**ELECTRICAL SYMBOL LEGEND** 1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS. 2. DASHED ELEECTRICAL EQUIPMENT GENERALLY INDICATES EXISTING EQUIPMENT. 3. LONG-SHORT-SHORT-LONG DASHING GENERALLY INDICATES MATCH LINE OR DEFINES AREA FOR CIRCUIT RELATED: LIGHTING OR POWER CIRCUIT(S). ARROW INDICATES HOME RUN. LONGER TICK(S) INDICATE NEUTRAL WIRE(S), SHORTER STRAIGHT TICK(S) INDICATE PHASE WIRE(S), SLANTED SHORTER TICK(S) INDICATE SWITCH LEG(S), DOT(S) INDICATE GROUNDING CONDUCTOR(S), DASHED WIRING (LONG-SHORT-LONG DASHES) INDICATES WIRING BELOW SLAB OR GRADE, DASHED WIRING (SERIES OF SHORT DASHES) INDICATES EXISTING WIRING. SLASH THROUGH ARROW INDICATES PARTIAL CIRCUIT. "D" ON HOMERUN ARROW INDICATES DEDICATED CIRCUIT: PROVIDE A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR FOR ENTIRE LENGTH OF CIRCUIT FROM PANEL TO OUTLET: COUNT EACH NEUTRAL AS CURRENT-CARRYING AND GROUP A MAXIMUM OF SIX THHN/THWN CONDUCTORS IN A SINGLE RACEWAY; GROUNDING NOTE: HOMERUN INDICATES INSTALLATION OF NEW WIRE AND CONDUIT (#12 WIRE, 3/4"C, UNLESS OTHERWISE NOTED) FROM SOURCE PANELBOARD TO LOAD. HOMERUN INDICATES CONNECTION OF NEW LOADS TO EXISTING CIRCUITS IN LIEU OF PANELBOARD WHERE NOTED ON PLANS. JUNCTION BOX GROUNDING FIXTURE LIGHTING: LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL NUMBER INDICATES CIRCUIT, CROSS HATCHING INDICATES FIXTURE ON EMERGENCY SYSTEM, FOR SOLID CIRCLE WITHIN FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL STRIP TYPE LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE ATTACHED TO FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE REFERENCE APPROPRIATE CATEGORY "A" DESIGNATES FIXTURE ON EMERGENCY POWER. RE: LIGHTING PLAN NOTES AND FIXTURE SCHEDULE NOTES FOR ADDITIONAL INFORMATION WALL OR BRACKET MOUNTED FIXTURE OR DEVICE EXIT LIGHT FIXTURE. LETTER INDICATES TYPE. NUMBER INDICATES CIRCUIT. NUMBER AND LOCATION OF SHADED TRIANGLE SECTIONS INDICATE NUMBER OF EXIT SIGN FACES AND DIRECTION OF EACH FACE. PROVIDE CHEVRON DIRECTIONAL INDICATORS AS SHOWN ON DRAWINGS CONTROL: SWITCH. SMALL LETTER INDICATES FIXTURES CONTROLLED, "P" INDICATES PILOT LIGHT, "WP" INDICATES WEATHERPROOF, "K" INDICATES KEY POERATED, "MO" INDICATES SPDT MOMENTARY CONTACT, "2" INDICATES DPDT, "3" INDICATES 3-WAY, "4" INDICATES 4-WAY, "M" INDICATES MANUAL MOTOR STARTER, CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER WALL BOX DIMMER SWITCH. "MARK" INDICATES WATTAGE IF OTHER THAN 600, "3D" INDICATES 3-WAY DIMMER MULTI-LEVEL SWITCH. CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER DIGITAL TIME SWITCH PHOTOELECTRIC CONTROL EMERGENCY POWER OFF (EPO) PUSHBUTTON **PUSH BUTTON** WALL MOUNT OCCUPANCY SENSOR WALL MOUNT OCCUPANCY SENSOR WITH DIMMING CONTROLS DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED RESTROOM OCCUPANCY SENSOR CEILING MOUNTED CORRIDOR OCCUPANCY SENSOR CEILING MOUNTED HIGH CEILING OCCUPANCY SENSOR 20A-125V DUPLEX RECEPTACLE 20A-125V GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE. "WP" INDICATES WEATHER PROOF DEVICE 20A-125V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP. REFER TO ARCHITECT FOR EXACT HEIGHT ABOVE COUNTER 20A-125V CONTROLLED DUPLEX RECEPTACLE 20A-125V ISOLATED GROUND TYPE DUPLEX RECEPTACLE 20A-125V DUPLEX TAMPER RESISTANT RECEPTACLE WITH (2) USB CHARGING PORTS 20A-125V FOURPLEX RECEPTACLE. SAME SYMBOLOGY AS DUPLEX RECEPTACLE SPECIAL PURPOSE SINGLE POWER RECEPTACLE. RATED AS INDICATED (IF NO RATING INDICATED RECEPTACLE RATING SHALL MATCH BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE AND SHALL MEET REQUIREMENTS OF EQUIPMENT BEING CONNECTED), "C" INDICATES CLOCK OUTLET 20A-125V FLUSH FLOOR DUPLEX RECEPTACLE. 20A WHEN INDICATED OR IF BRANCH CIRCUIT SERVES ONLY SINGLE DUPLEX. PROVIDE CARPED FLANGE WHERE APPLICABLE LC1-X CIRCUIT DESIGNATION NEXT TO RECEPTACLE DEVICES INDICATES BRANCH CIRCUIT NUMBER. SEE PANEL SCHEDULES FOR INFORMATION.

1. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK. 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS AND ADDENDA (DRAWINGS AND SPECIFICATIONS.) HE SHALL CHECK THE CONTRACT DOCUMENTS OF THE OTHER TRADES AND DETERMINE HIS

RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM COMPLETING ALL RESPONSIBLE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

3. THE CONTRACTOR SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.

4. ALL ELECTRICAL WORK REFERENCED HEREIN SHALL BE COORDINATED WITH OTHER TRADES AND SITE CONDITIONS, ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE CONTRACT DOCUMENTS SHALL BE INCURRED BY THE CONTRACTOR, ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

5. PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS, BRANCH CIRCUITS OR SIGNAL AND COMMUNICATIONS SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION.

6. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ENGINEER 14 DAYS PRIOR TO THE OUTAGE AND OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANEL BOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.

7. AFTER ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS HAVE BEEN FULLY COMPLETED. REPRESENTATIVES OF THE OWNERS WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCETANCE FROM EACH

8. FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF PUNCH LIST COMPLETION.

ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.

APPROVED FOR USE IN PLENUMS AND SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE.

10. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE OR MASONARY WALLS, GRADEBEAMS, FLOORS OR STRUCTURAL STEEL MEMBER SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL. FLOOR OR CEILING EXACT METHOD AND LOCATION OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL

11. FINAL CONNECTIONS TO VIBRATING EQUIPMENT AND AT SEISMIC SEPARATIONS SHALL BE FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS, AND LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES, AND FINAL CONNECTIONS TO MOTORS.

12. EQUIPMENT OUTLETS, LIGHTING FIXTURES, CONDUIT, WIRE AND CONNECTION METHODS IN HVAC AIR-PLENUMS SHALL BE

13. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING, ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.

14. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE,

CONCEALED WALLS, OR 24" MINIMUM BELOW SLAB ON GRADE UNLESS NOTED OTHERWISE. 15. LOCATE ELECTRICAL EQUIPMENT AND BOXES IN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS. ACCESS DOORS SHALL BE A MINIMUM DIMENSION OF 24" x 24" ACCESS DOOR LOCATIONS

SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED. 16. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILING TO SUIT FIELD CONDITIONS. THE EXACT SIZES AND

PHYSICAL LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED. 17. WHENEVER A DISCREPANCY OF ANY SYSTEM AND/OR EQUIPMENT ARISES ON THE CONTRACT DOCUMENTS OR

SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER. 18. STRAIGHT FEEDER BRANCH CIRCUIT AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION

BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS.

19. PANEL SCHEDULES SHALL BE REVISED TO REFLECT FINAL ROOM NAMES AND NUMBERS USING OWNER'S ROOM NAMES AND NUMBERS DESIGNATIONS. CONTRACTOR TO PROVIDE FINAL PANEL SCHEDULE TO EEOR AT COMPLETION OF PROJECT.

20. WHERE OUTLETS OCCUR AT TACKABLE WALL PANELS OR OTHER WALL FINISHES. PROVIDE EXTENSION RINGS AS REQUIRED SO THAT NO SPACE WILL EXIST BETWEEN DEVICE PLATE AND BACKBOX PER CALIFORNIA ELECTRICAL CODE 314.20 SEE ARCHITECTURAL ELEVATIONS FOR WALL FINISHES AND LOCATIONS.

21. COORDINATE LOCATIONS OF ALL SEISMIC SEPARATIONS.

22. ALL 120V POWER REQUIRED FOR THE FUNCTIONALITY OF ALL LOW VOLTAGE / TECHNOLOGY SYSTEMS SHALL BE A DEDICATED CIRCUIT AND ON EMERGENCY POWER WHEN AVAILABLE. CABLING CONTRACTOR SHALL COORDINATE ALL 120V POWER REQUIREMENTS AND LOCATIONS WITH ELECTRICAL CONTRACTOR FOR ALL EQUIPMENT.

23. SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AS ESTABLISHED BY THE EIA AND THE CEC.

24. ALL AC POWER CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM TECHNOLOGY LOW VOLTAGE CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.

25. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.

26. CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.

27. ALL CONDUCTORS SHALL BE UL LISTED, COPPER #12 MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY, UNLESS NOTED OTHERWISE.

28. ALL CABLING SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH MAXIMUM 40% CABLE FILL. MINIMUM CONDUIT SIZE SHALL BE 3/4" INTERIOR & 1" EXTERIOR.

29. ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE

#### DIAGRAMMATIC NOTE

DRAWING INDEX

**ELECTRICAL TITLE 24 FORMS** 

ELECTRICAL SITE PLAN

ELECTRICAL SYMBOLS, NOTES, AND ABBREVIATIONS

ELECTRICAL DEMOLITION FLOOR PLAN - BLDG 7

ELECTRICAL NEW FLOOR PLAN - BLDG 7

ELECTRICAL NEW ROOF PLAN - BLDG 7

**ELECTRICAL SCHEDULES & DETAILS** 

ELECTRICAL DEMOLITION LIGHTING PLAN

ELECTRICAL NEW LIGHTING PLAN - BLDG 7

**DESCRIPTION** 

E0.00

E0.01

E2.02

E3.01

E3.02

E4.02

DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE DETAILED CONDUIT ROUTING OR LENGTHS REQUIRED FOR COMPLETE INSTALLATION. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR BUT SHALL BE IN STRICT COMPLIANCE WITH STRUCTURAL REQUIREMENTS, CONTRACT DOCUMENTS AND SPECS UNLESS OTHERWISE NOTED. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL AND/OR MECHANICAL ITEMS OR FEATURES. REFER TO ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS FOR FEATURES, REFER TO ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS FOR DIMENSIONS.

#### DEVICE LOCATIONS NOTE

THE LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED. IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN UNLESS OTHERWISE NOTED. ELECTRICAL DEVICES SHALL BE MOUNTED PER "ACCESSIBLE DEVICE MOUNTING HEIGHT" DETAIL.

COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM. ELECTRICAL DRAWINGS. AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT, DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS.. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.

**GENERAL NOTES** 

MEP COMPONENT ANCHORAGE NOTES:

1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30: ALL PERMANENT EQUIPMENT AND COMPONENTS.

2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE

TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

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

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

### PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

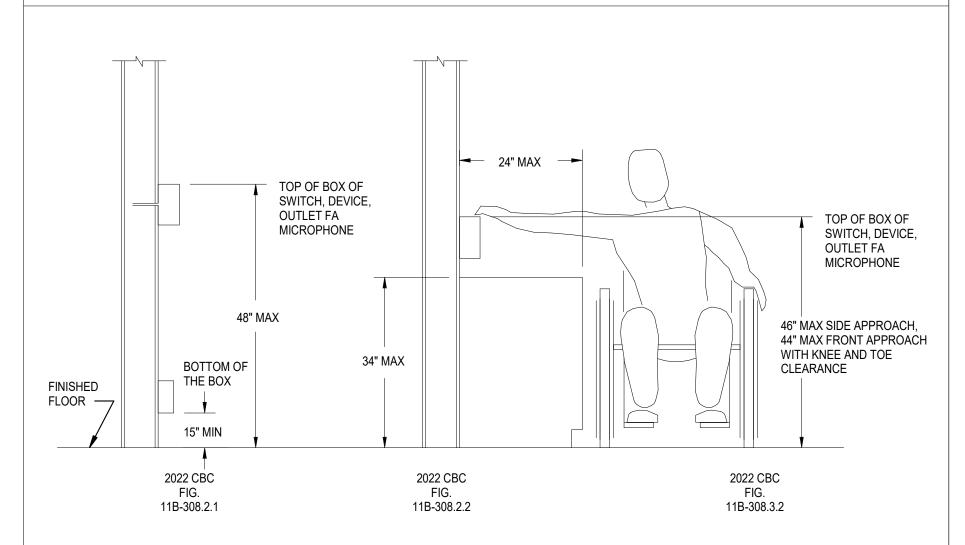
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTION 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

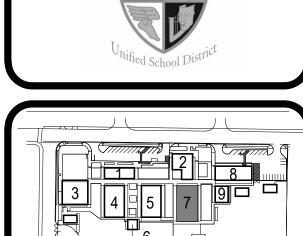
#### STRUCTURAL NOTE

UNLESS SPECIFICALLY SHOWN ON THESE PLANS, STRUCTURAL MEMBERS SHALL NOT BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT

## MOUNTING OVER OBSTRUCTION DETAIL



ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATIES (UL) AND BEAR THEIR LABEL OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY.



IDENTIFICATION STAMP DIV. OF THE STATE ARCHITEC

REVIEWED FOR

SS 🗹 FLS 🗹 ACS 🗹

RANCHO CUCAMONGA

8163 Rochestser Avenue, Suite 100

Rancho Cucamonga

California 91730

8163 Rochester Avenue, Suite 100

Rancho Cucamonga, CA 91730

909.987-0909

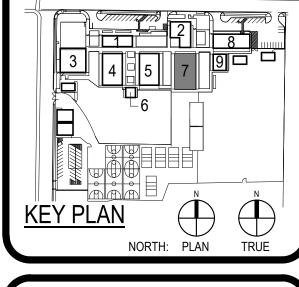
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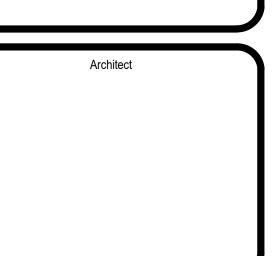
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**CONSULTANT** 

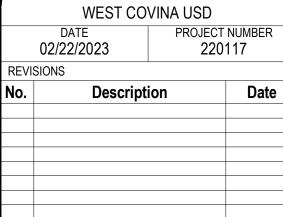
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DSA BACKCHECK

ELECTRICAL SYMBOLS, NOTES, AND **ABBREVIATIONS** 

TELEPHONE/DATA:

FLUSH FLOOR TELEPHONE OUTLET WITH CARPET FLANGE WHERE APPLICABLE WALL COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT

CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE

FLUSH FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX /

CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE SURFACE FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX /

### | EQUIPMENT:

A NOTATION INDICATING THE MOUNTING HEIGHT OF A DEVICE AS MEASURED FROM FINISHED FLOOR OR GRADE TO CENTER LINE OF DEVICE

1 ENCLOSURE UNLESS OTHERWISE NOTED. PROVIDE FUSED BUSWAY PLUG WHEN SWITCH IS INDICATED ON BUSWAY. ALL DISCONNECT SWITCHES SHALL BE 30/NF/3 UNLESS OTHERWISE NOTED

SINGLE CIRCUIT BREAKER IN INDIVIDUAL ENCLOSURE MAGNETIC MOTOR CONTROLLER. NUMBER INDICATES NEMA SIZE. STARTER NEMA SIZE SHALL BE "NEMA 1"

DISCONNECT SWITCH. FRAME SIZE/FUSE SIZE/POLES AS INDICATED, "NF" INDICATES NON-FUSIBLE. NEMA

UNLESS OTHERWISE NOTED COMBINATION DISCONNECT SWITCH / MOTOR CONTROLLER

CONTACTOR PANELBOARD

/ MOTOR

SWITCHBOARD / DF

TRANSFORMER

GROUNDING CONNECTION TO GROUNDING ELECTRODE AS DEFINED IN CEC ARTICLE 250

BELL. "WP" INDICATED OUTDOOR RATED

### REMODEL:

EQUIPMENT WITH "E" ADJACENT IS EXISTING TO REMAIN.

EXISTING EQUIPMENT WITH "R" ADJACENT IS TO BE COMPLETELY DISCONNECTED AND REMOVED. EXISTING EQUIPMENT WITH "RR" ADJACENT IS TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW

LOCATION AND RECONNECTED AS REQUIRED. EQUIPMENT WITH "ER" ADJACENT IS RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.

NO TAG INDICATES NEW EQUIPMENT.

(E) PNL-CKT CIRCUIT DESIGNATION WITH PREFIX "(E)" DENOTES EXISTING CIRCUIT AND EQUIPMENT IS TO REMAIN.

# UTILITY PENETRATIONS NOTE

UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED UL LISTED SYSTEM OR MATERIAL. STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILING, OR AREA

1. OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER IN THIS CASE, ONLY ONE OUTLET BOX NEEDS TO BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL

2. OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED TO BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE FEET OF WALL.

STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.

FIRESTOPPING MATERIAL: MPP-1 MOLDABLE PUTTY PADS

3M CONTRACTOR PRODUCTS MINNEAPOLIS. MN 3M TEST REPORT NO. 1167 DATED AUGUST 21, 1987

FLAMESAFE FSP 1077 FIRESTOP PADS INTERNATIONAL PROTECTIVE COATINGS OAKHURST, NJ

FSP FIRESTOP PUTTY PADS **HEVI-DUTY NELSON PRODUCTS** 

STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT.

UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD FRAMING OF THE WALL, PARTITION OR CEILING ASSEMBLY. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8 INCH IN SMOKE WALLS OR PARTITIONS, THE 1/8 INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED SEALANT.

## APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020 022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1. TITLE 24 CCR \* 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS) 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS) 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

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH

**EQUIPMENT ANCHORAGE NOTES** 

ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP 

MP 

MD 

PP 

E

OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES & DETAILS.

MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #\_\_\_\_\_

1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

## **UL LISTINGS NOTE**

ALL EQUIPMENT/DEVICES INSTALLED RECESSED IN FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED UL LISTED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL.

STATE OF CALIFORNIA **Indoor Lighting** CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities. Project Name: Walnut Grove IS - Science Lab Mod. Report Page: (Page 1 of 7) 614 E. Vine Ave. West Covina, CA. 91790 Date Prepared: 2023-02-15T18:06:29-05:00 Project Address:

A. GENERAL INFORMATION West Covina 01 Project Location (citv) 04 Total Conditioned Floor Area (ft<sup>2</sup>) 2,700 02 Climate Zone 05 Total Unconditioned Floor Area (ft<sup>2</sup>) 03 Occupancy Types Within Project (select all that apply): 06 # of Stories (Habitable Above Grade) Classroom

B. PROJECT SCOPE This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations. Unconditioned Spaces Scope of Work **Conditioned Spaces** 05 My Project Consists of (check all that apply): Calculation Method Calculation Method Area (ft<sup>2</sup>) ☐ New Lighting System N/A N/A ☐ New Lighting System - Parking Garage N/A N/A Area Category Method 2700 N/A 0 Total Area of Work (ft<sup>2</sup>) 2700

Registration Number: Generated Date/Time: Documentation Software: Energy Code Ace CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 89511-0223-0002 Report Generated: 2023-02-15 15:06:32

Schema Version: rev 20220101

STATE OF CALIFORNIA **Indoor Lighting CALIFORNIA ENERGY COMMISSION** CERTIFICATE OF COMPLIANCE Project Name: Walnut Grove IS - Science Lab Mod. Report Page: (Page 4 of 7 614 E. Vine Ave. West Covina, CA. 91790 Date Prepared: 2023-02-15T18:06:29-05:00 Project Address:

H. INDOOR LIGHTING CONTROLS (Not including PAFs) **Area Level Controls** Manual Area Multi-Level Secondary Interlocked Complete Building or Area Shut-Off Controls Field Inspector Controls Controls Daylighting Systems Area Description Category Primary Function 130.1(c) // Daylighting | 130.1(a)/ 130.1(b)/ 130.1(d) / 140.6(a)1/ 160.5(b)4C 130.1(d) / 160.5(b)4A 160.5(b)4B 160.5(b)4D | 170.2(e)2A L60.5(b)4D Pass Fail lassroom, Lecture, or Training Readily NA: Not Classroom Occupancy Sensor Dimmer davlit zone Vocational Accessible Plan Sheet Showing Daylit Zones: E3.02

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used. **Conditioned Spaces** 04 Additional Allowance / Adjustment Complete Building or Area Category Primary Allowed Density Allowed Wattage Area Description Area (ft<sup>2</sup>) Function Area  $(W/ft^2)$ (Watts) Area Category PAF Classroom, Lecture, or Training Vocational 0.6 2,700 1,620 Classroom Nο **TOTALS:** 2,700 1,620 See Tables J, or P for detail

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

Registration Number: Generated Date/Time: Documentation Software: Energy Code Ace CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Compliance ID: 89511-0223-0002 Report Version: 2022.0.000 Report Generated: 2023-02-15 15:06:32 Schema Version: rev 20220101

STATE OF CALIFORNIA **Indoor Lighting** CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-LTI-E Walnut Grove IS - Science Lab Mod. Report Page: (Page 7 of 7) Project Name: Project Address: 614 E. Vine Ave. West Covina, CA. 91790 Date Prepared: 2023-02-15T18:06:29-05:00 DOCUMENTATION AUTHOR'S DECLARATION STATEMENT I certify that this Certificate of Compliance documentation is accurate and complete. cumentation Author Signature: Nicole Oropeza Documentation Author Name: Nicole Oropeza

Company: LEAF Engineers EA/ HERS Certification Identification (if applicable): Address: 8163 Rochester Ave. City/State/Zip: Rancho Cucamonga, CA. 91730 Phone: 909-987-0909 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. 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) 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. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. Responsible Designer Signature: oonsible Designer Name: Ronald Dela Cruz Date Signed: 02-15-2023 Company: LEAF Engineers

License: E 23576

Generated Date/Time:

Report Version: 2022.0.000

Schema Version: rev 20220101

Documentation Software: Energy Code Ace

Report Generated: 2023-02-15 15:06:32

Compliance ID: 89511-0223-0002

gnature Date: 02-15-2023

STATE OF CALIFORNIA **Indoor Lighting** CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-LTI-E Walnut Grove IS - Science Lab Mod. Report Page: (Page 2 of 7) Project Name: Project Address: 614 E. Vine Ave. West Covina, CA. 91790 Date Prepared: 2023-02-15T18:06:29-05:00

C. COMPLIANCE RESULTS If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance. Adjusted Lighting Power per 140.6(a) / 170.2(e) **Compliance Results** Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts) 09 conditioned and Area unconditioned Category Tailored PAF Lighting spaces must not be Category | Additional | 140.6(c)3 / Control Credits combined for Building Designed 05 must be >= 08 (Watts) 140.6(c)2 / 140.6(c)2G / 170.2(e)4B Allowed 140.6(a)2/ compliance per 140.6(c)1 (Watts) 140.6 / 170.2(e) \*Includes 170.2(e)4 | 170.2(e)4Av | (+) (Watts) 170.2(e)1B 140.6(b)1 / 170.2(e) Adjustments (See Table I) (See Table I) (See Table J) (See Table K) (See Table F) (See Table P) COMPLIES 1,620 COMPLIES Controls Compliance (See Table H for Details) Rated Power Reduction Compliance (See Table Q for Details)

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

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

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

Registration Number:

Generated Date/Time: Documentation Software: Energy Code Ace Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 89511-0223-0002 Schema Version: rev 20220101 Report Generated: 2023-02-15 15:06:32

STATE OF CALIFORNIA **Indoor Lighting** CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-LTI-E Project Name: Walnut Grove IS - Science Lab Mod. Report Page: (Page 5 of 7) Project Address: 614 E. Vine Ave. West Covina, CA. 91790 Date Prepared: 2023-02-15T18:06:29-05:0

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE This section does not apply to this project. L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY This section does not apply to this project. M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING This section does not apply to this project.

This section does not apply to this project. O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE This section does not apply to this project. P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

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

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

Generated Date/Time: Documentation Software: Energy Code Ace Compliance ID: 89511-0223-0002 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Schema Version: rev 20220101 Report Generated: 2023-02-15 15:06:32

STATE OF CALIFORNIA **Indoor Lighting** CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE NRCC-LTI-E (Page 3 of 7) Project Name: Walnut Grove IS - Science Lab Mod. Report Page: 614 E. Vine Ave. West Covina, CA. 91790 Date Prepared: 2023-02-15T18:06:29-05:00 Project Address:

F. INDOOR LIGHTING FIXTURE SCHEDULE This table includes all planned permanent and portable lighting other than dwelling unit/hotel/motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here. **Designed Wattage: Conditioned Spaces** 04 Field Inspector Excluded per Modular Watts per Name or Item Complete Luminaire How is Wattage | Total Number (Track) Fixture Color Change<sup>1</sup> Aperture & 140.6(a)3 / Design Watts Description luminaire<sup>2</sup> determined of Luminaires 170.2(e)2C No NA FX-A 2X4 Troffer 30 Mfr. Spec 1.080 Total Designed Watts: CONDITIONED SPACES

<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 automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

<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 luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS This section does not apply to this project. H. INDOOR LIGHTING CONTROLS (Not including PAFs) This table includes lighting controls for conditioned and unconditioned spaces. **Building Level Controls** Field Inspector Mandatory Demand Response 110.12(c) Shut-off controls 130.1(c) / 160.5(b)4C Pass Fail NA < 4,000W subject to multilevel See Area/Space Level Controls

Generated Date/Time: Documentation Software: Energy Code Ace Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 89511-0223-0002 Report Generated: 2023-02-15 15:06:32 Schema Version: rev 20220101

STATE OF CALIFORNIA **Indoor Lighting** CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE Project Name: Walnut Grove IS - Science Lab Mod. Report Page: (Page 6 of 7 Project Address: 614 E. Vine Ave. West Covina, CA. 91790 Date Prepared 2023-02-15T18:06:29-05:00

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF) This section does not apply to this project. T. DWELLING UNIT LIGHTING This section does not apply to this project. U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Systems/Spaces To Be Field Form/Title Verified NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls. lClassroom

**I**Classroom

Report Generated: 2023-02-15 15:06:32

Form/Title

NRCI-LTI-E - Must be submitted for all buildings

NRCA-LTI-03-A - Must be submitted for automatic daylight controls.

Generated Date/Time: Documentation Software: Energy Code Ace Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 89511-0223-0002

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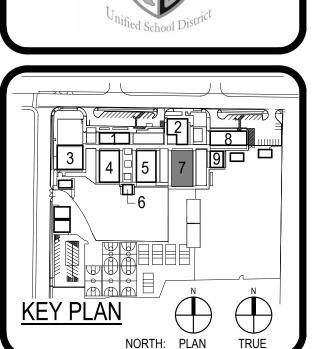
RANCHO CUCAMONGA 8163 Rochestser Avenue, Suite 100 Rancho Cucamonga California 91730 P 909-987-0909

> LEAF Engineers 8163 Rochester Avenue, Suite 100

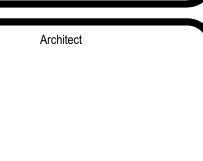
CONSULTANT

Rancho Cucamonga, CA 91730 909.987-0909 leafengineers.com

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WEST COVINA USD PROJECT NUMBER 220117 REVISIONS Description

**ELECTRICAL TITLE 24 FORMS** 

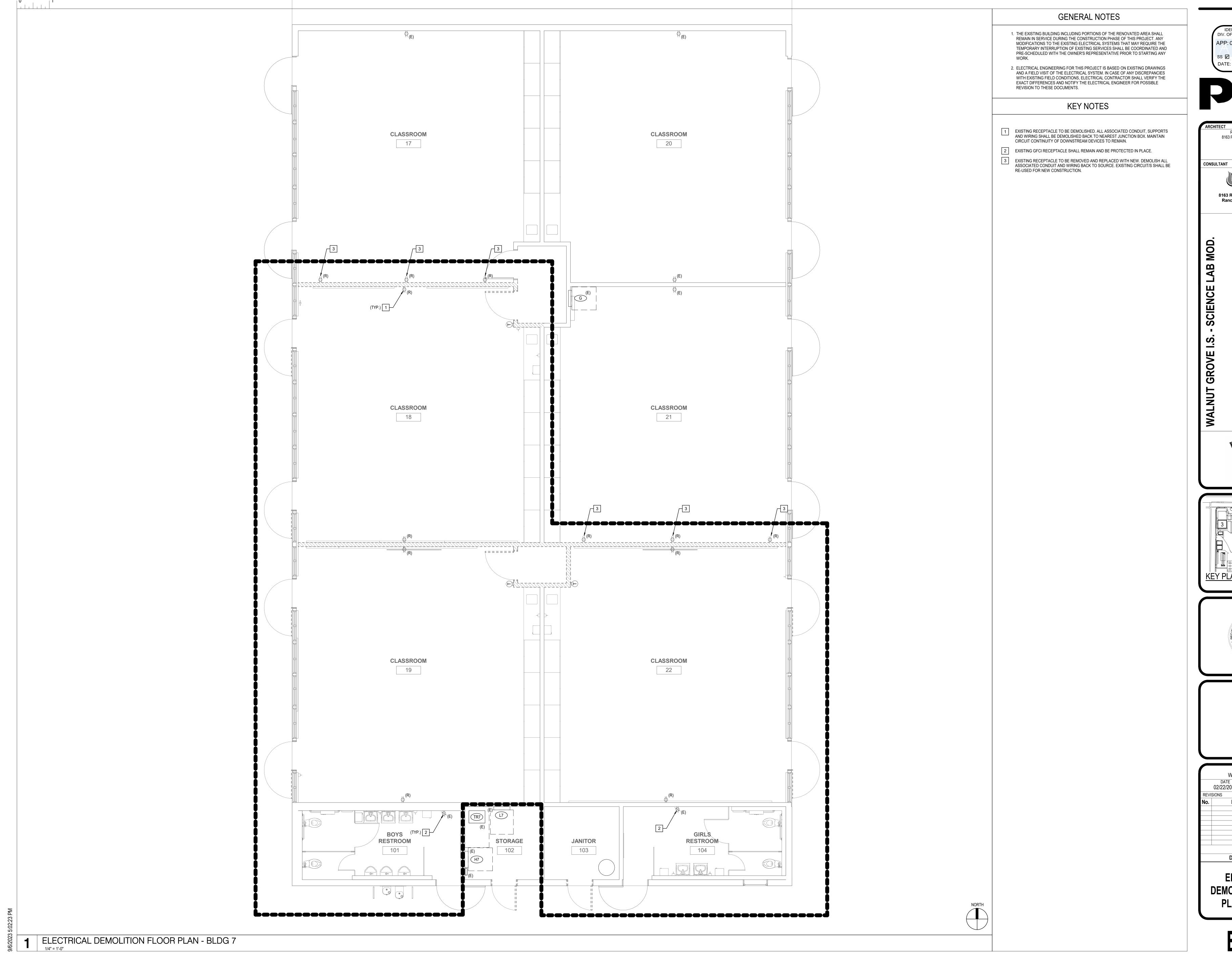
DSA BACKCHECK

Address: 8163 Rochester Ave.

Registration Number:

City/State/Zip: Rancho Cucamonga, CA. 91730

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance



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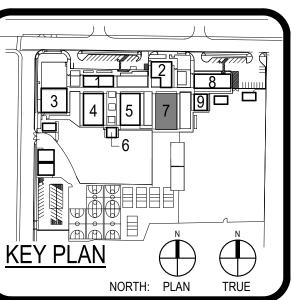
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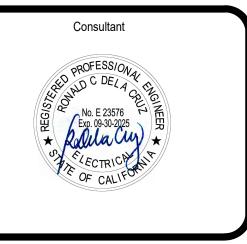
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**ELECTRICAL DEMOLITION FLOOR** PLAN - BLDG 7

### **GENERAL NOTES**

- 1. FOR EQUIPMENT OR DEVICES SHOWN ON ARCHITECTURAL DRAWINGS THAT REQUIRE POWER AND NOT IDENTIFIED ON ELECTRICAL PLANS, ASSUME AT A MINIMUM A DUPELX OUTLET, A DEDICATED CIRCUIT WITH 2#12,1#12G,3/4"C. WITH HOMERUN TO NEAREST 120/208V PANEL. ITEMS SUCH AS BUT NOT LIMITED TO ROLL DOWN DOORS, COUNTER DOORS, OVERHEAD GRILLES, DISPLAY CASES, HAND DRYERS, WATER COOLERS, ICE MAKERS, GARBAGE DISPOSALS, OSCILLATING FANS, LCD's, PROJECTORS, DISHWASHERS, MOTORIZED PROJECTION SCREENS, ETC.
- 2. ELECTRICAL ENGINEERING FOR THIS PROJECT IS BASED ON EXISTING DRAWINGS DATED JANUARY 01, 19xx, AND A FIELD VISIT OF THE ELECTRICAL SYSTEM. IN CASE OF ANY DISCREPANCIES WITH EXISTING FIELD CONDITIONS, ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT DIFFERENCES AND NOTIFY THE
- 3. ANY ELECTRICAL AND/OR SIGNAL UTILITY SHUTDOWNS WITHIN THE AREA OF WORK SHALL BE COORDINATED AND SCHEDULED IN ADVANCE WITH THE OWNER'S REPRESENTATIVE.

ELECTRICAL ENGINEER FOR POSSIBLE REVISION TO THESE DOCUMENTS.

#### **KEY NOTES**

- 1 INSTALL RECEPTACLE RECESSED INTO LAB DESK. STUB UP INTO MILLWORK, CONCEAL AS MUCH AS POSSIBLE. PROVIDE GROMMETS AS REQUIRED. COORDINATE EXACT LOCATION AND HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.
- PROVIDE 120V CONNECTION TO NEW DRINKING FOUNTAIN, INSTALL NEW GFCI TYPE RECEPTACLE AND GFCI TYPE CIRCUIT BREAKER AT PANEL 'L7A'. CONTRACTOR SHALL COORDINATE EXACT MOUNTING HEIGHT WITH MANUFACTURER PRIOR TO ROUGH-IN.
- PROVIDE AND INSTALL NEW 100A PANEL, SUB FEED FROM PANEL 'L7'. RELOCATE (2) 20A/1P CIRCUIT BREAKERS TO NEW PANEL AND PROVIDE NEW 60A/2P CIRCUIT BREAKER IN (E) PANEL 'L7'. SEE SINGLE LINE DIAGRAM AND PANEL SCHEDULES ON SHEET E5.01 FOR ADDITIONAL INFORMATION.
- PROVIDE LOCAL DISCONNECT WITH 120V CONNECTION TO NEW CIRC PUMP, 3/4"C-2# 12 + 1#12 GRD. SEE PLUMBING PLANS FOR ADDITIONAL INFORMATION.
- 5 REPLACED EXISTING RECEPTACLE WITH NEW, RE-USE EXISTING CIRCUIT/S. PROVIDE ALL NEW CONDUIT & WIRING BACK TO SOURCE.

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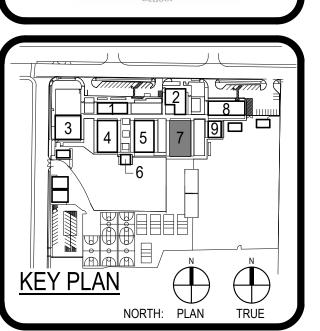
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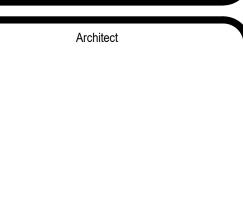
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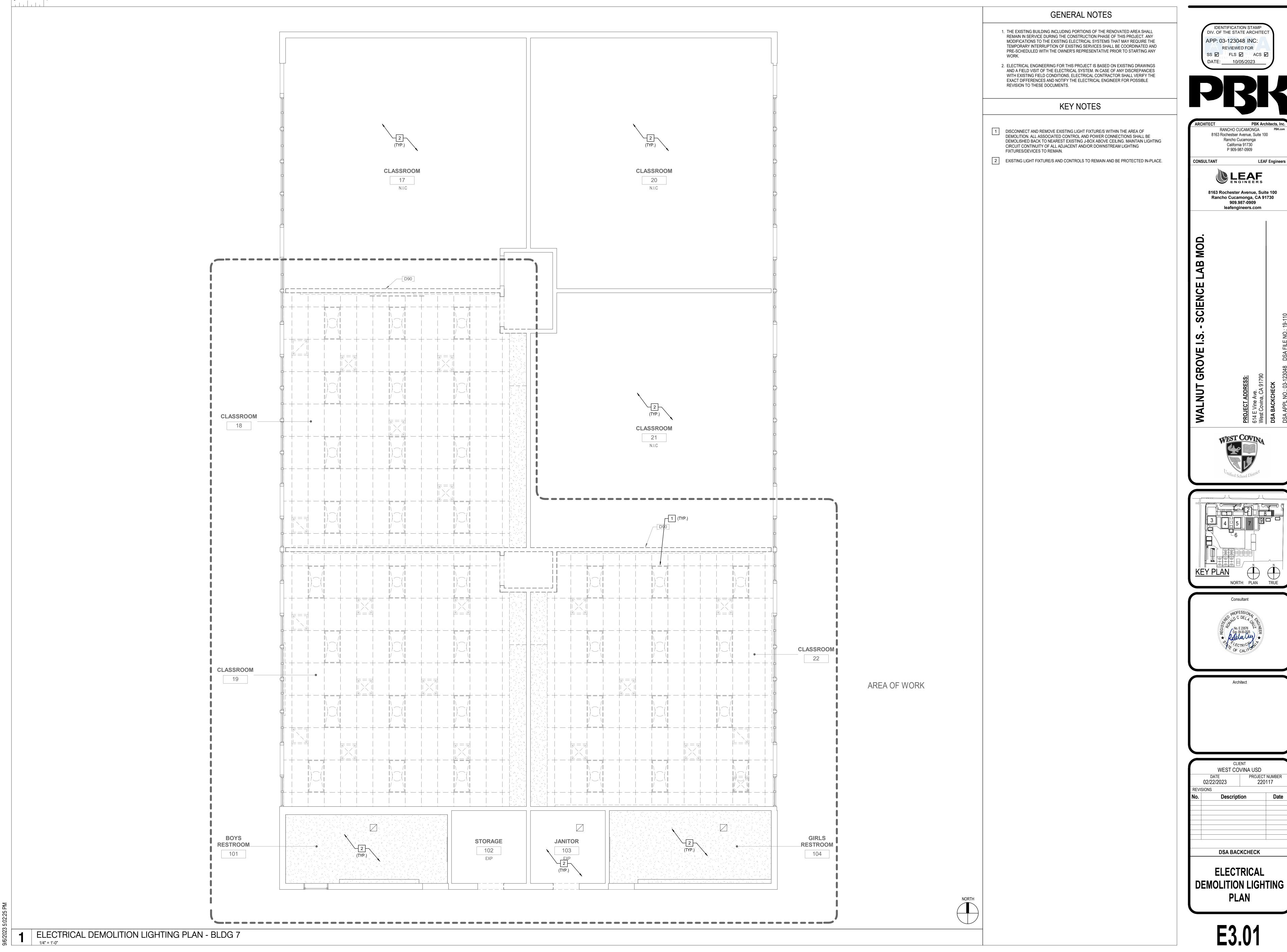




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**ELECTRICAL NEW** FLOOR PLAN - BLDG 7

**DSA BACKCHECK** 

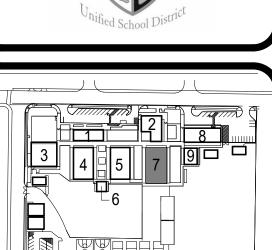


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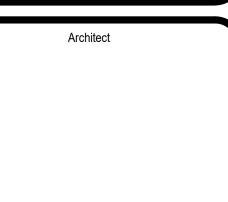
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**GENERAL NOTES** 

- 1. PROVIDE A COMPLETE AND OPERATIONAL SYSTEM OF OCCUPANCY SENSORS FOR ON/OFF CONTROL OF ALL LIGHT FIXTURES INCLUDING BUT NOT LIMITED TO POWER PACKS, WIRING, ETC. RE: DIVISION 26 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 2. PROVIDE EMERGENCY BATTERY PACKS FOR ALL LIGHTING FIXTURES DESIGNATED TO BE ON EMERGENCY POWER. PROVIDE UNSWITCHED HOT TO BATTERY SO THAT LAMPS CAN BE SWITCHED OFF AND ON WITHOUT DRAINING BATTERY. RE: DIVISION 26 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 3. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COMPLETED AFTER NORMAL WORKING HOURS. PRE-SCHEDULE ANY SERVICE INTERRUPTIONS WITH THE OWNER PRIOR TO STARTING ANY WORK. DO NOT DISTURB THE EXISTING DEPARTMENTS IN THE EXISTING BUILDING COMPLEX.

#### **KEY NOTES**

- NEW LED LIGHT FIXTURE. PROVIDE ALL NEW CONDUIT AND WIRING, REUSE EXISTING
  CIRCUITS LINESS OTHERWISE NOTED, ALL 2X4'S ARE 'EX-A', (LITHONIA LIGHTING -CIRCUITS. UNLESS OTHERWISE NOTED, ALL 2X4'S ARE 'FX-A'. (LITHONIA LIGHTING -STAKP 2X4 4000LM 80CRI 40K COLT MIN10 ZT MVOLT) 'EM' FIXTURES ARE PROVIDED WITH 90 MIN EMERGENCY BATTERY BACKUP (E10WLCP).
- 2 LOW VOLTAGE WALL ON/OFF SWITCH WITH DIMMING.
- 3 LOW VOLTAGE CEILING MOUNTED OCCUPANCY SENSOR.
- 4 LOW VOLTAGE CEILING MOUNTED DAYLIGHT HARVESTING SENSOR WITH DIMMING.

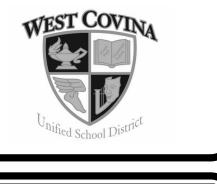
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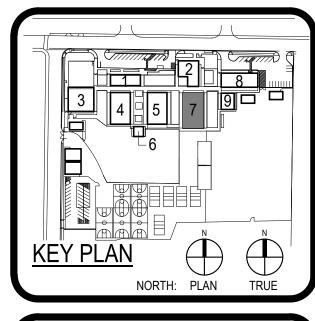
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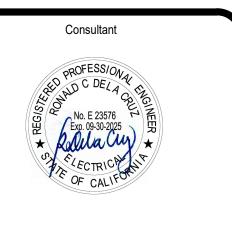
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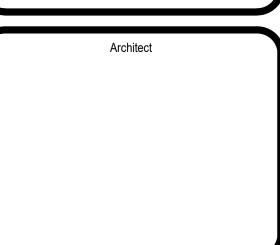
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1	DATE 22/2023 S		OT NUMBER 10117
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DSA BACKCHECK	DSA BAC	KCHECK	

Job:Walnut Grove IS - Science Lab Mod. Job No.<u>220117</u> Mounting SURFACE AIC Rating 10000 Main Type MCB (100A) 208Y/120V-3PH 4W 100 AMPS Neutral 100% Main Size: Ground Equipment Ground LugsSINGLE EX. 5 C 6 EX. --
EX. 7 A 8 EX. SPARE

20/3 EX. 9 B 10 EX. 20/3 --
EX. 11 C 12 EX. --
20/1 EX. 13 A 14 EX. 20/1 TEACHER RECEPT.

20/1 EX. 15 B 16 EX. 20/1 EF-3

20/1 EX. 17 C 18 EX. 20/1 EXISTING LOAD

20/1 EX. 19 A 20 EX. 20/1 EXISTING LOAD

20/1 EX. 21 B 22 EX. SURGE

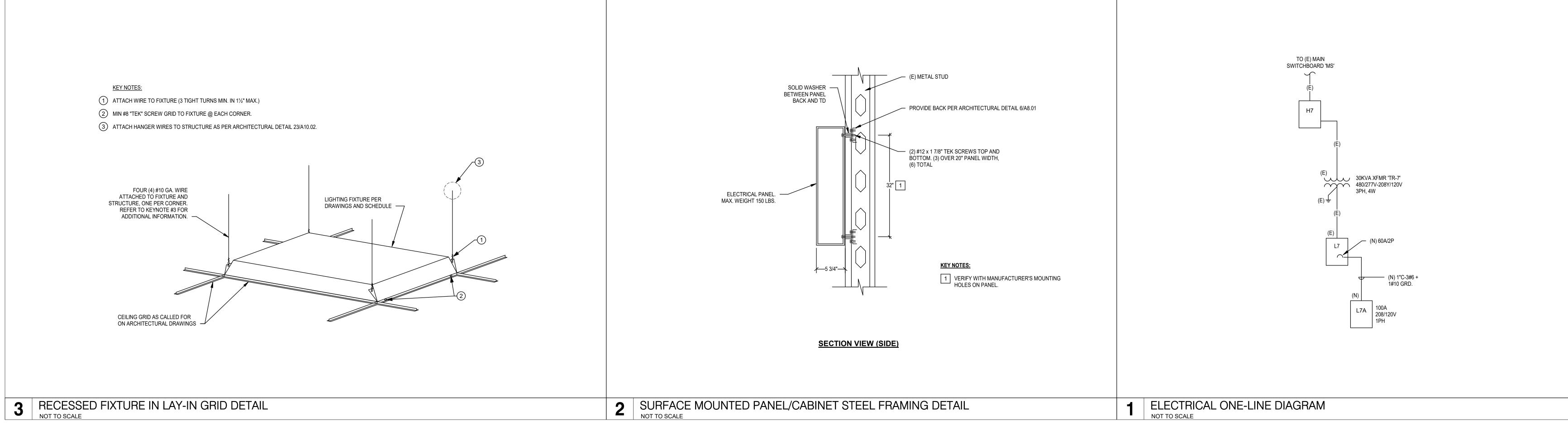
20/1 EX. 23 C 24 EX. 100/3 --
60/2 EX. 25 A 26 EX. --
EX. 27 B 28 EX. 20/1 SPARE 1.00 SPARE 1.00 SPARE 1.00 SPARE 0.00 EF-5 0.00 BOYS RR RECEPT. 0.00 GIRLS RR RECEPT. 0.00 0.00 PANEL 'L7A' 60/2 EX. 25 A 26 EX. ---EX. 27 B 28 EX. 20/1 SPARE
20/1 EX. 29 C 30 EX. 20/1 ROOF RECEPTS.
20/1 EX. 31 A 32 EX. 20/1 TIMECLOCK
20/1 EX. 33 B 34 EX. 20/1 SPARE
20/1 EX. 35 C 36 EX. 20/1 SPARE
20/1 EX. 37 A 38 EX. 20/1 SURGE
20/1 EX. 39 B 40 EX. 20/1 SURGE
20/1 EX. 41 C 42 EX. 20/1 SURGE
20/1 EX. 43 A 44 EX. 20/1 SPARE
20/1 EX. 43 A 44 EX. 20/1 SURGE
20/1 EX. 45 B 46 DO NOT REMOVE 1.00 SPARE DO NOT REMOVE 0 666 600 0 0 1600 0 12.00 **TOTALS** DO NOT REMOVE DO NOT REMOVE TOTALS 0 1280 800 0 0 1200 0 5.00 Phase Load
Ph KVA
A 2.2
B 1.9
C 1.7 LOAD SUMMARY Panel Remarks:

EXISTING PANEL FED FROM 'MS' 
 Ltg.
 Recept
 Motor
 Heat
 Cool
 Other
 Kitchen
 S/S
 Description

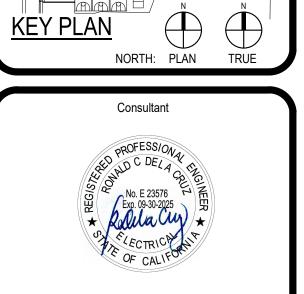
 0.0
 1.9
 1.4
 0.0
 0.0
 2.8
 0.0
 17.0
 Connected KVA

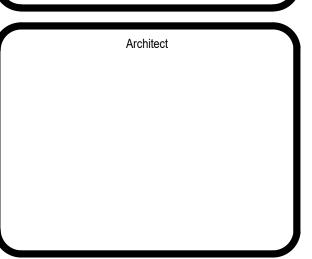
 1.25
 \*\*
 1.00
 1.00
 1.00
 0.65
 0.50
 \*Design Factors
 \*\* - INDICATES NEW LOAD 0.0 1.9 1.4 0.0 0.0 2.8 0.0 8.5 Design KVA \*Input div. factor per descriptions as required for calculations. \*\*100% of 1st 10 KVA, 50% of remaining. Con. Con. KVA Amps PANEL: **L7** Des. Des. KVA Amps TOTAL 23.1 64.2 Date: 2/15/2023 By: N.OROPEZA

							Jo	b:Walnut Grove IS - Scienc	e Lab Mod.						Job No	o.220117								
		Mounting	SURFACE								_							A	IC Rating	10000				
		Main Type	MLO						Voltage:		208Y/120	V-1PH 3	w											
		Neutra	100%						Main Size:		100 AN	PS				_			Ground	Equipme	nt Ground	d		
																_			Lugs	SINGLE				
NEL:												LOADS												
Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.		Cir. No.	Wire	Amp/P		Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S
	100						0.00	Relocated Load	20/1	12	1	Α	2	12	20/1	Classroom 18 Rec.		900						0.00
	100					1	0.00	Relocated Load	20/1	12	3	В	4	12	20/1	Classroom 18 Rec.		900						0.00
	500						0.00	Drinking Fountain	20/1	12	5	A	6	12	20/1	Classroom 19 Rec.		900						0.00
			40				0.00	Circ Pump	20/1	12	7	В	8	12	20/1	Classroom 19 Rec.		900						0.00
							1.00	Spare	20/1		9	Α	10	12	20/1	Classroom 22 Rec.		900						0.00
	700	-	40		•		1.00	Spare	20/1		11	В	12	12	20/1	Classroom 22 Rec.		900				-		0.00
0	700	0	40	0	0	0	2.00	TOTALS								TOTALS	0	5400	0	0	0	0	0	0.00
			LOAD SUM	MAADV								Dhao	e Load					[	Panel Rei	marka:				
			LUAD SUIV	IIVIART															Panei Kei					
l ta	Pecent	Motor		Cool	Other	Kitchen	9/9	Description				Dh	K\/\							ΝΕW	PANEI	FFD FRC	M/ 'I 7'	
	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description Connected KVA				Ph_	KVA						-Provide			FED FRO		fountain
0.0	Recept 6.1	0.0	Heat 0.0	0.0	0.0	0.0	2.0	Connected KVA				Α	3.3						-Provide			FED FRC preaker for		fountain
0.0 1.25	6.1	0.0 1.00	0.0 1.00	0.0 1.00	0.0 1.00	0.0 0.65	2.0 0.50	Connected KVA *Design Factors											-Provide					fountain
0.0 1.25	6.1	0.0	0.0 1.00	0.0	0.0	0.0	2.0	Connected KVA				Α	3.3						-Provide					fountain
0.0 1.25	6.1	0.0 1.00	0.0 1.00	0.0 1.00	0.0 1.00	0.0 0.65	2.0 0.50	Connected KVA *Design Factors				Α	3.3						-Provide					fountair
0.0 1.25 0.0	6.1	0.0 1.00 0.0	Heat 0.0 1.00 0.0	0.0 1.00 0.0	0.0 1.00 0.0	0.0 0.65 0.0	2.0 0.50	Connected KVA *Design Factors				Α	3.3						-Provide					fountain
0.0 1.25 0.0	6.1 ** 6.1	0.0 1.00 0.0	Heat 0.0 1.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1.00 0.0	0.0 1.00 0.0	0.0 0.65 0.0	2.0 0.50	Connected KVA *Design Factors				Α	3.3						-Provide					fountain
0.0 1.25 0.0	6.1 ** 6.1	0.0 1.00 0.0	Heat 0.0 1.00 0.0	0.0 1.00 0.0	0.0 1.00 0.0	0.0 0.65 0.0	2.0 0.50	Connected KVA *Design Factors				Α	3.3						-Provide					fountain
0.0 1.25 0.0	6.1 ** 6.1	0.0 1.00 0.0	Heat 0.0 1.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1.00 0.0	0.0 1.00 0.0	0.0 0.65 0.0	2.0 0.50	Connected KVA *Design Factors				Α	3.3						-Provide					fountain
0.0 1.25 0.0	6.1 ** 6.1	0.0 1.00 0.0	Heat 0.0 1.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1.00 0.0	0.0 1.00 0.0	0.0 0.65 0.0	2.0 0.50	Connected KVA *Design Factors				Α	3.3						-Provide					fountair
0.0 1.25 0.0	6.1 ** 6.1	0.0 1.00 0.0	Heat  0.0  1.00  0.0  ns as require remaining.	0.0 1.00 0.0	0.0 1.00 0.0	0.0 0.65 0.0	2.0 0.50	Connected KVA *Design Factors				Α	3.3							GFCI type				fountaiı
1.25 0.0	6.1 ** 6.1 . factor per	0.0 1.00 0.0 r descriptic	Heat  0.0  1.00  0.0  0.0  ns as require remaining.	0.0 1.00 0.0	0.0 1.00 0.0	0.0 0.65 0.0	2.0 0.50	Connected KVA *Design Factors				Α	3.3						-Provide	GFCI type				fountair



IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP: 03-123048 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/05/2023 ARCHITECT RANCHO CUCAMONGA 8163 Rochestser Avenue, Suite 100 Rancho Cucamonga California 91730 P 909-987-0909 CONSULTANT LEAF Engineers LEAF 8163 Rochester Avenue, Suite 100 Rancho Cucamonga, CA 91730 909.987-0909 leafengineers.com CIENCE S UT GROVE





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IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT

APP: 03-123048 INC:

REVIEWED FOR

SS FLS ACS D

DATE: 10/05/2023

DATE: 10/05/2023

ARCHITECT

PBK Architects, Inc.

RANCHO CUCAMONGA

PBK.com

8163 Rochestser Avenue, Suite 100

Rancho Cucamonga
California 91730
P 909-987-0909

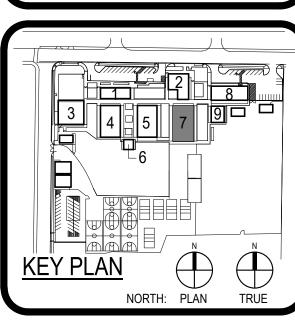
CONSULTANT

LEAF Engineers

8163 Rochester Avenue, Suite 100 Rancho Cucamonga, CA 91730 909.987-0909 leafengineers.com

NCE LAB MOD.

PROJECT ADDRESS:





CLIENT
WEST COVINA USD

DATE PROJECT NUMBER 22/22/2023 220117

REVISIONS

No. Description Date

DSA BACKCHECK

TECHNOLOGY
SYMBOLS, NOTES, AND
ABBREVIATIONS

### TECHNOLOGY SCOPE NOTES

A. CONTRACTOR SHALL REMOVE SCS AND CLASSROOM AUDIO/VIDEO DEVICES, CABLING, MOUNTS, WIRE MOLDING, FACEPLATES, AND OTHER APPARATUSES BACK TO THEIR SOURCE, PATCH PANEL, OR HEAD END; AND FURNISH NEW AS INDICATED IN THESE DRAWINGS. DEMOLISHED OUTLETS SHALL BE COVERED WITH BLANK STAINLESS-STEEL PLATES. PATCH AND PAINT TO MATCH AS

B. EXISTING INTERCOM (PA) AND CLOCK DEVICES SHALL BE TESTED PRIOR TO REMOVAL AND STORED BY THE CONTRACTOR. CABLING SHALL REMAIN AND BE PROTECTED THROUGHOUT DEMOLITION AND REINSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FUNCTIONALITY.

C. MOTION DETECTORS SHALL BE REPLACED WITH HONEYWELL MOTION SENSORS. CABLING SHALL REMAIN AND BE PROTECTED THROUGHOUT DEMOLITION AND REINSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FUNCTIONALITY.

). DISPLAYS AND MOUNTS SHALL BE PROVIDED BY THE OWNER AND INSTALLED BY THE CONTRACTO

### SITE KEY NOTES

- 1 INDICATES THE AREA OF WORK.
- INDICATES AN EXISTNG IDF RACK. CONTRACTOR SHALL ROUTE DATA CABLES IN
- 3 | INDICATES THE APPROXIMATE OVERHEAD PATHEWAY OF NEW DATA CABLES.
- 4 INDICATES APPROXIMATE LOCATION OF STUBOUT TO COUNTER

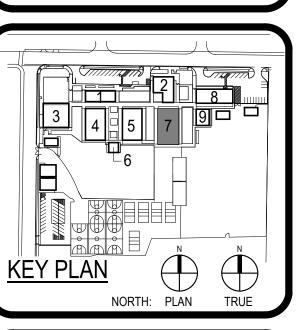
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITEC APP: 03-123048 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹

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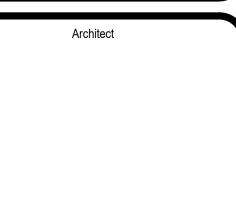
CONSULTANT LEAF Engineers

8163 Rochester Avenue, Suite 100 Rancho Cucamonga, CA 91730 909.987-0909 leafengineers.com

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**TECHNOLOGY SITE** 

**DSA BACKCHECK** 

TECHNOLOGY SCOPE NOTES

A. CONTRACTOR SHALL REMOVE SCS AND CLASSROOM AUDIO/VIDEO DEVICES, CABLING, MOUNTS, WIRE MOLDING, FACEPLATES, AND OTHER APPARATUSES BACK TO THEIR SOURCE, PATCH PANEL, OR HEAD END; AND FURNISH A NEW FULLY FUNCTIONING EXTENSION OF THE EXISTING SYSTEM AS INDICATED IN THESE DRAWINGS.

B. DEMOLISHED OUTLETS SHALL PATCHED AND PAINT TO MATCH AS REQUIRED.

C. CONTRACTOR SHALL FURNISH FIBER AND COPPER PATCH CABLES, PATCH MODULES, AND OTHER COMPONENTS, AND INSTALL ADDITIONAL OWNER FIRNISHED (OFCI) NETWORK SWITCH WITH FIBER MODULES AS REQUIRED. CONTRACTOR SHALL ALL REQUIRED FIBER PATCH CABLE CONTRACTOR SHALL FURNISH 110 % COPPER PATCH CABLES REQUIRED.

D. EXISTING INTERCOM (PA) AND CLOCK DEVICES SHALL BE TESTED PRIOR TO REMOVAL AND STORED BY THE OWNER. CABLING SHALL REMAIN AND BE PROTECTED THROUGHOUT DEMOLITION AND REINSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FUNCTIONALITY.

E. MOTION DETECTORS SHALL BE REPLACED WITH HONEYWELL DT8050M MOTION SENSORS. CABLING SHALL REMAIN AND BE PROTECTED THROUGHOUT DEMOLITION AND REINSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FUNCTIONALITY.

E. DISPLAYS AND MOUNTS SHALL BE PROVIDED BY THE OWNER AND INSTALLED BY THE CONTRACTOR

### **DEMOLITION NOTES**

A. CONTRACTOR SHALL REMOVE SCS ,CLASSROOM AUDIO/VIDEO, AND INTRUSION EXISTING MOUNTS, SURFACE MOUNTED PATHWAY, DEVICES AND CABLING IN IT'S ENTIRELY BACK TO THEIR ORIGIN, PATCH PANEL, OR HEAD-END. REMOVE ABANDONED LOW VOLTAGE CABLING UNLESS OTHERWISE

B. DEVICES, CABLING, MOUNTS, AND OTHER APPARATUSES BACK TO THEIR SOURCE, PATCH PANEL,

C. THE CONTRACTORS SHALL COORDINATE WITH THE DIVISION 27 AND 28 SUBCONTRACTORS PRIOR TO ANY DEMOLITION.

D. ONLY CONTRACTORS CERTIFIED AND/OR LICENSED FOR EACH SPECIFIC LOW VOLTAGE SYSTEM SHALL BE ALLOW TO SERVICE, RELOCATE, OR DEMOLISH ANY DIVISION 27 OR 28 SYSTEM COMPONENTS. PROGRAMMING MAY ONLY BE DONE BY A FACTORY APPROVED VENDOR AND

E. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL DRAWINGS FOR FULL EXTENT OF THE

F. PATCH ALL WALLS REQUIRED TO BE MODIFIED BY DEMOLITION OF RACEWAYS AND BACK BOXES FOR LOW VOLTAGE AND SPECIALTY SYSTEMS. REMOVE EDGE STRUCTURED CABLING, AUDIO VISUAL, INTERCOM, INTRUSION, AND ANY OTHER NON-FUNCTIONING CABLING. IN ITS ENTIRETY

LESS THAN 10 WORKING DAYS' NOTICE PRIOR TO ANY SCHEDULED OUTAGES FOR ANY

1 INDICATES APPROXIMATE LOCATION OF EXISTING IDF RACK.

REMOVED, RELOCATED, AND REINSTALLED. EXISTING CABLING SHALL BE PROTECTED AND TO REMAIN. SEE DETAIL T6.01/06

REMAIN. SEE DETAIL T6.01/07

AND REPLACED WITH NEW. EXISTING CABLING SHALL BE PROTECTED AND TO REMAIN. SEE DETAIL T6.01/09

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP: 03-123048 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹

RANCHO CUCAMONGA 8163 Rochestser Avenue, Suite 100 Rancho Cucamonga California 91730 P 909-987-0909

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DEMOTION TO BE PERFORMED.

FROM END TO END FOR DEVICES THAT WILL BE REMOVED DURING SELECTIVE DEMOLITION.

G. COORDINATE ALL DEMOLITION ACTIVITIES WITH OWNER, ARCHITECT, AND ENGINEER. PROVIDE NO COMMUNICATION (DIV 27) AND LIFE SAFETY AND SECURITY (DIV 28) OUTAGES.

I. THE CONTRACTOR SHALL REPORT ANY DAMAGED DEVICES THAT ARE SHOWN AS EXISTING TO REMAIN TO THE OWNER, ARCHITECT, AND ENGINEER PRIOR TO THE COMMENCEMENT OF WORK. ALL DEVICES FOUND TO BE DAMAGED AT THE TIME OF SUBSTANTIAL COMPLETION THAT HAVE NOT BEEN REPORTED PRIOR TO THE STARTING WORK SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. ANY REPROGRAMMING OF THE HEAD END OR END POINT DEVICES AS A RESULT OF DAMAGE OR REPLACEMENT OF THE DEVICE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AS WELL.

NEW DEVICES THAT ARE SHOWN ON CMU OR MASONRY WALLS IT IS PREFERRED THAT BACK BOXES AND RACEWAYS ARE CONCEALED WITHIN WALL, IF INSTALLATION WITHIN WALL IS NOT ATTAINABLE, THEN THE SECOND PREFERENCE IS TO PROVIDE SURFACE MOUNTED CONDUIT IN ADJACENT MECHANICAL, ELECTRICAL, CUSTODIAL, OR STORAGE SPACE, THEN PENETRATE THE WALL TO THE DESIRED LOCATION. PROVIDE SURFACE MOUNTED BACK BOX AT DEVICE LOCATION. IF THE SECONDARY PREFERENCE IS NOT ATTAINABLE, THEN AND ONLY THEN IS SURFACE. MOUNT RACEWAY ACCEPTABLE. CONTRACTOR SHALL PROVIDE METALLIC RACEWAY AND MECHANICALLY FASTEN IT TO WALL IN THESE INSTANCES. ALL USED EQUIPMENT IS PROPERTY OF THE OWNER.

. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL LOW VOLTAGE CABLE, RACEWAYS, WIREMOLD, OR OTHER UNUSED CABLE MANAGEMENT IN AFFECTED ROOMS.

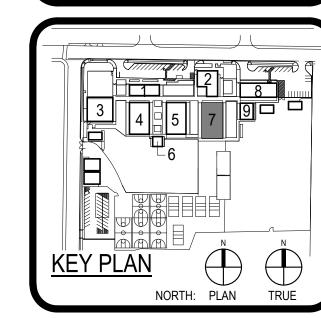
#### DEMOLITION KEY NOTES

(CLOCKS) INDICATES APPROPRIATE LOCATION OF EXISTING DEVICES TO BE

3 (INTERCOM PA) INDICATES APPROPRIATE LOCATION OF EXISTING DEVICES TO BE REMOVED AND REINSTALLED. EXISTING CABLING SHALL BE PROTECTED AND TO

4 (MOTION) INDICATES APPROXIMATE LOCATION OF EXISTING DEVICES TO BE REMOVED

(AP) INDICATES APPROXIMATE LOCATION OF EXISTING DEVICES TO BE DEMOLISHED ÀNÓ REPLACED WITH NEW. CABLING SHALL BE DEMOLISHED BACK TO IT'S ORIGIN, PATCH PANEL, OR HEAD-END. SEE DETAIL T6.01/04

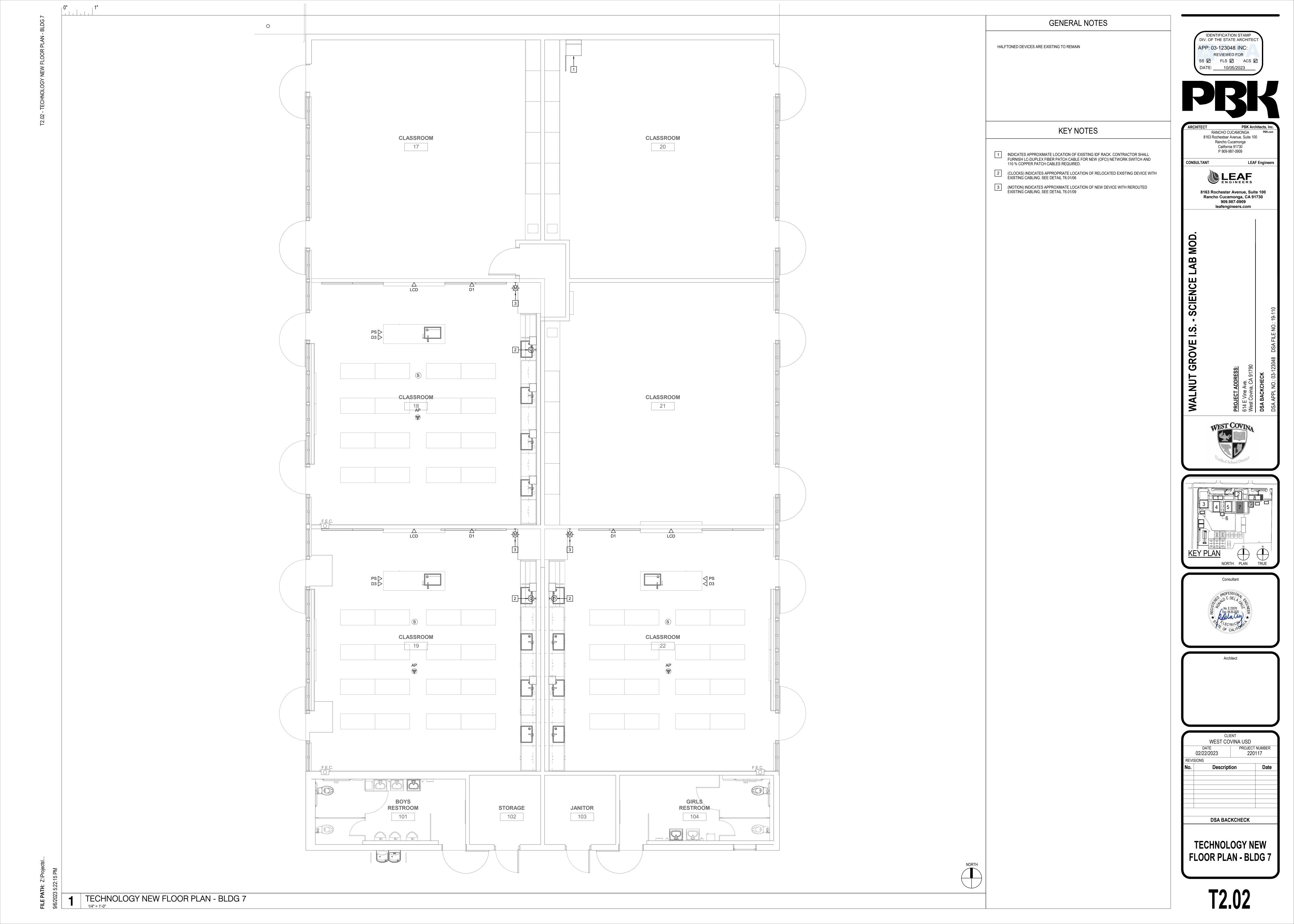




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**DSA BACKCHECK** 

**TECHNOLOGY DEMOLITION FLOOR** PLAN - BLDG 7



 FIBER OPTIC BACKBONE 2. UPPER BACKBONE SECURITY IDENTIFICATION STAMP 1"C WITH FITTING & 4. FIRE ALARM DIV. OF THE STATE ARCHITEC BUSHING \_\_ CCTV VOICE AND DATA APP: 03-123048 INC: WIRELESS ACCESS POINTS REVIEWED FOR 8. PA / INTERCOM CEILING SS 🗹 FLS 🗹 ACS 🗹 CLOCKS 10. FASTEN WITH 1/4" X 2 1/2" LAG NOTES: SCREW (TYP.) A. NO MORE THAN 50, .25" CABLES PER 2.5" SUPPORT. \_\_\_\_ 4" SQUARE (2-1/8" DEEP) BOX B. SUPPORTS SHALL BE INSTALLED AT A SINGLE GANG PLASTER MAXIMUM 5' ON CENTER. C. SUPPORTS SHALL BE A MINIMUM 3" ABOVE SUSPENDED CEILING. SINGLE CLOCK D. SEPARATE SUPPORTS REQUIRED FOR EACH CABLE TYPE AS ILLUSTRATED. RANCHO CUCAMONGA EACH SYSTEM CONTRACTOR TO 8163 Rochestser Avenue, Suite 100 PROVIDE AND INSTALL THE SUPPORTS Rancho Cucamonga FOR THEIR OWN SYSTEM. California 91730 NOTE P 909-987-0909 ADDITIONAL "WG" SUBSCRIPT E. SUPPORTS SHALL ATTACHED TO THE INDICATES WIRE GUARD TO BE BUILDING STRUCTURE. INSTALLED OVER CONSULTANT LEAF Engineers CLOCK F. ALL SUPPORTS SHALL BE INSTALLED AT A SERVICEABLE HEIGHT. LEAF N.T.S 06 CABLE SUPPORT DETAIL <sub>N.T.S</sub> | 01 | SINGLE DIGITAL CLOCK MOUNTING 8163 Rochester Avenue, Suite 100 Rancho Cucamonga, CA 91730 909.987-0909 leafengineers.com 1" CONDUIT TO THE NEAREST ACCESSIBLE CEILING IN THE KEYED NOTES: DIRECTION OF THE CLOSET TO 1. SPEAKER FACEPLATE BE USED FOR TERMINATION. 2. SUPPORT FROM STRUCTURE WITH WIRE, #12 GA PROVIDE SINGLE GANG 3. ROPE OR USE MOUNTING CHANNELS REDUCER RING FOR DOUBLE SPEAKER (E) 5.8 LBS. GANG BOX. 5. CEILING TILÉ PROVIDE STAINLESS STEEL SPEAKER BAFFLE FACEPLATE WITH (4) PORTS 7. T-BAR BOX SUPPORT BRACKET W/ #10 MINIMUM (6) PORTS MAXIMUM. SMS TO SPEAKER & #10 SMS EA. SIDE TO T-BAR CEILING THE FACE PLATE MUST HAVE LABELS WINDOWS. PROVIDE 2 GANG BOX FOR EACH TECHNOLOGY OUTLET. 1. FOR ATTACHMENT TO STURCTURE CIENCE REFER TO DETAILS (\_\_ LESS THAN OR EQUAL TO 20 LBS
 REFER TO DSA IR 25-2, 1.8.2&1.9 70V IN-CEILING RECESSED SPEAKER TECHNOLOGY OUTLET BOX DETAIL <sub>N.T.S</sub> 02 TYPICAL ABOVE CEILING DATA OUTLET.
 CEILING DECK AS SCHEDULED (BY OTHERS). INTERIOR WALL AS SCHEDULED (BY OTHERS). PATCH CORD. 3/4" EMT CONDUIT FROM WEST COVINA DOUBLE GANG BOX WITH 200 lbs. PULL STRING AND NYLON 0 BUSING STUBBED OUT ABOVE ACCESSIBLE CEILING. INTERIOR WALL MOUNTED DATA DATA INTERIOR DEVICE. RECESSED DOUBLE GANG BOX. HDMI 0 <sub>N.T.S</sub> 03 | N.T.S 08 INTERIOR WALL MOUNTED DEVICE LCD / PS / D3 OUTLET DETAIL KEY PLAN 1. 1" CONDUIT TO THE NEAREST J-HOOK ABOVE ACCESSIBLE NORTH: PLAN TRUE ACCESSIBLE CEILING IN THE CEILING. DIRECTION OF THE CLOSET TO DATA CABLE ABOVE ACCESSIBLE CEILING. BE USED FOR TERMINATION. PROVIDE SINGLE GANG 20' SERVICE LOOP ABOVE REDUCER RING FOR DOUBLE ACCESSIBLE CEILING NEATLY COILED AND SECURED TO GANG BOX. 3. PROVIDE WALL MOUNT MOTION J-HOOK. SURFACE MOUNT DATA DETECTOR. 4. PROVIDE 2 GANG BOX FOR OUTLET ABOVE ACCESSIBLE EACH TECHNOLOGY OUTLET. CEILING SECURED TO BUILDING STRUCTURE. DATA INSERT. <sub>N.T.S</sub> 04 | <sub>N.T.S</sub> 09 ABOVE CEILING DATA OUTLET TECHNOLOGY OUTLET BOX DETAIL CLOSET IDENTIFICATION.
 INDIVIDUAL PORT
 IDENTIFICATION: WEST COVINA USD PROJECT NUMBER 220117 EACH PATCH PANEL PORT SHALL BE LABELED WITH THE STATION PORT NUMBER AND THE ROOM NUMBER IT SERVES FIBER OPTIC (IN THIS CASE, PORTS 1-6 ARE **ENCLOSURE** SERVING CABLES 1 THRU 6 IN ROOM #806). COORDINATE ROOM NUMBERS WITH FINAL GRAPHICS PACKAGE ROOM NUMBERS AND NOT CONSECUTION PLAN ROOM NUMBERS. PANEL IDENTIFICATION (PANEL 'C' WOULD INDICATE THE 3RD DSA BACKCHECK PATCH PANEL IN THE COMMUNICATION CLOSET. CLOSET IDENTIFICATION (IN THIS CASE, THE LABEL INDICATES IDF CLOSET #1. THE TECHNOLOGY DETAILS MDF SHALL BE LABELED 'MDF') NOTES: A. PATCH PANEL PORT LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/4" IN HEIGHT. B. PATCH PANEL AND CLOSET IDENTIFICATION LABEL SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/2" IN HEIGHT. FIBER ENCLOSURE / PATCH PANEL LABELING DETAIL <sub>N.T.S</sub> 05

DEVICE SCHEDULE										
SYMBOL	DESCRIPTION	MODEL	MANUFACTURER	BACKBOX	MOUNTING HEIGHT	C.S.F.M. NUMBER				
FACP	EXISTING FIRE ALARM CONTROL PANEL (A#03-107514)	EST3	EDWARDS	PROVIDED						
FATC	FIRE ALARM TERMINAL CABINET	N/A	BY ELECTRICAL CONTRACTOR	N/A		N/A				
FAPS	EXISTING FIRE ALARM POWER SUPPLY	BPS-6	EDWARDS	N/A						
(S) <sub>P</sub>	MULTISENSOR SMOKE AND CO DETECTOR	SIGA-OSCD SIGA-AB4GT-LF	EDWARDS	4S DEEP BOX W/ 3-0 RING	CEILING	7275-1657:0513 7300-1657:0322				
$\langle ! \rangle_A / \langle ! \rangle$	ADDRESSABLE AREA HEAT DETECTOR (FIXED 200°F)	SIGA-HFD SIGA-SB	EDWARDS	4S DEEP BOX W/ 3-0 RING	ATTIC/ CEILING	7270-1657:0333 7300-1657:0120				
WP	FIRE ALARM EXTERIOR WEATHERPROOF HORN	757-1A-T	EDWARDS	4S DEEP BOX W/ 4S EXTENSION		7125-1657:0184				
<b>&gt;</b>	FIRE ALARM CEILING MOUNTED HORN/STROBE	GCAVRF	EDWARDS	4S DEEP BOX W/ 4S EXTENSION		7125-1657:0515				
JB	FIRE ALARM JUNCTION BOX	N/A	BY ELECTRICAL CONTRACTOR	N/A		N/A				
—	END OF LINE RESISTOR	N/A	N/A	N/A		N/A				
×	EXISTING FIRE ALARM WALL MOUNTED HORN/STROBE	G1-HDVM	EDWARDS	4S DEEP BOX W/ 4S EXTENSION						

1. UNLESS NOTED AS EXISTING, ALL THE DEVICES SHOWING ON THE DRAWINGS ARE NEW.

(SEE DETAIL -1/

SHEET FA6.01)

SMOKE DETECTOR NOT

TO BE INSTALLED IN

THIS AREA

AND STROBE

80" A.F.F.

TO 96"

SMOKE DETECTOR

FINISHED CEILING

SPEAKER ONLY

90" A.F.F. OR 6"

**BELOW CEILING** 

WHICHEVER IS

LOWER

C.S.F.M. NUMBER	AB
	AC
	AF
N/A	AIC
	AR
	AW
7275-1657:0513	С
7300-1657:0322	СК
7270-1657:0333	
7300-1657:0120	CL
7125-1657:0184	C.0
	CU
7125-1657:0515	DW
	ER
N/A	EM
	EQ
N/A	EX
	FIN
	FLI
	FT
	GF
	1

**DESCRIPTION** BBREVIATION **ABBREVIATION** AMPERES ABOVE FINISHED FLOOR AMPERES INTERRUPTING CAPACITY PH. OR Ø ARCHITECT; ARCHITECTURAL PWR AMERICAN WIRE GAUGE REC/RECEPT CONDUIT **CIRCUIT** REQ'D CEILING MOUNTED DEVICE CONDUIT ONLY WITH PULL WIRE COPPER DRAWING SPECS EXISTING DEVICE TO BE REMOVED ELECTRICAL METALLIC TUBING **EQUIPMENT EXISTING** U.O.N. FINISH **FLOOR** FEET **GROUND FAULT INTERRUPTER** GROUND LTG. LIGHTING MOUNTING NEW FLOW SWITCH

JUNCTION BOX

POST INDICATOR VALVE

PULL BOX (WEATHERPROOF)

TEMPER SWITCH

RISER UP AND DOWN

**LEGENDS** 

<u>DESCRIPTION</u>

NUMBER

PHASE

PANEL

POWER

RECEPTACLE

SQUARE FEET

SINGLE POLE

**SPECIFICATIONS** 

UNDERGROUND

**VOLT-AMPERES** 

WEATHERPROOF

CALIFORNIA ELECTRICAL CODE

UNLESS OTHERWISE NOTED

REQUIRED

ROOM

SHEET

SWITCH

TYPICAL

VOLTS

WATTS

WITH

WITHOUT

NOT IN CONTRACT

PARTIAL LIST OF APPLICABLE CODES:

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR \* 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR

2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10. TITLE 24 CCR 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

PARTIAL LIST OF APPLICABLE STANDARDS:

SCHEDULING A FINAL INSPECTION.

STANDARDS.

NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED): 2016 EDITION NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT;

NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES; 2016 EDITION UL 464 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES; 2003 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS; 1999 EDITION

UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED; 2002 EDITION (R2010) FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA

FIRE WATCH NOTE

A FIRE WATCH SHALL BE ESTABLISHED AND THE FIRE DEPARTMENT & FIRE CODE OFFICIAL SHALL BE NOTIFIED

SHALL BE STAGED WHENEVER THE BUILDING IS OCCUPIED (PARTIAL OR WHOLE) PER DSA IR F-2 AND CFC 901.7.

IMMEDIATELY WHENEVER THE FIRE PROTECTION / ALARM SYSTEM IS RENDERED OUT OF SERVICE. A FIRE WATCH

SCOPE OF WORK

PROVIDE FIRE ALARM SYSTEM DEVICES AS SHOWN IN EQUIPMENT LEGEND, FLOOR PLANS, AND SPECIFICATIONS

IN THIS CONSTRUCTION DOCUMENT SET. USE EXISTING FIRE ALARM CONTROL PANEL TO CONNECT NEW FIRE

COMPLETE PRE TEST SHALL BE PERFORMED TO VERIFY FUNCTIONALITY, IF FUNCTIONALITY IS COMPLETE THEN

ALARM SYSTEM DEVICES SHOWN PER DRAWING AND SPECIFICATION DOCUMENT. UPON COMPLETION, A

THE PROPER DOCUMENTATION SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION PRIOR TO

PROVIDE COMPLETE FULL AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITHIN THE AREA OF WORK.

APPLICABLE CODES

# **GENERAL NOTES**

DRAWING INDEX

FIRE ALARM SITE PLAN

FA0.00

FA1.01

FA2.01

FA2.02

FA6.01

FIRE ALARM SYMBOLS, NOTES, AND ABBREVIATIONS

FIRE ALARM PARTIAL RISER DIAGRAM, CALCULATIONS &

FIRE ALARM DEMOLITION FLOOR PLAN - BLDG 7

FIRE ALARM NEW FLOOR PLAN - BLDG 7

. APPLICABLE STANDARD 2016, NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35 2. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION. INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED 3. UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.

4. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR 5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT. 6. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL

INSPECTION AND /OR TESTING. 7. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION. 8. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96"

MAXIMUM FROM FINISHED FLOOR. 9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE. 10.AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (DBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR FIVE DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS.

WHICHEVER IS GREATER. IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING. 11.AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN. 12.THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE

13. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED. 14. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET 15.ALL FIRE ALARM WIRING SHALL BE FPLOR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS

REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THH 16.PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC 17.SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER. 18.ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS.

19.EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. 20.FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING 21.A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE

ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL." CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS. 22. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72,

23.FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR. 24.MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.

25.THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2. 26. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.

27.0WNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS. 28.ALL CARBON MONOXIDE SIGNALS SHALL SOUND A FOUR-PULSE TEMPORAL PATTERN PER NFPA 720, 5.8.6.5.1. 29.ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED. 30.ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE ACCESS FOR ATTIC HEAT DETECTOR, SERVICING, TROUBLESHOOTING, ETC.

31.DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC., THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. 32.ALL 120VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION. 35.ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES, AND

ASSOCIATED CONDUITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR MOUNTING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACKBOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. 36. SMOKE DETECTOR TESTING SHALL BE ACCOMPLISHED PER THE MANUFACTURER'S INSTRUCTIONS. 37.ALL WIRING, INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF

ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS. 38.ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES. 39. POINT, COMMON ANNUNCIATION, AND T-TAPPING ARE PROHIBITED.

40.PROVIDE 3/4" CONDUIT FROM FIRE ALARM CONTROL PANEL TO TELEPHONE BACKBOARD FOR OWNER PROVIDED CENTRAL STATION MONITORING 41.ALL CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED. 42.ALL FLOW SWITCHES SHALL BE 2 WIRE WITH NON-ELECTRONIC RETARD TYPE SIMILAR TO THE SYSTEM SENSOR MODEL "WFD SERIES" ONLY.

43.ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURER'S

SPECIFICATIONS.

44. FIRE ALARM SYSTEM SHALL BE UL LISTED (UUJS). 45.CBC 907.6.5.3 (SFM AMENDMENT) REQUIRES FIRE ALARM TO... "TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISORY STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISORY STATION SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE AND PROPRIETARY) BY THE UNDERWRITERS LABORATORY INC. (UL) OR OTHER APPROVED LISTING AND TESTING LABORATORY OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD, FM 3011)."

46. SUBSTITUTION OF SYSTEM COMPONENTS OR MANUFACTURER WILL REQUIRE THE CONTRACTOR TO SEPARATELY OBTAIN APPROVAL WITH THE DSA AT CONTRACTOR'S EXPENSE AND SHALL MEET ALL REQUIREMENTS OF THE SYSTEM AS DESIGNED AND PRE-APPROVED. ALL PROPOSED SUBSTITUTIONS SHALL BE LISTED WITH THE CALIFORNIA STATE FIRE MARSHAL.

47.FINAL ACCEPTANCE TEST TO INCLUDE TESTING THE CONNECTION BETWEEN THE FIRE ALARM PANEL AND THE SUPERVISING STATION. 48. COORDINATE WITH THE ENGINEER FOR USE OF EXISTING CONDUIT ON A CASE BY CASE BASIS. 49.PRIOR TO DEMOLITION, CONTRACTOR SHALL TEST THE INTERCOM SYSTEM TO ENSURE FULL FUNCTIONALITY.

GENERATE A LIST OF FAULTY EQUIPMENT AND PROVIDE TO THE OWNER AND THE ARCHITECT. PROVIDE PRICING

FOR ANY REQUIRED EQUIPMENT REPAIRS OR REPLACEMENT. 50. CONTRACTOR SHALL DISCONNECT EXISTING FIRE ALARM SYSTEM FROM THE EXISTING INTERCOM SYSTEM. ENSURE THE INTERCOM SYSTEM IS COMPLETELY FUNCTIONAL AFTER DISCONNECTION. 51. CONTRACTOR SHALL CLEARLY MARK THE ABANDON SECTION OF PUBLIC ADDRESS SYSTEM.

52. PROVIDE A FIRE ALARM DOCUMENTATION CABINET PER NFPA72,7.7. 53.FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH CBC CHAPTER 33 AND CFC CHAPTER 33

54 SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APRROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATION CHANGE DOCUMENT, OR A SEPERATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK (CAC 4-317(C)). 55. CHANGES TO THE DIVISION OF THE STATE ARCHITECT APPROVED DRAWINGS AND SPÉCIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS FOR CHANGES TO THE STRUCTURAL, ACCESSIBILITY OR

FIRE -SAFETY PORTIONS OF THE PROJECT. CHANGES SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK SHOWN THEREON CAC 4-338(C)) 56 PROJECT INSPECTOR TO APPROVE SYSTEM VOICE-EVACUATION INTELLIGIBILITY DURING TESTING PHASE. 57. CONTRACTOR SHALL PROVIDE ALL CABLING, RELAYS, MOUNTING HARDWARE AND ANY OTHER DEVICES (FIRE ALARM SYSTEM DEVICES) TO PROVIDE A FULLY FUNCTIONING FIRE ALARM OVERRIDE SYSTEM. WHEN FIRE ALARM

CEASES, EACH LOCAL SOUND SYSTEM SHALL AUTOMATICALLY REVERT TO NORMAL OPERATION. FIRE ALARM

MODULES AND CABLING BY FIRE ALARM CONTRACTOR. 58.FOR ALL HEAT DETECTORS THAT ARE LOCATED ABOVE CEILING/ATTIC SPACES, CONTRACTOR SHALL PROVIDE STICKER AND LABEL "HD" AT THE REFLECTED CEILING DIRECTLY BELOW THE DEVICE TO INDICATE LOCATION. 59.NOTIFICATION APPLIANCES USED FOR SIGNALING OTHER THAN FIRE SHALL NOT HAVE THE WORD "FIRE" OR ANY FIRE SYMBOL, IN ANY FORM (I.E., STAMPED, IMPRINTED, ETC. ) ON THE APPLIANCE VISIBLE TO THE PUBLIC. NOTIFICATION APPLIANCES WITH MULTIPLE VISIBLE ELEMENTS SHALL BE PERMITTED TO HAVE FIRE MARKING ONLY

ON THOSE VISIBLE ELEMENTS USED FOR FIRE SIGNALING, PER NFPA 72, 18.3,3.2/ NFPA 720, 6.3,3.2/ IR 9-2, 5.4,4 & 5,4.5. 60.AUTOMATIC FIRE ALARM SYSTEMS SHALL BE MONITORED AND SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE & PROPRIETARY) BY THE UNDERWRITERS LABORATORY INC. (UL) OR OTHER APPROVED LISTING AND TESTING LABORATORY OR SHALL COMPLY WITH THE REQUIREMENTS OF FM 3011. TERMINATION OF MONITORING SERVICES SHALL BE IN

ACCORDANCE WITH SECTION 907.6.6.2. 61.THE NEW PROJECT SUBMITTAL TO INCLUDE DIRECTION THAT FIRE ALARM SYSTEM RECORD OF COMPLETION AND FIRE ALARM SYSTEM RECORD OF INSPECTION AND TESTING FORM THESE TWO DOCUMENTS FROM NFPA 72 ARE TO BE COMPLETED AND SUBMITTED PRIOR TO CLOSE OUT OF THE PROJECT. A COPY OF COMPLETED AND SIGNED FORM SHALL BE GIVEN TO THE ARCHITECT OR ENGINEER OF RECORD, THE PROJECT INSPECTOR, THE OWNER (SCHOOL DISTRICT) AND LOCAL FIRE AUTHORITY. 62. FIRE ALARM SYSTÉM CHANGES IN EXISTING BUILDINGS SHOULD FOLLOW PER DSA IR-A 28.

SEQUENCE OF OPERATIONS

DEVICE	AREA SMOKE DETECTOR	CARBON MONOXIDE DETECTOR	HEAT DETECTOR	120VAC POWER FAILURE	SHORT CIRCUIT	GROUND FAULT	BATTERY FAILURE
SOUND ALARM AT "FACP"	YES	NO	YES	NO	NO	NO	NO
SOUND TROUBLE BUZZER AT "FACP"	NO	YES	NO	YES	YES	YES	YES
ANNUNCIATE AT "FACP" AND THE REMOTE ANNUNCIATOR (ALARM OR TROUBLE)	YES	YES	YES	YES	YES	YES	YES
ACTIVATE AUDIBLE / VISUAL ALARM SIGNAL THROUGHOUT BUILDING	YES	NO	YES	NO	NO	NO	NO
ACTIVATE AUDIBLE TEMPORAL-4 SIGNAL AT CO DETECTOR BASE	NO	YES	NO	NO	NO	NO	NO
ACTIVATE SIGNAL FOR OFF-SITE MONITORING	YES	NO	YES	YES	NO	NO	NO
MUTE AUTONOMOUS LOCAL SOUND SYSTEM	YES	NO	YES	NO	NO	NO	NO

## 4-S BOX WITH NO RING FLUSH TO WALL SPEAKER/STROBE OF SINGLE GANG RING FOR STROBE ONLY PULL STATION → 4-S BOX WITH SINGLE **GANG RING** 42"- 48" A.F.F. MAX TO OPERABLE PART FINISHED FLOOR

**ELEVATION MOUNTING DETAIL** 

/— 4-S BOX WITH 3" RING

4" OCTAGON BACK BOX

4" MIN.

MANUAL FIRE ALARM BOXES SHALL BE INSTALLED IN ACCORDANCE WITH 2022 CFC SECTIONS 907.4.2 MANUAL FIRE ALARM BOXES SHALL BE LOCATED NOT MORE THAN 5 FEET FROM THE ENTRANCE TO EACH EXIT. ADDITIONAL MANUAL FIRE ALARM BOXES SHALL BE LOCATED SO THAT THE TRAVEL DISTANCE TO THE NEAREST BOX DOES NOT EXCEED 200 FEET. THE HEIGHT OF THE MANUAL FIRE ALARM BOXES SHALL BE A MINIMUM OF 42 INCHES AND A MAXIMUM OF 48 INCHES, MEASURED VERTICALLY, FROM THE FLOOR LEVEL TO THE HIGHEST POINT OF THE ACTIVATING HANDLE OR LEVER OF THE BOX. MANUAL FIRE ALARM BOXES SHALL ALSO COMPLY WITH 2022 CBC SECTION 11B-309.4. PER NFPA 72 CHAPTER A.17.7.4.1 DETECTORS SHOULD NOT BE LOCATED IN ADIRECT AIRFLOW OR CLOSER THAN 36 IN. (910 MM) FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING, SUPPLY OR RETURN SOURCES LARGER THAN THOSE COMMONLY FOUND IN RESIDENTIAL AND SMALL COMMERCIAL ESTABLISHMENT CAN REQUIRE GREATER CLEARANCE TO SMOKE DETECTORS. SIMILARLY, SMOKE DETECTORS SHOULD BE LOCATED FARTHER AWAY FROM HIGH VELOCITY AIR SUPPLIES.

THE ENTIRE LENS OF STROBE LIGHTS MUST BE BETWEEN

IF CEILING HEIGHTS EXCEED 30 FEET, STROBE LIGHTS

MUST BE SUSPENDED AT OR BELOW 30 FEET

80" AND 96" ABOVE FLOOR FINISH (AFF)

MOUNTING OVER OBSTRUCTION DETAIL

24" MAX — - TOP OF SWITCH BOX, DEVICE, OUTLET FA TOP OF SWITCH MICROPHONE BOX, DEVICE, OUTLET FA **MICROPHONE** SIDE APPROACH 44" MAX FRONT APPROACH WITH KNEE 34" MAX **BOTTOM OF** AND TOE CLEARANCE THE BOX FINISHED FLOOR 15" MIN 2022 CBC 2022 CBC 2022 CBC 11B-308.2.1 11B-308.2.2 11B-308.3.2

NOTES: 1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

WIDTH x27" HIGH x19" MIN. DEEP CLEAR OPENING. CBC SECTIONS 11B-306 & 11B-308.

2. FORWARD OR FRONT APPROACH FOR DEVICES MOUNTED ABOVE COUNTERS ASSUMES THAT DIRECTLY BELOW THE DEVICE, THE COUNTER HAS A 30"MIN.

## WIRE SCHEDULE

WIRE DESIGNATION	WIRE IN CONDUIT	WIRE IN CONDUIT UNDERGROUND/WET LOC.	UNDERGROUND/WET WIRE DESIGNATION
INIT. LOOP Z	2 CONDUCTOR #16 FPL TWISTED/ SHIELDED WEST PENN #D991	2 CONDUCTOR #16 FPLP SHIELDED WEST PENN #AQ-294	INIT. LOOP Z
SBUS B	4 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	4 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	SBUS B
VBUS C	2 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	2 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	VBUS C
SPEAKER CKT. S	2 CONDUCTOR #14 THHN/THWN STRANDED	2 CONDUCTOR #14 THHN/THWN STRANDED	SPEAKER CKT. S
VISUAL CKT. V	2 CONDUCTOR #12 THHN/THWN STRANDED	2 CONDUCTOR #12 THHN/THWN STRANDED	VISUAL CKT. V
POWER CKT. P	2 CONDUCTOR #12 THHN/THWN STRANDED	2 CONDUCTOR #12 THHN/THWN STRANDED	POWER CKT. P

ALL WIRE MODEL NUMBERS ARE WEST PENN.

EQUIVALENT BY OTHER MANUFACTURER IS ACCEPTABLE.

## FIRE ALARM REQUIREMENTS

THE CONTRACTOR SHALL PROVIDE AND SUBMIT THE FIRE ALARM SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE FIRE ALARM SYSTEM. THE SUBMITTAL SHALL

A. SHOP DRAWINGS: COMPLETE 1/8" SCALE FLOOR PLANS SHOWING ALL DEVICES, COMPONENTS, CONDUIT AND WIRING INDICATING A COMPLETE AND OPERABLE SYSTEM AS DESIGNED AND SPECIFIED. REPRODUCED COPIES OF BID SET FIRE ALARM PLANS ARE NOT ACCEPTABLE AS SHOP DRAWINGS. SHOP DRAWINGS MUST ALSO INDICATE DEVICE MOUNTING HEIGHTS, ROOM NAMES AND NUMBERS

STATE FIRE MARSHALL LISTING NUMBERS. D. ORIGINAL COPIERS OF MANUFACTURERS' SPECIFICATION SHEETS FOR ALL EQUIPMENT AND DEVICES INDICATED. E. VOLTAGE DROP CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION FOR THE WORST CASE:

DEVICES. 4. NOTE CIRCUIT NUMBER FOR WORST CASE CALCULATION. F. BATTERY TYPE(S), AMPS HOURS AND LOAD CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION:

WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER -- I.E.: a. ZONE MODULES

c. OTHER DEVICES (IDENTIFY)

a. ZONE MODULES b. SIGNAL MODULES

c. DETECTORS d. SIGNAL DEVICES

e. ANNUNCIATOR f. OTHER DEVICES (IDENTIFY) 3. NORMAL OPERATION + ALARM OPERATION

b. TOTAL AMP HOURS PROVIDED.

10% OF EXISTING FIRE ALARM DEVICES AND APPLIANCES SHALL BE ADDED TO THE NEW FIRE ALARM DEVICES AND APPLIANCES FOR

CONTAIN THE FOLLOWING:

AND THE LOCATION OF ALL FIRE RATED WALLS. B. ELECTRICAL CONTRACTOR'S AND FIRE ALARM SYSTEM INSTALLER'S NAME, ADDRESS, PHONE NUMBER AND C-10 LICENSE C. LIST OF SYSTEM COMPONENTS, EQUIPMENT AND DEVICES, INCLUDING MANUFACTURERS' MODEL NUMBER(S) AND CALIFORNIA

1. POINT-TO-POINT OR OHMS LAW CALCULATIONS.

2. IDENTIFICATION OF ZONE USED IN CALCULATIONS. 3. VOLTAGE DROP PERCENT (NOT TO EXCEED MANUFACTURERS' REQUIREMENTS). a. NOTE: IF VOLTAGE DROP EXCEEDS 10%, INDICATE MANUFACTURERS' LISTED OPERATING RANGE(S) OR EQUIPMENT AND

1. NORMAL OPERATION: 100% OF APPLICABLE DEVICES FOR 24 HOURS = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE

b. DETECTORS 2. ALARM CONDITION: 100% OF APPLICABLE DEVICES FOR 15 MINUTES = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE. WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER -- I.E.:

a. TOTAL AMP HOURS REQUIRED.

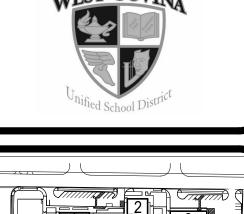
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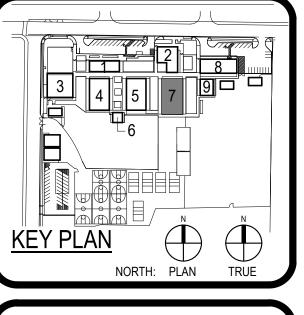
RANCHO CUCAMONGA 8163 Rochestser Avenue, Suite 100

Rancho Cucamonga California 91730 P 909-987-0909 **CONSULTANT** LEAF Engineer

> LEAF 8163 Rochester Avenue, Suite 100 Rancho Cucamonga, CA 91730

909.987-0909 leafengineers.com







Architect

	CLIENT							
	WEST CO							
	DATE 02/22/2023	PROJECT 220						
REVI	SIONS							
No.	Descript	ion	Date					

FIRE ALARM SYMBOLS

DSA BACKCHECK

KEY NOTES

- 1 AREA OF WORK.
- EXISTING EDWARDS EST3 (A# 03-107514) FIRE ALARM CONTROL PANEL AS SHOWN. FIELD VERIFY EXACT LOCATION.
- REUSE EXISTING 2'X3' UNDERGROUND PULL BOX WITH TRAFFIC COVER OTHERWISE PROVIDE NEW CONCRETE UNDERGROUND PULL BOXES AS 11" X 17" X 18" DEEP ON A 6" DEEP GRAVEL BASE. CONTRACTOR TO FIELD VERIFY THE EXISTING CONDITION AND
- REUSE EXISTING JUNCTION BOX AS SHOWN OTHERWISE PROVIDE NEW NEMA 3R WEATHERPROOF PULLBOX 18"X18"X6" FOR FIRE-ALARM. CONTRACTOR TO FIELD VERIFY THE EXISTING CONDITION AND LOCATION.
- VERIFY THE EXISTING CONDITION AND LOCATION.

  5 EXISTING FIRE ALARM POWER SUPPLY AND TERMINAL CABINET AS SHOWN.
- 6 WEATHERPROOF HORN DEVICES AS SHOWN (TYP).

ARCHITECT

RANCHO CUCAMONGA
8163 Rochestser Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

CONSULTANT

LEAF Engineers

8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

CIENCE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITEC

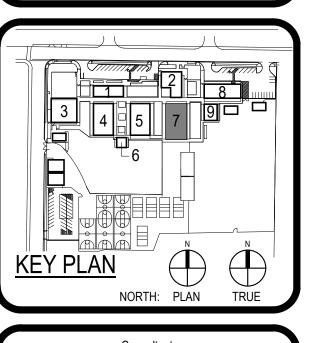
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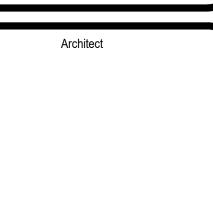
PROJECT ADDRESS:
614 E Vine Ave.
West Covina, CA 91790

DSA BACKCHECK

DSA APPL NO: 03-123048 DSA FILE NO





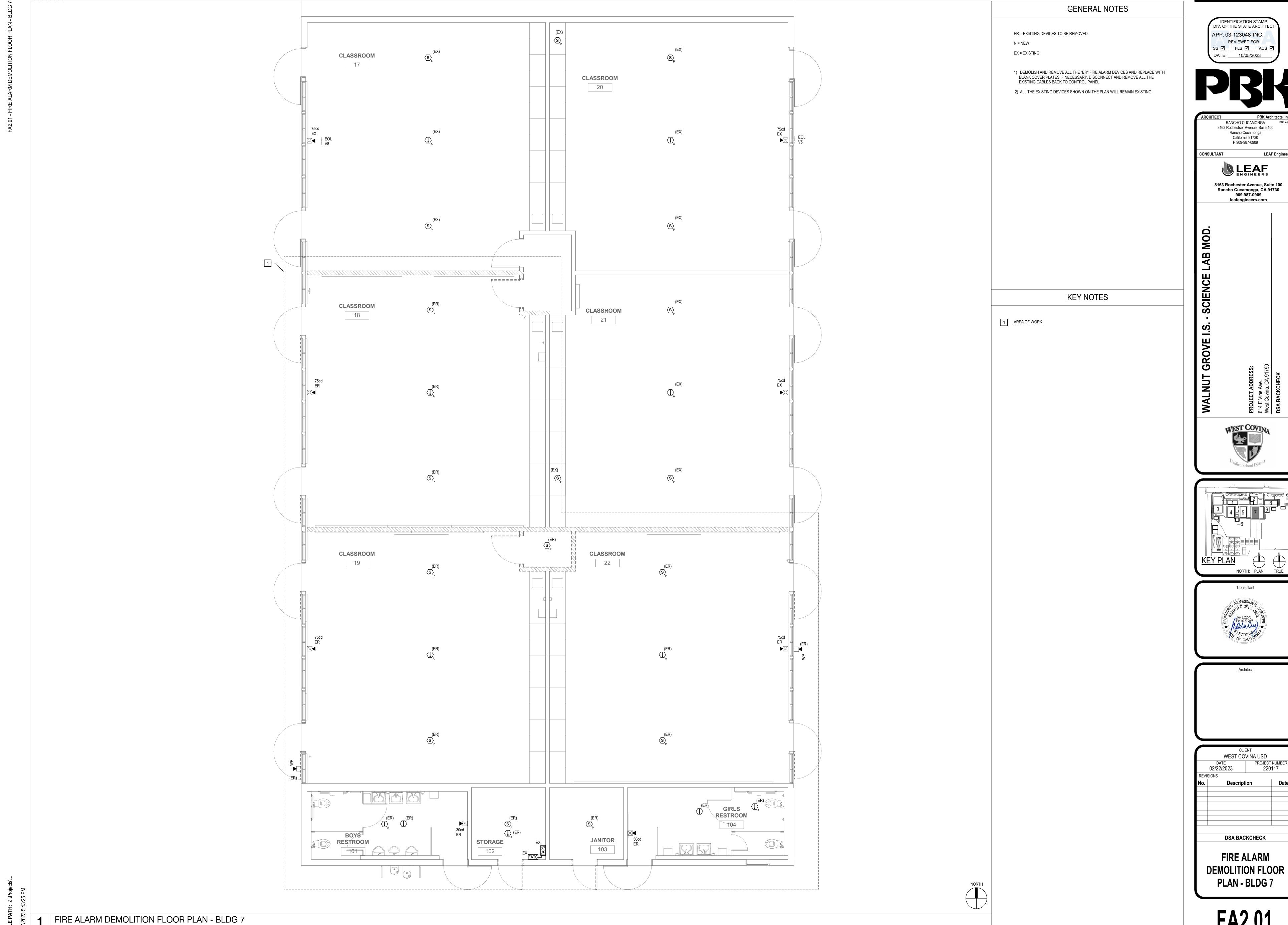


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FIRE ALARM SITE PLAN

**DSA BACKCHECK** 

FA1.01



FA2.01

BOYS RESTROOM

O= O= O=

STORAGE 102

CONNECTION WITH EXISTING FACP AT THE ADMIN BUILDING

## GENERAL NOTES

- 2. RUN FIRE ALARM CABLES IN CONDUIT CONCEALED IN WALLS AND CEILING WHEN POSSIBLE. EXPOSED CONDUITS ARE NOT ACCEPTABLE.
- 3. SMOKE ALARMS AND SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 36 IN. (910 MM) HORIZONTAL PATH FROM THE SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW FROM THOSE REGISTERS PER CBC 907.2.11.8.
- 4. DEMOLISH AND REMOVE ALL THE EXISTING FIRE ALARM DEVICES WHETHER SHOWN ON THE PLAN OR NOT AND REPLACE WITH BLANK COVER PLATES IF NECESSARY. DISCONNECT AND REMOVE ALL THE EXISTING CABLES BACK TO CONTROL PANEL.
- 5. EXISTING FIRE ALARM SYSTEM SHALL BE OPERATIONAL UNTIL NEW SYSTEMS ARE FULLY FUNCTIONAL.
- 6. FOR ALL HEAT DETECTORS THAT ARE LOCATED ABOVE CEILING/ATTIC SPACES, CONTRACTOR SHALL PROVIDE STICKER AND LABEL "HD" AT THE REFLECTED CEILING DIRECTLY BELOW THE DEVICE TO INDICATE LOCATION.
- 8. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE ACCESS FOR ATTIC HEAT DETECTOR, SERVICING, TROUBLESHOOTING, ETC.
- 9. ALL THE EXISTING DEVICES SHOWN ON THE PLAN WILL REMAIN EXISTING.

#### **KEY NOTES**

- 1 PROVIDE FIRE ALARM ADDRESSABLE SMOKE DETECTOR AS SHOWN (TYP).
- PROVIDE FIRE ALARM ADDRESSABLE ATTIC AND/OR CEILING MOUNTED HEAT DETECTOR AS SHOWN (TYP).
- 3 PROVIDE FIRE ALARM CEILING MOUNTED HORN STROBE AS SHOWN (TYP).
- PROVIDE FIRE ALARM WALL MOUNTED WEATHERPROOF HORN DEVICE AS SHOWN (TYP).
- 5 EXISTING FIRE ALARM POWER SUPPLY AND TERMINAL CABINET AS SHOWN.

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT

APP: 03-123048 INC:

REVIEWED FOR

SS FLS ACS D

DATE: 10/05/2023

PBK

RANCHO CUCAMONGA

8163 Rochestser Avenue, Suite 100

Rancho Cucamonga

California 91730

CONSULTANT LEAF Engi

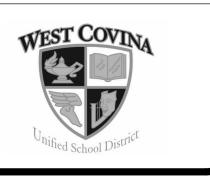
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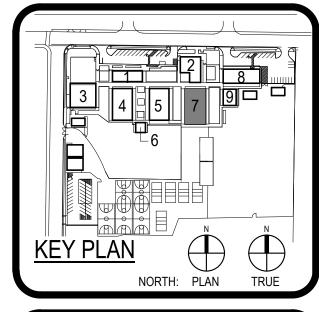
8163 Rochester Avenue, Suite 100 Rancho Cucamonga, CA 91730 909.987-0909 leafengineers.com

909.987-0909 leafengineers.com

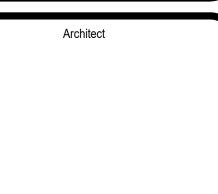
S. - SCIENCE LAB MOD

ROJECT ADDRESS:
14 E Vine Ave.
vest Covina, CA 91790









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	WEST CO	VINA USD	
	DATE 02/22/2023	PROJECT 220	
REVI	SIONS		
No.	. Description		Date

FIRE ALARM NEW FLOOR PLAN - BLDG 7

DSA BACKCHECK

FA2.02

(N) 2V ——/

(N) Z,V ——

103

fire Alarm New Floor Plan - Bldg 7

DATA IN (-)
TERMINAL 1

FROM PREVIOUS ADDRESSABLE DEVICE OR CONTROL PANLE

DATA IN (+)
TERMINAL 2

DATA OUT (-)

TO NEXT ADDRESSABLE DEVICE OR RETURN TO CONTROL PANEL

DATA OUT (+)

FIRE ALARM PARTIAL RISER DIAGRAM NOT TO SCALE

F	ACP	BATTERY CALCULATION S FACP (EX) LOCATION: ADMIN	SHEET			
			UNIT STANDBY	TOTAL STANDBY	UNIT	TOTAL
011/	ANTITY		CURRENT(A)		ALARM CURRENT(A)	ALARM CURRENT(A)
EX	1	3-CPU/PPS	0.165000			
EX	1	3-LCD	0.040000			
EX	1	3-RS485	0.063000			
EX	1	3-SSDC	0.081000			
EX	1	3-SDC	0.166000			
EX	1	3-IDC8/4	0.053000			
EX	1	3-LCD-ANN	0.053000			
EX	4	SIGA-CC1	0.000223			
EX	4	SIGA-CR	0.000100	0.000400		
EX	40	SIGA-CT1	0.000250	0.010000	0.000400	
EX	2	SIGA-WTM	0.000396	0.000792	0.000680	
EX	76	SIGA-IPHS	0.000045	0.003420	0.000045	0.003420
EX	4	SIGA-PS	0.000045	0.000180	0.000045	0.00018
EX	41	284B-PL	0.000000	0.000000	0.000000	0.00000
EX	16	SIGA-HRS	0.000045	0.000720	0.000045	0.00072
EX	24	757-8A-T	0.000000	0.000000	0.125000	3.00000
EX	8	757-3A-T	0.000000	0.000000	0.239000	1.91200
EX	16	757-5A-T	0.000000	0.000000	0.070000	1.12000
N	9	SIGA-OSCD	0.000032	0.000288	0.000032	0.00028
N	11	SIGA-HFD	0.000032	0.000352	0.000032	0.00035
N	2	WP-HORN	0.000000	0.000000	0.020000	0.04000
EX	5	SIGA-278	0.000250	0.001250	0.000400	0.00200
EX	8	757-1A-T	0.000000	0.000000	0.040000	0.32000
EX	14	757-5A-T	0.000000	0.000000	0.090000	1.26000
		SUB TOTAL		0.639		8.53
		STANDBY CURRENT x 24 Hrs. (AH)		15.343	АН	
		ALARM CURRENT x 5 MINUTES (AH)		0.712	AH	
		TOTAL (AH)		16.055	AH	
		20% DERATING		3.211	AH	
		TOTAL DEMAND (AH)		19.266	AH	
		RECOMMENDED MIN BATTERY SIZE		24	AH (EX)	

(EX) FAPS A# 04-107514

120V CIRCUIT WITH APPROVED LOCK-ON DEVICE ON CIRCUIT BREAKER AND RED INDICATOR ON

PANELBOARD PROVIDED BY THE

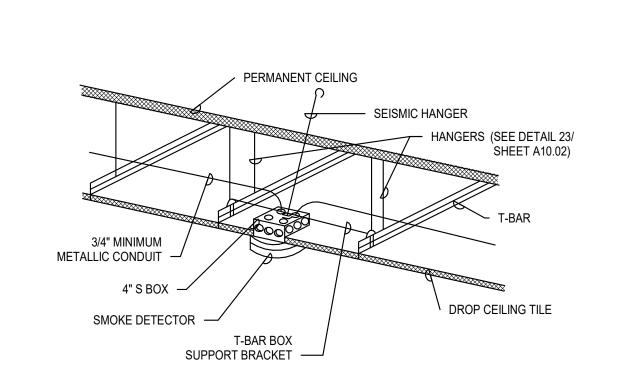
ELECTRICAL CONTRACTOR (IN ACCORDANCE WITH NFPA 72, 10.6.5.2)

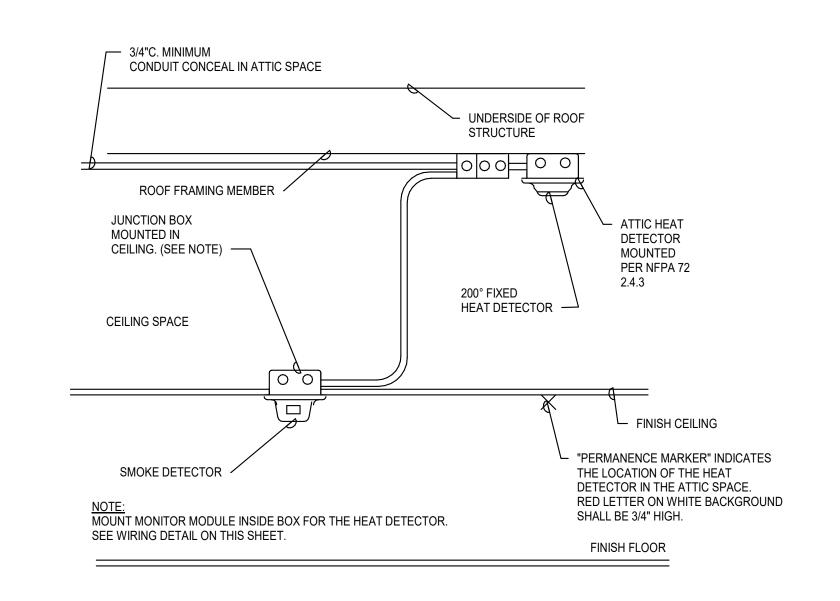
		BATTERY CAPACITY CALCUL FAPS (EX) LOCATION: CLASSROOM BLDG #7, STOR		ET		
		200,	Unit	Total	Unit	Total
			Standby	Standby	Alarm	Alarm
QUANTITY		Description	Current(A)	Current(A)	Current(A)	Current(A)
1	Ex	Nac trip	0.075	0.075	0.075	0.075
1	Ex	15cd wall strobes	0.000	0.000	0.239	0.239
1	Ex	30cd wall strobes	0.000	0.000	0.086	0.080
4	Updated	75cd ceiling horn/strobes	0.000	0.000	0.142	0.56
2	New	WP Horn	0.000	0.000	0.020	0.04
2	New	30cd ceiling horn/strobe	0.000	0.000	0.151	0.30
3	New	75cd ceiling horn/strobe	0.000	0.000	0.281	0.84
		Sub Total		0.075		2.57
		A - Battery Backup - Standby (Hour)	24			
		B - Battery Backup (minutes)	5			
		C - Allowable Error (%)	25			
		D - Total Standby Backup (Amp-Hour)	1.800			
		E - Total Alarm Backup (Amp-Hour)	0.215			
		F - Allowable Error (C x (D + E))	0.504			
		Total Amp-Hour Required (D + E + F)	2.519			
		Required Battery Size (Ex)	7 Amp-Hour			

STROBES WORST CASE VOLTAGE DROP											
		WALL HORN	WALL HORN/STROBE		CEILING HO	RN/STROBE		TOTAL	TOTAL	TOTAL	TOTAL
PANEL	CIRCUIT		75cd	15cd	30cd	75cd	95cd	CURRENT	DISTANCE	VOLTAGE	DEVICES
NAME	NUMBER	0.020	0.142	0.109	0.151	0.281	0.318	(AMPS)	(FEET)	DROP (%)	
FAPS (EX)	V5 (UPDATED)	1	2		1	1		0.736	200	2.03%	5
FAP3 (EX)	V8 (UPDATED)	1	1		1	2		0.875	150	1.81%	5
TOTAL 2 3 0 2 3 0											

2 SMOKE/HEAT DETECTOR DETAIL NOT TO SCALE

1 DROP CEILING DEVICE INSTALLATION DETAIL
NOT TO SCALE





IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT

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ARCHITECT
PBK Architects, Inc.

RANCHO CUCAMONGA
8163 Rochestser Avenue, Suite 100

Rancho Cucamonga
California 91730
P 909-987-0909

CONSULTANT

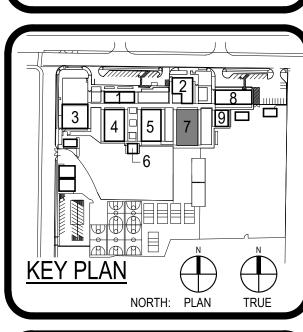
LEAF Engine

8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

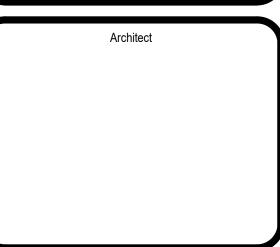
8163 Rochester Avenue, Su Rancho Cucamonga, CA 9 909.987-0909 leafengineers.com

IUT GROVE I.S. - SCIENCE LAB MOD.

PROJECT ADDRES
614 E Vine Ave.
West Covina, CA 91







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**DETAILS**