHALL PROVIDE OWNER A MINIMUM OF 5% EXTRA STOCK FOR FUTURE USE.
- 1.02 CARPETING SHALL BE AS SELECTED & APPROVED BY THE BUILDING OWNER. CONTRACTOR SHALL INSTALL COMPLETE WITH ALL ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION TO MEET NEW AND EXISTING SUBSTRATES, TRANSITIONS, AND TERMINATIONS. EXAMINE AND REPAIR ALL SURFACES AS REQUIRE 5 PRIOR TO LAYING OF FLOOR. CONTRACTOR SHALL PROVIDE OWNER A MINIMUM OF 5% EXTRA STOCK FOR FUTURE USE. INSTALLATION SHOULD COMPLY WIT. CBC 1124B.2 & 1124B.3

1124B.2: CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT, CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50% SLOPE)

1124B.3: IF CARPET OR CARPET TILE IS USED ON FLOOR SURFACE, THEN IT SHALL BE SECURELY ATTACHED, HAVE A FIRM CUSHION PAD OR BACKING OR NO USHION OR PAD; OR LEVEL-CUT/UNCUT PILE TEXTURE. MAXIMUM PILE HEIGHT SHALL BE 1/2". EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACE AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE

#### SECTION 09900 PAINTING

- 1.01 THIS SECTION DESCRIBES THE REQUIREMENTS FOR MATERIALS AND APPLICATION OF PAINTS AND FINISHES FOR SURFACES USUALLY APPLIED AT THE JOB SITE EXCEPT THOSE SPECIFICALLY EXCLUDED UNDER PARAGRAPH 'B' BELOW.
  - A. WORK INCLUDES, BUT IS NOT LIMITED TO PAINTING OF THE FOLLOWING ITEMS, MATERIALS, AND SPACES: 1. ALL NEW EXPOSED SURFACES UNLESS OTHERWISE NOTED BELOW. ALL EXISTING EXPOSED SURFACES UNLESS NOTED OTHERWISE. 2. EXPOSED MECHANICAL AND ELECTRICAL ITEMS IN INTERIOR FINISHED AREAS, SUCH AS PIPING, CONDUIT, PANELBOARDS, AND OTHER SIMILAR ITEMS
- B. WORK DOES NOT INCLUDE PAINTING THE FOLLOWING ITEMS, MATERIALS, OR SPACES: 1. MECHANICALLY FINISHED NONFERROUS METAL, FACTORY FINISHED EQUIPMENT AND MATERIALS, INTERIOR SPACES SPECIFICALLY NOTED AS UNPAINTED. & EXTERIOR EQUIPMENT
- 1.02 CAREFULLY EXAMINE, PREPARE, CLEAN, REPAIR, ETC. ALL SURFACES TO BE PAINTED. DO NOT PAINT SURFACES UNTIL IMPURITIES ARE REMOVED, DEFICIENCIES CORRECTED, AND PRÉPARATION AS RECOMMENDED BY PAINT MANUFACTURER IS COMPLETE.

B. GYPSUM BOARD WALLS: DRYWALL PREP COAT

WALL TEXTURE - ORANGE PEEL

- 1.03 PAINTING SYSTEMS
- A. GYPSUM BOARD CEILINGS DRYWALL PREP COAT CEILING TEXTURE - ORANGE PEE
- 1ST COAT LATEX PRIMER 1ST COAT LATEX PRIMER 2ND COAT LATEX ENAMEL 2ND COAT LATEX ENAMEL D. WOOD, TRANSPARENT (NON-FACTORY APPLIED):
- C. FERROUS METAL MECHANICAL & ELECT. ITEMS: 1ST COAT LATEX METAL PRIMER
- 1ST COAT WOOD FILLER 2ND COAT ALKYD ENAMEL 2ND COAT FULL-STAIN, TRANSPAREN 3RD COAT ALKYD ENAMEL 3RD COAT PEN-THANEE GLOSS(THINNED 10%) 4TH COAT PEN-THANEE SATIN

#### **DIVISIONS 10 - 14:**

REFER TO ARCHITECTURAL DRAWINGS WHERE APPLICABLE

#### **DIVISION 21: FIRE SUPPRESSION**

GENERAL CONTRACTOR SHALL SUBMIT MANUFACTURER'S LITERATURE, SPECIFICATIONS, AND SHOP DRAWINGS FOR AUTOMATIC FIRE SPRINKLER SYSTEM AND FIRE ALARM SYSTEM MODIFICATION FOR REVIEW BY DESIGN TEAM PRIOR TO START OF WORK. SHOP DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 1.10.

#### **DIVISION 22: PLUMBING**

REFER TO PLUMBING ENGINEERS DRAWINGS

#### REFER TO MECHANICAL ENGINEERS DRAWINGS

**DIVISION 26: ELECTRICAL** 

**DIVISION 23: HVAC** 

REFER TO ELECTRICAL ENGINEERS DRAWINGS



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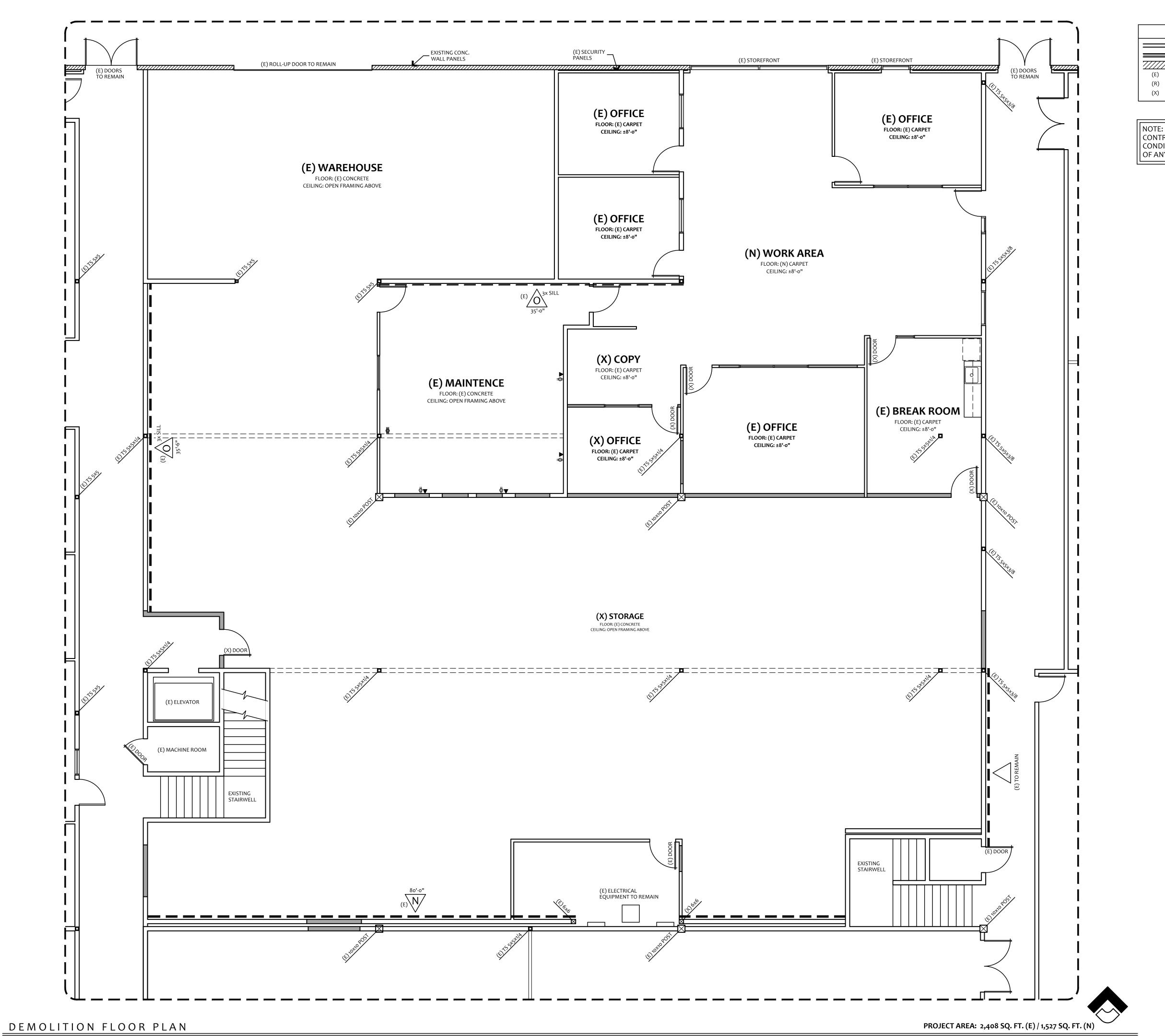
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DATE 15 OCT 24 SCALE AS NOTED

JOB 888-23-24

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LEGEND

EXISTING STUD WALL TO REMAIN

EXISTING WALL TO BE REMOVED EXISTING CONCRETE WALL TO REMAIN

**EXISTING TO REMAIN** (R) EXISTING RELOCATED

(X) EXISTING TO BE REMOVED

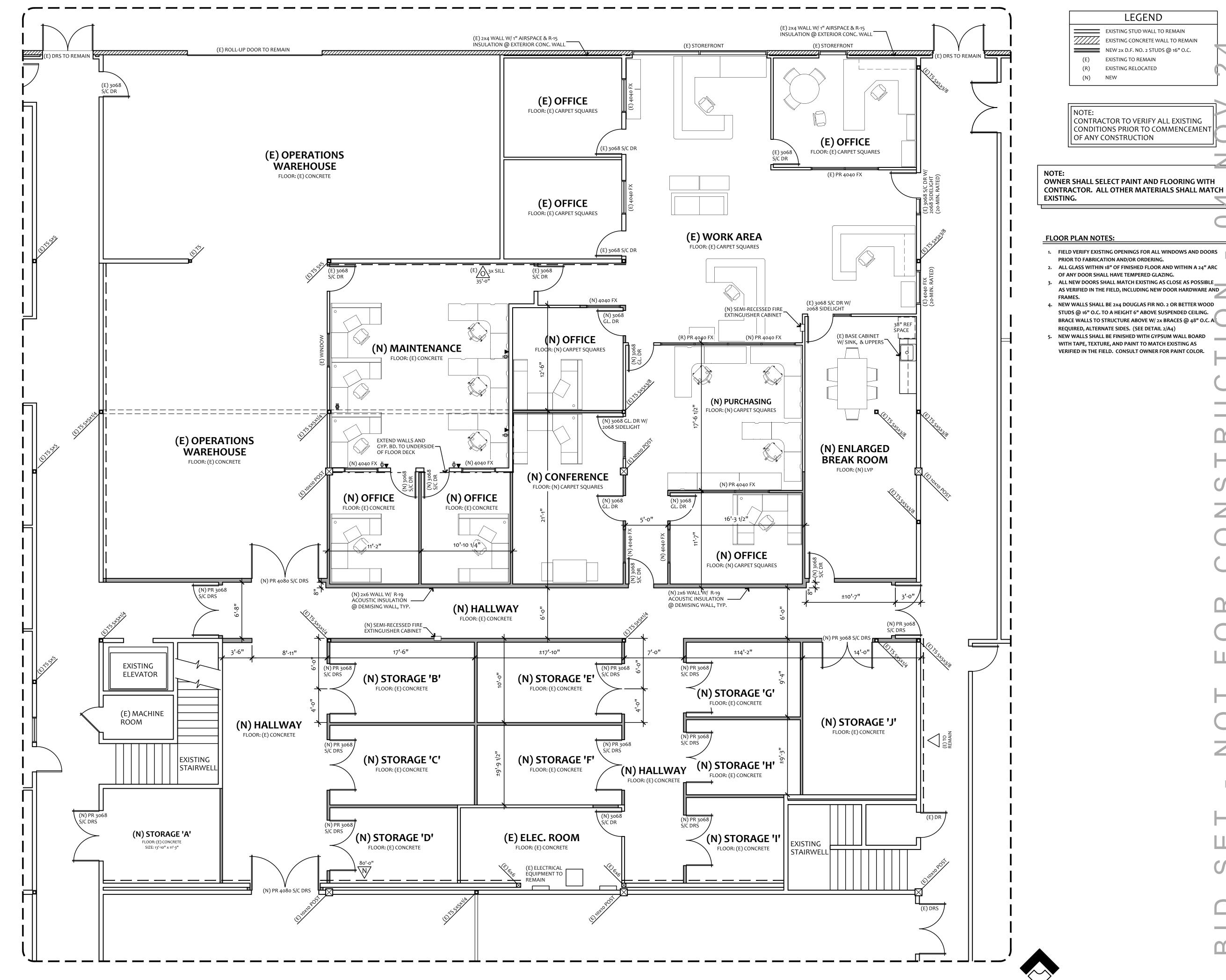
CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION

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DATE 15 OCT 24 SCALE 3/16" = 1'-0" JOB 888-23-24

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



NEW FLOOR PLAN

LEGEND EXISTING STUD WALL TO REMAIN

EXISTING CONCRETE WALL TO REMAIN NEW 2x D.F. NO. 2 STUDS @ 16" O.C.

(E) EXISTING TO REMAIN

(R) EXISTING RELOCATED

CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION

OWNER SHALL SELECT PAINT AND FLOORING WITH CONTRACTOR. ALL OTHER MATERIALS SHALL MATCH EXISTING.

#### **FLOOR PLAN NOTES:**

- 1. FIELD VERIFY EXISTING OPENINGS FOR ALL WINDOWS AND DOORS PRIOR TO FABRICATION AND/OR ORDERING.
- 2. ALL GLASS WITHIN 18" OF FINISHED FLOOR AND WITHIN A 24" ARC
- OF ANY DOOR SHALL HAVE TEMPERED GLAZING. 3. ALL NEW DOORS SHALL MATCH EXISTING AS CLOSE AS POSSIBLE
- 4. NEW WALLS SHALL BE 2x4 DOUGLAS FIR NO. 2 OR BETTER WOOD
- STUDS @ 16" O.C. TO A HEIGHT 6" ABOVE SUSPENDED CEILING. BRACE WALLS TO STRUCTURE ABOVE W/ 2x BRACES @ 48" O.C. A. REQUIRED, ALTERNATE SIDES. (SEE DETAIL 2/A4)
- 5. NEW WALLS SHALL BE FINISHED WITH GYPSUM WALL BOARD WITH TAPE, TEXTURE, AND PAINT TO MATCH EXISTING AS VERIFIED IN THE FIELD. CONSULT OWNER FOR PAINT COLOR.

REVISIONS

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DATE 15 OCT 24 SCALE 3/16" = 1'-0"

JOB 888-23-24

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PROJECT AREA: 2,408 SQ. FT. (E) / 1,527 SQ. FT. (N)



LEGEND EXISTING STUD WALL TO REMAIN EXISTING CONCRETE WALL TO REMAIN NEW 2x D.F. NO. 2 STUDS @ 16" O.C. (E) EXISTING TO REMAIN (R) EXISTING RELOCATED

CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT

CEILING FIXTURES LEGEND

DESCRIPTION

2' x 4' LED TROFFER LIGHT

1' x 4' LED TROFFER LIGHT

MECHANICAL SUPPLY DIFFUSER

MECHANICAL RETURN VENT

CEILING EXHAUST FAN

OF ANY CONSTRUCTION

SYMBOL



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REFLECTED CEILING PLAN NOTES:

- A. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF
- CONSTRUCTION. NOTIFY DESIGN TEAM OF ANY DISCREPANCIES. ALL MECHANICAL, ELECTRICAL, & SUSPENDED CEILINGS ARE NEW, U.O.N.
- ALL MECHANICAL SUPPLIES, RETURNS, DUCTWORK, ETC. SHOWN FOR REFERENCE ONLY. REFER TO NEW MECHANICAL PLANS BY OTHERS FOR MORE INFORMATION. D. CONTRACTOR SHALL COORDINATE THE RELOCATION / ADDITION OF FIRE SPRINKLERS PER THE
- NEW LAYOUT WITH APPROPRIATE SUBCONTRACTOR(S). REFER TO DETAILS 3/A4 - 7/A4 FOR SUSPENDED CEILING DETAILS & LIGHT SUPPORT DETAILS.
- NEW SUSPENDED CEILINGS SHALL MEET THE FOLLOWING REQUIREMENTS: 1. SUSPENDED ACOUSTICAL CEILING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH PROVISIONS OF ASTM C 635 AND ASTMC 636 AND ASCE 7-05 MINIMUM DESIGN LOADS FOR
- BUILDINGS AND OTHER STRUCTURES. 2. ASCE STANDARD 7-05, 13.5.6.2.2 SEISMIC DESIGN CATEGORIES D THROUGH F: SUSPENDED CEILINGS IN SEISMIC DESIGN CATEGORIES D,E, AND F SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ASTM C636 AND ASTM C636, AND THE CISCA AS MODIFIED BY THE
- 3. A HEAVY DUTY T-BAR GRID SYSTEM SHALL BE USED.
- 4. THE WIDTH OF THE PERIMETER SUPPORTING CLOSURE ANGLE SHALL BE NOT LESS THAN 2.0 IN. IN EACH ORTHOGONAL DIRECTION, ONE END OF THE CEILING GRID SHALL BE ATTACHED TO THE CLOSURE ANGLE. THE OTHER END IN EACH HORIZONTAL DIRECTION SHALL HAVE 0.75 IN. CLEARANCE FROM THE WALL AND SHALL REST UPON AND BE FREE TO SLIDE ON A CLOSURE
- 5. FOR CEILING AREAS EXCEEDING 1,000 SQ. FT. HORIZONTAL RESTRAINT OF THE CEILING TO THE STRUCTURAL SYSTEM SHALL BE PROVIDED. THE TRIBUTARY AREAS OF THE HORIZONTAL RESTRAINT OF THE SYSTEM SHALL BE PROVIDED. THE TRIBUTARY AREAS OF THE HORIZONTAL RESTRAINTS SHALL BE APPROXIMATELY EQUAL.
- EXCEPTION: RIGID BRACES ARE PERMITTED TO BE USED INSTEAD OF DIAGONAL SPLAY WIRES. BRACES AND ATTACHMENTS TO THE STRUCTURAL SYSTEM ABOVE SHALL BE ADEQUATE TO LIMIT THE RELATIVE LATERAL DEFLECTIONS AT A POINT ATTACHMENT OF CEILING GRID TO LESS THAN 0.25 IN. FOR THE LOADS PRESCRIBED IN SECTION 13.3.1.
- 6. FOR CEILING AREAS EXCEEDING 2,500 SQ. FT. A SEISMIC SEPARATION JOINT OR FULL HEIGHT PARTITION THAT BREAKS THE CEILING UP INTO AREAS NOT EXCEEDING 2,500 SQ. FT. SHALL BE PROVIDED UNLESS STRUCTURAL ANALYSES ARE PERFORMED OF THE CEILING BRACING SYSTEM FOR THE PRESCRIBED SEISMIC FORCES THAT DEMONSTRATE CEILING SYSTEM PENETRATIONS AND CLOSURE ANGLES PROVIDE SUFFICIENT CLEARANCE TO ACCOMMODATE THE ANTICIPATED
- LATERAL DISPLACEMENT. EACH AREA SHALL BE PROVIDED WITH CLOSURE ANGLES IN ACCORDANCE WITH ITEM 4 AND HORIZONTAL RESTRAINTS IN ACCORDANCE WITH ITEM 5. 7. EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTION, SPRINKLER HEADS AND OTHER PENETRATIONS SHALL HAVE 2.0 IN. OVERSIZE RING, SLEEVE, OR ADAPTOR THROUGH THE CEILING TILE TO ALLOW FOR FREE MOVEMENT OF AT LEAST 1.0 IN. IN ALL HORIZONTAL DIRECTIONS. ALTERNATIVELY, A SWING JOINT THAT CAN ACCOMMODATE 1.0 IN. OF CEILING MOVEMENT IN ALL HORIZONTAL DIRECTIONS IS PERMITTED TO BE PROVIDED AT THE TOP OF THE
- 8. CHANGES IN CEILING PLAN ELEVATION SHALL BE PROVIDED WITH POSITIVE BRACING. 9. CABLE TRAYS AND ELECTRICAL CONDUITS SHALL BE SUPPORTED INDEPENDENTLY OF THE
- 10. SUSPENDED CEILING SHALL BE SUBJECT TO SPECIAL INSPECTION REQUIREMENTS OF SECTION
- 11A.1.3.9 OF THIS STANDARD. 11. PERIODIC SPECIAL INSPECTION DURING THE ANCHORAGE OF SUSPENDED CEILING GRIDS
- ASSIGNED TO SEISMIC CATEGORIES D, E, OR F IS PERMITTED.
- 12. LATERAL BRACING FOR SUSPENDED CEILING MUST BE PROVIDED PER 2022 CBC SECTIONS 803.9.1.1 AND 1614A.1.12. REQUIRED WHERE SUSPENDED CEILING LOADS ARE LESS THAN 5# PER FT. AND NOT SUPPORTING INTERIOR PARTITIONS.CEILING BRACING SHALL BE PROVIDED BY FOUR NO. 12 GAUGE WIRES SECURED TO THE MAIN RUNNER WITHIN 2" OF THE CROSS RUNNER INTERSECTION AND SPLAYED 90 DEGREES FROM THE PLANE OF THE CEILING. THESE HORIZONTAL RESTRAINT POINTS SHALL BE PLACED AT 12'-0" O.C. IN BOTH DIRECTIONS, WITH THE FIRST POINT WITHIN 4'-0" FROM EACH WALL. ATTACHMENT OF THE RESTRAINT WIRES TO THE STRUCTURE ABOVE SHALL BE ADEQUATE FOR THE LOAD IMPOSED.

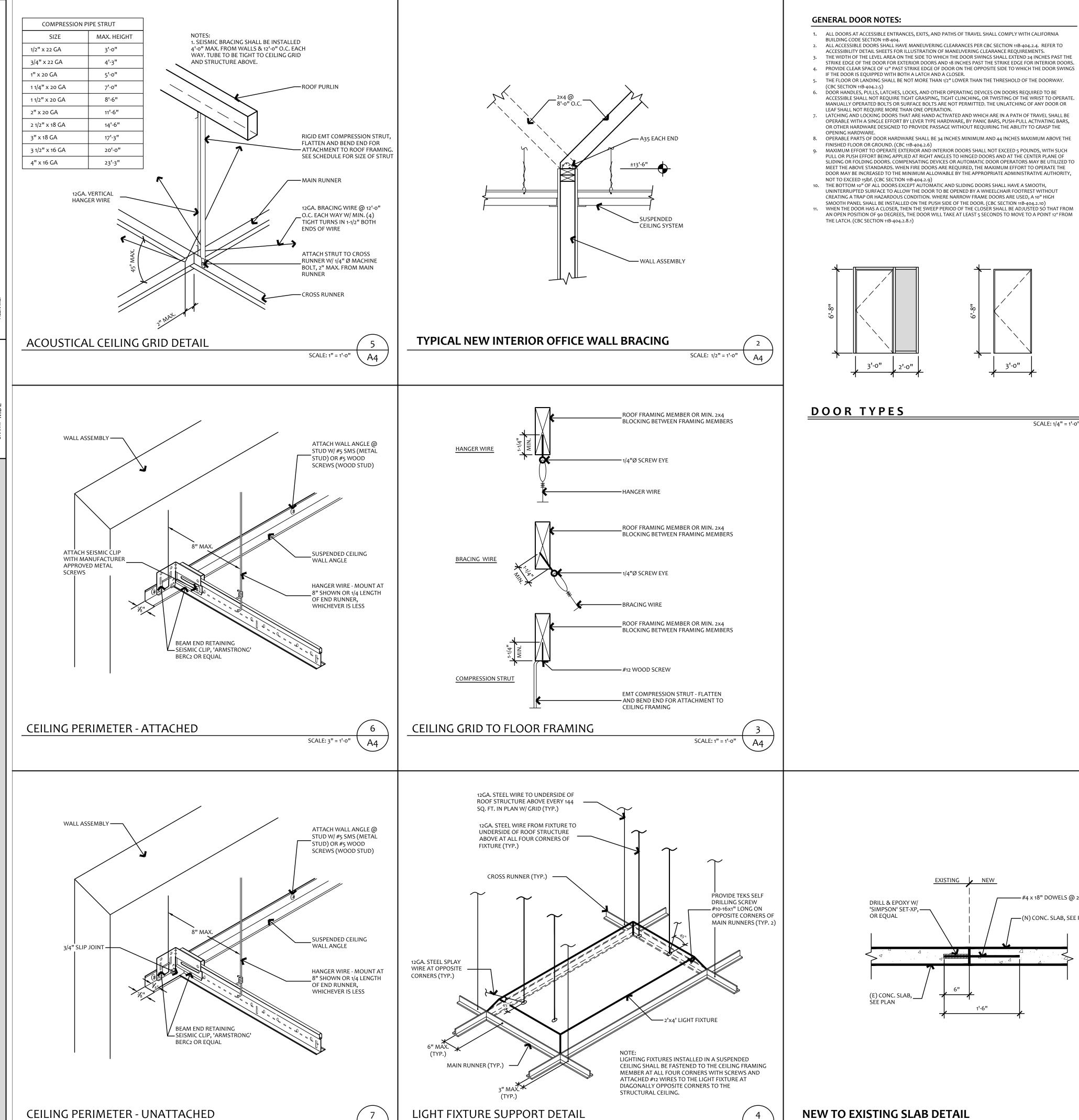
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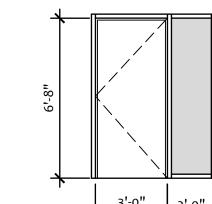
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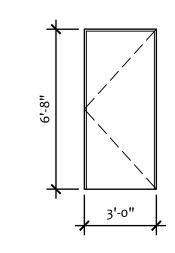
#### **GENERAL DOOR NOTES:**

- 1. ALL DOORS AT ACCESSIBLE ENTRANCES, EXITS, AND PATHS OF TRAVEL SHALL COMPLY WITH CALIFORNIA
- BUILDING CODE SECTION 11B-404.

  2. ALL ACCESSIBLE DOORS SHALL HAVE MANEUVERING CLEARANCES PER CBC SECTION 11B-404.2.4. REFER TO ACCESSIBILITY DETAIL SHEETS FOR ILLUSTRATION OF MANEUVERING CLEARANCE REQUIREMENTS. 3. THE WIDTH OF THE LEVEL AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24 INCHES PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18 INCHES PAST THE STRIKE EDGE FOR INTERIOR DOORS.
- 4. PROVIDE CLEAR SPACE OF 12" PAST STRIKE EDGE OF DOOR ON THE OPPOSITE SIDE TO WHICH THE DOOR SWINGS
- IF THE DOOR IS EQUIPPED WITH BOTH A LATCH AND A CLOSER. 5. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. (CBC SECTION 11B-404.2.5)
- 6. DOOR HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE SHALL NOT REQUIRE TIGHT GRASPING, TIGHT CLINCHING, OR TWISTING OF THE WRIST TO OPERATE. MANUALLY OPERATED BOLTS OR SURFACE BOLTS ARE NOT PERMITTED. THE UNLATCHING OF ANY DOOR OR LEAF SHALL NOT REQUIRE MORE THAN ONE OPERATION. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL SHALL BE
- OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. 8. OPERABLE PARTS OF DOOR HARDWARE SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISHED FLOOR OR GROUND. (CBC 118-404.2.6)

  9. MAXIMUM EFFORT TO OPERATE EXTERIOR AND INTERIOR DOORS SHALL NOT EXCEED 5 POUNDS, WITH SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF
- MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MINIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15lbf. (CBC SECTION 11B-404.2.9) 10. THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING DOORS SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. WHERE NARROW FRAME DOORS ARE USED, A 10" HIGH
- SMOOTH PANEL SHALL BE INSTALLED ON THE PUSH SIDE OF THE DOOR. (CBC SECTION 11B-404.2.10) WHEN THE DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SÓ THAT FROM AN OPEN POSITION OF 90 DEGREES, THE DOOR WILL TAKE AT LEAST 5 SECONDS TO MOVE TO A POINT 12° FROM THE LATCH. (CBC SECTION 11B-404.2.8.1)





DOOR TYPES

DRILL & EPOXY W/

(E) CONC. SLAB, \_\_ SEE PLAN

SCALE: 3/4" = 1'-0" \ A4

OR EQUAL

'SIMPSON' SET-XP,

——#4 x 18" DOWELS @ 24" O.C.

(N) CONC. SLAB, SEE PLAN

SCALE: 1" = 1'-0" \ A4

#### FASTENING SCHEDULE

2022 CALIFORNIA BUILDING CODE TABLE 2304.10.2
THE FOLLOWING ARE GENERAL REQUIREMENTS OF THE FASTENING SCHEDULE BASED ON THE 2022 CA BUILDING CODE. THIS HANDOUT IS INTENDED TO PROVIDE ONLY GENERAL INFORMATION. FOR FURTHER INFORMATION, CONTACT THE BUILDING & SAFETY DIVISION.

D	ESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER <sup>g</sup>	SPACING & LOCATION		DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER <sup>g</sup>	SPACINO	& LOCATION
	LLLIMLINTS	ROOF			ELEMENT3	FLOOR		
1.	BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	4 - 8d BOX (2 1/2"xo.113"); OR 3 - 8d COMMON (2 1/2"xo.131"); OR 3 - 10d BOX (3"xo.128"); OR 3 - 3"xo.131" NAILS; OR 3 - 3" 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL	21.	JOIST TO SILL, TOP PLATE, OR GIRDER	4 - 8d BOX (2 1/2"xo.113"); OR 3 - 8d COMMON (2 1/2"xo.131"); OR FLOOR 3 - 10d BOX (3"xo.128"); OR 3 - 3"xo.131" NAILS; OR 3 - 3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL	4
	BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2 - 8d COMMON (2 1/2"x0.131") 2 - 3"x0.131" NAILS 2 - 3" 14 GAGE STAPLES 2 - 16d COMMON (3 1/2"x0.162")	EACH END, TOENAIL END NAIL	22.	RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d BOX (2 1/2"x0.113") 8d COMMON (2 1/2"x0.131"); OR 10d BOX (3"x0.128"); OR 3"x0.131" NAILS; OR	4" O.C., TO	
	FLAT BLOCKING TO TRUSS & WEB FILLER	3 - 3"x0.131" NAILS 3 - 3" 14 GAGE STAPLES 16d COMMON (3 1/2"x0.162") @ 6" O.C. 3"x0.131" NAILS @ 6" O.C.	FACE NAIL	23.	1"x6" SUBFLOOR OR LESS TO EACH JOIST	3" 14 GAGE STAPLES, 7/16" CROWN 3 - 8d BOX (2 1/2"x0.113"); OR 2 - 8d COMMON (2 1/2"x0.131"); OR 3 - 10d BOX (3"x0.128"); OR	FACE NAIL	
2.	CEILING JOISTS TO TOP PLATE	3"x14 GAGE STAPLES @ 6" O.C. 4 - 8d BOX (2 1/2"x0.113"); OR 3 - 8d COMMON (2 1/2"x0.131"); OR	EACH JOIST, TOENAIL	24.	2" SUBFLOOR TO JOIST OR GIRDER	2 - 1 3/4" 16 GAGE STAPLES, 1" CROWN 3 - 16d BOX (3 1/2"x0.135"); OR 2 - 16d COMMON (3 1/2"x0.162")	BLIND & FA	CE NAIL
3.	CEILING JOIST NOT ATTACHED TO	3 - 10d BOX (3"x0.128"); OR 3 - 3"x0.131" NAILS; OR 3 - 3" 14 GAGE STAPLES, 7/16" CROWN 3 - 16d COMMON (3 1/2"x0.162"); OR	FACE NAIL	25. 26.	2" PLANKS (PLANK & BEAM - FLOOR & ROOF) BUILT-UP GIRDERS & BEAMS, 2"	3 - 16d BOX (3 1/2"xo.135"); OR 2 - 16d COMMON (3 1/2"xo.162") 20d COMMON (4"xo.192")		CENA" @ OP &
<i>)</i> .	PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	4 - 10d BOX (3"x0.128"); OR 4 - 3"x0.131" NAILS; OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN	I ACE WALE		LUMBER LAYERS	10d BOX (3"x0.128"); OR 3"x0.131" NAILS; OR	OPPOSITE S 24" O.C. FA BOTTOM, S	CE NATION TO P & TAGGERF' ON
4.	CEILING JOISTS ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	PER TABLE 2308.7.3.1	FACE NAIL			3" 14 GAGE STAPLES, 7/16" CROWN AND: 2 - 20d COMMON (4"xo.192"); OR 3 - 10d BOX (3"xo.128"); OR 3 - 3"xo.131" NAILS; OR	OPPOSITE S ENDS & @ FACE NAIL	EACH SPLICE,
5.	COLLAR TIE TO RAFTER	3 - 10d COMMON (3"x0.148"); OR 4 - 10d BOX (3"x.0128"); OR 4 - 3"x0.131" NAILS; OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL	27.	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3 - 3" 14 CAGE STAPLES, 7/16" CROWN 3 - 16d COMMON (3 1/2"xo1.62"); OR 4 - 16d BOX (3 1/2"xo.315"); OR	EACH JOIST FACE NAIL	ORDACTES
6.	RAFTER OR ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.5, TABLE 2308.7.5)	3 - 10d COMMON (3"x0.148"); OR 3 - 16d BOX (3 1/2"x0.135"); OR 4 - 10d BOX (3"x0.128"); OR 4 - 3"x0.131" NAILS; OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN	2 TOENAILS ON ONE SIDE & 1 TOENAIL ON OPPOSITE SIDE OF RAFTER OR TRUSS <sup>C</sup>	28.	JOIST TO BAND JOIST OR RIM JOIST	4 - 10d BOX (3"x0.128"); OR 4 - 3"x0.131" NAILS; OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN 3 - 16d COMMON (3 1/2"x0.162"); OR 4 - 10d BOX (3"x0.128"); OR	END NAIL	0
7.	ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2 - 16d COMMON (3 1/2"xo.162"); OR 3 - 16d BOX (3 1/2"xo.135"); OR 3 - 10d BOX (3"xo.128"); OR 3 - 3"xo.131" NAILS; OR	END NAIL	29.	BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	4 - 3"xo.131" NAILS; OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN , 2 - 8d COMMON (2 1/2"xo.131"); OR 2 - 10d BOX (3"xo.128"); OR	EACH END,	TOENAIL
		3 - 3" 14 GAGE STAPLES, 7/16" CROWN 3 - 10d COMMON (3 1/2"x0.148"); OR 4 - 16d BOX (3 1/2"x0.135"); OR	TOENAIL			2 - 3"x0.131" NAILS, OR 2 - 3" 14 GAGE STAPLES, 7/16" CROWN S (WSP), SUBFLOOR, ROOF & INTERIO		HEATHING
		4 - 10d BOX (3"xo.128"); OR 4 - 3"xo.131" NAILS; OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN			TO FRAMING & PA	ARTICLEBOARD WALL SHEATHING TO F	EDGES (INCHES)	INTERMEDIATE SUPPORTS (INCL'25)
8.	STUD TO STUD (NOT AT BRACED	WALL 16d COMMON (3 1/2"x0.162");	24" O.C. FACE NAIL	30.	3/8" - 1/2"	6d COMMON OR DEFORMED (2"x0.113"); OR	6	12
	WALL PANELS)	10d BOX (3"x0.128"); OR 3"x0.131" NAILS; OR 3 - 3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL			2 3/8"x0.113" NAIL (SUBFLOOR & WALL)  8d COMMON OR DEFORMED (2 1/2"x0.131"x0.281" HEAD) (ROOF) OR	6 <sup>e</sup>	6 <sup>e</sup>
9.	STUD TO STUD & ABUTTING STUDS @ INTERSECTING WALL CORNERS (@ BRACED WALL PANELS)	16d COMMON (3 1/2"xo.162") 16d BOX (3 1/2"xo.135"); OR 3"xo.131" NAILS; OR 3 - 3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL 12" O.C. FACE NAIL			RSRS-01 (2 3/8"x0.113") NAIL (R00F) <sup>d</sup> 1 3/4" 16 GAGE STAPLE, 7/16" CROWN (SUBFLOOR & WALL)  2 3/8"x0.113"x0.266" HEAD NAIL (R00F)	4 3 <sup>f</sup>	8 3 <sup>f</sup>
10.	BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON (3 1/2"x0.162") 16d BOX (3 1/2"x0.135")	16" O.C. EACH EDGE, FACE NAIL 12" O.C. EACH EDGE, FACE NAIL	31.	19/32" - 3/4"	1 3/4" 16 GAGE STAPLE, 7/16" CROWN (ROOF)  8d COMMON (2 1/2"xo.131"); OR	3 <sup>f</sup>	3 <sup>f</sup>
11.	CONTINUOUS HEADER TO STUD	4 - 8d COMMON (2 1/2"xo.131"); OR 4 - 10d BOX (3"xo.128"); OR 5 - 8d BOX (2 1/2"xo.113")	TOENAIL		- JIT	DEFORMED (2"Xo.113") (SUBFLOOR & WALL)  8d COMMON OR DEFORMED (2 1/2"xo.131"xo.281" HEAD) (ROOF) OR RSRS-01	6 6 <sup>e</sup>	6 <sup>e</sup>
12.	TOP PLATE TO TOP PLATE	16d COMMON (3 1/2"xo.162") 10d BOX (3"xo.128"); OR 3"xo.131" NAILS; OR	16" O.C. FACE NAIL 12" O.C. FACE NAIL			(2 3/8"x0.113") NAIL (ROOF) <sup>d</sup> 2 3/8"x0.113"x0.266" HEAD NAIL; OR 2" 16 GAGE STAPLE, 7/16" CROWN	4	8
13.	TOP PLATE TO TOP PLATE, @	3" 14 GAGE STAPLES, 7/16" CROWN 8 - 16d COMMON (3 1/2"xo.162"); OR	EACH SIDE OF END JOINT,	32.	7/8" - 1 1/4"	10d COMMON (3"x0.148"); OR DEFORMED (2 1/2"x0.131"x0.281" HEAD)	6	12
	END JOINTS	12 - 16d BOX (3 1/2"x0.135"); OR 12 - 10d BOX (3"x0.128"); OR 12 - 3"x0.131" NAILS; OR 12 - 3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)	33.	OT 1/2" FIBERBOARD SHEATHING <sup>b</sup>	HER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR	3	6
14.	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT @ BRACED WALL PANELS)	16d COMMON (3 1/2"xo.162") 16d BOX (3 1/2"xo.135"); OR 3"xo.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL 12" O.C. FACE NAIL	34.	25/32" FIBERBOARD SHEATHING <sup>b</sup>	11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN 13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR	3	
15.	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING @ BRACED WALL PANELS	2 - 16d COMMON (3 1/2"xo.162"); OR 3 - 16d BOX (3 1/2"xo.135"); OR 4 - 3"xo.131" NAILS; OR	16" O.C. FACE NAIL	,	WOOD STRUCTURAL PANELS	11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN 5, COMBINATION SUBFLOOR UNDERLA	YMENT TO	O FF AMING
16.	STUD TO TOP OR BOTTOM PLATE	4 - 3" 14 GAGE STAPLES, 7/16" CROWN 3 - 16d BOX (3 1/2"xo.135"); OR 4 - 8d COMMON (2 1/2"xo.131"); OR	TOENAIL		3/4" & LESS	8d COMMON (2 1/2"xo.131"); OR DEFORMED (2"xo.113"); OR DEFORMED (2"xo.120")	6	12
		4 - 10d BOX (3"x0.128"); OR 4 - 3"x0.131" NAILS; OR 4 - 8d BOX (2 1/2"x0.113"); OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN		36. 37·	7/8" - 1"	8d COMMON (2 1/2"xo.131"); OR DEFORMED (2 1/2"xo.131"); OR DEFORMED (2 1/2"xo.120") 10d COMMON (3"xo.148"); OR	6	(12)
		2 - 16d COMMON (3 1/2"xo.162"); OR 3 - 16d BOX (3 1/2"xo.135"); OR 3 - 10d BOX (3"xo.128"); OR 3 - 3"xo.131" NAILS; OR	END NAIL	57.	111/0 -11/4	DEFORMED (2 1/2"xo.131"); OR DEFORMED (2 1/2"xo.120")  PANEL SIDING TO FRAMING	6	12
17.	TOP PLATES, LAPS @ CORNERS & INTERSECTIONS	2 - 16d COMMON (3 1/2"xo.162"); OR 3 - 10d BOX (3"xo.128"); OR 3 - 3"xo.131" NAILS; OR	FACE NAIL	38.	1/2" OR LESS	6d CORROSION-RESISTANT SIDING (17/8"x0.106"); OR 6d CORROSION-RESISTANT CASING	6	12
18.	1" BRACE TO EACH STUD & PLATE	3 - 3" 14 GAGE STAPLES, 7/16" CROWN 3 - 8d BOX (2 1/2"xo.113"); OR 2 - 8d COMMON (2 1/2"xo.131"); OR 2 - 10d BOX (3"xo.128"); OR 2 - 3"xo.131" NAILS; OR	FACE NAIL	39-	5/8"	(2"x0.099")  8d CORROSION-RESISTANT SIDING (2 3/8"x0.128"); OR 8d CORROSION-RESISTANT CASING (2 1/2"x0.113")	6	12
19.	1"x6" SHEATHING TO EACH BEARING	2 - 3" 14 GAGE STAPLES, 7/16" CROWN 3 - 8d BOX (2 1/2"x0.113"); OR 2 - 8d COMMON (2 1/2"x0.131"); OR 2 - 10d BOX (3"x0.128"); OR	FACE NAIL	40.	1/4"	INTERIOR PANELING  4d CASING (11/2"x0.080"); OR 4d FINISH (11/2"x0.072")  6d CASING (2"x0.099"); OR	6	12
20.	1"x8" & WIDER SHEATHING TO EACH BEARING	2 - 1 3/4" 16 GAGE STAPLES; 1" CROWN 3 - 8d COMMON (2 1/2"xo.131"); OR 3 - 8d BOX (2 1/2"xo.113"); OR 3 - 10d BOX (3"xo.128"); OR	FACE NAIL			6d FINISH (2"x0.092") (PANEL SUPPORTS @ 24 INCHES)	6	12
		3 - 1 3/4" 16 GAGE STAPLES, 1" CROWN WIDER THAN 1"x8" 3 - 8d COMMON (2 1/2"x0.131"); OR 4 - 8d BOX (2 1/2"x0.113"); OR 3 - 10d BOX (3"x0.128"); OR 4 - 1 3/4" 16 GAGE STAPLES, 1" CROWN	-	a. b.	STRUCTURAL PÂNEL & PARTICLEBO/ SHEATHING ARE PERMITTED TO BE C SPACING SHALL BE 6 INCHES ON CEN NONSTRUCTURAL APPLICATIONS. P.	MEDIATE SUPPORTS WHERE SPANS ARE 48" OR N ARD DIAPHRAGMS & SHEARWALLS, REFER TO SEC OMMON, BOX OR CASING. ITER ON THE EDGES & 12 INCHES ON CENTER @ IN ANEL SUPPORTS @ 16 INCHES (20 INCHES IF STRE	TION 2305. N TERMEDIATE	SUPPO FOR

	ELEMENTS			3 & LUCA
		FLOOR		
21.	JOIST TO SILL, TOP PLATE, OR GIRDER	4 - 8d BOX (2 1/2"x0.113"); OR 3 - 8d COMMON (2 1/2"x0.131"); OR FLOOR	TOENAIL	
		3 - 10d BOX (3"x0.128"); OR 3 - 3"x0.131" NAILS; OR		
		3 - 3" 14 GAGE STAPLES, 7/16" CROWN		
22.	RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILI		4" O.C., TOI	
	OR OTHER FRAMING BELOW	10d BOX (3"x0.128"); OR	0.0., 101	E(W)
22. RB B C C C C C C C C C C C C C C C C C		3"xo.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN		
23.	1"x6" SUBFLOOR OR LESS TO	3 - 8d BOX (2 1/2"x0.113"); OR	FACE NAIL	
	EACH JOIST	2 - 8d COMMON (2 1/2"xo.131"); OR 3 - 10d BOX (3"xo.128"); OR		
24	all STIBELOOP TO TOTAL	2 - 1 3/4" 16 GAGE STAPLES, 1" CROWN	BLIND & FA	CE NAU
<b>-4</b> •	2" SUBFLOOR TO JOIST OR GIRDER	3 - 16d BOX (3 1/2"x0.135"); OR 2 - 16d COMMON (3 1/2"x0.162")	BLIND & FA	CE NAIL
25.	2" PLANKS (PLANK & BEAM -	3 - 16d BOX (3 1/2"x0.135"); OR	EACH BEAR	ING, FACE
26.	FLOOR & ROOF) BUILT-UP GIRDERS & BEAMS, 2	2 - 16d COMMON (3 1/2"x0.162") 2 - 2 - 2 - 16d COMMON (4"x0.192")	32" O.C. FA	
	LUMBER LAYERS		BOTTOM, S OPPOSITE S	TAGGERED
		10d BOX (3"xo.128"); OR	24" O.C. FA	CE N
		3"xo.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	BOTTOM, S OPPOSITE S	
		AND: 2 - 20d COMMON (4"x0.192"); OR	ENDS & @ I	EACH SPLIC
		3 - 10d BOX (3"x0.128"); OR	I ACE NAIL	
		3 - 3"x0.131" NAILS; OR 3 - 3" 14 GAGE STAPLES, 7/16" CROWN		
27.	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3 - 16d COMMON (3 1/2"x01.62"); OR	EACH JOIST FACE NAIL	ORDAFTE
	POISTS ON WALLEYS	4 - 16d BOX (3 1/2"xo.315"); OR 4 - 10d BOX (3"xo.128"); OR	I ACE NAIL	
		4 - 3"xo.131" NAILS; OR 4 - 3" 14 GAGE STAPLES, 7/16" CROWN		
28.	JOIST TO BAND JOIST OR RIM	3 - 16d COMMON (3 1/2"x0.162"); OR	END NAIL	
	JOIST	4 - 10d BOX (3"x0.128"); OR 4 - 3"x0.131" NAILS; OR		
20	BRIDGING OF BLOCKING TO 1011	4 - 3" 14 GAGE STAPLES, 7/16" CROWN	EACH TAID	TOENATI
29.	BRIDGING OR BLOCKING TO JOIS RAFTER OR TRUSS	2 - 10d BOX (3"xo.128"); OR	EACH END,	IUENAIL
		2 - 3"xo.131" NAILS, OR 2 - 3" 14 GAGE STAPLES, 7/16" CROWN		
		ELS (WSP), SUBFLOOR, ROOF & INTERIO		HEATHIN
		PARTICLEBOARD WALL SHEATHING TO F		
			EDGES	INTERME
			(INCHES)	(INC)
30.	3/8" - 1/2"	6d COMMON OR DEFORMED (2"x0.113"); OR 2 3/8"x0.113" NAIL (SUBFLOOR & WALL)	6	12
		8d COMMON OR DEFORMED (2	1	
		1/2"xo.131"xo.281" HEAD) (ROOF) OR RSRS-01 (2 3/8"xo.113") NAIL (RooF) <sup>d</sup>	6 <sup>e</sup>	6 <sup>e</sup>
		1 3/4" 16 GAGE STAPLE, 7/16" CROWN	4	8
		(SUBFLOOR & WALL)		8 af
		2 3/8"x0.113"x0.266" HEAD NAIL (R00F) 1 3/4" 16 GAGE STAPLE, 7/16" CROWN (ROOF)	3 <sup>f</sup>	3 <sup>f</sup>
21	40/22!! 2/4!!	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	3	3'
۱۰ ر	19/32" - 3/4"	8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113") (SUBFLOOR & WALL)	6	<u> </u>
		8d COMMON OR DEFORMED (2 1/2"x0.131"x0.281" HEAD) (ROOF) OR RSRS-01	6 <sup>e</sup>	6 <sup>e</sup>
		(2 3/8"x0.131" NAIL (ROOF) OR RSRS-01		66
	i	2 3/8"x0.113"x0.266" HEAD NAIL; OR 2" 16 GAGE STAPLE, 7/16" CROWN	4	8
		L TO GROLD IN LL, //IU CHOWIN	+	
32.	7/8" - 1 1/4"	10d COMMON (3"x0.148"); OR	c	12
32.	<u> </u>	DEFORMED (2 1/2"x0.131"x0.281" HEAD)	6	
	C	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING	6	
	<u> </u>	DEFORMED (2 1/2"x0.131"x0.281" HEAD)		
	C	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1"	3	6
33.	C	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  1 3/4"x0.120" GALVANIZED ROOFING NAIL		6
33.	C 1/2" FIBERBOARD SHEATHING <sup>b</sup>	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  1 3/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/2" 16 GAGE STAPLE WITH 7/16" OR 1"		6
33.	C 1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN	3	Q
33.	C  1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING  WOOD STRUCTURAL PANE	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  1 3/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA	3	<u>Q</u>
33.	C 1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR	3	Q
33.	CO 1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING WOOD STRUCTURAL PANE 3/4" & LESS	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  1 3/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR	3 3 3 YMENT TO	O FF AMII
33.	C  1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING  WOOD STRUCTURAL PANE	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  1 3/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR DEFORMED (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR	3 3 3 YMENT TO	O FF AMII
334.	CO 1/2" FIBERBOARD SHEATHING 25/32" FIBERBOARD SHEATHING WOOD STRUCTURAL PANE 3/4" & LESS	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  THER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  1 3/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR DEFORMED (2 1/2"x0.131"); OR	3 3 3 3 YMENT TC	D FF AMIN
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33. 34. 35.	CO 1/2" FIBERBOARD SHEATHING 25/32" FIBERBOARD SHEATHING WOOD STRUCTURAL PANE 3/4" & LESS	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR DEFORMED (2"x0.120")  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR	3 3 3 YMENT TO 6 6 6	O FF AMII
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33. 34. 35. 36.	CC  1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING  WOOD STRUCTURAL PANE  3/4" & LESS  7/8" - 1"  11/8" - 11/4"	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR DEFORMED (2"x0.120")  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.148"); OR DEFORMED (2 1/2"x0.150")  PANEL SIDING TO FRAMING  6d CORROSION-RESISTANT SIDING (17/8"x0.106"); OR 6d CORROSION-RESISTANT CASING (2"x0.099")  8d CORROSION-RESISTANT SIDING	3 3 3 YMENT TO 6 6 6	O FF AMII
33. 34. 35. 36.	CO 1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING WOOD STRUCTURAL PANE 3/4" & LESS 7/8" - 1" 11/8" - 11/4"	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR DEFORMED (2"x0.120")  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR	3 3 3 YMENT TO 6 6 6	O FF AMII
33. 34. 35. 36.	CO 1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING WOOD STRUCTURAL PANE 3/4" & LESS 7/8" - 1" 11/8" - 11/4"	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  1 1/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  1 1/2"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR DEFORMED (2"x0.113"); OR DEFORMED (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.120")  10d COMMON (3"x0.148"); OR DEFORMED (2 1/2"x0.120")  PANEL SIDING TO FRAMING 6d CORROSION-RESISTANT SIDING (17/8"x0.106"); OR 6d CORROSION-RESISTANT CASING (2"x0.099")  8d CORROSION-RESISTANT SIDING (12 3/8"x0.128"); OR	3 3 3 3 3 3 3 3 4 6 6 6	O FF AMII
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33. 33. 33. 33. 33. 33.	CO 1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING WOOD STRUCTURAL PANE 3/4" & LESS 7/8" - 1" 11/8" - 11/4"	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.120")  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.130")  PANEL SIDING TO FRAMING  6d CORROSION-RESISTANT SIDING (17/8"x0.106"); OR 6d CORROSION-RESISTANT CASING (2"x0.099")  8d CORROSION-RESISTANT SIDING (2 3/8"x0.128"); OR 8d CORROSION-RESISTANT CASING (2 1/2"x0.113")  INTERIOR PANELING  4d CASING (1 1/2"x0.080"); OR	3 3 3 3 3 3 3 3 4 6 6 6	D FF AMIN
333. 334. 335. 336. 337.	CC  1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING  WOOD STRUCTURAL PANE  3/4" & LESS  7/8" - 1"  11/8" - 11/4"  1/2" OR LESS	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.120")  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.13	3 3 3 3 3 3 3 3 3 4 6 6 6 6	12 C/2 12 12
333. 334. 335. 336. 337.	CC  1/2" FIBERBOARD SHEATHING <sup>b</sup> 25/32" FIBERBOARD SHEATHING  WOOD STRUCTURAL PANE  3/4" & LESS  7/8" - 1"  11/8" - 11/4"  1/2" OR LESS  5/8"	DEFORMED (2 1/2"x0.131"x0.281" HEAD)  OTHER EXTERIOR WALL SHEATHING  11/2"x0.120", GALVANIZED ROOFING NAIL (7/16"HEAD DIAMETER); OR 11/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  13/4"x0.120" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 11/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN  LS, COMBINATION SUBFLOOR UNDERLA  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2"x0.113"); OR DEFORMED (2"x0.120")  8d COMMON (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.131"); OR DEFORMED (2 1/2"x0.120")  10d COMMON (3"x0.148"); OR DEFORMED (2 1/2"x0.120")  PANEL SIDING TO FRAMING 6d CORROSION-RESISTANT SIDING (17/8"x0.106"); OR 6d CORROSION-RESISTANT CASING (2"x0.099")  8d CORROSION-RESISTANT SIDING (12"x0.128"); OR 8d CORROSION-RESISTANT CASING (21/2"x0.113")  INTERIOR PANELING  4d CASING (1 1/2"x0.080"); OR 4d FINISH (1 1/2"x0.072")	3 3 3 3 3 3 3 3 3 4 6 6 6 6	12 C/2 12 12

SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES & 12 INCHES ON CENTER @ INTERMEDIATE SUPPORTS ON ONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS @ 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG

c. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS CHIDULE & THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF

TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL. d. RSRS-01 IS A ROOF SHEATHING RING SHANK NAIL MEETING THE SPECIFICATIONS IN ASTM F1667.

e. TABULATED FASTENER REQUIREMENTS APPLY WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN 140 MPH. FOR WOOD STRUCTURAL PANEL ROOF SHEATHING ATTACHED TO GABLE-END ROOF FRAMING & TO INT RMEDIATE SUPPORTS WITHIN 48 INCHES OF ROOF EDGES & RIDGES, NAILS SHALL BE SPACED @ 4 INCHES ON CEN THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 MPH IN EXPOSURE B OR GREATER THAN 110 MPH IN EXPOSURE C. SPACING EXCEEDING 6 INCHES ON CENTER @ INTERMEDIATE SUPPORTS SHALL BE PERMITTED WHERE THE FASTENING IS DESIGNED PER THE AWC NDS.

f. FASTENING IS ONLY PERMITTED WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN OR EQUAL T / 110 MP. g. NAILS & STAPLES ARE CARBON STEEL MEETING THE SPECIFICATIONS OF ASTM F1667. CONNECTIONS US

STAPLES OF OTHER MATERIAL, SUCH AS STAINLESS STEEL, SHALL BE DESIGNED BY ACCEPTABLE ENGINEERING PRACTICE OR APPROVED UNDER SECTION 104.11.

REVISIONS

243 N. MAPLE AVENUE, STE B POST OFFICE BOX 477 MANTECA, CALIFORNIA 95336

P: **209.239.1229** /F: 209.239.4880

JOB 888-23-24

S DATE 15 OCT 24 SCALE AS NOTED

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		EXIT ROUTE
		ROUTE
		(EVANDI E DAIGED
		(EXAMPLE RAISED CHARACTER SIGNS)
		MAXIMUM
		OCCUPANCY
FILENAME:		
≡		PERSONS
		(EXAMPLE VISUAL CHARACTER SIGN)
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		MEN
		(EXAMPLE PICTOGRAM)
		SIGNAGE DETAILS
24 x 36		
24	5 1	

#### RAISED CHARACTERS (2013 CBC SEC. 11B-703.2:

- 1. RAISED CHARACTER SIGNS SHALL BE DUPLICATED IN BRAILLE (GRADE 2). RAISED CHARACTERS SHALL BE 1/32" MINIMUM ABOVE THEIR BACKGROUND.
- CHARACTERS SHALL BE UPPERCASE AND SANS SERIF FONT. 4. CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF
- THE UPPERCASE LETTER "I". 5. CHARACTER HEIGHT SHALL BE 5/8" MINIMUM AND 2" MAXIMUM BASED ON THE
- HEIGHT OF THE UPPERCASE LETTER "I". 6. SIGNS WITH TACTILE CHARACTERS SHALL BE LOCATED 48 INCHES MINIMUM ABOVE THE FINISHED FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60 INCHES MAXIMUM ABOVE THE FINISHED FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS.
- LOCATION: WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF. THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES BY 18 INCHES MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING.

#### VISUAL CHARACTERS (2013 CBC SEC. 11B-703.5:

1. CHARACTERS AND THEIR BACKGROUNDS SHALL HAVE A NON-GLARE FINISH.

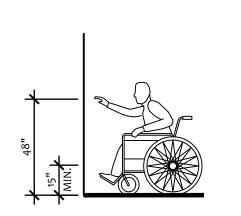
- CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. 2. CHARACTERS SHALL BE UPPERCASE OR LOWERCASE OR A COMBINATION OF BOTH. 3. CHARACTERS ON SIGN SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".
- 4. MINIMUM CHARACTER HEIGHT SHALL COMPLY WITH 2013 CBC TABLE 11B-703.5.5. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH. 5. VISUAL CHARACTERS SHALL BE 40 INCHED MINIMUM ABOVE THE FINISHED FLOOR
- 6. BRAILLE DOTS SHALL BE 1/10" ON CENTER IN EACH CELL WITH 2/10" SPACE BETWEEN CELLS, MEASURED FROM SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST
- COLUMN OF DOTS IN THE SECOND CELL.

VISUAL (	VISUAL CHARACTER HEIGHT - TABLE 11B-703.5.5						
HEIGHT TO FINISH FLOOR OR GROUND FROM BASELINE OF CHARACTER	HORIZONTAL VIEWING DISTANCE	MINIMUM CHARACTER HEIGHT					
40 INCHES TO LESS THAN OR EQUAL TO 70 INCHES	LESS THAN 72 INCHES	5/8 INCH					
	72 INCHES AND GREATER	5/8 INCH PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 72 INCHES					
GREATER THAN 70 INCHES TO	LESS THAN 180 INCHES	2 INCHES					
LESS THAN OR EQUAL TO 120 INCHES	180 INCHES AND GREATER	2 INCHES PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 180 INCHES					
	LESS THAN 21 FEET	3 INCHES					
GREATER THAN 120 INCHES	21 FEET AND GREATER	3 INCHES PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 21 FEET					

#### PICTOGRAMS (2013 CBC SEC. 11B-703.6:

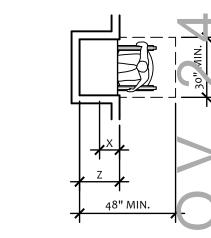
- 1. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES MINIMUM. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD. 2. PICTOGRAMS AND THEIR FIELDS SHALL HAVE A NON-GLARE FINISH AND SHALL
- CONTRAST WITH THEIR BACKGROUND. . PICTOGRAMS SHALL HAVE TEXT DESCRIPTORS LOCATED DIRECTLY BELOW THE PICTOGRAM FIELD. TEXT DESCRIPTORS SHALL COMPLY WITH SECTIONS 11B-703.2, 11B-703.3 AND 11B-703.4 (SEE ABOVE).

NOT TO SCALE \AS.1



HIGH FORWARD REACH LIMIT

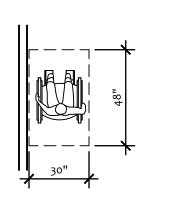
48" MIN.



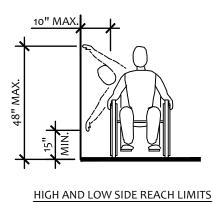
MAXIMUM FORWARD REACH OVER OBSTRUCTION

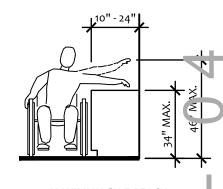
'X' SHALL BE LESS THAN OR EQUAL TO 25 INCHES. 'Z' SHALL BE GREATER THAN OR EQUAL TO 'X'. WHEN 'X' IS LESS THAN 20

INCHES, THEN 'Y' SHALL BE 48 INCHES MAXIMUM. WHEN 'X' IS 20 TO 25 INCHES, THEN 'Y' SHALL BE 44 INCHES MAXIMUM.



PARALLEL APPROACH

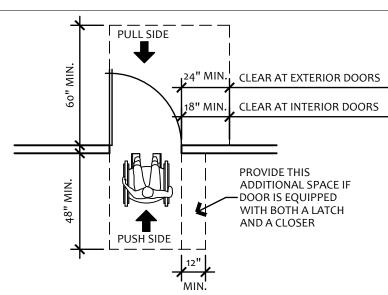




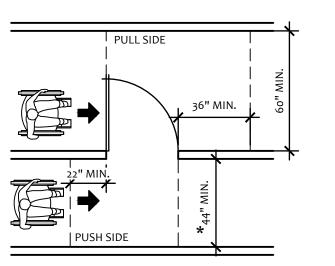
MAXIMUM SIDE REACH

### MAXIMUM REACH LIMITS

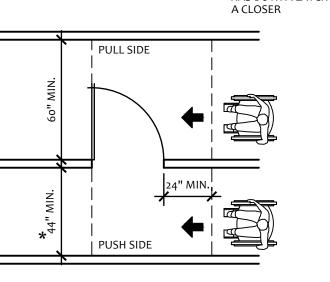
SCALE: 1/4" = 1'-0" \A\$ 1



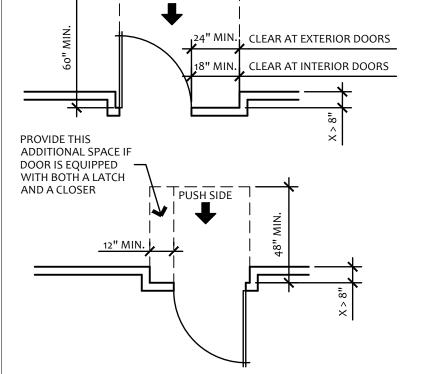
(a) FRONT APPROACH



48" MINIMUM IF DOOR HAS BOTH A LATCH AND



(c) LATCH APPROACH



11B-309.4). HARDWARF.

> OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MINIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15lbf. (2013 CBC SECTION 11B-404.2.9) SURFACE TO ALLOW THE DOOR TO BE OPENED BY A

KICK PLATES SHALL BE CAPPED. (2013 CBC SECTI ON 11B-404.2.10) 11. WHEN THE DOOR HAS A CLOSER, THEN THE SWLEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FR DM THE LATCH IS 5 SECONDS MINIMUM. DOOR SPRING ...... SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM. (2013 CBC SEC TO

CONTAINING ONE OR MORE GLAZING PANELS THAT PERMIT VIEWING THROUGH THE PANELS SHALL HAVE THE BOTTOM OF AT LEAST ONE GLAZED PANEL LOCATED 43 INCHES MAXIMUM ABOVE THE FINISHED FLOOR. (2013 C) C SECTION 11B-404.2.11)

WITH SECTION 11B-404.2.11.

MANEUVERING CLEARANCE AT DOORS

(d) DOOR IN ALCOVE

DATE 15 OCT 24 SCALE AS NOTED JOB 888-23-24

243 N. MAPLE AVENUE, STE B POST OFFICE BOX 477 MANTECA, CALIFORNIA 95336 P: **209.239.1229** /F: 209.239.4880

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REVISIONS

1. ALL DOORS AT ACCESSIBLE ENTRANCES, EXITS, AND TAITHS OF TRAVEL SHALL COMPLY WITH 2013 CALIFORNIA BUILDING CODE SECTION 11B-404.

2. ALL ACCESSIBLE DOORS SHALL HAVE MANEUVE CLEARANCES PER 2013 CBC SECTION 11B-404.2.4. THE FLOOR OR GROUND WITHIN THE REQUIRED CLEARANCES SHALL BE LEVEL AND CLEAR. THE LEVEL AREA SHALL HAVE A LENGTH IN THE DIRECTION OF DOOR SWING OF AT LEAST 60 INCHES AND THE LENGTH OPPOSITE THE DIRECTION OF ECOP SWING OF 48 INCHES AS MEASURED AT RIGHT ANGLES TO

THE PLANE OF THE DOOR IN ITS CLOSED POSITION.

EXCEPTION: THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING SHALL BE A MINIMUM OF +4 INCHES WHERE THE DOOR HAS NO CLOSER AND APPROACH TO THE DOOR BY A PERSON IN A WHEELCHAIR CAN BE MADE FROM THE LATCH SIDE, OR IF THE DC OK. 'AS NEITHER LATCH NOR CLOSER AND APPRO ACH CA'N BE

MADE FROM THE HINGE SIDE. 3. THE WIDTH OF THE LEVEL AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24 INCHES PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18 INC. IES. PAST THE STRIKE EDGE FOR INTERIOR DOORS. 4. PROVIDE CLEAR SPACE OF 12" PAST STRIKE EDGE OF DOOR ON THE OPPOSITE SIDE TO WHICH THE DOOR SWINGS IF THE DOOR IS EQUIPPED WITH BOTH A LATCH AND A CLOSER. 5. THRESHOLDS, IF PROVIDED, SHALL BE 1/2 INCH HIGH

MAXIMUM AND SHALL COMPLY WITH 2013 CBC SECTION 6. DOOR HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPER TE. MANUALLY OPERATED BOLTS OR SURFACE BOLTS ARE NOT PERMITTED. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM (2013 CBC SECTION

7. LATCHING AND LOCKING DOORS THAT ARE HAN ) ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL SHOULD BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, BY PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING

8. HAND-ACTIVATED DOOR OPENING HARDWARE! HALL BE 34" MINIMUM AND 44" MAXIMUM ABOVE THE FINISHED FLOOR OR GROUND. (2013 CBC SECTION 11B-404.2.7) 9. MAXIMUM EFFORT TO OPERATE EXTERIOR AND INTEN OR DOORS SHALL NOT EXCEED 5 POUNDS, WITH SUCH PUIL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES 12 11 NGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR

10. THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATI AND SLIDING DOORS SHALL HAVE A SMOOTH, UNINTERRUPTED WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. CAVITIES CREATED BY ADDED

11B-404.2.8)

12. DOORS AND SIDE LIGHTS ADJACENT TO DOORS EXCEPTION: GLAZING PANELS WITH THE LOWEST PART MORE THAN 66 INCHES FROM THE FINISHED FLOOR

OR GROUND SHALL NOT BE REQUIRED TO COMPLY

#### **GREEN BUILDING MEASURES**

- ALL EQUIPMENT AND SYSTEMS SHALL BE TESTED BY AN INDEPENDENT TESTING AND BALANCING (TAB) CONTRACTOR. THE TAB CONTRACTOR SHALL PROVIDE A REPORT FOR THE MEOR APPROVAL. A COPY OF THE APPROVED REPORT SHALL BE PROVIDED TO THE BUILDING OWNER.
- THE BUILDING OWNER SHALL BE PROVIDED WITH ADEQUATE TRAINING, DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF
- THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF THE ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS OF MERV 13 (AVERAGE EFFICIENCY OF 80%). REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION. CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSC) 5.504.1.

GUARANTIES AND/OR WARRANTIES FOR EACH SYSTEM AND ALL EQUIPMENT.

- AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST AND DEBRIS WHICH MAY ENTER THE SYSTEM.
- ADHESIVES, SEALANTS AND CAULKS SHALL NOT EXCEED VOC LIMITS PUBLISHED IN CGBSC 5.504.4. THE CONTRACTOR SHALL PROVIDE VERIFICATION
- OF COMPLIANCE UPON REQUEST OF THE ENFORCING AGENCY. AIR HANDLING UNITS SHALL BE PROVIDED WITH MERV 13 FILTERS (AVERAGE EFFICIENCY OF 80%) AS INDICATED IN THE SCHEDULE. CGBSC 5.504.5.3.
- VENTILATION IS PRÓVIDED IN ACCORDANCE PER THE CALIFORNIA MECHANICAL CODE. MINIMUM VENTILATION AIRFLOW IS LISTED ON THE DRAWINGS. CGBSC
- THE REFRIGERANT USED BY THE MECHANICAL EQUIPMENT, R410A, DOES NOT CONTAIN CFC OR HALON. CGBSC 5.508.1.

MARK MANUFACTURER

& MODEL#

NUMBER

#### MECHANICAL GENERAL NOTES

1. SCOPE:

WORKMANSHIP:

DESCRIPTION

- PROVIDE NEW MECHANICAL EQUIPMENT, AIR DISTRIBUTION SYSTEMS, TERMINAL DEVICES, CONTROLS AND NECESSARY APPURTENANCES AS GENERALLY DELINEATED ON THE PLANS FOR COMPLETE AND FUNCTIONAL SYSTEMS. EQUIPMENT SHALL COMPLY WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS. PROVIDE DEMOLITION OF EXISTING MECHANICAL EQUIPMENT AND APPURTENANCES AS GENERALLY INDICATED ON THE PLANS.
- CODES: ALL WORK MATERIAL AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY HAVING JURISDICTION. NOTHING IN THESE PLANS SHALL BE CONSTRUED TO PERMIT THE INSTALLATION OF WORK, MATERIAL OR EQUIPMENT NOT CONFORMING TO THESE OR OTHER CODES APPLICABLE TO THIS PROJECT:
  - A. 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1.
  - B. 2022 CALIFORNIA BUILDING CODE (CBC), CCR TITLE 24, PART 2, BASED ON THE 2021
  - INTERNATIONAL BUILDING CODE (IBC). C. 2022 CALIFORNIA ELECTRICAL CODE (CEC), CCR TITLE 24, PART 3, BASED ON THE
  - 2020 NATIONAL ELECTRICAL CODE (NEC). D. 2022 CALIFORNIA MECHANICAL CODE (CMC), CCR TITLE 24, PART 4, BASED ON THE
  - 2021 UNIFORM MECHANICAL CODE (UMC). E. 2022 CALIFORNIA PLUMBING CODE (CPC), CCR TITLE 24, PART 5, BASED ON THE 2021
  - UNIFORM PLUMBING CODE (UPC). F. 2022 CALIFORNIA ENERGY CODE (CEC), CCR TITLE 24, PART 6.
  - G. 2022 CALIFORNIA FIRE CODE (CFC), CCR TITLE 24, PART 9, BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC)
- H. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, "CALGREEN®", CCR TITLE 24, PART 11.
- ALL WORKMANSHIP SHALL BE DONE IN A NEAT AND ORDERLY MANNER ACCORDING TO THE BEST TRADE PRACTICE BY THOSE SKILLED IN THE PARTICULAR TRADE. EQUIPMENT, DUCTS, GRILLES, ETC., SHALL BE PLUMB, LEVEL, SQUARE OR CENTERED ETC., TO GIVE A NEAT AND PLEASING APPEARANCE. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- AVAILABLE POWER: THE MECHANICAL CONTRACTOR SHALL CONFIRM ALL SYSTEMS VOLTAGES BEFORE BIDDING OR ORDERING EQUIPMENT, AND SHALL ALLOW FOR BUCK & BOOST TRANSFORMERS IF REQUIRED.
- AIR BALANCE: THE AIR DISTRIBUTION SYSTEM SHALL BE BALANCED TO DELIVER SPECIFIED AIR QUANTITIES FOLLOWING THE PROCEDURES OF THE LATEST EDITION OF THE SMACNA PUBLICATION PROCEDURAL STANDARDS FOR TESTING, ADJUSTING & BALANCING OF ENVIRONMENTAL SYSTEMS. THE CONTRACTOR SHALL PROVIDE ACCESSIBLE & ADJUSTABLE VOLUME DAMPERS AS REQUIRED TO BALANCE THE SYSTEMS AND MAINTAIN A NOISE CRITERIA LEVEL NOT TO EXCEED 30.
- PERMITS AND UTILITY SERVICE FEES: THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS AND SERVICE
- CHARGES REQUIRED IN THE INSTALLATION OF THE WORK. EXISTING INFORMATION:
- LOCATION, SIZE, MATERIAL, ETC. OF EXISTING SYSTEMS, ETC., IS PROVIDED FROM SOURCES DEEMED TO BE RELIABLE BUT IS NOT GUARANTEED. THE CONTRACTOR SHALL FIELD VERIFY ALL DATA BEFORE PROCEEDING WITH ANY WORK. NO EXTRA COST WILL BE ALLOWED FOR CONDITIONS NOT AS SHOWN. 8. ACCURACY:
- THE PLANS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND LOCATIONS OF AC UNITS, EXHAUST FANS, WALLS, PARTITIONS ETC., AGAINST ARCHITECTURAL AND STRUCTURAL DESIGN PLANS FOR LOCATION CONSISTENCY & ACCURACY PRIOR TO COMMENCING WITH ANY WORK. 9. PAINTING:
- PAINT ALL VISIBLE INTERIOR PORTIONS OF TERMINAL DEVICES & CANS WITH FLAT BLACK ENAMEL PAINT. 10. SIZES:
- DUCTWORK SIZES ON PLANS ARE INSIDE NET FREE AREA. 11. MECHANICAL EQUIPMENT:
- ALL EQUIPMENT SHALL BE LISTED BY AN APPROVED TESTING AGENCY AND INSTALLED IN ACCORDANCE WITH ITS INSTALLATION INSTRUCTIONS AND LISTING.
- 12. INSULATING MATERIALS APPLIED TO THE SURFACE OF DUCTS AND PIPES SHALL HAVE A FLAME INDEX NOT TO EXCEED 25 AND A SMOKE-DEVELOPED INDEX NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, PER 2022 CMC, SECTION 605.

#### **DUCTWORK NOTES**

- ALL RECTANGULAR DUCT ELBOWS SHALL BE SMOOTH RADIUS WITHOUT TURNING VANES, CONSTRUCTED WITH A MINIMUM OF 1 1/2 CENTERLINE RADIUS TO WIDTH, UNLESS OTHERWISE NOTED ON DRAWINGS. PROVIDE SPLITTER VANES ON SMOOTH RADIUS RECTANGULAR ELBOWS WITH LESS THAN 1 1/2 CENTERLINE RADIUS TO WIDTH.
- ALL RECTANGULAR BRANCHES SHALL BE CONSTRUCTED OF ADJUSTABLE SPLITTER DAMPERS OR WYE FITTINGS AS SHOWN ON THE DRAWINGS. PROVIDE BRANCH EXTRACTORS AND/ OR DAMPERS ON WYE FITTINGS AS REQUIRED TO ACCOMPLISH DESIRED AIRFLOW.
- ALL ROUND BRANCHES FROM RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED OF CONICAL TYPE FITTINGS.
- PROVIDE TURNING VANES ON ALL SQUARE AND RECTANGULAR ELBOWS.
- 5. FACTORY MADE FLEXIBLE AIR DUCT AND CONNECTORS SHALL BE NOT MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOWS. FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE.
- ALL WORK TO BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE APPLICABLE SMACNA STANDARDS AND FABRICATION GUIDELINES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS SHOWING ACTUAL EQUIPMENT SELECTION, CONFIGURATION AND LOCATION; DUCTWORK SIZES, ROUTING AND PENETRATION LOCATIONS.
- ALL SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED PER TITLE 24 THICKNESS AND R-VALUE REQUIREMENTS. EXTERIOR INSULATION EXPOSED TO WEATHER SHALL BE WEATHERPROOFED AND SHALL BE PAINTED TO MATCH EXISTING ROOFTOP DUCTWORK.
- 9. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE PROVIDED WITH ACOUSTICAL WITHIN 10' FROM THE ROOFTOP UNIT OR FANCOIL.
- 10. ALL SUPPLY AIR DUCT SHALL BE PROVIDED WITH INSULATION TO PREVENT CONDENSATION. 11. ALL METAL DUCTS SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL PER CMC SECTION
- 12. ALL METAL DUCTS SHALL BE SUPPORTED PER LATEST SMACNA GUIDELINES.
- 13. MATERIALS INSTALLED WITHIN DUCTS AND PLENUMS FOR INSULATING, SOUND DEADENING, OR OTHER PURPOSES SHALL HAVE A MOLD, HUMIDITY, AND EROSION-RESISTANT SURFACE WHERE TESTED IN ACCORDANCE WITH UL181.
- 14. DUCT COVERINGS AND LININGS. INSULATION APPLIED TO THE SURFACE OF DUCTS. INCLUDING DUCT COVERINGS, LININGS, TAPES, AND ADHESIVES, LOCATED IN BUILDINGS SHALL HAVE A FLAME-SPREAD INDEX NOT TO EXCEED 25 AND A SMOKE DEVELOPED INDEX NOT TO EXCEED 50, WHERE TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723.
- 15. DUCT LEAKAGE TESTING SHALL BE CONDUCTED PER CMC SECTION 603.9.2..

#### FLEXIBLE DUCTWORK NOTES

- DUCTS SHALL BE INSTALLED USING THE MINIMUM REQUIRED LENGTH TO MAKE THE CONNECTION. HORIZONTAL DUCT RUNS SHALL BE SUPPORTED AT NOT MORE THAN 4 FEET INTERVALS.
- VERTICAL RISERS SHALL BE SUPPORTED AT NOT MORE THAN 6 FEET INTERVALS. SAG BETWEEN SUPPORT HANGERS SHALL NOT EXCEED 1/2" PER FOOT OF SUPPORT SPACING. SUPPORTS SHALL BE RIGID AND SHALL BE NOT LESS THAN 1 1/2" WIDE AT POINT OF CONTACT WITH THE DUCT SURFACE.
- DUCT BENDS SHALL BE NOT LESS THAN ONE DUCT DIAMETER BEND RADIUS. SCREWS SHALL NOT PENETRATED THE INNER LINER OF NON-METALLIC FLEXIBLE DUCTS UNLESS
- PERMITTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. FITTINGS FOR ATTACHING NON-METALLIC DUCTS SHALL BE BEADED AND HAVE A COLLAR LENGTH OF NOT LESS THAN 2" FOR ATTACHING THE DUCT. EXCEPTION: A BEAD SHALL NOT BE REQUIRED WHERE METAL WORM-GEAR CLAMPS ARE USED OF WHERE ATTACHING METALLIC DUCTS USING SCREWS IN ACCORDANCE WITH THE
- DUCT INNER LINER SHALL BE INSTALLED AT NOT LESS THAN 1 INCH ON THE COLLAR AND PAST THE BEAD PRIOR TO THE APPLICATION OF THE TAPE AND MECHANICAL FASTENER. WHERE MASTIC IS USED INSTEAD OF TAPE, THE MASTIC SHALL BE APPLIED IN ACCORDANCE WITH THE MASTIC MANUFACTURER'S INSTRUCTIONS.
- ). DUCT OUTER VAPOR BARRIERS SHALL BE SECURED USING TWO WRAPS OF APPROVED TAPE. A MECHANICAL FASTENER SHALL BE PERMITTED TO BE USED IN PLACE OF, OR IN COMBINATION WITH, THE TAPE.
- 11. FLEXIBLE AIR DUCTS SHALL NOT PENETRATE A FIRE-RESISTANCE-RATED ASSEMBLY OR
- 12. THE TEMPERATURE OF THE AIR TO BE CONVEYED IN A FLEXIBLE AIR DUCT SHALL NOT EXCEED
- 13. FLEXIBLE AIR DUCTS SHALL BE SEALED IN ACCORDANCE WITH SCTION 603.10.

MANUFACTURER'S INSTALLATION INSTRUCTIONS.

#### PACKAGED ROOFTOP HEAT PUMP UNIT SCHEDULE NOM | CFM | OSA | COOLING MBH | HEATING MBH | ESP | MOTOR | CFM TOTAL SENS HIGH LOW IN WC BHP ELECTRIC HEAT VOLTS PH MCA MOCP LBS. 47° 17° kW FLA

PROVIDE WITH FACTORY WEATHER-PROOF NON-FUSED ELECTRICAL DISCONNECT, DOWN-FLOW SUPPLY AND RETURN, LOW AMBIENT OPERATION, FREEZE PROTECTION T-STAT, HIGH-LO PRESSURE SWITCHES, CRANKCASE HEATER, HIGH-TEMP LIMIT SWITCHES, CONDENSER COIL GUARD GRILLE. PROVIDE MERV 13 FILTERS. COOING PERFORMANCE BASED ON AMBIENT 95°F DB, 67°F WB AND 80°F ENTERING AIR TEMPERATURE.

AC-27 | CARRIER 50GCQT04A2A3-0A3A0 | PACKAGED DOWNFLOW | 3 | 1200 | 370 | 34.02 | 26.95 | 33.2 | 18.0 | 0.70 | 0.47 | 3.3 | 15.9 | 208 | 1 | 48 | 50 | 760 | 7.3 | 11.7 /16.0 | SEE NOTES 1, 2, & 3

THERMOSTAT: SHALL BE CALIFORNIA COMPLIANT THERMOSTAT W/ 3 HOUR OCCUPIED BUTTON IN COVER AND TAMPER PROOF COVER. T-STAT SHALL BE ACCESSIBLE & MOUNTED @ 48" ABOVE FINISHED FLOOR, PROVIDE DIGITAL DISPLAY. PROGRAMMABLE THERMOSTAT.

- . ROOF CURB: STRUCTURALLY CALCULATED 14" TALL, KNOCKDOWN ROOF, TO INCLUDE WOOD NAILER AND HOLD DOWN BRACKETS. CONDENSATE AND POWER THROUGH THE CURB LISTED CURB WEIGHT IS 91 LBS. PROVENTCBKDPRS14. 2. ULTRA LOW LEAK ECONOMIZER, VERTICAL ORIENTATION, ADJUSTABLE DRY BULB SENSOR, FACTORY POWER EXHAUST - PROPELLER TYPE FAN POWERED FROM UNIT, AND NECESSARY APPURTENANCES, THERMOSTAT SHALL MEET TITLE 24
- 3. PACKAGED UNIT SHALL BE PROVIDED WITH SELF-CLEANING NEEDLEPOINT BIPOLAR IONIZATION SYSTEM, 24V TO 240V AC/DC, 0.41 TO 0.041 AMPS, POWER CONSUMPTION 10 W, TOTAL ION OUTPUT > 400 MILLION IONS/CC, 1.32 LBS, UL LISTED. GPS AIR #GPS-FC48-AC OR EQUAL. BIPOLAR IONIZATION EQUIPMENT SHALL BE FACTORY INSTALLED BY CARRIER. AREA SERVED IS PROVIDED WITH A TOTAL COVERAGE SMOKE-DETECTION SYSTEM. THE SMOKE DETECTION SYSTEM SHALL SHUT-OFF AIR MOVING UNIT UPON THE DETECTION OF SMOKE. LISTED WEIGHT INCLUDES ROOFTOP UNIT AND ECONOMIZER. UNITS SHALL BE PROVIDE WITH BASIC ELECTRO-MECHANICAL CONTROLS. THE CONTRACTOR SHALL PROVIDE BACNET BMS CONTROLLER MODULE TO INTERFACE WITH THE EXISTING JCI METASYS. THE CONTRACTOR SHALL PROVIDE NEW THERMOSTAT AND ROOM TEMPERATURE SENSORS. THERMOSTATS AND ROOM TEMPERATURE SENSORS SHALL BE INSTALL AT. BUT NOT EXCEED, 4'-0" ABOVE FINISHED FLOOR.

#### AIR DISTRIBUTION DEVICE SCHEDULE MANUFACTURER FRAME OBD NECK TYPE PATTERN SIZE & MODEL NO. NAILOR #7500 LAY-IN SEE PLAN NO SEE PLAN STEEL, 24"x24" FACE, ROUND NECK, APPLIANCE WHITE SURFACE NAILOR #7500 SEE PLAN NO SEE PLAN STEEL, SQUARE FACE, ROUND NECK, APPLIANCE WHITE NAILOR #6145H LAY-IN NO | SEE PLAN | STEEL, 24"x24" FACE, FIXED 45° HORIZONTAL BLADE, APPLIANCE WHITE YES | SEE PLAN | STEEL, FIXED 45° HORIXONTAL BLADE, APPLIANCE WHITE CR-2 NAILOR #6145H SURFACE 1. PROVIDE SQUARE OR RECTANGULAR TO ROUND TRANSITIONS AS REQUIRED.

2. PAINT ALL VISIBLE INTERIOR PORTIONS OF TERMINAL DEVICES & CANS WITH FLAT BLACK ENAMEL PAINT

	SHEET INDEX
SHEET NO.	DESCRIPTION
M0.0	MECHANICAL - SCHEDULES, NOTES & LEGEND
M0.1	MECHANICAL - SPECIFICATIONS SHEET 1
M0.2	MECHANICAL - SPECIFICATIONS SHEET 2
M1.1	MECHANICAL - OVERALL DEMOLITION FIRST FLOOR PLAN
M2.1	MECHANICAL - OVERALL PARTIAL FIRST FLOOR PLAN
M2.2	MECHANICAL - PARTIAL SECOND FLOOR & PARTIAL ROOF PLAN
M5.1	MECHANICAL - EQUIPMENT DETAILS
T24.1	TITLE 24 ENERGY COMPLIANCE REPORT - SHEET 1
T24.2	TITLE 24 ENERGY COMPLIANCE REPORT - SHEET 2

DUCT SIZE NET INSIDE DIMENSION		12 x 8 12 X 8	
EXHAUST AIR DUCT SECTION  SPLITTER DAMPER W/ LOCKING QUADRA	TIA	EA T	
FLEXIBLE DUCT CONNECTION	3111		w
DUCT DROP/RISE			,,
DOOR LOUVER			
AIR EXTRACTOR			
ACCESS DOOR - A.D.  VOLUME DAMPER W/ LOCKING QUADRA	NT		(
AUTO MOTORIZED CONTROLLED DAMPE		MD	_
FIRE DAMPER / CEILING FIRE DAMPER		FD FD/G	OFD =
MOTORIZED FIRE / SMOKE DAMPER		FSD FSD	_
1ST LETTER - LOCATION	C-CEILING		1 2
	W-WALL		<b>校</b>
	F-FLOOR	CS-5	T CS
2ND LETTER - SERVICE	S-SUPPLY	∜300 CFM 12x12	12x
	R-RETURN		
	E-EXHAUST		
NUMBER	-		WS-1
	5-SEE SCH	<b>├</b>	300 CF 14x8
	FOR TYPE	·	1410
300 CFM = AIRFLOW			
12 X 12 = NECK SIZE	1		
SMOKE DETECTOR		SD	
DUCT WITH ACOUSTICAL LINING  TO BE REMOVED		*======* -X	-
THERMOSTAT		<u> </u>	<del>-(</del>
SENSOR, WALL MOUNTED CO2		© CO2, RTU-XX	_
SENSOR, WALL MOUNTED TEMPERATUR		S RTU-XX / HP-XX	/ FC-XX
WALL SWITCH - ON, OFF, HOLD, INCREM	ENATAL	\$TIMED	
CHECK VALVE		$\rightarrow$	. Г
FLEXIBLE COUPLING			-
GLOBE VALVE			_ (
PRESSURE GAUGE		P	
REDUCER			_
SHUT OFF COCK		<del></del>	
SHUT OFF VALVE		V	
STRAINER			
ON WILL		· >·	
THERMOMETER			. [
UNION			-
		'  '	
ABOVE		ABV	
ABOVE FINISHED FLOOR		AFF	
ACCESS DOOR / ACCESS PANEL		AD / AP	
ANALOG INPUT / ANALOG OUTPUT		AI / AO	
AUTOMATIC AIR VENT		AAV	
BELOW		BEL.	
CEILING		CLG	
CEILING EXHAUST FAN		CEF	
CONCRETE		CONC.	
CUBIC FEET PER HOUR (1000 BTU)		CFH	
CUBIC FEET PER MINUTE		CFM	L
DIFFERENTIAL PRESSURE TRANSDUCE	₹	DPT	
DIGITAL INPUT / DIGITAL OUTPUT		DI / DO	
DOWN		DN	
DRY BULB		DB	- 1
ENTERING AIR TEMPERATURE		EAT	- 1
EXISTING		(E)	
FLOW SWITCH		FS	
GALLONS PER MINUTE		GPM	ŀ
LEAVING AIR TEMPERATURE		LAT	_
THOUSANDS OF BTU'S PER HOUR		MBH	
MECHANICAL ENGINEER OF RECORD		MEOR	
NET FREE AREA		NFA	-
NEW		(N)	
NOT IN MECHANICAL CONTRACT		N.I.M.C.	
OUTSIDE AIR		OSA	
POINT OF CONNECTION		POC€	
REFRIGERANT LIQUID / REFRIGERANT S	UCTION	RL / RS	
TEMPERATURE CONTROL PANEL		TCP	
		V	ŀ
VALVE			
WELL TEMPERATURE SENSOR		WTS	

MECHANICAL LEGEND

SYMBOL

SA

RA

POST OFFICE BOX 477

MANTECA, CALIFORNIA 95336

P: **209.239.1229** /F: 209.239.4880

DESCRIPTION

SUPPLY AIR DUCT SECTION

RETURN AIR DUCT SECTION

BOUDREAU ENGINEERING, INC.

CONSULTING MECHANICAL ENGINEERS

257 N. PALM ST TURLOCK, CA 95380 (209)606-7052

DATE 12 JULY 24 SCALE 1/4"=1'0" 658-23-15/241<sup>2</sup>

Permits for equipment connected to a particular system are to be considered as a part of 2. All shop drawings shall be submitted at one time in a neat and orderly fashion in a SECTION 15800 B. Verbal: The Contractor shall verbally instruct the Owner's maintenance staff in the Marking of short branches and repetitive branches for equipment connections is not GENERAL MECHANICAL PROVISIONS suitable binder with title sheet including Project, Architect, Engineer, and operation and maintenance of all equipment and systems. The controls contractor shall the work included under each system; for example, permits for electric motor connection are part of electrical work, permits for domestic water or gas connections are Contractor; Table of Contents; and indexed tabs dividing each group of materials or present that portion of the instruction that applies to the control system. The Engineer's B. Equipment: All equipment shall be identified with a plastic laminated, engraved part of plumbing work. All charges for service connections, meters, etc. by utility item of equipment. All items shall be marked with the specification paragraph office shall be notified 96 hours prior to this meeting. PART 1 - GENERAL nameplate which bears the unit mark number as indicated on the drawings (e.g. AC-1). companies or districts shall be included in the work. number for which they are proposed. All equipment shall also be identified by the C. Posted: The Contractor shall prepare operation instructions for all systems which shall Provide 1/2" high lettering, white on black background. Nameplates shall be 1.01 GENERAL CONDITIONS: mark number as indicated on the drawings. 1.04 COORDINATION OF WORK: 3. All capacities, characteristics, and accessories called for in the specifications or on be typewritten, reviewed by the Engineer, and mounted under glass adjacent to the permanently secured to the unit. appropriate temperature control panel. These instructions shall include applicable A. The foregoing General and Special Conditions shall form a part of this Division with the the drawings shall be highlighted, circled or underlined on the shop drawings. A. Layout of materials, equipment and systems is generally diagrammatic unless C. Valves: Provide valve tags on all valves of each piping system, excluding check valves, temperature control diagrams. same force and effect as though repeated herein. The provisions of this Section shall Calculations and other detailed data indicating how the item was selected shall be specifically dimensioned. The actual locations of all materials, piping, ductwork valves within equipment, shut-off valves at equipment and other repetitive terminal included for items that are not scheduled. Data must be complete enough to permit apply to all the Sections of Division 15. D Acknowledgment: The Contractor shall prepare a letter indicating that all operation and equipment, supports, etc. shall be carefully planned, prior to installation of any work, to units. Provide brass tags or plastic laminate tags. Prepare and submit a tagged valve detailed comparison of every significant characteristic which is specified avoid all interferences with each other or with structural electrical or architectural maintenance instructions (printed verbal and posted) have been given to the Owner to schedule, listing each valve by tag number, location and piping service. Mount in 1.02 CODES AND REGULATIONS: scheduled, or detailed. the Owner's satisfaction. This letter shall be acknowledged (signed) by the Owner and elements. Verify the proper voltage and phase of all equipment with the electrical plans. glazed frame where directed. C. Substitutions: Manufacturers and model numbers listed in the specifications or on the All conflicts shall be called to the attention of the Architect prior to the installation of A. All work and materials shall be in full accordance with current rules and regulations of submitted to the Architect. D. Controls: Label all panels, thermostats and by-pass timers with plastic laminated, drawings represent the standard of quality and the features desired. Unless otherwise applicable codes. Nothing in these drawings or specifications is to be construed to any work or the ordering of any equipment. engraved nameplate which bears the unit mark number as indicated on the drawings noted, alternate manufacturers may be submitted for review by the Engineer. 1.09 RECORD DRAWINGS: permit work not conforming to these codes. Should the drawings or specifications call 1.05 GUARANTEE: Calculations and other detailed data indicating how the item was selected shall be (e.g. AC-1). Provide 1/4" high lettering, white on black background. Nameplates shall for material or methods of construction of a higher quality or standard than required by A. The Contractor shall maintain a set of prints for the project as a record of all included. The Contractor shall assume full responsibility that substituted items or be permanently secured to the unit. these codes, the specifications shall govern. Applicable codes and regulations are: A. Guarantee shall be in accordance with the General Conditions. These specifications construction changes made. As the Work progresses, the Contractor shall maintain a procedures will meet the specifications and job requirements and shall be responsible California Code of Regulations – CCR: 2.03 EQUIPMENT SUPPORT FRAMES: may extend the period of the guarantee for certain items. Where such extensions are record of all deviations in the Work from that indicated on the drawings. Final location for the cost of redesign and modifications to the work caused by these items. Title 8, Industrial Relations. called for, or where items are normally provided with guarantee periods in excess of that of all underground work shall be recorded by depth from finished grade and by offset A. Unless specifically noted otherwise, it shall be the responsibility of Mechanical Title 24, Building Standards. called for in the General Conditions, the Certificate of Guarantee shall be furnished to D. Review: Submittals will be reviewed for general conformance with the design concept, distance from permanent surface structures, i.e. buildings, curbs and walks. In addition, California Building Code – CBC but this review does not guarantee quantity shown, nor does it supersede the Contractor to furnish and install all support frames for its equipment. the Owner through the Architect. the water, gas, under-floor ducts, etc. within the building shall be recorded by offse California Mechanical Code – CMO responsibility of the Contractor to provide all materials, equipment and installation in distances from building walls. The original drawings will be made available to the 1.06 EXAMINATION OF SITE: California Plumbing Code – CPC accordance with the drawings and specifications. The Contractor shall agree that shop Contractor from which he shall have a set of reproducible drawings made. The PART 3 - EXECUTION California Green Building Code. drawing submittals processed by the Engineer are not Change Orders; that the purpose Contractor shall then transfer the changes, notations, etc. from the marked-up prints to 3.01 SCHEDULING OF WORK: A. The Contractor shall examine the site, compare it with plans and specifications, and Air Diffusion Council – ADC. of shop drawing submittals by the Contractor is to demonstrate to the Engineer that the the reproducible drawings. The record drawings (marked-up prints and reproducibles shall have satisfied himself as to the conditions under which the work is to be American Gas Association – AGA. Contractor understands the design concept; that he demonstrates his understanding by shall be submitted to the Architect for review (as an alternative, the marked-up prints A. All work shall be scheduled subject to the approval of the Architect, Engineer and 8. Air Moving and Conditioning Association – AMCA. performed. No allowance shall subsequently be made in his behalf for any extra indicating which equipment and material he intends to furnish and install and by may be photocopied full size on reproducible stock). Owner. No work shall interfere with the operation of the existing facilities on or expense to which he may be put due to failure or neglect on his part to make such an . American National Standards Institute – ANSI. detailing the fabrication and installation methods he intends to use. The Contractor adjacent to the site. 10. Air Conditioning and Refrigeration Institute – ARI. shall agree that if deviations, discrepancies or conflicts between shop drawings and PART 2 - PRODUCTS 11. American Society of Heating, Refrigerating and Air Conditioning Engineers design drawings and specifications are discovered either prior to or after shop drawing 3.02 CONDUCT OF WORK: 1.07 SUBMITTALS: 2.01 SEISMIC RESTRAINTS: submittals are processed by the Architect, the design drawings and specifications shall 12. American Society of Mechanical Engineers - ASME. control and shall be followed. A. The Contractor shall have at all times, as conditions permit, a sufficient force of A. Submit shop drawings in accordance with Division 1. A. Where, required the mechanical systems (all equipment, piping, etc.) shall be provided 13. American Society for Testing and Materials – ASTM. workmen and quantity of materials to install the work contracted for as rapidly as with seismic restraints in accordance with OSHPD OPM-0043-13 Mason West, Inc. 1.08 OPERATION AND MAINTENANCE INSTRUCTIONS: 14. American Water Works Association – AWWA. possible consistent with good work, and shall cause no delay to other Divisions engaged B. Shop Drawings: Within 30 days of contract award, the Contractor shall submit six Seismic Restraint Guidelines for Suspended". 15. California Electrical Code – CEC. copies of shop drawings for all materials, equipment, etc. proposed for use on this upon this project or to the Owner. A. Printed: Four copies of the Operation and Maintenance Instructions and Wiring 16. National Electrical Manufacturers Association – NEMA. project. Material and equipment shall not be ordered or installed until written review is 2.02 SYSTEM IDENTIFICATION: Diagrams for all equipment and parts lists for all equipment, etc. shall be submitted to 17. National Fire Protection Association – NFPA. B. Mechanical Contractor shall arrange for all cutting necessary for the proper installation processed by the Engineer. Any item omitted from the submittal shall be provided as the Architect. All instructions shall be clearly identified by marking them with the same 18. Sheet Metal and Air Conditioning Contractors National Association – SMACNA. of its work, providing all sleeves and chases necessary. Cutting shall not be done in A. Above Grade Piping: Provide markers on piping which is either exposed or concealed in specified without substitution. All shop drawings must comply with the following designation as the equipment item to which they apply (e.g. AC-1). All wiring diagrams Underwriters' Laboratory – UL such a manner to impair the strength of the structure. Any damage resulting from work accessible spaces. For piping systems, other than drain and vent lines, indicate the fluid 1. Shop drawings are required for all material and equipment items and shall include shall agree with revised shop drawings and indicate the exact field installation. All 20. Occupational Safety and Health Act - OSHA. shall be repaired by the Contractor at his expense to the satisfaction of the Architect. conveyed or its abbreviation, either by preprinted markers or stenciled marking, and instructions shall be submitted at the same time and shall be bound in a suitable binder manufacturer's name and catalog numbers, dimensions, capacities, performance 1.03 PERMITS AND FEES: include arrows to show the direction of flow. Comply with ANSI A13.1 for colors. curves, and all other characteristics and accessories as listed in the specifications or with tabs dividing each type of equipment (e.g. Fans, Motors, etc.). Each binder shall C. Progressively, daily at the completion of each day's work, and at completion of the job, Locate markers at ends of lines near major branches and other interruptions including A. The Contractor shall take out all permits and arrange for all tests in connection with his on the drawings. Descriptive literature shall be current factory brochures and be labeled indicating "Operating and Maintenance Instructions, Project Title, the Contractor shall thoroughly clean all of his work, removing all debris, stain and equipment in the line, where lines pass through floor, walls or ceilings or otherwise pass work as required by local ordinances. All charges are to be included in the work. submittal sheets. Capacities shall be certified by the factory. Contractor, Date" and shall have a Table of Contents listing all items included. marks resulting from his work. into inaccessible spaces, and at 50' maximum intervals along exposed portion of lines. shall have frames suitable for mounting in the surfaces designated by the 3.03 OPENINGS, CUTTING AND PATCHING: SECTION 15801 Maximum length 5 ft., single piece at runouts to air terminals. Genflex, Lamborn or C. Fiber Glass Blanket: Foil faced, 0.13 Btu/hr – sq. ft. – degrees F conductivity at a mean HEATING, VENTILATING AND AIR CONDITIONING architectural drawing, coordinate prior to ordering. temperature of 75 degrees F, 2" thick minimum, R-8. CSG Insulation Corp., Schuller, A. The locations and dimensions for openings through walls, floors, ceilings, foundations, 4. Finish: All ceilings and wall grilles shall have a paintable white finish unless Owens-Corning, Knauf or equal. D. Spiral Duct: Ductwork shall be galvanized steel with uni-seal spiral seamlock and unifootings, etc. required to accomplish the work under this Specification Division shall be otherwise noted. Interior components shall be flat black provided under this Division. The actual openings and the required cutting and patching PART 1 - GENERAL seal fittings, ASTM A653. United McGill Corp or equal. All exposed spiral duct shall D. Bonding Adhesive: Benjamin Foster 85-15 or equal. B. Turning Vanes: Double wall, hollow metal, air-foil shape. Spacing in accordance with shall be provided. Coring through existing concrete or masonry walls, floors, ceilings, be painted, color selected by Owner. 1.01 GENERAL CONDITIONS: nanufacturer's recommendations. Aero Dyne, HEP or equal. 2.04 PIPING MATERIALS foundations, footings, etc., and saw cutting of concrete floors or asphaltic concrete E. Bonding Adhesive: Durodyne WBG, Scotchgrip Adhesive 4230 or equal. required to accomplish the work under this Specification Division shall be provided A. The foregoing Section 15800, General Mechanical Provisions shall form a part of this C. Flexible Connection: UL listed neoprene coated 30-ounce fiberglass cloth. 3" metal, 6" under this Division. Patching of these surfaces shall also be provided. Cutting and fabric, 3" metal. Ventglas or equal. F. Duct Mastic: Minnesota Mining and Manufacturing Duct Sealer 800, Tuff-Bond No. 1. Type L hard temper seamless copper, ASTM B88. Wrought copper fittings ANSI coring shall not impair the strength of the structure. Any damage resulting from this 12, Glencoat Seal-Flex or equal. D. Branch Duct Volume Damper: Volume control damper (VCD) in rectangular ducts B16.22. 50/ 50 lead-tin solder joints above grade, 95/ 5 tin-silver brazed joints work shall be repaired at the Contractor's expense to the satisfaction of the Architect. below grade. Provide schedule 40 PVC sleeve pipe for all below grade refrigerant shall be as follows: Opposed blade, 6" maximum blade width, 16-gage blade, 48" G. Duct Joints: 3.04 MANUFACTURER'S RECOMMENDATIONS: piping. All piping shall be sized per equipment manufacturer requirement A. Included: Perform all work necessary and required to complete construction as maximum length, nylon or oil impregnated bronze bearings, \( \frac{1}{2} \) diameter pin shaft, 16gage channel frame, actuating rod and linkage out of air stream. VCD in round duct indicated. Such work includes the furnishings of all labor, materials and services 1. As an option to joints and seams designated by SMACNA or shown on Drawings, 2. Valves and Specialties: A. All material, equipment, devices, etc., shall be installed in accordance with the necessary for a complete, lawful and operating air conditioning, heating, ventilating shall be as follows: Damper blade full height of branch and 1" less than branch width the following systems may be used: a. Line Valves: Bronze body, ball type, TFE locked in seals. Back seated valve recommendations of the manufacturer of a particular item. The Contractor shall be system with all equipment as shown or noted on the drawings or as specified herein. a. Ducts with sides 24 inches to 48 inches, transverse duct joint system by All branch dampers shall have regulator with stamped steel handle, spring loaded shaft stem. Contromatics C-1 responsible for all installation of work contrary to the manufacturer's recommendations. nut, cast body and serrated self-locking die cast core. Regulator for horizontal ducts b. Filter-Drier: Replaceable core. Capacity in accordance with ARI Standard The work includes, but is not necessarily limited to, the following Ductmate Jr., Nexus or equal (SMACNA "E" Type connection). The Contractor shall make all necessary changes and revisions to achieve such b. Ducts 48 inches and larger, Ductmate Regular, Nexus (SMACNA "J" Type overhead shall be mounted on sides or bottom of ducts. Secure a 12" length of brightly 710. Sporlan "Catch-All". Heating, ventilating and air conditioning equipment. compliance. Manufacturer's installation instructions shall be delivered to and colored plastic ribbon to handle for ease of location. Where rectangular or round connection) or equal. Moisture Indicator-Sight Glass: Double port. Henry, Sporlan. Air distribution system (Ductwork, Air Terminals, etc.) maintained at the job site through the construction of the project. ductwork is insulated, slit insulation to allow handle to protrude. Ventlok 641 (with d. Vibration Isolating Connection: Seamless flexible bronze tubing, braid H. Fiber Tape: Mineral impregnated fiber tape and plastic activator-adhesive. Hardcast 3. System insulation 607 end bearing for round ducts). covered. Suitable for system pressure. American, Flexonics. 3.05 QUIETNESS: Inc., United McGill Uni-Cast or equal. B. Work Specified Elsewhere: B. Miscellaneous Piping Items 1. Line voltage power wiring (60 volts or greater), motor starters in motor control I. Make-Up Air Unit Duct: Ductwork shall be double wall insulated galvanized steel E. Fire/ Smoke Damper: Multi-blade construction in accordance with CBC & CMC. UL A. Piping, ductwork and equipment shall be arranged and supported so that vibration is a Pipe Support centers, and disconnect switches are included in the electrical section. exterior and aluminum or stainless steel interior glass fiber insulation. 1.5 lb./cu. ft. 555 and UL 555S labels. Blades shall have metal-to-metal seals and not rely on actuator minimum and is not carried to the building structure or spaces. a. Pipe Hanger: Adjustable split ring, swivel hanger and rod. Black malleable Connection of gas and condensate drains to equipment. density, 2" thick minimum, R-8. Thermal conductivity shall not exceed 0.13 Btu/ hr. torque to maintain leakage rating. Prefco, Air Balance, Ruskin, Greenheck 5020-1 with iron. Size and maximum loads per manufacturer's recommendation. Felt 3.06 DAMAGES BY LEAKS: sq. ft.-degrees F at a mean temperature of 75 degrees F. CSG Insulation Corp., 5800MB2 power open/spring close operator, or equal. Lined, Kin-Line 450 F. 4. Controls and control wiring and conduit for control wiring. Manville, Owens-Corning, Knauf or equal. Duct dimensions shown on drawings for b. Construction Channel: 12 gage 1-5/8" x 1-5/8" steel channel. Single or A. The Contractor shall be responsible for damages to other work caused by leaks in the F. Louvers: Refer to the Air Distribution Schedule on the drawings. Manufacturer's double wall duct are clear (net) opening inside. multiple sections. Self-locking nuts and fittings. Kin-Line, Unistrut. temporary or permanent piping systems prior to completion of work and during the model numbers are listed to complete the description. Equivalent models of Ruskin, period of the guarantee, and for damages to other work caused by disconnected pipes or PART 2 - MATERIALS 2.02 AIR TERMINALS AND DUCT FITTINGS: 2. Pipe Sleeves: 24 gage galvanized steel. Adjus-to-Crete #10 with #99 thimble for Greenheck, Dayton or approved equal. Contractor shall fabricate and provide 16 GA. floors. #100 for walls fittings, and the overflow of equipment prior to completion of the work. galvanized perforated panel (50% Free Area) over exterior of all louvers and have field 2.01 DUCTWORK MATERIALS: A. Grilles: (Grilles, Registers and Diffusers) painted to match exterior wall. Refer to the floor plans for all sizes. 3.07 CLEANING: C. Flashing: Flashing for piping through roof shall be prefabricated 24 gage galvanized A. General: All ductwork materials shall have fire and smoke hazard ratings as tested 1. Information on Drawings: Refer to the Air Distribution Schedule on the drawings 2.03 DUCTWORK INSULATION MATERIALS: steel roof jacks with 8" square flange around pipe. Seal with weatherproofing mastic. under ASTM E-84 and UL-181 not exceeding a flame spread of 25 and smoke Progressively and at completion of the job, the Contractor shall thoroughly clean all of developed of 50. All ductwork shall be per Chapter 6 of the CMC description. Equivalent models of J & J, Krueger, Barber-Colman, Anemostat A. General: All ductwork insulation materials shall have fire and smoke hazard ratings as his work, removing all debris, stain and marks resulting from his work. Price, Titus or equal. Refer to the floor plans for neck size, CFM, air diffusion 2.05 PIPING INSULATION MATERIALS: tested under ASTM E-84 and UL-181 not exceeding a flame spread of 25 and smoke B. Low Velocity Metal Ductwork: Metal ductwork shall be galvanized sheet steel, ASTM pattern, and fire damper, if required. A. General: All piping insulation materials shall have fire and smoke hazard ratings as 2. Performance: If, according to the certified data of the manufacturer of the proposed tested under ASTM E-84 and UL 723 not exceeding a flame spread of 25 and smoke units, the sizes indicated on the drawings will not perform satisfactorily, the units B. Acoustic Lining: Glass fiber. One side coated to prevent fiber erosion up to 6000 ft./ C Low Velocity Flexible Ductwork: Insulated flexible ductwork Continuous internal shall be re-selected by the Contractor for the proper diffusion, spread, drop and min. Average noise reduction coefficient of 0.90. 0.13 Btu/hr - sq. ft. - degrees F liner bonded to galvanized steel wire helix. One pound per cubic foot glass fiber conductivity at a mean temperature of 75 degrees F, 2" thick minimum, R-8. CSG insulation 2" thick minimum R-8. Thermal conductivity shall not exceed 0.13 Btu/hr B. Refrigerant Piping: Rubber based elastomeric preformed pipe insulation. Thermal 3. Frame and Accessories: All supply, return, and exhaust grilles shall be provided Insulation Corp., Schuller, Owens-Corning, Knauf or equal. Duct dimensions shown sq. ft.- degrees F at a mean temperature of 75°F. Seamless vapor barrier jacket. Each conductivity shall not exceed 0.25 Btu-in/hr-SF-degree F at mean temperature of 75 with cushion heads and attachments to structure unless otherwise noted. All on drawings for lined duct are clear (net) opening inside of lining. length shall have a factory installed metal sleeve at each end. Duct shall be capable of END OF SECTION degrees F., 3/4" thick. Provide aluminum pipe and fitting jacketing. 0.016" thickness surface mounted grilles shall have a perimeter gasket and flanged edge. All grilles continuous operation at 1.5" of water static pressure and 4000 ft./ min. air velocity. three-phase induction unless otherwise noted. Design shall limit starting inrush for straight pipe, 0.024" thickness for fittings with integral moisture barrier, preaccordance with AMCA 500 for outside air dampers. Actuating rod out of air stream. curb base. Weatherproof disconnect switch. Upblast type UL listed for removal of horsepower. Pulleys shall be cast and have machined surfaces, 10-horse power and smoke and grease laden vapors (YZHW, 762), for kitchen hood service. Cook, fabricated strapping and seals for piping exposed to weather, Childers, Pabco or equal. current and running current to values shown on drawings. Motors 1 horsepower less shall be supplied with an adjustable drive pulley. 9. Sound Ratings: Shall be in accordance with ASHRAE 36-72. Sound ratings shall not and larger shall be the premium efficiency type, tested according to IEEE Standard Greenheck, Penn, ACME or equal. 6. Electrical: All internal electrical components shall be prewired for single point power 1. Insulation shall be provided on both refrigerant lines for ductless split systems. 112, Method B. Motors exposed to weather shall be TEFC. Motors in a fan air exceed scheduled values. 4. Roof Fan: Multivane centrifugal fan. Ball bearings. Vibration isolation mount. All connection. All electrical components shall be UL listed, recognized or classified stream shall be TEFC or TEAO. Vertical motors outdoors shall be ODP or TEFC 10. Drives: Unless noted as direct connected, drives shall be V-belt, rated at 150% of aluminum curb base. Weatherproof disconnect switch. Down blast type UL listed. where applicable and wired in compliance with the National Electrical Code. Control 2.06 EQUIPMENT: and shall have rain caps. motor horsepower. Multiple drive belts shall be matched set. Drive sheaves shall be Cook, Greenheck, Penn, ACME or equal. center shall include motor starter, control circuit fusing, control transformer for 120 d. Starters: Motor starters shall be furnished for all equipment except where starter is 5. In-Line Fan: Attic mounted direct drive centrifugal exhaust fan. Motor shall be VAC circuit, integral door interlocking disconnect switch with separate motor fusing dynamically balanced, adjustable, range +/ - 10%, selected at mid range. Adjustable A. General Requirements: in a motor control center as designated on the electrical drawings. Deliver starter relative movement shall be lockable to shaft. Belts shall be aligned within 1-1/2 open drip proof with permanently lubricated sealed bearings and built-in thermal and terminal strip. Contactors Class 20 adjustable overload protection and single-1. Capacity: Capacities shall be in accordance with schedules shown on drawings. to Electrical Contractor for installation and wiring. degrees at all times. Open drives shall be provided with OSHA approved open mesh overload protection and disconnect plug. Acoustic lined housing. Backdraft phase protection shall be standard. e. Control Voltage: Equipment connected to greater than 240 volts shall be provided damper. UL listed. Provide 24"x24" access panel with cylinder key lock when 7. Filter Section: Filters shall be mounted in a V-bank arrangement such that velocities belt guards. Belt guards exposed to weather shall be weatherproof enclosure with Capacities are to be considered minimum across the filters do not exceed 550.0 ft./ min. Filters shall be easily accessible with 120 volt control circuit from integral protected transformer if separate source 2. Dimensions: Equipment must conform to space requirements and limitations as louvered face for adequate ventilation. Driving motor shall be mounted on adjustable above hard ceiling. Penn, Cook, ACME, Greenheck or equal. is not indicated on plans. 240 volt control is acceptable if confined within control rails. T.B. Woods, Browning. Submit RPM range of driven machine with drive indicated on drawings and as required for operation and maintenance. Where through a removable access panel. 8. Direct Evaporative Cooling Section: Evaporative Cooling media shall be Munters Architectural screening is indicated, equipment shall not extend above or beyond f. Submittals: Included in shop drawings shall be internal wiring diagrams and CELdek with a depth of 12 inches for a cooling effectiveness of 90%, with a screening. Equipment will not be accepted that does not readily conform to space D. Make-up Air Unit (Direct): B. Ductless Split System Air Conditioning: manufacturer's recommend external wiring. stainless steel housing all provided by the Heat Recovery Unit manufacturer. Drain conditions. Prepare and submit layout drawings for all proposed equipment (different 1. General: Greenheck or equal shall be furnished per schedule. Equipment shall Condensing Unit: and overflow connections with bleed kit shall be piped through the side of the HRE 6. Fan Selection: than scheduled units) showing actual job conditions, required clearances for proper consist of a furnace section (fueled by natural gas), blower, and direct evaporative a. General: Self-contained unit designated for outdoor installation. Factory a. Fan Curves: Performance curves shall be submitted for all units of 3000 CFM or operation, maintenance, etc. cooling section. The unit shall be tested as a complete package prior to shipment. greater. Operating point for forward curved fans shall be from point of maximum assembled and tested. Provide all starters and relays required for operation. 24 9. Weather Hood: Weather hoods shall be the same finish as the unit and shall be 3. Ratings: 2. Furnace and Controls: Indirect fired gas furnace shall be 80% efficient, ETL list and volt control circuit from integral transformer. Weatherproof cabinet, a. Gas: Gas burning equipment shall be furnished with 100% safety gas shut-off, efficiency towards increased CFM limited by horsepower scheduled. Operating constructed of G90 galvanized steel with bird screen mounted at the intake. certified to ANSI Z83-8. The furnace shall have a blow through fan design. Furnace galvanized steel with enamel finish. Drain pan. ARI certified. Provide 3/4" x 10. Control Panel: Provide remote control panel with On-Off-Vent-Cool-Heat indicator intermittent pilot ignition, and be CSA (US) certified, except that boilers shall be point for backward inclined fans shall be selected near point of maximum shall be capable of operation with natural gas and have a power venting system. The 18 GA. expanded metal coil guards. Daikin, Quietside, Carrier, York, Trane lights and programmable thermostat control on face of panel. Permatector coated CSA (US) certified or UL listed. efficiency. Curves shall plot CFM verses static pressure with constant brake burner and heat exchanger shall be constructed of stainless steel. Standard furnace and Mitsubishi. b. Electrical: Electrical equipment shall be in accordance with NEMA Standards and horsepower, RPM and efficiency lines. features shall include main gas pressure regulator, main gas valve, electronic staged b. Refrigeration: Sealed Hermetic compressor with internal vibration isolating b. Static Pressure: Unless otherwise noted, pressure scheduled as external static UL or ETL listed where applicable standards have been established. or electronic modulating controls, electronic intermittent pilot ignition system, high PART 3 – EXECUTION mount. Crank case heater, high/low pressure switch, anti-recycle timer. Airpressure (ESP) includes all ductwork and accessory losses external to the unit 4. Piping: Each item or assembly of items shall be furnished completely piped for limit and a 24 volt control transformer cooled condenser with propeller fan. Non-ferrous finned coil. Low ambient housing. Unless otherwise noted, pressure scheduled as total static pressure connection to services. Control valves and devices shall be provided. Equipment 3.01 DUCTWORK INSTALLATION: 3. Unit Casing and Frames: Unit shall be of double wall construction. Internal frame control to 25°F, unless otherwise noted. includes all ductwork, filter, coil, cabinet, damper and other accessory losses. requiring domestic water for non-potable use shall be provided with backflow type construction of galvanized steel. All frames and panels shall be G90 galvanized a. Guarantee: Provide 5 year extended warranty on the condenser coil and Unless otherwise noted, pressure scheduled as duct static pressure includes all preventer acceptable for intended use by local governing authorities. steel. Where top panels are joined there shall be a standing seam to insure positive supply and return ductwork and accessory losses external to the unit housing and weather protection. All metal-to-metal surfaces exposed to the weather shall be 1. Standards: Unless otherwise noted, all ductwork shall be constructed and installed 2. Indoor Unit: Multi-speed direct drive blower on vibration mountings, filters, plenum (as applicable). The allowance for filter losses is 0.3" WC, unless a. General: Each item or assembly of items shall be furnished completely wired to in accordance with current SMACNA "HVAC Duct Construction Standards". sealed, requiring no caulking at job site. All components shall be easily accessible capacity as scheduled on plans. Daikin, Quietside, Carrier, York, Trane and individual terminal blocks for connection to single branch electrical circuit. All otherwise noted. Submit itemized static pressure losses for all components. through removable doors. Insulation in accordance with NFPA 90A and tested to Ductwork and accessories shall be installed in a manner to prevent vibration and electrical accessories and controls required by equipment shall be furnished. meet UL 181 erosion requirements and secured to unit with water proof adhesive and 3. Coil Section: Encased coil. Casing shall be galvanized steel finished with baked a. General: Tested and rated in accordance with ASHRAE Standard 52.2 and Title Provide terminal blocks for controls and interlocks not included in equipment permanent mechanical fasteners. Permatector exterior finish, color by Architect. 2. Seismic bracing: All ducts shall be braced and supported per SMACNA Guidelines enamel. Direct expansion evaporation coils complete with distribution piping, 24, C.C.R. Furnish and install one complete change of all filters after air balance package. Manual and magnetic starters shall have ambient compensating running Unit base to be designed for curb mounting, curb to be furnished with the unit. Unit for "Seismic Restraints Manual for Mechanical Systems" dated 1998, including expansion valve, drain pan, and drain connection. Daikin, Quietside, Carrier, York, in completed and prior to acceptance. Provide pressure differential gage across all overcurrent protection in all ungrounded conductors. Magnetic starters shall be base shall over hang the curb for a positive seal against water run-off. Trane and Mitsubishi. manual reset, shall have H-O-A switches and auxiliary contacts. Controllers and 4. Fan Section: Centrifugal fans shall be double width, double inlet. Fan and motor 3. Duct Access Doors: Provide access doors as required to adjust equipment and b. Filter Media: 2" media. MERV-8. Clean filter resistance 0.25" water at 500 fpm. other devices shall be in NEMA 1 or 3R enclosures as applicable. shall be mounted on a common base and shall be internally spring isolated. All Throw-away frame. Class 2. Camfil Farr AP-Eleven. b. Wiring: Conductors, conduit, and wiring shall be in accordance with Electrical blower wheels shall be statically and dynamically balanced. Ground and polished 4. Flexible Connections: Connections of ductwork to all equipment shall be with 6" 1. General: All exhaust fans shall be tested and rated in accordance with AMCA c. Pressure Differential Gage: Diaphragm actuated. 4" dial. Zero adjustment. Specifications. Individual items within assembly shall be separately protected with steel fan shafts shall be mounted in permanently lubricated ball bearings or ball (min.) flexible connection. Install with ample slack and uniform gap after Standard 210. Fans exposed to the weather shall have ventilated weatherproof Accuracy +/ - 2% of full scale. Range as required. Provide static pressure sensors, dead front, fused disconnect, fuse block, or circuit breaker for each ungrounded bearing pillow blocks. Bearings shall be selected for a minimum (L10) life in excess deflection of vibration isolators. There shall be no metal to metal contact across housing over motor and drive assembly. tubing and mounting brackets. Dwyer Series 2000. Mark gage to indicate filter conductor, all accessible on operating side of equipment. Switches, contacts and of 100,000 hours at maximum cataloged speeds. flexible connection. Protect outdoor connections with weatherproof metal shroud 2. Ceiling Fan: Ceiling mounted direct drive centrifugal exhaust fan with exhaust replacement pressure, coordinate point with filter and equipment manufacturers other devices shall be in ungrounded conductors. 5. Motors and Drives: Motors shall be energy efficient, complying with EPACT grille. Motor mounted on rubber-in-shear isolators. Motor and fan removable on top and sides, no metal-to-metal contact. Provide at all seismic joints. 8. Mixing Dampers: Opposed blade, 16-gage. Six-inch maximum blade width, 48" c. Motors: Shall be rated, constructed and applied in accordance with NEMA and standards, for single speed ODP and TE enclosures. Motors shall be permanently through grille. Acoustically lined housing. Backdraft damper. UL listed. Penn, 5. Ducted Returns: All air handling that is not directly located in the space that it maximum length. Nylon or oil impregnated bronze bearings. One-half inch diameter ANSI Standards without using service factor. Single-phase motor shall be of type lubricated, heavy-duty type, matched to the fan load and furnished at the specified serves shall have ducted returns. Cook, ACME, Greenheck or equal. pin shaft. 16-gage channel frame. One percent maximum leakage at 4" WC in to suit application. Three-phase motors shall be open drip proof, NEMA B design voltage, phase and enclosure. Drives shall be sized for a minimum of 150% of driven 6. Open ends of ductwork shall be covered during construction to keep inside clean. 3. Kitchen Hood Fan: Multivane centrifugal fan. Ball bearings. Vibration isolation on pumps and fans, NEMA C on reciprocating equipment, sealed ball bearing, mount. All aluminum construction with steel or aluminum wheel, and aluminum

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b. Tees: Tees shall be straight tap-in with extractor or 45 degree takeoff, as c. Duct Joints: Seal duct joints airtight with fiber tape and adhesive per manufacturer's printed instruction. Ducts in weather shall be sealed air and water tight with duct mastic before closing and taping.

i. Where Ductmate type joints are used, the manufacturer's designated procedure shall be followed. Ductmate joints on roof shall have continuous cleat on top duct flange to prevent water from collecting on

d. Dampers: Install volume control damper and damper regulator in all branch e. Duct dimensions shown on drawings for lined ducts, are clear net openings inside of lining.

each side to allow rain water to run off. Ducts that do not drain off top will be rejected and need to be replaced at contractors' expense. 2. Flexible Glass Fiber Ductwork: Hangers shall be 2" wide metal straps spaced to prevent sagging, 3 feet spacing maximum. Insert 6" wide fiberglass pad between duct and hanging strap. All joints and fittings shall be sheet metal and shall be installed with metal bands or 3 (min) self-tapping screws and fiber tape. Maximum length of flexible duct shall be 7 ft. Single piece minimum length shall be 3 ft.

Minimum turn radius shall be in accordance with SMACNA Standards (turn radius

f. Top of ducts exposed to weather shall be cross broken and sloped slightly to

to duct centerline not less than 1.5 times the duct diameter). 3.02 AIR TERMINALS AND DUCT FITTINGS INSTALLATION:

A. General: Unless otherwise noted, all air terminals and duct fittings shall be installed in accordance with current SMACNA "HVAC Duct Construction Standards", details on drawings and manufacturers instructions. Terminals and fittings shall be installed in a manner to prevent vibration and rattling.

B. Fire Smoke Damper: Fire smoke dampers shall be installed in accordance with their State Fire Marshal approval and the manufacturer's recommendations.

3.03 DUCTWORK INSULATION INSTALLATION:

A. General: All supply and return sheet metal ductwork shall be insulated.

B. Concealed Ductwork: Wrap ductwork with fiberglass blanket lapped 2" minimum. Secure with foil tape at all joints for a complete vapor barrier.

C. Acoustic Lining: All ductwork in equipment rooms, where exposed to weather, and elsewhere as indicated on drawings, shall have acoustic lining. Increase each sheet metal dimension to accommodate lining and maintain clear inside duct dimensions shown on drawings. Apply lining with bonding adhesive in accordance with manufacturer's recommendations and also secure with mechanical fasteners in accordance with SMACNA Standards. Seal exposed edges of lining with bonding adhesive.

3.04 PIPING INSTALLATION:

A. General: 1. Piping Layout: Piping shall be concealed in walls, above the ceilings, or below

grade unless otherwise noted. Exposed piping shall run parallel to room surfaces; location to be approved by Architect. No structural member shall be weakened by cutting, notching, boring or otherwise unless specifically allowed by structural drawings and/ or specifications. Where such cutting is required, reinforcement shall be provided as specified or detailed. All piping shall be installed in a manner to ensure unrestricted flow, eliminate air pockets, prevent any unusual noise, and permit complete drainage of the system. All piping shall be installed to permit expansion and contraction without strain on piping or equipment. Expansion joints and/or flexible connectors shall be installed as required. Vertical lines shall be installed to allow for building settlement without damage to piping. Lines shall be adequately braced against vertical and lateral movement. Pipe Support: a. General: Hangers shall be placed to support piping without strain on joints or

fittings. Maximum spacing between supports shall be as specified below. Actual spacing requirements will depend on structural system. Refer to drawings for additional requirements and attachment to structure. Vertical piping shall be supported at floor and ceiling. Support pipe within 12" of all changes in direction. No perforated straphanger shall be used in any work. b. Refrigerant Piping: Pipe shall be cut square. Joint surfaces shall be thoroughly cleaned, fitted and erected before brazing. Install specified accessories. After installation, evacuate to 29 inches of mercury, ambient temperature during evacuation shall not be less than 70 degrees F. After evacuation, fill with dry nitrogen to 250 psi and maintain for two-hour period without additional charge. After nitrogen test, purge with refrigerant charged through dryer and maintain holding charge in system and equipment. Refrigerant piping below grade shall be run in 4" (min.) PVC conduit with long radius ells. Seal ends of conduit

watertight. 3.05 PIPING INSULATION INSTALLATION:

A. Refrigerant Piping: Cover suction piping with foamed plastic insulation. Longitudinal and end seams shall be thoroughly cemented with adhesive in accordance with manufacturer's recommendation. Cover all fittings, unions, valves, and connections. Piping exposed to weather shall be covered with aluminum jacketing, seal all joints and

seams with grey outdoor mastic or silver silicone sealant. Piping exposed in room shall be covered with piping chase painted to match wall.

3.06 EQUIPMENT INSTALLATION:

A. General: It shall be the responsibility of the contractor to insure that no work done under other specification sections shall in any way block, or otherwise hinder access panels or diminish the effectiveness of equipment vibration isolation.

B. Connections to Equipment: Where size reductions are required for connections to equipment, they shall be made immediately adjacent to the equipment and, if possible, inside the equipment cabinet. Connections made to equipment mounted on vibration isolators shall be with flexible connectors, installed adjacent to equipment.

C. Start Up: Engage manufacturer or factory-authorized service representative to perform start up supervision. Manufacturer shall provide on-site start up and commissioning assistance through job completion. Complete installation and start up checks according to manufacturer's written instructions.

3.07 SYSTEM AIR BALANCE:

A. Scope: Provide the services of a qualified independent test and balance agency certified by the Associated Air Balance Council (AABC) or The National Environmental Balancing Bureau (NEBB) to test, adjust and balance, retest, and record performance of the system to obtain design quantities as specified. Balancing contractor must also be TABB certified and have a C-20 license.

B. Qualifications: Prior to commencing work, the agency shall be approved by the Owner's Representative.

C. Instruments: All instruments shall be accurately calibrated; calibration histories shall be available for examination. Application of instrumentation shall be in accordance with AABC standards.

D. Procedure: General: Balanced quantities shall be plus 5%, minus 5% of design quantities. All name-plate data, manufacturer, model, and serial numbers shall be recorded for each item tested.

E. Extended Warranty: The test and balance agency shall include an extended warranty of 90 days after completion of test and balance work, during which time the Owner's Representative at his discretion may request a recheck or resetting of any item or items in test report. The agency shall provide technicians to assist the Owner's Representative in making any tests he may require during this period of time.

F. Air Balance Procedure (for each Air Handling System):

1. All air filters shall be clean when air balance is performed.

2. Provide a sketch of the equipment showing exactly where all pressure readings were

3. Adjust blower RPM to design requirements.

Record motor full load amperes. 5. Make pitot tube traverse of main supply and return ducts and obtain design CFM at

6. Record system static pressures, inlet and discharge. 7. Record filter quantity, size(s) and pressure drop across filter(s) at each filter bank.

Adjust system for design CFM recirculated air. Adjust system for design CFM outside air.

10. Record entering air temperatures. (DB heating, DB and WB cooling.) 11. Record leaving air temperatures. (DB heating, DB and WB cooling.) 12. Adjust all main supply and return air ducts to design CFM.

applicable). Record applicable data from items 1 through 11 above.

13. Adjust all zones to design CFM, supply and return. 14. Adjust all diffusers, grilles and registers to plus 10%, minus 0% of design 15. Adjust CFM at all exhaust fans, make-up units, etc. (high and low speed, where

16. Each grille, diffuser and register shall be identified as to location. 17. Verify proper diffusion pattern for all ceiling grilles and that all sidewall grilles are set for 5 degrees downward deflection unless otherwise noted. Make a notation of any that are not set properly.

18. Size, type and manufacturer of diffusers, grilles, registers and all tested items shall be identified and listed. Manufacturer's ratings shall be used to make required

calculations on all items. 19. Readings and tests of diffusers, grilles, and registers shall include required FPM velocity and test resultant velocity, required CFM and test resultant CFM after adjustments.

20. In cooperation with the control manufacturer's representative, set adjustments of automatically operated dampers to operate as specified. Testing agency shall check all controls for proper calibrations and list all controls requiring adjustment by control installers.

21. All diffusers, grilles and registers shall be adjusted for required air patterns and to minimize drafts. 22. As a part of the work of this contract, THE AIR CONDITIONING CONTRACTOR

shall make any changes in pulleys, belts, dampers or the addition of dampers cleaning of insect screens and replacement of filters required for correct balance as recommended by air balance agency, at no additional cost to Owner. 23. Set, test and adjust packaged heating/ cooling unit economizer operation in cooperation with controls contractor. Record minimum and maximum outside and

G. Test, adjust and retest water bleed rates from evaporative coolers. Record all data.

END OF SECTION

exhaust airflows.

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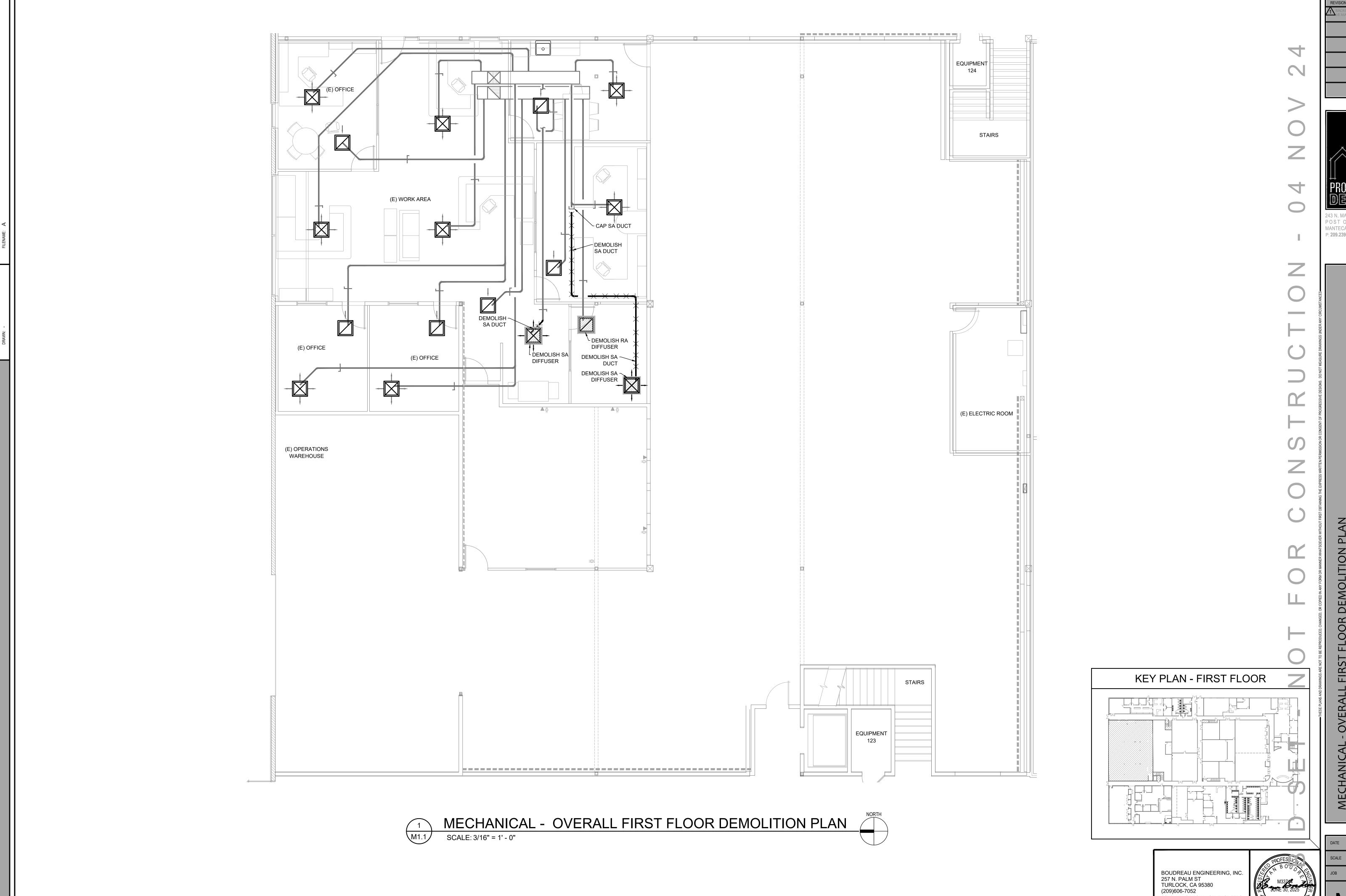
TURLOCK, CA 95380 (209)606-7052

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DATE 12 JULY 24 SCALE 1/4"=1'0"

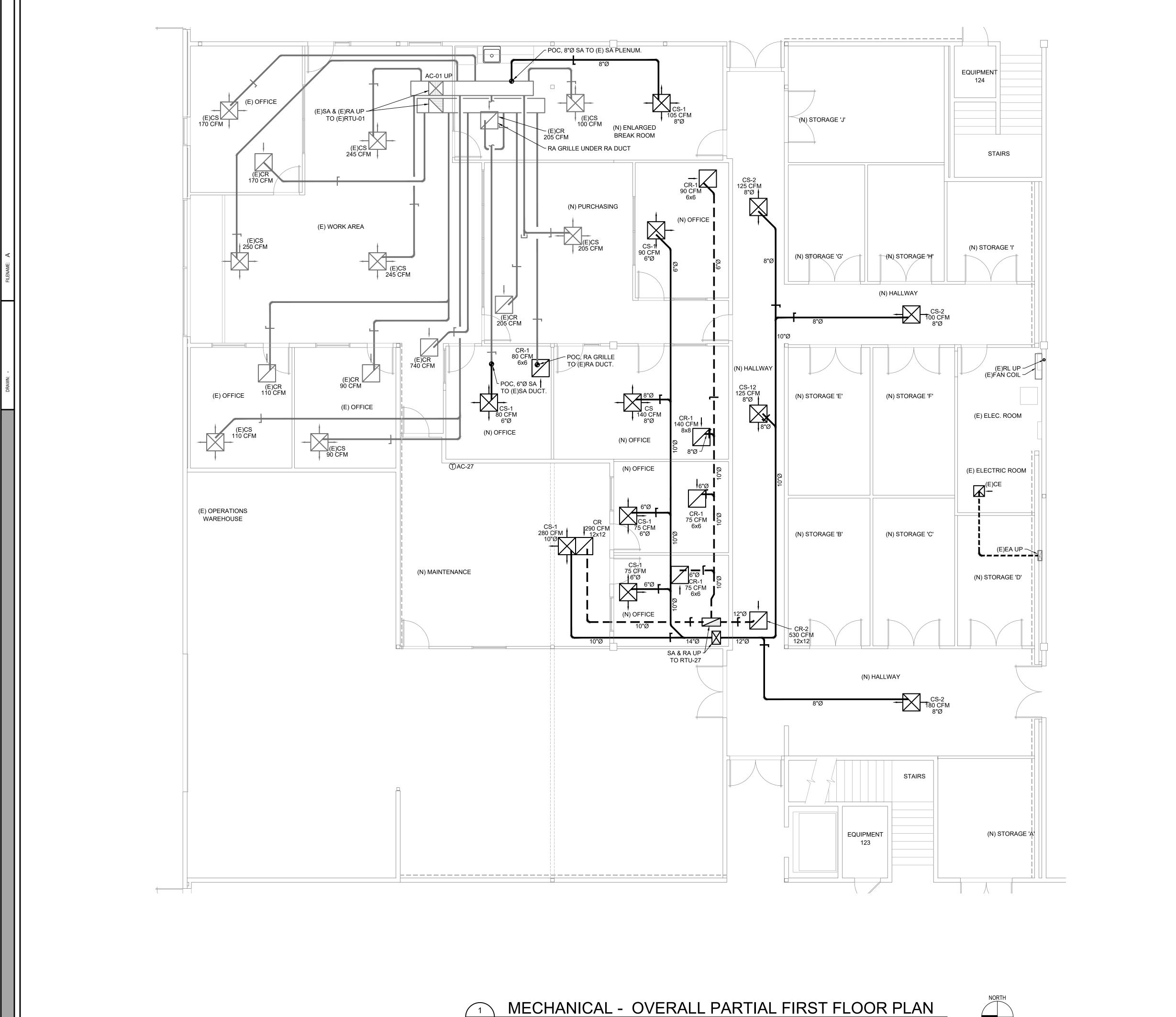


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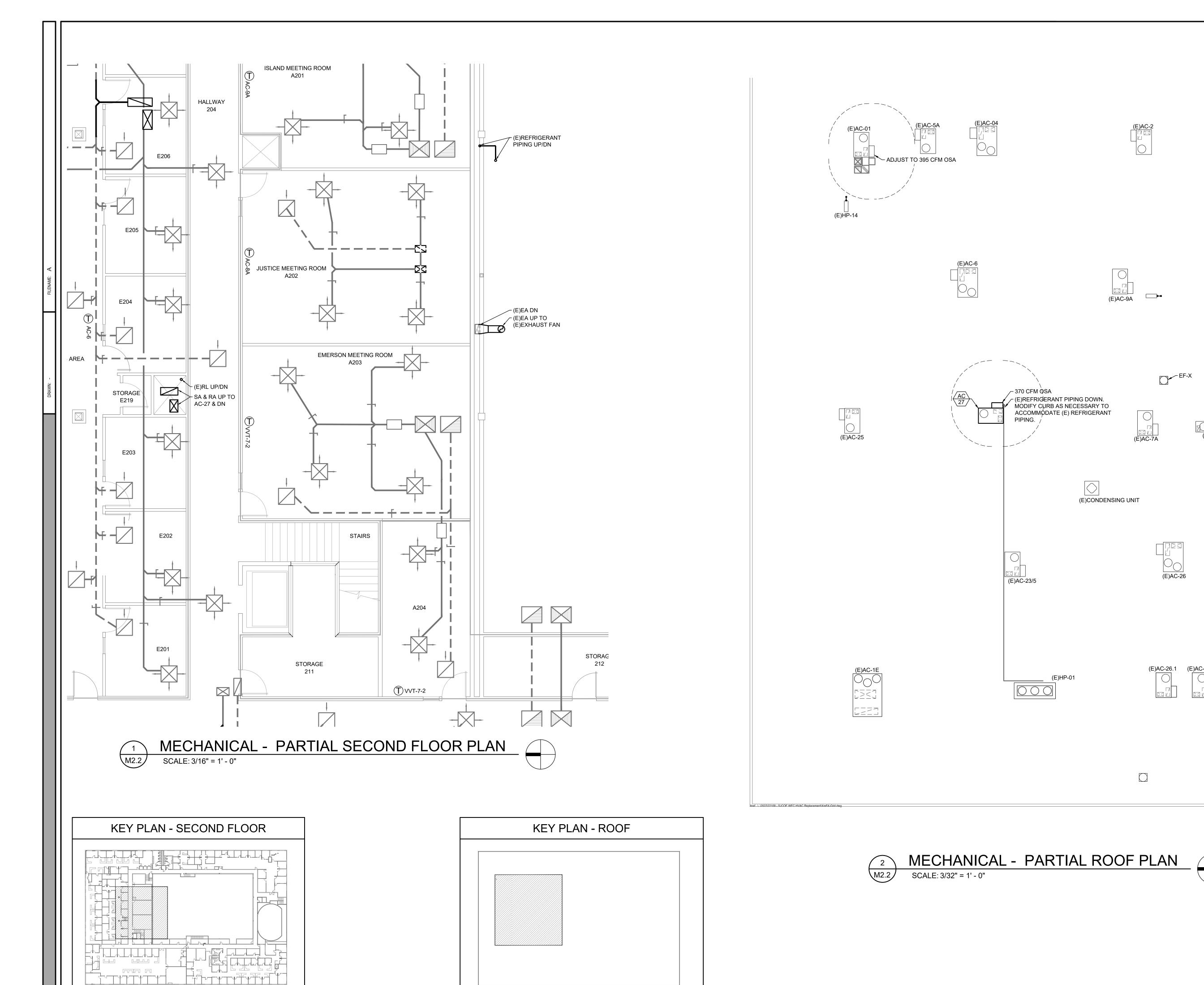
KEY PLAN - FIRST FLOOR

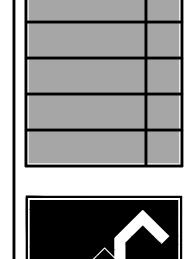
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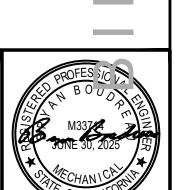
DATE 12 JULY 24 SCALE 1/4"=1'0"





243 N. MAPLE AVENUE, STE B POST OFFICE BOX 477

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DATE 12 JULY 24

SCALE 1/4"=1'0"



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(1) UPPER ATTACHMENT - SEE HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, SMACNA, CURRENT EDITION.

PROVIDE FRAMING, BLOCKING OR STRUCTURAL MEMBER AS MAY BE REQUIRED, COORDINATE STRUCTURAL COMPONENTS WITH STRUCTURAL PLANS OR WITH STRUCTURAL ENGINEER OF RECORD.

2 DUCT SUPPORT STRAP, WIRE OR ROD SEE TABLE BELOW FOR DETAILS.

(3) GALVANIZED SHEET METAL DUCT W/ ACOUSTIC LINING, SEE MECHANICAL PLANS FOR

(4) #10 x 3/4" SELF-TAPPING CADMIUM PLATED SHEET METAL SCREWS TO ANCHOR STRAPS TO DUCT. ALL STRAPS TO BE TIGHT AGAINST DUCT AND SUPPORT MEMBERS.

#### 1. DUCTWORK SHALL CONFORM WITH, HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, SMACNA, CURRENT EDITION.

- 2. HANGER SHALL BE POSITIVELY ATTACHED TO THE DUCT WITHIN 2" OF THE TOP OF THE DUCT WITH A MINIMUM OF TWO #10 SHEET METAL SCREWS EACH SIDE AND #10 SHEET METAL SCREW ON THE BOTTOM OF DUCT WITHIN 1" OF EACH SIDE. 3. DUCT WITH A CROSS-SECTIONAL AREA EQUAL TO OR GREATER THAN 6 SQUARE FEET, AND "L" GREATER THAN 12" REQUIRE
- 4. OSHPD ONLY SUPPLY & RETURN AIR DUCTS SERVING A HOSPITAL OR OTHER MEDICAL BUILDING SHALL NOT HAVE ACOUSTICALLY LINING OR INTERNALLY LINED INSULATION.

|--|

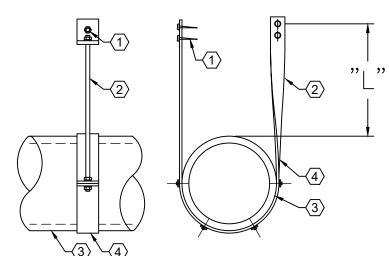
TABLE 3-1 RECTANGLE DUCT HANGERS WIINIWIUW SIZE									
MAXIMUM HALF OF	PAIR @ 10'-0" SPACING		PAIR @ 8'-0" SPACING		PAIR @ 5'-0" SPACING		PAIR @ 4'-0" SPACING		
DUCT PERIMETER	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	
P/2 = 30"	1"x0.030" (22 GA)	10 GA	1"x0.030" (22 GA)	10 GA	1"x0.030" (22 GA)	12 GA	1"x0.030" (22 GA)	12 GA	
P/2 = 72"	1"x0.047" (18 GA)	3/8"	1"x0.036" (20 GA)	1/4"	1"x0.030" (22 GA)	1/4"	1"x0.030" (22 GA)	1/4"	
P/2 = 96"	1"x0.058" (16 GA)	3/8"	1"x0.047" (18 GA)	3/8"	1"x0.036" (20 GA)	3/8"	1"x0.030" (22 GA)	1/4"	
P/2 = 120"	1 1/2"x0.058" (16 GA)	1/2"	1"x0.058" (16 GA)	3/8"	1"x0.047" (18 GA)	3/8"	1"x0.036" (20 GA)	1/4"	
P/2 = 168"	1 1/2"x0.058" (16 GA)	1/2"	1 1/2"x0.058" (16 GA)	1/2"	1"x0.058" (16 GA)	3/8"	1"x0.047" (18 GA)	3/8"	
P/2 = 192"	-	1/2"	1 1/2"x0.058" (16 GA)	1/2"	1"x0.058" (16 GA)	3/8"	1"x0.058" (16 GA)	3/8"	
D/2 > 102"		SDECIAL ANALYSIS DECLIDED							

				1			
P/2 ≥ 193"		SPECIAL ANALY	SPECIAL ANALYSIS REQUIRED				
WHEN STRAPS ARE L	AP-JOINED, USE THESE MINIMUM FASTE	NERS:	SINGLE HANGER MAXIMUI	M ALLOWABLE LOAD:			
1"x0.047", 0.036" 0.03	30" - TWO NO. 10 OR ONE 1/4" BOLT		STRAP	WIRE OR ROD (DIA.)			
1 1/2"x0.058" - TWO		1' 1' 1'	'x0.030" - 260 LBS 'x0.036" - 320 LBS 'x0.047" - 420 LBS 'x0.058" - 700 LBS 2"x0.058" - 1100 LBS	0.106" - 80 LBS 0.135" - 120 LBS 0.162" - 160 LBS 1/4" - 270 LBS 3/8" - 680 LBS 1/2" - 1250 LBS 5/8" - 2000 LBS 3/4" - 3000 LBS			

- DIMENSIONS OTHER THAN GAGE ARE IN INCHES. . TABLES ALLOW FOR DUCT WEIGHT 1 LB./SF INSULATION WEIGHT NORMAL REINFORCEMENT AND TRAPEZE WEIGHT BUT NO
- 3. STRAPS ARE GALVANIZED STEEL; OTHER MATERIALS ARE UNCOATED STEEL.
- 4. ALLOWABLE LOADS FOR P/2 ASSUME THAT DUCTS ARE 0.058" (16 GA) MAXIMUM, EXCEPT THAT WHEN MAXIMUM DUCT DIMENSION (W) IS
- OVER 60", THEN P/2 MAXIMUM IS 1.25W. 5. FOR TRAPEZE SIZES SEE, HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, SMACNA, CURRENT EDITION.
- 6. 12 GA, 10 GA OR 8 GA WIRE IS STEEL OF BLACK-ANNEALED, BRIGHT BASIC OR GALVANIZED TYPE.
- 7. CABLE HANGING SYSTEMS WITH ADJUSTABLE MECHANICAL DEVICE.



# RECTANGULAR DUCT HANGER DETAIL



(1) UPPER ATTACHMENT - SEE HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, SMACNA, CURRENT EDITION. PROVIDE FRAMING, BLOCKING OR STRUCTURAL MEMBER AS MAY BE REQUIRE, COORDINATE STRUCTURAL COMPONENTS WITH STRUCTURAL PLANS OR STRUCTURAL ENGINEER OF RECORD.

(2) HANGER ROD SEE TABLE, FOR SIZE SEE TABLE.

(3) GALV. SHEET METAL DUCT W/ ACOUSTIC LINING, SHEET METAL DUCT W/ EXTERNAL INSULATION OR VENT, SEE PLANS FOR SIZE.

4 STRAP, SEE TABLE FOR

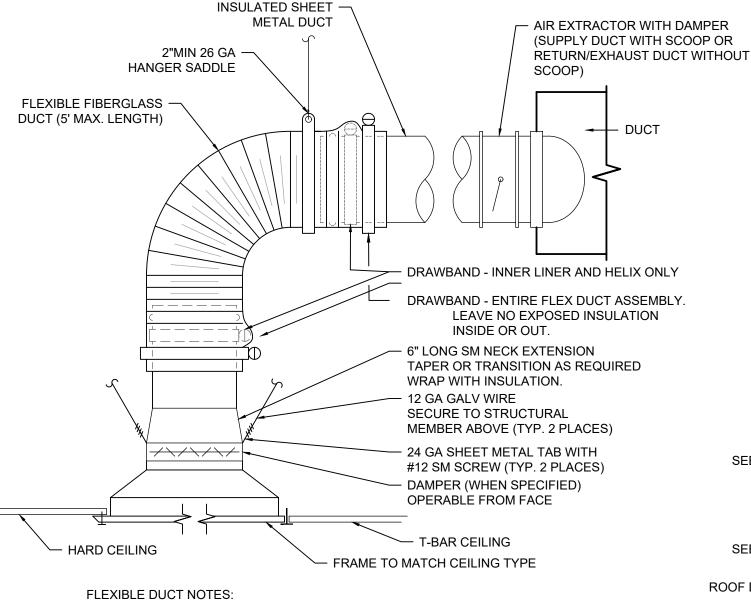
- 1. DUCTWORK SHALL CONFORM WITH, HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE, SMACNA, CURRENT EDITION.
- 2. DUCT WITH A CROSS-SECTIONAL AREA EQUAL TO OR GREATER THAN 6 SQUARE FEET, AND "L" GREATER THAN 12" REQUIRE SEISMIC BRACING.
- 3. OSHPD ONLY SUPPLY & RETURN AIR DUCTS SERVING A HOSPITAL OR OTHER MEDICAL BUILDING SHALL NOT HAVE ACOUSTICALLY LINING OR INTERNALLY LINED INSULATION.

TABLE 5-2	MINIMUM HAN	IGER SIZES FOR ROUND DU			
DUCT DIAMETER	MAXIMUM SPACING	ROD DIAMETER	STRAP		
<u>≥</u> 10"	12'	1/4"	1" x 0.030" (22 GA.)		
11" TO 18"	12'	1/4"	1" x 0.030" (22 GA.)		
19" TO 24"	12'	1/4"	1" x 0.030" (22 GA.)		
25" TOI 36"	12'	3/8"	1" x 0.036" (20 GA.)		
37" TO 50"	12'	2 @ 3/8"	2 @ 1" x 0.036" (20 GA.)		
51" TO 80"	12'	2 @ 3/8"	2 @ 1" x 0.037" (18 GA.)		
81" TO 94"	12'	2 @ 3/8"	2 @ 1" x 0.058" (16 GA.)		

#### STRAPS ARE GALVANIZED STEEL; RODS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL. ALL ARE

- TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS 1 LB./SF INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS; SEE ALLOWABLE LOAD LIMITS WITH TABLE 5-1. HANGER SPACING MAY BE ADJUSTED BY SPECIAL ANALYSIS.
- FOR INDUSTRIAL GRADE SUPPORTS, INCLUDING SADDLES, SINGLE POINT TRAPEZE LOADS, LONGER SPANS AND FLANGED JOINT LOADS, SEE SMACNA'S ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS.

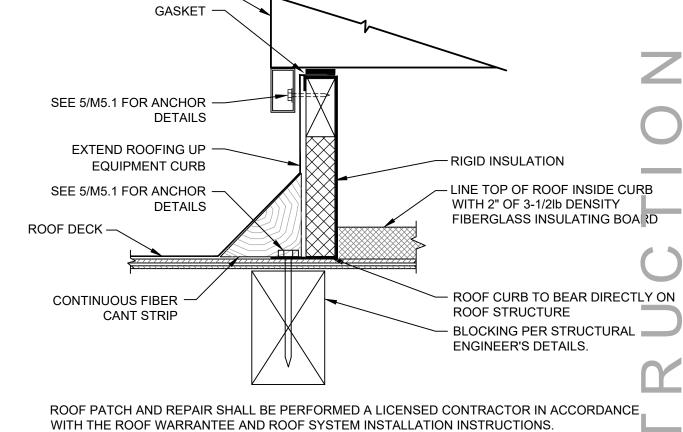




1. FLEXIBLE DUCTS SHALL CONSIST OF AN EXTERIOR REINFORCED LAMINATED VAPOR BARRIER, FIBER GLASS INSULATION (PER CEC STANDARDS), ENCAPSULATED SPRING STEEL WIRE HELIX AND IMPERVIOUS, SMOOTH, NON-PERFORATED INTERIOR VINYL LINER. INDIVIDUAL LENGTH OF FLEXIBLE DUCT SHALL

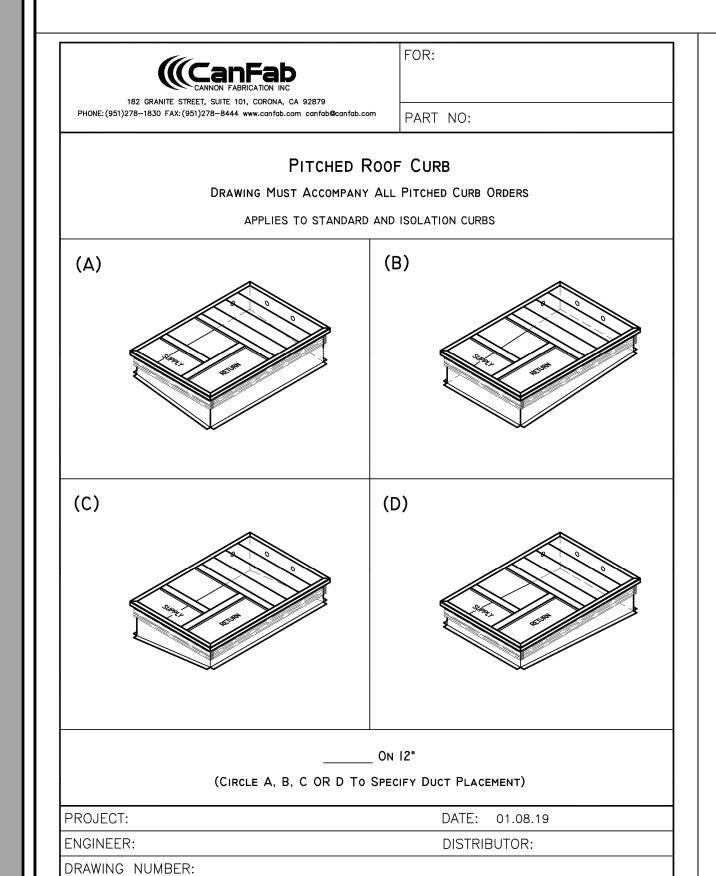
CONTAIN FACTORY FABRICATED STEEL CONNECTION COLLARS. 2. FLEXIBLE DUCTS SHALL BE SUPPORTED AT OR NEAR MID-LENGTH WITH 2" WIDE 28 GA. STEEL HANGER COLLAR ATTACHED TO THE STRUCTURE WITH AN APPROVED DUCT HANGER. INSTALLATION SHALL MINIMIZE SHARP RADIUS TURNS OR OFFSETS. THE MAXIMUM LENGTH WILL BE FIVE (5) FEET AND CAN BE USED AT THE TERMINAL ENDS ONLY, EXCEPT THAT FLEXIBLE DUCTS PROPERLY INSTALLED MAY BE USED TO CROSS SEISMIC JOINTS WITHOUT OFFSETS.

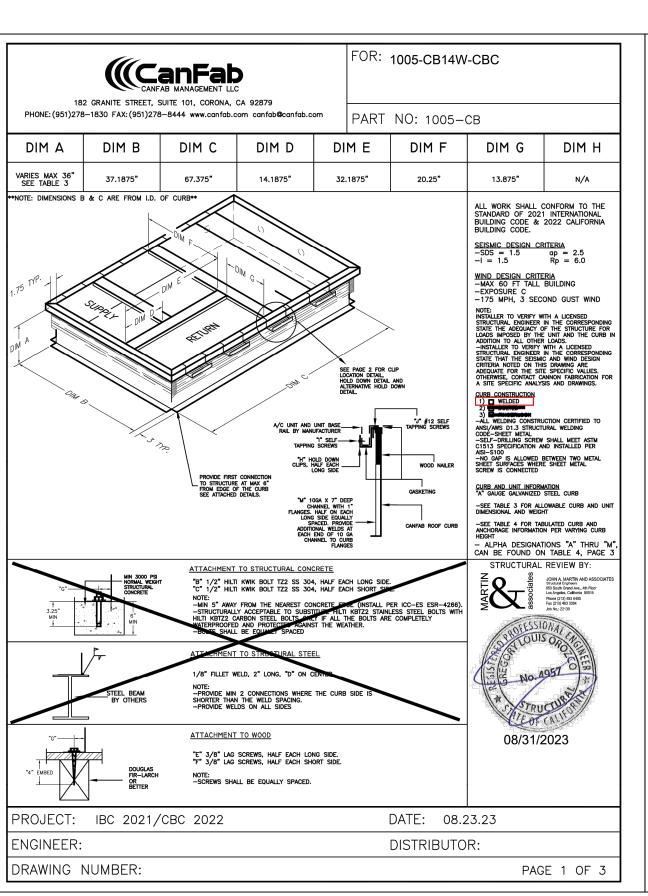
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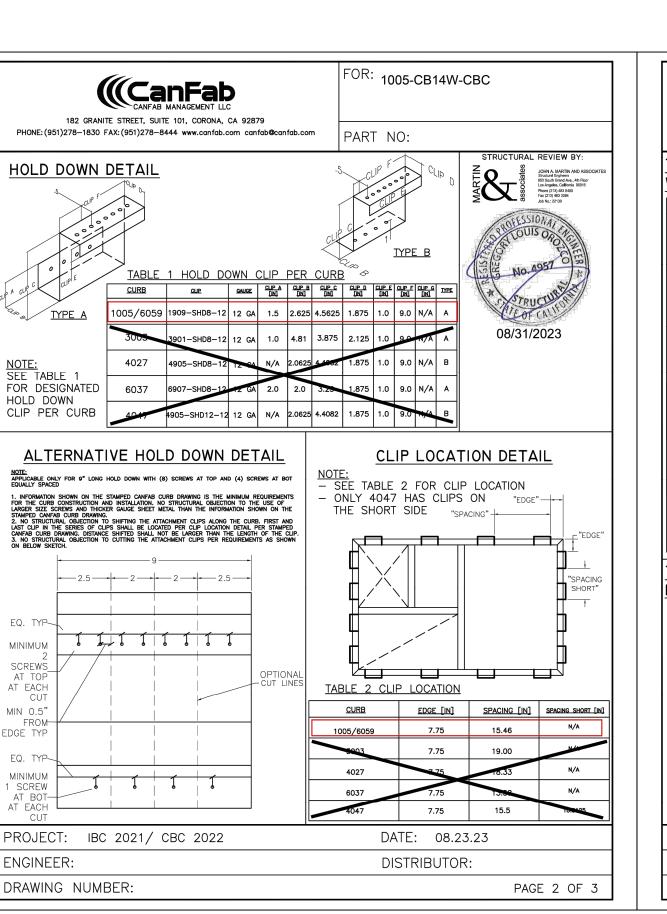


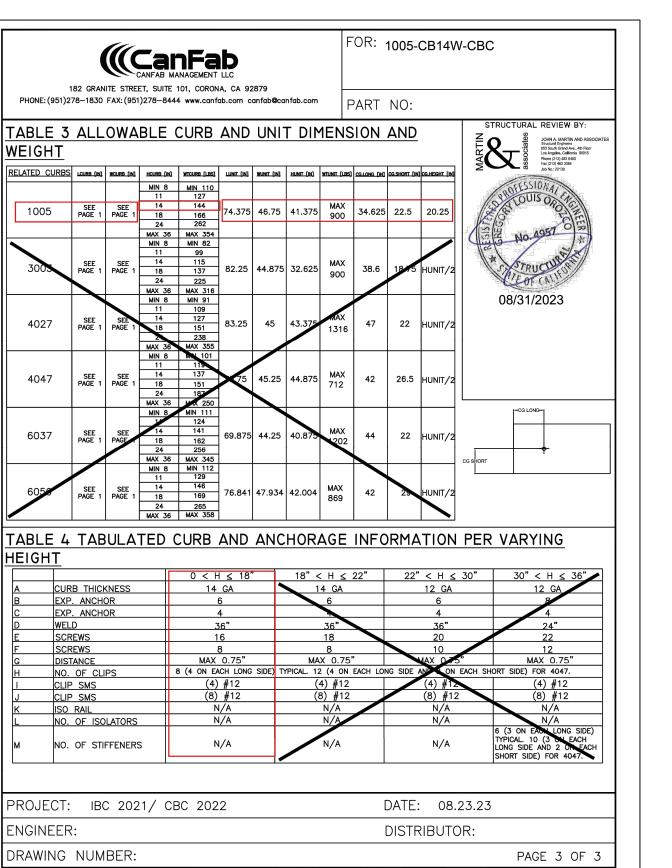
ROOF CURB DETAIL











BOUDREAU ENGINEERING, INC. 257 N. PALM ST TURLOCK, CA 95380

SCALE 1/4"=1'0" JOB 658-23-15/241<sup>-</sup>

ROOF CURB DETAILS SCALE: NTS

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DATE 12 JULY 24

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Ventilation Function

Office - Office space

Office - Office space

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

1-AC-01

3-AC-27

# of People

13.12

12.22

Supply OA CFM

393.48

366.72

Report Version: 2022.0.000

Schema Version: rev 20220601

Exhaust CFM

2623.2

2444.8

**DCV or Occupant Sensor** 

Controls, or Both

N/A

N/A

Report Generated: 2024-10-14 20:05:31

Compliance ID: EnergyPro-40090-1024-0055

Single Zone Heat

Pump (SZHP) Air

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

System

<sup>1</sup> Status: N - New, A - Altered, E - Existing

AC-27

COP

HSPF2

34.58

11.26

3.4

Report Version: 2022.0.000

Schema Version: rev 20220601

7.3

EER2

SEER2

35.14

11.7

Differential

Report Generated: 2024-10-14 20:05:31

Compliance ID: EnergyPro-40090-1024-0055

BOUDREAU ENGINEERING, INC.

CONSULTING MECHANICAL ENGINEERS

257 N. PALM ST

(209)606-7052

TURLOCK, CA 95380

NRCC-PRF-E

(Page 3 of 11)

Source Energy Use

Total<sup>2</sup> (kBtu/ft<sup>2</sup> - yr)

n/a

n/a

n/a

n/a

NRCC-PRF-E

(Page 6 of 11)

Margin

(MBtu)

0

**Proposed Design Site** 

10.2

10.2

10.2

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DATE 12 JULY 24 SCALE 1/4"=1'0" 658-23-15/241<sup>-</sup>

SHE

OF)

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD Nonresidential Performance Compliance Method N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION Selections made by Documentation Author indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online There are no Certificates of Verification applicable to this project

Report Version: 2022.0.000

Schema Version: rev 20220601

Report Generated: 2024-10-14 20:05:31 Compliance ID: EnergyPro-40090-1024-0055

NRCC-PRF-E

(Page 10 of 11)

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E Nonresidential Performance Compliance Method (Page 11 of 11) **Documentation Author's Declaration Statement** 1. I certify that this Certificate of Compliance documentation is accurate and complete. Documentation Author Name: Bryan Boudreau Documentation Author Signature: Bujun Boudreen Signature Date: 2024-10-14 Company: Boudreau Engineering Inc. CEA/HERS Certification Identification (if applicable): M33714 Address: 257 Palm Street City/State/Zip: Turlock, CA 95380-4028 Phone: (209)606-7052

**Responsible Person's Declaration statement** 

I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct.

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this

Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable

compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. 5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to

the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement. 6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at

occupancy, and I will take the necessary steps to accomplish these requirements. Responsible Designer Name: Bryan Boudreau Responsible Designer Signature: Bujun Bouleau Company: Boudreau Engineering Incorporated Address: 965 Yosemite Avenue Suite #16 Date Signed: 2024-10-14 City/State/Zip: Manteca, CA 95336 License #: M33714 Phone: 2096067052 Title: Principal

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

Compliance ID: EnergyPro-40090-1024-0055

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

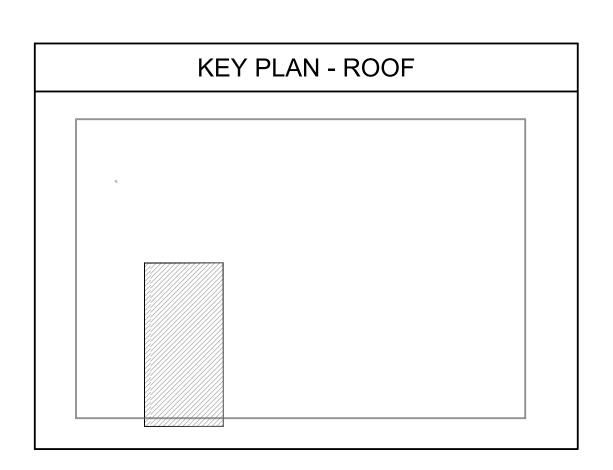
SCALE: NOT TO SCALE

└- 3/4" CD TO RAIN GUTTER

PLUMBING - OVERALL ROOF PLAN

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

COF WEC HVAC Replacement\Xref\X-Grid.dwg



## PLUMBING GENERAL NOTES

CONTRACTOR SHALL PROVIDE PLUMBING FIXTURES, EQUIPMENT, AND SERVICE PIPING AS GENERALLY DELINEATED ON THE PLUMBING DRAWINGS. WORK SHALL INCLUDE SERVICE PIPING AND FINAL CONNECTIONS TO EQUIPMENT FURNISHED AND INSTALLED BY OTHER TRADES AS MAY BE SHOWN ON THE ARCHITECTURAL, MECHANICAL, ELECTRICAL OR OTHER DRAWINGS OF THE CONTRACT DOCUMENTS.

CALIFORNIA CODE OF REGULATIONS:

ALL HOT WATER DISTRIBUTION AND CIRCULATION LINES SHALL BE INSULATED IN ACCORDANCE WITH SECTION 120.3 OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6, SUBCHAPTER 3. ALL PLUMBING FIXTURES & EQUIPMENT USED (E.G. SHOWERHEADS, LAVATORY FAUCETS, SINK FAUCET AND WATER HEATERS) SHALL BE CERTIFIED TO COMPLY WITH EFFICIENCY STANDARDS, AS LISTED BY THE CALIFORNIA ENERGY COMMISSION FOR SUCH APPLIANCES. BY ITS MANUFACTURER.

CODES: ALL WORK, MATERIAL, AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY HAVING JURISDICTION. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT THE INSTALLATION OF WORK, MATERIAL OR EQUIPMENT NOT CONFORMING TO THESE OR OTHER CODES APPLICABLE TO

A. 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1.

B. 2022 CALIFORNIA BUILDING CODE (CBC), CCR TITLE 24, PART 2, BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC).

C. 2022 CALIFORNIA ELECTRICAL CODE (CEC), CCR TITLE 24, PART 3, BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC). D. 2022 CALIFORNIA MECHANICAL CODE (CMC), CCR TITLE 24, PART 4, BASED ON THE 2021

UNIFORM MECHANICAL CODE (UMC). E. 2022 CALIFORNIA PLUMBING CODE (CPC), CCR TITLE 24, PART 5, BASED ON THE 2021

UNIFORM PLUMBING CODE (UPC). F. 2022 CALIFORNIA ENERGY CODE (CEC), CCR TITLE 24, PART 6.

G. 2022 CALIFORNIA FIRE CODE (CFC), CCR TITLE 24, PART 9, BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC)

H. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, CALGREEN®, CCR TITLE 24, PART 11 WORKMANSHIP:

ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER ACCORDING TO THE BEST TRADE PRACTICE BY THOSE SKILLED IN THE PARTICULAR TRADE. EQUIPMENT, FIXTURES, PIPING, ETC., SHALL BE PLUMB, LEVEL, SQUARE AND/OR CENTERED, ETC. EQUIPMENT TO BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.

EXISTING INFORMATION: LOCATION, SIZE, ELEVATION, MATERIAL, ETC., OF EXISTING UTILITIES IS PROVIDED FROM SOURCES DEEMED RELIABLE BUT IS NOT GUARANTEED. THE CONTRACTOR SHALL FIELD VERIFY ALL DATA BEFORE PROCEEDING WITH ANY WORK. NO EXTRA COST WILL BE ALLOWED FOR SERVICES NOT AS

PERMITS AND UTILITY SERVICE FEES:

THE PLUMBING CONTRACTOR SHALL ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS, AND SERVICE CHARGES REQUIRED FOR THE INSTALLATION OF THE WORK.

PLANS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND LOCATION OF WALLS, PARTITIONS, FIXTURES, ETC., AGAINST DESIGN PLANS FOR CONSISTENCY AND

ACCURACY PRIOR TO COMMENCING WORK. PROVIDE AND INSTALL CONDENSATE DRAIN WITH TRAP AT EACH A/C UNIT PER THE CPC, AT LOCATIONS SHOWN ON DRAWINGS. COORDINATE WORK WITH THE MECHANICAL CONTRACTOR.

). PROVIDE AND INSTALL ACCESS PANELS FOR ALL SHUT-OFF, ISOLATION, OR BRANCH VALVES NOT READILY ACCESSIBLE. ACCESS PANELS SHALL BE PROVIDED AND INSTALLED AT ALL TRAP PRIMER VALVES AND WATER HAMMER ARRESTORS.

1. ALL PIPING PASSING THROUGH CONCRETE FLOORS SHALL BE SLEEVED TO PROTECT PIPING

. HORIZONTAL DRAINAGE PIPING LESS THAN 4" IN DIAMETER SHALL BE SLOPED AT A MINIMUM OF 1/4" PER L.F. (2%) DRAINAGE PIPING 4" AND LARGER SHALL BE SLOPED AT A MINIMUM OF 1/8" PER L.F.

13. ALL PLUMBING FIXTURES AND PIPING SHALL BE LISTED BY AN APPROVED LISTING AND TESTING AGENCY AND PROPERLY LABELED. INSULATING MATERIALS APPLIED TO THE SURFACE OF DUCTS AND PIPES SHALL HAVE A FLAME

INDEX NOT TO EXCEED 25 AND A SMOKE-DEVELOPED INDEX NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, PER 2022 CMC, SECTION 602.2. . DISINFECT ALL DOMESTIC WATER PIPING PER 2022 CPC SECTION 609.10.

. PRESSURE TEST WATER PIPING PER 2022 CPC SECTION 609.4. . PRESSURE TEST WASTE PIPING PER 2022 CPC SECTION 712.0.

## PIPING MATERIAL SPECIFICATIONS

A. CONDENSATE DRAIN: (CD)
PIPE: COPPER TYPE L PER ASTM B-88 FITTINGS: WROUGHT COPPER PER ANSI 16.22

SYMBOL	ABBREVIATION	DESCRIPTION	
	SS	SOIL, WASTE OR SANITARY SEWER BELOW FLO	OR
	SS	SOIL, WASTE OR SANITARY SEWER OVERHEAD	
	V	VENT PIPING	
	CW, ICW	COLD WATER, INDUSTRIAL COLD WATER	
	HW, IHW (110°)	HOT WATER SUPPLY, INDUSTRIAL HOT WATER	
	HWR	HOT WATER RETURN	
G	G	NATURAL GAS	
<del>* * * * * * * * * * * * * * * * * * * </del>	(E)	EXISTING TO BE REMOVED	
—D—OR—_IW—	D OR IW	DRAIN OR INDIRECT WASTE	
co	CD	CONDENSATE DRAIN	
	AFG	ABOVE FINISHED GRADE	
	AD, AP	ACCESS DOOR, ACCESS PANEL	
<del></del>	AC	AIR CHAMBER	
<del></del>	BV	BALL VALVE	
<del></del>		BRANCH - TOP CONNECTION	
<del></del>		BRANCH - BOTTOM CONNECTION	
		BRANCH - SIDE CONNECTION	
$\bowtie$	CBV	CALIBRATED BALANCE VALVE	
<b>─────</b>	BFV	BUTTERFLY VALVE	
0	CB, RD	CATCH BASIN, ROOF DRAIN	
— <del></del>	CKV	CHECK VALVE	
— co <u>≪co</u>	со	CLEANOUT PLUG	-
	CR	CONCENTRIC REDUCER	
Ø	DIA	DIAMETER	
	ER	ECCENTRIC REDUCER	(
	FC	FLEXIBLE CONNECTOR	
<b>(</b> )	FCO	FLOOR CLEANOUT	-
	FD	FLOOR DRAIN	ı
$-\!\!\bowtie\!\!-\!$	GV	GATE VALVE	П
<del></del> -	GSCK, PC	GAS COCK, PLUG COCK	
	GPR	GAS PRESSURE REGULATOR	
—— <b>&gt;</b>	GL. V.	GLOBE VALVE	
ф	GCO	GRADE CLEANOUT	
<del></del>	НВ	HOSE BIBB	
<del></del>	AN	PIPE ANCHOR	
<del></del>	PG	PIPE GUIDE	ŀ
•	POC	POINT OF CONNECTION	ı
	PRV	PRESSURE REDUCING VALVE	П
	PG	PRESSURE GAUGE	
	T&PR	TEMPERATURE & PRESSURE RELIEF VALVE	
<b>──</b>	SOV	SHUT OFF VALVE	_
<u> </u>	STR	STRAINER	
Ψ	TH	THERMOMETER	
—_TP—_	TP	TRAP PRIMER	
<b>─</b> ──  <b>├</b> ──	UN	UNION OR FLANGE	
$\Theta$	WCO	WALL CLEANOUT	

PLUMBING LEGEND

SHEET INDEX								
SHEET NO.	DESCRIPTION							
P0.0 P0.1	PLUMBING - LEGEND, NOTES & SCHEDULES, PARTIAL PLAN & DETAILS PLUMBING - SPECIFICATIONS SHEET 1							
P0.2	PLUMBING - SPECIFICATIONS SHEET 2							

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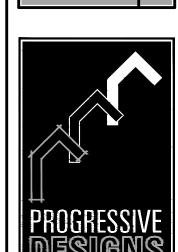
MANTECA, CALIFORNIA 95336

P: **209.239.1229** /F: 209.239.4880

DATE 12 JULY 24 SCALE 1/4"=1'0"

658-23-15/241<sup>-</sup>

BOUDREAU ENGINEERING, INC 257 N. PALM ST TURLOCK, CA 95380 (209)606-7052 CONSULTING MECHANICAL ENGINEERS



OST OFFICE BOX 477 MANTECA, CALIFORNIA 95336 : 209.239.1229 /F: 209.239.4880

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DATE 12 JULY 24

BOUDREAU ENGINEERING, INC.

CONSULTING MECHANICAL ENGINEERS

257 N. PALM ST TURLOCK, CA 95380 (209)606-7052

SCALE 1/4"=1'0" JOB 658-23-15/2411

- b. 3" and larger pipe 30".
- Miscellaneous: a. Escutcheons: Provide chromium plated escutcheons where piping penetrates walls, ceilings or floors in finished areas. b. Pipe Sleeves: All piping passing through concrete shall be provided with pipe
- sleeves. Allow 1" clearance between sleeve and pipe or pipe insulation. c. Dielectric Couplings: Dielectric couplings shall be installed wherever piping of dissimilar metals are joined.
- d. Shock Absorbers: Install per manufacturers recommendations.

#### B. Sanitary Sewer Piping:

- 1. General: Where inverts are not indicated, sanitary sewer piping shall be installed at 1/4" per foot pitch. Piping 4" and larger may be installed at 1/8" per foot pitch where structural or other limitations prevent installation at a greater pitch. 2. Cleanouts: Install cleanouts at ends of lines, at changes of direction greater than 45 degrees, and at not greater than 100 foot intervals. Locate interior cleanouts in accessible locations and bring flush to finished surface. Cleanouts at urinals shall
- be installed above urinal. 3. Vents: Vents shall terminate not less than 6" above the roof nor less than 12" from any vertical surface nor within 10 feet of any outside air intake. Install horizontal vent lines at 1/4" per foot pitch. Offset vents 2 feet minimum from gutters, parapets, ridges and roof flashing.
- C. Water Piping: Connections to branches and risers shall be made from the side of the main. Supply header in fixture battery shall be full size to last fixture, reducing in size only on individual connections to each fixture in battery. Provide ball valve shutoff for each building and at each connection to equipment and trap primers. Shock absorbers shall be installed in a vertical position at end of branch runs as specified in this section whether specifically shown or not on drawings. Connections to equipment shall be made with flexible connectors. Non-metallic pipe shall have 18 AWG copper tracer wire laid on top of pipe and taped in place at 15-foot spacing, terminate 4" above grade at ends of pipe runs.
- D. Gas Piping: Shall be pitched to drain to drip legs at each piece of equipment. No unions shall be installed except at connections to equipment. Provide shutoff at each equipment connection. Connections to equipment shall be made with flexible connectors. Under floor piping shall be sleeved, sealed and vented. Polyethylene or polyvinyl chloride pipe and fittings shall be joined in accordance with manufacturer's recommendation. Metal-to-plastic transition fittings shall be installed at all transitions. Non-metallic pipe shall have 18 AWG copper tracer wire laid on top of pipe and taped in place at 15-foot spacing, terminate 4" above grade at ends of pipe runs. All gas below grade shall have continuous caution tape installed 12" above gas line. All exposed gas piping shall be primed and painted, see painting section.

- E. Condensate Drain Piping: Install with constant pitch to receptacle, 1/4" per foot where possible, otherwise 1/8" per foot minimum. Provide trap at each air handling unit to prevent air leakage. Connections to equipment shall be made with flexible connection unless connection is internally isolated.
- F. Storm Drain Piping: Install at 1/4" per foot pitch.
- G. Flue Piping: Flue piping shall be installed in accordance with its UL listing and manufacturer's instructions.
- 3.02 PIPING INSULATION INSTALLATION
- A. Domestic Tempered Water Supply:
- 1. General: All domestic tempered water supply piping, except for exposed connections to fixtures, shall be insulated.
- 2. Install elastomeric pipe insulation by slipping over end of pipe. Where not feasible, slit insulation longitudinally, snap over piping and seal with adhesive. Insulate fittings with larger diameter sleeves or insulation, lapping pipe insulation a minimum of 2 in.
- 3. Butt sections of insulation tightly together and seal with adhesive to provide a continuous vapor and thermal barrier.

insulation. Cover blanket with PVC jacket in accordance with manufacturer's

recommendations. Seal all joints with factory supplied pressure sealing vapor

barrier tape with 2" (min.) overlap on both sides of joint. Insulate valves to

- 4. Pipe: Apply pre-molded fiberglass sections to pipe using integral pressure sealing lap adhesive in accordance with manufacturer's recommendations. Stagger longitudinal joints. Seal butt joints with factory supplied sealing tape. Fittings and Valves: a. Wrap fitting with pre-cut fiberglass blanket to thickness matching adjoining
- b. For miscellaneous fittings for which PVC jackets are not available or where proximity of fittings precludes a neat-appearing installation, the contractor may cover the fiberglass blanket with stretchable glass fabric and at least two coats of vapor barrier coating. All exposed ends of insulation shall be adequately

#### B. ADA Compliant Fixtures:

1. At sinks/ lavatories which are to be ADA Compliant, the p-trap and angle stop assemblies shall be insulated with Trap Wrap Protective Kit 500R by Brocar, Truebro Handi Lav-Guard #102W or #105W or equal. Abrasion resistant exterior cover shall be smooth and have 1/8" wall minimum over cushioned foam insert. Fasteners shall remain substantially out of sight.

#### 3.03 FIXTURE INSTALLATION:

- A. Fixture Height: Shall be standard height except those specified as ADA Compliant. Such fixtures shall be mounted in accordance with CCR Title 24, Section 1115B.7 and drawing details.
- B. Wall Hung Fixtures: Shall be provided with proper backing and hanger plates secured to wall. Fixtures mounted on carriers shall bear against stop nuts, clear of wall surface. Caulk fixtures against walls with white G.E. "Sanitary SCS1700" silicone sealant. Caulking shall be smooth and flush with fixture surface (not concave).
- C. Floor Drains or Floor Sinks: Shall be placed parallel to room surfaces, set level, flush with floor and adjusted at proper height to drain and easily accessible for inspection and cleaning. Cover openings during construction to keep all foreign matter out of drain

D. Other Connections: Rough-in and connection for trim or fixtures supplied by others

shall be included in this specification section. E. Floor Mounted Fixtures: Shall be provided with proper support plates. Caulk fixtures against floors with white G.E. "Sanitary SCS1700" silicone sealant. Caulking shall be smooth and flush with fixture surface (not concave).

#### 3.04 EQUIPMENT INSTALLATION:

- A. General: It shall be the responsibility of the equipment installer to insure that no work done under other specification sections shall in any way block, or otherwise hinder the
- B. Connections to Equipment: Where size reductions are required for connections to equipment, they shall be made immediately adjacent to the equipment and, if possible, inside the equipment cabinet.

#### 3.05 TESTS AND ADJUSTMENTS:

A. General: Unless otherwise directed, tests shall be witnessed by the Owner's Representative. Work to be concealed shall not be enclosed until prescribed tests are made. Should any work be enclosed before such tests, the Contractor shall, at his expense, uncover, test and repair his work, and that of other contractors, to original conditions. Leaks and defects shown by tests shall be repaired and entire work retested. Tests may be made in sections. However, all connections between sections previously tested and new section shall be included in the new test. New sections shall be isolated from existing sections for testing purposes. There shall be no drop in pressure during test except that due to ambient temperature changes. All components of system not rated for test pressure shall be isolated from system before test is made. Test the new sections or branches of piping only.

#### B. Gravity System:

- 1. Sanitary Sewer: All ends of the new sections of sewer system shall be capped and lines filled with water to the top of the highest vent, 10 feet above grade minimum. This test shall be made before any fixtures are installed. Test shall be maintained until all joints have been inspected, but no less than 2 hours. 2. Condensate Piping: Maintain 15 psig water pressure for a duration of 4 hours.
- C. Pressure Systems: 1. General: There shall be no drop in pressure during test except that due to ambient
- temperature changes. All components of system not rated for test pressure shall be isolated from system before test is made. Test the new sections or branches of
- 2. Domestic Tempered & Cold Water Piping: Maintain 60 psig water pressure for a minimum duration of 2 hours. 3. Gas Piping: Maintain 60 psig air pressure for a minimum duration of 2 hours.

#### D. Accessible Lavatories:

1. Faucet controls and operating mechanisms shall be installed and tested to comply per CBC Section 11B-606.4.

#### 3.06 DISINFECTION:

A. Disinfect all domestic hot and cold water piping systems in accordance with AWWA Standard C651, "AWWA Standard for Disinfecting Water Mains". Disinfection process shall be performed by certified testing agency or in cooperation with health department having jurisdiction and witnessed by a representative of the Architect. During procedure, signs shall be posted at each water outlet stating, "Chlorination - Do Not Drink". After disinfection, water samples shall be collected by certified testing agency or by health department for bacteriological analysis. Certificate of Bacteriological Purity shall be obtained and delivered to the Owner through the Owner's Representative.

END OF SECTION

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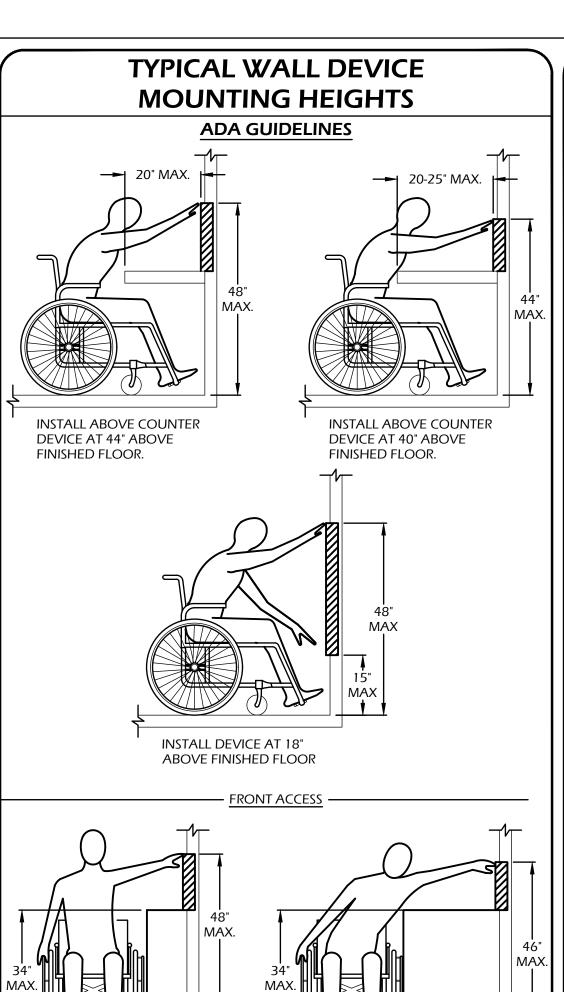
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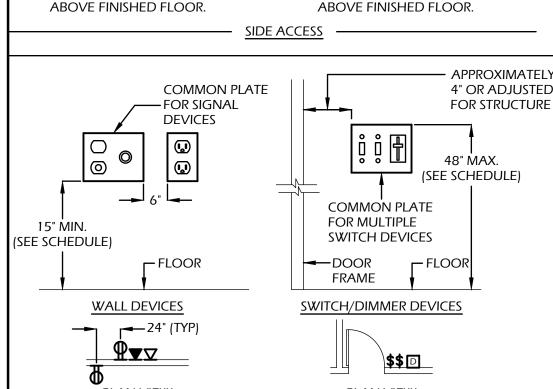
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BOUDREAU ENGINEERING, INC. 257 N. PALM ST

CONSULTING MECHANICAL ENGINEERS

TURLOCK, CA 95380 (209)606-7052





**INSTALL DEVICE AT 44"** 

10-24" MAX.

**INSTALL DEVICE AT 42"** 

PLAN VIEW	<u>PLAN VIEW</u>
DEVICE TYPE	MOUNTING HEIGHT
SWITCHES	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
DIMMERS	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
RECEPTACLES	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
TEL. OUTLETS (OFFICE)	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
TEL. OUTLETS (CLASSROOMS)	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
DATA OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
INTERCOM OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
TELEVISION OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
MICROPHONE OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
RECEPTACLES, OUTLETS, SWITCHES, ETC. MOUNTED ABOVE COUNTERS	WITHIN THE REACH RANGE SPECIFIED IN SECTION 11B-308 OF THE CALIFORNIA BUILDING CODE.
CLOCKS	AS SHOWN ON DRAWINGS
SPEAKERS	AS SHOWN ON DRAWINGS
HAND DRYERS	REFER TO ARCHITECTURAL PLANS
HAIR DRYERS	REFER TO ARCHITECTURAL PLANS
WALL SCONCES	ABOVE 80" FOR PROJECTIONS INTO CORRIDORS OF MORE THAN 4" OR AS SHOWN ON DRAWING
EXIT LIGHTS	SEE DETAILS
EXIT MARKERS	SEE DETAILS
EMERGENCY LIGHTING WALL PACK	AS SHOWN ON DRAWINGS
KEYPADS	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
WIREMOLD	MOUNTING HEIGHT SHALL BE SUCH THAT THE LOWEST DEVICE MOUNTED ON WIREMOLD IS AT 15" A.F.F. TO BOTTOM OF DEVICE, U.O.N.
NOTES	

ALL VERTICAL MEASUREMENTS ARE 'ABOVE FINISHED FLOOR' - (A.F.F.). SEE DRAWINGS FOR NON-TYPICAL MOUNTING HEIGHTS.

WHERE MOUNTING HEIGHTS ARE NOT SHOWN, REFER TO ARCHITECTURAL PLANS RECEPTACLES, LIGHT SWITCHES, TELEPHONE-DATA OUTLETS AND OTHER RECESSED ELECTRICAL DEVICES THAT ARE SHOWN BACK-TO-BACK ON WALLS SEPARATING CORRIDORS, ROOMS AND OPEN AREAS SHALL BE SEPARATED HORIZONTALLY BY AT LEAST 24 INCHES. THIS REQUIREMENT IS TO SATISFY BOTH THE CONDITIONS AT FIRE RATED CORRIDORS AND SOUND TRANSMISSION FACTOR BETWEEN ALL CORRIDORS, ROOMS AND OPEN AREAS INCLUDING EXTERIOR

# STANDARD SYMBOL LEGEND

# FIXTURE DESIGNATOR - '#' INDICATES FIXTURE TYPE

LIGHT FIXTURE - APPROXIMATELY TO SCALE FIXTURE WITH 90 MINUTE EMERGENCY BATTERY BACK-UP UNIT - SEE TYPICAL

LIGHT FIXTURE - WALL OR CEILING MOUNTED. '3' INDICATES CIRCUIT, 'a' INDICATES SWITCH CONTROL.

**EXIT LIGHTS- CEILING OR WALL MOUNTED, ARROW(S) INDICATES DIRECTION.** 

EXISTING POLE LIGHTING

CEILING MOUNTED MOTION SENSOR: NLIGHT #NCM-PDT-10-RJB

NLIGHT #NPODM LOW VOLTAGE SWITCH, 'a' INDICATES CONTROL

NLIGHT # NPODM-DX DIMMER SWITCH, 'a' INDICATES CONTROL

NLIGHT #NCM-ADCX-RJB PHOTOSENSOR NLIGHT #NPP20 PLUG LOAD CONTROLLER

— PANEL IDENTIFICATION

— CIRCUIT IDENTIFICATION

— SWITCH-LEG IDENTIFICATION

LIGHTING AND RECEPTACLE ROOM CONTROLLERS SHALL BE LOCATED ABOVE THE I-BAR CEILING FOR THE ROOMS THEY ARE CONTROLLING. IF THE ROOM WITH THE CONTROLLED DEVICES HAS A HARD CEILING THEN LOCATE THE ROOM CONTROLLERS AT THE NEAREST ADJACENT ROOM WITH A T-BAR CEILING. IF NO T-BAR CEILINGS EXISTS LOCATE THE ROOM CONTROLLERS IN THE ELECTRICAL ROOM. LABEL ALL ROOM LIGHTING AND RECEPTACLE CONTROLLERS WITH THE ROOM NAME, ROOM NUMBER, AND CIRCUIT(S) THEY CONTROL.

SKYLIT OR PRIMARY SIDE DAYLIT ZONE

SECONDARY SIDE DAYLIT ZONE

\$a SPST TOGGLE WALL SWITCH - 20A, 120/277V, `a' INDICATES CONTROL **\$**<sub>OC</sub> OCCUPANCY SENSOR COMBO WALL SWITCH - 20A, 120/277V RATED

QQ CEILING OR WALL MOUNTED JUNCTION BOX PULLBOX(S) - SIZE AND NUMBER AS INDICATED

RECEPTACLE, DUPLEX - 20A, 120V & GROUND

RECEPTACLE, DUPLEX CEILING MOUNTED

RECEPTACLE, DUPLEX - WITH ONE-HALF SWITCHED/CONTROLLED

RECEPTACLE, DUPLEX- WITH GFCI PROTECTION RECEPTACLE, DUPLEX - WITH GFCI PROTECTION IN WEATHERPROOF

20A, 120V RECEPTACLE, DUPLEX- WITH TWO USB PORTS

RECEPTACLE, DOUBLE DUPLEX - (2) 20A, 120V & GROUND

RECEPTACLE, DOUBLE DUPLEX CEILING MOUNTED RECEPTACLE, DOUBLE DUPLEX WITH GFCI PROTECTION

RECEPTACLE, DOUBLE DUPLEX - WITH ONE-HALF SWITCHED/CONTROLLED RECEPTACLE, DOUBLE DUPLEX - WITH ONE-HALF SWITCHED/CONTROLLED, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.

RECEPTACLE, SPECIAL - REFER TO FLOOR PLAN FOR RECEPTACLE SIZE.

relephone outlet: provide & install 2-gang box with 1" conduit. STUB-UP INTO T-BAR CEILING. FOR HARD CEILINGS, RUN THE CONDUIT TO THE CABLE TERMINATION LOCATION INDICATED PER THE RISER DIAGRAM.

DATA OUTLETS: PROVIDE & INSTALL 2-GANG BOX, FACEPLATE, AND QUANTITY OF CAT-6A DATA PORTS INDICATED WITH 1" CONDUIT STUB-UP INTO T-BAR CEILING. FOR HARD CEILINGS, RUN THE CONDUIT TO THE CABLE TERMINATION LOCATION INDICATED PER THE RISER DIAGRAM OR IDF LOCATION INDICATED. PROVIDE A SINGLE 1" CONDUIT FOR UP TO 4 CABLES. LABEL ALL DATA PORTS PER THE OWNER'S REQUIREMENTS.

RECEPTACLE, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.

RECEPTACLE WITH ONE-HALF SWITCHED/CONTROLLED, FLUSH FLOOR BOX -CARPET PLATE WHERE REQUIRED.

TELEPHONE OUTLET, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED DATA OUTLET, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.

INTERCOM OUTLET, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED. FLUSH, FLOOR MOUNTED DUPLEX RECEPTACLE, DATA JACK, AND TELEPHONE JACK.

DATA OUTLET, CEILING MOUNTED

CEILING OR WALL MOUNTED WIRELESS ACCESS POINT PROVISIONS. PROVIDE AND INSTALL ONE DATA CABLE FROM EACH ACCESS POINT TO IDF. FOR HARD CEILINGS TERMINATE THE CABLES INTO A BOX WITH COVER PLATE. リ FOR T-BAR CEILINGS TERMINATE THE CABLES INTO A CUBE CAT-6 PORT AND CURL UP THE CABLE WITH 10-FEET OF SLACK. LEAVE ABOVE THE T-BAR CEILING. PROVIDE A LABEL BENEATH THE T-BAR CEILING TO INDICATE DATA

3/4" THICK x 96" TALL FIRE RETARDANT PLYWOOD BACKBOARD, PROVIDE QUANTITY OF PLYWOOD SHEETS TO ENCOMPASS ENTIRE LENGTH INDICATED ON PLANS.

TERMINAL CABINET - SURFACE OR FLUSH MOUNTED WITH FLAME RETARDANT PLYWOOD BACKBOARD

PANELBOARD - SURFACE OR FLUSH MOUNTED

DISTRIBUTION OR SWITCHBOARD

■ NEUTRAL LINK

TRANSFORMER T X TRANSFORMER

FUSED DISCONNECT - MOTOR RATED. FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. DISCONNECTS TO BE FURNISHED WITH DUAL ELEMENT FUSES SIZED ACCORDING TO NAME PLATE DATA ON EQUIPMENT #A/#B/#C INSTALLED. SIZE AS: #A = AMPERE RATING OF DISCONNECT, #B = POLES, #C = FUSE SIZE REQUIRED. ALSO REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR DISCONNECT REQUIREMENTS. IF NO AMPERE RATING IS INDICATED ON PLAN SIZE DISCONNECT PER NAMEPLATE RATING AND CEC.

UNFUSED DISCONNECT - MOTOR RATED, FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR: #1 = AMPERE RATING OF DISCONNECT, #2 = POLES REQUIRED. ALSO REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR DISCONNECT REQUIREMENTS. IF NO AMPERE RATING IS INDICATED ON PLAN SIZE DISCONNECT PER NAMEPLATE RATING AND CEC.

MAGNETIC MOTOR STARTER FURNISHED, INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.

MOTOR - FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR AND CONNECTED BY ELECTRICAL CONTRACTOR. M METER

INSTALL OWNER FURNISHED SURVEILLANCE CAMERA. PROVIDE AND INSTALL 4-INCH OCTAGON JUNCTION BOX IN CEILING SPACE AT CAMERA LOCATION INDICATED ON PLANS. CONNECT CAMERA TO SECURITY SYSTEM AS SHOWN IN SECURITY SYSTEM RISER DIAGRAM. MAKE ALL CONNECTIONS FOR A FULLY

INTRUSION ALARM DOOR CONTACT PROVISION, SEE TYPICAL DETAILS. INTRUSION ALARM KEYPAD

INTRUSION ALARM MOTION DETECTOR, AIM AS INDICATED ON PLANS.

INTRUSION ALARM MICROPHONE. GLASS BREAK DETECTOR, HONEYWELL #FG-1625

GROUND

CIRCUIT BREAKER

EXISTING ABOVE GROUND CONDUIT

**EXISTING UNDERGROUND CONDUIT** 

WIREMOLD 5400 SERIES DUAL CHANNEL IVORY RACEWAY. PROVIDE ALL **— —** ACCESSORIES, FITTINGS, DIVIDERS, ETC FOR A COMPLETE AND FULLY

WIREMOLD RACEWAY VERTICAL RUNS. PROVIDE ALL ELBOWS, FITTINGS, AND CONNECTORS AS NECESSARY FOR A COMPLETE RACEWAY SYSTEM

W NEW ELECTRICAL EQUIPMENT

 $\Psi$  existing electrical equipment to remain

EXISTING ELECTRICAL EQUIPMENT TO BE DEMOLISHED

GROUND WIRE WITH GREEN INSULATION SIZE PER N.E.C., U.O.N.

CONDUIT CONCEALED IN WALL OR CEILINGS. PROVIDE NUMBER OF WIRES NECESSARY FOR BRANCH CIRCUIT, SWITCH LEGS, ETC. PROVIDE SEPARATE NEUTRALS FOR EACH PHASE WIRE. SIZE SHALL BE DETERMINED BY OCPD CONNECTED TO THE PHASE CONDUCTORS AND VOLTAGE DROP CONSIDERATIONS. ALL CONDUITS SHALL HAVE GROUND CONDUCTOR(S).

CONDUIT CONCEALED UNDERGROUND OR BELOW FLOOR, MINIMUM SIZE I 3/4". PROVIDE NUMBER OF WIRES NECESSARY FOR BRANCH CIRCUIT, SWITCH LEGS, ETC. PROVIDE SEPARATE NEUTRALS FOR EACH PHASE WIRE. SIZE SHAL BE DETERMINED BY OCPD CONNECTED TO THE PHASE CONDUCTORS AND VOLTAGE DROP CONSIDERATIONS. ALL CONDUITS SHALL HAVE GROUND CONDUCTOR(S). SIZE CONDUIT PER NEC.

CONDUIT- UP

── CONDUIT-DOWN

# SHEET NOTE NUMBER - #, SEE NOTE DESCRIPTION ON SAME SHEET. GENERAL NOTE NUMBER - #, SEE NOTE DESCRIPTION ON SAME SHEET.

REFERENCE TO PLAN/DETAIL/DIAGRAM

XX X DESIGNATES SIZE AND QUANTITY OF FEEDERS SEE FEEDER SCHEDULE

PROVIDE AND INSTALL TWO MALE F-TYPE CONNECTORS AND TV FACEPLATE PROVIDE AND INSTALL RG-6 COAXIAL CABLE FROM EACH CONNECTOR TO THE CABLE TV HEADEND & TERMINATE WITH A MALE F-TYPE CONNECTOR.

TELEVISION OUTLET IN FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED NUMBER IN PARENTHESIS INDICATES QUANTITY OF DEVICES. TYPICAL FOR

ALL TYPES OF DEVICES. SPEAKER - WALL OR CEILING MOUNTED, REFER TO RISER DIAGRAM AND/OR SPEAKER - WALL OR NOTES ON PLANS.

CLOCK, REFER TO RISER DIAGRAM AND/OR NOTES ON PLANS.

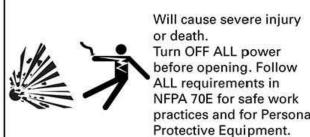
1 HR - RATED WALL (REFER TO ARCHITECTS DRAWINGS)

COMBINATION CLOCK & SPEAKER, SEE CLOCK & SPEAKER SYMBOLS.

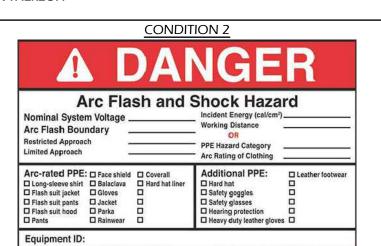
# **ARC FLASH WARNING** LABEL REQUIREMENTS

**CONDITION 1** 





ARC FLASH HAZARD HAZARD WARNING LABELS SHALL BE FIELD MARKED/PLACED ON ALL NEW AND EXISTING ELECTRICAL DISTRIBUTION BOARDS, MAIN SWITCHBOARDS, TRANSFORMERS, PANELS, PANELBOARDS, DISCONNECTS, MCC'S. PER CEC/NEC 110.16A THAT IS WITHIN THE SCOPE OF THIS PROJECT. LABELS SHALL BE APPLIED TO EXISTING EQUIPMENT WHERE NEW CONNECTIONS ARE MADE. THE LABELS SHALL MEET THE REQUIREMENTS OF 110.21(B) PER ANSI Z535.4-2011 GUIDELINES BY USING EFFECTIVE COLORS, SYMBOLS OR ANY COMBINATION THEREOF.



ARC FLASH HAZARD WARNING LABELS FOR AN ENTIRELY NEW ELECTRICAL SERVICE AND DISTRIBUTION SYSTEMS, THE EXCEPTION TO 110.16(B) SHALL BE UTILIZED AND ALL ELECTRICAL COMPONENTS OF THE DISTRIBUTION EQUIPMENT SHALL HAVE AN ARC FLASH WARNING LABEL WITH THE FOLLOWING INFORMATION:

a. NOMINAL SYSTEM VOLTAGE

b. ARC FLASH BOUNDARY c. MINIMAL ARC RATING OF CLOTHING

d. AT LEAST ONE, BUT NOT BOTH OF THE FOLLOWING:

• INCIDENT ENERGY & CORRESPONDING WORKING DISTANCE THE ARC FLASH PPE CATEGORY

THE LABELS SHALL MEET THE REQUIREMENTS OF 110.21(B) PER ANSI Z535.4-2011 GUIDELINES BY USING EFFECTIVE COLORS, SYMBOLS OR ANY COMBINATION THEREOF. THE CONTRACTOR SHALL HAVE THE EQUIPMENT MANUFACTURER PROVIDE THE REQUIRED LABELING OR OBTAIN THE SERVICES OF A THIRD PARTY OR THE ELECTRICAL ENGINEER OF

**CONDITION 3** 

ARC FLASH HAZARD WARNING LABELS SHALL BE FIELD MARKED/PLACED ON ALL NEW SERVICE EQUIPMENT WITH THE FOLLOWING INFORMATION: NOMINAL SYSTEM VOLTAGE, AVAILABLE FAULT CURRENT AT THE SERVICE OVERCURRENT PROTECTIVE DEVICES, CLEARING TIME OF THE SERVICE OVERCURRENT PROTECTIVE DEVICES BASED ON THE AVAILABLE FAULT CURRENT AT THE SERVICE EQUIPMENT, THE DATE THE LABEL WAS APPLIED. THE LABELS SHALL MEET THE REQUIREMENTS OF 110.21(B) PER ANSI Z535.4-2011 GUIDELINES BY USING EFFECTIVE COLORS, SYMBOLS OR ANY COMBINATION THEREOF.

### **ELECTRICAL EQUIPMENT NOTES**

THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT, DEVICES AND WIRING. SEE SECTION 260000 OF THE SPECIFICATIONS.

FOR THE EXACT LOCATION OF ELECTRICAL EQUIPMENT AND DEVICES SEE THE ARCHITECTURAL ELEVATIONS, DETAILS AND DIMENSIONS SHOWN ON THE

# **NLIGHT LIGHTING CONTROLS**

CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR: NLIGHT #NCM-PDT-10-RJB

WALL MOUNTED OCCUPANCY SENSOR. NLIGHT #NHW 13 (USE CEILING MOUNTED BRACKET #WV-BR WHEN MOUNTING ABOVE 10FT)

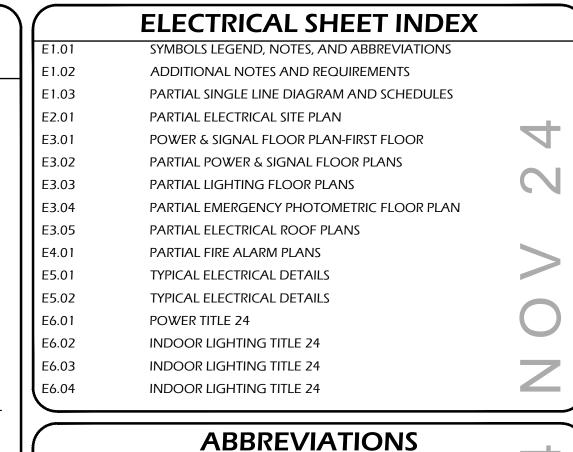
**H**☑<sup>a</sup> NLIGHT #NPODM LOW VOLTAGE SWITCH, 'a' INDICATES CONTROL **H**□a NLIGHT #NPODM-DX DIMMER SWITCH, 'a' INDICATES CONTROL NLIGHT NPODM-4P-DX PROGRAMMABLE SCENE DIMMING SWITCH

NLIGHT #NPP16-D-EFP FOR NORMAL CIRCUITS NLIGHT #NPP16-D-ER-EFP FOR EMERGENCY CIRCUITS NLIGHT #NPS-80-EZ FOR NORMAL CIRCUITS NLIGHT #NPS-80-EZ-ER FOR EMERGENCY CIRCUITS

NLIGHT #NCM-ADCX-RJB PHOTOSENSOR NLIGHT #NPP20 PLUG LOAD CONTROLLER

 PANEL IDENTIFICATION ——— CIRCUIT IDENTIFICATION 

LIGHTING AND ROOM RECEPTACLE CONTROLLERS SHALL BE LOCATED ABOVE THE T-BAR CEILING FOR THE ROOMS THEY ARE CONTROLLING. IF THE ROOM WITH THE CONTROLLED DEVICES HAS A HARD CEILING THEN LOCATE THE ROOM CONTROLLERS | TTC AT THE NEAREST ADJACENT ROOM WITH A T-BAR CEILING. IF NO T-BAR CEILINGS EXISTS LOCATE THE ROOM CONTROLLERS IN THE ELECTRICAL ROOM. LABEL ALL ROOM LIGHTING AND RECEPTACLE CONTROLLERS WITH THE ROOM NAME, ROOM NUMBER, AND CIRCUIT(S) THEY CONTROL



**ABOVE COUNTER** 

BOARD

CONDUIT

CABINET

CIRCUIT

EXISTING

**EMERGENCY** 

**END-OF-LINE** 

FIRE ALARM

FLOW SWITCH

GROUND

HORSEPOWER

KILOVOLTS

KILOWATT

LIGHTING

**MOUNTED** 

MOUNTING

NIGHT LIGHT

NOT TO SCALE

PULL BOX

RECEPTACLE

RAPID START

**RACK UNIT** 

SWITCH

TYPICAL

TELEPHONE TERMINAL

UNDERGROUND PULL SECTION

UNLESS OTHERWISE NOTED

VOLTS/VOLTAGE VANDAL PROOF

WEATHERPROOF WIREMOLD

REFRIGERATOR

NEUTRAL

NEW

LOW VOLTAGE

ABOVE FINISHED FLOOR

ALUMINUM CONDUCTOR OR BUS

A, AMP

EW/C

F.B.O.

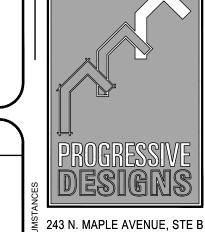
GND

I.B.O.

OFOI

REC/RECEPT.

RELO

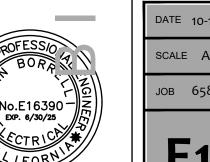


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CABLE TELEVISION CIRCUIT BREAKER CENTER TO CENTER CONDUIT ONLY, WITH PULL WIRE COMMUNICATIONS PULL BOX COPPER CONDUCTOR OR BUS DISTRIBUTION PANEL **ELECTRIC METALLIC TUBING EMERGENCY POWER-OFF ELECTRIC WATER COOLER** FIRE ALARM CONTROL PANEL FURNISHED BY OTHER/FURNISHED BY OWNER FULL LOAD AMPS FLEXIBLE METALLIC CONDUIT GREEN GROUND WIRE GROUND FAULT CIRCUIT INTERRUPT GALVANIZED RIGID STEEL HORIZONTAL CROSSCONNECT HIGH INTENSITY DISCHARGE HIGH PRESSURE SODIUM **INSTALLED BY OTHER** INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR INTERMEDIATE DISTRIBUTION FRAME (DATA) ISOLATED GROUND **INTRUSION ALARM** JUNCTION BOX KILOVOLTS-AMPERES LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT LIGHTING CONTROL PANEL MOTOR CONTROL CENTER MAIN LUG ONLY NOT IN CONTRACT OVER CURRENT PROTECTION DEVICE OWNER FURNISHED OWNER INSTALLED PUBLIC ADDRESS SYSTEM POST INDICATOR VALVE POWER PULL BOX RELOCATABLE/ PORTABLE BUILDING SIGNAL CURRENT EXPANDER PANEL SECURITY LIGHT SIGNAL AND COMMUNICATION TERMINAL BACKBOARD SIGNAL PULL BOX SURGE SUPPRESSION DEVICE SIGNAL TERMINAL BOARD SIGNAL TERMINAL CABINET TELEPHONE PULL BOX TAMPER SWITCH TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL CABINET UNDER COUNTER UNDERGROUND

S

DATE 10-15-24 SCALE AS NOTED JOB 658-23-15



EXP. 6/30/25



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Borrelli & Associates, Inc.

2032 N. Gateway Boulevard Fresno, CA. 93727

http://www.borrelliengineering.com/ ca-bai@borrelliengineering.com

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ALL PERMANENT EQUIPMENT AND COMPONENTS TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED

TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MOTE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS

HE ATTACHMENT OF THE FOLLOWING ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE OMPONENTS SHALL HAVE FLÉXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND

ASSOCIATED DUCTWORK, PIPING, AND CONDUIT COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY

SUPPORTS THE COMPONENT COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE NSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER OF RECORD.

#### CALIFORNIA CODE OF REGULATIONS

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2021 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2022 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR (2020 NÁTIONAL

ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR (2021 IAPMO

2022 California Plumbing Code (CPC), part 5, title 24 ccr(2021 iapmó uniform PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR

2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR(2021 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR (2021

AMENDMENTS)

TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION.

NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED) - 2022 EDITION

STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CA AMENDED) 2019 EDITION STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS - 2021 EDITION

STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION - 2019 EDITION STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS

AND THEIR APPURTENANCES (CA AMENDED) - 2019 EDITION NFPA 72 -NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED) - 2022

NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA

AMENDED) 2018 EDITION

**INCLUDING ACCESSORIES - 2003 EDITION** STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS - 1999 EDITION

**GRANDSTANDS 2017 EDITION** 

OR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) HAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

## **DEMOLITION AND CLEANUP NOTES**

- PATCH HOLES WHERE FASTENERS, DEVICES OR EQUIPMENT HAS BEEN REMOVED. PAINT PATCH TO MATCH SURROUNDING AREA.
- REMOVE ALL MATERIAL CAUSED BY THE DEMOLITION WORK FROM THE SITE AND LEAVE THE PREMISES CLEAN AND FREE OF DEBRIS.
- PROVIDE AND INSTALL BLANK COVER PLATES AT REMOVED ELECTRICAL DEVICE
- ALL DEMOLITION SHALL COMPLY WITH CH. 33 CBC AND CHAPTER 33 CFC.

# 120V BRANCH CIRCUIT VOLT DROP **CONDUCTOR LENGTH CHART**

LOAD IN		LENGTH OF CONDUCTOR										
VOLT		WIRE SIZE IN (GAUGE)										
AMPERES	#12	#10	#8	#6	#4 434							
1200VA	74	121	183	284								
1560VA	57	93	141	218	334							
1800VA	49	81	122	189	289							
1920VA	46	76	115	178	<del>27 1</del>							
2340VA	Х	62	94	146	223							
2880VA	Х	51	76	118	181							
3000VA	Х	48	73	114	174							
3900VA	Х	Х	56	87	134							
4800VA	Х	Х	46	71	108							

- THIS CHART IS FOR COPPER CONDUCTORS ONLY.
- THIS CHART ASSUME AN 80% POWER FACTOR AND STEEL RACEWAYS. 2019 CALIFORNIA ENERGY CODE, 130.5(c) ALLOWS A MAXIMUM COMBINED VOLTAGE DROP OF 5%. THIS CHART ASSUMES A MAXIMUM LENGTH OF CONDUCTORS FOR LESS THAN 2% VOLTAGE DROP ON A BRANCH CIRCUIT AT GIVEN VA LOAD.
- USE WIRE SIZE FROM THIS CHART UNLESS LARGER CONDUCTOR SIZES ARE NOTED ON THE DRAWINGS.
- FOR VA VALUES NOT SHOWN USE NEXT HIGHEST VALUE FROM VALUE FROM THE

## **GENERAL NOTES**

- ALL WORK AND MATERIAL SHALL CONFORM TO LATEST CODES AND ORDINANCES. IT IS THE INTENTION OF THESE PLANS AND SPECIFICATIONS TO COVER ALL THINGS REQUIRED TO PROVIDE COMPLETE AND OPERATIVE SYSTEMS. THE CONTRACTOR SHALL FURNISH LABOR, MATERIAL, TRANSPORTATION. EQUIPMENT, MISCELLANEOUS SERVICES, ETC. REQUIRED TO ACCOMPLISH THIS RESULT. ANYTHING WHICH MAY BE REASONABLY CONSTRUED AS A NECESSARY PART OF THE INSTALLATION SHALL BE INCLUDED. NOTHING IN THESE PLANS OR SPECIFICATIONS MAY BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO ANY CONSTRUCTION CODES.
- ALL EQUIPMENT SHALL HAVE TESTING LABORATORY LABEL ATTACHED (U.L. C.S.A. ETC.) AS PER C.E.C. 110. PROOF OF TESTING LABELS REQUIRED WITH ALL SUBMITTALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THESE REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PURCHASING, IF ANY OF THE SPECIFIED MATERIAL FAILED THESE REQUIREMENTS. WHERE A FIFI D CERTIFIED PRODUCT MAY BE REQUIRED FOR FIELD ASSEMBLED COMPONENT, PROVIDE CERTIFIED REPORT BY AN APPROVED TESTING AGENCY ACCEPTABLE TO THE AUTHORITIES HAVING JURISDICTION. INCLUDE ALL TESTING FEES IN BID.
- THE ENGINEERING SERVICE ARE LIMITED TO PREPARATION OF PLANS AND SPECIFICATIONS. THE PLANS AND SPECIFICATIONS ARE INTENDED TO BE USED AS CONSTRUCTION GUIDELINES ONLY AND NOT THE TOTAL INSTRUMENT OF CONTRACT DOCUMENTS. IT IS NOT THE INTENTION OF ANY CONSTRUCTION PLANS TO DIVIDE WORK AMONG DIFFERENT TRADES. VERIFY SCOPE OF WORK WITH GENERAL CONTRACTOR/OWNER SINCE THE ENGINEER IS NOT SUPERVISING THE JOB. THE ENGINEER WILL PROVIDE INTERPRETATION OF THE CONSTRUCTION DOCUMENTS, BUT SUPERVISION IS UNDER THE RESPONSIBILITY OF THE OWNER OR HIS APPOINTEE.
- WORKING CLEARANCE SHALL BE MAINTAINED AS PER C.E.C FOR ALL PANEL(S), SERVICE EQUIPMENT, DISCONNECT SWITCH, ETC. LOCAL UTILITY COMPANY WORKING CLEARANCE REQUIREMENT SHALL ALSO BE OBSERVED. POWER EQUIPMENT MANUFACTURER'S PRODUCT MAY VARY IN DIMENSION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORKING CLEARANCE REQUIREMENT WHEN LAYING OUT THE ELECTRICAL EQUIPMENT.
- ARC FLASH WARNING LABELS SHALL BE PLACED ON ALL ELECTRICAL DISTRIBUTION BOARDS, MAIN SWITCHBOARDS, TRANSFORMERS, PANELS, PANELBOARDS, DISCONNECTS ETC. PER CEC 110.16. LABELS SHALL BE PER ANSI Z535.4 GUIDELINES. REFER TO THE ARC FLASH REQUIREMENTS PER THE TYPICAL
- THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF TERMINAL BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST SHOP DRAWINGS BEFORE STUBBING UP CONDUITS OR PENETRATING EXTERIOR WALL(S) OF BUILDING(S)
- IN CASE OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE PROCEEDING.
- ALL OUTDOOR DEVICES SHALL BE WEATHERPROOF.
- ONLY MAJOR PULL BOXES ARE SHOWN. CONTRACTOR SHALL PROVIDE ADDITIONAL PULL BOXES WHERE THEY ARE REQUIRED TO MAKE A WORKABLE INSTALLATION. ALL PULL BOXES ABOVE GROUND SHALL BE PAD LOCKABLE. ALL PULL BOXES UNDERGROUND SHALL HAVE HOLD DOWN BOLTS AND BE TRAFFIC
- MARK ALL PANELS WITH LAMANOID TAGS RIVETED TO THE EQUIPMENT. PROVIDE TYPE WRITTEN PANEL SCHEDULE AT ALL PANELS.
- ALL FLOOR/GROUND MOUNTED EQUIPMENT SHALL SIT ON A CONCRETE PAD 3" HIGHER THAN SURROUNDING SURFACE FOR INTERIOR EQUIPMENT AND 6" FOR **EXTERIOR EQUIPMENT**
- CONTRACTOR SHALL FURNISH ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND SUPERVISION NECESSARY TO COMPLETE INSTALLATION, CHECKOUT AND INITIAL
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GENERAL ARRANGEMENT OF EQUIPMENT SHOWN AND SHALL SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT PRIOR TO PURCHASE.
- CAUTION SHOULD BE USED WHEN EXCAVATING OR TRENCHING TO LOCATE EXISTING UNDERGROUND CONDUITS. COORDINATE WITH AGENCIES SUCH AS UNDERGROUND SERVICE ALERT PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING VISITED THE SITE AND SATISFIED HIMSELF AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL CHECK ALL OF THE CONDITIONS WHICH MAY AFFECT HIS WORK. THE SITE VISIT SHALL BE MADE PRIOR TO SUBMITTING THE BID. BIDDERS SHALL PREARRANGE A SITE VISIT WITH THE OWNER/PROJECT
- THE CONTRACTOR SHALL OBTAIN A FULL SET OF PLANS WHEN BIDDING THE
- ALL PHASE CONDUCTORS SHALL HAVE THEIR OWN NEUTRALS. NO SHARING OF
- ISOLATED GROUNDING CONDUCTORS SHALL BE SIZED TO MATCH THE EQUIPMENT GROUNDING CONDUCTOR SIZE AND INSTALLED AND CONNECTED ONLY TO THE RECEPTACLES REQUIRED TO BE CONNECTED TO THE ISOLATED GROUNDING SYSTEM AND GROUNDED AT THE MAIN GROUNDING BUS WITHIN THE THE PANEL OF CIRCUIT ORIGIN. THE ISOLATED GROUNDING CONDUCTOR SHALL NOT BE CONNECTED TO ANY OTHER GROUNDING SYSTEM ALONG IT'S
- . PATCH AND REPAIR ALL REMOVED CONCRETE TO MATCH ADJACENT SURFACES

- 20. A CERTIFIED ELECTRICAL SHALL BE PRESENT ON THE PROJECT WHENEVER ELECTRICAL WORK IS IN PROGRESS. AN ELECTRICAL CONTRACTOR IS NOT EXEMP FROM THIS REQUIREMENT AND SHALL ALSO BE CERTIFIED IF HE IS WORKING AS THE RESPONSIBLE PROJECT ELECTRICIAN. VIOLATION OF THIS REQUIREMENT B
- EITHER ELECTRICIANS OR WORKING CONTRACTORS SHALL BE REPORTED TO TH STATE LICENSE CONTRACTOR BOARD AS REQUIRED UNDER THE EXISTING LABOR CODE SECTION 108.02. NO VOLUNTEERS ARE ALLOWED TO PERFORM WORK ON THIS PROJECT AND ALL CITY INSURANCE REQUIREMENTS MUST BE MET PRIOR TO
- 21. ALL CONDUIT SHALL BE CONCEALED WITHIN ATTIC SPACE AND WALLS. 22. ALL EXTERIOR RECEPTACLES SHALL BE GFCI TYPE WITH A LOCKING.
- WEATHERPROOF IN-USE COVER. 23. ALL FASTENERS USED SHALL BE STAINLESS STEEL GRADE 316.
- 24. ALL CONDUIT AND CONDUCTORS INSTALLED IN UNDERGROUND OR W. .. LOCATIONS SHALL BE LISTED FOR WET LOCATIONS AND MARKED WITH 'W' PER
- 25. SPLICES AND TERMINALS SHALL BE COMPRESSION TYPE OF SEAMLESS PUPF COPPER, TIN PLATED, LONG BARREL (TERMINALS WITH TWO-HOLE PAD AND INSPECTION WINDOW WITH NEMA DRILLING), AS MANUFACTURED BY BURNDY TYPE YS, YAZ-2N OR EQUAL. CLEAN ALL SURFACES AND INSTALL WITH OXID INHIBITING COMPOUND. BURNDY PENETROX-E OR EQUAL. INSTALL COMPRESSION CONNECTORS WITH 360° CIRCUMFERENTIAL COMPRESSION DYE. BURNDY HYPRESS OR EQUAL. THE INDENTER OR OTHER TYPE TOOLS WILL NOT
- 26. INSTALL MECHANICALLY FASTENED PHENOLIC NAMEPLATE WITH WHITE LETTIN ON BLACK BACKGROUND ON ALL EQUIPMENT, INCLUDING PULL BOXES, WITH DESCRIPTION INDICATED ON DRAWINGS. NAMEPLATE LETTERING SIZE SHALL BE 3/16-INCH HIGH FOR ALL NAMEPLATES SERVING FEEDER AND BRANCH CIRCUI
- BREAKERS, ON MAIN SERVICE PANELS AND ALL OTHER NAMEPLATES LETTERING SHALL BE 1/4-INCH HIGH. 26.1. ALL SWITCHBOARDS, SWITCHGEAR, PANEL BOARDS, VFD'S, MOTORS, JUNCTION BOXES PULL BOXES DISCONNECT SWITCHES, ETC. SHALL BE

MARKED TO INDICATE EACH DEVICE OR EQUIPMENT WHERE THE POWER

ORIGINATES PER CEC 408.4, FIELD IDENTIFICATION REQUIRED, (B) SOUI CE

- 27. COORDINATE EQUIPMENT LOCATIONS, CONTROL AND POWER WIRING REQUIREMENTS AND CONNECTION POINTS WITH ALL APPLICABLE DISCIPLINES
- 28. UTILIZE WIREMOLD 5400 AND 2300 SERIES SURFACE RACEWAYS OR EQUAL FOI SURFACE RACEWAY VERTICAL RUNS WHERE CABLING CANNOT BE CONCEALE
- 29. ONLY RIGID OR IMC CONDUIT SHALL BE USED WHEN TRANSITIONING FLOM UNDERGROUND PVC CONDUIT TO ABOVE GROUND, PVC NOT ALLOWED.
- 30. ALL DISCONNECTS SHALL BE READILY ACCESSIBLE AND IN SIGHT OF THE EQUIPMENT, PER THE CALIFORNIA ELECTRICAL CODE. IF THE DISCONNECTING MEANS CANNOT BE LOCATED WITHIN SIGHT OF THE EQUIPMENT SERVED, IT SHALL HAVE THE CAPABILITY OF BEING LOCKED IN THE OPEN POSITION
- 31. PROVIDE AND INSTALL FUSES PER UNIT NAMEPLATE DATA ON THE EQUIPMENT PROVIDED.
- 32. ALL NEW METAL STRUCTURES AND THE ELECTRICAL SYSTEMS SHALL BE GROUNDED AND BONDED. REFER TO ELECTRICAL SPECIFICATIONS AND TYPICAL
- 33. ALL TRANSFORMER DISCONNECTS SHALL HAVE LOCKOUT CAPABILITY TO LOCK THE DISCONNECT IN THE OPEN AS WELL AS IN THE CLOSED POSITION.
- 34. ALL BUSES, CONDUCTORS, AND WINDINGS SHALL BE COPPER.
- 35. ALL INTERRUPT AND SHORT CIRCUIT RATINGS SHALL BE FULLY RATED.
- 36. ALL TRANSFORMER WINDING SHALL BE COPPER AND THEY SHALL BE K-[ 3 RATED.
- 37. ALL OUTDOOR ENCLOSURES SHALL BE WEATHERPROOF RATED AND HAVE LOCKING HASP. INCLUDING, BUT NOT LIMITED TO SWITCHBOARDS, DISCONNECTS, ENCLOSURES, ETC. THE DISTRICT WILL PROVIDE THEIR OWN KEYED LOCKS. OUTDOOR PANELS SHALL HAVE KEYED LOCKING MECH, N SM

KEYED PER DISTRICT'S STANDARD.

- 38. AVAILABLE FAULT CURRENT SHALL BE INDICATED ON ALL NEWLY INSTALLED SERVICE EQUIPMENT PER ECE 110.24. THE FIELD MARKING SHALL INCLUDE THE DATE OF THE FAULT CURRENT CALCULATION WAS PERFORMED. FOR MODIFICATION TO THE ELECTRICAL INSTALLATION. THE AVAILABLE FAULT CURRENT SHALL BI RECALCULATED INCLUDING NEW LOADS AND POSTED ON SITE PRIOR TO FINAL INSPECTION PER CEC ARTICLE 110.24.
- 39. REINSTALL EXISTING ELECTRICAL INSTALLATIONS DISTURBED. CERTAIN EXISTING ELECTRICAL INSTALLATIONS MAY BE LOCATED IN WALL CEILINGS OR FLOORS THAT ARE TO BE REMOVED AND ARE ESSENTIAL FOR THE OPERATION OF OTHER REMAINING INSTALLATION. WHERE THIS CONDITION OCCUR, PROVIDE A NEV EXTENSION OF ORIGINAL CIRCUITS. RACEWAYS, EQUIPMENT AND OUTLE 13 10 RETAIN SERVICE CONTINUITY. INSTALLATIONS SHALL BE CONCEALED IN

No.E16390 — EXP. 6/30/25

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companies legal fees associated with defending and enforcing these rights

Borrelli & Associates, Inc.

2032 N. Gateway Boulevard Fresno, CA. 93727

http://www.borrelliengineering.com/ ca-bai@borrelliengineering.com

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Consulting Electrical Engineers

Phone: 559-233-4138

BAI Project #24139

O M

243 N. MAPLE AVENUE, STE B

POST OFFICE BOX 477

MANTECA, CALIFORNIA 95336

P: 209.239.1229 /F: 209.239.4880

ADDIT **S.J.C.** 2707

DATE 10-15-24 SCALE AS NOTED JOB 658-23-15

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2023

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR

UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS)

INTERNATIONAL EXISTING BUILDING CODE AND 2022 CALIFORNIA

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN). PART 11. TITLE 24 CCR

2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS 2019 ASME A17.1/CSA B44-2019 SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER 2022 CBC PART 2 CH 35)NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR

## PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS - 2021 EDITION

STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES - 2019 NFPA 80 -

STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT - 2005 (R2010) AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS

STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND

-	LIGHTING INVERTER UNIT	VOLTAGE: 208/120V, 3Ø, 4W								BREAKER AIC: 35,000					
					BU	S: 250A	(N) PANEL 'R'			MOUNTING: SURFACE					
	SPECIFICATIONS		M	AIN BRE	AKER: 2	50A/3P	1 /		NEMA	IENCLO	OSURE				
	ALL EMERGENCY SOURCE CIRCUITS SHALL BE INSTALLED IN SEPARATE RACEWAYS (FROM NORMAL POWER), PER 2022 CEC 700.10(B), OR APPLICABLE CODE AT THE TIME OF PERMITTING.		BKR		OAD (VA PHASE B		DESCRIPTION	DESCRIPTION		OAD (V. PHASE B	A) PHASE A	BKR	C		
		1	20A/1P	540			RM# 05 REC.	RM# 06 REC.			720	20A/1P	Γ		
	INPUT SHALL BE EQUIPPED WITH UL294 SURGE PROTECTION AND 1HZ NOMINAL SYNCHRONIZING SLEW RATE.	3	<b>↓</b>		540		RM# 05 REC.	RM# 10 PRINTER REC.		600		<b>↓</b>			
	OUTPUT VOLTAGE STATIC REGULATION SHALL BE +/- 5% FOR 100%	5	<b>↓</b>			540	RM# 05 REC.	RM# 10 REC.	360			<b>↓</b>	L		
•	RESISTIVE LOAD.	7	<b>↓</b>	540			RM# 05 REC.	RM# 11 REC.			720	↓	L		
_	OUTPUT DISTORTION SHALL BE 5% THD MAXIMUM.	9	<b>↓</b>		540		RM# 05 & 04 REC.	RM# 12 REC.		360		<b>↓</b>			
•		11	<b>↓</b>			0	SPARE	SPARE	0			<b>↓</b>	Ľ		
•	OVERLOAD RATING: 150% MOMENTARY; 115% FOR 10 MINUTES.	13	<b>↓</b>	720			RM# 08 REC	RM# 18 & 19 REC.			360	<b>↓</b>			
	TRANSFER TIME: LESS THAN 2 MILLISECONDS.	15	↓		540		RM# 9 REC	RM #14-24 LTG		444		15A/1P			
	BATTERY SHALL BE SEALED LEAD CALCIUM, 10 YEAR LIFE, 90	17	↓			540	RM# 9 REC	EXIT LIGHTS	40			$\downarrow$			
	MINUTE RUN TIME, WITH AUTO-DISCONNECT FOR LOW BATTERY	19	$\downarrow$	180			RM# 9 REC	SPARE			0	$\downarrow$	2		
	VOLTAGE.	21	15A/1P		227		RM #7,8,9 LTG	RM #13,28,29 MAIN. LTG		341.8		$\downarrow$	2		
	PROVIDE RS232 PORT AND RJ-45 ETHERNET PORT FOR EXTERNAL	23	<b>↓</b>			891.4	INVERTER-'EM-L' *	SPARE	0			20A/1P	Z		
	COMMUNICATIONS.	25	20A/1P	540			RM #21–23 REC.	RM# 07 REC.			720	$\downarrow$	2		
	INVERTER SHALL BE PWM TYPE.	27	15A/1P		307.4		RM #6,10,11,12 LTG	SPACE		0		<b>\</b>	2		
).	PROVIDE INTERNAL MAINTENANCE BYPASS.	29	20A/1P			180	RM #14 REC.	<b>↓</b>	0			$\downarrow$	3		
1	PROVIDE IN NEMA 1 ENCLOSURE, FRONT ACCESS ONLY.	31	<b>+</b>	900			RM #15-19 REC.	<b>↓</b>			0	$\downarrow$	3		
١.	PROVIDE IN NEIVA 1 ENCLOSORE, PROINT ACCESS ONLY.	33	<b>+</b>		0		SPARE	<b>↓</b>		0		<b>\</b>	3		
2.	PROVIDE FACTORY STARTUP AND TEST OF UNIT TO THE SATISFACTION OF BUILDING INSPECTION AUTHORITIES AND WITH	35	<b>+</b>			0	<b>↓</b>	<b>↓</b>	0			<b>↓</b>	3		
	MAXIMUM 4 HOURS OF PERSONNEL TRAINING FOLLOWING	37	<b>+</b>	360			RM #24 REC.	HVAC ROOF REC.			180	20A/1P	[3		
	STARTUP.	39	<b>+</b>		0		SPARE	ROOF HEAT PUMP AC-27		3994		<b>\</b>	4		
3.	AUTO SELF TESTING.	41	<b>+</b>			1920	COPIER	NOO! IIL/(I I OWII /\C-2/	3994			<b>\</b>	4		
4	PROVIDE OUTPUT CIRCUIT BREAKERS RATED 20 AMPS EACH WITH	43		360			SPACE	COPIER			1920	<b></b>	4		
	DEDICATED CIRCUITS FOR EACH OF THE EMERGENCY LIGHTING	45	20A/1P		360		SPARE	SPACE		0			[		
	LOADS: 5 OUTPUT BREAKERS.	47	<b>+</b>			360	<b>↓</b>	SPARE	0			20A/1P	4		
5.	SEISMIC QUALIFIED MOUNTING.	49	<b>↓</b>	360			<b>↓</b>	$\downarrow$			0	<b>↓</b>	Į.		
	)	51	$\downarrow$		360		$\downarrow$	<b>↓</b>		0		$\downarrow$	į		
_		53	$\downarrow$			360	$\downarrow$	$\downarrow$	0			$\downarrow$	I		
		TO	TAL Ø LO	ADS (V	۹):		PHASE A = 9120	PHASE B = 8614	PHASE	C = 918	35		_		
		TO	TAL Ø LO	ADS (A)	:		PHASE A = 76	PHASE B = 72	PHASE	C = 76					
		тот	TAL LOAE	D:			26919 VA	75 A							

\*=CIRCUIT BREAKER PROTECTING THE SYSTEM MUST BE A "MOTOR START", DELAYED TRIP TYPE.

LIGHTING	FIXTURE	SCHEDULE	(#)
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TYPE	LIGHTS	MANUFACTURER AND MODEL	LAMPS	REMARKS	WATTS	LBS
A2		LITHONIA # STAKP 2X4 4000LM 80CRI 40K COL MIN1 EZT MVOLT NLIGHT	LED	2-FT. x 4-FT., 4,321 LUMENS (NOMINAL), LED FIXTURE RECESS MOUNTED IN A T-BAR CEILING. FIXTURE SHALL HAVE CONTINUOUS 0-10V DIMMING DRIVER. LIGHT FIXTURE SHALL HAVE NLIGHTER EMERGENCY DRIVER AT EMERGENCY FIXTURE LOCATIONS INDICATED ON LIGHTING PLAN.	30.3	23
А3		LITHONIA # STAKP 2X4 4000LM 80CRI 40K COL MIN1 EZT MVOLT NLIGHT	LED	2-FT. x 4-FT., 4,858 LUMENS (NOMINAL), LED FIXTURE TO BE SURFACE MOUNTED. FIXTURE SHALL HAVE CONTINUOUS 0-10V DIMMING DRIVER. LIGHT FIXTURE SHALL HAVE NLIGHTER EMERGENCY DRIVER AT EMERGENCY FIXTURE LOCATIONS INDICATED ON LIGHTING PLAN.	40	24
В1		LITHONIA # STAKP 2X2 3000LM 80CRI 40K COL MIN1 EZT MVOLT NLIGHT	LED	2-FT. x 2-FT., 3,267 LUMENS (NOMINAL) LED FIXTURE RECESS MOUNTED IN A T-BAR CEILING. FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING DRIVER. LIGHT FIXTURE SHALL HAVE NLIGHTER EMERGENCY DRIVER AT EMERGENCY FIXTURE LOCATIONS INDICATED ON LIGHTING PLAN.	22.7	15
B2		LITHONIA # STAKP 2X2 4000LM 80CRI 40K COL MIN1 EZT MVOLT NLIGHT	LED	2-FT. x 2-FT., 4,310 LUMENS (NOMINAL) LED FIXTURE RECESS MOUNTED IN A T-BAR CEILING. FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING DRIVER. LIGHT FIXTURE SHALL HAVE NLIGHTER EMERGENCY DRIVER AT EMERGENCY FIXTURE LOCATIONS INDICATED ON LIGHTING PLAN.	30.7	15
C1		LITHONIA # LBL4 3000LM 80CRI 40K MIN1 ZT MVOLT NLIGHT	LED	10-INCH x 4-FT., 3,288 LUMENS (NOMINAL) LED FIXTURE SURFACE MOUNTED. FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING DRIVER. LIGHT FIXTURE SHALL HAVE EMG EMERGENCY DRIVER AT EMERGENCY FIXTURE LOCATIONS INDICATED ON LIGHTING PLAN.	25.6	10.85
G1		LITHONIA # 2GTL 4 30L EZ1 LP840 N80	LED	2-FT. x 4-FT., 3,102 LUMENS (NOMINAL) LED FIXTURE SURFACE MOUNTED. FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING DRIVER. LIGHT FIXTURE SHALL HAVE N80EMG EMERGENCY DRIVER AT EMERGENCY FIXTURE LOCATIONS INDICATED ON LIGHTING PLAN.	23.3	20.2
G2		LITHONIA # 2GTL 2 20L EZ1 LP840 N80	LED	2-FT. x 2-FT., 2,337 LUMENS (NOMINAL) LED FIXTURE SURFACE MOUNTED. FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING DRIVER. LIGHT FIXTURE SHALL HAVE N80EMG EMERGENCY DRIVER AT EMERGENCY FIXTURE LOCATIONS INDICATED ON LIGHTING PLAN.	18.4	12.64
X	EXIT	CHLORIDE OR EQUAL #CN6GCA1ICTA	LED	UNIVERSAL MOUNTED, EDGE LIT EXIT SIGN WITH CLEAR AND GREEN LETTERS. PROVIDE INDICATING ECHELON ARROWS REQUIRED PER DIRECTION INDICATED. PROVIDE TEST SWITCH, INDICATING LEDS, AND BATTERY PACK WITH INTEGRAL CHARGER. REFER TO FLOOR PLANS FOR WALL OR CEILING MOUNTING LOCATIONS.	5	10

# SCHEDULE NOTES

1. COORDINATE ALL COLORS WITH OWNER/ARCHITECT PRIOR TO ORDERING. CONTRACTOR SHALL PROVIDE COLOR SAMPLES DURING SUBMITTAL STAGE

ALL CLEAR, ACRYLIC, PRISMATIC LENSES ARE TO BE MINIMUM 0.125" PATTERN K12, U.O.N. 3. ALL LEDS SHALL HAVE A CRI OF 0.8 AND COLOR TEMPERATURE OF 4000K.

. ALL HALF SHADED FIXTURES SHALL HAVE AN EMERGENCY DRIVER WITH BATTERY BACKUP IN ORDER TO PROVIDE A MINIMUM OF 90 MINUTES OF BACKUP IN THE EVENT OF POWER OUTAGE WITH MINIMUM 1100 LUMEN OUTPUT. THE BATTERY CHARGER SHALL BE CONNECTED TO THE UN-SWITCHED SOURCE. IF LIGHT FIXTURE IS CONNECTED TO EMERGENCY CIRCUIT INTEGRAL BATTERY BACKUP IS NOT REQUIRED. REFER TO ELECTRICAL SINGLE LINE DIAGRAM.

i. ALL EXIT LIGHT FIXTURES SHALL BE CONNECTED TO AN UN-SWITCHED SOURCE.

6. ALL RECESS MOUNTED FIXTURES SHALL COME WITH BAR HANGERS. THE CONTRACTOR SHALL VERIFY CEILING TYPE PRIOR TO ORDERING.

7. ALL DRIVERS SHALL HAVE LESS THAN 10% THD. 8. FIXTURE TYPE IS SHOWN WITHIN MOST FIXTURES.

9. PRIOR TO ORDERING FIXTURES REFER TO THE LIGHTING PLAN FOR THE CORRECT VOLTAGES TO BE UTILIZED FOR THE FIXTURES.

10. THE SYSTEM DESIGNED HERE IN IS A NLIGHT NETWORKED LIGHTING SYSTEM. ALL ROOM CONTROLLERS/POWERPACKS, NETWORK BRIDGES, OCCUPANCY SENSORS, PHOTO SENSORS, LIGHTING RELAY PANEL, ETC. SHALL BE NETWORKED

TOGETHER WITHIN THE ROOM. REFER TO TYPICAL DETAILS.

(E) MAIN SWITCHBOARD 'MSB' 2500A, 480/277V, 3Ø, 4W 42KAIC <sub>I</sub> (N) XFMR 'TX-R': 480V-208V/120V 75kVA, 3Ø, 4W, WP 75 **250 4** PANEL <del>-</del> 20 3 LIGHTING INVERTER

# SHEET NOTES #

PROVIDE AND INSTALL NEW INDICATED CIRCUIT BREAKER AND ALL MOUNTING HARDWARE.

PROVIDE AND INSTALL A 1kVA, 120V-IN & 120V-OUT, 1 PHASE, MYERS #1-EM 1-S-BA2005 BTM-M-IOT-2YWT-5YP-5YW EMERGENCY LIGHTING INVERTER WITH 90 MINUTES OF RUN TIME (27.5" TALL X 24.5" WIDE X 10.5" DEEP 281 POUNDS TOTAL SYSTEM WEIGHT) OR APPROVED EQUAL.PROVIDE MANUFACTURER FLOOR MOUNTING BRACKETS FOR FLOOR MOUNTING. PROVIDE DATA CONNECTION CAT6 DATA CABLE BACK TO THE EXISTING IDF.

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**FEEDER SCHEDULE** 

20 3) 3/4"C. - (3) #12 & (1) #12 GND. 175 3) 2"C. - (3) #2/0 & (1) #4 GND. 250 4) 3"C. - (4) #250KCMIL & (1) #2 GND.

PARTIAL SINGLE LINE DIAGRAM

NOT TO SCALE

**ELECTRICAL DISTRIBUTION** 

WEIGHT & DIMENSIONS SCHEDULE MOUNTING MANUFACTURER NAME CB |WEIGHT(Lb)| 250A SURFACE MOUNTED SQUARE D OR EQUAL PANEL 'R'

**TRANSFORMER** kVA |WEIGHT(Lb)| LOCATION MANUFACTURE 33.50" 75 kVA | 760 30.06" 27.43" INDOOR XFMR 'TX-R'

### MECHANICAL EQUIPMENT SCHEDULE

MECHACITATION RELEGION MENTO SCHIEDGEE													
#	DESCRIPTION	FLA/MCA/	STARTER/	VOLT	PHASE	MAX. OCPD	CONDUIT	COND	UCTOR	GND.			
#	DESCRIPTION	HP/W	X FUSES	VOLI	PHASE	SIZE	SIZE	#	SIZE	GIND.			
AC-27	HEAT PUMP	48 MCA	FUSE/DISC.	208V	1	NOTE 2	1"	2	#8	NOTE 3			

- \* = THERMAL RATED SWITCH FOR FRACTIONAL HORSEPOWER MOTORS.
  REFER TO THE PANEL SCHEDULE AND SINGLE LINE DIAGRAM FOR THE CIRCUIT BREAKER AND CONDUIT SIZES, IF NOT INDICATED WITHIN
- GROUNDING CONDUCTOR SIZE TO MATCH CIRCUIT CONDUCTOR SIZE.
- COORDINATE LOCATIONS AND POWER REQUIREMENTS FOR THE MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR. PROVIDE DISCONNECT PER NAME PLATE RATING OF MECHANICAL UNITS.

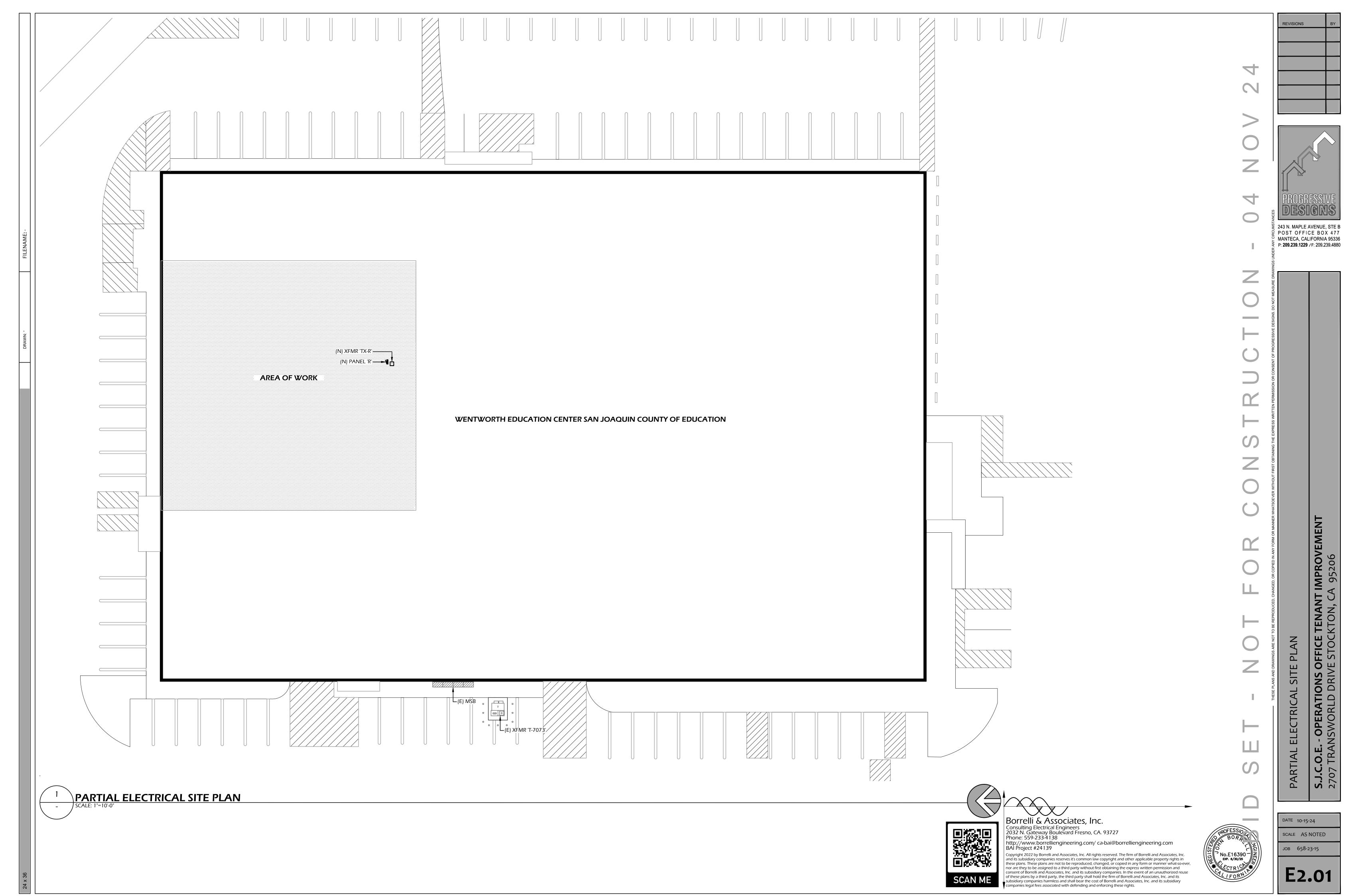


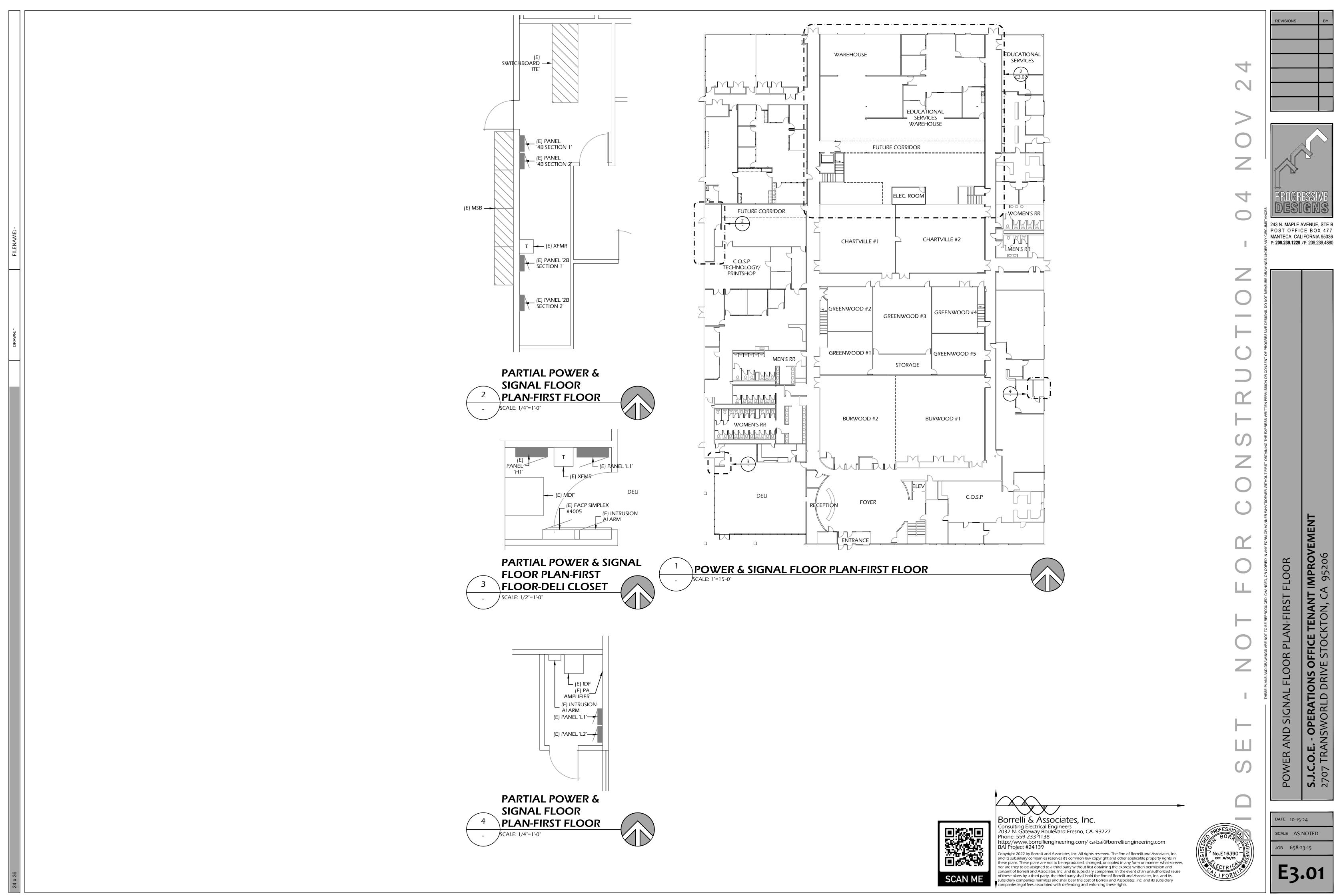
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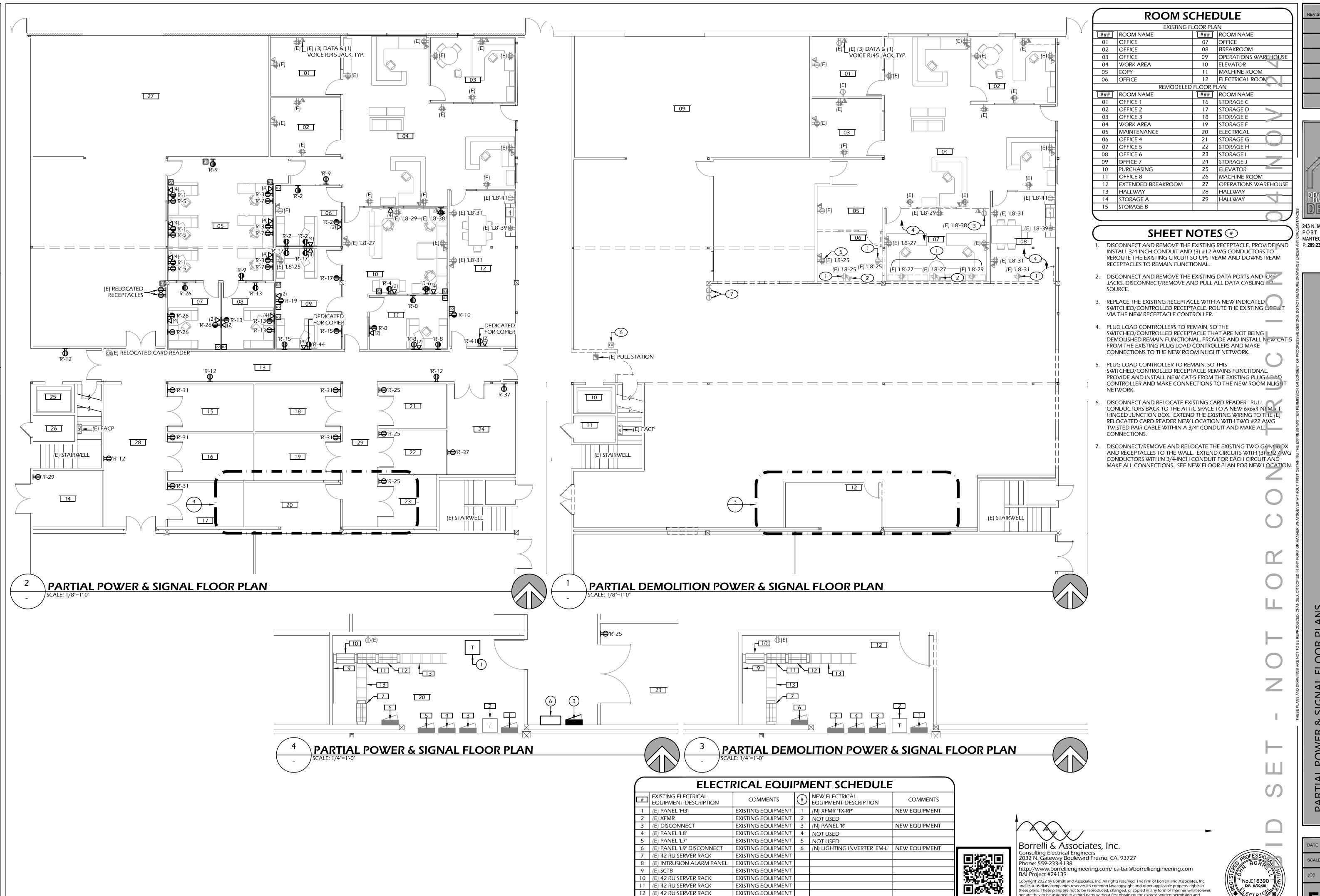
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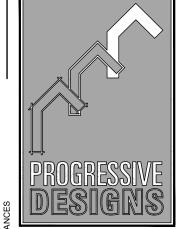


13 (E) OVERHEAD CABLE TRAY

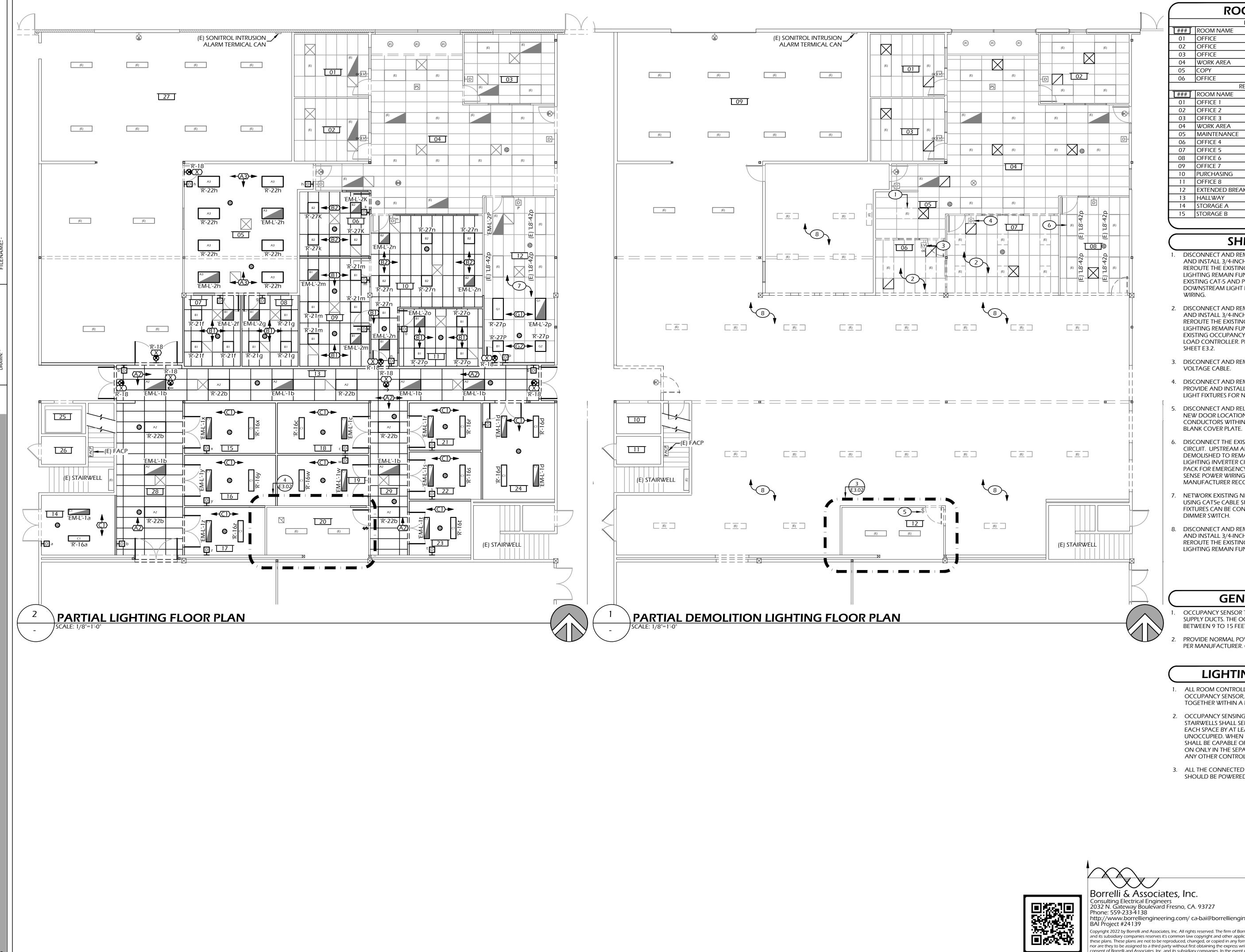
EXISTING EQUIPMENT

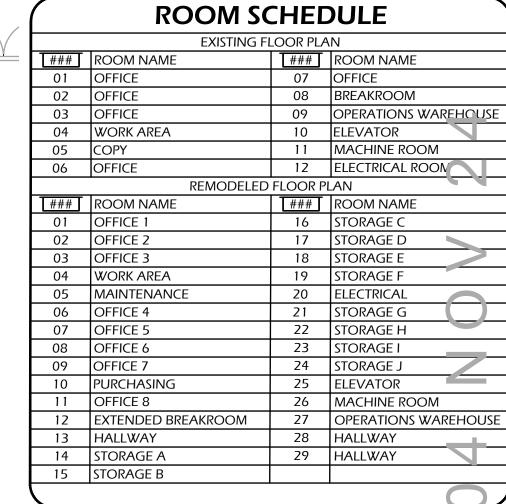
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#### SHEET NOTES #

DISCONNECT AND REMOVE THE EXISTING LIGHT FIXTURE. PROVIDE AND INSTALL 3/4-INCH CONDUIT AND (3)#12 AWG CONDUCTORS TO REROUTE THE EXISTING CIRCUIT SO UPSTREAM AND DOWNSTREAM LIGHTING REMAIN FUNCTIONAL. DISCONNECT AND REMOVE THE EXISTING CAT-5 AND PROVIDE AND INSTALL NEW CAT-5 FROM DOWNSTREAM LIGHT FIXTURE TO UPSTREAM FOR NLIGHT CONTPOL

- DISCONNECT AND REMOVE THE EXISTING LIGHT FIXTURE. PROVID AND INSTALL 3/4-INCH CONDUIT AND (3)#12 AWG CONDUCTORS TO REROUTE THE EXISTING CIRCUIT SO UPSTREAM AND DOWNSTREAM LIGHTING REMAIN FUNCTIONAL. DISCONNECT AND REMOVE THE EXISTING OCCUPANCY SENSOR AND CAT-5 CABLE BACK TO THE PLUG LOAD CONTROLLER. PLUG LOAD CONTROLLER TO REMAIN. REFER TO
- 3. DISCONNECT AND REMOVE THE EXISTING DIMMER SWITCH AND LOW VOLTAGE CABLE.
- 4. DISCONNECT AND REMOVE THE EXISTING LOW VOLTAGE CATE CABLE. PROVIDE AND INSTALL NEW CAT-5 CABLE BACK TO ONE OF THE NEW LIGHT FIXTURES FOR NLIGHT CONTROL WIRING.
- DISCONNECT AND RELOCATE THE EXISTING LIGHT SWITCH TO THE NEW DOOR LOCATION. EXTEND WIRING WITH (3) #12 AWG CONDUCTORS WITHIN A 3/4-INCH CONDUIT. PROVIDE AND INSTALL
- DISCONNECT THE EXISTING LIGHT FIXTURE FROM THE (E) 'L8'-42 CIRCUIT. UPSTREAM AND DOWNSTREAM LIGHTS THAT ARE NOT PEING DEMOLISHED TO REMAIN FUNCTIONAL. RECONNECT TO NEW LIGHTING INVERTER CIRCUIT INDICATED. USING nPS 80 EZ ER POWER PACK FOR EMERGENCY CONNECTION. PROVIDE/ INSTALL NOFM/L SENSE POWER WIRING CONNECTIONS. MAKE ALL CONNECTION' PF MANUFACTURER RECOMMENDATIONS.
- 7. NETWORK EXISTING NLIGHT NETWORK TO THE NEW NLIGHT NETWORK USING CATSE CABLE SUCH THAT ALL EXISTING AND NEWLY AT OFF FIXTURES CAN BE CONTROLLED WITH EXISTING AND NEWLY ADDED DIMMER SWITCH.
- DISCONNECT AND REMOVE THE EXISTING LIGHT FIXTURE. PROVIDE AND INSTALL 3/4-INCH CONDUIT AND (3) #12 AWG CONDUCTORS TO REROUTE THE EXISTING CIRCUIT SO UPSTREAM AND DOWNSTPEAM LIGHTING REMAIN FUNCTIONAL.

## GENERAL NOTES **(\*)**

OCCUPANCY SENSOR TO BE INSTALLED 4 TO 6 FEET AWAY FROM AIR SUPPLY DUCTS. THE OCCUPANCY SENSOR SHALL BE INSTALLED BETWEEN 9 TO 15 FEET ABOVE FINISHED FLOOR.

PROVIDE NORMAL POWER FOR EMERGENCY FIXTURES AS REC PER MANUFACTURER. CONNECT TO THE UNSWITCHED SIDE.

## LIGHTING SYSTEM NOTES

ALL ROOM CONTROLLERS/POWERPACKS, NETWORKED BRIDGES, OCCUPANCY SENSOR, PHOTO SENSORS, ETC. SHALL BE NETW ORKED TOGETHER WITHIN A ROOM.

- 2. OCCUPANCY SENSING CONTROLS INSTALLED IN CORRIDORS AND STAIRWELLS SHALL SEPARATELY REDUCE THE LIGHTING POWER IN EACH SPACE BY AT LEAST 50 PERCENT WHEN THE SPACE IS UNOCCUPIED. WHEN THE SPACE IS OCCUPIED, THE SENSING CONTROLS SHALL BE CAPABLE OF AUTOMATICALLY TURNING THE LIGHTING FULLY ON ONLY IN THE SEPARATELY CONTROLLED SPACE REGARDLESS OF ANY OTHER CONTROL.
- 3. ALL THE CONNECTED NLIGHT BUS POWER SUPPLYING DEVICES SHOULD BE POWERED FROM THE NORMAL POWER

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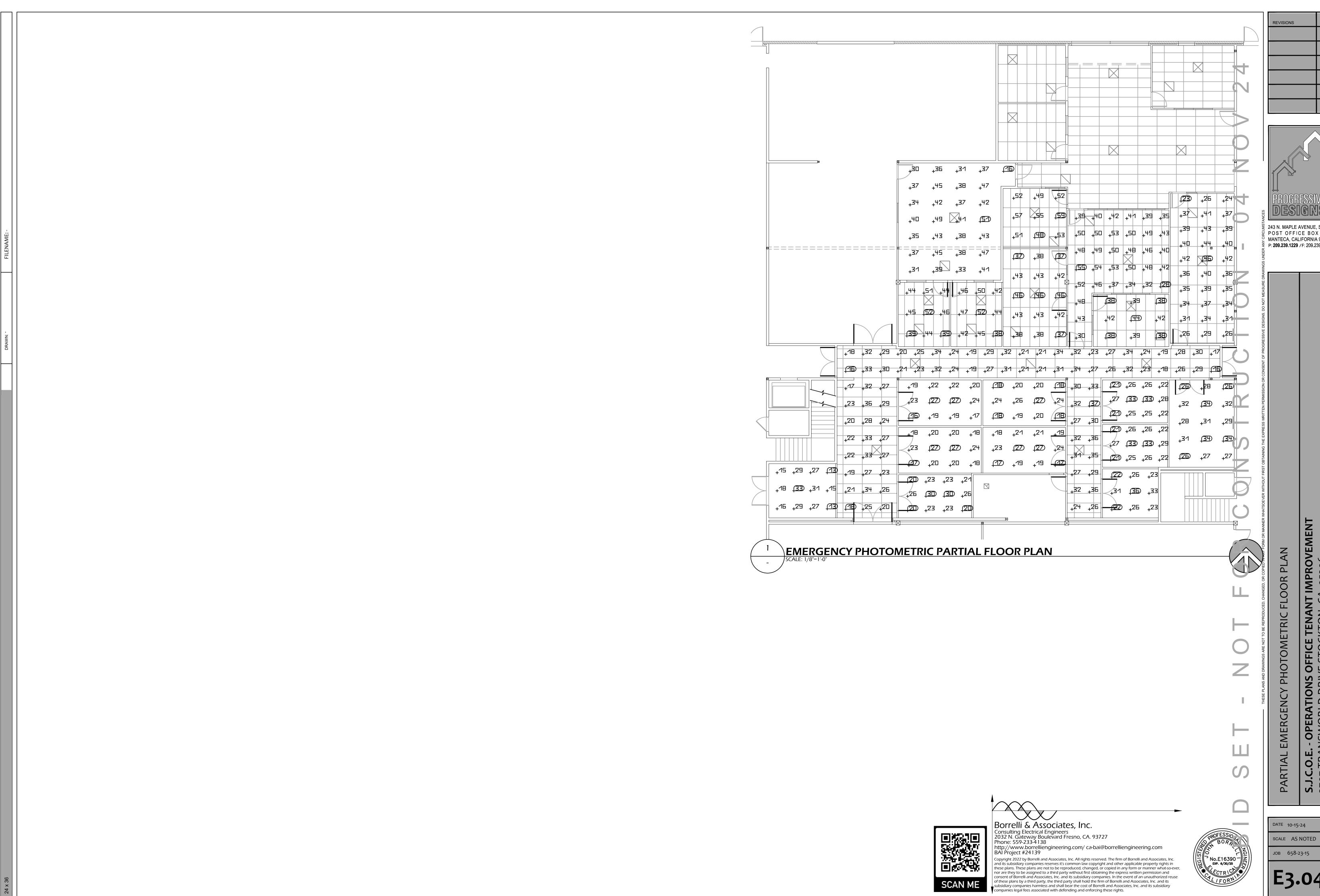
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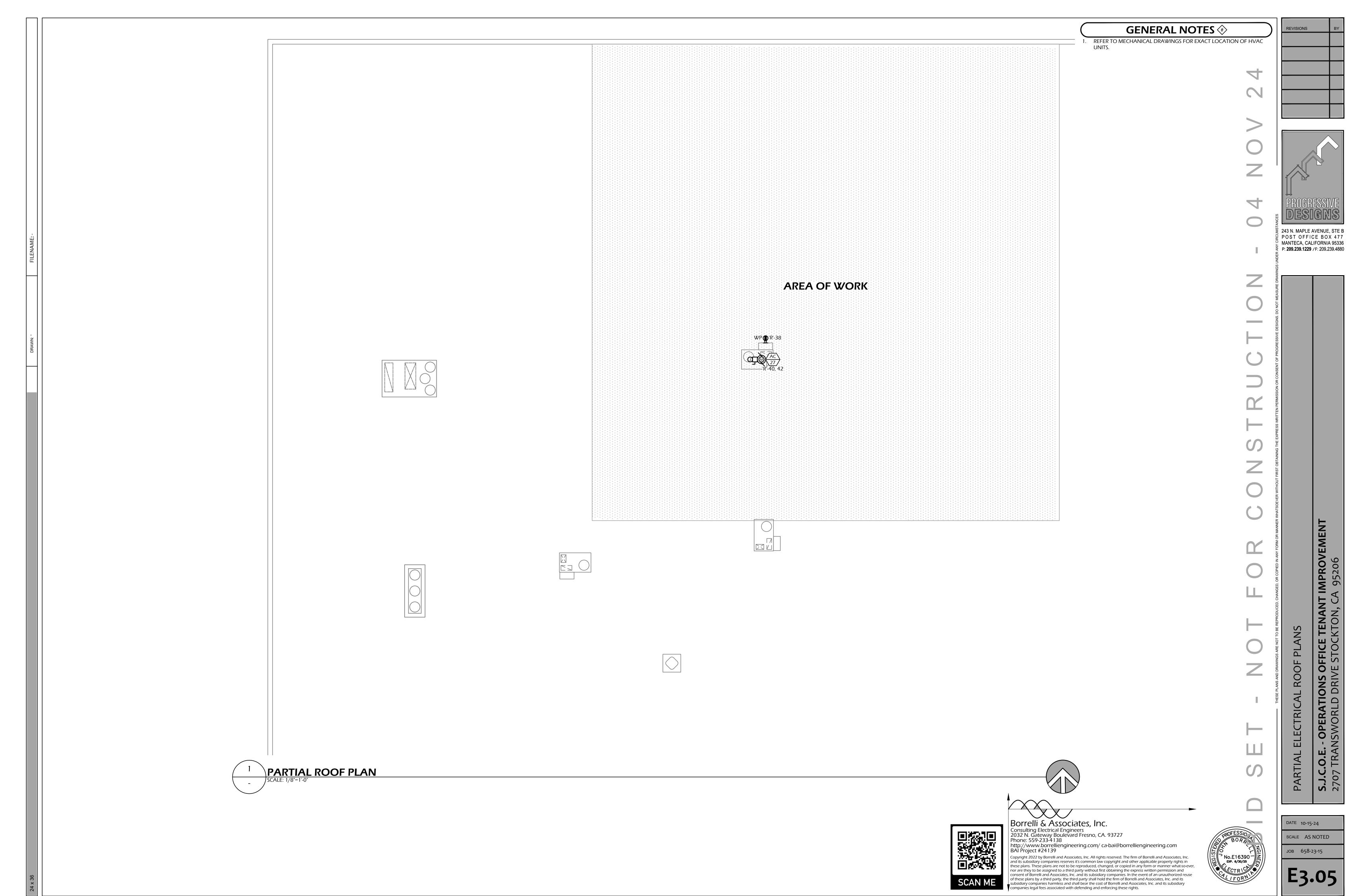


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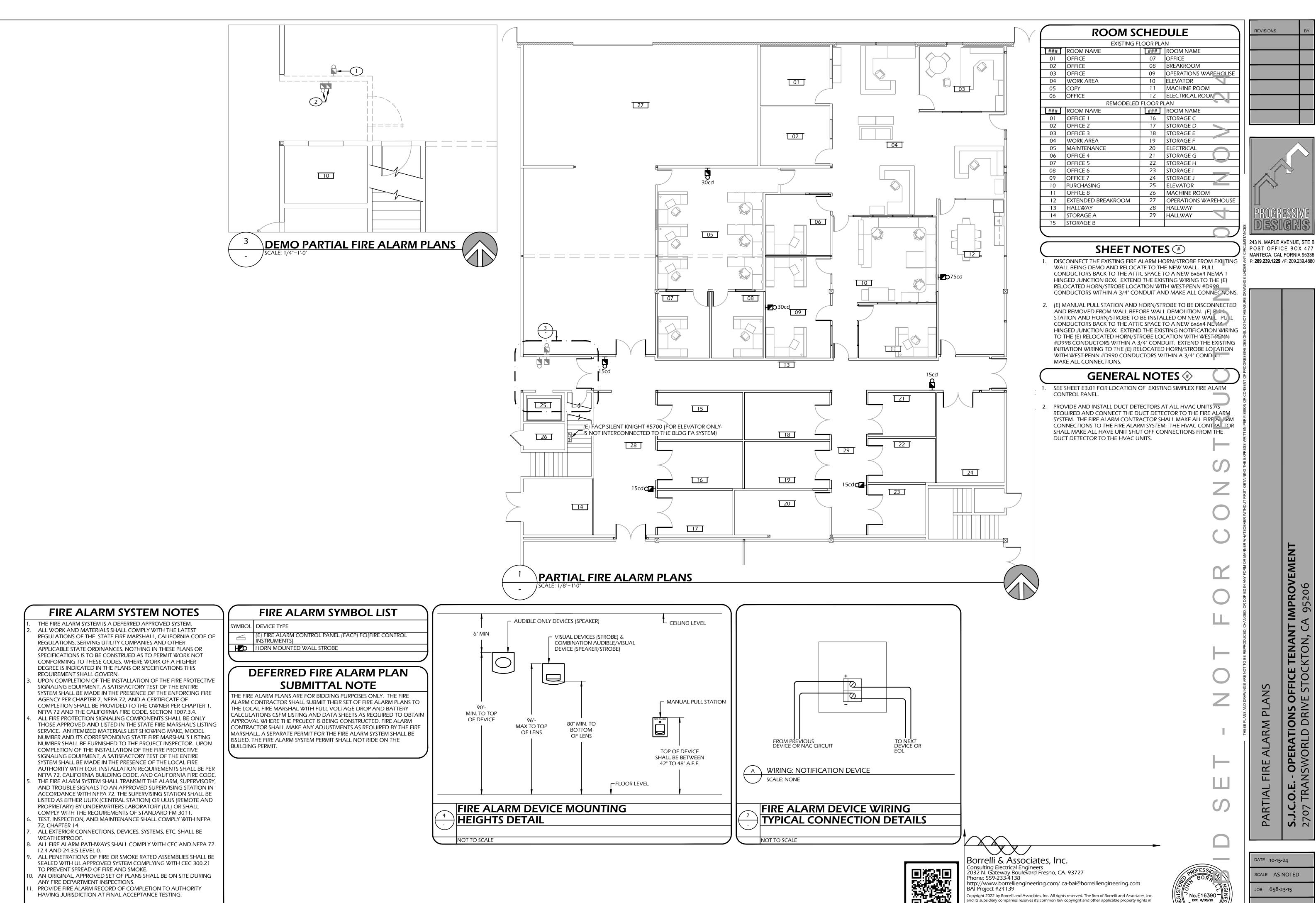
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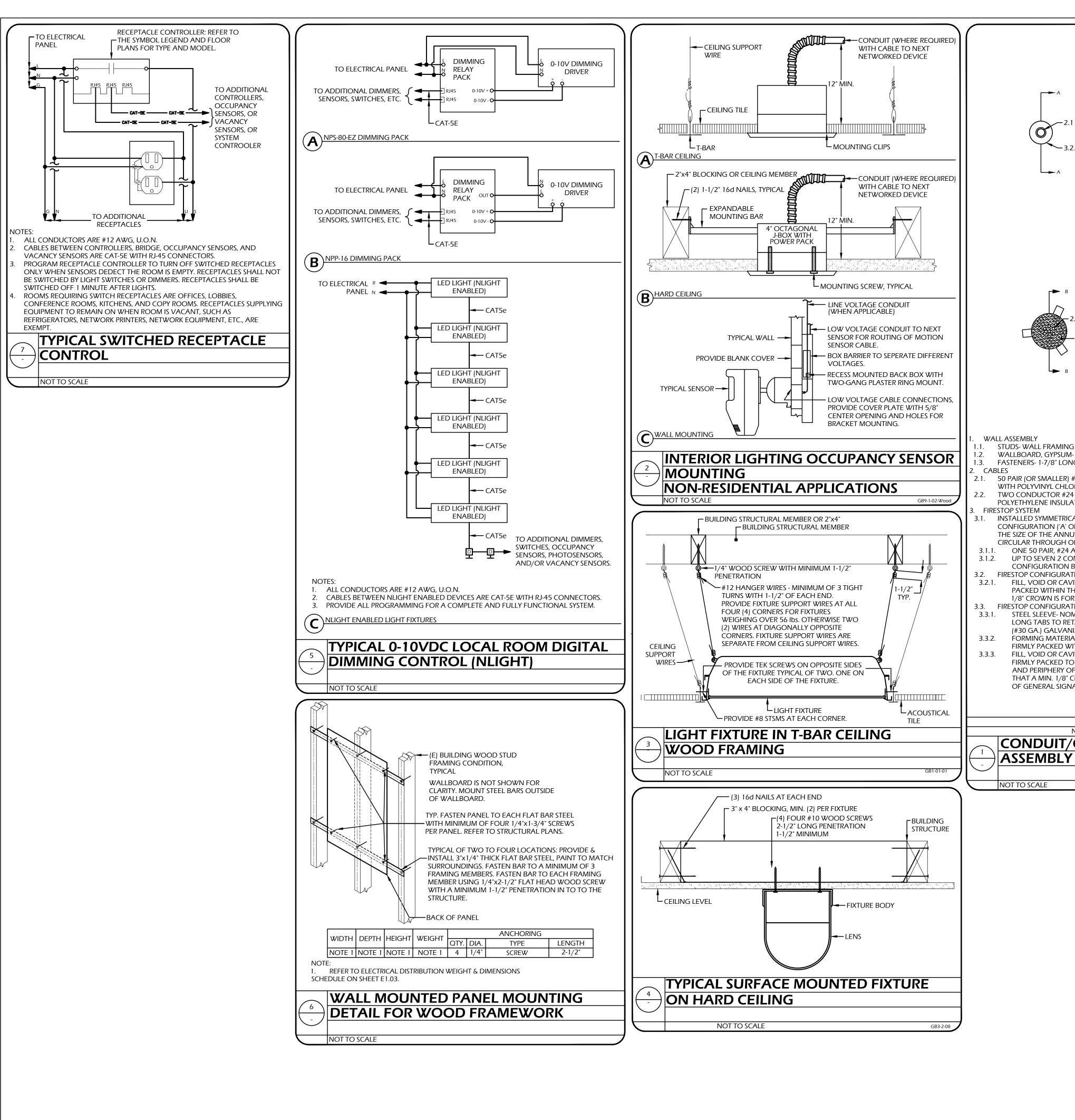
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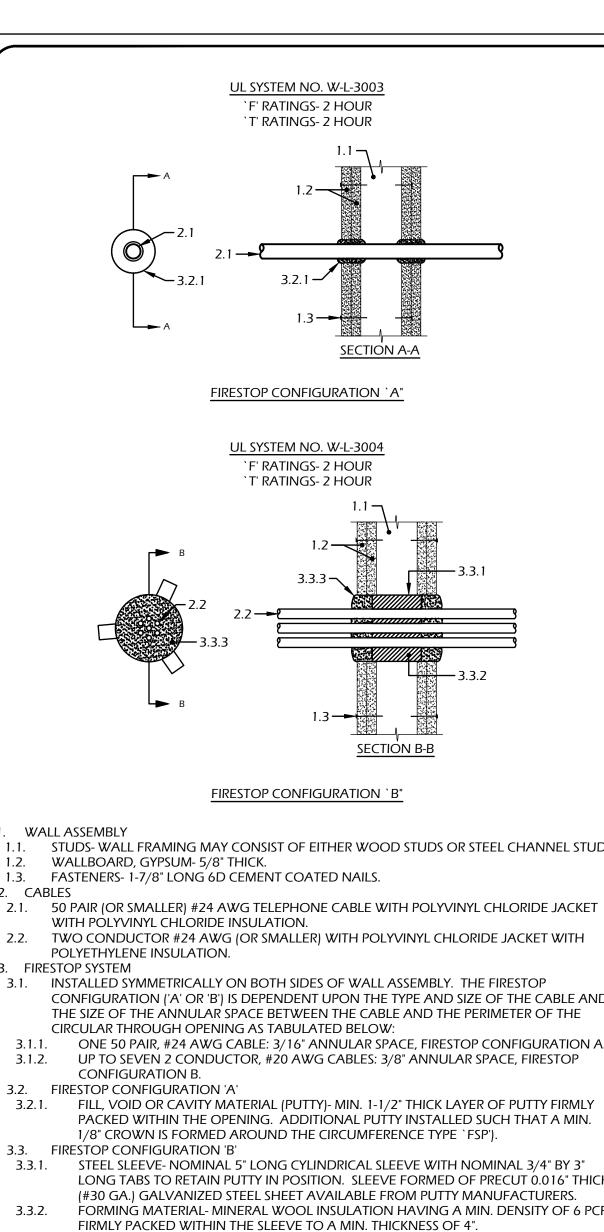
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TWO CONDUCTOR #24 AWG (OR SMALLER) WITH POLYVINYL CHLORIDE JACKET WITH

CONFIGURATION ('A' OR 'B') IS DEPENDENT UPON THE TYPE AND SIZE OF THE CABLE AND THE SIZE OF THE ANNULAR SPACE BETWEEN THE CABLE AND THE PERIMETER OF THE

3.1.1. ONE 50 PAIR, #24 AWG CABLE: 3/16" ANNULAR SPACE, FIRESTOP CONFIGURATION A. UP TO SEVEN 2 CONDUCTOR, #20 AWG CABLES: 3/8" ANNULAR SPACE, FIRESTOP

FILL, VOID OR CAVITY MATERIAL (PUTTY)- MIN. 1-1/2" THICK LAYER OF PUTTY FIRMLY PACKED WITHIN THE OPENING. ADDITIONAL PUTTY INSTALLED SUCH THAT A MIN.

STEEL SLEEVE- NOMINAL 5" LONG CYLINDRICAL SLEEVE WITH NOMINAL 3/4" BY 3" (#30 GA.) GALVANIZED STEEL SHEET AVAILABLE FROM PUTTY MANUFACTURERS. FORMING MATERIAL-MINERAL WOOL INSULATION HAVING A MIN. DENSITY OF 6 PCF,

FILL, VOID OR CAVITY MATERIAL (PUTTY)- MIN. 1" THICK LAYER OF PUTTY MATERIAL FIRMLY PACKED TO FILL THE ANNULAR SPACE BETWEEN THE CABLES, MINERAL WOOL AND PERIPHERY OF THE OPENING. ADDITIONAL PUTTY SHOULD BE INSTALLED SUCH THAT A MIN. 1/8" CROWN IS FORMED AROUND THE CABLES. (NELSON ELECTRIC, UNIT OF GENERAL SIGNAL CORP.- TYPE FSP.)

`T' RATINGS: 0, 1, 2, 3, & 4 HR. (SEE ITEM 4.1.1) FIRESTOP CONFIGURATION 'C' UL SYSTEM NO. W-L-2002 `F' RATINGS: 1, 1-1/2 & 2 HR. (SEE ITEM 4.1) `T' RATINGS: 3/4, 1, 1-1/2 & 2 HR. (SEE ITEM 4.2.1)

UL SYSTEM NO. W-L-1001

`F' RATINGS: 1, 2, 3 & 4 HR. (SEE ITEM 4.1)

FIRESTOP CONFIGURATION 'D'

1.1. STUDS-WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. | 1.1. STUDS-WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS 1.2. WALLBOARD, GYPSUM- 5/8" THICK. 1.3. FASTENERS

CONDUIT

PIPE COVERING (OPTIONAL)- NOM. 1" OR 2" THICK HOLLOW CYLINDRICAL HEAVY DENSI... (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH FOIL-SCRIM-KRAFT.

OF THE FIRESTOP SYSTEM IS EITHER (1) OR (2) HOUR DEPENDING UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE HOURLY 'T' RATINGS FOI THE FIRESTOP SYSTEM ARE DEPENDENT UPON THE SIZE OF THE STEEL PIPE OR COID  $\Im$  IT THE ABSENCE OR PRESENCE OF PIPE COVERING (ITEM3), THE FIRESTOP CONFIGUR AT ON AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED 4.1.1. MAXIMUM 1"Ø CONDUIT: 3/16" ANNULAR SPACE, FIRESTOP CONFIGURATION C, 1 OR 2

MAXIMUM 4"Ø CONDUIT AND 1" COVERING: 3/8" ANNULAR SPACE, FIRESTOP

CONFIGURATION D, 1 OR 2 HOUR 'T' RATING 4.2. FIRESTOP CONFIGURATION 'C' 4.2.1. FILL, VOID OR CAVITY MATERIAL - CAULK FILL MATERIAL FORCED INTO ANNULAR SPACE TO MAX. EXTENT POSSIBLE AND WITH A MIN. 1/4" DIAM. BEAD OF CAULK

APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WALL. 4.3. FIRESTOP CONFIGURATION 'D' LONG TABS TO RETAIN PUTTY IN POSITION. SLEEVE FORMED OF PRECUT 0.016" THICK 4.3.1. FILL, VOID OR CAVITY MATERIALS (WRAP STRIP)- NOMINAL 1/4" THICK INTUMESCENT ELASTOMERIC MATERIAL FACED ON ONE SIDE WITH ALUMINUM FOIL, SUPPLIED IN 2' WIDE STRIPS. NOMINAL 2" WIDE STRIP, TIGHTLY WRAPPED AROUND PIPE COV\_RING (FOIL SIDE OUT) WITH SEAM BUTTED AND WITH EDGE OF WRAP STRIP ABUTTING

> WALL SURFACE. WRAP STRIP TEMPORARILY HELD IN POSITION WITH ALUMINUM FO TAPE, STEEL WIRE TIE OR EQUIVALENT. FILL, VOID OR CAVITY MATERIALS (CAULK)- GENEROUS BEAD OF CAULK TO OUTER PERIMETER OF WRAP STRIP AT INTERFACE WITH WALL SURFACE. STEEL COLLAR- NOMINAL 2" DEEP COLLAR WITH 1-1/4" WIDE BY 2" LONG ANCHOR

TABS AND MINIMUM 1/4" LONG TABS TO RETAIN WRAP STRIP LAYER. COILS OF PRECUT 0.016" THICK (NO. 30 GAUGE) GALVANIZED SHEET STEEL AVAILABLE FROM WRAP STRIP MANUFACTURER.

NOTE: FOR OTHER RATED ASSEMBLIES, REFER TO THE LATEST ISSUE OF "UNDERWRITERS LABORATORIES, INC., FIRE RESISTANCE DIRECTORY."

CONDUIT/CABLE PENETRATIONS THRU RATED STUD/WALLBOARD ASSEMBLY DETAIL (TYPICAL)

GB1( ^ ^ ^1

DATE 10-15-24

**S.J.C.** 2707

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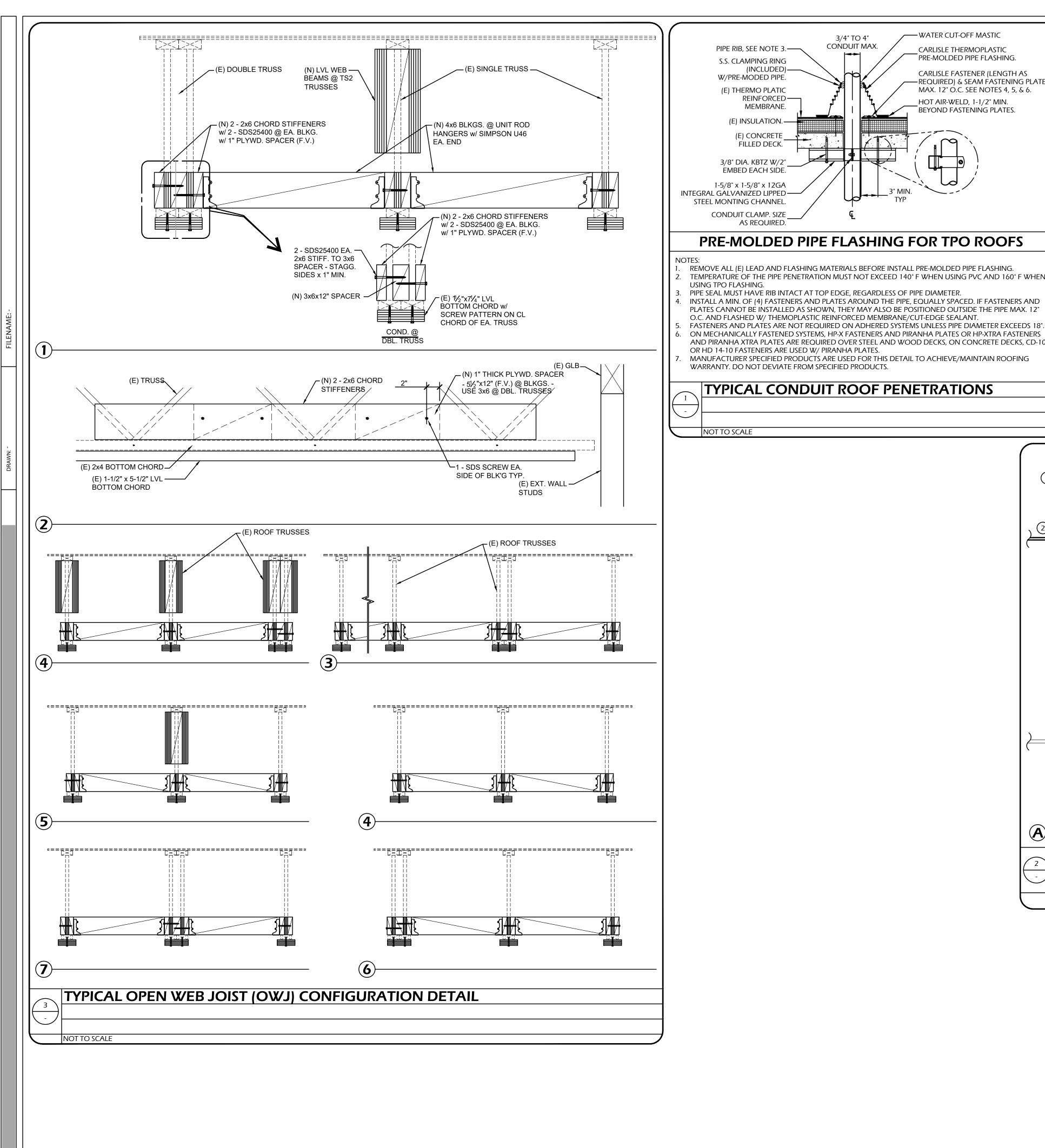
ttp://www.borrelliengineering.com/ ca-bai@borrelliengineering.com

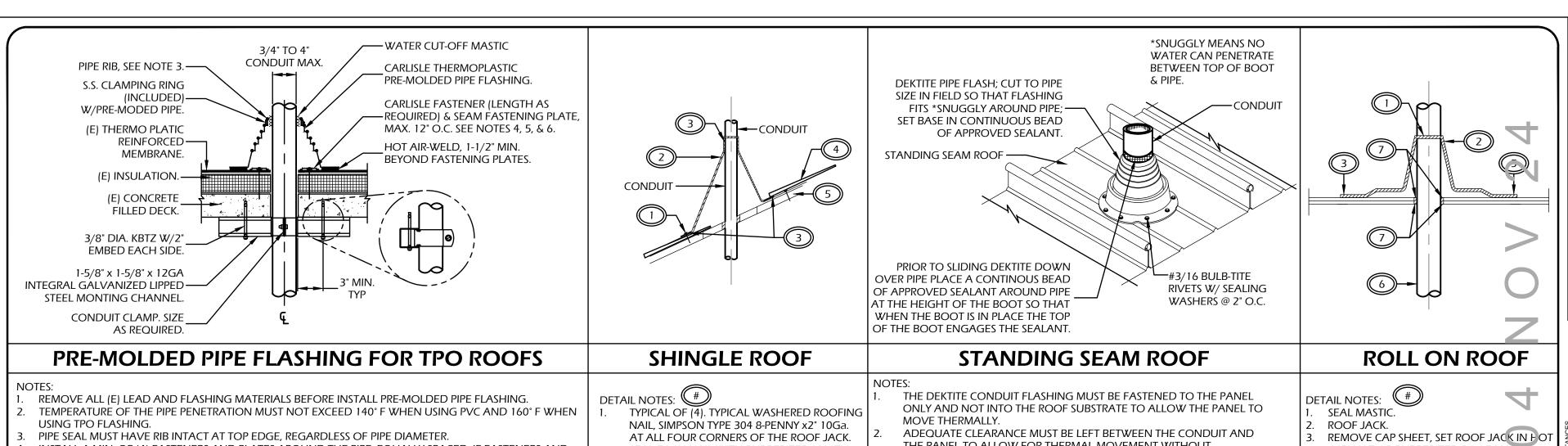
ies legal fees associated with defending and enforcing these rights.

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INSTALL A MIN. OF (4) FASTENERS AND PLATES AROUND THE PIPE, EQUALLY SPACED. IF FASTENERS AND PLATES CANNOT BE INSTALLED AS SHOWN, THEY MAY ALSO BE POSITIONED OUTSIDE THE PIPE MAX. 12" O.C. AND FLASHED W/ THEMOPLASTIC REINFORCED MEMBRANE/CUT-EDGE SEALANT.

ON MECHANICALLY FASTENED SYSTEMS, HP-X FASTENERS AND PIRANHA PLATES OR HP-XTRA FASTENERS AND PIRANHA XTRA PLATES ARE REQUIRED OVER STEEL AND WOOD DECKS, ON CONCRETE DECKS, CD-10 OR HD 14-10 FASTENERS ARE USED W/ PIRANHA PLATES. MANUFACTURER SPECIFIED PRODUCTS ARE USED FOR THIS DETAIL TO ACHIEVE/MAINTAIN ROOFING WARRANTY. DO NOT DEVIATE FROM SPECIFIED PRODUCTS.

SEAL EACH NAIL WITH RUBBERIZED MASTIC. METAL ROOF FLASHING/JACK.

SEAL WITH RUBBERIZED MASTIC. EXISTING ROOF SHINGLE, SLIP ROOF JACK BENEATH SHINGLE. NAIL ROOF JACK AT UPPER SIDE OF ROOF

BENEATH UPPER SHINGLE. SEAL WITH MASTIC

THE PANEL TO ALLOW FOR THERMAL MOVEMENT WITHOUT INTERFERENCE. THE CONDUIT MUST BE CENTERED IN THE PANEL TO ALLOW ADEQUATE CLEARANCE FOR INSTALLATION OF THE DEKTITE WITHOUT

INTERFERENCE WITH THE PANEL RIBS FOR REGIONS WITH SNOW & ICE, A ROW OF SNOW GUARDS MUST BE INSTALLED NO GREATER THAN 3' IN FRONT OF THE CONDUIT

PENETRATION FOR PROTECTION. CONDUITS LARGER THAN 6" IN DIAMETER MAY REQUIRE A CURB DEPENDING ON PANEL WIDTH & CONDUIT LOCATION. THIS IS TO BE VERIFIED IN FIELD.

ASPHALT OR RUBBERIZED ROOF MASTIC.

NOT USED. APPLY 6" FIBER TAPE CENTERED ON PERIMETER OF ROOF JACK BASE IN HOT ASPHALT.

CONDUIT. CAULK FORCED INTO SPACE TO MAXIMUM EXTENT POSSIBLE. CAULK SHALL BE INSTALLED FLUSH WITH ROOF MENIDING A

AND CEILING.

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1. OPEN WEB TRUSS, TYPICAL. 2x6-INCH TRUSS BRIDGE, TYPICAL.

DRILL HOLE THROUGH 2x6-INCH TO RUN CABLING TO FIXTURE OR DEVICE, TYPICAL 3/4" FLEX CONDUIT, TYPICAL. INSTALL AS HIGH AS POSSIBLE WITHIN THE TRUSS ATTIC SPACE. 9. 1-1/2" CONDUIT, FASTEN TO TOP OF TOP 2x4-INCH TRUSS BRIDGE, TYPICAL

**OPEN WEB JOIST (OWJ)** 

NOT TO SCALE

LIGHTING FIXTURE AND DEVICE MOUNTING DETAIL

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INSTALL 2x6-INCH TO UNDERSIDE OF TRUSS BRIDGE, TYPICAL LIGHTING FIXTURE, TYPICAL. REFER TO LIGHTING FLOOR PLAN.

> nd its subsidiary companies reserves it's common law copyright and other applicable property rights in nese plans. These plans are not to be reproduced, changed, or copied in any form or manner what-so-ever, nsent of Borrelli and Associates, Inc. and its subsidiary companies. In the event of an unauthorized reuse of these plans by a third party, the third party shall hold the firm of Borrelli and Associates, Inc. and its subsidiary companies harmless and shall bear the cost of Borrelli and Associates, Inc. and its subsidiary

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CALIFORNIA ENERGY COMMISSION This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)2P for alterations. For multifamily addition or alterations compliance will be documented Report Page: (Page 1 of 4) Date Prepared: 2024-10-21T11:40:37 04.70 02 Climate Zone 03 Occupancy Types Within Project: Office This table includes electrical systems that are within the scope of the permit application. 07 05 subject to CA Provides power to dwelling Elec Code units/common living areas Article 517 Demand Response Controls only in multifamily Exception to occupancy 130.5(a)and Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/ 160.3, 130.1/ 160.5, and 130.3/ 160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required. Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/160.3, 130.1/160.5, and 130.3/160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.  $^1$ FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required. Generated Date/Time: Documentation Software: Energy Code Acc

CALIFORNIA ENERGY COMMISSION NRCC-ELC-E Report Page: (Page 2 of 4) 2024-10-21T11:40:37-04.00 Date Prepared: This table includes electrical systems that are within the scope of the permit application. If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas. Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

Report Version: 2022.0.000

Schema Version: rev 20220101

Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below. Receptacles Electric Ready 160.9 **Compliance Results** 130.5(d)/160.6(d) (See Table J) (See Table I)

COMPLIES

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

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/ 160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)2Piii/ 180.2(b)4Bviic.

05 Sheet Number for Voltage Drop Field Inspector Combined Voltage Drop on Installed Feeder/Branch Location of Voltage Drop Calculations in Construction Circuit Conductors Compliance Method Calculations<sup>1</sup> Fail Documents Permitted by CA Elec Code (Exception to **Contractor Responsible** 130.5(c))\*

Documentation Software: Energy Code Ace Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101

Compliance ID: 214063-1024-0015 Report Generated: 2024-10-21 08:40.00

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onsent of Borrelli and Associates, Inc. and its subsidiary companies. In the event of an unauthorized reuse of these plans by a third party, the third party shall hold the firm of Borrelli and Associates, Inc. and its osidiary companies harmless and shall bear the cost of Borrelli and Associates, Inc. and its subsidiary panies legal fees associated with defending and enforcing these rights.

EXP. 6/30/25

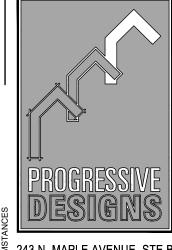
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Column   C			*	,				2024-1				
Companies   Comp		,			<u> </u>					path for multifamily occupancies. Multifamily includes dormitory and s	nior living facilities.	_
Company   Comp	F. INDOOR LIGHTIN	NG FIXTURE SCHEDULE										2024-11-01T17:09:35-04:0
Company   Comp	This table includes all	ll planned permanent and p										
Compared	documented in Table T not included here.	e I. If using Table T to docur	nent lighting in multifan	nily common use o	areas providing shared	a provisions for livi	ıng, eating, cooki 	ng or sanitation, thos	e Iuminaires are		OA Total Constitution of Electrical Constitution	i+2) 2 206 70
Column   C			02	25		07	00	00	10			
March   Marc			Small			Fy						
Security Contents   Secu		•	Modular   Aperture	. & Watts per luminaire <sup>2</sup>	determined	of Luminaires	140.6(a)3 /	Design Watts		• School or Classroom		
Part			Color Criar				, ,					
A	REC	ECESS MOUNTED IN A									nermit application and are demonstrating compliance using t	the prescriptive path outlined in 140.6 / 170.2(e)
A Control Co	I SHAI			22.7		20		45.4		141.0(b)2 / 180.2(b)4 for alterations.		
Part	0-1	-10V DIMMING AND	NO NA	22.7	Mfr. Spec	20	No	454	_   _			
Perf 16   19.00.	EM	MERGENCY FIXTURE										
March   Marc		LIGHTING PLAN.										Area Category Method 1546.88
Control Market 1996												
Math.   Math	REC	ECESS MOUNTED IN A									1	<u> </u>
Part	SHAI	ALL HAVE CONTINOUS	No NA	30.7	Mfr. Spec	10	No	307				
## MERCHANC - 2 ONL	EMI	MERGENCY DRIVER AT										
March   Marc	EM	MERGENCY FIXTURE										
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19   19   19   19   19   19   19   19												
	G1 SU	SURFACE MOUNTED.	No NA	23.3	Mfr. Spec	2	No	46.6	<i>-</i>   -			
Second Second Control												
## AGEOR   Part   Part				Gene	erated Date/Time:		1	Documentation Softwar	re: Energy Code Ace		Generated Date/Time:	Documentation Software: Energy Code Acc
## AGEOR   Part   Part	CA Building Energy Effic	ficiency Standards - 2022 Non	residential Compliance			04				CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance		Compliance ID: 214063-1124 0017
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INDOOR LIGHTING FIXTURE SCHEDULE	Project Name: S.J.C.	C.O.E OPERATIONS OFFICE T	+		Report Page:					Project Name: S.J.C.O.E OPERATIONS OFFICE TENANT IMPROVEMENT		(Page 2 of 1
AND MATERIAL REAL PROPERTY CATCHING TO A CONTROL OF THE PARK OF TH	2707 TRANSWOI	ORLD DRIVE, STOCKTON	I, CA 95206		Date Prepared:			2024-1	1-01T17:09:35-04:00	2707 TRANSWORLD DRIVE, STOCKTON, CA 95206	Date Prepared:	2024-11-01T17:09:35- <sub>U4:0</sub>
AND MATERIAL REAL PROPERTY CATCHING TO A CONTROL OF THE PARK OF TH												
PARTICIPATION   PARTICIPATIO			I	T		T	T	I		C. COMPLIANCE RESULTS		
Fig. 1	EM	MERGENCY FIXTURE								If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with E.		140 (/-) / 470 2/-)
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EMERGENCY PRIVING   COMPINION   COMPINIO			No I NA	184	Mfr Spec	2	No	36.8		combined for Ruilding Category Additional 140.	(C)3 /   Total   Control Credits	
COCATIONS INJUNCATED ON   COUNTING PLAN   CO	G2 CONTI		NO   NA	10	IVIII. Spec	•	I	l l	ı ı		$I_{OMB} = I_{OMB} = I_{OMB}$	
2-FT x 4-FT_4.35 BLUMENS, DIMMING DRIVER  A3 SURFACE MONITOD. No NA 40 Mfr. Spec 6 No 240	G2 CONTII AND E	EMERGENCY DRIVER AT MERGENCY FIXTURE	NO NA		IVIII. Spec					compliance per   140.6(c)1   140.6(c)2/   140.6(c)26/   170.2()14	(e)4B	*Includes 140.6 / 170.2(e)
DIMMING DRIVER  A2 PT. A FT. A	G2 CONTII AND E EM LOCA	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON	NO NA		Will. Spec					compliance per   140.6(c)1   140.6(c)2 / 140.6(c)26 / 170.2(e)4Av   (+)	(e)4B	*Includes 140.6 / 170.2(e)
2-FT, X-4FT, 4,321 LUMENS, FOTURE TO LAVE O-10V   No NA 30.3 Mfr. Spec 12 No 363.6	G2 CONTII AND E EM LOCA	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS,		150.			N-	240		140.6(c)1	(e)4B	*Includes Adjustments  140.6 / 170.2(e)  COMPLIES
FIXTURE TO HAVE O-1/W IDMINIS DRIVER.  TOtal Designed Wattage: Unconditioned Spaces  Total Designed Wattage: Uncon	G2 CONTII AND E EM LOCA 2-FT. >	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED,		40		6	No	240		140.6(c)1	(e)4B (e)4B (e)       =       Allowed (Watts)       140.6(a)2 / 170.2(e)1B (-)         (able K)       (See Table F)       (See Table P)         =       1,776.94       ≥       1,448         =       618.75       ≥       563.2	*Includes Adjustments
Designed Watts: Unconditioned Spaces  O1 O2 O3 O4 O5 O6 O7 O8 O9 O5 O5 O6 O7 O8 O5	G2 CONTII AND E EN LOCA 2-FT. > A3 SU 2-FT. X	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS,	No NA	40	Mfr. Spec	6	No			140.6(c)1	(e)4B	*Includes Adjustments  140.6 / 170.2(e)  140.6 / 170.2(e)  COMPLIES  COMPLIES  COMPLIES  COMPLIES  COMPLIES
Designed Wattage: Unconditioned Spaces  Or 10 02 03 04 05 06 07 08 09 10  Name or Item Tag Description (Track) Fixture & Complete Luminaire Tag UnMINA) LED FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING AND EMERGENCY Standards - 2022 Norresidential Compliance  CA Building Energy Efficiency Standards - 2022 Norresidential Compliance  CA Building Energy Efficiency Standards - 2022 Norresidential Compliance  Or 10 02 03 04 05 06 07 08 09 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	G2 CONTII AND E EM LOCA  2-FT. > A3 SU C  2-FT. x MOUN FIXT	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, JUNTED IN T-BAR CEILING, KTURE TO HAVE 0-10V	No NA	40	Mfr. Spec	6 12				140.6(c)1	(e)4B	*Includes Adjustments  140.6 / 170.2(e)  140.6 / 170.2(e)  COMPLIES  COMPLIES  COMPLIES  COMPLIES  COMPLIES
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Agent or item Tag  Description  Toplice Luminaire Toplice Luminair	G2 CONTII AND E EM LOCA  2-FT. > A3 SU C 2-FT. X MOUN FIXT D  Designed Wattage: Use	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  Ex 4-FT.,4,858 LUMENS, DIMMING DRIVER  Ex 4-FT., 4,321 LUMENS, DITTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces	No NA	30.3	Mfr. Spec Mfr. Spec	d Watts: CONDITIO	No ONED SPACES	363.6 1,448		140.6(c)1	(e)4B	*Includes Adjustments  140.6 / 170.2(e)  140.6 / 170.2(e)  COMPLIES  COMPLIES  COMPLIES  COMPLIES  COMPLIES
10-INCH x 4-FT, 3,288 LUMENS (NOMINAL) LED FIXTURE SURFACE NOMINON OF NA 25.6 Mfr. Spec 22 No 563.2 UM Mounted. FIXTURE SURFACE OF NOW DIMMING AND EMERGENCY DRIVER AT EMERGENCY DRIVER AT EMERGENCY DRIVER AT EMERGENCY Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 CA Building Energy Eff	G2 CONTII AND E EM LOCA  2-FT. > A3 SU C 2-FT. X MOUN FIXT D  Designed Wattage: Use 01	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  Ex 4-FT.,4,858 LUMENS, DIMMING DRIVER  Ex 4-FT., 4,321 LUMENS, DINTED IN T-BAR CEILING, KTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02	No NA  No NA  03 04	30.3	Mfr. Spec  Mfr. Spec  Total Designe	d Watts: CONDITIO	No ONED SPACES  08	363.6 1,448	10	Conditioned   1,776.94   Conditioned   Con	(e)4B	*Includes Adjustments  = 1448 = 563.2  COMPLIES COMPLIES COMPLIES COMPLIES
LUMENS (NOMINAL) LED FIXTURE SURFACE MOUNTED. FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING AND EMERGENCY DRIVER AT EMERGENCY  Generated Date/Time:  Generated Date/Time:  Documentation Software: Energy Code Ace  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  Report Generated: 2024-11-01 14:09:39  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresi	G2 CONTII AND E EM LOCA  2-FT. x A3 SU C 2-FT. x MOUN FIXT D  Designed Wattage: Us 01  Name or Item Cc	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, DIMMING DRIVER  TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire	No NA  No NA  O3 O4  Modular rack) Fixture	40 30.3  05 Watts per	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage	07  Total Number of Luminaires	No ONED SPACES  08 Excluded per 140.6(a)3 /	363.6 1,448 09 Design Watts	10 Field Inspector	Compliance per   140.6(c)1   140.6(c)2 / 170.2(e)4	(e)4B	*Includes Adjustments  = 1448 = 563.2  COMPLIES COMPLIES COMPLIES COMPLIES
C1 MOUNTED. FIXTURE SHALL HAVE CONTINOUS 0-10V DIMMING AND EMERGENCY DRIVER AT EMERGENCY DRIVER AT EMERGENCY  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  Report Version: 2022.0.000 Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  Report Version: 2022.0.000 Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  CA Building Energy Efficiency Standards - 2022	G2 CONTIL AND E EM LOCA  A3 2-FT. > A3 SU C A2 2-FT. X MOUN FIXT D  Designed Wattage: Ui O1 Name or Item Tag  CONTIL	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, DIMMING DRIVER  TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  (T	No NA  No NA  O3 O4  Modular rack) Fixture	40 30.3  05 Watts per	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage	07  Total Number of Luminaires	No ONED SPACES  08 Excluded per 140.6(a)3 /	363.6 1,448 09 Design Watts	10 Field Inspector	Compliance per   140.6(c)1   140.6(c)2 / 170.2(e)4	(e)4B	*Includes Adjustments  140.6 / 170.2(e)
DIMMING AND EMERGENCY DRIVER AT EMERGENCY DRIVER AT EMERGENCY  Generated Date/Time:  Documentation Software: Energy Code Ace  Generated Date/Time:  Documentation Software: Energy Code Ace  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101	G2 CONTII AND E EM LOCA  2-FT. x A3 SU C 2-FT. x MOUN FIXT D  Designed Wattage: Ui O1 Name or Item Tag  10- LUM	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT., 4,858 LUMENS, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, DIMMING DRIVER  TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED	No NA  No NA  O3 O4  Modular rack) Fixture	40 30.3  05 Watts per	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage	07  Total Number of Luminaires	No ONED SPACES  08 Excluded per 140.6(a)3 /	363.6 1,448 09 Design Watts	10 Field Inspector	Compliance per   140.6(c)1   140.6(c)2 / 170.2(e)4	(e)4B	*Includes Adjustments  140.6 / 170.2(e)  140.6 / 170.2(e)  COMPLIES  COMPLIES  COMPLIES  COMPLIES  COMPLIES
DRIVER AT EMERGENCY  Generated Date/Time:  Documentation Software: Energy Code Ace  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  Documentation Software: Energy Code Ace  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: 2022.0.000 Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Schema Version: rev 20220101  CA Building Energy Efficiency Standards	G2 CONTII AND E EN LOCA  A3 2-FT. > A3 SU C  2-FT. × MOUN FIXT D  Designed Wattage: U 01  Name or Item Tag  10- LUM F C1 MOU	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  Ex 4-FT.,4,858 LUMENS, DIMMING DRIVER  Ex 4-FT., 4,321 LUMENS, DIMMING DRIVER  EX 4-FT., 4,328 LUMENS, DIMMING DRIVER  EX 4-FT., 3,288 LUMENS, DIMMING DRIVER  EX 4-FT., 3,288 LUMENS (NOMINAL) LED FIXTURE SURFACE LUNTED. FIXTURE SHALL	No NA  No NA  O3 O4  Modular Small Aperture Color Char	40 30.3  05 Watts per luminaire <sup>2</sup>	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined	07  Total Number of Luminaires	08 Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts	10 Field Inspector Pass Fail	Compliance per   140.6(c)1   140.6(c)2 / 170.2(e)4	(e)4B	*Includes Adjustments  140.6 / 170.2(e)
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  Report Version: 2022.0.000  Report Version: 2022.0.000  Report Generated: 2024-11-01 14:09:39  CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  Report Version: 2022.0.000  Report Version: 2022.0.000  Report Generated: 2024-11-01 14:09:39	G2 CONTIL AND E EM LOCA  A3 2-FT. x A2 2-FT. x MOUN FIXT D  Designed Wattage: U  O1  CONTIL CONTIN CONTIL CONTIN C	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, DIMMING DRIVER  TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288 MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL IVE CONTINOUS 0-10V MING AND EMERGENCY	No NA  No NA  O3 O4  Modular Small Aperture Color Char	40 30.3  05 Watts per luminaire <sup>2</sup>	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined	07  Total Number of Luminaires	08 Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts	10 Field Inspector Pass Fail	Compliance per   140.6(c)1   140.6(c)2 / 170.2(e)4	(e)4B	*Includes Adjustments  140.6 / 170.2(e)
Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39 Schema Version: rev 20220101 Report Generated: 2024-11-01 14:09:39	G2 CONTIL AND E EM LOCA  A3 2-FT. > A3 SU C A2 2-FT. > MOUN FIXT D  Designed Wattage: U 01	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, DIMMING DRIVER  TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288 MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL IVE CONTINOUS 0-10V MING AND EMERGENCY	No NA  No NA  O3 O4  Modular Small Aperture Color Char	40 30.3  O5 Watts per luminaire² 25.6	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec	07  Total Number of Luminaires	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P	10 Field Inspector Pass Fail	Compliance per   140.6(c)1   140.6(c)2 / 170.2(e)4	Allowed (Watts)   Designed (Watts)   140.6(a)2 / 170.2(e)1B (-)	*Includes Adjustments  = 1448 = 563.2 COMPLIES
	G2 CONTIL AND E EM LOCA  A3 2-FT. A SU CONTIL AND E EM LOCA  A3 2-FT. A MOUN FIXT D  Designed Wattage: Use O1  Continue	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED  FIXTURE SURFACE  UNTED. FIXTURE SHALL  IVE CONTINOUS 0-10V  MING AND EMERGENCY  RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40 30.3  O5 Watts per luminaire <sup>2</sup> 25.6  Gene	Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec	07  Total Number of Luminaires	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Documentation Softwar	10 Field Inspector Pass Fail	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	*Includes Adjustments  = 1448 = 563.2 COMPLIES See Table H for Details) Complies Com
	G2 CONTIL AND E EM LOCA  A3 2-FT. AND E EM LOCA  A3 2-FT. AND E EM LOCA  A2 PT. AND E EM LOCA  A3 CD  A2 PT. AND E EM LOCA  A3 CD  A4 PT. AND E EM LOCA  A5 PT. AND EM LOCA  A6 PT. AND EM LOCA  A7 PT. AND EM LOCA  A8 PT. AND EM LOCA  A9 PT. AND EM LOCA  A10 PT. AND EM LOCA  B10 PT. AND EM LOCA  A10 PT. AND EM LOCA  B11 PT. AND EM LOCA  A11 PT. AND EM LOCA  B12 PT. AND EM LOCA  B13 PT. AND EM LOCA  B14 PT. AND EM LOCA  B15 PT. AND EM LOCA  B16 PT. AND EM LOCA  B17 PT. AND EM LOCA  B17 PT. AND EM LOCA  B17 PT. AND EM LOCA  B18 PT. AND EM LOCA  B18 PT. AND EM LOCA  B19 PT. AND EM LOCA  B10 PT. AND EM LOCA  B19 PT. AND EM LOCA  B19 PT.	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED  FIXTURE SURFACE  UNTED. FIXTURE SHALL  IVE CONTINOUS 0-10V  MING AND EMERGENCY  RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	*Includes Adjustments  = 1448 = 563.2 COMPLIES See Table H for Details) Compliance ID: 214063-1124-00
	G2 CONTIL AND E EN LOCA  A3 2-FT. > A3 SU C A2 A2 PIXT D  Designed Wattage: Ui O1 CONTIL CONTIN CONTIL CONT	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED  FIXTURE SURFACE  UNTED. FIXTURE SHALL  IVE CONTINOUS 0-10V  MING AND EMERGENCY  RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	*Includes Adjustments  = 1448 = 563.2 COMPLIES
	G2 CONTIL AND E EM LOCA  A3 2-FT. AND E EM LOCA  A3 2-FT. AND E EM LOCA  A2 PT. AND E EM LOCA  A3 CD  A2 PT. AND E EM LOCA  A3 CD  A4 PT. AND E EM LOCA  A5 PT. AND EM LOCA  A6 PT. AND EM LOCA  A7 PT. AND EM LOCA  A8 PT. AND EM LOCA  A9 PT. AND EM LOCA  A10 PT. AND EM LOCA  B10 PT. AND EM LOCA  A10 PT. AND EM LOCA  B11 PT. AND EM LOCA  A11 PT. AND EM LOCA  B12 PT. AND EM LOCA  B13 PT. AND EM LOCA  B14 PT. AND EM LOCA  B15 PT. AND EM LOCA  B16 PT. AND EM LOCA  B17 PT. AND EM LOCA  B17 PT. AND EM LOCA  B17 PT. AND EM LOCA  B18 PT. AND EM LOCA  B18 PT. AND EM LOCA  B19 PT. AND EM LOCA  B10 PT. AND EM LOCA  B19 PT. AND EM LOCA  B19 PT.	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED  FIXTURE SURFACE  UNTED. FIXTURE SHALL  IVE CONTINOUS 0-10V  MING AND EMERGENCY  RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  140.6 / 170.2(e)  140.6 /
	G2 CONTIL AND E EN LOCA  A3 2-FT. AND E EN LOCA  A3 2-FT. AND E EN LOCA  A2 PT. AND E EN LOCA  A3 C.	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED  FIXTURE SURFACE  UNTED. FIXTURE SHALL  IVE CONTINOUS 0-10V  MING AND EMERGENCY  RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  140.6 / 170.2(e)  140.6 /
	G2 CONTIL AND E EN LOCA  A3 2-FT. > A3 SU C A2 A2 MOUN FIXT D   Designed Wattage: U1 O1 CONTIL CONTIN CONTIL CONTIN CONTIL CONTIL CONTIN CONTIN CONTIN CONTIL CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIL CONTIN CONTI	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL AVE CONTINOUS 0-10V MING AND EMERGENCY RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  = 1448 = 563.2 COMPLIES  See Table H for Details)  Compliance ID: 214063-1124-0017  Report Generated: 2024-11-01 14:5-5-5
	G2 CONTIL AND E EN LOCA  A3 2-FT. > A3 SU C A2 A2 MOUN FIXT D   Designed Wattage: U1 O1 CONTIL CONTIN CONTIL CONTIN CONTIL CONTIL CONTIN CONTIN CONTIN CONTIL CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIL CONTIN CONTI	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL AVE CONTINOUS 0-10V MING AND EMERGENCY RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  = 1448 = 563.2 COMPLIES  See Table H for Details)  Compliance ID: 214063-1124-0017  Report Generated: 2024-11-01 14:5-5-5
	G2 CONTIL AND E EM LOCA  A3 2-FT. AND E EM LOCA  A3 2-FT. AND E EM LOCA  A2 PT. AND E EM LOCA  A3 SU C  2-FT. AND EM LOCA  A2 PT. AND EM LOCA  A3 10-LUM  A4 PT. AND EM LOCA  A3 10-LUM  A4 PT. AND EM LOCA  A4 PT. AND EM LOCA  A5 PT. AND EM LOCA  A6 PT. AND EM LOCA  A7 PT. AND EM LOCA  BY COMMITTED TO THE MOUNT AND EM LOCA  BY COM	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL AVE CONTINOUS 0-10V MING AND EMERGENCY RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  = 1448 = 563.2 COMPLIES  See Table H for Details)  Compliance ID: 214063-1124-0017  Report Generated: 2024-11-01 14:5-5-5
	G2 CONTIL AND E EN LOCA  A3 2-FT. > A3 SU C A2 PIXT D  Designed Wattage: Ui O1 Name or Item Tag  C1 MOU HAV DIMM DRI  DRI  C1  C1  C1  C1  C1  C1  C1  C2-FT. > C2  C1  C1  C1  C1  C1  C1  C1  C1  C1	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL AVE CONTINOUS 0-10V MING AND EMERGENCY RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  = 1448 = 563.2 COMPLIES  See Table H for Details)  Compliance ID: 214063-1124-0017  Report Generated: 2024-11-01 14:5-5-5
	G2 CONTIL AND E EN LOCA  A3 2-FT. > A3 SU C A2 PIXT D  esigned Wattage: Ui O1 CONTIL CONTIN CONTIL CONTIL CONTIL CONTIL CONTIL CONTIL CONTIL CONTIL CONTIN CONTIL CONTIL CONTIL CONTIL CONTIL CONTIL CONTIN CONTIL CONTIL CONTIL CONTIN CONTIL CONTIN CONTIN CONTIL CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIN CONTIL CONTIN C	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL AVE CONTINOUS 0-10V MING AND EMERGENCY RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  = 1448 = 563.2 COMPLIES  See Table H for Details)  Compliance ID: 214063-1124-0017  Report Generated: 2024-11-01 14:5-5-5
	CONTIL AND E EN LOCA 2-FT. > SU 2-FT. X MOUN FIXT D T Item Co	EMERGENCY DRIVER AT MERGENCY FIXTURE CATIONS INDICATED ON LIGHTING PLAN.  T. x 4-FT.,4,858 LUMENS, SURFACE MOUNTED, DIMMING DRIVER  T. x 4-FT., 4,321 LUMENS, SINTED IN T-BAR CEILING, CTURE TO HAVE 0-10V DIMMING DRIVER.  Unconditioned Spaces  02  Complete Luminaire Description  0-INCH x 4-FT., 3,288  MENS (NOMINAL) LED FIXTURE SURFACE UNTED. FIXTURE SHALL AVE CONTINOUS 0-10V MING AND EMERGENCY RIVER AT EMERGENCY	No NA  No NA  O3 O4  Modular Aperture Color Char  No NA	40  30.3  05  Watts per luminaire <sup>2</sup> 25.6  General Repo	Mfr. Spec  Mfr. Spec  Total Designe  06  How is Wattage determined  Mfr. Spec  erated Date/Time:	07  Total Number of Luminaires 22	No  ONED SPACES  08  Excluded per 140.6(a)3 / 170.2(e)2C	363.6  1,448  09  Design Watts  P  563.2  Compliance ID:	10 Field Inspector Pass Fail  Incre: Energy Code Ace : 214063-1124-0017	Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   1,776.94   Conditioned   Condition	(e) 4B	#Includes Adjustments  = 1448 = 563.2 COMPLIES  See Table H for Details)  Compliance ID: 214063-1124-0017  Report Generated: 2024-11-01 14:5-5-5



Borrelli & Associates, Inc.
Consulting Electrical Engineers
2032 N. Gateway Boulevard Fresno, CA. 93727
Phone: 559-233-4138
http://www.borrelliengineering.com/ ca-bai@borrelliengineering.com
BAI Project #24139

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243 N. MAPLE AVENUE, STE B POST OFFICE BOX 477 MANTECA, CALIFORNIA 95336 P: **209.239.1229** /F: 209.239.4880

> OPERATIONS OFFICE SWORLD DRIVE STOC INDOOR LIGHTING TITLE

DATE 10-15-24 SCALE AS NOTED ЈОВ 658-23-15 E6.02

CALIFORNIA ENERGY COMMISSION NRCC-LTI-E (Page 5 of 12) 2024-11-01T17:09:35-04:00 Total Designed Watts: UNCONDITIONED SPACES 563.2 <sup>1</sup>FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F <sup>2</sup>Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the 03 Field Inspector Shut-off controls 130.1(c) / 160.5(b)4C Pass Fail

CALIFORNIA ENERGY COMMISSION NRCC-LTI-E (Page 6 of 12) 2024-11-01T17:09:35-04:00

12 10 11 Field Inspecto Daylighting Systems Daylighting 130.1(d) / 140.6(a)1/ 160.5(b)4D 170.2(e)2A 160.5(b)4D Pass Fail NA: Not NA: Not daylit zone | daylit zone daylit zone daylit zone daylit zone | daylit zone daylit zone daylit zone daylit zone | daylit zone NA: Not daylit zone daylit zone NA: Not daylit zone | daylit zone NA: Not daylit zone daylit zone daylit zone | daylit zone NA: Not 

Documentation Software: Energy Coc : Ace Report Generated: 2024-11-01 14:05.55

Documentation Software: Energy Code Ace

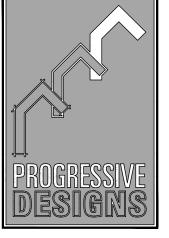
Compliance ID: 214063-1124 0017 Report Generated: 2024-11-01 14: 19:39

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BAI Project #24139 opyright 2022 by Borrelli and Associates, Inc. All rights reserved. The firm of Borrelli and Associates, Inc. and its subsidiary companies reserves it's common law copyright and other applicable property rights in these plans. These plans are not to be reproduced, changed, or copied in any form or manner what-so-ever, onsent of Borrelli and Associates, Inc. and its subsidiary companies. In the event of an unauthorized reuse of these plans by a third party, the third party shall hold the firm of Borrelli and Associates. Inc. and its ubsidiary companies harmless and shall bear the cost of Borrelli and Associates, Inc. and its subsidiary





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> FFICE STOCI <u></u> ○ ⊎ LIGHTING OP SW INDOOR **S.J.C.O.I** 2707 TR.

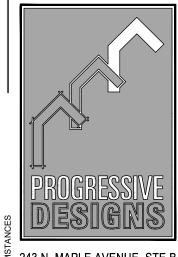
Indoor Lighting  CERTIFICATE OF COMPLIANCE	CALIFORNIA ENERGY COMMISSION  NRCC-LTI-E	STATE OF CALIFORNIA Indoor Lighting CERTIFICATE OF COMPLIANCE		CALIFORNIA ENERGY COMMISSION  NRCC-LTI-E
Project Name:       S.J.C.O.E OPERATIONS OFFICE TENANT IMPROVEMENT       Report Page:         2707 TRANSWORLD DRIVE, STOCKTON, CA 95206       Date Prepared:	(Page 11 of 12) 2024-11-01T17:09:35-04:00	Project Name: S.J.C.O.E OPERATIONS OFFICE TENANT IMPROVEMENT  2707 TRANSWORLD DRIVE, STOCKTON, CA 95206	Report Page: Date Prepared:	(Page 9 of 12) 2024-11-01T17:09:35-04:00
LA DESCADATION OF DECLUDED CERTIFICATES OF A COUNTAINS		I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CA	TEGORY METHODS	7
V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE  Selections have been made based on information provided in this document. If any selections have been change	by the permit applicant, an explanation should be included in Table E.	Storage H All Other Space Types	0.4 120.24	48.1 No No
Additional Remarks. These documents must be provided to the building inspector during construction and any wat Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/att	th "-A" in the form name must be completed through an Acceptance	Storage I All Other Space Types Storage J All Other Space Types	0.4     117.78       0.4     245.12	47.11         No         No           98.05         No         No
Form/Title	Systems/Spaces To Be Field  Verified		<b>TOTALS:</b> 1,546.88	618.75 See Tables J, or P for detail
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Storage A; Storage B; Storage	J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING	LIGHTING SYSTEM	
	C; Storage D; Storage E; Storage F; Storage G; Storage	This section does not apply to this project.		
	H; Storage I; Storage J; Hallway; Office 4; Office 5;	V. TALLODED METHOD CENEDAL LIGHTING DOWED ALLOWANCE		
	Office 6; Office 7; Office 8; Purchasing; Breakroom;	K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE  This section does not apply to this project.		
	Maintenance; RM #13; RM #28; RM #29			
		L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY		
		This section does not apply to this project.		
		M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK	LIGHTING	
		This section does not apply to this project.		
		N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPE	CIAL EFFECTS	
		This section does not apply to this project.		
		O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE No. This section does not apply to this project.	/IERCHANDISE	
Generated Date/Time:	Documentation Software: Energy Code Ace		Generated Date/Time:	Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 2022010	Compliance ID: 214063-1124-0017 Report Generated: 2024-11-01 14:09:39	CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance	Report Version: 2022.0.000 Schema Version: rev 20220101	Compliance ID: 214063-1124 0017 Report Generated: 2024-11-01 14: 9:39
STATE OF CALIFORNIA		STATE OF CALIFORNIA		
Indoor Lighting	CALIFORNIA ENERGY COMMISSION	Indoor Lighting		CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE  Project Name: S.J.C.O.E OPERATIONS OFFICE TENANT IMPROVEMENT Report Page:	NRCC-LTI-E (Page 12 of 12)	CERTIFICATE OF COMPLIANCE  Project Name: S.J.C.O.E OPERATIONS OFFICE TENANT IMPROVEMENT	Report Page:	NRCC-LTI-E (Page 10 of 12)
Project Address: 2707 TRANSWORLD DRIVE, STOCKTON, CA 95206 Date Prepared:	2024-11-01T17:09:35-04:00	2707 TRANSWORLD DRIVE, STOCKTON, CA 95206	Date Prepared:	2024-11-01T17:09:35-u4:uU
DOCUMENTATION AUTHORIS DESIGNATION STATES				
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  I certify that this Certificate of Compliance documentation is accurate and complete.		P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT)	STMENT FACTOR (PAF))	
Documentation Author Name:  John Borrelli, PE  Documentation Author	ignature:	This section does not apply to this project.		
Company:  Borrelli and Associates, Inc.		Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALT	ERATIONS	
Address: 2032 North Gateway Boulevard CEA/ HERS Certification	dentification (if applicable): (559) 233-4138	This section does not apply to this project.		
RESPONSIBLE PERSON'S DECLARATION STATEMENT	(337) 233-7130	R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPT	TIONS	
<ol> <li>certify the following under penalty of perjury, under the laws of the State of California:</li> <li>The information provided on this Certificate of Compliance is true and correct.</li> <li>I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system de</li> </ol>	gn identified on this Certificate of Compliance (responsible designer)	This section does not apply to this project.		
<ol> <li>The energy features and performance specifications, materials, components, and manufactured devices for the building design of Title 24, Part 1 and Part 6 of the California Code of Regulations.</li> </ol>	r system design identified on this Certificate of Compliance conform to the requirements	C DAVIGUE DECICAL DOLLED ADVICE CONTROL OF THE CONT		
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the infor plans and specifications submitted to the enforcement agency for approval with this building permit application.		S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)  This section does not apply to this project.		
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the docretion of Compliance is required to the com	mentation the builder provides to the building owner at occupancy.			
Company: Borrelli and Associates, Inc. Date Signed:		T. DWELLING UNIT LIGHTING  This section does not apply to this project.		
Address: 2032 North Gateway Boulevard License:  City/State/Zip: Fresno, CA 93727 Phone:	E16390 (559) 233-4138	This section does not apply to this project.	+	
		U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION		
		Selections have been made based on information provided in this document.  Additional Remarks. These documents must be provided to the building inspe		ant, an explanation should be included in Table E
			Form/Title	
		NRCI-LTI-E - Must be submitted for all buildings		
				<b>⊢</b>
Generated Date/Time:	Documentation Software: Energy Code Ace		Generated Date/Time:	Documentation Software: Energy Coc - Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 2022010	Compliance ID: 214063-1124-0017 Report Generated: 2024-11-01 14:09:39	CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance	Report Version: 2022.0.000 Schema Version: rev 20220101	Compliance ID: 214063-1124-0017 Report Generated: 2024-11-01 14:05.55
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Borrelli & Associates, Inc.
Consulting Electrical Engineers
2032 N. Gateway Boulevard Fresno, CA. 93727
Phone: 559-233-4138
http://www.borrelliengineering.com/ ca-bai@borrelliengineering.com
BAI Project #24139
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ROFESSIO ROFESSIO BORA No.E16390 — REP EXP. 6/30/25 EXP. 6/30/25



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POST OFFICE BOX 477
MANTECA, CALIFORNIA 95336
P: 209.239.1229 /F: 209.239.4880

S.J.C.O.E. - OPERATIONS OFFICE TENANT IMPROVEMENT 2707 TRANSWORLD DRIVE STOCKTON, CA 95206

DATE 10-15-24

SCALE AS NOTED

JOB 658-23-15

INDOOR LIGHTING TITLE 24