CODES, STANDARDS & GUIDES

PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2017 2016 California Administrative Code, Part 1, Title 24 C.C.R.*

2016 California Building Code (CBC), Part 2, Title 24 C.C.R.

(2015 International Building Code Volumes 1—2 and 2013 California Amendments)

2016 California Electrical Code (CEC), Part 3, Title 24 C.C.R. (2014 National Electrical Code and 2016 California Amendments)

2016 California Mechanical Code (CMC) Part 4, Title 24 C.C.R.

(2015) Uniform Mechanical Code and 2016 California Amendments) 2016 California Plumbing Code (CPC), Part 5, Title 24 C.C.R.

(2015) Uniform Plumbing Code and 2016 California Amendments)

2016 California Energy Code (CEC), Part 6, Title 24 C.C.R.* 2016 California Fire Code, Part 9, Title 24 C.C.R.

(2015 International Fire Code and 2016 California Amendments) 2016 California Green Building Standards Code, Part 11, Title 24 C.C.R.

2016 California Referenced Standards, Part 12, Title 24 C.C.R. Title 19 C.C.R., Public Safety, State Fire Marshal Regulations.

2007 ASME A17.1(w/ A17.1a/CSA B44a-08 addenda) Safety Code For Elevators And Escalators

PARTIAL LIST OF APPLICABLE STANDARDS

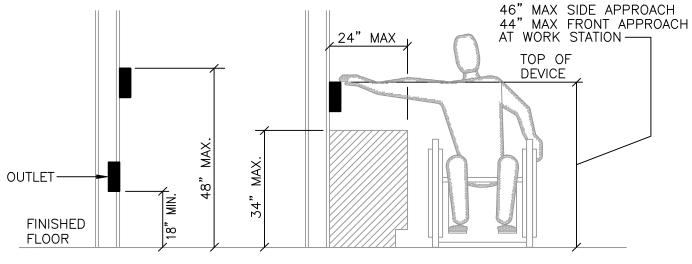
NFPA 13	Automatic Sprinkler Systems	2016 Edition
NFPA 14	Standpipe Systems	2016 Edition
NFPA 17	Dry Chemical Extinguishing Systems	2016 Edition
NFPA 17a	Wet Chemical Systems	2016 Edition
NFPA 20	Stationary Pumps	2016 Edition
NFPA 22	Water tanks for Private Fire Protection	2016 Edition
NFPA 24	Private Fire Mains	2016 Edition
NFPA 72	National Fire Alarm Code	2016 Edition
NFPA 80	Fire doors and Other Opening Protectives	2016 Edition
NFPA 92	Standard for Smoke Control Systems	2012 Edition
NFPA 253	Critical Radiant Flux of Floor Covering Systems	2015 Edition
NFPA 2001	Clean Agent Fire Extinguishing Systems	2015 Edition
ICC 300	ICC Standards on Bleachers, Folding and Telescoping	2012 Edition
	Seating and Grand stands	
UL 300	Fire Testing of Fire Extinguishing Systems for Protection	2005 Edition
	Of Restaurant Cooking Areas	
UL 464	Audible Signal Appliances	2003 Edition
UL 521	Heat Detectors for Fire Protective Signaling Systems	1999 Edition

Reference code section for NFPA Standards— 2013 CBC (SFM) Chapter 35. See Chapter 35 for State of California amendments to NFPA Standards.

ELECTRICAL EQUIPMENT BRACING & ANCHORAGE

- ALL ELECTRICAL EQUIPMENT AND CONDUITS SHALL BE INSTALLED WITH SEISMIC RESTRAINTS PER "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING SYSTEMS" PUBLISHED BY SMACNA AND APPROVED BY DSA, INCLUDING SUPPLEMENT DATED SEPT. 2016 FOR SEISMIC HAZARD LEVEL "AA".
- . WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWING OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER, AND THE DSA FIELD ENGINEER.
- 3. WHERE BRACING AND ANCHORAGE DETAILS AS CALLED FOR IN THE SPECIFICATIONS THAT CONTRACTOR TO SUBMIT AS PART OF SHOP DRAWINGS, CONTRACTOR SHALL FURNISH, DESIGN DETAILS, CALCULATIONS, A SET OF REPRODUCIBLE DRAWINGS ALL THESE REQUIREMENT SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. STRUCTURAL ENGINEER AND THE DSA FIELD ENGINEER.
- 4. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE AT ALL TIMES.
- 5. THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO C.C.R. TITLE 24, 2016 CBC. ANCHORAGE DETAILS FOR ROOF/FLOOR MOUNTED EQUIPMENT SHALL BE SHOWN ON PLANS.

TYPICAL MOUNTING HEIGHTS ABOVE FINISHED FLOOR (U.O.N. ON DRAWINGS)



OVER OBSTRUCTION

MOUNTING HEIGHTS

MOUNTING HEIGHTS

SCALE: N.T.S. OUTLETS, INTERCOM, CONTROLS, ETC. EXCEPT FIRE ALARM.

TYPICAL MOUNTING HEIGHTS ABOVE FINISHED FLOOR (UNLESS OTHERWISE NOTED ON DRAWINGS)

LIGHT SWITCHES, DIMMER SWITCHES, FIRE ALARM PULL STATION, INTERCOM CALL SWITCH, SPEAKER VOLUME CONTROL, T-STATS, BY-PASS TIMER, WALL TELEPHONE.

+18" ALL DUPLEX RECEPTACLES, WALL OUTLET FOR DESK TELEPHONE, COMPUTER TO BOTTOM OUTLET, UNLESS OTHERWISE NOTED.

GENERAL NOTES

- 1. THE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO COVER A COMPLETE INSTALLATION OF SYSTEMS. THE OMISSION OF EXPRESSED REFERENCE TO ANY ITEM OF LABOR OR MATERIAL FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH PRESENT PRACTICE OF THE TRADE SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH ADDITIONAL LABOR AND MATERIALS.
- 2. WORK INCLUDES ALL LABOR, MATERIALS, APPLIANCES, TOOLS, EQUIPMENT, FACILITIES, TRANSPORTATION AND SERVICES NECESSARY FOR AND INCIDENTAL TO PERFORMING ALL OPERATIONS IN CONNECTION WITH FURNISHING, DELIVERY AND INSTALLATION OF ELECTRICAL SYSTEM, COMPLETE, AS SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.
- 3. CONSTRUCT PROJECT IN ACCORDANCE WITH FOLLOWING CODES: REGULATIONS OF STATE AND LOCAL FIRE MARSHAL; NATIONAL ELECTRIC CODE, NATIONAL FIRE PROTECTION ASSOCIATION, EDITION IN FORCE; LOCAL CODES AND ORDINANCES; TITLE 19, 21 AND 24 CALIFORNIA ADMINISTRATIVE CODE.
- 4. PERMITS, FEES AND INSPECTIONS: OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND FEES REQUIRED BY ANY CONSTITUTED AUTHORITY HAVING JURISDICTION INCLUDING UTILITIES. ARRANGE AND PAY FOR ALL REQUIRED INSPECTIONS OR EXAMINATIONS AND DELIVER CERTIFICATES OF INSPECTION TO
- 5. RECORD DRAWINGS: ON COMPLETION OF WORK, OBTAIN ONE SET OF XEROX VELLUMS FROM ARCHITECT AT COST OF PRINTING, AND NOTE NEATLY IN SCALE ALL CHANGES ON RECORD SET. DELIVER COMPLETE SET OF VELLUMS TOGETHER WITH ONE SET OF BLUELINE PRINTS TO ARCHITECT TOGETHER WITH CONTRACTOR'S NAME, ADDRESS AND PHONE NUMBER. INCORRECT, NON-LEGIBLE OR NON-REPRODUCIBLE DRAWINGS WILL NOT BE ACCEPTED.
- 6. SUBMIT A LIST OF MATERIALS AND EQUIPMENT MANUFACTURERS THAT CONTRACTOR INTENDS TO USE. SUBMIT SHOP DRAWINGS FOR: SWITCHBOARDS, PANELBOARDS, LIGHT FIXTURES, TRANSFORMERS AND DISCONNECT SWITCHES.
- 7. THE TERM "PROVIDE" USED ON DRAWINGS SHALL BE CONSIDERED TO MEAN "FURNISH AND INSTALL".
- 8. BEFORE PROCEEDING WITH WORK CAREFULLY CHECK AND VERIFY ALL DIMENSIONS AND SIZES AND ASSUME ALL RESPONSIBILITY FOR FITTING OF MATERIALS AND EQUIPMENT TO OTHER PARTS OF EQUIPMENT AND TO STRUCTURE. WHERE APPARATUS AND EQUIPMENT HAVE BEEN INDICATED ON DRAWINGS, DIMENSIONS HAVE BEEN TAKEN FROM TYPICAL EQUIPMENT OF CLASS INDICATED. CAREFULLY CHECK DRAWINGS AND SEE THAT EQUIPMENT WILL FIT INTO SPACES PROVIDED.
- 9. LOCATIONS OF CONDUITS, OUTLETS, APPARATUS AND EQUIPMENT INDICATED ON DRAWINGS ARE APPROXIMATE ONLY AND SHALL BE CHANGED TO MEET ARCHITECTURAL AND STRUCTURAL CONDITIONS AS REQUIRED.
- 10. BE CAUTIONED THAT DIAGRAMS SHOWING ELECTRICAL CONNECTIONS ARE DIAGRAMMATIC ONLY AND MUST NOT BE USED FOR OBTAINING LINEAL RUNS OF WIRING OR CONDUIT. WIRING DIAGRAMS DO NOT NECESSARILY SHOW EXACT PHYSICAL ARRANGEMENT OF EQUIPMENT.
- 11. EXTRA WORK OR COSTS TO THIS CONTRACTOR DUE TO OTHER CONTRACTORS OR TRADES SHALL BE ADJUSTED BETWEEN THIS CONTRACTOR AND OFFENDING CONTRACTOR AT NO EXTRA COST TO OWNER. NOTIFY ARCHITECT BEFORE SUCH EXTRA WORK IS DONE.
- 12. WHERE EQUIPMENT IS MOUNTED ON VIBRATION ISOLATORS, USE FLEXIBLE CONNECTIONS TO REDUCE TRANSMISSION OF NOISE.
- 13. WHERE CONDUITS PASS THROUGH SLEEVES IN INTERIOR WALLS, FLOORS, OR CEILINGS, COMPLETELY FILL SPACE BETWEEN EACH CONDUIT AND ITS SLEEVE TO PROVIDE AN AIRTIGHT SEAL.
- 14. USE GLASS FIBER MATERIAL, "DUXSEAL" COMPOUND, FOR ACOUSTIC SEALS.
- 15. PROVIDE RECESSED OUTLET BOXES IN FINISHED AREAS; SECURE BOXES TO INTERIOR WALL AND PARTITION STUDS. ACCURATELY POSITION TO ALLOW FOR SURFACE FINISH THICKNESS. USE STAMPED STEEL STUD BRIDGES FOR FLUSH OUTLETS IN HOLLOW STUD WALL, AND ADJUSTABLE STEEL CHANNEL FASTENERS FOR FLUSH CEILING OUTLET BOXES. INSTALL PLASTER RINGS TO INTERFACE WITH EQUIPMENT TO BE MOUNTED THEREON.
- 16. ALIGN WALL-MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES.
- 17. PROVIDE CAST OUTLET BOXES IN EXTERIOR LOCATIONS AND WET LOCATIONS.
- 18. WHERE BOXES ARE INSTALLED IN FIRE RATED CEILING OR WALLS, BE RESPONSIBLE FOR PRESERVING INTEGRITY OF FIRE RATING AS REQUIRED.
- 19. IN FIRE-RATED WALL, USE 4" SQUARE DEEP BOXES. DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES OF BOXES FOR ANY 100 SQUARE FEET OF WALL OR PARTITIONS. SEPARATE OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITION BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES.
- 20. PROVIDE COPPER CONDUCTORS ONLY.
- 21. PROVIDE TYPE "THHN" OR "THWN" WIRES ONLY.
- 22. MOUNT RECEPTACLES, TELEPHONES AND J-BOXES LOCATED IN WALL AT +18" FROM FLOOR LINE TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED ON
- 23. MOUNT LIGHT SWITCHES, T-STATS, ETC. AT +48" UNLESS OTHERWISE NOTED.
- 24. PROVIDE WHEREVER NECESSARY ALL ADDITIONAL BACKING, BLOCKING AND SUPPORTS FOR LIGHT FIXTURES.
- 25. PROVIDE WEATHERPROOF TYPE ELECTRICAL EQUIPMENT OR MATERIALS FOR EXTERIOR LOCATIONS.
- 26. ALL EXPOSED CONDUITS AND BOXES AT EXTERIOR OR INTERIOR OF THE BUILDING SHALL BE PAINTED TO MATCH THE SURFACES WHERE INSTALLED. VERIFY ALL PAINT COLOR SELECTION WITH ARCHITECT PRIOR TO APPLICATION.

ELECTRICAL SYMBOLS

(ONLY THOSE THAT APPEAR ON PLANS APPLY)

B LED LIGHTING FIXTURE: UPPER CASE LETTER INDICATES TYPE.

DOH WALL MOUNT LED LIGHT FIXTURE: UPPER LETTER INDICATES TYPE.

A 5a LED LIGHTING FIXTURE, "5" DENOTES CIRCUIT NUMBER. LOWER CASE "a" DENOTES CONTROLLING SWITCH, UPPER CASE "A" DENOTES FIXTURE TYPE.

(E)[____] (E) LIGHT TO REMAIN.

(RR)[____] REMOVE AND RELOCATE (E) LIGHT.

(R)[____] RELOCATED (E) LIGHT.

- WALL MOUNT OCCUPANCY SENSOR, "SENSOR SWITCH #WSD PDT". +48" A.F.F.
- CEILING MOUNT OCCUPANCY SENSOR, "SENSOR SWITCH #CM PDT"
- POWER PACK, "SENSOR SWITCH #PP20".
- JUNCTION BOX: MOUNTED IN CEILING SPACE OR ON CEILING IF NO CEILING SPACE.
- DUPLEX RECEPTACLE: 125V., 15 AMP., NEMA 5-15R. +18" U.O.N.
- DUPLEX RECEPTACLE: 125V., 20 AMP., NEMA 5-20R. +18" U.O.N.
- GROUND FAULT INTERRUPTER TYPE DUPLEX RECEPTACLE: 125V., 15 AMP., NEMA 5-15R. MOUNT IN A 2" DEEP BOX. +18" U.O.N.
- © CEILING EXHAUST FAN.
- ⊕H 0-8HR BYPASS TIMER.
- CONDUIT: EXPOSED IN UNFINISHED AREAS: CONCEALED ABOVE CEILING OR IN WALL IN FINISHED AREAS.

— — — CONDUIT BELOW FINISHED FLOOR.

HOMERUN TO PANEL "A", CIRCUITS 1, 3, 5. (3) SLASH WIRES INDICATES 3#12 & 1#12G.

OTHER CONDUIT AND WIRE SIZE AS NOTED ON DRAWINGS.

---- CONDUIT: IN OR BELOW FLOOR OR BELOW GRADE. ---XR--- DISCONNECT AND REMOVE (E) CONDUIT AND WIRES.

EXISTING CONDUIT AND WIRES TO REMAIN.

--- ##--- EXISTING CONDUIT WITH NEW 3#12 & 1#12G. WIRES.

EXISTING CONDUIT WITH NEW WIRES AS NOTED.

GROUND ROD IN GROUND WELL BOX. SEE DETAIL 1/E-102.

MAIN SERVICE SWITCHBOARD.

LIGHTING PANEL.

A PANEL DESIGNATION, LETTER IDENTIFIES THE PANEL.

SINGLE POLE SWITCH. +48" A.F.F. S_K SINGLE POLE KEY OPERATED SWITCH. +48" A.F.F.

HORSE POWER RATED SWTICH.

FUSED DISCONNECT SWITCH H.P. RATED WITH CLASS "R" FUSECLIPS.

DIMMER SWITCH; +48" A.F.F. S DEMOLISH (E) SWITCH.

C.O. CONDUIT ONLY WITH #12 PULL WIRE. H.P. HORSEPOWER.

W.P. WEATHERPROOF. N.F. NON-FUSED. EXISTING. (N) NEW.

N.O. NORMALLY OPEN. (E)S (E) SWITCH TO REMAIN.

A.F.F. ABOVE FINISHED FLOOR.

A.F.G. ABOVE FINISHED GRADE.

LOW VOLTAGE.

A.I.C. AMPERE INTERRUPTING CURRENT.

U.O.N. UNLESS OTHERWISE NOTED.

U.G. UNDERGROUND.

DIV. OF THE STATE ARCHITEC APP. 03-119485 INC: REVIEWED FOR SS V DIFLS VIESTACS VI DATE: 8/14/2019

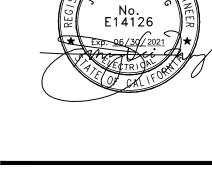
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PROJECT NUMBER: CHECKED: ISSUE/REVISION 8/21/2018 30% - SCHEMATIC DESIGN

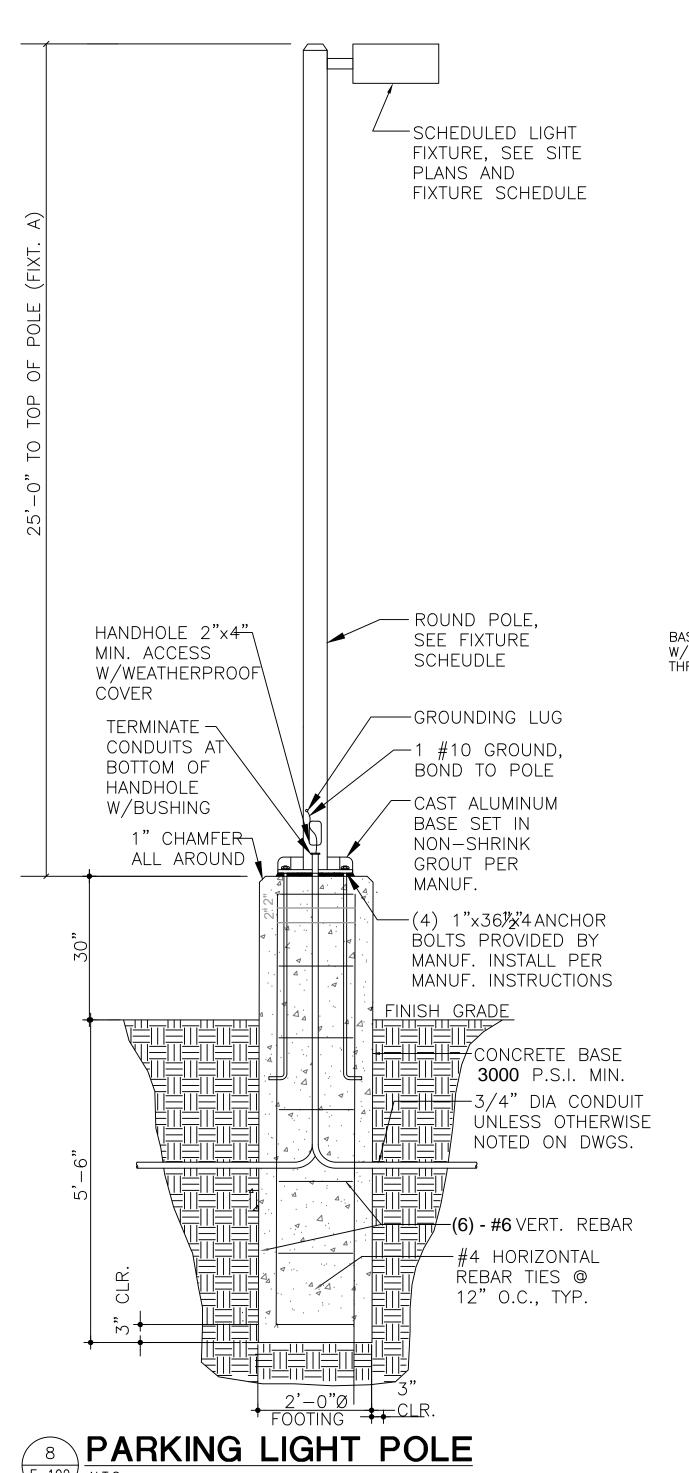
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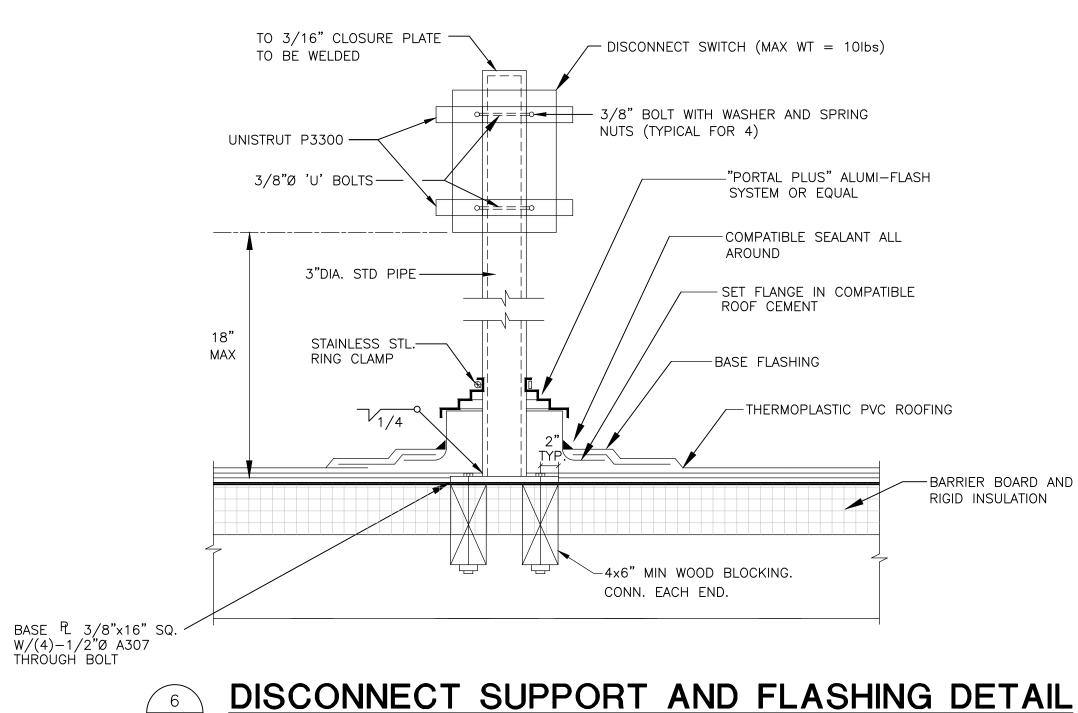
05/23/2019 DSA APPROVAL

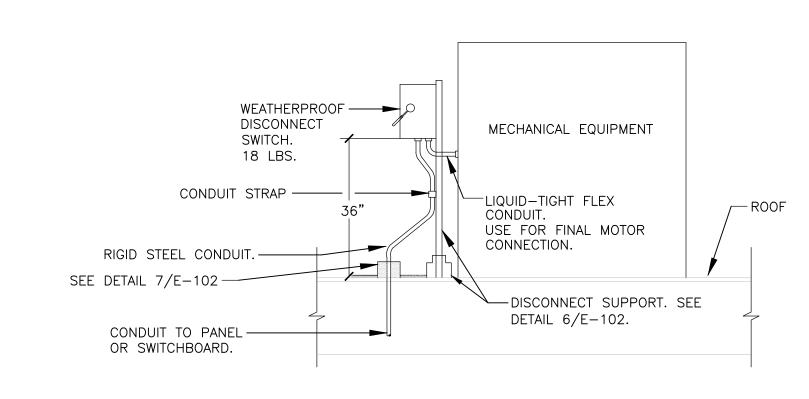
11/15/2018 100% CD - DSA SUBMITTAL

SYMBOL LIST, NOTES, & **DETAILS**

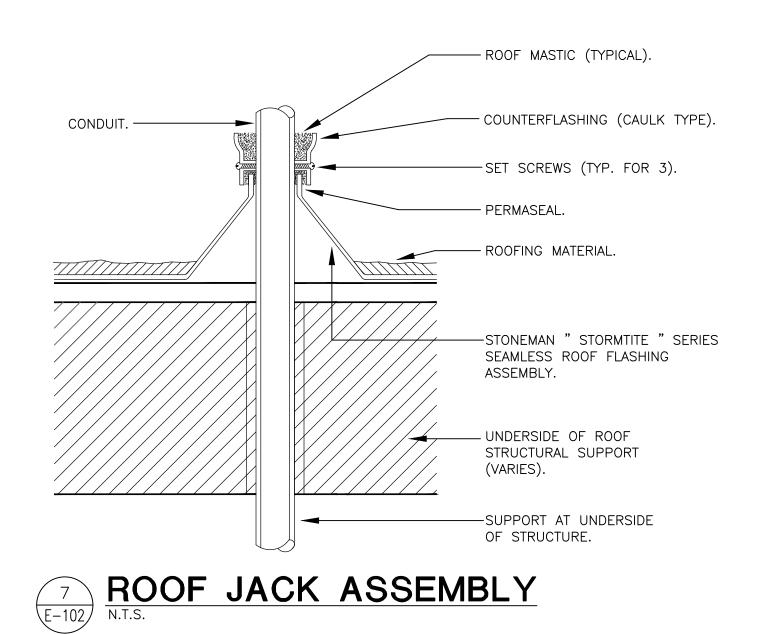
E-101

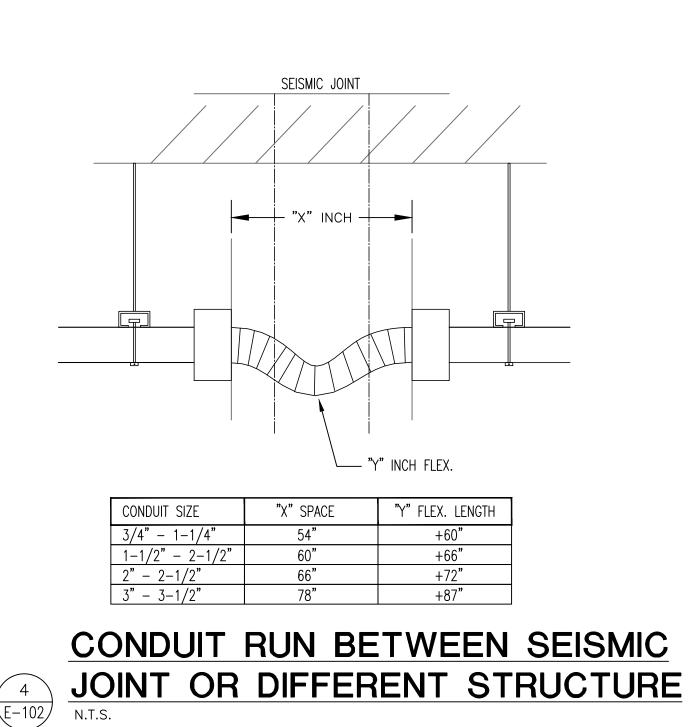


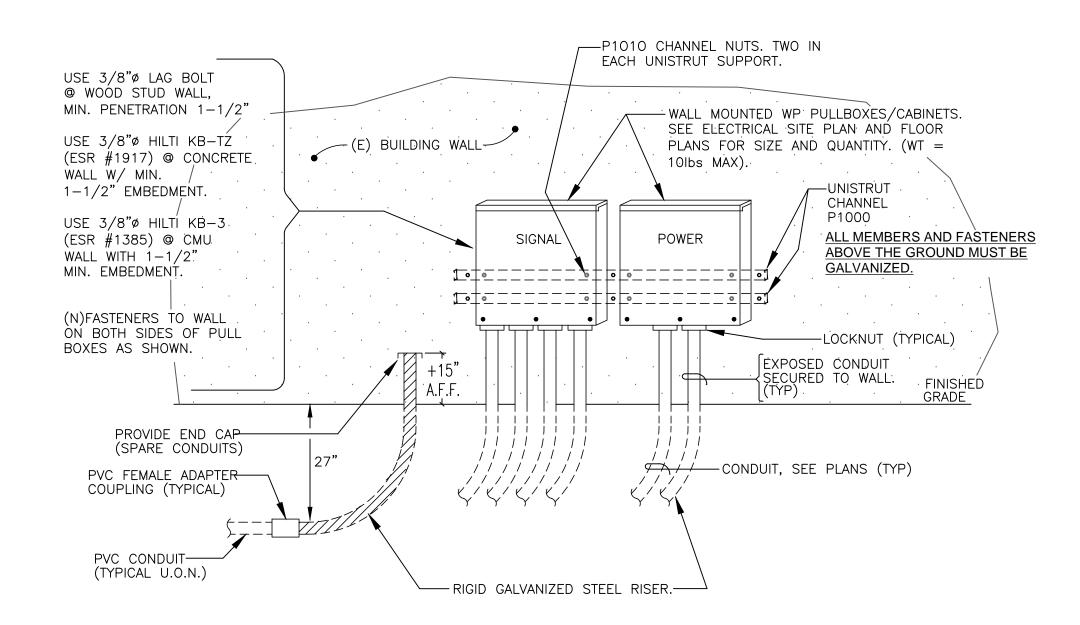




A/C UNIT - DISCONNECT SWITCH
MOUNTING DETAIL



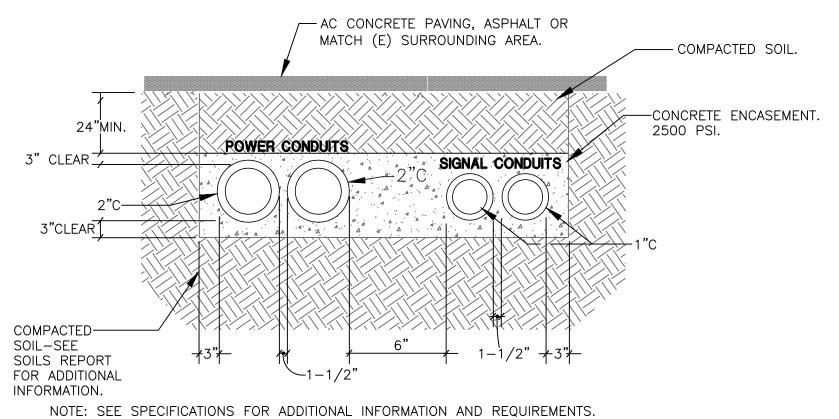




ALL UNDERGROUND GALVANIZED RIGID CONDUITS AND RISERS SHALL BE TAPED W/ 10MIL TAPE. (TYPICAL)

COMMUNICATION JUNCTION BOXES/CABINETS DETAIL N.T.S.

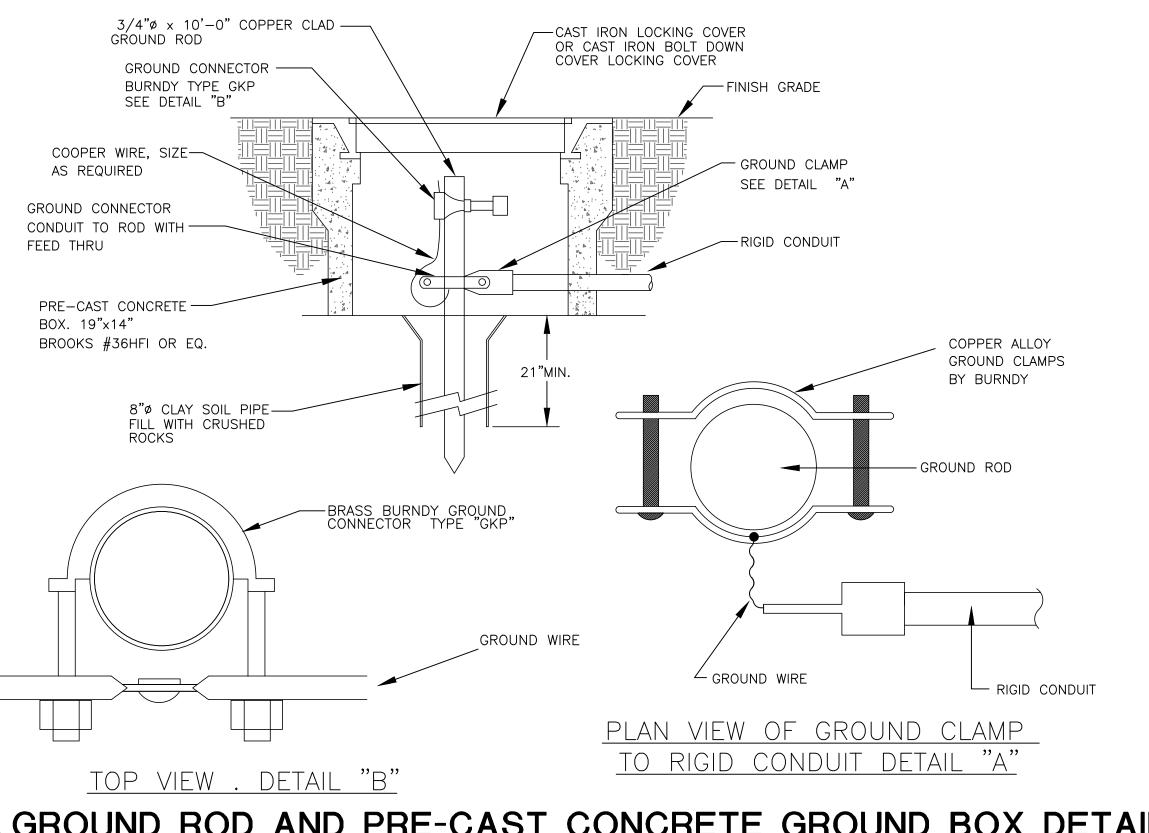
NOTE: DETAIL SHOWS TYPICAL MOUNTING OF PULLBOXES AND STUB UPS CONDUIT ONLY.
REFER TO DRAWINGS FOR ACTUAL QUANTITY AND SIZE OF CONDUITS AND PULLBOXES.



2 CONDUIT DUCT BANK DETAIL N.T.S.

- NOTE: 1. DETAILS SHOWS TYPICAL CONDUIT SPACING AND DEPTH ONLY.
 REFER TO DRAWINGS FOR EXACT QUANTITY AND SIZES OF
 - 2. SAW CUT AND PATCH EXISTING SURFACE WHEN TRENCHING UNDER EXISTING ASPHALT OR CONCRETE. PATCH TO MATCH
 - EXISTING CONDITION.

 3. ELECTRICAL UNDERGROUND CONDUITS SHALL HAVE A 12"
 MINIMUM SEPARATION FROM ANY OTHER UNDERGROUND
 UTILITIES SUCH AS GAS, SEWER, WATER; ETC.



GROUND ROD AND PRE-CAST CONCRETE GROUND BOX DETAIL

N.T.S.

NOTE: PROVIDE ONE ADDITIONAL GROUND ROD IN CONCRETE BOX AT 10 FT AWAY AS NEEDED IF 5 OHM REQUIREMENT IS NOT MET WITH ONLY ONE GROUND ROD BY EXTENDING SAME CONDUIT AND WIRE AND USING SAME CLAMPS. SEE SPECIFICATIONS.

PACIFIC ENGINEERS GROUP Consulting Electrical Engineers 2740 W. Magnolia Blvd., Suite 205 Burbank, CA 91505 (818) 748—1758 FAX (818) 763—9180 Y18—025

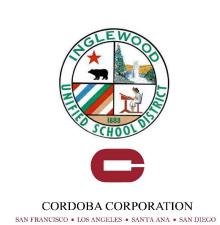
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STREET ELEMENTARY SCHOOL
uth Oak Street Inglewood, CA 90301

PROGI

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PROJECT NUMBER:

10292

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 CHECKED:
 P

 ISSUE/REVISION:
 8/21/2018

 30% - SCHEMATIC DESIGN
 50% CD SUBMITTAL

 11/15/2018
 100% CD - DSA SUBMITTAL

10/10/2018 50% CD SUBMITTAL

11/15/2018 100% CD - DSA SUBMITTAL

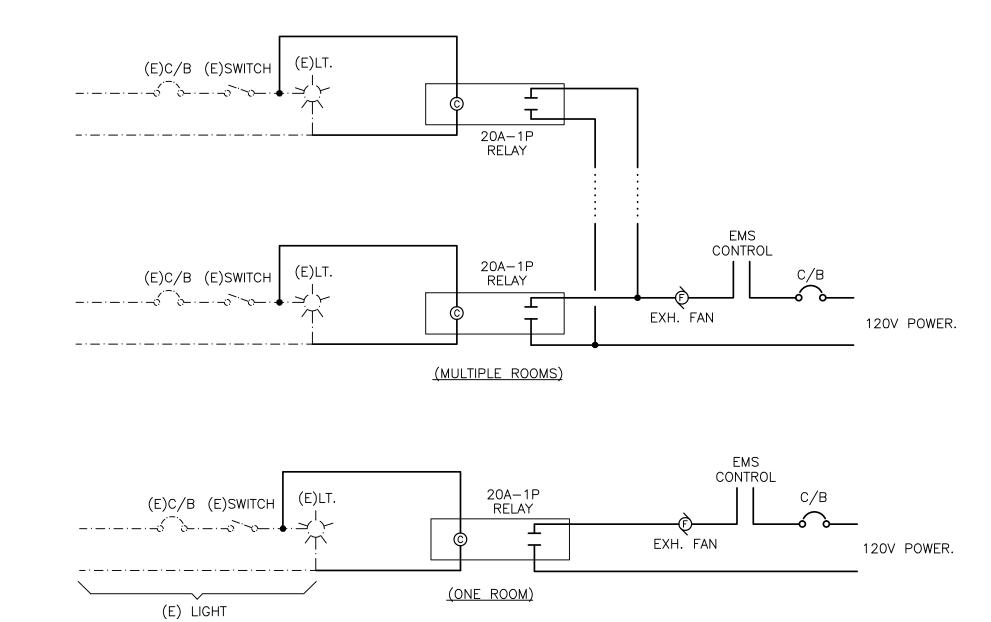
03/15/2019 DSA APPROVAL

DETAILS

277/480W OLT S					EXIST	ING	PA	NEL	HM.	A	MAI	N BRK	K : 20	OA			BUS I	RATING: 200A COPPER
3 PHASE							LOC	ATION:	STO	RAGE I	ROOM						S.C. F	ATING: 22K A.I.C FULLY RATED
4 WIRE																	MOUN	TING: SURFACE
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,																		20117.02
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			3933				23	_		_	24						3158	
AC-9	3158					1	25	15-3		15-3	26	1			3352			AC-12
		3158					27	_		_	28					3352		
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AC-14	3352					1	31	15-3		15-3	32	1			3352			AC-13
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(E) TRANSFORMER	2115						37	70-3			38							SPACE
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	VA 25%				166.13 2949.8	AMPS		-6018 ©	VA 277/4	80	VOLTS) S		3	PHAS	E, 4	WIRE	PH-C=46018 VA

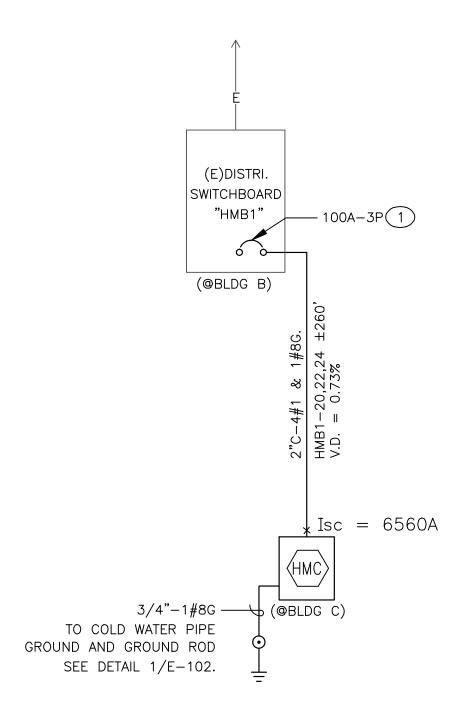
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3 PHASE																	S.C. RA	ATING: 14K A.I.C. FULLY RATE
4 WIRE																	MOUNT	ING: SURFACE
LOCATION		WATTA	GE	LTG	REC	MIS	CIR	BKR		BKR	CIR	MIS	REC	LTG		WATTAG	E	LOCATION
	PH-A	РН-В	PH-C												PH-A	PH-B	PC=C	
AC-25	7257						1	35-3		35-3	2				7257			AC-24
		7257					3	_		1	4					7257		
			7257				5	_		-	6						7257	
SPACE							7				8							SPACE
SPACE							9				10							SPACE
SPACE							11				12							SPACE
PH-A=14514 VA						PH-B=	 = 1	4514	VA									PH-C=14514 VA
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LCL: 21771 VA X	25%		=		5442.8	VA												
FDL: 43542 VA +	5443	VA	(LCI	_) =	48985		`	VA	OR 5	8.95	Α							



EXHAUST FAN INTERLOCK TO (E) LIGHT CONTROL DIAGRAM

N.T.S.



SINGLE LINE DIAGRAM

KEYED NOTES 1 PROVIDE NEW CIRCUIT BREAKER AT EXISTING PANEL. MATCH TYPE AND A.I.C. RATING OF EXISTING BREAKERS. DIV. OF THE STATE ARCHITEC APP. 03-119485 INC: REVIEWED FOR SS 🗸 FLS 🗸 ACS 🗸 DATE: 8/14/2019

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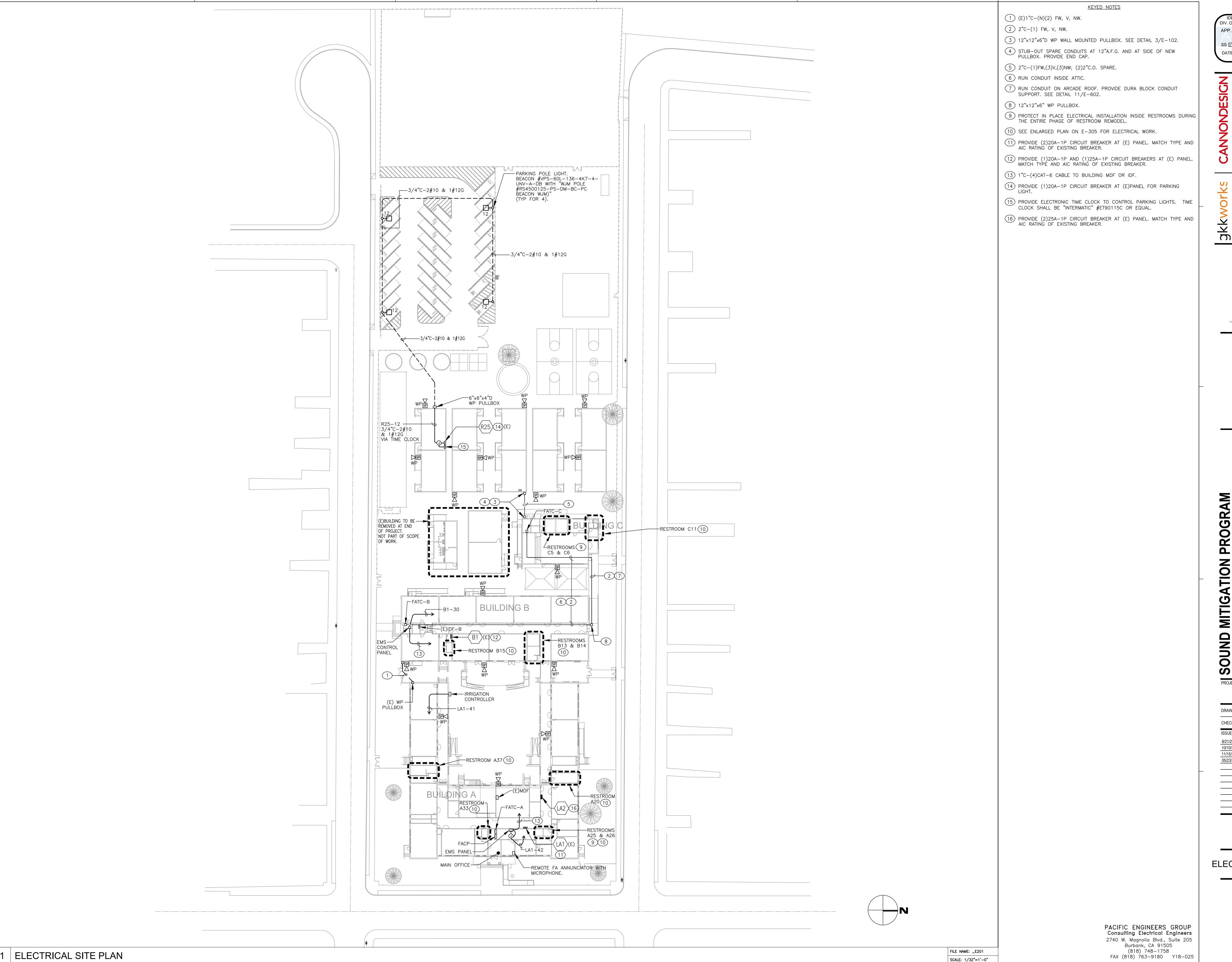
MITIGATION PROGRAM

SOUND PROJECT NUMBER: 10292

CHECKED: ISSUE/REVISION: 10/10/2018 50% CD SUBMITTAL 11/15/2018 100% CD - DSA SUBMITTAL

SINGLE LINE DIAGRAM & PANEL SCHEDULES

E-103



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-119485 INC:
REVIEWED FOR
SS FLS ACS D
DATE: 8/14/2019

DATE: 8/14/2019

155 S. Fair Oaks, 2nd Floor,

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L SCHOOL

OAK STREET ELEMENTARY 633 South Oak Street Inglewood, CA 90301
A PROJECT FOR:

UMBER: 10292 **A# 03-119485**

ELECTRICAL SITE PLAN

DEMOLITION KEYED NOTES

- 1 DISCONNECT AND REMOVE DISCONNECT SWITCH AND CONDUIT/WIRES FROM DISCONNECT TO A/C UNIT. REMOVE WIRES IN HOMERUN CONDUIT UP TO SERVING PANEL. FEEDER CONDUIT TO REMAIN.
- (E) TRANSFORMER AND DISCONNECT SWITCH INCLUDING ASSOCIATED WIRING TO REMAIN U.O.N.

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SOUND MITIGATION PROGRAM

 8/21/2018
 30% - SCHEMATIC DESIGN

 10/10/2018
 50% CD SUBMITTAL

 11/15/2018
 100% CD - DSA SUBMITTAL

DEMOLITION ROOF PLAN - BUILDING A

E-301

- 1) WP 30AS, 3P, 600VAC DISCONNECT SWITCH WITH 15A DUAL ELEMENT FUSES.
- 2 WP 30AS, 3P, 600VAC DISCONNECT SWITCH WITH 20A DUAL ELEMENT FUSES.
- 3 WP 30AS, 2P, 250VAC DISCONNECT SWITCH WITH 25A DUAL ELEMENT
- 4 WP 30AS, 2P, 250VAC DISCONNECT SWITCH WITH 20A DUAL ELEMENT
- (5) INTERCEPT (E) 1"C AND EXTEND TO NEW WP DISCONNECT AND A/C UNIT. PROVIDE NEW WIRES IN (E) CONDUIT UP TO PANEL.
- (6) EXISTING WP 100AS-2P, 250VAC DISCONNECT SWITCH. REPLACE (E) FUSES WITH 70A FUSES.
- 7) REMOVE (E) WIRES IN (E) 1" CONDUIT AND PROVIDE (N) 2#4 & 1#8G. 8 SPLICE NEW WIRES INSIDE PULLBOX AND EXTEND (N) WIRES AS NOTED
- 9 EXTEND AND TERMINATE CONDUIT TO A/C UNIT CONTROL COMPARTMENT FOR EMS CONTROL.
- (10) 3/4"C.O. FOR EMS CONTROLS. RUN CONDUIT INSIDE ATTIC.
- (11) 3/4"C.O. DOWN TO RESPECTIVE A/C THERMOSTAT BELOW. SEE MECHANICAL DRAWINGS FOR THERMOSTAT LOCATION.
- 12) PROVIDE (3)20A-1P CIRCUIT BREAKER AT (E) PANEL. MATCH TYPE AND A.I.C. RATING OF EXISTING BREAKERS.
- (13) 3/4"C- 2#12 & 1#12G DOWN TO (E) LIGHTS INSIDE TOILETS/ STORAGE/OR SUPPLY ROOM BELOW. INTERCEPT POWER TO EXISTING LIGHTS IN EACH ROOM AND PROVIDE 20A-1P RELAY FOR EXHAUST FAN INTERLOCK. SEE DETAIL ON SHEET E-103.

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GENERAL NOTES

- 1. THE ENTIRE INSTALLATION ON ROOF SHALL BE WEATHERPROOF TYPE, INCLUDING BUT NOT LIMITED TO: RECEPTACLES, CONDUITS,
- 3. EXISTING RECEPTACLES INCLUDING ASSOCIATED CONDUITS ON ROOF TO REMAIN. PROTECT IN PLACE.
- 4. VERIFY EXACT LOCATION OF FACTORY PREWIRED CONTROL PANEL
- 5 PROVIDE UNISTRUT MOUNTING SUPPORT TO DISCONNECT SWITCHES. PROVIDE CODE REQUIRED 3' WORKING CLEARANCE FOR DISCONNECT

- DISCONNECTS, BOXES, ETC. 2. ALL CONDUCTORS INDICATED ON ROOF PLAN SHALL BE COPPER "THWN"

- MOUNTED ON A/C UNIT WITH MECHANICAL.
- SWITCHES. SEE DISCONNECT SWITCH DETAILS 5,6/E-102.

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PROGRAM

PROJECT NUMBER:

10292 CHECKED:

ISSUE/REVISION: 8/21/2018 30% - SCHEMATIC DESIGN 10/10/2018 50% CD SUBMITTAL 11/15/2018 100% CD - DSA SUBMITTAL

ROOF POWER PLAN -BUILDING A

- 1) WP 30AS-3P, 600VAC DISCONNECT SWITCH WITH 20A DUAL ELEMENT
- 2 WP 30AS-3P, 600VAC DISCONNECT SWITCH WITH 15A DUAL ELEMENT
- (3) INTERCEPT (E) 1"C AND EXTEND TO NEW WP DISCONNECT AND A/C
- UNIT. PROVIDE NEW WIRES IN (E) CONDUIT UP TO PANEL. (4) SEE SINGLE LINE DIAGRAM ON SHEET E-103 FOR FEEDER SIZE.
- (5) 12"x12"x6"D WP PULLBOX.
- 6 EXTEND AND TERMINATE CONDUIT TO AC CONTROL COMPARTMENT FOR EMS CONTROL.
- (7) 3/4"C.O. FOR EMS CONTROLS. RUN CONDUIT INSIDE ATTIC.
- (8) 3/4"C.O. DOWN TO RESPECTIVE A/C THERMOSTAT BELOW. SEE MECHANICAL DRAWINGS FOR THERMOSTAT LOCATION.
- 9 PROVIDE (1)20A-1P CIRCUIT BREAKER AT (E) PANEL. MATCH TYPE AND A.I.C. OF EXISTING BREAKERS.
- 10 3/4"C-2#12 & 1#12G TO (E) LIGHT INSIDE TOILETS/STORAGE/OR SUPPLY ROOM BELOW. INTERCEPT POWER TO EXISTING LIGHTS IN EACH ROOM AND PROVIDE 20A-1P RELAY FOR EXHAUST FAN INTERLOCK. SEE DETAIL ON SHEET E-103.

GENERAL NOTES

FILE NAME: _E303

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

FILE NAME: _E303

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

- 1. THE ENTIRE INSTALLATION ON ROOF SHALL BE WEATHERPROOF TYPE, INCLUDING BUT NOT LIMITED TO: RECEPTACLES, CONDUITS, DISCONNECTS, BOXES, ETC.
- 2. ALL CONDUCTORS INDICATED ON ROOF PLAN SHALL BE COPPER "THWN"
- 3. EXISTING RECEPTACLES INCLUDING ASSOCIATED CONDUITS ON ROOF TO REMAIN. PROTECT IN PLACE.
- 4. VERIFY EXACT LOCATION OF FACTORY PREWIRED CONTROL PANEL MOUNTED ON A/C UNIT WITH MECHANICAL.
- 5 PROVIDE UNISTRUT MOUNTING SUPPORT TO DISCONNECT SWITCHES. PROVIDE CODE REQUIRED 3' WORKING CLEARANCE FOR DISCONNECT SWITCHES. SEE DISCONNECT SWITCH DETAILS 5,6/E-102.

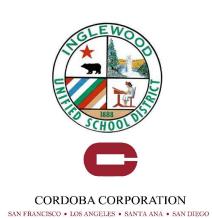
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DEMOLITION KEYED NOTES

3 DEMOLISHED (E) TRANSFORMER AND DISCONNECT SWITCH INCLUDING

- 1) DISCONNECT AND REMOVE DISCONNECT SWITCH AND CONDUIT/WIRES FROM DISCONNECT TO A/C UNIT. REMOVE WIRES IN HOMERUN CONDUIT UP TO SERVING PANEL. FEEDER CONDUIT TO REMAIN.
- 2 DISCONNECT AND REMOVE DISCONNECT SWITCH AND FEEDER UP TO SERVING PANEL.

ASSOCIATED CONDUIT AND WIRES TO (E) SWITCHBOARD "HMB1".

PROG ATION SOUND

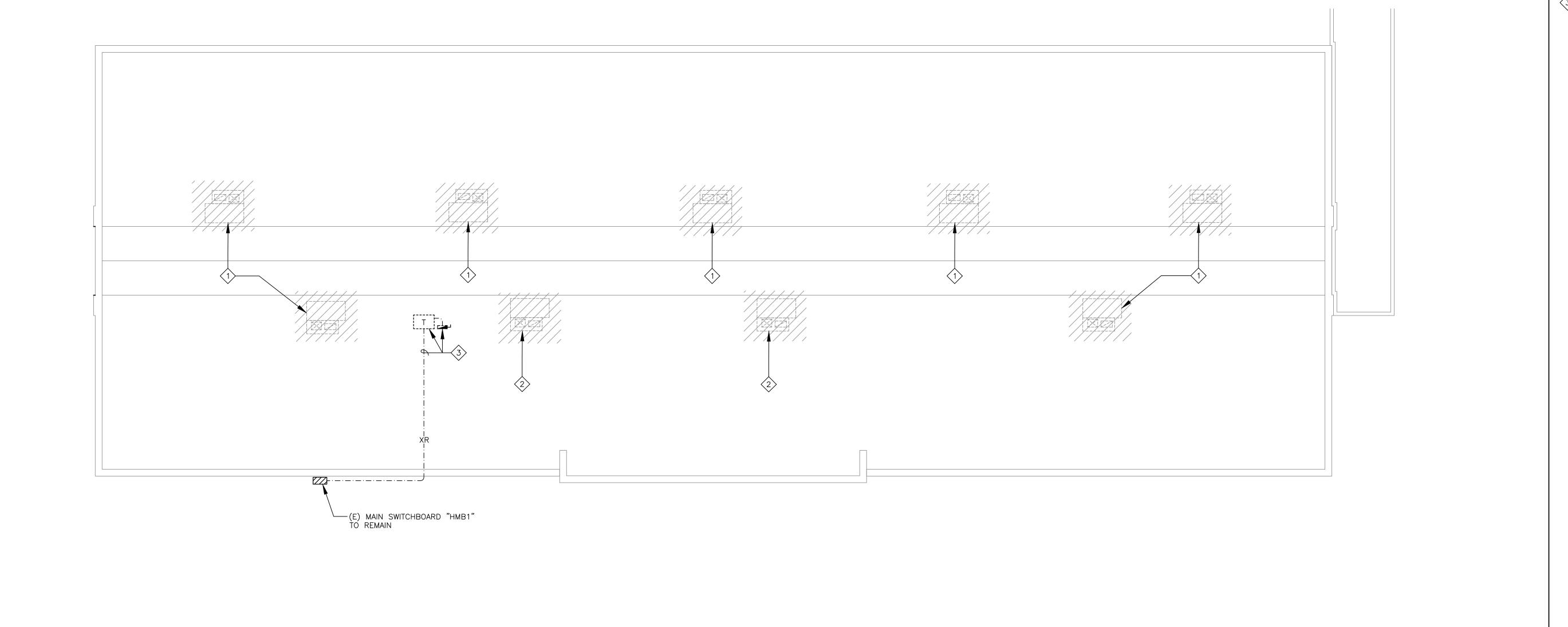
PROJECT NUMBER: 10292

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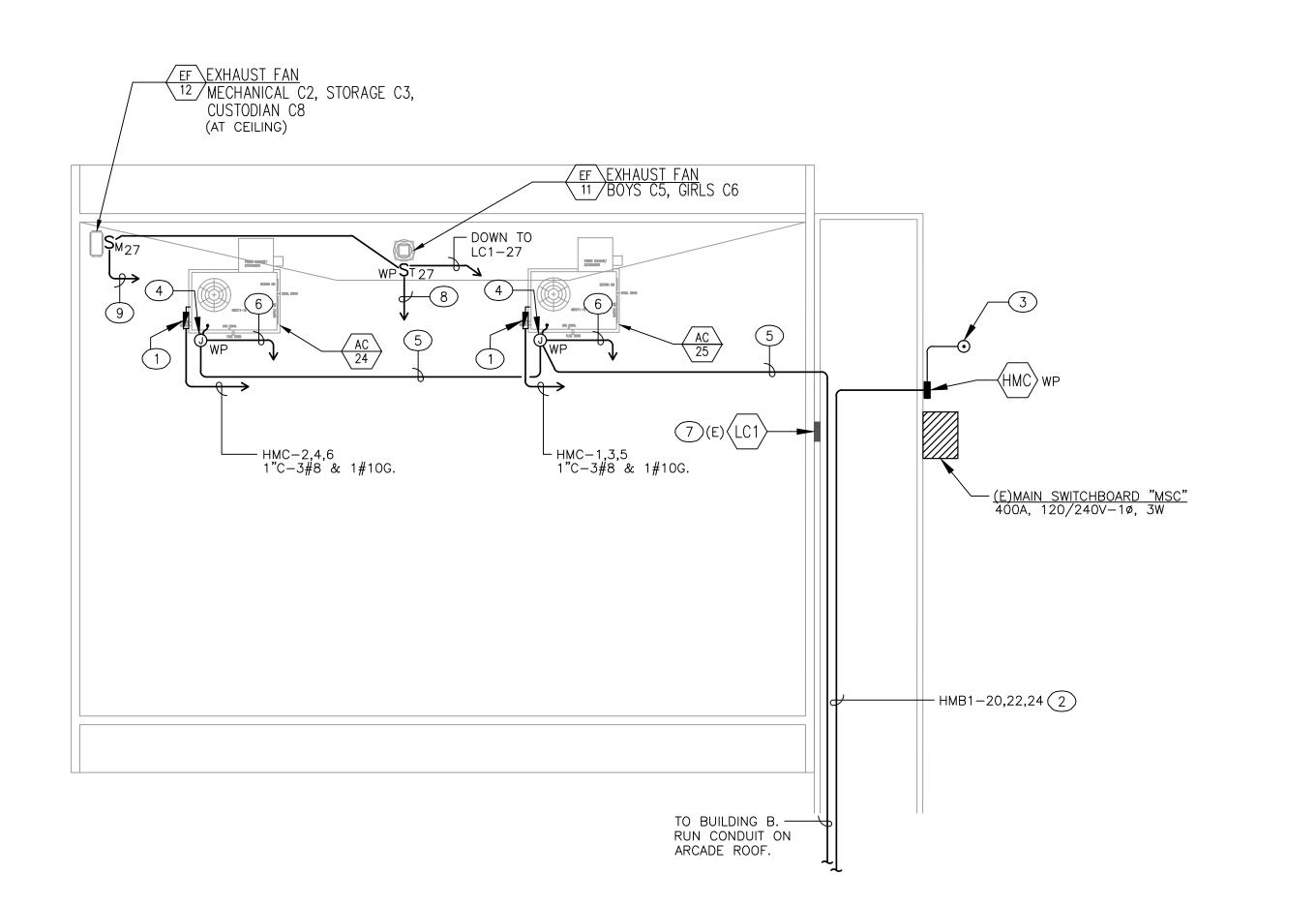
ISSUE/REVISION: 10/10/2018 50% CD SUBMITTAL 11/15/2018 100% CD - DSA SUBMITTAL

ROOF POWER & DEMO PLANS - BUILDING B

E-303



2 ROOF POWER PLAN - BUILDING B



- (1) WP, 60AS-3P, 460VAC DISCONNECT SWITCH WITH 35A DUAL ELEMENT FUSES. SEE DETAILS 5,6/E-102.
- 2 SEE SINGLE LINE DIAGRAM FOR FEEDER SIZE. RUN CONDUIT IN ARCADE ROOF.
- 3 GROUND ROD IN GROUND YARD BOX. SEE DETAIL 1/E-102.
- (4) EXTEND AND TERMINATE CONDUIT TO AC CONTROL COMPARTMENT FOR EMS CONTROL.
- (5) 3/4"C.O. FOR EMS CONTROLS. RUN CONDUIT INSIDE ATTIC. (6) 3/4"C.O. DOWN TO RESPECTIVE A/C THERMOSTAT BELOW. SEE
- MECHANICAL DRAWINGS FOR THERMOSTAT LOCATION. 7 UTILIZE (1)20A SPARE BREAKER (CKT 27) TO FEED NEW EXHAUST
- (8) 3/4"C-2#12 & 1#12G TO (E) LIGHT INSIDE TOILETS/STORAGE/OR SÚPPLY ŘOOM BEĽOW. INTERCÉPT POWER TO EXISTING LIGHTS IN EACH ROOM AND PROVIDE (1)20A-1P RELAY FOR EXHAUST FAN INTERLOCK. SEE DETAIL ON SHEET É-103.
- (9) 3/4"C-2#12 & 1#12G TO (E) LIGHTS INSIDE MECHANICAL, STORAGE AND CUSTODIAN. INTERCEPT POWER TO EXISTING LIGHTS IN EACH ROOM AND PROVIDE (1)20A-1P RELAY FOR EXHAUST FAN INTERLOCK. SEE DETAIL ON SHÈÈT E-103.

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GENERAL NOTES

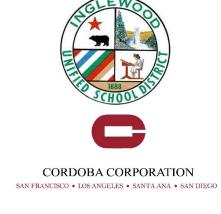
- 1. THE ENTIRE INSTALLATION ON ROOF SHALL BE WEATHERPROOF TYPE, INCLUDING BUT NOT LIMITED TO: RECEPTACLES, CONDUITS, DISCONNECTS, BOXES, ETC.
- 2. ALL CONDUCTORS INDICATED ON ROOF PLAN SHALL BE COPPER "THWN"
- 3. EXISTING RECEPTACLES INCLUDING ASSOCIATED CONDUITS ON ROOF TO REMAIN. PROTECT IN PLACE.
- 4. VERIFY EXACT LOCATION OF FACTORY PREWIRED CONTROL PANEL MOUNTED ON A/C UNIT WITH MECHANICAL.
- 5 PROVIDE UNISTRUT MOUNTING SUPPORT TO DISCONNECT SWITCHES. PROVIDE CODE REQUIRED 3' WORKING CLEARANCE FOR DISCONNECT SWITCHES. SEE DISCONNECT SWITCH DETAILS 5 & 6 ON E-102.

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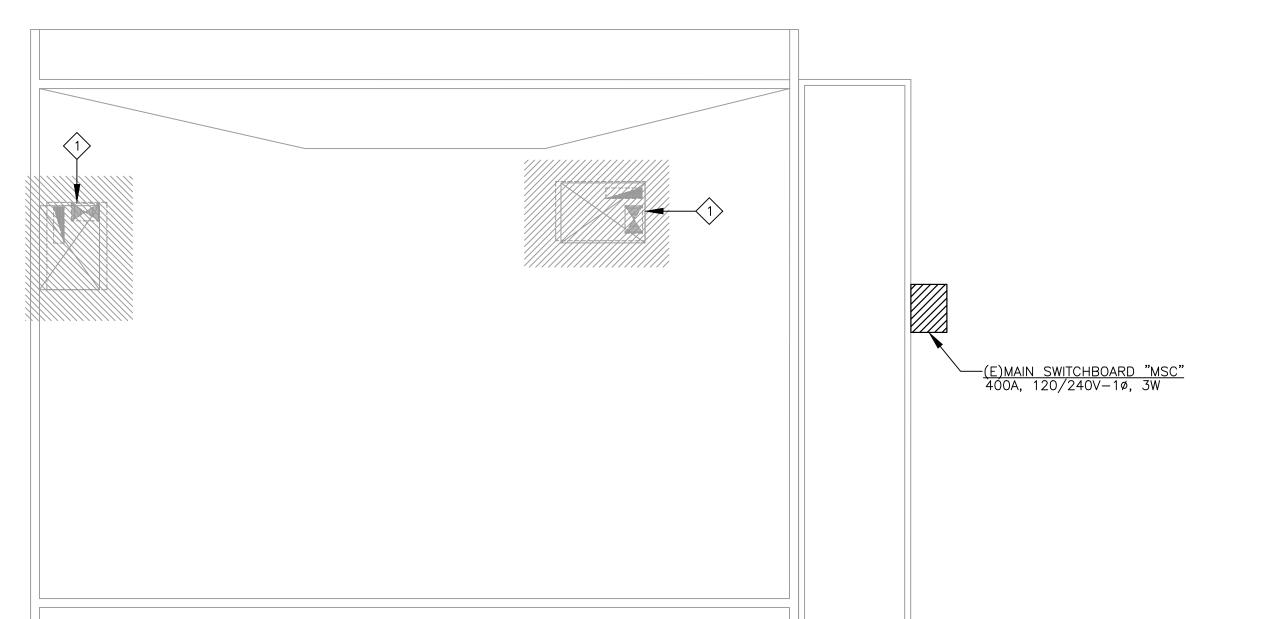
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DEMOLITION KEYED NOTES

DISCONNECT AND REMOVE DISCONNECT SWITCH AND FEEDER CONDUITS UP TO SERVING PANEL.



ATION SOUND

PROGRAM

PROJECT NUMBER: 10292

CHECKED: ISSUE/REVISION: 11/15/2018 100% CD - DSA SUBMITTAL

10/10/2018 50% CD SUBMITTAL

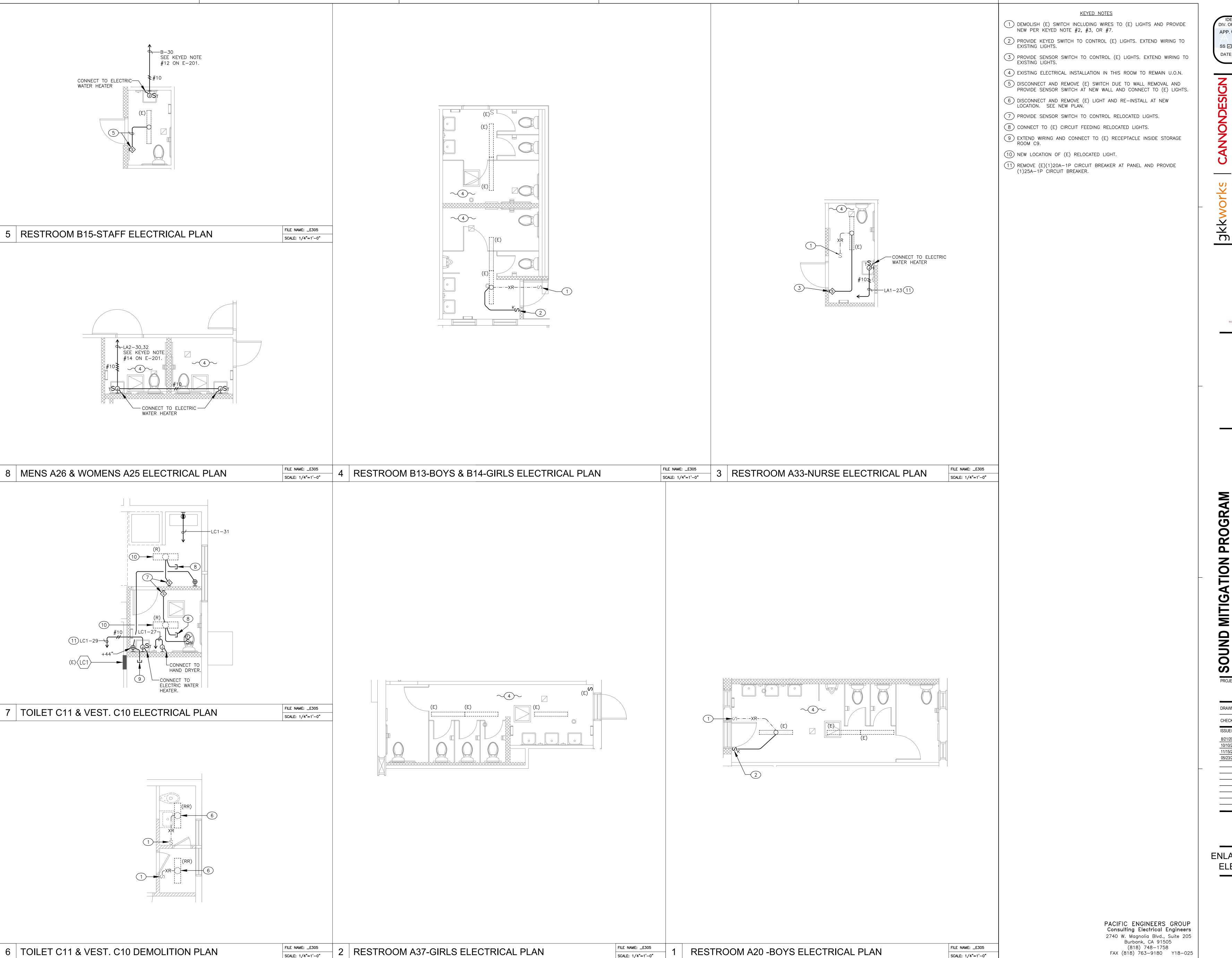
ROOF POWER & DEMO PLANS - BUILDING C

E-304

PACIFIC ENGINEERS GROUP Consulting Electrical Engineers 2740 W. Magnolia Blvd., Suite 205
Burbank, CA 91505
(818) 748-1758
FAX (818) 763-9180 Y18-025

2 ROOF POWER PLAN - BUILDING C

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



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

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

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ENLARGED RESTROOM ELECTRICAL PLANS

E-305

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

FIRE ALARM SYMBOLS

- OR IN WALL IN FINISHED AREAS. - - CONDUIT: IN OR BELOW FLOOR OR BELOW GRADE
 - FIRE ALARM CONTROL PANEL
 - LIGHTING PANEL
 - PANEL DESIGNATION, LETTER IDENTIFIES THE PANEL. ABOVE FINISHED FLOOR CKT CIRCUIT.
 - N.F. NONFUSED. AFG. ABOVE FINISHED GRADE.
- C/B CIRCUIT BREAKER. A.I.C. AMPERE INTERRUPTING CURRENT
- U.O.N. UNLESS OTHERWISE NOTED. WP WEATHERPROOF.
- C.O. CONDUIT ONLY WITH #12 PULL WIRE. N.C. NORMALLY CLOSED. DPDT DOUBLE POLE DOUBLE THROW. EOL END OF LINE RESISTOR.
- "F" CABLE "WEST PENN" NO. D990, 1 PAIR #18 UNSHIELDED FIRE ALARM ADDRESSABLE LOOP.
- "FW" CABLE "WEST PENN" NO. AQ225, 1 PAIR #16 UNSHIELDED FIRE ALARM ADDRESSABLE LOOP (UNDERGROUND).
- "N" CABLE 2#14 TWISTED UNSHIELDED PAIR CABLE SPEAKER CABLE, WET LOCATION TYPE IF UNDERGROUND.
- "V" CABLE 2#12 AWG CABLE.
- "T" CABLE 4 PAIR #24 UTP CAT-6 CABLE.

1/2" WATT TAP SPEAKER.

- FATC FIRE ALARM TERMINAL CABINET WITH TERMINAL FA FIRE ALARM
- SPKR SPEAKER. MFACP MAIN FIRE ALARM CONTROL PANEL.
- FCPS FIELD CHARGE POWER SUPPLY. MFATC MAIN FIRE ALARM TERMINAL CABINET.
- FIRE ALARM WALL MOUNTED SPEAKER WITH STROBE LIGHT, CANDELA RATING AS INDICATED. +96" TO TOP OF STROBE LIGHT. "A" DENOTES AUDIBLE FIRE ALARM 15cd SIGNAL CIRCUIT AND "V" DENOTE VISUAL FIRE ALARM SIGNAL CIRCUIT. "15cd" DENOTES CANDELA RATING. [1] DENOTE SPEAKER TAP WATTS. NO TAP WATT
 - SUBSCRIPT MEANS "1/2" WATT TAP SPEAKER. CEILING MOUNTED SPEAKER/STROBE, CANDELA RATING AS INDICATED.

[1] DENOTE SPEAKER TAP WATTS. NO TAP WATT SUBSCRIPT MEANS

- S1-1 FH FIRE ALARM MANUAL PULL STATION. PROVIDE MONITOR MODULE TO EACH DEVICE, +48". "S1-1" DENOTES LOOP MODULE (SLC #1) IDENTIFICATION NUMBER.
- A_{1-1} EXTERIOR W.P. FIRE ALARM SPEAKER. "A1-1" DENOTES AUDIBLE FA
- SIGNAL CIRCUIT NUMBER. [2] DENOTE SPEAKER TAP WATTS. V2-1 FIRE ALARM WALL MOUNTED STROBE. MOUNT AT +96" TO TOP OF STROBE. 15cd CANDELA RATING AS INDICATED. "V2-1" DENOTES FIRE ALARM SIGNAL CIRCUIT
- NUMBER. "15cd" DENOTES 15cd CANDELA RATING. V2-1000 FIRE ALARM WALL CEILING STROBE. CANDELA RATING AS INDICATED. "V2-1" DENOTES FIRE ALARM SIGNAL CIRCUIT NUMBER. "15cd" DENOTES 15cd CANDELA
- S1-1(SI) ADDRESSABLE SMOKE DETECTOR, PHOTOELECTRIC TYPE. "S1-1" DENOTES
- LOOP DETECTOR IDENTIFICATION NUMBER.
- S1-1(1) ADDRESSABLE HEAT DETECTOR MOUNTED IN ATTIC. "S1-1" DENOTES LOOP DETECTOR IDENTIFICATION NUMBER.
- $S1-1 \oplus D$ ADDRESSABLE HEAT DETECTOR MOUNTED IN CEILING. "S1-1" DENOTES LOOP DETECTOR IDENTIFICATION NUMBER.
- S1-1 $|\Theta|$ ADDRESSABLE HEAT DETECTOR MOUNTED IN ATTIC. "S1-1" DENOTES LOOP DETECTOR IDENTIFICATION NUMBER. PROVIDE 18"x18" MIN. CEILING ACCESS PANEL. SEE ARCHITECTURAL DRAWING DETAIL 10/A651
- S1-1M MONITOR MODULE. "S1-1" DENOTES LOOP DETECTOR IDENTIFICATION NUMBER.
- S1-1 CM CONTROL MODULE. "S1-1" DENOTES LOOP DETECTOR IDENTIFICATION NUMBER.
- CRI CONTROL RELAY.
- WP OB FIRE ALARM BELL.
- TS TAMPER SWITCH.
- FS FLOW SWITCH. F 3/4" CONDUIT WITH ONE "F" CABLE
- ——2F—— 3/4" CONDUIT WITH TWO "F" CABLES.
- ----F,V---- 3/4" CONDUIT WITH ONE "F" CABLE & ONE "V" CABLE.
- F,N— 3/4" CONDUIT WITH ONE "F" CABLE & ONE "N" CABLE.
- -2V,2N- 3/4" CONDUIT WITH TWO "V" CABLES & TWO "N" CABLES.
- 2V,F 3/4" CONDUIT WITH TWO "V" CABLES & ONE "F" CABLE.
- —F,V,N— 3/4" CONDUIT WITH ONE "F" CABLE, ONE "V" CABLE & ONE "N" CABLE.
- —2F,V— 3/4" CONDUIT WITH TWO "F" CABLES & ONE "V" CABLE.
- -2F,2V- 3/4" CONDUIT WITH TWO "F" CABLES & TWO "V" CABLES.
- -2F,2N- 3/4" CONDUIT WITH TWO "F" CABLES & TWO "N" CABLES.
- -2F,V,2N- 1" CONDUIT WITH TWO "F" CABLES, ONE "V" CABLE & TWO "N" CABLE.
- -2F,2V,2N- 1" CONDUIT OR WITH TWO "F" CABLES, TWO "V" CABLES & TWO "N" CABLES. ——N—— 3/4" CONDUIT WITH ONE "N" CABLE
- ——2N—— 3/4" CONDUIT WITH TWO "N" CABLES.
- ——2V—— 3/4" CONDUIT WITH TWO "V" CABLES. ——F2—— 3/4" CONDUIT WITH ONE "F" CABLE & 2#12.
- —— 3/4" CONDUIT WITH 2#12.
- -7/7/- 3/4" CONDUIT WITH 4#12.
- -/// 3/4" CONDUIT WITH 6#12.

GENERAL NOTES

- SEAL AND CAULK AS REQUIRED AT CONDUITS/PENETRATIONS.
- 2. EXPOSED CONDUITS AND BOXES SHALL BE PAINTED TO MATCH THE SURFACES WHERE
- 3. THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO ASCE 7-05 SECTION 13.3.1 AND TABLE 13.6-1. ANCHORAGE DETAILS FOR ROOF/FLOOR MOUNTED EQUIPMENT SHALL BE SHOWN ON PLANS.
- 4. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND EQUIPMENT AND MATERIAL APPROVED FOR USE UNDER THIS CONTRACT.
- 5. DRAWINGS DO NOT SHOW THE NECESSARY J-BOXES AND PULL BOXES WHICH WILL BE REQUIRED THROUGHOUT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THESE BOXES AS NECESSARY TO TERMINATE CONDUITS AND RACEWAYS. PAINT BOXES TO MATCH COLOR OF THE FINISHED SURFACE THAT THE BOXES ARE ATTACHED TO.
- 6. JUNCTION BOXES AND DEVICES INDICATED ON BUILDING EXTERIORS SHALL BE
- WEATHERPROOF TYPE. 7. SIGNAL WIRING IN UNDERGROUND CONDUITS SHALL BE WET LOCATION TYPE.
- 8. COORDINATION:
- A. THE CONTRACTOR SHALL COORDINATE LAYOUT DIMENSIONS INDICATED ON ELECTRICAL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE BID TIME, OR BEFORE PROCEEDING WITH THE WORK.
- B. IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE CONSTRUCTION DOCUMENTS, THEN THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SIMILAR CONDITIONS THAT ARE SHOWN.
- C. THE CONTRACTOR SHALL VERIFY ELECTRICAL, COMMUNICATION AND SECURITY REQUIREMENTS BEFORE CONSTRUCTION BEGINS.
- 9. BRACING OF DUCTS AND PIPINGS SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES AS APPROVED BY DSA. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECTED TO THE APPROVAL OF THE ARCHITECT, STRUCTURAL ENGINEER AND DSA FIELD ENGINEER. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE.
- 10. UNDERGROUND CONDUITS SHALL BE ENTIRELY ENCASED IN CONCRETE 3" THICK ON SIDES WITH MULTIPLE CONDUITS SPACED NOT LESS THAN 1-1/2" APART. MINIMUM DEPTH OF NOT LESS THAN 27" BELOW FINISHED GRADE TO THE TOP OF CONCRETE ENVELOPE.
- 11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE INTERMEDIATE BOXES ALONG CONDUIT RUNS AS NECESSARY TO TERMINATE CONDUITS AND RACEWAYS AND TO MEET CODE. PROVIDE ACCESS PANELS TO CONCEALED BOXES ABOVE HARD PLASTER CEILING. PAINT BOXES TO MATCH COLOR OF THE FINISHED SURFACE THAT THE BOXES ARE ATTACHED TO THE BUILDINGS. CONCEALED BOXES MAY NOT BE PAINTED.
- 12. WHEN FIRE ALARM DEVICES ARE INSTALLED AND PROGRAMMING IS COMPLETE, PROVIDE A ALARM DEVICE MAP IN THE SCHOOL MAIN OFFICE TO INDICATE TO SCHOOL PERSONNEL THE LOCATIONS OF THE F.A. DEVICES.
- 13. PROVIDE PROPER SIZE BACK-BOX FOR SURFACE MOUNTED FIRE ALARM DEVICES I.E. SPEAKER, SPEAKER/STROBES, STROBES, ETC. BOXES SHALL BE PER MANUFACTURER RECOMMENDATIONS.
- 14. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE ARTICLE 760 OF THE CALIFORNIA ELECTRICAL CODE, CURRENT CALIFORNIA TITLE 24 REQUIREMENTS, 2016 CALIFORNIA FIRE CODE, 2016 NFPA 72 AND 101 STANDARDS, AMERICAN WITH DISABILITY ACT (ADA) REQUIREMENTS.
- 15. CONTRACTOR SHALL INSTALL AND FURNISH A COMPLETE ADDRESSABLE FIRE ALARM SYSTEM, NCLUDING BUT NOT LIMITED TO WIRING, CONDUITS AND DEVICES REQUIRED FOR SATISFACTORY
- 16. SUBMIT COMPLETED NFPA 72 INSPECTION & TESTING FORMS AND RECORD OF COMPLETION FORMS ALONG WITH UPDATED POINTS LIST. 17. JUNCTION BOXES SHALL NOT CONTAIN SPLICES. CONDUCTORS SHALL BE PULLED THROUGH.
- TERMINATIONS SHALL BE PERFORMED IN TERMINAL CABINETS ON TERMINAL BLOCKS OR ON
- 18. "LABEL DESCRIPTIONS" INDICATING DEVICE TYPE AND LOCATION THAT ARE DISPLAYED ON THE FIRE ALARM LCD DISPLAY SHOULD BE CLEAR AND EASILY UNDERSTOOD BY THE OFFICE STAFF. DESCRIPTIONS SHOULD BE BASED ON THE STAFFS UNDERSTANDING OF THE SITE AND NOT ON INFORMATION TAKEN FROM PRINTS.
- 19. A DSA INSPECTOR WITH CLASS 1 CERTIFICATION IS REQUIRED FOR THIS PROJECT.
- 20. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUCT THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- 21. WIRING SHALL NOT BE LOOPED THROUGH DEVICES, WIRES MUST BE CUT FOR IN AND OUT. 22. POINT AND COMMON ANNUNCIATOR AND T-TAPPING ARE PROHIBITED.
- 23. TERMINATIONS IN TERMINAL CABINET SHALL BE ON TERMINAL BLOCKS.
- 24. FIRE STROBES WHERE THREE OR MORE OR FLASHES FROM THREE OR MORE ARE VISIBLE FOR ANY ONE POINT MUST BE SYNCHRONIZED UNLESS SEPARATED BY A MINIMUM OF 55 FEET. WIRING AND HARDWARE CONFIGURATION FOR FIRE STROBES IN A COMMON SPACE MUST BE PERFORMED CAREFULLY SINCE FEEDING STROBES FROM DIFFERENT CIRCUITS OF DIFFERENT REMOTE POWER SUPPLIES OR SYNCHRONIZATION MODULES MAY CAUSE A CONDITION WHERE WITHIN THE SAME SPACE SYNCHRONIZATION IS LOST DUE TO DIFFERENT POWER SOURCES AND SYNCHRONIZATION TIMING. THE TRIGGER CIRCUIT FOR AUDIBLE SIGNALS SHOULD BE FROM THE FACP TO ENSURE SYNCHRONIZATION. AUDIBLE SIGNALS MUST BE SYNCHRONIZED WITHIN THE SAME NOTIFICATION ZONE. 2016 NFPA 72 CHAPTER 8.
- 25. EXPANSION JOINTS-SEISMIC SEPARATIONS BETWEEN BUILDINGS SHALL BE PROVIDED WITH COMBINATION DEFLECTION/ EXPANSION FITTINGS AND SHALL COMPLY WITH SPECIFICATIONS WHETHER SHOWN ON DRAWINGS OR NOT.
- 26. HEAT DETECTOR WHERE INSTALLED ABOVE SUSPENDED CEILING SHALL HAVE THEIR LOCATIONS BE CLEARLY MARK BELOW THE CEILING AND BE ACCESSIBLE. PROVIDE P-TOUCH LABEL 1" WIDE WITH RED LETTERING. TAGS SHALL INDICATE NAME OF DEVICE.
- 27. ALL TRENCHES OUTSIDE OF THE BARRICADE LIMITS SHALL BE BACKFILLED AND PAVED NOT LATER THAN 72 HOURS AFTER BEING OPENED. DURING THE TIME THE TRENCHES ARE OPEN IN TRAFFIC AREAS, THE CONTRACTOR SHALL PROVIDE TRAFFIC PLATES.
- 28. WHEN TRENCHING FOR NEW UNDERGROUND CONDUIT, EXERCISE EXTREME CARE TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ALL DAMAGED LINES.
- 29. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE EXISTING OR NEW STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED ON THE DRAWINGS OR APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER AND DSA FIELD ENGINEER.
- 30. ALL DEMOLISHED ELECTRICAL EQUIPMENT & DEVICES WITH SALVAGE VALUE AS DETERMINED BY THE DISTRICT SHALL BE DELIVERED TO DISTRICT WAREHOUSE WITHOUT EXTRA COST TO THE DISTRICT.
- 31. REPLACE ALL DAMAGE CEILING TILE DUE TO NEW POWER & SIGNAL INSTALLATION. MATCH EXISTING TILE AND FINISH.
- 32. INCLUDE ALL ELECTRICAL DEMOLITION AS PART OF THIS CONTRACT. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT OF WALL REMOVALS. CEILING CHANGES AND ALL OTHER SIMILAR WORK. ELECTRICAL DEMOLITION SHALL INCLUDE DISCONNECTION AND REMOVAL OF AFFECTED LIGHTS. OUTLETS AND ALL OTHER ELECTRICAL DEVICES. REMOVE AND PLUG OR CAP ALL AFFECTED CONDUITS. REMOVE WIRES. IF REMOVED OUTLETS AFFECT DOWNSTREAM ACTIVE OUTLETS. PROVIDE ALL WORK NECESSARY TO REROUTE AND RECONNECT AFFECTED CIRCUITS.

CODES, STANDARDS & GUIDES

PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2017

2016 California Administrative Code, Part 1, Title 24 C.C.R.*

2016 California Building Code (CBC), Part 2, Title 24 C.C.R. (2015 International Building Code Volumes 1—2 and 2013 California Amendments)

2016 California Electrical Code (CEC), Part 3, Title 24 C.C.R. (2014 National Electrical Code and 2016 California Amendments)

2016 California Mechanical Code (CMC) Part 4, Title 24 C.C.R. (2015) Uniform Mechanical Code and 2016 California Amendments)

2016 California Plumbing Code (CPC), Part 5, Title 24 C.C.R. (2015) Uniform Plumbing Code and 2016 California Amendments)

2016 California Energy Code (CEC), Part 6, Title 24 C.C.R.* 2016 California Fire Code, Part 9, Title 24 C.C.R. (2015 International Fire Code and 2016 California Amendments)

2016 California Green Building Standards Code, Part 11, Title 24 C.C.R. 2016 California Referenced Standards, Part 12, Title 24 C.C.R.

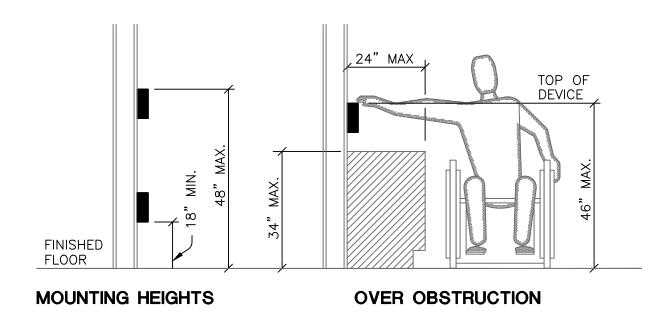
Title 19 C.C.R., Public Safety, State Fire Marshal Regulations. 2007 ASME A17.1(w/ A17.1a/CSA B44a-08 addenda) Safety Code For Elevators And Escalators

PARTIAL LIST OF APPLICABLE STANDARDS 2016 Edition NFPA 13 Automatic Sprinkler Systems 2016 Edition NFPA 14 Standpipe Systems 2016 Edition Dry Chemical Extinguishing Systems Wet Chemical Systems 2016 Edition NFPA 20 Stationary Pumps 2016 Edition NFPA 22 Water tanks for Private Fire Protection 2016 Edition NFPA 24 Private Fire Mains 2016 Edition NFPA 72 National Fire Alarm Code 2016 Edition 2016 Edition NFPA 80 Fire doors and Other Opening Protectives 2012 Edition Standard for Smoke Control Systems NFPA 92 Critical Radiant Flux of Floor Covering Systems 2015 Edition Clean Agent Fire Extinguishing Systems 2015 Edition ICC Standards on Bleachers, Folding and Telescoping 2012 Edition Seating and Grand stands Fire Testing of Fire Extinguishing Systems for Protection 2005 Edition Of Restaurant Cooking Areas 2003 Edition Audible Signal Appliances

Reference code section for NFPA Standards— 2013 CBC (SFM) Chapter 35. See Chapter 35 for State of California amendments to NFPA Standards.

1999 Edition

Heat Detectors for Fire Protective Signaling Systems



MOUNTING HEIGHTS

SCALE: N.T.S. OUTLETS, INTERCOM, CONTROLS, ETC.

TYPICAL MOUNTING HEIGHTS ABOVE FINISHED FLOOR (UNLESS OTHERWISE NOTED ON DRAWINGS) +48": LIGHT SWITCHES, FIRE ALARM PULL STATION, T-STATS, WALL TELEPHONE & SECURITY

TO TOP OF SWITCH OR CONTROL BOX. +15": ALL DUPLEX RECEPTACLES, WALL OUTLET FOR DESK TELEPHONE, COMPUTER OUTLET, UNLESS OTHERWISE NOTED TO BOTTOM OF OUTLET BOX.

GENERAL FIRE ALARM NOTES

- 1. THE SYSTEM SHALL CONFORM TO CALIFORNIA CODE OF REGULATIONS (CCR) TITLES 19 & 24 AS APPLICABLE TO THIS PROJECT.
- 2. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO DSA/IOR. CONTRACTOR TO SUPPLY NECESSARY TESTING EQUIPMENT INCLUDING A "DECIMETER" TO CHECK ACCEPTABLE NOISE LEVELS OF AUDIBLE DEVICES, PROVIDE TEST RESULTS PER NFPA 72 TO ARCHITECT, DSA, INSPECTOR OF RECORD, OWNER AND TO THE LOCAL FIRE AUTHORITY.
- 3. PENETRATIONS OF FIRE—RATED WALLS SHALL BE PROTECTED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, PART 2.
- 4. RECORD RECEIPT OF SIGNALS TO CENTRAL STATION MONITOR.
- 5. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CHANGE ORDER APPROVED BY THE OFFICE OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- 6. A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE OFFICE OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
- 7. EXISTING FIRE ALARM SYSTEM MUST REMAIN IN PLACE AND MUST BE OPERATIONAL AT ALL TIMES UNTIL NEW SYSTEM IS IN PLACE. CONTRACTOR TO PROVIDE FIRE WATCH WHEN SYSTEM IS INTERRUPTED OR DISCONNECTED AND SHALL BE RECONNECTED AND FULLY OPERATIONAL AFTER WORKING HOURS.

PACIFIC ENGINEERS GROUP FIRE ALARM SYSTEM DESCRIPTION Consulting Electrical Engineers FIRE ALARM SUBMITTAL CONSISTS OF COMPLETE FULLY AUTOMATIC FIRE 2740 W. Magnolia Blvd., Suite 205 ALARM SYSTEM AT THE ENTIRE SCHOOL. PER DSA POLICY CFC 907.2.3. Burbank, CA 91505 (818) 748-1758

FAX (818) 763-9180 Y18-025

DIV. OF THE STATE ARCHITEC APP. 03-119485 INC: REVIEWED FOR SS V DIFLS VIESTACS VI DATE: 8/14/2019

> 155 S. Fair Oaks, 2nd Floor, Pasadena California 91105 t 626.666.6906 f 626.666.3940 www.cannondesign.com

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PROJECT NUMBER:

CHECKED: ISSUE/REVISION 8/21/2018 30% - SCHEMATIC DESIGN

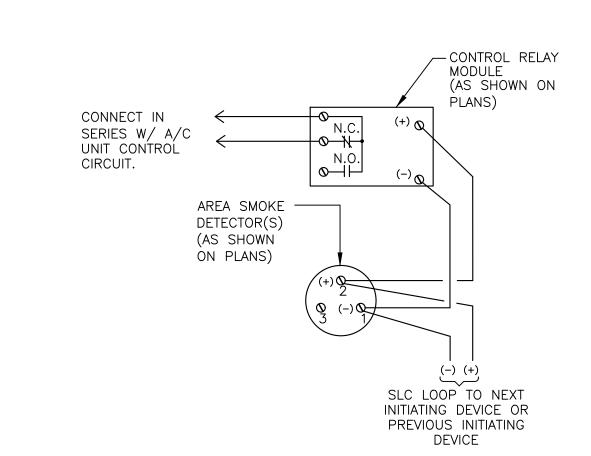
11/15/2018 100% CD - DSA SUBMITTAL

10/10/2018 50% CD SUBMITTAL

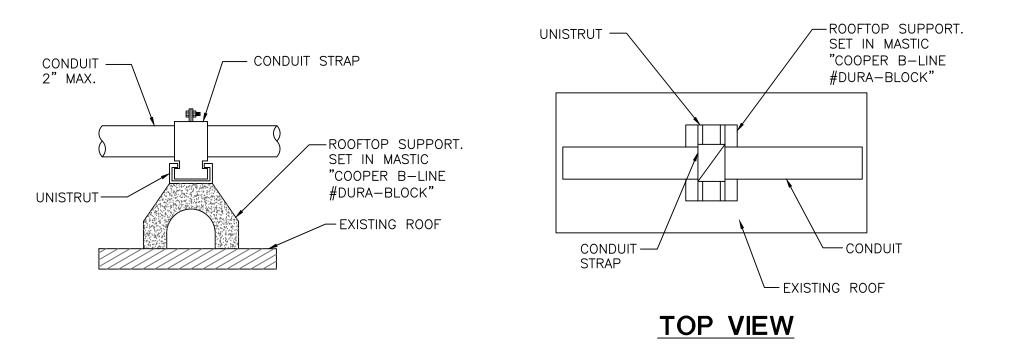
10292

03/15/2019 DSA APPROVAL ._____

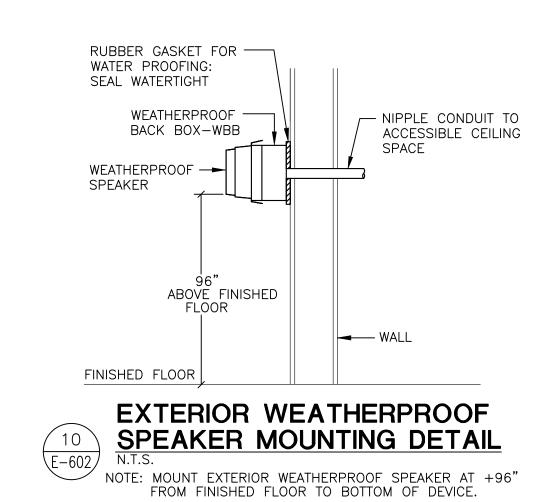
FA SYMBOL LIST, NOTES AND CODES

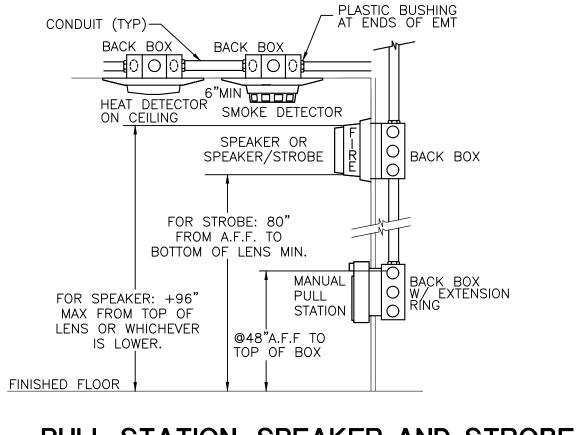


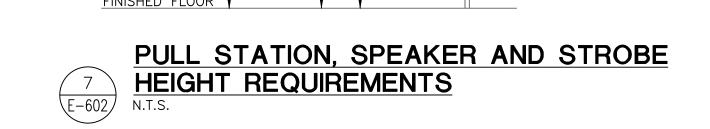
8 TYPICAL A/C UNIT SHUT DOWN CONTROLS
N.T.S.

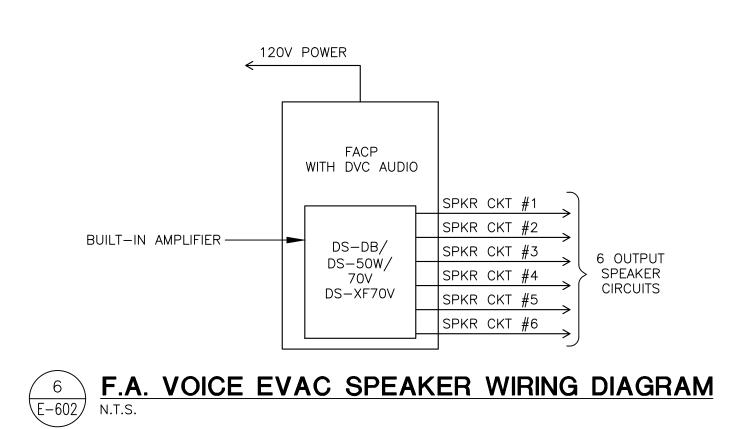


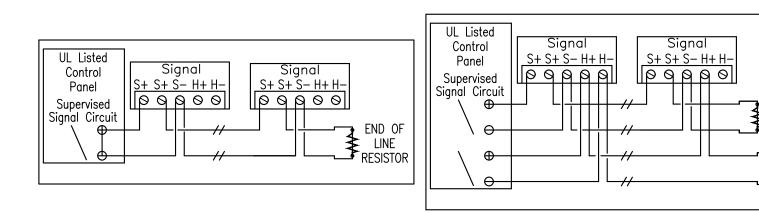
CONDUIT SUPPORT ON ROOF N.T.S.





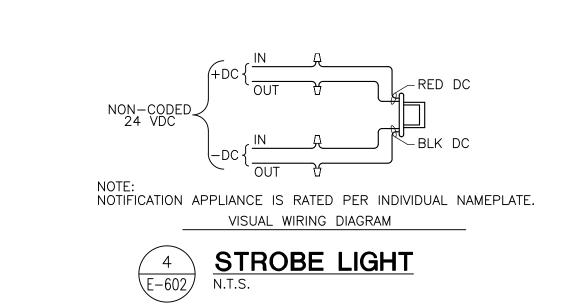


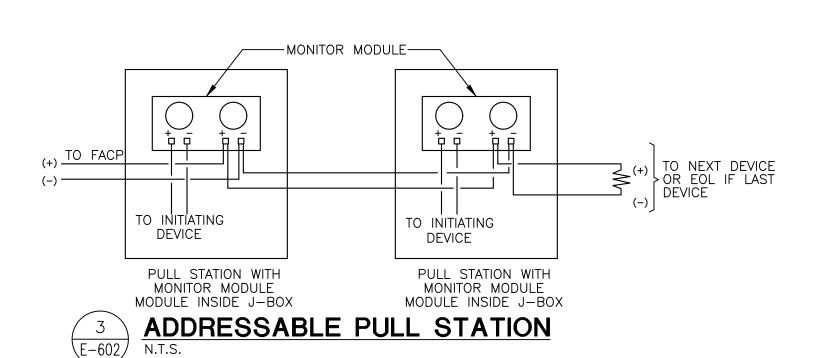


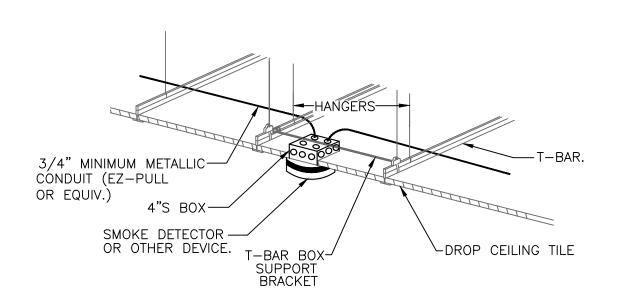


TEMPORAL CODE 3 FOR ALL AUDIBLE DEVICES OBTAINED FROM FIRE ALARM CONTROL PANEL

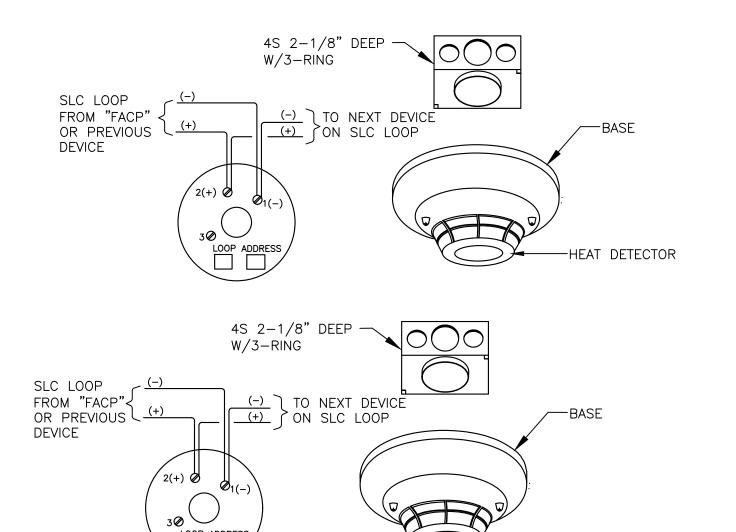
DUAL INPUT SPEAKER/STROBE WIRING DIAGRAM











SMOKE AND HEAT DETECTORS DETAIL WIRING

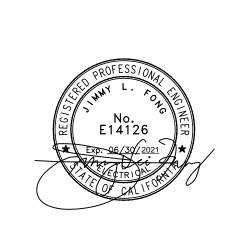
FIRE ALARM SYSTEM DESCRIPTION FIRE ALARM SUBMITTAL CONSISTS OF COMPLETE FULLY AUTOMATIC FIRE ALARM SYSTEM AT THE ENTIRE SCHOOL. PER DSA POLICY CFC 907.2.3. PACIFIC ENGINEERS GROUP Consulting Electrical Engineers 2740 W. Magnolia Blvd., Suite 205 Burbank, CA 91505 (818) 748-1758 FAX (818) 763-9180 Y18-025

DIV. OF THE STATE ARCHITEC APP. 03-119485 INC: REVIEWED FOR SS P FLS P ESTACS P DATE: 8/14/2019

> 155 S. Fair Oaks, 2nd Floor, Pasadena California 91105 t 626.666.6906 f 626.666.3940 www.cannondesign.com

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A PROJECT FOR: INGLEWOOD UNIFIED

DISTRICT

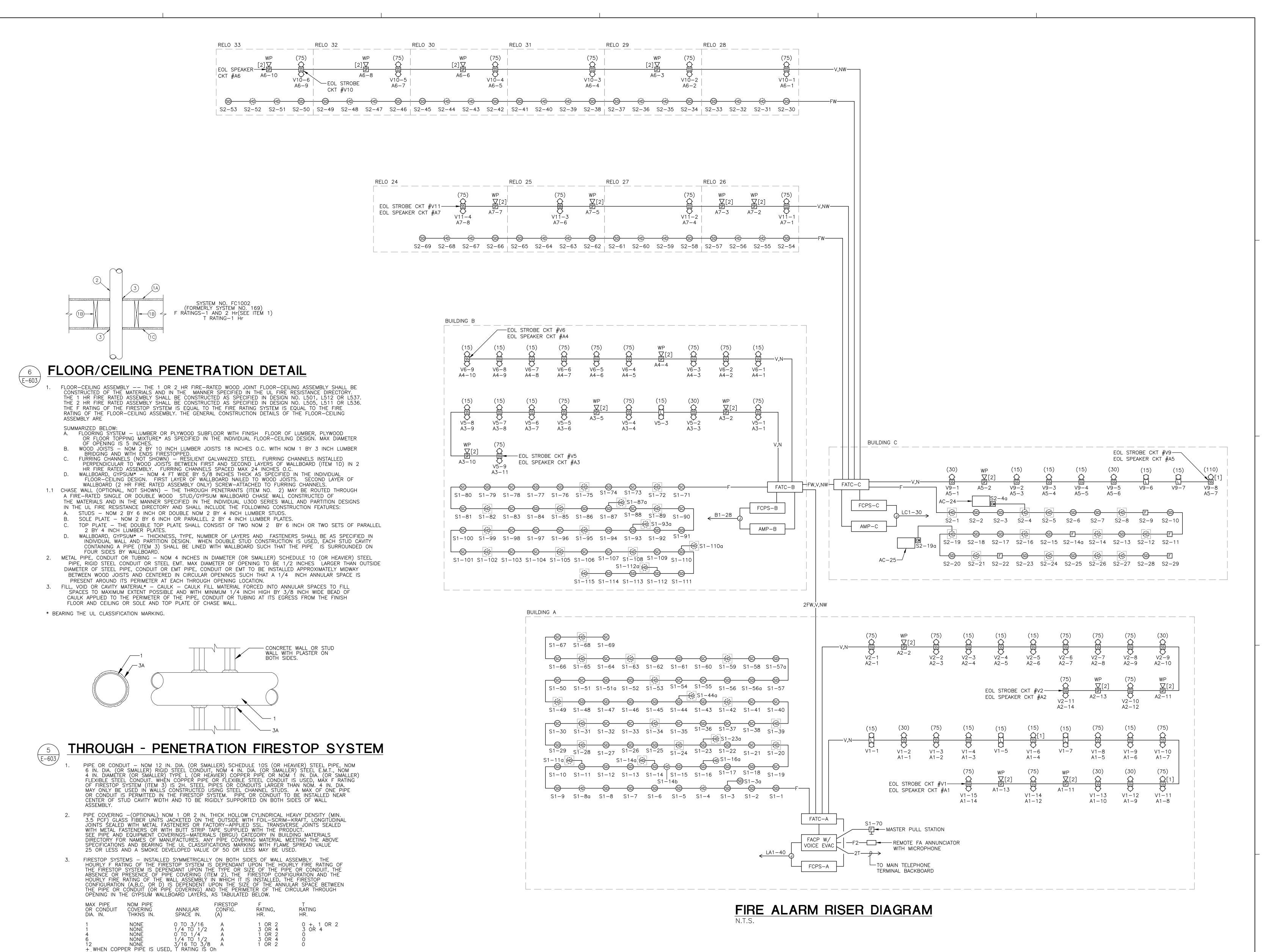
MITIGATION PROGRAM

SOUND PROJECT NUMBER: 10292

CHECKED: ISSUE/REVISION: 8/21/2018 30% - SCHEMATIC DESIGN

10/10/2018 50% CD SUBMITTAL 11/15/2018 100% CD - DSA SUBMITTAL

FIRE ALARM DETAILS



(A)A INDICATES FIRESTOP CONFIGURATION, AS DESCRIBED IN THE FOLLOWING:

FILL VOID OR CAVITY MATERIAL—CAULK — CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN. DIA. BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT

AS IT EGRESS FROM THE WALL. MINNESOTA MINING & MANUFACTURING-TYPES CP-25 S/L, CP-25 N/S, CP-25 W/B.(UL #WL1001)

DIV. OF THE STATE ARCHITE APP. 03-119485 INC: REVIEWED FOR SS 🗸 FLS 🗸 ACS 🗸 DATE: 8/14/2019

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PROG ATION MITIG/ OUND

UNIFIED

A PROJECT FOR: INGLEWOOD (

0 PROJECT NUMBER:

CHECKED: ISSUE/REVISION 8/21/2018 30% - SCHEMATIC DESIGN

10292

10/10/2018 50% CD SUBMITTAL 11/15/2018 100% CD - DSA SUBMITTAL

FA RISER DIAGRAM & FA **DETAILS**

STANDBY AH ALARM AH	3.98 0.54			SUB TOTAL HOURS	0.17 24.00	SUB TOTAL HOURS	2 0.2
75cd ALARM S	TROBE LIGHT 24 VDC -	WALL MTD.	0	0	0	0.158	
30cd ALARM S	TROBE LIGHT 24 VDC -	WALL MTD.	0	0	0	0.094	
15cd ALARM S	TROBE LIGHT 24 VDC -	WALL MTD.	0	0	0	0.066	
15cd ALARM S	TROBE LIGHT 24 VDC -	CEILING MTD.	10	0	0	0.041	0.4

3.98		SUB TOTAL	0.17	SUB TOTAL	2
0.54		HOURS	24.00	HOURS	0.2
4.52		AH STANDBY	3.98	- AH ALARM	0.5
7 411 DAT	TEDY DAOK DOOMDED			(0.0F LIDC	15 1411

7	АН	BATTERY	PACK	PROVIDED

(0.25 HRS. = 15 MIN.)

SYMBOLS

COMPONENT

FIRE ALARM CONTROL PANEL "FACP"

FIELD CHARGE POWER SUPPLY

FIRE ALARM ANNUNCIATOR WITH MICROPHONE

BATTERY CALCULATIONS -	- POWE	R EXTEND	ER FCPS	S-B	
		SUPERVISORY	CURRENT, A	ALARM CUR	RENT, A
EQUIPMENT MODEL	QUANTITY	UNIT	TOTAL	UNIT	TOTAL
POWER SUPPLY FCPS-24S6	1	0.166	0.166	0.166	0.166
95cd ALARM STROBE LIGHT 24 VDC — CEILING MTD.	0	0	0	0.134	0
115cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	0	0	0	0.158	0
75cd ALARM STROBE LIGHT 24 VDC — CEILING MTD.	9	0	0	0.111	0.999
30cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	1	0	0	0.063	0.063
15cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	8	0	0	0.041	0.328
15cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	0	0	0	0.066	0
30cd ALARM STROBE LIGHT 24 VDC — WALL MTD.	0	0	0	0.094	0
75cd ALARM STROBE LIGHT 24 VDC — WALL MTD.	0	0	0	0.158	0
110cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	0	0	0	0.202	0
STANDBY AH 3.98	•	SUB TOTAL	0.17	SUB TOTAL	1.56

,					
30cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	1	0	0	0.063	0.06
15cd ALARM STROBE LIGHT 24 VDC — CEILING MTD.	8	0	0	0.041	0.32
15cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	0	0	0	0.066	
30cd ALARM STROBE LIGHT 24 VDC — WALL MTD.	0	0	0	0.094	
75cd ALARM STROBE LIGHT 24 VDC — WALL MTD.	0	0	0	0.158	
110cd ALARM STROBE LIGHT 24 VDC — WALL MTD.	0	0	0	0.202	

0.50	
0.39	
4.37	

ALARM AH TOTAL

SUB TOTAL 0.17 SUB TOTAL HOURS 24.00 HOURS 0.25
AH STANDBY 3.98 AH ALARM 0.39

	7 AH B	BATTERY PAC	K PRC	VIDED	(0.25	HRS.	=	15	MIN
$D \setminus D \cup $	CALCIII			DOMED) EGDG					

BATTERY CALCULATIONS –	POWE				
		SUPERVISORY			RENT, A
EQUIPMENT MODEL	QUANTITY	UNIT	TOTAL	UNIT	TOTAL
POWER SUPPLY FCPS-24S6	1	0.166	0.166	0.166	0.166
95cd ALARM STROBE LIGHT 24 VDC — CEILING MTD.	0	0	0	0.134	C
115cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	0	0	0	0.158	(
75cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	10	0	0	0.111	1.1
30cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	0	0	0	0.063	(
15cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	0	0	0	0.041	
15cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	5	0	0	0.066	0.3
30cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	2	0	0	0.094	0.18
75cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	0	0	0	0.158	
110cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	1	0	0	0.202	0.20

75cd ALARM STROBE LIGHT 24 VDC - CEILING MTD.	10	0	U	0.111	1.11
30cd ALARM STROBE LIGHT 24 VDC — CEILING MTD.	0	0	0	0.063	0
15cd ALARM STROBE LIGHT 24 VDC — CEILING MTD.	0	0	0	0.041	0
15cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	5	0	0	0.066	0.33
30cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	2	0	0	0.094	0.188
75cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	0	0	0	0.158	0
110cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	1	0	0	0.202	0.202
STANDBY AH 3.98		SUB TOTAL	0.17	SUB TOTAL	2.00
ALARM AH0.50_		HOURS		HOURS	0.25
TOTAL 4.40		ALL CTANDON	7.00		0.50

15cd ALARM STROBE LIGHT 24 VDC — CEILING MTD.	0	0	0	0.041	С
15cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	5	0	0	0.066	0.33
30cd ALARM STROBE LIGHT 24 VDC — WALL MTD.	2	0	0	0.094	0.188
75cd ALARM STROBE LIGHT 24 VDC - WALL MTD.	0	0	0	0.158	0
110cd ALARM STROBE LIGHT 24 VDC — WALL MTD.	1	О	0	0.202	0.202
STANDBY AH 3.98		SUB TOTAL	0.17	SUB TOTAL	2.0
ALARM AH 0.50_		HOURS	24.00	HOURS	0.25
TOTAL 4.48		AH STANDBY	3.98	AH ALARM	0.50

STANDBY AH	3.98		SUB TOTAL	0.17	SUB TOTAL	2.
ALARM AH	0.50		HOURS	24.00	HOURS	0.25
TOTAL	4.48	•	AH STANDBY	3.98	AH ALARM	0.50
		7 AH BATTERY PACK PROVIDED			(0.25 HRS.	= 15 MIN.

SUE	3 TOTAL 0.17	SUB TOTAL	2.00
	HOURS 24.00	HOURS	0.25
AH S	TANDBY 3.98	AH ALARM	0.50
7 AH BATTERY PACK PROVIDED		(0.25 HRS. =	15 MIN.)

	HOURS	24.00	HOURS_	0.25
	AH STANDBY	3.98	AH ALARM	0.50
IDED			(0.25 HRS. =	= 15 MIN.)

		SPEAKER CII	RCUIT	LOAD	CALCUI	LATION						MFG. REC	. MAXIMUM LOS	SS IS 0.5dB
	SPEAKER CIRCUIT DESCRIPTION			WIRE	CIRCUIT	APPLI	ANCES QUANTI	TIES / TAP V	ALUES	TOTAL	ESTIMATED		MAXIMUM	TOTAL
			PANEL	GAUGE	VOLTAGE	SPEAKER	SPEAKER	SPEAKER	SPEAKER	CIRCUIT	CIRCUIT	ACTUAL	ALLOWABLE	CIRCUIT
AMPLIFIER#	AMPLIFIER LOCATION	CIRCUIT LOCATION	CIRCUIT	(18, 16, 14	(25 OR	TAPPED AT	TAPPED AT	TAPPED AT	TAPPED AT	LOAD	LENGTH	WIRE/LOSS	CKT. LENGTH	RESISTANCE
			NUMBER	12)	70 VRMS)	0.25 Watts	0.5 Watts	1 Watt	2 Watts	(WATTS)	(FEET)	(dB)	(FEET)	(OHMS)
FACP (50W)	SUPPLY ROOM A8	ADMIN BUILDING A	A1	14 AWG	70 Vrms	0	10	2	2	11.00 Watts	370 ft.	-0.04 dB	35,502 ft.	1.9 Ohms
FACP (50W)	SUPPLY ROOM A8	ADMIN BUILDING A	A2	14 AWG	70 Vrms	0	9	2	2	10.50 Watts	430 ft.	-0.04 dB	37,192 ft.	2.2 Ohms
AMP-B (50W)	STORAGE ROOM B8	BUILDING B	A3	14 AWG	70 Vrms	0	8	0	3	10.00 Watts	310 ft.	-0.03 dB	39,052 ft.	1.6 Ohms
AMP-B (50W)	STORAGE ROOM B8	BUILDING B	A4	14 AWG	70 Vrms	0	9	0	1	6.50 Watts	420 ft.	-0.03 dB	60,080 ft.	2.2 Ohms
AMP-C (50W)	HEATER RM C3	BUILDING C	A5	14 AWG	70 Vrms	0	5	1	1	5.50 Watts	260 ft.	-0.01 dB	71,003 ft.	1.4 Ohms
AMP-C (50W)	HEATER RM C3	RELO BUILDINGS	A6	14 AWG	70 Vrms	0	6	0	4	11.00 Watts	400 ft.	-0.04 dB	35,502 ft.	2.1 Ohms
AMP-C (50W)	HEATER RM C3	RELO BUILDINGS	A7	14 AWG	70 Vrms	0	4	0	4	10.00 Watts	320 ft.	-0.03 dB	39,052 ft.	1.7 0hms
AMP-C (50W)	HEATER RM C3	SPARE	A8	14 AWG	70 Vrms	0	0	0	0	0.00 Watts	0 ft.	0.00 dB	0 ft.	0.0 Ohms

| = TOTAL CURRENT FLOW IN ALARM CONDITION | L = LENGTH OF CIRCUIT FROM SUPPLY TO LAST DEVICE (IN FEET) | 21.6 = RESISTIVITY OF COPPER CONDUCTOR PER CIRCULAR MILL (10.8 \times 2 FOR TWICE THE LENGTH) | C.M. = CROSS SECTIONAL AREA OF CONDUCTOR IN CIRCULAR MILLS % VOLTAGE DROP = (I) \times (CM) | 100 | 24

Total Load (Watts)

UDACT	UNIVERSAL DIGITAL ALARM COMMUNICATOR TRANSMITTER	UDACT	7165-1703:0125
FH	INTERIOR MANUAL PULL STATION	NBG-12LX	7150-0028:0199
WP DSP	EXTERIOR SPEAKER	SYSTEM SENSOR SPRK	7320-1653:0201
(cd) 🂢 🗆	STROBE - WALL/COLUMN MOUNTED	SYSTEM SENSOR SRL	7125-1653:0504
(cd) \Overline{38}	SPEAKER - STROBE WALL/COLUMN MTD.	SYSTEM SENSOR SPSRL	7320-1653:0505
(cq) \(\siz \sight)	CEILING SPEAKER/STROBE	SYSTEM SENSOR SPSCRL	7320-1653:0505
(cd) QLQ	CEILING STROBE	SYSTEM SENSOR SCRL	7125-1653:0504
(SD)	SMOKE DETECTOR	FAPT-851	7272-0028:0206
(a)	SMOKE DETECTOR BASE	B710LP	7300-0028:0173
мм	MONITOR MODULE	FMM-1	7300-0028:0219
СМ	CONTROL RELAY MODULE	FCM-1/FRM	7300-0028:0219
CR	CONTROL RELAY	PAM-1	7300-1004:0101
(HD)	HEAT DETECTOR	FST-851R	7270-0028:0196
<u>(ún</u>)	HEAT DETECTOR BASE	B710LP	7300-0028:0173
©	SMOKE DETECTOR/ CARBON MONOXIDE COMBO WITH BX-501 BASE	FCO-851	7275-0028:0264
F	1 PAIR UNSHIELDED	WEST PENN NO. D990	7161-0859:0101
N	1 PAIR TWISTED UNSHIELDED	WEST PENN 994	7160-0859:0102

CAT. NO.

DVC-RPU

FCPS-24S6

NFS2-3030 WITH DVC AUDIO

CSFM NO.

7165-0028:0224

7165-0028:0224

7315-0028:0225

				FIRE ALA	RM SIGNAL	CIRCUIT S	SCHEDULE	- NFS2-3	030 DVC A	AUDIO C	PTION				
CKT. NO.	WALL QUAN. STROBE 15cd 0.066	WALL QUAN. STROBE 30cd 0.094	WALL QUAN. STROBE 75cd 0.158	WALL QUAN. STROBE 110cd 0.202	CEIL. QUAN. STROBE 15cd 0.041	CEIL. QUAN. STROBE 30cd 0.063	CEIL. QUAN. STROBE 75cd 0.111	CEIL. QUAN. STROBE 95cd 0.134	CEIL. QUAN. STROBE 115cd 0.158	TOTAL AMPS	WIRE SIZE	DISTANCE (IN FEET)	TO FACP	TO POWER EXTENDER	PERCENT VOLTAGE DROP
V1					7	3	5			1.03	#12	340		FCPS-A	4.83
V2					3	1	7			0.96	#12	390		FCPS-A	5.18
V3										0.00	#12	SPARE		FCPS-A	0.00
V4										0.00	#12	SPARE		FCPS-A	0.00
V5					4	1	4			0.67	#12	230		FCPS-B	2.13
V6					4		5			0.72	#12	390		FCPS-B	3.86
V7										0.00	#12	SPARE		FCPS-B	0.00
V8										0.00	#12	SPARE		FCPS-B	0.00
V9	5	2		1						0.72	#12	140		FCPS-C	1.39
V10							6			0.67	#12	330		FCPS-C	3.03
V11							4			0.44	#12	250		FCPS-C	1.53
V12										0.00	#12	SPARE		FCPS-C	0.00

15cd 0.066	30cd 0.094	75cd 0.158	110cd 0.202	15cd 0.041	30cd 0.063	75cd 0.111	95cd 0.134	115cd 0.158	AMPS	SIZE	(IN FEET)	EXTENDER	VOLTAGE DROP
				7	3	5			1.03	#12	340	FCPS-A	4.83
				3	1	7			0.96	#12	390	FCPS-A	5.18
									0.00	#12	SPARE	FCPS-A	0.00
									0.00	#12	SPARE	FCPS-A	0.00
				4	1	4			0.67	#12	230	FCPS-B	2.13
				4		5			0.72	#12	390	FCPS-B	3.86
									0.00	#12	SPARE	FCPS-B	0.00
									0.00	#12	SPARE	FCPS-B	0.00
5	2		1						0.72	#12	140	FCPS-C	1.39
						6			0.67	#12	330	FCPS-C	3.03
						4			0.44	#12	250	FCPS-C	1.53
									0.00	#12	SPARE	FCPS-C	0.00

	BATTERY CALCULATIONS PANEL FACP "NOTIFIER" - NFS2-303	O WITH DVC	AUDIO		
		STAN	IDBY	ALA	RM
QTY.	DESCRIPTION	DEVICE	AMPS	DEVICE	AMPS
1	NFS2-3030-CPU2-3030D	0.34000	0.34000	0.34000	0.3400
1	LCM-320	0.13000	0.13000	0.13000	0.1300
2	LEM-320	0.10000	0.20000	0.10000	0.2000
1	ACPS-610 POWER SUPPLY	0.02000	0.02000	0.02000	0.0200
1	NCA2-NETWORK ANNUNCIATOR	0.40000	0.40000	0.40000	0.4000
1	DIGITAL COMMUNICATOR - UDACT	0.04000	0.04000	0.04000	0.0400
1	DVC-EM	0.20000	0.20000	0.20000	0.2000
1	DAA2-50W/DS-XF70V	0.05100	0.05100	0.90000	0.9000
0	FCM/FRM ADDRESSABLE MONITOR/CONTROL MODULE	0.00200	0.00000	0.00650	0.0000
132	SMOKE DETECTOR, PHOTOELECTRIC	0.00030	0.03960	0.00650	0.8580
68	HEAT DETECTOR	0.00030	0.02040	0.00650	0.4420
5	MANUAL PULLSTATION	0.00040	0.00200	0.00060	0.0030
19	SPEAKER - 1/2 WATT TAP	0.00000	0.00000	0.03200	0.6080
4	SPEAKER - 1 WATT TAP	0.00000	0.00000	0.06400	0.2560
4	SPEAKER - 2 WATT TAP	0.00000	0.00000	0.13200	0.5280
TOTAL			1.4430		4.925
		STANDBY		ALARM	
		24 HOURS	34.6320	15 MIN.	1.231
		TOTAL	35.86	A.H.	
	BATTERY WITH 25% DERATING INCLUDED:		44.83	A.H.	
	BATTERY:		50	A.H.	

SPARE:

5.17 A.H.

FIRE ALARM S	EQUENCE	OF OPERAT	ION	
DEVICE/ACTION	MANUAL PULL STATION	AREA SMOKE DETECTOR	AREA HEAT DETECTOR	POWER FAILURE
ANNUNCIATE ALARM AT FACP AND REMOTE ANNUNCIATOR	Х	X	X	
ANNUNCIATE SUPERVISORY CONDITION AT FACP AND REMOTE ANNUNCIATOR				
ANNUNCIATE TROUBLE AT FACP AND REMOTE ANNUNCIATOR*	Х	X	Х	Х
ACTIVATE AUDIBLE/VISUAL SIGNAL THROUGHOUT SCHOOL(ALARM)	Х	X	Х	
CONTACT CENTRAL STATION (UDACT)	Х	Х	Х	Х
DISABLE PASSING SIGNALS	Х	X	X	
SHUT DOWN AIR HANDLING EQUIPMENT (FOR AREA IN ALARM)		X	Х	
CLOSE SMOKE/FIRE DAMPERS (FOR AREA IN ALARM)		X	Х	
		1		

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Pasadena California 91105

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SOUND PROJECT NUMBER: CHECKED: ISSUE/REVISION:

PROGR/

ATION

10/10/2018 50% CD SUBMITTAL

8/21/2018 30% - SCHEMATIC DESIGN 11/15/2018 100% CD - DSA SUBMITTAL

FA SCHEDULES AND CALCULATIONS

E-604

- 1 DEMOLISH FIRE ALARM CONTROL PANEL, PULL STATION, AND ASSOCIATED CONDUITS AND WIRES AFTER NEW FIRE ALARM SYSTEM IS OPERATIONAL AND ACCEPTED BY THE DISTRICT.
- 2) PROVIDE (1)20A-1P CIRCUIT BREAKER AT (E) PANEL. PROVIDE "LOCK-ON" DEVICE AND RED LABEL TO READ "FIRE ALARM".
- (3) 2"C-(2)FW, (1)V, (1)NW TO FATC-A.
- (4) MOUNT HEAT DETECTOR WITHIN 3 FT OF CEILING PEAK.

<u>CEILING TYPE LEGEND</u> T-BAR - T-BAR CEILING.

GTC — 12"x12" GLUED TILE CEILING. HC — HARD CEILING AND OR OPEN CEILING.

1. THE ENTIRE ATTIC OF THE BUILDING IS OPEN. WALL PARTITION FRAMING BETWEEN ROOMS AND CORRIDOR WALLS IS UP TO ROOF DECK. WALL FINISH IS UP TO CEILING ONLY. DIV. OF THE STATE ARCHITECT APP. 03-119485 INC: REVIEWED FOR SS 🗸 FLS 🗸 ACS 🗸 DATE: 8/14/2019

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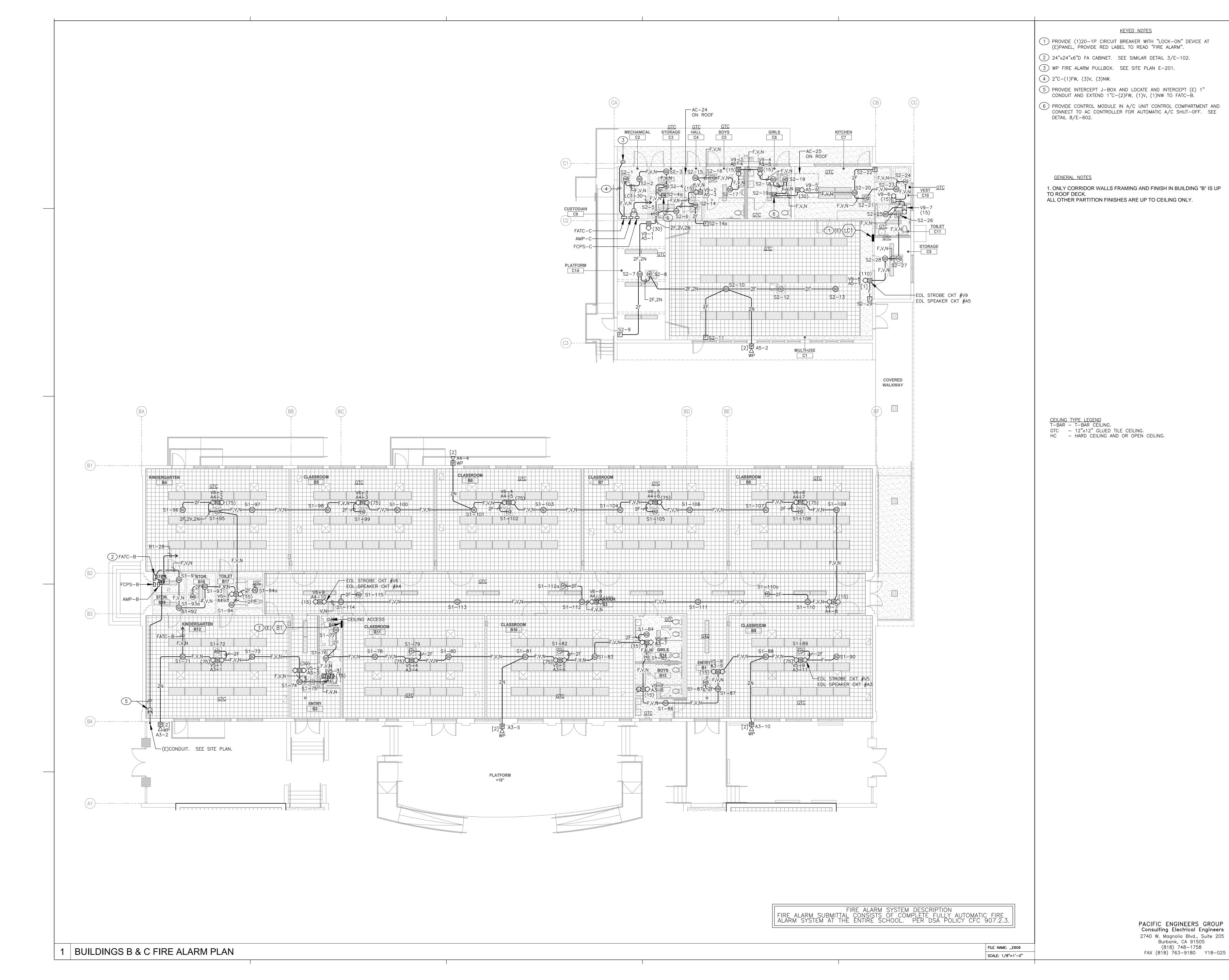
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10292

BUILDINGS A - FIRE ALARM PLAN



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BUILDINGS B & C FIRE ALARM PLAN

1) 12"x12"x6"D WP PULLBOX. MARK COVER "FIRE ALARM". SEE DETAIL 3/E-102.

2 STUB-UP SPARE CONDUITS TO +15" AFG AND PROVIDE END CAP.

3 PROVIDE LIQUID TIGHT FLEX BETWEEN BUILDING. SEE DETAIL 4/E-102.

1. ALL RELOCATABLE CLASSROOMS INCLUDING RESTROOMS HAVE T-BAR CEILING.

4 2"C-(1)FW, V, NW; (2)2"C.O. SPARE. 5 SEE DETAIL 10/E-602.

GENERAL NOTES

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ATION PROGRA SOUND

PROJECT NUMBER: 10292

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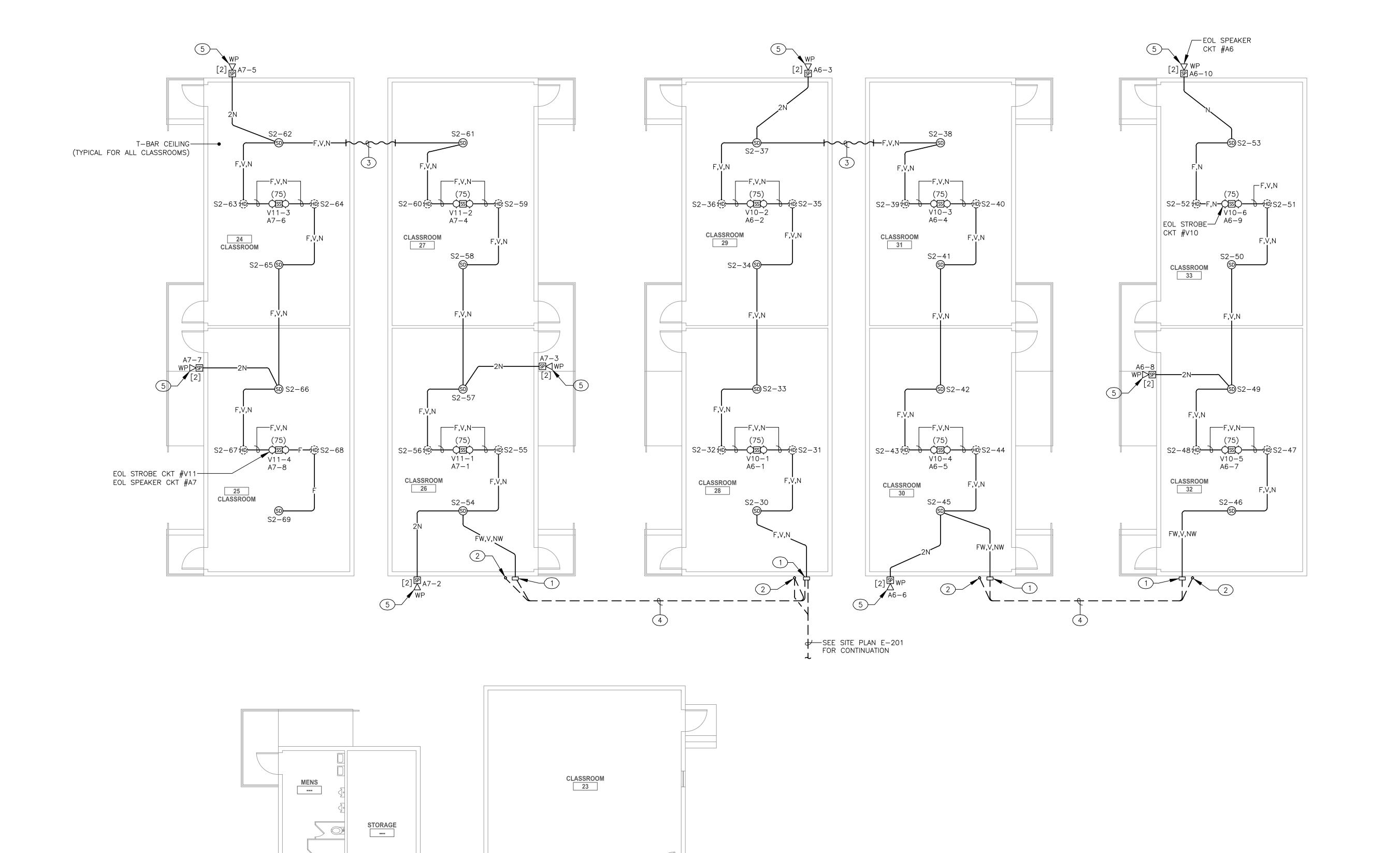
ISSUE/REVISION: 8/21/2018 30% - SCHEMATIC DESIGN 10/10/2018 50% CD SUBMITTAL 11/15/2018 100% CD - DSA SUBMITTAL

RELOCATABLE BLDGS

FIRE ALARM PLAN

E-607

PACIFIC ENGINEERS GROUP Consulting Electrical Engineers 2740 W. Magnolia Blvd., Suite 205 Burbank, CA 91505 (818) 748-1758 FAX (818) 763-9180 Y18-025



CLASSROOM 22

NOT PART OF SCOPE