Electrical Abbreviations

1P	1 Pole (2P, 3P, 4P, ETC.)	M	Meter
A, Amp	Ampere	M/M	Meter / Main
AC	Above Counter	MAX	Maximum
ADA	Americans with Disabilities Act	M/C	Momentary Contact
ADD	Automatic Door Opener	MC	Mechanical Contractor
AF	Amp Frame, Amp Fuse	MCB	Main Circuit Breaker
AF/AT	Amp Frame, Amp Trip	MDF	Main Distribution Frame
AFF	Above Finished Floor	MCC	Motor Control Center
AFG	Above Finished Grade	MFR	Manufacturer
AFI	Arc Fault Circuit Interrupter	MH	Manhole
AHU	Air Handling Unit	MIC	Microphone
AHJ	Authority Having Jurisdiction	MIN	Minimum
AIC	Amperes Interrupting Capacity	MCA	Minimum Circuit Amps
AL	Aluminum	MISC	Miscellaneous
ALT	Alternate	MLO	Main Lugs Only
ANNUN	Annunciator	MOCP	Maximum Overcurrent Protection
APPROX	Approximately	MT	Mount
ARCH	Architect, Architectural	MTD	Mounted
AS	Amp Switch	MTS	Manual Transfer Switch
AS/AF	Amp Switch, Amp Frame	MTR	Motor, Motorized
AT	Amp Trip	MW	Microwave
ATS	Automatic Transfer Switch	N.C.	Normally Closed
AUTO	Automatic	NEC	National Electrical Code
AUX	Auxiliary	NEMA	National Electrical Manufacturer's Association
AV	Audio Visual	NIC	Not In Contract
AVG	Average	NL	Night Light
AWG	American Wire Gauge	N.O.	Normally Open
BATT	Battery	NTS	Not To Scale
BD	Board	OC	On Center
BLDG	Building	OFCI	Owner Furnished, Contractor Installed
BMS	Building Management System	OH	Overhead
C	Conduit	OL	Overloads
CAB	Cabinet	PS	Pull Section
CATV	Cable Television	PA	Public Address
CB	Circuit Breaker	PB	Pull Box Or Pushbutton
CCTV	Closed Circuit Television	PC	Photocell
CEC	California Electrical Code	PF	Power Factor
CFCI	Contractor Furnished, Contractor Installed	PH	Phase
CKT	Circuit	PIV	Post Indicating Valve
CLG	Ceiling	PNL	Panel
COMB	Combination	PP	Power Pole
CMPR	Compressor	PR	Pair
CONN	Connection	PRI	Primary
CONST	Construction	PROJ	Projection
CONT	Continuation Or Continuous	PT	Potential Transformer
CO	Conduit Only	PVC	Polyvinyl Chloride (Conduit)
CPT	Control Power Transformer	PWR	Power
CT	Current Transformer	REC	Receptacle
CU	Copper	REF	Refrigerator
DEPT	Department	RGS	Rigid Galvanized Steel (Conduit)
DET	Detail	RM	Room
DIA	Diameter	RSC	Rigid Steel Conduit
DISC	Disconnect	RTU	Roof Top Unit
DIST	Distribution	SC	Surface Conduit
DS	Safety Disconnect Switch	SCCR	Short Circuit Current Rating
DWG	Drawing	SEC	Secondary
E	Existing	SFD	Smoke Fire Damper
EB	Emergency Battery	SHT	Sheet
EC	Electrical Contractor	SIM	Similar
EG	Emergency Generator	SLD	Single-Line Diagram
EGC	Equipment Grounding Conductor	SPD	Surge Protective Device
EI	Emergency Inverter	SPEC	Specification
EL	Existing To Be Relocated	SS	Stainless Steel
ELEC	Electric, Electrical	STD	Standard
ELEV	Elevator	SW	Switch
ELU	Emergency Lighting Unit	SWBD	Switchboard
EM	Emergency	SYS	System
EMS	Energy Management System	TEL	Telephone
EMT	Electrical Metallic Tubing	TR	Tamper Resistant
EN	New Location Of Relocated	TV	Television
EPO	Emergency Power Off	TYP	Typical
EQUIP	Equipment	UC	Under Counter
ER	Existing To Be Removed	UG	Underground
EV	Electric Vehicle	UGPS	Underground Pull Section
EVCS	Electric Vehicle Charging Station	UNO	Unless Noted Otherwise
FA	Fire Alarm		(or UON Unless Otherwise Noted)
FABP	Fire Alarm Booster Power Supply Panel	UPS	Uninterruptible Power Supply
FACP	Fire Alarm Control Panel	UT	Underground Telephone
FC	Footcandle	UTIL	Utility
FCU	Fan Coil Unit	V	Volt
FLA	Full Load Amps	VA	Volt-Amperes
FLR	Floor	VD	Voltage Drop
GA	Gauge	VFD	Variable Frequency Drive
GAL	Gallon	W	Watt
GALV	Galvanized	W/	With
GC	General Contractor	WH	Water Heater
G/D	Garbage Disposal	W/O	Without
GEN	Generator	WP	Weatherproof
GEC	Grounding Electrode Conductor	XFMR	Transformer
GFI	Ground Fault Circuit Interrupter		
GFP	Ground Fault Protector		
GND	Ground	∠	Angle
GRS	Galvanized Rigid Steel (Conduit)	@	At
GYP	Gypsum Board	▲	Delta
HOA	Hands-Off-Automatic Switch	'	Feet
HP	Horsepower	"	Inches
HT	Height	#	Number
HTR	Heater	Ø	Phase
HV	High Voltage		
HVAC	Heating, Ventilating And Air Conditioning		
DF	Intermediate Distribution Frame		
IG	Isolated Ground		
IMC	Intermediate Metal Conduit		
INV	Inverter		
J-BOX	Junction Box		
KCMIL	Thousand Circular Mils		
KV	Kilovolt		
KVA	Kilovolt-Ampere		
KW	Kilowatt		
KWH	Kilowatt Hour		
LCL	Long Continuous Load		
LTG	Lighting		
LV	Low Voltage		
LVL	Level		

Electrical Symbol Legend

Lighting Symbols

- Lighting Fixtures, Typical, Rectangular (Various Symbols) — Filled circles indicate recessed. Open circles indicate surface-mounted. Diagonal line indicates lensed. Outer dots indicate suspended.
- Lighting Fixtures, Typical, Round (Various Symbols) — Center dot indicates pendant. Diagonal line indicates lensed. Chevron indicates wall wash.
- Wall-mounted fixtures, Typical (Various Symbols)
- Strip Fixture
- Directional Light, Track Light, Flood Light
- Linear Light, Tape Light
- Emergency Lighting Unit, Ceiling-Mounted, Integral Battery
- Emergency Lighting Unit, Ceiling-Mounted, Remote Battery
- Emergency Lighting Unit, Wall-Mounted, Integral Battery
- Emergency Lighting Unit, Wall-Mounted, Remote Battery
- Exit Light, Ceiling-Mounted. Shading and arrows indicate faces and directional chevrons.
- Exit Light, Wall-Mounted. Shading and arrows indicate faces and directional chevrons.
- Exit/ELU Combo
- Pole/Area Lights
- Post-Top Area Light
- Bollard Light
- Diagonal hatch indicates light on a critical circuit.
- Solid hatch indicates light on an emergency or life safety circuit.
- $ — Single-Pole Switch (for lighting) Switch Modifiers: 3: 3-Way; 4: 4-Way; K: Keyed; D: Dimming; T: Timer; OS: Occupancy Sensor; VS: Vacancy Sensor; AC: Above-Counter; LV: Low-Voltage; M: Motor-Rated
- OS — Occupancy Sensor
- DL — Daylight Harvesting Sensor
- SD — 1 Button Dimming Switch, With Occupancy Sensor
- DC1, DC2, DC3 — 0-10V Dimming Controller With Integral Relays
- ELCU — Emergency Lighting Control Unit
- SW — Low Voltage Wall Switch With Dimming Zones; # = Zone

Lighting Tags

- Top Value: Fixture Type ID (Underlined)
- A — Bottom Value, Lowercase Letter: Switch ID
- B — Bottom Value, Number(s): Circuit Number
- EG — Bottom Value, Uppercase Letter(s): Panel ID; Indicates Source of Emergency Power: EG: Emergency Generator; EB: Emergency Battery; EI: Emergency Inverter

Absence of a switch designation on a lighting fixture indicates fixture is controlled by the only switch in the space. An "x" in place of the switch designation indicates unswitched.

- S / OS / a — Switch ID indicated by a lowercase letter. Switch IDs are unique per space. A switch with an ID "a" controls all devices within the space in which it is located tagged with "a". A switch without a tagged ID controls all lighting fixtures within a space. ID tags may be used on control devices other than switches, such as occupancy sensors or contactors.

Telecom Symbols

- Data Outlet
- Telephone Outlet
- Data/Telephone Outlet — Outlet Modifiers: ##: Height AFF OC; AC: Above Counter
- Wireless Access Point
- TV — TV Outlet
- CS — Communication System Call Station

Power Symbols

- Simplex Receptacle
- Duplex Receptacle
- Quadruplex Receptacle
- Special Receptacle, Type as Indicated — Receptacle Modifiers: ##: Height AFF OC; AC: Above Counter; GFI: Ground-Fault Circuit Interrupter; WP: Weatherproof In-Use Cover
- Half shading indicates split (typically switched)
- Outside shading indicates emergency circuit
- Title-24 Compliant Controlled Receptacle
- $ — Single-Pole Switch (for power) Switch Modifiers: K: Keyed; T: Timer; AC: Above-Counter; M: Motor-Rated
- Multioutlet Assembly — Filled squares indicate 120V outlet. Open squares indicate with USB
- Cord Reel, Device Varies
- Drop Cord, Device Varies
- FF — Furniture Feed Ceiling
- FF — Furniture Feed Wall
- FF — Furniture Feed Floor Box
- J — Junction Box Ceiling
- J — Junction Box Wall
- SS — Seismic Sensor
- PP — Power Pack Ceiling
- Emergency Power Off
- DO — Door Opener Push Plate
- M — Power Meter
- Safety Switch, Fused
- Safety Switch, Unfused
- Motor Starter
- Combination Starter/Disconnect
- Contactor
- SFD — Smoke Fire Damper (Provide With Motor Rated Switch)
- MD — Motorized Damper (Provide With Motor Rated Switch)
- PL — Plug Load Controller
- MP — Media Panel
- S / D / EVCS — Single Or Dual Electric Vehicle Charging Station - Installed Complete With Wiring
- S / D / EVCA — Single Or Dual Electric Vehicle Charging Station - Provide J-Box With 1"C.O.
- EVR — Low Power Level 2 Electric Vehicle Charger Station - Provide Level 2 Outlet By Orange Charger (or Equal)

Power Device and Equipment Tags

- Electrical DeviceTags: Uppercase letter(s) indicates Panel ID and circuit number. Lowercase letter indicates designation of controlling switch (where applicable).
- XX-1 — Equipment Tags: Equipment ID is indicated by an underlined tag adjacent to the equipment. See the equipment connection schedule for description, electrical requirements, and panel and circuit number. Symbols/graphic appearance of equipment varies.

Wiring

- Wiring Turned Up
- Wiring Turned Down
- Concealed EMT conduit with wire 2#12AWG and 1#12AWG green ground, 3/4"C. minimum.
- Concealed EMT conduit with wire 3#12AWG and 1#12AWG green ground, 3/4"C. minimum.
- #10 — Concealed EMT conduit with wire 3#10AWG and 1#10AWG green ground, 3/4"C. minimum.
- Underground conduit and #10 wire, unless noted otherwise 3/4" PVC minimum.
- Home run to branch circuit panelboard. The equipment name and circuit number(s) are indicated, separated by a hyphen. Homeruns are only intended to indicate panel and circuit number. Actual homerun location shall be field-determined by the contractor.

Power Distribution Equipment

- SB1, MDP, HP1A, LP1A
- T-XX / T — Dry Type Transformer: See Single-Line Diagram for description and requirements.

Security Symbols

- Security Camera — PTZ: Pan/Tilt/Zoom; 360°: 360 Degree. Provide J-Box with 3/4"C. and CAT-5E back to closest IDF Room.; 180°: 180 Degree. Provide J-Box with 3/4"C. and CAT-5E back to closest IDF Room.
- CR — Card Reader
- CK — Card Reader with Keypad
- K — Security Keypad
- LD — Lockdown Button
- PB — Teleor Emergency call button. 48" AFF
- C — Telecor paging speaker and clock. 96" AFF
- DC — Door Contact
- ES — Electric Strike
- IC — Intercom
- ML — Magnetic Lock
- RX — Request to Exit Button
- REX — Request to Exit Sensor
- MD — Motion Detector
- XXX — Security Control Unit: SCP: Security Control Panel; SPS: Security Power Supply Unit
- ON / L — On-Line Lock. Locks shall be Salto. Provide complete system.
- OFL — Off-Line Lock. Locks shall be Salto. Provide complete System.

Fire Alarm Symbols

- DH — Door Holder
- SD — Smoke Detector
- CHS — Combination Smoke and CO2 Sensor
- XXX — Fire Alarm Control Unit: EVAC: Voice Evacuation Control Panel; FAA: Fire Alarm Annunciator; FACP: Fire Alarm Control Panel; FATC: Fire Alarm Terminal Cabinet; NACP: Notification Appliance Circuit Panel; FAMN: Fire Alarm Mass Notification Control Panel

Construction Phasing (Typical All Symbols and Equipment)

- (E) Existing
- (EL) Existing to Be Relocated
- (EN) New Location Of Relocated
- (ER) Existing to Be Removed

Existing to Be Demolished

Miscellaneous

- Area Not in Contract
- # or # — Keynote
- Underground Line Type

Singleline Symbols and Descriptions

- TFL — Through Feed Lugs
- PANEL — Panelboard
- Transformer
- Grounding Electrode and Conductor
- Circuit Breaker
- M — Utility Meter with C.T.S.
- ATS — Automatic Transfer Switch
- ALSIG — Circuit Breaker with Electronic Sensing, Timing and Tripping Control with Field Interchangeable with Descrete Field Adjustable Setting
- LSIG — Independant of Other Adjustments
- LSI — A. Arch Flash Reduction; L. Lone Time Trip; S. Short Time Overcurrent Trip; I. InstantaneousTrip; G. Ground Fault Trio, Ground Fault Sensing Integral with Circuit Breaker
- SPD — Surge Protective Device
- DM — Digital Submeter Revenue Grade
- ST — Shunt Trip
- GTW — Wireless Access Control Gateway (OFCI) Alarm Lock Networx AL-IM3-POE
- EXP — Wireless Access Control Expander (OFCI) Alarm Lock Networx AL-IME2-EXP-POE

MEP COMPONENT ANCHORAGE NOTE ((DSA JOBS ONLY))!!!!!!

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 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. 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 ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. 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.

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 COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAT 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAT 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG 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 THE 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 DISPLACEMENT PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8. AND 2022 CBC, SECTIONS 1617A.1.24, 1617.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR16-13.

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

MP ☐ MD ☐ PP ☐ E ☒ OPTION 1: PROJECT SPECIFIC DESIGN.

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: DESIGN BASED ON OSHPD OPM#_____. WITHIN PROJECT SUBMITTAL.

MP ☐ MD ☐ PP ☐ E ☐ OPTION 3: DESIGN BASED ON OSHPD OPM#_____. DEFERRED SUBMITTAL.

DESIGN BUILD NOTES

THE ELECTRICAL DESIGN AND CALCULATIONS ON THESE DRAWINGS HAVE BEEN PREPARED AS DESIGN-BUILD DOCUMENTS BY MA ENGINEERS FOR THE EXCLUSIVE USE/CONSTRUCTION BY (XXX Electrical Contractor). THESE DRAWINGS ARE NOT TO BE USED FOR COMPETITIVE BIDDING PURPOSES. ANY REUSE OR REPRODUCTION OF THESE DOCUMENTS WITHOUT WRITTEN PERMISSION OF (XXX Electrical Contractor) IS STRICTLY FORBIDDEN. ALL RIGHTS RESERVED.

APPLICABLE CODES

ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, GUIDELINES, STANDARDS, REGULATIONS AND ORDINANCES INCLUDING:

CALIFORNIA BUILDING STANDARD CODE:

2022 CALIFORNIA BUILDING CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 2

2022 CALIFORNIA ELECTRICAL CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 3

2022 CALIFORNIA ENERGY CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 6

2022 CALIFORNIA FIRE CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 9

2022 'CALGREEN' CALIFORNIA GREEN BUILDING CODE, CALIFORNIA CODE REGULATIONS TITLE-24 - PART 11

NATIONAL AND LOCAL CODES:

ASME A17.1/CSA B44-2019, SAFETY CODE FOR ELEVATORS AND ESCALATORS

GENERAL PROJECT NOTES

1. A SEPARATE ELECTRICAL PLAN CHECK IS REQUIRED TO VERIFY THE RACEWAYS METHOD(S), WIRING SCHEMATICS AND ELECTRICAL CALCULATIONS FOR THE ELECTRICAL CHARGE SYSTEM. THE ELECTRICAL SYSTEM SHALL HAVE SUFFICIENT CAPACITY TO SIMULTANEOUSLY CHARGE ALL ELECTRICAL VEHICLES AT THEIR FULL RATED AMPERAGE.
2. THE SERVICE PANEL OR SUBPANEL(S) SHALL HAVE SUFFICIENT CAPACITY TO ACCOMMODATE THE REQUIRED NUMBER OF DEDICATED 40 AMPERE MINIMUM BRANCH CIRCUIT(S) FOR THE FUTURE INSTALLATION OF THE EVSE.
3. PROVIDE SUPPORTS FOR ALL CONDUCTORS IN VERTICAL RACEWAYS PER CEC 300.19.
4. ALL ENCLOSURES AND EMERGENCY EQUIPMENT FOR EMERGENCY CIRCUITS SHALL BE PERMANENTLY MARKED SO THEY ARE READILY IDENTIFIED AS A COMPONENT OF AN EMERGENCY SYSTEM OR CIRCUIT PER CEC 700.10(A).
5. TERMINALS/LUGS SHALL BE RATED FOR COPPER/ALUMINUM WITH 75°C MIN RATING.
6. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, CALIFORNIA ELECTRICAL CODE, STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS AND ALL REQUIREMENT OF THE AUTHORITY HAVING JURISDICTION (AHJ).
7. CONTRACTORS SHALL COORDINATE ALL EQUIPMENT LOCATIONS WITH ARCHITECTURAL, MECHANICAL, STRUCTURAL, PLUMBING AND ALL APPROPRIATE DISCIPLINES.
8. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND/OR ENGINEER PRIOR TO THE START OF CONSTRUCTION.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF THE EXISTING SURFACES, AREAS, AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF ANY ELECTRICAL DEMOLITION AND/OR NEW WORK.
10. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE ELECTRICAL INSTALLATION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THE ABOVE ITEMS.
11. ALL CONDUITS SHALL BE EMT (INSTALLED IN INTERIOR CONCEALED SPACES) OR SCHEDULE-40 PVC (INSTALLED UNDERGROUND) UNLESS OTHERWISE NOTED.
12. ALL AMPACITIES ARE BASED UPON TABLE 310.15(B)16 OF THE 2022 C.E.C.
13. FEEDER SCHEDULES INDICATE DATA FOR COPPER CONDUCTORS RATED UP TO 600V AT 75°C.
14. PROVIDE WEATHERPROOF (NEMA 3R) JUNCTION BOXES, CONDUIT, FITTINGS AND ALL ENCLOSURES AT ALL EXTERIOR LOCATIONS AND ALL WET OR DAMP INTERIOR LOCATIONS. ALL EXTERIOR LIGHTING FIXTURES SHALL BE UL LISTED FOR WET OR DAMP LOCATIONS AS APPROPRIATE FOR THE LOCATION.
15. VERIFY EXISTING CONDITIONS PRIOR TO BID AND INCLUDE ALL COSTS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION.
16. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.
17. CONTRACTOR SHALL ENSURE THAT ALL CONDUIT, FIXTURES, FITTINGS, AND DEVICES LOCATED IN PUBLIC AREAS ARE TAMPERPROOF AND PROTECTED FROM PHYSICAL DAMAGE.
18. ALL MANUAL CONTROLS INTENDED TO BE USED BY ROOM OCCUPANTS SUCH AS LIGHT SWITCHES SHALL BE MOUNTED NOT HIGHER THAN 48" AFF TO TOP OF BOX AND RECEPTACLE OUTLETS SHALL BE MOUNTED NOT LOWER THAN 15" AFF TO BOTTOM OF BOX.

SCOPE OF WORK

SITE MODIFICATIONS TO EXISTING ELEMENTARY SCHOOL. 480V 3-PHASE SERVICE, 3000A INCOMING SERVICE:

WORK CONSISTS OF:
1. EXTERIOR LIGHTING
2. POWER
3. TITLE 24
5. PHOTOMETRICS

APPLICATION NUMBER:
BUILDING PERMIT:

600V 1PH CU FEEDER SCHEDULE (XXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
201	20	1	3/4"	2 #12, 1 #12 G
301	30	1	3/4"	2 #10, 1 #10 G
401	40	1	3/4"	2 #8, 1 #10 G
501	50	1	3/4"	2 #6, 1 #10 G
601	60	1	1"	2 #4, 1 #10 G
701	70	1	1"	2 #4, 1 #8 G
801	80	1	1-1/4"	2 #2, 1 #8 G
901	90	1	1-1/4"	2 #2, 1 #8 G
1001	100	1	1-1/4"	2 #1, 1 #8 G
1251	125	1	1-1/4"	2 #1, 1 #6 G
1501	150	1	1-1/4"	2 #1/0, 1 #6 G
1751	175	1	1-1/2"	2 #2/0, 1 #6 G
2001	200	1	2"	2 #3/0, 1 #6 G

600V CU TRANSFORMER SECONDARY FEEDER SCHEDULE (XXXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
50T	50	1	1"	3 #6, 1 #6 N, 1 #8 G
100T	100	1	1-1/2"	3 #1, 1 #1 N, 1 #8 G
150T	150	1	1-1/2"	3 #1/0, 1 #1/0 N, 1 #6 G
250T	250	1	1-1/2"	3 #250KCMIL, 1 #250KCMIL N, 1 #2 G
400T	400	1	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #1/0 G
500T	500	2	3"	3 #250KCMIL, 1 #250KCMIL N, 1 #2/0 G
800T	800	2	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G
1000T	1000	3	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #3/0 G
1600T	1600	4	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G
2500T	2500	6	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G

600V 1PH + N CU FEEDER SCHEDULE (XXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
202	20	1	3/4"	2 #12, 1 #12 N, 1 #12 G
302	30	1	3/4"	2 #10, 1 #10 N, 1 #10 G
402	40	1	1"	2 #8, 1 #8 N, 1 #10 G
502	50	1	1"	2 #6, 1 #6 N, 1 #10 G
602	60	1	1-1/4"	2 #4, 1 #4 N, 1 #10 G
702	70	1	1-1/4"	2 #4, 1 #4 N, 1 #8 G
802	80	1	1-1/4"	2 #2, 1 #2 N, 1 #8 G
902	90	1	1-1/4"	2 #2, 1 #2 N, 1 #8 G
1002	100	1	1-1/2"	2 #1, 1 #1 N, 1 #8 G
1252	125	1	1-1/2"	2 #1, 1 #1 N, 1 #6 G
1502	150	1	1-1/2"	2 #1/0, 1 #1/0 N, 1 #6 G
1752	175	1	2"	2 #2/0, 1 #2/0 N, 1 #6 G
2002	200	1	2"	2 #3/0, 1 #3/0 N, 1 #6 G

600V 3PH CU FEEDER SCHEDULE (XXXXX)

Feeder Designation	Feeder Ampacity	Sets	Conduit Size	Conductor Quantity and size per conduit
203	20	1	3/4"	3 #12, 1 #12 G
204	20	1	3/4"	3 #12, 1#12 N, 1 #12 G
303	30	1	3/4"	3 #10, 1 #10 G
304	30	1	3/4"	3 #10, 1 #10 N, 1 #10 G
403	40	1	1"	3 #8, 1 #10 G
404	40	1	1"	3 #8, 1#8 N, 1 #10 G
503	50	1	1"	3 #6, 1 #10 G
504	50	1	1"	3 #6, 1 #6 N, 1 #10 G
603	60	1	1-1/4"	3 #4, 1 #10 G
604	60	1	1-1/4"	3 #4, 1#4 N, 1 #10 G
703	70	1	1-1/4"	3 #4, 1 #8 G
704	70	1	1-1/4"	3 #4, 1#4 N, 1 #8 G
803	80	1	1-1/4"	3 #2, 1 #8 G
804	80	1	1-1/4"	3 #2, 1 #2 N 1 #8 G
903	90	1	1-1/4"	3 #2, 1 #8 G
904	90	1	1-1/4"	3 #2, 1 #2 N, 1 #8 G
1003	100	1	1-1/2"	3 #1, 1 #8 G
1004	100	1	1-1/2"	3 #1, 1 #1 N, 1 #8 G
1253	125	1	1-1/2"	3 #1, 1 #6 G
1254	125	1	1-1/2"	3 #1, 1 #1 N, 1 #6 G
1503	150	1	1-1/2"	3 #1/0, 1 #6 G
1504	150	1	1-1/2"	3 #1/0, 1 #1/0 N, 1 #6 G
1753	175	1	2"	3 #2/0, 1 #6 G
1754	175	1	2"	3 #2/0, 1 #2/0 N, 1 #6 G
2003	200	1	2"	3 #3/0, 1 #6 G
2004	200	1	2"	3 #3/0, 1 #3/0 N, 1 #6 G
2253	225	1	2-1/2"	3 #4/0, 1 #4 G
2254	225	1	2-1/2"	3 #4/0, 1 #4/0 N, 1 #4 G
2503	250	1	2-1/2"	3 #250KCMIL, 1 #4 G
2504	250	1	2-1/2"	3 #250KCMIL, 1 #250KCMIL N, 1 #4 G
3003	300	1	3"	3 #350KCMIL, 1 #4 G
3004	300	1	3"	3 #350KCMIL, 1 #350KCMIL N, 1 #4 G
3503	350	1	4"	3 #500KCMIL, 1 #2 G
3504	350	1	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #2 G
4003	400	1	4"	3 #600KCMIL, 1 #2 G
4004	400	1	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #2 G
4503	450	2	3"	3 #4/0, 1 #2 G
4504	450	2	3"	3 #4/0, 1 #4/0 N, 1 #2 G
5003	500	2	3"	3 #250KCMIL, 1 #2 G
5004	500	2	3"	3 #250KCMIL, 1 #250KCMIL N, 1 #2 G
6003	600	2	4"	3 #350KCMIL, 1 #1 G
6004	600	2	4"	3 #350KCMIL, 1 #350KCMIL N, 1 #1 G
7003	700	2	4"	3 #500KCMIL, 1 #1/0 G
7004	700	2	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #1/0 G
8003	800	2	4"	3 #600KCMIL, 1 #1/0 G
8004	800	2	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #1/0 G
10003	1000	3	4"	3 #500KCMIL, 1 #2/0 G
10004	1000	3	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #2/0 G
12003	1200	3	4"	3 #600KCMIL, 1 #3/0 G
12004	1200	3	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #3/0 G
16003	1600	4	4"	3 #600KCMIL, 1 #4/0 G
16004	1600	4	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #4/0 G
20003	2000	5	4"	3 #600KCMIL, 1 #250KCMIL G
20004	2000	5	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #250KCMIL G
25003	2500	6	4"	3 #600KCMIL, 1 #350KCMIL G
25004	2500	6	4"	3 #600KCMIL, 1 #600KCMIL N, 1 #350KCMIL G
30003	3000	8	4"	3 #500KCMIL, 1 #500KCMIL G
30004	3000	8	4"	3 #500KCMIL, 1 #500KCMIL N, 1 #500KCMIL G
40003	4000	10	4"	3 #600KCMIL, 1 #500KCMIL G
40004	4000	10	4"	3 #600KCMIL, 1#600KCMIL N, 1 #500KCMIL G

ELECTRICAL SHEET LIST

E0-000	ELECTRICAL TITLE SHEET
E0-001	TITLE 24 CALCULATIONS
ED0-100	ELECTRICAL SITE PLAN - DEMO
ED1-100	BLDG 100 - ELECTRICAL PLAN - DEMO
ED1-101	BLDG 100 - ROOF ELECTRICAL PLAN - DEMO
ED1.5-100	BLDG 150 - ELECTRICAL PLAN - DEMO
ED1.5-101	BLDG 150 - ROOF ELECT

STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Rancho Del Rey MS	Report Page:	(Page 7 of 7)
Project Address: 1174 E. J Street	Date Prepared:	9/4/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Shahab Salehi	Documentation Author Signature: Shahab Salehi
Company: MA Engineers	Signature Date: 2025-09-04
Address: 5160 Carroll Canyon Rd.	CEA/ HERS Certification Identification (if applicable): E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Shahab Salehi	Responsible Designer Signature: Shahab Salehi
Company: MA Engineers	Date Signed: 2025-09-04
Address: 5160 Carroll Canyon Rd, Suite 200	License: E18803
City/State/Zip: San Diego CA 92121	Phone: 858-200-0030

STATE OF CALIFORNIA
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Project Name: Rancho Del Rey MS	Report Page:	(Page 4 of 7)
	Date Prepared:	9/4/2025

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail

[1] FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.
[2] Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.
[3] Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.

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Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Rancho Del Rey MS	Report Page:	(Page 5 of 7)
	Date Prepared:	9/4/2025

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01				
	☒ General Hardscape Allowance Table I (below)	"Use it or lose it" Allowance (select all that apply) (select all that apply)			
		☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
SITE	130861	0.019	2486.4	0	0.2	0	2486
					Initial Wattage Allowance for Entire Site (Watts):		200
					Instances of Initial Wattage Allowance (LZ 0 only)[1]		
					Total General Hardscape Allowance (Watts):		2686

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

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Project Name: Rancho Del Rey MS	Report Page:	(Page 6 of 7)
	Date Prepared:	9/4/2025

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

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STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Rancho Del Rey MS	Report Page:	(Page 1 of 7)
Project Address: 1174 E. J Street	Date Prepared:	9/4/2025

This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor 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)6, 180.1(e) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	Chula Vista	04	Total Illuminated Hardscape Area (ft²)	130861
02	Climate Zone	7			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
● All Other Occupancies					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02			
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6			
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes	○ No	
03	04	05		
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method		
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%				

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
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C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv											Compliance Results			
01		02		03		04		05		06		07	08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
2,686	+	---	+	---	+	---	+	---	OR	---	=	2,686	≥	1,247	COMPLIES
										Shielding Compliance (See Table G for Details)					N/A
										Controls Compliance (See Table H for Details)					Not applicable

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

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STATE OF CALIFORNIA
Outdoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
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F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires [2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
L1	L1	☐ Linear	29	Mfr. Spec	43	New	☐	1,247	NA: < 6200 lumens	☐	☐
							Total Design Watts:	1247			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)
[2] For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.
[3] Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.
[4] Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

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Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/Rancho Del Rey MS_Building & Site Rehabilitation_detached_24.rvt
Thursday, September 4, 2025 10:33:27 AM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

ARCHITECT / CONSULTANT STAMP

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SWEETWATER UNION HIGH SCHOOL DISTRICT

DSA BACKCHECK

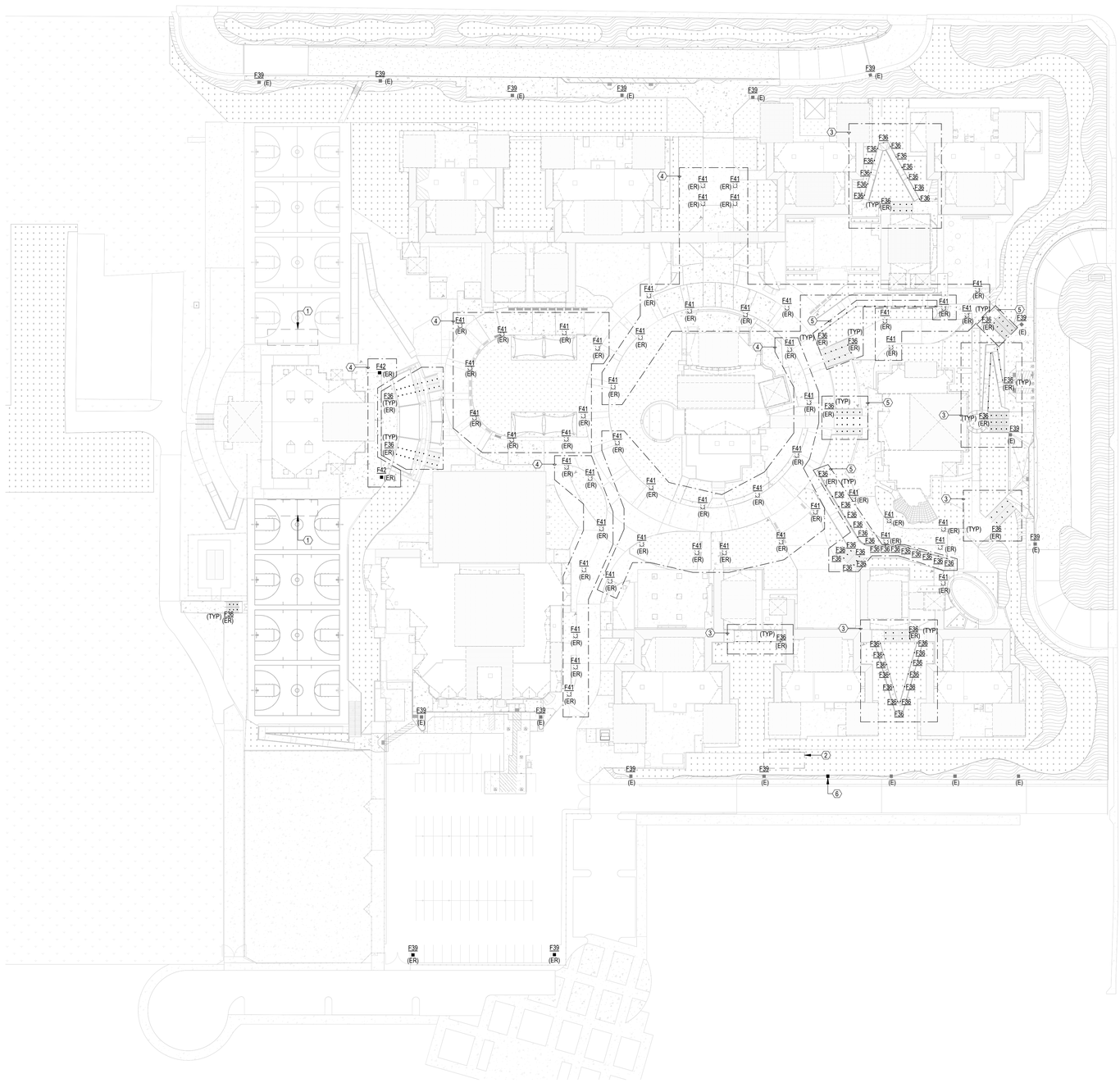
RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

TITLE 24 CALCULATIONS

E0-001



1 ELECTRICAL SITE PLAN - DEMO
1" = 50'-0"

0' 25' 50' 100'

PLAN NORTH

KEY NOTES ⓧ

1 EXISTING PORTABLE BUILDING TO BE DEMOLISHED. REMOVE ALL ELECTRICAL AND LOW-VOLTAGE SERVICES BACK TO SOURCE.

2 EXISTING CELLULAR BUILDING TO BE DEMOLISHED. REMOVE ALL ELECTRICAL AND LOW-VOLTAGE SERVICES BACK TO SOURCE.

3 DEMOLISH ALL EXISTING LIGHT FIXTURES IN THIS AREA. AT STAIRS, INFILL CAVITY WITH CONCRETE. MAINTAIN EXISTING BRANCH CIRCUIT AND CONDUIT PATHWAY BACK TO ELECTRICAL ROOM FOR CONNECTION TO NEW POLE MOUNTED FIXTURES.

4 DEMOLISH ALL EXISTING LIGHT FIXTURES IN THIS AREA. MAINTAIN EXISTING BRANCH CIRCUIT AND CONDUIT BACK TO ELECTRICAL ROOM FOR CONNECTION TO NEW POLE MOUNTED FIXTURES.

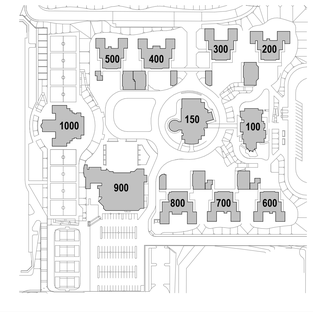
5 DEMOLISH ALL EXISTING LIGHT FIXTURES IN THIS AREA. AT STAIRS, INFILL CAVITY WITH CONCRETE. DEMOLISH ALL CONDUCTORS BACH TO SOURCE PANEL.

6 EXISTING CROWN CASTLE 35'-0" TALL ANTENNA POLE TO BE REPLACED. MAINTAIN EXISTING LIGHT FIXTURE HEAD, CONDUCTORS AND GROUNDING FOR RECONNECTION.

GENERAL NOTES

1. DEMOLISH ALL EXISTING STEP LIGHT AND INFILL CAVITY WITH CONCRETE.

KEY PLAN



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Checked By	:	Checker
Revisions	:	

ELECTRICAL SITE PLAN - DEMO

ED0-100

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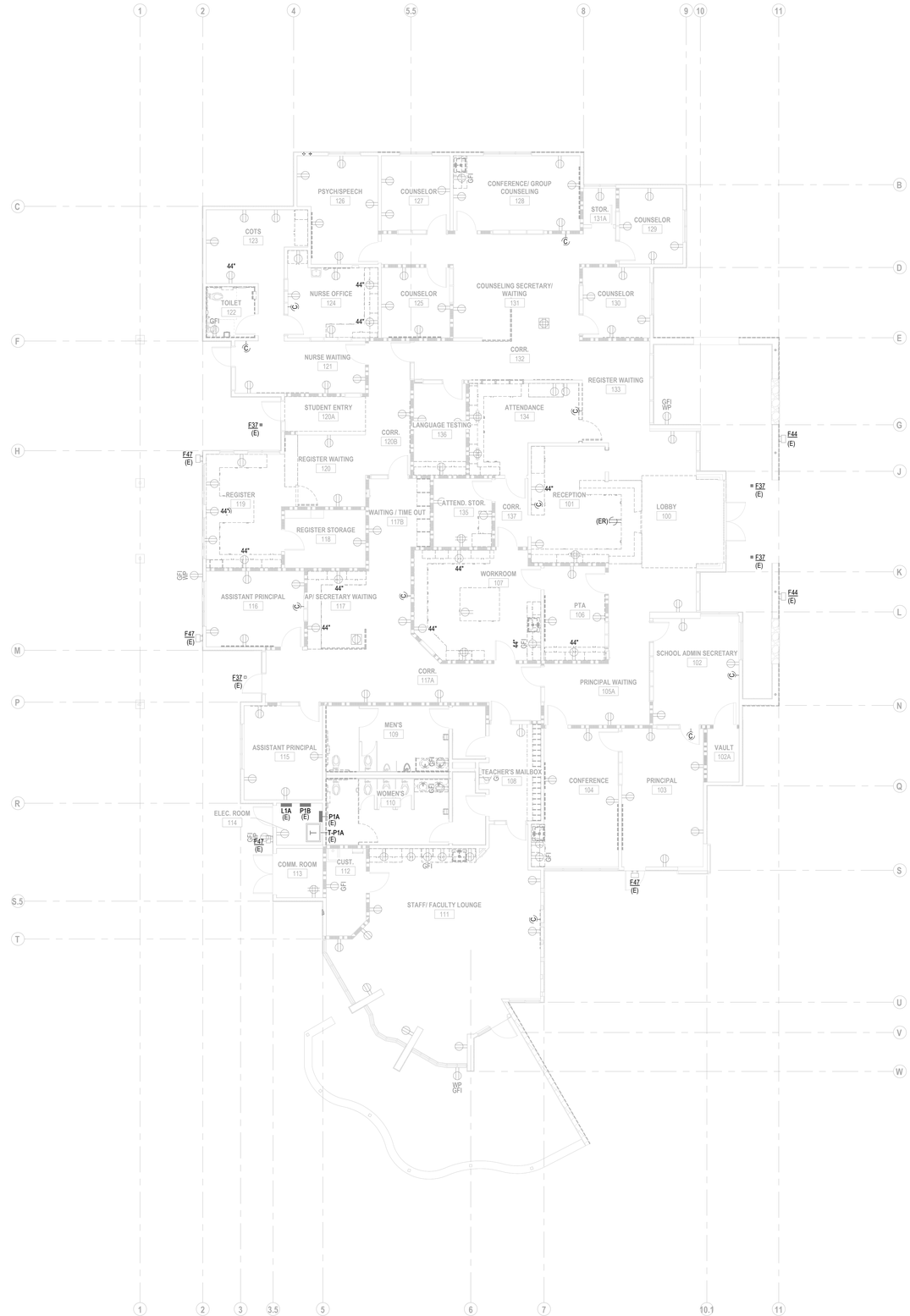


1 **LEVEL 1 DEMO ELECTRICAL PLAN - BUILDING 100**
1/8" = 1'-0"

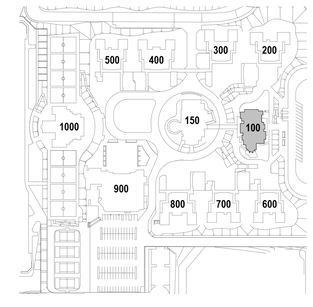
KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



PLAN NORTH

0' 2' 4'

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SWEETWATER UNION HIGH SCHOOL DISTRICT

DSA BACKCHECK

RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 100 - ELECTRICAL PLAN - DEMO

ED1-100

Architects Mosher Drew and Rey MS - Building & Site Rehabilitation - Construction Documents - Submittal to DSA - 2025.xxx
Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation - Construction Documents - Submittal to DSA - 2025.rvt

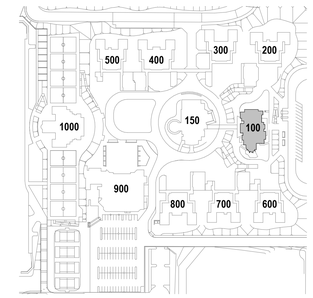
1 **ROOF DEMO POWER PLAN - BUILDING 100**
1/8" = 1'-0"

KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

KEY PLAN



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APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

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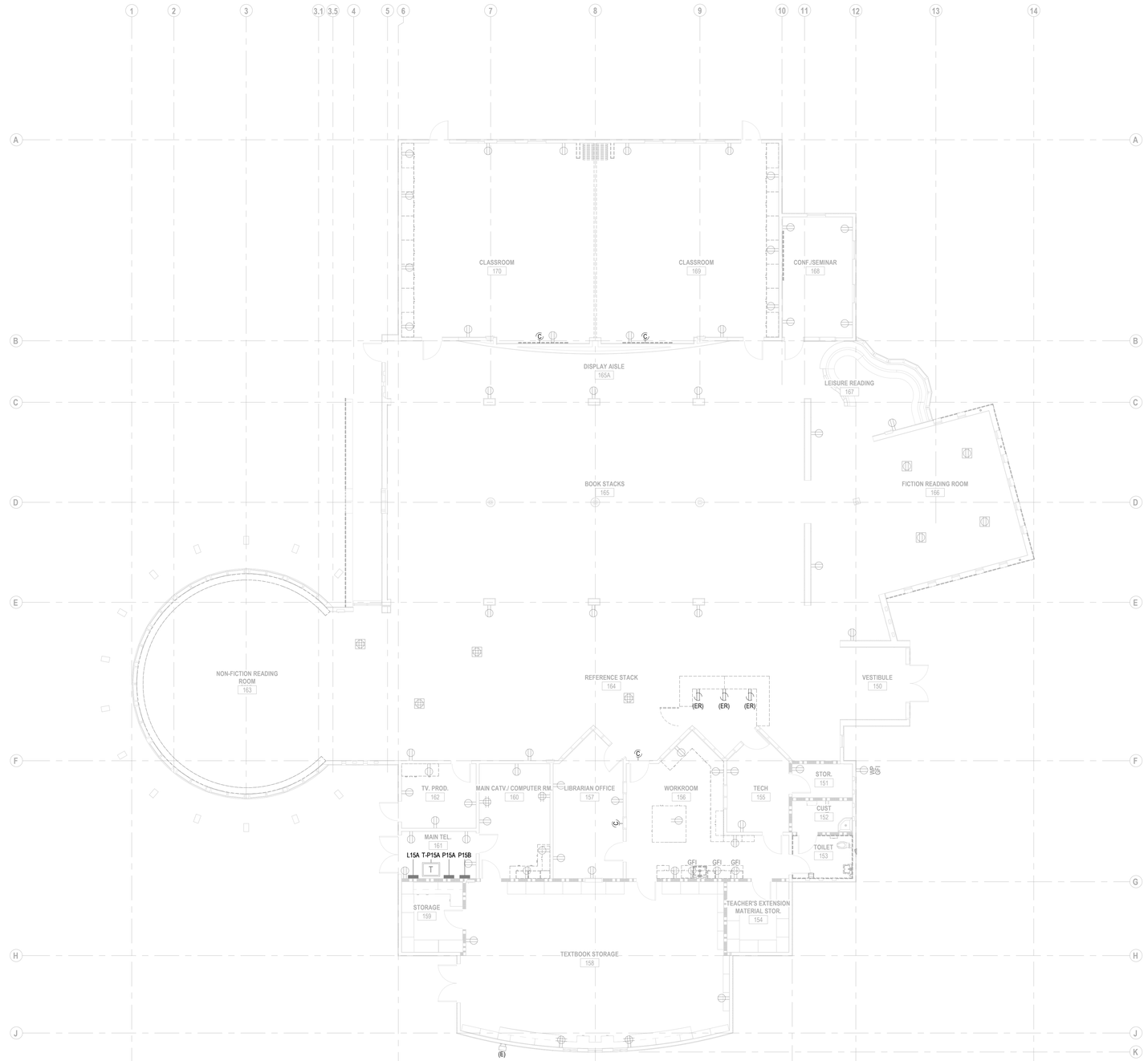
BLDG 100 - ROOF ELECTRICAL PLAN - DEMO

ED1-101



1 **LEVEL 1 DEMO POWER PLAN - BUILDING 150**
1/8" = 1'-0"

PLAN NORTH

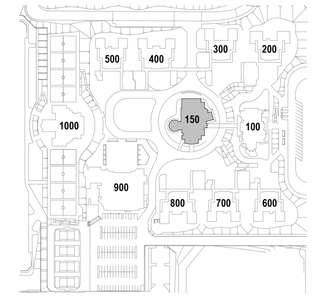
0' 2' 4'

KEY NOTES ⓧ

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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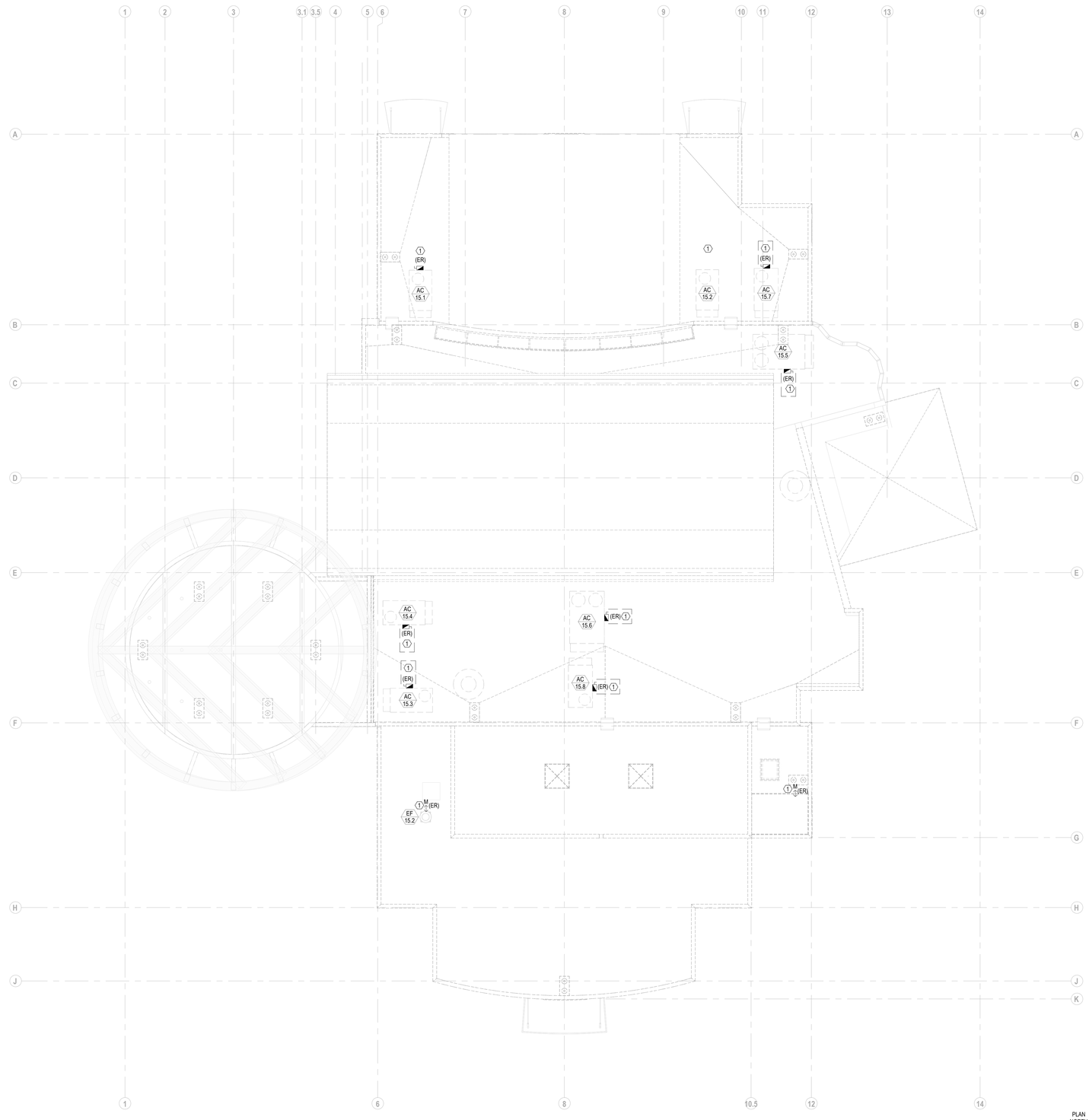
BLDG 150 - ELECTRICAL PLAN - DEMO

ED1.5-100

Architects Mosher Drew and Rey MS - Building & Site Rehabilitation - 24203.10 - 1174 E J St, Chula Vista, CA 91910



1 **BLDG 150 - ROOF ELECTRICALR PLAN - DEMO**
1/8" = 1'-0"

PLAN NORTH

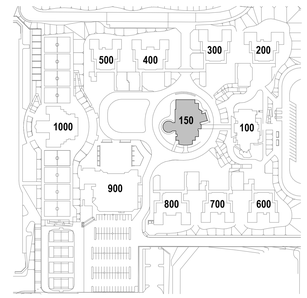
0' 2' 4'

KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

KEY PLAN



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SWEETWATER UNION HIGH SCHOOL DISTRICT
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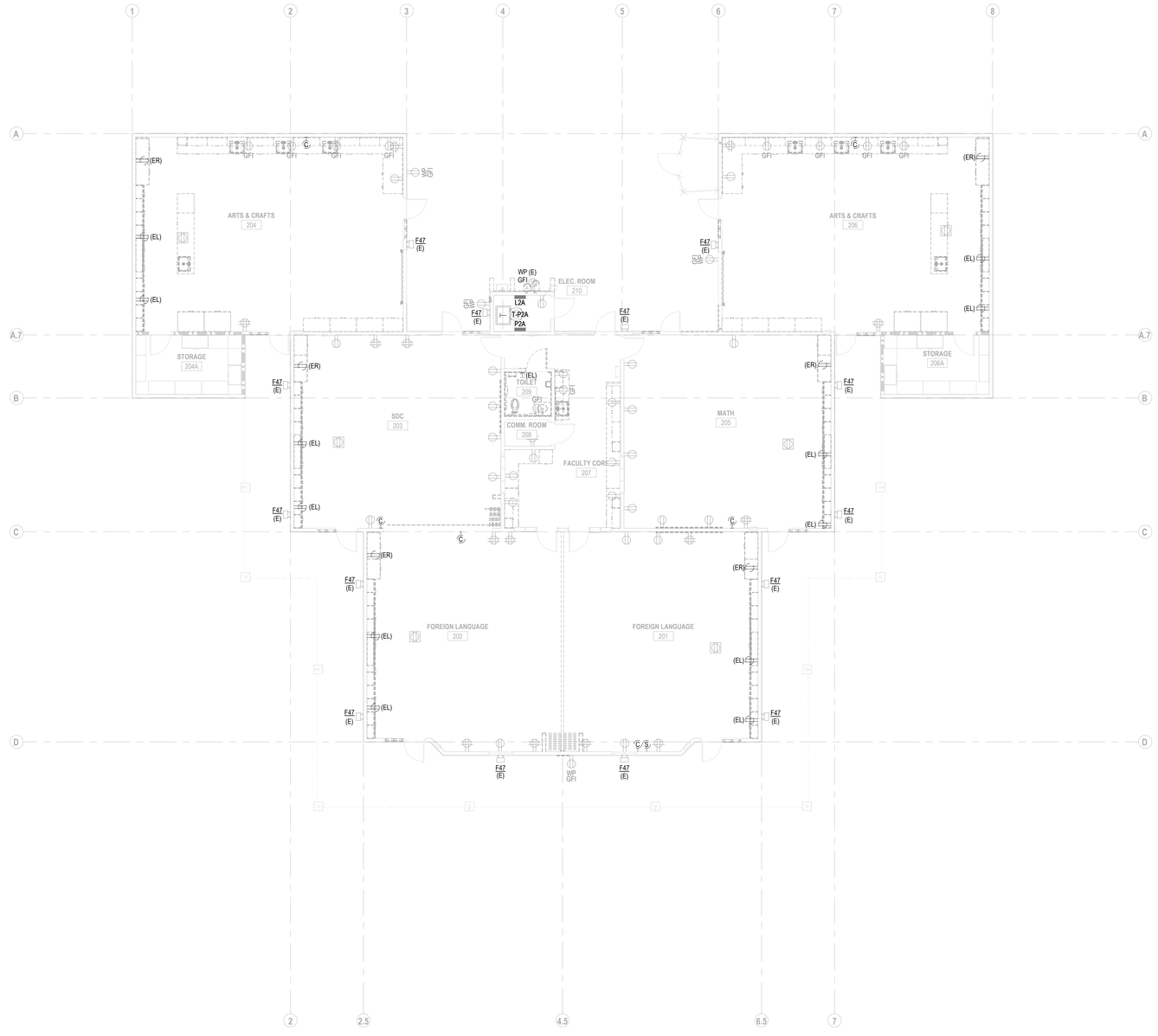
BLDG 150 - ROOF ELECTRICAL PLAN - DEMO

ED1.5-101

Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/24203.10_RDR_Bldg 150_Roof Electrical_Demo_R24_ACS.rvt



1 **LEVEL 1 DEMO POWER PLAN - BUILDING 200**
1/8" = 1'-0"

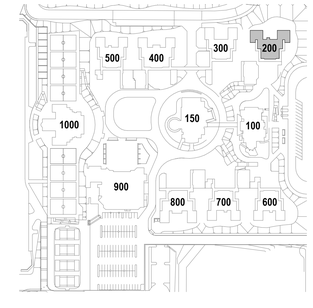
KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



PLAN NORTH

0' 4' 8'

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1174 E. J STREET, CHULA VISTA, CA 91910

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Drawn By	:	Author
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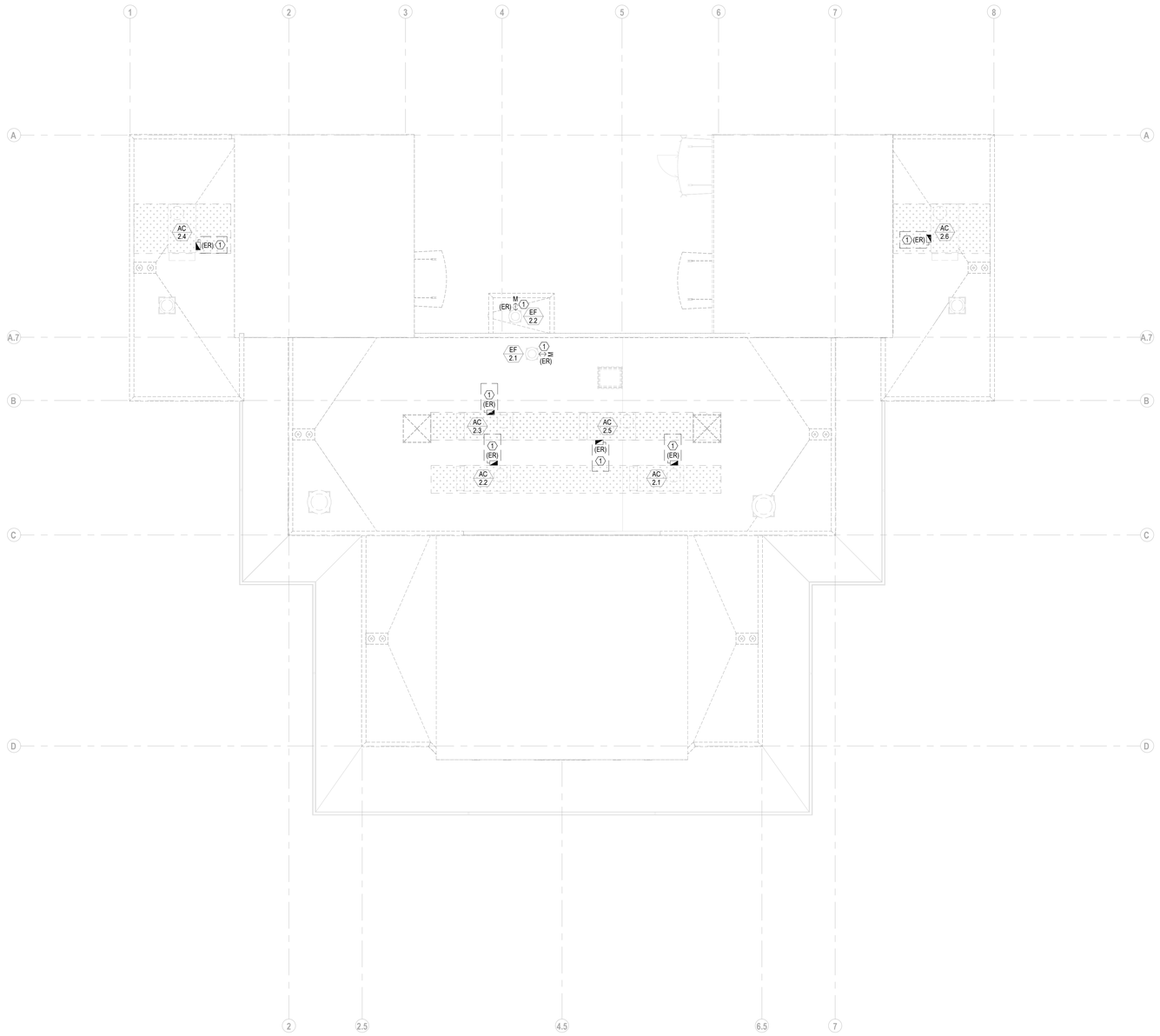
Revisions	:	

BLDG 200 - ELECTRICAL PLAN - DEMO

ED2-100



1 ROOF DEMO POWER PLAN - BUILDING 200
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

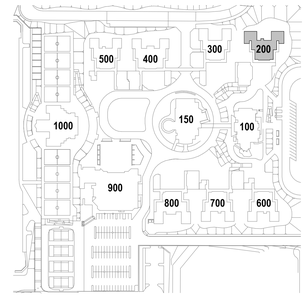
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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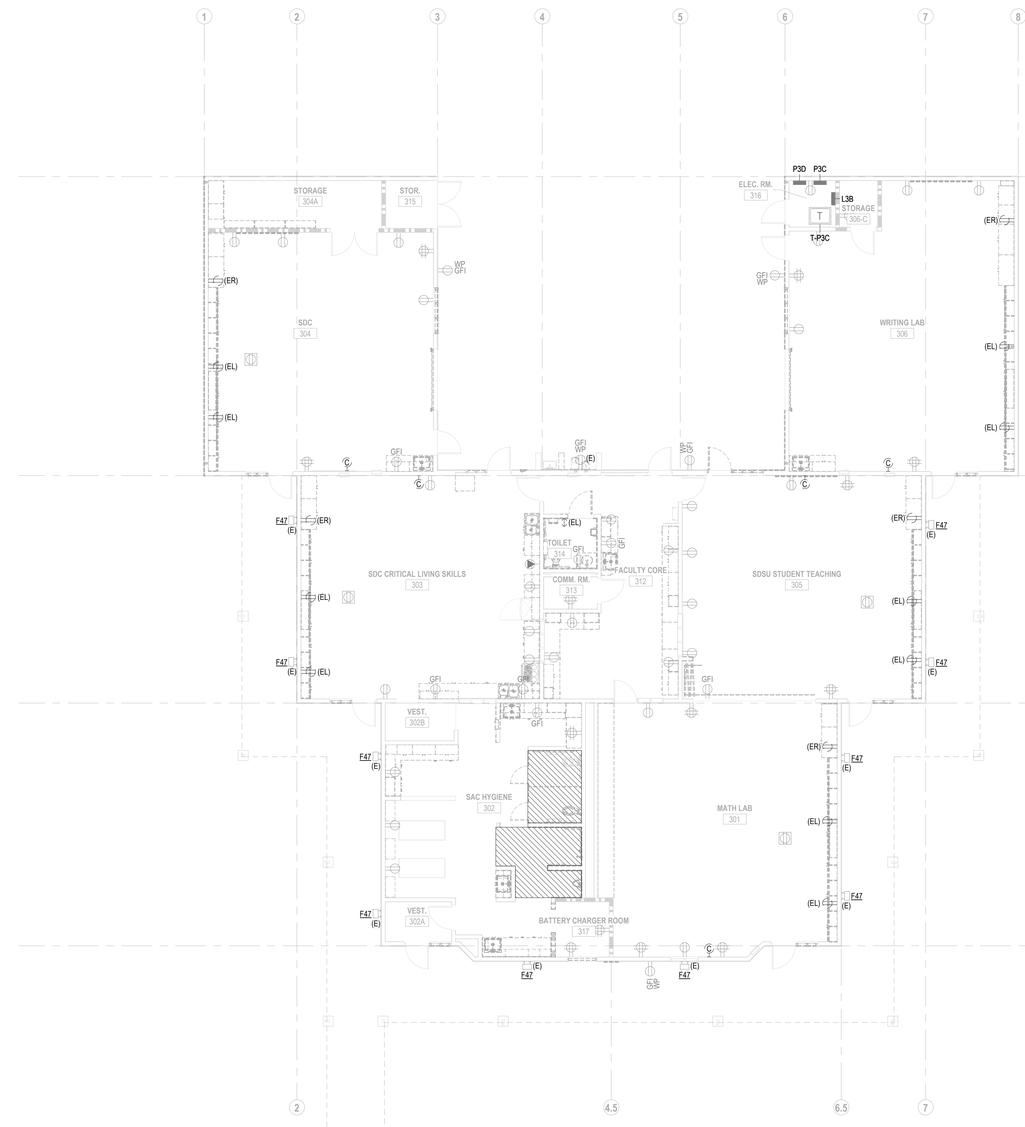
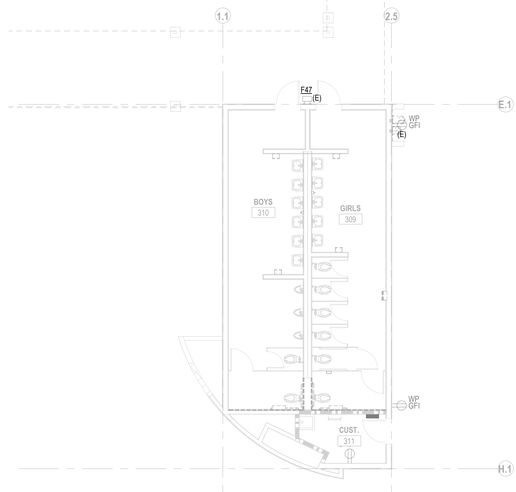
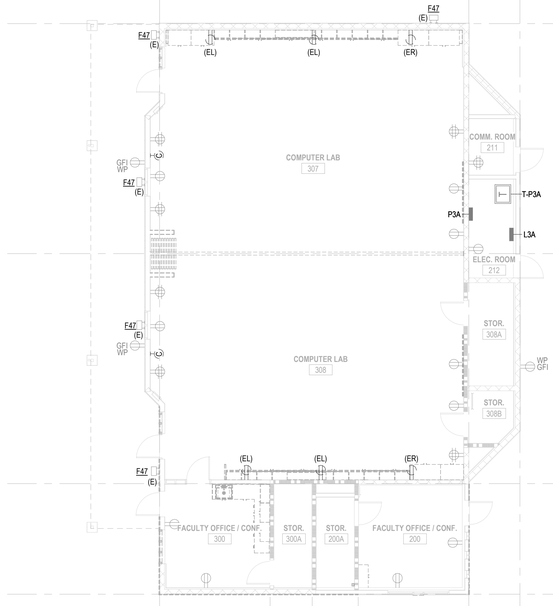
BLDG 200 - ROOF ELECTRICAL PLAN - DEMO

ED2-101

Architects Mosher Drew and Rey MS - Building & Site Rehabilitation\24203.10_RDR_Bldg 200_Roof Demo Power Plan.dwg, 9/5/2025 8:31:12 AM, Author







1 **LEVEL 1 DEMO POWER PLAN - BUILDING 300**
1/8" = 1'-0"

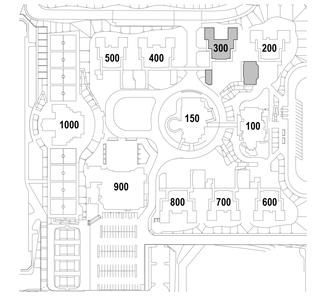
KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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RANCHO DEL REY MIDDLE SCHOOL
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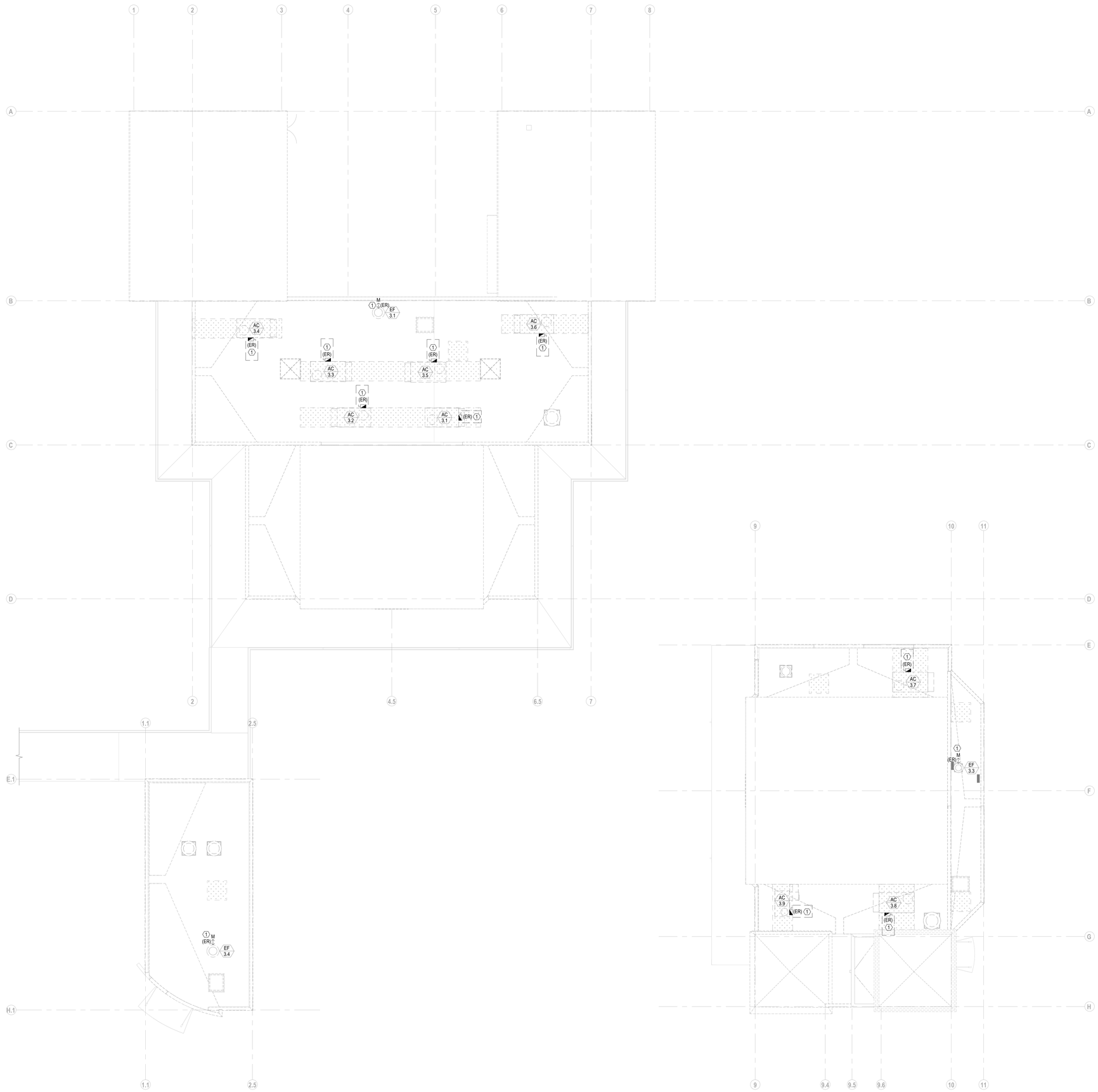
BLDG 300 - ELECTRICAL PLAN - DEMO

ED3-100

PLAN NORTH
0' 4' 8'



1 ROOF DEMO POWER PLAN - BUILDING 300
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

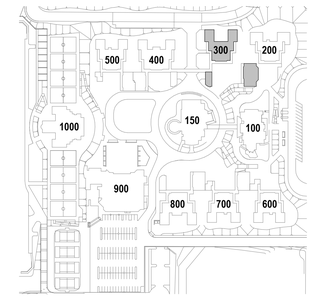
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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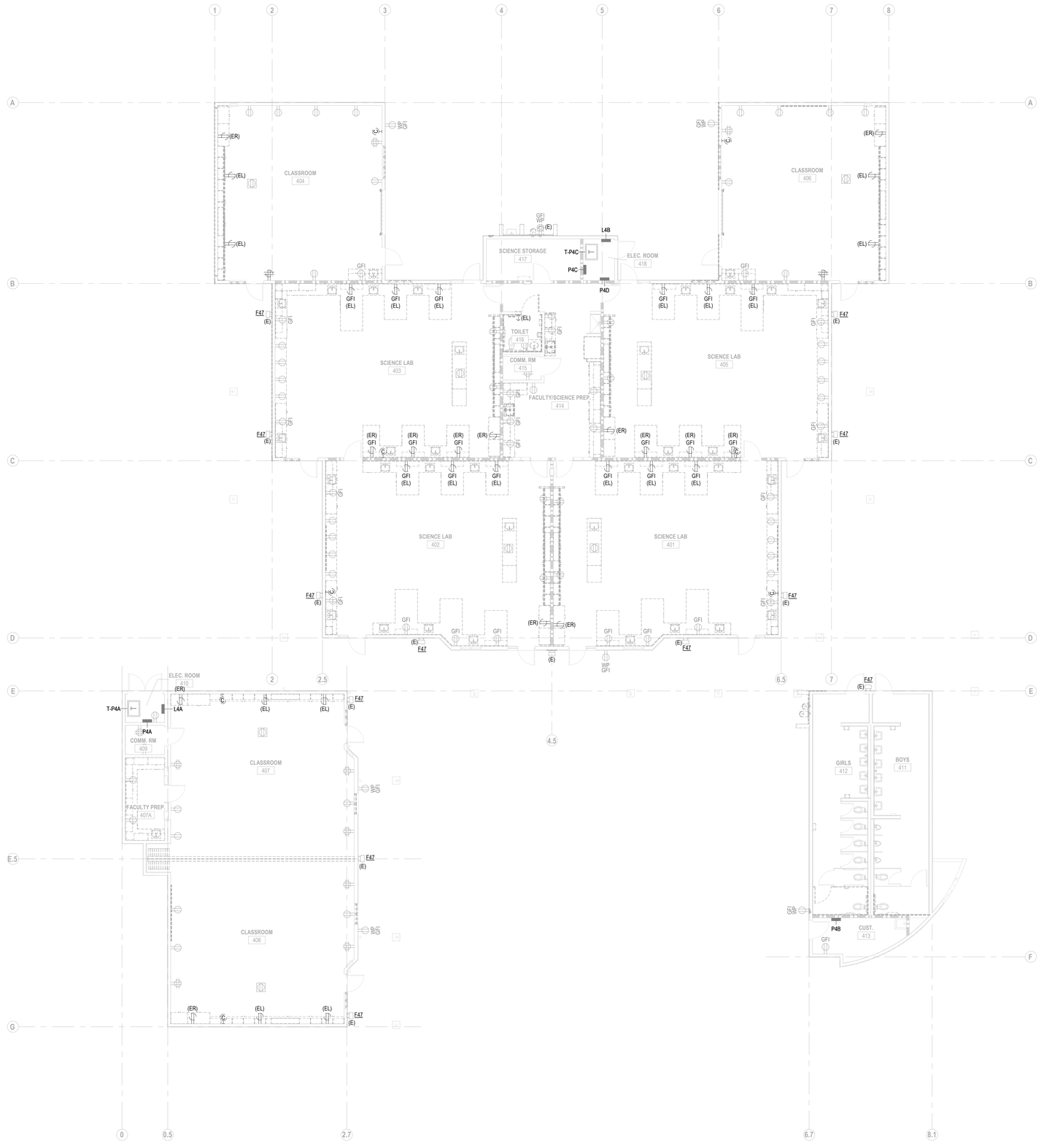
BLDG 300 - ROOF ELECTRICAL PLAN - DEMO

ED3-101



1 **LEVEL 1 DEMO POWER PLAN - BUILDING 400**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

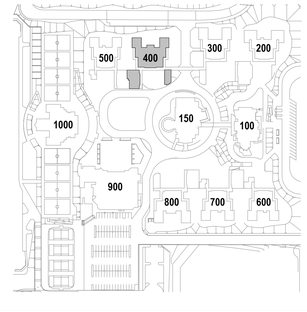
KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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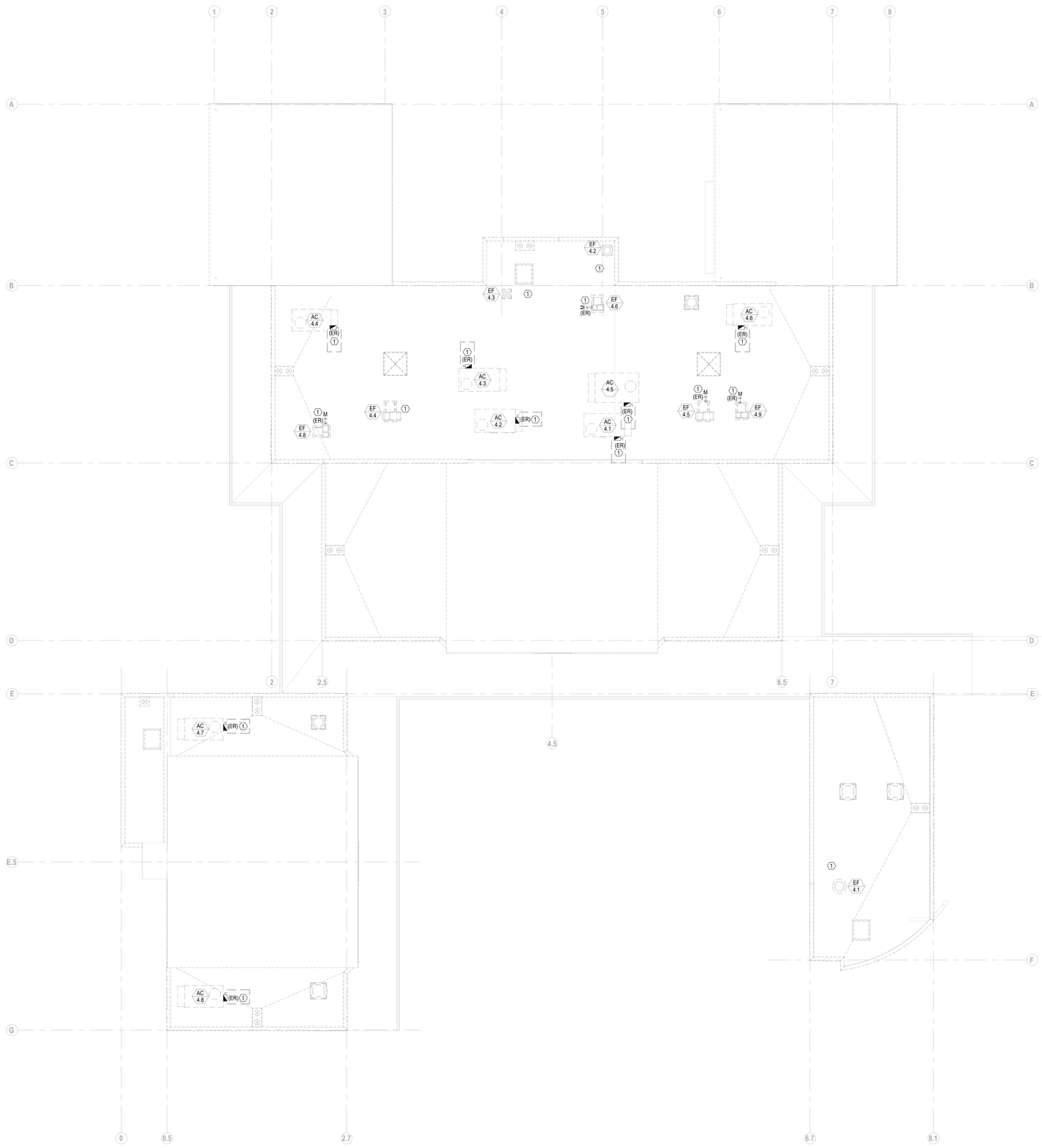
Revisions	:	

BLDG 400 - ELECTRICAL PLAN - DEMO

ED4-100

Architects Mosher Drew San Diego, CA 92110 Project Number: 24203.10 Date: 09-05-2025 Drawn By: Author Checked By: Checker



1 **ROOF DEMO POWER PLAN - BUILDING 400**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

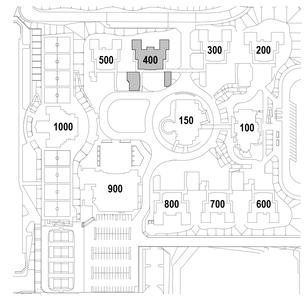
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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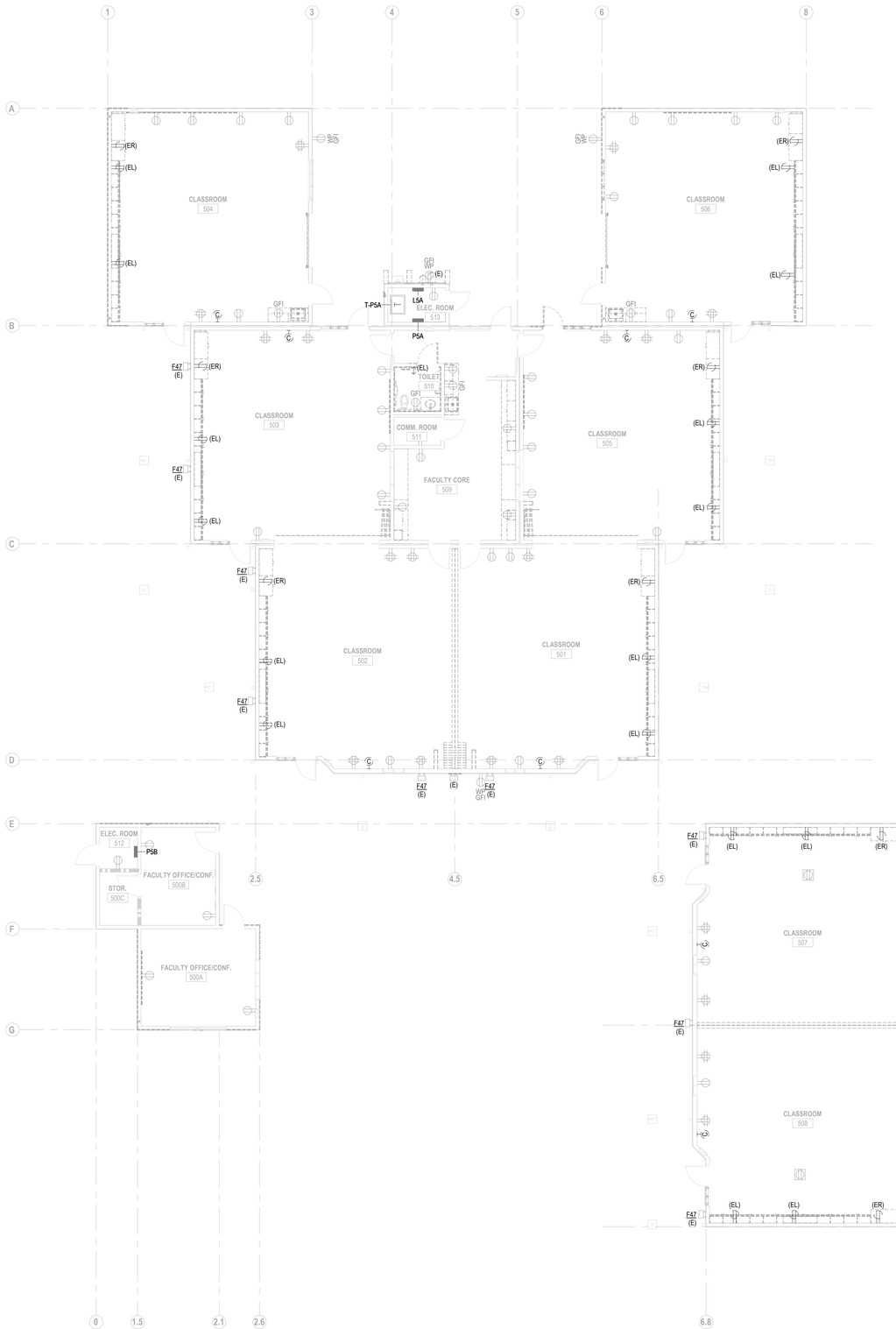
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 400 - ROOF ELECTRICAL PLAN - DEMO

ED4-101

Architects Mosher Drew and Rey MS - Building & Site Rehabilitation\24203.10_RDR_Building & Site Rehab_Central\Arch\24203.10_RDR_ED4.dwg 9/5/2025 8:24:31 AM



1 **LEVEL 1 DEMO POWER PLAN - BUILDING 500**
1/8" = 1'-0"

0 4' 8'

PLAN NORTH

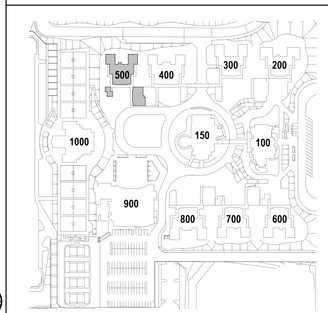
KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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BLDG 500 - ELECTRICAL PLAN - DEMO

ED5-100

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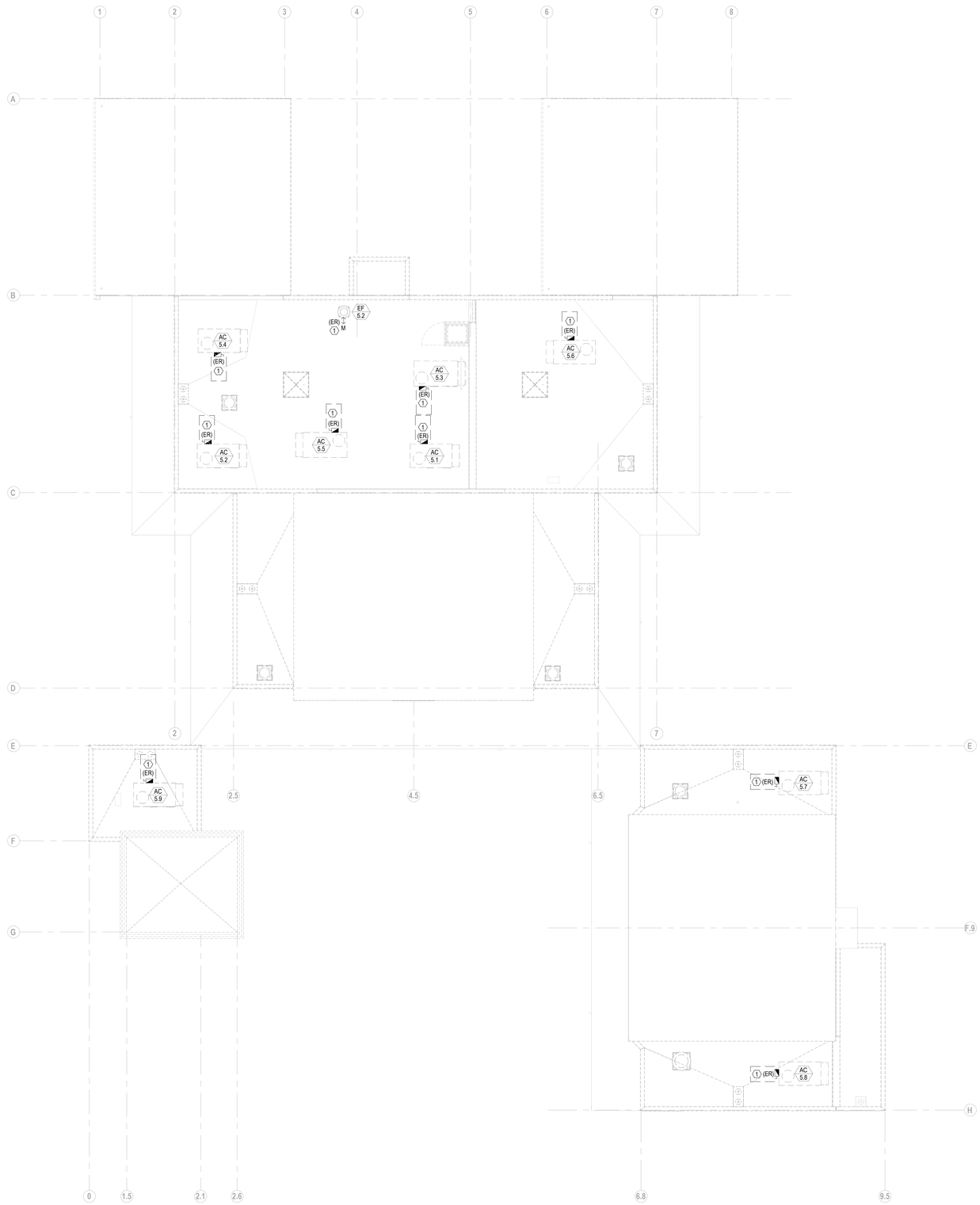


1 **ROOF DEMO POWER PLAN - BUILDING 500**
1/8" = 1'-0"

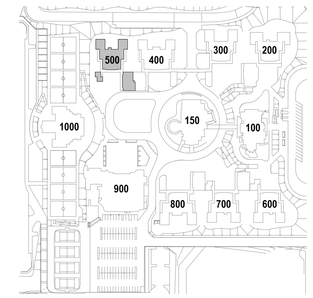
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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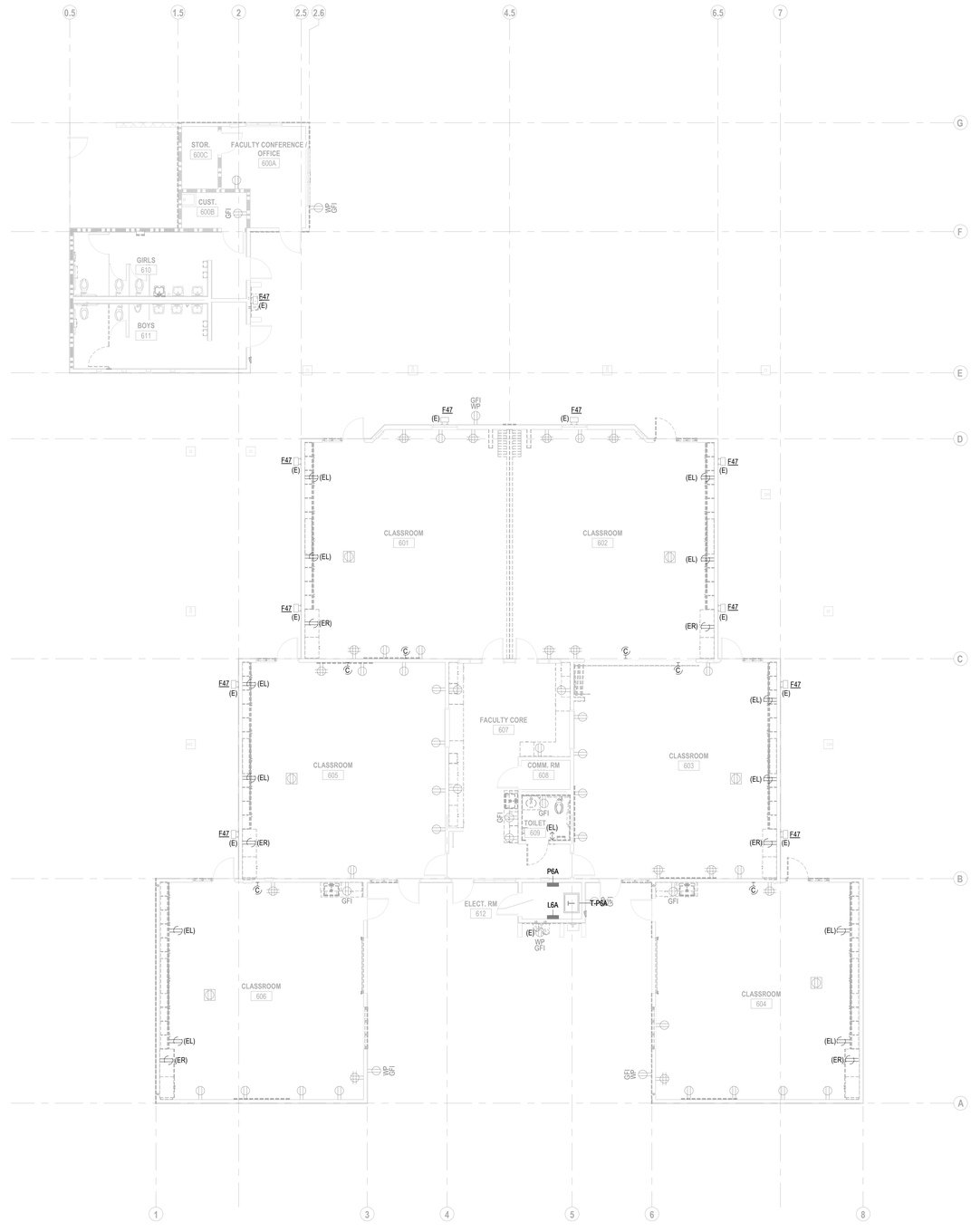
BLDG 500 - ROOF ELECTRICAL PLAN - DEMO

ED5-101



1 **LEVEL 1 DEMO POWER PLAN - BUILDING 600**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

1 XXX

GENERAL NOTES

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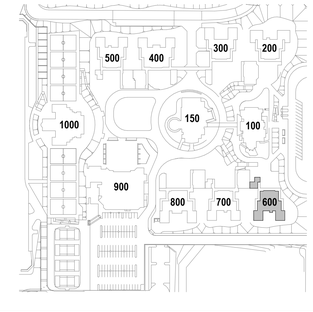
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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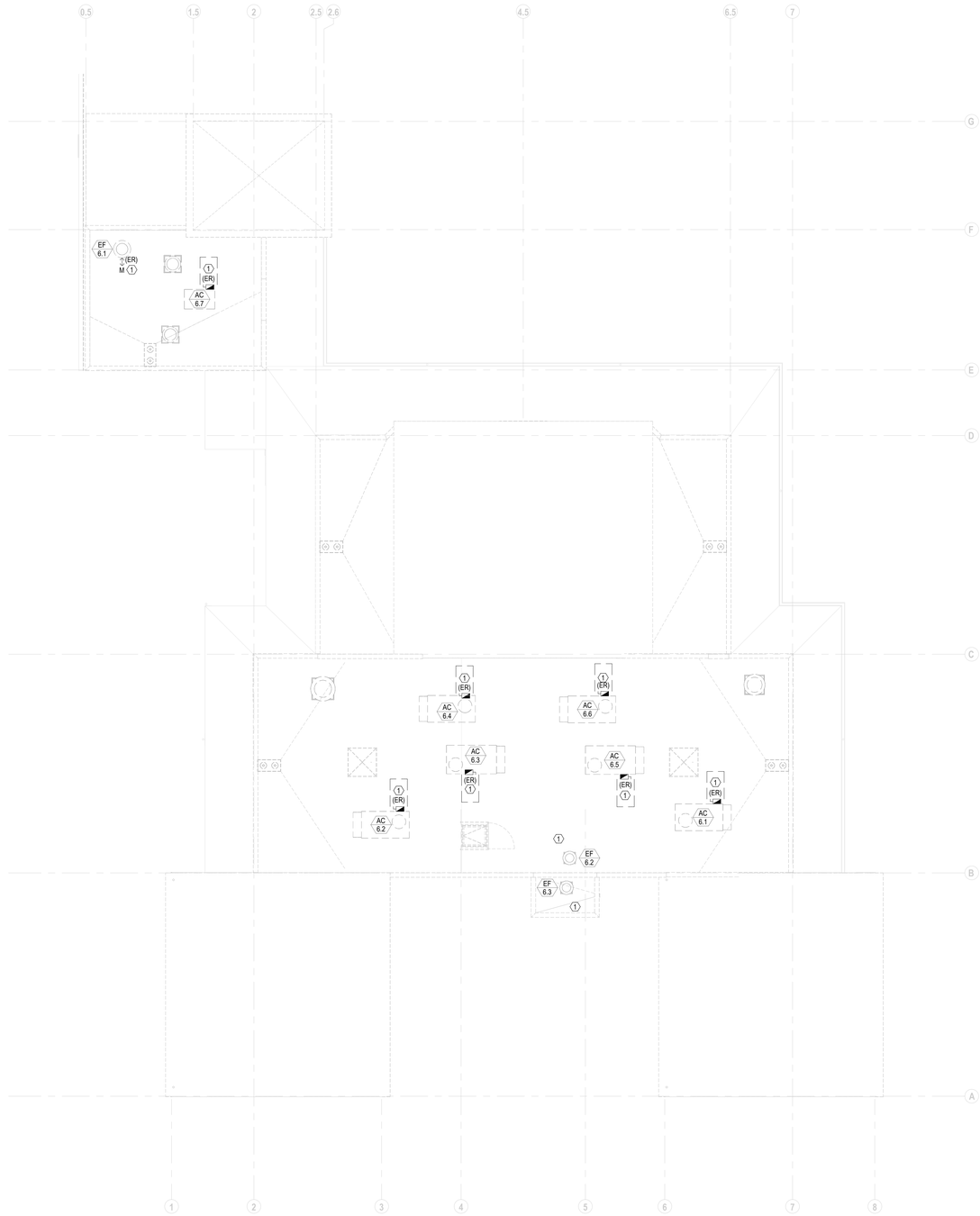
BLDG 600 - ELECTRICAL PLAN - DEMO

ED6-100

Architect Mosher Drew San Diego, CA 92110 Project Number 24203.10 Date 09-05-2025 Drawn By Author Checked By Checker



1 **ROOF DEMO POWER PLAN - BUILDING 600**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

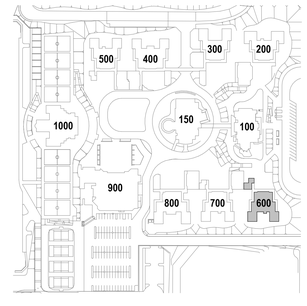
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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BLDG 600 - ROOF ELECTRICAL PLAN - DEMO

ED6-101

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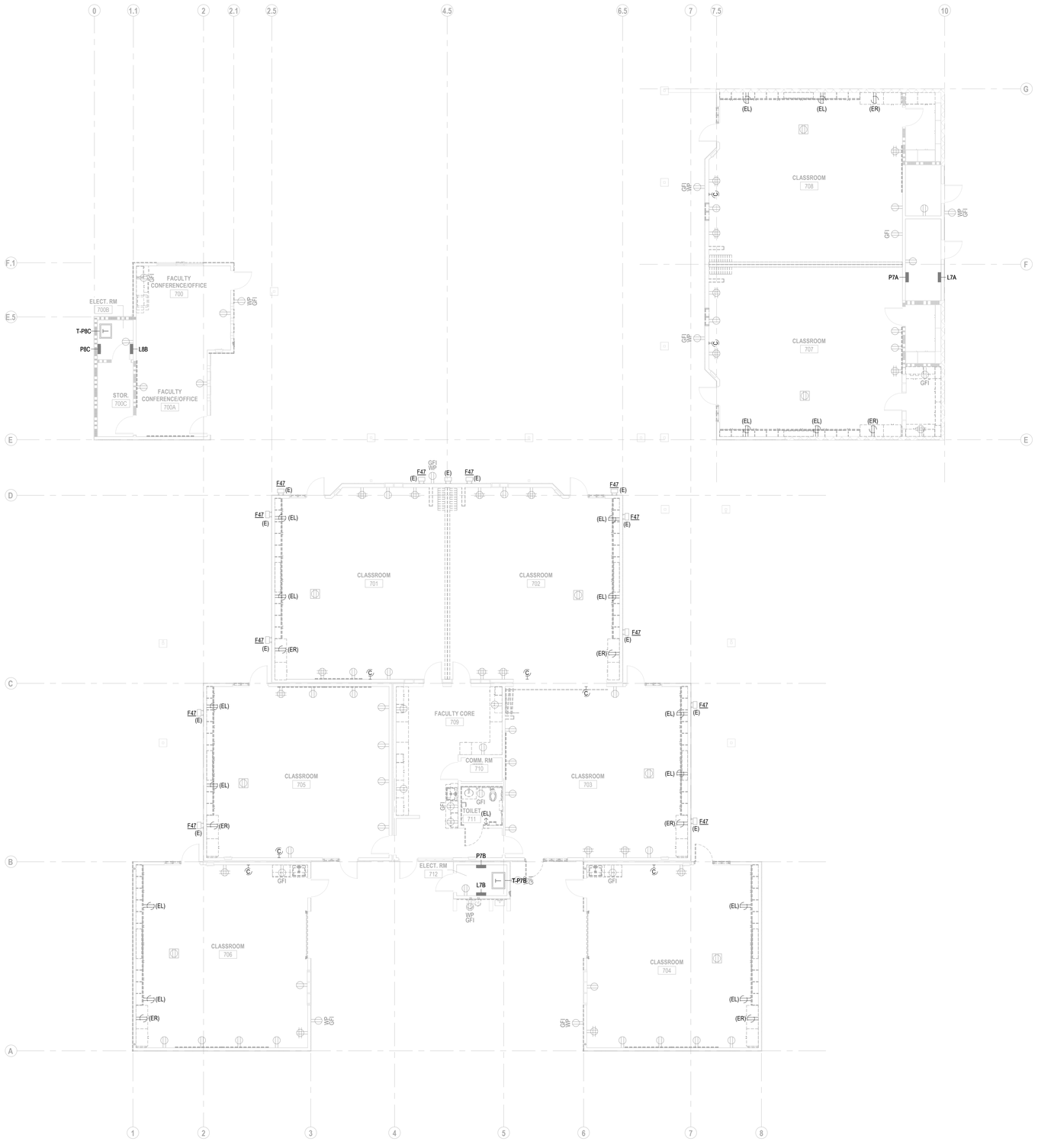

1 **LEVEL 1 DEMO POWER PLAN - BUILDING 700**
1/8" = 1'-0"

KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
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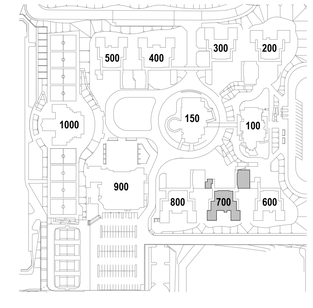
KEY PLAN



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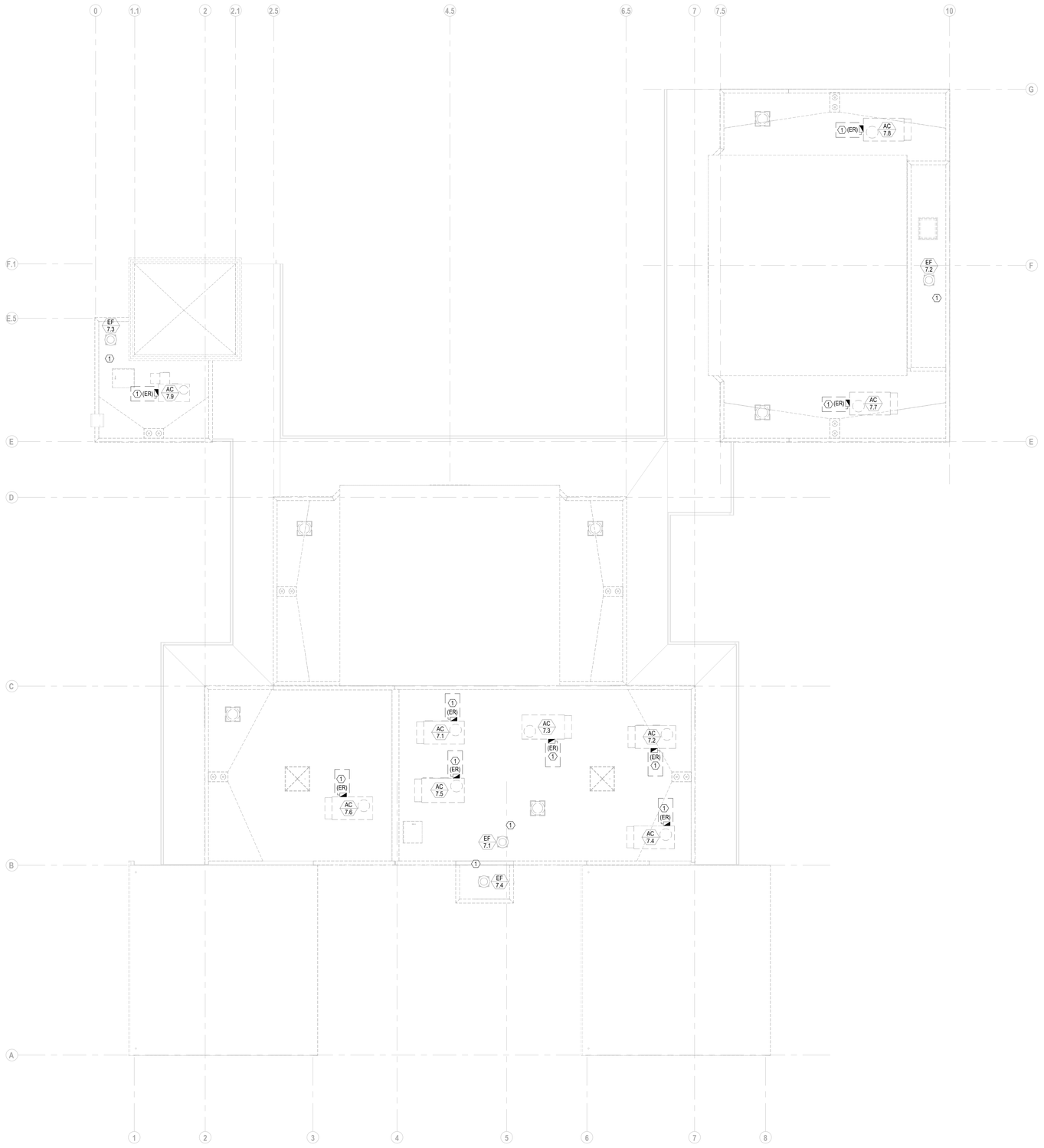
BLDG 700 - ELECTRICAL PLAN - DEMO

ED7-100



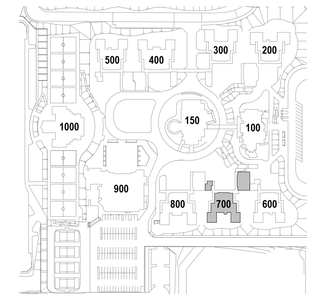
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



1 **ROOF DEMO POWER PLAN - BUILDING 700**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

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BLDG 700 - ROOF ELECTRICAL PLAN - DEMO

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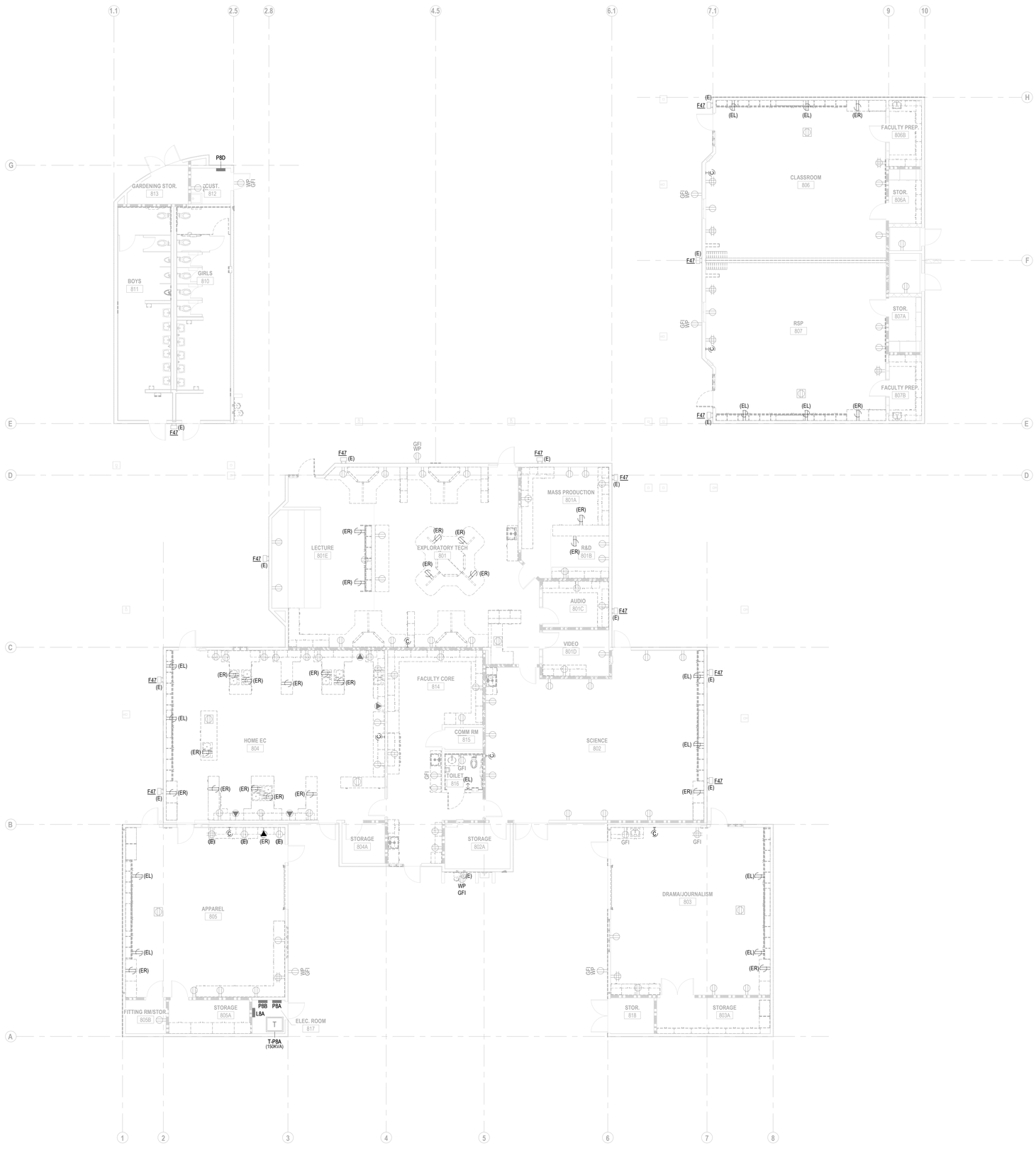

1 LEVEL 1 DEMO POWER PLAN - BUILDING 800

1/8" = 1'-0"

0' 4' 8'

PLAN NORTH

KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
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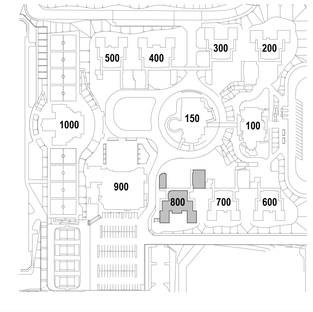
KEY PLAN



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BLDG 800 - ELECTRICAL PLAN - DEMO

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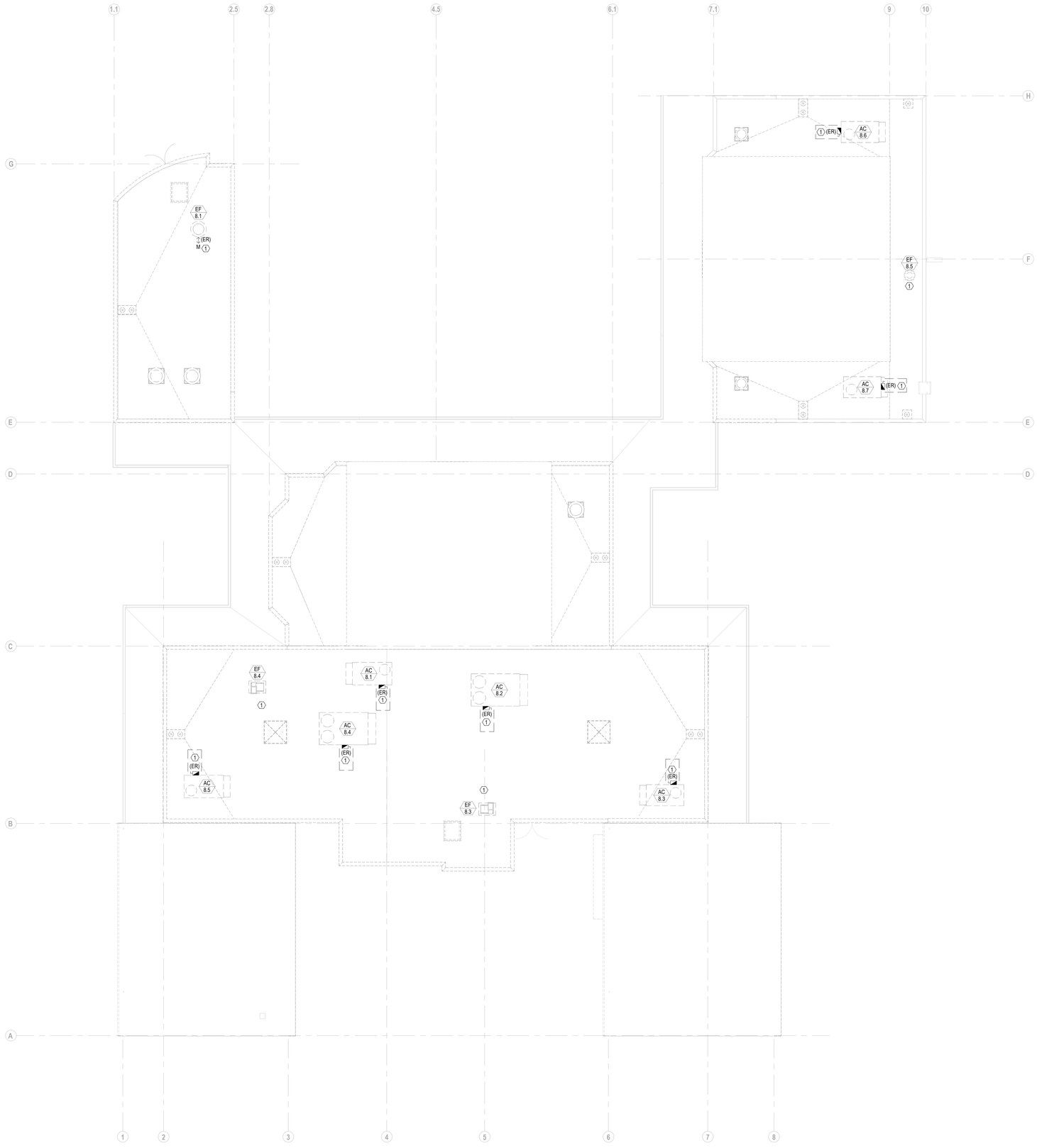


1 **ROOF DEMO POWER PLAN - BUILDING 800**
1/8" = 1'-0"

PLAN NORTH
0' 4' 8'

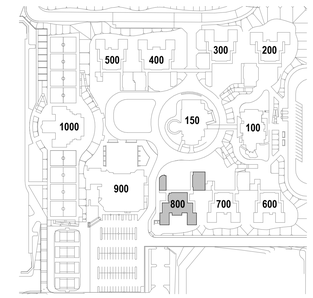
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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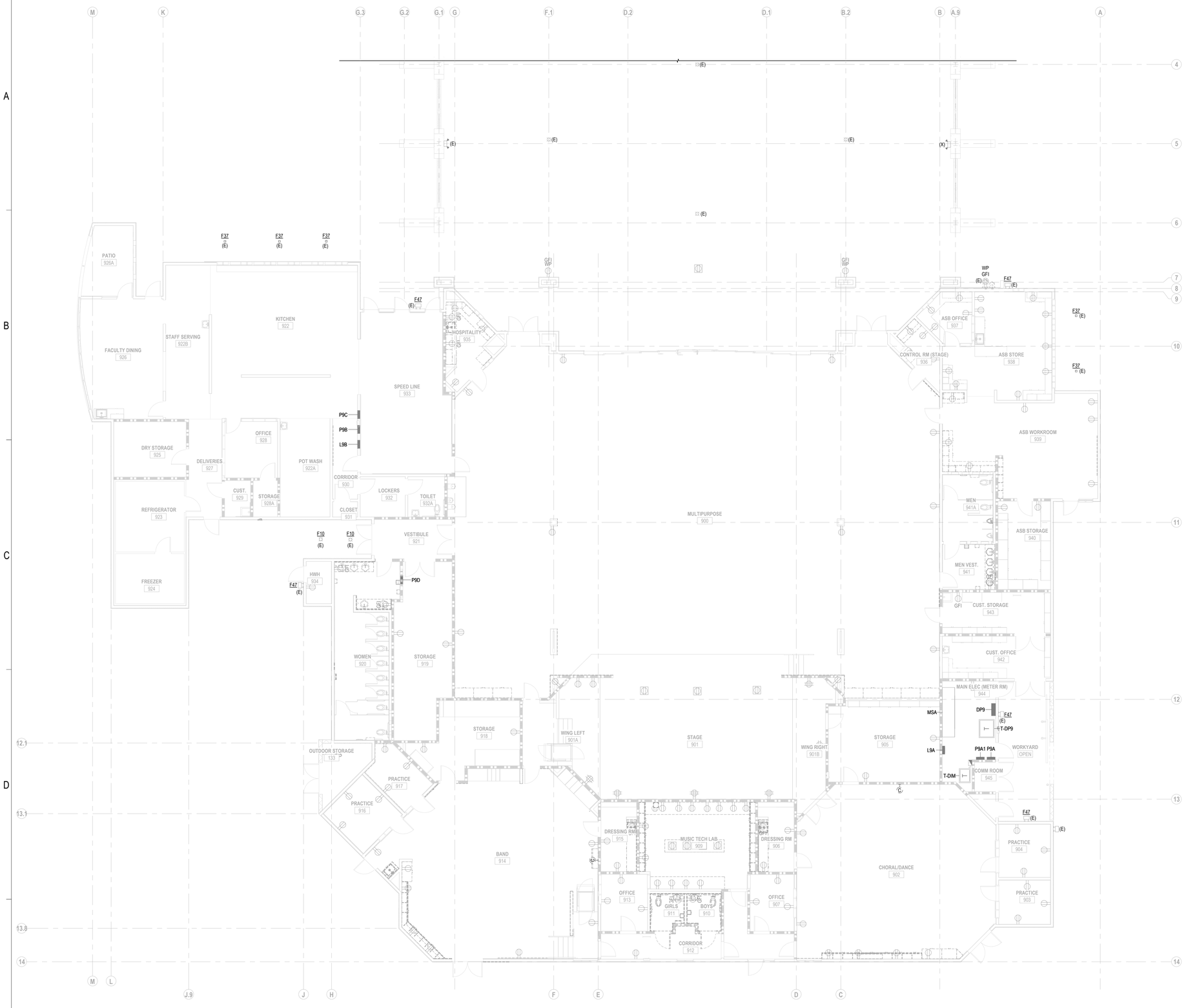
BLDG 800 - ROOF ELECTRICAL PLAN - DEMO

ED8-101

Architect Mosher Drew and Rey MS - Building & Site Rehabilitation 1174 E J Street Chula Vista, CA 91910 Sweetwater Union High School District



1 **LEVEL 1 DEMO POWER PLAN - BUILDING 900**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

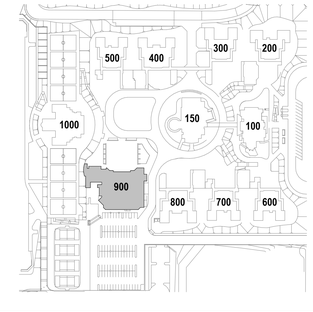
KEY NOTES ⓧ

1 XXX

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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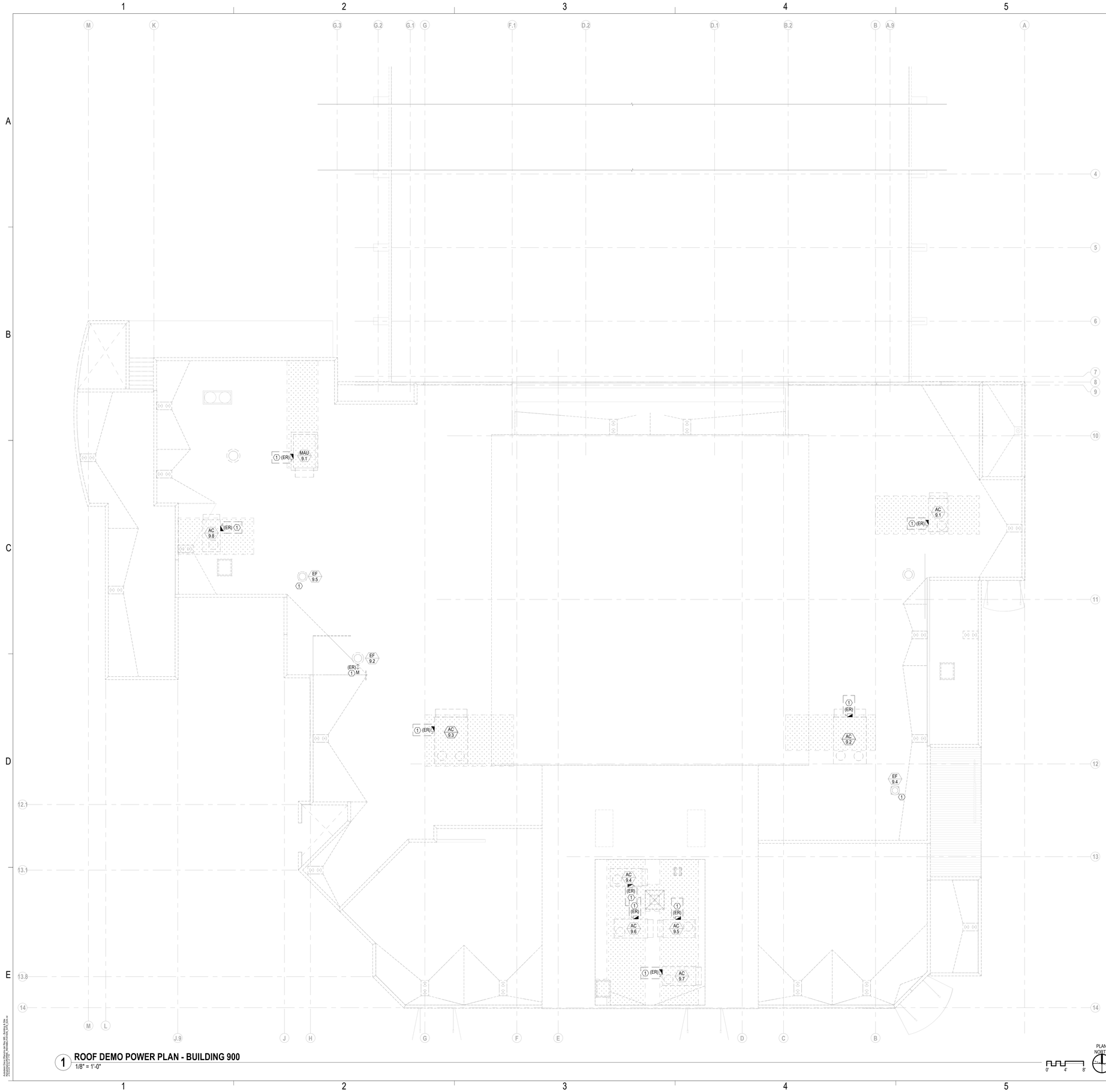
SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 900 - ELECTRICAL PLAN - DEMO

ED9-100



1 ROOF DEMO POWER PLAN - BUILDING 900
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

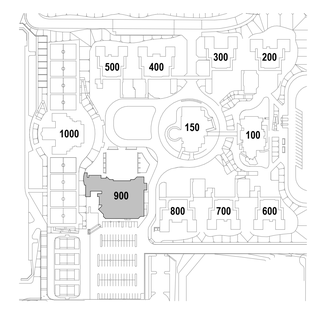
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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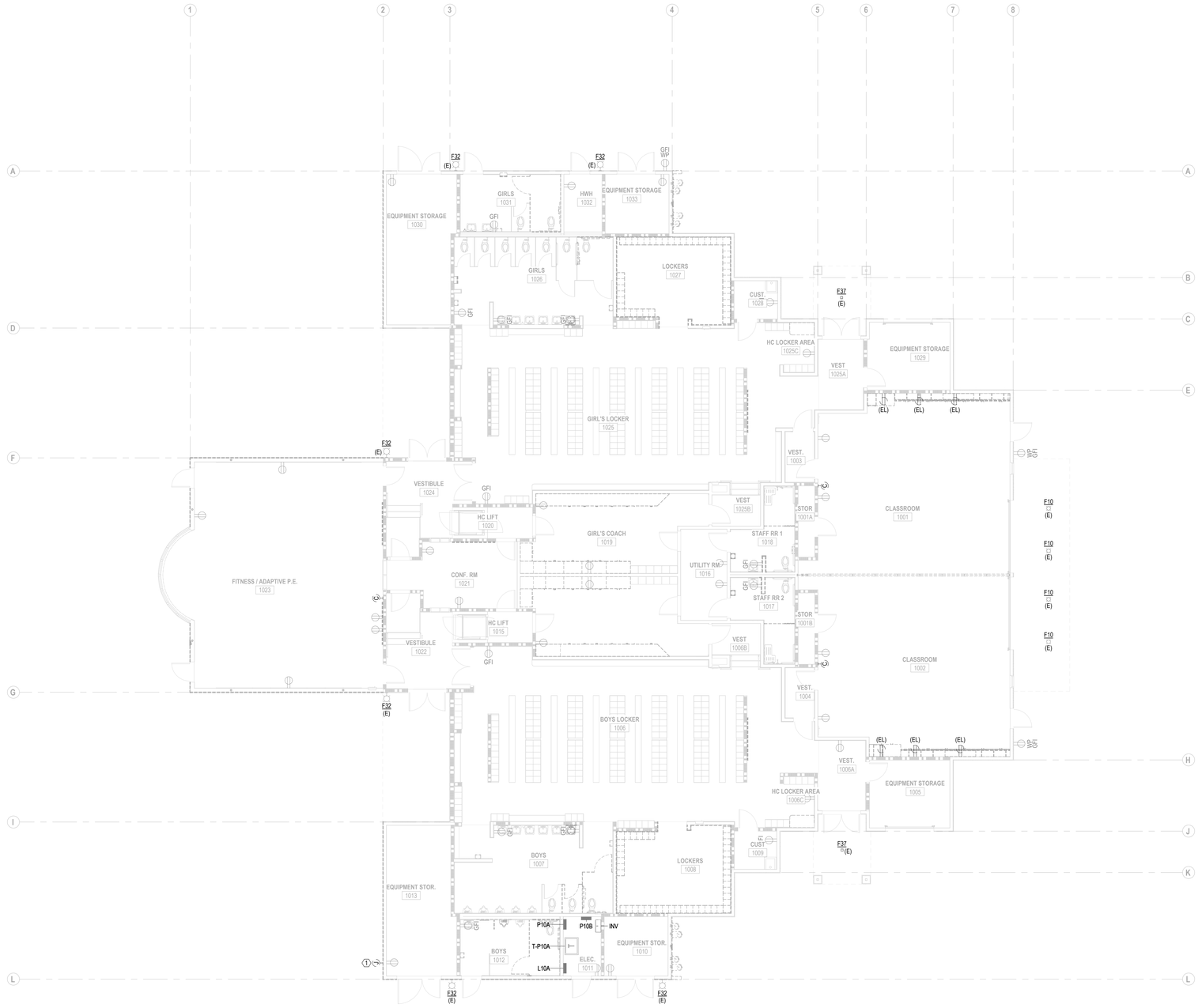
BLDG 900 - ROOF ELECTRICAL PLAN - DEMO

ED9-101



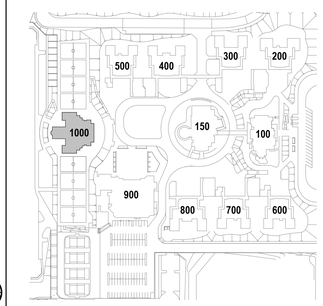
KEY NOTES ⓧ

1 EXISTING JUNCTION BOX AND CONDUITS FOR EXISTING PORTABLES TO BE DEMOLISHED.

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



1 **LEVEL 1 DEMO POWER PLAN - BUILDING 1000**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

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BLDG 1000 - ELECTRICAL PLAN - DEMO

ED10-100

1 **ROOF DEMO POWER PLAN - BUILDING 1000**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

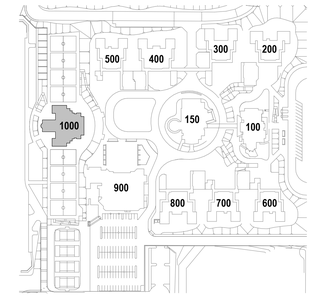
KEY NOTES ⓧ

1 EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH EXISTING DISCONNECT AND CONDUIT BACK TO UNDER SIDE OF ROOF FOR FUTURE EXTENSION TO NEW MECHANICAL EQUIPMENT.

GENERAL NOTES

1. XXX

KEY PLAN



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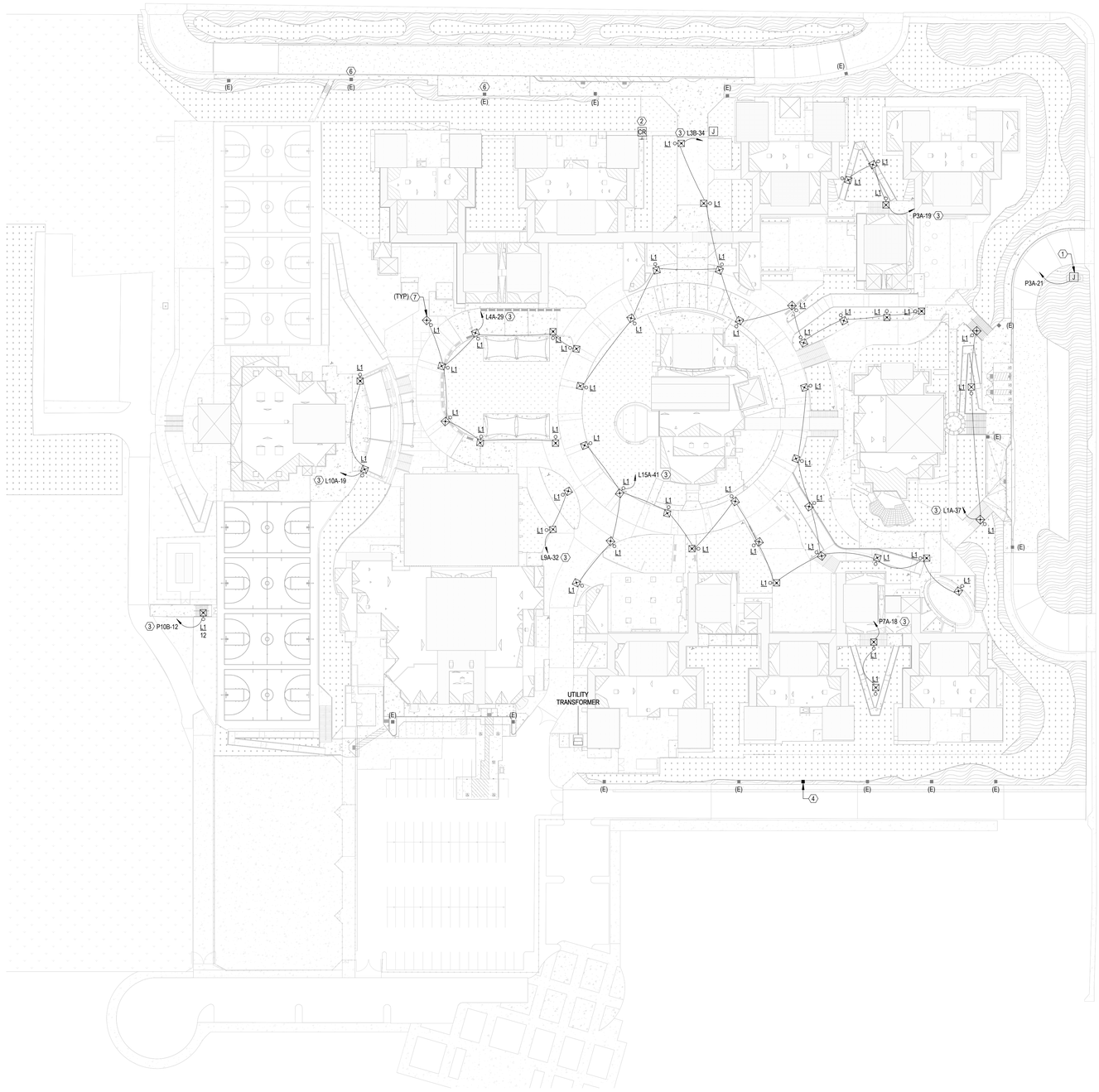
BLDG 1000 - ROOF ELECTRICAL PLAN - DEMO

ED10-101

Architect Mosher Drew and Mar Ventures, LLC, Building & Site Rehabilitation, Rancho Del Rey Middle School, Sweetwater Union High School District, CA 91910



1 **ELECTRICAL SITE PLAN**
1" = 50'-0"

KEY NOTES ⓧ

1 NEW MARQUEE. PROVIDE 120V POWER FROM BUILDING 300 ELECTRICAL ROOM. VERIFY LOCATION WITH SCHOOL DISTRICT AND ADDITIONAL REQUIREMENTS WITH MANUFACTURER'S SHOP DRAWINGS.

2 IP-BASED VIDEO CALL STATION AT NEW GATE. PROVIDE (2)1"C.O. FROM GATE POSTS TO NEAREST IDF ROOM IN EXISTING CLASSROOM BUILDING. PROVIDE MASTER CALL STATION AT RECEPTION STATION IN ADMINISTRATION BUILDING. SEE SPECIFICATION SECTION 282305 FOR ADDITIONAL DETAILS.

3 INTERCEPT EXISTING LIGHTING CIRCUIT AND EXTEND TO NEW POLE MOUNTED LIGHT FIXTURES. SPLICE CONDUCTORS IN WEATHERPROOF JUNCTION BOX AND SEAL ALL CONDUITS.

4 PROVIDE NEW 30'-0" STREETLIGHT POLE (WITH SAME LIGHT FIXTURE) TO REPLACE EXISTING 35'-0" TALL ANTENNA POLE. ANCHOR TO NEW FOUNDATION PER STRUCTURAL 17/S-0-0.11. CONNECT LIGHT FIXTURE TO EXISTING CONDUCTORS AND GROUNDING.

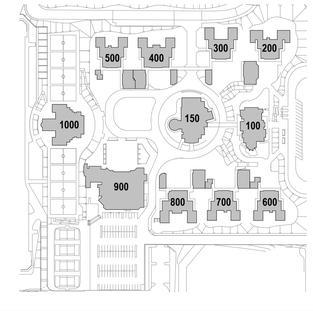
5 POLE MOUNTED LIGHT FIXTURE ON NEW FOUNDATION PER STRUCTURAL 17/S-0-0.11.

6 EXISTING POLE MOUNTED LIGHT FIXTURE TO BE REMOVED DURING GRADING AND INSTALLED ON NEW FOUNDATION PER STRUCTURAL 17/S-0-0.11.

GENERAL NOTES

1. REUSE EXISTING BRANCH CIRCUIT UNDERGROUND PATHWAYS WHERE POSSIBLE. PROVIDE NEW WIRING BETWEEN LIGHT FIXTURES.

KEY PLAN



0' 25' 50' 100'

PLAN NORTH

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ELECTRICAL SITE PLAN

E0-100

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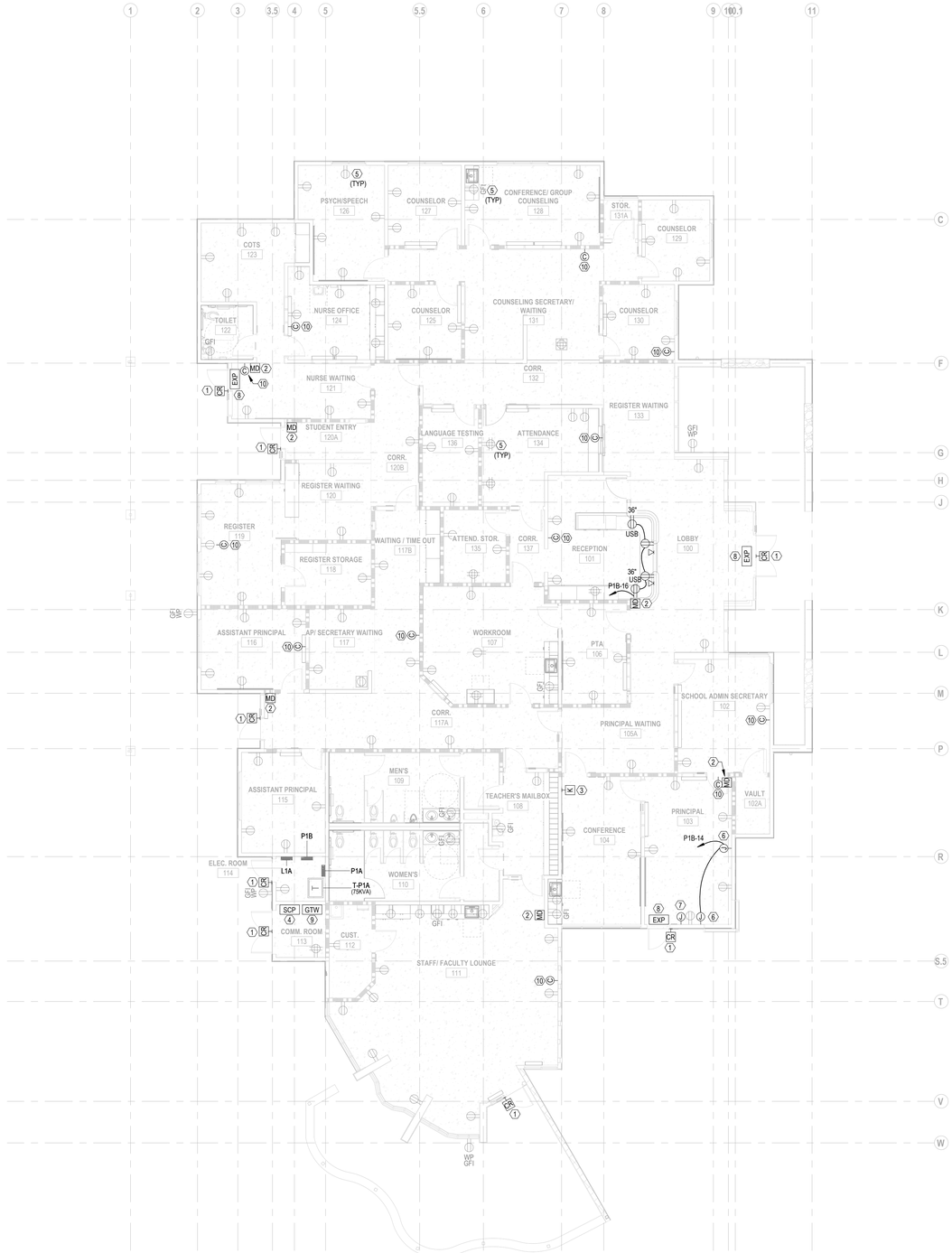


1 **LEVEL 1 POWER PLAN - BUILDING 100**
1/8" = 1'-0"

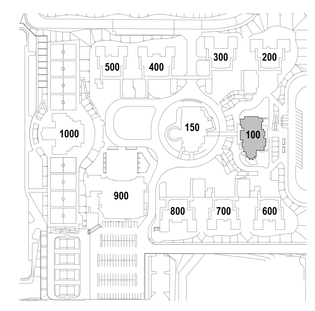
KEY NOTES ⓧ

1. WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
2. EXISTING SECURITY SYSTEM MOTION SENSOR TO BE REPLACED WITH NEW MOTION SENSOR MATCHING CURRENT DISTRICT STANDARD EQUIPMENT.
3. EXISTING SECURITY SYSTEM KEYPAD TO BE REPLACED WITH NEW KEYPAD MATCHING CURRENT DISTRICT STANDERD EQUIPMENT.
4. EXISTING SECURITY SYSTEM CONTROL PANEL TO BE REPLACED WITH NEW CONTROL PANEL MATCHING CURRENT DISTRICT STANDERD EQUIPMENT.
5. PROVIDE NEW RECEPTACLE AND COVER PLATE AT EXISTING LOCATION. DEVICE AND COVER PLATE FINISH SHALL BE WHITE.
6. JUNCTION BOX FOR CONNECTION TO MOTORIZED SHADE. COORDINATE CONNECTION WITH MANUFACTURER'S SHOP DRAWINGS.
7. PROVIDE JUNCTION BOX FOR MOTORIZED SHADE CONTROLS AND 3/4" CONDUIT TO SHADE. COORDINATE CONNECTION WITH MANUFACTURER'S SHOP DRAWINGS.
8. WALL MOUNTED ACCESS CONTROL WIRELESS EXPANDER INSTALLED ABOVE DOOR IN ACCESSIBLE CEILING SPACE.
9. WALL MOUNTED ACCESS CONTROL WIRELESS GATEWAY.
10. PROVIDE NEW TELECOR IP-BASED CLOCK & PA SPEAKER W/ (1) CAT6A DROP ROUTED BACK TO IDF RACK. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
3. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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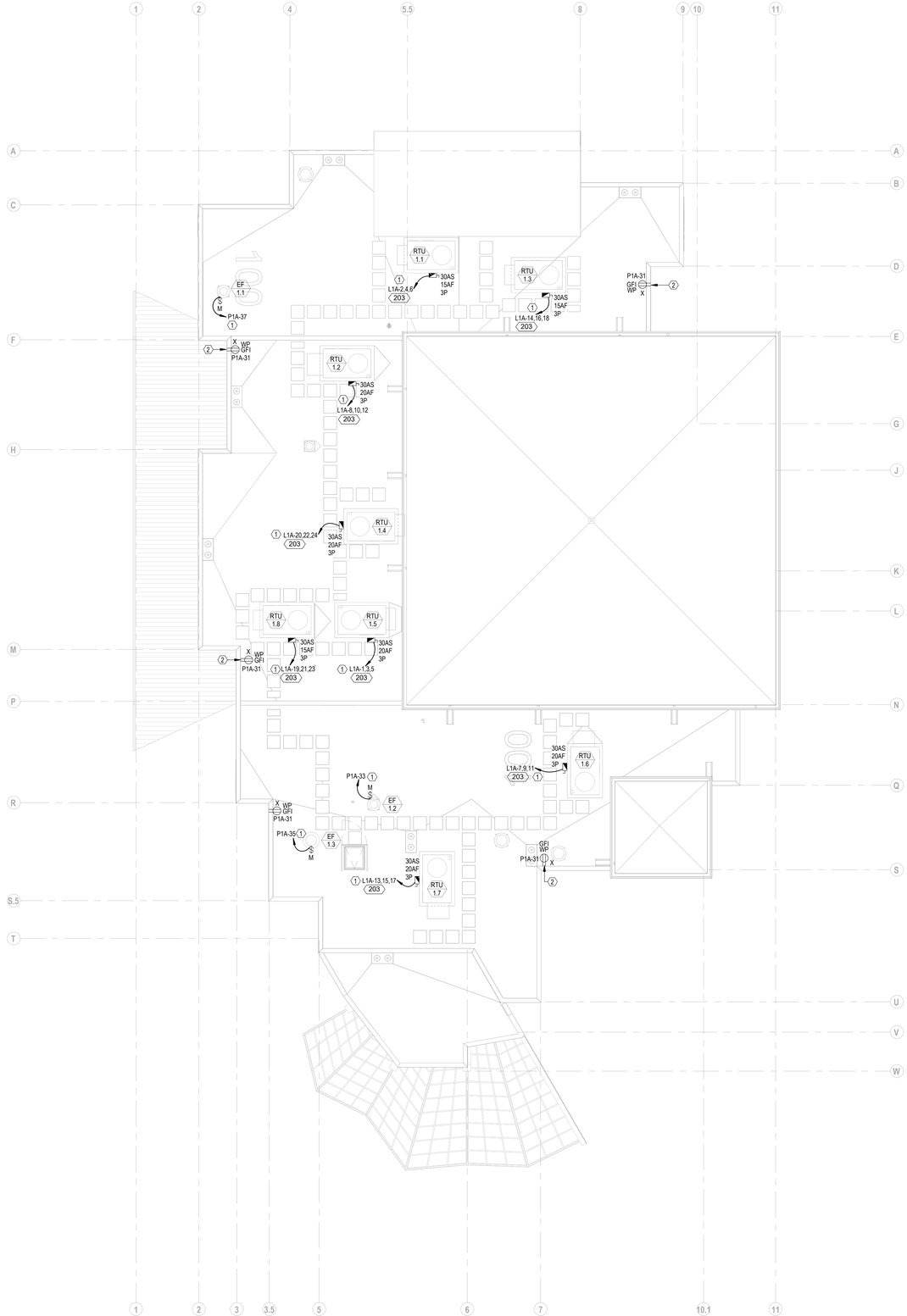
BLDG 100 -
ELECTRICAL PLAN

E1-100

Architects Mosher Drew and Ross, MA - Building & Site Rehabilitation - Rancho Del Rey Middle School - 24203.10 - 2025-09-05 - 12:47:16 PM



1 **ROOF POWER PLAN - BUILDING 100**
1/8" = 1'-0"

PLAN NORTH

0' 2' 4'

KEY NOTES ⓧ

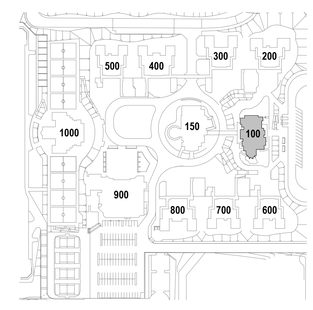
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



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BLDG 100 - ROOF POWER PLAN

E1-101

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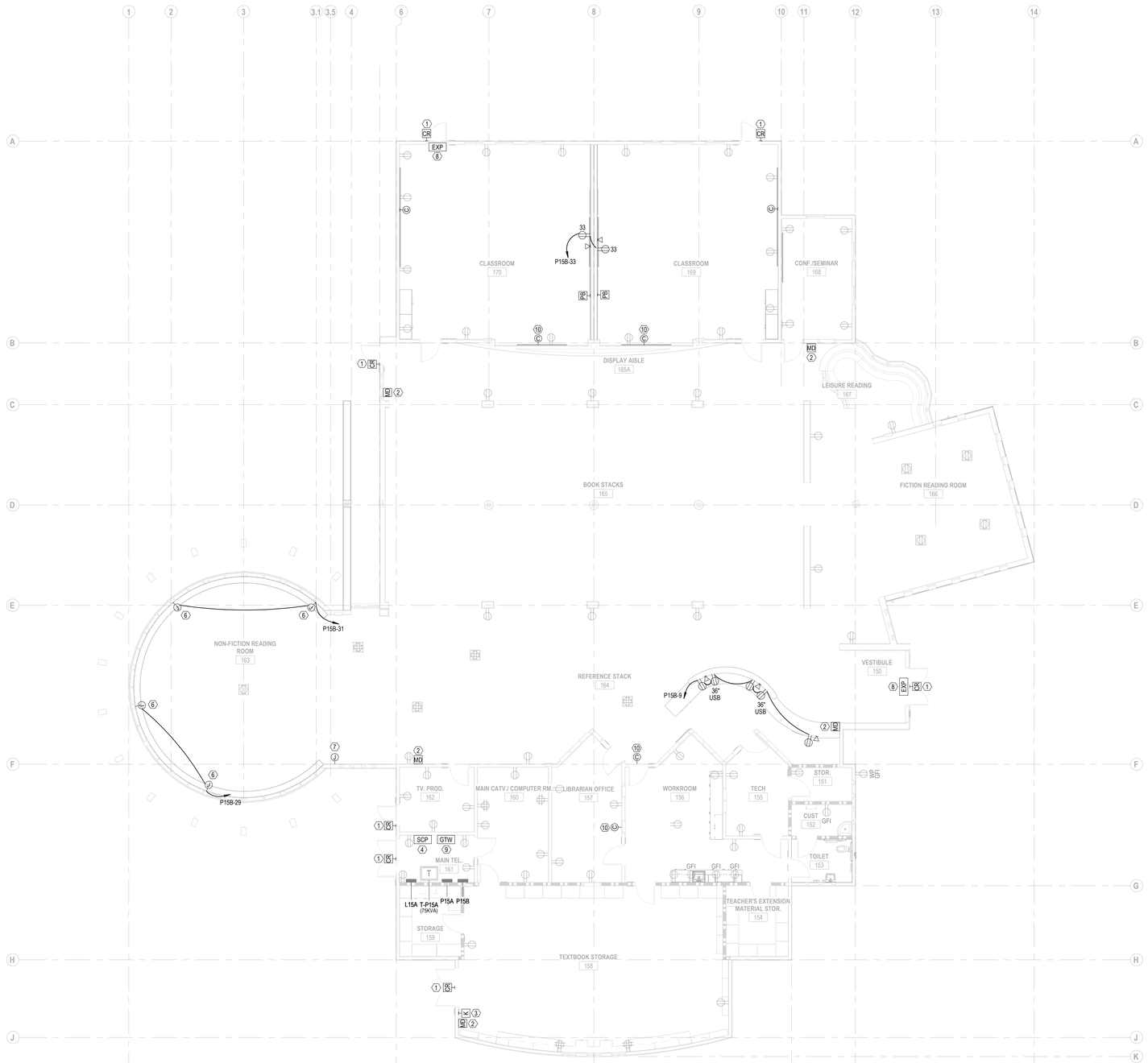

1 LEVEL 1 POWER PLAN - BUILDING 150

1/8" = 1'-0"

PLAN NORTH

0' 2' 4'

KEY NOTES ⓧ

1. WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
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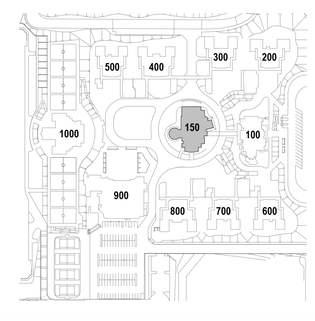

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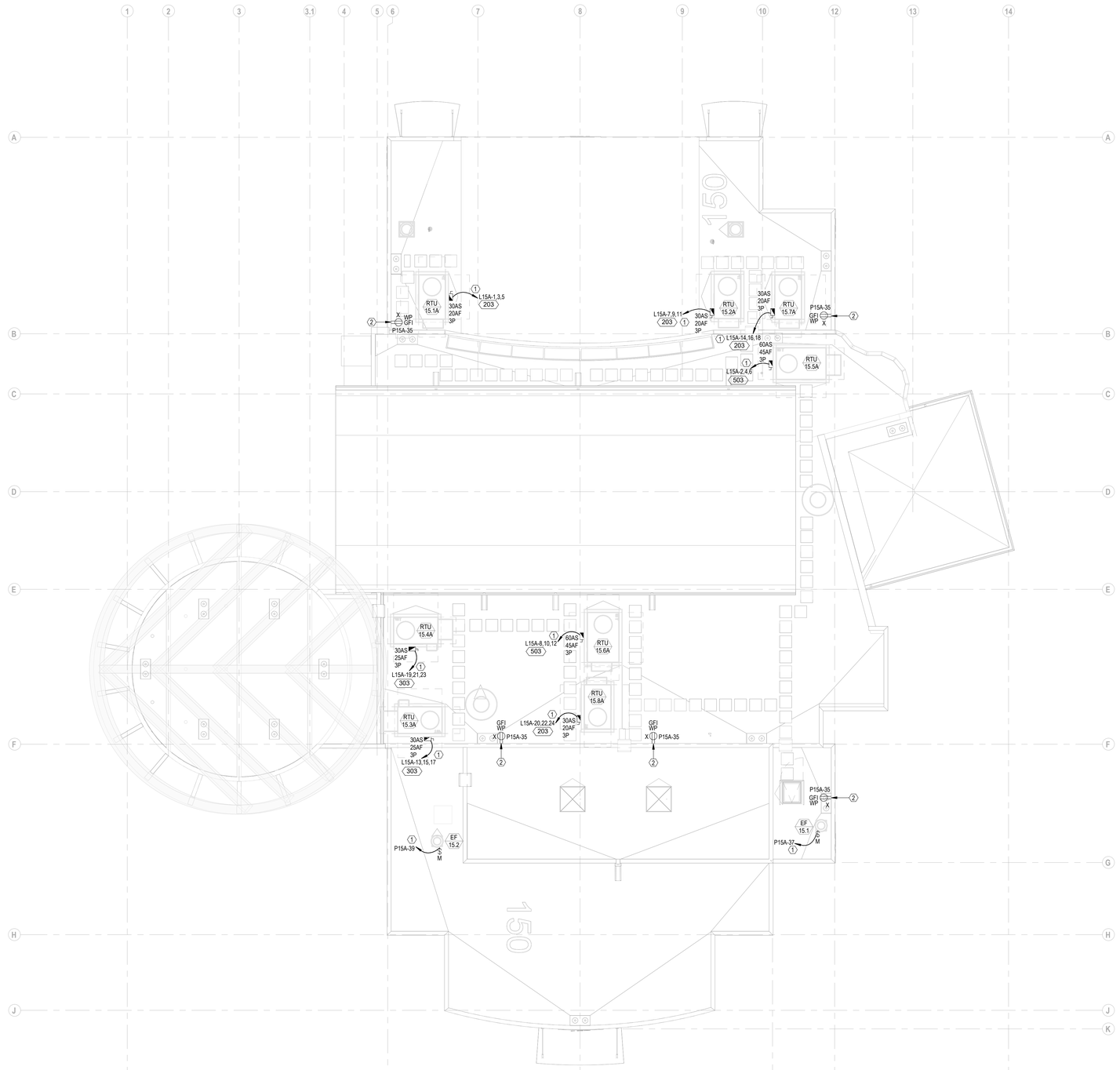
SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 150 - ELECTRICAL PLAN

E1.5-100

Architects Mosher Drew and Mark Mills - Building & Site Rehabilitation - Rancho Del Rey Middle School - 1174 E. J Street, Chula Vista, CA 91910 - 24203.10 - 09-05-2025 - 2:28:48 PM



1 **ROOF POWER PLAN - BUILDING 150**
1/8" = 1'-0"

PLAN NORTH

0' 2' 4'

KEY NOTES ⓧ

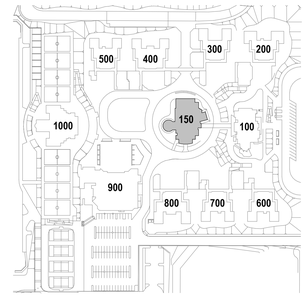
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



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Revisions	:	

BLDG 150 - ROOF ELECTRICAL PLAN

E1.5-101

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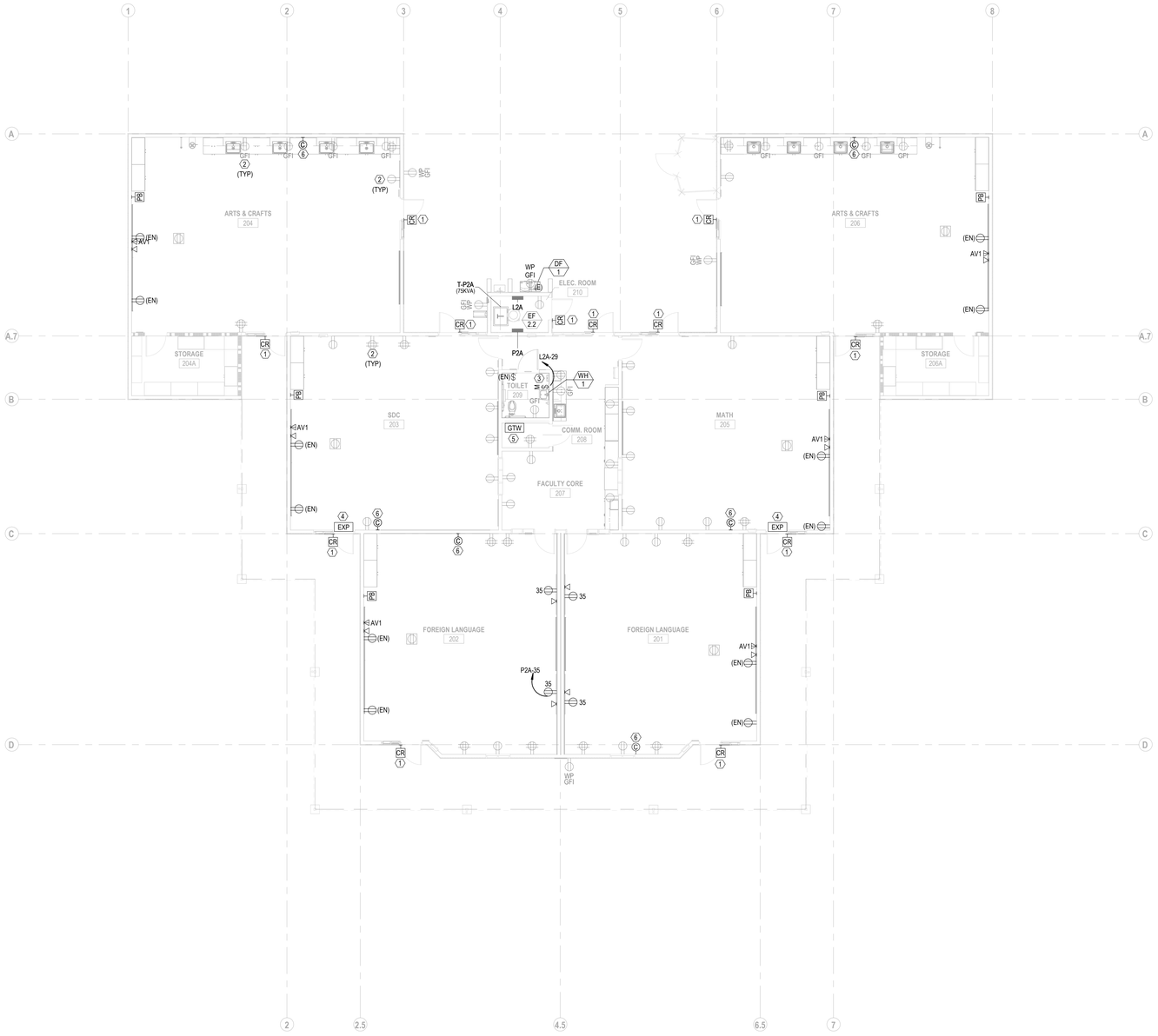


1 **LEVEL 1 POWER PLAN - BUILDING 200**
1/8" = 1'-0"

KEY NOTES ⓧ

1 WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.

2 PROVIDE NEW RECEPTACLE AND COVER PLATE AT EXISTING LOCATION. DEVICE AND COVER PLATE FINISH SHALL BE WHITE.

3 PROVIDE POWER FOR NEW INSTAHOT. UTILIZE EXISTING CONDUIT TO ELECTRICAL ROOM.

4 WALL MOUNTED ACCESS CONTROL WIRELESS EXPANDER INSTALLED ABOVE DOOR IN ACCESSIBLE CEILING SPACE.

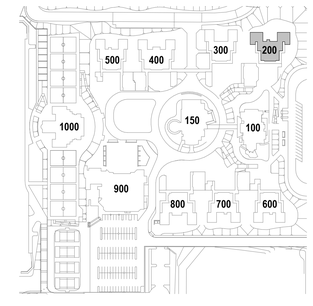
5 WALL MOUNTED ACCESS CONTROL WIRELESS GATEWAY.

6 PROVIDE NEW TELECOR IP-BASED CLOCK & PA SPEAKER W/ (1) CAT6A DROP ROUTED BACK TO IDF RACK. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
3. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



PLAN NORTH

0' 4' 8'

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BLDG 200 - ELECTRICAL PLAN

E2-100

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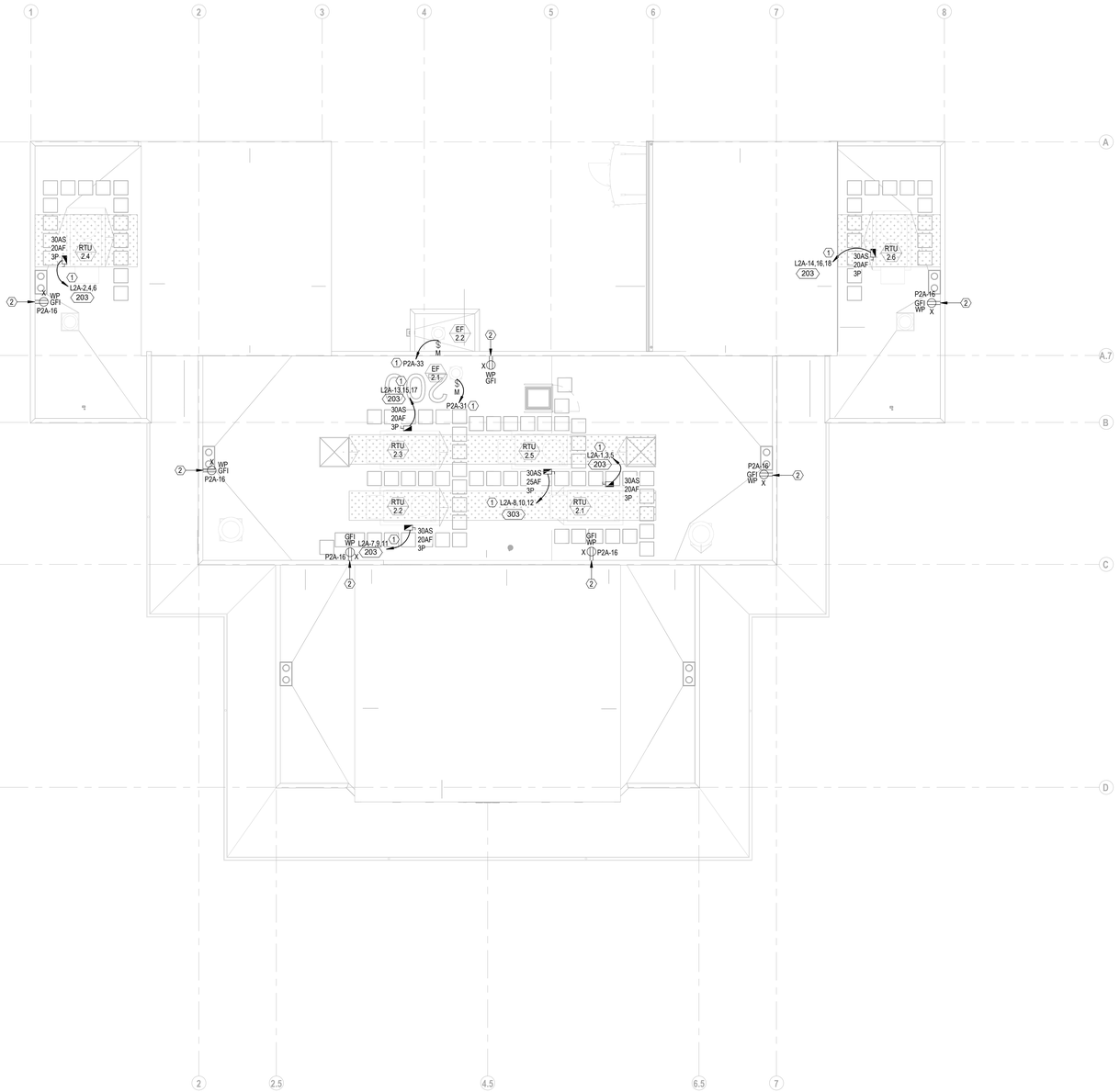


1 **ROOF POWER PLAN - BUILDING 200**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

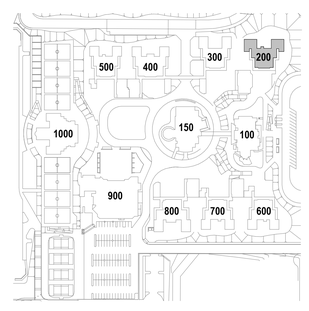
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



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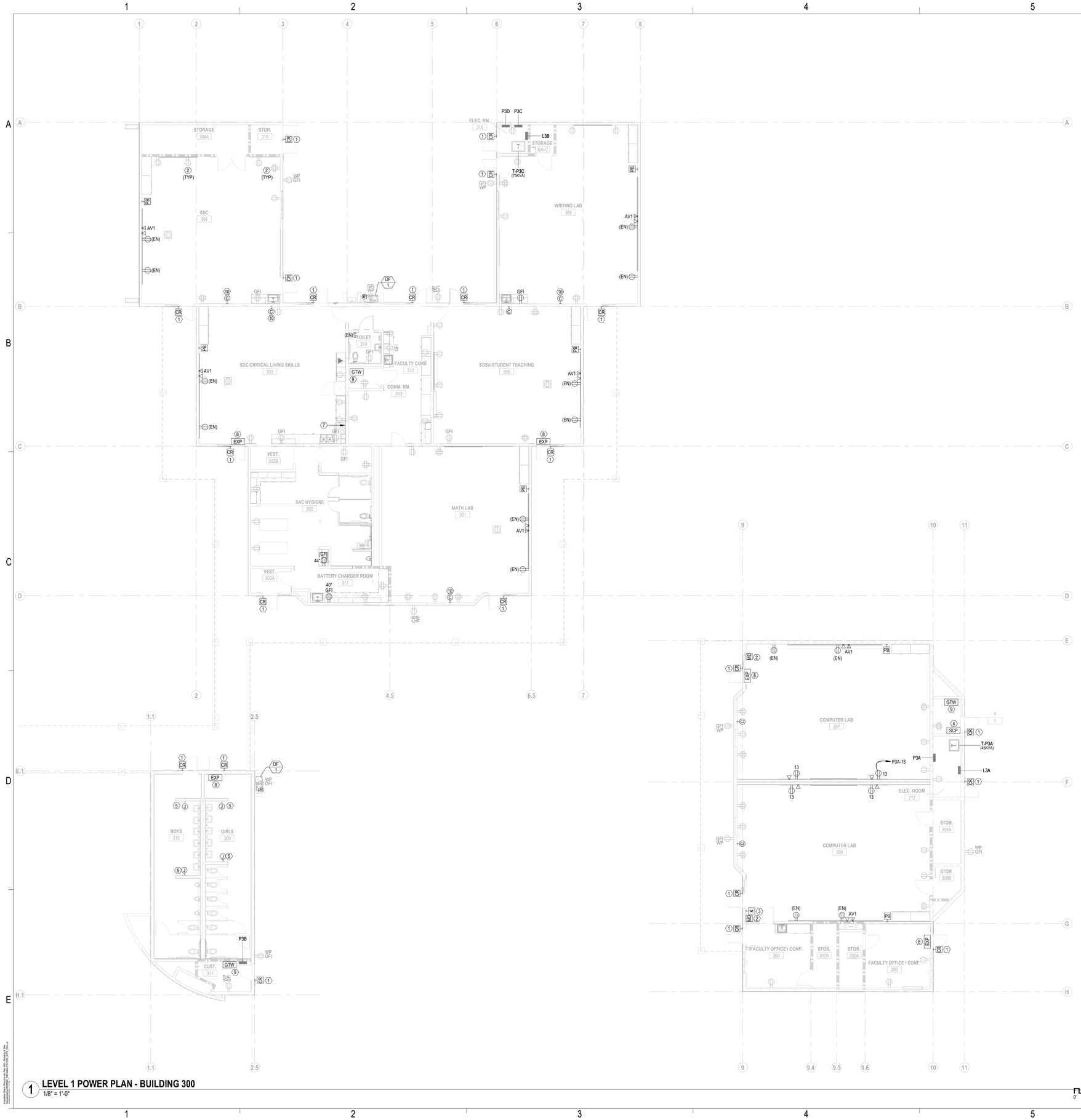
BLDG 200 - ROOF ELECTRICAL PLAN

E2-101



1 LEVEL 1 POWER PLAN - BUILDING 300

1/8" = 1'-0"

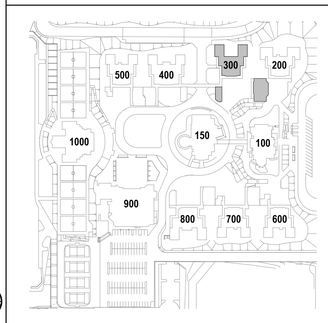
KEY NOTES

1. WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
2. EXISTING SECURITY SYSTEM MOTION SENSOR TO BE REPLACED WITH NEW MOTION SENSOR MATCHING CURRENT DISTRICT STANDERD EQUIPMENT.
3. EXISTING SECURITY SYSTEM KEYPAD TO BE REPLACED WITH NEW KEYPAD MATCHING CURRENT DISTRICT STANDERD EQUIPMENT.
4. EXISTING SECURITY SYSTEM CONTROL PANEL TO BE REPLACED WITH NEW CONTROL PANEL MATCHING CURRENT DISTRICT STANDERD EQUIPMENT.
5. JUNCTION BOX FOR CONNECTION TO NEW HAND DRYER. REUSE EXISTING BRANCH CIRCUIT.
6. PROVIDE NEW RECEPTACLE AND COVER PLATE AT EXISTING LOCATION. DEVICE AND COVER PLATE FINISH SHALL BE WHITE.
7. EXISTING VENTED HOOD TO BE REPLACED. RECONNECT EXISTING CIRCUIT TO NEW HOOD.
8. WALL MOUNTED ACCESS CONTROL WIRELESS EXPANDER INSTALLED ABOVE DOOR IN ACCESSIBLE CEILING SPACE.
9. WALL MOUNTED ACCESS CONTROL WIRELESS GATEWAY.
10. PROVIDE NEW TELECOR IP-BASED CLOCK & PA SPEAKER W/ (1) CAT6A DROP ROUTED BACK TO IDF RACK. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
3. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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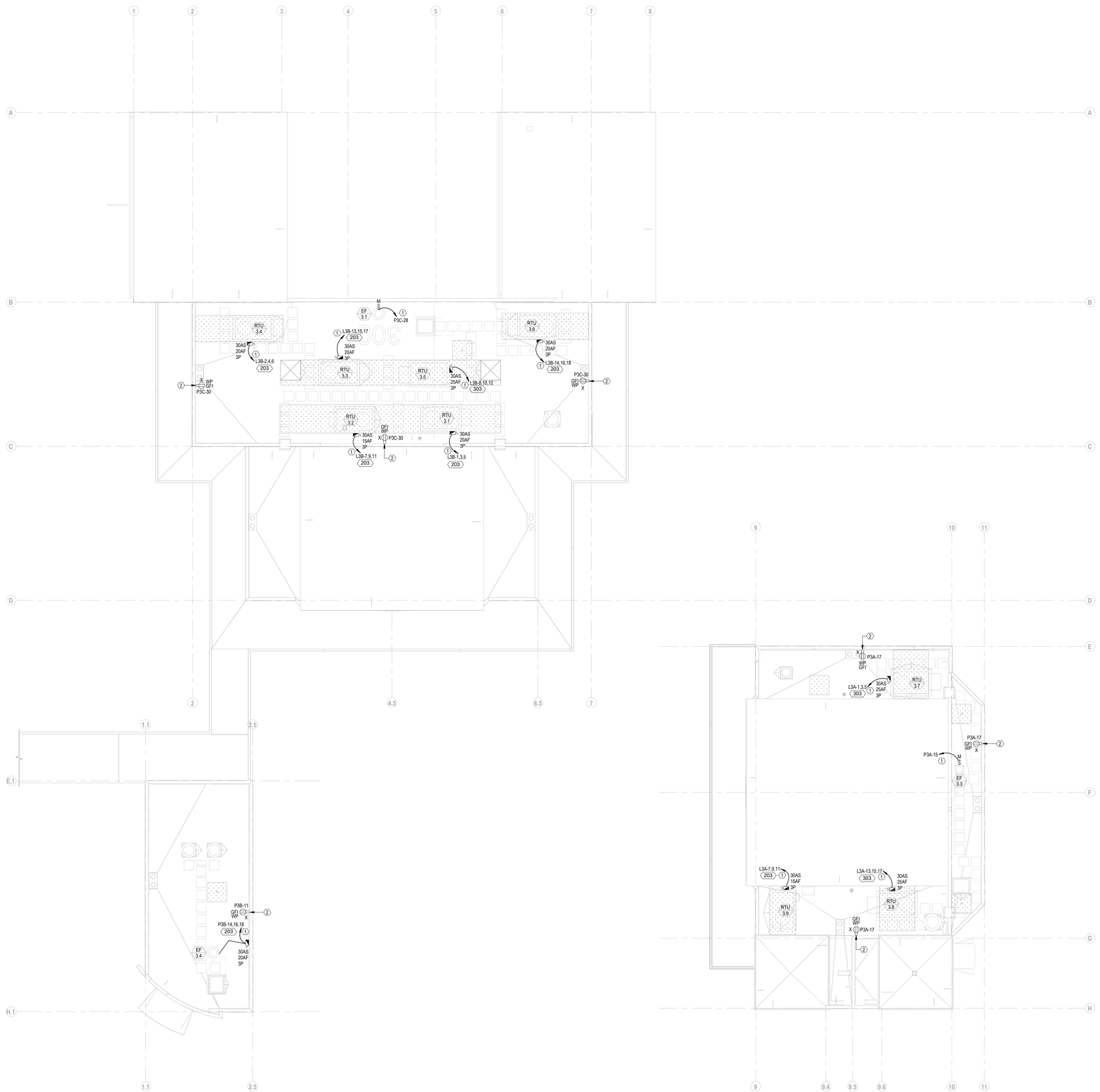
BLDG 300 -
ELECTRICAL PLAN

E3-100



1 **ROOF POWER PLAN - BUILDING 300**
1/8" = 1'-0"

KEY NOTES ⓧ

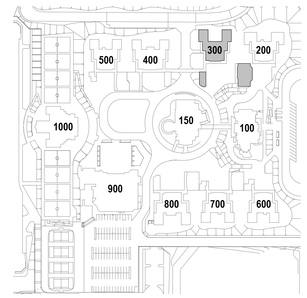
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



PLAN NORTH

0' 4' 8'

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BLDG 300 - ROOF ELECTRICAL PLAN

E3-101

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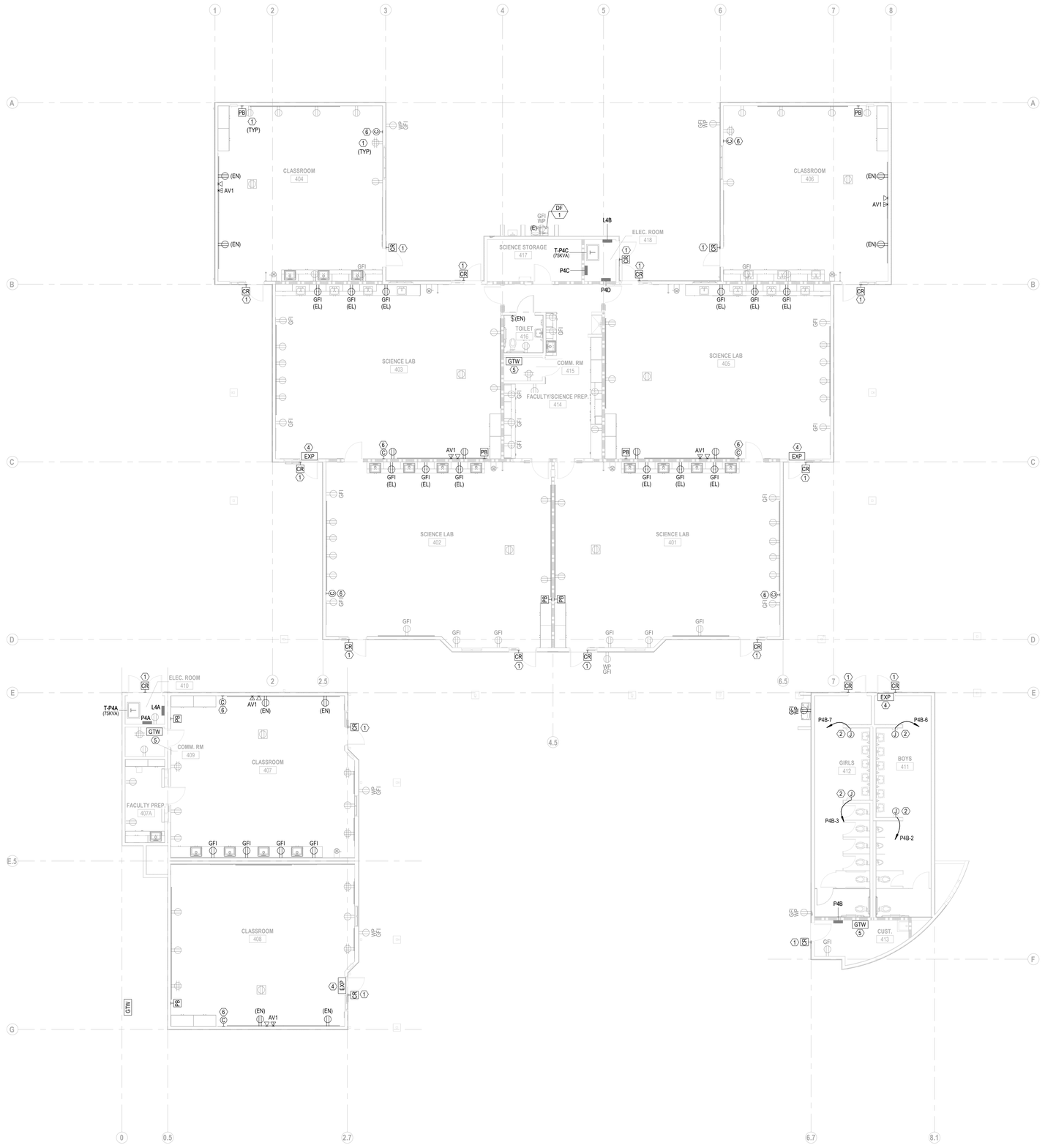


1 **LEVEL 1 POWER PLAN - BUILDING 400**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

1 WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.

2 JUNCTION BOX FOR CONNECTION TO NEW HAND DRYER. REUSE EXISTING BRANCH CIRCUIT.

3 PROVIDE NEW RECEPTACLE AND COVER PLATE AT EXISTING LOCATION. DEVICE AND COVER PLATE FINISH SHALL BE WHITE.

4 WALL MOUNTED ACCESS CONTROL WIRELESS EXPANDER INSTALLED ABOVE DOOR IN ACCESSIBLE CEILING SPACE.

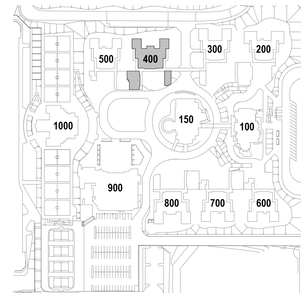
5 WALL MOUNTED ACCESS CONTROL WIRELESS GATEWAY.

6 PROVIDE NEW TELECOR IP-BASED CLOCK & PA SPEAKER W/ (1) CAT6A DROP ROUTED BACK TO IDF RACK. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
3. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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BLDG 400 - ELECTRICAL PLAN

E4-100

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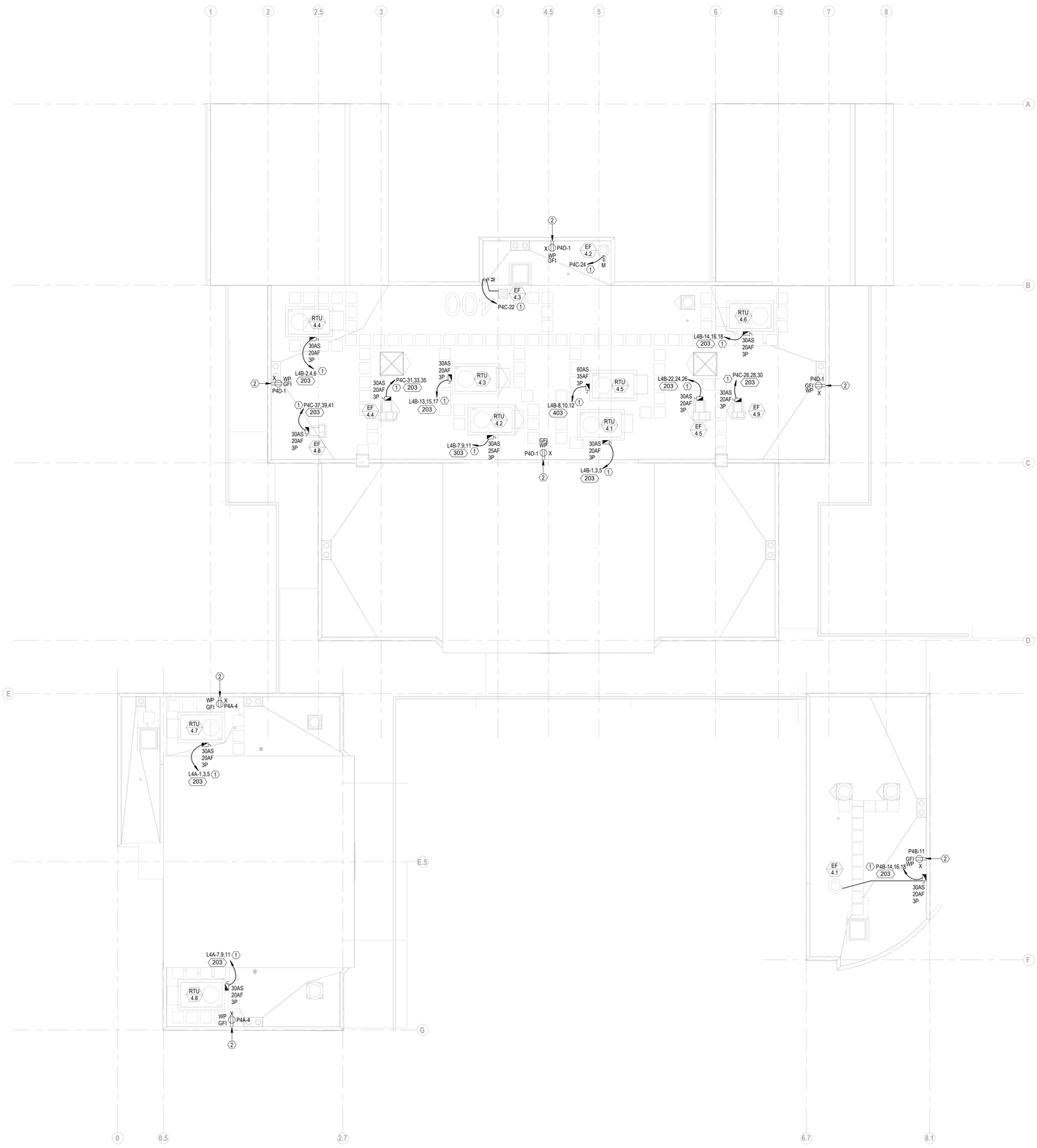


1 **ROOF POWER PLAN - BUILDING 400**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

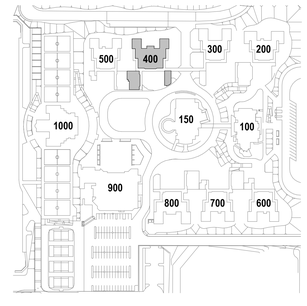
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



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BLDG 400 - ROOF ELECTRICAL PLAN

E4-101

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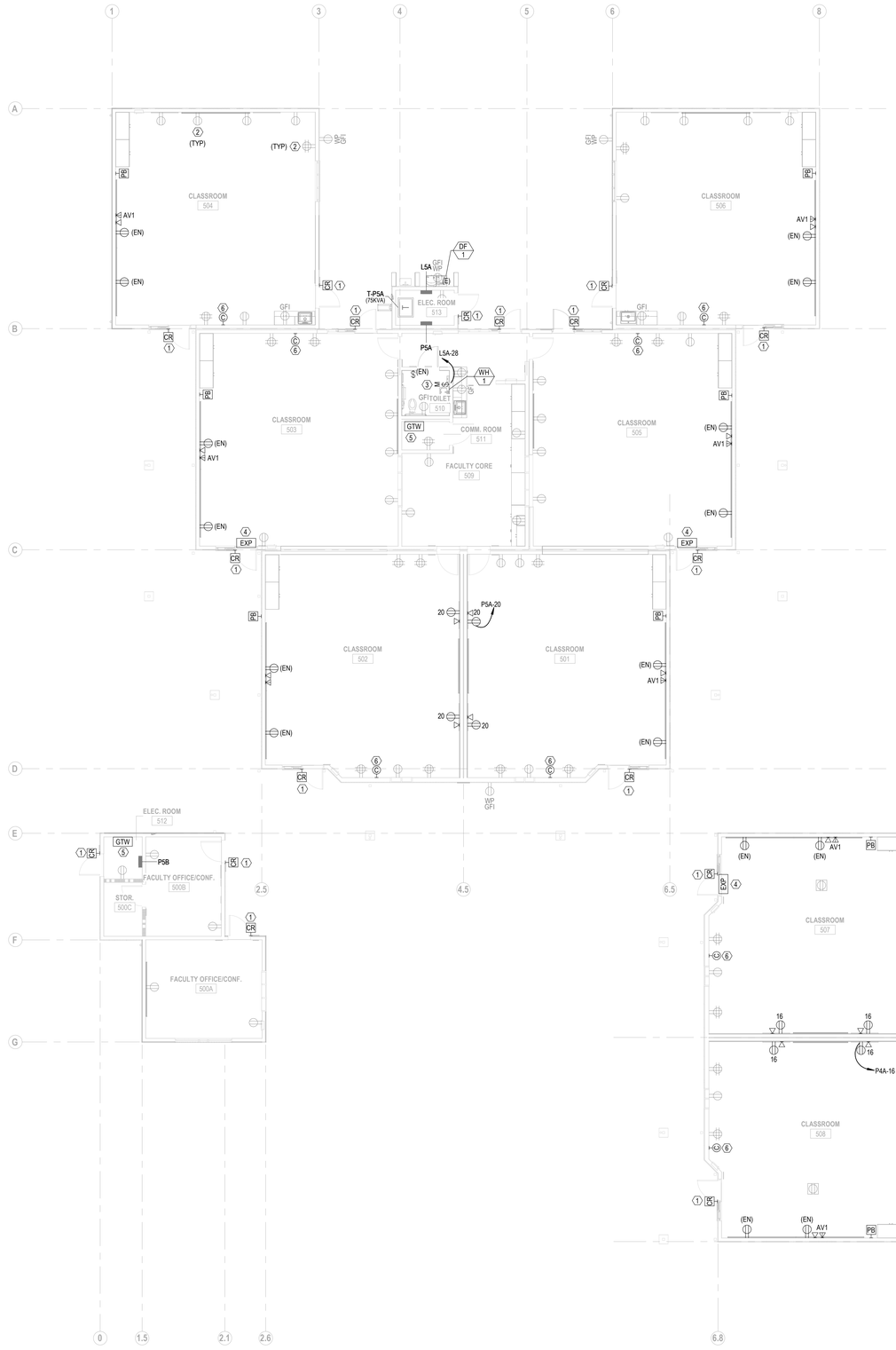


1 **LEVEL 1 POWER PLAN - BUILDING 500**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

1 WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.

2 PROVIDE NEW RECEPTACLE AND COVER PLATE AT EXISTING LOCATION. DEVICE AND COVER PLATE FINISH SHALL BE WHITE.

3 PROVIDE POWER FOR NEW INSTAHOT.

4 WALL MOUNTED ACCESS CONTROL WIRELESS EXPANDER INSTALLED ABOVE DOOR IN ACCESSIBLE CEILING SPACE.

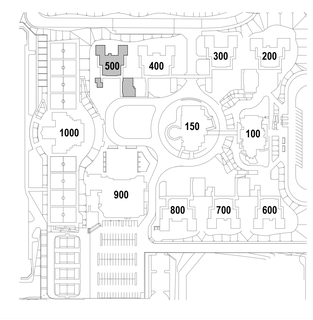
5 WALL MOUNTED ACCESS CONTROL WIRELESS GATEWAY.

6 PROVIDE NEW TELECOR IP-BASED CLOCK & PA SPEAKER W/ (1) CAT6A DROP ROUTED BACK TO IDF RACK. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
3. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



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RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 500 - ELECTRICAL PLAN

E5-100

Architects Mosher Drew and Mark MA - Building & Site Rehabilitation - Rancho del Rey Middle School - 24203.10 - 2025-09-05 - E5-100.dwg

1 **ROOF POWER PLAN - BUILDING 500**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

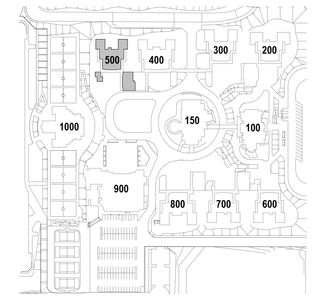
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



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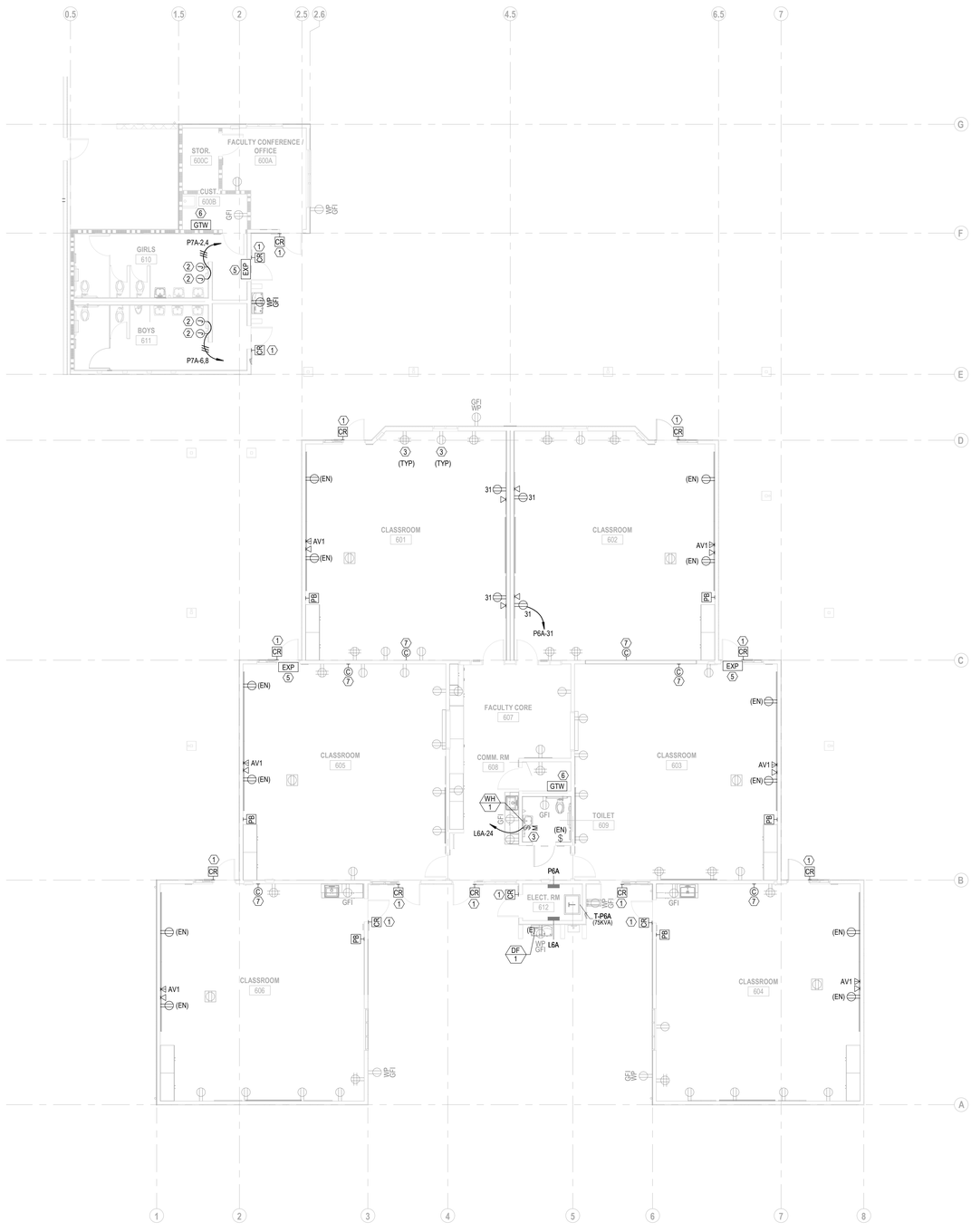
BLDG 500 - ROOF ELECTRICAL PLAN

E5-101



1 **LEVEL 1 POWER PLAN - BUILDING 600**
1/8" = 1'-0"

KEY NOTES ⓧ

1. WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
2. JUNCTION BOX FOR CONNECTION TO NEW HAND DRYER. REUSE EXISTING BRANCH CIRCUIT.
3. PROVIDE NEW RECEPTACLE AND COVER PLATE AT EXISTING LOCATION. DEVICE AND COVER PLATE FINISH SHALL BE WHITE.
4. PROVIDE POWER FOR NEW INSTAHOT. UTILIZE EXISTING CONDUIT TO ELECTRICAL ROOM.
5. WALL MOUNTED ACCESS CONTROL WIRELESS EXPANDER INSTALLED ABOVE DOOR IN ACCESSIBLE CEILING SPACE.
6. WALL MOUNTED ACCESS CONTROL WIRELESS GATEWAY.
7. PROVIDE NEW TELECOR IP-BASED CLOCK & PA SPEAKER W/ (1) CAT6A DROP ROUTED BACK TO IDF RACK. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

GENERAL NOTES

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2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
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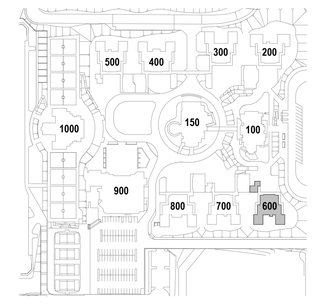
KEY PLAN



PLAN NORTH

0' 4' 8'

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BLDG 600 - ELECTRICAL PLAN

E6-100

1 **ROOF POWER PLAN - BUILDING 600**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

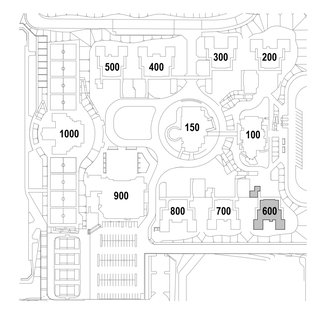
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



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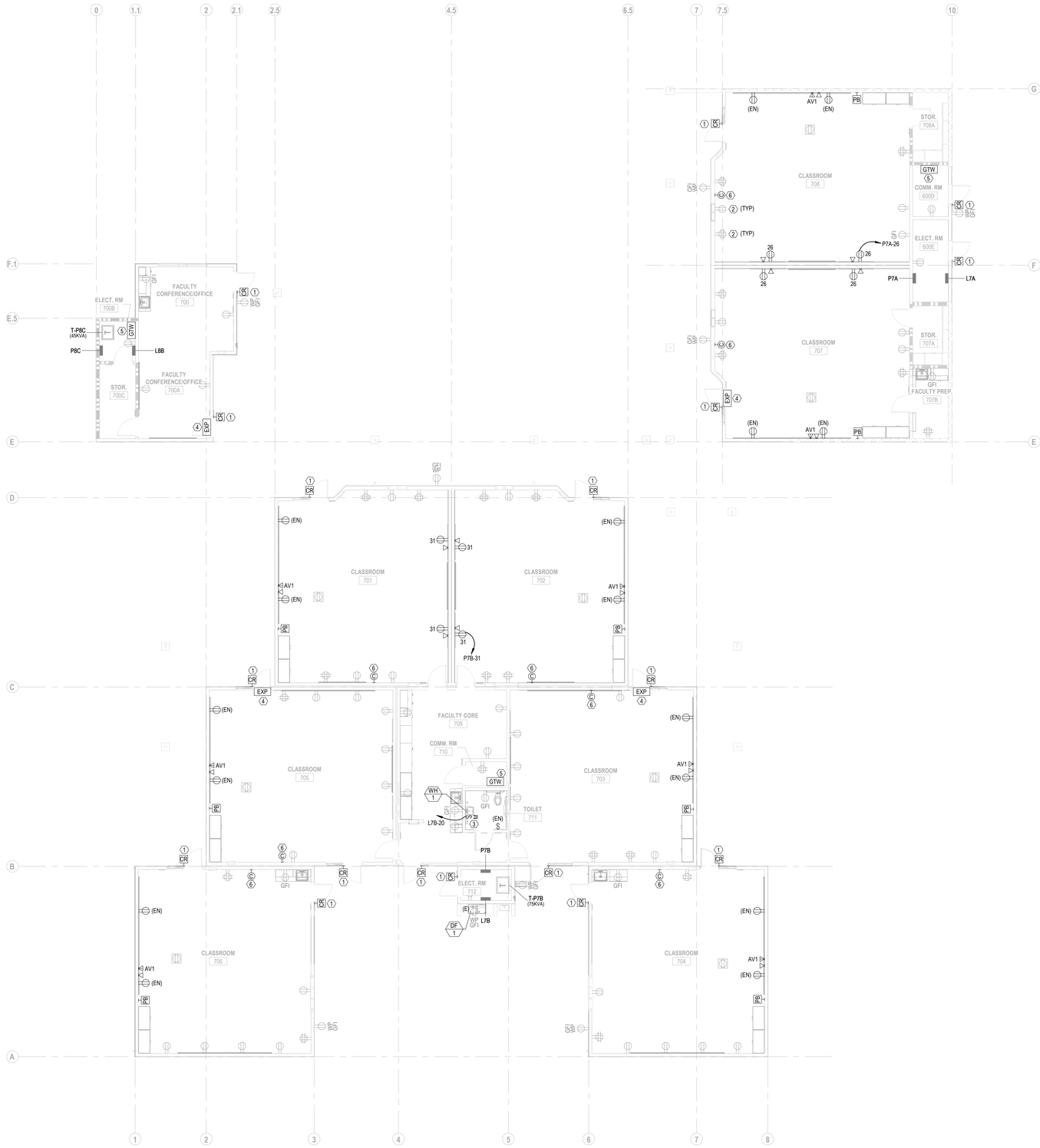
BLDG 600 - ROOF ELECTRICAL PLAN

E6-101

Architects Mosher Drew and Ross Mfr., Building & Site Rehabilitation, Rancho Del Rey Middle School, Sweetwater Union High School District, CHULA VISTA, CA



1 **LEVEL 1 POWER PLAN - BUILDING 700**
1/8" = 1'-0"

KEY NOTES ⓧ

1. WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
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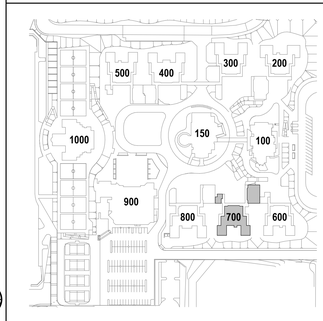
KEY PLAN



PLAN NORTH

0' 4' 8'

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BLDG 700 - ELECTRICAL PLAN

E7-100

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1 **ROOF POWER PLAN - BUILDING 700**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

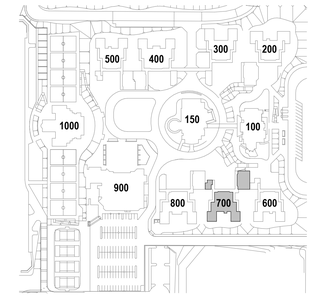
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



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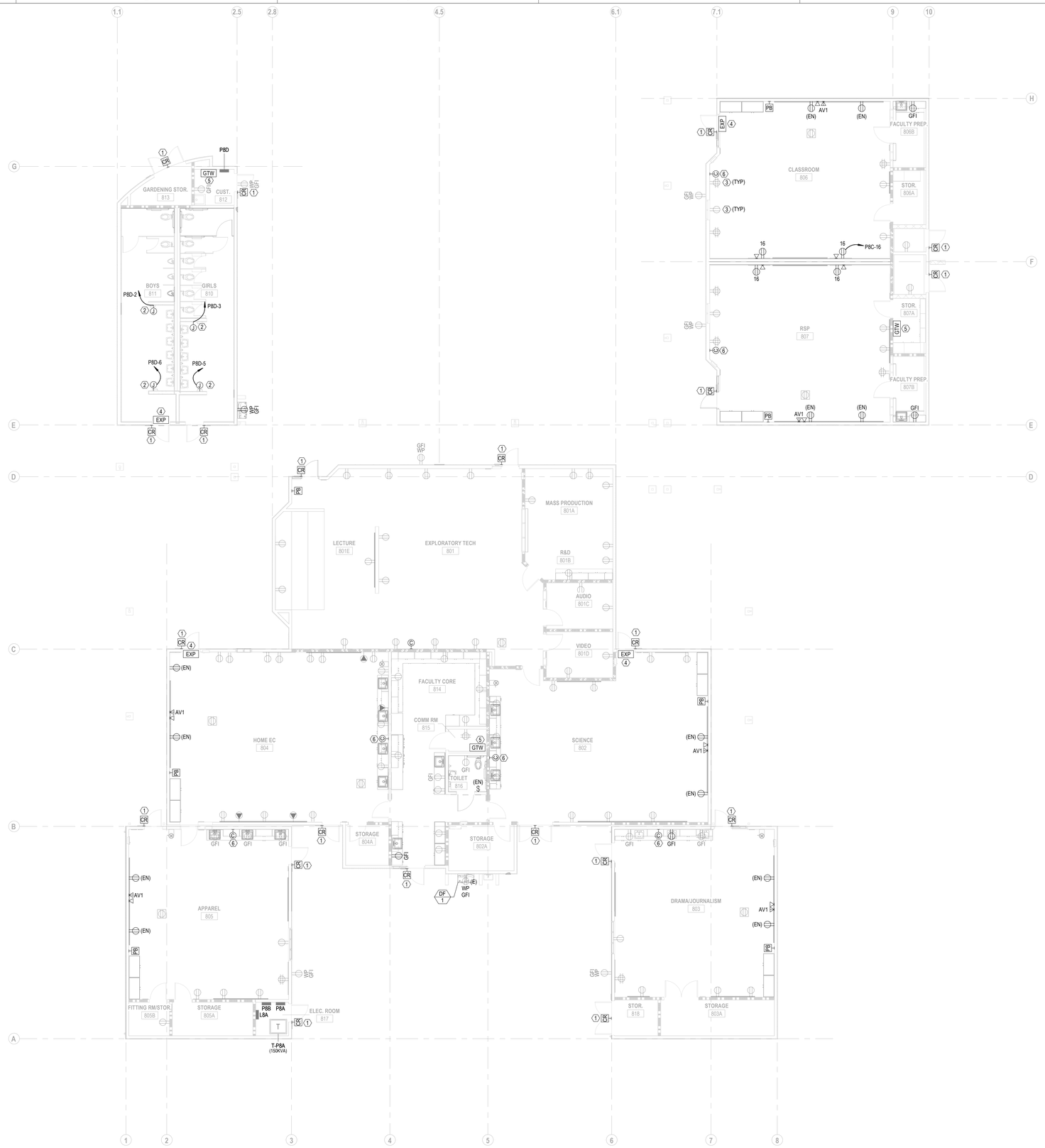
BLDG 700 - ROOF ELECTRICAL PLAN

E7-101

Architects Mosher Drew and Rey MS - Building & Site Rehabilitation\24203.10_RDR_Bldg700_Roof_Elec_E7-101.dwg



1 **LEVEL 1 POWER PLAN - BUILDING 800**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

1 WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.

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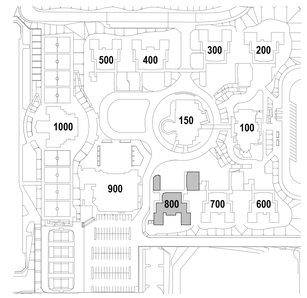

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BLDG 800 -
ELECTRICAL PLAN

E8-100

Architect Drew Mosher as Rep Of: Mosher Drew Architects, Inc. 1775 Hancock Street, Suite 150 San Diego, CA 92110 (619) 223-2400

KEY NOTES ⓧ

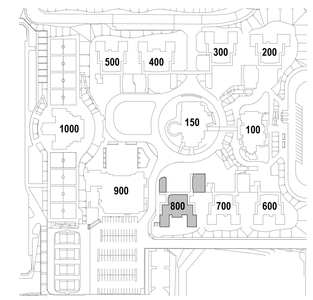
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



1 **ROOF POWER PLAN - BUILDING 800**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

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BLDG 800 - ROOF ELECTRICAL PLAN

E8-101

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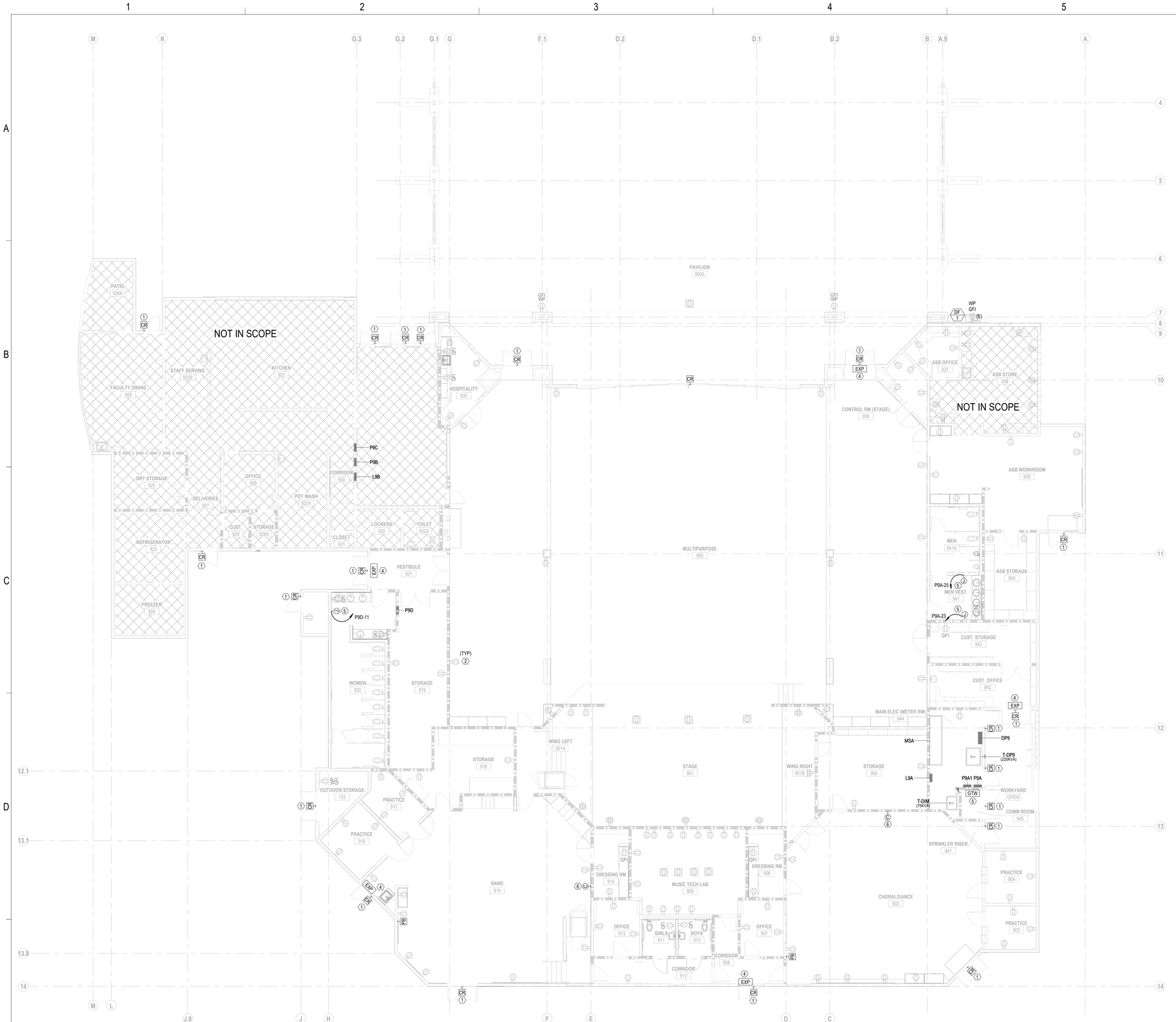

1 LEVEL 1 POWER PLAN - BUILDING 900

1/8" = 1'-0"

KEY NOTES ⓧ

1. WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
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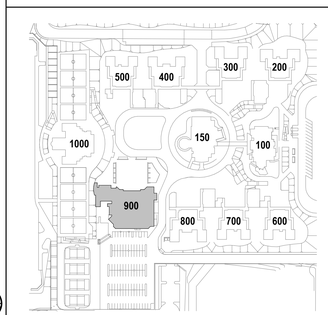
2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
3. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
P: (619) 223-2400
F: (619) 223-3017

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ARCHITECT / CONSULTANT STAMP

REGISTERED PROFESSIONAL ENGINEER
DENNIS SALEEN
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CLIENT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

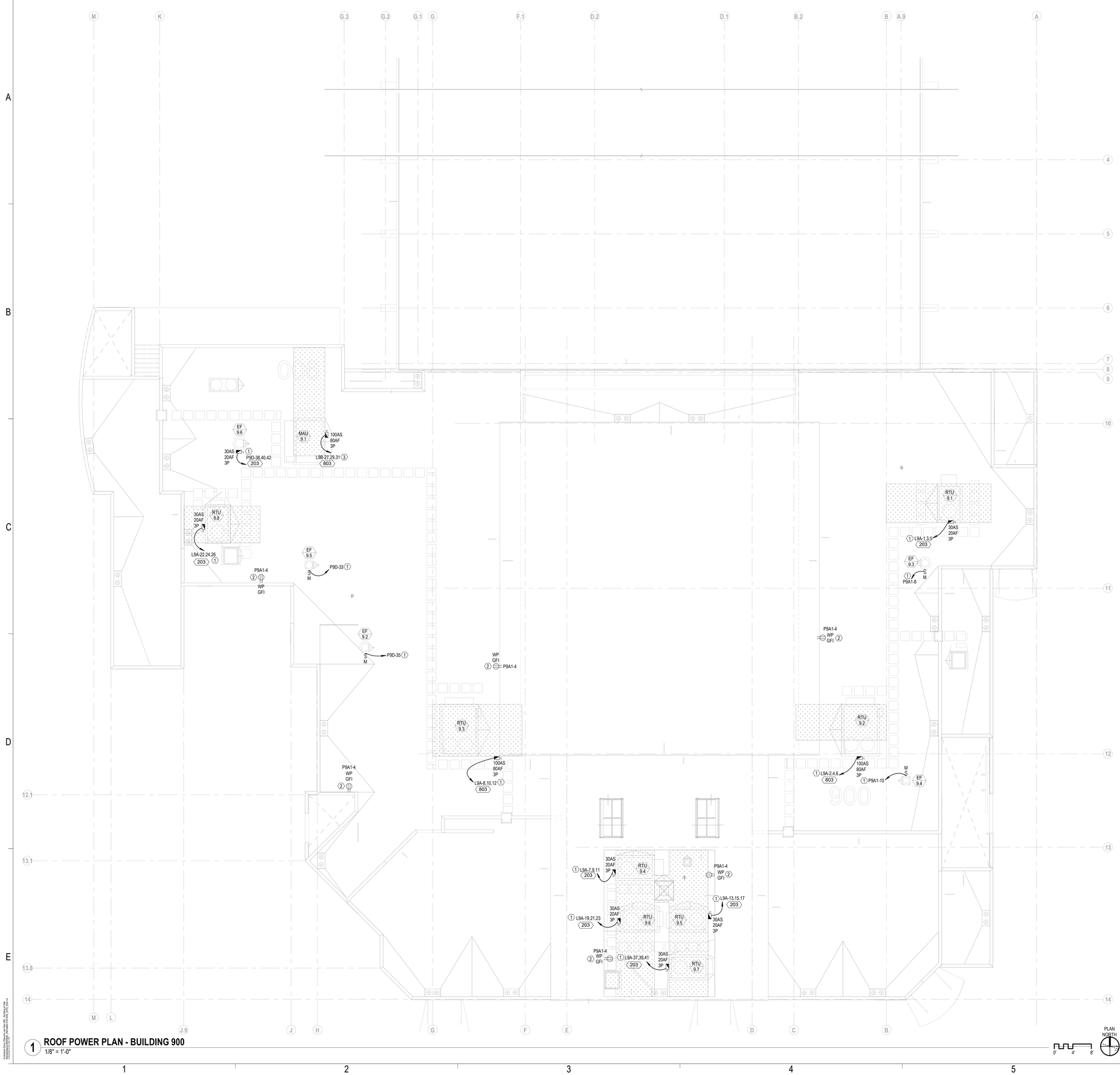
BLDG 900 - ELECTRICAL PLAN

E9-100

PLAN NORTH

0' 4' 8'

Autodesk Docs://Rancho Del Rey - Building & Site Rehabilitation/24203.10 RDR_BLDG_E9.rvt



1 **ROOF POWER PLAN - BUILDING 900**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

KEY NOTES ⓧ

1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

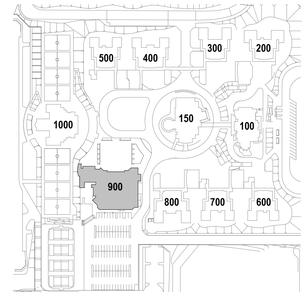
2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

3 PROVIDE NEW CONDUCTORS IN EXISTING CONDUIT.

GENERAL NOTES

1. XXX

KEY PLAN



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DATE: 02/17/2026

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RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

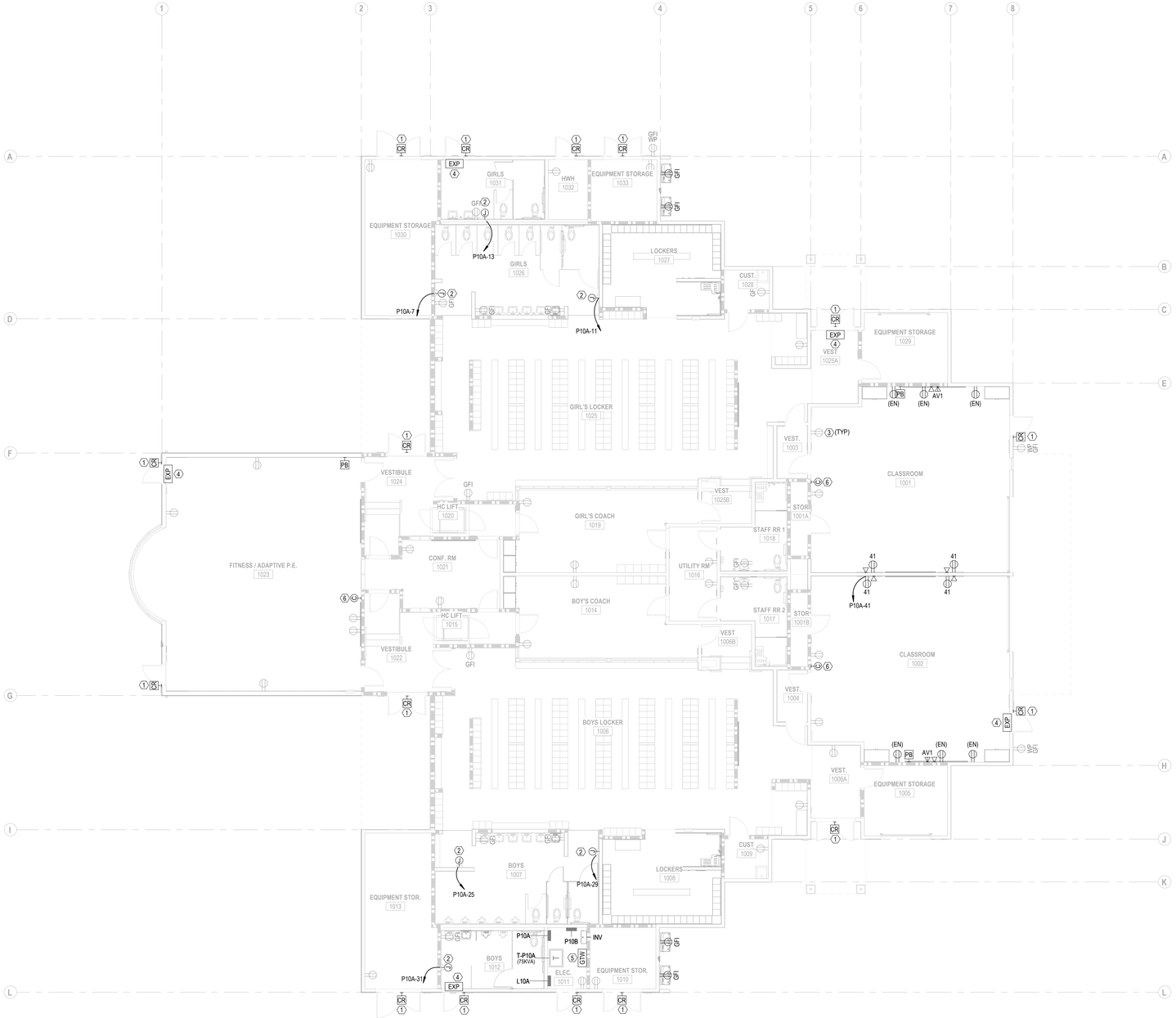
SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 900 - ROOF ELECTRICAL PLAN

E9-101

Architects Mosher Drew and Mac Mills, Building & Site Rehabilitation, Rancho Del Rey Middle School, Sweetwater Union High School District, CHULA VISTA, CA © 2025



1 LEVEL 1 POWER PLAN - BUILDING 1000

1/8" = 1'-0"

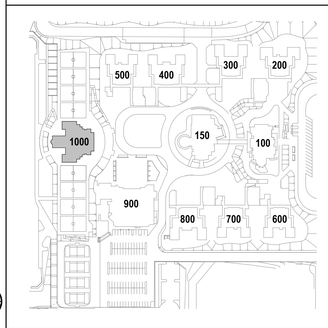
KEY NOTES ⓧ

1. WIRELESS PROXIMITY READER INTEGRAL TO DOOR HARDWARE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
2. JUNCTION BOX FOR CONNECTION TO NEW HAND DRYER. REUSE EXISTING BRANCH CIRCUIT.
3. PROVIDE NEW RECEPTACLE AND COVER PLATE AT EXISTING LOCATION. DEVICE AND COVER PLATE FINISH SHALL BE WHITE.
4. WALL MOUNTED ACCESS CONTROL WIRELESS EXPANDER INSTALLED ABOVE DOOR IN ACCESSIBLE CEILING SPACE.
5. WALL MOUNTED ACCESS CONTROL WIRELESS GATEWAY.
6. PROVIDE NEW TELECOR IP-BASED CLOCK & PA SPEAKER W/ (1) CAT6A DROP ROUTED BACK TO IDF RACK. VERIFY FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.
2. REPLACE ALL LIGHT SWITCH COVER PLATES WITH WHITE.
3. ON DOORS RECEIVING NEW HARDWARE, EXISTING HARDWARE TO BE REMOVED AND SURRENDERED TO THE DISTRICT. REFER TO ARCHITECTURAL DEMO DOOR SCHEDULE.

KEY PLAN



PLAN NORTH

0' 4' 8'

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BLDG 1000 - ELECTRICAL PLAN

E10-100

Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/24203.10 RDR MS Building & Site Rehabilitation_CentralFile_CAM.rvt

KEY NOTES ⓧ

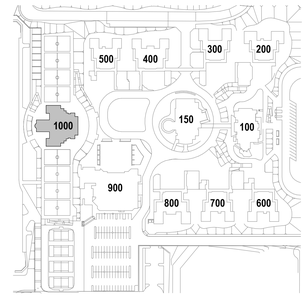
1 RE-USE EXISTING CONDUIT WHERE POSSIBLE, PROVIDE NEW CONDUIT AS NEEDED.

2 EXISTING RECEPTACLE AND COVER TO BE REPLACED.

GENERAL NOTES

1. XXX

KEY PLAN



1 **ROOF POWER PLAN - BUILDING 1000**
1/8" = 1'-0"

PLAN NORTH

0' 4' 8'

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BLDG 1000 - ROOF ELECTRICAL PLAN

E10-101

Architect Mosher Drew and Mep Mfc, Planning & Des... Consultant shall not be responsible for the accuracy... Consultant shall not ... Architect Mosher Drew, 2025 ©

NOTES:

1 CAT6A CABLES SHALL BE RAN FALLOWING THE SAME PATH AS THE NETWORK CABLES UTILIZING J-HOOKS FOR SUPPORT.

2 ALL CABLES SHALL BE RAN IN A NEAT AND ORDERLY FASHION.

1 ACCESS CONTROL DIAGRAM

NO SCALE

Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/Rancho del Rey MS - Building & Site Rehabilitation_Central_CAES_2024.rvt
Document Version: 2026.0 (20250604_1515) (x64)

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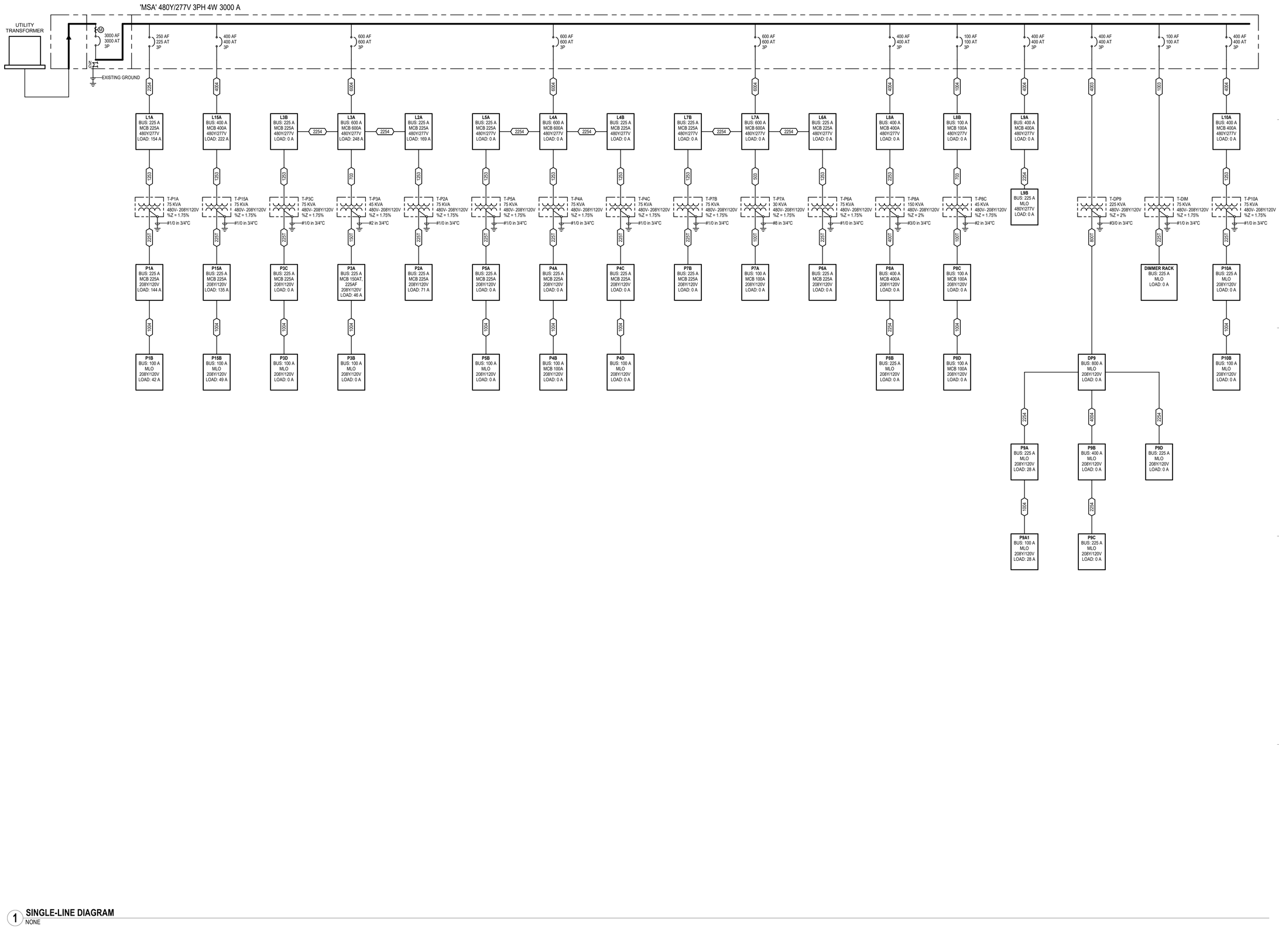
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

ACCESS CONTROL DIAGRAM

E400



1 SINGLE-LINE DIAGRAM
NONE

IDENTIFICATION STAMP
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REVIEWED FOR
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DATE: 02/17/2026

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SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

SINGLE-LINE DIAGRAM

E401

Architects Mosher Drew and Mark Mills, Structural & Civil Engineers have prepared these documents in accordance with the AIA Document E-202™ – 2008 and the Protocol Exhibit attached thereto.

PANELBOARD: P15B

LOCATION: MAIN TEL. 161
SUPPLY: P15A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,636 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) LAB 169, 170 DUCT	20	1		1000	1000			1	20	(E) LAB 169, 170 DUCT	2
3	(E) LAB 169, 170 DUCT	20	1			1000	1000		1	20	(E) LAB 169, 170 DUCT	4
5	(E) LAB 169, 170 DUCT	20	1				1000	1000	1	20	(E) LAB 169, 170 DUCT	6
7	(E) SFD	20	1		400	1000			1	20	(E) PROJECTION SCREEN	8
9	REFERENCE STACK 164 DESK	20	1			900	900		1	20	(E) TEXTBOOK STORAGE	10
11	SPARE	20	1	--			0	500	1	20	(E) TRACK LTG	12
13	(E) PHONE RM	20	1		500	180			1	20	(E) EXTERIOR RECEP	14
15	(E) PHONE RM	20	1				500	1000	1	20	(E) DEDICATED RECEP	16
17	(E) COX COMM RECEP	20	1					180	1000	1	20	(E) DEDICATED RECEP	18
19	(E) COX COMM RECEP	20	1		180	1000			1	20	(E) DEDICATED RECEP	20
21	(E) COX COMM RECEP	20	1				180	180	1	20	(E) COMPUTER RECEP	22
23	(E) COMPUTER RECEP	20	1					180	180	1	20	(E) COMPUTER RECEP	24
25	(E) COMPUTER RECEP	20	1		180	180			1	20	(E) COMPUTER RECEP	26
27	(E) COMPUTER RECEP	20	1				180	1500	2	30	(E) MDF A/C	28
29	MOTORIZED SHADE	20	1					200	1500			30
31	MOTORIZED SHADE	20	1		200	--			--	1	--	PROVISIONS	32
33	CLASSROOM 170, 169 REC	20	1				360	--	--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--				--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	--			--	1	--	PROVISIONS	38
39	PROVISIONS	--	1	--			--	--	--	1	--	PROVISIONS	40
41	PROVISIONS	--	1	--					--	1	--	PROVISIONS	42
					CONNECTED LOAD:		6 kVA		8 kVA		6 kVA		
					CONNECTED CURRENT:		49 A		64 A		48 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	3000 VA	100.00%	3000 VA
POWER	400 VA	100.00%	400 VA
LIGHTING	500 VA	125.00%	625 VA
RECEPTACLE	15360 VA	100.00%	15360 VA

PANEL TOTALS	
CONNECTED LOAD:	19 kVA
CONNECTED CURRENT:	53 A
DEMAND LOAD:	19 kVA
DEMAND CURRENT:	54 A

NOTES:

PANELBOARD: P1A

LOCATION: ELEC. ROOM 114
SUPPLY: T-P1A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,323 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) ELEC. RM. REC	20	1		180	360			1	20	(E) MEN/WOMEN REC	2
3	(E) COMM. RM. REC	20	1			360	1200		1	20	(E) WATER COOLER	4
5	(E) CUSTODIAN REC	20	1				500	720	1	20	(E) MAIL/CONFERENCE REC	6
7	(E) VENDING MACHINE	20	1		1600	1200			1	20	(E) CONFERENCE REFRIG. REC	8
9	(E) VENDING MACHINE	20	1			1600	900		1	20	(E) PRINCIPAL REC	10
11	(E) VENDING MACHINE	20	1				1600	540	1	20	(E) ADMIN. SECRETARY REC	12
13	(E) LOUNGE DISPOSAL	20	1		1200	720			1	20	(E) LOBBY REC	14
15	(E) LOUNGE MICROWAVE	20	1			1500	720		1	20	(E) PTA REC	16
17	(E) LOUNGE COUNTER REC	20	1				1200	2080	1	20	(E) WORK RM. COPIER REC	18
19	(E) LOUNGE REFRIG REC	20	1		1000	2080			1	20	(E) WORK RM. COPIER REC	20
21	(E) LOUNGE COPIER REC	20	1			1500	900		1	20	(E) WORK RM. REC	22
23	(E) LOUNGE REC	20	1				900	1260	1	20	(E) REG. STORAGE	24
25	(E) ASSIST. PRINCIPAL REC	20	1		720	1080			1	20	(E) REGISTERS REC	26
27	(E) SECRETARY/WAIT REC	20	1			900	200		1	20	(E) FIRE CONTROL PANEL	28
29	(E) ASSIST. PRINCIPAL REC	20	1				720	900	1	20	(E) MAIL REC	30
31	(E) MAIL REC	20	1		900	900			1	20	(E) MAIL REC	32
33	EF-1.2	20	1			696	500		1	20	(E) F.A. PA PHONES	34
35	EF-1.3	20	1				528	0	--	1	20	SPARE	36
37	EF-1.1	20	1		528	5764							38
39							1000	6095					40
41	(E) WORK ROOM COPIER REC	30	2				1000	4544					42
					CONNECTED LOAD:		18 kVA		18 kVA		16 kVA		
					CONNECTED CURRENT:		154 A		153 A		137 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	696 VA	100.00%	696 VA
POWER	2056 VA	100.00%	2056 VA
LIGHTING	1883 VA	125.00%	2354 VA
RECEPTACLE	48160 VA	100.00%	48160 VA

PANEL TOTALS	
CONNECTED LOAD:	53 kVA
CONNECTED CURRENT:	147 A
DEMAND LOAD:	53 kVA
DEMAND CURRENT:	148 A

NOTES:

PANELBOARD: L1A

LOCATION: ELEC. ROOM 114
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,034 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547	2882						2
3	RTU-1.5	20	3			3547	2882		3	15	RTU-1.1	4
5							3547	2882				6
7					3547	3547						8
9	RTU-1.6	20	3			3547	3547		3	20	RTU-1.2	10
11							3547	3547				12
13					3547	2882						14
15	RTU-1.7	20	3			3547	2882		3	15	RTU-1.3	16
17							3547	2882				18
19					2882	3547						20
21	RTU-1.8	15	3			2882	3547		3	20	RTU-1.4	22
23							2882	3547				24
25	(E) OFFICE LTG	20	1		3629	0			--	1	20	SPARE	26
27	(E) OFFICE LTG	20	1			3578	0		--	1	20	SPARE	28
29	(E) OFFICE LTG	20	1				2692	0	--	1	20	SPARE	30
31	(E) OFFICE LTG	20	1		1615	0			--	1	20	SPARE	32
33	(E) EXTERIOR LTG	20	1			190	0		--	1	20	SPARE	34
35	(E) EXTERIOR LTG	20	1				813	0	--	1	20	SPARE	36
37	EXTERIOR LIGHTING	20	1		87	18232							38
39	PROVISIONS	--	1	--		--	18071						40
41	PROVISIONS	--	1	--			--	16492					42
					CONNECTED LOAD:		50 kVA		48 kVA		46 kVA		
					CONNECTED CURRENT:		181 A		175 A		167 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	79844 VA	100.00%	79844 VA
POWER	2056 VA	100.00%	2056 VA
LIGHTING	14487 VA	125.00%	18109 VA
RECEPTACLE	48160 VA	100.00%	48160 VA

PANEL TOTALS	
CONNECTED LOAD:	145 kVA
CONNECTED CURRENT:	174 A
DEMAND LOAD:	148 kVA
DEMAND CURRENT:	178 A

NOTES:

PANELBOARD: P2A

LOCATION: ELEC. ROOM 210
SUPPLY: T-P2A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,344 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) RM. 202 COMP. REC	20	1		1080	1080			1	20	(E) RM. 204 COMP. REC	2
3	(E) RM. 202 COMP. REC	20	1			720	720		1	20	(E) RM. 204 COMP. REC	4
5	(E) RM. 202 TECH. WALL REC	20	1				1268	1268	1	20	(E) RM. 204 TECH. WALL REC	6
7	(E) RM. 203 COMP. REC	20	1		900	360			1	20	(E) FIRE ALARM	8
9	(E) RM. 203 COMP. REC	20	1			720	750		1	20	(E) REFRIGERATOR REC	10
11	(E) RM. 203 TECH. WALL REC	20	1				1088	1500	1	20	(E) MICROWAVE REC	12
13	(E) RM. 205 TECH. WALL REC	20	1		1088	900			1	20	(E) FACULTY REC	14
15	(E) RM. 205 COMP. REC	20	1			900	1260		1	20	ROOF REC	16
17	(E) RM. 205 COMP. REC	20	1				720	720	1	20	(E) FACULTY REC	18
19	(E) RM. 201 COMP. REC	20	1		1088	33						20
21	(E) RM. 201 COMP. REC	20	1			720	33		3	40	(E) SIGN	22
23	(E) RM. 201 COMP. REC	20	1				900	33				24
25	(E) RM. 202 COMP. REC	20	1		720	100			1	20	(E) UNDERCABINET LTG	26
27	(E) RM. 202 COMP. REC	20	1			900	200		1	20	(E) UNDERCABINET LTG	28
29	(E) RM. 202 TECH WALL REC	20	1				1088	300	1	20	(E) SIGN	30
31	EF-2.1	20	1		528	300			1	20	(E) UNDERCABINET LTG	32
33	EF-2.2	20	1			696	300		1	20	(E) UNDERCABINET LTG	34
35	CLASSROOM REC	20	1				720	--	--	1	--	PROVISIONS	36
37	SPARE	20	1	--	0	--			--	1	--	PROVISIONS	38
39	SPARE	20	1	--		0	--		--	1	--	PROVISIONS	40
41	SPARE	20	1	--			0	--	--	1	--	PROVISIONS	42
					CONNECTED LOAD:		8 kVA		8 kVA		10 kVA		
					CONNECTED CURRENT:		68 A		66 A		80 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	528 VA	100.00%	528 VA
POWER	796 VA	100.00%	796 VA
LIGHTING	1200 VA	125.00%	1500 VA
RECEPTACLE	23178 VA	100.00%	23178 VA

PANEL TOTALS	
CONNECTED LOAD:	26 kVA
CONNECTED CURRENT:	71 A
DEMAND LOAD:	26 kVA
DEMAND CURRENT:	72 A

NOTES:

PANELBOARD: P1B

LOCATION: ELEC. ROOM 114
SUPPLY: P1A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,094 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) ATTENDANCE REC	20	1		900	144			1	20	(E) STEP LTG	2
3	(E) WAIT/STORAGE/CORR. REC	20	1			1160	503		1	20	(E) STEP LTG, FLAG POLE	4
5	(E) NURSE WAIT/TOILET REC	20	1				720	144	1	20	(E) STEP LTG	6
7	(E) COTS. RM. REC	20	1		720	360			1	20	(E) STEP LTG	8
9	(E) NURSE REC	20	1			900	432		1	20	(E) STEP LTG	10
11	(E) NURSE REFRIG. REC	20	1				1200	900	1	20	(E) REFRIG. REC	12
13	(E) PSYCH/SPEECH REC	20	1		900	1000			1	20	MOTORIZED SHADE	14
15	(E) COUNSELOR 3-4 REC	20	1			1260	720		1	20	RECEPTION 101 DESK	16
17	(E) CONFERENCE REC	20	1				720	0	--	1	20	SPARE	18
19	(E) COUNSELOR 1-2 REC	20	1		1440	0			--	1	20	SPARE	20
21	(E) COUNS./SEC. WAIT REC	20	1			720	0		--	1	20	SPARE	22
23	(E) EXTERIOR REC	20	1				360	0	--	1	20	SPARE	24
25	(E) UNDER CAB. LTG	20	1		300	0			--	1	20	SPARE	26
27	(E) FIRE SMOKE DAMPER	20	1			400	0		--	1	20	SPARE	28
29	(E) FIRE SMOKE DAMPER	20	1				500	0	--	1	20	SPARE	30
31	PROVISIONS	--	1	--	--	--			--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--			--	--	--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--				--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	--			--	1	--	PROVISIONS	38
39	PROVISIONS	--	1	--			--	--	--	1	--	PROVISIONS	40
41	PROVISIONS	--	1	--				--	--	1	--	PROVISIONS	42
					CONNECTED LOAD:		6 kVA		6 kVA		5 kVA		
					CONNECTED CURRENT:		50 A		52 A		38 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
POWER	1000 VA	100.00%	1000 VA
LIGHTING	1883 VA	125.00%	2354 VA
RECEPTACLE	13520 VA	100.00%	13520 VA

PANEL TOTALS	
CONNECTED LOAD:	16 kVA
CONNECTED CURRENT:	46 A
DEMAND LOAD:	17 kVA
DEMAND CURRENT:	47 A

NOTES:

PANELBOARD: L15A

LOCATION: MAIN TEL. 161
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,822 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547	7094						2
3	RTU-15.1A	20	3			3547	7094		3	45	RTU-15.5A	4
5							3547	7094				6
7					3547	7094						8
9	RTU-15.2A	20	3			3547	7094		3	45	RTU-15.6A	10
11							3547	7094				12
13					4877	3547						14
15	RTU/15.3A	25	3			4877	3547		3	20	RTU-15.7A	16
17							4877	3547				18
19					4877	3547						20
21	RTU-15.4A	25	3			4877	3547		3	20	RTU-15.8A	22
23							4877	3547				24
25	(E) STACK LTG	20	1		2960	0			--	1	20	SPARE	26
27	(E) STACK LTG	20	1			2350	3385			1	20	(E) OFFICE LTG	28
29	(E) READING RM LTG	20	1				1060	800		1	20	(E) EMERGENCY LTG	30
31	(E) OFFICE LTG	20	1		2150	0			--	1	20	SPARE	32
33	(E) READING RM LTG	20	1			650	0		--	1	20	SPARE	34
35	(E) CLASSROOM LTG	20	1				2850	0	--	1	20	SPARE	36
37	(E) EMERGENCY LTG	20	1		500	15700							38
39	(E) EMERGENCY LTG	20	1				356	17188					40
41	EXTERIOR LIGHTING	20	1					377	15980				42
					CONNECTED LOAD:		59 kVA		62 kVA		59 kVA		
					CONNECTED CURRENT:		215 A		224 A		214 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	119954 VA	100.00%	119954 VA
POWER	400 VA	100.00%	400 VA
LIGHTING	22278 VA	125.00%	27848 VA
RECEPTACLE	38062 VA	100.00%	38062 VA

PANEL TOTALS	
CONNECTED LOAD:	181 kVA
CONNECTED CURRENT:	217 A
DEMAND LOAD:	186 kVA
DEMAND CURRENT:	224 A

NOTES:

PANELBOARD: P15A

LOCATION: MAIN TEL. 161
SUPPLY: T-P15A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,852 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) PLUG STRIP	20	1		500	912			1	20	(E) LAB 169 TEACHWALL	2
3	(E) TRACK LTG RM 165A	20	1				1850	720	1	20	(E) LAB 169, 170 RECEP	4
5	(E) TRACK LTG RM 165A	20	1					1850	880	1	20	(E) LAB 170 TEACHWALL	6
7	(E) CONF. ROOM RECEP	20	1		500	720			1	20	(E) CONF. 168 RECEP	8
9	(E) EXT LTG	20	1				1250	900	1	20	(E) STACKS 165 RECEP	10
11	(E) EXT LTG	20	1					1250	900	1	20	(E) STACKS 165 RECEP	12
13	(E) WTR HTR RM 152	20	1		1500	920			1	20	(E) FIC READING RECEP	14
15	(E) SNAC PANEL	20	1				180	360	1	20	(E) STOR RECEP	16
17	SPARE	20	1	--				0	900	1	20	(E) CIRC DESK/TECH REC	18
19	(E) COPIER ROOM 164	20	1		1000	900			1	20	(E) CUST/TOIL/STOR RECEP	20
21	(E) TV PRODUCTION	20	1				900	1000	1	20	(E) U/C REFRIG RM 156	22
23	(E) COMPUTER RM 160	20	1					360	1080	1	20	(E) WORK ROOM 156 RECEP	24
25	(E) COMPUTER RM 160	20	1		360	1680			1	20	(E) WORK RM MICRO RECEP	26
27	(E) COMPUTER RM 160	20	1				720	720	1	20	(E) WORK STATION 164 RECEP	28
29	(E) LIBRARIAN RM 161	20	1					720	900	1	20	(E) WORK STATION 163 RECEP	30
31	(E) ELCET/TELE RM 161	20	1		360	0			--	1	20	SPARE	32
33	(E) ELCET/TELE RM 161	20	1			360	0		--	1	20	SPARE	34
35	RECEPTACLE	20	1					900	0	--	1	20	SPARE	36
37	EF-15.1	20	1		528	5820							38
39	EF-15.2	20	1				528	7700					40
41	P.I.V.	20	1					500	5740				42
					CONNECTED LOAD:		16 kVA		17 kVA		16 kVA		
					CONNECTED CURRENT:		131 A		144 A		134 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	5556 VA	100.00%	5556 VA
POWER	400 VA	100.00%	400 VA
LIGHTING	4892 VA	125.00%	6063 VA
RECEPTACLE	38062 VA	100.00%	38062 VA

PANEL TOTALS	
CONNECTED LOAD:	49 kVA
CONNECTED CURRENT:	136 A
DEMAND LOAD:	50 kVA
DEMAND CURRENT:	139 A

NOTES:

PANELBOARD: L2A

LOCATION: ELEC. ROOM 210
SUPPLY: L3A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,194 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547	3547						2
3	RTU/2.1	20	3			3547	3547		3	20	RTU-2.4	4
5							3547	3547				6
7					3547	4877						8
9	RTU-2.2	20	3			3547	4877		3	25	RTU-2.5	10
11							3547	4877				12
13					3547	3547						14
15	RTU-2.3	20	3			3547	3547		3	20	RTU-2.6	16
17							3547	3547				18
19	(E) CLASSROOM LTG	20	1		2890	0			--	1	20	SPARE	20
21	(E) CLASSROOM LTG	20	1			2890	0		--	1	20	SPARE	22
23	(E) CLASSROOM LTG	20	1				2760	0	--	1	20	SPARE	24
25	SPARE	40	1	--	0	6880							26
27	SPARE	40	1	--		0	6880		3	30	(E) KILN	28
29	WH-1	20	1				4150	6880					30
31	(E) EXTERIOR LTG	20	1		1045	8000							32
33	(E) EXTERIOR LTG	20	1			168	8000		1	40	(E) INSTA-HOT 207	34
35	PROVISIONS	--	1	--			--	0	--	1	20	SPARE	36
37	PROVISIONS	--	1	--	--	8177							38
39	PROVISIONS	--	1	--		--	7919		3	125	T-P2A	40
41	PROVISIONS	--	1	--			--	9605					42
					CONNECTED LOAD:		50 kVA		48 kVA		46 kVA		
					CONNECTED CURRENT:		180 A		176 A		166 A		

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	89010 VA	100.00%	89010 VA
POWER	4946 VA	100.00%	4946 VA
LIGHTING	10953 VA	125.00%	13691 VA
RECEPTACLE	39178 VA	100.00%	39178 VA

PANEL TOTALS	
CONNECTED LOAD:	144 kVA
CONNECTED CURRENT:	173 A
DEMAND LOAD:	147 kVA
DEMAND CURRENT:	177 A

NOTES:

P15B	P1A	L1A
P2A	P1B	L15A
	P15A	L2A

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

REGISTERED PROFESSIONAL ENGINEER
BRIAN SAEED
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA
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SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

PANEL SCHEDUL

PANELBOARD: P3D

LOCATION: ELEC. RM. 316
SUPPLY: P3C
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,018 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) ELEC. RM. 360A	20	1		360 1000				1	20	(E) LAB. 306 DUCT	2
3	(E) LAB. 306 DUCT	20	1			1000 1000			1	20	(E) LAB. 306 DUCT	4
5	(E) LAB. 306 DUCT	20	1				1000 1000		1	20	(E) LAB. 306 DUCT	6
7	(E) EF	20	1		200 100				1	20	(E) WATER HEATER	8
9	SPARE	20	1	--		0 --		--	1	--	PROVISIONS	10
11	SPARE	20	1	--			0 --	--	1	--	PROVISIONS	12
13	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	14
15	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	16
17	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	18
19	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	20
21	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	22
23	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	30
	CONNECTED LOAD:				2 kVA	2 kVA	2 kVA					
	CONNECTED CURRENT:				14 A	17 A	17 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	200 VA	100.00%	200 VA
RECEPTACLE	5460 VA	100.00%	5460 VA

PANEL TOTALS	
CONNECTED LOAD:	6 kVA
CONNECTED CURRENT:	16 A
DEMAND LOAD:	6 kVA
DEMAND CURRENT:	16 A

NOTES:

PANELBOARD: P3A

LOCATION: ELEC. ROOM 212
SUPPLY: T-P3A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 150AT, 225AF
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,613 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) CONF. RM. 200/300 REC	20	1		720 912				1	20	(E) LAB 308 TEACHWALL	2
3	(E) COMM. & ELEC. RM. REC	20	1			540 900			1	20	(E) LAB 308 REC	4
5	(E) EXTERIOR REC	20	1				540 720		1	20	(E) LAB 308 REC	6
7	(E) LAB 307 TECH. WALL REC	20	1		912 1000				1	20	(E) LAB 307, 308 DUCT	8
9	(E) LAB 307 REC	20	1			900 1000			1	20	(E) LAB 307, 308 DUCT	10
11	(E) LAB 307 REC	20	1				720 1000		1	20	(E) LAB 307, 308 DUCT	12
13	COMPUTER LAB 307,308 REC	20	1		720 1000				1	20	(E) LAB 307, 308 DUCT	14
15	EF-3.3	20	1			0 1000			1	20	(E) LAB 307, 308 DUCT	16
17	RECEPTACLE	20	1				540 1000		1	20	(E) LAB 307, 308 DUCT	18
19	EXTERIOR LIGHTING	20	1		87 1000				1	20	(E) LAB 307, 308 DUCT	20
21	MARQUEE SIGN	20	1			360 400			1	20	(E) SFD	22
23	(E) FIRE ALARM	20	1				1000 200		1	20	(E) FIRE ALARM	24
25	PROVISIONS	--	1	--	5126							26
27	PROVISIONS	--	1	--		-- 3972			3	70	P3B	28
29	PROVISIONS	--	1	--			-- 5770					30
	CONNECTED LOAD:				11 kVA	9 kVA	11 kVA					
	CONNECTED CURRENT:				99 A	76 A	99 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	865 VA	100.00%	865 VA
POWER	360 VA	100.00%	360 VA
LIGHTING	873 VA	125.00%	1091 VA
RECEPTACLE	29942 VA	100.00%	29942 VA

PANEL TOTALS	
CONNECTED LOAD:	32 kVA
CONNECTED CURRENT:	89 A
DEMAND LOAD:	32 kVA
DEMAND CURRENT:	90 A

NOTES:

PANELBOARD: L3A

LOCATION: ELEC. ROOM 212
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 600 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 600A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,596 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					4877 11477							2
3	RTU3.7	25	3			4877 9072			3	70	T-P3A	4
5							4877 11490					6
7					2882 49606							8
9	RTU3.9	15	3			2882 48471			3	225	L2A	10
11							2882 46009					12
13					4877 36441							14
15	RTU3.8	25	3			4877 38331			3	225	L3B	16
17							4877 40777					18
19	(E) CLASSROOM LTG	20	1		2224 8000				1	40	(E) INSTA-HOT RM 300	20
21	(E) CLASSROOM LTG	20	1			1380 327			1	20	(E) EXTERIOR LTG	22
23	SPARE	20	1	--			0 0	--	1	20	SPARE	24
25	SPARE	20	1	--	0 0			--	1	20	SPARE	26
27	SPARE	20	1	--		0 0		--	1	20	SPARE	28
29	SPARE	20	1	--			0 0	--	1	20	SPARE	30
31	SPARE	20	1	--	0 0			--	1	20	SPARE	32
33	SPARE	20	1	--		0 0		--	1	20	SPARE	34
35	SPARE	20	1	--			0 --	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	38
39	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	40
41	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	42
	CONNECTED LOAD:				120 kVA	110 kVA	111 kVA					
	CONNECTED CURRENT:				435 A	398 A	401 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	195527 VA	100.00%	195527 VA
POWER	5306 VA	100.00%	5306 VA
LIGHTING	25291 VA	125.00%	31614 VA
RECEPTACLE	115392 VA	100.00%	115392 VA

PANEL TOTALS	
CONNECTED LOAD:	342 kVA
CONNECTED CURRENT:	411 A
DEMAND LOAD:	348 kVA
DEMAND CURRENT:	418 A

NOTES:

PANELBOARD: P4A

LOCATION: ELEC. ROOM 410
SUPPLY: T-P4A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 5,002 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) RM 507 TEACH WALL REC	20	1		908 360				1	20	BLDG 500 ROOF REC	2
3	(E) RM 507 COMP REC	20	1			720 360			1	20	ROOF REC	4
5	(E) RM 507 COMP REC	20	1				900 400		1	20	(E) SFD	6
7	(E) RM 508 COMP REC	20	1		900 500				1	20	(E) 410 EF	8
9	(E) RM 508 COMP REC	20	1			720 300			1	20	(E) PEPSI	10
11	(E) RM 508 TEACH WALL REC	20	1				908 300		1	20	(E) PEPSI	12
13	(E) EXTERIOR REC	20	1		360 500				1	20	(E) WATER HEATER	14
15	(E) FAC PREP AND STOR	20	1			720 720			1	20	CLASSROOM 507,508 REC	16
17	(E) SFD	20	1				400 0	--	1	20	SPARE	18
19	(E) RM 408 TEACH WALL REC	20	1		908 0				--	1	20	SPARE	20
21	(E) RM 408 COMP REC	20	1			720 0			--	1	20	SPARE	22
23	(E) RM 408 COMP REC	20	1				900 0	--	1	20	SPARE	24
25	(E) RM 407 COMP REC	20	1		900 0				--	1	20	SPARE	26
27	(E) RM 407 COMP RECEP	20	1			900 0			--	1	20	SPARE	28
29	(E) RM 407 TEACH WALL REC	20	1				908 0	--	1	20	SPARE	30
31	(E) FAC PRE/MISC REC	20	1		1080 0				--	1	20	SPARE	32
33	SPARE	20	1	--		0 0		--	1	20	SPARE	34
35	SPARE	20	1	--			0 0	--	1	20	SPARE	36
37					2748 0				--	1	20	SPARE	38
39	P4B	100	3			2872 0			--	1	20	SPARE	40
41							2170 0	--	--	1	20	SPARE	42
	CONNECTED LOAD:				9 kVA	8 kVA	7 kVA					
	CONNECTED CURRENT:				78 A	68 A	57 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	1365 VA	100.00%	1365 VA
POWER	4900 VA	100.00%	4900 VA
LIGHTING	786 VA	125.00%	983 VA
RECEPTACLE	17032 VA	100.00%	17032 VA

PANEL TOTALS	
CONNECTED LOAD:	24 kVA
CONNECTED CURRENT:	67 A
DEMAND LOAD:	24 kVA
DEMAND CURRENT:	67 A

NOTES:

PANELBOARD: P3B

LOCATION: CUST. 311
SUPPLY: P3A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 1,425 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) CUST. REC	20	1		360 2300				1	30	(E) HAND DRYER	2
3	(E) HAND DRYER	20	1			1000 1000			1	20	(E) HAND DRYER	4
5	(E) HAND DRYER	30	1				2300 2300		1	30	(E) HAND DRYER	6
7	(E) HAND DRYER	20	1		1000 1000				1	20	(E) HAND DRYER	8
9	(E) WATER HEATER	20	1			1500 84			1	20	(E) RESTROOM LTG	10
11	ROOF REC	20	1				180 702		1	20	(E) RESTROOM LTG	12
13	(E) SFD	20	1		100 288							14
15	PROVISIONS	--	1	--		-- 288			3	20	EF-3.4	16
17	PROVISIONS	--	1	--			-- 288					18
19	PROVISIONS	--	1	--	-- 78			--	1	20	(E) DISPLAY CASE	20
21	PROVISIONS	--	1	--		-- 100			1	20	(E) TIME CLOCK	22
23	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--			--				38
39	PROVISIONS	--	1	--		--		--				40
41	PROVISIONS	--	1	--			--	--				42
	CONNECTED LOAD:				5 kVA	4 kVA	6 kVA					
	CONNECTED CURRENT:				44 A	33 A	50 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	865 VA	100.00%	865 VA
LIGHTING	786 VA	125.00%	983 VA
RECEPTACLE	13218 VA	100.00%	13218 VA

PANEL TOTALS	
CONNECTED LOAD:	15 kVA
CONNECTED CURRENT:	41 A
DEMAND LOAD:	15 kVA
DEMAND CURRENT:	42 A

NOTES:

PANELBOARD: L3B

LOCATION: ELEC. RM. 316
SUPPLY: L3A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,014 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547 3547							2
3	RTU-3.1	20	3			3547 3547			3	20	RTU3.4	4
5							3547 3547					6
7					2882 4877							8
9	RTU3.2	15	3			2882 4877			3	25	RTU3.5	10
11							2882 4877					12
13					3547 3547							14
15	RTU-3.3	20	3			3547 3547			3	20	RTU3.6	16
17							3547 3547					18
19	(E) CLASSROOM LTG	20	1		2652 0				--	1	20	SPARE	20
21	(E) CLASSROOM LTG	20	1			2686 0			--	1	20	SPARE	22
23	(E) CLASSROOM LTG	20	1				2803 0	--	1	20	SPARE	24
25	SPARE	20	1	--	0 0				--	1	20	SPARE	26
27	SPARE	20	1	--		0 0			--	1	20	SPARE	28
29	SPARE	20	1	--			0 0	--	1	20	SPARE	30
31	PROVISIONS	--	1	--	-- 0				--	1	20	SPARE	32
33	PROVISIONS	--	1	--		-- 348				1	20	EXTERIOR LIGHTING	34
35	PROVISIONS	--	1	--			-- 1045			1	20	(E) EXTERIOR LTG	36
37	PROVISIONS	--	1	--	-- 11840								38
39	PROVISIONS	--	1	--		-- 13348			3	125	T-P3C	40
41	PROVISIONS	--	1	--			-- 14980					42
	CONNECTED LOAD:				36 kVA	38 kVA	41 kVA					
	CONNECTED CURRENT:				132 A	139 A	148 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	67742 VA	100.00%	67742 VA
LIGHTING	9534 VA	125.00%	11918 VA
RECEPTACLE	38272 VA	100.00%	38272 VA

PANEL TOTALS	
CONNECTED LOAD:	116 kVA
CONNECTED CURRENT:	139 A
DEMAND LOAD:	118 kVA
DEMAND CURRENT:	142 A

NOTES:

PANELBOARD: P4B

LOCATION: CUST. 413
SUPPLY: P4A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 100A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 2,683 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) CUST CONV REC	20	1		360 1000				1	30	HAND DRYER	2
3	HAND DRYER	30	1			1000 0			1	30	SPARE	4
5	SPARE	30	1	--			0 1000		1	30	HAND DRYER	6
7	HAND DRYER	30	1		1000 0				1	30	SPARE	8
9	(E) WATER HEATER	20	1			1500 84			1	20	(E) RESTROOM LTG	10
11	RECEPTACLE	20	1				180 702		1	20	(E) RESTROOM LTG	12
13	(E) SFD	20	1		100 288							14
15	PROVISIONS	--	1	--		-- 288			3	20	EF-4.1	16
17	PROVISIONS	--	1	--			-- 288					18
19	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	20
21	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	22
23	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--			--				38
39	PROVISIONS	--	1	--		--		--				40
41	PROVISIONS	--	1	--			--	--				42
	CONNECTED LOAD:				3 kVA	3 kVA	2 kVA					
	CONNECTED CURRENT:				24 A	25 A	18 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	865 VA	100.00%	865 VA
POWER	4000 VA	100.00%	4000 VA
LIGHTING	786 VA	125.00%	983 VA
RECEPTACLE	2140 VA	100.00%	2140 VA

PANEL TOTALS	
CONNECTED LOAD:	8 kVA
CONNECTED CURRENT:	22 A
DEMAND LOAD:	8 kVA
DEMAND CURRENT:	22 A

NOTES:

PANELBOARD: P3C

LOCATION: ELEC. RM. 316
SUPPLY: P-P3C
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,208 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) LAB 306 TECH. WALL REC	20	1		900 900				1	20	(E) RSP 300 REC	2
3	(E) LAB 306 REC	20	1			540 720			1	20	(E) RSP 300 REC	4
5	(E) LAB 306 REC	20	1				1090 1090		1	20	(E) RSP 300 TECH WALL REC	6
7	(E) ELEC. RM. REC	20	1		360 360				1	20	(E) COMM RM REC	8
9	(E) RM. 303 REC	20	1			540 1200			1	20	(E) UC REFRIG RM 312	10
11	(E) RM. 303 TECH WALL REC	20	1				1060 1500		1	20	(E) MICRO. RM. 312	12
13	(E) LAB 305 TECH WALL REC	20	1		880 900				1	20	(E) RM. 312 REC	14
15	(E) LAB 305 REC	20	1			900 492			1	20	(E) RANGE HOOD 303	16
17	(E) LAB 305 REC	20	1				720 540		1	20	(E) RM. 303 REC	18
19	(E) LAB 301 TECH WALL REC	20	1		910 750				1	20	(E) REFRIG. RM. 303	20
21	(E) LAB 301 REC	20	1			540 4000			2	50	(E) RANGE RM. 303	22
23	(E) LAB 301 REC	20	1				900 4000					24
25	(E) RM. 302 REC	20	1		540 1680				1	20	(E) WASHER/DRYER 303	26
27	(E) BATT. CHARGER	20	1			720 696			1	20	EF-3.1	28
29	(E) SAC HYGIENE REC	20	1				540 540		1	20	ROOF REC	30
31	(E) MICROWAVE REC	20	1		1000 1000				1	20	(E) GATE MOTOR	32
33	(E) COUNTER REC	20	1			1000 --		--	1	--	PROVISIONS	34
35	(E) MICROWAVE REC	20	1				1000 --	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	-- 1660							38
39	PROVISIONS	--	1	--		-- 2000			3	100	P3D	40
41	PROVISIONS	--	1	--			-- 2000					42
	CONNECTED LOAD:				12 kVA	13 kVA	15 kVA					
	CONNECTED CURRENT:				99 A	113 A	127 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	1896 VA	100.00%	1896 VA
RECEPTACLE	38272 VA	100.00%	38272 VA

PANEL TOTALS	
CONNECTED LOAD:	40 kVA
CONNECTED CURRENT:	111 A
DEMAND LOAD:	40 kVA
DEMAND CURRENT:	111 A

NOTES:

PANELBOARD: L4A

LOCATION: ELEC. ROOM 410
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 600 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 600A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,129 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547 3547							2
3	RTU-4.7	20	3			3547 3547			3	20	RTU-5.7	4
5							3547 3547					6
7					3547 3547							8
9	RTU-4.8	20	3			3547 3547			3	20	RTU-5.8	10
11							3547 3547					12
13					40285 43526							14
15	L4B	225	3			38666 48072			3	225	L5A	16
17							42320 39561					18
19	PROVISIONS	--	1	--	-- 9164							20
21	PROVISIONS	--	1	--		-- 8032			3	125	T-P4A	22
23	PROVISIONS	--	1	--			-- 6886					24
25	(E) CLASSROOM LTG	20	1		1352 8000				1	40	(E) INSTA-HOT	26
27	(E) CLASSROOM LTG	20	1			992 8000			1	40	(E) INSTA-HOT	28
29	EXTERIOR LIGHTING	20	1				232 0	--	1	20	SPARE	30
31	(E) LIGHTS	20	1		500 0				--	1	20	SPARE	32
33	(E) LIGHTS	20	1			500 0			--	1	20	SPARE	34
35	SPARE	20	1	--			0 0	--	1	20	SPARE	36
37	PROVISIONS	--	1	--	-- --				--	1	--	PROVISIONS	38
39	PROVISIONS	--	1	--		-- --			--	1	--	PROVISIONS	40
41	PROVISIONS	--	1	--			-- --	--	--	1	--	PROVISIONS	42
	CONNECTED LOAD:				117 kVA	118 kVA	103 kVA					
	CONNECTED CURRENT:				430 A	435 A	373 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	204434 VA	100.00%	204434 VA
POWER	10274 VA	100.00%	10274 VA
LIGHTING	26948 VA	125.00%	33685 VA
RECEPTACLE	97002 VA	100.00%	97002 VA

PANEL TOTALS	
CONNECTED LOAD:	339 kVA
CONNECTED CURRENT:	407 A
DEMAND LOAD:	345 kVA
DEMAND CURRENT:	415 A

NOTES:

P3D	P3A	L3A
P4A	P3B	L3B
P4B	P3C	L4A

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
P: (619) 223-2400
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

REGISTERED PROFESSIONAL ENGINEER
JOSHUA SALEEM
E18805
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORN

PANELBOARD: P5B

LOCATION: ELEC. ROOM 512
SUPPLY: P5A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 2,857 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) CONFERENCE ROOM REC	20	1		682	696						1	20	(E) EF-5.1	2
3	RECEPTACLE	20	1				180	900				1	20	(E) FAC OFFICE/CONF REC	4
5	PROVISIONS	--	1	--								1	20	SPARE	6
7	PROVISIONS	--	1	--	--	0						1	20	SPARE	8
9	PROVISIONS	--	1	--			--	0				1	20	SPARE	10
11	PROVISIONS	--	1	--					--	0		1	20	SPARE	12
13	PROVISIONS	--	1	--	--	0						1	20	SPARE	14
15	PROVISIONS	--	1	--			--	0				1	20	SPARE	16
17	PROVISIONS	--	1	--					--	0		1	20	SPARE	18
19	PROVISIONS	--	1	--	--	0						1	20	SPARE	20
21	PROVISIONS	--	1	--			--	0				1	20	SPARE	22
23	PROVISIONS	--	1	--					--	0		1	20	SPARE	24
25	PROVISIONS	--	1	--	--	0						1	20	SPARE	26
27	PROVISIONS	--	1	--			--	0				1	20	SPARE	28
29	PROVISIONS	--	1	--					--	0		1	--	PROVISIONS	30
				CONNECTED LOAD:	1 kVA		1 kVA		0 kVA						
				CONNECTED CURRENT:	13 A		10 A		0 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	696 VA	100.00%	696 VA
RECEPTACLE	1762 VA	100.00%	1762 VA

PANEL TOTALS	
CONNECTED LOAD:	2 kVA
CONNECTED CURRENT:	7 A
DEMAND LOAD:	2 kVA
DEMAND CURRENT:	7 A

NOTES:

PANELBOARD: P4C

LOCATION: ELEC. ROOM 418
SUPPLY: T-P4C
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,666 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) RM 406 COMP REC	20	1		1080	1080						1	20	(E) RM 404 COMP REC	2
3	(E) RM 406 COMP REC	20	1				720	720				1	20	(E) RM 404 COMP REC	4
5	(E) RM 406 TEACH WALL REC	20	1						908	908		1	20	(E) RM 404 TEACH WALL REC	6
7	(E) RM 403 REC	20	1		720	360						1	20	(E) COMMUNICATION ROOM	8
9	(E) RM 403 REC	20	1				720	750				1	20	(E) REFRIGERATOR REC	10
11	(E) RM 403 TEACH WALL REC	20	1						1436	1500		1	20	(E) MICROWAVE REC	12
13	(E) RM 405 REC	20	1		720	360						1	20	(E) FAC/PREP REC	14
15	(E) RM 405 REC	20	1				720	720				1	20	(E) FAC/PREP REC	16
17	(E) RM 405 TEACH WALL REC	20	1						1436	500		1	20	(E) FAC/PREP REC	18
19	(E) RM 401 REC	20	1		900	180						1	20	(E) FAC/PREP REC	20
21	(E) RM 401 REC	20	1				720	696				1	20	(E) EF-4.3	22
23	(E) RM 401 TEACH WALL REC	20	1						1436	528		1	20	(E) EF-4.4	24
25	(E) RM 402 REC	20	1		720	288									26
27	(E) RM 402 REC	20	1				720	288				3	20	EF-4.9	28
29	(E) RM 402 TEACH WALL REC	20	1						1436	288					30
31					793	0					--	1	20	SPARE	32
33	EF-4.4	20	3				793	0			--	1	20	SPARE	34
35									793	0	--	1	20	SPARE	36
37					288	2460									38
39	EF-4.8	20	3				288	1900				3	100	P4D	40
41									288	1220					42
				CONNECTED LOAD:	10 kVA		10 kVA		13 kVA						
				CONNECTED CURRENT:	83 A		81 A		106 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	4108 VA	100.00%	4108 VA
POWER	1224 VA	100.00%	1224 VA
LIGHTING	80 VA	125.00%	100 VA
RECEPTACLE	26970 VA	100.00%	26970 VA

PANEL TOTALS	
CONNECTED LOAD:	32 kVA
CONNECTED CURRENT:	90 A
DEMAND LOAD:	32 kVA
DEMAND CURRENT:	90 A

NOTES:

PANELBOARD: L4B

LOCATION: ELEC. ROOM 418
SUPPLY: L4A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,573 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547	3547									2
3	RTU-4.1	20	3				3547	3547				3	20	RTU-4.4	4
5									3547	3547					6
7					4877	5986									8
9	RTU-4.2	25	3				4877	5986				3	35	RTU#4.5	10
11									4877	5986					12
13					3547	3547									14
15	RTU-4.3	20	3				3547	3547				3	20	RTU-4.6	16
17									3547	3547					18
19	(E) CLASSROOM LTG 400, 405	20	1		2916	1425						1	20	(E) EXTERIOR LTG	20
21	(E) CLASSROOM LTG 404, 403	20	1				2916	942							22
23	(E) CLASSROOM LTG 401, 402	20	1						3648	942		3	20	EF-4.5	24
25	PROVISIONS	--	1	--	--	942									26
27	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	--						--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	9949									38
39	PROVISIONS	--	1	--			--	9755				3	125	T-P4C	40
41	PROVISIONS	--	1	--					--	12677					42
				CONNECTED LOAD:	40 kVA		39 kVA		42 kVA						
				CONNECTED CURRENT:	146 A		140 A		154 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	82093 VA	100.00%	82093 VA
POWER	1224 VA	100.00%	1224 VA
LIGHTING	10985 VA	125.00%	13731 VA
RECEPTACLE	26970 VA	100.00%	26970 VA

PANEL TOTALS	
CONNECTED LOAD:	121 kVA
CONNECTED CURRENT:	146 A
DEMAND LOAD:	124 kVA
DEMAND CURRENT:	149 A

NOTES:

PANELBOARD: P6A

LOCATION: ELECT. RM 612
SUPPLY: T-P6A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,566 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) RM. 606 COMP. REC	20	1		1080	1080						1	20	(E) RM. 604 COMP. REC	2
3	(E) RM. 606 COMP. REC	20	1				720	720				1	20	(E) RM. 604 COMP. REC	4
5	(E) RM. 606 TEACH WALL REC	20	1						1088	1088		1	20	(E) RM. 604 TEACH WALL REC	6
7	(E) RM. 603 COMP. REC	20	1		900	360						1	20	(E) COMMUNICATION RM	8
9	(E) RM. 603 COMP. REC	20	1				900	750				1	20	(E) REFRIGERATOR REC	10
11	(E) RM. 603 TEACH WALL REC	20	1						1088	1500		1	20	(E) MICROWAVE REC	12
13	(E) RM. 605 TEACH WALL REC	20	1		908	696						1	20	EF-6.1	14
15	(E) RM. 605 COMP. REC	20	1				900	540				1	20	BLDG 600 ROOF REC	16
17	(E) RM. 605 COMP. REC	20	1						720	360		1	20	(E) FACULTY REC	18
19	(E) RM. 601 TEACH WALL REC	20	1		1088	720						1	20	(E) FACULTY REC	20
21	(E) RM. 601 COMP. REC	20	1				720	300				1	20	(E) FIRE ALARM	22
23	(E) RM. 601 COMP. REC	20	1						900	1581		2	20	RTU-6.7	24
25	(E) RM. 602 COMP. REC	20	1		720	1581									26
27	(E) RM. 602 COMP. REC	20	1				900	--			--	1	--	PROVISIONS	28
29	(E) RM. 602 TEACH WALL REC	20	1						1088	--	--	1	--	PROVISIONS	30
31	CLASSROOM 601, 602 REC	20	1		720	--					--	1	--	PROVISIONS	32
33	(E) IRRIGATION	20	1				300	--			--	1	--	PROVISIONS	34
35	EF-6.2	20	1						696	--	--	1	--	PROVISIONS	36
37	EF-6.3	20	1		528	--					--	1	--	PROVISIONS	38
39	SPARE	20	1	--			0	--			--	1	--	PROVISIONS	40
41	SPARE	20	1	--					0	--	--	1	--	PROVISIONS	42
				CONNECTED LOAD:	10 kVA		7 kVA		10 kVA						
				CONNECTED CURRENT:	91 A		56 A		89 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	5082 VA	100.00%	5082 VA
RECEPTACLE	22158 VA	100.00%	22158 VA

PANEL TOTALS	
CONNECTED LOAD:	27 kVA
CONNECTED CURRENT:	76 A
DEMAND LOAD:	27 kVA
DEMAND CURRENT:	76 A

NOTES:

PANELBOARD: P4D

LOCATION: ELEC. ROOM 418
SUPPLY: P4C
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,393 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	ROOF REC	20	1		720	720						1	20	(E) RM 403 REC	2
3	(E) SFD	20	1				1100	720				1	20	(E) RM 405 REC	4
5	(E) CIR. PUMP	20	1						500	720		1	20	(E) RM 401 REC	6
7	(E) FACP FA	20	1		300	720						1	20	(E) RM 402 REC	8
9	SPARE	20	1	--			0	80				1	20	(E) RM 414 LTG	10
11	SPARE	20	1	--					0	--	--	1	--	PROVISIONS	12
13	SPARE	20	1	--	0	--					--	1	--	PROVISIONS	14
15	SPARE	20	1	--			0	--			--	1	--	PROVISIONS	16
17	SPARE	20	1	--					0	--	--	1	--	PROVISIONS	18
19	SPARE	20	1	--	0	--					--	1	--	PROVISIONS	20
21	SPARE	20	1	--			0	--			--	1	--	PROVISIONS	22
23	SPARE	20	1	--					0	--	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	--	--					--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--			--	--			--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--					--	--	--	1	--	PROVISIONS	30
				CONNECTED LOAD:	2 kVA		2 kVA		1 kVA						
				CONNECTED CURRENT:	21 A		17 A		10 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
LIGHTING	80 VA	125.00%	100 VA
RECEPTACLE	5500 VA	100.00%	5500 VA

PANEL TOTALS	
CONNECTED LOAD:	6 kVA
CONNECTED CURRENT:	15 A
DEMAND LOAD:	6 kVA
DEMAND CURRENT:	16 A

NOTES:

PANELBOARD: L5A

LOCATION: ELEC. ROOM 513
SUPPLY: L4A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,560 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547	3547									2
3	RTU-5.1	20	3				3547	3547				3	20	RTU-5.4	4
5									3547	3547					6
7					3547	4877									8
9	RTU-5.2	20	3				3547	4877				3	25	RTU-5.5	10
11									3547	4877					12
13					3547	3547									14
15	RTU-5.3	20	3				3547	3547				3	20	RTU-5.6	16
17									3547	3547					18
19	(E) CLASSROOM LTG 506, 505	20	1		2376	2882									20
21	(E) CLASSROOM LTG 503, 504	20	1				2376	2882				3	20	RTU-5.9	22
23	(E) CLASSROOM LTG 501, 502	20	1						2804	2882					24
25	(E) PAURNG LOT LTG	20	1		3000	3000						1	20	(E) INSTA-HOT	26
27	PROVISIONS	--	1	--			--	4150				1	20	WH-1	28
29	PROVISIONS	--	1	--					--	0	--	1	20	SPARE	30
31	PROVISIONS	--	1	--	--	0					--	1	20	SPARE	32
33	PROVISIONS	--	1	--			--	8000				1	40	(E) INSTA-HOT	34
35	PROVISIONS	--	1	--					--	1045		1	20	(E) EXTERIOR LTG	36
37	PROVISIONS	--	1	--	--	9654									38
39	PROVISIONS	--	1	--			--	8050				3	125	T-P5A	40
41	PROVISIONS	--	1	--					--	10216					42
				CONNECTED LOAD:	44 kVA		48 kVA		40 kVA						
				CONNECTED CURRENT:	159 A		176 A		143 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	78408 VA	100.00%	78408 VA
POWER	4150 VA	100.00%	4150 VA
LIGHTING	11601 VA	125.00%	14501 VA
RECEPTACLE	37000 VA	100.00%	37000 VA

PANEL TOTALS	
CONNECTED LOAD:	131 kVA
CONNECTED CURRENT:	158 A
DEMAND LOAD:	134 kVA
DEMAND CURRENT:	161 A

NOTES:

PANELBOARD: P5A

LOCATION: ELEC. ROOM 513
SUPPLY: T-P5A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,612 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) RM 506 COMP REC	20	1		1080	1080						1	20	(E) RM 504 COMP REC	2
3	(E) RM 506 COMP REC	20	1				720	720				1	20	(E) RM 504 COMP REC	4
5	(E) RM 506 TEACH WALL REC	20	1						1268	1268		1	20	(E) RM 504 TEACH WALL REC	6
7	(E) RM 503 COMP REC	20	1		900	360						1	20	(E) COMMUNICATION	8
9	(E) RM 503 COMP REC	20	1				720	750				1	20	(E) REFRIGERATOR ROOM	10
11	(E) RM 503 TEACH WALL REC	20	1						1088	1500		1	20	(E) MICROWAVE REC	12
13	(E) RM 505 COMP REC	20	1		900	1080						1	20	(E) FAC CORE, EXT REC	14
15	(E) RM 505 COMP REC	20	1				720	720				1	20	RECEPTACLE	16
17	(E) RM 505 TEACH WALL REC	20	1						1088	696		1	20	EF-5.2	18
19	(E) RM 501 TEACH WALL REC	20	1		908	720						1	20	RECEPTACLE	20
21	(E) RM 501 COMP REC	20	1				720	0			--	1	20	SPARE	22
23	(E) RM 501 COMP REC	20	1						900	1500		1	20	(E) WORK RM WATER HEATER	24
25	(E) RM 502 COMP REC	20	1		720	0					--	1	20	SPARE	26
27	(E) RM 502 COMP REC	20	1				900	0			--	1	20	SPARE	28
29	(E) RM 502 TEACH WALL REC	20	1						908	0	--	1	20	SPARE	30
31	MOTOR	20	1		528	0					--	1	20	SPARE	32
33	(E) GATE OPERATOR	20	1				1000	0			--	1	20	SPARE	34
35	PROVISIONS	--	1	--					--	0	--	1	20	SPARE	36
37	PROVISIONS	--	1	--	--	1378									38
39	PROVISIONS	--	1	--			--	1080				3	100	P5B	40
41	PROVISIONS	--	1	--					--	0					42
				CONNECTED LOAD:	10 kVA		8 kVA		10 kVA						
				CONNECTED CURRENT:	83 A		67 A		87 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	1920 VA	100.00%	1920 VA
RECEPTACLE	26000 VA	100.00%	26000 VA

PANEL TOTALS	
CONNECTED LOAD:	28 kVA
CONNECTED CURRENT:	77 A
DEMAND LOAD:	28 kVA
DEMAND CURRENT:	77 A

NOTES:

PANELBOARD: L6A

LOCATION: ELECT. RM 612
SUPPLY: L7A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,493 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)		PHASE B LOAD (VA)		PHASE C LOAD (VA)		FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547	3547									2
3	RTU-6.1	20	3				3547	3547				3	20	RTU-6.4	4
5									3547	3547					6
7					3547	3547									8
9	RTU-6.2	20	3				3547	3547				3	20	RTU-6.5	10
11									3547	3547					12
13					4877	3547									14
15	RTU-6.3	25	3				4877	3547				3	20	RTU-6.6	16
17									4877	3547					18
19	(E) CLASSROOM LTG	20	1		2376	3000						1	20	(E) INSTA-HOT 609	20
21	(E) CLASSROOM LTG	20	1				2376	8000				1	40	(E) INSTA-HOT 607	22
23	(E) CLASSROOM LTG	20	1						2804	4150		1	20	WH-1	24
25	PROVISIONS	--	1	--	--	0					--	1	20	SPARE	26
27	PROVISIONS	--	1	--			--	0			--	1	20	SPARE	28
29	PROVISIONS	--	1	--					--	1045		1	20	(E) EXTERIOR LTG	30
31	PROVISIONS	--	1	--	--	0					--	1	20	SPARE	32
33	PROVISIONS	--	1	--			--	0			--	1	20	SPARE	34
35	PROVISIONS	--	1	--					--	0	--	1	20	SPARE	36
37	PROVISIONS	--	1	--	--	10381									38
39	PROVISIONS	--	1	--			--	6750				3	125	T-P6A	40
41	PROVISIONS	--	1	--					--	10109					42
				CONNECTED LOAD:	38 kVA		40 kVA		41 kVA						
				CONNECTED CURRENT:	139 A		144 A		148 A						

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	72924 VA	100.00%	72924 VA
POWER	4150 VA	100.00%	4150 VA
LIGHTING	8601 VA	125.00%	10751 VA
RECEPTACLE	33158 VA	100.00%	33158 VA

PANEL TOTALS	
CONNECTED LOAD:	119 kVA
CONNECTED CURRENT:	143 A
DEMAND LOAD:	121 kVA
DEMAND CURRENT:	146 A

NOTES:

P5B	P4C	L4B
P6A	P4D	L5A
	P5A	L6A

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

REGISTERED PROFESSIONAL ENGINEER
TIMING SHEETS
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EXP. 6/30/2027
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RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

PANEL SCHEDULES

E404

Architect Does Offset on Plot, Will Adjust Title Block Accordingly. Architect Does Not Guarantee Accuracy of Plot. AUTODESK DOCS_CM_23.4

PANELBOARD: P8B

LOCATION: ELEC. ROOM 817
SUPPLY: P8A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 6,062 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) HOME EC REC/DISP	20	1		1180 4000				2	50	(E) HOME EC RANGE	2
3	(E) GAS RANGE	20	1		540 4000							4
5	(E) HOME EC REC	20	1				540 4000		2	50	(E) HOME EC RANGE	6
7	(E) HOME EC DISP	20	1		1000 4000							8
9	(E) HOME EC DISP	20	1			1000 4000			2	50	(E) HOME EC RANGE	10
11	(E) HOME EC REC	20	1				360 4000					12
13	(E) HOME EC DISP	20	1		1000 4000				2	50	(E) HOME EC RANGE	14
15	(E) HOME EC DISP	20	1			1000 4000						16
17	(E) HOME EC REC/LTG	20	1				848 750		1	20	(E) REFRIGERATOR	18
19	(E) HOME EC DISP	20	1		1000 750				1	20	(E) REFRIGERATOR	20
21	(E) HOME EC DISP	20	1			1000 1000			1	20	(E) IND TECH 802 DUCT	22
23	(E) HOME EC DISP	20	1				1000 1000		1	20	(E) IND TECH 802 DUCT	24
25	(E) HOME EC REC	20	1		1080 1000				1	20	(E) IND TECH 802 DUCT	26
27	(E) DISHWASHER	20	1			1056 1000			1	20	(E) IND TECH 802 DUCT	28
29	(E) DRYER	30	1				1900 1000		1	20	(E) IND TECH 802 DUCT	30
31	(E) WASHER	20	1		1000 1000				1	20	(E) IND TECH 802 DUCT	32
33	(E) MICROWAVE	20	1			1000 100			1	20	(E) CIRC PUMP RM 804A	34
35	(E) MICROWAVE	20	1				1000 1000		1	20	(E) GATE OPERATOR	36
37	(E) MICROWAVE	20	1		1000 700				1	20	(E) SFD	38
39	(E) MICROWAVE	20	1			1000 500			1	20	(E) IRRG. CONTROLLER	40
41	(E) MICROWAVE	20	1				1000 --	--	1	--	PROVISIONS	42
					CONNECTED LOAD: 23 kVA		21 kVA		18 kVA			
					CONNECTED CURRENT: 193 A		180 A		153 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	100 VA	100.00%	100 VA
POWER	2200 VA	100.00%	2200 VA
RECEPTACLE	60004 VA	100.00%	60004 VA

PANEL TOTALS	
CONNECTED LOAD:	62 kVA
CONNECTED CURRENT:	173 A
DEMAND LOAD:	62 kVA
DEMAND CURRENT:	173 A

NOTES:

PANELBOARD: P7A

LOCATION: ELECT. RM 600E
SUPPLY: T-P7A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 100A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 2,953 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) FAC/CONF RM REC	20	1		720 100				1	30	HAND DRYER	2
3	BLDG 600 ROOF REC	20	1			180 100			1	30	HAND DRYER	4
5	SPARE	20	1	--			0 100		1	30	HAND DRYER	6
7	SPARE	20	1	--	0 100				1	30	HAND DRYER	8
9	SPARE	20	1	--		0 1500			1	20	(E) WATER HEATER	10
11	(E) ELEC COMM RM REC	20	1				360 642		1	20	(E) RR/FAC CONF REC	12
13	(E) EXTERIOR REC	20	1		520 540				1	20	BLDG 700 ROOF REC	14
15	(E) FAC PREP REC	20	1			520 360			1	20	(E) PHONE RM REC	16
17	EF-7.2	20	1				696 58		1	20	EXTERIOR LIGHTING	18
19	(E) RM 707 TEACH WALL REC	20	1		908 400				1	20	(E) SFD	20
21	(E) RM 707 COMP REC	20	1			720 1000			2	20	(E) AC-6.7	22
23	(E) RM 707 COMP REC	20	1				900 1000					24
25	(E) RM 708 COMP REC	20	1		720 720				1	20	CLASSROM 707, 708 REC	26
27	(E) RM 708 COMP REC	20	1			900						28
29	(E) RM 708 TEACH WALL REC	20	1				908					30
31	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	-- --			--	1	--	PROVISIONS	38
39	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	40
41	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	42
					CONNECTED LOAD: 5 kVA		5 kVA		5 kVA			
					CONNECTED CURRENT: 39 A		44 A		39 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	2696 VA	100.00%	2696 VA
POWER	1900 VA	100.00%	1900 VA
LIGHTING	58 VA	125.00%	73 VA
RECEPTACLE	10018 VA	100.00%	10018 VA

PANEL TOTALS	
CONNECTED LOAD:	15 kVA
CONNECTED CURRENT:	41 A
DEMAND LOAD:	15 kVA
DEMAND CURRENT:	41 A

NOTES:

PANELBOARD: L7A

LOCATION: ELECT. RM 600E
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 600 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 600A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,114 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547 0			--	1	20	SPARE	2
3	RTU-7.7	20	3			3547 8000			1	40	(E) INSTA-HOT	4
5							3547 --	--	1	--	PROVISIONS	6
7					3547 --			--	1	--	PROVISIONS	8
9	RTU-7.8	20	3			3547 --		--	1	--	PROVISIONS	10
11							3547 --	--	1	--	PROVISIONS	12
13						--		--	1	--	PROVISIONS	14
15							--	--	1	--	PROVISIONS	16
17								--	1	--	PROVISIONS	18
19	PROVISIONS	--	1	--	--			--	1	--	PROVISIONS	20
21	PROVISIONS	--	1	--		-- --		--	1	--	PROVISIONS	22
23	PROVISIONS	--	1	--			-- --	--	1	--	PROVISIONS	24
25	(E) CLASSROOM LTG	20	1		2280 --			--	1	--	PROVISIONS	26
27	(E) CLASSROOM LTG	20	1			1414 --		--	1	--	PROVISIONS	28
29	(E) RESTROOM/ FAC CONF LTG	20	1				304 --	--	1	--	PROVISIONS	30
31	SPARE	20	1	--	0 4728							32
33	SPARE	20	1	--		0 5280			3	50	T-P7A	34
35	SPARE	20	1	--			0 4664					36
37					41816 38371							38
39	L7B	225	3			36516 39740			3	225	L6A	40
41							37051 40722					42
					CONNECTED LOAD: 94 kVA		98 kVA		90 kVA			
					CONNECTED CURRENT: 343 A		356 A		329 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	165802 VA	100.00%	165802 VA
POWER	10200 VA	100.00%	10200 VA
LIGHTING	26913 VA	125.00%	33641 VA
RECEPTACLE	75834 VA	100.00%	75834 VA
LARGEST MOTOR	3421 VA	125.00%	4276 VA

PANEL TOTALS	
CONNECTED LOAD:	282 kVA
CONNECTED CURRENT:	339 A
DEMAND LOAD:	290 kVA
DEMAND CURRENT:	349 A

NOTES:

PANELBOARD: P7B

LOCATION: ELECT. RM 712
SUPPLY: T-P7B
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,570 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) RM. 706 COMP REC	20	1		1080 1080				1	20	(E) RM. 704 COMP REC	2
3	(E) RM. 706 COMP REC	20	1			720 720			1	20	(E) RM 704 COMP REC	4
5	(E) RM. 706 TEACH WALL REC	20	1				1088 908		1	20	(E) RM 704 TEACH WALL REC	6
7	(E) RM. 703 COMP REC	20	1		900 180				1	20	(E) COMM. ROOM	8
9	(E) RM. 703 COMP REC	20	1			900 750			1	20	(E) REFRIGERATOR REC	10
11	(E) RM. 703 TEACH WALL REC	20	1				1088 1500		1	20	(E) MICROWAVE REC	12
13	(E) RM. 705 TEACH WALL REC	20	1		908 900				1	20	(E) FAC CORE CONV REC	14
15	(E) RM. 705 COMP REC	20	1			900 540			1	20	BLDG 700 ROOF REC	16
17	(E) RM. 705 COMP REC	20	1				720 528		1	20	EF-7.1	18
19	(E) RM. 701 COMP REC	20	1		908 528				1	20	EF-7.4	20
21	(E) RM. 701 COMP REC	20	1			720 3000			1	20	(E) INSTA/HOT	22
23	(E) RM. 701 COMP REC	20	1				900 1000		1	20	(E) INSTA-HOT	24
25	(E) RM. 702 COMP REC	20	1		720 0			--	1	20	SPARE	26
27	(E) RM. 702 COMP REC	20	1			900 0		--	1	20	SPARE	28
29	(E) RM. 702 TEACH WALL REC	20	1				908 0	--	1	20	SPARE	30
31	CLASSROOM 701,702 REC	20	1		720 0			--	1	20	SPARE	32
33	SPARE	20	1	--		0 0		--	1	20	SPARE	34
35	SPARE	20	1	--			0 0	--	1	20	SPARE	36
37	SPARE	20	1	--	0 0			--	1	20	SPARE	38
39	SPARE	20	1	--		0 0		--	1	20	SPARE	40
41	SPARE	20	1	--			0 0	--	1	20	SPARE	42
					CONNECTED LOAD: 8 kVA		9 kVA		9 kVA			
					CONNECTED CURRENT: 66 A		77 A		73 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	1056 VA	100.00%	1056 VA
RECEPTACLE	24658 VA	100.00%	24658 VA

PANEL TOTALS	
CONNECTED LOAD:	26 kVA
CONNECTED CURRENT:	71 A
DEMAND LOAD:	26 kVA
DEMAND CURRENT:	71 A

NOTES:

PANELBOARD: L7B

LOCATION: ELECT. RM 712
SUPPLY: L7A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 225A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,500 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3547 3547							2
3	RTU-7.1	20	3			3547 3547			3	20	RTU-7.4	4
5							3547 3547					6
7					3547 3547							8
9	RTU-7.2	20	3			3547 3547			3	20	RTU-7.5	10
11							3547 3547					12
13					4877 3547							14
15	RTU-7.3	25	3			4877 3547			3	20	RTU-7.6	16
17							4877 3547					18
19	(E) CLASSROOM LTG	20	1		2376 4150				1	20	WH-1	20
21	(E) CLASSROOM LTG	20	1			2376 0		--	1	20	SPARE	22
23	(E) CLASSROOM LTG	20	1				2376 0	--	1	20	SPARE	24
25	(E) CLASSROOM LTG	20	1		2376 0			--	1	20	SPARE	26
27	(E) CLASSROOM LTG	20	1			2376 0		--	1	20	SPARE	28
29	(E) CLASSROOM LTG	20	1				2376 1045		1	20	(E) EXTERIOR LTG	30
31	(E) CLASSROOM LTG	20	1		2376 --			--	1	--	PROVISIONS	32
33	SPARE	20	1	--		0 --		--	1	--	PROVISIONS	34
35	SPARE	20	1	--			0 --	--	1	--	PROVISIONS	36
37	SPARE	20	1	--	0 7524							38
39	SPARE	20	1	--		0 9150			3	125	T-P7B	40
41	SPARE	20	1	--			0 8640					42
					CONNECTED LOAD: 42 kVA		37 kVA		37 kVA			
					CONNECTED CURRENT: 151 A		132 A		134 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	68898 VA	100.00%	68898 VA
POWER	4150 VA	100.00%	4150 VA
LIGHTING	14256 VA	125.00%	17820 VA
RECEPTACLE	24658 VA	100.00%	24658 VA
LARGEST MOTOR	3421 VA	125.00%	4276 VA

PANEL TOTALS	
CONNECTED LOAD:	115 kVA
CONNECTED CURRENT:	139 A
DEMAND LOAD:	120 kVA
DEMAND CURRENT:	144 A

NOTES:

PANELBOARD: P8A

LOCATION: ELEC. ROOM 817
SUPPLY: T-P8A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 6,288 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) APPAREL REC	20	1		1080 1080				1	20	(E) DRAMA REC	2
3	(E) APPAREL REC	20	1			540 720			1	20	(E) DRAMA REC	4
5	(E) APP REC/LTG	20	1				1028 1028		1	20	(E) DRAMA REC/LTG	6
7	(E) AUDIO/VIDEO	20	1		720 360				1	20	(E) COMM RM REC	8
9	(E) R&D	20	1			1272 750			1	20	(E) U/C REFRIGERATOR	10
11	(E) IND TECH	20	1				668 1500		1	20	(E) MICROWAVE	12
13	(E) MASS PRODUCT	20	1		1224 1260				1	20	(E) FACULTY CORE	14
15	(E) TECH LAB REC	20	1			720 1000			1	20	(E) IND TECH ROOM	16
17	(E) TECH LAB REC	20	1				900 1000		1	20	(E) IND TECH ROOM	18
19	(E) TECH LAB REC	20	1		900 1000				1	20	(E) IND TECH ROOM	20
21	(E) TECH LAB REC	20	1			720 1000			1	20	(E) IND TECH ROOM	22
23	(E) TECH LAB REC	20	1				1360 1000		1	20	(E) IND TECH ROOM	24
25	(E) IND TECH	20	1		1000 1000				1	20	(E) IND TECH REC	26
27	(E) IND TECH	20	1			1000 1000			1	20	(E) IND TECH REC	28
29	(E) IND TECH	20	1				1000 3848		2	40	(E) IND TECH	30
31	(E) IND TECH	40	2		3840 3848							32
33						3840 360			1	20	(E) TECH LAB REC	34
35	(E) IND TECH	40	2				3840 180		1	20	(E) COMPUTER LOUNGE	36
37					3840 22710							38
39	(E) IND TECH	40	2			3840 21196			3	225	P8B	40
41							3840 18398					42
					CONNECTED LOAD: 44 kVA		38 kVA		40 kVA			
					CONNECTED CURRENT: 368 A		316 A		332 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	100 VA	100.00%	100 VA
POWER	2200 VA	100.00%	2200 VA
RECEPTACLE	119110 VA	100.00%	119110 VA

PANEL TOTALS	
CONNECTED LOAD:	121 kVA
CONNECTED CURRENT:	337 A
DEMAND LOAD:	121 kVA
DEMAND CURRENT:	337 A

NOTES:

PANELBOARD: L8A

LOCATION: ELEC. ROOM 817
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,225 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					4877 7094							2
3	RTU8.1	25	3			4877 7094			3	45	RTU8.4	4
5							4877 7094					6
7					7094 3547							8
9	RTU8.2	45	3			7094 3547			3	20	RTU-8.5	10
11							7094 3547					12
13					3547 700							14
15	RTU-8.3	20	3			3547 700			3	20	(E) DUST ARRESTOR	16
17							3547 700					18
19	(E) CLASSROOM LTG	20	1		2804 3000				1	20	(E) INSTA-HOT RM 816	20
21	(E) CLASSROOM LTG	20	1			2866 8000			1	40	(E) INSTA-HOT RM 814	22
23	(E) CLASSROOM LTG	20	1				2922 3547					24
25	(E) EXTERIOR LTG	20	1		1425 3547				3	20	RTU-8.6	26
27	(E) DRIVEWAY LTG	20	1			2000 3547						28
29	SPARE	20	1	--			0 2882					30
31	PROVISIONS	--	1	--	-- 2882				3	15	RTU8.7	32
33	PROVISIONS	--	1	--		-- 2882						34
35	PROVISIONS	--	1	--			-- 0	--	1	20	SPARE	36
37	PROVISIONS	--	1	--	-- 43862				3	225	T-P8A	38
39	PROVISIONS	--	1	--		-- 37958						40
41	PROVISIONS	--	1	--			-- 39590					42
					CONNECTED LOAD: 84 kVA		84 kVA		76 kVA			
					CONNECTED CURRENT: 309 A		308 A		274 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	99970 VA	100.00%	99970 VA
POWER	13200 VA	100.00%	13200 VA
LIGHTING	12017 VA	125.00%	15021 VA
RECEPTACLE	119110 VA	100.00%	119110 VA

PANEL TOTALS	
CONNECTED LOAD:	244 kVA
CONNECTED CURRENT:	294 A
DEMAND LOAD:	247 kVA
DEMAND CURRENT:	297 A

NOTES:

P8B	P7A	L7A
	P7B	L7B
	P8A	L8A

Architects Drawings are Not Valid for Bidding & Construction Unless Signed and Sealed. Electronic Data Files are Not Signed and Sealed.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

REGISTERED PROFESSIONAL ENGINEER
BRIAN SALEM
E18805
EXP. 6/30/2027
ELECTRICAL
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DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

PANEL SCHEDULES

E405

PANELBOARD: P10A

LOCATION: ELEC. 1011
SUPPLY: T-P10A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,721 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) GIRLS	20	1		540	360			1	20	(E) GIRLS LOCK/VEST	2
3	(E) EQUIP/CUST/HWH	20	1			720	720		1	20	(E) RSP	4
5	(E) HW CIR PUMP/CONT	20	1				1000	360	1	20	(E) RSP	6
7	HAND DRYER	20	1		100	900			1	20	(E) HC LIFT-GIRLS	8
9	(E) DRYER-GIRLS	30	1			2300	720		1	20	(E) COACH-GIRLS/BOYS	10
11	HAND DRYER	20	1				100	900	1	20	(E) HC LIFT-BOYS	12
13	HAND DRYER	20	1		100	1000			1	20	(E) WASHER	14
15	(E) FITNESS	20	1			900	800		1	20	(E) DRYER	16
17	(E) VEST/LOCK/GRL-BOY	20	1				720	360	1	20	(E) WOMEN/MEN	18
19	(E) CONF	20	1		360	360			1	20	(E) BOYS LOCK/VEST/CUST	20
21	(E) BOYS	20	1			540	360		1	20	(E) RSP	22
23	(E) EQUIP/ELEC/STOR	20	1				720	720	1	20	(E) RSP	24
25	HAND DRYER	20	1		100	900			1	20	BLDG 1000 ROOF REC	26
27	(E) DRYER-BOYS	30	1			2300	0		--	1	20	SPARE	28
29	HAND DRYER	20	1				100	528	1	20	EF-10.5	30
31	HAND DRYER	20	1		100	288						32
33	(E) DRYER-BOYS	30	1			2300	288		3	20	EF-10.3	34
35	(E) DRYER-BOYS	30	1				2300	288				36
37	(E) COMPUTER REC	20	1		540	4434						38
39	(E) EF	20	1			696	6616		3	100	P10B	40
41	CLASSROOM 1001, 1002 REC	20	1				720	4485				42
				CONNECTED LOAD:	10 kVA		19 kVA		13 kVA			
				CONNECTED CURRENT:	84 A		165 A		115 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	6676 VA	100.00%	6676 VA
POWER	16400 VA	100.00%	16400 VA
LIGHTING	3627 VA	125.00%	4534 VA
RECEPTACLE	15940 VA	100.00%	15940 VA

PANEL TOTALS	
CONNECTED LOAD:	43 kVA
CONNECTED CURRENT:	118 A
DEMAND LOAD:	44 kVA
DEMAND CURRENT:	121 A

NOTES:

PANELBOARD: L10A

LOCATION: ELEC. 1011
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,652 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					6759	--		--	1	--	PROVISIONS	2
3	MAU-10.2	20	3			6759	--	--	1	--	PROVISIONS	4
5							6759	--	1	--	PROVISIONS	6
7					2882	3768			1	20	(E) BOYS LOCKERS	8
9	RTU-10.1	15	3			2882	3364		1	20	(E) OFFICE	10
11							2882	3768	1	20	(E) GIRLS LOCKERS	12
13					2882	1780			1	20	(E) FITNESS ROOM	14
15	RTU-10.2	15	3			2882	1599		1	20	(E) EGRESS LTG	16
17							2882	252	1	20	(E) EXTERIOR LTG	18
19	EXTERIOR LIGHTING	20	1		58	0		--	1	20	SPARE	20
21						6759	0	--	1	20	SPARE	22
23	MAU-10.1	20	3				6759	0	--	1	20	SPARE	24
25					6759	0		--	1	20	SPARE	26
27	PROVISIONS	--	1	--		--	0	--	1	20	SPARE	28
29	PROVISIONS	--	1	--				--	0	--	1	--	SPARE	30
31					60	--		--	1	--	PROVISIONS	32
33	(E)	100	3			60	--	--	1	--	PROVISIONS	34
35							60	--	1	--	PROVISIONS	36
37					10082	--		--	1	--	PROVISIONS	38
39	T-P10A	125	3			19260	--	--	1	--	PROVISIONS	40
41							13301	--	1	--	PROVISIONS	42
				CONNECTED LOAD:	35 kVA		44 kVA		37 kVA			
				CONNECTED CURRENT:	126 A		158 A		133 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	64520 VA	100.00%	64520 VA
POWER	16580 VA	100.00%	16580 VA
LIGHTING	18216 VA	125.00%	22770 VA
RECEPTACLE	15940 VA	100.00%	15940 VA

PANEL TOTALS	
CONNECTED LOAD:	115 kVA
CONNECTED CURRENT:	139 A
DEMAND LOAD:	120 kVA
DEMAND CURRENT:	144 A

NOTES:

PANELBOARD: L8B

LOCATION: ELECT. RM 700B
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 100A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,176 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					2882	8000			1	40	(E) INSTA-HOT RM 806B	2
3	RTU/7.9	15	3			2882	8000		1	40	(E) INSTA-HOT RM 807B	4
5							2882	8000	1	40	(E) INSTA-HOT	6
7	(E) FAC/CONF RM REC	20	1		484	0		--	1	20	SPARE	8
9	SPARE	20	1	--		0	0	--	1	20	SPARE	10
11	SPARE	20	1	--			0	0	--	1	20	SPARE	12
13	PROVISIONS	--	1	--	--	0		--	1	20	SPARE	14
15	PROVISIONS	--	1	--			--	0	--	1	20	SPARE	16
17	PROVISIONS	--	1	--				--	0	--	1	20	SPARE	18
19	(E) CLASSROOM LTG	20	1		2804	--			--	1	--	PROVISIONS	20
21	(E) CLASSROOM LTG	20	1			2866	--		--	1	--	PROVISIONS	22
23	(E) CLASSROOM LTG	20	1				2922	--	--	1	--	PROVISIONS	24
25	(E) CLASSROOM LTG	20	1		1104	5733							26
27	(E) CLASSROOM LTG	20	1			1476	7807		3	70	T-P8C	28
29	PROVISIONS	--	1	--				--	5383				30
				CONNECTED LOAD:	21 kVA		23 kVA		19 kVA			
				CONNECTED CURRENT:	77 A		84 A		69 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	11432 VA	100.00%	11432 VA
POWER	1900 VA	100.00%	1900 VA
LIGHTING	11262 VA	125.00%	14078 VA
RECEPTACLE	38630 VA	100.00%	38630 VA

PANEL TOTALS	
CONNECTED LOAD:	63 kVA
CONNECTED CURRENT:	76 A
DEMAND LOAD:	66 kVA
DEMAND CURRENT:	79 A

NOTES:

PANELBOARD: P10B

LOCATION: ELEC. 1011
SUPPLY: P10A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: No
FEATURES & MODIFICATIONS: -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,473 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1						420						2
3							420		3	20	EF-10.1	4
5								420				6
7						378			1	20	(E) STEP LTG	8
9							720		1	20	(E) STEP LTG	10
11								29	1	20	EXTERIOR LTG	12
13	(E) EXT REC	20	1		360	300			1	20	(E) GIRLS LOCKER FAN	14
15	(E) EXTERIOR LTG	20	1				1500	300	1	20	(E) GIRLS LOCKER FAN	16
17	(E) EXTERIOR LTG	20	1						1000	420			18
19	(E) SFD	20	1		200	420			3	20	EF-10.2	20
21	(E) INVERTER	20	1				1000	420				22
23	(E) ELECT RM	20	1					360	1667			24
25	(E) FACP	20	1		400	1667			3	60	(E) SHED	26
27	(E) BOYS LOCKER RM FAN	20	1				300	1667				28
29	(E) BOYS LOCKER RM FAN	20	1					300	0	1	0	INV	30
31					288							32
33	EF-10.4	20	3				288					34
35								288				36
37												38
39												40
41												42
				CONNECTED LOAD:	4 kVA		7 kVA		4 kVA			
				CONNECTED CURRENT:	37 A		55 A		37 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	4587 VA	100.00%	4587 VA
POWER	6600 VA	100.00%	6600 VA
LIGHTING	3627 VA	125.00%	4534 VA
RECEPTACLE	720 VA	100.00%	720 VA

PANEL TOTALS	
CONNECTED LOAD:	16 kVA
CONNECTED CURRENT:	43 A
DEMAND LOAD:	16 kVA
DEMAND CURRENT:	46 A

NOTES:

PANELBOARD: P8C

LOCATION: ELECT. RM 700B
SUPPLY: T-P8C
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 100A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 3,470 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) CONFERENCE REC	20	1		900	912			1	20	(E) CLASSROOM REC	2
3	(E) COMM/ELEC RM REC	20	1			360	900		1	20	(E) CLASSROOM REC	4
5	(E) EXTERIOR REC	20	1				360	720	1	20	(E) CLASSROOM REC	6
7	(E) CLASSROOM REC	20	1		912	180			1	20	BLDG 700 ROOF REC	8
9	(E) CLASSROOM REC	20	1			900	90		1	20	(E) STEP LTG	10
11	(E) CLASSROOM REC	20	1				720	500	1	20	(E) LOUNGE	12
13	EF-8.5	20	1		528	500			1	20	(E) LOUNGE	14
15	(E) FAC/CONF REC	20	1			1080	720		1	20	CLASSROOM 806.807 REC	16
17	EF-7.3	20	1				528	--	--	1	--	PROVISIONS	18
19	PROVISIONS	--	1	--	--	--		--	--	1	--	PROVISIONS	20
21	PROVISIONS	--	1	--		--	--		--	1	--	PROVISIONS	22
23	PROVISIONS	--	1	--			--	--	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	--	1621							26
27	PROVISIONS	--	1	--			--	3037	3	100	P8D		28
29	PROVISIONS	--	1	--				--	2555				30
31	PROVISIONS	--	1	--	--	180			1	20	BLDG 800 ROOF REC		32
33	PROVISIONS	--	1	--			--	720	1	20	BLDG 800 ROOF REC		34
35	PROVISIONS	--	1	--									36
37	PROVISIONS	--	1	--	--	--							38
39	PROVISIONS	--	1	--			--	--					40
41	PROVISIONS	--	1	--				--	--				42
				CONNECTED LOAD:	6 kVA		8 kVA		5 kVA			
				CONNECTED CURRENT:	48 A		66 A		45 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	2786 VA	100.00%	2786 VA
POWER	1900 VA	100.00%	1900 VA
LIGHTING	90 VA	125.00%	113 VA
RECEPTACLE	14146 VA	100.00%	14146 VA

PANEL TOTALS	
CONNECTED LOAD:	19 kVA
CONNECTED CURRENT:	53 A
DEMAND LOAD:	19 kVA
DEMAND CURRENT:	53 A

NOTES:

PANELBOARD: L9A

LOCATION: MAIN ELEC (METER RM) 944
SUPPLY: MSA
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 400A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,803 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					3545	13518						2
3	RTU-9.1	20	3			3545	13518		3	80	RTU-9.2	4
5							3545	13518				6
7					3545	13518						8
9	RTU-9.4	20	3			3545	13518		3	80	RTU-9.3	10
11							3545	13518				12
13					3545	0		--	1	20	SPARE	14
15	RTU-9.5	20	3			3545	3000		1	20	(E) INSTA-HOT	16
17							3545	3000	1	20	(E) INSTA-HOT	18
19					3545	8000			1	40	(E) INSTA-HOT	20
21	RTU-9.6	20	3			3545	2882					22
23							3545	2882	3	20	RTU-9.8	24
25	(E) EXTERIOR LTG	20	1		500	2882						26
27	(E) EGRESS LTG	20	1			900	4000		1	20	(E) PARKING LOT LTG	28
29	(E) RMS 902, 06-15	20	1					3770	4000	1	20	(E) PARKING LOT LTG	30
31	(E) RM 939 - 45	20	1		2352	58				1	20	EXTERIOR LIGHTING	32
33	(E) RMS 900, 36-38	20	1			2100	1000			1	20	(E) EGRESS LTG	34
35	(E) LTG	20	1				500	336		1	20	(E) EXTERIOR LTG	36
37					3547	48332							38
39	RTU-9.7	20	3			3547	45086		3	225	L9B		40
41							3547	45132					42
				CONNECTED LOAD:	107 kVA		104 kVA		104 kVA			
				CONNECTED CURRENT:	386 A		374 A		377 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	201789 VA	100.00%	201789 VA
POWER	58043 VA	100.00%	58043 VA
LIGHTING	55172 VA	125.00%	68965 VA

PANEL TOTALS	
CONNECTED LOAD:	315 kVA
CONNECTED CURRENT:	379 A
DEMAND LOAD:	329 kVA
DEMAND CURRENT:	395 A

NOTES:

PANELBOARD: P8D

LOCATION: CUST. 812
SUPPLY: P8C
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MCB 100A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 2,080 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) CUST REC	20	1		360	100			1	30	HAND DRYER	2
3	HAND DRYER	30	1			100	0	--	1	20	SPARE	4
5	HAND DRYER	30	1				100	100	1	30	HAND DRYER	6
7	SPARE	20	1	--	0	0		--	1	20	SPARE	8
9	(E) WATER HEATER RM 812	20	1			1500	180		1	20	BLDG 800 ROOF REC	10
11							288	1098	1	20	(E) RESTROOMS	12
13	EF-8.1	20	3		288	84			1	20	(E) RESTROOMS	14
15						288	180		1	20	(E) WTR	16
17							288	180	1	20	(E) WTR	18
19	EF-8.3	20	3		288	0		--	1	20	SPARE	20
21						288	500		1	20	(E) VENDING	22
23							0	500	1	20	(E) VENDING	24
25	EF-8.4	20	3		0	500			1	20	(E) VENDING	26
27						0	--		--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--			--	--	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	--	--			--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--		--	--		--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--			--	--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--								38
39	PROVISIONS	--	1	--		--							40
41	PROVISIONS	--	1	--			--						42
				CONNECTED LOAD:	2 kVA		3 kVA		3 kVA			
				CONNECTED CURRENT:	14 A		27 A		22 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	1730 VA	100.00%	1730 VA
POWER	1900 VA	100.00%	1900 VA
RECEPTACLE	3582 VA	100.00%	3582 VA

PANEL TOTALS	
CONNECTED LOAD:	7 kVA
CONNECTED CURRENT:	20 A
DEMAND LOAD:	7 kVA
DEMAND CURRENT:	20 A

NOTES:

PANELBOARD: L9B

LOCATION: CORRIDOR 930
SUPPLY: L9A
MOUNTING: Recessed
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS: -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,039 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) EGRESS LTG	20	1		1025	14681						2
3	(E) RMS 914-20	20	1			3452	14681		3	70	(E) DISHWASHER	4
5	(E) ROOM 900	20	1				1834	14681				6
7	(E) KITCHEN LTG	20	1		3109	2400			1	20	(E) EXTERIOR LTG	8
9	(E) EXTERIOR LTG	20	1			336	1500		1	20	(E) EXTERIOR LTG	10
11	(E) TENNIS LTG	30	2				2000	1500	1	20	(E) EXTERIOR LTG	12
13					2000	1500			1	20	(E) INTERIOR LTG	14
15	(E) TENNIS LTG	30	2			2000	1500		1	20	(E) INTERIOR LTG	16
17							2000	1500	1	20	(E) INTERIOR LTG	18
19	(E) TENNIS LTG	30	2		2000	0		--	1	20	SPARE	20
21						2000	2000					22
23	(E) TENNIS LTG	30	2				2000	2000	3	20	(E) VRV-1	24
25					2000	2000						26
27	MAU-9.1	80	3			17617	--	--	1	--	PROVISIONS	28
29							17617	--	--	1	--	PROVISIONS	30
31					17617	--			--	1	--	PROVISIONS	32
33	PROVISIONS	--	1	--		--	--		--	1	--	PROVISIONS	34
35	PROVISIONS	--	1	--				--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	--			--	1	--	PROVISIONS	38
39	PROVISIONS	--	1	--		--	--		--	1	--	PROVISIONS	40
41	PROVISIONS	--	1	--				--	--	1	--	PROVISIONS	42
				CONNECTED LOAD:	48 kVA		45 kVA		45 kVA			
				CONNECTED CURRENT:	175 A		163 A		163 A			

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	58851 VA	100.00%	58851 VA
POWER	44043 VA	100.00%	44043 VA
LIGHTING	35656 VA	125.00%	44570 VA

PANEL TOTALS	
CONNECTED LOAD:	139 kVA
CONNECTED CURRENT:	167 A
DEMAND LOAD:	147 kVA
DEMAND CURRENT:	177 A

NOTES:

P10A	L10A	L8B
P10B	P8C	L9A
	P8D	L9B

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

REGISTERED PROFESSIONAL ENGINEER
BRIAN SAEED
E18805
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA
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SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

PANEL SCHEDULES

E406

Architect Drew Officer's Set Rev. 1 - Building & Site Rehabilitation - 24203.10 - 2025-09-05 - DSA BACKCHECK - 2025-09-05 - 24203.10 - E406 - 24203.10.pln

SWITCHBOARD: MSA

LOCATION: MAIN ELEC (METER RM) 944
SUPPLY: UTILITY TRANSFORMER
MOUNTING: Surface
ENCLOSURE: NEMA 1
FEATURES & MODIFICATIONS -

VOLTAGE: 480Y/277V, 3PH, 4W
BUS RATING: 3000 A
NEUTRAL: 100%
MAINS TYPE: MCB 3000A
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,867 A

CKT	DESCRIPTION:	FRAME (A)	TRIP (A)	POLES	FN/NOTE	LOAD
1	L1A	250	225	3		144547
2	L15A	400	400	3		180694
3	L3A	600	600	3		341516
4	L4A	600	600	3		338658
5	L7A	600	600	3		282170
6	L8A	400	400	3		244297
7	L8B	100	100	3		63224
8	L9A	400	400	3		315004
9	T-DP9	400	400	3		185125
10	T-DIM	100	100	3		0
11	L10A	400	400	3		115256

LOAD SUMMARY

LOAD CLASSIFICATION	Connected	FACTOR	DEMAND	PANEL TOTALS	
DWELLING UNIT 220.84	3126 VA	100.00%	3126 VA	CONNECTED LOAD:	2210 kVA
LARGEST MOTOR	3421 VA	125.00%	4276 VA	CONNECTED...	2659 A
LIGHTING	214736 VA	125.00%	268420 VA	DEMAND LOAD:	2265 kVA
MOTOR	1157975 VA	100.00%	1157975 VA	DEMAND CURRENT:	2724 A
POWER	143759 VA	100.00%	143759 VA		
RECEPTACLE	684914 VA	100.00%	684914 VA		
Other	1000 VA	100.00%	1000 VA		
Spare	1560 VA	100.00%	1560 VA		

NOTES:

PANELBOARD: P9B

LOCATION: CORRIDOR 930
SUPPLY: DP9
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 400 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 5,067 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					1550	1664			2	20	(E) REFRIG/FREEZER	2
3							1550	1664				4
5	(E) KITCHEN CONV REC	20	1				800	2392	2	30	(E) WARMER	6
7	(E) MICROWAVE	20	1		1100	2392						8
9	(E) REFRIGERATOR	20	1			1440	1563		2	20	(E) HOT/COLD SERVER	10
11	(E) AIR SCREEN	20	1				936	1563				12
13	(E) REFRIGERATOR	20	1		1920	1563			2	20	(E) HOT/COLD SERVER	14
15	(E) CASH REGISTER	20	1			500	1563					16
17	(E) WARMER	20	1				900	1563	2	20	(E) HOT/COLD SERVER	18
19	(E) KITCHEN CONV REC	20	1		1600	1563						20
21	(E) KITCHEN CONV REC	20	1			1600	1563		2	20	(E) HOT/COLD SERVER	22
23	(E) KITCHEN CONV REC	20	1				1600	1563				24
25	(E) HOT CART	20	1		1560	1563			2	20	(E) HOT/COLD SERVER	26
27	(E) KITCHEN CONV REC	20	1			800	1563					28
29	(E) FAN COIL	20	2				1000	180	1	20	(E) EXTERIOR REC	30
31					1000	1500			1	20	(E) REFRIGERATOR	32
33	(E) FAN COIL	20	2			1000	1500		1	20	(E) REFRIGERATOR	34
35							1000	--	1	--	PROVISIONS	36
37					21016	--			1	--	PROVISIONS	38
39	P9C	225	3			17348	--		1	--	PROVISIONS	40
41							15800	--	1	--	PROVISIONS	42
	CONNECTED LOAD:				40 kVA	34 kVA	29 kVA					
	CONNECTED CURRENT:				339 A	286 A	244 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	4000 VA	100.00%	4000 VA
POWER	13700 VA	100.00%	13700 VA
LIGHTING	2152 VA	125.00%	2690 VA
RECEPTACLE	79964 VA	100.00%	79964 VA
DWELLING UNIT 220.84	3126 VA	100.00%	3126 VA

PANEL TOTALS	
CONNECTED LOAD:	103 kVA
CONNECTED CURRENT:	286 A
DEMAND LOAD:	103 kVA
DEMAND CURRENT:	287 A

NOTES:

PANELBOARD: DP9

LOCATION: MAIN ELEC (METER RM) 944
SUPPLY: T-DP9
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 800 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 7,952 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1					39991	13746						2
3	P9B	400	3			33654	18338		3	225	P9A	4
5							29297	14080				6
7					12333	--		--	1	--	PROVISIONS	8
9	P9D	225	3			11989	--	--	1	--	PROVISIONS	10
11							11697	--	1	--	PROVISIONS	12
13	PROVISIONS	--	1	--	--	--		--	1	--	PROVISIONS	14
15	PROVISIONS	--	1	--			--	--	1	--	PROVISIONS	16
17	PROVISIONS	--	1	--			--	--	1	--	PROVISIONS	18
19	PROVISIONS	--	1	--	--	--			1	--	PROVISIONS	20
21	PROVISIONS	--	1	--		--	--		1	--	PROVISIONS	22
23	PROVISIONS	--	1	--			--	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	--	--			1	--	PROVISIONS	26
27	PROVISIONS	--	1	--		--	--		1	--	PROVISIONS	28
29	PROVISIONS	--	1	--			--	--	1	--	PROVISIONS	30
31	PROVISIONS	--	1	--	--	--			1	--	PROVISIONS	32
33	PROVISIONS	--	1	--		--	--		1	--	PROVISIONS	34
35	PROVISIONS	--	1	--			--	--	1	--	PROVISIONS	36
37	PROVISIONS	--	1	--	--	--			1	--	PROVISIONS	38
39	PROVISIONS	--	1	--		--	--		1	--	PROVISIONS	40
41	PROVISIONS	--	1	--			--	--	1	--	PROVISIONS	42
	CONNECTED LOAD:				66 kVA	64 kVA	55 kVA					
	CONNECTED CURRENT:				562 A	545 A	459 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	14703 VA	100.00%	14703 VA
POWER	25800 VA	100.00%	25800 VA
LIGHTING	2152 VA	125.00%	2690 VA
RECEPTACLE	136784 VA	100.00%	136784 VA
DWELLING UNIT 220.84	3126 VA	100.00%	3126 VA
Spare	1560 VA	100.00%	1560 VA
Other	1000 VA	100.00%	1000 VA

PANEL TOTALS	
CONNECTED LOAD:	185 kVA
CONNECTED CURRENT:	514 A
DEMAND LOAD:	186 kVA
DEMAND CURRENT:	515 A

NOTES:

PANELBOARD: P9C

LOCATION: KITCHEN 922
SUPPLY: P9B
MOUNTING: Recessed
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,906 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) SPEED LINE CONV	20	1		1600	2700			1	30	(E) HEATED SERVER	2
3	(E) AIR SCREEN	20	1			936	2700		1	30	(E) HEATED SERVER	4
5	(E) AIR SCREEN	20	1				936	2700	1	30	(E) HEATED SERVER	6
7	(E) AIR SCREEN	20	1		936	2700			1	30	(E) HEATED SERVER	8
9	(E) CASH REGISTERS	20	1			1000	1632		1	20	(E) REFRIG SERVER	10
11	(E) CASH REGISTERS	20	1				1000	1632	1	20	(E) REFRIG SERVER	12
13	(E) CASH REGISTERS	20	1		1000	1920			1	20	(E) REFRIGERATOR	14
15	(E) CASH REGISTERS	20	1			1000	1920		1	20	(E) HEATED CABINET	16
17	(E) DISHWASHER	20	1				500	800	1	20	(E) KITCHEN CONV	18
19	(E) KITCHEN CONV	20	1		1600	1560			1	20	(E) HOT CART	20
21	(E) VENTILATOR	30	1			2400	360		1	20	(E) TOILET/LOCKER	22
23	(E) FIRE PROTECTION	30	1				2400	900	1	20	(E) OFFICE/CUST	24
25	(E) SFD	20	1		500	1000			1	20	(E) AIR SCREEN	26
27	SPARE	20	1	--		0	180		1	20	(E) ELECT MESSAGE	28
29	SPARE	20	1	--			0	432	1	20	(E) STEP LTG	30
31					900	1000			1	20	(E) EXTERIOR LTG	32
33	(E) DISPOSAL	20	3			900	720		1	20	(E) TENNIS COURTS	34
35							900	0	1	20	SPARE	36
37					3600							38
39	(E) COMPRESSOR RACK	50	3			3600						40
41							3600					42
	CONNECTED LOAD:				21 kVA	17 kVA	16 kVA					
	CONNECTED CURRENT:				177 A	147 A	132 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
POWER	13700 VA	100.00%	13700 VA
LIGHTING	2152 VA	125.00%	2690 VA
RECEPTACLE	38312 VA	100.00%	38312 VA

PANEL TOTALS	
CONNECTED LOAD:	54 kVA
CONNECTED CURRENT:	150 A
DEMAND LOAD:	55 kVA
DEMAND CURRENT:	152 A

NOTES:

PANELBOARD: P9A

LOCATION: MAIN ELEC (METER RM) 944
SUPPLY: DP9
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 7,381 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) VENDING	20	1		1200	1080			1	20	(E) PRACTICE ROOM	2
3	(E) VENDING	20	1				1200	900	1	20	(E) CHORAL DANCE	4
5	(E) ASB STORE	20	1					720	900	1	20	(E) CHORAL/DANCE/STOR	6
7	(E) ICE MACHINE	20	1		1560	100				1	20	(E) FIRE SPRKLR TS/FS	8
9	(E) ICE MACHINE	20	1				1560	900		1	20	(E) STAGE RIGHT	10
11	(E) REFRIGERATOR	20	1					1200	720	1	20	(E) STAGE	12
13	(E) FREEZER	20	1		1200	900				1	20	(E) STAGE	14
15	(E) REFRIGERATOR	20	1				1200	1080		1	20	(E) STAGE LEFT	16
17	(E) SODA DISP/REC	20	1							1	20	(E) DRESSING ROOM LEFT	18
19	(E) ASB WORK RM/STOR	20	1					360	1740	1	20	(E) OFFICE	20
21	(E) ASB WORK RM/STOR	20	1		900	540				1	20	(E) OFFICE	20
23	HAND DRYER	30	1				720	2300		1	30	(E) DRYER/BOYS	22
25	HAND DRYER	30	1		100	540			100	2300	1	30	(E) DRYER/GIRLS	24
27	(E) MEN/CUST STOR	20	1				360	1620			1	20	(E) BOYS/GIRLS/CORR	26
29	(E) RACEWAY	20	1					900	1740	1	20	(E) MUSIC TEACH	28
31	(E) ELECT RM REC	20	1		180	300				1	20	(E) DRESSING ROOM RIGHT	30
33	(E) ASB OFFICE	20	1				720	0		1	20	(E) FACP	32
35	(E) CONTROL ROOM	20	1						360	1000	1	20	SPARE	34
37	(E) CONTROL ROOM	20	1		360	4786						20	(E) PEPSI COOLER	36
39	(E) MULTIPURPOSE	20	1				900	4878				38
41	(E) MULTIPURPOSE	20	1						360	1680	3	100	P9A1	40
	CONNECTED LOAD:				14 kVA	18 kVA	14 kVA					42
	CONNECTED CURRENT:				115 A	153 A	118 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	5324 VA	100.00%	5324 VA
POWER	6900 VA	100.00%	6900 VA
RECEPTACLE	33940 VA	100.00%	33940 VA

PANEL TOTALS	
CONNECTED LOAD:	46 kVA
CONNECTED CURRENT:	128 A
DEMAND LOAD:	46 kVA
DEMAND CURRENT:	128 A

NOTES:

PANELBOARD: P9D

LOCATION: STORAGE 919
SUPPLY: DP9
MOUNTING: Recessed
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 225 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 4,837 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) BAND ROOM	20	1		720	1560			1	20	(E) BACKBOARD NW	2
3	(E) BAND ROOM, HC LIFT	20	1			1000	1560		1	20	(E) BACKBOARD N	4
5	(E) PRACTICE ROOMS	20	1				1080	1560	1	20	(E) BACKBOARD NE	6
7	(E) STOR/EXT STOR	20	1		900	1560			1	20	(E) BACKBOARD SW	8
9	(E) DRYERS-WOMEN	30	1			2300	1560		1	20	(E) BACKBOARD S	10
11	HAND DRYER	30	1				100	1560	1	20	(E) BACKBOARD SE	12
13	(E) DRYERS-WOMEN	30	1		2300	900			1	20	(E) CHAIR LIFT	14
15	(E) WOMEN	20	1			180	1000		1	20	(E) SFD	16
17	(E) WTR HTR CTRL/PUMP	20	1				500	1600	1	20	(E) EX. ROLL-UP DR	18
19	(E) HOSPITALITY - REFRIG	20	1		1200	180			1	20	(E) FIRE CURTAIN	20
21	(E) HOSPITALITY	20	1			360	500		1	20	(E) SCREEN	22
23	(E) HOSPITALITY	20	1				360	1200	1	20	(E) VENDING	24
25	(E) MULTIPURPOSE	20	1		540	1200			1	20	(E) VENDING	26
27	(E) PAVILION	20	1			360	1200		1	20	(E) VENDING	28
29	SPARE	20	1	--			0	1600	1	20	(E) EX. ROLL-UP DR	30
31	SPARE	20	1	--	0							32
33	EF-9.5	20	1			696						34
35	EF-9.2	20	1				864					36
37	PROVISIONS	--	1	--	--	1273			3	20	EF-9.6	38
39	PROVISIONS	--	1	--		--	1273					40
41	PROVISIONS	--	1	--			--	1273				42
	CONNECTED LOAD:				12 kVA	12 kVA	12 kVA					
	CONNECTED CURRENT:				103 A	100 A	97 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	5379 VA	100.00%	5379 VA
POWER	5200 VA	100.00%	5200 VA
RECEPTACLE	22880 VA	100.00%	22880 VA
Spare	1560 VA	100.00%	1560 VA
Other	1000 VA	100.00%	1000 VA

PANEL TOTALS	
CONNECTED LOAD:	36 kVA
CONNECTED CURRENT:	100 A
DEMAND LOAD:	36 kVA
DEMAND CURRENT:	100 A

NOTES:

PANELBOARD: P9A1

LOCATION: MAIN ELEC (METER RM) 944
SUPPLY: P9A
MOUNTING: Surface
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V, 3PH, 4W
BUS RATING: 100 A
NEUTRAL: 100%
FEED-THRU LUGS: NO
FEATURES & MODIFICATIONS -

MAINS TYPE: MLO
MAINS FN/NOTE: -
SCCR:
AVAILABLE FAULT: 6,898 A

CKT	DESCRIPTION	TRIP (A)	POLES	FN/NOTE	PHASE A LOAD (VA)	PHASE B LOAD (VA)	PHASE C LOAD (VA)	FN/NOTE	POLES	TRIP (A)	DESCRIPTION	CKT
1	(E) CHARGER EAST	20	1		500	720			1	20	(E) OFFICE REC	2
3	(E) CHARGER WEST	20	1				500	1080	1	20	(E) ROOF REC	4
5	(E) WATER HEATER ASB	20	1					300	300	1	20	(E) EF-9.1	6
7	(E) AC-RM 942	30	2		1750	696				1	20	EF-9.3	8
9							1750	528		1	20	EF-9.4	10
11	PROVISIONS	--	1	--				--	360	1	20	(E) MUSIC TEACH	12
13	PROVISIONS	--	1	--	--	400				1	20	(E) SFD	14
15	PROVISIONS	--	1	--			--	720		1	20	(E) REC	16
17	PROVISIONS	--	1	--				--	720	1	20	(E) REC	18
19	PROVISIONS	--	1	--	--	720				1	20	(E) REC	20
21	PROVISIONS	--	1	--			--	300		1	20	(E) EF	22
23	PROVISIONS	--	1	--				--	--	1	--	PROVISIONS	24
25	PROVISIONS	--	1	--	--	--			--	1	--	PROVISIONS	26
27	PROVISIONS	--	1	--		--	--		--	1	--	PROVISIONS	28
29	PROVISIONS	--	1	--			--	--	--	1	--	PROVISIONS	30
	CONNECTED LOAD:				5 kVA	5 kVA	2 kVA					
	CONNECTED CURRENT:				44 A	45 A	14 A					

LOAD CLASSIFICATION	CONNECTED	FACTOR	DEMAND
MOTOR	5324 VA	100.00%	5324 VA
POWER	1700 VA	100.00%	1700 VA
RECEPTACLE	4320 VA	100.00%	4320 VA

PANEL TOTALS	
CONNECTED LOAD:	11 kVA
CONNECTED CURRENT:	31 A
DEMAND LOAD:	11 kVA
DEMAND CURRENT:	31 A

NOTES:

MSA	P9B	DP9
	P9C	P9A
	P9D	P9A1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

REGISTERED PROFESSIONAL ENGINEER
TERRY SAEDI
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SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

PANEL SCHEDULES

E407

Architect Drew Officers set files MA - Building & Site Rehabilitation - 24203.10 - 2025-09-05 - 2025-09-05 at 2:04:47 PM - AARABIAN.ARON_CPA.rvt

GENERAL NOTES

1. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION, REQUIREMENTS, AND SCOPE OF WORK.
3. DEVICE LOCATIONS, ELEVATIONS, RISER DIAGRAMS, SCHEMATICS, AND DETAILS SHOWN ON PLANS ARE CONCEPTUAL AND ILLUSTRATE ONLY THE FUNCTIONAL RELATIONSHIPS BETWEEN COMPONENTS OF THE SYSTEM AND THE DESIGN INTENT OF THE PROJECT. CONTRACTOR SHALL INSTALL DEVICES AS SITE CONDITIONS REQUIRE IN COORDINATED WITH THE ARCHITECT AND AS REQUIRED BY THE AHJ.
4. DOOR DETAILS ILLUSTRATE FUNCTIONAL RELATIONSHIPS; ACTUAL ARCHITECTURAL CONDITIONS (DIRECTION OF SWING, HAND OF DOOR) MAY VARY AND SHALL BE FIELD VERIFIED.
5. ANY FIELD CONDITION WHICH APPEARS TO BE MISREPRESENTED IN THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
6. ANY DEVIATION FROM THESE PLANS NECESSARY DUE TO FIELD CONDITIONS MUST BE REVIEWED BY THE ENGINEER, APPROVED BY THE AHJ, AND DETAILED ON "AS BUILT" DRAWINGS.
7. ALL DEVICES IN THE FIRE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED TO MANUFACTURER'S SPECIFICATION AND SHALL ALSO BE INSTALLED IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF CURRENT TITLE 24, PART 9, CFC CHAPTER 9, CEC ARTICLE 760, AND NFPA 72.
8. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE LATEST VERSION OF THE CALIFORNIA BUILDING CODE (CBC) STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AS FURNISHED BY THE CONTRACT DRAWINGS. WORKMANSHIP AND MATERIALS NOT IN CONFORMANCE TO THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE SUBJECT TO REMOVAL AND/OR REPLACEMENT AT CONTRACTOR'S EXPENSE.
9. CONTRACTOR TO PROVIDE ALL NECESSARY COMPONENTS WHETHER SHOWN OR NOT ON THE DRAWINGS OR SPECIFIED ON THE CONTRACT TO MAKE THE FIRE ALARM SYSTEM FUNCTIONALLY OPERATIVE AND ACCEPTABLE TO ALL CONCERNED AUTHORITIES.
10. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, OR, IF A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED CHANGE(S) SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER AND APPROVED BY THE AHJ BEFORE PROCEEDING WITH THE WORK.
11. PAINTING, PATCHING, AND FINISHES FOR ALL DEVICES LOCATED IN EXISTING AREAS SHALL MATCH EXISTING FINISHES AND MUST BE APPROVED AND COORDINATED WITH THE ARCHITECT.
12. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
13. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE AND FIRE MARSHAL.
14. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED A MINIMUM OF 48 HR. PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
15. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION, TESTING ALL DEVICES AND APPLIANCES PER NFPA 72, FIGURE 7.8.2 AND 24.4.3.5.2 AND SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC, SECTION 901.6.2. PROVIDE A COPY OF THE COMPLETED RECORD OF COMPLETION TO THE OWNER'S REPRESENTATIVE.
16. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE ALARM SYSTEM MONITORING CONTRACT OR PROVISIONS.
17. EXISTING CONDUITS MAY BE RE-USED WHERE PERMITTED BY LOCAL CODES.

ABBREVIATIONS

AC = ABOVE CEILING	NDU = NETWORK DISPLAY UNIT
AFF = ABOVE FINISHED FLOOR	NEC = NATIONAL ELECTRIC CODE
ALM = ALARM	NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
ANN = ANNUNCIATOR	NIC = NOT IN CONTRACT
BATT = BATTERY	NPU = NETWORK PROCESSING UNIT
BMS = BUILDING MANAGEMENT SYSTEM	NTS = NOT TO SCALE
C = CEILING MOUNTED	PAP = PRE-ACTION PANEL
CBC = CALIFORNIA BUILDING CODE	SCC = STATUS COMMAND CENTER
CD = (eq. 15CD) CANDELA	SLC = SIGNALING LINE CIRCUIT
CSFM = AUTHORITY HAVING JURISDICTION	SMK = SMOKE
CSFM = CALIFORNIA STATE FIRE MARSHALL	SUPV = SUPERVISORY
DET = DETECTOR	TAC = TRUE ALERT ADDRESSABLE CONTROLLER
DGP = DATA GATHERING PANEL	TRBL = TROUBLE
EOL = END OF LINE	TS = TAMPER SWITCH
EPO = EMERGENCY POWER OFF	TYP = TYPICAL
FAA = FIRE ALARM ANNUNCIATOR	UON = UNLESS OTHERWISE NOTED
FACP = FIRE ALARM CONTROL PANEL	VCC = VOICE COMMAND CENTER
FATC = FIRE ALARM TERMINAL CABINET	VT = VALVE TAMPER
FBO = FURNISHED BY OTHERS	W = eg. 1/2W) WATT
FCC = FIRE COMMAND CENTER	W/ = WITH
FSD = FIRE SMOKE DAMPER	WF = WATER FLOW
FTR = FIRE ALARM TRANSPONDER	W/O = WITHOUT
H = HIGH HUMIDITY	WP = WEATHERPROOF
HT = HEIGHT	X = EXISTING TO REMAIN
HVAC = HEATING, VENTILATION AND AIR CONDITIONING	XE = REMOVE EXISTING AND REPLACE WITH NEW
IMS = INFORMATION MANAGEMENT SYSTEM	XL = EXISTING TO BE RELOCATED
MAX = MAXIMUM	XN = NEW LOCATION OF RELOCATED DEVICE
MIN = MINIMUM	XP = EXPLOSION PROOF
N/A = NOT APPLICABLE	XR = EXISTING TO REMOVE AND DEMO
NAC = NOTIFICATION APPLIANCE CIRCUIT	

FIRE ALARM SEQUENCE OF OPERATION

SYSTEM INPUTS	ALARM IGNITION @ PAP	SUPERVISORY CONDITION @ PACP	TROUBLE CONDITION @ PACP	SIGNAL @ REMOTE ANNUNCIATOR (NEAR RECEPTION AREA ENTRANCE)	TRANSMIT SIGNAL TO CENTRAL STATION	ACTIVATE AUDIBLE/VISUAL SIGNALS THROUGHOUT	ACTIVATE LOCAL AUDIBLE SOUNDER BASE	SHUT DOWN ASSOCIATED IR MANDLER	CLOSE FIRE SMOKE DAMPERS	SHUT DOWN HVAC VOLUME / DIFFUSER FANS
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1 AREA SMOKE DETECTOR	●						●	●				●	●	●
2 DUCT SMOKE DETECTOR	●						●	●				●	●	●
3 AREA HEAT DETECTOR	●						●	●				●	●	●
4 -														
5 FIRE ALARM AC POWER FAILURE			●											
6 FIRE ALARM SYSTEM ALARM CONDITION	●						●	●				●		
7 FIRE ALARM SYSTEM SUPERVISORY CONDITION		●												
8 FIRE ALARM SYSTEM TROUBLE CONDITION			●											
9 -														
10 MANUAL PULL STATION	●						●	●				●		
11 -														
12														
13														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N

ANNUNCIATION | NOTIFICATION | AUX. CONTROL

PROJECT SCOPE OF WORK

RENOVATION OF EXISTING AUTOMATIC FIRE ALARM SYSTEM INTO EXISTING 1-STORY BUILDINGS 100, 150, 200, 300, 400, 500, 600, 700, 800, 900, & 1000. FIRE ALARM BELL (FURNISHED BY OTHER) TO BE LOCATED AT FRONT ENTRANCE AREA (FIELD VERIFY EXACT LOCATION).

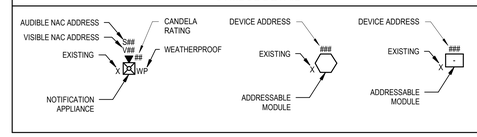
FURNISH AND INSTALL INTO (NEW AND/OR RENOVATED) FIRE ALARM SYSTEM(S):

- NO CIC CONDUIT/CABLE TO BE PROVIDED
- SPEAKERS TO BE PROVIDED FOR AUDIBLE NOTIFICATION
- NOTIFICATION THROUGHOUT COMMON AREAS
- HVAC SHUTDOWN ON DUCT DETECTOR ACTIVATION PER SMOKE CONTROL SEQUENCE OF OPERATIONS
- ENTIRE BUILDING EVACUATION.

APPLICABLE CODES / STANDARDS

LIST OF APPLICABLE CODES
2025 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, 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
APPLICABLE STANDARDS
For a list of applicable standards, including California amendments to the NFPA Standards, refer to CBC Chapter 35 and CFC Chapter 80.

SYMBOL DETAIL



FIRE ALARM NOTES

1. ALL WIRING SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS. UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. CONDUIT FILL SHALL BE PER TABLE 3B OF ELECTRICAL CODE. PROVIDE PVC SCHEDULE 40 FOR CONDUITS EMBEDDED IN CONCRETE SLAB, EMT CONDUIT FOR INTERIOR EXPOSED AREAS, AND GALVANIZED RIGID STEEL FOR EXPOSED EXTERIOR AREAS. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVAL FOR WET LOCATIONS.
2. MINIMUM CONDUIT SIZE SHALL BE 3/4" UON CONTRACTOR ADJUST SIZE FOR FIELD CONDITIONS (I.E. NO. OF BENDS. ETC.) BUT SHALL NOT BE SMALLER THEN 3/4 " . MAXIMUM CONDUIT SIZE SHALL BE 2 " .
3. ALL FIRE ALARM WIRING SHALL BE FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM (FLP OR FPLP) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE UNDERGROUND MAY BE THHN OR THWN.
4. ALL WIRING IS SHALL BE PULLED THROUGH EACH JUNCTION BOX AND CONNECT DIRECTLY TO EACH FIRE ALARM DEVICE. DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6" OF LEAD WIRE FROM BOX TO THE DEVICE. ALL BOX TO BE SIZED PER CEC. WIRING SHALL NOT BE LOOPED THOUGH DEVICES; WIRE MUST BE CUT FOR IN AND OUT OF DEVICE JUNCTION BOX.
5. ALL WIRING, INDICATING DEVICE AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION (FIRE ALARM PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL CIRCUITS AND INITIATING DEVICES).
6. ALL PENETRATIONS OF FIRE-RATED ASSEMBLIES, REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER LAB CRITERIA. APPROVE TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN A FIRE ALARM SECTION. INSTALLATION AND APPLICATION PER MANUFACTURERS INSTRUCTIONS. REFER TO FIRE ALARM DETAIL DRAWING THROUGH-PENETRATION FIRE STOPPING FOR ALL FIRE RATED WALLS.
7. CONDUIT AND JUNCTION BOXES SHALL NOT BE USED FOR UNRELATED WIRING.
8. ALL TERMINATION ON MAIN PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS.
9. THE FIRE ALARM CONTROL PANEL SHALL NOT BE USED AS A TERMINAL CABINET. PROVIDE SEPARATE TERMINAL CABINET.
10. FIRE ALARM LOCKED PANEL SHALL BE ACCESSIBLE ONLY TO FIRE DEPT. PERSONNEL, AUTHORIZED MAINTENANCE PERSONNEL AND SHALL BE MARKED " FIRE ALARM CONTROL PANEL " .
11. BATTERIES SHALL BE LABELED WITH THE MONTH AND YEAR OF MANUFACTURE.
12. FIRE ALARM PANEL, REMOTE ANNUNCIATOR, AND COMPONENTS SHALL BE SECURE TO MOUNTING SURFACE PER MANUFACTURES SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
13. FIRE ALARM EQUIPMENT AND POWER SUPPLIES SHALL BE CONNECTED TO A DEDICATED 120V CIRCUIT. CIRCUIT BREAKER SHALL MATCH BY TYPE/STRUCTURAL RATING. PROVIDE LOCK ON DEVICE TO CIRCUIT BREAKER HANDLE. WITH RED MARKING. ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, IDENTIFIED AS FIRE ALARM CIRCUIT " , AND LOCATION OF CIRCUIT BREAKER PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL UNIT IN COMPLIANCE WITH NFPA 72, 10.6.5.2.
14. ALL EQUIPMENT, I.E. AUTOMATIC DETECTION DEVICES, MANUAL PULL STATIONS , AUDIO/VISUAL DEVICES, DUCT DETECTORS, ETC., SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH LISTINGS AND APPLICABLE PROVISIONS OF TITLE 24, 2, 3, 4 & 9 STANDARDS. ALL EXTERIOR DEVICES SHALL BE LISTED FOR OUTDOOR USE AND MOUNTED IN APPROVED WEATHERPROOF BOXES AND IN ACCORDANCE WITH CEC 760.
15. ALARM SIGNAL SHALL BE DISTINCTIVE FROM ANY OTHER SIGNAL AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. SUPERVISORY SIGNALS AND TROUBLE SIGNALS SHALL ACTIVATE THE SAME SOUND AT THE CONTROL PANEL AND WILL BE DISTINCTIVELY ANNUNCIATED ON THE LCD DISPLAY OF THE CONTROL UNIT (AND REMOTE ANNUNCIATOR WHERE PROVIDED) THE FIRE ALARM PANELS HAVE SEPARATE DISPLAY QUEUES FROM ALARM, SUPERVISORY AND TROUBLE. (NFPA 72, 2022 EDITION).
16. THE FIRE ALARM SYSTEM SHALL BE ADDRESSABLE TYPE FOR THE FIRE ALARM SYSTEM AND COMPONENTS. EACH INITIATING DEVICE SHALL BE INDIVIDUALLY ANNUNCIATED ON AN ADDRESS WITH UNIQUE POINT DESCRIPTORS.
17. AUDIBLE NOTIFICATION APPLIANCES SHALL HAVE SOUND LEVEL AT LEAST 15 dB ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dB ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, MEASURED 5 FT ABOVE THE FLOOR IN THE AREA REQUIRED TO BE SERVED BY THE SYSTEM USING THE A-WEIGHTED SCALE (dBA). BUT NOT LESS THAN 75 dB AT 10 FT, THROUGHOUT AREA OF ALARM. ACCORDANCE WITH CFC 907.5.2 AND NFPA 72, 18.4 WITH CALIFORNIA AMENDMENTS.
18. THE UNIT MULTI-STATION (LOCAL) ALARM AUDIBLE SIGNAL PATTERN SHALL BE THE STANDARD ALARM EVACUATION SIGNAL CONSISTING OF THREE-PULSE TEMPORAL PATTERN. (NFPA 72, 18.4.2.1),
19. IF VOICE EVACUATION IS PROVIDED, THE BUILDING ALARM AUDIBLE SIGNAL SHALL BE A PRE-RECORDED VOICE EVACUATION SIGNAL AND SHALL PROVIDE INTELLIGENT VOICE MESSAGES PER NFPA 72, 24.3.1.
20. WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCES SHALL HAVE THEIR TOPS ABOVE THE FINISHED FLOOR AT HEIGHTS OF NOT LESS THAN 90 " (MAXIMUM 100 ") AND BELOW THE FINISHED CEILINGS AT DISTANCE OF NOT LESS THAN 6 " . (NFPA 72, 18.4.8)
21. WALL MOUNTED VISIBLE NOTIFICATION APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80 " AND NOT GREATER THAN 96 " ABOVE THE FINISH FLOOR. WHERE LOW CEILING HEIGHTS DO NOT PERMIT MOUNTING AT A MINIMUM 80 " , APPLIANCES SHALL BE MOUNTED WITHIN 6 " OF CEILING. (NFPA 72, 18.5.5)
22. VISIBLE NOTIFICATION APPLIANCES SHALL BE RATED NOT LESS THAN 15 CD AND SHALL NOT EXCEED TWO FLASHES PER SECOND NOR BE LESS THAN ONE FLASH PER SECOND. (NFPA 72, 18.5.3). WHERE THERE ARE MORE THAN TWO APPLIANCES IN A FIELD OF VIEW, THEY NEED TO BE SYNCHRONIZED.

    IN ROOMS: VISIBLE NOTIFICATION SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72, 18.5.5.4, EITHER TABLE 18.5.5.4.1(A) OR TABLE 18.5.5.4.1.(B).
    IN CORRIDORS: VISIBLE NOTIFICATION APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72, 18.5.5.5 VISIBLE NOTIFICATION APPLIANCES SHALL BE LOCATED NOT MORE THAN 15 FT FROM THE END OF THE CORRIDOR WITH SEPARATION NOT GREATER THAN 100 FT BETWEEN APPLIANCES.
23. VISIBLE NOTIFICATION IN SLEEPING AREAS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72, 18.5.5.7.
24. ALL AREA WHICH REQUIRE A STROBE DEVICE MUST HAVE DIRECT LINE OF SIGHT TO AT LEAST ONE STROBE LIGHT.
25. FIRE ALARM PULL STATIONS SHALL BE MOUNTED AT +48 " ABOVE FINISHED FLOOR TO HANDLE.
26. DETECTOR LOCATIONS ARE BASED ON SMOOTH CEILING WITH MAXIMUM HEIGHT OF 10 FT ABOVE FINISH FLOOR UNLESS OTHERWISE NOTED. ALL POINTS ON THE CEILING SHALL HAVE A DETECTOR WITHIN A DISTANCE EQUAL TO OR LESS THAN 0.7 TIMES THE LISTED SPACING. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND INSTALL ACCORDINGLY.
    A.) SPACING FOR HEAT DETECTOR (ATTIC) SHALL BE INSTALLED MAXIMUM 35 FT RADIUS SPACING.
    B.) SPACING FOR SMOKE DETECTORS SHALL BE INSTALLED MAXIMUM 21 FT RADIUS SPACING.
27. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 12 " FROM FIRE SPRINKLER OR 36 " 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 TURN OVER THE OWNER.
28. FOR SYSTEMS WHICH REQUIRE A RELAY, CONTRACTOR SHALL COORDINATE WITH ELECTRICAL AND MECHANICAL CONTRACTORS FOR INSTALLATION OF DISCONNECTION SWITCH.

STATE FIRE MARSHALL GENERAL NOTES

1. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF THE CALIFORNIA ELECTRICAL CODE.
2. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE CALIFORNIA STATE FIRE MARSHAL.
3. A MINIMUM OF 72 HOURS NOTICE SHALL BE REQUIRED FOR ANY TESTING AND/OR INSPECTION.
4. ALL DEVICES OF THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL.
5. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF DEVICES SHALL BE APPROVED BY THE CALIFORNIA STATE FIRE MARSHAL.
6. ANY DISCREPANCIES BETWEEN THE DRAWING AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OF RECORD.
7. A CERTIFICATE OF COMPLIANCE SHALL BE PREPARED BY THE INSTALLER AND GIVEN TO THE CALIFORNIA STATE FIRE MARSHAL UPON COMPLETION OF THE INSTALLATION.

FIRE ALARM WIRE LENGEND

	CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES: FPLR	FPLP	THHN	TFFN
A	ADDRESSABLE NOTIFICATION	UTP SOLID	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. MINIMUM	X	X		
B	RUI + COMMUNICATION	UTP SOLID	18 AWG	58pf/ft. MAX CAPACITANCE; 35.5Ω TOTAL LINE RESISTANCE	X	X		
M	IDNET	UTP SOLID	18 AWG	0.60µF MAX TOTAL LINE CAPACITANCE	X	X		
R	RELAY	2 CONDUCTORS SOLID	14 AWG		X	X	X	X
S	AUDIO - SPEAKER	UTP SOLID	18 AWG	30pf/ft. MAX CAPACITANCE RECOMMENDED	X	X		
Sd	DIGITAL AUDIO RISER	UTP SOLID	18 AWG	0.02µF MAX TOTAL LINE CAPACITANCE	X	X		
T	PUSH TO TALK	2 CONDUCTORS SOLID	18 AWG		X	X		
V	VISUAL	2 CONDUCTORS SOLID	14 AWG		X	X		
X	REMOTE MICROPHONE	STP SOLID	18 AWG		X	X		
Y	FIBER OPTIC - MULTIMODE, ES NETWORK	OFNP/ SC CONNECTOR	50/125 µm	MAX ATTENUATION 1.5 dB/km MIN. BANDWIDTH 500 MHz*km				
Z	ZONE CIRCUIT	2 CONDUCTORS SOLID	14 AWG		X	X	X	X

CONDUIT SIZE	MAX CONDUIT AREA
3/4"	0.213 SQ INCH (40% FILL PER N.E.C.)
1"	0.346 SQ INCH (40% FILL PER N.E.C.)
1-1/4"	0.598 SQ INCH (40% FILL PER N.E.C.)
1-1/2"	0.814 SQ INCH (40% FILL PER N.E.C.)
2"	1.342 SQ INCH (40% FILL PER N.E.C.)

ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRUCIAL TO THE CIRCUIT DESIGN OF THIS SYSTEM INSTALLATION. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR SELECTING AND INSTALLING CABLE MANUFACTURER AND MODEL THAT MEETS OR EXCEEDS THE ABOVE REQUIREMENTS. RECOMMENDED CABLE MANUFACTURERS AND MODELS ARE AVAILABLE UPON REQUEST.

DSA GL-2 FIRE ALARM NOTES

1. APPLICABLE STANDARD 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 BY DSA.
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 INSTALLATION.
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. FLOOR AND NO CLOSER THEN 6 " TO A HORIZONTAL STRUCTURE.
9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90 " MINIMUM AND 100 " MAXIMUM FROM FINISHED
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 ALARMS.
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 CANDELA. 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 LOCATIONS.
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 THHN OR THWN.
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. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
19. 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 DETAILS.
20. 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.
21. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED " SYSTEM RECORD OF COMPLETION " PER NFPA 72, FIGURE 17.8.2.
22. FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48 " ABOVE THE FINISHED FLOOR.
23. 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.
24. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
25. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
26. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.

FIRE ALARM DEVICE SYMBOL LEGEND AND CALIFORNIA STATE FIRE MARSHAL LISTINGS

QTY	SYMBOL	DESCRIPTION	MFG	MODEL NO.	REQUIRED BACK BOX	WIRE TYPE(S)	CSFM LISTING NO.
SYMBOLS FOR CONTROL UNITS:							
1	FACU	FIRE ALARM CONTROL PANEL.	GAMEWELL-FCI	E3 SERIES	-		7165-1703:0125
10	NACPX	NOTIFICATION APPLIANCE CONTROL PANEL. X = PANEL NO.	GAMEWELL-FCI	HPF-PS6	-	M	7315-1637:0505
10	AMPX	REMOTE SPEAKER AMPLIFIER. X = PANEL NO.	GAMEWELL-FCI	AM-50-70	-	R	7165-1703:0125
INITIATING DEVICES							
631		ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ STANDARD BASE	GAMEWELL-FCI	ASD-PTL3	B300-6	M	7272-1703:0501 7300-1653:0109
592		ADDRESSABLE HEAT SENSOR W/ STANDARD BASE	GAMEWELL-FCI	ATD-L3	B300-6	M	7270-1703:0502 7300-1653:0109
37	F	NO GRIP ADDRESSABLE MANUAL PULL STATION	GAMEWELL-FCI	MS-7AF	4" SQ., 2-1/8" D. W/ 3/4" SINGLE GANG COVER EXTENSION	M	7150-1703:0119
88		ADDRESSABLE DUCT SMOKE DETECTOR	SYSTEM SENSOR	DNR	-	M	3240-1653:0209
MODULES & RELAYS							
20	M	INDIVIDUAL ADDRESSABLE MONITORING MODULE	GAMEWELL-FCI	AMM-2F	SINGLE GANG 2-1/2" D. W/ COVER	M	7300-1703:0102
10	M	INDIVIDUA

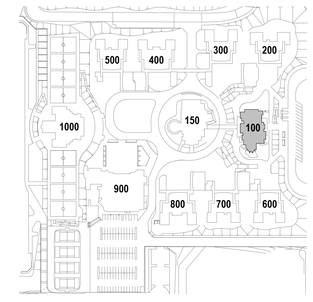
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 100**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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DATE: 02/17/2026

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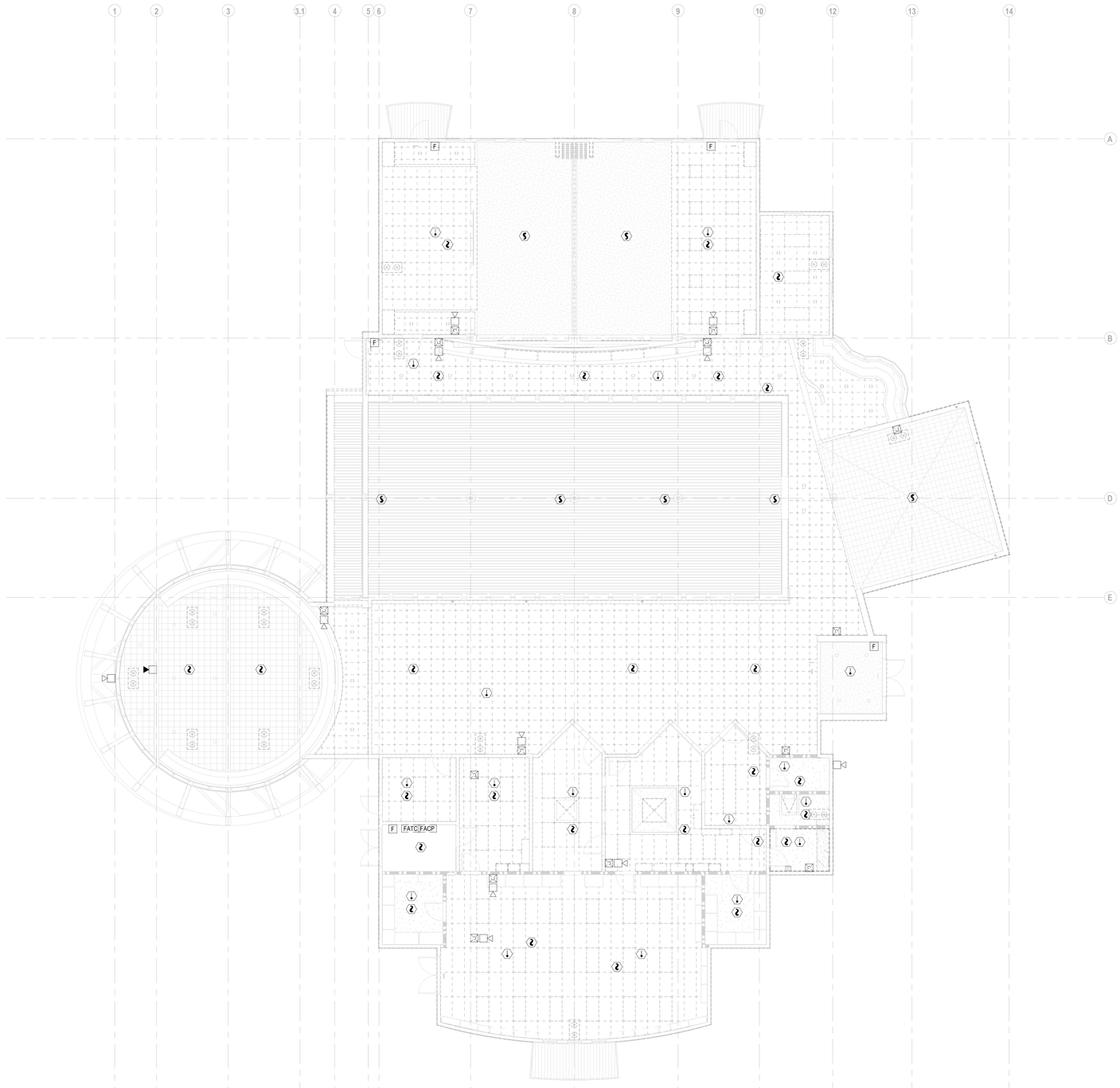
Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 100 - FIRE ALARM PLAN - DEMO

FD1-100



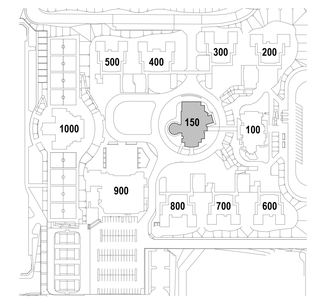
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 150**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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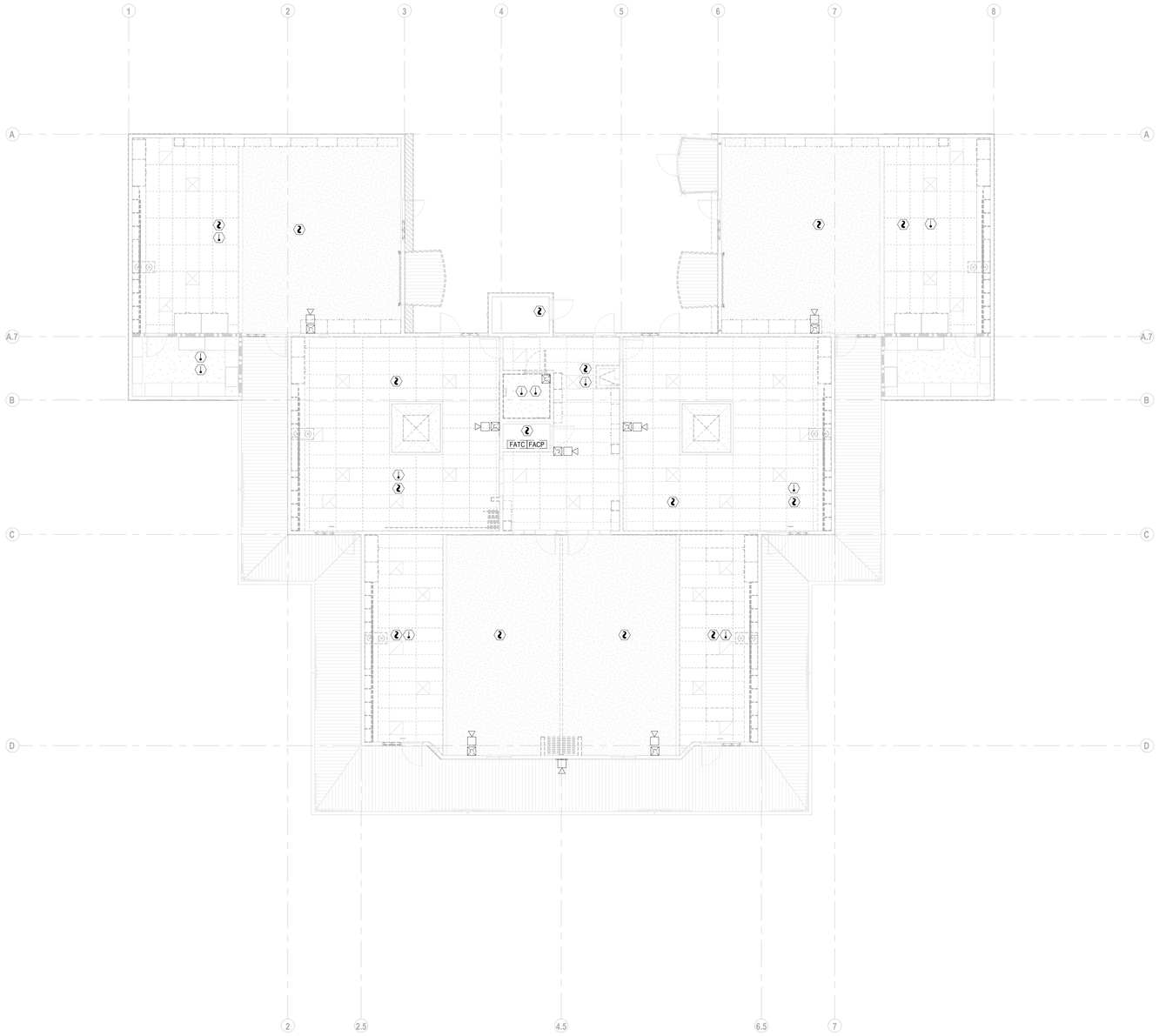
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 150 - FIRE ALARM PLAN - DEMO

FD1.5-100



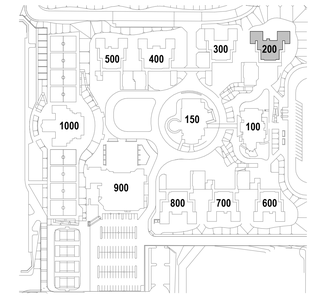
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 200**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

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BLDG 200 - FIRE ALARM PLAN - DEMO

FD2-100

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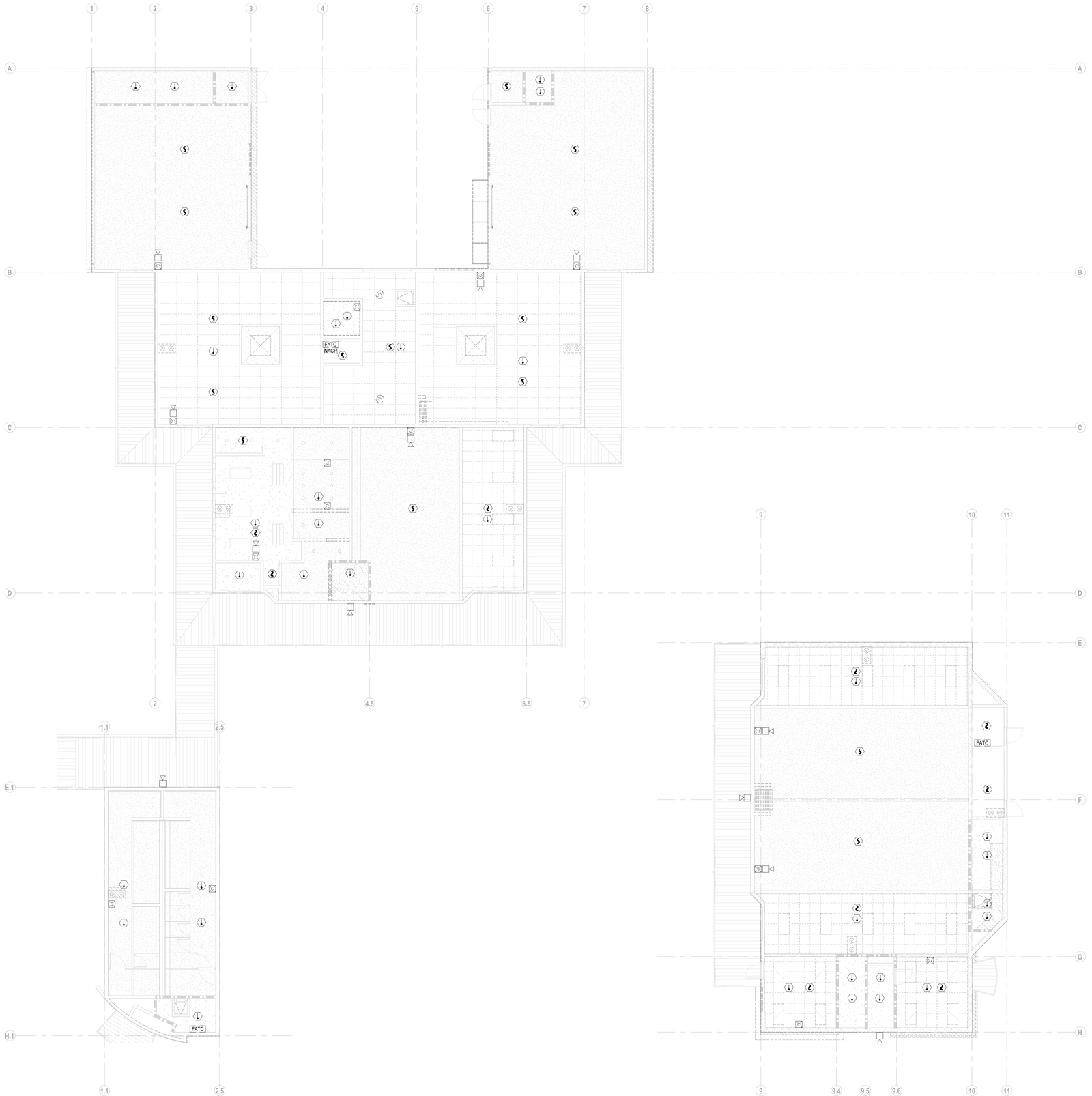


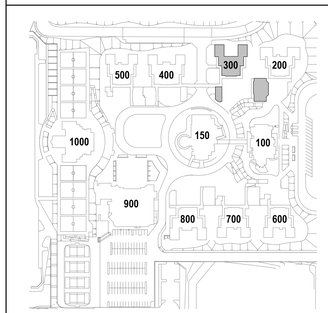
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 300**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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BLDG 300 - FIRE ALARM PLAN - DEMO

FD3-100

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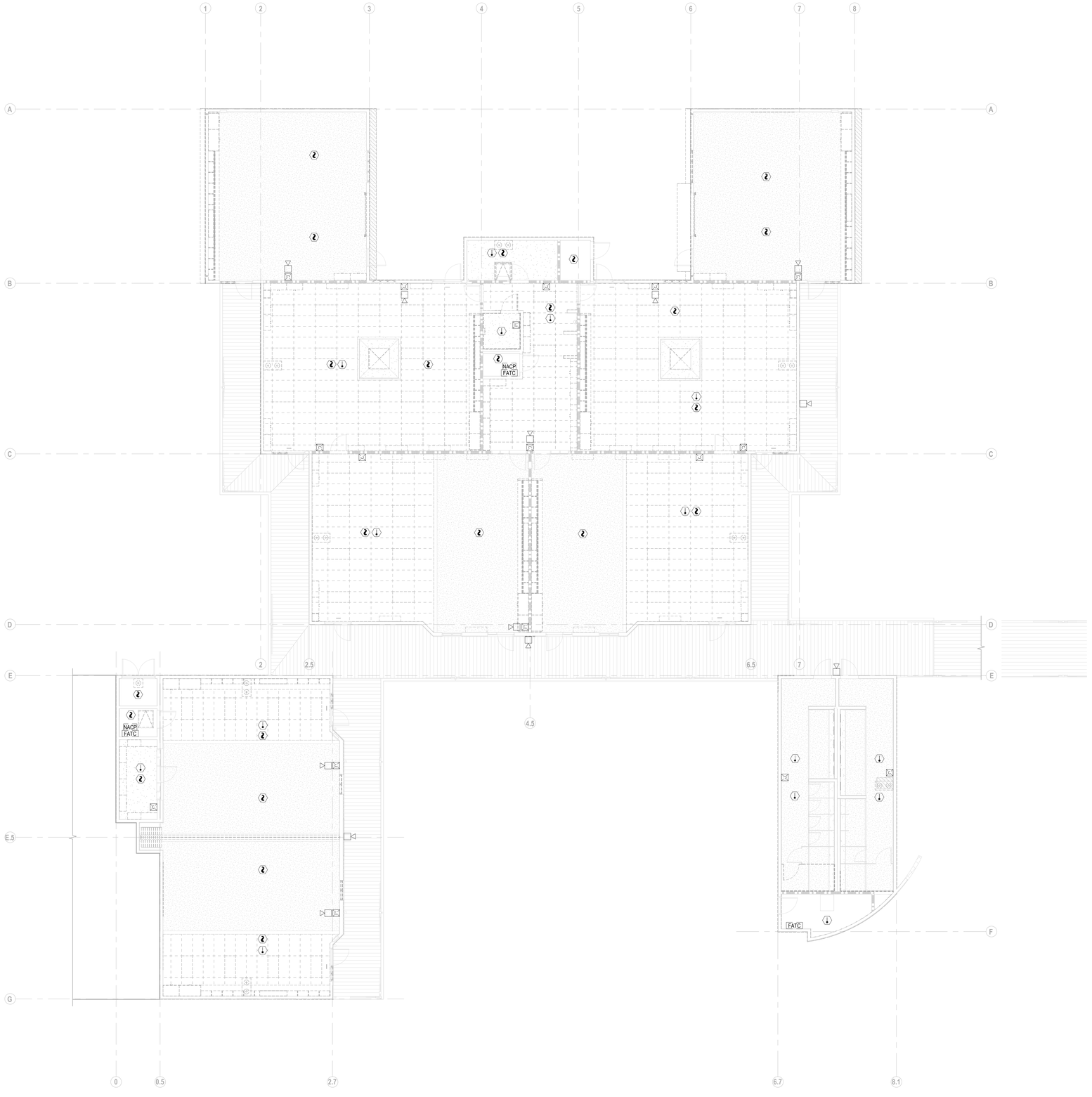
Production Limit Date: 12/31/2026 (Unlimited Time)



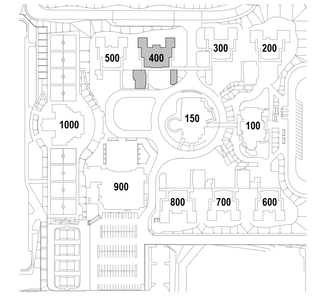
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 400**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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BLDG 400 - FIRE ALARM PLAN - DEMO

FD4-100

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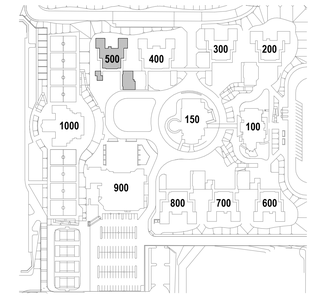
1 LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 500
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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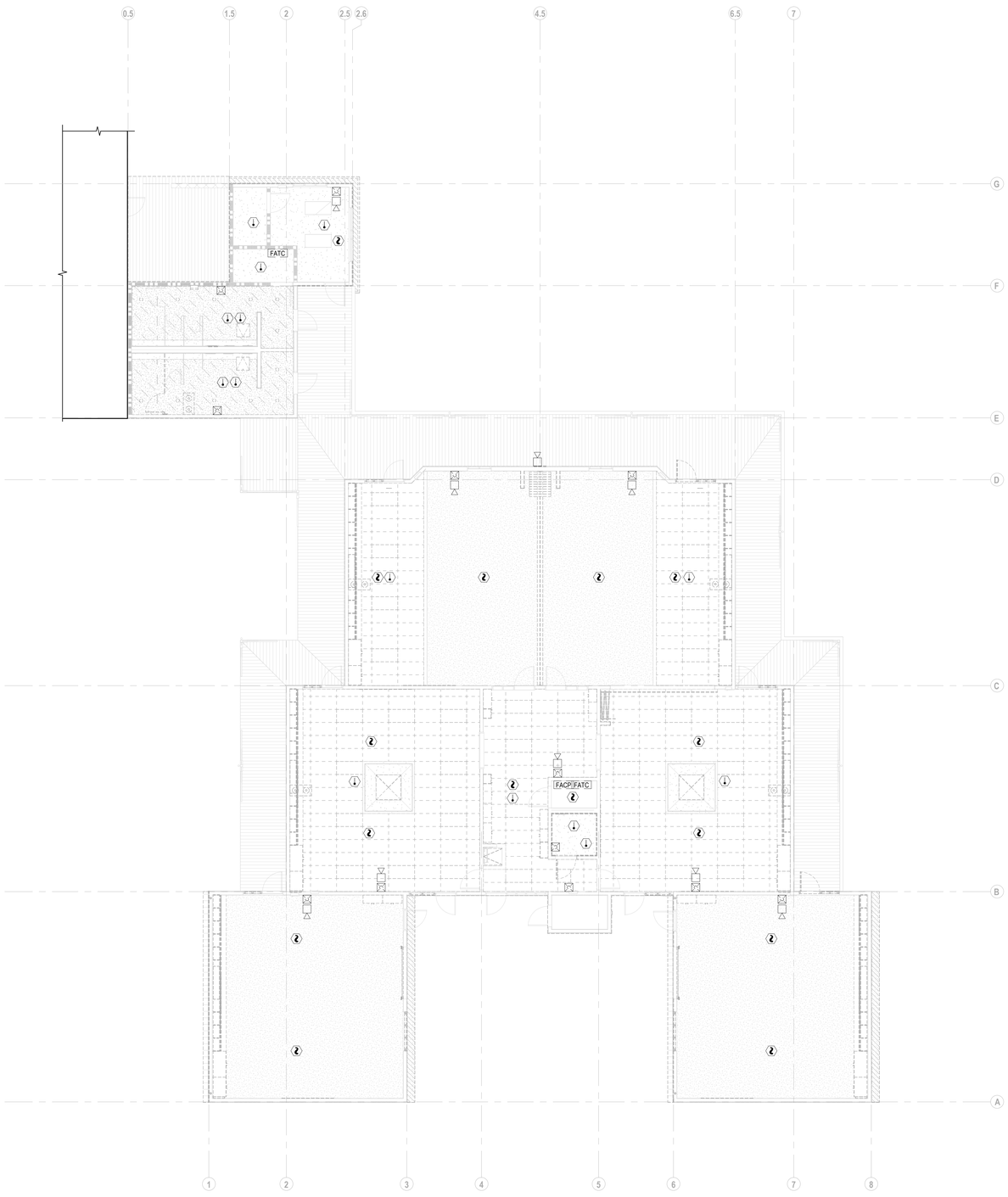
BLDG 500 - FIRE ALARM PLAN - DEMO

FD5-100



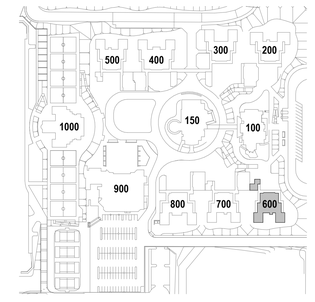
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 600**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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BLDG 600 - FIRE ALARM PLAN - DEMO

FD6-100

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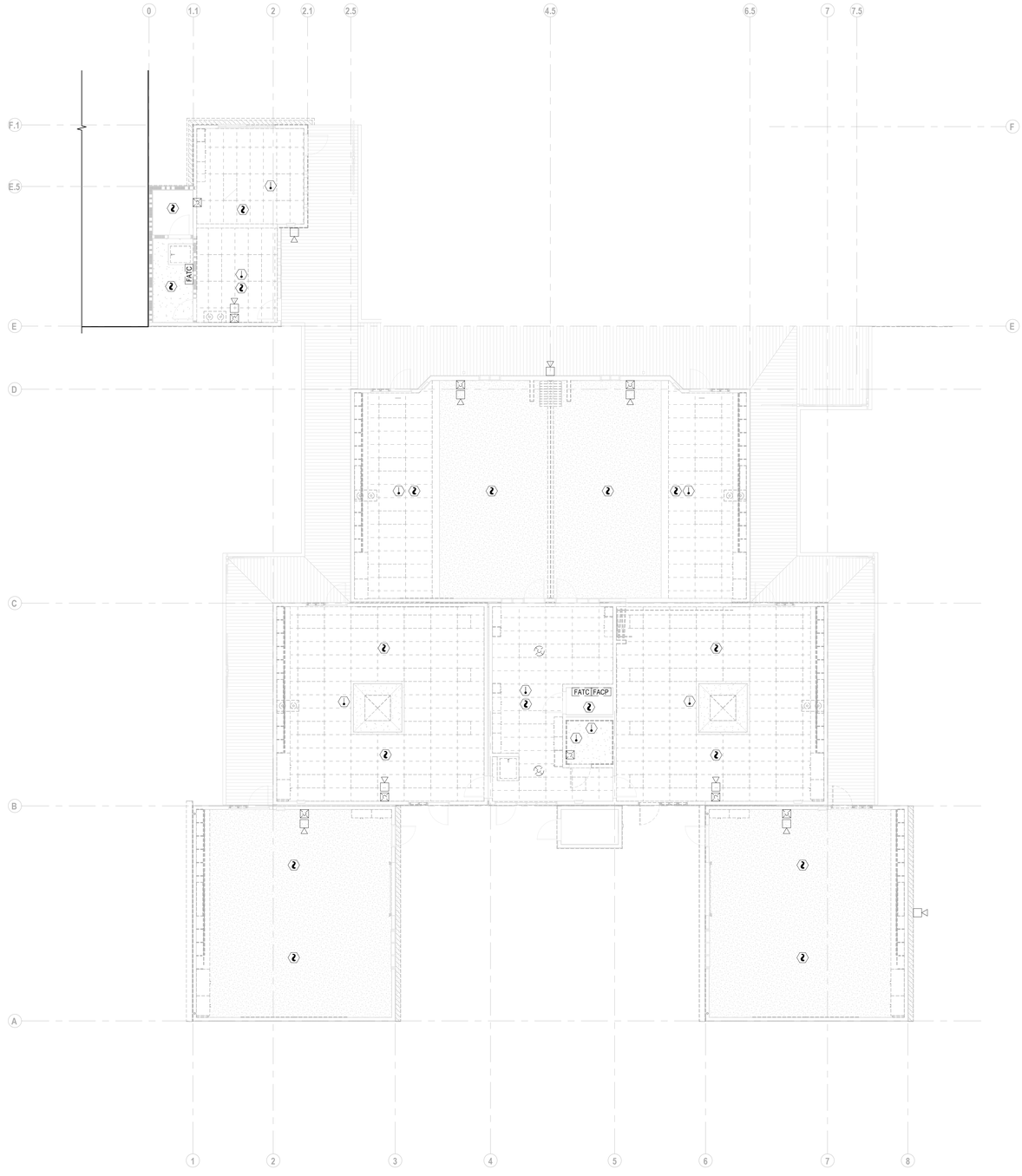


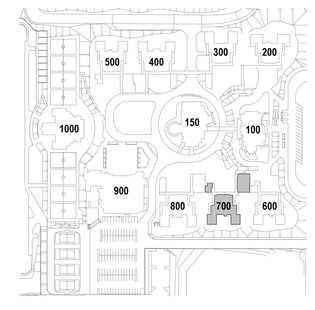
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 700**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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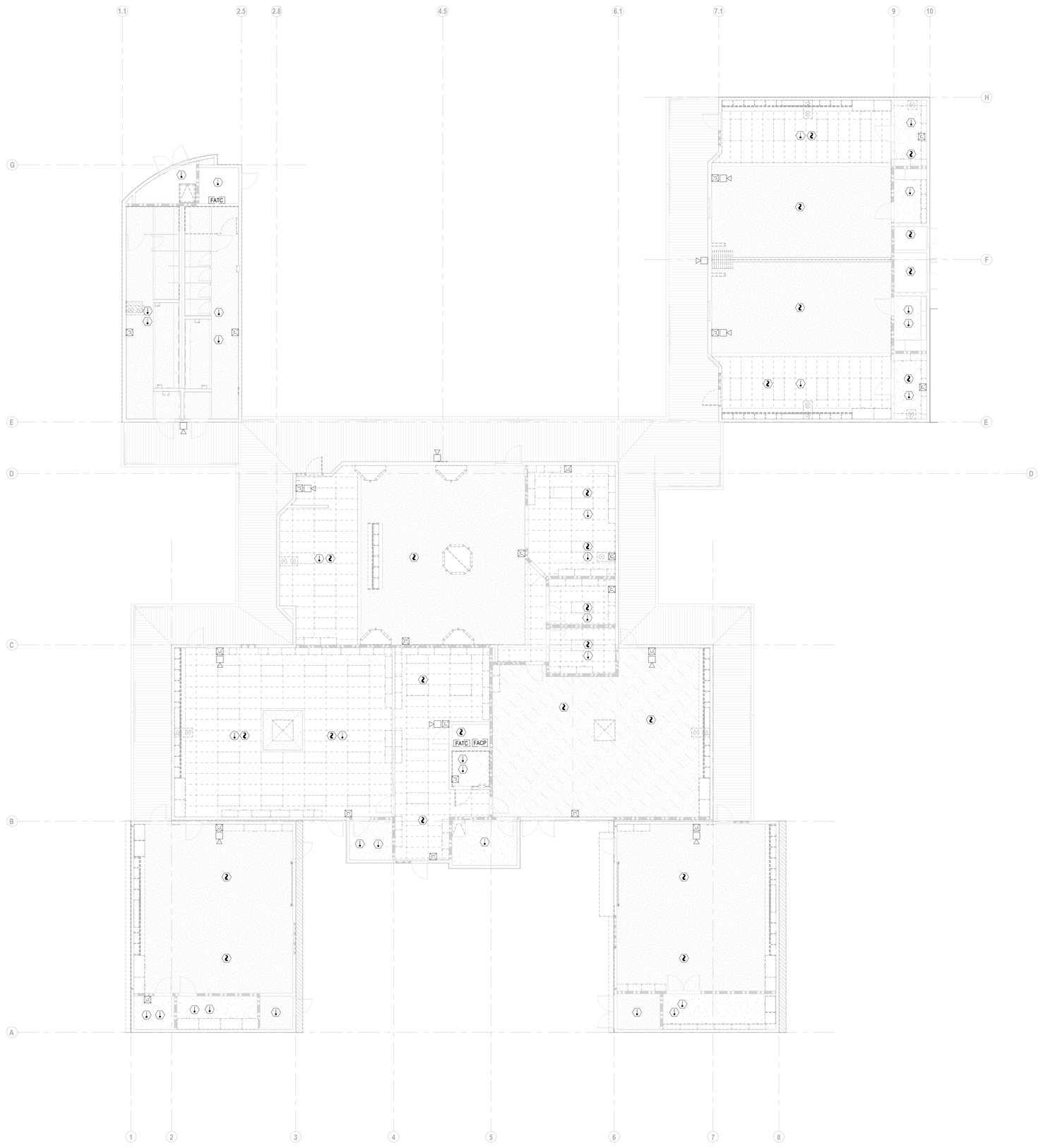
BLDG 700 - FIRE ALARM PLAN - DEMO

FD7-100



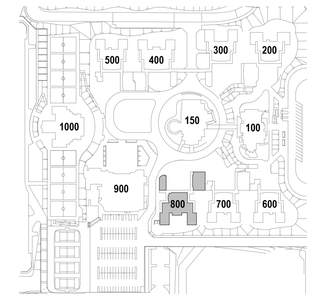
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 800**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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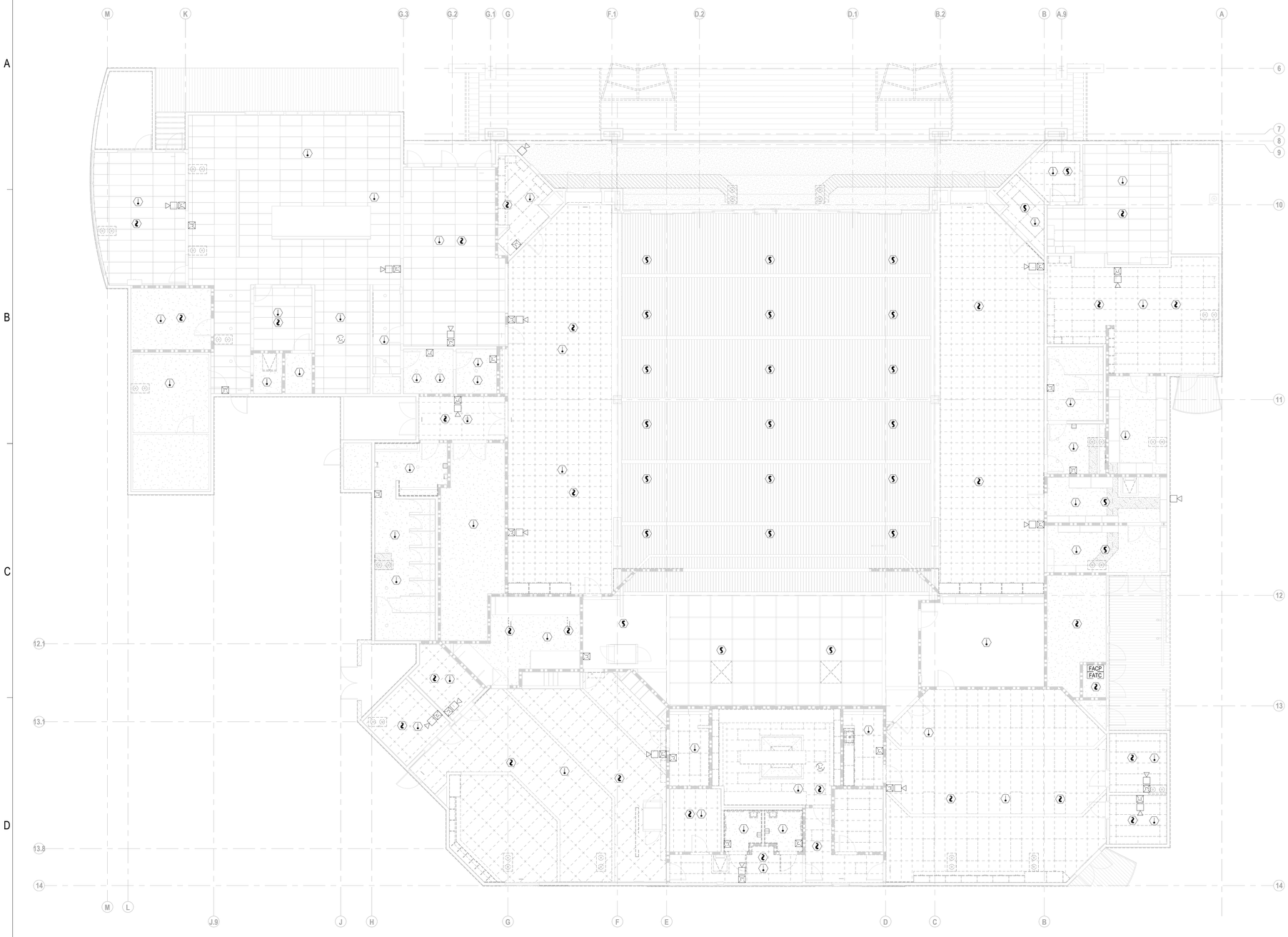
BLDG 800 - FIRE ALARM PLAN - DEMO

FD8-100



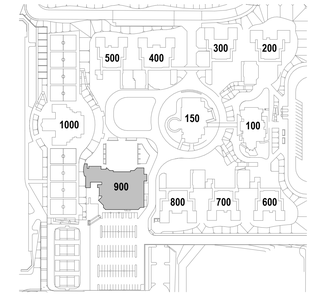
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 900**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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BLDG 900 - FIRE ALARM PLAN - DEMO

FD9-100

Architects Mosher Drew and Mac Arch, Building & Site Rehabilitation, Rancho Del Rey Middle School, Sweetwater Union High School District, CHULA VISTA, CA 91910

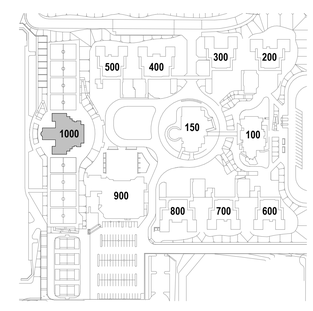
1 **LEVEL 1 DEMO FIRE ALARM PLAN - BUILDING 1000**
1/8" = 1'-0"

KEY NOTES ⓧ

GENERAL NOTES

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE ALARM DEVICES, WIRING, & CONDUIT UNLESS OTHERWISE NOTED.

KEY PLAN



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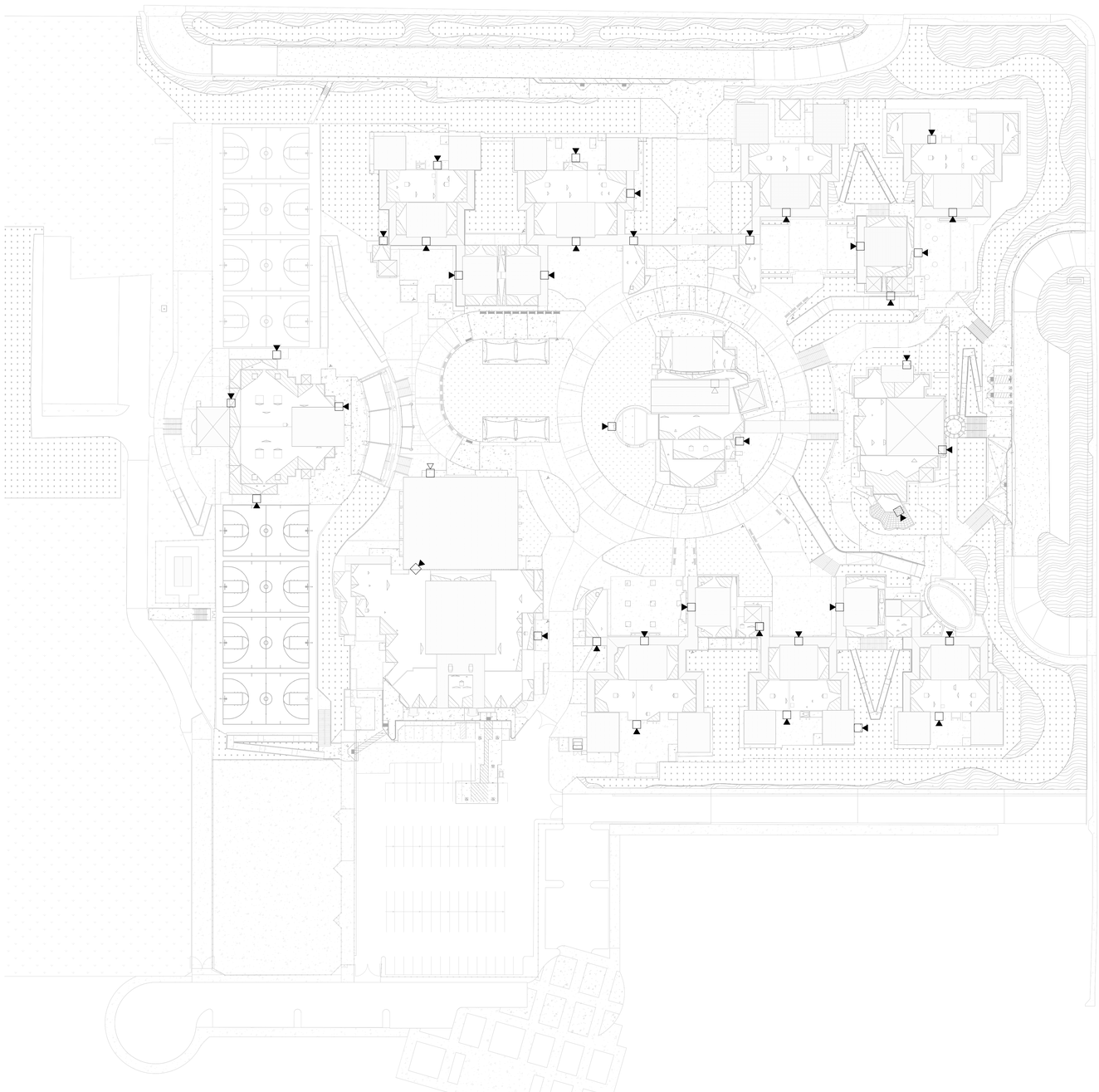
BLDG 1000 - FIRE ALARM PLAN - DEMO

FD10-100

Architects Mosher Drew and Mark Ma, Building & Site Rehabilitation, Rancho Del Rey Middle School, 1174 E J Street, Chula Vista, CA 91910, 24203.10, 2025-09-05 12:47:15 PM



1 **FIRE ALARM SITE PLAN**
1" = 50'-0"

FIRE ALARM WIRING LEGEND	
VISUAL	
AUDIBLE - SPEAKER	
IDNET	
RELAY	
PUSH TO TALK	

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FIRE ALARM SITE PLAN

F0-100

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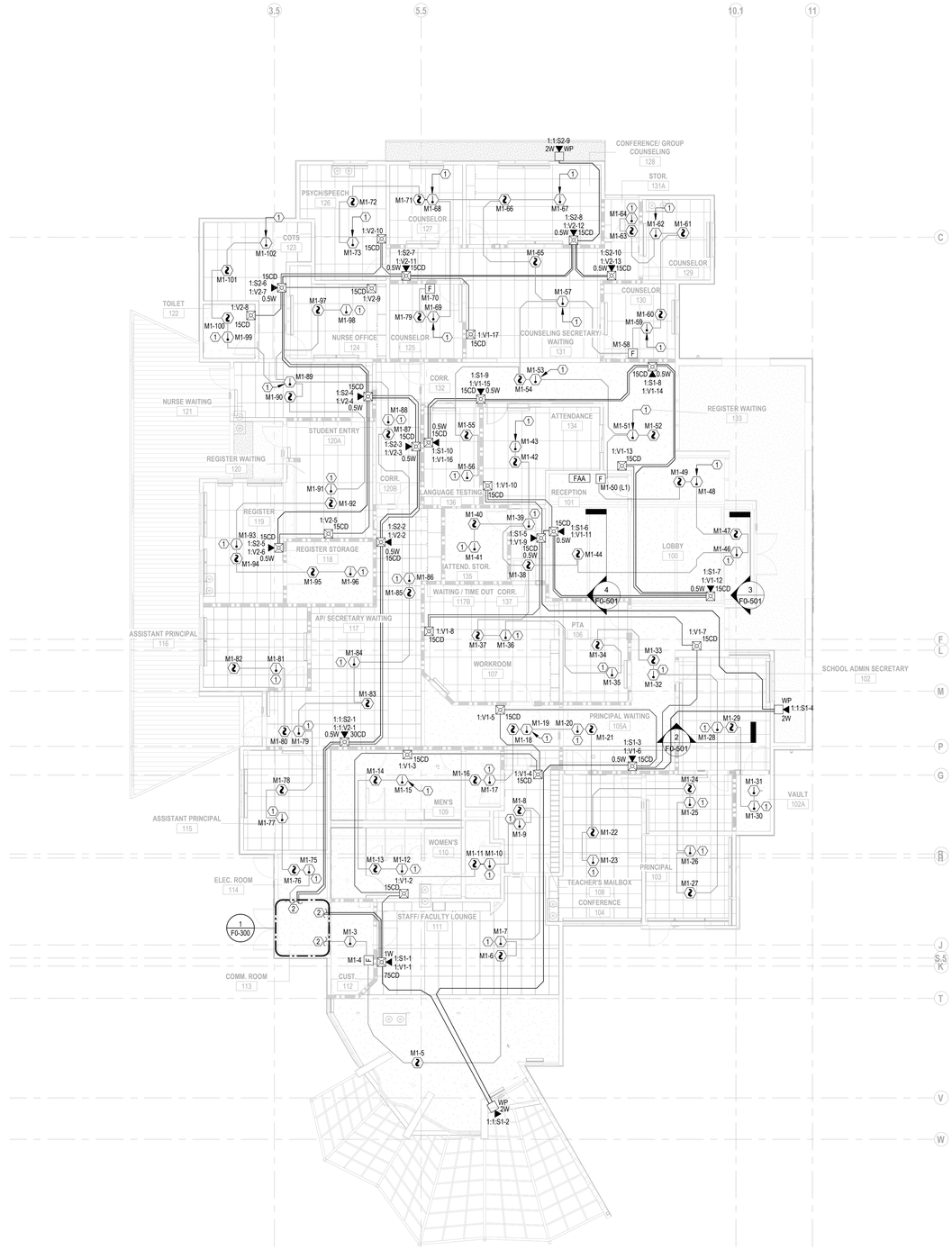


1 **LEVEL 1 FIRE ALARM PLAN - BUILDING 100**
1/8" = 1'-0"

KEY NOTES ⓧ

1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

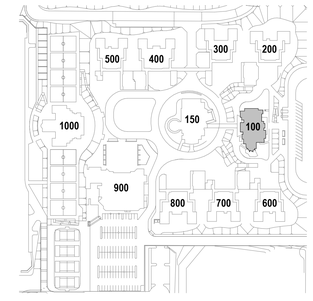
2 SEE DETAIL 1/F0-300 FOR CONTINUATION OF CIRCUIT OR LOOP.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 100 - FIRE ALARM PLAN

F1-100

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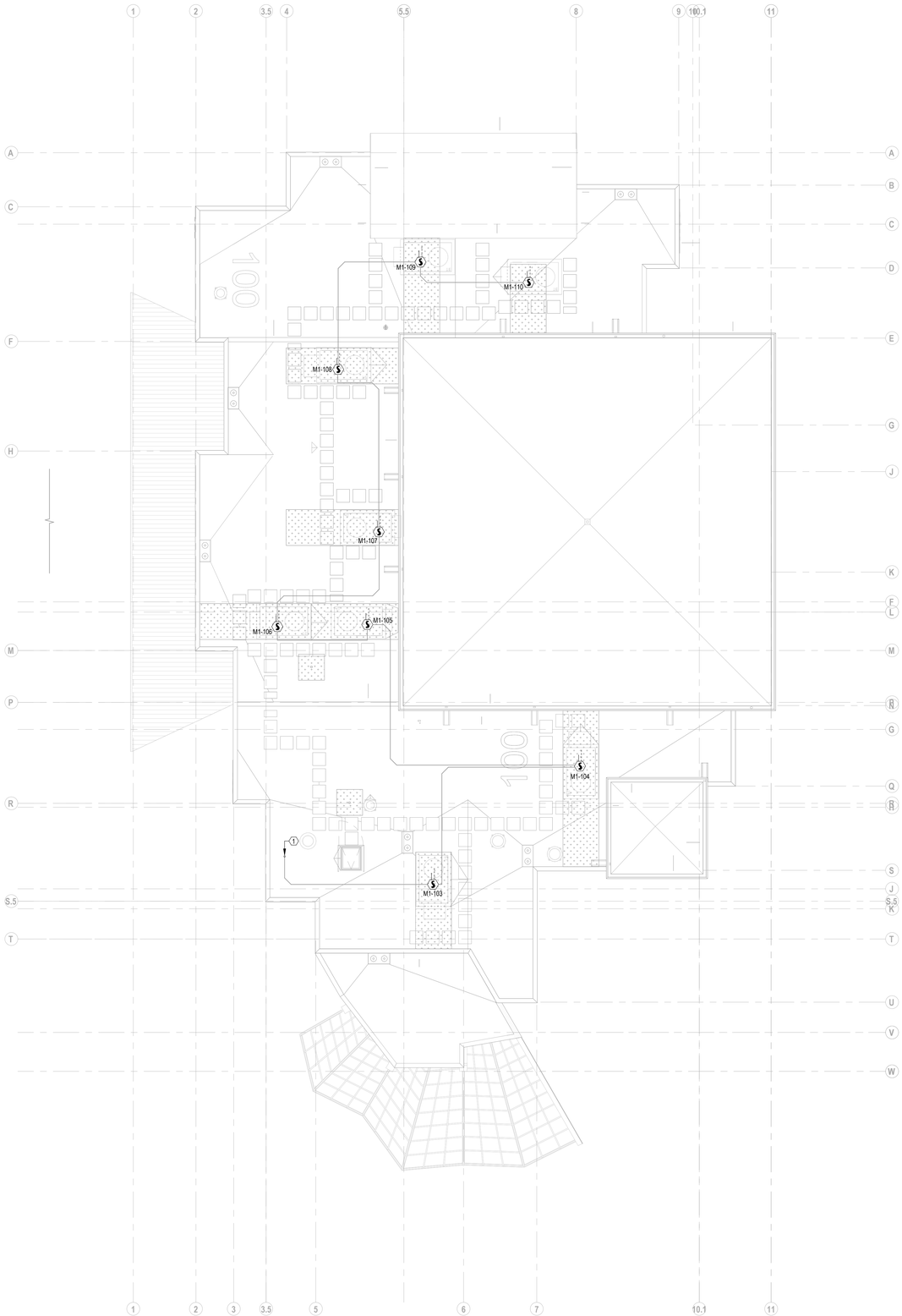


1 **ROOF FIRE ALARM PLAN - BUILDING 100**
1/8" = 1'-0"

KEY NOTES ⓧ

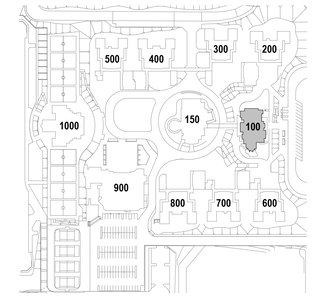
1 STUB UP (1) 3/4" FIRE ALARM CONDUIT FROM FIRE ALARM CONTROL PANEL ON FIRST FLOOR.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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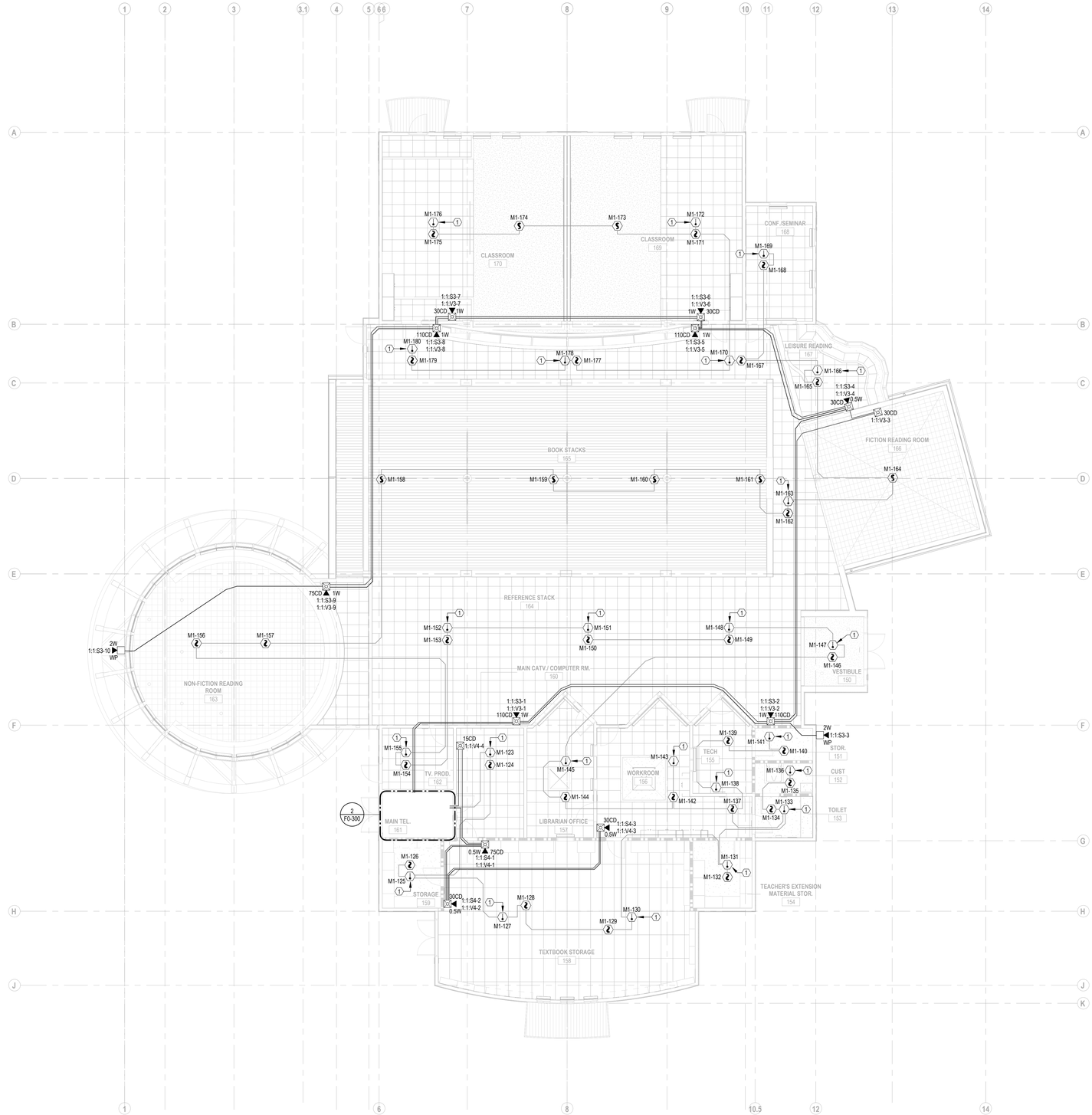
BLDG 100 - ROOF FIRE ALARM PLAN

F1-101

Architect Drew Phipps on file with Planning & Site Development Department - Permit#: 2-24-0 Date: 2025-09-05



1 LEVEL 1 FIRE ALARM PLAN - BUILDING 150
1/8" = 1'-0"

KEY NOTES ⓧ

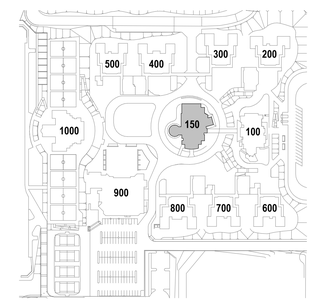
1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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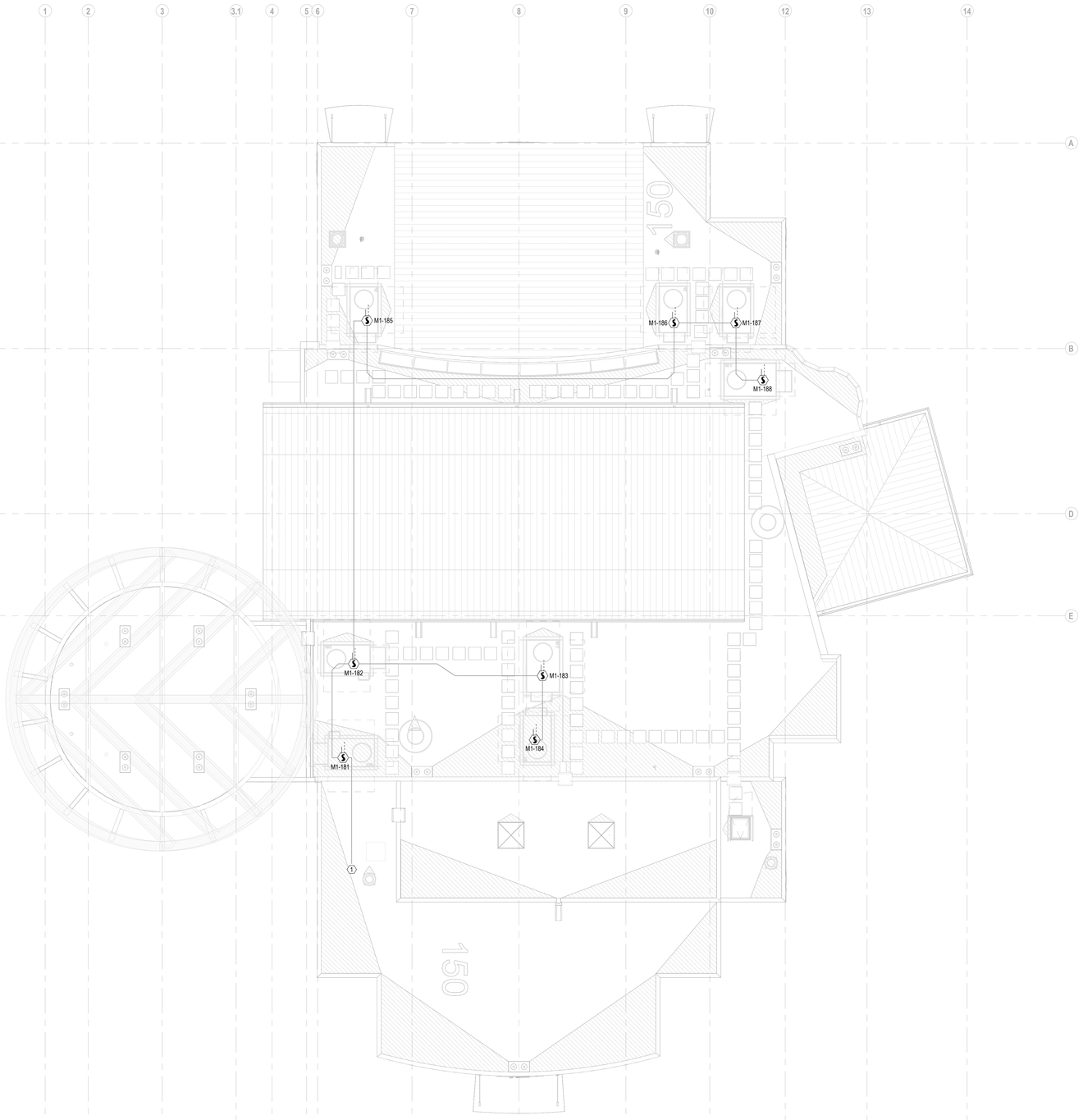
BLDG 150 - FIRE ALARM PLAN

F1.5-100



1 **ROOF FIRE ALARM PLAN - BUILDING 150**
1/8" = 1'-0"

KEY NOTES ⓧ

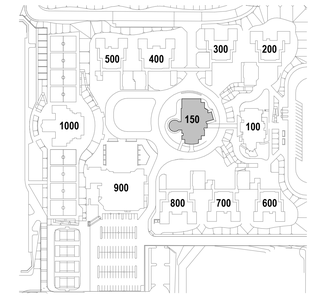
1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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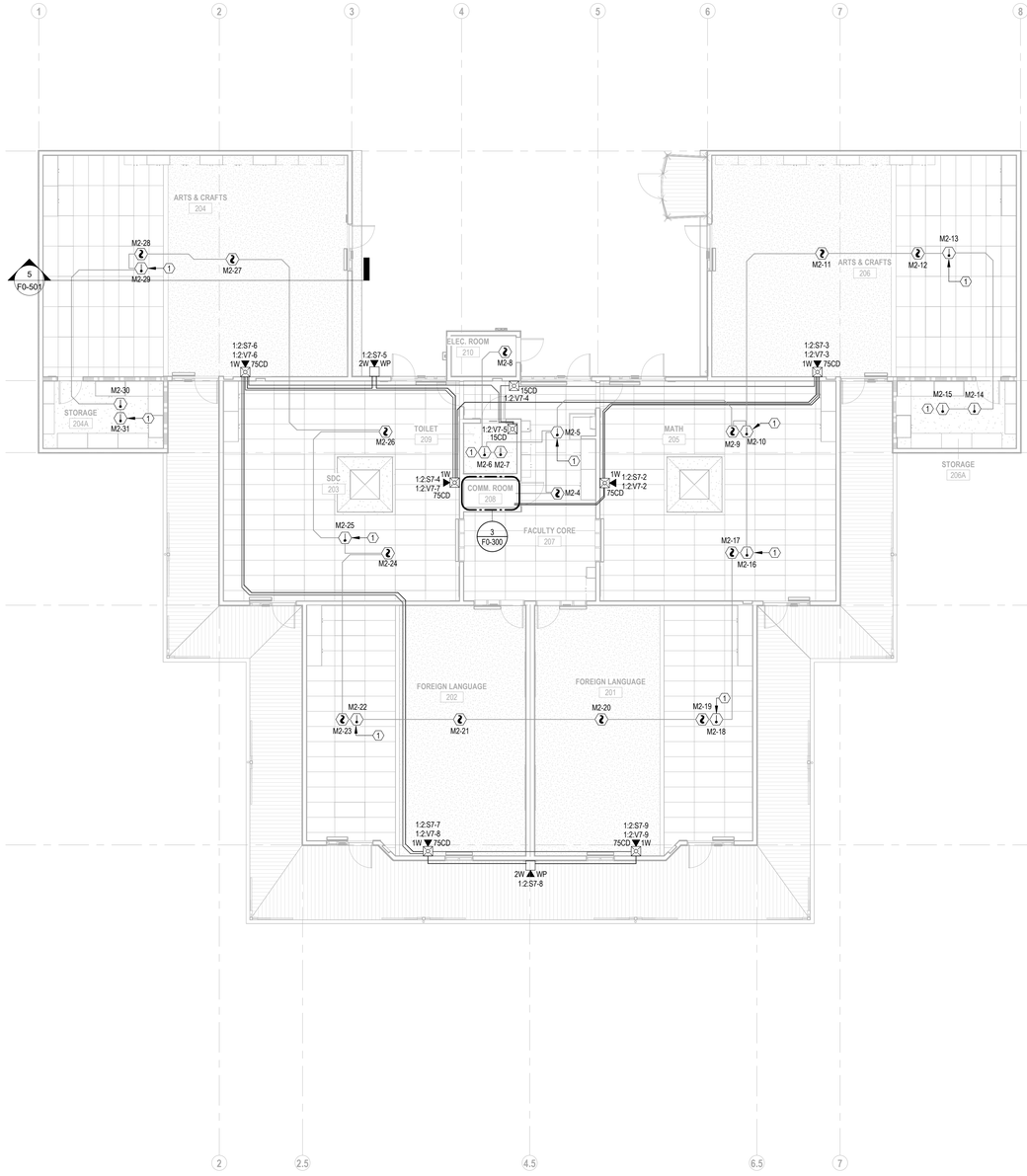
BLDG 150 - ROOF FIRE ALARM PLAN

F1.5-101

Architect Drew | Mosher | Del Rey MS - Building & Site Rehabilitation | 1174 E. J Street, Chula Vista, CA 91910 | Construction Set Package 1 | 11 x 17 | 2025-09-05



1 **LEVEL 1 FIRE ALARM PLAN - BUILDING 200**
1/8" = 1'-0"

KEY NOTES ⓧ

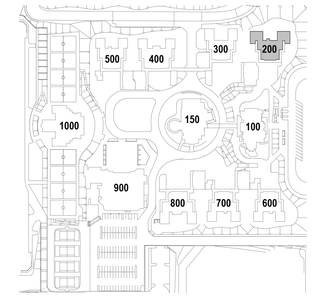
1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 200 - FIRE ALARM PLAN

F2-100

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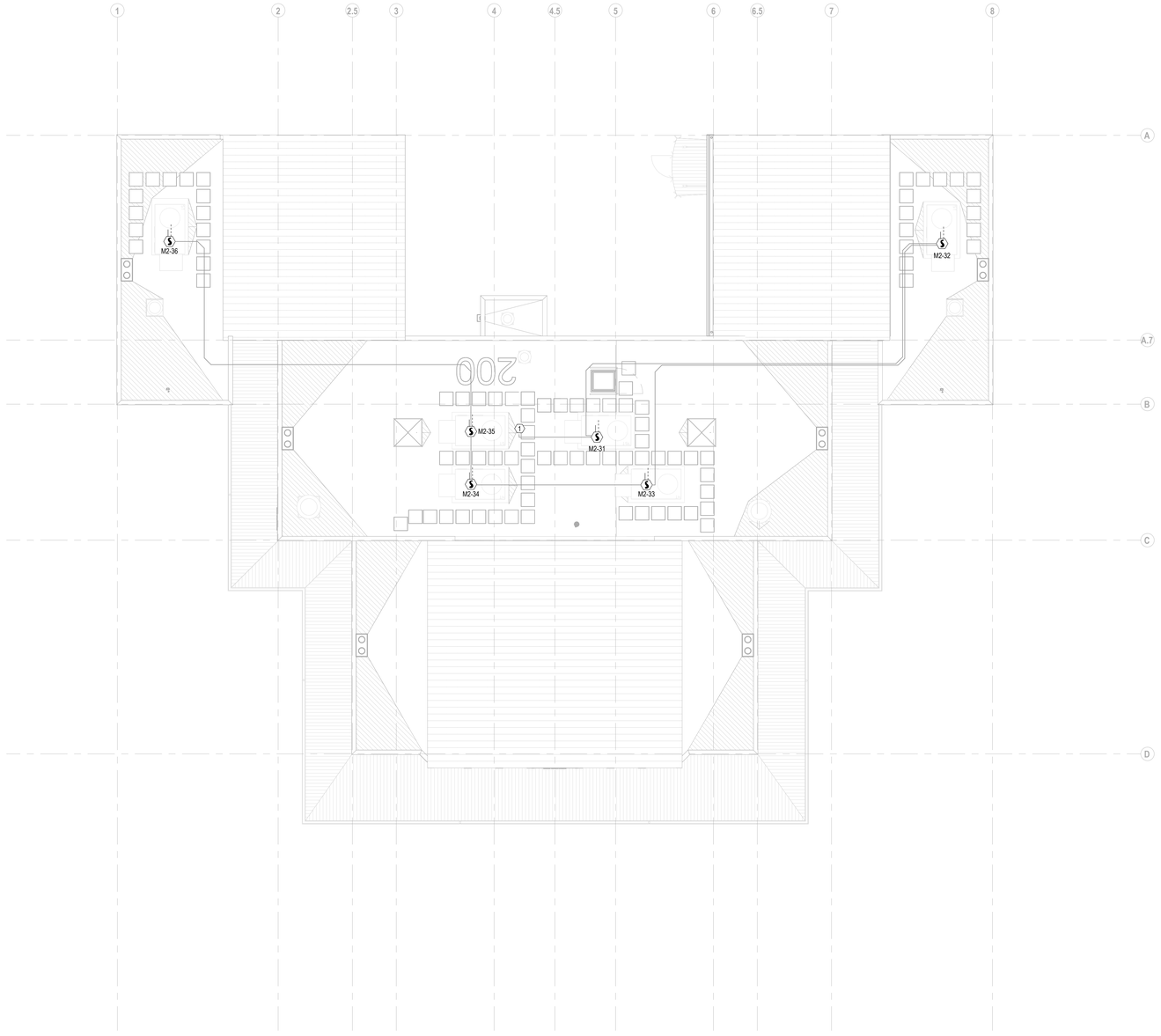


1 **ROOF FIRE ALARM PLAN - BUILDING 200**
1/8" = 1'-0"

KEY NOTES ⓧ

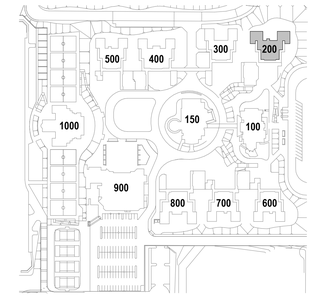
1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 200 - ROOF FIRE ALARM PLAN

F2-101

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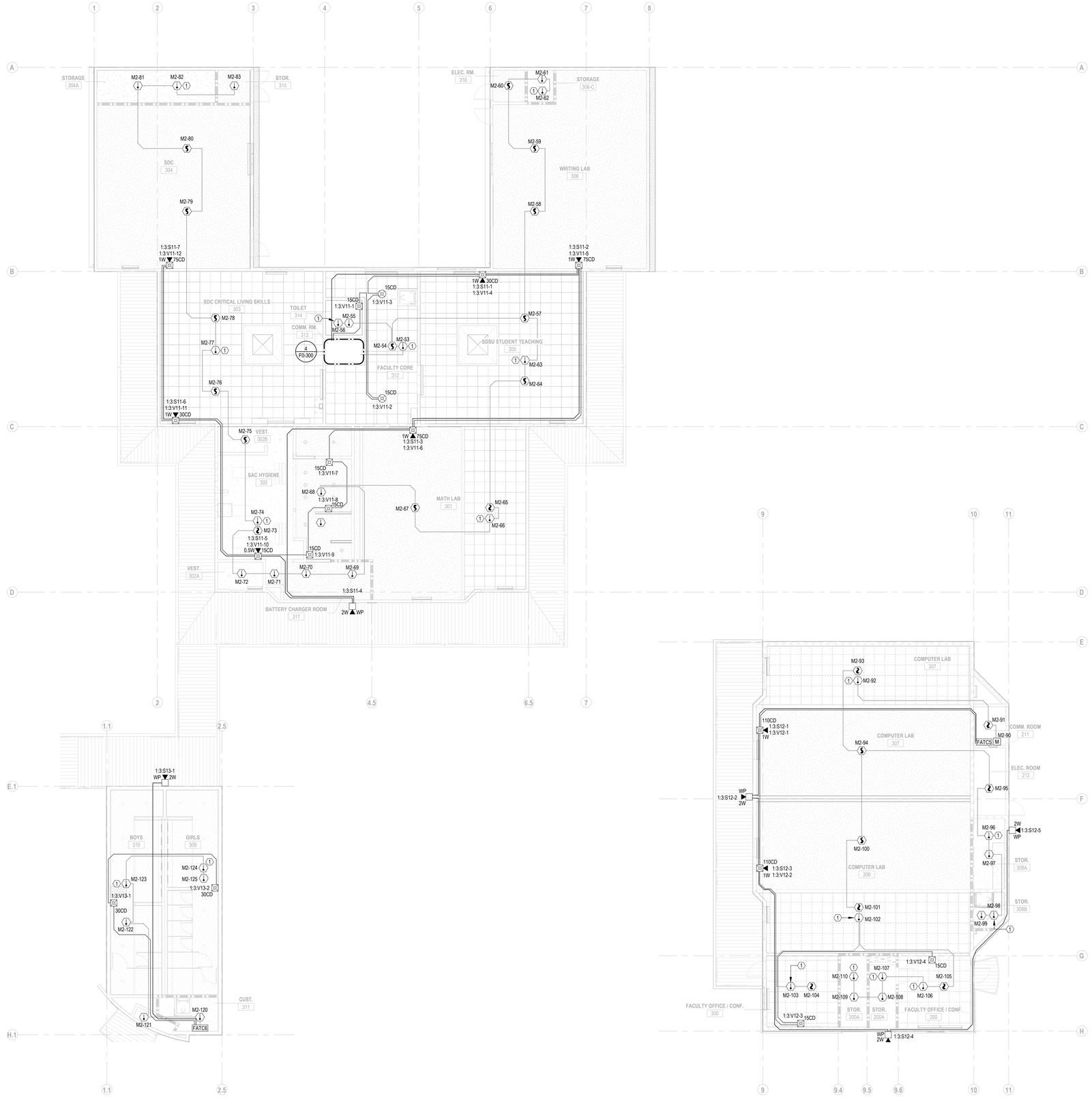

1 LEVEL 1 FIRE ALARM PLAN - BUILDING 300
1/8" = 1'-0"

KEY NOTES ⓧ

1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

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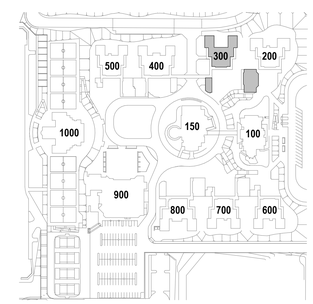
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 300 - FIRE ALARM PLAN

F3-100

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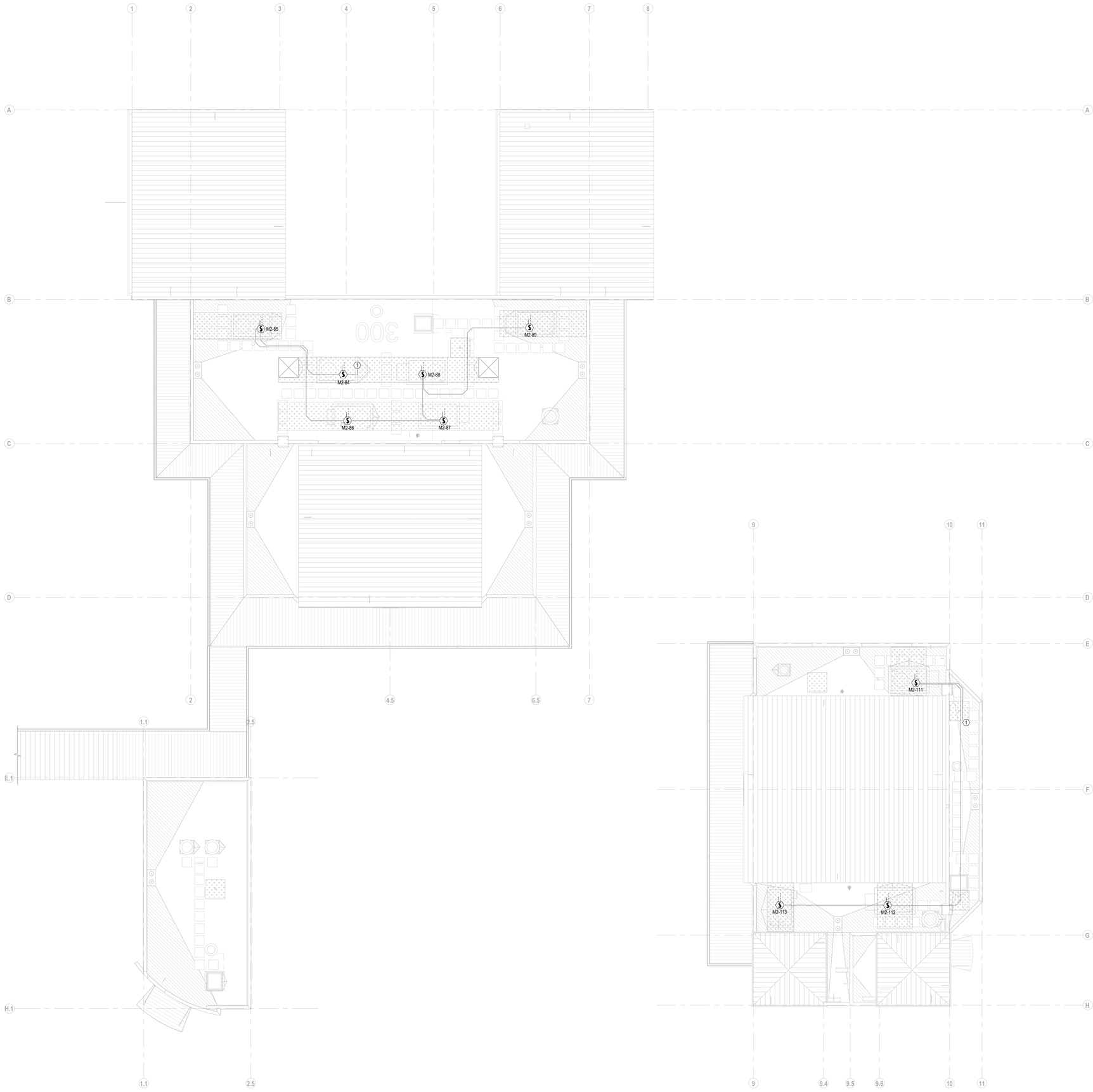

1 ROOF FIRE ALARM PLAN - BUILDING 300
1/8" = 1'-0"

KEY NOTES ⓧ

1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

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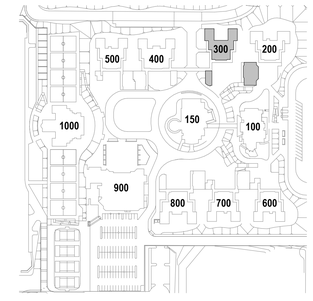
FIRE ALARM WIRING LEGEND	
VISUAL	
AUDIBLE - SPEAKER	
IDNET	
RELAY	
PUSH TO TALK	

KEY PLAN



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BLDG 300 - ROOF FIRE ALARM PLAN

F3-101

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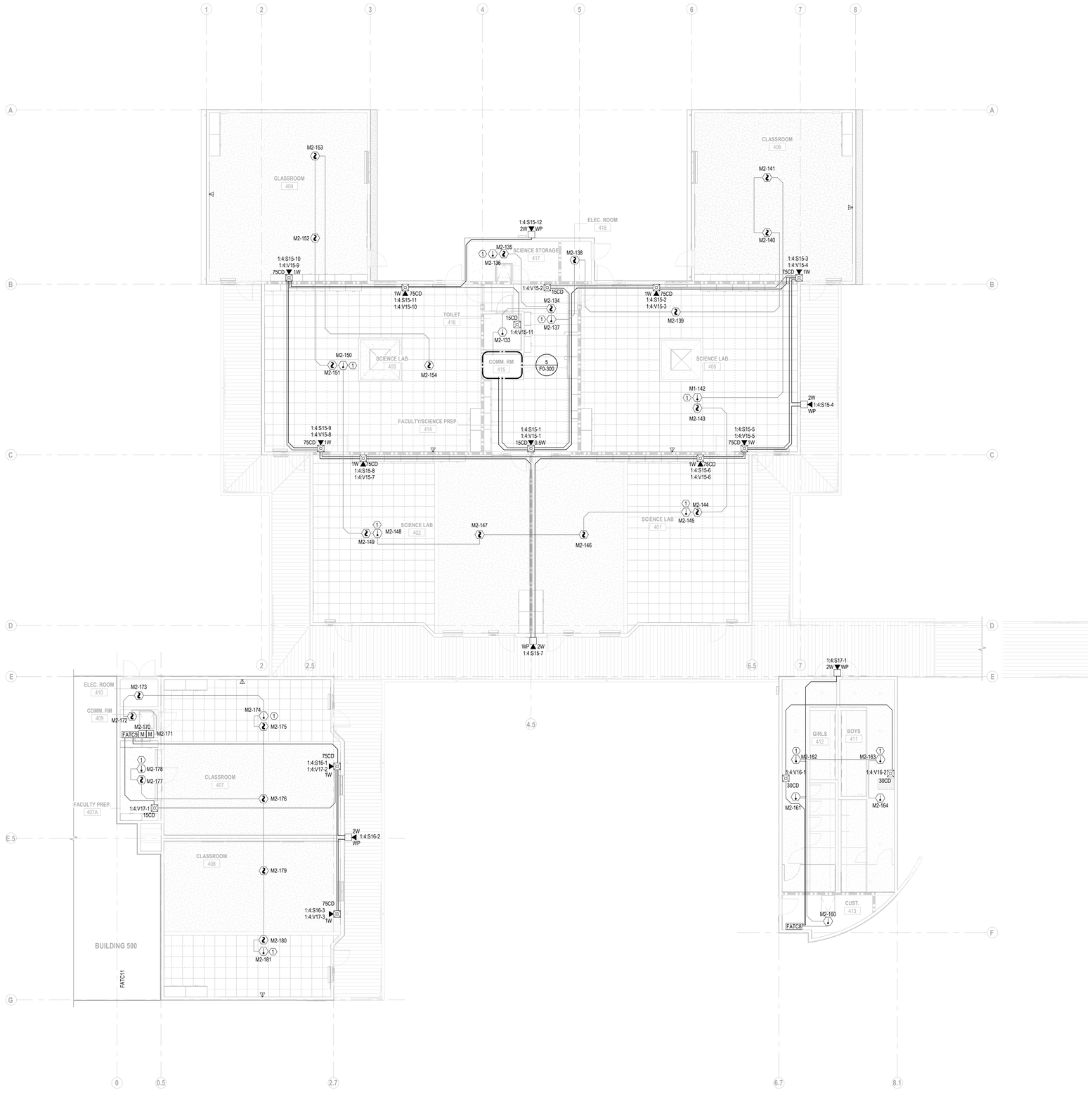


1 LEVEL 1 FIRE ALARM PLAN - BUILDING 400

1/8" = 1'-0"

KEY NOTES ⓧ

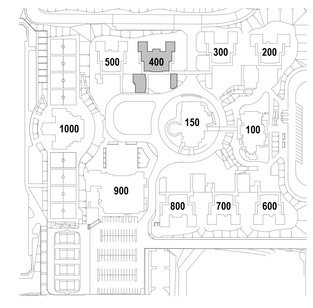
1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

BLDG 400 - FIRE ALARM PLAN

F4-100

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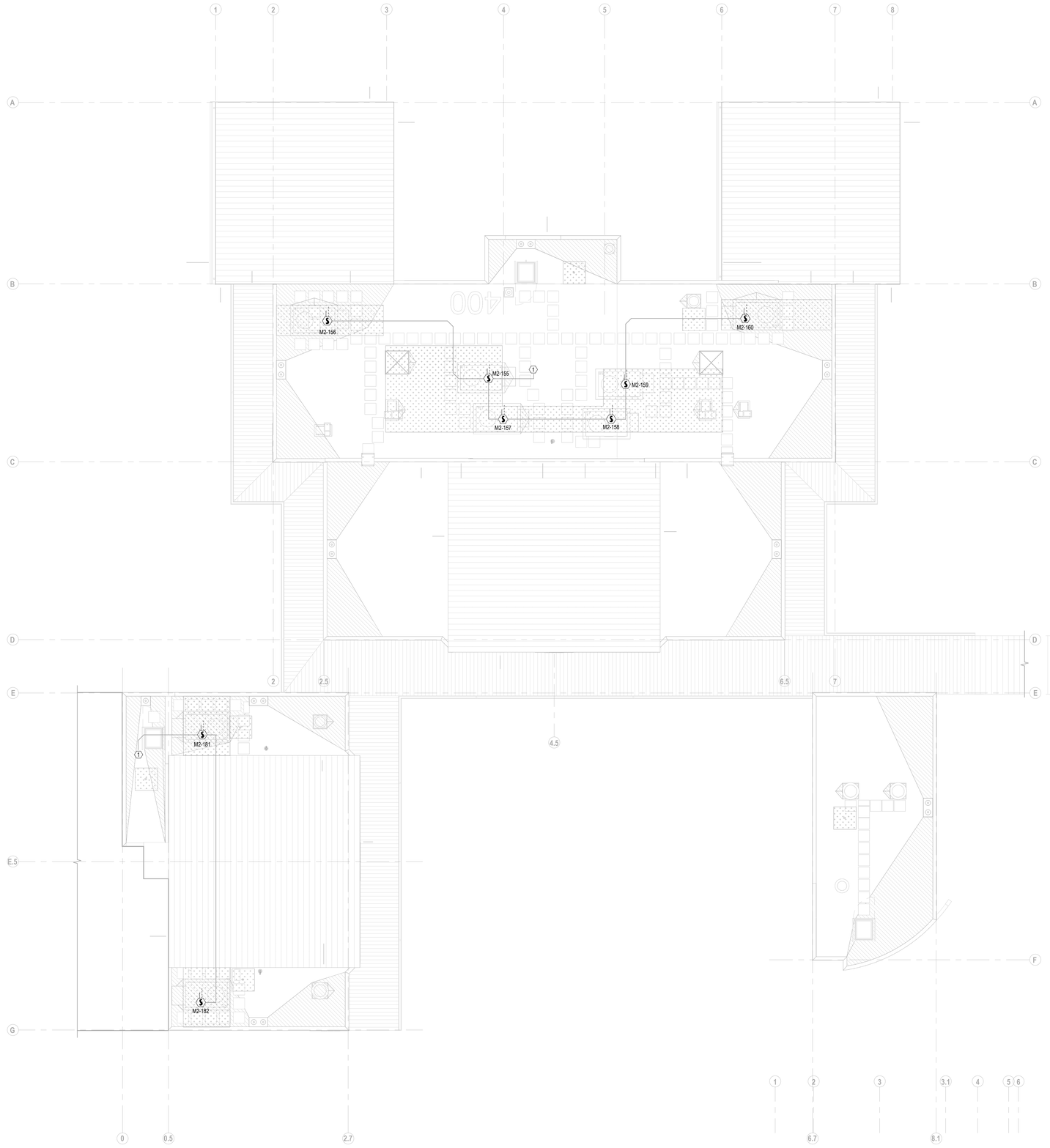


1 **ROOF FIRE ALARM PLAN - BUILDING 400**
1/8" = 1'-0"

KEY NOTES ⓧ

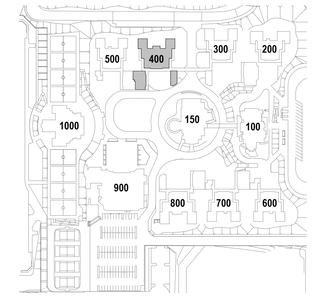
1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.

FIRE ALARM WIRING LEGEND	
VISUAL	
AUDIBLE - SPEAKER	
IDNET	
RELAY	
PUSH TO TALK	

KEY PLAN



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BLDG 400 - ROOF
FIRE ALARM PLAN

F4-101

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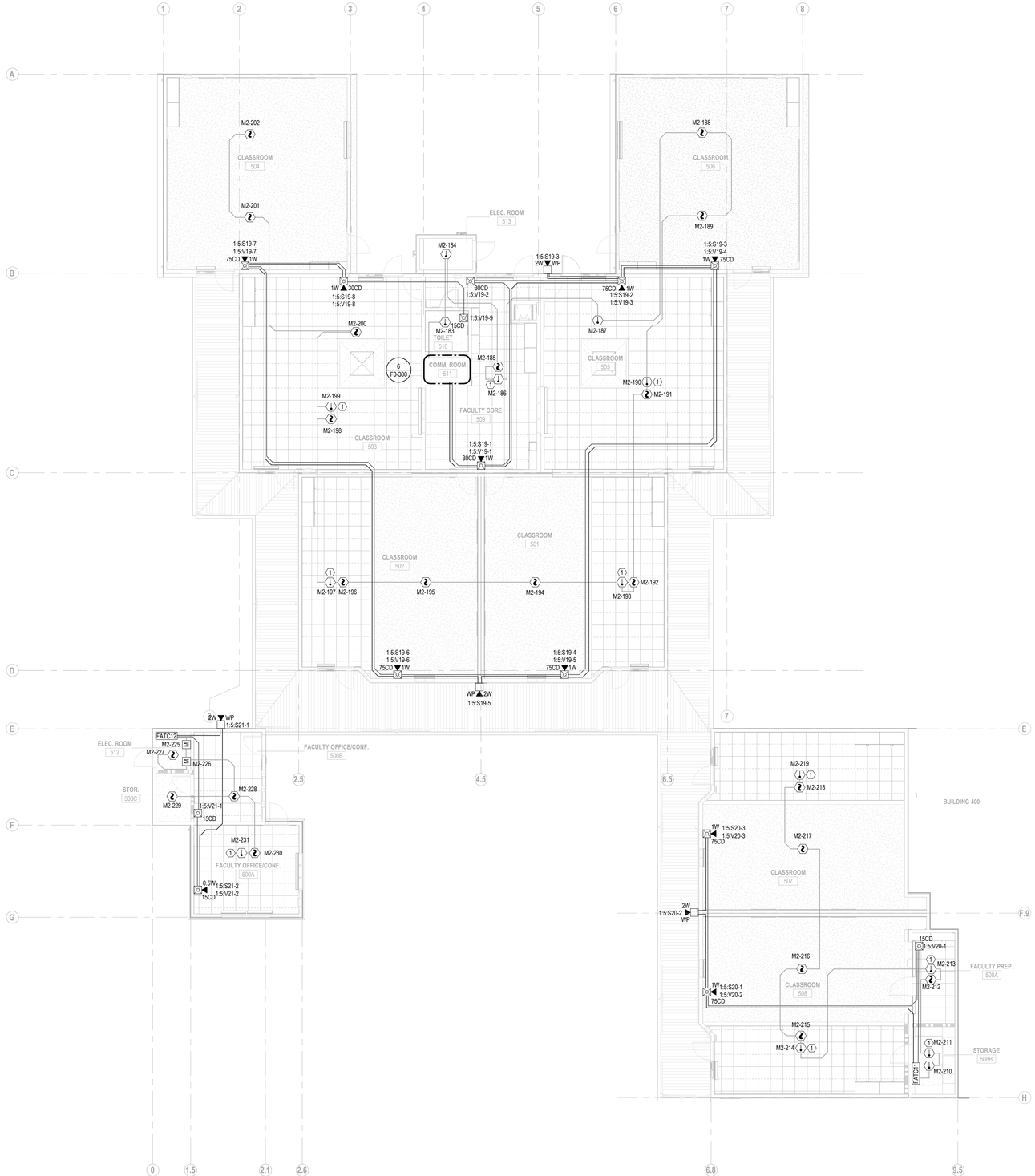


1 LEVEL 1 FIRE ALARM PLAN - BUILDING 500
1/8" = 1'-0"

KEY NOTES ⓧ

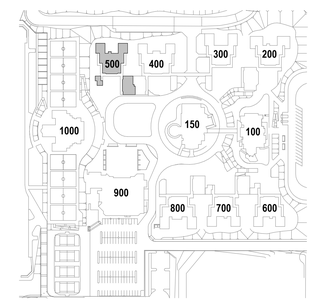
1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 500 - FIRE ALARM PLAN

F5-100

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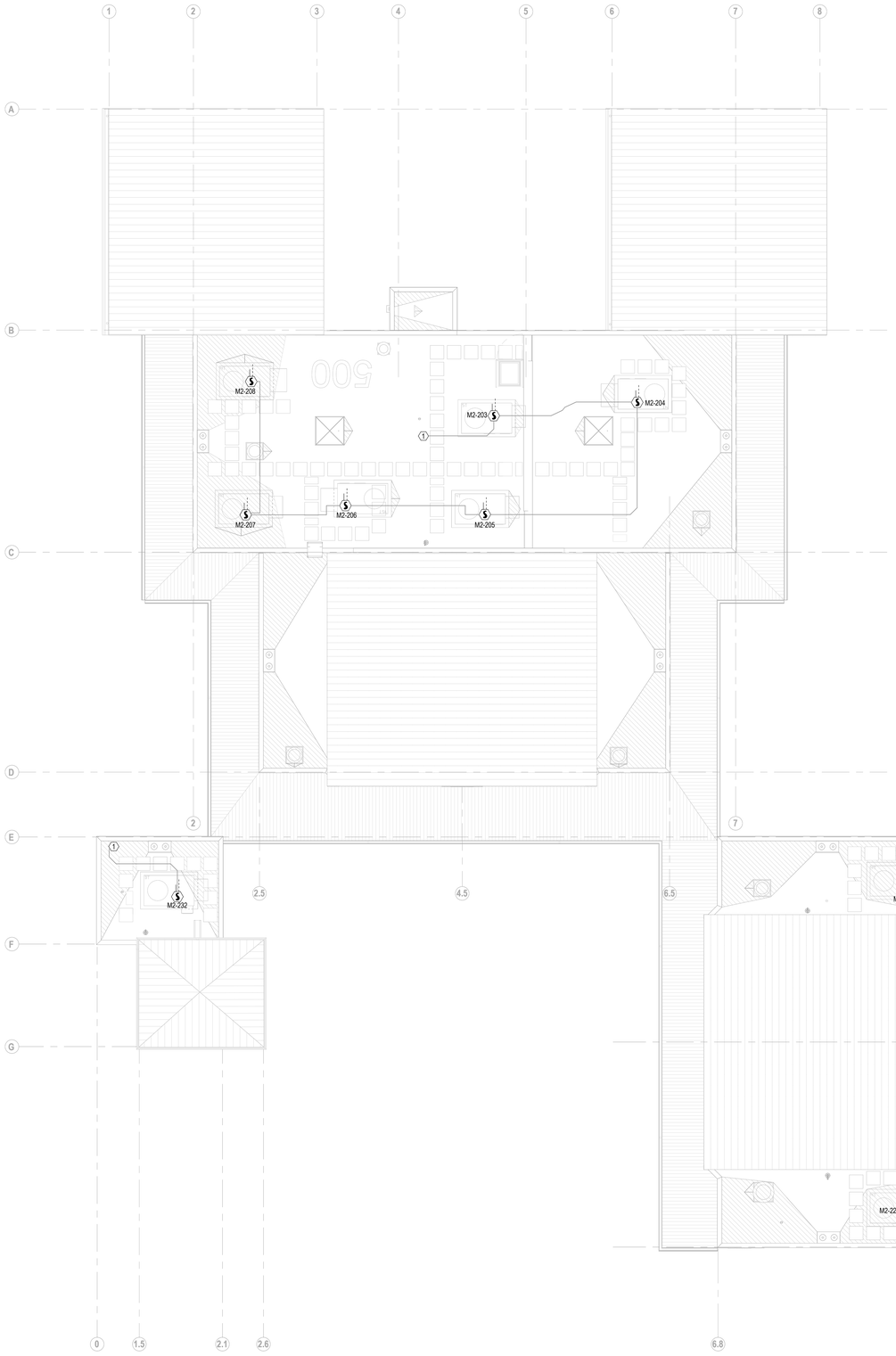


1 **ROOF FIRE ALARM PLAN - BUILDING 500**
1/8" = 1'-0"

KEY NOTES ⓧ

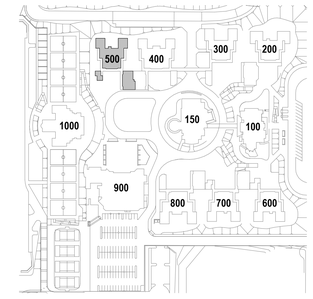
1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 500 - ROOF
FIRE ALARM PLAN

F5-101

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1 LEVEL 1 FIRE ALARM PLAN - BUILDING 600
1/8" = 1'-0"

KEY NOTES Ⓧ

1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
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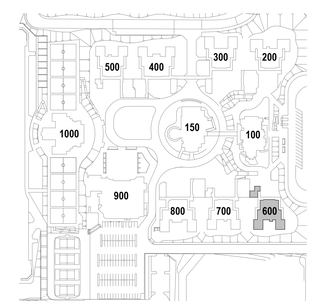
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	
AUDIBLE - SPEAKER	
IDNET	
RELAY	
PUSH TO TALK	

KEY PLAN



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BLDG 600 - FIRE ALARM PLAN

F6-100

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1 **ROOF FIRE ALARM PLAN - BUILDING 600**
1/8" = 1'-0"

KEY NOTES ⓧ

1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
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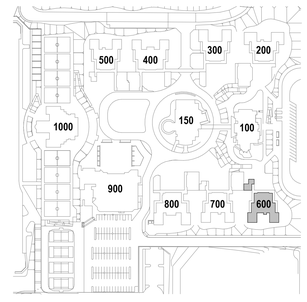
FIRE ALARM WIRING LEGEND	
VISUAL	
AUDIBLE - SPEAKER	
IDNET	
RELAY	
PUSH TO TALK	

KEY PLAN



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BLDG 600 - FIRE ALARM ROOF PLAN

F6-101

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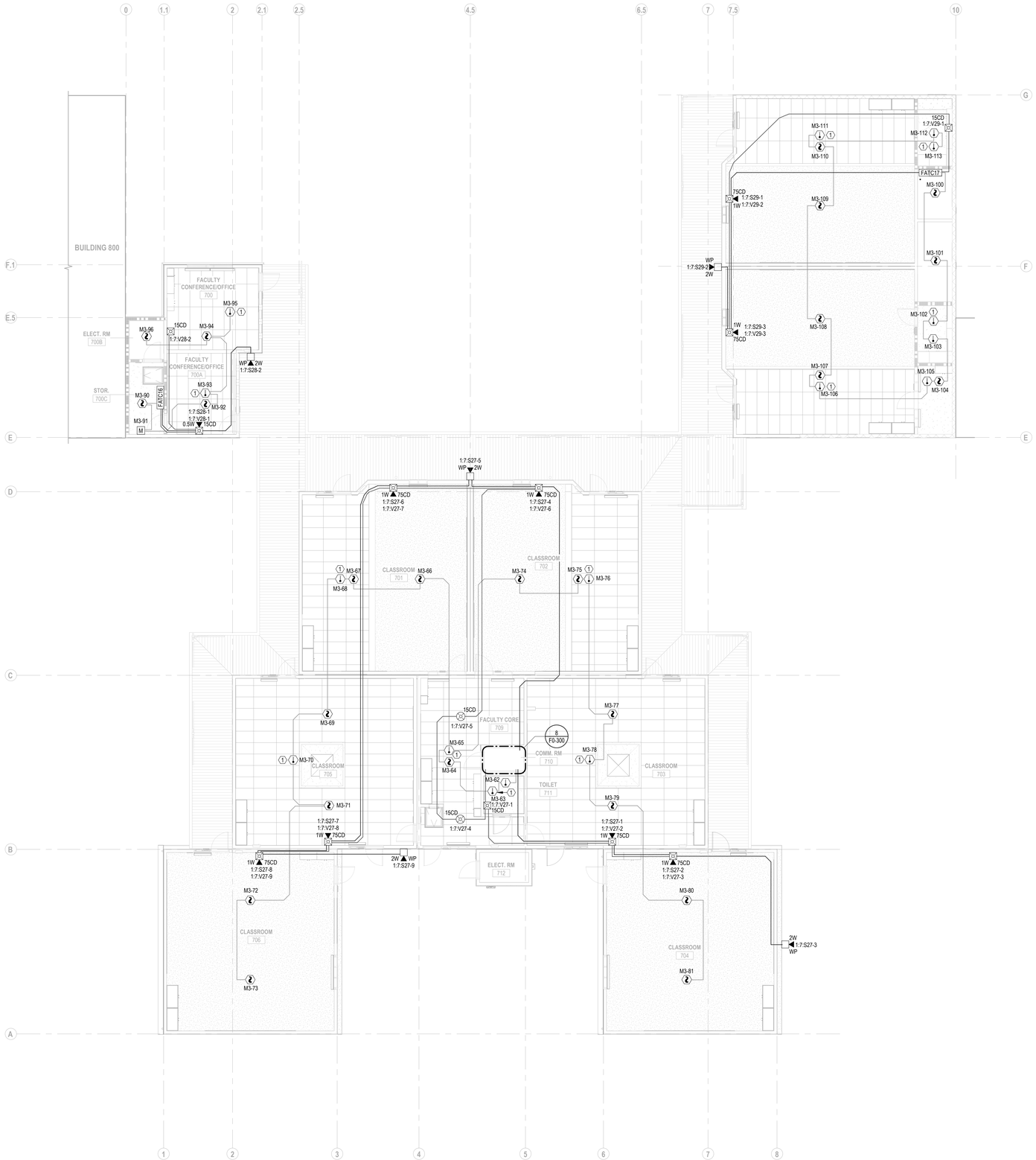

1 LEVEL 1 FIRE ALARM PLAN - BUILDING 700

1/8" = 1'-0"

KEY NOTES ⓧ

1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

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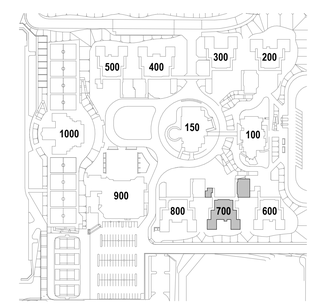
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 700 - FIRE ALARM PLAN

F7-100

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1 **ROOF FIRE ALARM PLAN - BUILDING 700**
1/8" = 1'-0"

KEY NOTES ⓧ

1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
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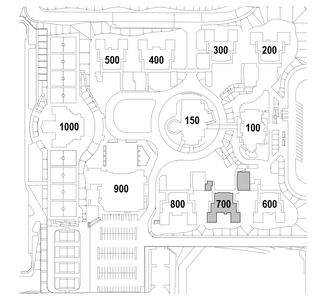
FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 700 - FIRE ALARM ROOF PLAN

F7-101

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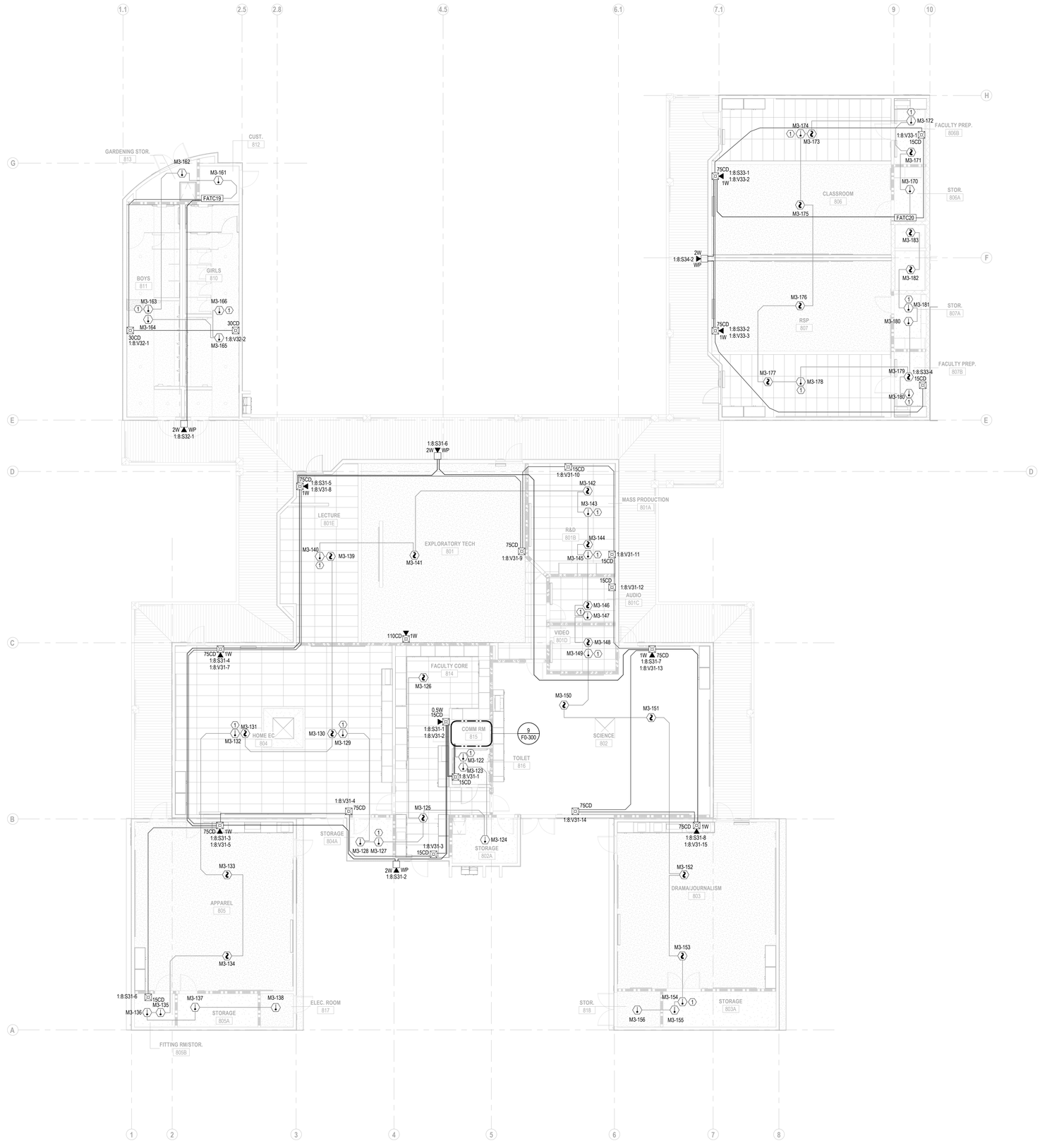
Consultant Rep Info, Consultant Rep Info, Consultant Rep Info



1 LEVEL 1 FIRE ALARM PLAN - BUILDING 800
1/8" = 1'-0"

KEY NOTES ⓧ

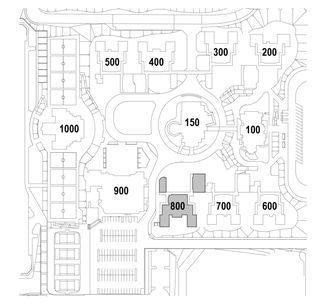
1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
2. CONTRACTOR SHALL INSTALL ALL NEW FIRE ALARM SYSTEM INCLUDING NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, PANELS, WIRING, AND CONDUIT.
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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Project Number	:	24203.10
Date	:	09-05-2025
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Revisions	:	

BLDG 800 - FIRE ALARM PLAN

F8-100

1 **ROOF FIRE ALARM PLAN - BUILDING 800**
1/8" = 1'-0"

KEY NOTES ⓧ

1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
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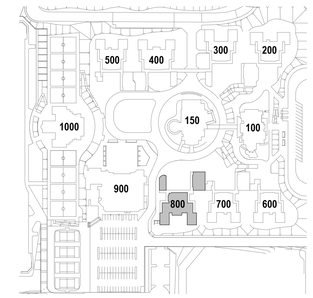
FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 800 - FIRE ALARM ROOF PLAN

F8-101

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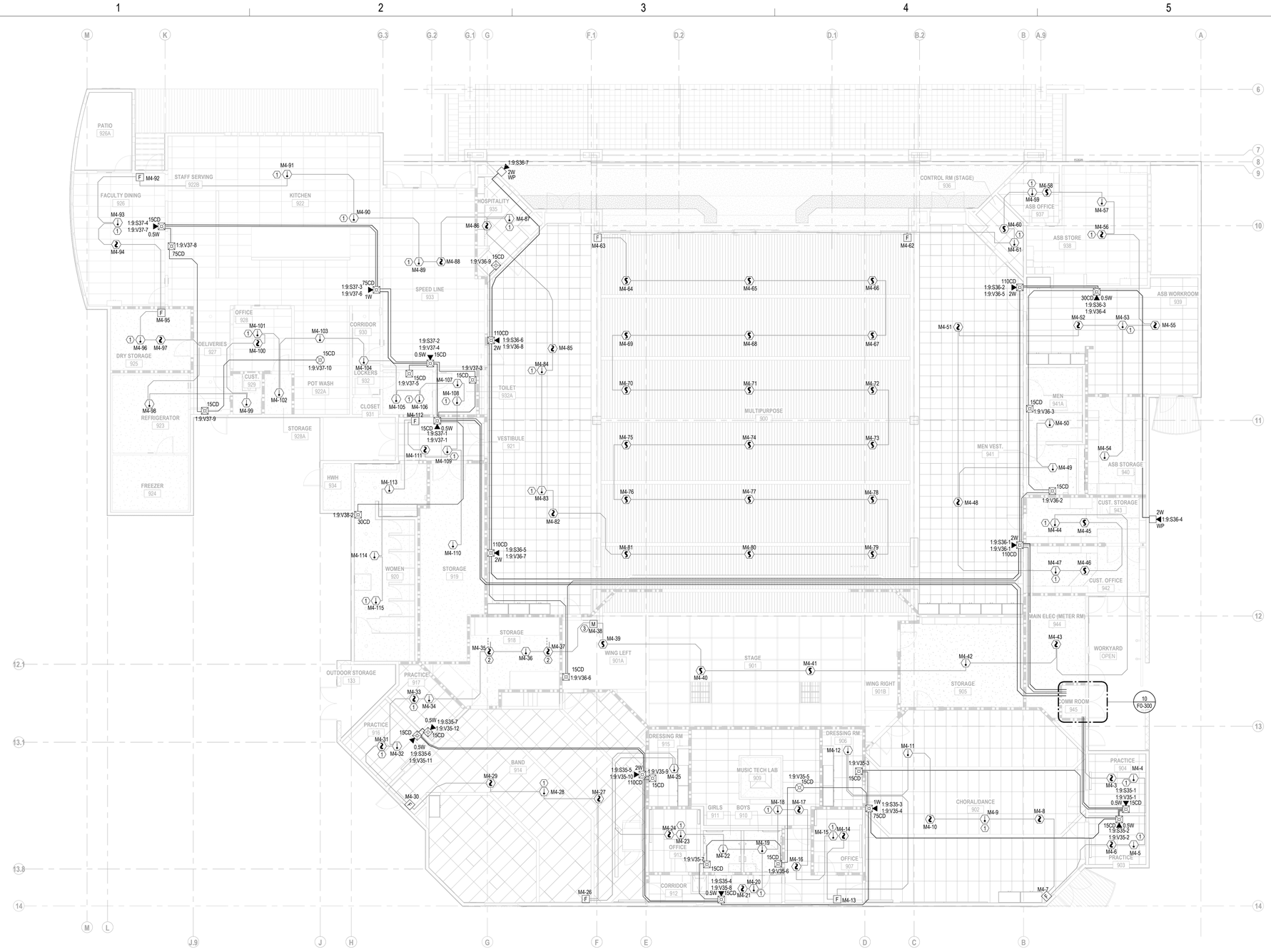

1 **LEVEL 1 FIRE ALARM PLAN - BUILDING 900**
1/8" = 1'-0"

KEY NOTES ⓧ

1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

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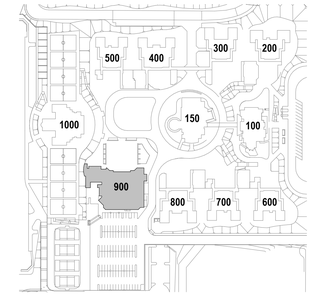
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	
AUDIBLE - SPEAKER	
IDNET	
RELAY	
PUSH TO TALK	

KEY PLAN



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BLDG 900 - FIRE ALARM PLAN

F9-100

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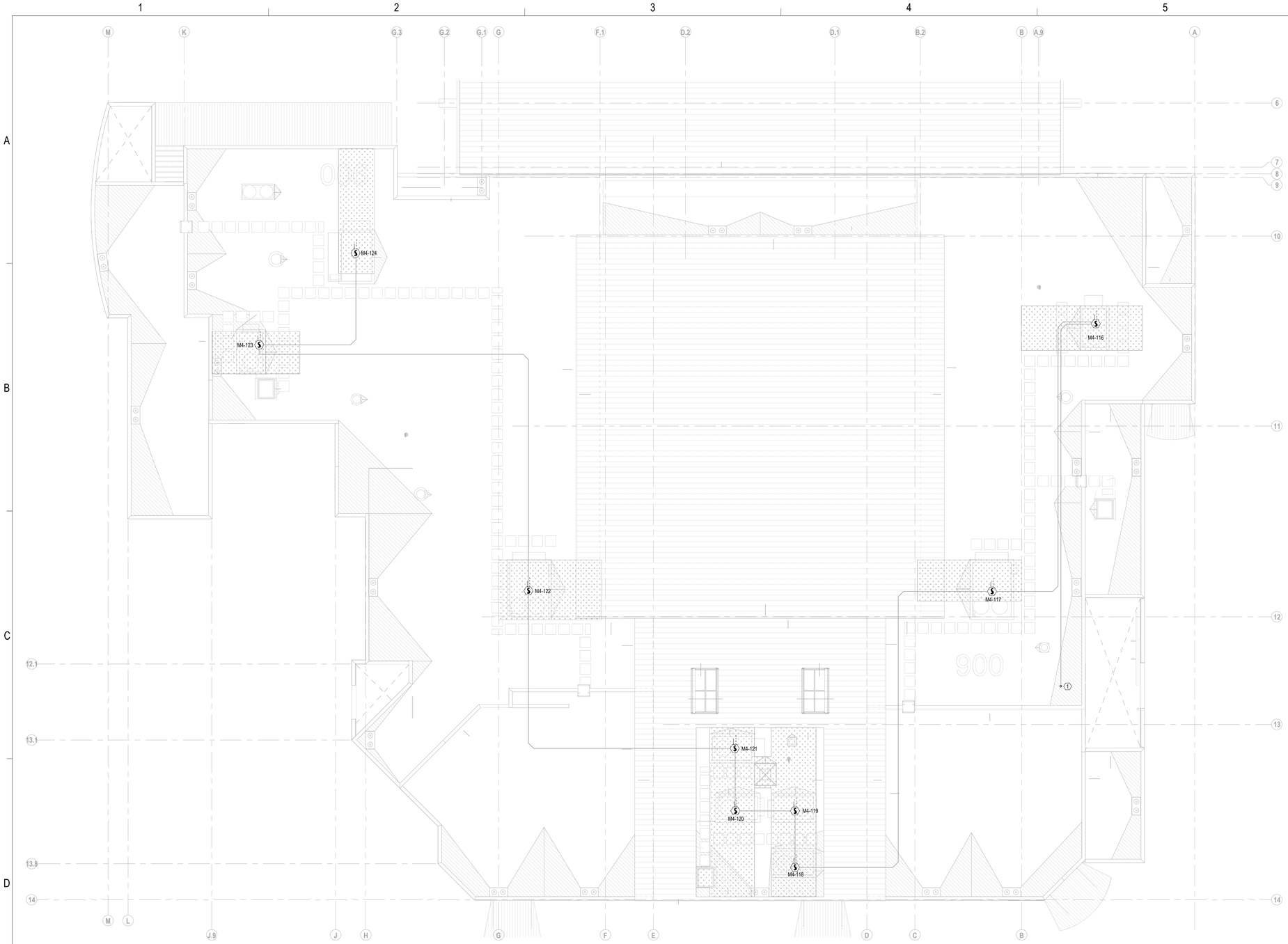

1 **ROOF FIRE ALARM PLAN - BUILDING 900**
1/8" = 1'-0"

KEY NOTES ⓧ

1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

1. ALL WIRING TO BE INSTALLED IN CONDUIT AND CONCEALED BEHIND WALLS AND CEILINGS
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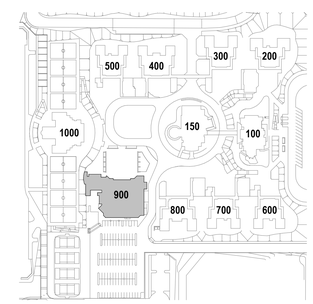
FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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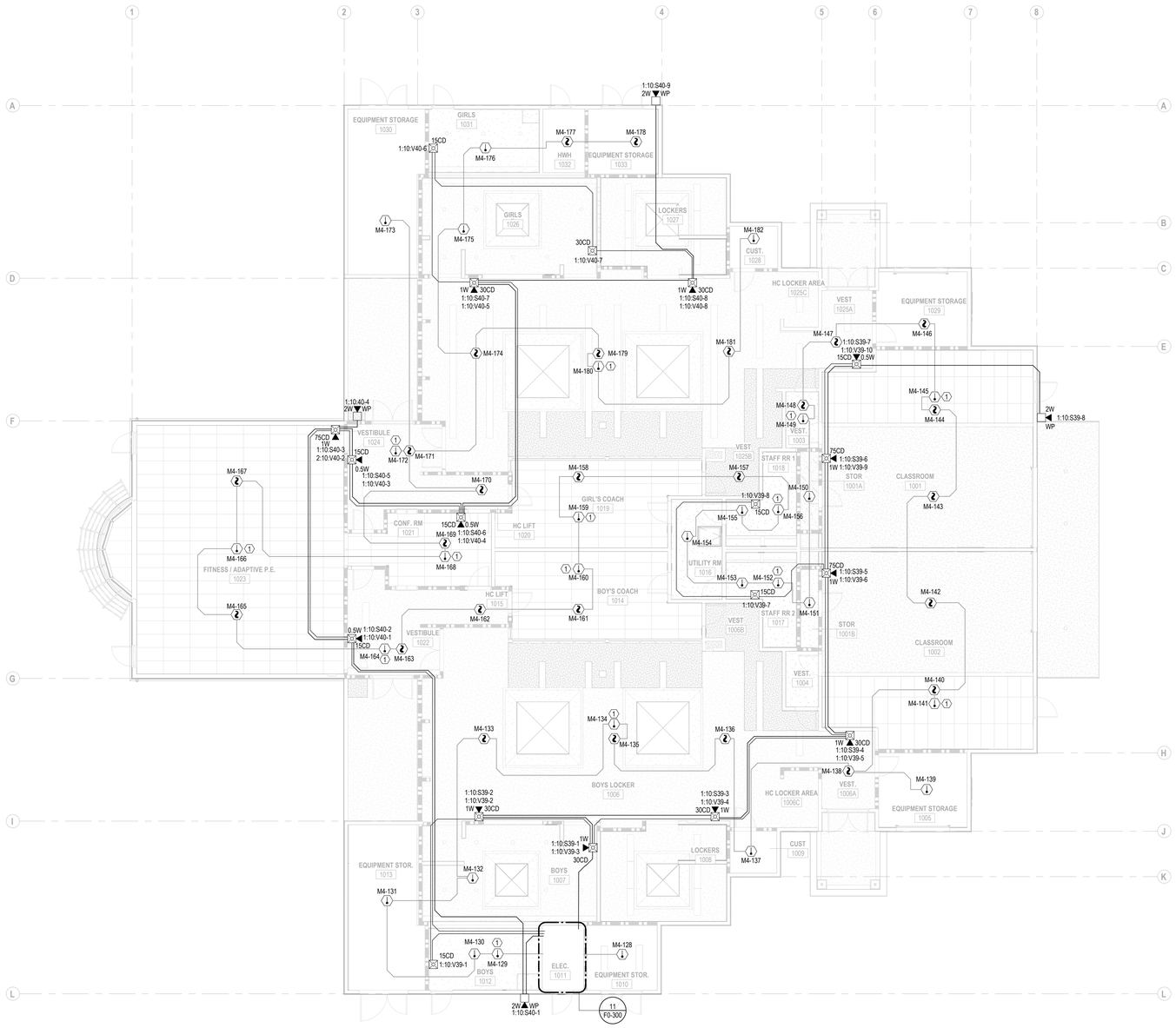
BLDG 900 - FIRE ALARM ROOF PLAN

F9-101



1 LEVEL 1 FIRE ALARM PLAN - BUILDING 1000
1/8" = 1'-0"

KEY NOTES ⓧ

1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

GENERAL NOTES

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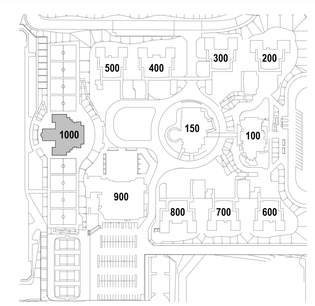
3. SEE SHEET F0-501 FOR FIRE ALARM CEILING SECTIONS.

FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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BLDG 1000 - FIRE ALARM PLAN

F10-100

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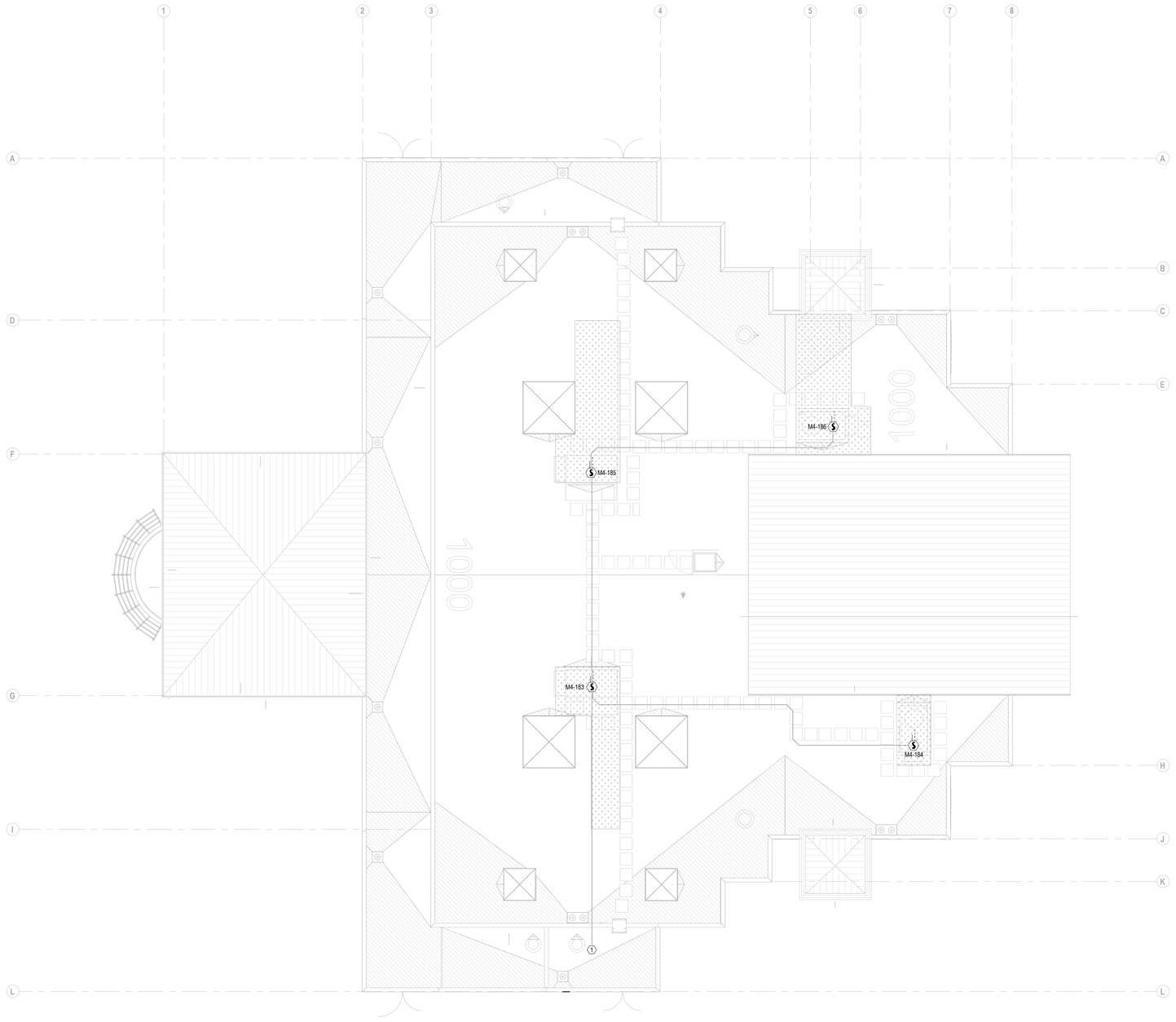

1 **ROOF FIRE ALARM PLAN - BUILDING 1000**
1/8" = 1'-0"

KEY NOTES ⓧ

1 (1) 1" C.O. FOR CONTINUATION OF IDNET LOOP FROM LEVEL BELOW.

GENERAL NOTES

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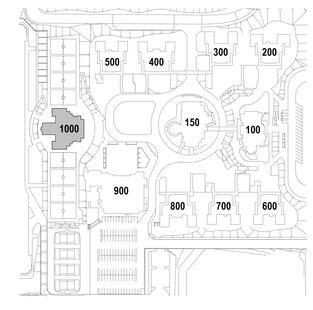
FIRE ALARM WIRING LEGEND	
VISUAL	———
AUDIBLE - SPEAKER	———
IDNET	———
RELAY	———
PUSH TO TALK	———

KEY PLAN



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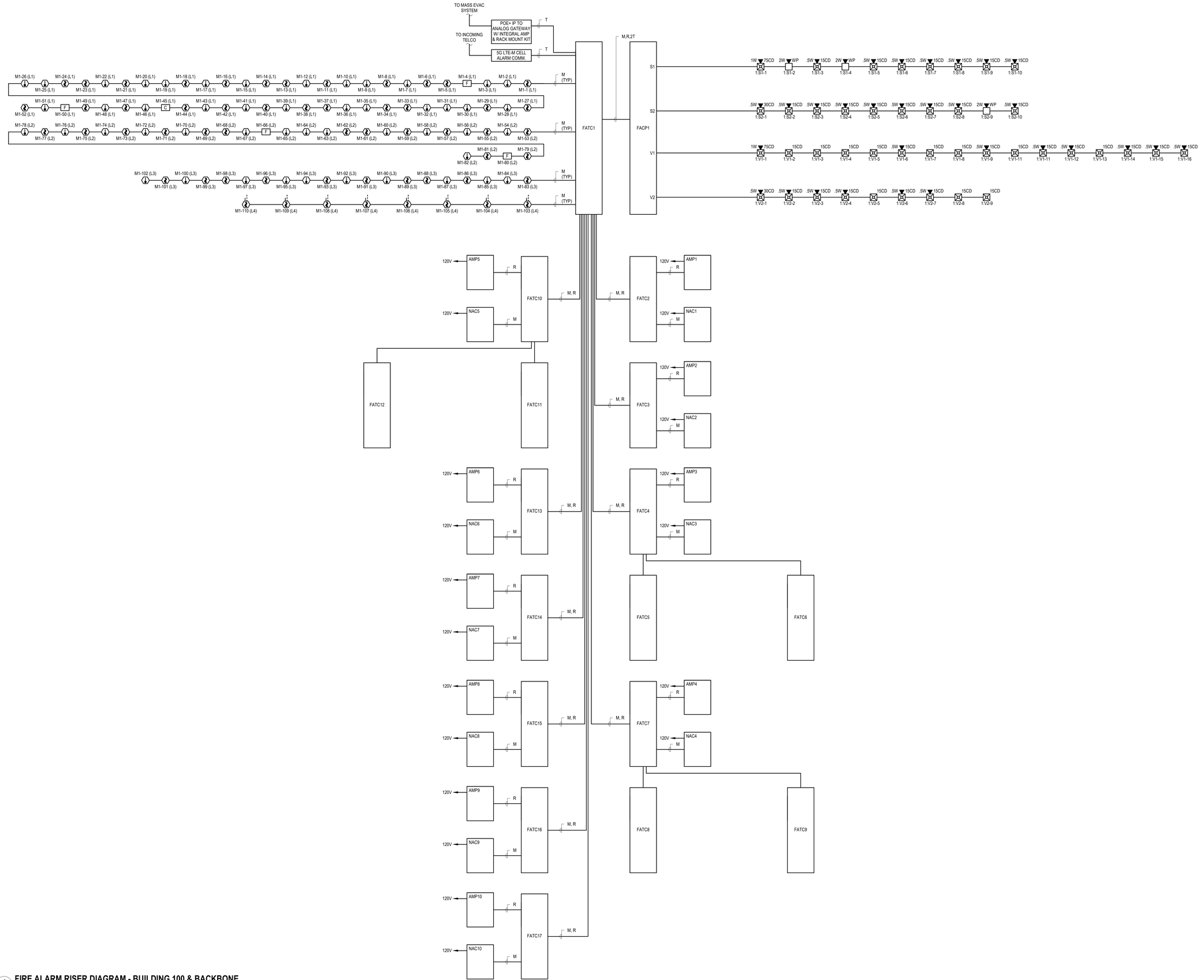
BLDG 1000 - FIRE ALARM ROOF PLAN

F10-101



1 **FIRE ALARM RISER DIAGRAM - BUILDING 100 & BACKBONE**
NO SCALE

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FIRE ALARM RISER DIAGRAMS

F0-200

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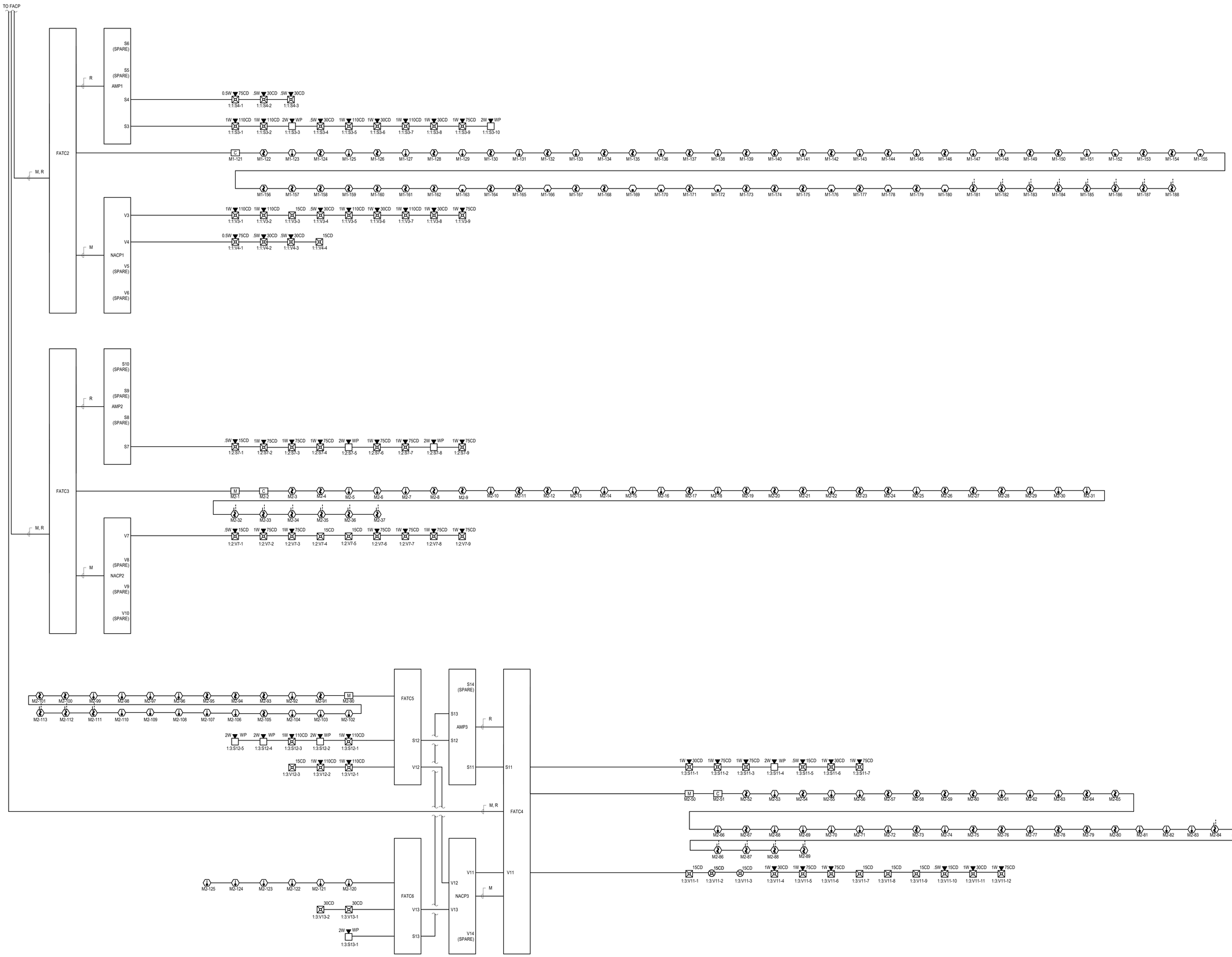

1 **FIRE ALARM RISER DIAGRAM - BLDG. 150, BLDG. 200, & BLDG. 300**
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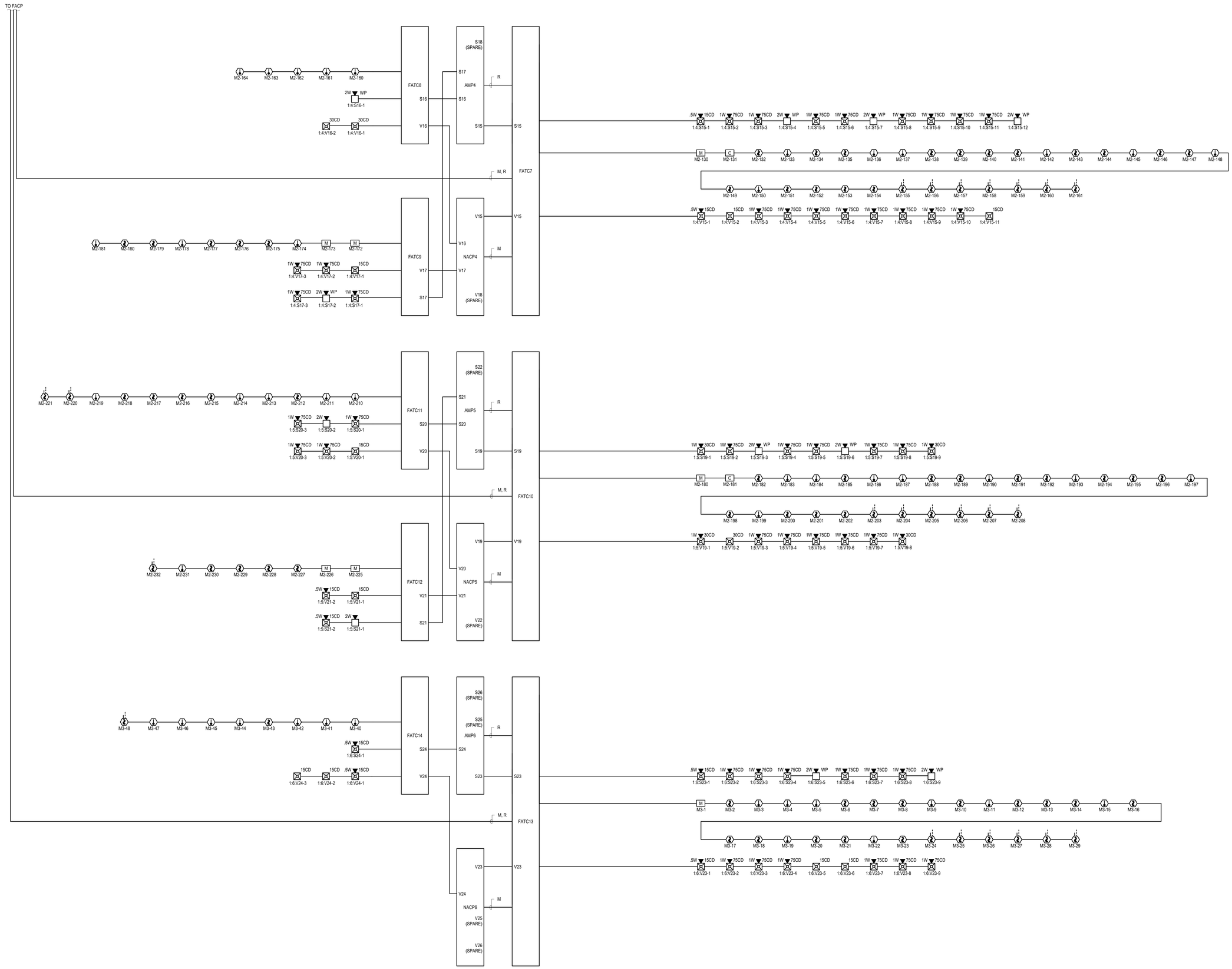
FIRE ALARM RISER DIAGRAMS

F0-201



1 **FIRE ALARM RISER DIAGRAM - BLDG. 400, BLDG. 500, & BLDG. 600**
NO SCALE

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FIRE ALARM RISER DIAGRAMS

F0-202

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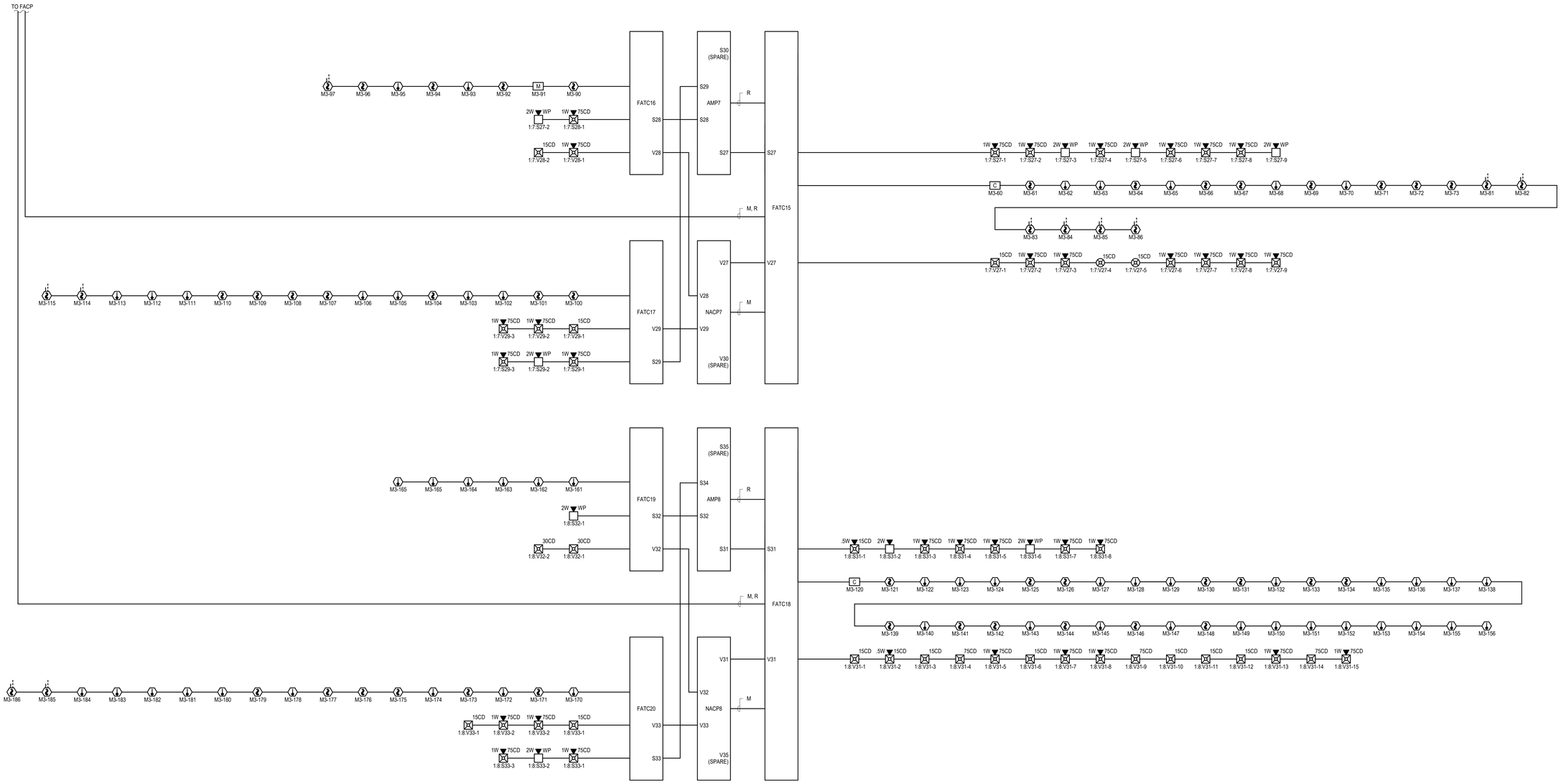

1 **FIRE ALARM RISER DIAGRAM - BLDG. 700 & BLDG. 800**
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DSA BACKCHECK

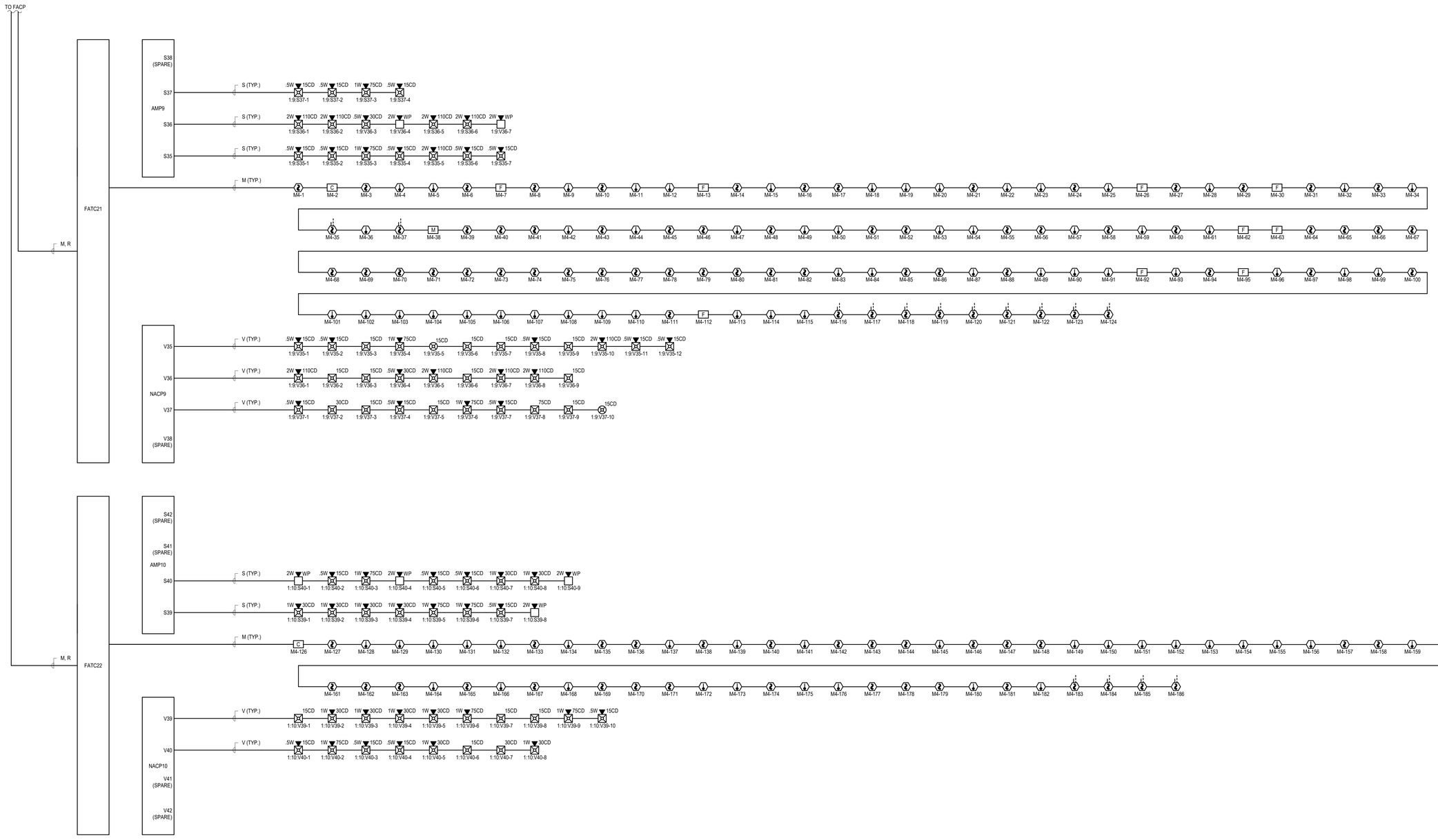
RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

FIRE ALARM RISER DIAGRAMS

F0-203



1 FIRE ALARM RISER DIAGRAM - BLDG. 900 & BLDG. 1000
NO SCALE

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APP: 04-124769 INC:
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SS ☑ FLS ☑ ACS ☑
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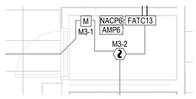
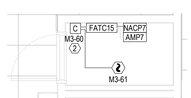
FIRE ALARM RISER DIAGRAMS

F0-204



7 **BLDG. 600 - COMM. RM. 608 - FIRE ALARM ENLARGED PLAN**
1/4" = 1'-0"



8 **BLDG. 700 - COMM. RM. 710 - FIRE ALARM ENLARGED PLAN**
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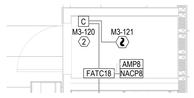

9 **BLDG. 800 - COMM. RM. 815 - FIRE ALARM ENLARGED PLAN**
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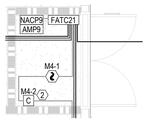

10 **BLDG. 900 - COMM. RM. 945 - FIRE ALARM ENLARGED PLAN**
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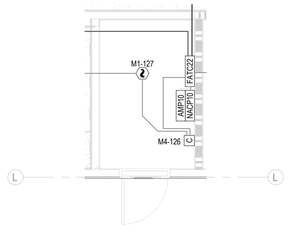
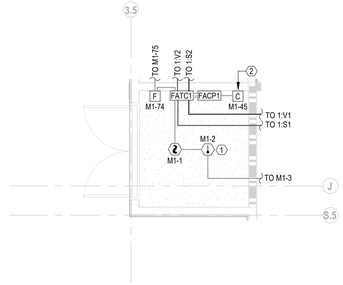
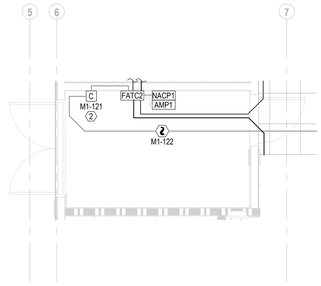


11 **BLDG. 1000 - COMM. RM. 1011 - FIRE ALARM ENLARGED PLAN**
1/4" = 1'-0"



1 **BLDG. 100 - COMM. ROOM 113 - FIRE ALARM ENLARGED PLAN**
1/4" = 1'-0"



2 **BLDG. 150 - MAIN TEL. 161 - FIRE ALARM ENLARGED PLAN**
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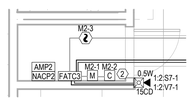
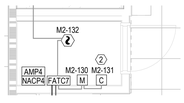


3 **BLDG. 200 - COMM. ROOM 208 - FIRE ALARM ENLARGED PLAN**
1/4" = 1'-0"

4 **BLDG. 300 - COMM. RM. 313 - FIRE ALARM ENLARGED PLAN**
1/4" = 1'-0"



5 **BLDG. 400 - COMM. RM. 415 - FIRE ALARM ENLARGED PLAN**
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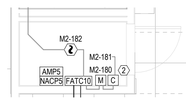

6 **BLDG. 500 - COMM. RM. 511 - FIRE ALARM ENLARGED PLAN**
1/4" = 1'-0"

KEY NOTES

1 PROVIDE HEAT DETECTOR ABOVE ACCESSIBLE CEILING.

2 PROVIDE ADDRESSABLE OUTPUT CONTROL MODULE FOR AUTOMATIC SHUT-DOWN OF HVAC UNITS.

GENERAL NOTES

FIRE ALARM WIRING LEGEND	
VISUAL	
AUDIBLE - SPEAKER	
IDNET	
RELAY	
PUSH TO TALK	

KEY PLAN

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Revisions	:	

FIRE ALARM
ENLARGED PLANS

F0-300

Autodesk Docs://Projects and Plan Sets - Working & Site Rehabilitation - Rancho Del Rey MS - Building 24203.10.rvt
Document Version: 2026.0 (Build 27.0.1.4 RSH, Jan 07, 2025)

BATTERY CAPACITY CALCULATION SHEET
NACP9

Location: COMM. ROOM 945

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V36	0.002	0.002	0.479	0.479
1	VISUAL CIRCUIT V37	0.002	0.002	0.475	0.475
1	VISUAL CIRCUIT V38	0.002	0.002	0.382	0.382
1	VISUAL CIRCUIT V39 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.481		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.370
F - ALLOWABLE ERROR (C x (D + E))	0.549
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.296
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP10

Location: ELEC. 1011

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V36	0.002	0.002	0.581	0.581
1	VISUAL CIRCUIT V37	0.002	0.002	0.402	0.402
1	VISUAL CIRCUIT V38	0.002	0.002	0	0
1	VISUAL CIRCUIT V39 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.128		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.282
F - ALLOWABLE ERROR (C x (D + E))	0.532
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.190
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP1

Location: MAIN TEL. 161

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S3	0.002	0.002	0.163	0.163
1	AUDIBLE/VOICE CIRCUIT S4	0.002	0.002	0.021	0.021
1	AUDIBLE/VOICE CIRCUIT S5 (SPARE)	0.002	0.002	0.000	0.000
1	AUDIBLE/VOICE CIRCUIT S6 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.282		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.070
F - ALLOWABLE ERROR (C x (D + E))	0.523
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.137
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP2

Location: COMM ROOM 208

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S7	0.002	0.002	0.149	0.149
1	AUDIBLE/VOICE CIRCUIT S8 (SPARE)	0.002	0.002	0.000	0.000
1	AUDIBLE/VOICE CIRCUIT S9 (SPARE)	0.002	0.002	0.000	0.000
1	AUDIBLE/VOICE CIRCUIT S10 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.247		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.062
F - ALLOWABLE ERROR (C x (D + E))	0.521
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.127
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP5

Location: COMM. ROOM 515

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V19	0.002	0.002	0.971	0.971
1	VISUAL CIRCUIT V20	0.002	0.002	0.044	0.044
1	VISUAL CIRCUIT V21	0.002	0.002	0.232	0.232
1	VISUAL CIRCUIT V22 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.392		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.348
F - ALLOWABLE ERROR (C x (D + E))	0.545
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.269
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP6

Location: COMM. ROOM 608

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V23	0.002	0.002	0.971	0.971
1	VISUAL CIRCUIT V24	0.002	0.002	0.044	0.044
1	VISUAL CIRCUIT V25	0.002	0.002	0.232	0.232
1	VISUAL CIRCUIT V26 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.392		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.348
F - ALLOWABLE ERROR (C x (D + E))	0.545
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.269
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP7

Location: COMM. ROOM 710

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V27	0.002	0.002	0.971	0.971
1	VISUAL CIRCUIT V28	0.002	0.002	0.044	0.044
1	VISUAL CIRCUIT V29	0.002	0.002	0.232	0.232
1	VISUAL CIRCUIT V30 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.392		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.348
F - ALLOWABLE ERROR (C x (D + E))	0.545
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.269
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP8

Location: COMM. ROOM 815

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V31	0.002	0.002	0.971	0.971
1	VISUAL CIRCUIT V32	0.002	0.002	0.044	0.044
1	VISUAL CIRCUIT V33	0.002	0.002	0.232	0.232
1	VISUAL CIRCUIT V34 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.392		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.348
F - ALLOWABLE ERROR (C x (D + E))	0.545
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.269
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP1

Location: MAIN TEL. 161

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V3	0.002	0.002	0.654	0.654
1	VISUAL CIRCUIT V4	0.002	0.002	0.251	0.251
1	VISUAL CIRCUIT V5	0.002	0.002	0	0
1	VISUAL CIRCUIT V6 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.05		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.263
F - ALLOWABLE ERROR (C x (D + E))	0.528
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.166
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP2

Location: COMM. ROOM 208

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V7	0.002	0.002	0.721	0.721
1	VISUAL CIRCUIT V8 (SPARE)	0.002	0.002	0	0
1	VISUAL CIRCUIT V9 (SPARE)	0.002	0.002	0	0
1	VISUAL CIRCUIT V10 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	0.866		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.217
F - ALLOWABLE ERROR (C x (D + E))	0.519
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.111
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP3

Location: COMM ROOM 313

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V11	0.002	0.002	0.598	0.598
1	VISUAL CIRCUIT V12 (SPARE)	0.002	0.002	0	0
1	VISUAL CIRCUIT V13 (SPARE)	0.002	0.002	0	0
1	VISUAL CIRCUIT V14 (SPARE)	0.002	0.002	0	0
	SUB TOTAL		0.099		0.743

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.186
F - ALLOWABLE ERROR (C x (D + E))	0.512
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.074
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
NACP4

Location: COMM. ROOM 415

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - NACP				
1	MAIN CIRCUIT BOARD (E3 SERIES)	0.091	0.091	0.145	0.145
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V15	0.002	0.002	0.971	0.971
1	VISUAL CIRCUIT V16	0.002	0.002	0.044	0.044
1	VISUAL CIRCUIT V17	0.002	0.002	0.232	0.232
1	VISUAL CIRCUIT V18 (SPARE)	0.002	0.002	0	0
	SUB TOTAL	0.099	1.392		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.376
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.348
F - ALLOWABLE ERROR (C x (D + E))	0.545
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.269
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

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RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
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Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

FIRE ALARM CALCULATIONS

F0-400

BATTERY CAPACITY CALCULATION SHEET
FACP

Location: COMM. ROOM 113

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - FACP				
1	POWER SUPPLY (PM-9)	0.05	0.05	0.05	0.05
1	KEYPAD AND DISPLAY (LCD-E3)	0.024	0.024	0.028	0.028
1	50W DIGITAL AMPLIFIER (AM-50-70)	0.049	0.049	0.049	0.049
	NOTIFICATION APPLIANCES - SPEAKERS				
1	SPEAKER CIRCUIT S1	0.0002	0.0002	0.120	0.120
1	SPEAKER CIRCUIT S2	0.0002	0.0002	0.092	0.092
	NOTIFICATION APPLIANCES - STROBES				
1	VISUAL CIRCUIT V1	0.0002	0.0002	0.699	0.699
1	VISUAL CIRCUIT V2	0.0002	0.0002	0.401	0.401
	INITIATING DEVICES				
37	MANUAL PULL STATION (MS-7AF)	0.0004	0.0139	0.0050	0.1850
631	SMOKE DETECTOR (ASD-PTL3)	0.0002	0.1262	0.0045	2.8395
592	HEAT DETECTOR (ATD-L3)	0.0002	0.1184	0.0045	2.664
88	DUCT SMOKE DETECTOR (DNR)	0.0002	0.0176	0.0050	0.4400
20	MONITORING MODULE (AMM-2F)	0.0004	0.0075	0.0050	0.10
10	CONTROL MODULE (AOM-2RF)	0.0004	0.0038	0.0050	0.05
	SUB TOTAL		0.411		7.718

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	25%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	9.867
E - TOTAL ALARM BACKUP (AMP-HOURS)	1.929
F - ALLOWABLE ERROR (C x (D + E))	2.949
TOTAL AMP-HOUR REQUIRED (D + E + F)	14.746
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	15

BATTERY CAPACITY CALCULATION SHEET
AMP7

Location: COMM. RM 710

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S27	0.002	0.002	0.170	0.170
1	AUDIBLE/VOICE CIRCUIT S28	0.002	0.002	0.042	0.042
1	AUDIBLE/VOICE CIRCUIT S29	0.002	0.002	0.057	0.057
1	AUDIBLE/VOICE CIRCUIT S30 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.367		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.092
F - ALLOWABLE ERROR (C x (D + E))	0.527
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.163
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP3

Location: COMM. RM. 313

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S11	0.002	0.002	0.134	0.134
1	AUDIBLE/VOICE CIRCUIT S12	0.002	0.002	0.113	0.113
1	AUDIBLE/VOICE CIRCUIT S13	0.002	0.002	0.028	0.028
1	AUDIBLE/VOICE CIRCUIT S14 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.374		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.093
F - ALLOWABLE ERROR (C x (D + E))	0.527
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.165
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP8

Location: COMM. RM 815

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S31	0.002	0.002	0.134	0.134
1	AUDIBLE/VOICE CIRCUIT S32	0.002	0.002	0.028	0.028
1	AUDIBLE/VOICE CIRCUIT S33	0.002	0.002	0.057	0.057
1	AUDIBLE/VOICE CIRCUIT S34 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.317		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.079
F - ALLOWABLE ERROR (C x (D + E))	0.525
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.148
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP4

Location: COMM. RM 415

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S15	0.002	0.002	0.205	0.205
1	AUDIBLE/VOICE CIRCUIT S16	0.002	0.002	0.028	0.028
1	AUDIBLE/VOICE CIRCUIT S17 (SPARE)	0.002	0.002	0.057	0.057
1	AUDIBLE/VOICE CIRCUIT S18 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.388		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.5
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.097
F - ALLOWABLE ERROR (C x (D + E))	0.528
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.169
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP9

Location: COMM. RM 945

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S35	0.002	0.002	0.078	0.078
1	AUDIBLE/VOICE CIRCUIT S36	0.002	0.002	0.177	0.177
1	AUDIBLE/VOICE CIRCUIT S37	0.002	0.002	0.035	0.035
1	AUDIBLE/VOICE CIRCUIT S38 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.388		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.097
F - ALLOWABLE ERROR (C x (D + E))	0.528
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.169
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP5

Location: COMM. ROOM 511

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S19	0.002	0.002	0.156	0.156
1	AUDIBLE/VOICE CIRCUIT S20	0.002	0.002	0.057	0.057
1	AUDIBLE/VOICE CIRCUIT S21	0.002	0.002	0.035	0.035
1	AUDIBLE/VOICE CIRCUIT S22 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.346		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.086
F - ALLOWABLE ERROR (C x (D + E))	0.526
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.156
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP10

Location: ELEC. 1011

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S39	0.002	0.002	0.120	0.120
1	AUDIBLE/VOICE CIRCUIT S40	0.002	0.002	0.149	0.149
1	AUDIBLE/VOICE CIRCUIT S41 (SPARE)	0.002	0.002	0.000	0.000
1	AUDIBLE/VOICE CIRCUIT S42 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.367		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.092
F - ALLOWABLE ERROR (C x (D + E))	0.527
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.163
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

BATTERY CAPACITY CALCULATION SHEET
AMP6

Location: COMM. RM 608

Quantity	Decription	Unit Standby Current (A)	Total Standby Current (A)	Unit Alarm Current (A)	Total Alarm Current (A)
	PANEL EQUIPMENT - AMP				
2	50W, 70V AMPLIFIER (AM-50-70)	0.049	0.098	0.049	0.098
	NOTIFICATION APPLIANCES - SPEAKERS				
1	AUDIBLE/VOICE CIRCUIT S23	0.002	0.002	0.149	0.149
1	AUDIBLE/VOICE CIRCUIT S24	0.002	0.002	0.007	0.007
1	AUDIBLE/VOICE CIRCUIT S25 (SPARE)	0.002	0.002	0.000	0.000
1	AUDIBLE/VOICE CIRCUIT S26 (SPARE)	0.002	0.002	0.000	0.000
	SUB TOTAL	0.106	0.254		

BATTERY CALCULATIONS

ASSUMPTIONS:	
A - BATTERY BACKUP - STANDBY (HOURS)	24
B - BATTERY BACKUP (MINUTES)	15
C - ALLOWABLE ERROR (%)	20%
D - TOTAL STANDBY BACKUP (AMP-HOURS)	2.544
E - TOTAL ALARM BACKUP (AMP-HOURS)	0.063
F - ALLOWABLE ERROR (C x (D + E))	0.521
TOTAL AMP-HOUR REQUIRED (D + E + F)	3.129
ADJUSTED BATTERY CAPACITY (AMP-HOURS)	4

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EXP. 6/30/2027
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Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

FIRE ALARM CALCULATIONS

F0-401

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VOLTAGE DROP VISUAL NOTIFICATION APPLIANCE CIRCUIT SCHEDULE

PANEL	CIRCUIT	WALL STROBE 15CD 0.018	WALL STROBE 30CD 0.022	WALL STROBE 75CD 0.07	CLG. STROBE 15CD 0.041	WALL SPKR/STROBE 15CD 0.018	WALL SPKR/STROBE 30CD 0.043	WALL SPKR/STROBE 75CD 0.07	WALL SPKR/STROBE 110CD 0.08	TOTAL CURRENT AT 16VDC (AMPS)	ONE-WAY CIRCUIT LENGTH (FEET)	WIRE GAUGE	CIRCUIT RESISTANCE (OHMS)	VOLTAGE DROP FROM 20.4V (MAX 4.4V)	PERCENT VOLTAGE DROP FROM 20.4V (MAX 21.6%)	VOLTAGE AT LAST DEVICE (MIN 16V)	DESCRIPTION
FACP	V1	8	0	0	0	7	0	1	0	0.340	1000	12	3.96	1.3	6.6%	19.1	VISUAL NAC
	V2	3	0	0	0	5	1	0	0	0.187	1000	12	3.96	0.7	3.6%	19.7	VISUAL NAC
										0.527							
NACP1	V3	1	0	0	0	0	3	1	4	0.537	1000	12	3.96	2.1	10.4%	18.3	VISUAL NAC
	V4	1	0	0	0	0	2	1	0	0.174	1000	12	3.96	0.7	3.4%	19.7	VISUAL NAC
	V5	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0.0	0.0%	20.4	VISUAL NAC (SPARE)
	V6	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.711							
NACP2	V7	2	0	0	0	1	0	6	0	0.474	1000	12	3.96	1.9	9.2%	18.5	VISUAL NAC
	V8	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0.0	0.0%	20.4	VISUAL NAC (SPARE)
	V9	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
	V10	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.474							
NACP3	V11	4	0	0	2	1	2	3	0	0.468	1000	12	3.96	1.9	9.1%	18.5	VISUAL NAC
	V12	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0.0	0.0%	20.4	VISUAL NAC (SPARE)
	V13	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
	V14	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.468							
NACP4	V15	2	0	0	2	1	0	8	0	0.696	1000	12	3.96	2.8	13.5%	17.6	VISUAL NAC
	V16	0	2	0	0	0	0	0	0	0.044	1000	12	3.96	0.2	0.9%	20.2	VISUAL NAC
	V17	1	0	0	0	0	0	2	0	0.158	1000	12	3.96	0.6	3.1%	19.8	VISUAL NAC
	V18	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.898							
NACP5	V19	2	0	0	2	1	0	8	0	0.696	1000	12	3.96	2.8	13.5%	17.6	VISUAL NAC
	V20	0	2	0	0	0	0	0	0	0.044	1000	12	3.96	0.2	0.9%	20.2	VISUAL NAC
	V21	1	0	0	0	0	0	2	0	0.158	1000	12	3.96	0.6	3.1%	19.8	VISUAL NAC
	V22	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.898							
NACP6	V23	2	0	0	2	1	0	8	0	0.696	1000	12	3.96	2.8	13.5%	17.6	VISUAL NAC
	V24	0	2	0	0	0	0	0	0	0.044	1000	12	3.96	0.2	0.9%	20.2	VISUAL NAC
	V25	1	0	0	0	0	0	2	0	0.158	1000	12	3.96	0.6	3.1%	19.8	VISUAL NAC
	V26	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.898							
NACP7	V27	2	0	0	2	1	0	8	0	0.696	1000	12	3.96	2.8	13.5%	17.6	VISUAL NAC
	V28	0	2	0	0	0	0	0	0	0.044	1000	12	3.96	0.2	0.9%	20.2	VISUAL NAC
	V29	1	0	0	0	0	0	2	0	0.158	1000	12	3.96	0.6	3.1%	19.8	VISUAL NAC
	V30	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.898							
NACP8	V31	2	0	0	2	1	0	8	0	0.696	1000	12	3.96	2.8	13.5%	17.6	VISUAL NAC
	V32	0	2	0	0	0	0	0	0	0.044	1000	12	3.96	0.2	0.9%	20.2	VISUAL NAC
	V33	1	0	0	0	0	0	2	0	0.158	1000	12	3.96	0.6	3.1%	19.8	VISUAL NAC
	V34	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.898							
NACP9	V35	3	0	0	1	5	0	1	1	0.335	1000	12	3.96	1.3	6.5%	19.1	VISUAL NAC
	V36	4	0	0	0	0	1	0	4	0.435	1000	12	3.96	1.7	8.4%	18.7	VISUAL NAC
	V37	2	1	1	1	3	0	1	0	0.293	1000	12	3.96	1.2	5.7%	19.2	VISUAL NAC
	V38	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										1.063							
NACP10	V39	3	0	0	1	1	4	2	0	0.425	1000	12	3.96	1.7	8.3%	18.7	VISUAL NAC
	V40	1	1	0	0	3	2	1	0	0.250	1000	12	3.96	1.0	4.9%	19.4	VISUAL NAC
	V41	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
	V42	0	0	0	0	0	0	0	0	0.000	0	12	0.00	0	0.0%	20.4	VISUAL NAC (SPARE)
										0.675							

VOLTAGE DROP AUDIBLE/VOICE NOTIFICATION APPLIANCE CIRCUIT SCHEDULE

PANEL	CIRCUIT	0.25 WATTS	0.5 WATTS	1 WATTS	2 WATTS	TOTAL CURRENT AT 70VDC (AMPS)	ONE-WAY CIRCUIT LENGTH (FEET)	WIRE GAUGE	CIRCUIT RESISTANCE (OHMS)	VOLTAGE DROP FROM 70.7V (MAX 15.2V)	PERCENT VOLTAGE DROP FROM 70.7V (MAX 21.6%)	VOLTAGE AT LAST DEVICE (MIN 56V)	DESCRIPTION
FACP	S1	0	1	7	2	0.564	1000	14	6.28	3.5	5.0%	67.2	AUDIBLE/VOICE NAC
	S2	0	3	0	0	0.074	1000	14	6.28	0.5	0.7%	70.2	AUDIBLE/VOICE NAC
						0.637							
AMP1	S3	0	1	7	2	0.564	1000	14	6.28	3.5	5.0%	67.2	AUDIBLE/VOICE NAC
	S4	0	3	0	0	0.074	1000	14	6.28	0.5	0.7%	70.2	AUDIBLE/VOICE NAC
	S5	0	0	0	0	0.000	0	14	0.00	0.0	0.0%	70.7	AUDIBLE/VOICE NAC (SPARE)
	S6	0	0	0	0	0.000	0	14	0.00	0.0	0.0%	70.7	AUDIBLE/VOICE NAC (SPARE)
						0.637							
AMP2	S7	0	1	6	2	0.515	1000	14	6.28	3.2	15.8%	17.2	AUDIBLE/VOICE NAC
	S8	0	0	0	0	0.000	1000	14	6.28	0.0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
	S9	0	0	0	0	0.000	0	14	0.00	0.0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
	S10	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						0.515							
AMP3	S11	0	1	5	2	0.466	1000	14	6.28	2.9	14.3%	17.5	AUDIBLE/VOICE NAC
	S12	0	0	2	3	0.392	1000	14	6.28	2.5	12.1%	17.9	AUDIBLE/VOICE NAC
	S13	0	0	0	1	0.098	1000	14	6.28	0.6	3.0%	19.8	AUDIBLE/VOICE NAC
	S14	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						0.956							
AMP4	S15	0	1	8	3	0.711	1000	14	6.28	4.5	21.9%	15.9	AUDIBLE/VOICE NAC
	S16	0	0	0	1	0.098	1000	14	6.28	0.6	3.0%	19.8	AUDIBLE/VOICE NAC
	S17	0	0	2	1	0.196	1000	14	6.28	1.2	6.0%	19.2	AUDIBLE/VOICE NAC
	S18	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						1.005							
AMP5	S19	0	0	7	2	0.539	1000	14	6.28	3.4	16.6%	17.0	AUDIBLE/VOICE NAC
	S20	0	0	2	1	0.196	1000	14	6.28	1.2	6.0%	19.2	AUDIBLE/VOICE NAC
	S21	0	1	0	1	0.123	1000	14	6.28	0.8	3.8%	19.6	AUDIBLE/VOICE NAC
	S22	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						0.858							
AMP6	S23	0	1	6	2	0.515	1000	14	6.28	3.2	4.6%	67.5	AUDIBLE/VOICE NAC
	S24	0	1	0	0	0.025	1000	14	6.28	0.2	0.2%	70.5	AUDIBLE/VOICE NAC
	S25	0	0	0	0	0.000	1000	14	6.28	0.0	0.0%	70.7	AUDIBLE/VOICE NAC
	S26	0	0	0	0	0.000	0	14	0.00	0.0	0.0%	70.7	AUDIBLE/VOICE NAC (SPARE)
						0.539							
AMP7	S27	0	0	6	3	0.588	1000	14	6.28	3.7	18.1%	16.7	AUDIBLE/VOICE NAC
	S28	0	0	1	1	0.147	1000	14	6.28	0.9	4.5%	19.5	AUDIBLE/VOICE NAC
	S29	0	0	2	1	0.196	1000	14	6.28	1.2	6.0%	19.2	AUDIBLE/VOICE NAC
	S30	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						0.931							
AMP8	S31	0	1	5	2	0.466	1000	14	6.28	2.9	14.3%	17.5	AUDIBLE/VOICE NAC
	S32	0	0	0	1	0.098	1000	14	6.28	0.6	3.0%	19.8	AUDIBLE/VOICE NAC
	S33	0	0	2	1	0.196	1000	14	6.28	1.2	6.0%	19.2	AUDIBLE/VOICE NAC
	S34	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						0.760							
AMP9	S35	0	5	1	1	0.270	1000	14	6.28	1.7	8.3%	18.7	AUDIBLE/VOICE NAC
	S36	0	1	0	6	0.613	1000	14	6.28	3.8	18.9%	16.6	AUDIBLE/VOICE NAC
	S37	0	0	1	0	0.049	1000	14	6.28	0.3	1.5%	20.1	AUDIBLE/VOICE NAC
	S38	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						0.931							
AMP10	S39	0	1	6	1	0.417	1000	14	6.28	2.6	12.8%	17.8	AUDIBLE/VOICE NAC
	S40	0	3	3	3	0.515	1000	14	6.28	3.2	15.8%	17.2	AUDIBLE/VOICE NAC
	S41	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
	S42	0	0	0	0	0.000	0	14	0.00	0	0.0%	20.4	AUDIBLE/VOICE NAC (SPARE)
						0.931							

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW

1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
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REGISTERED PROFESSIONAL ENGINEER
JOHN SALEEBY
E18805
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA
6697

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SWEETWATER UNION HIGH SCHOOL DISTRICT

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RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

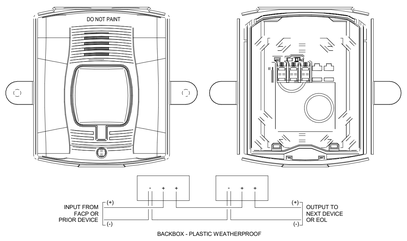
SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

FIRE ALARM CALCULATIONS

F0-402

Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/24203.10_RDRMS_BSR_CAP_Local.rvt
Last Saved: 2026-02-17 by Author



7 WALL MTD. SPEAKER/STROBE WIRING
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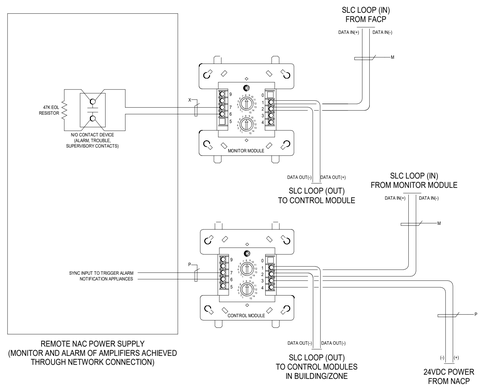

4 REMOTE PANEL MODULES AND WIRING
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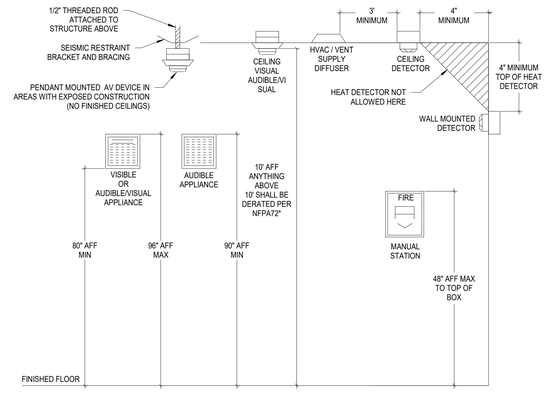

1 FIRE ALARM DEVICE MOUNTING ELEVATION
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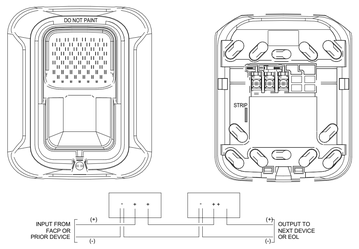

8 WALL MTD. STROBE WIRING
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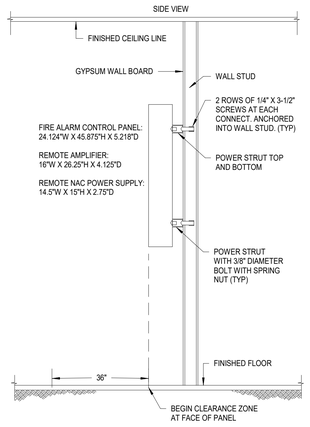

5 FIRE ALARM PANEL MOUNTING
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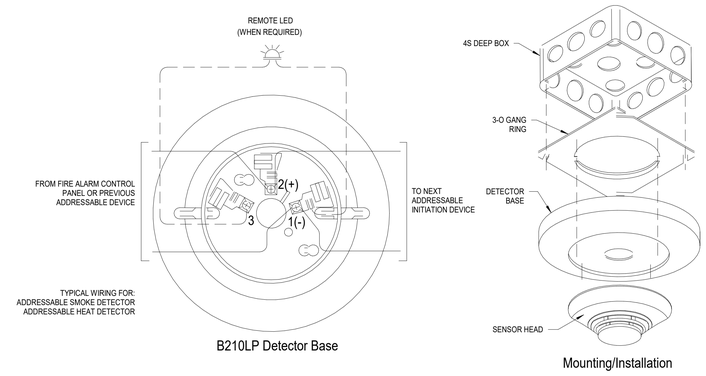

2 SMOKE & HEAT DETECTOR BASE
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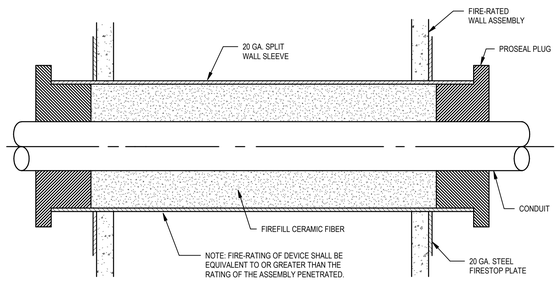

9 CONDUIT THROUGH FIRE RATED WALL DETAIL
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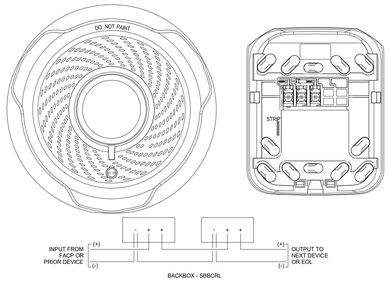
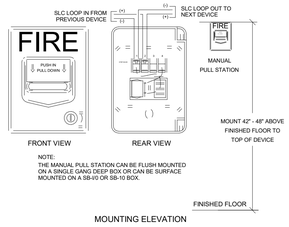


6 CLG. MTD. STROBE & SPEAKER/STROBE WIRING
NO SCALE



3 DUAL ACTION MANUAL PULL STATION
NO SCALE

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DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
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REGISTERED PROFESSIONAL ENGINEER — JAMES W. SALERNO — E18805 — EXP. 6/30/2027 — ELECTRICAL — STATE OF CALIFORNIA — 6697

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BUILDING & SITE REHABILITATION

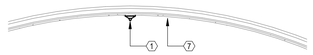
SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

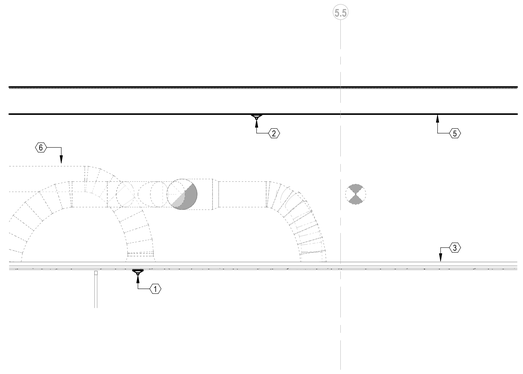
FIRE ALARM DETAILS

F0-500

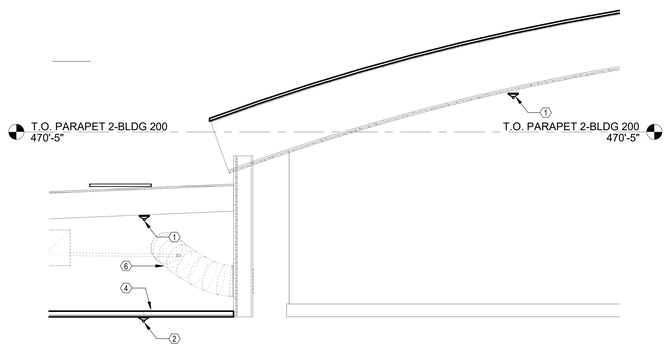
Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/24203.10_RDR_Building & Site Rehabilitation_Local.rvt 9/5/2025 10:14:56 PM



4 BLDG. 100 - RECEPTION 101 - FIRE ALARM BARREL CEILING SECTION
1/2" = 1'-0"

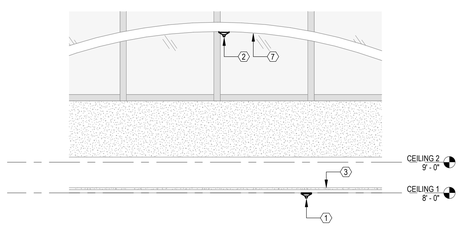


1 TYP. GYP. CEILING FIRE ALARM SECTION
1/2" = 1'-0"



5 TYP. CLASSROOM FIRE ALARM ACT & BARREL CEILING SECTION
1/2" = 1'-0"

2 TYP. ACT. GRID CEILING FIRE ALARM SECTION
1/2" = 1'-0"



3 BLDG. 100 - LOBBY 100 - FIRE ALARM BARREL CEILING SECTION
1/2" = 1'-0"

KEY NOTES

1	SMOKE DETECTOR SURFACE MOUNTED TO CEILNG.
2	HEAT DETECTOR MOUNTED TO ROOF DECK ABOVE ACCESSIBLE CEILING SPAC E
3	SUSPENDED GYPSUM CEILING.
4	SUSPENDED ACT CEILING.
5	ROOF DECK.
6	MECHANICAL DUCTWORK.
7	BARREL CEILING.

GENERAL NOTES

KEY PLAN

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ARCHITECTS
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REGISTERED PROFESSIONAL ENGINEER
STRUCTURAL
E18805
EXP. 6/30/2027
ELECTRICAL
STATE OF CALIFORNIA
6697

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RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

FIRE ALARM CEILING SECTIONS

F0-501

Architects Mosher Drew and Mac Mh - Building & Site Rehabilitation - Rancho Del Rey Middle School - 1174 E. J Street - Chula Vista, CA - 24203.10

2 1

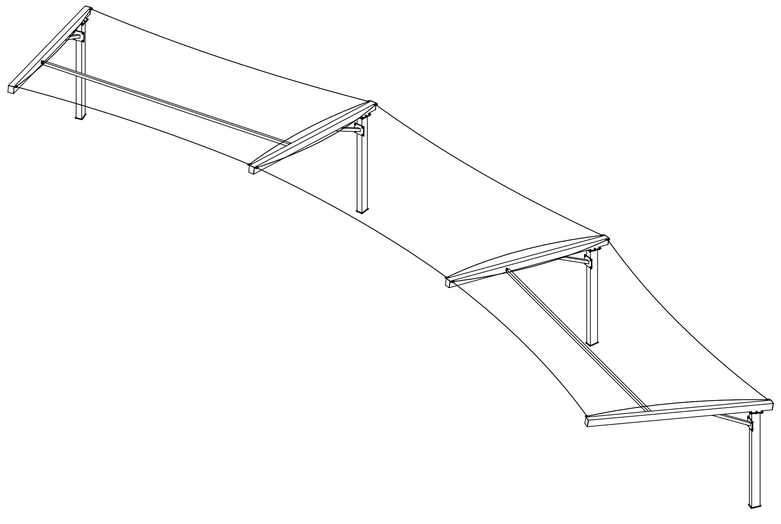
B

A

LIST OF MATERIALS

ITEM NO.	DESCRIPTION	QTY	MATERIAL / SHAPE
1	COLUMN	4	HSS - 12 X 8 X 3/8
2	RAFTER	4	HSS - 10 X 8 X 1/4
3	RAFTER SUPPORT BEAM	4	HSS - 4 X 4 X 0.25
4	PURLIN	2	HSS - 4 X 4 X 0.25
5	COLUMN CONNECTION PLATE	8	STEEL PLATE - 3/4"
6	RAFTER SUPPORT CONNEX. PLATE	8	STEEL PLATE - 5/8"
7	FABRIC TAB	12	STEEL PLATE - 3/8"
8	PURLIN END PLATE	4	STEEL PLATE - 3/8"
9	PURLIN SHEAR PLATE	8	STEEL PLATE - 3/8"
10	RAFTER CAP	8	STEEL PLATE - 1/4"
11	END PLATE	4	STEEL PLATE - 3/8"
12	HDPE FABRIC	3	HDPE MESH (SEE NOTES)
13	3/8" - 7X19 WIRE ROPE	3	GALV. (SEE NOTES)
14	3/8" - CABLE CLAMP	12	GALV.
15	DEE RING THIMBLE	12	SS 3/8" SOLOMESH DEE RING THIMBLE - PART NO. 207032
16	D-SHACKLE	12	GALV.
17	1" HEX BOLT SET	40	A325N GALV.
18	5/8" HEX BOLT SET	8	A325N GALV.

SHEET INDEX	
SS1-1	COVER SHEET
SS1-2	GENERAL NOTES
SS1-3	SPECIFICATIONS
SS1-4	SUPPLIER SPECIFICATIONS
SS1-5	FABRIC SPECIFICATIONS
SS1-6	PLAN AND ELEVATIONS
SS1-7	FRAMING & FABRIC CONNECTION DETAILS
SS1-8	FOUNDATION PLAN AND DETAILS



SEAL

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DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ENGINEER & MANUFACTURER

CUSTOM CANOPIES INC.

11815 BURKE ST,
SANTE FE SPRINGS, CA 90670

PROJECT / LOCATION

RANCHO DEL REY MS

1174 E. J ST.
CHULA VISTA, CA 91910

DRAWING NO.

D1494

MODEL

CST-ARC-35X20X10

DRAWN BY:	IB	DATE:	09/05/2025
CHECKED BY:	HD	DATE:	09/05/2025
SHEET FORMAT:	ARCH. D	REVISION:	A.1
SCALE:	1:100		

REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

COVER SHEET

SS1-1

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE 2022 C.B.C. AND THE A.C.I. 318-19 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
2. SLAB AND FOUNDATION CONCRETE SHALL BE 150 P.C.F. HARDROCK, MIXED PER A.S.T.M. C-94, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 P.S.I. AT 28 DAY. MAX. SLUMP TO BE 4" ± 1" OF W/C RATIO < .45
3. THE MAXIMUM SIZE AGGREGATE IN FOUNDATION AND MASS CONCRETE WORK SHALL BE 1 INCH.
4. CEMENT SHALL CONFORM TO A.S.T.M.. C-150 TYPE II, FOR NORMAL WEIGHT SHALL CONFORM TO A.S.T.M. C-33.
5. ADMIXTURES AND COLORS (EXCEPT AS NOTED HEREIN) SHALL NOT BE USED UNLESS SUBSTANTIATING DATE IS SUBMITTED TO AND ACCEPTED BY THE ENGINEER AND ARCHITECT OF RECORD AND DSA.
6. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY. THE MIX DESIGNS SHALL CONFORM TO ACI 318-19 SECTION 26.4.3. UNLESS NOTED OTHERWISE.
7. NON-STRUCTURAL STEEL EMBEDDED IN CONCRETE SHALL BE GALVANIZED OR PAINTED. ALL DAMAGED GALVANIZED AREAS SHALL BE REPAIRED PRIOR TO EMBEDMENT.
8. READY MIXED CONCRETE SHALL CONFORM TO (A.S.T.M. C-94).
9. PLACEMENT OF CONCRETE SHALL CONFORM THE 2022 C.B.C. AND THE TO A.C.I. 304. CLEAN AND ROUGHEN A FULL AMPLITUDE OF 1/4" BY REMOVING THE ENTIRE SURFACE AND EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX AGAINST ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE POURED.
10. ALL EXPOSED CONCRETE SHALL HAVE A SMOOTH FORM FINISH USING B-B PLYFORM, CLASS I, EXT-A.P.A. PLYWOOD.
11. ALL SLABS SHALL HAVE A TROWELED FINISH EXCEPT AS NOTED ON THE DRAWINGS.
12. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
13. IF THE CONTRACTOR DESIRES TO MAKE ANY CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THESE DRAWINGS, HE SHALL SUBMIT DETAILS OF CHANGES TO THE ENGINEER OF RECORD FOR REVIEW BEFORE STARTING WORK AND THE ENGINEER OF RECORD TO OBTAIN DSA APPROVAL PRIOR TO STARTING WORK.
14. NO BRICK OR POROUS MATERIAL SHALL BE USED TO SUPPORT FOUNDATION STEEL OF THE GROUND.
15. PROVIDE 1/2 INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS, U.N.O.
16. MINIMUM CONCRETE COVERAGES
    - FOOTINGS CAST AGAINST EARTH 3"
    - FORMED CONCRETE EXPOSED TO EARTH OR WEATHER 2"
17. CONCRETE CURING:
    - SLAB AND FDN; TYPICALLY REQUIRED FOR 10 DAYS TO ACHIEVE A MINIMUM OF 3000 PSI STRENGTH PRIOR TO INSTALLATION OF OTHER MAJOR STRUCTURAL COMPONENTS.

FOUNDATION:

1. THIS STRUCTURE IS DESIGNED TO THE C.B.C. MINIMUM. WHERE SOIL REPORT IS AVAILABLE; ATTACH ONE COPY OF SOILS REPORT TO THE APPROVED SET OF CONSTRUCTION DOCUMENTS. SOILS REPORT SHALL BE PART OF THESE NOTES. PRIOR TO THE POURING OF CONCRETE AND PRIOR TO THE CONTRACTOR REQUESTING A DSA FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE THE FOOTING EXCAVATIONS. HE SHALL POST NOTICE ON THE JOB SITE AND ADVISE THE DSA INSPECTOR IN WRITING THAT THE WORK SO INSPECTED MEETS THE CONDITIONS OF THE REPORT. A WRITTEN CERIFICATION TO VERIFY THAT:
    - THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOIL REPORT.
    - THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED, AND
    - THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS REPORT.
2. TYPE OF FOOTING:
    - DESIGN SOIL PRESSURE:

FOOTING TYPE	STATIC BEARING PRESSURE
DEEP FOOTING	1,500 psf
LATERAL BEARING	100 pcf*

*MAY BE DOUBLED PER SECTION 1806A.3.4

3. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
4. THE CONTRACTOR SHALL DETERMINE LOCATION OF UTILITY SERVICES IN AREAS TO BE EXCAVATED BEFORE BEGINNING EXCAVATION. EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING. DAMAGE CAUSED AS A RESULT OF FAILING TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN, APPROVALS, PERMITS, INSTALLATION AND MONITORING OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN TEMPORARY EXCAVATIONS.
6. ALL PLANTERS IN CLOSE PROXIMITY TO THE STRUCTURE SHALL HAVE ADEQUATE DRAINAGE OF SURFACE WATER TO PREVENT SATURATION OF SOIL UNDER FOUNDATION
7. 2022 CBC SEISMIC SITE CLASS D-DEFAULT

GENERAL NOTES:

1. THE PROJECT SPECIFICATIONS SHALL BE PART OF THE CONTRACT DOCUMENTS
2. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
3. THE CONCTRACTOR SHALL REVIEW EXISTING CONDITIONS ON THE SITE DURING THE BIDDING. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK. THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANICES OR INCONSISTENCIES PRIOR TO PROCEEDING.
4. ALL PHASES OF WORK ARE TO CONFORM TO THE MINIMUM STANDARDS OF THE CBC 2022, RELATED CALIFORNIA BUILDING CODE STANDARDS, AND ANY ASTM SPECIFICATIONS ON WHICH THESE STANDARDS ARE BASED. WHERE CONFLICT BETWEEN BUILDING CODES AND SPECIFICATIONS OCCURS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
5. ALL ASTM DESIGNATIONS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST ADOPTED OR REVISED SPECIFICATION, AS OF THE DATE OF THESE DRAWINGS.
6. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS. DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
7. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
8. THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL REQUIREMENTS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS THAT OCCUR PER SPECIFIC PLANS FOR NON-STRUCTURAL ITEMS, SUCH AS:
    - SIZE AND LOCATION OF ALL OPENINGS
    - SIZE AND LOCATION OF ALL NON-BEARING WALLS
    - SIZE AND LOCATION OF ALL CONCRETE CURBS, WALKS, ROOF AND FLOOR DRAINS, SLOPES, DEPRESSED SLAB AREAS, ETC.
    - FLOOR, ROOF, AND WALL FINISHES
    - DEIMESNIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
9. THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE NOTED. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
10. NEITHER THE OWNER NOR THE ARCHITECT/STRUCTURAL ENGINER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONCTRACTOR SHALL AT HIS OWN EXPENSE, DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES. INCLUDING SHORING AND BRACING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARD, LAWS AND REGULATIONS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE SAFETY ITEMS.
11. SATISFACTORY EXECUTION OF CONSTRUCTION IS DEPENDANT UPON CONFORMANCE WITH THE INTENT OF THESE DRAWINGS. OWNER OR CONTRACTOR SHALL RETAIN A CALIFORNIA LICENSED STRUCTURAL ENGINEER DURING CONSTRUCTION TO OBSEREVE THE CONSTRUCTION AND FILE A REPORT (DSA 6AE) STATING "THE CONSTRUCTION HAS, IN EVERY MATERIAL RESPECT, BEEN PERFORMED IN COMPLIANCE WITH THE DSA APPROVED DOCUMENTS.
12. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACES ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD FOR EACH PARTICULAR LEVEL. WHEN WEIGHT OF MATERIALS OR EQUIPMENT MAY EXCEED DESIGN LOAD, STRUCTURED SYSTEMS SHALL BE SHORED.
13. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK. THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK
14. CBC 2022 AND AISC MANUAL OF STANDARD PRACTICE TO BE USED FOR FABRICATION/ERECTION TOLERANCES.

DESIGN BASIS:

1. CODE: 2022 CBC (CALIFORNIA BUILDING CODE CCR, TITLE 24, PART 2)
2. GRAVITY LOADS:
    - ROOF LIVE LOAD = 5 PSF. (REDUCIBLE)
    - ROOF DEAD LOAD = 1.5 PSF. (MAX)
    - SNOW LOAD PG = 0.0 PSF.
3. LATERAL LOADS:
    - SITE CLASS D - (DEFAULT WHERE NO GEOTECHNICAL REPORT REQUIRED) NOTE: DESIGN VALUES MAY ALSO BE USED WHERE SITE CLASS C IS JUSTIFIED BY LOCATION SPECIFIC GEOTECHNICAL REPORT
    - RISK CATEGORY = II
    - REDUNDANCY (Rho) = 1.30
    - Ss = 0.818
    - S1 = 0.292
    - Sms = 0.981
    - Sds = 0.654
    - SEISMIC DESIGN CATEGORY = D (ASCE 7-16 TABLE 11.6.1 AND TABLE 11.6.2)
    - Ie = 1.00
    - ORDINARY CANTILEVER COLUMN SYSTEM - R = 1.25
    - Cs = Sds/(R/Ie)*Rho (LRFD) = 0.680 ULTIMATE, TOTAL SEISMIC BASE SHEAR = 5.40K
    - ANALYSIS METHOD = EQUIVALENT LATERAL FORCE ANALYSIS
4. WIND DESIGN
    - ANALYSIS METHOD = DIRECTIONAL PROCEDURE (OPEN STRUCTURE)
    - V = 96 MPH, BASIC WIND SPEED, ASCE 7-16
    - EXPOSURE "C"
    - Kzt = 1.0
    - RISK CATEGORY = II
5. STRUCTURE IS DESIGNED FOR CLEAR WIND FLOW
6. FLOOD HAZARD: DESIGN DOES NOT ACCOUNT FOR FLOOD HAZARD
7. SITE SPECIFIC GEOTECHNICAL STUDY IS NOT REQUIRED
8. THIS DESIGN IS NOT DESIGNED TO INCLUDE WEIGHT OF SPRINKLERS.

SEAL

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DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ENGINEER & MANUFACTURER

CUSTOM CANOPIES INC.

11815 BURKE ST,
SANTE FE SPRINGS, CA 90670

PROJECT / LOCATION

RANCHO DEL REY MS

1174 E. J ST.
CHULA VISTA, CA 91910

DRAWING NO.

D1494

MODEL

CST-ARC-35X20X10

DRAWN BY:	IB	DATE:	09/05/2025
CHECKED BY:	HD	DATE:	09/05/2025
SHEET FORMAT:	ARCH. D	REVISION:	A.1
SCALE:	1:46		

REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

GENERAL NOTES

SS1-2

STRUCTURAL OBSERVATION:

1. PER C.B.C. CHAPTER 17A, 1704A.6 THE OWNER SHALL EMPLOY A LICENSED ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, OR HIS DESIGNATED ENGINEER OR ARCHITECT TO MAKE SITE VISITS TO OBSERVE. GENERAL COMPLIANCE WITH THE APPROVED STRUCTURAL PLANS, SPECIFICATIONS AND CONSTRUCTION CHANGE DOCUMENT (CCD). THE ENGINEER OR ARCHITECT SHALL SUBMIT A STATEMENT IN WRITING TO THE DSA PROJECT INSPECTOR STATING THAT THE SITE VISIT HAS BEEN MADE AND THAT ANY DEFICIENCIES NOTED HAVE BEEN CORRECTED.
2. IN ACCORDANCE WITH SECT. 4-333 (a) OF TITLE 24, PART 1, STRUCTURAL OBSERVATION SHALL INCLUDE AND OCCUR AT THE FOLLOWING STAGES:
   - OBSERVATION AT THE SITE PRIOR TO PLACING CONCRETE.
   - OBSERVATION OF THE SHADE STRUCTURE DURING FABRICATION AFTER MAJORITY OF STRUCTURAL ITEMS ARE IN PLACE.
   - OBSERVATION OF THE COMPLETED STRUCTURE PRIOR TO BEING COVERED FINISHES.
3. AT COMPETITION OF IN-PLANT MANUFACTURING THE INDIVIDUAL ACCEPTING RESPONSIBILITY FOR OBSERVATION OF IN-PLANT MANUFACTURING SHALL SIGN THE VERIFIED REPORT, DSA 152-IPI (IN-PLANT INSPECTOR VERIFIED REPORT).
4. OBSERVATION OF THE ON SITE CONSTRUCTION INCLUDES THE SCOPE OF WORK INDICATED ON THE DSA APPROVED BUILDING PLANS AND SPECS.
5. INTERIM AND FINAL VERIFIED REPORTS ARE REQUIRED DURING, AND AT THE COMPLETION OF, ON SITE CONSTRUCTION AND INSTALLATION USING FORM DSA 6-AE (ARCHITECT/ENGINEER VERIFIED REPORT).
6. STRUCTURAL TESTING & SPECIAL INSPECTIONS: REFER TO DSA-103 FORM FOR ALL STRUCTURAL TESTING & SPECIAL INSPECTION REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, AND DSA-103 FORM, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

STEEL CABLES:

1. ALL CABLE STEEL TO BE ASTM A1023, 7X19 CLASS IWRC
2. CABLES SHALL BE GALVANIZED (CLASS A ZINC COATING) OR STAINLESS STEEL, CLASS BRIGHT WIRE ROPE.
3. MAXIMUM CABLE STRENGTH:
   - 3/8" 7X19 GALV. = 14,400 LBS, SERVICE PER MFG. 4909 LBS MAX. ALLOWABLE PER CODE.
4. MAX. PRETENSION LOAD:
   - 3/8" DIA. = 75 LBS TO 100 LBS PRETENSION
5. FOR CABLE (ROPE CLIPS) SEE SS1-3

WELDING:

1. QUALIFIED AND CERTIFIED WELDERS SHALL BE USED FOR ALL WELDING.
2. ALL WELDING SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE AWS D1.1 AND CFC
3. ALL WELDING SHALL BE DONE BY THE SHIELDED ARC PROCESS USING APPROVED ELECTRODES PER AWS SPECIFICATIONS E70XX (LOW HYDROGEN ELECTRODES).
4. ALL WELDS SHALL HAVE A WELD CONTROLLED SEQUENCE AND TECHNIQUE IN ORDER TO MINIMIZE SHRINKAGE, STRESSES, AND DISTORTION.
5. ALL ELECTRODES FILLER MATERIAL SHALL BE A MIN. OF E70XX
6. SPECIAL INSPECTION IS REQUIRED FOR ALL WELDING.
7. ALL SHOP AND FIELD WELDING OF MOMENT CONNECTIONS OR MOMENT RESISTING FRAMES, AND ALL COLUMN SPLICE WELDS, SHALL BE TESTED AS PER CBC:
   - ALL WELDS WITHIN MEMBERS DESIGNATED AS PER OF THE LATERAL FORCES RESITING SYSTEM (LFRS) SHALL CONFORM TO THE DETAILING, MATERIALS, WORKMANSHIP, TESTING AND INSPECTION REQUIRMENTS PERS AWS D1.8 AND AISC 341-16, AND SHALL USE A FILLER METAL WITH A CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LB AT 0 ℉.
   - WHERE WELDS ARE DESIGNATED AS DEMAND CRITICAL, THEY SHALL BE WITH FILLER METAL CAPABLE OF PROVIDING A MIN. CVN TOUGHNESS OF 20 FT-IB AT 20 ℉ AND 40 FT-IB AT 70 F. SEE AWS D1.8 SECTION 6.3.8.
   - WELDERS PERFORMING WELDING WITHIN THE LFRS SHALL BE QUALIFIED IN ACCORDANCE WITH AWS D1.8 CHAPTER 5

STEEL:

1. MATERIALS:
   - MISCELLANEOUS PLATES SHALL CONFORM TO - ASTM A-36
   - HIGH STRENGTH STEEL CONNECTION BOLTS SHALL CONFORM TO - ASTM A325-N, ALL FASTENERS SHALL BE HOT DIP GALVANIZED PER ASTM A153 CLASS D MINIMUM
   - HSS STEEL TUBING (SQ. RECT. & ROUND) SHALL CONFORM TO - ASTM A-500, GRADE B (HSS ROUND, FY = 42 KSI) HSS SQ. & RECT., FY = 46 KSI)
   - WELDING ELECTRODES SHALL CONFORM TO - AWS STRUCTURAL STEEL E70XX
   - GALVANIZING SHALL CONFORM TO - ASTM A-123
   - RUST-INHIBITING PRIMER SHALL BE SHERWIN WILLIAMS CC-M10 OR EQUAL.
2. STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123, UNDERCOAT AND FINISH COAT OR EQUIVALENT PAINT SYSTEM.
3. BURNING OF HOLES IS NOT ALLOWED.
4. INSPECTION OF WELDING SHALL CONFORM TO CBC REQUIREMENTS (CHAPTER 17A)
5. THE STRUCTURAL STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
6. ALL BOLTED CONNECTIONS USING A325 BOLTS SHALL USE STANDARD HOLES PER AISC, UNLESS OTHERWISE NOTED.
7. STRUCTURAL STEEL SHALL BE DELIVERED TO THE JOB SITE FREE OF EXCESSIVE RUST, MILL SCALE, GREASE, ETC.
8. OPENINGS SHALL NOT BE PLACES IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED.

QUALITY CONTROL

THE FOLLOWING FORM SHALL BE COMPLETED BY CUSTOM CANOPIES PRIOR TO START OF CONSTRUCTION.

Custom Canopies Int. - Quality Control Check Sheet

Project Information

- **Project Name:** _____
- **Order Number:** _____
- **Customer Name:** _____
- **Date of Inspection:** _____
- **Inspector Name:** _____
- **Job Reference/PO:** _____

---

1. Raw Materials Inspection

Item	Supplier	Material Spec	Inspection Criteria	Pass/Fail
Steel Frames	_____	_____	Correct gauge, no rust or bends	_____
	_____	_____	Straightness of beams	_____
	_____	_____	Consistency in frame dimensions	_____
	_____	_____	No surface deformities (dents, scratches)	_____
	_____	_____	Weldable steel properties tested	_____
	_____	_____	No visible signs of corrosion	_____
	_____	_____	Frame edges free of sharp or hazardous areas	_____

Notes:

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2. Fabrication Process

Fabrication Stage	Inspection Criteria	Pass/Fail
Frame Cutting	Accurate cuts, clean edges	_____
Frame Welding	Welds free of cracks or voids	_____

Notes:

---

3. Final Product Inspection

Item	Inspection Criteria	Pass/Fail
Overall Dimensions	Correct to order specifications	_____
Visual Defects	No visible defects on frame	_____

Notes:

Inspector's Comments/Sign Off

- **Inspector Name:** _____
- **Inspector Signature:** _____
- **Date:** _____

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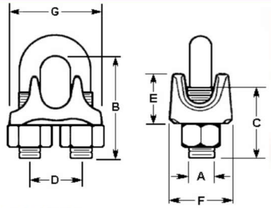
REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

SPECIFICATIONS

SS1-3

kulkoni MALLEABLE WIRE ROPE CLIPS



ZINC PLATED, MALLEABLE

Size in Inches	Min. Clips Required	Wire Rope Turn Back in Inches	Torque in Foot Pounds*	Approx. Wt. in Pounds	Dimensions in Inches						
					A	B	C	D	E	F	G
3/8	3	9.1/2	30.0	0.210	0.38	1.63	1.00	0.88	0.84	0.88	1.63

Meets the performance requirements of Federal Specification FF-C-450, current revision, Type 1, Class 2.**

* Based on clean, unlubricated threads. The table above shows the minimum torque required to reach maximum holding power of wire rope clips.

** NOTE: 1/16" and 1/8" are not covered by Federal Specification FF-C-450, current revision.

Improper use and installation of cast malleable wire rope clips can result in serious injury or death.

NEVER use cast malleable wire rope clips for lifting or suspending ANY load.

Cast malleable wire rope clips are to be used only for non-critical, light duty applications with small applied loads.

For complete installation instructions refer to page 48.

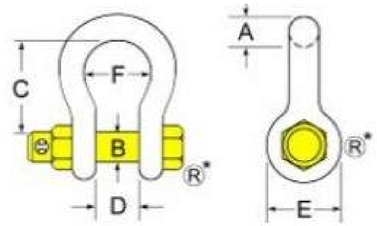
7 x 19

7 x 19 GALVANIZED CABLE

Size in Inches	Approx. Wt. per 1000 Ft. in Pounds	Breaking Strength in Pounds*
3/8	243.0	14,400

Small diameter 7 x 7 and 7 x 19 construction cable is sometimes referred to as "aircraft cable". ***It is not intended for aircraft use*** but designed for industrial and marine applications according to Federal Specification RR-W-410, current revision and A.S.T.M. A 1023/A 1023M, as applicable.

* Listed for comparison only. Actual operating loads should never exceed the recommended design factor or 20% of catalog Breaking Strength.



* U.S. Registered Trademark No. 2,011,393

GALVANIZED BOLT TYPE ANCHOR SHACKLES

Size in Inches (A)	Working Load Limit in Tons	Bolt Ø in Inches (B)	Length Inside in Inches (C)	Width Between Eyes in Inches (D)		Dimensions in Inches		Appx. Weight Each in Pounds
				Nominal	Tolerance	E	F	
5/8	3.1/4	3/4	2.3/8	1.1/16	± 1/16	1.7/8	1.1/2	1.6

* The YELLOW shackle bolt is the Federally Registered Trademark of Kulkoni, Inc.

** Minimum Width Between Eyes as defined by Federal Specification RR-C-271, current revision.

Meets the performance requirements of Federal Specification RR-C-271, current revision, Type IV A, Class 3, Grade A. Hot galvanized, forged carbon steel, heat treated, with alloy bolts, permanently marked with size and Working Load Limit. Sizes 1/2" through 3" are also available in DOMESTIC.

SOLAMESH®

HARDWARE MEASUREMENTS

DEE RING THIMBLE

			HEIGHT		WIDTH		INSIDE THIMBLE DIAMETER	OUTSIDE DIAMETER		GROVE DIAMETER
			MM	INCHES	MM	INCHES	INCHES	MM	INCHES	INCHES
	207032	SOLAMESH DEE RING THIMBLE STAINLESS STEEL TYPE 316 10MM X 65MM (3/8" X 2-9/16")	78MM	2.99"	87MM	3.43"	1.88"	65MM	2.56"	0.38"

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CUSTOM CANOPIES INC

SUPPLIER SPECIFICATIONS

SS1-4

B

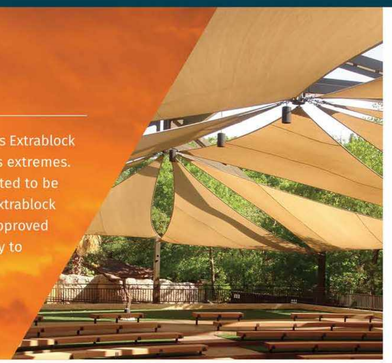
A

B

A

ALNET

EXTRABLOCK



EXTRABLOCK

Designed for strength and durability, Alnet's Extrablock shadecloth protects against all of nature's extremes. It meets the highest standards and is knitted to be dimensionally stable for easy fabrication. Extrablock also comes in 16 California Fire Marshall approved colors and is backed by a 10-year warranty to demonstrate our dedication to quality, durability and safety.

CERTIFICATIONS

NFPA 701 · ASTM E84 TESTING · UP TO 98% UVR PROTECTION · 100% RECYCLABLE · SABS APPROVED · verified BEE rating

10 Year Warranty

ALNET is the leading innovator in synthetic textile and netting material production for the world's ***architectural, agricultural, aquacultural*** and ***industrial industries.***

For more information, please contact **protect@AlnetAmericas.com** or visit us at **www.AlnetAmericas.com**

Properties	Mass	Thickness	Fabric Width	Tensile		Elongation at Break		Tearing Strength Tongue Tear		Burst Strength	Burst Strength	Temp. Stability
Test Method	ASTM 3776	ASTM 1777	ASTM 3774	ASTM D 5034		ASTM D 4595-87		ASTM D 2261		ASTM 3787 Ball	ASTM 3786 Mullen	
				Warp	Weft	Warp	Weft	Warp	Weft			
US	9.6 oz/yd	50.4 mil	118 in.	278 lbf	340 lbf	71%	74%	33 lbs	36 lbs	363 lb	460 psi	-13°F +176°F
Metric	325 gsm	1.28mm	3 m	1236 N	1512 N	71%	74%	147 N	160 N	1615 N	3172 kPa	-25°C +80°C

Colors	UPF	UVR	Shade Factor	Fire Retardancy	Flame Resistance
Cream	13	92%	74%	Yes	**ASTM E-84**
Beige	33	97%	87%	Yes	**ASTM E-84**
Yellow	16	94%	76%	Yes	**ASTM E-84**
Red	29	97%	86%	Yes	**ASTM E-84**
True Blue	14	93%	89%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Forest Green	24	96%	94%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Silver	19	95%	93%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Sunblaze	14	94%	91%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Latte	18	95%	90%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Bottle Green	16	94%	91%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Charcoal	20	96%	94%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Midnight	33	98%	98%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Mint Green	18	95%	93%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Dove Blue	13	93%	90%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Oxide Red	14	93%	91%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Pearl Onyx	16	94%	86%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Purple	16	94%	86%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Olive	26	97%	96%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Brown	19	95%	93%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Navy Blue	23	96%	96%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Lime	18	95%	79%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**

CAL FIRE SINCE 1885

FLAME RETARDANT

Fabric Registration

LICENSE NUMBER: F-094501

EXTRA BLOCK SHADECLOTH

Product Marketed by:

ALNET PTY (LTD)
MOORSOM AVENUE, EPPING, INDUSTRY II
CAPE TOWN, S. AFRICA, ,

Issue Date : 04/03/2025
Expiration Date : 06/30/2026

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code. The scope of the approved use of this product is provided in the current edition of the CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS published by the California State Fire Marshal.

CWalker

Issued By Cortney Walker
Fire Engineering License Manager
Fire Engineering & Investigations Division

Reviewed and Approved By Patricia Setter
Program Coordinator
Fire Engineering & Investigations Division

OFFICE OF THE STATE FIRE MARSHAL

Please visit uatcalfire.govmotus.org for more information on Licensing and Permitting with CAL FIRE

SEAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ENGINEER & MANUFACTURER

CUSTOM CANOPIES INC.

11815 BURKE ST,
SANTE FE SPRINGS, CA 90670

PROJECT / LOCATION

RANCHO DEL REY MS

1174 E. J ST.
CHULA VISTA, CA 91910

DRAWING NO.

D1494

MODEL

CST-ARC-35X20X10

DRAWN BY:	IB	DATE:	09/05/2025
CHECKED BY:	HD	DATE:	09/05/2025
SHEET FORMAT:	ARCH. D	REVISION:	A.1
SCALE:	1:46		

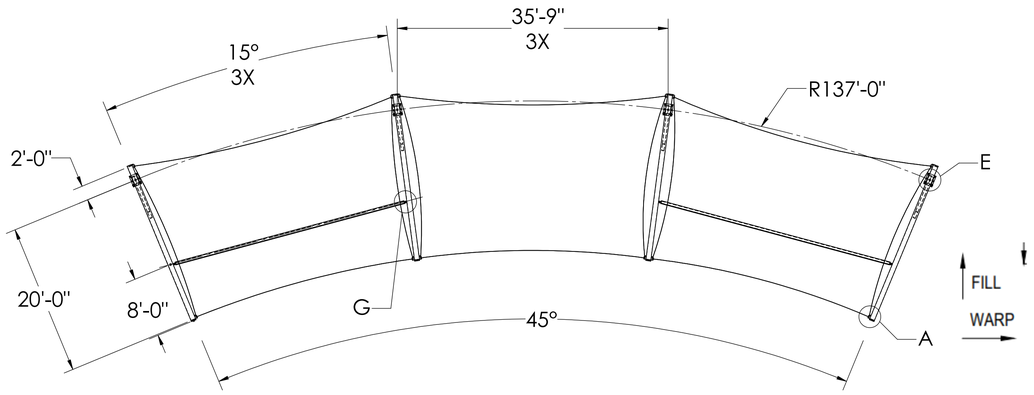
REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

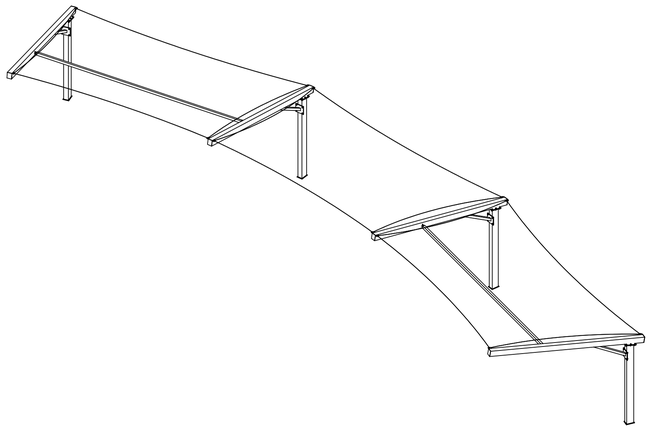
FABRIC SPECIFICATIONS

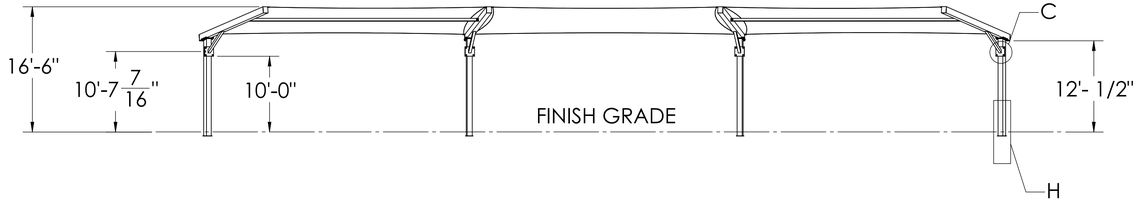
SS1-5

NOTES
1 - ELEVATED FRAMING DETAILED KEYED THIS SHEET ARE SHOWN ON SHEET 7 OF 8
2 - FOUNDATION DETAIL AND BASE PLATE SHOWN ON SHEET 8 OF 8

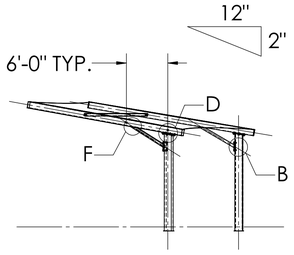


TOP - PLAN VIEW





FRONT - ELEVATION VIEW



SIDE - ELEVATION VIEW

SEAL

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SCALE:	1:120		

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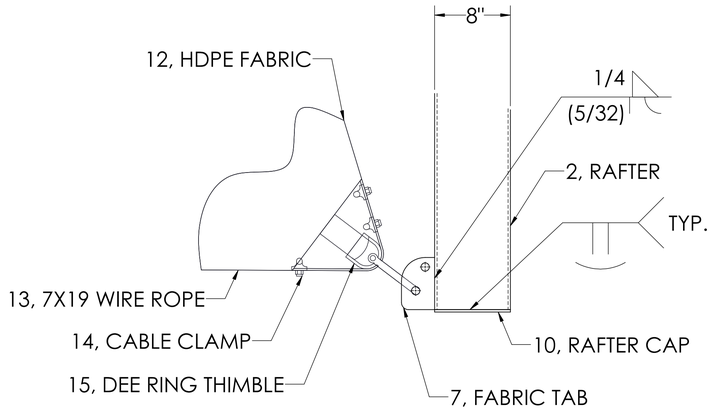
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

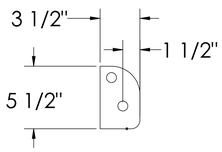
CUSTOM CANOPIES INC

PLAN AND ELEVATIONS

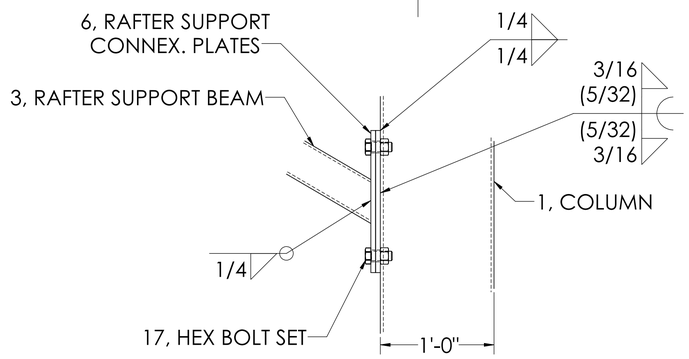
SS1-6



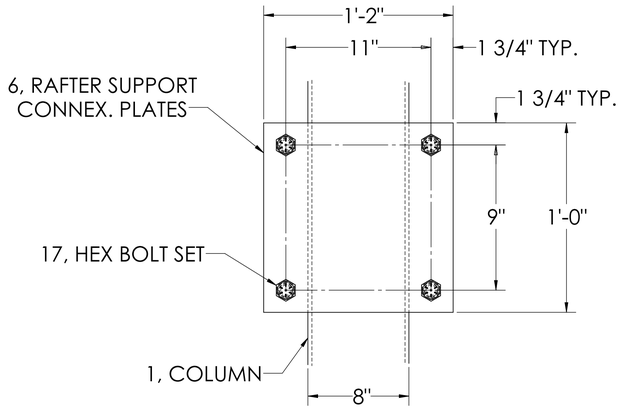
NOTE - FABRIC TAB SET TO BE FLUSH WITH TOP OF HSS TYP.



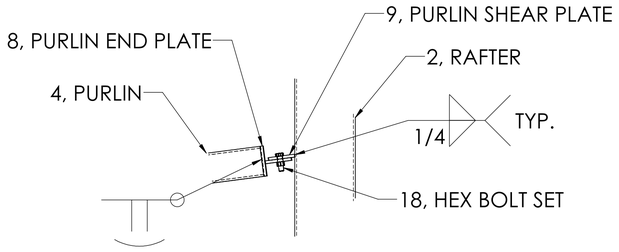
DETAIL A - TOP - PLAN VIEW
FABRIC TO RAFTER CONNECTION
SCALE 1 : 8
12 PLACES



DETAIL B - SIDE - RELATIVE VIEW
RAFTER SUPPORT TO CONNEX. CONNECTION
SCALE 1 : 8
4 PLACES

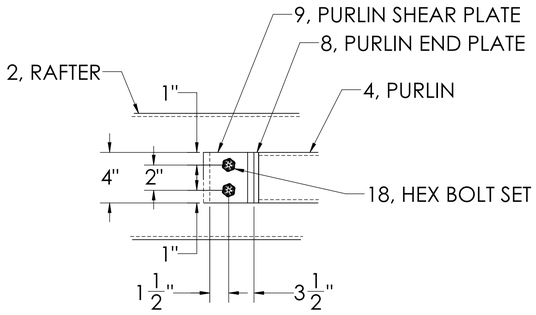


DETAIL C - FRONT - ELEVATION VIEW
RAFTER SUPPORT TO CONNEX. CONNECTION
SCALE 1 : 6
4 PLACES

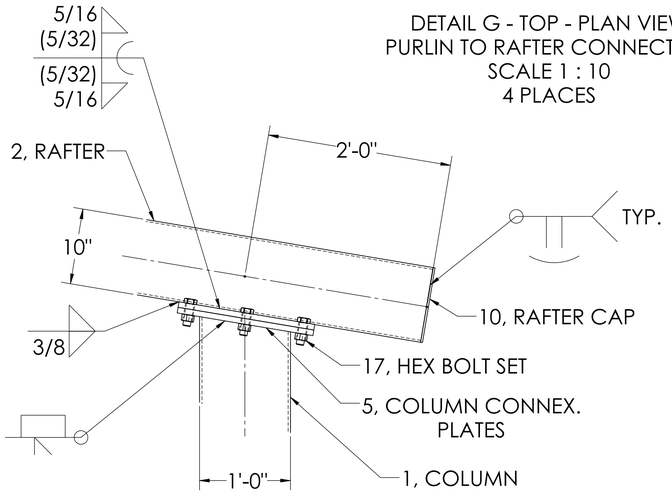


NOTE - CENTERLINE OF PURLIN TO BE SET @ CENTERLINE OF RAFTER

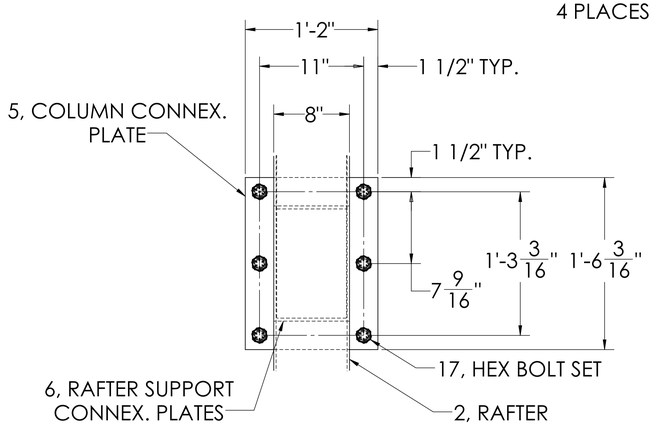
DETAIL G - TOP - PLAN VIEW
PURLIN TO RAFTER CONNECTION
SCALE 1 : 10
4 PLACES



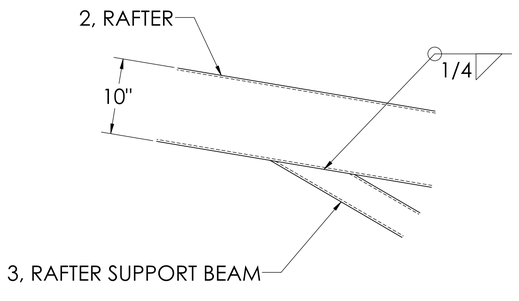
DETAIL G - TOP - PLAN VIEW
PURLIN TO RAFTER CONNECTION
SCALE 1 : 6
4 PLACES



DETAIL D - SIDE - ELEVATION VIEW
COLUMN TO RAFTER CONNEX.
SCALE 1 : 10
4 PLACES



DETAIL E - TOP - PLAN VIEW
COLUMN TO RAFTER CONNEX.
SCALE 1 : 8
4 PLACES



DETAIL F - SIDE - ELEVATION VIEW
RAFTER SUPPORT BEAM TO RAFTER CONNECTION
SCALE 1 : 10
4 PLACES

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SCALE:	1:96		

REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

FRAMING & FABRIC
CONNECTION DETAILS

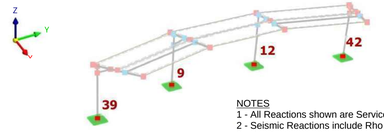
SS1-7

B

A

FOUNDATION / FOOTING:

- CONCRETE FOR FOOTING SHALL BE AS STATED ON SHEET 2 OF 8



NOTES
1 - All Reactions shown are Service Load (ASD)
2 - Seismic Reactions include Rho and Omega multipliers
3 - Px, Py, Mx, My & MZ shall be considered to act in a +/- direction so as to produce the worst-case condition

Node No.	DL Support Forces [kip] PX	PY	PZ	DL Support Moments [kipft] MX	MY	MZ
9	0.014	0.174	-2.016	-5.14	9.74	1.85
12	0.014	-0.174	-2.016	5.14	9.74	-1.85
39	-0.014	0.124	-1.949	-6.18	7.90	0.54
42	-0.014	-0.124	-1.949	6.18	7.90	-0.54

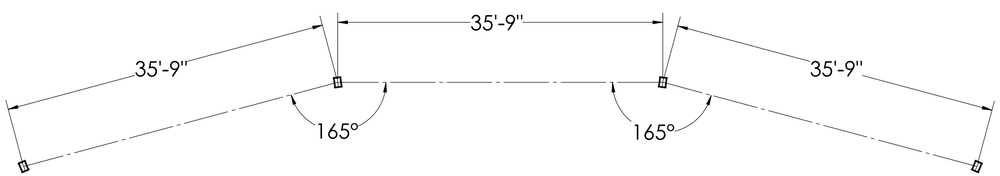
Node No.	LL Support Forces [kip] PX	PY	PZ	LL Support Moments [kipft] MX	MY	MZ
9	0.015	0.920	-1.562	-22.37	16.93	7.68
12	0.015	-0.920	-1.562	22.38	16.94	-7.68
39	-0.015	1.004	-0.526	-24.03	4.51	3.59
42	-0.015	-1.004	-0.526	24.03	4.51	-3.59

Node No.	WLX Support Forces [kip] PX	PY	PZ	WLX Support Moments [kipft] MX	MY	MZ
39	0.25	1.43	1.19 Down, 0.92 Up	35.39	15.56	5.01
9	0.54	1.21	3.31 Down, 2.23 Up	31.54	44.28	9.07
12	0.54	1.21	3.31 Down, 2.23 Up	31.54	44.28	9.07
42	0.25	1.43	1.19 Down, 0.92 Up	35.39	15.56	4.14

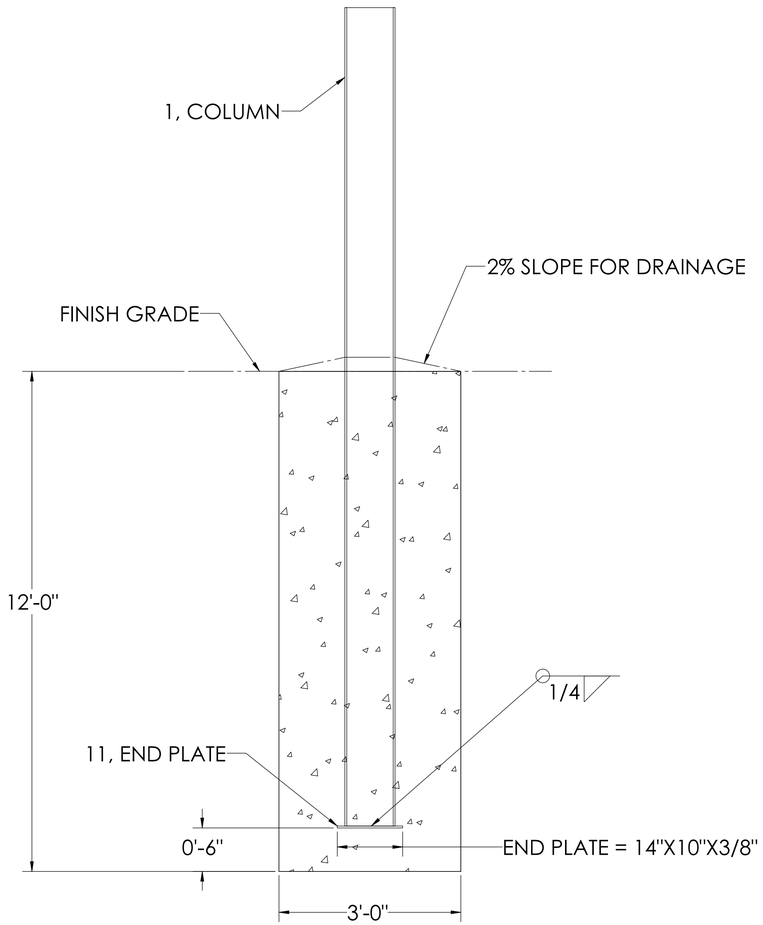
Node No.	WLY Support Forces [kip] PX	PY	PZ	WLY Support Moments [kipft] MX	MY	MZ
39	0.19	1.14	0.74 Down, 0.83 Up	26.07	11.35	4.63
9	0.35	0.93	2.08 Down, 2.02 Up	23.45	29.55	7.98
12	0.35	0.93	2.08 Down, 2.02 Up	23.45	29.55	7.97
42	0.19	1.14	0.74 Down, 0.83 Up	26.06	11.35	4.63

Node No.	EQX Support Forces [kip] PX	PY	PZ	EQX Support Moments [kipft] MX	MY	MZ
9	1.52	0.17	0.11 Down	-3.75	24.83	1.05
12	1.53	-0.17	0.11 Down	3.90	24.90	-1.12
39	1.31	0.23	0.11 Down	-5.43	20.79	-0.04
42	1.43	-0.27	0.11 Down	6.15	22.81	0.06

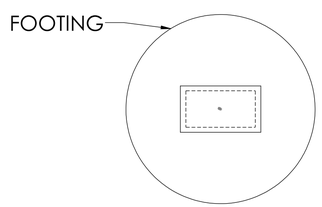
Node No.	EQY Support Forces [kip] PX	PY	PZ	EQY Support Moments [kipft] MX	MY	MZ
9	-0.03	1.66	0.33 Down	-27.23	0.86	6.35
12	0.08	1.39	0.33 Down	-20.78	3.22	3.27
39	0.00	1.64	0.33 Down	-27.38	1.25	5.87
42	-0.06	1.37	0.33 Down	-20.19	0.10	3.89



FOOTING LAYOUT - TOP - PLAN VIEW



DETAIL H - FRONT - ELEVATION VIEW
FOOTING SECTION
N.T.S.
4 PLACES



DETAIL H - TOP - PLAN VIEW
FOOTING SECTION
N.T.S.
4 PLACES

SEE SHEET 1 OF 8 FOR LIST OF MATERIALS

SEAL

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SCALE:	1:100		

REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

FOUNDATION PLAN
AND DETAILS

SS1-8

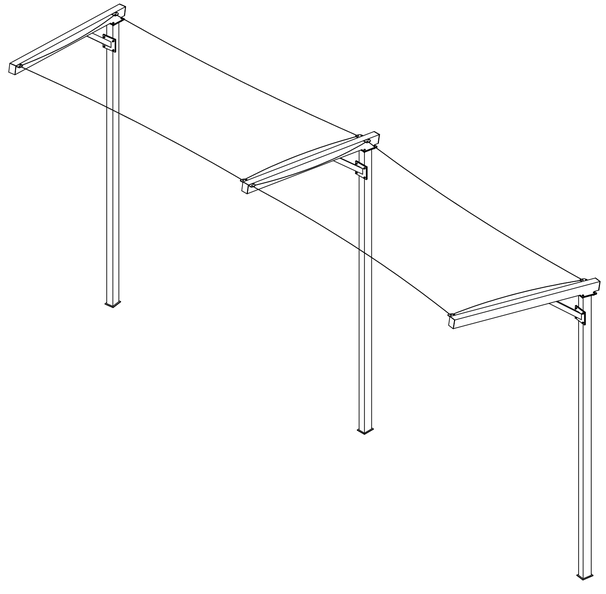
2 1

B

A

LIST OF MATERIALS

ITEM NO.	DESCRIPTION	QTY	MATERIAL / SHAPE
1	COLUMN	3	HSS - 8 X 6 X 5/16
2	RAFTER	3	HSS - 8 X 6 X 0.25
3	RAFTER SUPPORT BEAM	3	HSS - 4 X 4 X 0.25
4	COLUMN CONNECTION PLATE	6	STEEL PLATE - 5/8
5	RAFTER SUPPORT CONNEX. PLATE	6	STEEL PLATE - 1/2
6	FABRIC TAB	8	STEEL PLATE - 3/8
7	RAFTER CAP	6	STEEL PLATE - 1/4
8	END PLATE	3	STEEL PLATE - 3/8
9	HDPE FABRIC	2	HDPE MESH (SEE NOTES)
10	1/4" - 7X19 WIRE ROPE	2	GALV. (SEE NOTES)
11	1/4" - CABLE CLAMP	6	GALV.
12	3/8" - DEE RING THIMBLE	8	SS 3/8" SOLOMESH DEE RING THIMBLE - PART NO. 207032
13	5/8" - D-SHACKLE	8	A325N GALV.
14	3/4" HEX BOLT SET	24	A325N GALV.



SHEET INDEX	
SS2-1	COVER SHEET
SS2-2	GENERAL NOTES
SS2-3	SPECIFICATIONS
SS2-4	SUPPLIER SPECIFICATIONS
SS2-5	FABRIC SPECIFICATIONS
SS2-6	PLAN AND ELEVATIONS
SS2-7	FRAMING & FABRIC CONNECTION DETAILS
SS2-8	FOUNDATION PLAN AND DETAILS

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CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA

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CUSTOM CANOPIES INC

COVER SHEET

SS2-1

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE 2022 C.B.C. AND THE A.C.I. 318-19 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
2. SLAB AND FOUNDATION CONCRETE SHALL BE 150 P.C.F. HARDROCK, MIXED PER A.S.T.M. C-94, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 P.S.I. AT 28 DAY. MAX. SLUMP TO BE 4" ± 1" OF W/C RATIO < .45
3. THE MAXIMUM SIZE AGGREGATE IN FOUNDATION AND MASS CONCRETE WORK SHALL BE 1 INCH.
4. CEMENT SHALL CONFORM TO A.S.T.M.. C-150 TYPE II, FOR NORMAL WEIGHT SHALL CONFORM TO A.S.T.M. C-33.
5. ADMIXTURES AND COLORS (EXCEPT AS NOTED HEREIN) SHALL NOT BE USED UNLESS SUBSTANTIATING DATE IS SUBMITTED TO AND ACCEPTED BY THE ENGINEER AND ARCHITECT OF RECORD AND DSA.
6. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY. THE MIX DESIGNS SHALL CONFORM TO ACI 318-19 SECTION 26.4.3. UNLESS NOTED OTHERWISE.
7. NON-STRUCTURAL STEEL EMBEDDED IN CONCRETE SHALL BE GALVANIZED OR PAINTED. ALL DAMAGED GALVANIZED AREAS SHALL BE REPAIRED PRIOR TO EMBEDMENT.
8. READY MIXED CONCRETE SHALL CONFORM TO (A.S.T.M. C-94).
9. PLACEMENT OF CONCRETE SHALL CONFORM THE 2022 C.B.C. AND THE TO A.C.I. 304. CLEAN AND ROUGHEN A FULL AMPLITUDE OF 1/4" BY REMOVING THE ENTIRE SURFACE AND EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX AGAINST ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE POURED.
10. ALL EXPOSED CONCRETE SHALL HAVE A SMOOTH FORM FINISH USING B-B PLYFORM, CLASS I, EXT-A.P.A. PLYWOOD.
11. ALL SLABS SHALL HAVE A TROWELED FINISH EXCEPT AS NOTED ON THE DRAWINGS.
12. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
13. IF THE CONTRACTOR DESIRES TO MAKE ANY CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THESE DRAWINGS, HE SHALL SUBMIT DETAILS OF CHANGES TO THE ENGINEER OF RECORD FOR REVIEW BEFORE STARTING WORK AND THE ENGINEER OF RECORD TO OBTAIN DSA APPROVAL PRIOR TO STARTING WORK.
14. NO BRICK OR POROUS MATERIAL SHALL BE USED TO SUPPORT FOUNDATION STEEL OF THE GROUND.
15. PROVIDE 1/2 INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS, U.N.O.
16. MINIMUM CONCRETE COVERAGES
    - FOOTINGS CAST AGAINST EARTH 3"
    - FORMED CONCRETE EXPOSED TO EARTH OR WEATHER 2"
17. CONCRETE CURING:
    - SLAB AND FDN; TYPICALLY REQUIRED FOR 10 DAYS TO ACHIEVE A MINIMUM OF 3000 PSI STRENGTH PRIOR TO INSTALLATION OF OTHER MAJOR STRUCTURAL COMPONENTS.

FOUNDATION:

1. THIS STRUCTURE IS DESIGNED TO THE C.B.C. MINIMUM. WHERE SOIL REPORT IS AVAILABLE; ATTACH ONE COPY OF SOILS REPORT TO THE APPROVED SET OF CONSTRUCTION DOCUMENTS. SOILS REPORT SHALL BE PART OF THESE NOTES. PRIOR TO THE POURING OF CONCRETE AND PRIOR TO THE CONTRACTOR REQUESTING A DSA FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE THE FOOTING EXCAVATIONS. HE SHALL POST NOTICE ON THE JOB SITE AND ADVISE THE DSA INSPECTOR IN WRITING THAT THE WORK SO INSPECTED MEETS THE CONDITIONS OF THE REPORT. A WRITTEN CERIFICATION TO VERIFY THAT:
    - THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOIL REPORT.
    - THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED, AND
    - THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS REPORT.
2. TYPE OF FOOTING:
    - DESIGN SOIL PRESSURE:

FOOTING TYPE	STATIC BEARING PRESSURE
DEEP FOOTING	1,500 psf
LATERAL BEARING	100 pcf*

*MAY BE DOUBLED PER SECTION 1806A.3.4

3. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
4. THE CONTRACTOR SHALL DETERMINE LOCATION OF UTILITY SERVICES IN AREAS TO BE EXCAVATED BEFORE BEGINNING EXCAVATION. EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING. DAMAGE CAUSED AS A RESULT OF FAILING TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN, APPROVALS, PERMITS, INSTALLATION AND MONITORING OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN TEMPORARY EXCAVATIONS.
6. ALL PLANTERS IN CLOSE PROXIMITY TO THE STRUCTURE SHALL HAVE ADEQUATE DRAINAGE OF SURFACE WATER TO PREVENT SATURATION OF SOIL UNDER FOUNDATION
7. 2022 CBC SEISMIC SITE CLASS D-DEFAULT

GENERAL NOTES:

1. THE PROJECT SPECIFICATIONS SHALL BE PART OF THE CONTRACT DOCUMENTS
2. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
3. THE CONCTRACTOR SHALL REVIEW EXISTING CONDITIONS ON THE SITE DURING THE BIDDING. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK. THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANICES OR INCONSISTENCIES PRIOR TO PROCEEDING.
4. ALL PHASES OF WORK ARE TO CONFORM TO THE MINIMUM STANDARDS OF THE CBC 2022, RELATED CALIFORNIA BUILDING CODE STANDARDS, AND ANY ASTM SPECIFICATIONS ON WHICH THESE STANDARDS ARE BASED. WHERE CONFLICT BETWEEN BUILDING CODES AND SPECIFICATIONS OCCURS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
5. ALL ASTM DESIGNATIONS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST ADOPTED OR REVISED SPECIFICATION, AS OF THE DATE OF THESE DRAWINGS.
6. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS. DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
7. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
8. THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL REQUIREMENTS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS THAT OCCUR PER SPECIFIC PLANS FOR NON-STRUCTURAL ITEMS, SUCH AS:
    - SIZE AND LOCATION OF ALL OPENINGS
    - SIZE AND LOCATION OF ALL NON-BEARING WALLS
    - SIZE AND LOCATION OF ALL CONCRETE CURBS, WALKS, ROOF AND FLOOR DRAINS, SLOPES, DEPRESSED SLAB AREAS, ETC.
    - FLOOR, ROOF, AND WALL FINISHES
    - DEIMESNIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
9. THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE NOTED. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
10. NEITHER THE OWNER NOR THE ARCHITECT/STRUCTURAL ENGINER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONCTRACTOR SHALL AT HIS OWN EXPENSE, DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES. INCLUDING SHORING AND BRACING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARD, LAWS AND REGULATIONS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE SAFETY ITEMS.
11. SATISFACTORY EXECUTION OF CONSTRUCTION IS DEPENDANT UPON CONFORMANCE WITH THE INTENT OF THESE DRAWINGS. OWNER OR CONTRACTOR SHALL RETAIN A CALIFORNIA LICENSED STRUCTURAL ENGINEER DURING CONSTRUCTION TO OBSEREVE THE CONSTRUCTION AND FILE A REPORT (DSA 6AE) STATING "THE CONSTRUCTION HAS, IN EVERY MATERIAL RESPECT, BEEN PERFORMED IN COMPLIANCE WITH THE DSA APPROVED DOCUMENTS.
12. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACES ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD FOR EACH PARTICULAR LEVEL. WHEN WEIGHT OF MATERIALS OR EQUIPMENT MAY EXCEED DESIGN LOAD, STRUCTURED SYSTEMS SHALL BE SHORED.
13. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK. THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK
14. CBC 2022 AND AISC MANUAL OF STANDARD PRACTICE TO BE USED FOR FABRICATION/ERECTION TOLERANCES.

DESIGN BASIS:

1. CODE: 2022 CBC (CALIFORNIA BUILDING CODE CCR, TITLE 24, PART 2)
2. GRAVITY LOADS:
    - ROOF LIVE LOAD = 5 PSF. (REDUCIBLE)
    - ROOF DEAD LOAD = 1.5 PSF. (MAX)
    - SNOW LOAD PG = 0.0 PSF.
3. LATERAL LOADS:
    - SITE CLASS D - (DEFAULT WHERE NO GEOTECHNICAL REPORT REQUIRED) NOTE: DESIGN VALUES MAY ALSO BE USED WHERE SITE CLASS C IS JUSTIFIED BY LOCATION SPECIFIC GEOTECHNICAL REPORT
    - RISK CATEGORY = II
    - REDUNDANCY (Rho) = 1.30
    - Ss = 0.818
    - S1 = 0.292
    - Sms = 0.981
    - Sds = 0.654
    - SEISMIC DESIGN CATEGORY = D (ASCE 7-16 TABLE 11.6.1 AND TABLE 11.6.2)
    - Ie = 1.00
    - ORDINARY CANTILEVER COLUMN SYSTEM - R = 1.25
    - Cs = Sds/(R/Ie)*Rho (LRFD) = 0.680 ULTIMATE, TOTAL SEISMIC BASE SHEAR = 1.95K
    - ANALYSIS METHOD = EQUIVALENT LATERAL FORCE ANALYSIS
4. WIND DESIGN
    - ANALYSIS METHOD = DIRECTIONAL PROCEDURE (OPEN STRUCTURE)
    - V = 96 MPH, BASIC WIND SPEED, ASCE 7-16
    - EXPOSURE "C"
    - Kzt = 1.0
    - RISK CATEGORY = II
5. STRUCTURE IS DESIGNED FOR CLEAR WIND FLOW
6. FLOOD HAZARD: DESIGN DOES NOT ACCOUNT FOR FLOOD HAZARD
7. SITE SPECIFIC GEOTECHNICAL STUDY IS NOT REQUIRED
8. THIS DESIGN IS NOT DESIGNED TO INCLUDE WEIGHT OF SPRINKLERS.

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ENGINEER & MANUFACTURER

CUSTOM CANOPIES INC.

11815 BURKE ST,
SANTE FE SPRINGS, CA 90670

PROJECT / LOCATION

RANCHO DEL REY MS

1174 E. J ST.
CHULA VISTA, CA 91910

DRAWING NO.

D1495

MODEL

CST-ARC-22X11X12

DRAWN BY:	IB	DATE:	09/05/2025
CHECKED BY:	HD	DATE:	09/05/2025
SHEET FORMAT:	ARCH. D	REVISION:	A.1
SCALE:	1:46		

REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER TAGH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

GENERAL NOTES

SS2-2

STRUCTURAL OBSERVATION:

1. PER C.B.C. CHAPTER 17A, 1704A.6 THE OWNER SHALL EMPLOY A LICENSED ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, OR HIS DESIGNATED ENGINEER OR ARCHITECT TO MAKE SITE VISITS TO OBSERVE. GENERAL COMPLIANCE WITH THE APPROVED STRUCTURAL PLANS, SPECIFICATIONS AND CONSTRUCTION CHANGE DOCUMENT (CCD). THE ENGINEER OR ARCHITECT SHALL SUBMIT A STATEMENT IN WRITING TO THE DSA PROJECT INSPECTOR STATING THAT THE SITE VISIT HAS BEEN MADE AND THAT ANY DEFICIENCIES NOTED HAVE BEEN CORRECTED.
2. IN ACCORDANCE WITH SECT. 4-333 (a) OF TITLE 24, PART 1, STRUCTURAL OBSERVATION SHALL INCLUDE AND OCCUR AT THE FOLLOWING STAGES:
   - OBSERVATION AT THE SITE PRIOR TO PLACING CONCRETE.
   - OBSERVATION OF THE SHADE STRUCTURE DURING FABRICATION AFTER MAJORITY OF STRUCTURAL ITEMS ARE IN PLACE.
   - OBSERVATION OF THE COMPLETED STRUCTURE PRIOR TO BEING COVERED FINISHES.
3. AT COMPETITION OF IN-PLANT MANUFACTURING THE INDIVIDUAL ACCEPTING RESPONSIBILITY FOR OBSERVATION OF IN-PLANT MANUFACTURING SHALL SIGN THE VERIFIED REPORT, DSA 152-IPI (IN-PLANT INSPECTOR VERIFIED REPORT).
4. OBSERVATION OF THE ON SITE CONSTRUCTION INCLUDES THE SCOPE OF WORK INDICATED ON THE DSA APPROVED BUILDING PLANS AND SPECS.
5. INTERIM AND FINAL VERIFIED REPORTS ARE REQUIRED DURING, AND AT THE COMPLETION OF, ON SITE CONSTRUCTION AND INSTALLATION USING FORM DSA 6-AE (ARCHITECT/ENGINEER VERIFIED REPORT).
6. STRUCTURAL TESTING & SPECIAL INSPECTIONS: REFER TO DSA-103 FORM FOR ALL STRUCTURAL TESTING & SPECIAL INSPECTION REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, AND DSA-103 FORM, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

STEEL CABLES:

1. ALL CABLE STEEL TO BE ASTM A1023, 7X19 CLASS IWRC
2. CABLES SHALL BE GALVANIZED (CLASS A ZINC COATING) OR STAINLESS STEEL, CLASS BRIGHT WIRE ROPE.
3. MAXIMUM CABLE STRENGTH:
   - 1/4" 7X19 GALV. = 7000 LBS, SERVICE PER MFG. 2386 LBS MAX. ALLOWABLE PER CODE.
4. MAX. PRETENSION LOAD:
   - 1/4" DIA. = 50 LBS TO 75 LBS PRETENSION
5. FOR CABLE (ROPE CLIPS) SEE SS2-3

WELDING:

1. QUALIFIED AND CERTIFIED WELDERS SHALL BE USED FOR ALL WELDING.
2. ALL WELDING SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE AWS D1.1 AND CFC
3. ALL WELDING SHALL BE DONE BY THE SHIELDED ARC PROCESS USING APPROVED ELECTRODES PER AWS SPECIFICATIONS E70XX (LOW HYDROGEN ELECTRODES).
4. ALL WELDS SHALL HAVE A WELD CONTROLLED SEQUENCE AND TECHNIQUE IN ORDER TO MINIMIZE SHRINKAGE, STRESSES, AND DISTORTION.
5. ALL ELECTRODES FILLER MATERIAL SHALL BE A MIN. OF E70XX
6. SPECIAL INSPECTION IS REQUIRED FOR ALL WELDING.
7. ALL SHOP AND FIELD WELDING OF MOMENT CONNECTIONS OR MOMENT RESISTING FRAMES, AND ALL COLUMN SPLICE WELDS, SHALL BE TESTED AS PER CBC:
   - ALL WELDS WITHIN MEMBERS DESIGNATED AS PER OF THE LATERAL FORCES RESITING SYSTEM (LFRS) SHALL CONFORM TO THE DETAILING, MATERIALS, WORKMANSHIP, TESTING AND INSPECTION REQUIRMENTS PERS AWS D1.8 AND AISC 341-16, AND SHALL USE A FILLER METAL WITH A CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LB AT 0 F.
   - WHERE WELDS ARE DESIGNATED AS DEMAND CRITICAL, THEY SHALL BE WITH FILLER METAL CAPABLE OF PROVIDING A MIN. CVN TOUGHNESS OF 20 FT-IB AT 20 F AND 40 FT-IB AT 70 F. SEE AWS D1.8 SECTION 6.3.8.
   - WELDERS PERFORMING WELDING WITHIN THE LFRS SHALL BE QUALIFIED IN ACCORDANCE WITH AWS D1.8 CHAPTER 5

STEEL:

1. MATERIALS:
   - MISCELLANEOUS PLATES SHALL CONFORM TO - ASTM A-36
   - HIGH STRENGTH STEEL CONNECTION BOLTS SHALL CONFORM TO - ASTM A325 - N, ALL FASTENERS SHALL BE HOT DIP GALVANIZED PER ASTM A153 CLASS D MINIMUM
   - HSS STEEL TUBING (SQ. RECT. & ROUND) SHALL CONFORM TO - ASTM A-500, GRADE B (HSS ROUND, FY = 42 KSI) HSS SQ. & RECT., FY = 46 KSI)
   - WELDING ELECTRODES SHALL CONFORM TO - AWS STRUCTURAL STEEL E70XX
   - GALVANIZING SHALL CONFORM TO - ASTM A-123
   - RUST-INHIBITING PRIMER SHALL BE SHERWIN WILLIAMS CC-M10 OR EQUAL.
2. STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123, UNDERCOAT AND FINISH COAT OR EQUIVALENT PAINT SYSTEM.
3. BURNING OF HOLES IS NOT ALLOWED.
4. INSPECTION OF WELDING SHALL CONFORM TO CBC REQUIREMENTS (CHAPTER 17A)
5. THE STRUCTURAL STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
6. ALL BOLTED CONNECTIONS USING A325 BOLTS SHALL USE STANDARD HOLES PER AISC, UNLESS OTHERWISE NOTED.
7. STRUCTURAL STEEL SHALL BE DELIVERED TO THE JOB SITE FREE OF EXCESSIVE RUST, MILL SCALE, GREASE, ETC.
8. OPENINGS SHALL NOT BE PLACES IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED.

QUALITY CONTROL

THE FOLLOWING FORM SHALL BE COMPLETED BY CUSTOM CANOPIES PRIOR TO START OF CONSTRUCTION.

Custom Canopies Int. - Quality Control Check Sheet

Project Information

- **Project Name:** _____
- **Order Number:** _____
- **Customer Name:** _____
- **Date of Inspection:** _____
- **Inspector Name:** _____
- **Job Reference/PO:** _____

---

1. Raw Materials Inspection

Item	Supplier	Material Spec	Inspection Criteria	Pass/Fail
Steel Frames	_____	_____	Correct gauge, no rust or bends	_____
	_____	_____	Straightness of beams	_____
	_____	_____	Consistency in frame dimensions	_____
	_____	_____	No surface deformities (dents, scratches)	_____
	_____	_____	Weldable steel properties tested	_____
	_____	_____	No visible signs of corrosion	_____
	_____	_____	Frame edges free of sharp or hazardous areas	_____

Notes:

---

2. Fabrication Process

Fabrication Stage	Inspection Criteria	Pass/Fail
Frame Cutting	Accurate cuts, clean edges	_____
Frame Welding	Welds free of cracks or voids	_____

Notes:

---

3. Final Product Inspection

Item	Inspection Criteria	Pass/Fail
Overall Dimensions	Correct to order specifications	_____
Visual Defects	No visible defects on frame	_____

Notes:

Inspector's Comments/Sign Off

- **Inspector Name:** _____
- **Inspector Signature:** _____
- **Date:** _____

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11815 BURKE ST,
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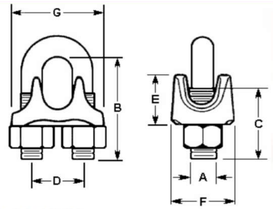
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

SPECIFICATIONS

SS2-3

kulkoni MALLEABLE WIRE ROPE CLIPS



ZINC PLATED, MALLEABLE

Size in Inches	Min. Clips Required	Wire Rope Turn Back in Inches	Torque in Foot Pounds*	Approx. Wt. in Pounds	Dimensions in Inches						
					A	B	C	D	E	F	G
1/4	3	7	15.0	0.130	0.31	1.19	0.75	0.75	0.69	0.75	1.31

Meets the performance requirements of Federal Specification FF-C-450, current revision, Type 1, Class 2.**

* Based on clean, unlubricated threads. The table above shows the minimum torque required to reach maximum holding power of wire rope clips.

** NOTE: 1/16" and 1/8" are not covered by Federal Specification FF-C-450, current revision.

Improper use and installation of cast malleable wire rope clips can result in serious injury or death.

NEVER use cast malleable wire rope clips for lifting or suspending ANY load.

Cast malleable wire rope clips are to be used only for non-critical, light duty applications with small applied loads.

For complete installation instructions refer to page 48.

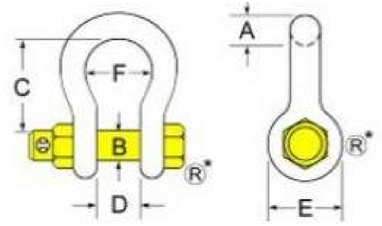
7 x 19

7 x 19 GALVANIZED CABLE

Size in Inches	Approx. Wt. per 1000 Ft. in Pounds	Breaking Strength in Pounds*
1/4	110.0	7,000

Small diameter 7 x 7 and 7 x 19 construction cable is sometimes referred to as "aircraft cable". ***It is not intended for aircraft use*** but designed for industrial and marine applications according to Federal Specification RR-W-410, current revision and A.S.T.M. A 1023/A 1023M, as applicable.

* Listed for comparison only. Actual operating loads should never exceed the recommended design factor or 20% of catalog Breaking Strength.



* U.S. Registered Trademark No. 2,011,393

GALVANIZED BOLT TYPE ANCHOR SHACKLES

Size in Inches (A)	Working Load Limit in Tons	Bolt Ø in Inches (B)	Length Inside in Inches (C)	Width Between Eyes in Inches (D)		Dimensions in Inches		Appx. Weight Each in Pounds
				Nominal	Tolerance	E	F	
1/2	2	5/8	1.7/8	13/16	± 1/16	1.3/8	1.3/16	0.9

* The YELLOW shackle bolt is the Federally Registered Trademark of Kulkoni, Inc.

** Minimum Width Between Eyes as defined by Federal Specification RR-C-271, current revision.

Meets the performance requirements of Federal Specification RR-C-271, current revision, Type IV A, Class 3, Grade A. Hot galvanized, forged carbon steel, heat treated, with alloy bolts, permanently marked with size and Working Load Limit. Sizes 1/2" through 3" are also available in DOMESTIC.

SOLAMESH®

HARDWARE MEASUREMENTS

DEE RING THIMBLE

			HEIGHT		WIDTH		INSIDE THIMBLE DIAMETER	OUTSIDE DIAMETER		GROVE DIAMETER
			MM	INCHES	MM	INCHES	INCHES	MM	INCHES	INCHES
	207032	SOLAMESH DEE RING THIMBLE STAINLESS STEEL TYPE 316 10MM X 65MM (3/8" X 2-9/16")	78MM	2.99"	87MM	3.43"	1.88"	65MM	2.56"	0.38"

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CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

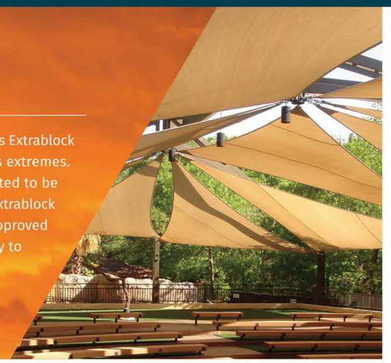
SUPPLIER SPECIFICATIONS

SS2-4

ALNET

ALNET EXTRABLOCK

EXTRABLOCK



Designed for strength and durability, Alnet's Extrablock shadecloth protects against all of nature's extremes. It meets the highest standards and is knitted to be dimensionally stable for easy fabrication. Extrablock also comes in 16 California Fire Marshall approved colors and is backed by a 10-year warranty to demonstrate our dedication to quality, durability and safety.

CERTIFICATIONS

NFPA 701 · ASTM E84 TESTING · UP TO 98% UVR PROTECTION · 100% RECYCLABLE · SABS APPROVED · verified BEE rating

10 Year Warranty

ALNET is the leading innovator in synthetic textile and netting material production for the world's ***architectural, agricultural, aquacultural*** and ***industrial industries.***

For more information, please contact **protect@AlnetAmericas.com** or visit us at **www.AlnetAmericas.com**

Properties	Mass	Thickness	Fabric Width	Tensile		Elongation at Break		Tearing Strength - Tongue Tear		Burst Strength	Burst Strength	Temp. Stability
Test Method	ASTM 3776	ASTM 1777	ASTM 3774	ASTM D 5034		ASTM D 4595-87		ASTM D 2261		ASTM 3787 Ball	ASTM 3786 Mullen	
				Warp	Weft	Warp	Weft	Warp	Weft			
US	9.6 oz/yd	50.4 mil	118 in.	278 lbf	340 lbf	71%	74%	33 lbs	36 lbs	363 lb	460 psi	-13°F +176°F
Metric	325 gsm	1.28mm	3 m	1236 N	1512 N	71%	74%	147 N	160 N	1615 N	3172 kPa	-25°C +80°C

Colors	UPF	UVR	Shade Factor	Fire Retardancy	Flame Resistance
Cream	13	92%	74%	Yes	**ASTM E-84**
Beige	33	97%	87%	Yes	**ASTM E-84**
Yellow	16	94%	76%	Yes	**ASTM E-84**
Red	29	97%	86%	Yes	**ASTM E-84**
True Blue	14	93%	89%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Forest Green	24	96%	94%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Silver	19	95%	93%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Sunblaze	14	94%	91%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Latte	18	95%	90%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Bottle Green	16	94%	91%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Charcoal	20	96%	94%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Midnight	33	98%	98%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Mint Green	18	95%	93%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Dove Blue	13	93%	90%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Oxide Red	14	93%	91%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Pearl Onyx	16	94%	86%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Purple	16	94%	86%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Olive	26	97%	96%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Brown	19	95%	93%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Navy Blue	23	96%	96%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**
Lime	18	95%	79%	Yes	**CA 1237.1 Title 19 - CSFM NFPA-701 #2**

CAL FIRE — CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION — SINCE 1885

FLAME RETARDANT

Fabric Registration

LICENSE NUMBER: F-094501

EXTRA BLOCK SHADECLOTH

Product Marketed by:

ALNET PTY (LTD)
MOORSOM AVENUE, EPPING, INDUSTRY II
CAPE TOWN, S. AFRICA, ,

Issue Date : 04/03/2025
Expiration Date : 06/30/2026

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code. The scope of the approved use of this product is provided in the current edition of the CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS published by the California State Fire Marshal.

C Walker
Issued By Cortney Walker
Fire Engineering License Manager
Fire Engineering & Investigations Division

Patricia J Setter
Reviewed and Approved By Patricia Setter
Program Coordinator
Fire Engineering & Investigations Division

OFFICE OF THE STATE FIRE MARSHAL

Please visit uatcalfire.govmotus.org for more information on Licensing and Permitting with CAL FIRE

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CUSTOM CANOPIES INC

FABRIC SPECIFICATIONS

SS2-5

2 1

B

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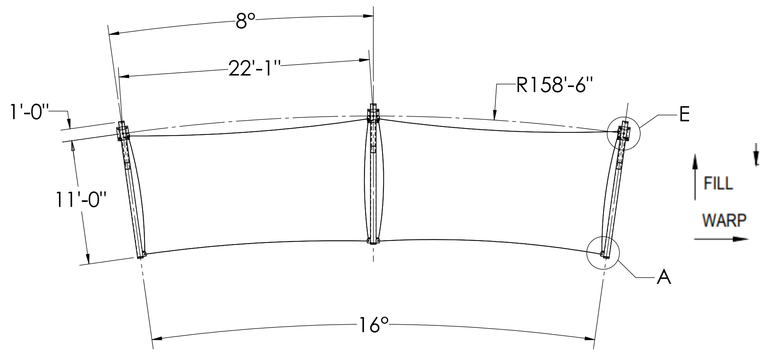
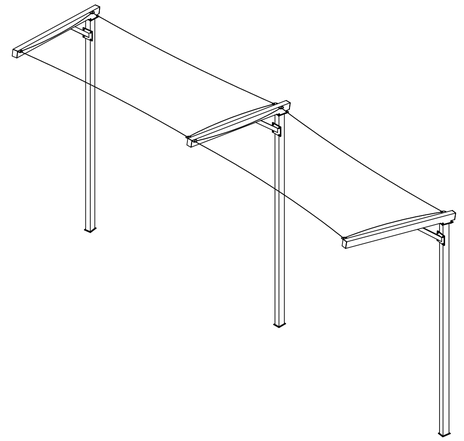
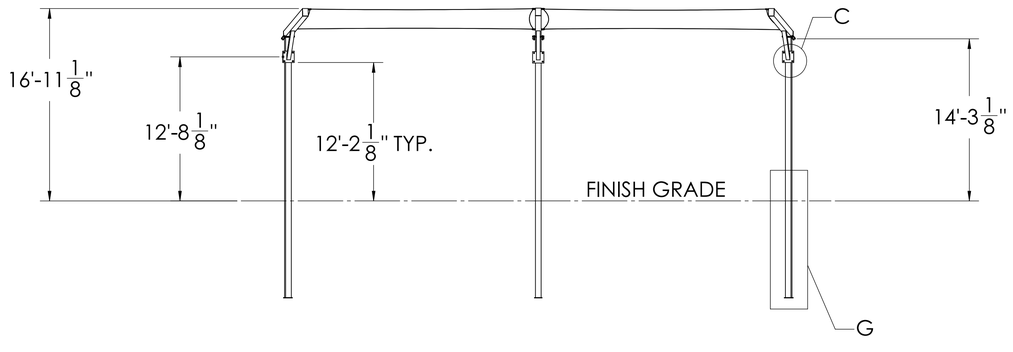
NOTES
1- ELEVATED FRAMING DETAILED KEYED THIS SHEET ARE SHOWN ON SHEET 7 OF 8
2- FOUNDATION DETAIL AND BASE PLATE SHOWN ON SHEET 8 OF 8

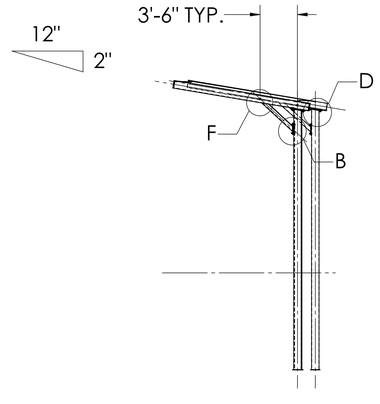


TOP - PLAN VIEW





FRONT - ELEVATION VIEW



SIDE - ELEVATION VIEW

SEAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ENGINEER & MANUFACTURER

CUSTOM CANOPIES INC.

11815 BURKE ST,
SANTE FE SPRINGS, CA 90670

PROJECT / LOCATION

RANCHO DEL REY MS

1174 E. J ST.
CHULA VISTA, CA 91910

DRAWING NO.

D1495

MODEL

CST-ARC-22X11X12

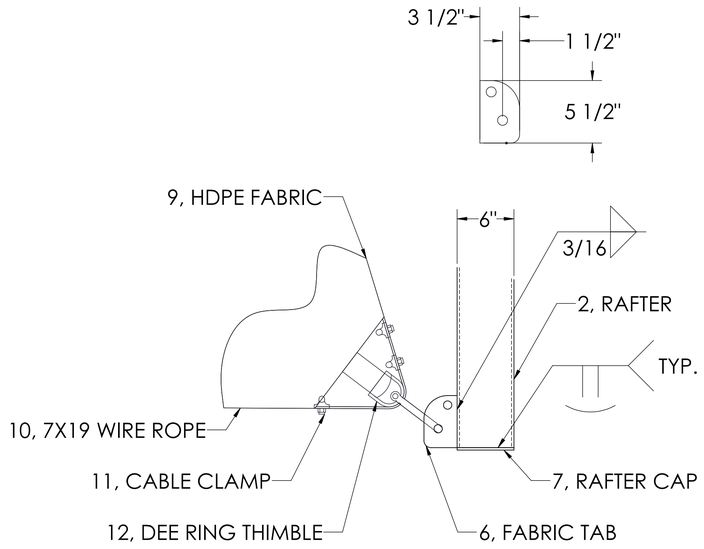
DRAWN BY:	IB	DATE:	09/05/2025
CHECKED BY:	HD	DATE:	09/05/2025
SHEET FORMAT:	ARCH. D	REVISION:	A.1
SCALE:	1:80		

REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

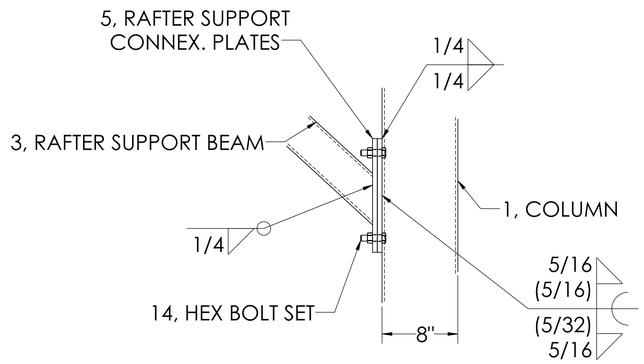
CUSTOM CANOPIES INC

PLAN AND ELEVATIONS

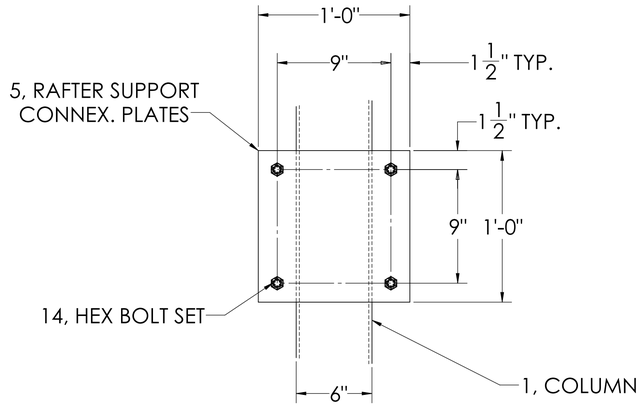
SS2-6



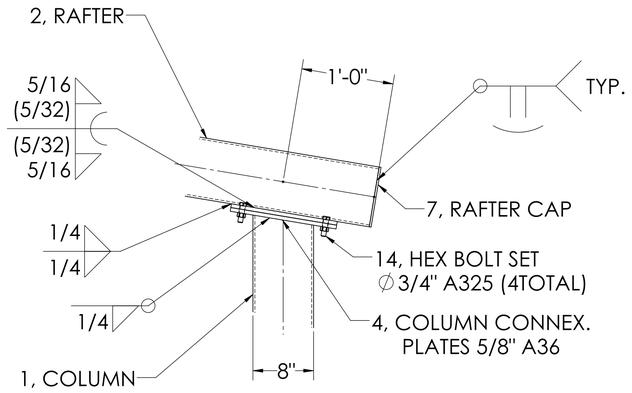
DETAIL A - TOP - PLAN VIEW
FABRIC TO RAFTER CONNECTION
SCALE 1 : 8
12 PLACES



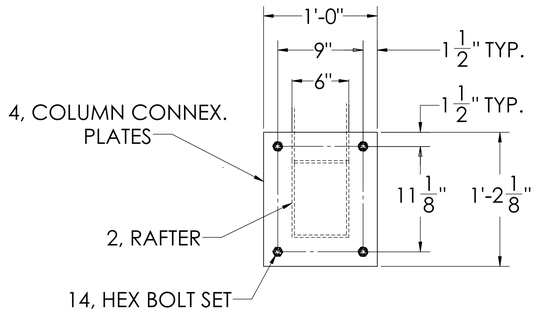
DETAIL B - SIDE - RELATIVE VIEW
RAFTER SUPPORT TO CONNEX. CONNECTION
SCALE 1 : 8
4 PLACES



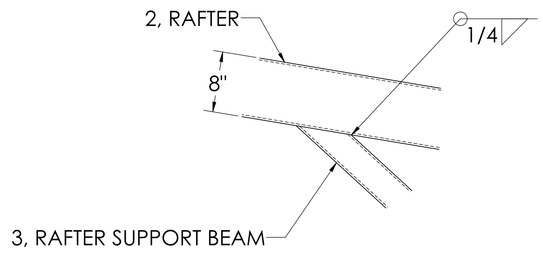
DETAIL C - FRONT - ELEVATION VIEW
RAFTER SUPPORT TO CONNEX. CONNECTION
SCALE 1 : 6
4 PLACES



DETAIL D - SIDE - ELEVATION VIEW
COLUMN TO RAFTER CONNEX.
SCALE 1 : 10
4 PLACES



DETAIL E - TOP - PLAN VIEW
COLUMN TO RAFTER CONNEX.
SCALE 1 : 8
4 PLACES



DETAIL F - SIDE - ELEVATION VIEW
RAFTER SUPPORT BEAM TO RAFTER CONNECTION
SCALE 1 : 10
4 PLACES

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SCALE:	1:96		

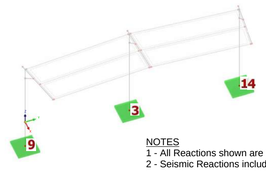
REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

FRAMING & FABRIC
CONNECTION DETAILS

SS2-7

FOUNDATION / FOOTING:
- CONCRETE FOR FOOTING STATED ON SHEET 2 OF 8



NOTES
1 - All Reactions shown are Service Load (ASD)
2 - Seismic Reactions include Rho and Omega multipliers
3 - Px, Py, Mx, My & MZ shall be considered to act in a +/ direction so as to produce the worst-case condition

Node No.	DL Support Forces [kip]			DL Support Moments [kipft]		
	PX	PY	PZ	MX	MY	MZ
3	0.019	0.100	-0.962	2.35	2.16	0.55
9	-0.009	0.198	-0.937	-4.70	1.33	1.10
14	-0.009	-0.198	-0.937	4.70	1.33	-1.10

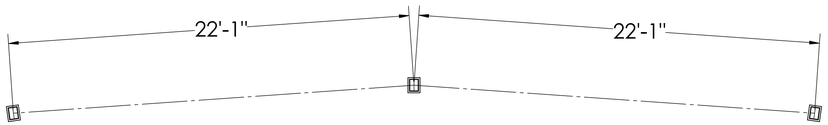
Node No.	LL Support Forces [kip]			LL Support Moments [kipft]		
	PX	PY	PZ	MX	MY	MZ
3	-0.048	0.390	-0.547	8.86	2.55	1.79
9	0.024	0.781	-0.243	-17.73	1.82	3.58
14	0.024	-0.781	-0.243	17.73	1.82	-3.58

Node No.	WLX Support Forces [kip]			WLX Support Moments [kipft]		
	PX	PY	PZ	MX	MY	MZ
9	0.15	0.99	0.52 Down, 0.57 Up	22.71	5.76	4.06
3	0.14	0.10	1.12 Down, 0.91 Up	2.10	9.06	0.17
14	0.15	0.99	0.52 Down, 0.57 Up	22.71	5.76	4.06

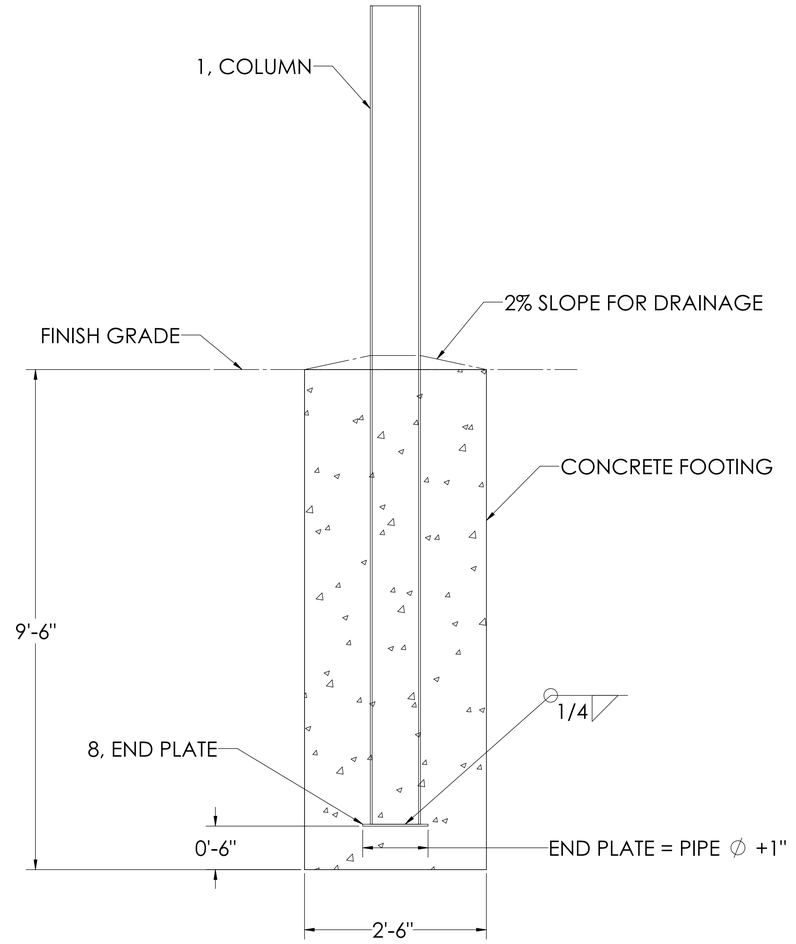
Node No.	WLY Support Forces [kip]			WLY Support Moments [kipft]		
	PX	PY	PZ	MX	MY	MZ
9	0.13	0.94	0.33 Down, 0.56 Up	20.03	5.18	3.84
3	0.14	0.14	0.72 Down, 0.87 Up	2.82	7.58	0.08
14	0.13	0.94	0.33 Down, 0.56 Up	20.03	5.18	3.84

Node No.	EQX Support Forces [kip]			EQX Support Moments [kipft]		
	PX	PY	PZ	MX	MY	MZ
3	0.75	0.11	0.32 Down	2.35	11.35	0.58
9	0.70	0.21	0.16 Down	-4.72	10.19	1.05
14	0.70	-0.21	0.16 Down	4.72	10.19	-1.05

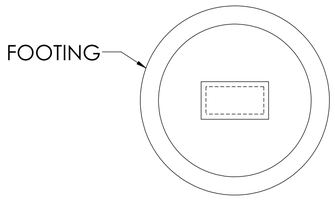
Node No.	EQY Support Forces [kip]			EQY Support Moments [kipft]		
	PX	PY	PZ	MX	MY	MZ
3	0.03	-0.74	0.32 Down	10.99	0.85	-0.48
9	-0.05	-0.93	0.16 Down	15.40	-0.93	1.89
14	0.05	-0.93	0.16 Down	15.40	0.93	-1.89



FOOTING LAYOUT - TOP - PLAN VIEW



DETAIL G - FRONT - ELEVATION VIEW
FOOTING SECTION
N.T.S.
3 PLACES



DETAIL G - TOP - PLAN VIEW
FOOTING SECTION
N.T.S.
3 PLACES

SEAL

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SCALE:	1:50		

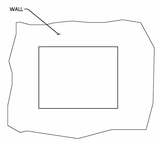
REGISTERED PROFESSIONAL ENGINEER
CLINTON GRANGER NASH
S 6395
STRUCTURAL
STATE OF CALIFORNIA
07-16-2025
Expires 03-31-2027

CUSTOM CANOPIES INC

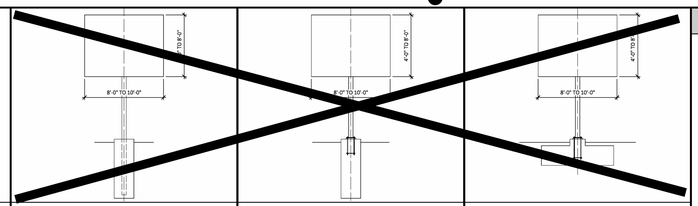
FOUNDATION PLAN
AND DETAILS

SS2-8

NEVCO DSA P.C. 04-124534



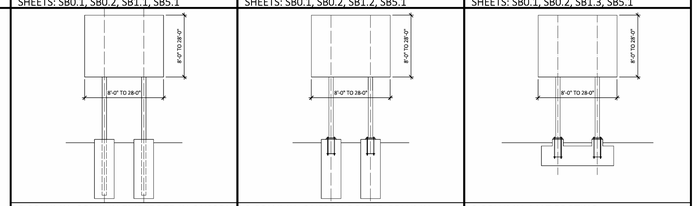
INDOOR WALL MOUNTED ASSEMBLY
SHEETS: SB0.1, SB0.2, SB6.1



MARQUEE: COLUMN EMBEDDED IN CAISSON
SHEETS: SB0.1, SB0.2, SB1.1, SB5.1

MARQUEE: CAISSON-BOLTED COLUMN
SHEETS: SB0.1, SB0.2, SB1.2, SB5.1

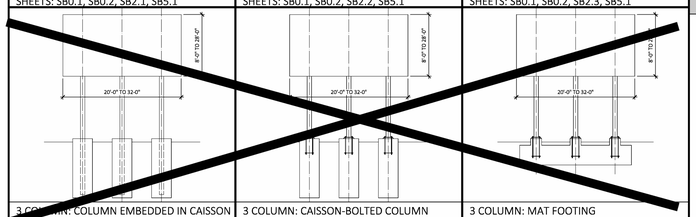
MARQUEE: MAT FOOTING
SHEETS: SB0.1, SB0.2, SB1.3, SB5.1



2 COLUMN: COLUMN EMBEDDED IN CAISSON
SHEETS: SB0.1, SB0.2, SB2.1, SB5.1

2 COLUMN: CAISSON-BOLTED COLUMN
SHEETS: SB0.1, SB0.2, SB2.2, SB5.1

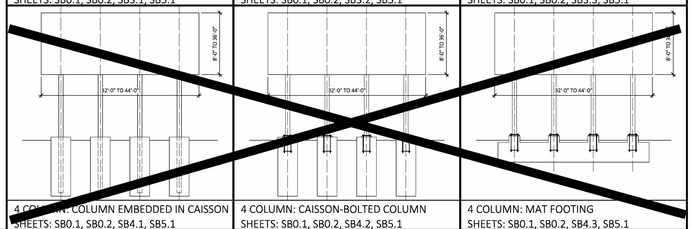
2 COLUMN: MAT FOOTING
SHEETS: SB0.1, SB0.2, SB2.3, SB5.1



3 COLUMN: COLUMN EMBEDDED IN CAISSON
SHEETS: SB0.1, SB0.2, SB3.1, SB5.1

3 COLUMN: CAISSON-BOLTED COLUMN
SHEETS: SB0.1, SB0.2, SB3.2, SB5.1

3 COLUMN: MAT FOOTING
SHEETS: SB0.1, SB0.2, SB3.3, SB5.1



4 COLUMN: COLUMN EMBEDDED IN CAISSON
SHEETS: SB0.1, SB0.2, SB4.1, SB5.1

4 COLUMN: CAISSON-BOLTED COLUMN
SHEETS: SB0.1, SB0.2, SB4.2, SB5.1

4 COLUMN: MAT FOOTING
SHEETS: SB0.1, SB0.2, SB4.3, SB5.1

TABLE C - SITE SPECIFIC SEISMIC AND WIND VALUES

EARTHQUAKE DESIGN DATA	MAXIMUM		
Mapped Spectral Response Accelerations (Maximum)	S_M= 3.73 g ; S_1= 1.0 g	≥	S_M= 1.059 g ; S_1= 0.374 g
Site Class	D	≥	D
Spectral Response Coefficients (Maximum)	S_{MS}= 2.49 g ; S_{D1}= 1.0 g	≥	S_{MS}= 0.828 g ; S_{D1}= 0.623 g
Wind Design Data	**Value**		**Value**
Design Wind Speed (3-sec gust), V_{ULT}	100 mph	≥	100 mph
Exposure Category	C		C

Earthquake and Wind design data can be found at: https://asce7hazardtool.org/

TABLE D - SITE FLOOD ZONE

THIS SECTION NOT REQUIRED IF SITE IS IN FLOOD ZONE X

Geotechnical Engineer:

Letter Dated:

TABLE B - STRUCTURAL DESIGN VALUES

All values reported are unfactored and strength level, unless noted otherwise

Gravity Design Data	Value
Dead Loads:	
Sign Dead Load	PER SCHEDULE
Snow Loads:	
Ground Snow Load, P_g (Maximum)	30 psf
Deflection Criteria:	
Sign, Wind Load	H/240
Wind Design Data	**Value**
Design Wind Speed (3-sec gust), V_{ULT}	100 mph
Design Wind Speed (3-sec gust), V_{ASD}	77 mph
Risk Category	II
Exposure Category	C
Applicable Internal Pressure Coefficient	± 0.18
Design Wind Pressure(s) for Components & Cladding (Not specifically designed by the Registered Design Professional, and to be modified by applicable factors per ASCE 7)	q_h=21.8xK_z psf ; K_zVARIES
Earthquake Design Data	**Value**
Risk Category	II
Importance Factor, I_e	1.0
Mapped Spectral Response Accelerations (Maximum)	S_M= 3.73 g ; S_1= 1.0 g
Site Class	A through E
Spectral Response Coefficients (Maximum)	S_{MS}= 2.49 g ; S_{D1}= 1.0 g
Seismic Design Category	E
Analysis Procedure Used | Equivalent Lateral Force Procedure (ASCE 7, 12.8)	
Basic Seismic-Force Resisting System | Non-Building Structure, ASCE 7-16 Chapter 15	
Response Modification Factor, Signs and Billboards Table 15.4-2	R_s= 3.0
Seismic Response Coefficient	C_s= 0.83
Design Base Shear	$V_s = C_s w_p$
Flood Design	
When the scoreboard is located in a flood zone other than Zone X, a letter stamped and signed from a Geotechnical Engineer is needed to validate allowable soil values specified in the PC are still applicable.	
Geotechnical Design Data	**Value**
Geotechnical Design Based on: 2022 California Building Code, Chapter 18A, Table 1806.A.2 (Class 5 Material)	
Allowable Soil Bearing Pressure (DL + LL)	1,500 psf
Design Passive Pressure, P_p (Tabular value has been increased per CBC Section 1806A.3.4 for pier design)	100 psf
Design Skin Friction, f_s	100 psf

SCOREBOARD ASSEMBLY WORKSHEET (TABLE A, C & D) INSTRUCTIONS

STEP 1: DETERMINE DESIRED SCOREBOARD ASSEMBLY. FILL OUT SCOREBOARD ASSEMBLY TABLE (TABLE A BELOW). PROVIDE NEVCO PART NUMBERS, PART HEIGHT, PART WIDTH, AND PART WEIGHTS.

STEP 2: DETERMINE TOTAL ASSEMBLY HEIGHT, WIDTH, AND WEIGHT, TABLE A

STEP 3: BASED ON TOTAL ASSEMBLY WIDTH, DETERMINE THE NUMBER OF REQUIRED COLUMNS.
SEE SHEETS SB1.X FOR 1 COLUMN ASSEMBLY OPTIONS
SB2.X FOR 2 COLUMN ASSEMBLY OPTIONS
SB3.X FOR 3 COLUMN ASSEMBLY OPTIONS
SB4.X FOR 4 COLUMN ASSEMBLY OPTIONS
SB6.1 FOR WALL MOUNTED ASSEMBLY OPTIONS (SKIP STEPS 4, 5, & 7)

STEP 4: PICK FOUNDATION TYPE (CAISSON WITH EMBEDDED COLUMN, CAISSON WITH BOLTED COLUMN, OR MAT FOOTING) . MARK APPLICABLE SHEET ON SHEET INDEX, SB0.1

STEP 5: MARK APPLICABLE CHECK BOX FOR SCOREBAORD SIZE ON DETAIL 'A' OF SELECTED COLUMN/FOUNDATION OPTION (SHEETS SB1.X, SB2.X, SB3.X OR SB4.X)

STEP 6: FILL IN SITE SPECIFIC SEISMIC AND WIND VALUES TABLE C ON SB0.1.

STEP 7: FILL IN SITE SPECIFIC FLOOD ZONE AS REQUIRED, TABLE D ON SB0.1

STEP 8: VERIFY ALL APPLICABLE SHEETS ARE MARKED ON SHEET INDEX, SB0.1. INCLUDE ONLY MARKED SHEETS AS PART OF DSA SUBMITTAL

SITE SPECIFIC SUBMITTAL REQUIREMENTS

SEE DSA POLICY PL 07-02 FOR ADDITIONAL INSTRUCTIONS REGARDING USE AND APPLICATION OF THIS PRE-CHECK DOCUMENT. ALL SITE SPECIFIC SUBMITTALS SHALL INCLUDE:

1. COMPLETED DSA 1 APPLICATION, DSA3, DSA 103, AND FILING FEE AND COPY OF THE PRE-CHECK DOCUMENT WITH APPLICABLE DESIGN OPTION MARKED ON THE MARQUEE, TWO COLUMN, THREE COLUMN, FOUR COLUMN, OR WALL ASSEMBLY SCHEDULES.
2. SITE PLAN OF FACILITY IDENTIFYING ALL STRUCTURES BY DSA APPLICATION NUMBER. LOCATION OF SCOREBOARD SHALL BE IDENTIFIED. ELECTRICAL PANEL SERVING THE SCOREBOARD SHALL BE LOCATED AND IDENTIFIED.
3. WHERE WIRELESS CONTROLLERS ARE NOT SPECIFIED, AN ACCESSIBLE PATH OF TRAVEL AND ACCESSIBLE SEATING FOR THE SCOREBOARD OPERATOR SHALL BE IDENTIFIED AND PROVIDED.
4. PROVIDE AN ELEVATION OF PROPOSED SCOREBOARD IDENTIFYING ALL INSTALLED DISPLAY COMPONENTS, SIGNAGE, TRUSSES, AND ADDITIONAL COMPONENTS IN THE PRE-CHECK DOCUMENT. ALL ELEMENT WEIGHTS SHALL BE SPECIFIED.
5. THE APPLICABLE SHEETS SHALL BE IDENTIFIED BY MARKING APPROPRIATE CHECK BOX ON THIS SHEET.
6. THE APPLICABLE CONFIGURATION SHALL BE IDENTIFIED BY MARKING APPROPRIATE CHECK BOX ON THE 'A' DETAILS ON THE APPLICABLE SHEET.
7. PROVIDE CUT SHEETS OF THE BOARDS, BOXES, AND EQUIPMENT TO BE MOUNTED ON THE STRUCTURE. CUT SHEETS SHALL INCLUDE WEIGHTS AND DIMENSIONS
8. SITE SPECIFIC SEISMIC DESIGN CRITERIA SHALL BE PROVIDED IN THE DRAWINGS.
9. SITE SPECIFIC BASIC DESIGN WINDSPEED AND SITE EXPOSURE SHALL BE PROVIDED ON THE DRAWINGS, SEE TABLE C.
10. STEEL COATING SPECIFICATIONS FOR WEATHER PROTECTION IF DIFFERENT THAN NOTED ON SB0.2
11. A GEOHAZARD REPORT IS NOT REQUIRED PER IR A-4. IF A SCOREBOARD IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED BY A GEOTECHNICAL ENGINEER IS REQUIRED VALIDATING THE ALLOWABLE SOIL VALUES, PROVIDE INFORMATION IN TABLE D.
12. PROVIDE A SITE SPECIFIC DESIGN FOR STRUCTURES THAT DO NOT MEET THE MINIMUM SETBACK REQUIREMENTS.
13. PROVIDE A SITE SPECIFIC DESIGN FOR STRUCTURES LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F.
14. FOR WALL MOUNTED ASSEMBLIES (SB6.1), STRUCTURAL ANALYSIS AND JUSTIFICATION THAT THE WALL FRAMING IS CAPABLE OF SUPPORTING THE ASSEMBLY FOR VERTICAL AND LATERAL LOADS.

TABLE A - SCOREBOARD ASSEMBLY WORKSHEET (1)

Nevco Part No.or Description	Part Height [ft.]	Part Width [ft]	Part Weight [lb]
Total			

TOTAL ASSEMBLY DIMENSIONS & WEIGHT (2)

Total Assembly Height =	_____ft._____in.		
Total Assembly Width =	_____ft._____in.		
Total Assembly Weight =	_____lbs.		
Distance from Finish Grade to Bottom of Sign =	_____ft._____in.	Total Height = Total Assembly Height + Distance from Finish Grade to Bottom of Sign =	_____ft. ____in.

SCOREBOARD ASSEMBLY FOOTNOTES

1. Verify part number, dimensions, and weight with Nevco
2. See Step 3 of Scoreboard Assembly Worksheet Instructions

CHECK ALL THAT APPLY

■	(REQ'D)
■	(REQ'D)
☐	
☐	
☐

STRUCTURAL NOTES

GENERAL NOTES

1. The following notes, typical details and schedules shall apply to all phases of this project unless otherwise shown or noted.
2. Specific notes and details shall take precedence over general notes and typical details.
3. All materials and workmanship shall conform to the minimum standards of the 2022 edition Title 24 of the California Building Code (CBC) and such other regulating agencies exercising authority over any portion of the work. The contractor shall have a current copy of the CBC on the job site.
4. The "Contract or Construction Documents" shall consist of these notes, details, schedules, plans, and drawings.
5. All specifications, including but not limited to materials and products, shall be those put forth in the "Contract or Construction Documents". No substitutions shall be permitted to be used or assumed to be used in the bidding or construction process without written approval by the Structural Engineer of Record.
6. The contractor shall examine the "Contract or Construction Documents" and shall notify the Architect or Structural Engineer of Record of any discrepancies he may find before proceeding with the work.
7. All information on existing conditions shown on drawings are based on best present knowledge available, but without guarantee of accuracy. The Contractor shall verify and be responsible for all dimensions and conditions at the site and shall notify the Architect or Structural Engineer of Record of any discrepancies between actual site conditions and information shown on or in the "Contract or Construction Documents" before proceeding with work.
8. The Contractor shall immediately notify the Architect or Structural Engineer of Record of any condition which in his opinion might endanger the stability of the structure or cause distress of the structure.
9. All work shall conform to the best practice prevailing in the various trades comprising work. The Contractor shall be responsible for coordinating the work of all trades.
10. These "Contract or Construction Documents" represent the finished structure, and do not indicate the method of construction. The Contractor shall supervise and direct the work and shall be solely responsible for construction means, methods, techniques, sequences and procedures.
11. Inspection and approval for fabricator's shops used for fabrication of structural load bearing members, components, materials or assemblies shall conform to CBC Section 1704A.2.5.
    A. Labeling (as required or specified) shall be provided in accordance with CBC Section 1709A.5.
    B. Evaluation and follow-up inspection services (as required or specified), shall conform to CBC Section 1703A.6.
12. The Contractor shall provide temporary bracing and shoring for all structural members as required for structural stability of the structure during all phases of construction.
13. The Contractor shall take all steps necessary to ensure proper alignment of the structure after the installation of all structural and finish materials. This shall include any necessary preloading of the structure to determine final position of the completed work.
14. Observation visits to the project site by field representatives of Architect and/or Structural Engineer of Record (support services) shall not include inspections of safety or protective measures, nor construction procedures, techniques or methods. Any support services performed by Architect or Structural Engineer of Record during any phase of construction, shall be distinguished from continuous and detailed inspection services (as required by any regulating governmental agency, e.g. the Authority Having Jurisdiction) provided by others. these support services, whether of material or work, are performed solely for the purpose of assisting in quality control and in achieving conformance with contract documents, but do not guarantee Contractor's performance and shall not be construed as supervision of construction.
15. These notes, details, drawings and specifications (Contract or Construction Documents) do not carry necessary provisions for construction safety. These documents and all phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the current California Occupational Safety and Health Act.
16. Where any conflict occurs between the requirements of federal, state and local laws, codes, ordinances, rules and regulations, the most stringent shall govern.
17. Written dimensions shall have precedence over scaled dimensions.
18. Drawings (notes, schedules, details and plans) shall have precedence over Structural Calculations.
19. In the event that certain features of the construction are not fully shown on the drawings or called for in the General Notes or Specifications, then their construction shall be of the same character as for similar conditions that are shown or called for.
20. ASTM designation and all standards refer to the latest amendments.
21. These structural "Contract or Construction Documents" shall not be modified without prior written approval of the Structural Engineer of Record.
22. Only structural working drawings approved by the Division of the State Architecture permitted to be used for construction on this project. All other drawings or documents are obsolete and are not permitted on the job site, nor shall they be used for any construction purposes. Contractors using unapproved drawings or documents are solely responsible for all work not performed in accordance with the "approved" drawings.
23. A Division of the State Architect certified project inspector employed by the District (Owner) and approved by the Division 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 California Code of Regulations.

FOUNDATION NOTES

1. Basis: See Structural Design Values Chart, Sheet S80.1 Table B
2. Unexpected soil conditions: Allowable values and foundation design are based upon the minimum values provided in Table 1806A.2 of the 2022 California Building Code. See S80.1 for values. Test and special inspection requirements (exempt type 1 - soils: eligible deep foundation elements)
3. Excavate to required depths and dimensions (as indicated in drawings), cut square and smooth with firm level bottoms. Care shall be taken not to over-excavate foundation at lower elevation and prevent disturbing of soils around higher elevation.
4. Footings shall be poured in neat excavations, without side forms whenever possible.
5. Carry all foundations to required depths into compacted fill or natural soil (as per Structural Plans and Details).
6. All foundation excavations shall be inspected and approved by the Inspector of Record or Geotechnical Engineer prior to forming and placement of reinforcing or concrete.
7. Foundations shall not be poured until all required reinforcing steel, sleeves, inserts, conduits, pipes, etc. and formwork is properly placed and inspected by the Authority having Jurisdiction.
8. The sides and bottoms of excavations which are to have concrete contact must be moistened several times just prior to pouring upon them.
9. De-water footings, as required, to maintain dry working conditions.

REINFORCING STEEL

1. All reinforcing steel shall be deformed intermediate grade bars conforming to ASTM A615, Grade 60 (f_y = 60 ksi) unless noted otherwise.
2. Reinforcing steel shall not be welded, unless specifically noted otherwise.
3. To hold reinforcing bars in their true position and prevent displacement, standard tie and anchorage devices must be provided. Placing of reinforcement shall conform to ACI 318-19 Section 26.6.2.
4. Shop drawings for fabrication of any reinforcing steel shall be approved by Contractor and submitted to Project Specific Architect or Project Specific Structural Engineer of Record, for their review, prior to fabrication.
5. Refer to typical details for minimum splice length and minimum radius of bend of reinforcing steel.
6. All reinforcing steel splices shall be staggered 24", unless specifically noted or detailed otherwise.
7. All reinforcing bar bends shall be made cold.
8. Fabrication, erection and placement of reinforcing steel shall conform to Concrete Reinforcing Steel Institute of Standard Practice.
9. Reinforcing steel shall be clean of rust, grease or other material likely to impair bond.

CONCRETE

1. All concrete shall have a minimum ultimate compressive strength (f'_c) as outlined below at 28 days. All concrete shall be regular weight (unless specifically noted otherwise).
   A. Concrete for footings: 4,500 psi w/c = 0.45 max.
2. Maximum Fly Ash content shall be 15%, by weight, of total cementitious materials and shall conform to ASTM C618.
3. All concrete work shall comply with CBC Chapter 19A and ACI 318-19 and latest edition of ACI Manual of Concrete Practice.
4. Special Inspection (as required or specified) shall conform to CBC Chapter 17A.
5. Cement shall be portland cement Type V and shall conform to ASTM C150.
6. Aggregates shall conform to ASTM C33, provide aggregates from a single source.
7. Water shall conform to ASTM C94 and be potable.
8. Where not specifically detailed, the minimum concrete cover on reinforcing steel shall be:
   A. Concrete cast against and permanently exposed to earth or weather: 3"
10. All reinforcing steel, anchor bolts, dowels, inserts and any other hardware to be set in concrete shall be well secured in position prior to pouring of concrete.
11. Vibrate all concrete as it is placed, with a mechanical vibrator operated by experienced personnel. The vibrator shall be used to consolidate the concrete, not transport it. Reinforcing and forms shall not be vibrated.
12. Formwork design and removal shall conform to ACI 318-19 Section 26.11. Remove forms in accordance with the following minimum schedule:
    A. Side forms of footings: Minimum 48 hours
    B. Column and pier forms: 72 hours & 70% of design strength
15. Concrete shall not free fall more than six feet. Use tremie, pump or other approved methods.
16. Concrete shall be maintained in a moist condition for a minimum of 5 days after placement.
17. The Contractor may use concrete admixtures as a construction means and methods to execute "Contract or Construction Documents". Use of admixture is solely the responsibility of the Contractor.
18. Mix designs shall be prepared by an approved testing laboratory, signed by a licensed engineer and shall be submitted to the Project Specific Design Professional of Record for approval. Buehler Engineering Inc is not responsible for review or approval of site specific concrete mix design.
19. Only one grade of concrete shall be allowed on project site at any one time
20. Concrete strength shall be verified by standard cylinder tests (in accordance with CBC Section 1905A.1.16) made by an approved testing laboratory.
21. Concrete placed when the air temperature has fallen to, or is expected to fall below 40° shall conform to ACI 318-19 Section 26.5.4, and ACI 306R-16.
22. Concrete placed during hot weather shall conform to ACI 318-19 Section 26.5.5, and ACI 305R-14.
23. Conduits and sleeves placed within structural concrete shall not be tied directly to structural reinforcement.
    A. 1" concrete cover shall be maintained around all reinforcement.
24. No stakes shall be permitted within the footing section.
25. Concrete shall reach minimum 75% design strength or cure for 3 days minimum prior to installation of steel columns and scoreboard components.

DRILLED CAISSON/PIER AND GRADE BEAM NOTES

1. Excavations for drilled caissons/pier shall be performed in compliance with local grading codes and ordinances as well as CBC Chapters 18A and 33A.
2. Provide Special Inspection in accordance with CBC Section 1705A.8 and Table 1705A.8.
3. Excavations for all drilled caissons/piers shall be approved by the Project Geotechnical Engineer or Project Social inspector prior to placing of concrete.
4. Reinforcement for drilled caissons/pier shall be approved by the Structural Engineer of Record prior to placing in caisson/pier excavation.
5. De-water caisson/pier footings and building excavation as required to maintain dry working conditions.
6. Caisson/piers are to be poured within 24 hours after completion of drilling operation. Shoring requirements shall be determined by contractor. Contractor shall be provide fall protection and safety barriers at and near the drilled hole as required by OSHA and the Authority Having Jurisdiction.
7. The Contractor shall be responsible for all shoring, bracing, etc. necessary to support cut and/or fill banks, and existing structures during excavation, and the forming and placement of concrete.
8. Bottom of caissons/piers shall be thoroughly cleaned prior to placement of concrete.

STRUCTURAL STEEL AND WELDING

1. All structural steel construction shall conform to AISC 360-16 and AISC 341-16.
   A. Fabrication of all structural steel shall be done in the shop of an approved fabricator. Inspection and approval for fabricator's shops used for fabrication of structural load bearing members, components, materials or assemblies shall conform to CBC Section 1704A.2.5.
2. All structural steel shall conform to the following specifications:
   A. Angles, channels, plates, bars, rounds, and other miscellaneous shapes: Shall conform to ASTM A36 and shall have a minimum yield stress (F_y) of 36 ksi.
   B. Wide-flange shapes: Shall conform to ASTM A992 and shall have a minimum yield stress (F_y) of 50 ksi.
   C. Structural tubes: Shall be ASTM A500, Grade C, and shall have a min. yield stress (F_y) of 50ksi.
3. All structural steel fasteners shall conform to the following specifications:
   A. Bolts shall conform to ASTM A307
   B. Anchor Bolts shall conform to ASTM F1554, Grade as noted in drawings
   C. Carbon steel nuts shall conform to ASTM A563
   D. Stainless steel nuts shall conform to ASTM F594
   E. Washers shall conform to ASTM F436
4. Special Inspection shall be provided for all structural steel and welding, in accordance with CBC Chapter 17A.
5. All structural steel shall be fabricated, erected and welded in accordance with AISC Specifications for Structural Steel Buildings (AISC 360-16) and Code of Standard Practice for Steel Buildings and Bridges (AISC 303-16).
6. All welding shall be done by qualified and certified welders.
7. Shop drawings for the fabrication of any structural steel shall be approved by the Contractor and submitted to Project Specific Architect or Project Specific Structural Engineer of Record for their review, prior to fabrication.
8. No holes other than those specifically detailed shall be allowed through structural steel members. Burning of holes is not permitted.
9. All welding shall conform to 'AWS D1.1' specifications for welding. (E-70XX Electrodes).
10. Where fillet weld size is not indicated, use 'AWS' minimum size based on the thickness of the thinner part being welded, as specified in AISC Specifications for Structural Steel Buildings (AISC 360-10), Section J2.2.
11. All butt welds to be complete joint penetration, unless specifically noted otherwise.
12. Welder qualification requirements, welding procedure and welding electrodes for all structural steel (except structural sheet steel, see steel decking) shall conform to CBC Sections 1705A.2.1 and 2204A.1.
13. Provide 3" minimum concrete cover around all structural steel below grade.
14. Structural steel embedded into concrete shall be uncoated.
15. Structural steel shall be hot-dip galvanized (minimum ASTM A123 or A153 Class D) or painted with zinc-rich primer, undercoat, and finish coat; or equivalent paint system.
16. All exposed steel fasteners, including cast-in-place anchor bolts/rods, shall be stainless steel (Type 304 minimum), hot-dip galvanized (ASTM A153, Class D minimum or ASTM F2329), or protected with corrosion-preventive coating that demonstrated no more than 2% of red rust in minimum 1,000 hours of exposure in salt spray test per ASTM B117. Zinc plated fasteners do not comply with this requirement.

ABBREVIATIONS

A.B.	Anchor Bolt		
ABV.	Above	HORIZ.	Horizontal
ACI	American Concrete Institute	HSS	Hollow Steel Section
ADJ.	Adjacent	HT.	Height
AHJ	Division of the State Architect		
AISC	American Institute of Steel Construction	ICC	International Building Code
		ICC	International Code Council
AOR	Architect of Record	ID	Inside Diameter
APPROX.	Approximate(ly)	IN.	Inch, Inches
ASCE	American Society of Civil Engineers	INT.	Interior
ARCH.	Architect, Architecture	ksi	Kips per Square Inch
ASTM	American Society of Testing and Materials	LL	Live Load
ATR	All Thread Rod		
AWS	American Welding Society	MAX.	Maximum
		MB	Machine Bolt
B.O.	Bottom of _____	MFR.	Manufactured, Manufacturer
BOT.	Bottom	MIN.	Minimum
b/t	Between	MPH	Miles per Hour
CAC	California Administrative Code	N/R	Not Required
CBC	California Building Code	N.T.S.	Not to Scale
CIP	Cast-in-place		
CJP	Complete Joint Penetration	o.c.	On Center
℄	Centerline	o/	Over
CLR.	Clear	OD	Outside Diameter
COL.	Column		
CONC.	Concrete	PEN.	Penetration
CONN.	Connection	PL.	Plate
CONST.	Construction	PJP	Partial Joint Penetration
CONT.	Continue, Continuous	psi	Pounds per Square Inch
		PSF	Pounds per Square Foot
ø	Diameter		
DBL.	Double	REBAR	Reinforcing Bar
DET.	Detail	REINF.	Reinforcement
DL	Dead Load	REQ'D	Required
DSA	Division of State Architect		
DWGS.	Drawings	S.F.	Square Feet
		SHT.	Sheet
EA.	Each	SIM.	Similar
E.F.	Each Face	SMS	Sheet Metal Screw
ELEC.	Electric, Electrical	SQ.	Square
ELEV.	Elevation	STAGG'D	Staggered
EMBED.	Embedded, Embedment	STD.	Standard
EOR	Engineer of Record	STL.	Steel
EQ.	Equal	SEOR	Structural Engineer of Record
EQUIP.	Equipment		
E.S.	Each Side	T&B	Top and bottom
E.W.	Each Way	THRD	Threaded
EXT.	Exterior	T.O.	Top of _____
		TYP.	Typical
FAB.	Fabricated		
FDN.	Foundation	U.N.O.	Unless Noted Otherwise
F.G.	Finish Grade		
F.O.	Face of _____	VERT.	Vertical
FRMG.	Framing	VIF	Verify in Field
FT.	Foot,Feet		
FTG.	Footing	w/	With
		w/c	Water/Cement Ratio
GA.	Gauge	WSS	Welded Steel Stud
GALV.	Galvanized	WT.	Weight
GEOR	Geotechnical Engineer of Record		

POST INSTALLED ANCHOR & TESTING

1. All post-installed anchors are to be tension tested with the exception that torque testing is allowed if the anchors are specifically designed as torque controlled
2. Test quantity of post-installed anchors as noted below:

Application	Quantity
Non-structural (Equipment Anchorage, etc.)	50%
Structural	100%

3. Apply proof test loads to anchors without removing the nut if possible. if not, remove nut and install a threaded coupler to the same tightness of the original nut using a torque wrench and apply load.
4. All tests shall be performed in the presence of the inspector.
5. Reaction loads from test fixtures may be applied close to the anchor being tested, provided the anchor is not restrained from withdrawing or restricted from a concrete shear cone type failure mechanism.
6. Test equipment is to be calibrated by an approved testing laboratory in accordance with standard recognized procedures.
7. The following criteria apply for the acceptance of installed anchors:
   A. Hydraulic ram method: anchors tested with a hydraulic jack or spring loaded devices shall maintain the test load for a minimum of 15 seconds and shall exhibit no discernable movement during the tension test, e.g. as evidenced by loosening of the washer under the nut.
   B. Torque wrench method: anchors tested with a calibrated torque wrench must attain the manufacturer recommended torque within ½ turn of the nut.
   Exceptions:
   - Wedge or sleeve type: one-quarter turn of the nut from 3/8" sleeve anchor only.
   - Threaded type: one-quarter turn of the screw after initial seating of the screw head.
8. If any anchor falls testing, test all anchors of the same type not previously tested until twenty consecutive anchors pass, then resume the initial test frequency. if the anchors are used for the support and bracing of non-structural components (pipe, duct or conduit), the twenty shall be only those anchors installed by the same trade.
9. Test loads per ICC ESR, IAPMO, OR UES report
10. When installing drilled-in anchors and/or powder driven pins in existing non-prestressed reinforced concrete, use care and caution to avoid cutting or damaging the existing reinforcing bars. When installing them into existing prestressed concrete (pre- or post-tensioned) locate the prestressed tendons by using a non-destructive method prior to installation. Exercise extreme care and caution to avoid cutting or damaging the tendons during installation. Maintain a minimum clearance of one inch between the reinforcement and the drilled-in anchor and/or pin.

ANCHOR TORQUE TEST VALUES

Anchor Diameter	CONCRETE		MASONRY	
	HILTI KB TZ 2	SIMPSON STRONG BOLT 2	HILTI KB TZ 2	SIMPSON STRONG BOLT 2
	ESR-4266	ESR-3037	ESR-4561	ER-240
⅜"	30 ft-lb	30 ft-lb	15 ft-lb	20 ft-lb
½"	50 ft-lb	60 ft-lb	25 ft-lb	35 ft-lb
⅝"	40 ft-lb	90 ft-lb	30 ft-lb	55 ft-lb
¾"	110 ft-lb	150 ft-lb	50 ft-lb	100 ft-lb

If the manufacturer's recommended installation torque is less than the test torque noted in the table, the manufacturer's recommended installation torque should be used in lieu of the tabulated values.

See manufacturer's ESR report for Maximum Impact Wrench Torque Rating.

BUEHLER

REGISTERED PROFESSIONAL ENGINEER DANIEL E. PADILLA No. 5405 STRUCTURAL STATE OF CALIFORNIA

DATE SIGNED: 04.11.2025

PC SEOR SEAL

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THANK YOU FOR YOUR INTEREST IN NEVCO SCOREBOARD PRODUCTS

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APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-124534 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 05/14/2025
DSA STAMP

PRE-CHECK (PC) DOCUMENT
CODE: 2022

A separate project application for construction is required.

STRUCTURAL NOTES & SPECIAL INSPECTIONS

SHEET INFORMATION

DATE	04.11.2025
DRAWN	JMK
CHECKED	MEP
2206 JOB #	S23109
SHEET	SB0.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW

1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
P: (619) 223-2400
F: (619) 223-3017

All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

LICENSED ARCHITECT
STATE OF CALIFORNIA
JAMES M. HOLAKIEVICH
No. C-31100
REN 06-30-27
ARCHITECT / CONSULTANT STAMP

CONSULTANT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT
CLIENT LOGO

DSA BACKCHECK

RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

MARQUEE - STRUCTURAL NOTES & SPECIAL INSPECTIONS

PC102

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EXAMPLE DSA 103 - TESTING AND INSPECTIONS

DSA **103-22**

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

☐ Project has a geotechnical report or construction observation and special inspection by a geotechnical engineer.
☒ Project does NOT have and does NOT require a geotechnical report or special inspection by a geotechnical engineer.

	TYPE	BY
S1 | SOILS - GENERAL		
☒ S1a: Site Preparation	See Notes	PI
S2 | COMPACTION AND FILL		
☐ S2a: Fill Materials	Test	LOR*
☒ S2b: Fill Placement	Continuous	LOR*
☒ S2c: Compaction	Test	LOR*
S3 | DRIVEN DEEP FOUNDATIONS (PILES)		
☐ S3a: Pile Driving Members	Continuous	GE*
☐ S3b: Pile Capacity	Test	LOR*
☐ S3c: Driving Operations	Continuous	GE*
☐ S3d: Pile Installation	Continuous	GE*
☐ S3e: Specialty Piles		
S4 | CAST-IN-PLACE DEEP FOUNDATIONS (PIERS)		
☒ S4a: Drilling Operations	Continuous	PI
☒ S4b: Pile Construction	Continuous	PI
☐ S4c: Bearing Strata	Continuous	GE*
S5 | RETAINING WALLS		
☐ S5a: Backfill Placement	Continuous	GE*
☐ S5b: Soil Reinf. and Drainage	Continuous	GE*
☐ S5c: Segmental Retaining Walls	Continuous	GE*
S6 | OTHER SOILS		
☐ S6a: Soil Improvement Test	Test	GE*
☐ S6b: Soil Improvement Inspection	Continuous	GE*
☐ S6c: Not used.	N/A	N/A
☐ S6d: Not used.	N/A	N/A
☐ S6e: Not used.	N/A	N/A
☐ S6f: Not used.	N/A	N/A
☐ S6g: Not used.	N/A	N/A
☐ S6h: Not used.	N/A	N/A
☐ S6i: Not used.	N/A	N/A
☐ S6j: Not used.	N/A	N/A
☐ S6k: Not used.	N/A	N/A
☐ S6l: Not used.	N/A	N/A
☐ S6m: Not used.	N/A	N/A
☐ S6n: Not used.	N/A	N/A

	TYPE	BY
C1 | CAST-IN-PLACE CONCRETE		
☒ C1a: Mix Design	Verify	SI*
☒ C1b: Reinforcing Steel	Test	LOR
☒ C1c: Concrete Materials	Test	LOR
☒ C1d: Strength Test	Test	LOR
☒ C1e: Batch Plant Inspection	Continuous	SI*
C2 | PRESTRESSED CONCRETE		
☐ C2a: Tendons and Anchorage	Test	LOR*
☐ C2b: Tendon Placement	Periodic	SI*
☐ C2c: Concrete Strength	Periodic	SI*
☐ C2d: Stressing Operations	Continuous	SI*
C3 | PRECAST CONCRETE		
☐ C3a: General Fabrication	Continuous	SI
☐ C3b: General Erection	Periodic	SI*
☐ C3c: Diaphragm Connections	Continuous	SI
☐ C3d: Diaphragm Tolerances	Periodic	SI
C4 | SHOTCRETE		
☐ C4a: Placement	Continuous	SI
☐ C4b: Shotcrete Material	Test	LOR
C5 | POST-INSTALLED ANCHORS		
☐ C5a: Inspection	See notes	SI*
☐ C5b: Testing	Test	LOR
C6 | OTHER CONCRETE		
☐ C6a: Not used.	N/A	N/A
☐ C6b: Not used.	N/A	N/A
☐ C6c: Not used.	N/A	N/A
☐ C6d: Not used.	N/A	N/A
☐ C6e: Not used.	N/A	N/A
☐ C6f: Not used.	N/A	N/A
☐ C6g: Not used.	N/A	N/A
☐ C6h: Not used.	N/A	N/A
☐ C6j: Not used.	N/A	N/A
☐ C6k: Not used.	N/A	N/A
☐ C6m: Not used.	N/A	N/A
☐ C6n: Not used.	N/A	N/A

* See Appendix for additional information.

Project Name: **Nevco PC** Application No.: **04-124534** Increment:
School District: **Nevco PC** File No.: **PC-00**

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DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA

DSA 103 - 22
Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

NOTE: Underlined sections and table references found in this appendix are from the CBC, or California Building Code

S1. GENERAL:

Test or Special Inspection	Code References and Notes
S1a: Site Preparation	
Verify that: Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. Unsuitable or undocumented fill removed to proper depth and have reached proper material. Materials below footings are adequate to achieve the design bearing capacity.	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth under foundations is not permitted without a geotechnical report.

S2. SOIL COMPACTION AND FILL:

Test or Special Inspection	Code References and Notes
S2a: Fill Materials / Perform classification and testing of fill materials.	* Under the supervision of the geotechnical engineer.
S2b: Fill Placement / Verify use of proper materials, densities and lift thickness; placement and compaction during placement of fill.	* Under the supervision of a geotechnical engineer or LDR's engineering manager. Refer to specific items identified in the end of this form listing exemptions for limitations.
S2c: Compaction / Conduct in-situ tests	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth under foundations is not permitted without a geotechnical report.

S3. DRIVEN DEEP FOUNDATIONS (PILES):

Test or Special Inspection	Code References and Notes
S3a: Materials and Members / Verify pile materials, sizes and lengths comply with the requirements.	* By geotechnical engineer or his or her qualified representative.
S3b: Pile Capacity / Determine capacities of test piles and conduct additional load tests as required.	* Under the supervision of a geotechnical engineer.
S3c: Driving Operations / Inspect driving operations and maintain complete and accurate records for each pile.	* By geotechnical engineer or his or her qualified representative.

Project Name: **Nevco PC** Application No.: **04-124534** Increment:
School District: **Nevco PC** File No.: **PC-00**

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DSA 103 - 22
Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

C3b: General Erection / Inspect erection of precast concrete members.	**Table 1705A.3 Item 10.**
C3c: Diaphragm Connections / For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to SDC C, inspect welding of the items listed in the welding connections and reinforcement in the field for: 1. Installation of the embedded parts. 2. Completion of the continuity of reinforcement across joints. 3. Completion of connections in the field.	**Table 1705A.3 Item 11.**
C3d: Diaphragm Tolerances / Inspect installation tolerances of precast concrete diaphragm connectors for compliance with ACI 550.5.	**Table 1705A.3 Item 12**

C4. SHOTCRETE (IN ADDITION TO SECTION C1):

Test or Special Inspection	Code References and Notes
C4a: Placement / Inspect shotcrete placement for proper application techniques.	**1705A.3.3, Table 1705A.3 Item 7, 1908A.1, 1908A.2, 1908A.3. See ACI 506.2 Section 3.4, and ACI 506R.**
C4b: Shotcrete Material / Sample and test shotcrete.	**1908A.2 and 1705A.3.9.**

C5. POST-INSTALLED ANCHORS:

Test or Special Inspection	Code References and Notes
C5a: Inspection / Inspect installation of post-installed anchors.	**1617A.1.19, Table 1705A.3 Item 4z (Continuous) & 4b (Periodic).** ACI 318 Section 26.7.2, 26.13.1, 26.13.2, 26.13.3.3.* May be performed by the project inspector when specifically approved by DSA.
C5b: Test / Test post-installed anchors.	**1910A.5.** (See Appendix (end of this form) for exemptions.)

Project Name: **Nevco PC** Application No.: **04-124534** Increment:
School District: **Nevco PC** File No.: **PC-00**

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DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA

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Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

M4. OTHER MASONRY:

Test or Special Inspection	Code References and Notes
M4a.	Not used.	N/A
M4b.	Not used.	N/A
M4c.	Not used.	N/A
M4d.	Not used.	N/A
M4e.	Not used.	N/A
M4f.	Not used.	N/A
M4g.	Not used.	N/A
M4h.	Not used.	N/A
M4j.	Not used.	N/A
M4k.	Not used.	N/A
M4m.	Not used.	Not used.
M4n.	Not used.	Not used.

Project Name: **Nevco PC** Application No.: **04-124534** Increment:
School District: **Nevco PC** File No.: **PC-00**

DSS DSA 103-22 (Revised 4/17/20)
DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA

DSA 103 - 22
Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

S4A. ANCHOR BOLTS AND ANCHOR RODS:

Test or Special Inspection	Code References and Notes
S4Ab: Anchor Rods and Bolts / Anchor Bolts and Anchor Rods	Identify, sample and test anchor bolts and anchor rods **not** meeting exemptions identified in Section 1 of IR 17-11.
S4Ab: Other Threaded Rods / Threaded rod not used for foundation anchorage	Identify, sample and test threaded rods **not** meeting exemptions identified in Section 1 of IR 17-11.

S4Ab STORAGE RACK SYSTEMS:

Test or Special Inspection	Code References and Notes
S4Ab: Material Verification / Materials used, to verify compliance with one or more of the material test reports in accordance with the approved construction documents.	Table 1705A.13.7
S4Ab: Fabrication / Fabricated storage rack elements.	1704A.2.6. Table 1705A.13.7
S4Ab: Anchorage / Storage rack anchorage installation.	ANSI/MH16.1 Section 7.3.2; Table 1705A.13.7
S4Ab: Completed System / Completed storage rack system to verify compliance with the approved construction documents.	Table 1705A.13.7.* May be performed by the project inspector when specifically approved by DSA.

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X1. OTHER:

Test or Special Inspection	Code References and Notes
X01.	Load test for identified product(s):	1705A.2; 1705A.3. Testing is not required for: 1) a product with a valid research report complying with IR 4-5, or 2) a product that can be justified by structural calculation.
X02.	Installation torque for non-HS bolts on communication tower identified as essential service facility projects (ESFP):	Calibrated wrench use required, verified by SI during installation. DSA Policy PL 18-01: Communication Towers, Poles and Buildings Utilized by State Agencies for Essential Services Communications. Non-ESFPs Non-ESFP may use PI without need for notification to DSA.
X03.	Not used.	N/A
X04.	Not used.	N/A
X05.	Not used.	N/A
X06.	Not used.	N/A
X07.	Not used.	N/A
X08.	Not used.	N/A
X09.	Not used.	N/A
X10.	Not used.	N/A

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	TYPE	BY
M1 | STRUCTURAL MASONRY		
Fm PSI:		
☐ M1a: Mill Certificates - Reinf.	Periodic	SI*
☐ M1b: Material Certificates	Test	LOR
☐ M1c: Strength Test	Test	LOR
☐ M1d: Mortar Proportions	Periodic	SI
☐ M1e: Grout Proportions	Periodic	SI
☐ M1f: Batch Plant Inspection		SI
☐ M1g: Core Tests	Test	LOR
☐ M1h: Prisms	Continuous	SI
☐ M1i: Dowels and Supports	Periodic	SI
☐ M1j: Reinforcement and Members	Periodic	SI
☐ M1k: Cold/Hot Weather Work	Continuous	SI
☐ M1l: Grout Placement	Continuous	SI
☐ M1m: Unit Layup and Joints	Periodic	SI*
☐ M1n: Cold/Hot Weather Work	Periodic	SI
☐ M1o: Anchors and Embeds	Continuous	SI
☐ M1p: Grout Cavity	Continuous	SI
M2 | VENEER OR GLASS BLOCK PARTITIONS		
☐ M2a: Mortar and Grout	Periodic	SI
☐ M2b: Unit Layup and Joints	Periodic	SI
☐ M2c: Wires and Connector	Periodic	SI
☐ M2d: Anchors and Embeds	Periodic	SI
☐ M2e: Cold/Hot Weather Work	Periodic	SI
☐ M2f: Adhered Veneer Bond	Test	LOR
M3 | POST-INSTALLED ANCHORS		
☐ M3a: Inspection	Varies*	SI*
☐ M3b: Test	Test	LOR
M4 | OTHER MASONRY		
☐ M4a: Not used.	N/A	N/A
☐ M4b: Not used.	N/A	N/A
☐ M4c: Not used.	N/A	N/A
☐ M4d: Not used.	N/A	N/A
☐ M4e: Not used.	N/A	N/A
☐ M4f: Not used.	N/A	N/A
☐ M4g: Not used.	N/A	N/A
☐ M4h: Not used.	N/A	N/A
☐ M4j: Not used.	N/A	N/A
☐ M4k: Not used.	N/A	N/A

	TYPE	BY
S1A | STEEL AND ALUMINUM		
☐ S1Aa: Material Identification	Periodic	*
☐ S1Ab: Unidentified Material	Test	LOR
☐ S1Ac: Steel Fabrication	Periodic	SI
☐ S1Ad: Buckling Restrained Brace	Test*	LOR
S2A | HIGH-STRENGTH BOLTS		
☐ S2Aa: Product Verification	Periodic	SI
☐ S2Ab: Bolts, Nuts, and Washers	Test	LOR
☐ S2Ac: Snug Tight	Periodic	SI
☐ S2Ad: Pretensioned / Slip-Critical	*	SI
S3A | WELDING		
☐ S3Aa: Welding Material	Periodic	SI
☐ S3Ab: Certificate of Compliance	Periodic	SI
☐ S3Ac: WPS and Qualifications	Periodic	SI
S4A | SHOP WELDING		
☐ S4Aa: Weld Category A	Continuous	SI
☐ S4Ab: Weld Category B	Periodic	SI
☐ S4Ac: Stairs and Railing	Periodic	SI
☐ S4Ad: Reinf. Steel Weldability	Periodic	SI
☐ S4Ae: Reinforcing Steel	Continuous	SI
S5A | NONDESTRUCTIVE TESTING		
☐ S5Aa: Ultrasonic	Test	LOR
☐ S5Ab: Magnetic Particle	Test	LOR
☐ S5Ac: Not used.	N/A	N/A
☐ S5Ad: Not used.	N/A	N/A
☐ S5Ae: Not used.	N/A	N/A
S6A | STEEL JOISTS AND TRUSSES		
☐ S6Aa: Fabrication	Continuous	SI
S7A | SPRAYED FIRE-RESISTANT MATERIALS		
☐ S7Aa: Surface and Installation	Periodic	SI
☐ S7Ab: Density	Test	LOR
☐ S7Ac: Bond: Adhesion/Cohesion	Test	LOR

* See Appendix for additional information.

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S3d: Pile Installation / Verify locations of piles and conduct additional load tests as required; record number of blows per foot of penetration, determine required penetrations to achieve design capacity; record tip and butt elevations and record any pile damage.

* By geotechnical engineer or his or her qualified representative.

S3e: Specialty Piles / For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.

* As defined on drawings or specifications.

S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):

Test or Special Inspection	Code References and Notes
S4a: Drilling Operations / Inspect drilling operations and maintain complete and accurate records for each pier.	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix (end of this form) listing exemptions for limitations.
S4b: Pier Construction / Verify pier locations, diameters, bottoms, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix (end of this form) listing exemptions for limitations.
S4c: Bearing Strata / Confirm adequate end strata bearing capacity.	Provide tests and inspections per CONCRETE section below.

S5. RETAINING WALLS:

Test or Special Inspection	Code References and Notes
S5a: Backfill Placement / Placement, compaction and inspection of backfill.	1704A.5.1 * By geotechnical engineer or his or her qualified representative. (See section S2 above).
S5b: Soil Reinf. and Drainage / Placement of soil reinforcement and/or drainage devices.	* By geotechnical engineer or his or her qualified representative.
S5c: Segmental Retaining Walls / Segmental retaining walls, impact placement of units, dowels, connectors, etc.	* By geotechnical engineer or his or her qualified representative. See DSA IR 19-2.

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C6. OTHER CONCRETE:

Test or Special Inspection	Code References and Notes
C6a.	Not used.	N/A
C6b.	Not used.	N/A
C6c.	Not used.	N/A
C6d.	Not used.	N/A
C6e.	Not used.	N/A
C6f.	Not used.	N/A
C6g.	Not used.	N/A
C6h.	Not used.	N/A
C6j.	Not used.	N/A
C6k.	Not used.	N/A
C6m.	Not used.	Not used.
C6n.	Not used.	Not used.

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S4H. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES:

Test or Special Inspection	Code References and Notes
S1A1a: Material Identification / Verify identification of all materials and: / Mill certificates indicate material properties that comply with requirements; / Steel plates, bars and grades comply with requirements.	**Table 1705A.2.1 Item 3a-3c.** 2203A.1; AISI S100 Section A3.1 & A3.2; AISI S240 Section A3 & 6; AISI S220 Sections A4 & A6. By special inspector or qualified technician when performed off-site.
S1A1b: Unidentified Material / Test unidentified material.	**2203A.1.**
S1A1c: Steel Fabrication / Verify and document steel fabrication per DSA- approved construction documents.	Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**).
S1A1d: Buckling Restrained Brace / Verify and document steel fabrication per DSA-approved construction documents.	Testing and special inspections in accordance with IR 22-4. For non-accepted fabrication shops, refer manufacturer's Certificate of Compliance in lieu of testing and special inspections. See IR 22-4.

S1A2. HIGH-STRENGTH BOLTS:

Test or Special Inspection	Code References and Notes
S1A2a: Product Verification / Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	**Table 1705A.2.1 Item 1a & 1b, 2203A.1.** AISC 360 Section A3.3, J3.1, and N3.2; RCSC Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
S1A2b: Bolts, Nuts, and Washers / Test high-strength bolts, nuts and washers.	**Table 1705A.2.1 Item 1c, 2213A.1.** RCSC Section 7.2; DSA IR 17-8.
S1A2c: Snug Tight / Bearing-type ("snug tight") connections.	**Table 1705A.2.1 Item 2a, 1705A.2.2, 2204A.2.** AISC 360 J3.1, J1.2, J3.6 & N5.6; RCSC Section 8.1; DSA IR 17-8.
S1A2d: Pretensioned / Slip-Critical / Pretensioned and slip-critical connections.	**Table 1705A.2.1 Item 2a & 2c, 1705A.2.2, 2204A.2.** AISC 360 J3.1, J3.2, M2.3 & N5.6; RCSC Sections 8.2 & 9; DSA IR 17-9 "Continuous" or "Periodic" depends on the tightening method used.

S1A3. WELDING:

Test or Special Inspection	Code References and Notes
S1A3a: Weld Material / Verify identification of filler material identification markings and manufacturer's certification of compliance for welding materials conforms to AWS qualifications and equipment.	**Table 1705A.2.1 Items 4 & 5.** AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel. DSA IR 17-3.
S1A3b: Certificate of Compliance / Verify certificate of compliance for filler material manufacturer's certificate of compliance.	DSA IR 17-3.
S1A3c: WPS and Qualifications / Verify WPS and welder qualifications.	DSA IR 17-3.

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S1A1. Other Steel

Test or Special Inspection	Code References and Notes
S1A11a.	Not used.	N/A
S1A11b.	Not used.	N/A
S1A11c.	Not used.	N/A
S1A11d.	Not used.	N/A
S1A11e.	Not used.	N/A
S1A11f.	Not used.	N/A
S1A11g.	Not used.	N/A
S1A11h.	Not used.	N/A
S1A11j.	Not used.	N/A
S1A11k.	Not used.	N/A
S1A11m.	Not used.	Not used.
S1A11n.	Not used.	Not used.

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M1. PREFABRICATED WOOD TRUSSES:

Test or Special Inspection	Code References and Notes
M1a: Open Web Truss Fabrication / Inspect fabrication of manufactured open web trusses.	**1704A.5.8.** DSA IR 23-8.
M1b: Metal Plate Truss Fabrication / Inspect fabrication of manufactured metal-plate- connected trusses.	**1704A.5.6, 1705A.5.7.** DSA IR 23-4.

M2. MANUFACTURED ARCHITECTURAL ELEMENTS:

Test or Special Inspection	Code References and Notes
W2a: GLS Timber Fabrication / Fabrication of glued laminated timber.	* See **1705A.5.5** for exceptions
W2b: CLT Fabrication / Inspect fabrication of cross-laminated timber.	**1704A.5.5**
W2c: Mass Timber Erection / Inspect erection of mass timber.	**1705A.5.3.** Item 2
W2d: Connections Type A / Inspect mass timber connections with adhesive anchors installed in a horizontal or upward orientation. Verify use of pre-drilled holes where required, fastener, screws, including diameter, length, head type, spacing, edge distance, and depth.	**1705A.5.3.** Item 1.1, 1.2, 1.3, 2.4, 3.5. For threaded fasteners: Verify that the correct fastener is installed with the proper installation equipment. Verify use of pre-drilled holes where required.
W2e: Connections Type B / Inspect mass timber connections with adhesive anchors installed in a horizontal or upward orientation.	**1705A.5.3.** Item 3.2
W2f: Sealants / Inspect application of sealants or adhesives applied to mass timber elements.	**1705A.20**

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W1. STRUCTURAL MASONRY:

Test or Special Inspection	Code References and Notes
W1a: Material Rated / Mill certificate indicates compliance with requirements for reinforcement, anchors, ties, fasteners and metal accessories. See item C1(b) for identification, sampling and testing of reinforcing steel.	**2103A.4**, TMS 602-16 Article 1.5B.2 & 2.4. * To be performed by qualified LDR representative. Applicable testing by LDR. See IR 17-10.
W1b: Material Certificates / Producer's certificate of compliance for masonry units, mortar and grout materials.	**1705A.4**, **2103A.3**, **2105A.3**, TMS 602 Articles 1.5B.2, 2.1, 2.2, 2.6A and 2.6B, and Table 6 footnote 3.
W1c: Strength Test / Test masonry (fm).	**1705A.4**. For Unit Strength: **2105A.3**, TMS 602 Articles 1.4B.2, 1.5B.1 & 1.5B.2. **For Prism (required when f'm > 2500 psi) 2105A.3**, TMS 602 Articles 1.4B.3, 1.4B.4, 1.5B.1 & 1.5B.2.
W1d: Mortar Proportions / Verify proportions or properties of site-prepared, premixed or preblended mortar.	TMS 602, Table 3 (row 5). Table 4 item 1a. **1705A.4** Pre-construction Submittals (end of this form) for exemptions.)
W1e: Grout Proportions / Verify proportions or properties of site-prepared, premixed or preblended grout.	Default of "Continuous" per **1705A.3.3** approved by DSA. Verify grout meets **minimum f'c required in accordance with** requirements in **Section 1705A.3.3.5**, or as required **per 1705A.3.3.2**. See IR 17-13. Refer to TMS 602 Table 3 and Table 4, Item 4(b). (end of this form for exemptions.)
W1f: Batch Plant Inspection / Batch plant inspection.	**2105A.3.** See Appendix (end of this form) for exemptions.)
W1g: Core Tests / Test core-drilled samples.	**2105A.3.** See Appendix (end of this form) for exemptions.)
W1h: Prisms / Inspect preparation of prisms.	TMS 602 Article 1.4.B.3 & 1.4.B.4 Table 4 Item 4.
W1i: Dowels and Supports / Verify location and condition of all dowels, construction supports, masonry, etc.	TMS 602 Table 4 Item 3.
W1j: Reinforcement and Members / Verify grade and type of reinforcement, connectors, prestressing tendons and bonding. Verify size and location of members.	TMS 602 Table 4. Items 1c & 3c.
W1k: Reinforcement Placement / Inspect placement of reinforcement, anchors, ties, fasteners and metal accessories.	TMS 602 Table 4 Item 2c.
W1l: Grout Placement / Inspect grout placement, consolidation, and reconsolidation.	TMS 602 Table 4 Item 3b.
W1m: Unit Layup and Joints / Inspect placement of units and construction of mortar joints.	TMS 602 Table 4 Item 3b.
W1n: Cold/Hot Weather Work / Verify preparation, construction and protection of masonry during cold weather (temperatures below 40° F) or hot weather (above 90° F).	TMS 602 Table 4 Item 3f. * May be performed by the project inspector when specifically approved by DSA.
W1o: Anchors and Embeds / Inspect type, size and location of anchors and all other items to be embedded in masonry including other details of anchorage of masonry.	TMS 602 Table 4 Item 3d.

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S4A. SHOP WELDING (IN ADDITION TO SECTION S3A):

Test or Special Inspection	Code References and Notes
S4Aa: Weld Category A / Inspect groove welds, multi-pass fillet welds and single-pass fillet welds > 5/16", plug and slot welds.	**Table 1705A.2.1 Items 5a.1-4.** AISC 360 (and AISC 341 as applicable); DSA IR 17-3.
S4Ab: Weld Category B / Inspect single-pass fillet welds ≤ 5/16".	**Table 1705A.2.1 Item 5a.5.** AISC 360 (AISC 341 as applicable); DSA IR 17-3.
S4Ac: End Welded Studs / Inspect end welded studs (ASTM A 108) installation (including bend test).	**2213A.2**, AISC 360 (AISC 341 as applicable); AWS D1.1, Dsa IR 17-3.
S4Ad: Deck Welds / Inspect floor and roof deck welds.	**1705A.2.2, Table 1705A.2.1 Item 5a.6.** AISC 360 (AISC 341 as applicable); AWS D1.3; DSA IR 17-3.
S4Ae: Cold-Formed Steel / Inspect welding of structural cold-formed steel.	**1705A.2.5,** AWS D1.3; DSA IR 17-3. The quality control provisions of AISI S240 Chapter D shall also apply. * May be performed by the project inspector when specifically approved by DSA.
S4Af: Stairs and Railing / Inspect welding of stairs and railing systems.	**1705A.2.1**, AISC 360 (AISC 341 as applicable); AWS D1.1 & D1.3; DSA IR 17-3. * May be performed by the project inspector when specifically approved by DSA.
S4Ag: Reinf. Steel Weldability / Verification of reinforcing steel weldability.	**1705A.3.1**, AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
S4Ah: Reinforcing Steel / Inspect welding of reinforcing steel.	**Table 1705A.3.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1905A.8,** AWS D1.4; DSA IR 17-3.

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W3. OTHER Wood:

Test or Special Inspection	Code References and Notes
W3a.	Not used.	N/A
W3b.	Not used.	N/A
W3c.	Not used.	N/A
W3d.	Not used.	N/A
W3e.	Not used.	N/A
W3f.	Not used.	N/A
W3g.	Not used.	N/A
W3h.	Not used.	N/A
W3j.	Not used.	N/A
W3k.	Not used.	N/A
W3m.	Not used.	Not used.
W3n.	Not used.	Not used.

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W2. OTHER WOOD:

Test or Special Inspection	Code References and Notes
W2a.	Not used.	N/A
W2b.	Not used.	N/A
W2c.	Not used.	N/A
W2d.	Not used.	N/A
W2e.	Not used.	N/A
W2f.	Not used.	N/A
W2g.	Not used.	N/A
W2h.	Not used.	N/A
W2j.	Not used.	N/A
W2k.	Not used.	N/A
W2m.	Not used.	Not used.
W2n.	Not used.	Not used.

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S1A. STEEL JOISTS AND TRUSSES:

Test or Special Inspection	Code References and Notes
S1A7a: Fabrication / Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	**1705A.2.3, Table 1705A.2.1 Items 4 & 5.** AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel. DSA IR 17-3.

S1A. SPRAYED FIRE-RESISTANT MATERIALS:

Test or Special Inspection	Code References and Notes
S1A8a: Surface and Installation / Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify that the material complies with requirements of application with DSA-approved documents.	**1705A.15, 1705A.15.1, 1705A.15.2, 1705A.15.3, 1705A.15.4, 1705A.15.5, 1705A.15.6.**
S1A8b: Density / Test density.	**1705A.15.1, 1705A.15.5, ASTM E605**
S1A8c: Bond: Adhesion/Cohesion / Bond strength adhesion/cohesion.	**1705A.15.1, 1705A.15.6, ASTM E736**

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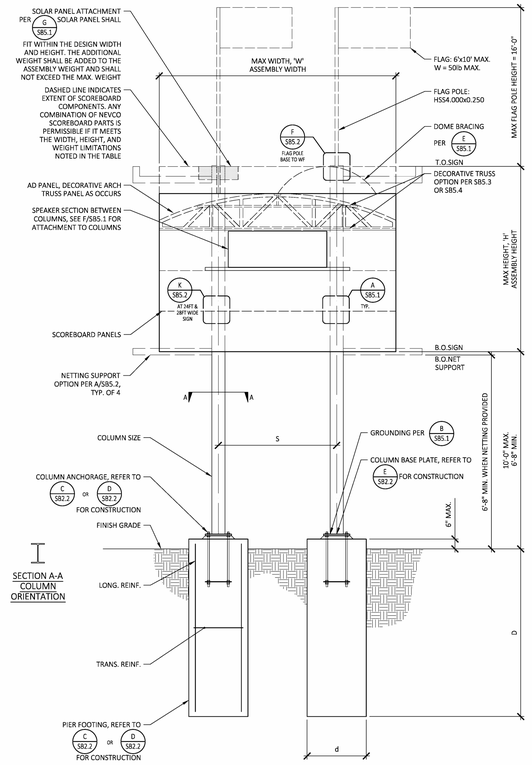
IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Any items indicated on the approved construction documents with a note stating that the items are not part of the DSA-approved scope of work are not listed on this form. Refer to the applicable sections of the appendix to this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special

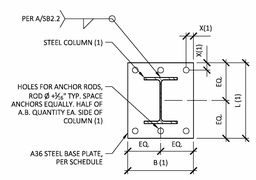
TWO COLUMN ASSEMBLY																		
ASSEMBLY CRITERIA							PIER FOOTING CRITERIA (2)				BASE PLATE				ANCHOR RODS (3)				
ASSEMBLY WIDTH, W	CHECK OPTION THIS APPLICATION	MAX. WEIGHT	ASSEMBLY HEIGHT, H	COLUMN SPACING, S	COLUMN SIZE	COLUMN SIZE, W/O FLAG	PIER DIAMETER, d	DEPTH, D	LONG. REINF.	TRANS. REINF. (1)	THICKNESS, t	WIDTH, B	LENGTH, L	WELD	QUANTITY & DIAMETER	GRADE	EDGE DISTANCE, X	GROUT HEIGHT	EMBED
8'-0"		770 lbs.	≤ 8'-0"	6'-0"	W8x24	W8x24	36"Ø	7'-0"	8 - #6	#4 @ 4½" o.c.	1"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2½"	2"	48"
		1,160 lbs.	≤ 12'-0"	6'-0"	W10x33	W10x33	36"Ø	8'-0"	8 - #6	#4 @ 4½" o.c.	1⅛"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2½"	2"	48"
		1,540 lbs.	≤ 16'-0"	6'-0"	W12x40	W12x40	36"Ø	9'-0"	8 - #6	#4 @ 4½" o.c.	1⅜"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2½"	2"	48"
		1,920 lbs.	≤ 20'-0"	6'-0"	W14x61	W14x61	42"Ø	9'-9"	8- #8	#4 @ 6" o.c.	1½"	24"	24"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
9'-0"		870 lbs.	≤ 8'-0"	8'-0"	W8x24	W8x24	36"Ø	7'-3"	8 - #6	#4 @ 4½" o.c.	1"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2¼"	2"	48"
		1,300 lbs.	≤ 12'-0"	8'-0"	W10x33	W10x33	36"Ø	8'-3"	8 - #6	#4 @ 4½" o.c.	1⅛"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2½"	2"	48"
		1,730 lbs.	≤ 16'-0"	8'-0"	W12x45	W12x40	36"Ø	9'-3"	8 - #6	#4 @ 4½" o.c.	1⅜"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2¼"	2"	48"
		2,160 lbs.	≤ 20'-0"	8'-0"	W14x61	W14x61	42"Ø	10'-0"	8 - #8	#4 @ 6" o.c.	1½"	24"	24"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
10'-0"		960 lbs.	≤ 8'-0"	8'-0"	W8x24	W8x24	36"Ø	7'-6"	8 - #6	#4 @ 4½" o.c.	1"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2¼"	2"	48"
		1,440 lbs.	≤ 12'-0"	8'-0"	W10x33	W10x33	36"Ø	8'-6"	8 - #6	#4 @ 4½" o.c.	1⅛"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2½"	2"	48"
		1,920 lbs.	≤ 16'-0"	8'-0"	W14x48	W14x48	42"Ø	9'-9"	8 - #6	#4 @ 4½" o.c.	1⅜"	24"	24"	⅜	(4) - 1¼"Ø	F1554 - GR.105	2½"	2"	48"
		2,400 lbs.	≤ 20'-0"	8'-0"	W14x61	W14x61	48"Ø	9'-9"	8 - #8	#4 @ 6" o.c.	1½"	24"	24"	⅜	(4) - 1¼"Ø	F1554 - GR.105	2½"	2"	64"
12'-0"	X	1,160 lbs.	≤ 8'-0"	8'-0"	W10x30	W10x30	36"Ø	8'-0"	8 - #6	#4 @ 4½" o.c.	1"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2¼"	2"	48"
		1,730 lbs.	≤ 12'-0"	8'-0"	W14x43	W14x43	42"Ø	9'-3"	8 - #6	#4 @ 4½" o.c.	1⅛"	24"	24"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2½"	2"	48"
		2,310 lbs.	≤ 16'-0"	8'-0"	W14x61	W14x53	42"Ø	10'-3"	8 - #8	#4 @ 4½" o.c.	1⅜"	24"	24"	⅜	(6) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
		2,880 lbs.	≤ 20'-0"	8'-0"	W14x61	W14x61	48"Ø	10'-3"	8- #8	#4 @ 6" o.c.	1½"	24"	24"	⅜	(6) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
16'-0"		1,540 lbs.	≤ 8'-0"	8'-0"	W10x33	W10x33	36"Ø	8'-9"	8 - #6	#4 @ 4½" o.c.	1⅛"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2½"	2"	48"
		2,310 lbs.	≤ 12'-0"	8'-0"	W12x40	W12x40	36"Ø	10'-3"	8 - #6	#4 @ 4½" o.c.	1½"	24"	24"	⅜	(6) - 1¼"Ø	F1554 - GR.55	2½"	2"	48"
		3,080 lbs.	≤ 16'-0"	8'-0"	W14x61	W14x61	48"Ø	12'-0"	8 - #8	#4 @ 6" o.c.	1⅜"	24"	24"	⅜	(6) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
		3,840 lbs.	≤ 20'-0"	8'-0"	W16x77	W16x67	48"Ø	12'-0"	12- #8	#4 @ 6" o.c.	1⅝"	24"	30"	½	(6) - 1¼"Ø	F1554 - GR.105	2½"	2"	64"
18'-0"		1,730 lbs.	≤ 8'-0"	10'-0"	W12x35	W12x35	36"Ø	9'-0"	8 - #6	#4 @ 4½" o.c.	1⅛"	20"	20"	⅜	(4) - 1¼"Ø	F1554 - GR.36	2¼"	2"	48"
		2,600 lbs.	≤ 12'-0"	10'-0"	W14x48	W14x43	42"Ø	10'-0"	8 - #8	#4 @ 6" o.c.	1½"	24"	24"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
		3,460 lbs.	≤ 16'-0"	10'-0"	W14x61	W14x61	48"Ø	10'-9"	8 - #8	#4 @ 6" o.c.	1⅝"	24"	24"	⅜	(6) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
		4,320 lbs.	≤ 20'-0"	10'-0"	W16x77	W16x77	48"Ø	13'-0"	12- #8	#4 @ 6" o.c.	1⅞"	24"	30"	⅝	(6) - 1½"Ø	F1554 - GR.55	3"	2"	64"
24'-0"		2,310 lbs.	≤ 8'-0"	14'-0"	W14x43	W14x43	36"Ø	9'-9"	8 - #6	#4 @ 4½" o.c.	1⅛"	24"	24"	⅜	(4) - 1¼"Ø	F1554 - GR.55	2½"	2"	48"
		3,460 lbs.	≤ 12'-0"	14'-0"	W14x61	W14x61	36"Ø	11'-6"	8 - #8	#4 @ 6" o.c.	1⅜"	24"	24"	⅜	(6) - 1¼"Ø	F1554 - GR.55	2½"	2"	64"
		4,610 lbs.	≤ 16'-0"	14'-0"	W16x67	W16x67	48"Ø	11'-9"	12 - #8	#4 @ 6" o.c.	1⅝"	24"	30"	⅛	(4) - 1½"Ø	F1554 - GR.55	3"	2"	64"
		5,760 lbs.	≤ 20'-0"	14'-0"	W18x86	W18x86	48"Ø	13'-3"	12 - #8	#4 @ 6" o.c.	1¾"	24"	30"	⅝	(6) - 1½"Ø	F1554 - GR.55	3"	2"	64"
		6,920 lbs.	≤ 24'-0"	14'-0"	W18x130	W18x119	48"Ø	14'-6"	12 - #8	#4 @ 6" o.c.	2"	24"	30"	CJP	(6) - 1½"Ø	F1554 - GR.105	3"	2"	64"
		8,070 lbs.	≤ 28'-0"	14'-0"	W18x158	W18x143	54"Ø	16'-0"	12 - #8	#4 @ 6"o.c.	2½"	24"	36"	CJP	(6) - 2"Ø	F1554 - GR.105	4"	2"	64"
28'-0"		2,690 lbs.	≤ 8'-0"	14'-0"	W14x43	W14x43	42"Ø	10'-0"	8 - #7	#4 @ 4½" o.c.	1½"	24"	24"	⅜	(4) - 1½"Ø	F1554 - GR.55	2½"	2"	64"
		4,040 lbs.	≤ 12'-0"	14'-0"	W14x61	W14x61	48"Ø	11'-3"	8 - #8	#4 @ 6" o.c.	1⅜"	24"	30"	⅜	(4) - 1½"Ø	F1554 - GR.55	3"	2"	64"
		5,380 lbs.	≤ 16'-0"	14'-0"	W16x77	W16x67	48"Ø	12'-9"	12 - #8	#4 @ 6" o.c.	2"	24"	30"	½	(6) - 1½"Ø	F1554 - GR.55	3"	2"	64"
		6,720 lbs.	≤ 20'-0"	14'-0"	W18x97	W18x97	48"Ø	14'-3"	12 - #8	#4 @ 6" o.c.	2"	24"	30"	CJP	(6) - 1½"Ø	F1554 - GR.105	3"	2"	64"
		8,070 lbs.	≤ 24'-0"	14'-0"	W18x143	W18x143	54"Ø	15'-9"	12 - #8	#4 @ 6" o.c.	2½"	24"	36"	CJP	(6) - 2"Ø	F1554 - GR.105	4"	2½"	64"
		9,410 lbs.	≤ 28'-0"	14'-0"	W18x175	W18x175	54"Ø	16'-6"	14 - #8	#4 @ 6"o.c.	3"	24"	36"	CJP	(6) - 2"Ø	F1554 - GR.105	4"	2½"	64"

NOTES: (#)
1. CONTRACTOR OPTION TO PROVIDE TIES OR SPIRAL REINFORCING. SEE C/SB2.2 FOR TIE OPTION, SEE D/SB2.2 FOR SPIRAL OPTION
2. CONTRACTOR IS RESPONSIBLE FOR CASING PIERS AND DRILLING SEQUENCING TO PROTECT PIER EXCAVATION
3. F1554 FULLY THREADED ROD IS AN ACCEPTABLE ALTERNATE TO ANCHOR RODS



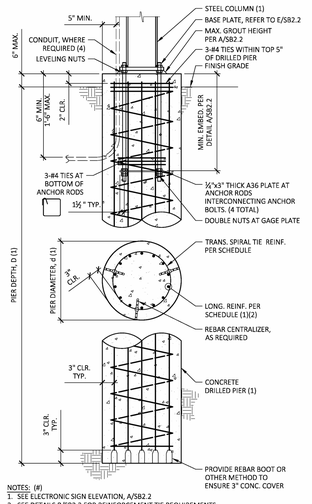
ELEVATION

TWO COLUMN SCOREBOARD INSTALLATION
N.T.S. — A



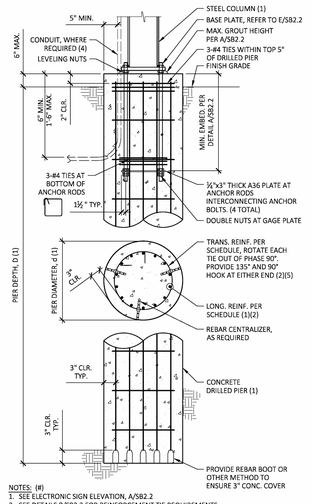
NOTES: (#)
1. SEE SCOREBOARD ELEVATION, A/SB2.2

BASE PLATE
N.T.S. — E



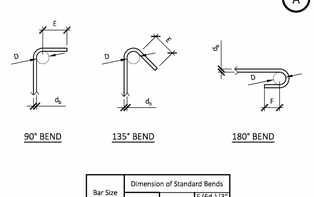
NOTES: (#)
1. SEE ELECTRONIC SIGN ELEVATION, A/SB2.2
2. SEE DETAILS B/SB2.2 FOR REINFORCEMENT TIE REQUIREMENTS
3. DO NOT SPLICE REINFORCEMENT.
4. LOCATION OF CONDUIT APPROACH SHOWN GRAPHICALLY ONLY FOR REFERENCE, VERIFY ACTUAL CONDITIONS IN FIELD. (2)-2" NOMINAL CONDUIT MAX. SPACE CONDUIT 6"o.c. MIN.
5. TIE SHALL OVERLAP ITSELF A MINIMUM OF 6" AND HOOK AT VERTICAL BARS. MAXIMUM OF THREE VERTICAL BAR SPACINGS BETWEEN HOOKS

CONCRETE DRILLED PIER
N.T.S. — D



NOTES: (#)
1. SEE ELECTRONIC SIGN ELEVATION, A/SB2.2
2. SEE DETAILS B/SB2.2 FOR REINFORCEMENT TIE REQUIREMENTS
3. DO NOT SPLICE REINFORCEMENT.
4. LOCATION OF CONDUIT APPROACH SHOWN GRAPHICALLY ONLY FOR REFERENCE, VERIFY ACTUAL CONDITIONS IN FIELD. (2)-2" NOMINAL CONDUIT MAX. SPACE CONDUIT 6"o.c. MIN.
5. TIE SHALL OVERLAP ITSELF A MINIMUM OF 6" AND HOOK AT VERTICAL BARS. MAXIMUM OF THREE VERTICAL BAR SPACINGS BETWEEN HOOKS

CONCRETE DRILLED PIER
N.T.S. — C



Bar Size	Dimension of Standard Bends		
	D	E	F ($6d_b$) [3" min.]
#4	2"Ø	3"	3"

TIE AND STIRRUP BENDS
N.T.S. — B

TESTING AND SPECIAL INSPECTION REQUIREMENTS (EXEMPT TYPE 1 - SOILS: ELIGIBLE DEEP FOUNDATION ELEMENTS)

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
P: (619) 223-2400
F: (619) 223-3017

All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

ARCHITECT / CONSULTANT STAMP

BUEHLER

REGISTERED PROFESSIONAL ENGINEER
DANIEL E. PADILLA
No. 5405
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 04.11.2025
PC SEISM SEAL

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THANK YOU FOR YOUR INTEREST IN NEVCO SCOREBOARD PRODUCTS

CONSULTANT LOGO

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301 East Harris Avenue, Greenville, Illinois 62246
Phone: (618) 664-0360
www.nevco.com

CLIENT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-124534 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 05/14/2025
DSA STAMP

PRE-CHECK (PC) DOCUMENT
CODE: 2022

A separate project application for construction is required.

TWO COLUMN CAISSON - BOLTED

SHEET INFORMATION

DATE	04.11.2025
DRAWN	JMK
CHECKED	MEP
SSG JOB #	S23109
SHEET	SB2.2

RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

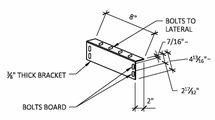
DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

MARQUEE - TWO COLUMN CAISSON - BOLTED

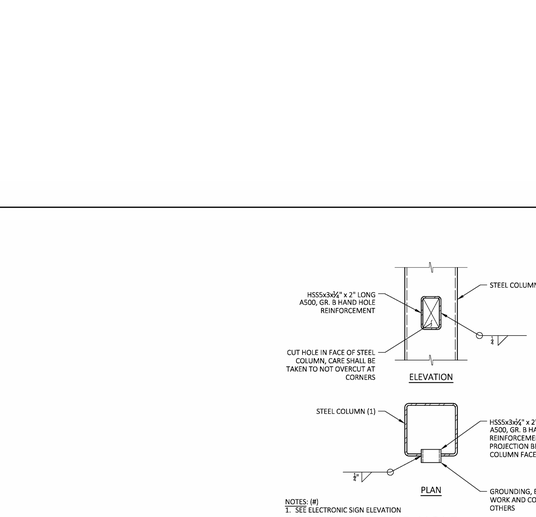
PC104

Autodesk Docs://Buehler Rec Rds - Building & Site Rehabilitation/24203.10_Rancho Del Rey MS_Building & Site_detached_central_2026.rvt



L BRACKET - B

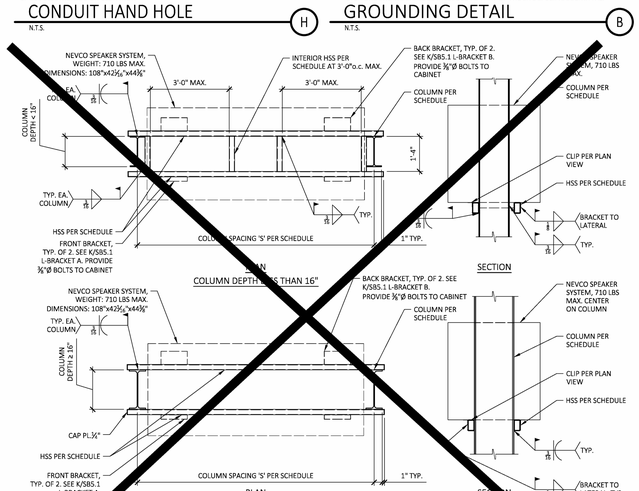
F_y = 50 ksi



NOTES: (#)
1. SEE ELECTRONIC SIGN ELEVATION

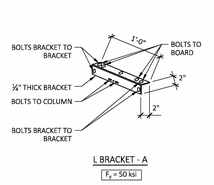
CONDUIT HAND HOLE (H)

N.T.S.



HSS SCHEDULE

COLUMN SPACING, S	HSS SIZE
10'-0"	HSS4x3x¼ LLV
12'-0"	HSS4x3x5⁄16 LLV
14'-0"	HSS4x3x⅜ LLV

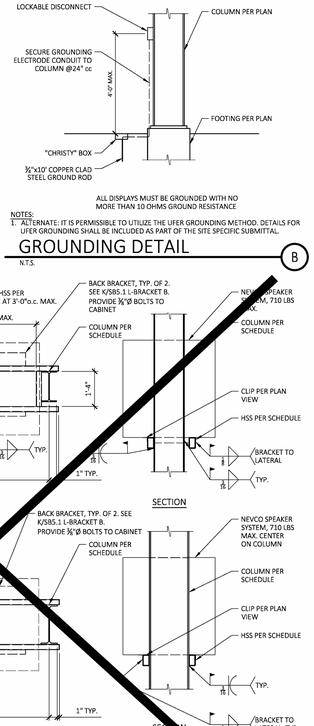


L BRACKET - A

F_y = 50 ksi

L BRACKETS (K)

N.T.S.

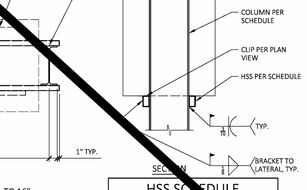


ALL DISPLAYS MUST BE GROUNDED WITH NO MORE THAN 10 OHMS GROUND RESISTANCE

NOTES:
1. ALTERNATE: IT IS PERMISSIBLE TO UTILIZE THE UFER GROUNDING METHOD. DETAILS FOR UFER GROUNDING SHALL BE INCLUDED AS PART OF THE SITE SPECIFIC SUBMITTAL.

GROUNDING DETAIL (B)

N.T.S.

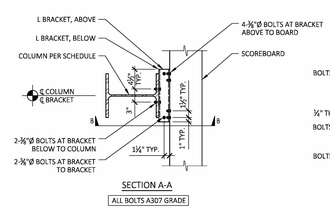


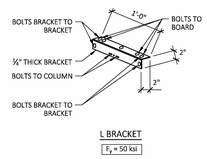
L BRACKET - A

F_y = 50 ksi

L BRACKETS (K)

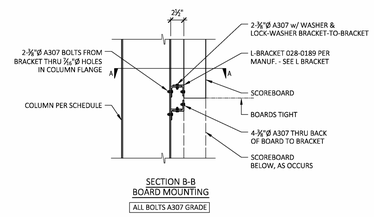
N.T.S.





L BRACKET

F_y = 50 ksi

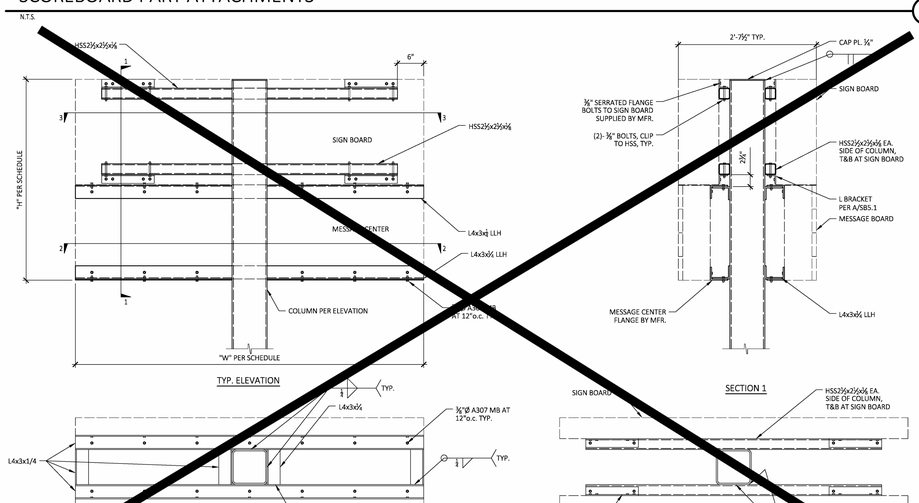


SECTION B-B
BOARD MOUNTING

ALL BOLTS A307 GRADE

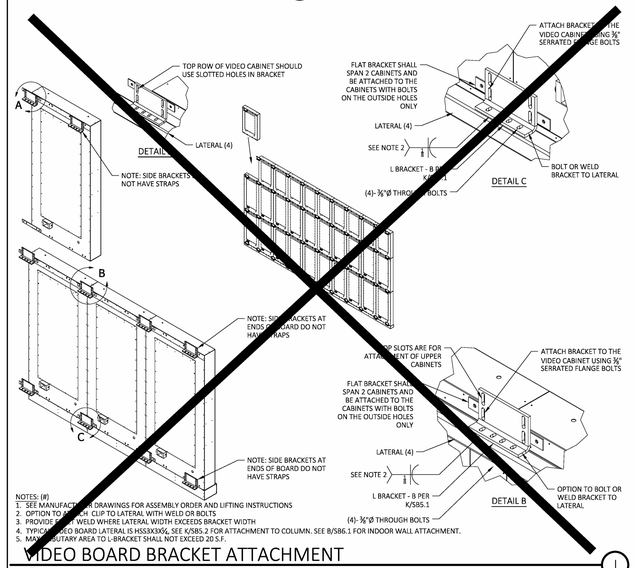
SCOREBOARD PART ATTACHMENTS (A)

N.T.S.



MARQUEE CENTER INSTALLATION (D)

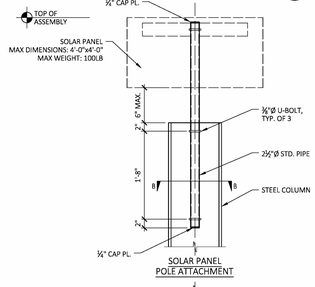
N.T.S.

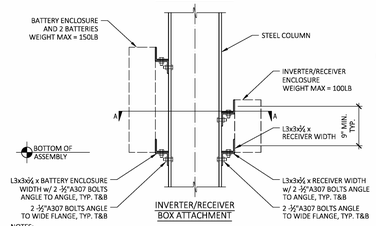


NOTES: (#)
1. SEE MANUFACTURER DRAWINGS FOR ASSEMBLY ORDER AND LIFTING INSTRUCTIONS
2. OPTION TO PUNCH CLIP TO LATERAL WITH WELD OR BOLTS
3. PROVIDE FILLET WELD WHERE LATERAL WIDTH EXCEEDS BRACKET WIDTH
4. TYPICAL VIDEO BOARD LATERAL IS HSS3X3X5⁄16, SEE K/SB5.2 FOR ATTACHMENT TO COLUMN. SEE B/SB6.1 FOR INDOOR WALL ATTACHMENT.
5. MAXIMUM TRIBUTARY AREA TO L-BRACKET SHALL NOT EXCEED 20 S.F.

VIDEO BOARD BRACKET ATTACHMENT (J)

N.T.S.

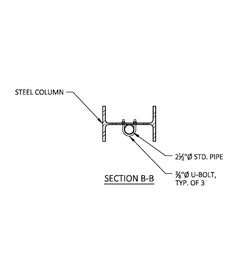


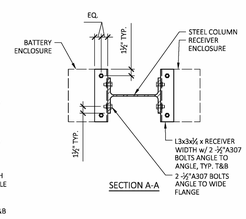


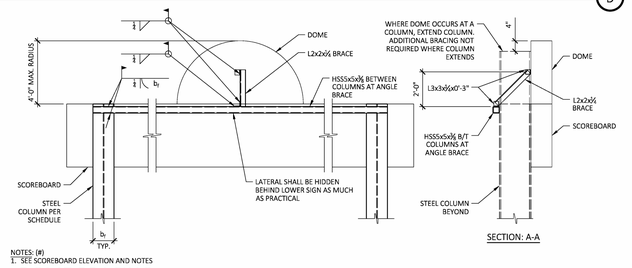
NOTES:
1. THE SOLAR PANEL, BATTERIES AND ENCLOSURE, AND INVERTER/RECEIVER DIMENSIONS SHALL FIT WITHIN THE PERMITTED EXTENT OF SCOREBOARD AS INDICATED IN THE SCOREBOARD ELEVATION AND SCHEDULE.
2. THE SOLAR PANEL, BATTERIES AND ENCLOSURE, AND INVERTER/RECEIVER WEIGHT ALONG WITH ALL OTHER SCOREBOARD COMPONENTS SHALL NOT EXCEED THE WEIGHT INDICATED IN THE SCOREBOARD SCHEDULE.

SOLAR PANEL/BATTERY/ INVERTER/RECEIVER ATTACHMENT (G)

N.T.S.







NOTES: (#)
1. SEE SCOREBOARD ELEVATION AND NOTES

DOME BRACING (E)

N.T.S.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

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1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
P: (619) 223-2400
F: (619) 223-3017

All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

BUEHLER

REGISTERED PROFESSIONAL ENGINEER
MICHAEL E. PADILLA
No. 5405
STRUCTURAL
STATE OF CALIFORNIA

PE SEISMIC SEAL

DATE SIGNED: 04.11.2025

THESE DRAWINGS, NOTES AND DETAILS ARE INSTRUMENTS OF SERVICE AND ARE THE PROPERTY OF BUEHLER ENGINEERING INC. ALL DRAWINGS, INFORMATION, SPECIFICATIONS, IDEAS, DESIGNS AND ARRANGEMENTS REPRESENTED WITHIN THESE DOCUMENTS SHALL NOT BE USED BY ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER. COPYRIGHT 2025.
THANK YOU FOR YOUR INTEREST IN NEVCO SCOREBOARD PRODUCTS.

nevco
301 East Harris Avenue, Greenville, Illinois 62246
Phone: (618) 664-0360
www.nevco.com

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-124534 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 05/14/2025

DSA STAMP

PRE-CHECK (PC) DOCUMENT
CODE: 2022

A separate project application for construction is required.

ATTACHMENT DETAILS

SHEET INFORMATION

DATE	04.11.2025
DRAWN	JMK
CHECKED	MEP
BNG JOB #	S23109
SHEET	SB5.1

LICENSED ARCHITECT
CHRISTOPHER M. HOLAKIEWICH
No. C 31100
REN 06-30-27
STATE OF CALIFORNIA

ARCHITECT / CONSULTANT STAMP

CONSULTANT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

CLIENT LOGO

RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

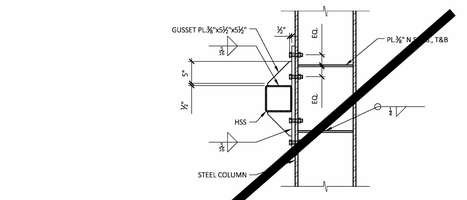
DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

MARQUEE - ATTACHMENT DETAILS

PC105

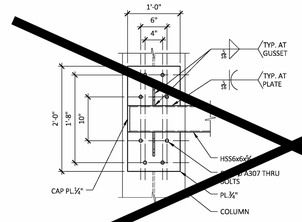
Autodesk Docs://Rancho Del Rey MS - Building & Site Rehabilitation/Rancho Del Rey MS - Building & Site Rehabilitation_CM_ENG.rvt 10/1/2025 7:36:40 AM



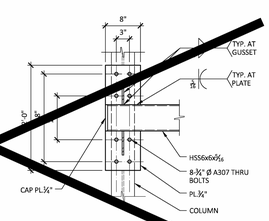
NET MOUNT PLATE

N.T.S.

E



COLUMN WIDTH GREATER THAN OR EQUAL TO 9"

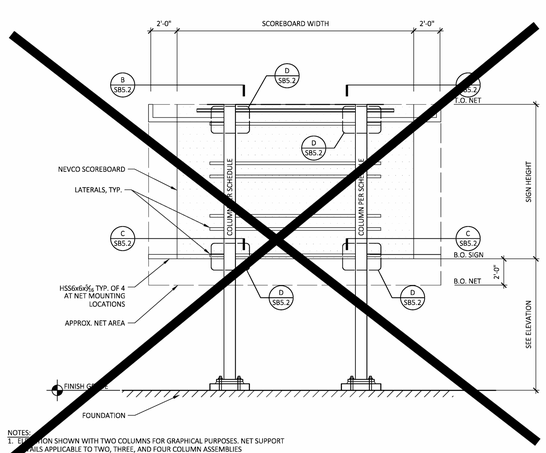


COLUMN WIDTH LESS THAN

NET MOUNT PLATE

N.T.S.

D

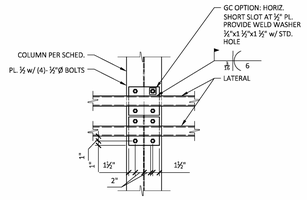


NOTES:
1. ELEVATION SHOWN WITH TWO COLUMNS FOR GRAPHICAL PURPOSES. NET SUPPORT DETAILS APPLICABLE TO TWO, THREE, AND FOUR COLUMN ASSEMBLIES

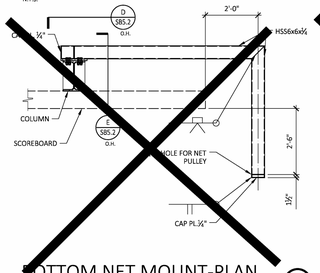
SCOREBOARD NETTING SUPPORTS

N.T.S.

A



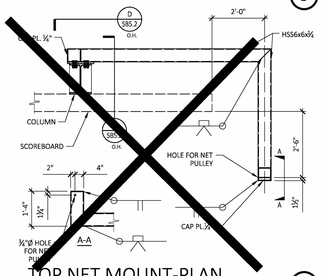
ELEVATION: OPTION C&D-BOLTED LATERAL



BOTTOM NET MOUNT-PLAN

N.T.S.

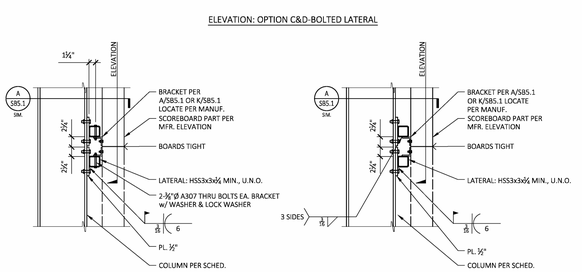
C



TOP NET MOUNT-PLAN

N.T.S.

B



OPTION C: LATERAL BOLTED/CLIP BOLTED

OPTION D: LATERAL BOLTED/CLIP WELDED

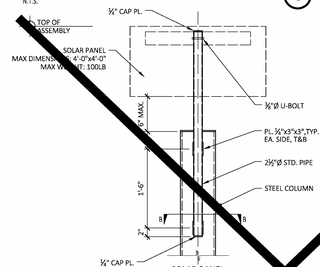
OPTION A: LATERAL WELDED/CLIP BOLTED

OPTION B: LATERAL WELDED/CLIP WELDED

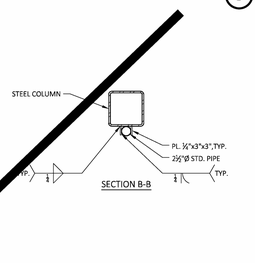
LATERAL/BOARD ATTACHMENT

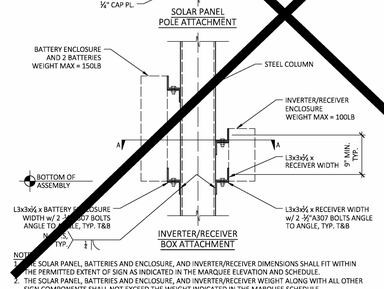
N.T.S.

K

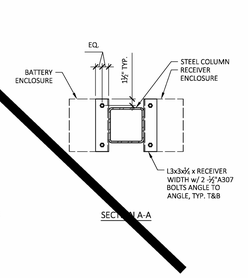


SOLAR PANEL POLE ATTACHMENT





INVERTER/RECEIVER BOX ATTACHMENT

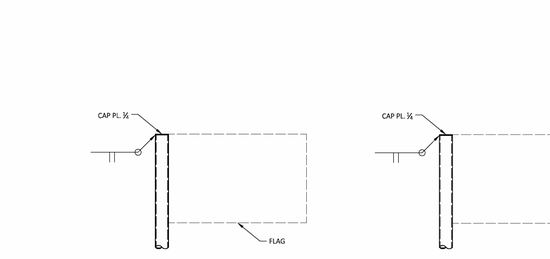


NOTES:
1. THE SOLAR PANEL, BATTERIES AND ENCLOSURE, AND INVERTER/RECEIVER DIMENSIONS SHALL FIT WITHIN THE PERMITTED EXTENT OF SIGN AS INDICATED IN THE MARQUEE ELEVATION AND SCHEDULE.
2. THE SOLAR PANEL, BATTERIES AND ENCLOSURE, AND INVERTER/RECEIVER WEIGHT ALONG WITH ALL OTHER SIGN COMPONENTS SHALL NOT EXCEED THE WEIGHT INDICATED IN THE MARQUEE SCHEDULE.

SOLAR PANEL/BATTERY/ INVERTER/RECEIVER ATTACHMENT

N.T.S.

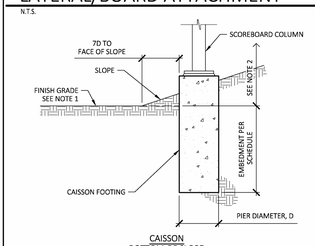
H



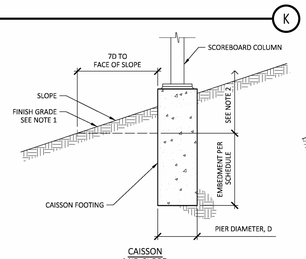
FLAG POLE COLUMN TO WF BEAM

N.T.S.

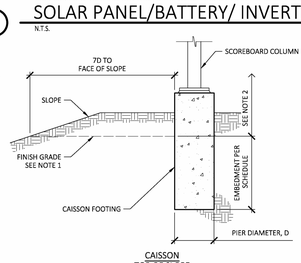
F



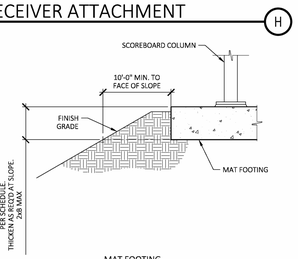
CAISSON BOTTOM OF SLOPE



CAISSON MID-SLOPE



CAISSON TOP OF SLOPE



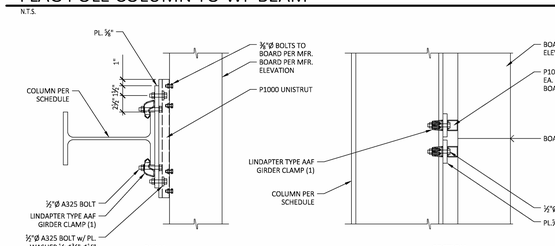
MAT FOOTING

NOTES:
1. REFERENCE FINISH GRADE FOR DETERMINATION OF MAXIMUM SCOREBOARD HEIGHT.
2. SEE TYPICAL SCOREBOARD INSTALLATION DETAIL FOR MAXIMUM ASSEMBLY HEIGHT AND CLEARANCE TO BOTTOM OF SCOREBOARD.

DISTANCE TO SLOPE

N.T.S.

J



NOTES: (#)
1. LAK#350 CLAMP WITH ROCKING WASHER - INSTALL PER ICC ESR-3976

ALTERNATE BOARD ATTACHMENT

N.T.S.

G

S:\2023\23109\03 PRODUCTION\03 DRAWINGS\S23109 - DET - SB5.2.DWG

Authorized Print Officer for Dist./Div./Bureau & Title
Print Authorization Date: 02/17/2026 10:41:00 AM
Print Authorization Code: 2026021710410000

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
P: (619) 223-2400
F: (619) 223-3017

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ARCHITECT / CONSULTANT STAMP

LICENSED ARCHITECT
ERIC M. HOLAKIEWICH
NO. C 31100
REN 06-30-27
STATE OF CALIFORNIA

CONSULTANT LOGO

BUEHLER

REGISTERED PROFESSIONAL ENGINEER
MICHAEL E. PADILLA
No. 5405
STRUCTURAL
STATE OF CALIFORNIA

PE SEISMIC SEAL

DATE SIGNED: 04.11.2025

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APP: 04-124534 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐ CG ☐
DATE: 05/14/2025

DSA STAMP

PRE-CHECK (PC) DOCUMENT
CODE: 2022

A separate project application for construction is required.

OPTIONAL SCOREBOARD FEATURE ATTACHMENT DETAILS

SHEET INFORMATION

DATE	04.11.2025
DRAWN	JMK
CHECKED	MEP
DSG JOB #	S23109
SHEET	SB5.2

CLIENT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

MARQUEE - OPTIONAL FEATURE ATTACHMENT DETAILS

PC106

PRECHECK FABRIC SHADE STRUCTURE II

FOR CUSTOM CANOPIES

PROJECT DIRECTORY

OWNER
CUSTOM CANOPIES INC.
11815 BURKE STREET
SANTA FE SPRINGS, CA 90670
T: (562) 464-4766
F: (562) 464-4770
CONTACT: STEVE GRAAF

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CONTACT: RON EDWARDS

STRUCTURAL
JAMES L. MITCHELL
220 CHERRY LAUREL LANE
KYLE, TX 78640
T: (936) 446-9999

SHEET INDEX

SHT	SHEET INDEX	
	ARCHITECTURAL:	
T001	TITLE SHEET & CAL-FIRE MATERIAL CERT.	
T002	T&I GUIDELINE	2 SHEETS
	STRUCTURAL:	
S1.1	GENERAL NOTES & TYPICAL DETAILS	
S1.2	GENERAL NOTES & TYPICAL DETAILS	
S1.3	GENERAL NOTES & TYPICAL DETAILS	
~~HG2020-1~~	~~20'X20'X12' HIP CANOPY DRAWINGS~~	
~~HG2020-2~~	~~20'X20'X12' HIP CANOPY DRAWINGS~~	
~~HG2020-3~~	~~20'X20'X12' HIP CANOPY DRAWINGS~~	
~~HG3030-1~~	~~30'X30'X12' HIP CANOPY DRAWINGS~~	
~~HG3030-2~~	~~30'X30'X12' HIP CANOPY DRAWINGS~~	
~~HG3030-3~~	~~30'X30'X12' HIP CANOPY DRAWINGS~~	
~~HG4030-1~~	~~40'X30'X12' HIP CANOPY DRAWINGS~~	
~~HG4030-2~~	~~40'X30'X12' HIP CANOPY DRAWINGS~~	
~~HG4030-3~~	~~40'X30'X12' HIP CANOPY DRAWINGS~~	
HS3030-1	30'X30'X14'/16' HYPAR SHADE DRAWINGS	
HS3030-2	30'X30'X14'/16' HYPAR SHADE DRAWINGS	
HS3030-3	30'X30'X14'/16' HYPAR SHADE DRAWINGS	
~~TS3030-1~~	~~30'X30'X14'/16' TRIANGULAR SHADE DRAWINGS~~	
~~TS3030-2~~	~~30'X30'X14'/16' TRIANGULAR SHADE DRAWINGS~~	
~~TS3030-3~~	~~30'X30'X14'/16' TRIANGULAR SHADE DRAWINGS~~	~~18 SHEETS~~
TOTAL		20 SHEETS

MATERIAL SPECIFICATIONS - SEE ALSO SHEETS S1.1 & S1.2

1. MATERIAL WIRE ROPE CLIPS
   - 1.A. CABLE CLIPS SHALL BE FORGED STEEL PER FEDERAL INSPECTION FF-C-40 TYPE 1, CLASS 2 INSTALLED WITH THE U-BOLT ON THE CABLE DEAD END
   - 1.B. BOLT TORQUE FOR $\frac{1}{4}$"Ø CALBE CLIPS = 15 lb-ft, FOR $\frac{5}{16}$"Ø CABLE CLIPS = 30 lb-ft.
2. BOLT HOLES
   - 2.A. BOLT HOLE DIAMETERS SHALL BE $\frac{1}{8}$" MAX. LARGER THAN THE BOLT DIAMETER.
   - 2.B. ALL BOLTS SHALL BE INSTALLED WITH LOCK WASHERS.
3. CORROSION PROTECTION
   - 3.A. STEEL TUBE ROOF MEMBER SHALL BE TRIPLE COATED USING IN-LINE ZINC ELECTROPLATING PER ASTM E-6 AND THEN POWDER COATED WITH A TGIC POLYESTER TOP COAT.
   - 3.B. STEEL PIPE COLUMNS SHALL BE POWDER COATED WITH A TGIC POLYESTER PRIMER AND TOP COAT.
   - 3.C. ZINC SPELTER CONFORMS TO ASTM B-6 HIGH GRADE ZINC.
4. FABRIC MATERIAL
   - 4.A. FABRIC MATERIAL SHALL BE EXTRA BLOCK.
   - 4.B. THE FABRIC SHALL BE MANUFACTURED FROM HIGH DENSITY POLYETHYLENE POLYMER.
   - 4.C. MIN. WEIGHT - 8.3 oz/sq.yd
     FABRIC THICKNESS - 50.4 mil.
   - 4.D. MIN. BREAKING STRENGTH PER ASTM D 5034: WARP = 165 lbs., WEFT = 260 lbs.
   - 4.E. MAX. ELONGATION WARP = 115%, WEFT = 76%.
   - 4.F. MIN. TEAR STRENGTH PER ASTM D 2261: WARP = 26 lbs., WEFT = 26 lbs
   - 4.G. FIRE RETARDANT RATING PER CSFM - TITLE 19, (REGISTRATION #: ALNET EXTRA BLOCK SHADECLOTH - F94501)
   - 4.H. THE FABRIC SHALL BE CAPABLE OF MAINTAINING 80% OF IT'S TENSILE AND TEARING STRENGTH AFTER EXPOSURE TO A 313NM LIGHT SOURCE APPLIED FOR 500 HOURS AND WHILE MOISTENED FOR 1 HOUR EVERY 12 HOURS PER ASTM G53. THE FABRIC SHALL REQUIRE ANNUAL INSPECTION AND MAINTENANCE.
   - 4.I. THE FABRIC SHALL MAINTAIN AT LEAST 50% OF IT'S ORIGINAL BREAKING STRENGTH AFTER 5 YEARS OF EXPOSURE TO SUNLIGHT.
5. STANDARD NOTES
   - 5.A. ALL WORK SHALL CONFORM TO 2022 EDITION TITLE 24, CALIFORNIA CODE OF REGULATION (CCR)
   - 5.B. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 (CCR)
   - 5.C. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE (CCR). MINIMUM CLASS 2 PROJECT INSPECTOR FOR THE PROJECT.
   - 5.D. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TEST AND INSPECTIONS FOR THE PROJECT.
   - 5.E. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH THE TITLE24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD) OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA.
   - 5.F. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND REQUIREMENTS AND ENVIROMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

APPLICABLE CODES

2022 California Administrative Code (CAC), Part 1, Title 24 CCR2022 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 CCR2022 California Plumbing Code (CPC), Part 5, Title 24 CCR
2022 California Energy Code, 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

APPLICABLE STANDARDS
For a list of applicable standards, including California amendments to the NFPA Standards, refer to CBC Chapter 35 and CFC Chapter 80.

GENERAL NOTES

1. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH CFC CHAPTER 33 AND CBC CHAPTER 33.

FLAME RETARDANT

Fabric Registration

LICENSE NUMBER: F-094501

EXTRA BLOCK SHADECLOTH

Product Marketed by:
ALNET PTY (LTD)
MOORSOM AVENUE, EPPING, INDUSTRY II
CAPE TOWN, S. AFRICA, ,

Issue Date : 03/06/2023
Expiration Date : 06/30/2024

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code. The scope of the approved use of this product is provided in the current edition of the CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS published by the California State Fire Marshal.

Issued By Cortney Walker
Fire Engineering License Manager
Fire Engineering & Investigations Division

Reviewed and Approved By Patricia Setter
Deputy State Fire Marshal III
Fire Engineering & Investigations Division

OFFICE OF THE STATE FIRE MARSHAL

Please visit calfire.govmotus.org for more information on Licensing and Permitting with CAL FIRE

Page 1 of 1

DESIGN PARAMETER CHECKLIST FOR OTC REVIEW

THE FOLLOWING CHECKLIST IS INTENDED TO ASSIST THE PLAN REVIEWER TO DETERMINE IF THIS PRE-CHECKED SUBMITTAL IS APPLICABLE TO THE SITE SPECIFIC CONDITIONS IN WHICH IT IS INTENDED TO BE USED. IT IS THE SITE APPROVAL ARCHITECT'S RESPONSIBILITY TO FILL IN THE APPROPRIATE BOXES AND CONFIRM SITE CONDITIONS. IF THIS CHECKLIST CANNOT BE COMPLETED, ADDITIONAL ENGINEERING PROVING SITE-SPECIFIC COMPLIANCE IS REQUIRED.

THIS PRE-CHECKED SUBMITTAL IS APPLICABLE UNDER THE FOLLOWING CIRCUMSTANCES:

- ☐ NONE OF THE STRUCTURAL DESIGN CRITERIA ARE EXCEEDED
- ☐ THE RISK CATEGORY IS 'II' OR LESS
- ☐ THE WIND EXPOSURE CATEGORY IS 'C'
- ☐ THE PROJECT SITE BASIC ULTIMATE WIND SPEED IS <100mph
- ☐ THE PROJECT SITE CLASS CATEGORY IS 'D'
- ☐ THE PROJECT SEISMIC DESIGN CATEGORY IS 'E'
- ☐ THE PROJECT SEISMIC SDS IS MAXIMUM 2.40
- ☐ THE PROJECT SITE IS NOT IN A FLOOD ZONE OTHER THAN ZONE 'X'. IF SO, THEN A GEOTECHNICAL LETTER IS REQUIRED PER IR PC-4 1.7.2.
- ☐ THE PROJECT SITE IS NOT IN AN AREA WITH SNOW LOADING EXCEEDING 5 PSF.
- ☐ THE PROJECT IS DESIGNED FOR VERY HIGH FIRE HAZARD SEVERITY ZONE (AREAS PER CBC CHAPTER 7A.
- ☐ THE ALLOWABLE SOIL BEARING PRESSURE IS 1500psf OR GREATER
- ☐ IF THE CANOPY SIZE IS <1600s.f. IN AREA, NO GEOTECHNICAL/GEOHAZARDS REPORT IS REQUIRED.
- ☐ IF THE CANOPY SIZE IS >1600s.f. AND <4000s.f. AND THERE IS A GEOTECHNICAL REPORT PROVING THAT NO POTENTIAL FOR LIQUIFICATION EXISTS, NO GEOHAZARDS REPORT IS REQUIRED.
- ☐ IF THE CANOPY SIZE IS >4000s.f., A SITE SPECIFIC GEOTECHNICAL/GEOHAZARD REPORT IS REQUIRED GEOTECHNICAL/GEOHAZARD REPORT REQUIRED IN MAPPED GEOLOGIC HAZARD ZONES AND AS REQUIRED BY IR A-4.
- ☐ THE CANOPY SIZE PROVIDES THE MAXIMUM REQUIRED AREA FOR SELECTED ASSEMBLY USE AND DESIRED OCCUPANCY LOAD (SEE ASSEMBLY USE CHECKLIST)
- ☐ THE PROJECT IS NOT INTENDED TO PROVIDE SOLAR PANELS
- ☐ THE PROJECT DOES NOT INCLUDE FIRE SPRINKLERS.

ASSEMBLY USE SELECTION CHECKLIST

THE FOLLOWING CHECKLIST IS TO BE USED BY THE PARTY SUBMITTING THIS PRE-CHECK TO INDICATE THE INTENDED ASSEMBLY USE FOR THIS STRUCTURE.

- ☒ DINING CANOPY - ASSEMBLY USE - 'A2'
- ☐ SHADE STRUCTURE - ASSEMBLY USE - 'A'
- ☐ SHADE STRUCTURE - OUTDOOR INSTRUCTIONAL USE - ASSEMBLY USE - 'E'
- ☐ SHADE STRUCTURE OVER PLAY EQUIPMENT - ASSEMBLY USE - 'E'
- ☐ SHADE STRUCTURE OVER PARKING - ASSEMBLY USE - 'S2' OR 'U'

SITE-SPECIFIC CODE ANALYSIS

THE SECTION IS TO BE FILLED OUT BY THE ARCHITECT OF RECORD FOR THE SITE-SPECIFIC APPROVAL

- ☐ OCCUPANCY GROUP: A-2 (SEE USE CHECKLIST) OCCUPANCY LOAD FACTOR: 15
- ☐ OCCUPANCY LOAD: 40
- ☐ TYPE OF CONSTRUCTION: V-B
- ☐ PROPOSED AREA: 600 SF
- ☐ ALLOWABLE AREA: 6000 SF

CANOPY SIZE SELECTION CHECKLIST

THE FOLLOWING CHECKLIST IS TO BE USED BY THE PARTY SUBMITTING THIS PRE-CHECK TO INDICATE THE INTENDED SIZES USED FOR THIS PRE-CHECK STRUCTURE. SITE SPECIFIC AOR TO SPECIFY IF CONJOINED OR NON-CONJOINED COLUMNS PER SHEET S2.0.

- ☐ 20'X20' ☐ _____'X_____' (FOR INTERMEDIATE SIZE)
- ☒ 30'X30' ☒ 30 'X 20 ' (FOR INTERMEDIATE SIZE)
- ☐ 40'X30' ☐ _____'X_____' (FOR INTERMEDIATE SIZE)

NOTES:
1. PLAN DIMENSIONS ARE REPEATABLE IN ANY ONE DIRECTION TO A TOTAL AREA OF 4000 SQ.FT. STRUCTURALLY. MAXIMUM SIZES MAY BE LESS DUE TO RISK CATEGORY THRESHOLDS. SEE TABLE 1604.5, 2022 CBC.
2. INTERMEDIATE SIZES MAY USE THE MEMBER SIZES, CONNECTIONS, AND FOUNDATIONS OF THE NEXT LARGEST CANOPY PROVIDED NO SINGLE PLAN DIMENSION, LENGTH OR WIDTH VARIES BY MORE THAN 35%. ADDITIONALLY, THE EVE AND RIDGE HEIGHTS OF THE LARGER CANOPY IS NOT EXCEEDED.

COLUMN HEIGHTS:
- ☐ 9' COLUMN HEIGHT ☐ 10' COLUMN HEIGHT ☐ 11' COLUMN HEIGHT ☐ 12' COLUMN HEIGHT
- ☒ 14'/16' COLUMN HEIGHT(HYPAR & TRIANGULAR SHADES)

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
MOSHER DREW
1775 HANCOCK STREET, SUITE 150
SAN DIEGO, CALIFORNIA 92110
P: (619) 223-2400
F: (619) 223-3017

All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

ARCHITECT / CONSULTANT STAMP

LICENSED ARCHITECT
RONALD W. EDWARDS
NO. C 31100
REN 06-30-27
STATE OF CALIFORNIA

CONSULTANT LOGO

CLIENT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

rea architect
RON EDWARDS
Architecture
7400 Pedrick Court
Bakersfield, CA 93313
(661) 394-0053
ron@rearchitect.net

LICENSED ARCHITECT
RONALD W. EDWARDS
C 25192
REN 06-30-27
STATE OF CALIFORNIA

MANUFACTURER:

CUSTOM CANOPIES INC.
11815 BURKE STREET

IDENTIFICATION STAMP DIVISION OF THE STATE ARCHITECT
PRE-CHECK PC DOCUMENT
CODE: 2022 CBC
A separate application for construction is required

PC APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123036 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 04/12/2024

PRECHECK FABRIC SHADE STRUCTURE II

TITLE SHEET

Project # 22-037
Drawn By RWE
Date 1-10-24

T001

RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

HYPER SHADE STRUCTURE - TITLE SHEET

PC201

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DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC

General:

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2022 CBC).

**NOTE: Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS:

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required Periodic – Indicates that a periodic special inspection is required Test – Indicates that a test is required	GE (Geotechnical Engineer) – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative. LOR (Laboratory of Record) – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335. PI (Project Inspector) – Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA. SI (Special Inspection) – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

Geotechnical Reports: Project does NOT have and does NOT require a geotechnical report

	S1. GENERAL: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and into proper bearing soil. • Materials below footings must not contain loose material, mud, organic silt, organic clays, or peat.	See Notes	PI	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth under foundations and/or within the building envelope is not permitted without a geotechnical report.

	S2. SOIL COMPACTION AND FILL: Test or Special Inspection	Type	Performed By	Code References and Notes
*	Test or Special Inspection			
*	a. Perform classification and testing of fill materials.	Test	LOR*	* Under the supervision of the geotechnical engineer.
*	b. Verify use of proper materials, densities and inspect lift thickness during placement and compaction during placement of fill.	Continuous	LOR*	* Under the supervision of a geotechnical engineer or LOR's engineering manager. Refer to specific items identified in the Appendix listing exemptions for limitations.
*	c. Compaction testing.	Test	LOR*	* Under the supervision of a geotechnical engineer or LOR's engineering manager. Refer to specific items identified in the Appendix listing exemptions for limitations.

	S3. DRIVEN DEEP FOUNDATIONS (PILES): Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Verify pile materials, sizes and lengths comply with the requirements.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS): Test or Special Inspection	Type	Performed By	Code References and Note
☑	a. Inspect drilling operations and maintain complete and accurate records for each pier.	Continuous	PI	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	b. Verify pier locations, diameters, plumbness and lengths.Record concrete or grout volumes.	Continuous	PI	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	c. Concrete piers.	Provide tests and inspections per CONCRETE section below.		

	S5. OTHER SOILS: Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Soil Improvements	Test	GE*	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS (California Geological Survey) for publication. * By geotechnical engineer or his or her qualified representative.
*	b. Inspection of Soil Improvements	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
*	c.			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3, ACI 318-19 Sections 26.12 & 26.13

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	C1. CAST-IN-PLACE CONCRETE Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Verify use of required design mix.	Continuous	SI	Table 1705A.3 Item 5, 1910.6, 1.
☑	b. Identify, sample, and test reinforcing steel.	Test	LOR	1910A.2; ACI 318-19 Ch.20 and Section 26.6.1.2; DSA IR 17-10. (See Appendix (end of this form) for exemptions.)
☑	c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Test	LOR	Table 1705A.3 Items 6; ACI 318-19 Sections 26.5 & 26.12.
☑	d. Test concrete (f'c).	Test	LOR	1905A.1.17; ACI 318-19 Section 26.12.
☑	e. Batch plant inspection: Not Required	See Notes	SI	Default of 'Continuous' per 1705A.3.3 if approved by DSA, batch plant inspection may be changed to 'Periodic' or 'Not Required' as noted in Section 1705A.3.3.1, or not required per 1705A.3.3.2. See IR 17-13. (See Appendix (end of this form) for exemptions.)
*	f. Welding of reinforcing steel.	Provide special inspection per STEEL, Category S/A4(d) & (e) and/or S/A5(g) & (h) below.		

	C2. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1): Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Sample and test prestressing tendons and anchorages.	Test	LOR	1705A.3.4, Table 1705A.3 Items 1 & 9.
*	b. Inspect placement of prestressing tendons.	Periodic	SI	1705A.3.4, Table 1705A.3 Items 1 & 9.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3, ACI 318-19 Sections 26.12 & 26.13

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	C3. PRECAST CONCRETE (IN ADDITION TO SECTION C1): Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Inspect fabrication of precast concrete members.	Continuous	SI	ACI 318-19 Section 26.13, and PCI MNL-128 and -130.
*	b. Inspect erection of precast concrete members.	Periodic	SI*	Table 1705A.3 Item 10. * May be performed by PI when specifically approved by DSA.
*	c. For precast concrete diaphragm connections or connections of precast gravity walls with the seismic force-resisting system (MSE or IMSF) in structures assigned to Seismic Design Category D, E or F, inspect such connections and reinforcement in the field for: 1. Installation of the embedded parts 2. Completion of the continuity of reinforcement across joints. 3. Completion of connections in the field.	Continuous	SI	Table 1705A.3; ACI 318-19 Section 26.13.3.3; ACI 550.5
*	d. Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	Periodic	SI	Table 1705A.3; ACI 318-19 Section 26.13.3.3; ACI 550.5

	C4. SHOTCRETE (IN ADDITION TO SECTION C1): Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Inspect shotcrete placement for proper application techniques.	Continuous	SI	1705A.3.9; Table 1705A.3 Item 7; 1908A.1; 1908A.2; 1908A.3. See ACI 506.2-13 Section 5.4; ACI 506R-16.
*	b. Sample and test shotcrete (f'c).	Test	LOR	1908A.2, 1705A.3.9

	C5. POST-INSTALLED ANCHORS: Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Inspect installation of post-installed anchors.	See Notes	SI*	1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8 (See Appendix (end of this form) for exemptions); ACI 318-19 Section 26.13. * May be performed by the project inspector when specifically approved by DSA.
*	b. Test post-installed anchors.	Test	LOR	1910A.5. (See Appendix (end of this form) for exemptions.)

	C6. OTHER CONCRETE: Test or Special Inspection	Type	Performed By	Code References and Notes
*	a.			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

Table 1705A.2.1, Table 1705A.2.3, ASSC 341-16, ASSC 358-16, ASSC 360-16, AISI S100-20, RCSC 2014, AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	S/N1. STRUCTURAL STEEL (COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES): Test or Special Inspection*	Type	Performed By	Code References and Notes
☑	a. Verify identification of all material, heat, coil and/or lot numbers and material properties that comply with requirements. Material sizes, types and grades comply with requirements.	Periodic	*	Table 1705A.2.1 Item 1a; ISI: 2203A.1; ASSC 360-16 Section A3.1 & A3.2, AISI S240-20 Section A1 & A3; AISC 360-16 Section A4 & A6. * By project inspector or qualified fabricator shop when performed off-site.
☑	b. Test unidentified materials.	Test	LOR	2203A.1.
☑	c. Examine seam welds of HSS shapes	Periodic	SI	DSA IR 17-3.
☑	d. Verify and document steel fabrication per DSA-approved construction documents.	Periodic	SI*	Not applicable to cold-formed steel light-frame construction, except for Section 1705A.2.4).
*	e. Building restrained braces.	Test	LOR	Welding and special inspections in accordance with IR 22-4.

	S/A2. HIGH STRENGTH BOLTS: Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Verify identification markings and manufacturer's certificates of bolts, nuts and washers meet standards specified in the DSA-approved documents.	Periodic	SI	Table 1705A.2.1 Items 1a & 1b; 2203A.1; ASSC 360-16 Section A3.3; J1.1; and ASSC/RCSC 2014 Section 1.3 & 2.1; DSA IR 17-6 & DSA IR 17-9.
*	b. Test high strength bolts, nuts and washers.	Test	LOR	Table 1705A.2.1 Item 2; 2213A.1; RCSC 2014 Section 7.2; DSA IR 17-8.
*	c. Bearing-type ("snug tight") connections.	Periodic	SI	Table 1705A.2.1 Item 2a; 1705A.2.2; 2204A.2; ASSC 360-16 J3.3, J3.2, M2.5 & M3.6; RCSC 2014 Section 8.2; DSA IR 17-9.
*	d. Pretensioned and slip-critical connections.	*	SI	Table 1705A.2.1 Item 2b & 2c; 1705A.2.2; 2204A.2; ASSC 360-16 J1.10, J3.2, M2.5 & M3.6; RCSC 2014 Section 8.2; DSA IR 17-9. * "Continuous" or "Periodic" depends on the type of bolt used.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.3, ASSC 341-16, ASSC 358-16, ASSC 360-16, AISI S100-20, RCSC 2014, AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	S/A3. WELDING: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	Periodic	SI	1705A.2.3, Table 1705A.2.1 Items 4 & 5; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-5.
☑	b. Verify weld filler material manufacturer's certificate of compliance.	Periodic	SI	DSA IR 17-3.
☑	c. Verify WPS, welder qualifications and equipment.	Periodic	SI	DSA IR 17-3.

	S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3): Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds ≥ 5/16", plug and slot welds.	Continuous	SI	Table 1705A.2.1 Items 5a.1-4; ASSC 360-16 (and ASSC 341-16 as applicable); DSA IR 17-5.
☑	b. Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	Periodic	SI	1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6; ASSC 360-16 (and ASC 341-16 as applicable); DSA IR 17-5.
☑	c. Inspect welding of stairs and railing systems.	Periodic	SI	1705A.2.2; ASSC 360-16 (and ASSC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-5.
☑	d. Verification of reinforcing steel weldability.	Periodic	SI	1705A.3.1; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☑	e. Inspect welding of reinforcing steel.	Continuous	SI	Table 1705A.2.1 Item 5b; 1705A.3.1, Table 1705A.3 Item 2, 1910.6; AWS D1.4; DSA IR 17-5.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.3, ASSC 341-16, ASSC 358-16, ASSC 360-16, AISI S100-20, RCSC 2014, AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3): Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds ≥ 5/16", plug and slot welds.	Continuous	SI	Table 1705A.2.1 Items 5a.1-4; ASSC 360-16 (ASSC 341-16 as applicable); DSA IR 17-5.
☑	b. Inspect single-pass fillet welds ≤ 5/16".	Periodic	SI	Table 1705A.2.1 Item 5a.5; ASSC 360-16 (ASSC 341-16 as applicable); DSA IR 17-5.
☑	c. Inspect end-welded studs (ASTM A 108) installation (including bend test).	Periodic	SI	2213A.2; ASSC 360-16 (ASSC 341-16 as applicable); AWS D1.1; DSA IR 17-5.
☑	d. Inspect floor and roof deck welds.	Periodic	SI	1705A.2.2, Table 1705A.2.1 Item 5a.6; ASSC 360-16 (ASSC 341-16 as applicable); AWS D1.3; DSA IR 17-5.
☑	e. Inspect welding of structural cold-formed steel.	Periodic	SI*	1705A.2.3; AWS D1.3; DSA IR 17-5. The quality control provisions of AISI S240-20 Chapter D shall also apply.* May be performed by the project inspector when specifically approved by DSA.
☑	f. Inspect welding of stairs and railing systems.	Periodic	SI*	1705A.2.1; ASSC 360-16 (ASSC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-5. * May be performed by the project inspector when specifically approved by DSA.
☑	g. Verification of reinforcing steel weldability.	Periodic	SI	1705A.3.1; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☑	h. Inspect welding of reinforcing steel.	Continuous	SI	Table 1705A.2.1 Item 5b; 1705A.3.1, Table 1705A.3 Item 2, 1910.6; AWS D1.4; DSA IR 17-5.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.3, ASSC 341-16, ASSC 358-16, ASSC 360-16, AISI S100-20, RCSC 2014, AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	S/A6. SHEAR STUD WELDING: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Verify stud base material, diameter, length and type.	Periodic	SI	Table 1705A.2.1 Item 6a; 2213A.1; ASSC 360-16 Section A3.5; AWS D1.1 Section 7.2.1; DSA IR 17-4.
☑	b. Verify pre-production bend tests.	Periodic	SI	Table 1705A.2.1 Item 6b; 2213A.1; ASSC 360-16 (ASSC 341-16 as applicable); AWS D1.1 Section 7.2.2; DSA IR 17-4.
☑	c. Verify stud installation including production bend tests, firing of guns and use of ferrules.	Periodic	SI	Table 1705A.2.1 Item 6c; 2213A.1; ASSC 360-16 (ASSC 341-16 as applicable); AWS D1.1 Section 7.2.3; DSA IR 17-4.

	S/A7. STEEL JOISTS AND TRUSSES: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Verify size, type and grade for all chord and web members as well as connectors and weld filler material. Inspect bridging and bridge anchorage and verify proper spacing. Verify all weld locations, lengths and profiles; mark at top web joint.	Continuous	SI	1705A.2.3; Table 1705A.2.2; AWS D1.1/D1.8 JI for steel joists only; 1705A.2.4; AWS D1.3 for cold-formed steel trusses.

	S/A8. SPRAYED FIRE-RESISTANT MATERIALS: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	Periodic	SI	1705A.13; 1705A.13.3.1; AISC 343-22, 1705A.13.3; 1705A.13.4; 1704A.13.5.3; 1705A.13.6.
☑	b. Test density.	Test	LOR	1705A.13.7; 1705A.13.5; ASTM E605
☑	c. Bond strength adhesion/cohesion.	Test	LOR	1705A.13.5.1; 1705A.13.6; ASTM E736

	S/A9. ANCHOR BOLTS AND ANCHOR RODS: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Anchor Bolts and Anchor Rods	Type	LOR	Identify, sample and test anchor bolts and anchor rods not meeting exemptions identified in Section 1 of IR 17-11.
☑	b. Threaded rod not used for foundation anchorage.	Type	LOR	Identify, sample and test threaded rods not meeting exemptions identified in Section 1 of IR 17-11.

	S/A10. STORAGE RACK SYSTEMS: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Materials used, to verify compliance with one or more of the material test reports in accordance with the approved construction documents.	Periodic	SI	Table 1705A.13.7
☑	b. Fabricated storage rack elements.	Periodic	SI	1704A.2.5; Table 1705A.13.7

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.3, ASSC 341-16, ASSC 358-16, ASSC 360-16, AISI S100-20, RCSC 2014, AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	S/A11. Other Steel: Test or Special Inspection	Type	Performed By	Code References and Notes
*	a.			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3, ACI 318-19 Sections 26.12 & 26.13

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	C7. CONCRETE FILLED PIPE AND TUBE: Test or Special Inspection	Type	Performed By	Code References and Notes
☑	a. Verify use of required design mix.	Continuous	SI	Table 1705A.3 Item 5, 1910.6, 1.
☑	b. Identify, sample, and test reinforcing steel.	Test	LOR	1910A.2; ACI 318-19 Ch.20 and Section 26.6.1.2; DSA IR 17-10. (See Appendix (end of this form) for exemptions.)
☑	c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Test	LOR	Table 1705A.3 Items 6; ACI 318-19 Sections 26.5 & 26.12.
☑	d. Test concrete (f'c).	Test	LOR	1905A.1.17; ACI 318-19 Section 26.12.
☑	e. Batch plant inspection: Not Required	See Notes	SI	Default of 'Continuous' per 1705A.3.3 if approved by DSA, batch plant inspection may be changed to 'Periodic' or 'Not Required' as noted in Section 1705A.3.3.1, or not required per 1705A.3.3.2. See IR 17-13. (See Appendix (end of this form) for exemptions.)
*	f. Welding of reinforcing steel.	Provide special inspection per STEEL, Category S/A4(d) & (e) and/or S/A5(g) & (h) below.		

	C8. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1): Test or Special Inspection	Type	Performed By	Code References and Notes
*	a. Sample and test prestressing tendons and anchorages.	Test	LOR	1705A.3.4, Table 1705A.3 Items 1 & 9.
*	b. Inspect placement of prestressing tendons.	Periodic	SI	1705A.3.4, Table 1705A.3 Items 1 & 9.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

1705A.2.1, Table 1705A.2.3, ASSC 341-16, ASSC 358-16, ASSC 360-16, AISI S100-20, RCSC 2014, AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	S/A12. Other Steel: Test or Special Inspection	Type	Performed By	Code References and Notes
*	a.			

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

	WELDING:
*	7. Any support for exempt non-structural components given in CBC Section 1617A.1.18 (which references ASCE 7-16, Section 13.1.4) meeting the following: A) when supported on a floor/roof, <400# and resulting composite center of mass (including component's center of mass) of above supporting floor/roof, B) when hung from a wall or roof/floor, <20# for discrete components and for distributed systems.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2022 CBC

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

Name of Architect or Engineer in general responsible charge:

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer: Date:

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

DSA 103-22: LIST OF REQUIRED VERIFIED REPORTS, CBC 2022

Application Number: 04-123036 | School Name: | School District:
DSA File Number: | Increment Number: | Date Created: 2024-01-10 15:15:54

Test or Special Inspection	Type	Performed By	Code References and Notes
1. Storage rack anchorage installation.	Periodic	SI	ANSI/MH16.1 Section 7.3.2; Table 1705A.13.7
2. Completed storage rack system to indicate compliance with the approved construction documents.	Periodic	SI*	Table 1705A.13.7. * May be performed by the project inspector when specifically approved by DSA.

S/A11. Other Steel: Test or Special Inspection	Type	Performed By	Code References and Notes
a.			

1. Structural Testing and Inspection Laboratory Verified Report Form DSA 291

2. Shop Welding Inspection Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

NOTES

1. THE EXAMPLE FORM DSA-103(s) SHOWN ON THIS SHEET ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA-103 IS TO BE FOR EACH APPLICATION THAT THIS PC IS BEING INCORPORATED INTO AND ALL EXAMPLE DSA-103(s) ARE TO BE CROSSED OUT ON THIS DRAWING.

rea architect RONEDWARDS
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(661) 394-0053
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LICENSED ARCHITECT RONALD W. EDWARDS C 25192 Exp. 12-31-25 STATE OF CALIFORNIA

MANUFACTURER:

CUSTOM CANOPIES INC.
11815 BURKE STREET

IDENTIFICATION STAMP DIVISION OF THE STATE ARCHITECT
PRE-CHECK PC DOCUMENT
CODE: 2022 CBC
A separate application for construction is required

PC APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123036 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 04/12/2024

PRECHECK FABRIC SHADE STRUCTURE II

T&I GUIDELINE

Project # 22-037 | Drawn By RWE | Date 1-10-24 | **T002**

PC202

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

ARCHITECTS
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1775 HANCOCK STREET, SUITE 150
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

LICENSED ARCHITECT RONALD W. HOLAKIEVICH NO. C 31100 REN 06-30-27 STATE OF CALIFORNIA

ARCHITECT / CONSULTANT STAMP

CONSULTANT LOGO

CLIENT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

DSA BACKCHECK

Project Number	24203.10
Date	09-05-2025
Drawn By	Author
Checked By	Checker
Revisions	

HYPER SHADE STRUCTURE - T&I GUIDELINE

Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/RDR MS - Precheck PC Set.rvt
Exported on 12/19/2025 as 24203.10_RDR MS - Precheck PC Set

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE 2022 C.B.C. AND THE A.C.I. 319-14 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
2. SLAB AND FOUNDATION CONCRETE SHALL BE 150 P.C.F. HARDROCK, MIXED PER A.S.T.M. C-94, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 P.S.I. AT 28 DAY. MAX. SLUMP TO BE 4" ± 1" OF W/C RATIO < .45
3. THE MAXIMUM SIZE AGGREGATE IN FOUNDATION AND MASS CONCRETE WORK SHALL BE 1 INCH.
4. CEMENT SHALL CONFORM TO A.S.T.M., C-150 TYPE V, LOW ALKALI. AGGREGATES FOR NORMAL WEIGHT SHALL CONFORM TO A.S.T.M. C-33.
5. ADMIXTURES AND COLORS (EXCEPT AS NOTED HEREIN) SHALL NOT BE USED UNLESS SUBSTANTIATING DATE IS SUBMITTED TO AND ACCEPTED BY THE ENGINEER AND ARCHITECT OF RECORD AND DSA.
6. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY. THE MIX DESIGNS SHALL CONFORM TO ACI 318-19 SECTION 26.4.3. UNLESS NOTED OTHERWISE.
7. NON-STRUCTURAL STEEL EMBEDDED IN CONCRETE SHALL BE GALVANIZED OR PAINTED. ALL DAMAGED GALVANIZED AREAS SHALL BE REPAIRED PRIOR TO EMBEDMENT.
8. READY MIXED CONCRETE SHALL CONFORM TO (A.S.T.M. C-94).
9. PLACEMENT OF CONCRETE SHALL CONFORM THE 2022 C.B.C. AND THE TO A.C.I. 304. CLEAN AND ROUGHEN A FULL AMPLITUDE OF $\frac{1}{4}$" BY REMOVING THE ENTIRE SURFACE AND EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX AGAINST ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE POURED.
10. ALL EXPOSED CONCRETE SHALL HAVE A SMOOTH FORM FINISH USING B-B PLYFORM, CLASS I, EXT-A.P.A. PLYWOOD.
11. ALL SLABS SHALL HAVE A TROWELED FINISH EXCEPT AS NOTED ON THE DRAWINGS.
12. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
13. IF THE CONTRACTOR DESIRES TO MAKE ANY CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THESE DRAWINGS, HE SHALL SUBMIT DETAILS OF CHANGES TO THE ENGINEER OF RECORD FOR REVIEW BEFORE STARTING WORK AND THE ENGINEER OF RECORD TO OBTAIN DSA APPROVAL PRIOR TO STARTING WORK.
14. NO BRICK OR POROUS MATERIAL SHALL BE USED TO SUPPORT FOUNDATION STEEL OF THE GROUND.
15. PROVIDE $\frac{3}{4}$ INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS, U.N.O.
16. MINIMUM CONCRETE COVERAGES

FOOTINGS CAST AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	2"

17. CONCRETE CURING:
SLAB AND FDN; TYPICALLY REQUIRED FOR 10 DAYS TO ACHIEVE A MINIMUM OF 3000 PSI STRENGTH PRIOR TO INSTALLATION OF OTHER MAJOR STRUCTURAL COMPONENTS.

FOUNDATION:

1. THIS P.C. IS DESIGN TO THE C.B.C. MINIMUM. WHERE SOIL REPORT IS AVAILABLE; ATTACH ONE COPY OF SOILS REPORT TO THE APPROVED SET OF CONSTRUCTION DOCUMENTS. SOILS REPORT SHALL BE PART OF THESE NOTES. PRIOR TO THE POURING OF CONCRETE AND PRIOR TO THE CONTRACTOR REQUESTING A DSA FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE THE FOOTING EXCAVATIONS. HE SHALL POST NOTICE ON THE JOB SITE AND ADVISE THE DSA INSPECTOR IN WRITING THAT THE WORK SO INSPECTED MEETS THE CONDITIONS OF THE REPORT. A WRITTEN CERIFICATION TO VERIFY THAT:
   A. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOIL REPORT.
   B. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED, AND
   C. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS REPORT.
2. SOIL REMOVAL AND RECOMPACTION SHALL BE DONE PER SOILS REPORT RECOMMENDATIONS UNDER GEOTECHNICAL ENGINEERS'S SUPERVISION AND INSPECTION. TEST AND SPECIAL INSPECTION REQUIREMENTS (EXEMPT TYPE 2 - SOILS: ELIGIBLE DEEP FOUNDATION ELEMENTS)
3. TYPE OF FOOTING:
   A. DESIGN SOIL PRESSURE:

FOOTING TYPE	STATIC BEARING PRESSURE
DEEP FOOTING	1,500 psf
LATERAL BEARING	100 pcf*

   *MAY BE DOUBLED PER SECTION 1806A.3.4
4. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
5. THE CONTRACTOR SHALL DETERMINE LOCATION OF UTILITY SERVICES IN AREAS TO BE EXCAVATED BEFORE BEGINNING EXCAVATION. EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING. DAMAGE CAUSED AS A RESULT OF FAILING TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN, APPROVALS, PERMITS, INSTALLATION AND MONITORING OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN TEMPORARY EXCAVATIONS.
7. ALL PLANTERS IN CLOSE PROXIMITY TO THE STRUCTURE SHALL HAVE ADEQUATE DRAINAGE OF SURFACE WATER TO PREVENT SATURATION OF SOIL UNDER FOUNDATION.
8. 2022 C.B.C. SEISMIC SITE CLASS A, B, C, D, + D-DEFAULT

GENERAL NOTES:

1. THE PROJECT SPECIFICATIONS SHALL BE PART OF THE CONTRACT DOCUMENTS.
2. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
3. THE CONTRACTOR SHALL REVIEW EXISTING CONDITIONS ON THE SITE DURING THE BIDDING. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARING WORK. THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO PROCEEDING.
4. ALL PHASES OF WORK ARE TO CONFORM TO THE MINIMUM STANDARDS OF THE CALIFORNIA BUILDING CODE (2022 EDITION C.B.C.), RELATED CALIFORNIA BUILDING CODE STANDARDS, AND ANY A.S.T.M. SPECIFICATIONS ON WHICH THESE STANDARDS ARE BASED. WHERE CONFLICT BETWEEN BUILDING CODES AND SPECIFICATIONS OCCURS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
5. ALL A.S.T.M. DESIGNATIONS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST ADOPTED OR REVISED SPECIFICATION, AS OF THE DATE OF THESE DRAWINGS.
6. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS. DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
7. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
8. THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL REQUIREMENTS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS THAT OCCUR PER SPECIFIC PLANS FOR NON-STRUCTURAL ITEMS, SUCH AS:
   A. SIZE AND LOCATION OF ALL OPENINGS.
   B. SIZE AND LOCATION OF ALL NON-BEARING WALLS.
   C. SIZE AND LOCATION OF ALL CONCRETE CURBS, WALKS, ROOF AND FLOOR DRAINS, SLOPES, DEPRESSED SLAB AREAS, ETC.
   D. FLOOR, ROOF AND WALL FINISHES.
   E. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
9. THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
10. NEITHER THE OWNER NOR THE ARCHITECT/STRUCTURAL ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STARE AND FEDERAL SAFETY AND HEALTH STANDARDS, SLAWS AND REGULATIONS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE SAFETY ITEMS.
11. SATISFACTORY EXECUTION OF CONSTRUCTION IS DEPENDENT UPON CONFORMANCE WITH THE INTENT OF THESE DRAWINGS. OWNER OR CONTRACTOR SHALL RETAIN A CALIFORNIA LICENSED STRUCTURAL ENGINEER DURING CONSTRUCTION TO OBSERVE THE CONSTRUCTION AND FILE A REPORT (DSA 6AE) STATING THE "THE CONSTRUCTION HAS, IN EVERY MATERIAL RESPECT, BEEN PERFORMED IN COMPLIANCE WITH THE DSA APPROVED DOCUMENTS".
12. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD FOR EACH PARTICULAR LEVEL. WHEN WEIGHT OF MATERIALS OR EQUIPMENT MAY EXCEED DESIGN LOAD, STRUCTURAL SYSTEMS SHALL BE SHORED.
13. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK. THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.

DESIGN BASIS:

CODE: 2022 C.B.C. (CALIFORNIA BUILDING CODE CCR, TITLE 24, PART 2)

GRAVITY LOADS:

1. ROOF LIVE LOAD 5 P.S.F.
2. ROOF DEAD LOAD 1.5 P.S.F. (MAX.)
3. SNOW LOAD Pg 5.0 PS.F.

LATERAL LOADS:

1. SEISMIC DESIGN

☐ SITE CLASS D Default were no Geotechical Report required

RISK CATEGORY = II
REDUNDANCY (p) = 1

Ss = 2.5
SDS = 1.67

SDS = SMS X 2/ 3

☐ CANOPIES OCCUPANCY = II

☐ ORDINARY STEEL CANTILEVER COLUMNS

SEISMIC DESIGN CATEGORY = E (ASCE 7-16 TABLE 11.6.1 AND TABLE 11.6.2)
Ie = 1.25
R = 1.25
CS = SDS/(R/Ie) (LRFD) = 1.33 Ultimate (0.993 ASD)
ANALYSIS METHOD = EQUIVALENT LATERAL FORCE ANALYSIS

Note: Design values may also be used conservatively where Site Class C is justified by location specific Geotechnical Report

2. WIND DESIGN
ANALYSIS METHOD = DIRECTIONAL PROCEDURE (OPEN STRUCTURE)
V = 110 M.P.H. BASIC WIND SPEED, ASCE 7-16
EXPOSURE "C"
Kzt = 1.0
RISK CATEGORY = II
SITE CLASS "D-DEFAULT"

STRUCTURE IS DESIGN FOR CLEAR WIND FLOW

FLOOD HAZARD: DESIGN DOES NOT ACCOUNT FOR FLOOD HAZARD

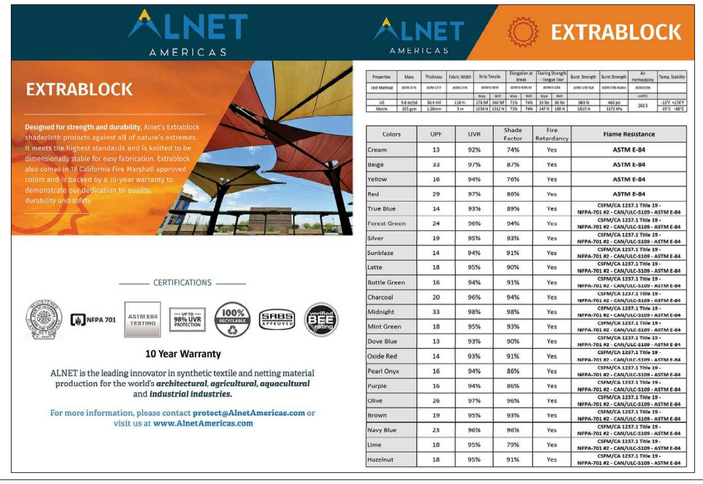
SITE SPECIFIC GEOTECHNICAL STUDY IS NOT REQUIRED FOR

THIS PC PROJECT IS NOT DESIGNED TO INCLUDE WEIGHT OF SPRINKLERS

BUILDING SEPARATION REQUIREMENT:

MINIMUM CLEAR DISTANCE REQUIRED BETWEEN EXISTING SITE STRUCTURE/ ADJACENT SITE STRUCTURE AND SHADE STRUCTURE IS TO BE AT LEAST 5' FROM OUTER EDGE OF FABRIC TO OUTER EDGE OF STRUCTURE AND PER EMBEDDED DOUBLE POST OPTION BETWEEN SHADE STRUCTURES IN THE SAME APPLICATION.

SEISMIC BASE SHEAR (LRFD)	
BUILDING CONFIGURATION	BASE SHEAR (KIP)
20'X20'	1.5K
30'X30'	3.00K
40'X30'	3.50K



ALNET AMERICAS — EXTRABLOCK

Properties	Mass	Thickness	Fabric Width	Strip Tensile	Elongation at break	Tearing Strength Original Dart	Burst Strength	Burst Strength	Air Permeability	Temp. Stability
Test Method	ASTM D76	ASTM D237	ASTM D76	ASTM D5034	ASTM D5035 MOD.07	ASTM D1388	ASTM D3786 Mullen	ASTM D3786 Mullen	ASTM D6938	
				Warp / Weft	Warp / Weft	Warp / Weft			cm/s	
US	9.6 oz/yd²	30.4 mil	118 in.	270 lbf / 340 lbf	71% / 74%	33 lbs / 30 lbs	360 lb	460 psi	163.5	-22°F +176°F
Metric	325 g/m²	1.08mm	3 m	1218 N / 1512 N	71% / 74%	147 N / 133 N	1631 N	3172 kPa		-27°C +80°C

Colors	UPF	UVR	Shade Factor	Fire Retardancy	Flame Resistance
Cream	13	92%	74%	Yes	ASTM E-84
Beige	13	97%	87%	Yes	ASTM E-84
Yellow	16	94%	76%	Yes	ASTM E-84
Red	29	97%	86%	Yes	ASTM E-84
True Blue	14	93%	89%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Forest Green	24	96%	94%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Silver	19	95%	93%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Sunblaze	14	94%	91%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Latte	18	95%	90%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Bottle Green	16	94%	91%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Charcoal	20	96%	94%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Midnight	33	98%	98%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Mint Green	18	95%	93%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Dove Blue	13	93%	90%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Oxide Red	14	93%	91%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Pearl Onyx	16	94%	86%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Purple	16	94%	86%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Olive	26	97%	96%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Brown	19	95%	93%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Navy Blue	23	96%	96%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Lime	18	95%	79%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84
Hazelnut	18	95%	91%	Yes	CSFM/CA 1237.1 Title 19 - NFPA-701 #2 - CAN/UUC-S109 - ASTM E-84

8/16/24

rea architect
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MANUFACTURER:

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IDENTIFICATION STAMP DIVISION OF THE STATE ARCHITECT
PRE-CHECK PC DOCUMENT
CODE: 2022 CBC
A separate application for construction is required

PC APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-129036 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 04/12/2024

PRECHECK FABRIC SHADE STRUCTURE II

Project # 22-037
Drawn By RWE
Date 12-20-22

S1.1

HYPER SHADE STRUCTURE - STRUCTURAL NOTES

PC203

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

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F: (619) 223-3017

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LICENSED ARCHITECT — RENEWAL 08/31/2025 — NO. C 31100 — REN 06-30-27 — STATE OF CALIFORNIA

ARCHITECT / CONSULTANT STAMP

CONSULTANT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

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RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

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USER

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STRUCTURAL OBSERVATION:

1. PER C.B.C. CHAPTER 17A, 1704A.6 THE OWNER SHALL EMPLOY A LICENSED ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, OR HIS DESIGNATED ENGINEER OR ARCHITECT TO MAKE SITE VISITS TO OBSERVE. GENERAL COMPLIANCE WITH THE APPROVED STRUCTURAL PLANS, SPECIFICATIONS AND CHANGE ORDERS. THE ENGINEER OR ARCHITECT SHALL SUBMIT A STATEMENT IN WRITING TO THE BUILDING OFFICIAL STATING THAT THE SITE VISIT HAS BEEN MADE AND THAT ANY DEFICIENCIES NOTED HAVE BEEN CORRECTED.
2. IN ACCORDANCE WITH SECT. 4-333 (a) OF TITLE 24, PART 1, STRUCTURAL OBSERVATION SHALL INCLUDE AND OCCUR AT THE FOLLOWING STAGES:
   A. OBSERVATION AT THE SITE PRIOR TO PLACING CONCRETE.
   B. OBSERVATION OF THE BUILDING DURING FABRICATION AFTER MAJORITY OF STRUCTURAL ITEMS ARE IN PLACE.
   C. OBSERVATION OF THE COMPLETED STRUCTURE PRIOR TO BEING COVERED FINISHES.
3. AT COMPLETION OF IN-PLANT MANUFACTURING THE INDIVIDUAL ACCEPTING RESPONSIBILITY FOR OBSERVATION OF IN-PLANT MANUFACTURING SHALL SIGN THE VERIFIED REPORT, DSA 152-IPI (IN-PLANT INSPECTOR VERIFIED REPORT).
4. OBSERVATION OF THE ON SITE CONSTRUCTION INCLUDES THE SCOPE OF WORK INDICATED ON THE DSA APPROVED BUILDING PLANS AND SPECS.
5. INTERIM AND FINAL VERIFIED REPORTS ARE REQUIRED DURING, AND AT THE COMPLETION OF, ON SITE CONSTRUCTION AND INSTALLATION USING FORM DSA 6-AE (ARCHITECT/ENGINEER VERIFIED REPORT).
6. STRUCTURAL TESTING & SPECIAL INSPECTIONS: SEE APPROVED DSA-103 FORM FOR STRUCTURAL TESTING AND INSPECTIONS.

COLD FORMED STRUCTURAL STEEL:

1. ALL LIGHT GAUGE METAL FRAMING SHALL BE THE TYPE, SIZE, GAUGE AS SHOWN ON THE PLANS AND BE FABRICATED AND ERECTED IN ACCORDANCE WITH 2016 (2020) A.I.S.I. S100 SPECIFICATIONS. WITH SUPPLEMENT 2 AND 2022 CBC SECTIONS 2210A, 2211A, &2213A.
2. STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123 OR A153 CLASS D OR PAINTED WITH ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT; OR EQUIVALENT PAINT SYSTEM. COLD FORMER STEEL MEMBERS SHALL BE 5 PERCENT ALUMINUM-ZINC ALLOY COATED PER ASTM A792/A792M STANDARD IN ACCORDANCE TO AMERICAN IRON AND STEEL INSTITUTE (AISI) S240 TABLE A4-1, CP 90 COATING DESIGNATION.
3. TOUCH UP COLD GALVANIZING USING ZRC CHEMICAL PRODUCTS CO., ZRC COLD GALVANIZING COMPOUND OR EQUAL.

STEEL CABLES:

1. ALL CABLE STEEL TO BE ASTM A1023, 6X19 CLASS IWRC OR 7x19 CLASS IWRC
2. CABLES SHALL BE GALVANIZED (CLASS A ZINC COATING) OR STAINLESS STEEL, CLASS BRIGHT WIRE ROPE
3. MAXIMUM CABLE STRENGTH: (Service loads)

5 / 16" 7X19 304 SS	=	3.068K
3 / 8" 7X19 304 SS	=	4.091K
7/16" 6X19 Galv.	=	6.259K
1/2" 6X19 Galv.	=	8.181K

4. MAXIMUM. PRETENSION LOAD:(Service loads)

1 / 4" DIA.	=	0.30k
3 / 8" DIA.	=	0.30k
7/ 16" DIA.	=	0.30k
1/2" DIA	=	0.50K

5. FOR CABLE (ROPE CLIPS) SEE SHEET 1 OF EACH SIZE

WELDING:

1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE AMERICAN WELDING SOCIETY CODE D1.1.-15, AND CBC.
2. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS.
3. ALL WELDING SHALL BE DONE BY THE SHIELDED ARC PROCESS USING APPROVED ELECTRODES PER A.W.S. SPECIFICATIONS E70XX (LOW HYDROGEN ELECTRODES).
4. ALL WELDS SHALL HAVE A WELD CONTROLLED SEQUENCE AND TECHNIQUE IN ORDER TO MINIMIZE SHRINKAGE, STRESSES AND DISTORTION.
5. ALL ELECTRODES FILLER MATERIAL SHALL BE A MINIMUM OF E70XX.
6. SPECIAL INSPECTION IS REQUIRED FOR ALL WELDING.

STEEL:

1. QUALIFIED AND CERTIFIED WELDERS SHALL BE USED FOR ALL WELDING. ALL WELDING TO CONFORM TO THE LATEST ADOPTED EDITION OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE A.W.S. D1.1.
2. MATERIALS:

MISCELLANEOUS PLATES	A.S.T.M. A-36
STRUCTURAL STEEL PIPES	A.S.T.M. A500 Gr. B, Fy = 42 ksi
WELDING ELECTRODES	A.W.S. STRUCTURAL STEEL E70XX,
TYPICAL STEEL CONNECTION BOLTS	GALVANIZED A307
GALVANIZING	A.S.T.M. A-123
RUST-INHIBITING PRIMER	CC-M10
STEEL TUBING	A.S.T.M. A-500, GRADE C (HSS ROUND) (Fy = 46 K.S.I.) (HSS RECT) (Fy = 50 K.S.I.)

3. STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123, UNDERCOAT AND FINISH COAT OR EQUIVALENT PAINT SYSTEM.
4. CONNECTED MEMBERS SHALL BEAR ONLY UPON UNTHREADED PORTIONS OF BOLTS.
5. BURNING OF HOLES IS NOT ALLOWED.
6. INSPECTION OF WELDING SHALL CONFORM TO C.B.C. REQUIREMENTS (CHAPTER 17A).
7. THE STRUCTURAL STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
8. BOLT HOLES SHALL BE 1 / 8" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLTS USED, UNLESS NOTED OTHERWISE.
9. STRUCTURAL STEEL SHALL BE DELIVERED TO THE JOB SITE FREE OF EXCESSIVE RUST, MILL SCALE, GREASE, ETC.
10. OPENINGS SHALL NOT BE PLACED IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED.

REGISTERED PROFESSIONAL ENGINEER JAMES L. MITCHELL S 3081 EXP. 6/30/2025 STRUCTURAL STATE OF CALIFORNIA

2/16/24

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MANUFACTURER:
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SANTA FE SPRINGS, CA 90670

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DATE: 04/12/2024

PRECHECK FABRIC SHADE STRUCTURE II

Project #	22-037
Drawn By	RWE
Date	12-20-22

S1.2

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

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LICENSED ARCHITECT RON E. EDWARDS NO. C 31100 REN 08-30-27 STATE OF CALIFORNIA

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CONSULTANT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

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SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
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Revisions	:	

HYPER SHADE STRUCTURE - STRUCTURAL NOTES

PC204

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ABBREVIATIONS:

&	AND
@	AT
℄	CENTER LINE
℞	PLATE, PROPERTY LINE
A.B.	ANCHOR BOLT
ADJ	ADJACENT
A.F.F.	ABOVE FINISH FLOOR
ARCH'L	ARCHITECTURAL
BD	BOARD
BLD'G	BUILDING
BLK	BLOCK
BLK'G	BLOCKING
BLW	BELOW
BM	BEAM
B.N.	BOUNDARY NAIL/SCREW
BOT.	BOTTOM
BRG	BEARING
B.S.	BOTH SIDE
BTWN	BETWEEN
C.B.	CARRIAGE BOLT
C.F.	CUBIC FOOT
CHAM	CHAMFER
C.I.	CAST-IRON
C.I.P.	CAST-IN-PLACE
C.J.	CONTROL JOINT
CLG	CEILING
CLK	CAULK
CLK'G	CAULKING
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
CNTR	CENTER
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CNTRSNK	COUNTERSINK
d	PENNY
DBL	DOUBLE
DEP	DEPRESSED
DET	DETAILED
D.F.	DOUGLAS FIR
D.F.L.	DOUGLAS FIR/LARCH
DIA	DIAMETER
DIAG	DIAGONAL
DIAM.	DIMENSION
D.L.	DEAD LOAD
DN	DOWN
DIV	DIVISION
DR	DOOR
DWG	DRAWING
DWL	DOWEL
EA	EACH
E.F.	EACH FACE
EL.	ELEVATION
ELEV.	ELEVATION / ELEVATOR
EMBED	EMBEDMENT
E.N.	EDGE NAIL/SCREW
EQ.	EQUAL
EQUIP	EQUIPMENT
E.S.	EACH SIDE
E.W.	EACH WAY
EXIST'G	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F.D.	FLOOR DRAIN
FDN	FOUNDATION
F.F.	FINSIH FLOOR
FIN.	FINISH
F.N.	FIELD NAIL
F.O.	FACE OF
FRM'G	FRAMING
F.S.	FAR SIDE
FT	FEET / FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
G.I.	GALVANIZED IRON
GLB	GLU-LAMINATED BEAM
GRD	GRADE
GYP	GYPSUM
H.D.	HOLDOWN
HDR	HEADER
HGR	HANGER
HORIZ	HORIZONTAL
HRD	HARD
H.S.B.	HIGH STRENGTH BOLT
HT.	HEIGHT
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
IN.	INCH
INSP.	INSPECTION / INSPECTOR
INT.	INTERIOR
JST	JOIST
JT	JOINT
KIPS	KILOPOUNDS (1,000 POUNDS)
K.O.	KNOCK OUT
LB	POUND
L.B.	LAG BOLT
L.F.	LINEAR FOOT
LG	LONG
L.L.	LIVE LOAD
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
L.S.	LAG SCREW
LT.	LIGHT
MAS	MASONRY
MAT.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH'L	MECHANICAL
MEZZ.	MEZZANINE
MIN.	MINIMUM
M.H.	MANHOLE
MANUF.	MANUFACTURER
MTL.	METAL
N.S.	NEAR SIDE
N.I.C.	NOT IN CONTACT
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OPPOSITE HAND
OPN'G	OPENING
OPP	OPPOSITE
O.W.J.	OPEN WEB JOIST
P.C.	PRECAST
PERP.	PERPENDICULAR
PLYWD	PLYWOOD
PNL	PANEL
PREFAB	PREFABRICATED
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PT	POINT
P.T.	PRESSURE TREATED
P.V.C.	POLYVINYL CHLORIDE
RAD	RADIUS
R.D.	ROOF DRAIN
REF.	REFERENCE
REINF.	REINFORCED / REINFORCING
REQ'D	REQURIRED
REV	REVISION
RF	ROOF
RFTR	RAFTER
R.H.	ROOF HATCH
RM	ROOM
R.O.	ROUGH OPENING
R.S.	ROUGH SAWN
SCHED.	SCHEDULE
SECT.	SECTION
S.F.	SQUARE FOOT
SHT	SHEET
SHT'G	SHEETING
SIM.	SIMULAR
S.M.S.	SHEET METAL SCREW
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
STAGG.	STAGGARED
STD	STANDARD
STIFF.	STIFFENER
STL	STEEL
STRUCT'L	STRUCTURAL
STS	SELF TAPPING SCREW
SYM	SYMMETRICAL
SYS	SYSTEM
T & B	TOP AND BOTTM
T & G	TONGUE AND GROOVE
TEMP	TEMPORARY
THK	THICK
THKN'D	THICKENED
THRU	THROUGH
T.L.	TOTAL LOAD
T.O.	TOP OF
T.S.G.	TAPERED STEEL GIRDER
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
U.T.	ULTRASONIC TESTING
VERT.	VERTICAL
W/	WITH
W/O	WITHOUT
WD	WOOD
WIN	WINDOW
W.P.	WATERPROOF / WORK POINT
W.P.J.	WEAKENED PLAN JOINT
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH

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PRECHECK FABRIC SHADE STRUCTURE II

Project # 22-037
Drawn By RWE
Date 12-20-22
S1.3

REGISTERED PROFESSIONAL ENGINEER
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S 3081
EXP. 6/30/2025
STRUCTURAL
STATE OF CALIFORNIA
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HYPER SHADE STRUCTURE - STRUCTURAL ABBREVIATIONS

PC205

Autodesk Docs://Projects/Del Rey MS - Building & Site Rehabilitation/Structural/Precheck/Del Rey MS - Precheck STR.rvt

6X19/37 Class Galvanized Wire Rope

Size (in)	Approx. Wt per ft. (lbs)		Nominal Breaking Load (lbs)			
			IPS		EIPS	
	FC	IWRC	FC	IWRC	FC	IWRC
1/4	0.015	0.116	4,940	5,300	5,430	6,120
5/16	0.164	0.18	7,660	8,240	8,440	9,480
3/8	0.236	0.26	10,980	11,800	12,090	13,600
7/16	0.32	0.35	14,880	16,000	16,380	18,360
X 1/2	0.42	0.46	19,260	20,700	21,240	24,000
9/16	0.53	0.59	24,300	26,100	26,820	30,200
5/8	0.66	0.72	30,000	32,200	32,940	37,000
3/4	0.95	1.04	42,800	46,000	47,160	53,000
7/8	1.29	1.42	58,000	62,200	63,720	71,600
1	1.68	1.85	75,200	80,800	82,800	93,000
1-1/8	2.13	2.34	94,600	101,800	104,040	117,000
1-1/4	2.63	2.89	116,200	125,000	127,980	143,800
1-3/8	3.18	3.50	139,800	150,400	153,900	172,800

kulkani MALLEABLE WIRE ROPE CLIPS

ZINC PLATED, MALLEABLE

Size in Inches	Min. Clips Required	Wire Rope Turn Back in Inches	Torque in Foot Pounds*	Approx. Wt. in Pounds	Dimensions in Inches					
					A	B	C	D	E	F	G
1/16**	3	4	2.0	0.030	0.15	0.55	0.40	0.38	0.38	0.45	0.62
1/8**	3	4.3/4	3.0	0.040	0.18	0.81	0.50	0.50	0.50	0.56	0.94
3/16	3	5.1/2	4.5	0.063	0.25	0.94	0.56	0.56	0.56	0.63	1.06
1/4	3	7	15.0	0.130	0.31	1.19	0.75	0.75	0.69	0.75	1.31
5/16	3	7.3/4	15.0	0.150	0.31	1.31	0.84	0.75	0.75	0.75	1.44
3/8	3	9.1/2	30.0	0.210	0.38	1.63	1.00	0.88	0.84	0.88	1.63
7/16	4	10.1/4	40.0	0.370	0.38	2.00	1.19	1.06	1.00	1.06	1.88
1/2	4	15.1/4	45.0	0.370	0.44	2.00	1.19	1.06	1.00	1.06	1.88
9/16	4	16	50.0	0.590	0.50	2.31	1.38	1.25	1.25	1.28	2.09
5/8	4	16	75.0	0.590	0.50	2.31	1.38	1.25	1.25	1.28	2.09
3/4	5	22.1/4	75.0	0.840	0.56	2.56	1.56	1.31	1.44	1.56	2.38
7/8	5	23.1/2	130.0	1.250	0.63	3.06	1.81	1.63	1.75	1.81	2.88
1	6	31	130.0	1.660	0.63	3.44	2.00	1.88	2.06	2.00	3.00
1.1/8	7	39	200.0	2.430	0.75	4.00	2.75	2.00	2.19	2.06	3.38

Meets the performance requirements of Federal Specification FF-C-450, current revision, Type 1, Class 2.**

* Based on clean, unlubricated threads. The table above shows the minimum torque required to reach maximum holding power of wire rope clips.

** NOTE: 1/16" and 1/8" are not covered by Federal Specification FF-C-450, current revision.

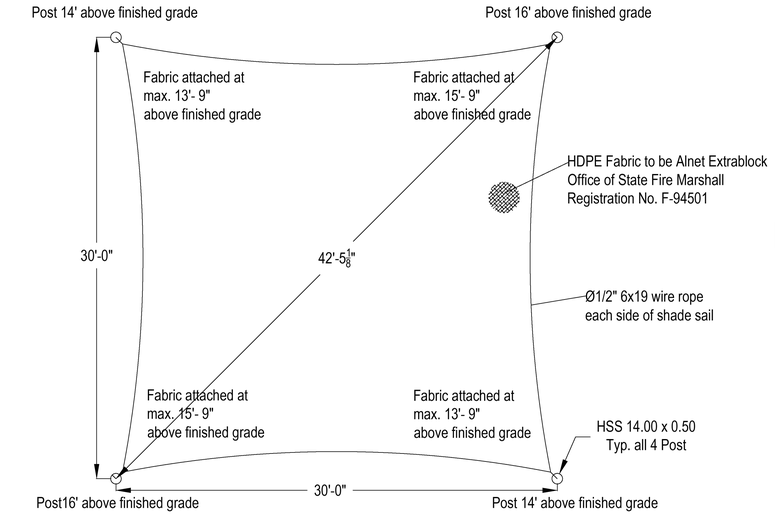
Improper use and installation of cast malleable wire rope clips can result in serious injury or death.

NEVER use cast malleable wire rope clips for lifting or suspending ANY load.

Cast malleable wire rope clips are to be used only for non-critical, light duty applications with small applied loads.

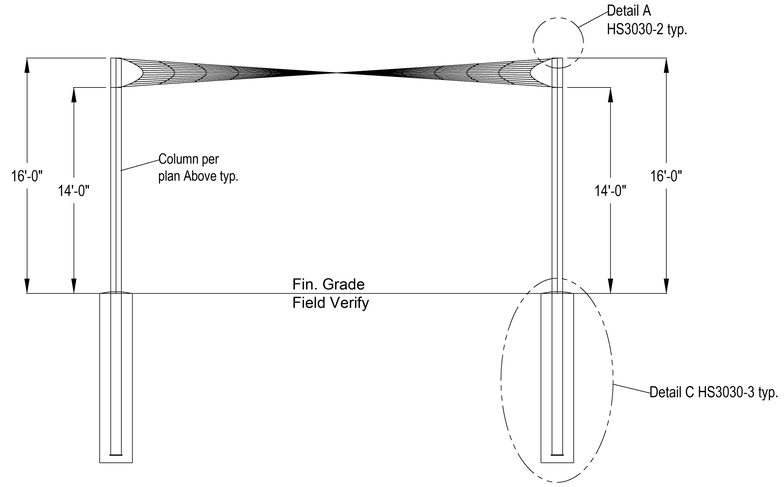
For complete installation instructions refer to page 4ff.

Page 52 | v921 | WARNING: NEVER EXCEED WORKING LOAD LIMIT Read important warnings and information on pages 2 - 9 and page 4ff. | Kulkoni, Inc.

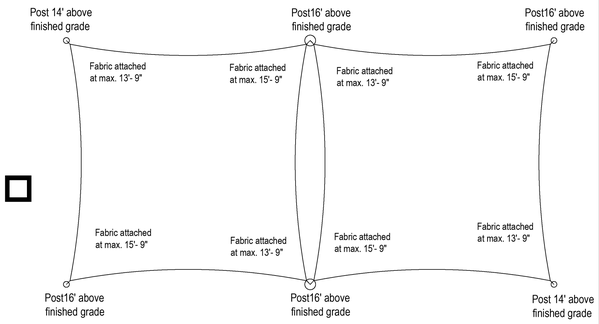


PLAN VIEW

NOTES:
1 - Steel Structure not designed for snow load accumulation in excess of 5.0 psf.
All Sails/cables shall be removed prior to snow load accumulation
2 - Refer to HS3030-3 for Footing details

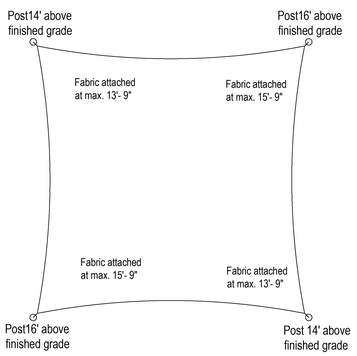


ELEVATION VIEW



Double shade sails

X



Single shade sail

Scale: Not To Scale

JAMES L. MITCHELL 2/16/24
REGISTERED PROFESSIONAL ENGINEER
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APP: 04-123038 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE 04/12/2024

30'X30'X14' HYPAR SHADE

Project # 22-037
Drawn By RWE
Date 12-20-22
HS3030-1

RANCHO DEL REY MIDDLE SCHOOL BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

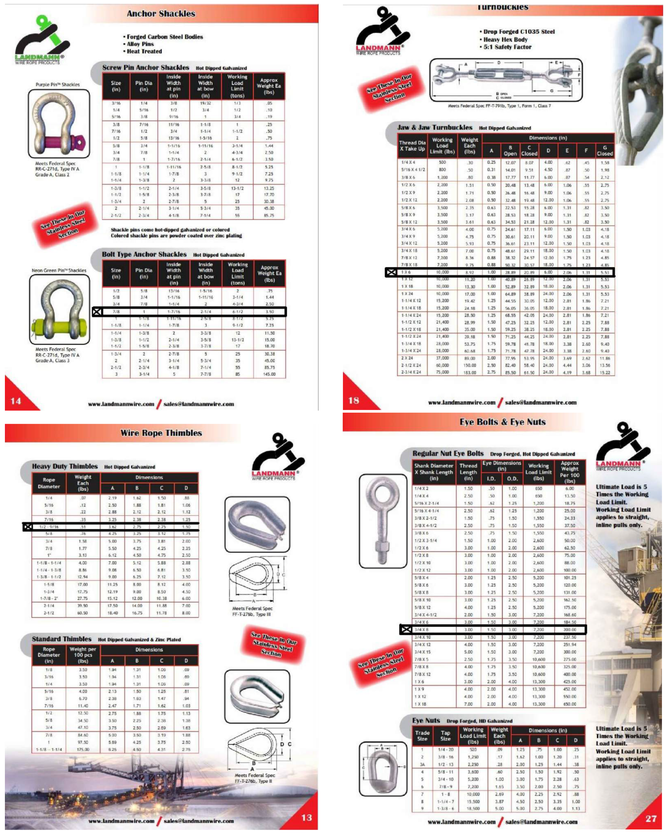
DSA BACKCHECK

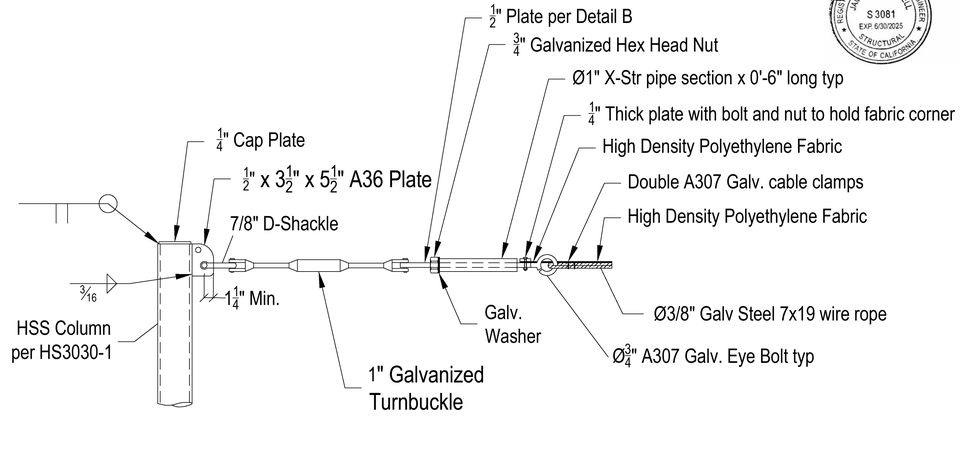
Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

HYPER SHADE STRUCTURE - PLANS & ELEVATIONS

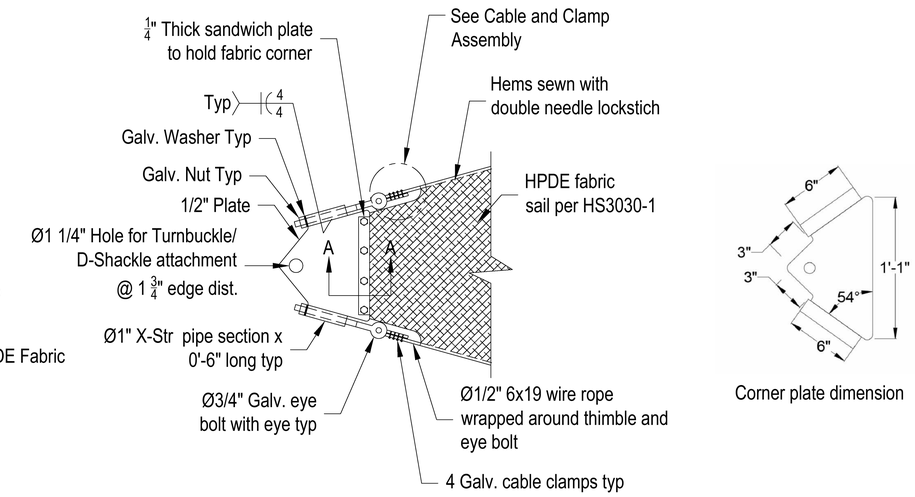
PC206

Autodesk Docs://Rancho del Rey MS - Building & Site Rehabilitation/24203.10_Rancho del Rey MS_Central.rvt



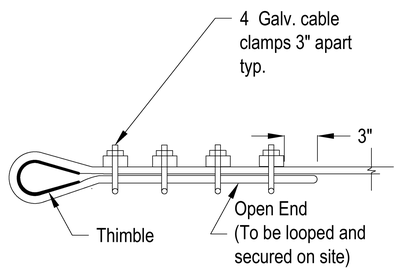


Detail A Side view

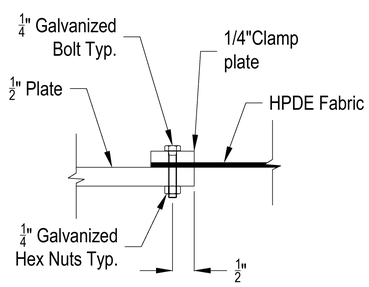


Detail B
Plate Assembly Detail

Corner plate dimension



Cable and Clamp Assembly Detail



Section A-A

Scale: Not To Scale

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
APP: 04-124769 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 02/17/2026

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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

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30'X30'X14'
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BUILDING & SITE REHABILITATION
SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
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Revisions	:	

HYPER SHADE STRUCTURE - DETAILS

PC207

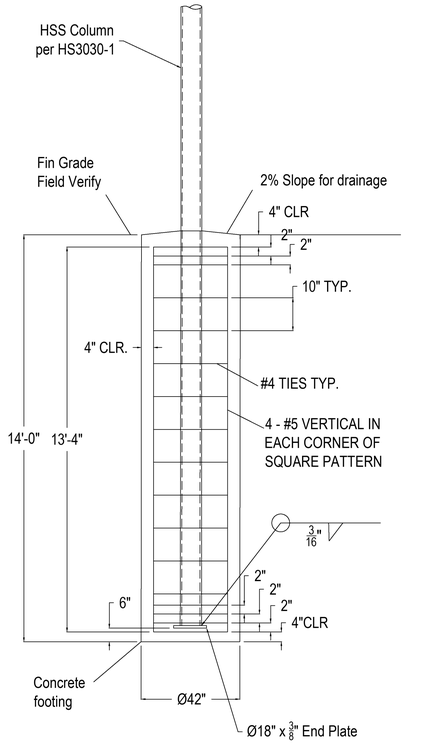
DSA BACKCHECK

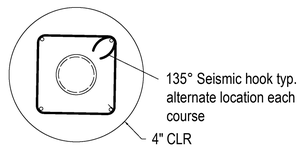
FINAME
REVDATE
USER

Autodesk Docs://Rancho Del Rey MS - Building & Site Rehabilitation/24203.10_RDR_Hyper Shade_Structure_Detail_Backcheck_22-037.rvt

REGISTERED PROFESSIONAL ENGINEER
JAMES L. MITCHELL
S 3081
EXP 6/30/2025
STRUCTURAL
STATE OF CALIFORNIA
2/16/24

Node No.		Support Forces P_x [kip]	P_y [kip]	P_z [kip]	Support Moments M_x [kipft]	M_y [kipft]	M_z [kipft]
	D LC1 - Self-weight						
1		1.045	1.046	-1.313	-16.75	16.73	0.00
2		-0.591	0.591	-0.967	-8.27	-8.27	0.00
4		0.591	-0.591	-0.966	8.28	8.28	0.00
5		-1.046	-1.045	-1.313	16.74	-16.74	0.00
	Tv LC2 - Prestress						
1		0.604	0.604	-0.070	-9.67	9.67	0.00
2		-0.604	0.604	0.070	-8.46	-8.46	0.00
4		0.604	-0.604	0.070	8.46	8.46	0.00
5		-0.604	-0.604	-0.070	9.67	-9.67	0.00
	L LC3 - Live						
1		5.397	5.402	-1.637	-86.57	86.49	0.00
2		-2.755	2.755	-0.240	-38.59	-38.58	0.00
4		2.756	-2.760	-0.239	38.65	38.59	0.00
5		-5.398	-5.397	-1.637	86.50	-86.50	-0.01
	W LC4 - Wind 1						
1		8.186	8.184	2.146	-130.67	130.70	0.00
2		-13.938	13.925	6.403	-194.01	-194.21	0.01
4		13.937	-13.936	6.403	194.19	194.20	0.00
5		-8.184	-8.172	2.147	130.46	-130.67	0.00
	W LC5 - Wind 2						
1		0.604	0.604	-0.070	-9.67	9.67	0.00
2		-0.604	0.604	0.070	-8.46	-8.46	0.00
4		0.604	-0.604	0.070	8.46	8.46	0.00
5		-0.604	-0.604	-0.070	9.67	-9.67	0.00
	S LC6 - Snow						
1		5.397	5.402	-1.637	-86.57	86.49	0.00
2		-2.755	2.755	-0.240	-38.59	-38.58	0.00
4		2.756	-2.760	-0.239	38.65	38.59	0.00
5		-5.398	-5.397	-1.637	86.50	-86.50	-0.01





Detail C
Embedded Post Option

TESTING AND SPECIAL INSPECTION REQUIREMENTS (EXEMPT TYPE 2 - SOILS: ELIGIBLE DEEP FOUNDATION ELEMENTS)

Scale: Not To Scale

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LICENSED ARCHITECT
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NO. C 31100
REN 06-30-27
STATE OF CALIFORNIA

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DSA BACKCHECK

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BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
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HYPER SHADE STRUCTURE - DETAILS

PC208

FNAME
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USER

APPLICABLE CODES AND STANDARDS

2022 California Administrative Code (CAC), Part 1, Title 24 CCR*
2022 California Building Code (CBC), Part 2, Title 24 CCR
(2021 International Building Code, Vol. 1 & 2, and 2022 California amendments)
2022 California Electrical Code (CEC), Part 3, Title 24 CCR
(2020 National Electrical Code and 2022 California Amendments)
2022 California Mechanical Code (CMC), Part 4, Title 24 CCR
(2021 IAPMO Uniform Mechanical Code and 2022 California amendments)
2022 California Plumbing Code (CPC), Part 5, Title 24 CCR
(2021 IAPMO Uniform Plumbing Code and 2022 California amendments)
2022 California Energy Code (CEC), Part 6, Title 24 CCR
2022 California Fire Code (CFC), Part 9, Title 24 CCR
(2021 International Fire Code and 2022 California Amendments)
2022 California Existing Building Code (CEBC), Part 10, Title 24 CCR
(2021 International Existing Building Code and 2022 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
2019 ASME A17.1/CSA B44-13 Safety Code for Elevators and Escalators (per 2022 CBC Part 2 Ch 35)
Note: Cal/OSHA Elevator Unit enforces CCR Title 8 and uses the 2004 ASME A17.1 by adoption
NFPA 13 (2022) - Standard for the Installation of Sprinkler Systems (CA amended)
NFPA 14 (2019) - Standard for the Installation of Standpipe and Hose Systems (CA amended)
NFPA 17 (2021) - Standard for Dry Chemical Extinguishing Systems
NFPA 17A (2021) - Standard for Wet Chemical Extinguishing Systems
NFPA 20 (2019) - Standard for the Installation of Stationary Pumps for Fire Protection
NFPA 22 (2018) - Standard for Water Tanks for Private Fire Protection
NFPA 24 (2019) - Standard for the Installation of Private Fire Service Mains and Their Appurtenances (CA amended)
NFPA 72 (2022) - National Fire Alarm and Signaling Code (CA amended)
NFPA 80 (2019) - Standard for Fire Doors and Other Opening Protectives
NFPA 2001 (2018) - Standard on Clean Agent Fire Extinguishing Systems (CA amended)
UL 300 (2005, R2010) - Standard for Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment
UL 464 (2003) - Audible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories
UL 521 (1999) - Standard for Heat Detectors for Fire Protective Signaling Systems
UL 1971 (2002, R2010) - Standard for Signaling Devices for the Hearing Impaired
ICC 300 (2017) - Standard for Bleachers, Folding and Telescopic Seating, and Grandstands

ABBREVIATIONS & SYMBOLS

A	AREA	S	SECTION MODULOUS
DIM.	DIMENSION	SHT.	SHEET
EA.	EACH	SIM.	SIMILAR
EXT.	EXTERIOR	SQ.	SQUARE
FT.	FOOT OR FEET	Std.	STANDARD
GA	GAGE	STRUC.	STRUCTURAL
INSP.	INSPECTIONS	SYM.	SYMMETRICAL
INT.	INTERIOR	t	THICKNESS
KSI	KIPS PER SQUARE INCH	TYP.	TYPICAL
I	MOMENT OF INERTIA	U.O.N.	UNLESS OTHERWISE NOTED
LB	POUND	xS	EXTRA STRONG
MAX.	MAXIMUM	Ø	DIAMETER
MIN.	MINIMUM	#	NUMBER
NA	NOT APPLICABLE	<	LESS THAN
NO.	NUMBER	>	GREATER THAN
OZ.	OUNCES	≤	LESS THAN OR EQUAL TO
PL	PLATE	≥	GREATER THAN OR EQUAL TO
PSF	POUND PER SQUARE FOOT		

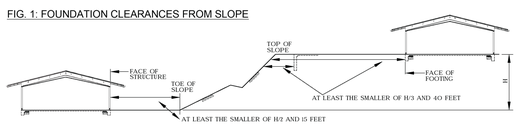
DESIGN CRITERIA

1. VERTICAL LOADS
   - 1.A. CANOPY LIVE LOAD = 5 psf (NON-REDUCIBLE)
   - 1.B. CANVAS DEAD LOAD = 0.069 psf
   - 1.C. SUPERIMPOSED LOAD = 0.5 psf (TEMPORARY LOAD)
   - 1.D. LIVE LOAD = 5 psf
   - 1.E. GROUND SNOW LOAD = 0 psf
2. LATERAL LOADS
   - 2.A. WIND (ASCE/SEI 7-16 DIRECTIONAL PROCEDURE)
     - ULTIMATE DESIGN WIND SPEED: V_{ULT} = 110 mph
     - NOMINAL DESIGN WIND SPEED: V_{ASD} = 85 mph
     - EXPOSURE CATEGORY = "C"
     - RISK CATEGORY = II
     - CLASSIFICATION: OPEN STRUCTURE (CLEAR WIND FLOW), K_{zt} = 1.0
     - WIND VELOCITY PRESSURE: q_h = 0.00256 K_z K_{zt} K_d V^2 = 22.38 psf
     - NOTE: WIND IS BASED ON OPEN STRUCTURE WITH CLEAR WIND FLOW
   - 2.B. EARTHQUAKE (EQUIVALENT LATERAL FORCE PROCEDURE)
     - MAPPED SPECTRAL RESPONSE ACCELERATIONS, S_S = 2.500, S_1 = 0.750
     - SITE CLASS = "D"
       - UNLESS A SITE-SPECIFIC GROUND MOTION HAZARD ANALYSIS IS PERFORMED, THE S_{M1} VALUE INCREASED BY 50% SHALL BE LESS THAN THE DESIGN CRITERIA STATED HEREIN.
     - RISK CATEGORY = II
     - SEISMIC DESIGN CATEGORY (SDC) = "E"
     - ORDINARY STEEL CANTILEVERED COLUMN SYSTEM
     - SPECTRAL RESPONSE COEFFICIENTS, Fa = 1.2, Fv = 1.7, S_{DS} = 2.0, S_{D1} = 0.850
     - REDUNDANCY FACTOR: ρ = 1.3
     - IMPORTANCE FACTOR: I_e = 1.0
     - OVERSTRENGTH FACTOR: $Ω_0$= 1.25
     - RESPONSE MODIFICATION FACTOR, R = 1.25
     - SEISMIC RESPONSE COEFFICIENT, C_s = 1.6
     - SEISMIC BASE SHEAR: V = 1.6W (STRENGTH LEVEL)
     - MAXIMUM FUNDAMENTAL PERIOD OF STRUCTURE: 0.25 seconds
     - HORIZONTAL OR VERTICAL IRREGULARITY: NONE
3. ULTIMATE REACTION LOADS (MAX. LOADS)
   - 3.A. CANTILEVER UMBRELLA SHADE (WORST CASE)
     - DEAD: 2.1 k; M = 13.2 k-ft
     - LIVE: 3.7 k; M = 27.2 k-ft
     - WIND (LRFD):
       - C = 5.34 k (DOWN)
       - T = 3.0 k (UPLIFT)
       - H = 3.5 k (HORIZONTAL)
       - M = 66 k-ft (MAX. MOMENT)
       - TR = 26.4 k-ft (TORSION)
     - SEISMIC (LRFD):
       - H = 2.8 k (HORIZONTAL)
       - M = 33.6 k-ft (MAX. MOMENT)
       - TR = 24.8 k-ft (TORSION)
4. PIER FRICTION RESISTANCE
   - PIER ALLOWABLE UPLIFT FRICTION CAPACITY = 250 psf
   - MAXIMUM PIER FRICTION RESISTANCE: f = 18.8 k
5. MINIMUM CLEARANCES
   - 5.A. AS PER IR PC-4 5.4.5: THE MINIMUM CLEARANCE REQUIRED BETWEEN DRILLED PIERS WHEN PLACING MULTIPLE CANOPIES IS: 8 x PIER DIAMETER (24" FROM PIER TO PIER).
   - 5.B. THE MINIMUM SEISMIC SEPARATION BETWEEN ADJACENT SHADE STRUCTURES IS 9 INCHES.

GENERAL NOTES

1. MATERIAL SPECIFICATIONS
   - 1.A. SOIL (NO SOIL REPORT PROVIDED): SOIL BEARING PRESSURE = 1500 PSF AT 24" BELOW THE LOWEST GRADE. LATERAL BEARING PRESSURE = 200 PSF/FT (CLASS 5), INCREASED PER CBC SECTION 1806A.3.4. A SITE-SPECIFIC GEOTECHNICAL REPORT IS REQUIRED AT THE TIME OF SITE APPLICATION WHEN USING LOAD-BEARING VALUES ABOVE THE STATED MAXIMUMS FOR CLASS 5 SOIL. ALLOWABLE PIER FRICTIONAL UPLIFT CAPACITY = 250 PSF. 1/3 INCREASE FOR SHORT TERM LOADS IS NOT ALLOWED. TEST AND SPECIAL INSPECTION REQUIREMENTS (EXEMPT TYPE 2).
   - 1.B. CONCRETE: f'_c = 4,500 psi min. @ 28 DAYS (SPECIAL INSPECTION REQUIRED). CONCRETE SHALL BE MADE WITH TYPE V CEMENT, PLUS POZZOLAN OR SLAG CEMENT COMPLYING WITH FOOTNOTE 7 OF ACI 318 TABLE 19.3.2.1, WITH A WATER TO CEMENT RATIO NOT MORE THAN 0.45. SITE-SPECIFIC GEOTECHNICAL REPORT MUST BE PROVIDED IF A LOWER f'_c IS DESIRED. APPLICABLE EXPOSURE LEVELS = S2. CONCRETE EXPOSED TO FREEZING-AND-THAWING CYCLES SHALL BE AIR ENTRAINED PER ACI 318 SECTION 19.3.3. ADMIXTURES CONTAINING CALCIUM AND CHLORIDE ARE PROHIBITED.
   - 1.C. REINFORCING STEEL: ASTM A615, GRADE 60, EXCEPT STIRRUPS AND TIES SHALL BE GRADE 40.
   - 1.D. PLATE STEEL: ASTM A36, F_Y = 36ksi
   - 1.E. SQUARE TUBE, RECTANGULAR TUBE, & SCHEDULE PIPE: ASTM A500 GRADE B&C, F_Y = 46 ksi
   - 1.F. RAFTER AND STRUT TUBES: ASTM A500 GRADE B, Ø<3" F_Y = 50 ksi, Ø≥3" 46 ksi. CORROSION PROTECTION SHALL BE TRIPLE COATED FLO-COAT® HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A 1057/A1057M.
   - 1.G. MACHINED BOLTS: ASTM F593C/304 OR F593D/304 (LOCK NUTS ARE REQUIRED).
   - 1.H. LOCK NUTS: ASTM F594; ASME B18.16.6
   - 1.I. SELF-TAP SCREWS: AISI 410 SS
   - 1.J. ANCHOR BOLTS: ASTM F1554 GRADE 36 MINIMUM
   - 1.K. ANCHOR NUTS: ASTM A563
   - 1.L. CABLE STEEL: 7x19 OR 6x36 CLASS IWRC (TYPICALLY REFERRED TO AS AIRCRAFT CABLE), CABLE SHALL BE AISI 304 STAINLESS STEEL, ASTM A240.
     NOMINAL CABLE STRENGTH FOR 3/16"Ø F_u = 3.7k, 1/4"Ø F_u = 6.4k, 5/16"Ø F_u = 9k, 3/8"Ø F_u = 12k, 7/16"Ø Fu = 16.3k.
     ALLOWABLE STRENGTH FOR 3/16"Ø S_a = 1.23k, 1/4"Ø S_a = 2.18k, 5/16"Ø S_a = 3.07k, 3/8"Ø S_a = 4.09k, 7/16"Ø S_a = 6.3k.
     MIN. PRETENSION FORCE ON 1/4"Ø = 0.10k, ON 5/16"Ø = 0.15k, ON 3/8"= 0.20k, ON 7/16"Ø = 0.25k.
     MAX. PRETENSION FORCE ON 1/4"Ø = 0.15k, ON 5/16"Ø = 0.23k, ON 3/8"Ø = 0.30k, ON 7/16"Ø = 0.35k.
   - 1.M. WELDING ELECTRODES SHALL BE GMAW / SEMI-AUTOMATIC, GRADE ER70S-6 PER AWS A-5.18
   - 1.N. GROUT: NON-SHRINK, NON-METALLIC GROUT, SHALL MEET ASTM C1107, MIN. F'c = 5,000 psi.
   - 1.O. EXPOSED STEEL FASTENERS: ALL EXPOSED STEEL FASTENERS, INCLUDING CAST-IN-PLACE ANCHOR BOLTS/RODS, SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), OR HOT-DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329 OR ASTM A325 HIGH STRENGTH)
2. WELDING
   - 2.A. WORKMANSHIP AND TECHNIQUE OF WELDING ARE TO CONFORM TO THE 2022 C.B.C. SECTION 2204A.1. ALL WELDS SHALL BE INSPECTED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE 2022 C.B.C. CHAPTER 17A, SECTION 1705A.2.5
3. CABLE CLIPS & TURNBUCKLES
   - 3.A. CABLE CLIPS SHALL BE FORGED STEEL PER FEDERAL SPECIFICATION FF-C-450 TYPE 1, CLASS 1 INSTALLED WITH THE U-BOLT ON THE CABLE DEAD END (SEE SPECIFICATION SHEET ON FINAL SHEET OF THIS SUBMITTAL). CABLE CLIPS WILL DEVELOP THE ALLOWABLE STRENGTH OF THE CABLE WHEN PROPER QUANTITY AND BOLT TORQUE IS USED.
   - 3.B. 3/16"Ø CABLE REQUIRES A MINIMUM OF 3 CLIPS, 1/4"Ø CABLE REQUIRES A MINIMUM OF 3 CLIPS, 5/16"Ø CABLE REQUIRES A MINIMUM OF 3 CLIPS, 3/8"Ø CABLE REQUIRES A MINIMUM OF 3 CLIPS, AND 7/16"Ø CABLE REQUIRES A MINIMUM OF 4 CLIPS.
   - 3.C. BOLT TORQUE FOR 3/16" Ø CABLE CLIPS = 7 lb-ft, FOR 1/4"Ø CABLE CLIPS = 15 lb-ft, FOR 5/16"Ø CABLE CLIPS = 30lb-ft, FOR 3/8"Ø CABLE CLIPS = 45lb-ft, FOR 7/16"Ø CABLE CLIPS = 65lb-ft.
   - 3.D. TURNBUCKLES SHALL BE AISI T316 STAINLESS STEEL. ALLOWABLE STRENGTH FOR 1/2"Ø S_a = 1.54k, 5/8"Ø S_a = 2.46k, FOR 3/4"Ø S_a = 3.52k.
4. BOLT HOLES
   - 4.A. ANCHOR BOLT HOLE DIAMETERS SHALL BE 1/8" LARGER THAN THE BOLT DIAMETER, ALL OTHER CONNECTION BOLT HOLE DIAMETERS SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER
5. CORROSION PROTECTION
   - 5.A. ALL STEEL MEMBERS (U.N.O.) SHALL BE POWDER COATED WITH A ZINC RICH PRIMER AND TGIC POLYESTER TOP COAT MEETING ASTM B117, ASTM D2247, AND ASTM D4587-05
6. FABRIC MATERIAL
   - 6.A. FABRIC MATERIAL SHALL BE COMMERCIAL NINETYFIVE 340 FR FABRIC
   - 6.B. MAXIMUM MODULUS OF ELASTICITY = 138 psi
   - 6.C. THE FABRIC SHALL BE MANUFACTURED FROM HIGH DENSITY POLYETHYLENE POLYMER
   - 6.D. NOMINAL WEIGHT = 10 oz/yd²
   - 6.E. MIN. ULTIMATE BREAKING STRENGTH PER ASTM D 5034: WARP = 158.6 lbs, WEFT = 412.3 lbs
   - 6.F. MAX. ELONGATION: WARP = 49%, WEFT = 89%
   - 6.G. MIN. ULTIMATE TEAR STRENGTH PER ASTM D 2261: WARP = 43.0 lbf, WEFT =39.6 lbf
   - 6.H. ALLOWABLE STRENGTH OF SEAMS: 67.3 lb/in
   - 6.I. FIRE RETARDANT RATING PER CSFM - TITLE 19, (LICENSE # : F-037801).
   - 6.J. FABRIC SHADE STRUCTURES SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF CBC SECTION 3102 AND 3105
   - 6.K. FABRIC MATERIAL SHALL COMPLY WITH CBC SECTIONS 3102.3.1, 3105.3, AND CCR, TITLE 19, DIVISION 1, CHAPTER 8
7. QUALITY CONTROL
   - 7.A. QUALITY CONTROL PERFORMED BY THE SUPPLIER SHALL INCLUDE VISUAL AND/OR INSTRUMENTED VERIFICATION OF THE FOLLOWING ASPECTS. IF APPLICABLE: MATERIAL TRACEABILITY, WELD QUALITY, DIMENSIONAL ACCURACY, COATINGS, ASSEMBLY, PACKING, AND SHIPPING.
   - 7.B. ALL MANUFACTURER PERSONNEL SHALL RECEIVE TRAINING AS MANDATED BY SUPERIOR RECREATIONAL PRODUCTS. QUALITY PERSONNEL WILL BE CONTINUALLY TRAINED, INCLUDING PROCESS AUDITS THROUGHOUT THE PRODUCT REALIZATION. QUALITY ASSURANCE AUDITS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN SRP AND LADBS CERTIFIED INSPECTOR.
   - 7.C. ALL WELDED STEEL PRODUCTS SHALL RECEIVE QUALITY ASSURANCE AUDITS AFTER WELDING TO ENSURE DIMENSIONAL ACCURACY AND WELD QUALITY. PAINTED STEEL PRODUCTS SHALL RECEIVE RANDOM QUALITY ASSURANCE AUDITS USING A FILM THICKNESS GAUGE 250 TIMES PER DAY ON PRIMER COAT AND 250 PER DAY ON TOP COAT TO ENSURE PROPER COATING THICKNESS.
   - 7.D. STANDARDS FOR EXECUTION OF THE WORK SHALL FOLLOW SUPERIOR RECREATIONAL PRODUCTS' WORK INSTRUCTIONS, QUALITY PROCEDURES, AND DSA APPROVED SEALED DRAWINGS. MANUFACTURER SHALL ADHERE TO DIMENSIONAL TOLERANCES AS SPECIFIED ON APPLICABLE DRAWINGS AND DOCUMENTATION.
8. STANDARD NOTES
   - 8.A. ALL WORK SHALL CONFORM TO 2022 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
   - 8.B. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR
   - 8.C. A "DSA CERTIFIED" CLASS 3 MIN. PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR
   - 8.D. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT
   - 8.E. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT OR ADDENDUM, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION PER DSA IR A-6 AND SECTION 338(C) PART 1, TITLE 24 CCR
   - 8.F. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR)
   - 8.G. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
   - 8.H. AS PER IR PC-4 1.7: FLOOD ZONE: DESIGN SHALL COMPLY WITH CBC SECTION 1612A AND PROCEDURE PR 14-01: FLOOD DESIGN AND PROJECT SUBMITTAL REQUIREMENTS. WHEN A SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X A LETTER STAMPED AND SIGNED FROM A GEOTECHNICAL ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THE PC ARE STILL APPLICABLE.
   - 8.I. AS PER IR PC-4 1.8: GEOHAZARD REPORTS: GEOHAZARD REPORTS ARE NOT REQUIRED FOR OPEN FABRIC SHADE STRUCTURES 1,600 SQUARE FEET (SQ. FT.) OR LESS COMPLYING WITH THE REQUIREMENTS OF IR A-4: GEOHAZARD REPORT REQUIREMENTS, SECTION 3.1.1. OPEN FABRIC SHADE STRUCTURES GREATER THAN 1,600 SQ. FT. UP TO A MAXIMUM OF 4,000 SQ. FT. AND COMPLYING WITH THE REQUIREMENTS NOTED IN IR A-4 SECTION 3.1.1 DO NOT REQUIRE A GEOHAZARD REPORT PROVIDED A GEOTECHNICAL REPORT INDICATES THAT NO LIQUEFACTION POTENTIAL EXISTS.
   - 8.J. AS PER IR PC-4 5.7: PIER & SHALLOW SPREAD FOOTINGS MAY BE COMBINED WITHIN THE SAME SHADE STRUCTURE IF ALL COLUMNS IN THE SHADE STRUCTURE HAVE THE SAME HEIGHT.
   - 8.K. SHADE STRUCTURE APPROVAL FOR WILDLAND-URBAN INTERFACE PER CBC 7A TO BE FIELD VERIFIED. THIS PC HAS NOT BEEN APPROVED FOR USE IN A FIRE HAZARD SEVERITY ZONE PER CBC CHAPTER 7A.
   - 8.L. MINIMUM SETBACK LIMIT FOR THE SHADE STRUCTURES AS PER FIGURE 1:

FIG. 1: FOUNDATION CLEARANCES FROM SLOPE



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#	Drawing Title
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S2	ELEVATION DETAILS
S3	TYPICAL DETAILS
S4	REFERENCE TABLES
S5	SPECIFICATION INFORMATION
S6	EXAMPLE FORM DSA 103 - TESTS & INSPECTIONS

DESIGN PARAMETER CHECKLIST FOR OVER-THE-COUNTER REVIEW

THE FOLLOWING CHECKLIST IS INTENDED TO ASSIST THE PLAN REVIEWER DETERMINE IF THIS PRE-CHECKED SUBMITTAL IS APPLICABLE TO THE SITE-SPECIFIC CONDITIONS IN WHICH IT IS INTENDED TO BE USED. IF THIS CHECKLIST CANNOT BE COMPLETED, ADDITIONAL ENGINEERING PROVING SITE-SPECIFIC COMPLIANCE IS REQUIRED.

THIS PRE-CHECKED SUBMITTAL IS APPLICABLE UNDER THE FOLLOWING CIRCUMSTANCES:

- □ THE CONSTRUCTION TYPE IS "IIB"
- □ THE RISK CATEGORY IS "II" OR LESS
- □ THE WIND EXPOSURE CATEGORY IS "C" OR LESS
- □ THE SOIL CLASS IS "D" OR BETTER
- □ THE PROJECT SITE BASIC ULTIMATE WIND SPEED IS ≤ 110 mph
- □ THE PROJECT SITE SEISMIC DESIGN CATEGORY IS "E" OR LESS
- □ THE PROJECT SITE IS NOT IN A FLOOD ZONE (WHEN A SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X A LETTER STAMPED AND SIGNED FROM GEOTECHNICAL ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN PC ARE STILL APPLICABLE)
- □ THE PROJECT SITE IS NOT IN AN AREA CLASSIFIED AS A WILD LAND URBAN INTERFACE FIRE AREA (A FIRE HAZARD SEVERITY ZONE)
- □ NONE OF THE MAXIMUM DESIGN CRITERIA ARE EXCEEDED
- □ ALLOWABLE SOIL COMPRESSIVE STRENGTH IS 1,500 psf OR GREATER
- □ LATERAL BEARING PRESSURE SHALL BE 200 PSF/FT (INCREASED PER CBC SECTION 1806A.3.4) OR GREATER
- □ PIER FRICTIONAL RESISTANCE SHALL BE LARGER THAN USED IN DESIGN
- □ IF THE CANOPY SIZE IS < 1,600 ft² IN AREA, COMPLYING WITH THE REQUIREMENTS OF DSA IR A-4 SECTION 3.1.1, SUPPORTED ON ALL CORNERS (3 COLUMNS MINIMUM), A SITE-SPECIFIC GEOHAZARD REPORT IS NOT REQUIRED
  -OR-
  IF THE CANOPY SIZE IS < 4,000 ft² IN AREA AND THERE IS A GEOTECHNICAL REPORT PROVING THAT NO POTENTIAL FOR LIQUEFACTION EXISTS, A SITE-SPECIFIC GEOHAZARD REPORT IS NOT REQUIRED
- □ THE CANOPY SIZE PROVIDES THE MINIMUM REQUIRED AREA FOR THE SELECTED ASSEMBLY USE AND DESIRED OCCUPANCY LOAD (SEE ASSEMBLY USE SELECTION CHECKLIST)

OCCUPANCY USE SELECTION CHECKLIST

THE FOLLOWING CHECKLIST IS TO BE USED BY THE PARTY SUBMITTING THIS PRE-CHECK TO INDICATE THE INTENDED OCCUPANCY USE FOR THIS FABRIC CANOPY.
☒ ASSEMBLY GROUP A-2
□ ASSEMBLY GROUP A-3
□ BUSINESS GROUP B
□ EDUCATIONAL GROUP E
INTENDED OCCUPANCY LOAD 15 PERSONS

SITE-SPECIFIC CODE ANALYSIS

THIS SECTION IS TO BE FILLED OUT BY THE ARCHITECT OF RECORD FOR SITE-SPECIFIC APPROVAL
TYPE OF CONSTRUCTION: TYPE V-B
FIRE SPRINKLER: NO
ALLOWABLE AREA = 6,000 ft²

CODE ANALYSIS			
OCCUPANCY GROUP	OCCUPANT LOAD FACTOR	TOTAL OCCUPANT LOAD	SHADE STRUCTURE AREA (ft²)
A-2	15	27	400

NOTE: THE INTENDED USE AND OCCUPANCY TO BE SPECIFIED ON SITE-SPECIFIC APPLICATION DRAWINGS.

CANOPY SIZE SELECTION CHECKLIST

THE FOLLOWING CHECKLIST IS TO BE USED BY THE PARTY SUBMITTING THIS PRE-CHECK TO INDICATE THE INTENDED SIZES USED FOR THIS FABRIC CANOPY SUBMITTAL. SELECT ONE STYLE/SIZE AND ONE HEIGHT.

NOTES:
1. HEIGHT OPTIONS ARE FROM 9FT TO 12FT.
2. INTERMEDIATE SIZES MAY USE THE MEMBER SIZES OF THE NEXT LARGEST CANOPY WITH AN IDENTICAL WIDTH TO LENGTH RATIO.

CANTILEVER UMBRELLA STYLE SIZE
- □ 10'
- □ 14'
- ☑ 20'

HEIGHT
- □ 9'
- ☑ 10'
- □ 12'

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FABRIC CANOPIES DSA PC - CU
COVER SHEET

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1	7/17/2024	KJK

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Date:	4/2/2024
Chkd:	
Date:	
Job Number:	

S1
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Revisions	:	

CANTILEVER UMBRELLA - TITLE SHEET

PC301

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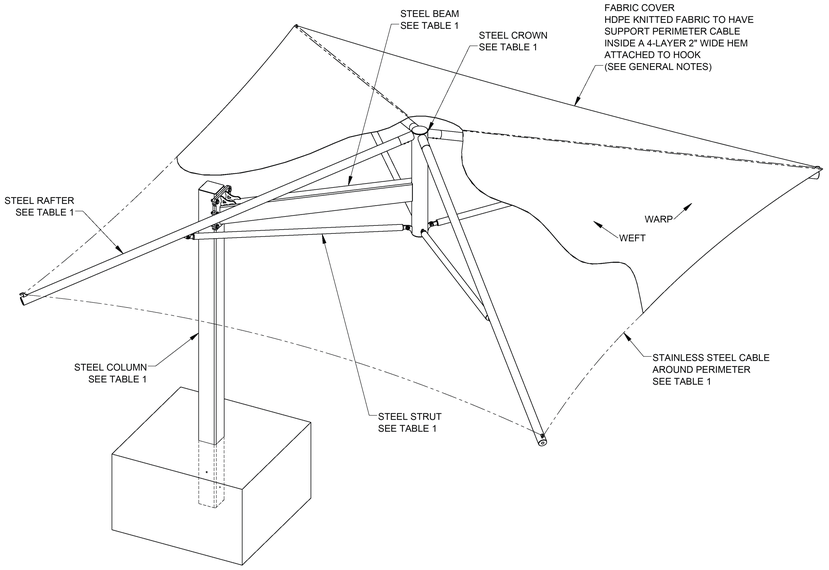
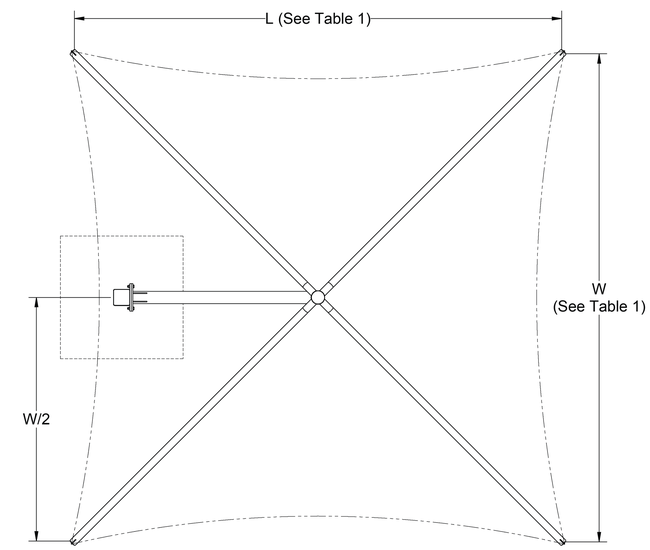
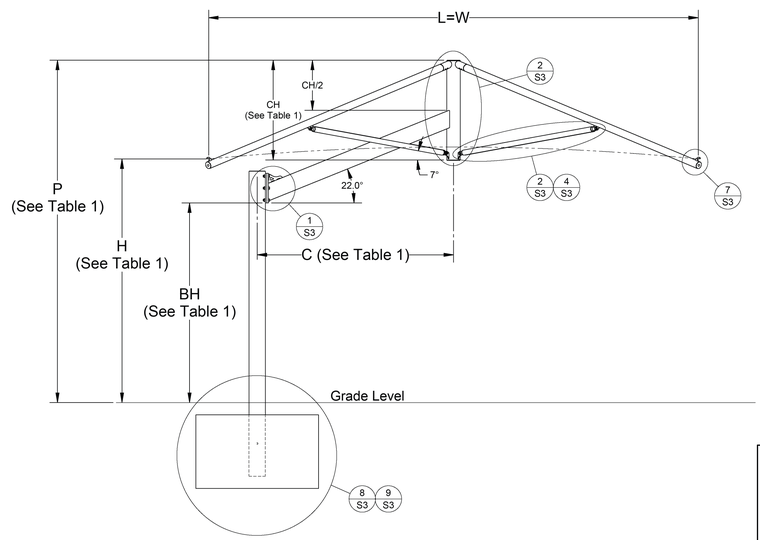


1 / S2 CANTILEVER UMBRELLA SHADE STRUCTURE



2 / S2 FRAME PLAN VIEW



3 / S2 FRAME ELEVATION VIEW

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ELEVATION DETAILS

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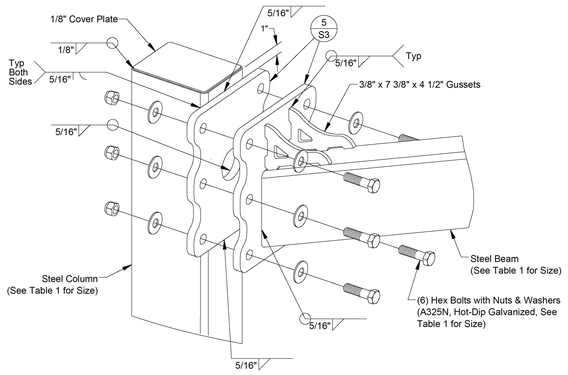
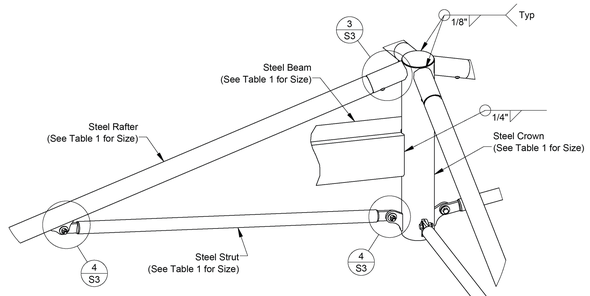
CANTILEVER
UMBRELLA -
ELEVATION DETAILS

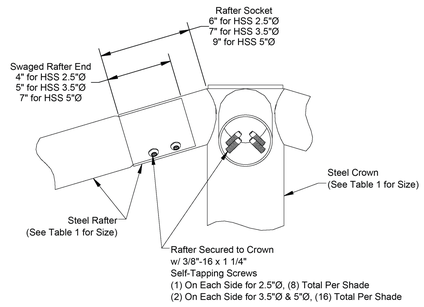
PC302



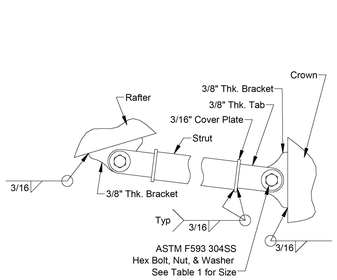
1 S3 COLUMN/BEAM CONNECTION DETAIL



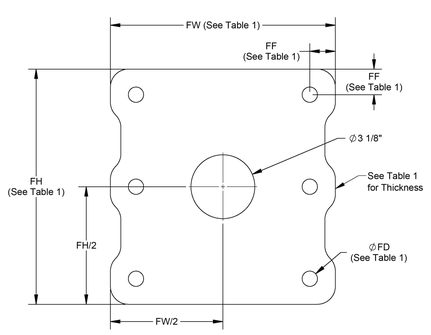
2 S3 CROWN DETAIL



3 S3 SWAGE CONNECTION DETAIL

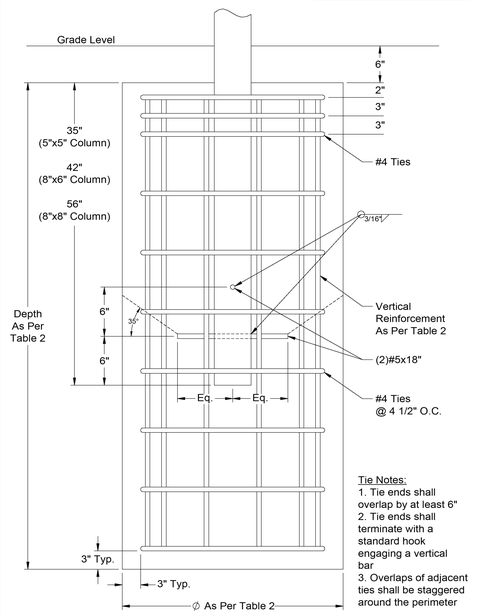


4 S3 STRUT DETAIL



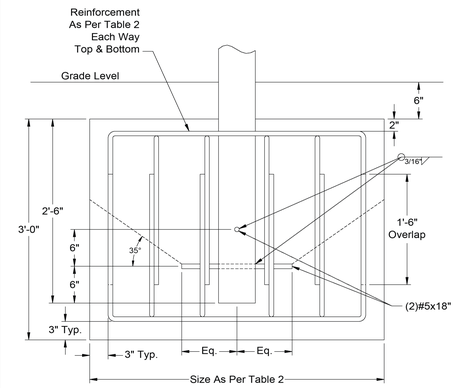
5 S3 FLANGE DETAIL

TESTING AND SPECIAL INSPECTION REQUIREMENTS (EXEMPT TYPE 2 - SOILS: ELIGIBLE DEEP FOUNDATION ELEMENTS)

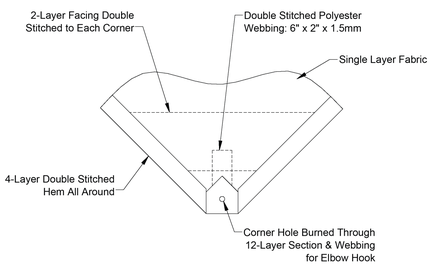


Tie Notes:
1. Tie ends shall overlap by at least 6"
2. Tie ends shall terminate with a standard hook engaging a vertical bar
3. Overlaps of adjacent ties shall be staggered around the perimeter

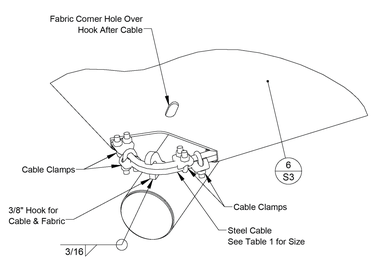
8 S3 PIER FOOTING OPTION DETAIL



9 S3 SPREAD FOOTING OPTION DETAIL



6 S3 FABRIC CORNER DETAIL



7 S3 FABRIC/CABLE CONNECTION

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FABRIC CANOPIES DSA PC - CU
TYPICAL CANOPY DETAILS

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Revisions	:	

CANTILEVER UMBRELLA - TYPICAL CANOPY DETAILS

PC303

Autodesk Docs://Mosher del Rey MS - Building & Site Rehabilitation/Mosher del Rey MS - Building & Site Rehabilitation_24203.10_CAP_r.rvt

TABLE 1 : Shade Member Sizes

✓	Shade Number	Length (L)	Width (W)	Height (H)	Peak Height (P)	Beam Height (BH)	Center Offset (C)	Crown Height (CH)	Steel Column	Steel Beam	Steel Crown	Steel Rafter	Steel Strut	Strut Bolt Size (See Detail 4/S3)	Flange Bolt Size (See Detail 1/S3)	Flange Width (FW)	Flange Height (FH)	Flange Thickness	Flange Hole Dia. (FD)	Flange Hole Offset (FF)	Cable Size
	DSACU101009IN	10'	10'	9'	10.95'	7.6'	5'	2.2'	HSS 5" x 5", 1/4" Wall	HSS 4" x 4", 3/16" Wall	Pipe 5" x Sch 40	HSS 2.5" x 12 Gauge	HSS 1.66" x 13 Gauge	∅3/4"	5/8"	10"	10 1/2"	5/8"	11/16"	1 1/4"	3/16" 7x19
	DSACU101010IN	10'	10'	10'	11.95'	8.6'	5'	2.2'	HSS 5" x 5", 1/4" Wall	HSS 4" x 4", 3/16" Wall	Pipe 5" x Sch 40	HSS 2.5" x 12 Gauge	HSS 1.66" x 13 Gauge	∅3/4"	5/8"	10"	10 1/2"	5/8"	11/16"	1 1/4"	3/16" 7x19
	DSACU101012IN	10'	10'	12'	13.95'	10.6'	5'	2.2'	HSS 7" x 5", 1/4" Wall	HSS 4" x 4", 3/16" Wall	Pipe 5" x Sch 40	HSS 2.5" x 12 Gauge	HSS 1.66" x 13 Gauge	∅3/4"	5/8"	10"	10 1/2"	5/8"	11/16"	1 1/4"	3/16" 7x19
	DSACU141409IN	14'	14'	9'	11.78'	7.5'	6'	3.0'	HSS 8" x 6", 1/4" Wall	HSS 5" x 5", 1/4" Wall	Pipe 5" x Sch 40	HSS 3.5" x 11 Gauge	HSS 1.9" x 11 Gauge	∅3/4"	3/4"	11"	11 1/2"	3/4"	13/16"	1 1/4"	1/4" 7x19
	DSACU141410IN	14'	14'	10'	12.78'	8.5'	6'	3.0'	HSS 8" x 6", 1/4" Wall	HSS 5" x 5", 1/4" Wall	Pipe 5" x Sch 40	HSS 3.5" x 11 Gauge	HSS 1.9" x 11 Gauge	∅3/4"	3/4"	11"	11 1/2"	3/4"	13/16"	1 1/4"	1/4" 7x19
	DSACU141412IN	14'	14'	12'	14.78'	10.5'	6'	3.0'	HSS 8" x 6", 1/4" Wall	HSS 5" x 5", 1/4" Wall	Pipe 5" x Sch 40	HSS 3.5" x 11 Gauge	HSS 1.9" x 11 Gauge	∅3/4"	3/4"	11"	11 1/2"	3/4"	13/16"	1 1/4"	1/4" 7x19
	DSACU202009IN	20'	20'	9'	13.04'	7.1'	8'	4.0'	HSS 8" x 8", 3/8" Wall	HSS 8" x 6", 3/8" Wall	Pipe 6" x Sch 40	HSS 5" x 7 Gauge	HSS 2.5" x 12 Gauge	∅1"	7/8"	13 1/2"	14 1/2"	1"	15/16"	1 3/8"	5/16" 7x19
✓	DSACU202010IN	20'	20'	10'	14.04'	8.1'	8'	4.0'	HSS 8" x 8", 3/8" Wall	HSS 8" x 6", 3/8" Wall	Pipe 6" x Sch 40	HSS 5" x 7 Gauge	HSS 2.5" x 12 Gauge	∅1"	7/8"	13 1/2"	14 1/2"	1"	15/16"	1 3/8"	5/16" 7x19
	DSACU202012IN	20'	20'	12'	16.04'	10.1'	8'	4.0'	HSS 8" x 8", 3/8" Wall	HSS 8" x 6", 3/8" Wall	Pipe 6" x Sch 40	HSS 5" x 7 Gauge	HSS 2.5" x 12 Gauge	∅1"	7/8"	13 1/2"	14 1/2"	1"	15/16"	1 3/8"	5/16" 7x19

TABLE 2 : Shade Foundation

✓	Shade Number	Spread Footing Depth	Spread Footing Size	Spread Footing Reinforcement	Pier Footing Depth	Pier Footing Diameter	Pier Footing Reinforcement
	DSACU101009IN	3.0'	5.5' x 5.5'	7 #5	7'	Ø3'	12 #6
	DSACU101010IN	3.0'	5.5' x 5.5'	7 #5	7'	Ø3'	12 #6
	DSACU101012IN	3.0'	6' x 6'	8 #5	7.5'	Ø3'	12 #6
	DSACU141409IN	3.0'	6.25' x 6.25'	8 #5	8'	Ø3'	12 #6
	DSACU141410IN	3.0'	6.25' x 6.25'	8 #5	8'	Ø3'	12 #6
	DSACU141412IN	3.0'	6.5' x 6.5'	9 #5	8'	Ø3'	12 #6
	DSACU202009IN	3.0'	7.25' x 7.25'	10 #5	9'	Ø3'	12 #6
✓	DSACU202010IN	3.0'	7.25' x 7.25'	10 #5	9'	Ø3'	12 #6
	DSACU202012IN	3.0'	7.75' x 7.75'	10 #5	9.5'	Ø3'	12 #6

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Shade

SUPERIOR SHADE
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REFERENCE TABLES

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SITE PROJECT NAME:
DISTRICT/OWNER:
LOCATION/ADDRESS:

Revisions

	Date:	By:
1	7/17/2024	KJK

Drawn:	KJK
Date:	4/2/2024
Chkd:	
Date:	
Job Number:	

S4
Sheet No.

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RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

CANTILEVER UMBRELLA - REFERENCE TABLES

PC304

Autodesk Docs://Mosher del Rey MS - Building & Site Rehabilitation/Mosher del Rey MS - Building & Site Rehabilitation_2024_CBC_CAA.rvt
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FLAME RETARDANT

Fabric Registration

LICENSE NUMBER: F-037801

COMMERCIAL NINETYFIVE 340FR

Product Marketed by:

GALE PACIFIC LTD
145 WOODLANDS DRIVE
BRAESIDE, AUSTRAILIA 3195, ,

Issue Date : 05/29/2024
Expiration Date : 06/30/2025

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code. The scope of the approved use of this product is provided in the current edition of the CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS published by the California State Fire Marshal.

Issued By Cortney Walker
Fire Engineering License Manager
Fire Engineering & Investigations Division

Reviewed and Approved By Patricia Setter
Deputy State Fire Marshal III
Fire Engineering & Investigations Division

OFFICE OF THE STATE FIRE MARSHAL

Please visit calfire.govmotus.org for more information on Licensing and Permitting with CAL FIRE

Page 1 of 1

Commercial **NinetyFive 340FR**

PRODUCT SPECIFICATION

Commercial NinetyFive 340 FR, the flame retardant version of the most trusted HDPE shade fabric in the industry, is a mid-weight, flame retardant fabric that delivers the utmost in versatility. Available in 22 vibrant and on-trend colors, Commercial NinetyFive 340 FR can fulfill almost any HDPE design requirement.

- A mid-weight, 340 gsm fabric suitable for applications spanning a wide array of sizes and designs.
- Provides the optimal combination of sun protection, strength, and durability to ensure low maintenance, and long-life performance
- The most expansive color assortment in the HDPE shade fabric market. Offering 22 rich, vibrant and on-trend colors to fulfill a wide range of design requirements.
- Each color individually tested and meets the most stringent FR certification criteria
- Industry-leading stentering process provides premium lay flat characteristics to assist with accurate design and fabrication.
- Backed by a full 10-year warranty against UV degradation and designed to withstand the world's harshest environments
- 100% Lead and Phthalate free

FLAMMABILITY
CSFM Title 19 1237.1
NFPA 701 Test Methods 1 & 2
ASTM E84 19B

Each color individually tested and passes all certification criteria for above. Test results available upon request. NFPS2-503 Class M1 in process

FABRIC PROPERTIES
AS 2001.2.13 Mass per unit
Nominal fabric mass 340 gsm ± 20; ;10 oz/yd²
Approximate thickness 0.06 in. / 1.6 mm

ROLL SPECIFICATIONS
Nominal width: 9 ft. 10 in. / 3.0m (folded)
Length: 131 ft 3 in. / 40m
Approx. roll weight: 97 lbs. / 44 kg
Approx. roll diameter: 1.05 ft / 0.32 m
Core diameter: 1.38 in. / 35 mm

USAGE INSTRUCTIONS
Do not use against flames. Contact with organic solvents, halogens or highly acidic substances may reduce the service life of the fabric and void the warranty. Biaxial elastic material properties available on request.

SUGGESTED SPECIFICATION
Shade cloth fabric shall be compliant to Australian standard AS 4174:2018 and shall be GALE Pacific Commercial NinetyFive 340 FR Knitted HDPE monofilament & tape shade fabric offering a UVE Protection from 90 to 96%.

PERFORMANCE

ASTM D5034
Tensile Strength and Elongation
Maximum Force – Warp (Mean) 158.6 lbf
Elongation at Maximum Force (Mean) 89%
Maximum Force – Weft (Mean) 412.3 lbf
Elongation at Maximum Force – Warp (Mean) 49%

ASTM D2261
Tearing Strength – Tongue (Single Rip)
Mean Force – Warp 43.0 lbf
Mean Force – Weft 39.6 lbf

ASTM D6797
Bursting Strength – Ball Burst (Constant Rate of Extension)
Mean Force 408 lbf

AS 4174:2018
Shade Protection Fabric Performance

Colour	Cover Factor	Shade Factor	UV-Vis Trans %	UVR Trans %	UVR Block %	UVE %	Protection Category
Aquatic Blue	92	88.1	11.9	8.5	91.5	91	Very Effective
Black	95	94.8	5.2	5.0	95.0	94	Very Effective
Bright Green	90	87.3	12.7	9.0	91.0	90	Effective
Brown	96	94.3	5.7	4.0	96.0	95	Most Effective
Brunswick Green	93	92.9	7.1	6.4	93.6	92	Very Effective
Cayenne	93	87.3	12.7	6.7	93.3	92	Very Effective
Cedar	93	88.4	11.6	6.4	93.6	93	Very Effective
Charcoal	93	93.6	6.4	6.1	93.9	92	Very Effective
Cherry Red	90	80.0	20.0	10.0	90.0	90	Effective
Deep Ochre	91	90.5	9.5	8.3	91.7	90	Effective
Desert Sand	93	86.1	13.9	6.6	93.4	92	Very Effective
Gun Metal	96	94.5	5.5	3.5	96.5	96	Most Effective
Natural	94	78.3	21.7	6.5	93.5	92	Very Effective
Navy Blue	94	93.1	6.9	6.2	93.8	93	Very Effective
Orange	92	80.8	19.2	7.6	92.4	91	Very Effective
Rivergum Green	94	89.7	10.3	6.0	94.0	93	Very Effective
Royal Purple	91	87.9	12.1	8.6	91.4	90	Effective
Sky Blue	94	91.3	8.7	6.0	94.0	93	Very Effective
Steel Grey	92	89.7	10.3	7.6	92.4	91	Very Effective
Turquoise	94	89.5	10.5	6.6	93.4	93	Very Effective
White	95	76.5	23.5	5.4	94.6	94	Very Effective
Yellow	93	77.5	22.5	6.8	93.2	92	Very Effective

Industrial Fabrics Association International | American Society of Landscape Architects | National Architectural Specifications

USA P 1800 560 4667 F +1 407 772 0553
AU P 1800 331 521 F +61 3 9518 3398
NZ P 0800 555 171 F 0800 555 172
UAE P +971 4 881 7114 F +971 4 881 7167
www.galecommercial.com

GALE PACIFIC

The above results are typical averages from quality assurance testing and are not to be taken as a minimum specification nor as forming any contract between GALE Pacific and another party. Due to continuous product improvement product specifications are subject to alteration without notice. As the use and disposal of this product are beyond GALE Pacific's control, regardless of any assistance provided without charge, GALE Pacific assumes no obligation or liability for the suitability of its products in any specific end use application. It is the customer's responsibility to determine whether GALE Pacific's products are appropriate for the specific application and complies with any legal & patent regulations.

Rev 1-US 3/20

7 x 19

7X19 Stainless Steel Cable

Diameter (Inches)	Weight per 100ft (Lbs)	Nominal B.S. (Lbs) AISI 302, 304	Nominal B.S. (Lbs) AISI 316
3/16	6.50	3,700	3,210
7/32	8.60	5,000	4,350
1/4	11.00	6,400	5,600
5/16	17.30	9,000	8,200
3/8	24.30	12,000	11,000

6 X 36

6X19/37 Class Stainless Steel Wire Rope

Diameter (Inches)	Weight per 100ft (Lbs)	Nominal B.S. (Lbs) AISI 302, 304	Nominal B.S. (Lbs) AISI 316
7/16	35.0	16,300	14,800

Stainless Steel Wire Rope Clips

Stainless Steel Wire Rope Clips

Precision Cast Type 316

Size (Inch)	Size (mm)	Min Clips Required	Weight (Lbs)
3/16	5	3	0.08
1/4	6	3	0.09
5/16	8	3	0.19
3/8	10	3	0.38
1/2	12	4	0.53
5/8	16	4	0.90
3/4	20	5	1.06

Stainless Steel Jaw & Jaw Turnbuckle

T316, Forged

Size X Take Up (Inch)	Working Load Limit (Lbs)	Weight per Each (Lbs)
1/4 x 4	500	0.528
5/16 x 4-1/2	800	0.726
3/8 x 6	1,200	0.880
1/2 x 12	2,200	2.394
5/8 x 12	3,500	4.664
3/4 x 12	5,200	7.042
1 x 12	8,000	11.24

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LOCATION/ADDRESS:

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1	7/17/2024	KJK

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Date:	4/2/2024
Chkd:	
Date:	
Job Number:	

S5
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RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

CANTILEVER UMBRELLA - SPECIFICATION INFORMATION

PC305

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DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC

General

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents in the appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The Project Inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2022 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required **Periodic** – Indicates that a periodic special inspection is required **Test** – Indicates that a test is required	**GE (Geotechnical Engineer) –** Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative. **LOR (Laboratory of Record) –** Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335. **PI (Project Inspector) –** Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA. **SI (Special Inspection) –** Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

Geotechnical Reports: Project does NOT have and does NOT require a geotechnical report

	S1. GENERAL:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☑	**a.** Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and have reached proper material. • Materials below footings must not contain loose material, mud, organic silt, organic clays, or peat.	**See Notes**	**PI**	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth under foundations and/or within the building envelope is not permitted without a geotechnical report.

	S2. SOIL COMPACTION AND FILL:

	S3. DRIVEN DEEP FOUNDATIONS (PILES):

	S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS): Not required if spread footing option is selected			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☑	**a.** Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	**PI**	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	**b.** Verify pier locations, diameters, plumbness and lengths,Record concrete or grout volumes.	**Continuous**	**PI**	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	**c.** Concrete piers.	Provide tests and inspections per CONCRETE section below.		

	S5. RETAINING WALLS:

	S6. OTHER SOILS:

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

	C1. CAST-IN-PLACE CONCRETE			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☑	**a.** Verify use of required design mix.	**Periodic**	**SI**	**Table 1705A.3 Item 5, 1910A.1.**
☑	**b.** Identify, sample, and test reinforcing steel.	**Test**	**LOR**	**1910A.2;** ACI 318-19 Ch.20 and Section 26.6.1.2; DSA IR 17-10. (See Appendix (end of this form) for exemptions.)
☑	**c.** During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	**Test**	**LOR**	**Table 1705A.3 Item 6;** ACI 318-19 Sections 26.5 & 26.12.
☑	**d.** Test concrete if:).	**Test**	**LOR**	**1905A.1.17;** ACI 318-19 Section 26.12.
☐	**e.** Batch plant inspection:	**See Notes**	**SI**	Default of '**Continuous**' per **1705A.3.3**. If approved by DSA, batch plant inspection may be reduced to '**Periodic**' subject to requirements in Section **1705A.3.3.1,** or not required per **1705A.3.3.2.** See IR 17-13. (See Appendix (end of this form) for exemptions.)
☐	**f.** Welding of reinforcing steel.	Provide special inspection per STEEL, Category S/A4(d) & (e) and/or S/A5(g) & (h) below.		

	C2. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1):

	C3. PRECAST CONCRETE (IN ADDITION TO SECTION C1):

	C4. SHOTCRETE (IN ADDITION TO SECTION C1):

	C5. POST-INSTALLED ANCHORS:

	C6. OTHER CONCRETE:

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

	S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☑	**a.** Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements. •Material sizes, types and grades comply with requirements.	**Periodic**	*	**Table 1705A.2.1 Item No. 2c.** 2202A.1; AISI S100-20 Section A3.1 & A3.2, AISI S240-20 Section A1.6 AS, AISI S220-20 Sections A4 & A6. * By special inspection qualified technician when performed off-site.
☑	**b.** Test unidentified materials	**Test**	**LOR**	**2213A.1.**
☑	**c.** Examine seam welds of HSS shapes	**Periodic**	**SI**	DSA IR 17-3.
☑	**d.** Verify and document steel fabrication per DSA-approved construction documents.	**Periodic**		Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**).
☐	**e.** Buckling restrained braces.	**Test**	**LOR**	Testing and special inspections in accordance with IR 22-4.

	S/A2. HIGH-STRENGTH BOLTS:

	S/A3. WELDING:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☑	**a.** Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	**Periodic**	**SI**	**1705A.2.5, Table 1705A.2.1 Items 4 & 5**; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3.
☑	**b.** Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	**SI**	DSA IR 17-3.
☑	**c.** Verify WPS, welder qualifications and equipment.	**Periodic**	**SI**	DSA IR 17-3.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

	S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☐	**a.** Inspect groove welds, multi-pass fillet welds, single pass fillet welds ≥ 5/16", plug and slot welds.	**Continuous**	**SI**	**Table 1705A.2.1 Items 5a.1–4;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☑	b. Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	**Periodic**	**SI**	**1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☐	**c.** Inspect welding of stairs and railing systems.	**Periodic**	**SI**	**1705A.2.1**; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3, DSA IR 17-3.
☐	**d.** Verification of reinforcing steel weldability other than ASTM A706.	**Periodic**	**SI**	**1705A.3.1**; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☐	**e.** Inspect welding of reinforcing steel.	**Continuous**	**SI**	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8;** AWS D1.4; DSA IR 17-3.

	S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3):

	S/A6. NONDESTRUCTIVE TESTING:

	S/A7. STEEL JOISTS AND TRUSSES:

	S/A8. SPRAYED FIRE-RESISTANT MATERIALS:

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

	S/A9. ANCHOR BOLTS AND ANCHOR RODS:

	S/A10. STORAGE RACK SYSTEMS:

	S/A11. Other Steel

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

Exempt items given in DSA IR A-22 or the 2022 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests / special inspections listed. **Items marked as exempt shall be identified on the approved construction documents**. The project inspector shall verify all construction complies with the approved construction documents.

	SOILS:

	CONCRETE/MASONRY:

	WELDING:

DSA 103-22: LIST OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2022 CBC

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

Name of Architect or Engineer in general responsible charge:

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer: Date:

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

DSA 103-22: LIST OF REQUIRED VERIFIED REPORTS, CBC 2022

Application Number: **School Name:** **School District:**

DSA File Number: **Increment Number:** **Date Created:**

1. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291
2. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

NOTE: THE EXAMPLE FORM DSA-103(s) SHOWN ON THIS SHEET ARE FOR ILLUSTRATION PURPOSES ONLY.
A FORM DSA-103 IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS PC IS BEING INCORPORATED INTO AND ALL EXAMPLE FORM DSA-103(s) ARE TO BE CROSSED OUT ON THIS DRAWING

SEAL:

LICENSED PROFESSIONAL ENGINEER XINGONG ZHAO S 6814 7/17/24 STRUCTURAL STATE OF CALIFORNIA

DSA IDENTIFICATION STAMP

SUPERIOR RECREATIONAL PRODUCTS Shade

SUPERIOR SHADE
150 Adamson Industrial Blvd.
Carrollton, GA 30117

FABRIC CANOPIES DSA PC - CU
EXAMPLE FORM DSA 103 -
TESTS & INSPECTIONS

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PC IDENTIFICATION STAMP

PRE-CHECK (PC) DOCUMENT
CODE: 2022 CBC
A separate project application for construction is required

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122398 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 7/23/2024

SITE PROJECT NAME:
DISTRICT/OWNER:
LOCATION/ADDRESS:

Revisions

	Date:	By:
1	7/17/2024	KJK

Drawn:	KJK
Date:	4/2/2024
Chkd:	
Date:	
Job Number:	

S6
Sheet No.

ARCHITECTS
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1775 HANCOCK STREET, SUITE 150
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All ideas, designs, and arrangements indicated on these drawings are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent of Architects Mosher Drew. There shall be no changes or deviations from these drawings or the accompanying specifications without the written consent of Architects Mosher Drew.

LICENSED ARCHITECT RENEWAL IS HOLA KIRK CAMPBELL NO. C 31100 REN 08-30-27 STATE OF CALIFORNIA

ARCHITECT / CONSULTANT STAMP

CONSULTANT LOGO

SWEETWATER UNION HIGH SCHOOL DISTRICT

CLIENT LOGO

DSA BACKCHECK

RANCHO DEL REY MIDDLE SCHOOL
BUILDING & SITE REHABILITATION

SWEETWATER UNION HIGH SCHOOL DISTRICT
RANCHO DEL REY MIDDLE SCHOOL
1174 E. J STREET, CHULA VISTA, CA 91910

Project Number	:	24203.10
Date	:	09-05-2025
Drawn By	:	Author
Checked By	:	Checker
Revisions	:	

CANTILEVER UMBRELLA - TESTS & INSPECTIONS

PC306

Autodesk Docs://Rancho Del Rey, Building & Site Rehabilitation - Central/24203.10 Rancho Del Rey_central.rvt