Grossmont Union High School District

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

DSA Approval

10/30/24

HED

2023-GU001-010

10/29/2024 7:55:24 AM

PROJECT DESCRIPTION

INTERIOR MODERNIZATION OF EXISTING BUILDING 300S. SEPARATION OF AN EXISTING RESTROOM INTO TWO SINGLE USER RESTROOM.

LIMITED HVAC WORK, MAIN AHU TO REMAIN. ALL NEW DUCTWORK.

BUILDING EXISTING ENVELOPE WILL NOT BE ALTERED.

TYPE V-1 HR. WOOD CONSTRUCTION. E OCCUPANCY.

LIMITED SITE IMPROVEMENTS: WALKWAY IMPROVEMENT ADJACENT TO BUILDING REQUIRED DUE TO NEW WORK, EXISTING HANDRAIL MODIFICATION TO MAKE ACCESSIBLE. REMOVAL OF SITE SIGNAGE

PROJECT DIRECTORY

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SIGNATURE STATEMENT

THE DRAWINGS AND/OR SPECIFICATIONS AND/OR CALCULATIONS FOR THE ITEMS LISTED BELOW HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED UNDER MY GENERAL SUPERVISION.

THE ITEMS LISTED ON SHEET G-002 HAVE BEEN COORDINATED WITH THE DRAWINGS AND SPECIFICATIONS PREPARED UNDER MY GENERAL SUPERVISION AND ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE.

LIST OF DRAWINGS: STRUCTURAL, MECHANICAL, PLUMBING, & ELECTRICAL.

10/01/2024

JENNETTE LA QUIRE
ARCHITECT
HARLEY ELLIS DEVEREAUX

DATE

LICENSE NO. C 29425 EXPIRATION DATE: 05-31-2025

ADDITIONAL NOTES

THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.

LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.

ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OF RECORD OR THE OWNER'S AGENT.

A LISTING OF CERTIFIED ATT CAN BE FOUND AT: HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE.

THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.

PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

A WRITTEN SITE SAFETY PLAN IN ACCORDANCE WITH CFC 3303.1.1 MUST BE PREPARED AND AVAILABLE ON SITE PRIOR TO COMMENCEMENT OF ANY MOBILIZATION, DEMOLITION AND/OR CONSTRUCTION.

CONTRACTOR OPERATIONS SHALL NOT BLOCK, HINDER, IMPEDE OR OTHERWISE INHIBIT THE USE OF REQUIRED EXITS AT ANY TIME. CONTRACTOR SHALL MAINTAIN UNOBSTRUCTED ACCESS TO FIRE EXTINGUISHERS, FIRE HYDRANTS, TEMPORARY FIRE PROTECTION FACILITIES, STAIRWAYS AND OTHER ACCESS ROUTES FOR FIRE-FIGHTING EQUIPMENT AND OR PERSONNEL.

CODE REFERENCES

PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2022*

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

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR.

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR

2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR

2022 CALIFORNIA ENERGY CODE, 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 STANDARD CODE (CALGREEN), PART 11, TITLE 24 CCR

2022 CALIFORNIA 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.

THE APPROVAL JURISDICTION IS THE STATE OF CALIFORNIA, DIVISION OF THE STATE ARCHITECT (DSA).

IF SCOPE OF WORK IS CHANGED AFTER THE START OF CONSTRUCTION, A CONSTRUCTION CHANGE DOCUMENT (CCD) SHALL BE SUBMITTED TO DSA.

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. A MINIMUM CLASS 3 INSPECTOR IS REQUIRED.

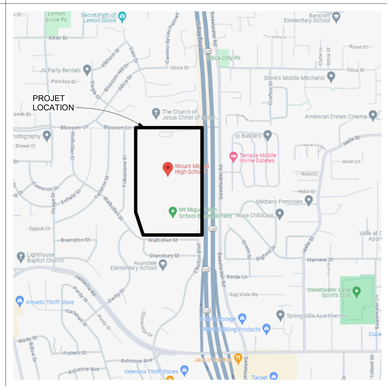
A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

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).

ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

VICINITY MAP



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Grand total: 87

DEFERRED SUBMITTALS

- NONE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
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REN. 5/31/2025
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WWW.HED.DESIGN

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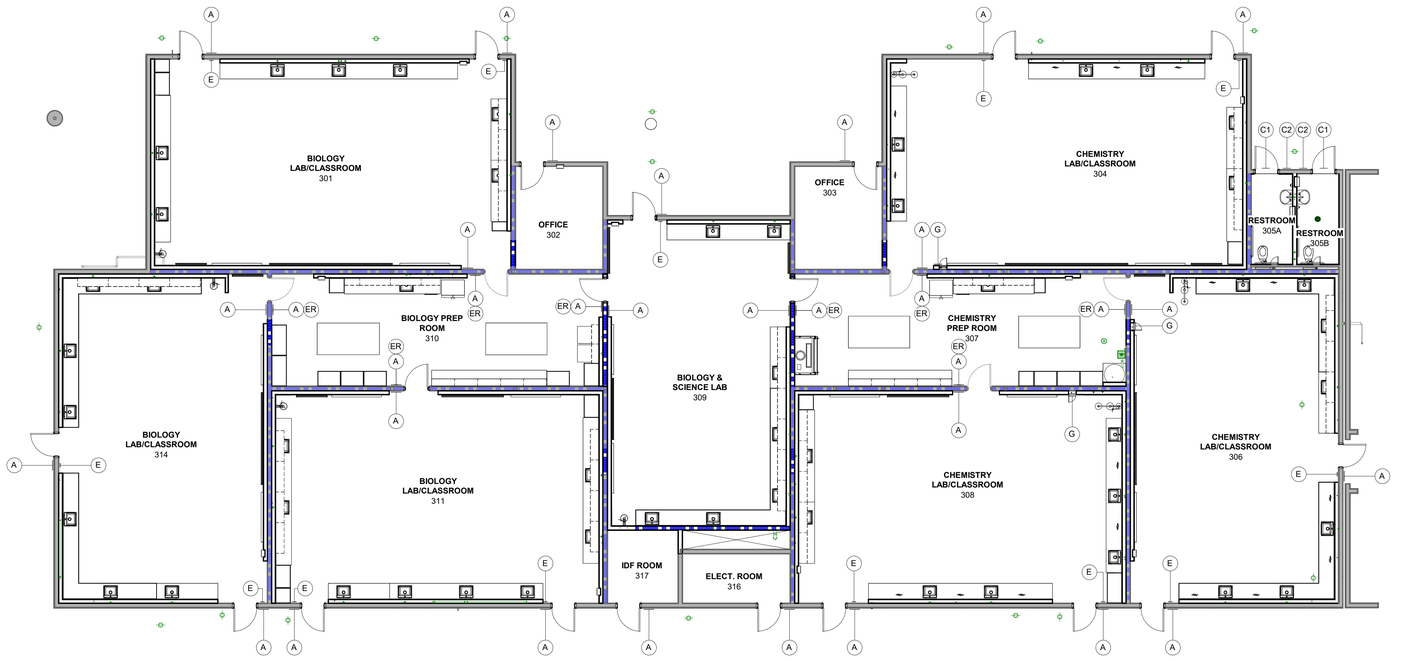
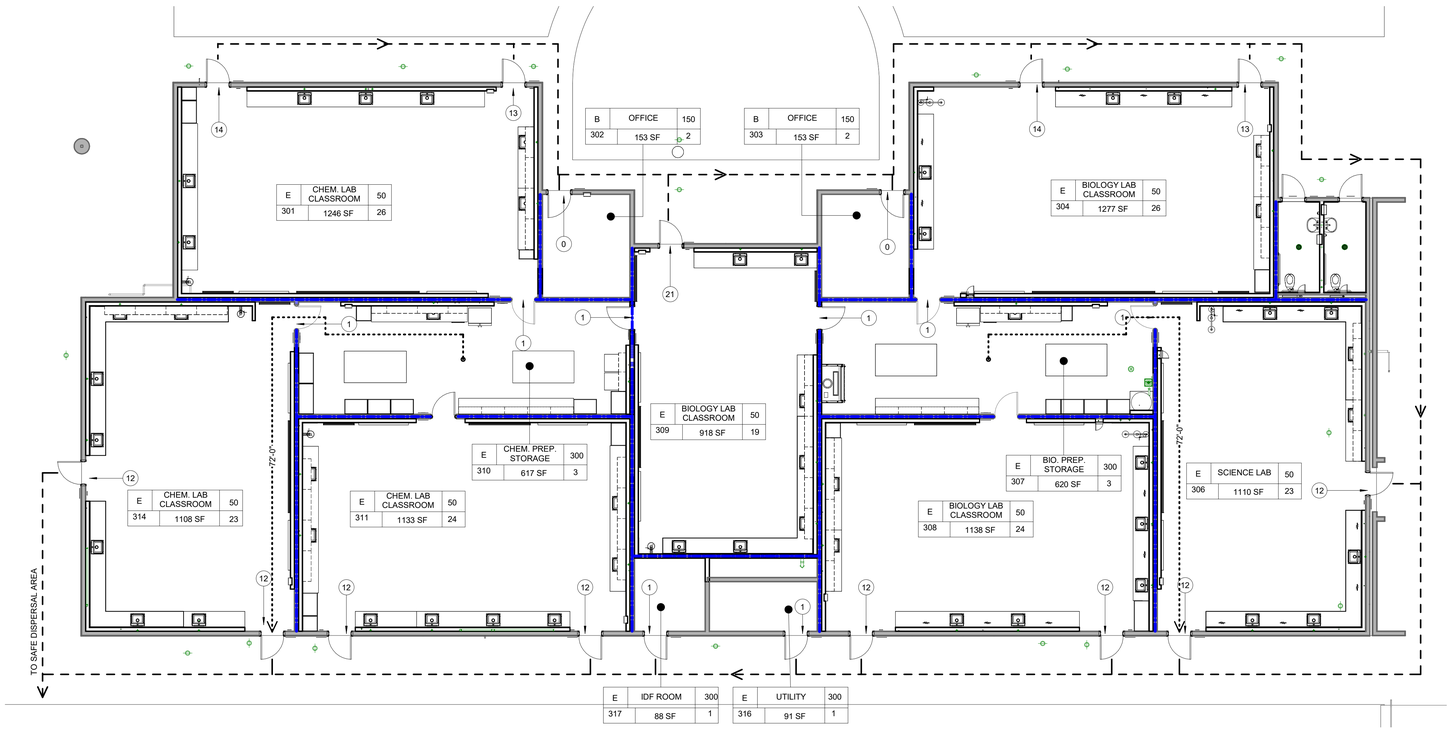


2 BUILDING 300S - SIGNAGE PLAN

1/8" = 1'-0"

ROOM SIGNAGE LEGEND - DETAILS ON SHEET G-003 U.O.N.		
MARK	DESCRIPTION	DETAIL #
A	TYPICAL EXTERIOR / INTERIOR ROOM IDENTIFICATION SIGN W/ ISA	5
C1	ALL-GENDER RESTROOM DOOR IDENTIFICATION SIGN	12
C2	ALL-GENDER RESTROOM IDENTIFICATION SIGN	3
E	EXIT DOOR IDENTIFICATION SIGN	6
ER	EXIT ROUTE	6
G	GAS SHUT-OFF VALVE IDENTIFICATION SIGN	10



1 BUILDING 300S - EGRESS PLAN

1/8" = 1'-0"

GENERAL NOTES

A. ALL PORTIONS OF MEANS OF EGRESS SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF CHAPTER 10 OF THE 2022 CBC.
B. ALL PORTIONS OF THE EXIT ACCESS SHALL COMPLY WITH SECTION 1016 OF THE 2022 CBC.
C. MEANS OF EGRESS UTILIZES SECTION 1006 TABLE 1006.2.1 OF THE 2022 CBC. THIS BUILDING IS NON-SPRINKLERED.
D. THE MAXIMUM LENGTH OF EXIT ACCESS TRAVEL MEASURED FROM THE MOST REMOTE POINT WITHIN A STORY TO THE ENTRANCE TO AN EXIT ALONG THE NATURAL UNOBSTRUCTED EGRESS TRAVEL, SHALL NOT EXCEED THE DISTANCES IN TABLE 1017.2.
E. DOORS IN THE MOE SYSTEM TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
F. THE EGRESS PATH SHALL REMAIN FREE AND CLEAR OF ALL OBSTRUCTIONS AT ALL TIMES; NO STORAGE IS PERMITTED IN ANY EGRESS PATHS.
G. THE MEANS OF EGRESS, INCLUDING THE EXIT DISCHARGE, WILL BE ILLUMINATED TO A LEVEL OF NOT LESS THAN ONE FOOTCANDLE AT THE WALKING SURFACE AT ALL TIMES THE BUILDING SPACE SERVED BY THE MEANS OF EGRESS IS OCCUPIED.
H. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED AT ALL TIMES AND SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM (BATTERIES, UNIT EQUIPMENT, OR AN ON-SITE GENERATOR) THAT WILL AUTOMATICALLY ILLUMINATE THE EXIT SIGNS FOR A DURATION OF NOT LESS THAN 90 MINUTES.
I. EXIT SIGNS ARE NOT REQUIRED AT ROOMS OR AREAS THAT REQUIRE ONLY ONE EXIT OR EXIT ACCESS. CBC 1013.1.
J. NOT USED.
K. THE MEANS OF EGRESS WILL BE ILLUMINATED TO A LEVEL OF NOT LESS THAN ONE FOOT-CANDLE AT THE WALKING SURFACE AT ALL TIMES THE BUILDING SPACE SERVED BY MEANS OF EGRESS IS OCCUPIED.
L. LOCATIONS AND CLASSIFICATIONS OF EXTINGUISHERS SHALL BE IN ACCORDANCE WITH CFC 906 AMD CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 19.
M. DURING CONSTRUCTION, AT LEAST ONE EXTINGUISHER SHALL BE PROVIDED ON EACH FLOOR LEVEL AT EACH STAIRWAY. IN ALL STORAGE AND CONSTRUCTION SHEDS, IN LOCATIONS WHERE FLAMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED, AND WHERE OTHER SPECIAL HAZARDS ARE PRESENT PER CFC SECTION 3315.1.
N. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 33. WELDING, CUTTING, AND OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 35.
O. ADDRESS IDENTIFICATION SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN LOCATION THAT IS PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. WHERE ACCESS IS BY WAY OF PRIVATE ROAD AND THE BUILDING ADRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, AN APPROVED SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. PREMISES IDENTIFICATION SHALL CONFORM TO CBC SECTION 502.1
P. WALL, FLOOR AND CEILING FINISHES AND MATERIALS SHALL NOT EXCEED THE INTERIOR FINISH CLASSIFICATIONS IN CBC TABLE 803.13 AND SHALL MEET THE FLAME PROPAGATION PERFORMANCE CITERIA OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 19, DIVISION 1. DECORATIVE MATERIALS SHALL BE PROPERLY TREATED BY A PRODUCT OR PROCESS APPROVED BY THE STATE FIRE MARSHAL WITH APPROPRIATE DOCUMENTATION PROVIDED TO THE CITY OF SANTEE.
Q. DUMPSTERS AND TRASH CONTAINERS EXEEDING 1.5 CUBIC YARDS SHALL NOT BE STORED IN BUILDINGD OR PLACED WITHIN 5 FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF EAVE LINES UNLESS PROTECTED BY AN APPROVED SPRINKLER SYSTEM OR LOCATED IN A TYPE I OR IIA STRUCTURE SEPERATED BY 10 FEET FROM OTHER STRUCTURES. CONTAINERS LARGER THAN 1 CUBIC YARD SHALL BE OF NON- OR LIMITED-COMBUSTIBLE MATERIALS OR SIMILARLY PROTECTED OR SEPERATED. CFC 304.3.
R. EXITS, EXIT SIGNS, FIRE ALARM PANELS, HOSE CABINETS, FIRE EXTINGUISHER LOCATIONS, AND STANDPIPE CONNECTIONS SHALL NOT BE CONCEALED BY CURTAINS, MIRRORS, OR OTHER DECORATIVE MATERIALS.
S. OPEN FLAMES, FIRE, AND BURNING ON ALL PREMISES IS PROHIBITED EXCEPT AS SPECIFICALLY PERMITTED BY THE CITY OF SAN DIEGO AND CFC 308.

NOTES:

1. THE EGRESS PATH SHALL REMAIN FREE AND CLEAR OF ALL OBSTRUCTIONS AT ALL TIMES. NO STORAGE IS PERMITTED IN ANY EGRESS PATHS.

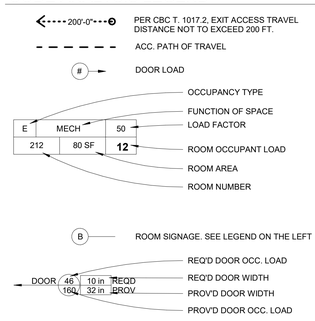
2. TOTAL EXIT ACCESS TRAVEL DISTANCE: **72'-0"**

TOTAL ALLOWABLE EXIT ACCESS TRAVEL DISTANCE: 200 FT UNSPRINKLERED.

3. TOTAL BUILDING OCCUPANT IS **177**. PER CBC 903.2.3, NO FIRE SPRINKLERS ARE REQUIRED

4. OCCUPANT LOAD IS **50** PER DSA IR A-26

CODE ANALYSIS LEGEND



SUMMARIZED BUILDING CODE ANALYSIS - BUILDING 300S NON-SPRINKLERED, NON-SEPARATED, COMBUSTIBLE CONSTRUCTION								
OCCUPANCY TYPE	OCCUPANCY LOAD	DESCRIPTION OF USE	CONSTRUCTION TYPE	STORIES	HEIGHT	BASIC ALLOWABLE (SF) *PER CBC TABLE 506.2*	ACTUAL (SF)	SPECIAL CONSIDERATIONS
E	**181**	**LABS & STORAGE**	**V-1**	**1**	**17'-4"**	18,500	**10,788**	N/A

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

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1	03/13/24	SD/DD Submittal
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WWW.HED.DESIGN

Code Analysis & Signage Plan

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G-002

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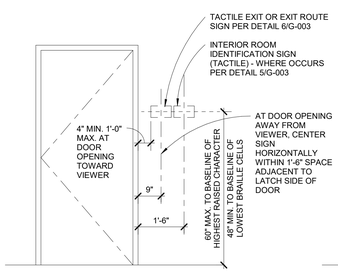
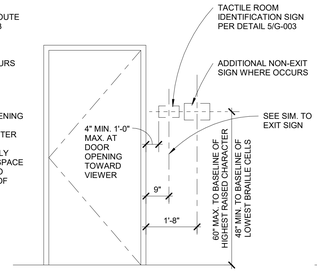
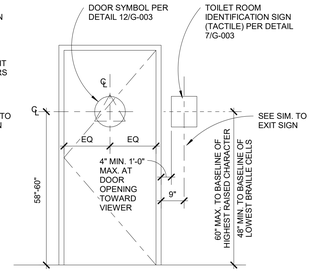


EXIT SIGN



ROOM IDENTIFICATION SIGN ON WALL



RESTROOM DOOR & WALL SIGNAGE

NOTE:

1. SIGNS TO BE LOCATED ADJACENT TO LATCH SIDE OF DOOR.
2. WHERE NO SPACE ON LATCH SIDE IS AVAILABLE, SIGNS TO BE LOCATED A NEAREST ADJACENT WALL.
3. SIGNS TO BE LOCATED ON APPROACH SIDE OF DOOR AS ONE ENTERS ROOM OR SPACE.
4. SIGNS THAT IDENTIFY EXITS ARE TO BE LOCATED ON APPROACH SIDE OF DOOR AS ONE EXITS ROOM TO SPACE.
5. SIGN CONTAINING TACTILE RAISED CHARACTERS SHALL BE LOCATED SO THERE IS AN 18" BY 18" MINIMUM CLEAR FLOOR SPACE, CENTERED ON THE TACTILE CHARACTERS, BEYOND THE ARC OF ANY DOOR BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.
6. AT DOUBLE DOORS, SIGN SHALL BE LOCATED ON RIGHTHAND SIDE.
7. ROOM NAMES AND NUMBERS TO BE SPECIFIED BY THE DISTRICT U.O.N.
8. FOR BRAILLE MEASUREMENT SEE DETAIL 23/-

24 DOOR SIGN LOCATION

1/2" = 1'-0"

TABLE *11B*-703.3.1
BRAILLE DIMENSIONS

MEASUREMENT RANGE	MINIMUM IN INCHES MAXIMUM IN INCHES
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell[1]	*0.100 (2.5 mm)*
Distance between corresponding dots in adjacent cells[1]	*0.300 (7.6 mm)*
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dots from one cell directly below[1]	0.395 (10 mm) to 0.400 (10.2 mm)

1. Measured center to center.

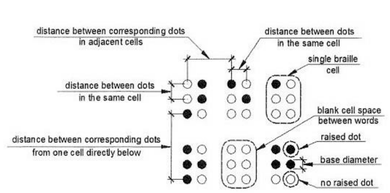


FIGURE *11B*-703.3.1
BRAILLE MEASUREMENT

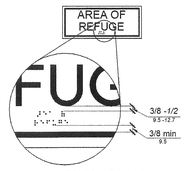
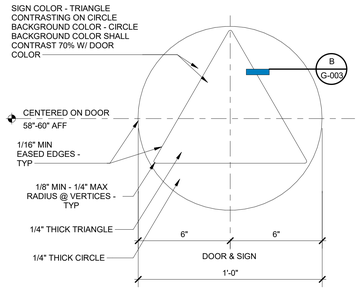


FIGURE *11B*-703.3.2
POSITION OF BRAILLE

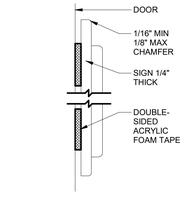
23 BRAILLE MEASUREMENT

1" = 1'-0"



ALL-GENDER

SET SIGN IN FULL BED OF ADHESIVE AND ANCHOR EACH CORNER WITH #8 COUNTERSUNK TAMPER-RESISTANT SCREWS. USE TYPE OF SCREW (SHEET METAL SCREW, WOOD SCREW OR CONCRETE SCREW) APPLICABLE FOR SUBSTRATE ANCHORAGE.



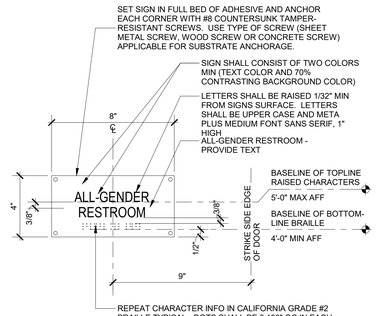
DETAIL B

MATERIAL & COLOR:
1/4" THICK MATERIAL PER SPECIFICATIONS; AT ALL GENDER SYMBOL, 1/4" THICK TRIANGLE SUPERIMPOSED ON 1/4" THICK CIRCLE

SYMBOL COLOR SHALL CONTRAST WITH DOOR COLOR. AT ALL GENDER SYMBOL, TRIANGLE COLOR SHALL CONTRAST WITH CIRCLE COLOR; CIRCLE COLOR SHALL CONTRAST WITH DOOR COLOR. INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) WHERE PROVIDED, SHALL CONTRAST WITH SYMBOL COLOR. SEE SPECIFICATIONS FOR COLORS

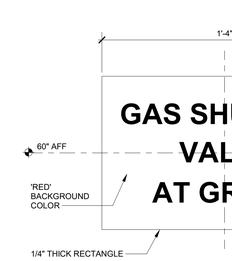
12 ACCESSIBLE WOMEN, MEN, & ALL GENDER DOOR SIGN

3" = 1'-0"



3 ALL GENDER RESTROOM SIGN

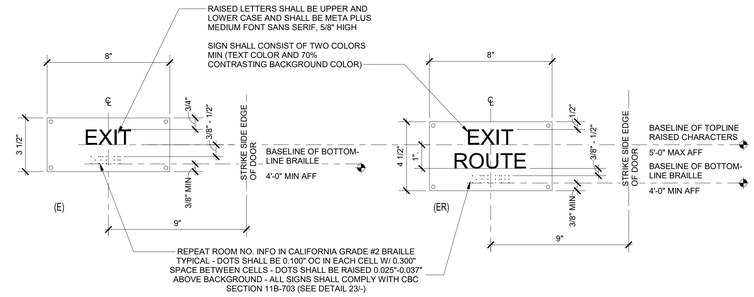
3" = 1'-0"



SET SIGN IN FULL BED OF ADHESIVE AND ANCHOR EACH CORNER WITH #8 COUNTERSUNK TAMPER-RESISTANT SCREWS. USE TYPE OF SCREW (SHEET METAL SCREW OR WOOD SCREW) APPLICABLE FOR SUBSTRATE ANCHORAGE.

10 GAS SHUT-OFF VALVE SIGN

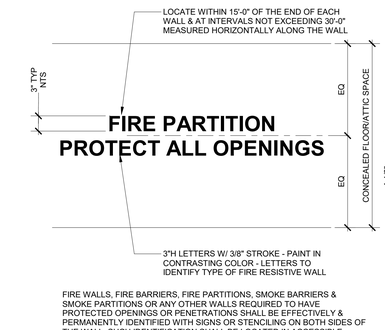
3" = 1'-0"



SET SIGN IN FULL BED OF ADHESIVE AND ANCHOR EACH CORNER WITH #8 COUNTERSUNK TAMPER-RESISTANT SCREWS. USE TYPE OF SCREW (SHEET METAL SCREW, WOOD SCREW OR CONCRETE SCREW) APPLICABLE FOR SUBSTRATE ANCHORAGE.

6 ACCESSIBLE EXIT & EXIT ROUTE SIGN

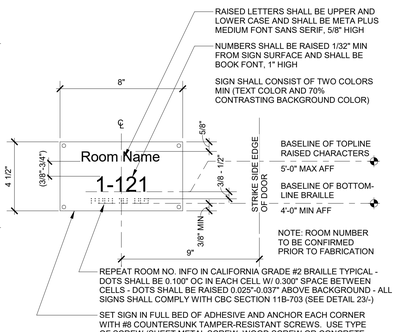
3" = 1'-0"



FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS & SMOKE PARTITIONS OR ANY OTHER WALLS REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY & PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ON BOTH SIDES OF THE WALL. SUCH IDENTIFICATION SHALL BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES

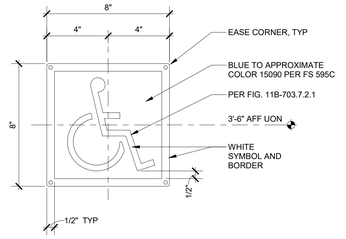
9 FIRE RESISTIVE WALL IDENTIFICATION

3" = 1'-0"



5 ACCESSIBLE ROOM NAME SIGN

3" = 1'-0"



SET SIGN IN FULL BED OF ADHESIVE AND ANCHOR EACH CORNER WITH #8 COUNTERSUNK TAMPER-RESISTANT SCREWS. USE TYPE OF SCREW (SHEET METAL SCREW, WOOD SCREW OR CONCRETE SCREW) APPLICABLE FOR SUBSTRATE ANCHORAGE.

NOTE: DETAIL TO BE USED FOR RENOVATION ONLY

1 INTERNATIONAL SYMBOL OF ACCESSIBILITY BUILDING SIGN

3" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

Signage Details

2023-GU001-010 ©2023

G-003

Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

10/28/2024 4:39:20 PM

DESIGN LOADS

1. DESIGN CODE:
   - 2022 CALIFORNIA BUILDING CODE
2. DESIGN LOAD COMBINATIONS:
   - PER ASCE 7-16 SECTION 2.3 & 2.4 & CBC SECTION 1605A
3. ROOF LIVE LOADS (UNFACTORED):
   a. MINIMUM ROOF LIVE LOAD — 20 PSF
4. LIVE LOAD DEFLECTION: — L/240
5. ULTIMATE DESIGN WIND LOAD FOR STRUCTURAL FRAME:

a.	RISK CATEGORY	III
b.	EXPOSURE	C
c.	ULTIMATE WIND SPEED	103 MPH

6. SEISMIC LOADS:

a.	RISK CATEGORY	III
b.	IMPORTANCE FACTOR "I_E"	1.25
c.	SHORT PERIOD PEAK SPECTRAL ACCELERATION "S_S"	0.834g
d.	1 SECOND PERIOD PEAK SPECTRAL ACCELERATION "S_1"	0.298g
e.	SEISMIC SITE CLASS	D
f.	SPECTRAL RESPONSE COEFFICIENT "S_{DS}"	0.667g
g.	SPECTRAL RESPONSE COEFFICIENT "S_{D1}"	N/A
h.	LONG TERM TRANSITION PERIOD "T_L"	8 SEC

DRILLING INTO CONCRETE

1. LOCATE EXISTING REINFORCING WITH NON-DESTRUCTIVE METHOD.
2. AT (5) RANDOM LOCATIONS USE CHIPPING GUN OR SIMILAR DEVICE TO CLEAR COVER AT THE REINFORCING LOCATION AND VERIFY ACTUAL LOCATION.
   a. IF LOCATIONS DETERMINED FROM NON-DESTRUCTIVE METHOD ARE ACCURATE, THEN PROCEED.
   b. IF LOCATIONS DETERMINED BY NON-DESTRUCTIVE METHOD ARE NOT ACCURATE, THEN DETERMINE DEGREE OF VARIATION AND PROCEED INCLUDING CONSIDERATION FOR THE WORST CASE VARIATION.
   c. PATCH AREAS WHERE COVER WAS REMOVED.
3. DRILL A 4" DEEP, 1/8" DIAMETER PILOT HOLE AT EACH PROPOSED LOCATION. LOCATE PILOT HOLE TO INCLUDE ADJUSTMENTS FOR APPLICABLE VARIATION AS NOTED IN STEP 2.b ABOVE.
   a. IF INTERFERENCE WITH REINFORCING IS FOUND, ADJUST LOCATION AND REPEAT STEP 3.
   b. IF NO INTERFERENCE WITH REINFORCING IS FOUND, PROCEED.
4. DRILL HOLE TO REQUIRED SIZE AND DEPTH.
5. DO NOT FABRICATE CONNECTIONS PRIOR TO LOCATING EXISTING REINFORCING. CONTRACTOR SHALL SUBMIT REVISED CONNECTION DETAIL TO ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL WHEN EXISTING REINFORCING CONDITIONS REQUIRE MODIFICATION TO CONNECTION LAYOUT.

MICROLLAM LVL HEADERS AND BEAMS

1. MICROLLAM LAMINATED VENEER LUMBER (LVL) SHALL BE AS MANUFACTURED BY iLEVEL BY WEYERHAUSER IN ACCORDANCE WITH ICC REPORT NO. ESR-1387 WITH RENEWAL DATE FEBRUARY 2025.
2. ALL MICROLLAM LVL HEADERS AND BEAMS SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN STRESSES:
   - E = 1.9 X 10^6 PSI
   - G = 118,750 PSI
   - F_b = 2,600 PSI
   - F_c = 285 PSI
   - $F_{c\perp}$ = 2,510 PSI
   - $F_{v\perp}$ = 750 PSI
3. CONNECTION BETWEEN MULTIPLE PIECES OF TOP-LOADED BEAMS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.
4. DO NOT NOTCH OR CUT RECTANGULAR HOLES IN MICROLLAM LVL HEADERS OR BEAMS.
5. HOLES THROUGH LVL BEAM ARE NOT ALLOWED UNLESS LOCATIONS AND DIMENSIONS OF OPENING ARE PROVIDED IN WRITING BY SEOR.

CONCRETE

1. CONCRETE SHALL BE AS FOLLOWS:
   CLASS A: INTERIOR SLAB-ON-GRADE:
   MIN f'c = 3000 PSI (AT 28-DAYS)
   MAX AGG. SIZE: 1"
   MAX W/C RATIO: 0.5
   SLUMP: 4" ± 1"
2. ALL CONCRETE SHALL BE READY-MIX IN ACCORDANCE WITH ASTM C94.
3. CONCRETE MIX DESIGNS SHALL BE REVIEWED BY THE OWNER'S TESTING LABORATORY AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL. SELECTION OF CONCRETE MIX PROPORTIONS SHALL BE IN ACCORDANCE WITH ACI SECTION 26.4 AND CBC SECTION 1903A..
4. CEMENT SHALL CONFORM TO ASTM C150 TYPE I OR II.
5. WATER SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS, OR OTHER SUBSTANCES DELETERIOUS TO CONCRETE OR REINFORCEMENT.
6. CONCRETE AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33. AGGREGATES FOR LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C330.
7. CONCRETE BAR REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615 (GR. 60, 60,000 PSI YIELD) FOR #4 AND LARGER, AND ASTM A 615 (GR. 40, 40,000 PSI YIELD) FOR #3 AND SMALLER.
8. CONCRETE BAR REINFORCEMENT FOR WELDED REINFORCEMENT CONNECTIONS SHALL CONFORM TO ASTM A706. ASTM STANDARDS SHALL BE LATEST EDITION. ALL PREHEATING AND WELDING OF REINFORCING BARS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.4.
9. UNLESS NOTED OTHERWISE, CONCRETE WORK SHALL CONFORM TO THE ACI STANDARD "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-19) AND THE ACI "DETAILING MANUAL" (SP-66 2004 EDITION).
10. MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE 48 HOURS.
11. BEAMS, SLABS AND COLUMNS SHALL BE PLACED MONOLITHICALLY EXCEPT WHERE OTHERWISE SHOWN. NO HORIZONTAL CONSTRUCTION JOINTS ARE TO BE MADE IN SLABS OR BEAMS, UNLESS SHOWN OR OTHERWISE NOTED.
12. PROVIDE CONSTRUCTION JOINTS AS INDICATED ON THE DRAWINGS. CONCRETE SURFACE AT CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND LAITANCE REMOVED. WHERE INDICATED ON DRAWINGS ROUGHEN CONCRETE SURFACE BY CHIPPING ENTIRE SURFACE, SAND BLASTING, OR RAKING THE SURFACE TO PRODUCE 1/4" DEEP DEFORMATIONS. PROVIDE A SHEAR KEY AT 1/3 OF DEPTH OF STRUCTURAL MEMBER AT CONSTRUCTION JOINTS. SEE TYPICAL DETAILS FOR ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS.
13. CONCRETE SLABS, INCLUDING SLABS ON METAL DECKS, SHALL BE CAST SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS. (THIS WILL REQUIRE THAT THE SLAB NOT BE CAST DEAD LEVEL WHERE SUPPORTING BEAMS, GIRDERS OR TRUSSES HAVE AN UPWARD CAMBER).
14. MINIMUM CONCRETE COVER SHALL BE (UNLESS NOTED OTHERWISE):
   a. UNFORMED SURFACES IN CONTACT WITH EARTH: 3"
   b. SLABS ON GRADE (TOP COVER): 1"
   c. FORMED SURFACES IN CONTACT WITH EARTH OR EXPOSED TO THE WEATHER: 2"
   d. BEAMS AND COLUMN MAIN REINFORCING OR STIRRUPS AND TIES: 1 1/2"
   e. INTERIOR & EXTERIOR STRUCTURAL SLABS: 1"
   f. INTERIOR WALL SURFACES: 1"
   g. IN ALL CASES, CLEARANCE NOT LESS THAN THE DIAMETER OF THE BARS.
15. ALL REINFORCING SHALL BE CONTINUOUS WITHOUT SPLICES WHERE POSSIBLE. NO SPLICES ARE PERMITTED IN GRADE BEAM FOUNDATIONS AT BRACED FRAMES AND MOMENT FRAMES. WHERE REQUIRED, SEE TYPICAL DETAILS FOR LAP SPLICE LENGTH REQUIREMENTS, ACCEPTABLE REINFORCING AT CORNERS, AND ACCEPTABLE REINFORCING AT INTERSECTIONS.
16. REINFORCING DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED AND HELD IN PLACE IN FORMS BEFORE PLACING CONCRETE.
17. PIPES AND ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE OR CONCRETE FILL OVER METAL DECK EXCEPT WHERE SPECIFICALLY DETAILED IN THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE.
18. MAXIMUM FREE FALL OF CONCRETE SHALL BE 6'-0".
19. CONSOLIDATE ALL CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING, OR TAMPING. USE EQUIPMENT AND PROCEDURES FOR CONSOLIDATION OF CONCRETE IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF ACI 309 TO SUIT THE TYPE OF CONCRETE AND PROJECT CONDITIONS.
20. PLACE NON-SHRINK GROUT UNDER STEEL BASE PLATES, WOOD SILL PLATES, ETC. AS INDICATED IN THE DRAWINGS. NON-SHRINK GROUT SHALL BE MASTERFLOW 928 GROUT BY MASTER BUILDERS TECHNOLOGIES WITH A MINIMUM COMPRESSIVE STRENGTH OF 7,500 PSI AT 28 DAYS.

CONCRETE EXPANSION ANCHOR NOTES

1. USE HILTI KWIK BOLT TZ2 EXPANSION ANCHORS AS MANUFACTURED BY HILTI INC., TULSA, OKLAHOMA. ICC REPORT NO. ESR-4266 WITH RENEWAL DATE DEC 2025.
2. INSTALLATION OF ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, ICC REPORT AND THESE NOTES.
3. SPECIAL INSPECTION IS REQUIRED FOR ALL ANCHORS.
4. WHEN INSTALLING ANCHORS IN EXISTING CONCRETE DO NOT CUT OR DAMAGE EXISTING REINFORCING BARS.
5. THE TESTING OF THE ANCHORS SHALL BE DONE BY THE TESTING LABORATORY AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO DSA AND ARCHITECT/STRUCTURAL ENGINEER. TESTING SHALL OCCUR 24 HRS. MINIMUM AFTER THE INSTALLATION OF THE ANCHORS.
6. TESTING FREQUENCY FOR ANCHORS SHALL BE IN ACCORDANCE WITH 2019 CALIFORNIA BUILDING CODE, SECTION 1910A.5.3. A BRIEF DESCRIPTION IS PROVIDED HERE FOR REFERENCE:

   STRUCTURAL APPLICATIONS:
   SILL TRACK BOLTING - 10% OF ANCHORS SHALL BE TESTED.
   ALL OTHER - 100% OF ANCHORS SHALL BE TESTED.

   NONSTRUCTURAL APPLICATIONS:
   EQUIPMENT ANCHORAGE - 50% OR ALTERNATING BOLTS IN A GROUP SHALL BE TESTED.
7. FOR ANCHOR DIAMETER, EMBEDMENT DEPTH, EDGE DISTANCE & SPACING REQUIREMENTS, AND TEST LOADS SEE TABLE BELOW:

NORMAL WEIGHT CONCRETE ANCHORS — ICC REPORT NO. ESR-4266

HILTI KWIK BOLT TZ2
CARBON STEEL ANCHORS
F'c = 3000 PSI MIN.

ANCHOR DIAMETER	EMBED (UON)	MIN. EDGE DISTANCE	MIN. SPACING	INSTALL / TEST TORQUE (FT-LBS)
3/8"	2"	2 1/2"	2 1/4"	30
1/2"	3 1/4"	2 1/4"	2"	50
5/8"	4"	3 1/2"	2 3/4"	40
3/4"	4 3/4"	3 1/2"	3 3/4"	110

WOOD NAILING

1. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:
   a. 8d — 0.131" DIAM x 2-1/2" LONG
   b. 10d — 0.148" DIAM x 3" LONG
   c. 10d SHORT — 0.148" DIAM x 1-5/8" PLUS SHEATHING THICKNESS LONG
   d. 16d — 0.162" DIAM x 3-1/2" LONG
   e. 20d — 0.192" DIAM x 4" LONG
2. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED, NAIL PER NAILING SCHEDULE BELOW (CBC TABLE 2304.10.2).
3. NAILING NOT NOTED IN SCHEDULE BELOW OR IN THE STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT. USE 8d NAILS FOR NOMINAL 1x MATERIAL AND 16d FOR NOMINAL 2x MATERIAL.
4. HOLES SHALL BE PRE-DRILLED WHERE NECESSARY TO PREVENT SPLITTING.
5. NAILS INTO PRESERVATIVE TREATED LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.

TABLE 2304.10.2
FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
ROOF		
BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3-8D COMMON (2 1/2" X 0.131")	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT WALL TOP PLATE, TO RAFTER OR TRUSS	2-8D COMMON (2 1/2" X 0.131")	EACH END, TOENAIL
	2-16D COMMON (3 1/2" X 0.162")	END NAIL
RAFTER OR ROOF TRUSS TO TOP PLATE	3-10D COMMON (3" X 0.148")	TOENAIL
ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2-16D COMMON (3 1/2" X 0.162")	END NAIL
	3-10D COMMON (3 1/2" X 0.148")	TOENAIL
WALL		
STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	16D COMMON (3" X 0.162")	16" OC FACE NAIL
BUILT-UP HEADER (2" TO 2" HEADER)	16D COMMON (3 1/2" X 0.162")	16" OC EACH EDGE, FACE NAIL
CONTINUOUS HEADER TO STUD	4-8D COMMON (2 1/2" x 0.131"	TOENAIL
TOP PLATE TO TOP PLATE	16D COMMON (3 1/2" X 0.162")	16" OC FACE NAIL
TOP PLATE TO TOP PLATE, AT END JOINTS	8-16D COMMON (3 1/2" X 0.162")	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	2-16D COMMON (3 1/2" X 0.162")	16" OC FACE NAIL
STUD TO TOP OR BOTTOM PLATE	4-8D COMMON (2 1/2" X 0.131")	TOENAIL
	2-16D COMMON (3 1/2" X 0.162")	END NAIL
TOP OR BOTTOM PLATE TO STUD	2-16D COMMON (3 1/2" X 0.162")	END NAIL
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16D COMMON (3 1/2" X 0.162")	FACE NAIL
FLOOR		
JOIST TO SILL, TOP PLATE, OR GIRDER	3-8D COMMON (2 1/2" X 0.131")	TOENAIL
RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8D COMMON (2 1/2" X 0.131")	6" OC TOENAIL
BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20D COMMON (4" X 0.192")	32" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND: 2-20D COMMON (4" X 0.192")	ENDS AND AT EACH SPLICE, FACE NAIL
LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3-16D COMMON (3 1/2" X 0.162")	EACH JOIST OR RAFTER, FACE NAIL
JOIST TO BAND JOIST OR RIM JOIST	3-16D COMMON (3 1/2" X 0.162")	END NAIL
BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2-8D COMMON (2 1/2" X 0.131")	EACH END, TOENAIL

STRUCTURAL OBSERVATION

1. THE OWNER SHALL EMPLOY THE ARCHITECT OR STRUCTURAL ENGINEER OF RECORD TO PERFORM STRUCTURAL OBSERVATION IN ACCORDANCE WITH CBC SECTION 1704.6.
2. ANY DEFICIENCIES DISCOVERED SHALL BE REPORTED IMMEDIATELY TO THE OWNER AND STRUCTURAL ENGINEER OF RECORD, AND WITHIN TWO (2) BUSINESS DAYS SHALL BE REPORTED IN WRITING TO THE OWNER, BUILDING OFFICIAL, AND ENGINEER OF RECORD.
3. STRUCTURAL OBSERVATIONS DO NOT CONSTITUTE SPECIAL INSPECTIONS OF ANY KIND
4. UPON COMPLETION OF THE PROJECT FINAL WRITTEN DOCUMENTATION SHALL BE PROVIDED TO THE OWNER, BUILDING OFFICIAL, AND STRUCTURAL ENGINEER OF RECORD STATING THAT THE REQUIRED SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE STRUCTURAL OBSERVER AT LEAST 48 HOURS PRIOR TO THE COMPLETION OF THE NOTED STAGES OF CONSTRUCTION ABOVE IN ITEM 2.

WOOD

1. ALL SAWN LUMBER SHALL BE DOUGLAS FIR-LARCH (DF-L) AS GRADED BY THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) IN ACCORDANCE WITH STANDARD GRADING RULES NO. 17 TYPICAL UNLESS NOTED OTHERWISE. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM GRADES:
   a. ALL FRAMING MEMBERS — NO. 1
   b. BLOCKING — NO. 2
2. ALL STRUCTURAL SHEATHING USED FOR SHEAR WALLS AND ROOF DIAPHRAGMS SHALL BE MANUFACTURED IN ACCORDANCE WITH PRODUCT STANDARDS OF APA-THE ENGINEERED WOOD ASSOCIATION. SHEATHING SHALL MEET PS2-92 PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL USE PANELS AND SHALL BE STAMPED WITH THE APA TRADEMARK.
3. ALL WOOD SHALL HAVE A MOISTURE CONTENT OF NOT MORE THAN 19% BEFORE BEING COVERED WITH SHEATHING.
4. ALL FOUNDATION PLATES OR SILLS ON CONCRETE SLABS WHICH ARE IN DIRECT CONTACT WITH EARTH, AND PLATES OR SILLS ON CONCRETE OR MASONRY FOUNDATIONS SHALL BE PRESERVATIVE PRESSURE TREATED.
5. 8" MINIMUM CLEARANCE SHALL BE MAINTAINED AT ALL EXTERIOR WALLS BETWEEN FINISH GRADE AND BOTTOM OF WOOD WALLS INCLUDING BOTTOM EDGE OF SHEATHING.
6. SILL PLATE ANCHOR BOLTS SHALL BE INSTALLED WITH PLATE WASHERS BETWEEN THE NUT AND SILL PLATE AS INDICATED IN THE TYPICAL DETAILS AND SHEAR WALL DETAILS.
7. LAY ALL STRUCTURAL SHEATHING ON ROOF AND FLOORS WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS TYPICAL UNLESS NOTED OTHERWISE. USE PLY-CLIPS AT UNSUPPORTED SHEATHING EDGES TYPICAL UNLESS NOTED OTHERWISE.
8. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL BOLT DIAMETER PLUS 1/16".
9. HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS:
   a. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK.
   b. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO BETWEEN 60% AND 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
10. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. SOAP MAY BE USED TO LUBRICATE SCREWS.
11. ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED AT INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
12. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD WITH THE FOLLOWING MINIMUM DIMENSIONS:

BOLT DIAMETER	MALLEABLE IRON WASHER	STEEL WASHER
a. 5/8"	5/16"x2-3/4" DIAM	1/4"x2-1/2" SQR
b. 3/4"	7/16"x3" DIAM	5/16"x3" SQR
c. 7/8"	7/16"x3-1/2" DIAM	3/8"x3-1/2" SQR
d. 1"	1/2"x4" DIAM	3/6"x3-3/4" SQR

13. METAL FRAMING CONNECTOR MODEL NUMBERS INDICATED IN THE DRAWINGS ARE THOSE FOR SIMPSON STRONG-TIE COMPANY. EQUIVALENT CONNECTORS WITH A CURRENT APPROPRIATE EVALUATION REPORT MAY BE SUBMITTED FOR SUBSTITUTION REVIEW AS AN ALTERNATE.

POWER ACTUATED FASTENERS (PAF/SHOT PINS)

1. THESE NOTES GOVERN ALL CONDITIONS CALLED OUT ON THE PLANS AS 'PAF' OR 'SHOT PINS' UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ALL PAF (SHOT PINS) SHALL BE AS MANUFACTURED BY HILTI, INC., TULSA, OKLAHOMA IN ACCORDANCE WITH ICC-ESR 2269 WITH REVISED DATE OF NOVEMBER 2023 AND A RENEWAL DATE OF FEBRUARY 2025.
3. PAF (SHOT PINS) DRIVEN INTO STEEL BASE MATERIAL SHALL BE X-U TYPE (0.157"Ø) WITH P8 WASHERS UON. LENGTH OF PIN SHALL BE AS REQUIRED FOR THE FASTENER POINT TO PENETRATE THROUGH THE STEEL BASE MATERIAL. MINIMUM EDGE DISTANCE TO ANY CONNECTED PART SHALL BE 1/2" AND MINIMUM FASTENER SPACING SHALL BE 2".
4. PAF (SHOT PINS) DRIVEN INTO CONCRETE BASE MATERIAL SHALL BE X-U TYPE (0.157"Ø) WITH P8 WASHERS UON. LENGTH OF PIN SHALL BE AS REQUIRED TO PENETRATE 1 1/2" INTO THE CONCRETE BASE MATERIAL. MINIMUM EDGE DISTANCE TO ANY CONCRETE MATERIAL SHALL BE 3" AND MINIMUM FASTENER SPACING SHALL BE 4".

CONCRETE ADHESIVE ANCHOR NOTES

1. USE HILTI HIT-RE 500 V3 ADHESIVE ANCHORS AS MANUFACTURED BY HILTI, INC., TULSA, OKLAHOMA. ICC REPORT NO. ESR-3814 WITH RENEWAL DATE JANUARY, 2025.
2. INSTALLATION OF ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, ICC REPORT AND THESE NOTES.
3. SPECIAL INSPECTION IS REQUIRED FOR ALL ANCHORS.
4. WHEN INSTALLING ANCHORS IN EXISTING CONCRETE DO NOT CUT OR DAMAGE EXISTING REINFORCING BARS.
5. THE TESTING OF THE ANCHORS SHALL BE DONE BY THE TESTING LABORATORY AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO DSA AND ARCHITECT/STRUCTURAL ENGINEER. TESTING SHALL OCCUR 24 HRS. MINIMUM AFTER THE INSTALLATION OF THE ANCHORS.
6. TESTING FREQUENCY FOR ANCHORS SHALL BE IN ACCORDANCE WITH 2022 CALIFORNIA BUILDING CODE, SECTION 1910A.5.3. A BRIEF DESCRIPTION IS PROVIDED HERE FOR REFERENCE:

   STRUCTURAL APPLICATIONS:
   SILL TRACK BOLTING: 10% OF ANCHORS SHALL BE TESTED.

   NONSTRUCTURAL APPLICATIONS:
   EQUIPMENT ANCHORAGE: 50% OR ALTERNATING BOLTS IN A GROUP SHALL BE TESTED.

   NOT APPLICABLE ITEMS:
   SLAB ON GRADE DOWELS NOT PART OF THE LATERAL FORCE RESISTING SYSTEM NEED NOT BE TESTED.
7. FOR ANCHOR DIAMETER, EMBEDMENT DEPTH, EDGE DISTANCE & SPACING REQUIREMENTS, AND TEST LOADS SEE TABLE BELOW:

NORMAL WEIGHT CONCRETE ANCHORS — ICC REPORT NO. ESR-3814

HILTI HIT-RE 500 V3 ADHESIVE ANCHORS
CARBON STEEL ANCHORS (ASTM F1554, GR. 36)
F'c = 3000 PSI MIN.

ANCHOR DIAMETER	EMBED (UON)	MIN. EDGE DISTANCE	MIN. SPACING	TENSION TEST LOAD (LBS)
3/8"	2 3/8"	1 7/8"	1 7/8"	1,850
1/2"	3 1/4"	2 1/2"	2 1/2"	3,050
5/8"	4"	3 1/8"	3 1/8"	4,250
3/8"	4 3/4"	3 3/4"	3 3/4"	6,000

GENERAL NOTES

1. ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTES THE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND THE SAME MAY NOT BE DUPLICATED, USED, OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
2. THESE DRAWINGS ARE NOT COMPLETE UNTIL REVIEWED AND ACCEPTED BY DSA AND SIGNED BY THE STRUCTURAL ENGINEER OF RECORD.
3. THE STRUCTURAL DRAWINGS SHOW A PORTION OF THE WORK TO BE PERFORMED BY THE CONTRACTOR. SUPPLEMENTARY REQUIREMENTS FOR STRUCTURAL STEEL, CONCRETE, ETC., ARE FOUND WITHIN THE DRAWINGS OF OTHER DISCIPLINES AND REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
4. THESE NOTES ARE COMPLEMENTARY TO THE SPECIFICATIONS AND SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS.
5. SPECIFICATIONS AND DRAWINGS SHALL BE EQUAL IN AUTHORITY AND PRIORITY. SHOULD THE SPECIFICATIONS AND DRAWINGS DISAGREE IN THEMSELVES, OR WITH EACH OTHER, CONSTRUCTION SHALL BE BASED ON THE MOST EXPENSIVE MATERIALS AND METHODS. THE WORK REQUIRED TO BE CONSTRUCTED BY THE DOCUMENTS SHALL BE DECIDED BY THE ARCHITECT/ENGINEER IN THE EVENT OF THE ABOVE MENTIONED DISAGREEMENTS.
6. SHOULD AN ERROR APPEAR IN THE APPROVED DRAWINGS OR SPECIFICATIONS OR IN WORK DONE BY OTHERS AFFECTING THIS WORK, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING. IF THE CONTRACTOR PROCEEDS WITH THE WORK SO AFFECTED WITHOUT HAVING GIVEN SUCH WRITTEN NOTICE AND WITHOUT RECEIVING THE NECESSARY APPROVAL, DECISION, OR INSTRUCTION IN WRITTEN FORM FROM THE ARCHITECT, THEN THE CONTRACTOR SHALL HAVE NO VALID CLAIM AGAINST THE OWNER FOR THE COST OF SO PROCEEDING AND SHALL MAKE GOOD ANY RESULTING DAMAGE OR DEFECT. NO VERBAL APPROVAL, DECISION, OR INSTRUCTION SHALL BE THE BASIS FOR ANY CLAIM AGAINST THE OWNER, ITS OFFICERS, EMPLOYEES, OR AGENTS. THE FOREGOING INCLUDES TYPICAL ERRORS IN THE SPECIFICATIONS OR NOTATIONAL ERRORS IN THE APPROVED DRAWINGS WHERE THE INTERPRETATION IS DOUBTFUL OF WHERE THE ERROR IS SUFFICIENTLY APPARENT AS TO PLACE A REASONABLY PRUDENT CONTRACTOR ON NOTICE THAT, SHOULD HE ELECT TO PROCEED, HE IS DOING SO AT HIS OWN RISK.
7. VERIFY THE SIZES, LOCATIONS, ELEVATIONS AND DETAILS OF EXISTING CONDITIONS THAT AFFECT THE WORK. INFORM THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES IN DIMENSIONS, SIZES, LOCATIONS, AND CONDITIONS, PROCEEDING WITH WORK ONLY AFTER DISCREPANCIES ARE RESOLVED.
8. PROVIDE SHORING, BRACING, UNDERPINNING, AND ANY OTHER MEANS REQUIRED TO PROTECT AND MAINTAIN THE SAFETY, INTEGRITY AND STABILITY OF ALL EXISTING AND NEW CONSTRUCTION.
9. NORMAL OPERATIONS WILL BE CONTINUED BY THE OWNER THROUGHOUT THE DURATION OF CONSTRUCTION. ANY INTERFERENCE WITH THE OWNER'S OPERATION OR INTERRUPTION TO UTILITIES SHALL BE COORDINATED WITH THE OWNER.
10. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AT THE SITE, INCLUDING UTILITIES, SERVICES, ETC., AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE HE CAUSES TO THE PROPERTY, EXISTING AND NEW CONSTRUCTION, AND FOR ANY UNAUTHORIZED DISRUPTIONS TO THE OWNER'S NORMAL USE OF UTILITIES, SERVICES AND THE SURROUNDING FACILITIES.
11. CONTRACTOR SHALL OBTAIN APPROVAL OF THE ARCHITECT/ENGINEER PRIOR TO PLACING OPENINGS OR SLEEVES NOT SHOWN ON DRAWINGS THROUGH ANY STRUCTURAL MEMBERS.
12. WHERE NO SPECIFIC DETAIL IS SHOWN ON THE DRAWINGS, CONSTRUCTION SHALL BE IN ACCORDANCE WITH TYPICAL DETAILS ON THIS PROJECT OR IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THIS PROJECT. SHOULD THERE BE ANY QUESTION, CONTACT THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO PROCEEDING.
13. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL DRAWINGS, AND SHOP DRAWINGS FOR SIZE AND LOCATION OF WALL AND FLOOR OPENINGS, WALL OFFSETS, STAIR DETAILS, PIPES, VENTS, DUCTS, CONDUIT, AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS. THE OWNER, ARCHITECT, AND ENGINEER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
15. ANY SUBSTITUTIONS OR REVISIONS TO CONSTRUCTION MATERIALS, STRUCTURAL MEMBERS, HARDWARE, OR DETAILS INDICATED IN THE DRAWINGS OR SPECIFICATIONS SHALL BE REVIEWED BY THE ARCHITECT AND STUCTURAL ENGINEER AND APPROVED BY DSA.

STRUCTURAL ABBREVIATIONS

ARCH	ARCHITECTURAL (DISCIPLINE)
BOTT	BOTTOM
CJP	COMPLETE JOINT PENETRATION
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
DIA/ ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DTL	DETAIL
EA	EACH
ELEC	ELECTRICAL (DISCIPLINE)
EMBED	EMBEDMENT
EOR	ENGINEER OF RECORD
EQUIP	EQUIPMENT
EXIST	EXISTING
EXP	EXPANSION
FND	FOUNDATION
GA	GAUGE
GALV	GALVANIZED
HORIZ	HORIZONTAL
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MANUF	MANUFACTURER
MECH	MECHANICAL (DISCIPLINE)
NTS	NOT TO SCALE
OC	ON CENTER
OH	OPPOSITE H

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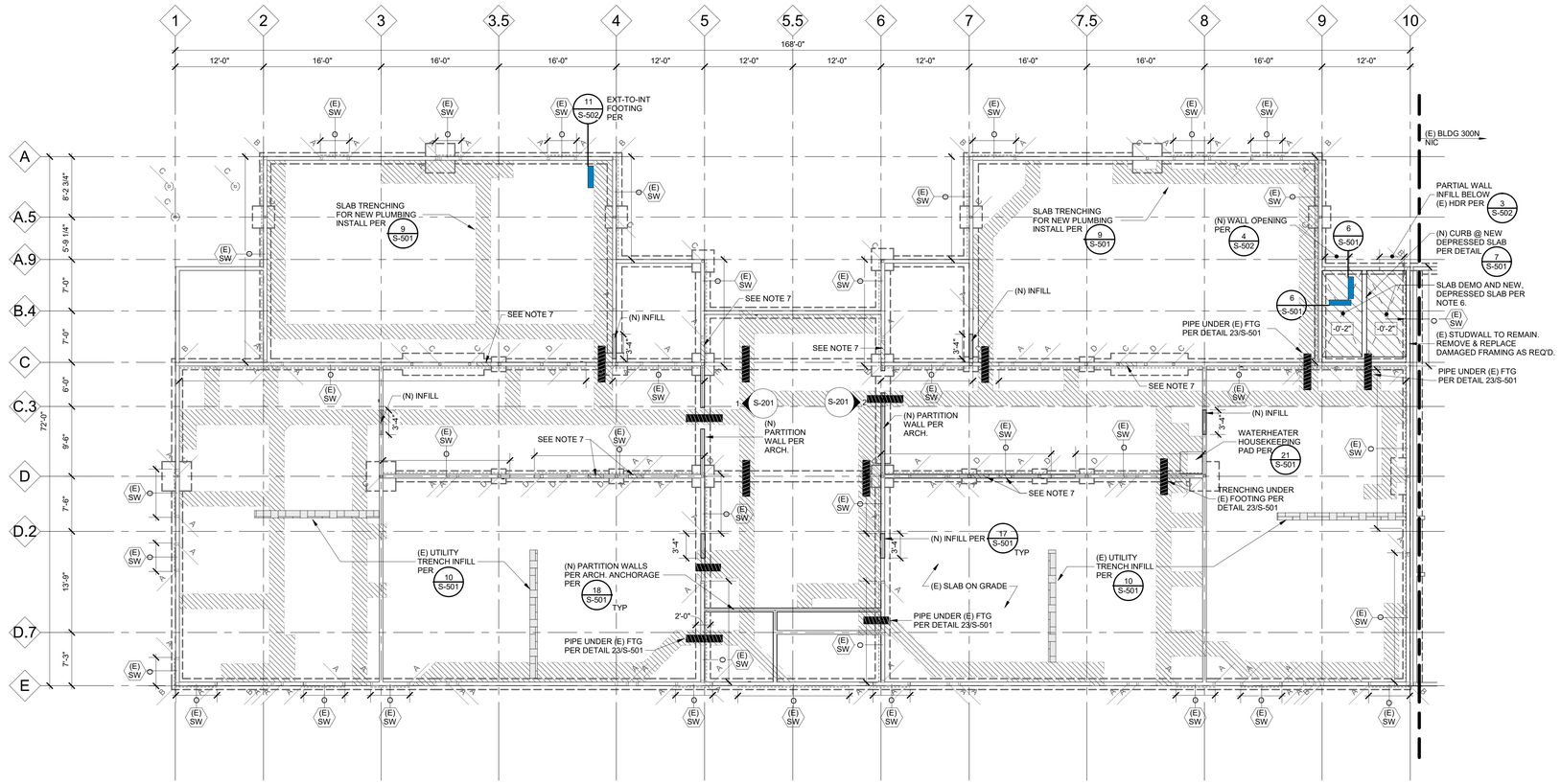
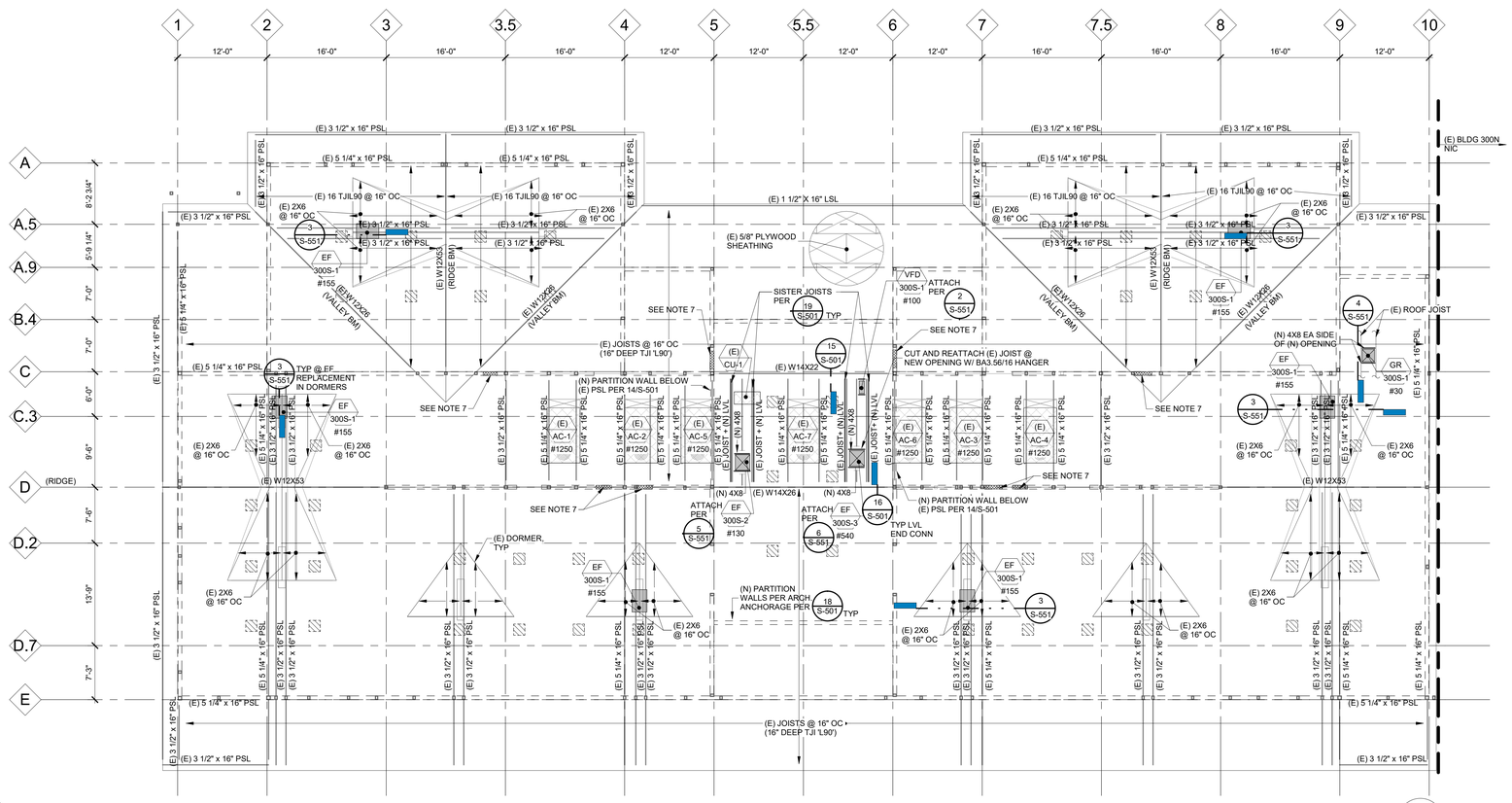


1 FOUNDATION & LEVEL 1 PLAN
1/8" = 1'-0"



2 ROOF FRAMING PLAN
1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. REFER TO DRAWING S-001 FOR GENERAL NOTES.
2. REFER TO FORM DSA-103 FOR SPECIAL INSPECTION & TESTING.
3. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
4. (N) INDICATES NEW CONSTRUCTION.
5. (E) INDICATES EXISTING CONSTRUCTION.
6. DEMO (E) SLAB-ON-GRADE COORDINATE EXTENT OF DEMO REQUIRED WITH ARCH/PLUMBING/ELECTRICAL. REPLACE WITH NEW 4" MIN THICK SLAB W/ 15-MIL VAPOR BARRIER. REINFORCE SLAB WITH #4 @ 18" OC EA WAY @ MID DEPTH OF SLAB. DEPRESS SLAB BY AMOUNT INDICATED ON PLAN. PROVIDE SLOPING TO DRAIN(S) PER ARCH.
7. LOCATION OF EXISTING DUCT PENETRATION THROUGH SHEAR WALL TO BE USED FOR NEW DUCT. NO MODIFICATION TO EXISTING PENETRATION REQUIRED.

FOUNDATION SYMBOL LEGEND

- INDICATES SLAB DEPRESSION
- INDICATES EXISTING COLUMN/POST SEE COLUMN/POST SCHEDULE BELOW
- INDICATES (N) PARITION WALL. LOCATION AND DIMENSIONS TO BE VERIFIED PER ARCH.
- INDICATES (E) LOAD-BEARING STUD WALL
- INDICATES LOCATIONS FOR (N) WALL INFILL PER DETAIL 17/S-501 DIMENSIONS TO BE VERIFIED PER ARCH.
- INDICATES (E) CONTINUOUS FOOTING
- INDICATES EXISTING SHEAR WALL (TO REMAIN OR BE OTHERWISE MODIFIED AS INDICATED ON PLAN). SIDE OF TAG IS LOCATION OF STRUCTURAL SHEATING.
- INDICATES TRENCHING FOR UNDER SLAB PLUMBING PER DETAIL 9/S-501
- INDICATES UTILITY TRENCH INFILL PER DETAIL 10/S-501
- INDICATES PIPING UNDER (E) 1'-6" AND 2'-0" FOOTINGS PER DETAIL 23/S-501

POST/COLUMN SCHEDULE

POST/COLUMN NOTATION	SIZE
A	(E) 4X6
B	(E) 6X6
C	(E) HSS4X4X5/16
D	(E) HSS5X5X5/16
E	(E) HSS5X5X3/8

ROOF FRAMING PLAN NOTES

1. REFER TO DRAWING S-001 FOR GENERAL NOTES.
2. REFER TO FORM DSA-103 FOR SPECIAL INSPECTION & TESTING.
3. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
4. (N) INDICATES NEW CONSTRUCTION.
5. (E) INDICATES EXISTING CONSTRUCTION.
6. TYPICAL 'LVL' SIZE IS LVL 1.75 X 16 UNLESS NOTED OTHERWISE
7. LOCATION OF EXISTING DUCT PENETRATION THROUGH HSEAR WALLS TO BE USED FOR NEW DUCT. NO MODIFICATION TO EXISTING PENETRATION REQUIRED.

FRAMING SYMBOL LEGEND

- S-X — INDICATES DECK SPAN AND TYPE
- 6X6 — INDICATES EXISTING COLUMN/POST
- INDICATES (N) PARTITION WALL BELOW
- INDICATES (E) LOAD-BEARING STUD WALL BELOW
- RTU XX XX# — INDICATES (E) MECHANICAL UNIT
- RTU XX XX# — INDICATES (N) MECHANICAL UNIT INDICATES OPERATING WEIGHT IN POUNDS, INCLUDING PRE-FAB CURB AND ACCESSORIES (WHERE APPLICABLE)
- (N) CEILING SUSPENDED CORD REELS. ANCHORAGE TO STRUCTURE PER DETAIL 1/S-551
- (E) SHEAR WALL PENETRATION USED FOR DUCT WORK. DIMENSIONS TO BE VERIFIED WITH MECHANICAL.

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GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

Date	Issued For
05/08/2024	DSA Submittal
10/01/2024	DSA Resubmittal
10/30/2024	DSA Resubmittal

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350 Camino De La Reina
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(619) 398-3800
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REGISTERED PROFESSIONAL ENGINEER
JOSEPH C. [illegible]
No. S5844
Exp. 08/30/26
STRUCTURAL
STATE OF CALIFORNIA

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2023-GU001-010

BLDG 300S FOUNDATION & ROOF PLANS

S-101

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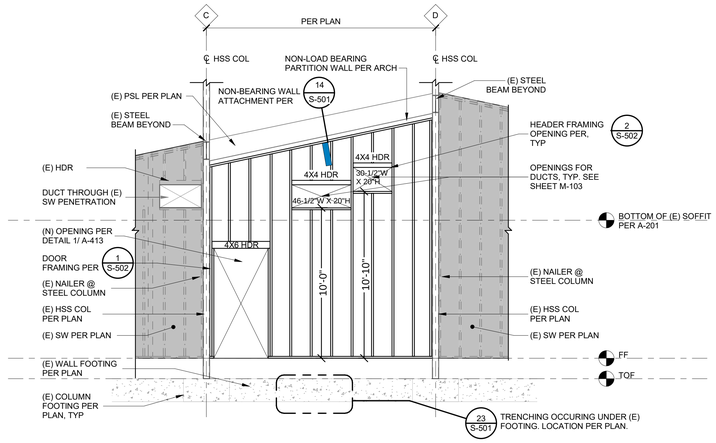
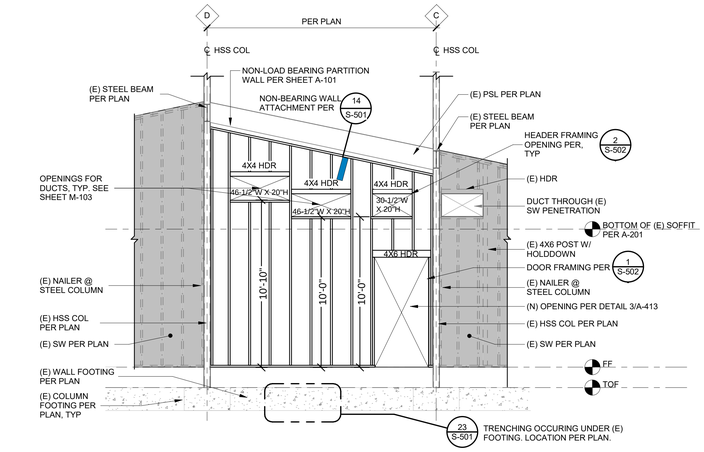


2 FRAMING ELEVATION @ GRID 6 BTWN GRIDS D AND C

1/4" = 1'-0"



1 FRAMING ELEVATION @ GRID 5 BTWN GRIDS D AND C

1/4" = 1'-0"

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

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10/30/2024	DSA Resubmittal

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RECEIVED PROFESSIONAL ENGINEER
KAY C. CHEUNG
No. S5884
Exp. 06/30/26
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STATE OF CALIFORNIA

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FRAMING ELEVATIONS

S-201

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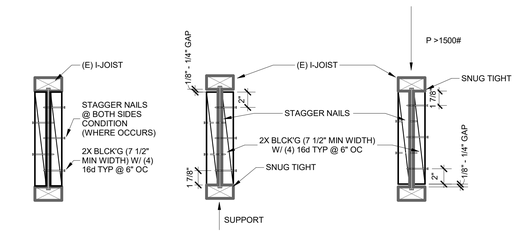
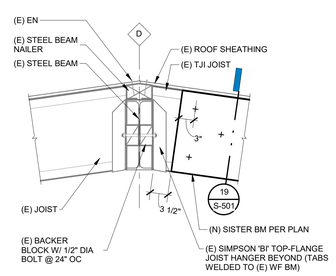


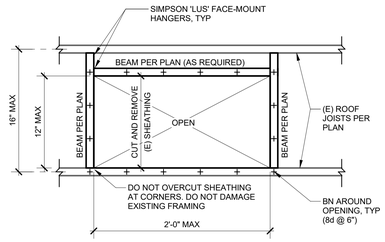
20 TYP WEB-STIFFENERS (FULL DEPTH) @ (E) JOIST

1 1/2" = 1'-0"



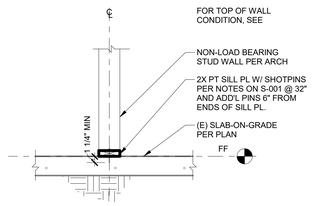
16 (N) JOIST TO (E) WF BM @ GRID D

1" = 1'-0"



12 TYP (N) OPENING BTWN (E) JOIST

1" = 1'-0"



8 TYP NON-BEARING WOOD STUD BASE ATTACHMENT

3/4" = 1'-0"

BAR SIZE	DEVELOPMENT LENGTH	
	90 DEGREE HOOK	
3	9"	
4	11"	
5	14"	
6	17"	
7	20"	
8	22"	
9	25"	
10	28"	
11	31"	

NOTES:

1. THIS SCHEDULE APPLES TO CONCRETE WITH 28-DAY COMPRESSIVE STRENGTH f'c =3000 PSI
2. HOOKED ENDS SHALL NOT BE USED TO DEVELOP BARS IN COMPRESSION.
3. FOR STANDARD HOOK DIMENSIONS , SEE 1 / S-501

4 DEVELOPMENT LENGTH - HOOKS

12" = 1'-0"

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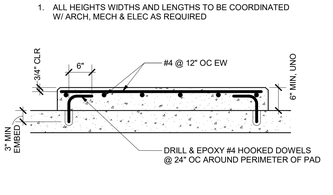
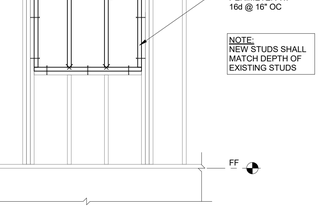
10/30/2024	DSA Resubmittal

NOTE:
THIS DETAIL MAY BE USED AT EXISTING SHEAR WALLS ONLY WHERE SPECIFICALLY SHOWN ON FOUNDATION PLAN.



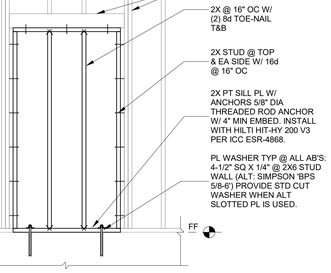
23 PIPE UNDER (E) FOOTING

3/4" = 1'-0"



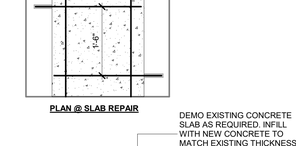
19 SISTER JOIST DETAIL

1 1/2" = 1'-0"



15 (N) JOIST TO (E) STEEL WF BM @ GRID C

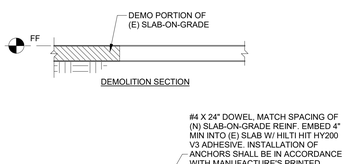
1" = 1'-0"



BEAM SIZE	HANGER
4X8	U46
4X10	U410
4X12	U410
6X8	U66
6X10	U610
6X12	HU612

11 TYPICAL BEAM HANGERS

3/4" = 1'-0"



7 NEW DEPRESSED SLAB & CURB @ (E) SLAB

3/4" = 1'-0"

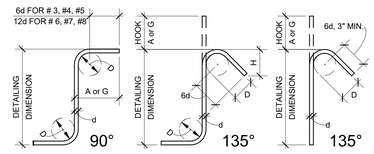
BAR SIZE	BEAM & MAT TOP BARS (CLASS B) (REF NOTE #3)	BEAM & MAT BARS OTHER THAN TOP BARS (CLASS B)	COLUMN& WALL BARS TENSION (CLASS B)	COMPRESSION BARS (REF NOTE #5)
f'c=	3000 PSI	3000 PSI	3000 PSI	3000 PSI
#3	28"	22"	22"	12"
#4	38"	29"	29"	15"
#5	47"	36"	36"	19"
#6	56"	43"	43"	23"
#7	81"	63"	63"	27"
#8	93"	72"	72"	30"
#9	105"	81"	81"	34"
#10	118"	91"	91"	39"
#11	131"	101"	101"	43"

NOTES:

1. USE MECH TENSION SPLICE FOR 125% TENSILE CAPACITY OF REINFORCEMENT
2. BEAM BARS SPACED @ NOT LESS THAN 3 BAR DIAMETER ON CENTER
3. COLUMN BARS SPACED @ NOT LESS THAN 4 BAR DIAMETER ON CENTER
4. REINFORCING BARS ARE CLASSED AS TOP BARS WHEN MORE THAN 12 " OF CONCRETE IS CAST BENEATH RESPECTIVE REINFORCING BAR.
5. COMPRESSION DEVELOPMENT IS PERMISSIBLE ONLY WHEN SPECIFICALLY NOTED ON THE DRAWINGS DETAILS OR SCHEDULES.
6. TENSION SPLICES SHALL BE USED IN ALL BEAMS SLABS AND WALLS UNLESS OTHERWISE NOTED
7. WHEN LAPPING LARGE BAR WITH SMALL BAR LAP LENGTH OF THE SMALLER BAR SHALL GOVERN RESPECTIVE SPLICE

3 LAP SPLICE SCHEDULE

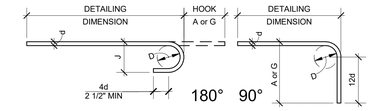
12" = 1'-0"



MINIMUM STIRRUP / TIE HOOK DIMENSIONS					MINIMUM SEISMIC STIRRUP / TIE HOOK DIMENSIONS				
BAR SIZE	D	90°	135°		BAR SIZE	D	135°		
		A OR G	A OR G	H			A OR G	H	
# 3	1 1/2"	0'-4"	4"	2 1/2"	# 3	1 1/2"	4 1/4"	3"	
# 4	2 "	4 1/2"	4 1/2"	3"	# 4	2 "	4 1/2"	3"	
# 5	2 1/2"	0'-6"	5 1/2"	3 3/4"	# 5	2 1/2"	5 1/2"	3 3/4"	
# 6	4 1/2"	1'-0"	8"	4 1/2"	# 6	4 1/2 "	8"	4 1/2"	
# 7	5 1/4"	1'-2"	9"	5 1/4"	# 7	5 1/4"	9"	5 1/4"	
# 8	6"	1'-4"	10 1/2"	6"	# 8	6"	10 1/2"	6"	

2 STIRRUP/TIE HOOK DIMENSIONS

1" = 1'-0"



MINIMUM STANDARD END HOOK DIMENSIONS				
BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
# 3	2 1/4"	0'-5"	0'-3"	0'-6"
# 4	3 "	0'-6"	0'-4"	0'-8"
# 5	3 3/4"	0'-7"	0'-5"	0'-10"
# 6	4 1/2"	0'-8"	0'-6"	1'-0"
# 7	5 1/4"	0'-10"	0'-7"	1'-2"
# 8	6"	0'-11"	0'-8"	1'-4"
# 9	9 1/2"	1'-3"	0'-11 3/4"	1'-7"
# 10	10 3/4"	1'-5"	1'-1 1/4"	1'-10"
# 11	12"	1'-7"	1'-2 3/4"	2'-0"
# 14	18 1/4"	2'-3"	1'-9 3/4"	2'-7"
# 18	24"	3'-0"	2'-4 1/2"	3'-5"

1 STANDARD HOOK DIMENSIONS

1" = 1'-0"

22 TYP INFILL @ (E) ROOF OPENING

1" = 1'-0"

18 TYP NON-BEARING WOOD WALL ATTACHMENT TO STRUCTURE

1" = 1'-0"

14 TYP NON-LOAD BEARING WALL @ (E) PSL

1" = 1'-0"

10 (E) SLAB TRENCH INFILL DETAIL

3/4" = 1'-0"

6 NEW DEPRESSED SLAB @ (E) CURB

3/4" = 1'-0"

MINIMUM STIRRUP / TIE HOOK DIMENSIONS					MINIMUM SEISMIC STIRRUP / TIE HOOK DIMENSIONS				
BAR SIZE	D	90°	135°		BAR SIZE	D	135°		
		A OR G	A OR G	H			A OR G	H	
# 3	1 1/2"	0'-4"	4"	2 1/2"	# 3	1 1/2"	4 1/4"	3"	
# 4	2 "	4 1/2"	4 1/2"	3"	# 4	2 "	4 1/2"	3"	
# 5	2 1/2"	0'-6"	5 1/2"	3 3/4"	# 5	2 1/2"	5 1/2"	3 3/4"	
# 6	4 1/2"	1'-0"	8"	4 1/2"	# 6	4 1/2 "	8"	4 1/2"	
# 7	5 1/4"	1'-2"	9"	5 1/4"	# 7	5 1/4"	9"	5 1/4"	
# 8	6"	1'-4"	10 1/2"	6"	# 8	6"	10 1/2"	6"	

2 STIRRUP/TIE HOOK DIMENSIONS

1" = 1'-0"

MINIMUM STANDARD END HOOK DIMENSIONS				
BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
# 3	2 1/4"	0'-5"	0'-3"	0'-6"
# 4	3 "	0'-6"	0'-4"	0'-8"
# 5	3 3/4"	0'-7"	0'-5"	0'-10"
# 6	4 1/2"	0'-8"	0'-6"	1'-0"
# 7	5 1/4"	0'-10"	0'-7"	1'-2"
# 8	6"	0'-11"	0'-8"	1'-4"
# 9	9 1/2"	1'-3"	0'-11 3/4"	1'-7"
# 10	10 3/4"	1'-5"	1'-1 1/4"	1'-10"
# 11	12"	1'-7"	1'-2 3/4"	2'-0"
# 14	18 1/4"	2'-3"	1'-9 3/4"	2'-7"
# 18	24"	3'-0"	2'-4 1/2"	3'-5"

1 STANDARD HOOK DIMENSIONS

1" = 1'-0"

NOTES:

1. ALL HEIGHTS WIDTHS AND LENGTHS TO BE COORDINATED W/ ARCH, MECH & ELEC AS REQUIRED

21 TYPICAL HOUSEKEEPNG PAD

3/4" = 1'-0"

17 TYP INFILL AT (E) OPENINGS

1/2" = 1'-0"

9 SLAB TRENCH DETAIL

3/4" = 1'-0"

5 SLAB-ON-GRADE DOWELS

3/4" = 1'-0"

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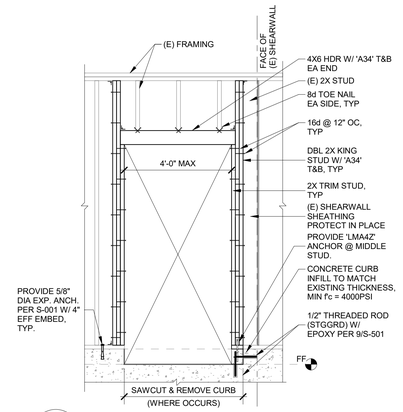
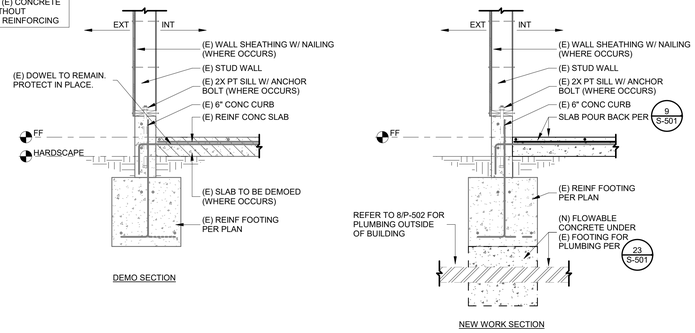
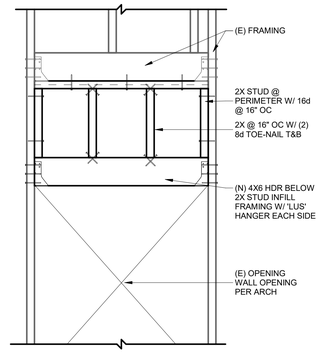


4 (N) DOOR OPENING @ (E) FRAMING
1/2" = 1'-0"

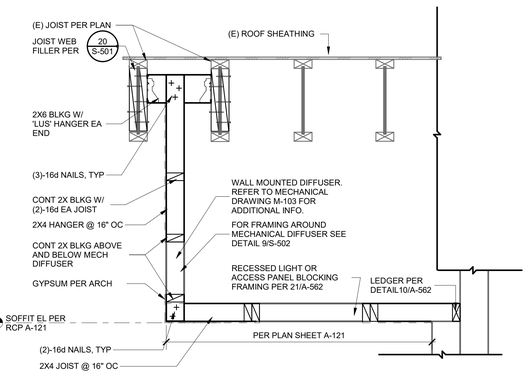
NOTE:
USE HAND TOOLS TO CHIP/REMOVE (E) CONCRETE THIS AREA WITHOUT DAMAGING (E) REINFORCING



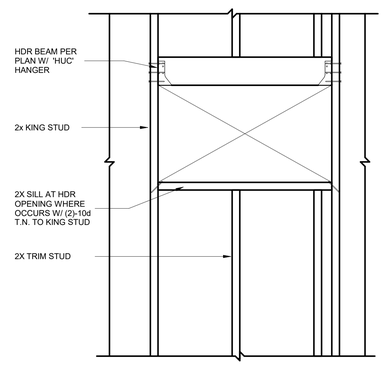
11 PIPE UNDER (E) FOOTING @ EXTERIOR WALL
3/4" = 1'-0"



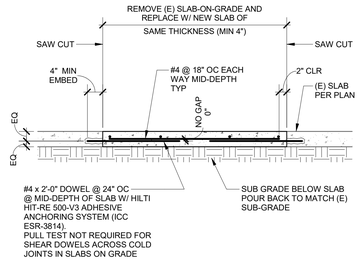
3 (N) HDR @ (E) OPENING
1" = 1'-0"



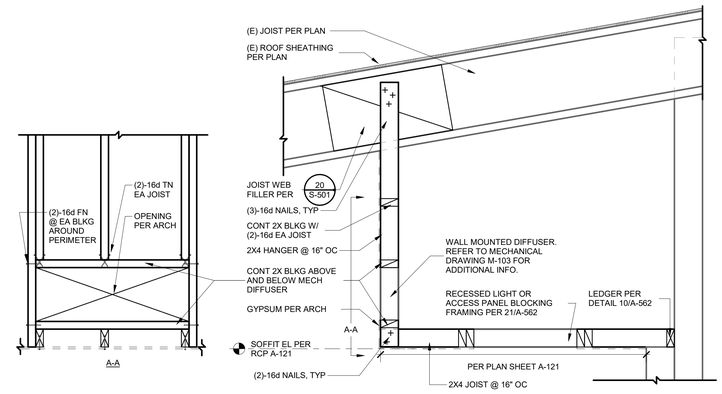
10 SOFFIT FRAMING - PARALLEL FRAMING
1" = 1'-0"



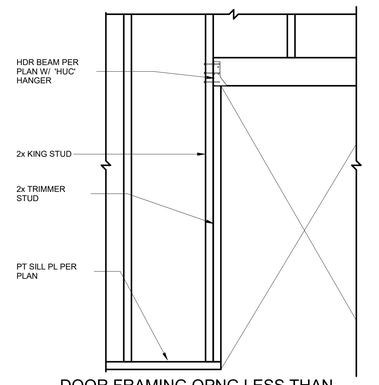
HEADER FRAMING OPNG LESS THAN 6'-0"
2 1" = 1'-0"



13 TYP SLAB POUR BACK
3/4" = 1'-0"



9 SOFFIT FRAMING - PERPENDICULAR FRAMING
1" = 1'-0"



DOOR FRAMING OPNG LESS THAN 6'-0"
1 1" = 1'-0"

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DATE: 11/05/2024

GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

Date	Issued For
05/08/2024	DSA Submittal
10/01/2024	DSA Resubmittal
10/30/2024	DSA Resubmittal

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STRUCTURAL DETAILS

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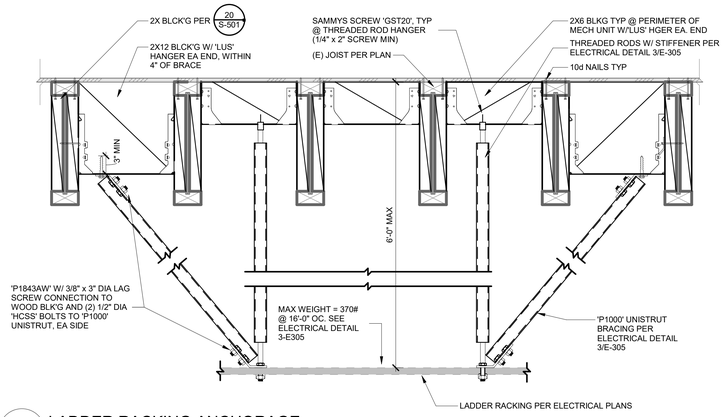
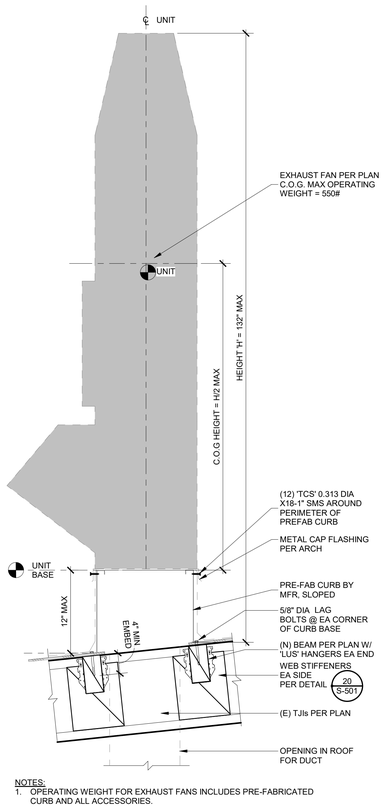
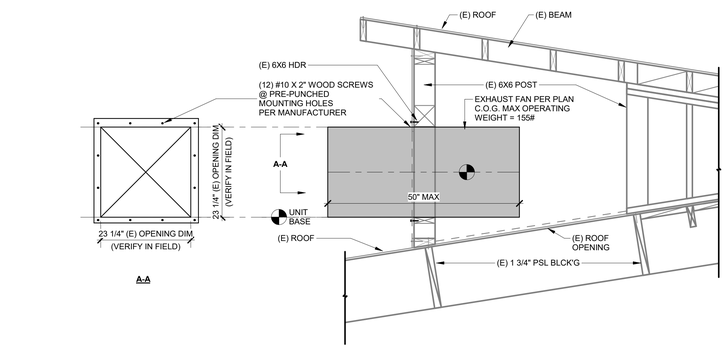


19 LADDER RACKING ANCHORAGE
1 1/2" = 1'-0"

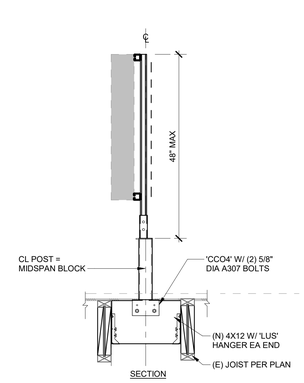


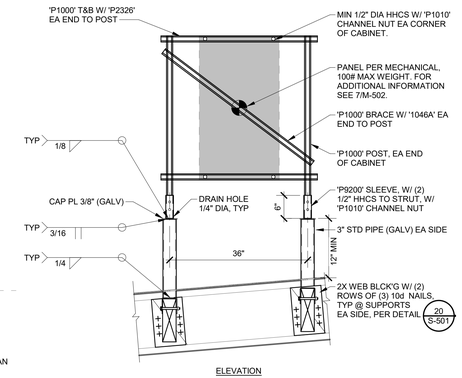
NOTES:
1. OPERATING WEIGHT FOR EXHAUST FANS INCLUDES PRE-FABRICATED CURB AND ALL ACCESSORIES.

6 EXHAUST FUME 'EF' @ SLOPED ROOF
1" = 1'-0"

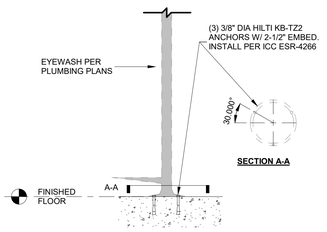


3 EXHAUST FAN 'EF' MOUNTED IN ROOF DORMER
3/4" = 1'-0"

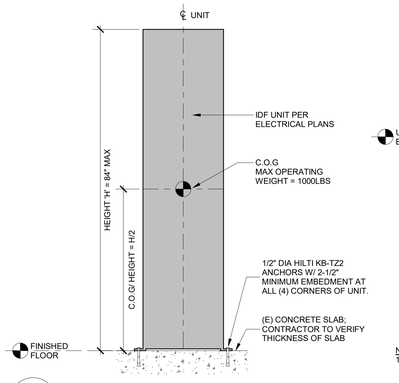




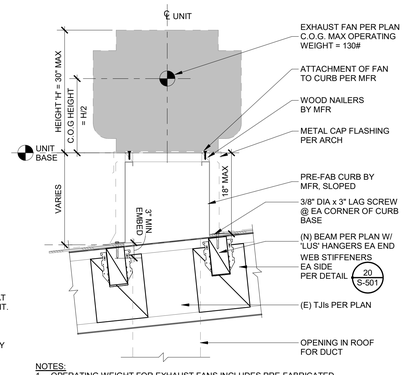
2 'VFD' PANEL MOUNTING DETAIL
3/4" = 1'-0"



18 EMERGENCY SHOWER & EYE WASH ANCHORAGE
1" = 1'-0"

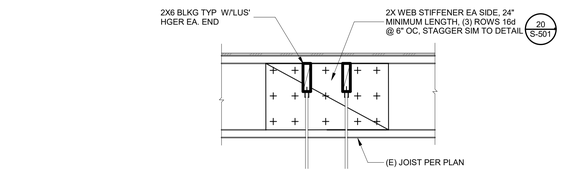


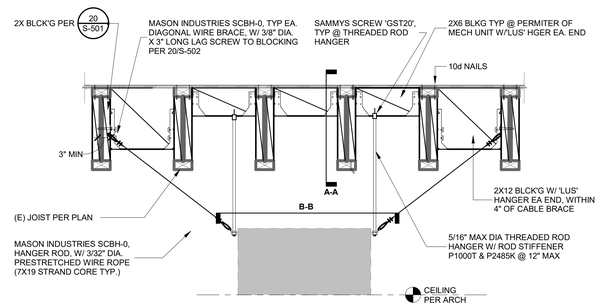
14 IDF SLAB ON GRADE
3/4" = 1'-0"

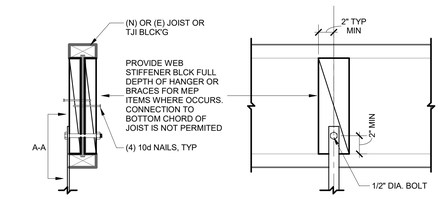


NOTES:
1. OPERATING WEIGHT FOR EXHAUST FANS INCLUDES PRE-FABRICATED CURB AND ALL ACCESSORIES.

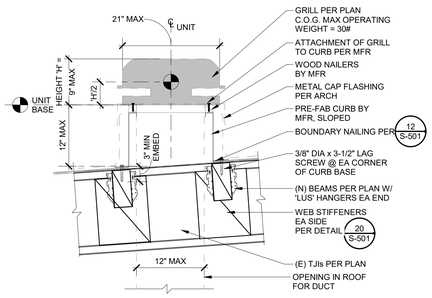
5 EXHAUST FAN 'EF' @ SLOPED ROOF
1" = 1'-0"





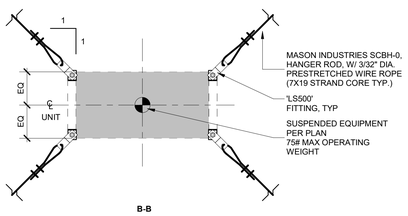


7 TYP HANGER @ JOIST
1 1/2" = 1'-0"



NOTES:
1. OPERATING WEIGHT FOR GRILL INCLUDES PRE-FABRICATED CURB AND ALL ACCESSORIES.

4 ROOF MOUNTED GRILL 'GR'
1" = 1'-0"



1 CORD REEL ANCHORAGE
1" = 1'-0"

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GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

Date	Issued For
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10/01/2024	DSA Resubmittal
10/30/2024	DSA Resubmittal

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MEP EQUIPMENT ANCHORAGE DETAILS

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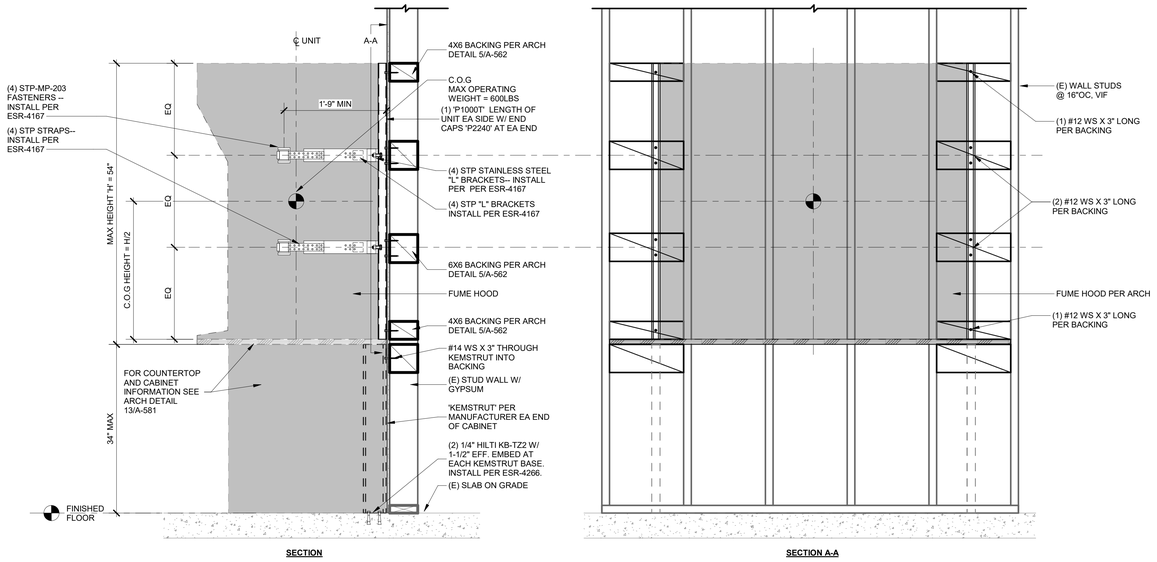
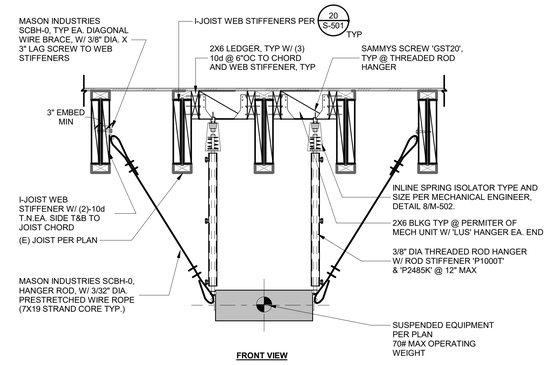


17 FUME HOOD ANCHORAGE
1" = 1'-0"



1 CEILING SUSPENDED EXHAUST FAN ANCHORAGE
1" = 1'-0"

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GENERAL NOTES

1. THE CONSTRUCTION CONTRACT IS FOR A COMPLETE AND FULLY FUNCTIONING INSTALLATION. THESE DOCUMENTS DESCRIBE THE DESIGN INTENT AND SPECIFIC REQUIREMENTS OF THE INSTALLATION. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. THESE DOCUMENTS ARE NOT MEANT TO SHOW EVERY ITEM REQUIRED TO CONSTRUCT THE WORK. ITEMS SUCH AS, BUT NOT LIMITED TO, FASTENERS, CONNECTORS, FILLERS, MISCELLANEOUS CLOSURE ELEMENTS, ANCILLARY CONTROL WIRING AND POWER WHERE REQUIRED FOR THE CONTROL OR OPERATION OF THE PROVIDED EQUIPMENT, ETC. ARE NOT ALWAYS SHOWN BUT ARE CONSIDERED TO BE INCLUDED IN THE SCOPE OF THE WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A FULLY FUNCTIONING INSTALLATION WHICH MEETS THE DESIGN INTENT, INCLUDING BUT NOT LIMITED TO THE SPECIFIC REQUIREMENTS IN THESE DOCUMENTS.

2. THESE DOCUMENTS DESCRIBE WORK UNDER A SINGLE CONSTRUCTION CONTRACT. THE USE OF SUB-CONTRACTORS IS THE ELECTION OF THE GENERAL CONTRACTOR. IT IS NOT THE INTENT OF THE DOCUMENTS TO DIVIDE THE WORK AMONG SUB-CONTRACTORS. WHERE THE DOCUMENTS IDENTIFY WORK WITH SUCH NOTES AS "NOT IN MECHANICAL WORK" OR "NOT IN ELECTRICAL WORK" OR "SEE STRUCTURAL DRAWINGS," IT MEANS THAT THE WORK IS NOT FURTHER DESCRIBED OR SPECIFIED ON THE DRAWING WHERE SUCH NOTES APPEAR; IT DOES NOT PRECLUDE THE CONTRACTOR FROM DELEGATING THE WORK TO ENTITIES OF HIS ELECTION. IN ADDITION, THE DIVISION OF THE CONTRACT DOCUMENTS INTO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL OR OTHER DESIGN DISCIPLINES IS FOR CONVENIENCE ONLY, AND IS NOT INTENDED TO DIVIDE THE WORK AMONG VARIOUS SUB-CONTRACTORS, OR IMPLY THAT ALL OF THE WORK FOR A PARTICULAR TRADE IS SHOWN ONLY IN THOSE DRAWINGS OR SPECIFICATIONS.

3. REFERENCE TO "CONTRACTOR" IN THESE DOCUMENTS SHALL BE INTERPRETED AS REFERRING TO THE GENERAL CONTRACTOR OR TO ANY SUB-CONTRACTOR TO THE GENERAL CONTRACTOR, COLLECTIVELY OR AS INDIVIDUAL ENTITIES. FURTHER, REFERENCE TO A PARTICULAR SUB-CONTRACTOR IS FOR CONVENIENCE ONLY, AND IS NOT INTENDED TO LIMIT THE SCOPE OF THE WORK TO THAT TRADE OR LIMIT THE RESPONSIBILITIES OF THE GENERAL CONTRACTOR TO COORDINATE THE WORK OF ALL TRADES AS DEFINED BY THE OWNER/CONTRACTOR AGREEMENT.

4. THE DRAWINGS AND PROJECT MANUAL ESTABLISH DETAILED MINIMUM REQUIREMENTS FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT. PARTIAL OR OUTDATED SETS OF CONTRACT DOCUMENTS SHOULD NOT BE DISTRIBUTED OR UTILIZED.

5. WORK IS TO COMPLY WITH APPLICABLE FEDERAL, STATE CODES AND REGULATIONS IN FORCE AT THE TIME OF CONSTRUCTION.

6. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FEES FOR PERMITS PRIOR TO STARTING CONSTRUCTION. PERMITS ARE TO BE POSTED IN A CONSPICUOUS PLACE ON THE PROJECT SITE AS REQUIRED BY AUTHORITY HAVING JURISDICTION.

7. UNLESS SPECIFICALLY NOTED AS BEING RE-USED, MATERIALS FURNISHED AT THE JOB SITE SHALL BE NEW AND FREE FROM DEFECTS, AND SHALL BE STORED AT THE SITE IN SUCH A MANNER AS TO PROTECT THEM FROM DAMAGE. ALL WORK SHALL BE BEST PRACTICE OF EACH TRADE.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETELY COORDINATE WORK AS REQUIRED TO MEET THE DESIGN INTENT AS DEFINED BY THE DOCUMENTS. THE CONTRACTOR SHALL LAY OUT AND SEQUENCE THE INSTALLATION OF WORK SO THAT THE DIFFERENT SYSTEMS DO NOT OBSTRUCT INSTALLATION OF SUBSEQUENT WORK. IN GENERAL, SYSTEMS INSTALLED FIRST SHOULD BE AS HIGH AND AS TIGHT TO THE STRUCTURE AS POSSIBLE TO ALLOW SPACE FOR SYSTEMS WHICH FOLLOW.

9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUB-CONTRACTORS TO REVIEW DRAWINGS, PROJECT MANUAL, ADDENDA, BULLETINS, ETC., IN ORDER TO ENSURE COMPLETE COORDINATION OF WORK. FAILURE TO REVIEW AND COORDINATE ALL CONTRACT DOCUMENTS BY THE GENERAL CONTRACTOR WITH THE SUB-CONTRACTORS FOR APPLICABLE PORTIONS OF THE WORK DOES NOT RELIEVE ANY PARTY FROM PROVIDING MATERIALS AND WORK REQUIRED FOR A COMPLETE INSTALLATION.

10. THE PROJECT MANUAL, WHICH INCLUDES THE GENERAL CONDITIONS, SUPPLEMENTAL CONDITIONS, AND TECHNICAL SPECIFICATIONS, AND THE DRAWINGS, ARE COMPLIMENTARY AND TOGETHER DESCRIBE THE PROJECT REQUIREMENTS. WHERE THERE ARE DISCREPANCIES BETWEEN THE PROJECT MANUAL AND THE DRAWINGS, THE CONTRACTOR SHALL ADVISE THE ARCHITECT OF SUCH AND REQUEST CLARIFICATION. IN GENERAL, THE PROJECT MANUAL TAKES PRECEDENCE OVER DRAWINGS. LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALL SCALE DETAILS.

11. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THE SITE PRIOR TO BIDDING IN ORDER TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE IMPACT OF THE PROPOSED WORK INDICATED ON THE DRAWINGS AND SPECIFICATIONS ON THESE CONDITIONS. ANY QUESTIONS REGARDING THE COORDINATION OF NEW WORK WITH EXISTING CONDITIONS MUST BE SUBMITTED TO THE ARCHITECT IN WRITING PRIOR TO THE BID SUBMISSION AND WITH ADEQUATE TIME FOR RESPONSE TO ALL BIDDERS. THE ARCHITECT WILL RESPOND TO TIMELY QUESTIONS WITH A WRITTEN RESPONSE TO ALL BIDDERS.

12. ALL WORK NOTED "NIC" IS NOT IN CONTRACT. CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE PER REQUIREMENT ESTABLISHED BY OWNER.

13. EXISTING DIMENSIONS AND CONDITIONS INDICATED IN THESE DOCUMENTS ARE FROM ELECTRONIC CAD INFORMATION PROVIDED BY THE OWNER AND ARE ASSUMED TO BE ACCURATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF SUCH INFORMATION PRIOR TO THE START OF CONSTRUCTION, AND ADVISE THE ARCHITECT OF ANY DEVIATIONS OR CONFLICTS WITH THE INFORMATION SHOWN ON THE DRAWINGS.

14. DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR SHALL REFER TO THE DIMENSIONS INDICATED OR THE ACTUAL SIZES OF CONSTRUCTION ITEMS. WHERE NO DIMENSION OR METHODS OF DETERMINING A LOCATION EXISTS, VERIFY DIMENSION WITH ARCHITECT PRIOR TO LAYOUT AND INSTALLATION.

15. THE DRAWINGS AND REFERENCED DETAILS HAVE BEEN DIMENSIONED IN ORDER TO ESTABLISH THE CONTROL AND GUIDELINES FOR FIELD LAYOUT. WHERE DISCREPANCIES EXIST BETWEEN THE DRAWINGS AND FIELD CONDITIONS THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF SUCH PRIOR TO START OF WORK.

16. DIMENSIONS ON DOCUMENTS ARE TO FACE OF FINISH MATERIALS UNLESS OTHERWISE INDICATED.

17. WHERE DIMENSIONS INDICATED ARE NOTED AS VERIFY IN FIELD (VIF) THE DIMENSION SHOWN IS THE BASIS OF DESIGN, BUT MAY DIFFER FROM ACTUAL CONDITIONS. CONTRACTOR SHALL VERIFY THESE DIMENSIONS WHILE LAYING OUT THE WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING.

18. WHERE DIMENSIONS ARE NOTED AS "+/-" FIELD DIMENSIONS MAY VARY FROM THE NOTED DIMENSIONS BY MINOR AMOUNTS. DISCREPANCIES OF MORE THAN 1" SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CONFIRMATION.

19. DIMENSIONS NOTED AS "CLEAR" ARE TO BE ACCURATE, THESE ARE MINUMUM DIMENSIONS REQUIRED FROM FACE OF FINISH TO FACE OF FINISH OR OTHER ELEMENT AND CANNOT BE ANY SMALLER.

20. DETAILS ARE KEYED TO THE PLANS AT TYPICAL LOCATIONS. TYPICAL DETAILS APPLY TO ALL LOCATIONS WHICH ARE SIMILAR BUT ARE NOT NECESSARILY KEYED TO EVERY LOCATION TO WHICH THEY APPLY. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE LOCATION OF ALL TYPICAL DETAILS AND INSTALL THE WORK INDICATED. FEATURES NOT SHOWN IN THEIR ENTIRETY SHALL BE COMPLETELY PROVIDED AS IF SHOWN IN FULL. IF DISCREPANCIES EXIST, CONTRACTOR IS TO REQUEST CLARIFICATION BY THE ARCHITECT OF SUCH CONDITIONS.

21. FINISH FLOOR ELEVATIONS REFER TO TOP OF CONCRETE SLAB, UNLESS NOTED OTHERWISE. WHERE CONCRETE SLAB IS DEPRESSED TO ACCOMMODATE SETTING BEDS, RAISED ACCESS FLOOR, OR OTHER SIMILAR FLOOR ASSEMBLIES, FINISH FLOOR ELEVATIONS ARE TO TOP OF FINISH FLOOR ASSEMBLY INDICATED.

22. FIRE RATING "TAPES" INDICATED ON FLOOR PLANS SHOW EXTENT OF FIRE RATED PARTITIONS, BARRIERS AND FIRE WALLS. RATING IN A PARTITION SHALL BE CONTINUOUS AND SHALL CONTINUE OVER DOORS AND OVER AND BELOW WINDOWS WHETHER OR NOT THEY ARE SHOWN AS SUCH ON THE PLANS. REFER TO PARTITION DETAILS FOR REQUIREMENTS OF THE RATED ASSEMBLIES.

23. VERIFY AND COORDINATE SIZES, LOCATION AND MOUNTING REQUIREMENTS OF ALL EQUIPMENT AND FIXTURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE REQUIRED BLOCKING, BACKING, SLEEVES, ETC. FOR A COMPLETE, NEAT INSTALLATION. COORDINATE INSTALLATION OF ALL SLEEVES AND OPENINGS AS REQUIRED THROUGH ALL EXISTING OR NEW CONSTRUCTION.

22. DETAILS INDICATE DESIGN INTENT OF WORK IN PLACE. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS OR DIMENSIONS AND ARE TO BE INCLUDED AS PART OF THE WORK.

23. PROVIDE PROTECTION FOR PEDESTRIANS OR OCCUPANTS OF ADJACENT AREAS OF THE BUILDING AS NECESSARY AND AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

24. MAINTAIN THE PREMISES CLEAN AND FREE OF TRASH AND DEBRIS. PROTECT PROJECT, THE SITE, AND PERSONAL PROPERTY FROM DAMAGE.

25. PROTECT WORK AREAS AND EXISTING ADJACENT AREAS, INCLUDING EXISTING UTILITIES, FROM DAMAGE. REPAIR, REPLACE, OR PATCH ANY DAMAGE DUE TO CONSTRUCTION. REPAIRED CONSTRUCTION IS SUBJECT TO REVIEW AND ACCEPTANCE BY ARCHITECT.

26. PROVIDE REQUIRED TEMPORARY UTILITIES, BRACING, SUPPORTS, SHORING, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN ADEQUACY AND SAFETY OF ERECTION.

27. CONTRACTOR SHALL MAINTAIN CURRENT UPDATED RECORD DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES.

28. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO SITE SAFETY AND SECURITY FOR WORKERS AND GENERAL MEMBERS OF THE PUBLIC.

29. METAL FABRICATIONS AND SUPPORT ASSEMBLIES WHETHER SHOWN OR NOT SHALL BE PROVIDED FOR THE STRUCTURAL SUPPORT OF MISCELLANEOUS ELEMENTS. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ENGINEERED STRUCTURAL ASSEMBLIES AND CALCULATIONS SHOWING COMPLIANCE WITH CODE REQUIREMENTS AND ACCOUNTING FOR STATIC AND DYNAMIC LOADS INCLUDING ANY WIND OR SEISMIC LOADS, THERMAL MOVEMENT OF SUPPORTING STRUCTURE AND DIMENSIONAL TOLERANCES OF THE BUILDING.

30. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR APPROPRIATE INSTALLATION OF ALL TOILET ROOM ACCESSORIES AND PARTITIONS, AND ALL WALL MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL OR MISCELLANEOUS EQUIPMENT.

31. PIPE SLEEVES IN MECHANICAL EQUIPMENT ROOMS EXTEND 2" ABOVE THE FLOOR LINE. FILL THE ANNULAR SPACES OF PIPE SLEEVES THROUGH THE FLOOR OR THROUGH RATED WALLS WITH FIRE SAFING AND SMOKE SEAL COMPOUND AS INDICATED ON THE SPECIFICATION, AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.

32. SIZES OF MECHANICAL EQUIPMENT PADS AND BASES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY DIMENSIONS OF ALL PADS AND BASES WITH THE APPROPRIATE EQUIPMENT MANUFACTURERS. CONTRACTOR SHALL COORDINATE MOUNTINGS WITH APPROPRIATE EQUIPMENT MANUFACTURERS. PADS AND BASES SHALL BE INDICATED ON SUBMITTALS AND BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO LAY-OUT OF REINFORCING STEEL OR STEEL DECK.

33. PROVIDE ACCESS PANELS FOR MECHANICAL AND ELECTRICAL EQUIPMENT AS REQUIRED BY APPLICABLE CODES. ALL ACCESS PANELS IN GYP BOARD SHALL BE CONCEALED, MUD-IN TYPE. ELECTRICAL J-BOXES, PLUMBING CLEANOUTS, FIRE DAMPERS AND OTHER SIMILAR ITEMS REQUIRING ACCESS ARE NOT TO BE LOCATED ABOVE GYPSUM BOARD OR SIMILAR NON-ACCESSIBLE CEILING.

ABBREVIATIONS

ACP	ACOUSTICAL CEILING PANELS
ADJ	ADJACENT, ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
BLDG	BUILDING
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT, CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR, CLEARANCE
CMU	CONCRETE MASONRY UNIT(S)
COL	COLUMN
CONC	CONCRETE
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
EA	EACH
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION (GRADE)
EWC	ELECTRIC WATER COOLER
EXIST OR (E)	EXISTING
EXP	EXPOSED
EXT	EXTERIOR
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FURNITURE, FIXTURES & EQUIPMENT
FIN	FINISH, FINISHED
F.O.S.	FACE OF STRUCTURE
FR	FIRE RATED, FIRE RETARDANT
FRP	FIBERGLASS REINFORCED POLYESTER
FRTW	FIRE RETARDANT TREATED WOOD
GA	GAUGE
GALV	GALVANIZED
GYP BD	GYPSUM BOARD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
INT	INTERIOR
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MO	MASONRY OPENING
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OPP	OPPOSITE
PL	PROPERTY LINE
P.I.P.	PROTECT IN PLACE
PPT	PRESERVATIVE PRESSURE TREATED
PR	PAIR
PSF	PER SQUARE FOOT
RD	ROOF DRAIN
SF	SQUARE FOOT
SIM	SIMILAR
SPEC	SPECIFICATIONS
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORIES
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
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WWW.HED.DESIGN

Architectural General Notes & Abbreviations

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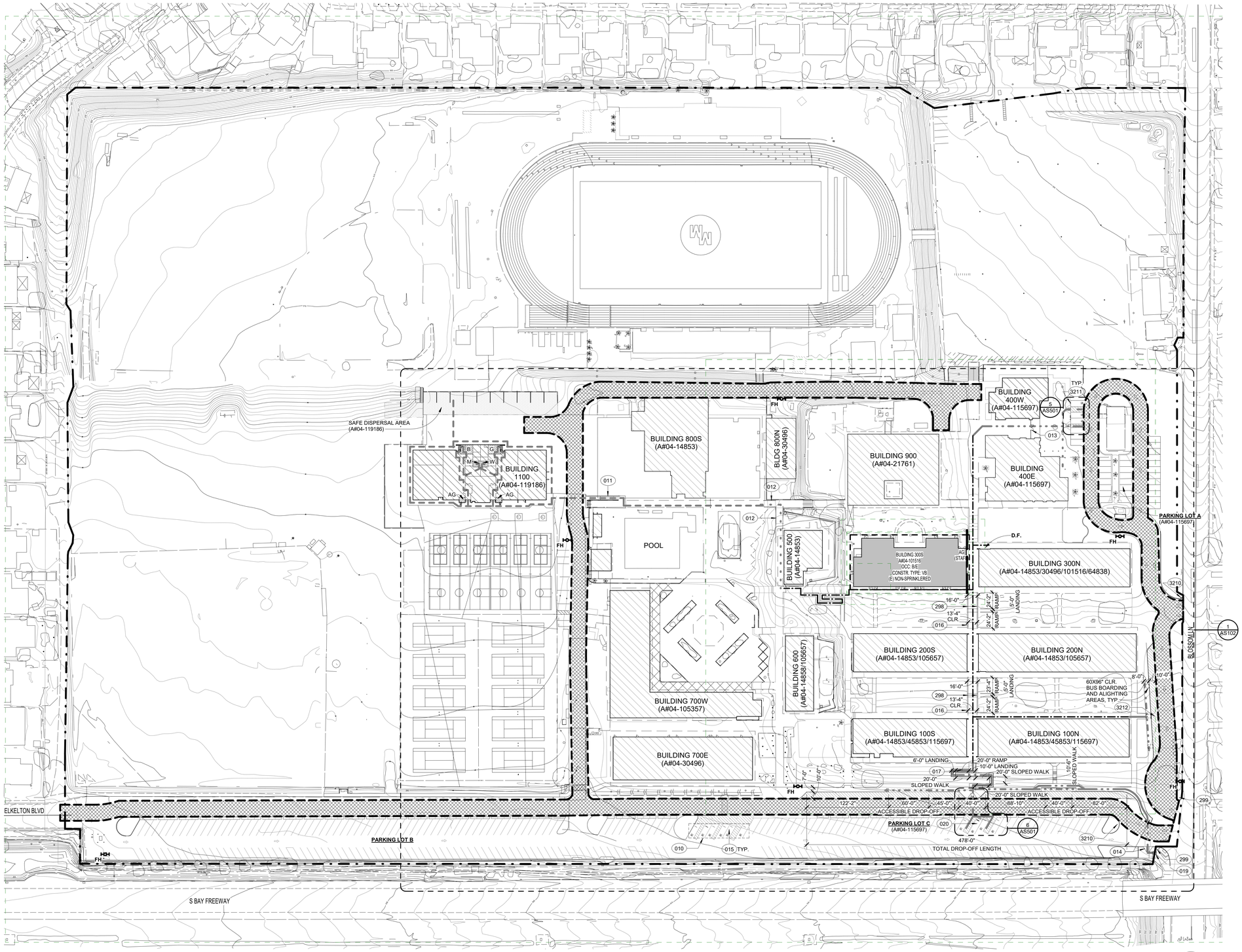

1 SITE PLAN
1" = 60'-0"

CODE ANALYSIS - LEGEND

1. CONTRACTOR TO PROTECT ALL LANDSCAPE, HARDSCAPE, & EXISTING CONSTRUCTION TO REMAIN FROM DAMAGE DURING THE ENTIRE CONSTRUCTION PROCESS.

2. IN COMPLIANCE WITH SECTIONS 11B-302, 11B-303, & 11B-403: "PATH OF TRAVEL (P.O.T.) AS INDICATED IS A BARRIER FREE ACCESSIBLE ROUTE WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT A SLOPE NOT STEEPER THAN 1:2, EXCEPT THAT LEVEL CHANGES ARE 1/4" MAXIMUM VERTICAL AND IS AT LEAST 48" WIDE. SURFACE SHALL BE STABLE, FIRM, AND SLIP RESISTANT. CROSS-SLOPE SHALL NOT BE STEEPER THAN 1:48 AND RUNNING SLOPE SHALL NOT BE STEEPER THAN 1:20. P.O.T. SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (SECTION 11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL SURFACE BETWEEN 27" AND 80" ABOVE FINISH FLOOR OR GROUND (SECTION 11B-307.2). ARCHITECTS TO VERIFY THAT THERE ARE NO BARRIERS IN THE P.O.T. AND ALL P.O.T. COMPLY WITH SECTION11B-206."

3. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT."DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE P.O.T WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

4. DURING CONSTRUCTION, IF P.O.T ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT."

5. OPENINGS IN GRATINGS OR STRAINERS LOCATED IN PEDESTRIAN WAYS OR IN P.O.T. SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER. ELONGATED OPENINGS SHALL BE PLACED SO THAT LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL IN COMPLIANCE WITH SECTION 11B-302.3. CONTRACTOR TO PROVIDE CUTSHEETS WHERE OCCURS. WHERE NO DOMINANT DIRECTION OF TRAVEL EXISTS, OPENINGS SHALL BE LIMITED TO 1/2" MAXIMUM IN ALL DIRECTIONS.

6. DEMOLITION OF EXISTING HARDSCAPE SHOULD BE FROM JOINT TO JOINT, NO TRENCHING EXISTING HARDSCAPE

7. DOORS AND GATES ON THE PATH OF TRAVEL SHALL BE ADJUSTED TO HAVE A MAXIMUM OPENING FORCE OF 5-POUNDS (CBC 11B-404.2.9), AND CLOSING SPEED PER CBC 11B-404.2.8. HARDWARE SHOULD UNLATCH WITH 5 POUNDS MAXIMUM OF PRESSURE.

CODE ANALYSIS - LEGEND

- BUILDING TO BE MODERNIZED
- (E) BUILDING NOT IN SCOPE
- 20'-0" WIDE FIRE TRUCK ACCESS A# 04-115697
- PROPERTY LINE
- AREA OF WORK
- RESTROOM FACILITY B=BOYS M=MEN G=GIRLS W=WOMEN AG=ALL GENDER
- D.F. — ACCESSIBLE DRINKING FOUNTAIN SEE 13/AS501
- FH — EXISTING FIRE HYDRANT
- EXISTING ACC. PATH OF TRAVEL A#04-101516
- EXISTING ACC. PATH OF TRAVEL A#04-111308
- EXISTING ACC. PATH OF TRAVEL A#04-115697
- EXISTING ACC. PATH OF TRAVEL A#04-119186

KEYNOTE LEGEND	
010	(E) SHADE STRUCTURE OVER PARKING.
011	(E) PEDESTRIAN RAMP (A# 04-119186)
012	(E) PEDESTRIAN RAMP, PER A# 04-119186
013	(E) 4'-0"W. X 6'-0"H. ORNAMENTAL GATE, PAIR (A#04-115697).
014	(E) CURB RAMP (A# 04-115697)
015	(E) ACCESSIBLE PARKING STALLS
016	(E) PEDESTRIAN RAMP (A#04-101516)
017	(E) RAMP & HANDRAIL (A#04-115697)
019	P.O.T. CONNECTION TO P.R.O.W.
020	(E) ACCESSIBLE PARKING (A#04-115697)
298	(E) HANDRAIL TO REMAIN. MODIFY AS NOTED ON 4/AS501 TO MAKE ACCESSIBLE. CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS.
299	REMOVE (E) NON-COMPLIANT TOW AWAY SIGN
3210	(E) TOW AWAY SIGN, REFER TO A#04-115697
3211	(E) ACCESSIBLE PARKING, REFER TO PARKING LOT A#
3212	(E) BUS DROP-OFF, REFER TO A#04-115697

PARKING TABULATION

CBC:
T. 11B-208.2
11B-208.2.4

	TOTAL PARKING STALLS	REQUIRED ACC. STALLS		PROVIDED ACC. STALLS		REGULAR STALLS
		STD.	VAN	STD.	VAN	
PARKING LOT A FACULTY & VISITORS	37	2	1	2	1	34
PARKING LOT B STUDENT & VISITORS	145	*ACCOUNTED FOR AT PARING LOT C*				145
PARKING LOT C FACULTY & VISITORS	99	5	2	8	2	91

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DATE: 11/05/2024

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WWW.HED.DESIGN

Architectural Site Plan

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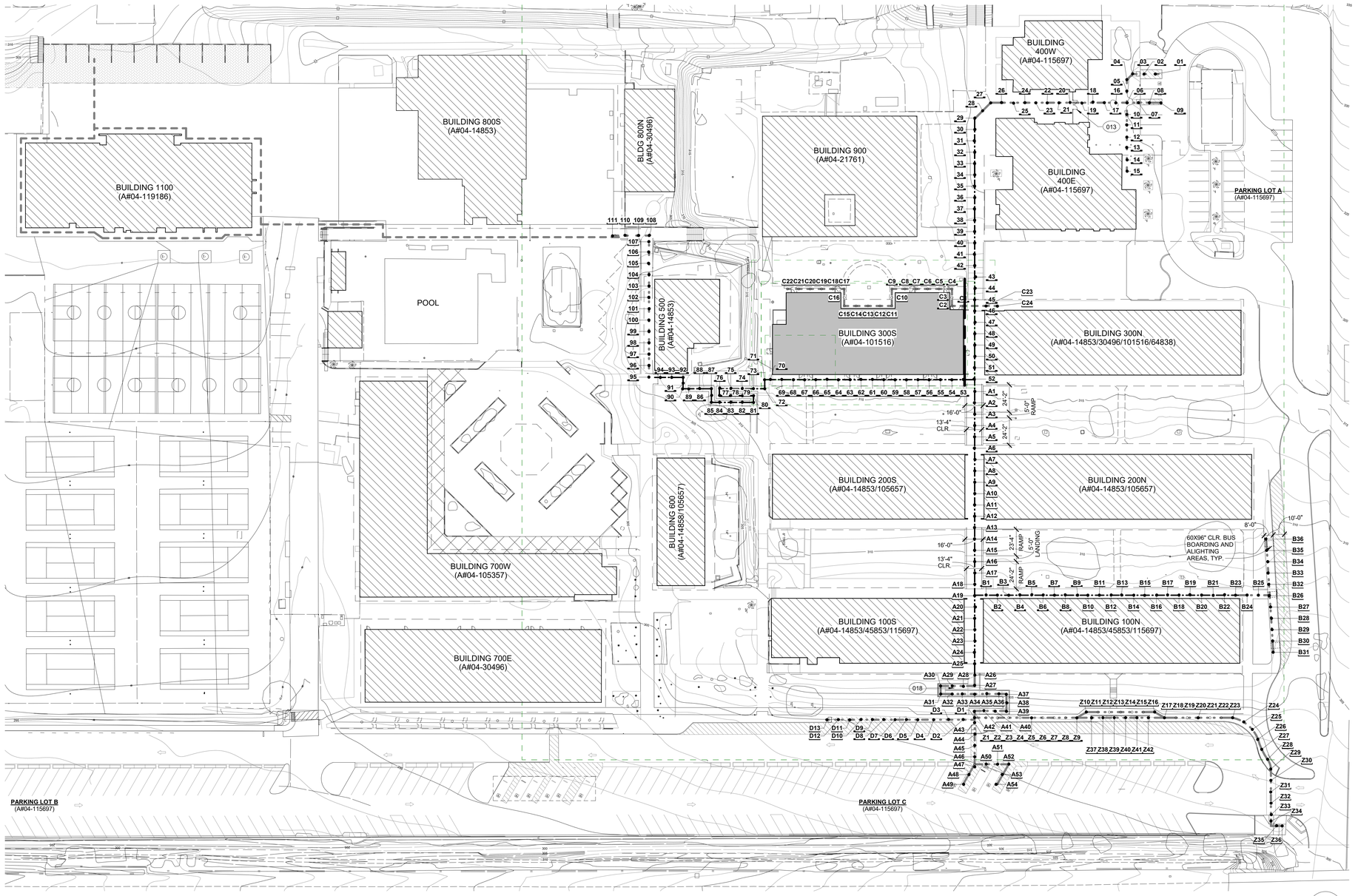

1 ENLARGED SITE PLAN - PATH OF TRAVEL VERIFICATION

1" = 40'-0"

SITE P.O.T. VERIFICATION NOTES

1. ALL POINTS NOTED WERE FIELD VERIFIED TO CONFIRM SLOPE.
2. AT AREAS WHERE NOTED, CONTRACTOR SHALL UPGRADE NON-CONFORMING CBC/ADA ACCESSIBLE PATH OF TRAVEL. GRIND PORTION OF CONCRETE WITHIN JOINTS AS REQUIRED TO REACH 2% MAX. SLOPE IN CROSS DIRECTION AND 5% MAX. SLOPE IN RUNNING DIRECTION OF TRAVEL. GRIND TO CLOSEST JOINT, ENSURE A FLUSH TRANSITION.

P.O.T. SITE LEGEND

- EXISTING ACC. PATH OF TRAVEL A#04-101516
- EXISTING ACC. PATH OF TRAVEL A#04-111308
- EXISTING ACC. PATH OF TRAVEL A#04-115697
- EXISTING ACC. PATH OF TRAVEL A#04-119186

KEYNOTE LEGEND

013	(E) 4'-0"W. X 6'-0"H. ORNAMENTAL GATE, PAIR (A#04-115697).
018	(E) RAMP, A#04-115697

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
01	0.1	0.9	Landing
02	0.3	0.9	
03	0.4	3.9	Ramp
04	0.3	0.5	
05	0.4	0.2	
06	0.6	0.0	Landing
07	0.3	4.4	Ramp
08	0.1	1.2	
09	0.0	0.5	
10	0.3	0.4	
11	0.5	0.9	
12	1.0	1.1	
13	0.4	0.3	
14	0.6	0.6	
15	0.7	0.0	
16	1.1	0.4	
17	1.0	0.4	
18	0.7	1.5	
19	0.9	0.4	
20	0.4	0.4	
21	0.3	0.3	
22	0.5	0.2	
23	0.5	0.0	
24	1.1	0.3	
25	0.9	0.1	
26	0.4	0.3	
27	0.7	0.8	Turning Space
28	1.3	0.9	
29	1.3	0.0	Turning Space
30	1.5	0.5	
31	1.3	0.0	
32	1.3	0.4	
33	1.5	0.1	
34	1.3	0.1	
35	1.0	1.1	
36	0.8	2.0	
37	0.1	1.9	

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
38	0.1	0.4	
39	0.0	0.4	
40	0.1	3.1	
41	0.1	3.0	
42	0.1	0.1	
43	0.0	4.2	
44	0.3	3.1	
45	0.1	0.7	
46	0.4	0.4	
47	0.6	0.0	
48	0.2	0.3	
49	0.0	0.2	
50	0.3	1.1	
51	0.0	0.2	
52	0.2	0.6	Turning Space
53	1.0	0.7	
54	0.6	0.6	
55	0.2	0.3	Door
56	0.3	0.2	
57	0.3	0.0	
58	0.4	0.4	
59	0.5	0.0	
60	0.5	0.3	Door
61	0.8	0.3	
62	0.4	0.3	Door
63	0.5	0.5	Door
64	0.7	0.2	
65	0.6	0.2	
66	0.3	0.4	Door
67	0.5	0.3	
68	0.5	2.2	
69	0.3	1.4	
70	1.0	0.6	
71	0.4	0.5	Turning Space
72	1.1	0.6	Turning Space
73	0.5	0.5	
74	0.0	0.3	

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
75	0.7	3.3	
76	0.3	0.4	Turning Space
77	0.4	0.1	
78	0.5	4.2	
79	0.2	3.5	
80	0.0	0.1	Turning Space
81	0.1	0.0	Turning Space
82	0.1	3.8	
83	0.0	3.8	
84	0.7	3.5	
85	0.5	0.2	Turning Space
86	0.4	3.4	
87	1.0	0.1	Turning Space
88	0.9	4.2	
89	0.9	4.1	
90	0.5	0.3	Turning Space
91	0.0	0.7	
92	0.1	0.6	Turning Space
93	0.6	3.6	
94	0.8	0.8	
95	0.2	1.4	Turning Space
96	0.0	2.6	
97	0.1	2.4	
98	0.1	0.4	
99	0.2	0.4	
100	0.3	0.1	
101	0.5	2.6	
102	0.7	2.5	
103	0.0	1.8	
104	0.3	4.3	
105	0.6	4.2	
106	0.8	2.3	
107	0.8	2.1	
108	1.4	1.0	Turning Space
109	0.4	3.8	
110	0.5	5.0	
111	0.6	0.3	

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
A1	0.7	3.8	
A2	0.6	3.4	
A3	0.5	3.8	
A4	0.2	0.4	
A5	0.4	3.4	
A6	1.1	3.8	
A7	0.9	0.2	
A8	0.3	0.5	
A9	0.5	0.2	
A10	0.3	0.3	
A11	0.5	0.0	
A12	0.3	0.5	
A13	0.1	0.4	
A14	0.6	3.9	
A15	0.7	4.2	
A16	0.2	0.6	
A17	0.2	4.0	
A18	0.4	3.8	
A19	0.5	0.4	Turning Space
A20	0.6	0.3	
A21	0.4	0.7	
A22	0.2	1.1	
A23	0.4	0.3	
A24	0.3	0.5	
A25	0.5	0.4	
A26	0.5	2.3	
A27	1.1	1.0	Turning Space
A28	1.0	4.2	
A29	0.6	4.0	
A30	0.2	0.9	Turning Space
A31	1.2	0.3	Turning Space
A32	1.4	2.0	
A33	1.1	1.2	
A34	1.3	1.8	
A35	0.9	2.2	
A36	0.9	2.6	
A37	0.6	0.0	Turning Space

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
A38	0.9	2.3	
A39	0.8	0.7	Turning Space
A40	1.0	2.9	
A41	0.5	2.5	
A42	0.4	0.3	Turning Space
A43	1.0	0.0	Landing
A44	0.2	3.7	Ramp
A45	1.1	1.6	
A46	1.8	1.2	
A47	0.3	0.9	
A48	0.7	1.0	
A49	0.2	0.1	
A50	0.9	0.7	
A51	0.8	0.7	
A52	1.0	0.6	Turning Space
A53	0.4	0.9	
A54	0.1	0.7	

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
B1	0.3	0.0	
B2	0.5	0.3	
B3	0.6	0.5	
B4	0.6	0.1	
B5	0.8	0.1	
B6	0.3	0.5	
B7	1.0	0.0	
B8	0.4	0.1	
B9	0.7	0.3	
B10	0.8	0.3	
B11	0.7	0.4	
B12	0.8	0.7	
B13	0.4	0.0	
B14	0.4	0.5	
B15	0.8	0.3	
B16	0.9	0.2	
B17	1.1	0.0	
B18	1.0	0.3	
B19	1.4	0.6	
B20	0.8	0.5	
B21	0.6	0.7	
B22	0.7	0.1	
B23	0.8	0.3	
B24	0.2	0.3	
B25	1.2	4.3	
B26	1.1	0.9	Turning Space
B27	0.5	1.2	
B28	0.5	1.7	
B29	0.5	1.7	
B30	0.4	1.8	
B31	0.0	1.9	
B32	0.2	2.3	
B33	0.2	2.5	
B34	0.1	2.3	
B35	0.3	2.3	
B36	0.5	2.4	

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
C1	0.4	0.3	Door
C2	0.3	0.0	Door
C3	0.1	0.2	
C4	0.5	0.0	Turning Space
C5	0.7	0.2	
C6	0.8	0.0	
C7	1.0	0.6	Door
C8	0.5	0.1	
C9	0.5	0.6	Turning Space
C10	1.2	0.0	
C11	0.5	0.1	Turning Space
C12	0.8	0.2	
C13	1.1	0.2	
C14	1.1	0.4	
C15	0.7	0.2	Turning Space
C16	1.1	0.2	
C17	0.1	0.4	Turning Space
C18	1.3	0.3	Door
C19	1.1	0.2	
C20	0.7	0.6	
C21	0.9	0.8	
C22	0.7	0.1	
C23	1.2	0.8	
C24	1.5	0.9	

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
D1	0.95	0.5	
D2	0.6	1.45	
D3	0.2	0.3	
D4	0.5	0.95	
D5	0.25	0.25	
D6	0.4	7.15	CURB RAMP
D7	0.4	0.6	
D8	0.6	0.25	
D9	0.85	0.65	
D10	0.4	0.5	
D11	1.0	0.15	
D12	0.95	0.3	
D13	1.1	7.65	CURB RAMP

SLOPE KEYNOTE

Tag	Cross Slope %	Running Slope %	Description
Z1	0.8	0.4	
Z2	1.2	0.4	
Z3	1.4	0	
Z4	1.3	0.2	
Z5	1.3	0.4	
Z6	1.2	0.2	
Z7	1.1	0	
Z8	1.1	0.2	
Z9	1.0	0.2	Turning Space
Z10	1.1	0.6	Turning Space
Z11	1.3	0.1	
Z12	1.1	0.1	
Z13	1.2	0.2	
Z14	1.3	0.1	
Z15	1.0	0.2	
Z16	1.1	0.5	Turning Space
Z17	1.0	0.2	Turning Space
Z18	1.3	0	
Z19	1.3	0.1	
Z20	1.2	0.1	
Z21	0.8	0.4	
Z22	0.8	0.2	
Z23	1.1	0.4	
Z24	1.5	0.2	
Z25	0.9	1.0	
Z26	1.2	1.5	
Z27	1.4	1.7	
Z28	1.2	1.5	
Z29	1.2	5.0	
Z30	1.2	1.1	
Z31	0.4	1.7	
Z32	0.6	1.9	
Z33	1.0	1.3	
Z34	0.95	7.6	Ramp
Z35	0.6	0.4	
Z36	2.0	1.0	

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA
(858) 398-3800
WWW.HED.DESIGN

Enlarged Site Plan - POT

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AS102

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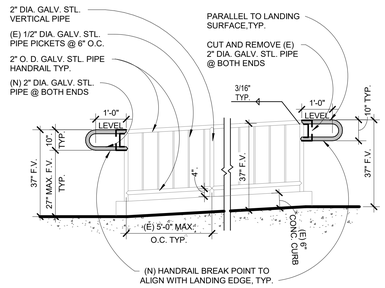
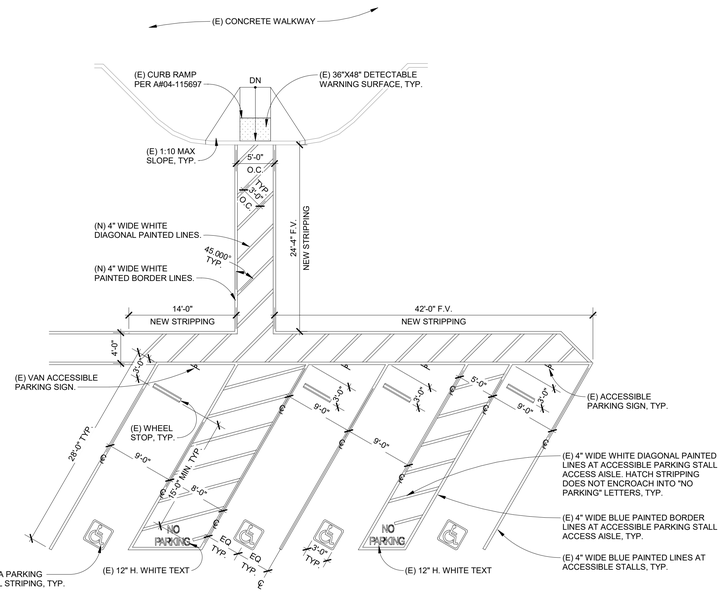


NOTE:
- EXISTING HANDRAIL COMPLIES WITH ALL DIMENSIONS AND MATERIALS NOTED ON DETAIL.
- DEMO EXISTING (DASH) AS SHOWN AND REPLACE WITH NEW (GREY).

4 (E) RAMP HANDRAIL

1/2" = 1'-0"

NOTE:
FOR ADDITIONAL (E) SLOPE INFORMATION, REFER TO SHEET AS102



6 (E) PARKING LOT C - ACCESSIBLE STALLS (A#04-115697)

1/8" = 1'-0"

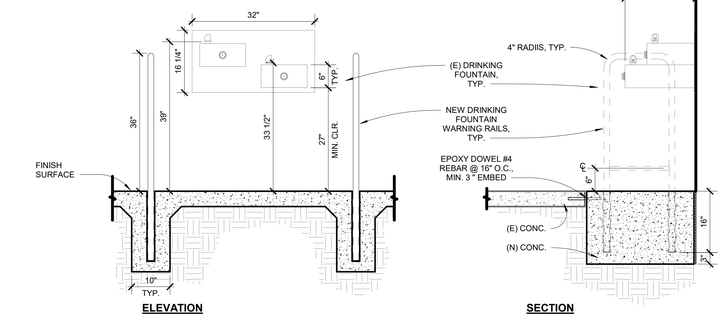
PLAN

NOTE:
- WATER FLOW SHALL BE TESTED AND ADJUSTED PER THE BELOW REQUIREMENT.

CBC 11B-602.6 WATER FLOW: THE SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES MAXIMUM FROM THE FRONT UNIT. THE ANGLE OF WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3 INCHES OF THE FRONT OF THE UNIT, THE ANGLE OF WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES AND 5 INCHES MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM.

DETAIL A

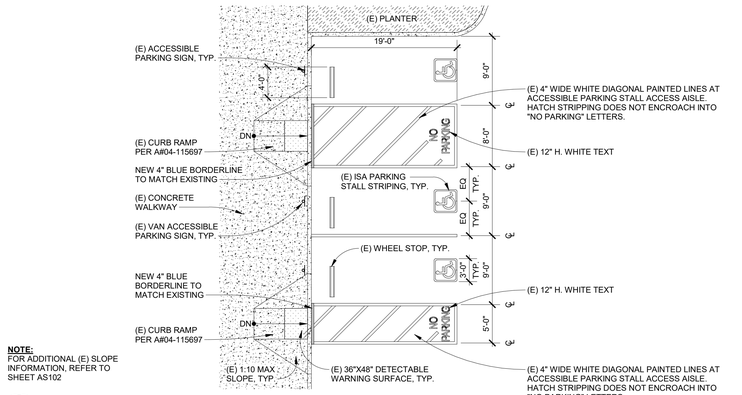
SCALE 1 1/2"= 1'=0"



ELEVATION **SECTION**

13 NEW GUARDRAILS @ (E) D.F.

3/4" = 1'-0"



NOTE:
FOR ADDITIONAL (E) SLOPE INFORMATION, REFER TO SHEET AS102

5 (E) FRONT ENTRY ACCESSIBLE PARKING (A#04-115697)

1/8" = 1'-0"

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GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

Site Details

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AS501

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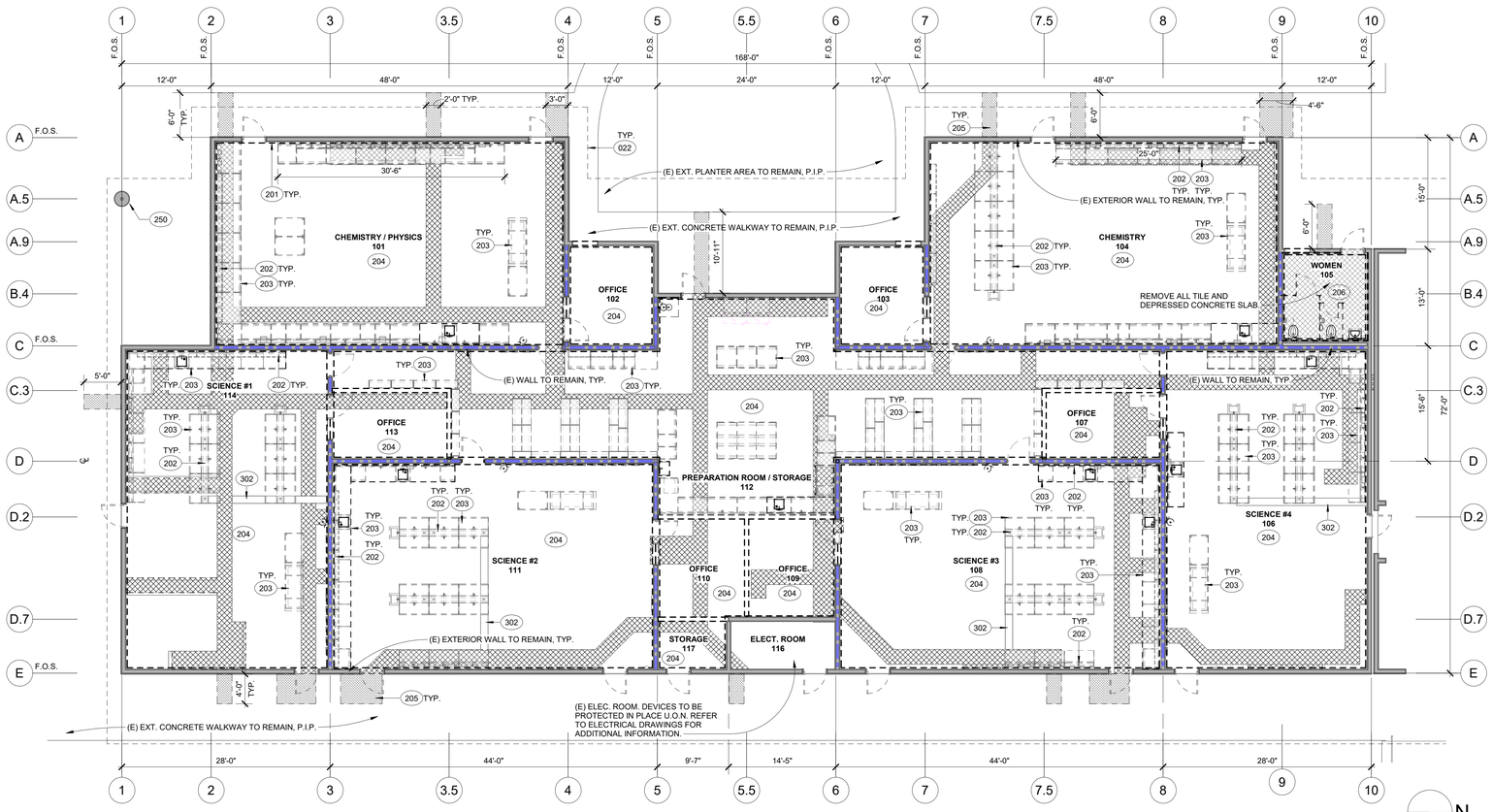


1 DEMOLITION PLAN

1/8" = 1'-0"

2 BLDG 300S FLOOR PLAN

1/8" = 1'-0"

DEMOLITION FLOOR PLAN NOTES

ROOF:
REMOVE SINGLE PLY ROOFING MEMBRANE AS REQUIRED FOR NEW WORK.
REMOVE MECHANICAL EQUIPMENT, WHERE NOTED, COORDINATE WITH MECHANICAL DRAWINGS.
REMOVE COVER BOARDS AND INSULATION IF PRESENT TO INFILL OPENINGS. REFER TO STRUCTURAL DRAWINGS FOR PATCHING DETAIL. PROTECT STRUCTURAL MEMBERS TO REMAIN.

CEILING:
COMPLETELY REMOVE ALL EXISTING CEILINGS, INCLUDING LIGHT FIXTURES, REGISTERS AND OTHER CEILING MOUNTED DEVICES, SUPPORTS, TRACKS, ETC. COORDINATE DEMOLITION WITH MECHANICAL, PLUMBING AND ELECTRICAL.

EXTERIOR WALL:
REMOVE DOORS AND FRAMES, WHERE NOTED, PATCH & REPAIR AS REQUIRED FOR NEW DOOR AND FRAME INSTALLATION.
REMOVE ALL ROOM NAME SIGNAGE.

INTERIOR:
REMOVE ALL INTERIOR FINISHES, CASEWORK, WHITEBOARDS, TACKBOARDS, FIRE EXTINGUISHERS, ETC. TO EXPOSE PLYWOOD SHEATHING/STUDS. REMOVE ELECTRICAL, PLUMBING, AND MECHANICAL EQUIPMENT TO ALLOW FOR INTERIOR FINISH REMOVAL. PATCH & REPAIR FLOOR AS REQUIRED FOR NEW WORK, SEE PLUMBING DRAWINGS FOR PIPE ROUTING.
WINDOWS TO REMAIN. PROTECT IN PLACE.
REMOVE ALL FLOORING FINISHES TO EXPOSE CONCRETE.

NOTE:
NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

ALL DEMOLITION SHALL COMPLY WITH CH. 33 CBC AND CHAPTER 33 CFC.

WHERE TRENCHING IS REQUIRED UNDER (E) WALLS, DO NOT DEMO FOOTINGS. PLUMBING TO BE ROUTED UNDER FOOTINGS.

FLOOR PLAN LEGEND

- COL — STRUCTURAL GRID LINE
- 101A — DOOR MARK
- NEW DOOR
- EXISTING WALL TO REMAIN
- NEW WALL
- WALL TO BE DEMOLISHED
- (E) FIRE RATED WALL TO REMAIN
- 1 HOUR BARRIER, DESIGN # PER TABLE ON A-571
- CT4D — PARTITION TYPE (SEE SHEET A-571)
- ROOM NAME 101 — ROOM NAME & NUMBER
- FLOOR DRAIN (FD)
- FEC — FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER PER 1/A-562
- SAWCUT & REMOVE CONCRETE SLAB AND CURB (WHERE OCCURS), 2'-0" MAX. WIDTH. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFO. WHERE TRENCH/SLAB DEMO EXCEEDS 2'-0" WIDTH, PROVIDE POURBACK SLAB PER DETAIL 13/S-502
- CONC. SLAB INFILL TO MATCH ADJACENT FINISH AND LEVEL. REFER TO 9/S-501 FOR ADDITIONAL INFO.
- ACCESSIBLE 5'-0" TURNING CIRCLE CLEAR FLOOR SPACE TYP.
- ACCESSIBLE 30" X 48" CLEAR FLOOR SPACE TYP.
- ACCESSIBLE WORKSTATION
- CONC. SLAB INFILL TO MATCH ADJACENT FINISH AND LEVEL. REFER TO 10/S-501
- NEW TILE FLOOR OVER DEPRESSED SLAB
- NEW EXTERIOR CONCRETE WALKWAY
- REMOVE (E) EXTERIOR CONCRETE WALKWAY

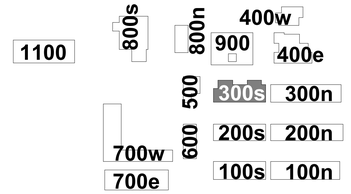
FLOOR PLAN NOTES

1. CONTRACTOR TO COORDINATE AND PROVIDE BACKING FOR ALL ITEMS IN CONTRACT, AS WELL AS ITEMS NOTED WHICH ARE IDENTIFIED AS NOT IN CONTRACT (NIC) OR ITEMS WHICH ARE OWNER-PROVIDED OR VENDOR-PROVIDED. SUCH ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO, SIGNAGE, VISUAL BOARD UNITS, CONFERENCING TRAYS, RAILS OR OTHER ACCESSORIES, BULLETIN BOARDS, DISPLAY CASES, COMPUTER OR TELEVISION DISPLAYS, MONITORS, SECURITY CAMERAS, WIRELESS ACCESS POINTS, LOCKERS, AND OTHER CASEWORK OR EQUIPMENT.
2. DO NOT SCALE DRAWINGS. USE DIMENSIONS INDICATED.
3. CONTRACTOR SHALL VERIFY BUILDING DIMENSIONS, PARTITION AND WALL LOCATIONS, AND FLOOR ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
4. ALL EXISTING CONSTRUCTION REMAINING BUT AFFECTED BY THE WORK UNDER THIS CONTRACT SHALL BE RESTORED AND REFINISHED TO MATCH THE MATERIALS, FINISH AND ALIGNMENT OF THE EXISTING ADJACENT CONSTRUCTION.
5. COORDINATE QUANTITY, SIZE AND LOCATION OF ALL FLOOR, ROOF AND WALL OPENINGS FOR MECHANICAL AND ELECTRICAL WORK FOR A COMPLETE INSTALLATION. PROVIDE OPENINGS SHOWN OR REQUIRED FOR COMPLETION OF WORK.
6. COORDINATE SIZE AND LOCATION OF ALL ACCESS PANELS WITH APPROPRIATE TRADES.
7. ALL DIMENSIONS ARE TO FACE OF GYPSUM BOARD, NOMINAL FINISH FACE OF CONCRETE, OR NOMINAL FACE OF MASONRY UNLESS OTHERWISE NOTED.
8. DIMENSIONS IN ROOMS WITH WALL TILE ARE TO FACE OF TILE SURFACE TYPICAL, UNLESS OTHERWISE NOTED, WITH THICKNESS OF TILE AND SETTING BED BEING IDENTIFIED NOMINALLY AS ½". IF TILE AND SETTING BED IS THICKER THAN ½", PARTITION LAYOUT TO BE ADJUSTED ACCORDINGLY.
9. WHERE FIRE RATED PARTITIONS TERMINATE AT EXTERIOR WALLS, PROVIDE FIRE SAFING (UL LISTED) INSULATION FROM END OF PARTITION TO INTERIOR FACE OF EXTERIOR SHEATHING, 5" DEPTH X FULL HEIGHT OF CONSTRUCTION (TYPICAL).
10. WHERE SOUND INSULATED PARTITIONS TERMINATE AT EXTERIOR WALL ASSEMBLIES, EXTEND GYPSUM BOARD, ISOLATION CHANNELS, AND SOUND ATTENUATING INSULATION AS SCHEDULED, TO INSIDE FACE OF EXTERIOR SHEATHING, AND SEAL JOINT AT SHEATHING WITH ACOUSTICAL SEALANT.
11. FOR ADDITIONAL INTERIOR FINISHES WHICH MAY IMPACT DIMENSIONS, REFER TO FINISH PLANS/SCHEDULES.
12. WHERE INTERIOR PARTITIONS ABUT WINDOW SYSTEMS, ALIGN CENTERLINES OF PARTITIONS WITH CENTERLINES OF VERTICAL WINDOW MULLIONS, UNLESS OTHERWISE NOTED.
13. PROVIDE CONTINUOUS FIRE RATED CONSTRUCTION BEHIND RECESSED FIXTURES IN FIRE PARTITIONS, FIRE BARRIERS AND FIRE WALLS.
14. PROVIDE FIREPROOFING CONTINUITY WITH EXISTING CONDITIONS, USING LIKE SYSTEMS AS EXISTING, WHERE REQUIRED. VERIFY CONSTRUCTION OF EXISTING ELEMENTS IDENTIFIED AS FIRE RATED AND REPORT CONDITIONS NEGATIVELY IMPACTING RATING OF ELEMENT TO ARCHITECT.
15. PATCH AND REPAIR EXISTING PARTITIONS AT REMOVED RECESSED ITEMS AND AT NEW DOOR OPENINGS. CUT BACK EXISTING GYPSUM BOARD TO NEXT STUD JOINT BETWEEN NEW AND EXISTING GYPSUM BOARD SHALL BE SECURED TO A COMMON OR SISTERED STUD.
16. PATCH AND REPAIR EXISTING CONCRETE SLAB AND/OR DECK AT REMOVED FLOOR DRAINS, WATER CLOSETS, DUCT PENETRATIONS AND OTHER REMOVED UTILITIES. PROVIDE CONCRETE IN THICKNESS REQUIRED TO MAINTAIN FIRE RATING OF FLOOR SLAB. REFER TO STRUCTURAL DRAWINGS FOR REQUIRED REINFORCEMENT OR ANCHORING. REPAIR OR INSTALL FIREPROOFING UNDER SLAB AS REQUIRED TO MATCH EXISTING CONSTRUCTION OR AS REQUIRED BY AHJ.
17. LEVEL AND SCARIFY EXISTING SLABS TO PROVIDE ACCEPTABLE SUBSTRATE FOR SCHEDULED FLOORING. REFER TO FINISH PLANS/SCHEDULES AND SPECIFICATIONS FOR PREPARATION OF FLOORS TO RECEIVE NEW FINISHES.

KEYNOTE LEGEND

009	ACCESSIBLE STATION, REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL DETAILS.
021	SOFFIT ABOVE, REFER TO R.C.P. FOR ADDITIONAL INFORMATION.
022	ROOF ABOVE.
201	REMOVE WALL FINISH TO EXPOSE (E) WALL STUDS OR (E) SHEATHING.
202	REMOVE (E) PARTIAL HT. FURRED WALL AND ALL ASSOCIATED UTILITIES, WHERE OCCURS. REFER TO PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
203	REMOVE CASEWORK & SINK (WHERE OCCURS). REMOVE ALL ASSOCIATED PLUMBING PIPES, ELECTRICAL CONDUITS, AND GAS LINES (WHERE OCCURS). REFER TO PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
204	REMOVE ALL INTERIOR FINISHES TO EXPOSE PLYWOOD SHEATHING / STUDS. REMOVE ALL ELECTRICAL, PLUMBING, AND MECHANICAL EQUIPMENT AND/OR FIXTURES TO ALLOW FOR INTERIOR FINISH REMOVAL. REMOVE RESILENT FLOORING, WHERE OCCURS.
205	(E) CONCRETE WALKWAY TO BE REMOVED. COORDINATE WITH NEW WORK.
206	REMOVE (E) PLUMBING FIXTURES, HARDWARE, FITTING, CUT & CAP BACK UNDER FLOOR OR BEHIND WALL IF NOT OBSTRUCTING NEW WORK.
250	(E) CONC. COLUMN TO REMAIN
251	(E) NON-OPERABLE WINDOW TO REMAIN, PROTECT IN PLACE.
253	(E) PLANTING TO REMAIN, PROTECT IN PLACE.
259	(E) CONCRETE WALKWAY TO REMAIN, PROTECT IN PLACE.
301	CONCRETE SLAB, SEE 9/S-501 FOR ADDITIONAL INFORMATION.
302	INFILL (E) SLAB TRENCH PER 10/S-501
602	CASEWORK, REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
607	ACCESSIBLE WORKSTATION, REFER TO 10/A-401 FOR ADDITIONAL INFORMATION.
1028	SLIDING WHITE BOARD, SEE DTL 3/A-562
1032	SEMI RECESSED FIRE EXTINGUISHER CABINET, SEE DTL 1/A-562
1053	86" WALL MOUNTED TV, SEE 5/A-562
1107	DISHWASHER (GE MODEL # GDT550PGR), O.F.C.I.
1108	SIDE-BY-SIDE REFRIGERATOR (SAMSUNG MODEL # RS27T5200SR), PROVIDE ANTI-TIP BRACKET. O.F.C.I.
1112	FUME HOOD, REFER TO 13/A-581 AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2204	FLOOR CLEAN OUT, REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
2205	FLOOR DRAIN REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
2210	EMERGENCY EYEWASH, SEE PLUMBING DRAWINGS AND 12/A-575 FOR ADDITIONAL INFO.
2211	SAFETY SHOWER / EYE WASH, SEE 4/A-575
2235	SINK, REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFO.
2237	GAS VALVE, REFER TO PLUMBING DRAWINFS FOR ADDITIONAL INFORMATION.
3201	FOR EXTERIOR CONCRETE WALK, REFER TO DETAILS 13, 14, 15, & 16/A-521 FOR ADDITIONAL INFORMATION.

KEY PLAN



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Floor Plans
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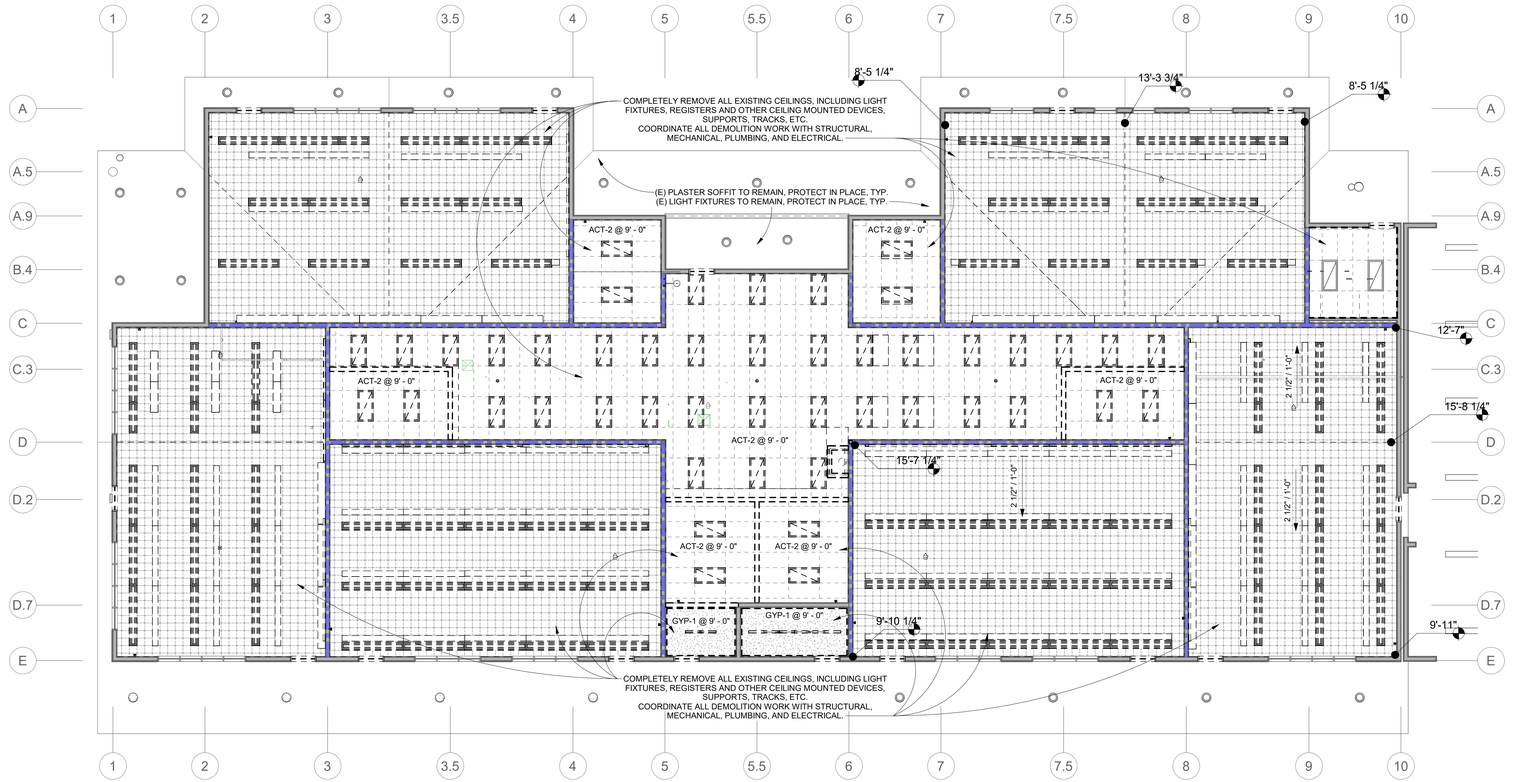
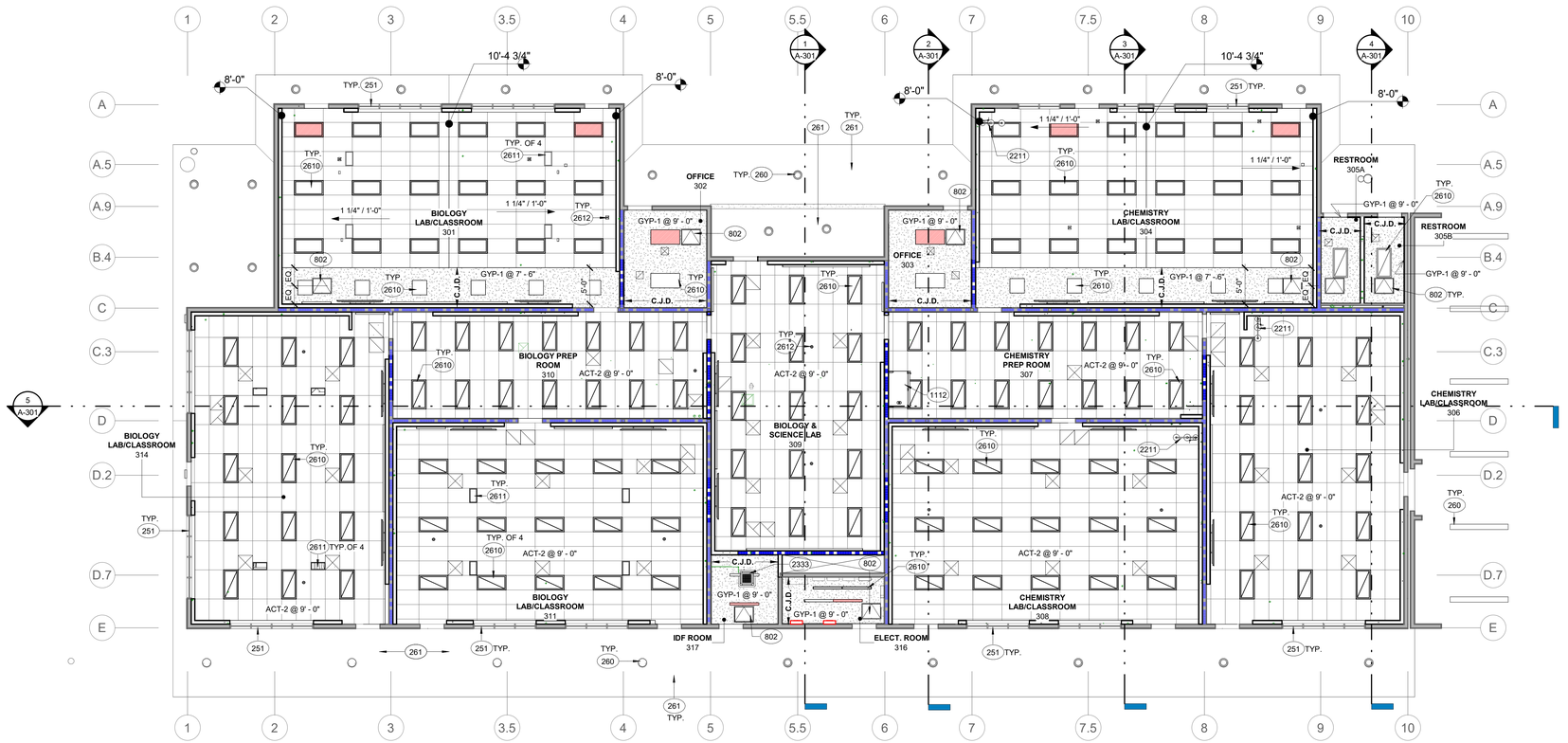


1 DEMOLITION REFLECTED CEILING PLAN

1/8" = 1'-0"



2 REFLECTED CEILING PLAN

1/8" = 1'-0"

DEMOLITION LEGEND

- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- COMPLETELY REMOVE ALL 24X48 ACP, INCLUDING LIGHT FIXTURES, REGISTERS, AND OTHER CEILING MOUNTED DEVICES, SUPPORTS, ETC. COORDINATE DEMOLITION WITH MECHANICAL AND ELECTRICAL.
- COMPLETELY REMOVE ALL 12X12 CEILING TILES, INCLUDING LIGHT FIXTURES, REGISTERS, AND OTHER CEILING MOUNTED DEVICES, SUPPORTS, ETC. COORDINATE DEMOLITION WITH MECHANICAL AND ELECTRICAL.
- COMPLETELY REMOVE GYPSUM BOARD CEILING, INCLUDING LIGHT FIXTURES, REGISTERS, AND OTHER CEILING MOUNTED DEVICES, SUPPORTS, ETC. COORDINATE DEMOLITION WITH MECHANICAL AND ELECTRICAL.

CEILING NOTES

1. COORDINATE SIZE AND LOCATION OF ACCESS PANELS WITH TRADE REQUIRING SAME AND CONFIRM WITH ARCHITECT.
2. COORDINATE CEILING SUSPENSION SYSTEMS WITH OTHER CEILING SPACE EQUIPMENT SUPPORTING DEVICES.
3. CONTRACTOR SHALL MAINTAIN THE FIRE RATING INTEGRITY OF EXISTING PARTITIONS INDICATED AS FIRE RESISTANCE RATED. REPORT CONDITIONS NEGATIVELY IMPACTING RATING OF ELEMENT TO ARCHITECT.
4. CEILING PANELS TO BE CENTERED IN ROOM IN BOTH DIRECTIONS UNLESS OTHERWISE INDICATED.
5. NO CEILING PANEL TO BE CUT TO LESS THAN 6" WIDTH.
6. VERIFY LOCATIONS OF SOFFIT AND CEILING CONTROL JOINTS WITH THE ARCHITECT PRIOR TO INSTALLATION.
7. COORDINATE ESCUTCHEON PLATES AT CEILING PANEL PENETRATIONS WITH ELECTRICAL AND MECHANICAL TRADES.
8. REFER TO ELECTRICAL DRAWINGS FOR FIXTURE TYPES.
9. AT SLOPED ACOUSTICAL CEILING PANELS PROVIDE HOLD DOWN CLIPS (ARMSTRONG FASTSHIP- UHDC) PER SPEC SECTION 09 51 00 ACOUSTICAL CEILINGS IR 25-2 DETAIL #2.90

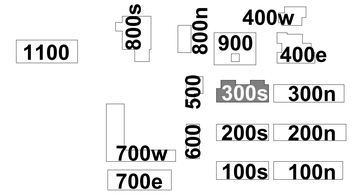
KEYNOTE LEGEND

251	(E) NON-OPERABLE WINDOW TO REMAIN, PROTECT IN PLACE.
260	(E) EXTERIOR LIGHT FIXTURE TO REMAIN, PROTECT IN PLACE.
261	(E) EXTERIOR PLASTER SOFFIT TO REMAIN, PROTECT IN PLACE.
802	24"X30" ACCESS PANEL. REFER TO 21/A-562 FOR ADDITIONAL INFO.
1112	FUME HOOD, REFER TO 13/A-581 AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2211	SAFETY SHOWER / EYE WASH, SEE 4/A-575
2333	MECHANICAL FIXTURES, SEE MECHANICAL DWGS.
2610	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFO.
2611	CORD REEL, REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFO. AND 1/S-551 FOR ANCHORAGE.
2612	ELEC. DEVICE. LIGHT SENSOR / SMOKE DETECTOR / HEAT DETECTOR / JUNCTION BOX, REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFO.

CEILING PLAN LEGEND

- 24" X 48" ACOUSTICAL CEILING PANEL ON METAL CEILING SUSPENSION SYSTEM. CLASS A - FIRE PERFORMANCE (FPI: 25 & SDI: 50). SEE SHEET A-573.
- 5/8" GYPSUM BOARD CEILING ON WOOD JOIST FRAMING. FOR MEMBER SIZE SEE 10/A-562 FOR ADDITIONAL INFO.
- ACP-1 @ 8'-0" — CEILING TYPE & HEIGHT TAG
- SUPPLY AIR DIFFUSER, REFER TO MECH. DRAWINGS FOR ADDITIONAL INFO.
- RETURN AIR DIFFUSER, REFER TO MECH. DRAWINGS FOR ADDITIONAL INFO.
- LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- C.J.D. — CEILING JOIST DIRECTION

KEY PLAN



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APP: 04-123438 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT JENNETTE LAQUIRE NO. C 29425 REN. 5/31/2025 STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA
(858) 398-3800
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Reflected Ceiling Plans

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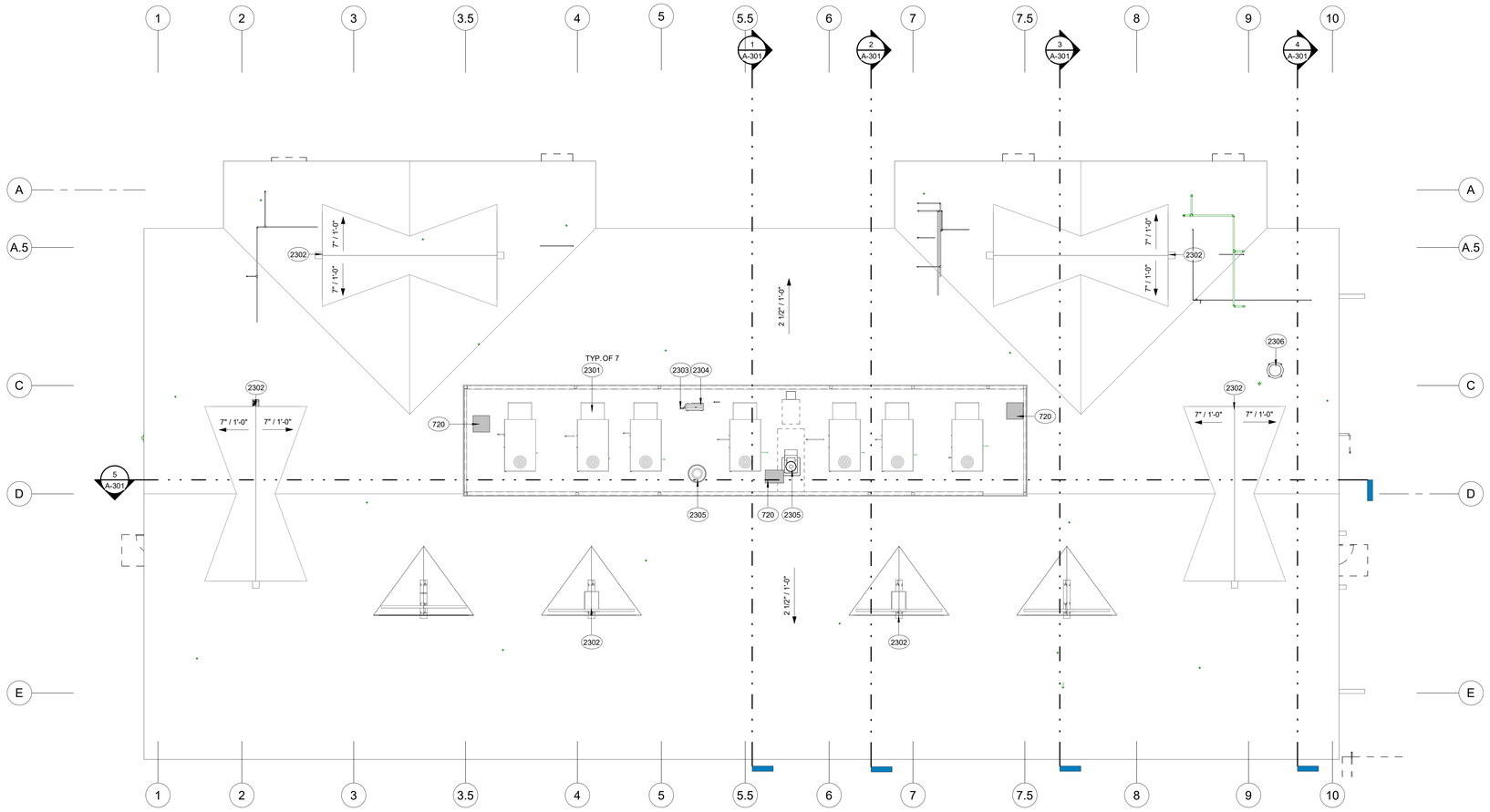

1 ROOF PLAN
1/8" = 1'-0"

N

GENERAL NOTES

1. COORDINATE FINAL SIZE AND FINAL LOCATION OF ALL EQUIPMENT SUPPORTS WITH THE APPROPRIATE EQUIPMENT MANUFACTURER.

2. ROOF SCOPE LIMITED TO PATCHING AS NOTED ON THIS SHEET. WHERE NEW PENETRATION IS REQUIRED PER NEW WORK, CONTRACTOR SHALL PROTECT SORROUNDING ROOF. CONTRACTOR TO VERIFY ALL ROOF DETAILS COMPLY WITH APPROVED ROOFING SYSTEM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ANY ADDITIONAL DETAILS AND / OR MATERIALS TO ENSURE COMPLIANCE WITH WARRANTY.

3. REFER TO MECHANICAL AND ELECTRICAL DOCUMENTS FOR ALL PIPES, CURBS, VENTS, DUCTS, CONDUITS, AND OTHER FEATURES EXTENDING THROUGH ROOF SURFACES WHICH REQUIRE FLASHING. COORDINATE SIZE AND LOCATION OF SAME.

4. ALL ROOF DETAILS ARE BASED ON SARNAFIL G410 MEMBRANE ADHERED SINGLE-PLY ROOFING SYSTEM, UL CLASS A FIRE RATING. ALL OTHER ROOF MANUFACTURERS TO SUPPLY ANY ADDITIONAL MATERIALS FOR THEIR SYSTEM AS REQUIRED.

5. FOR ROOFING ASSEMBLY TYPE SEE 3/A-521.

KEYNOTE LEGEND

720	ROOF INFILL PER 7/A-521 AND 22/S-501
2301	(E) HVAC ROOF TOP UNITS TO REMAIN, PROTECT IN PLACE. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2302	REMOVE (E) EXHAUST FAN AT DORMER AND REPLACE WITH NEW. REFER TO M-104 FOR ADDITIONAL INFORMATION AND 3/S-551 FOR ATTACHMENT DETAILS.
2303	PIPE PENETRATION, REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION. FOR FLASHING REFER TO 8/A-521
2304	(E) MECHANICAL EQUIP. TO REMAIN, PROTECT IN PLACE. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFO.
2305	EXHAUST FAN, REFER TO M-104 FOR ADDITIONAL INFORMATION. FOR FLASHING INFORMATION REFER TO 4/A-521
2306	GRAVITY RELIEF, SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION. FOR FLASHING INFORMATION SEE 4/A-521 FOR SIM. CONDITION.

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Roof Plan

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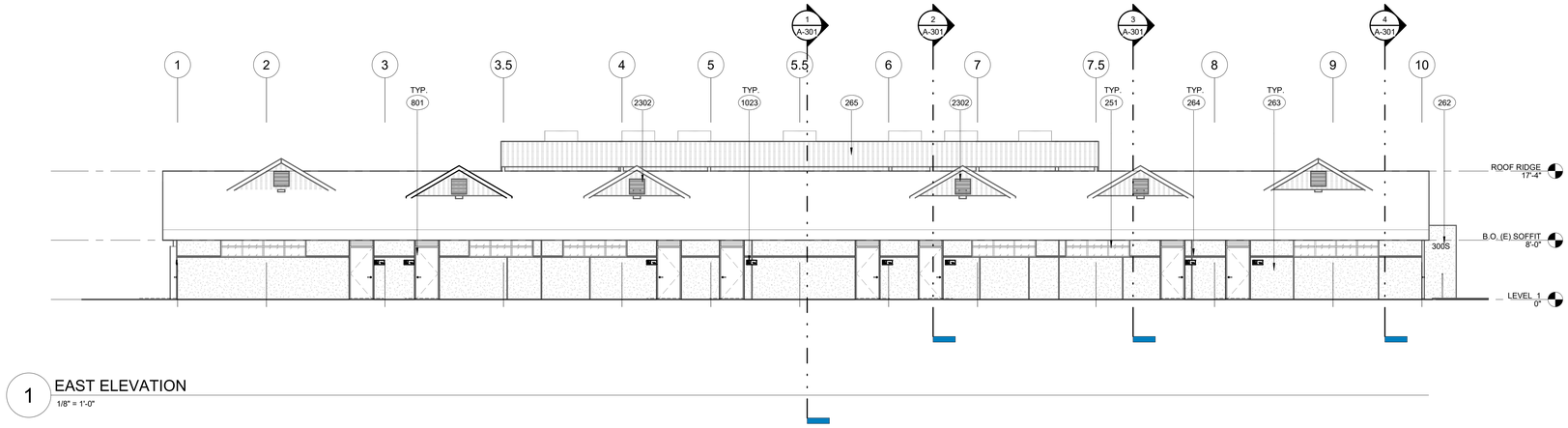
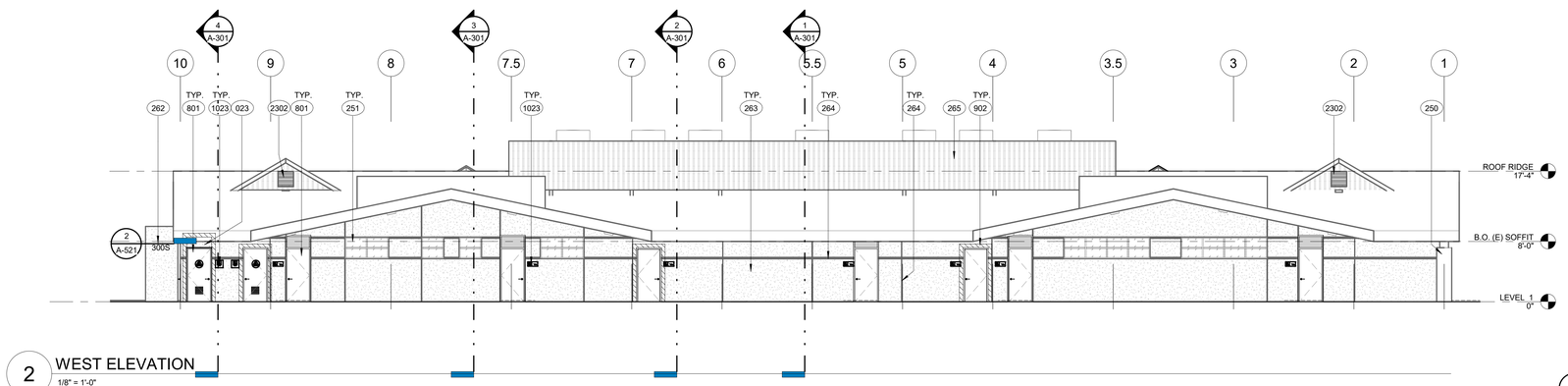


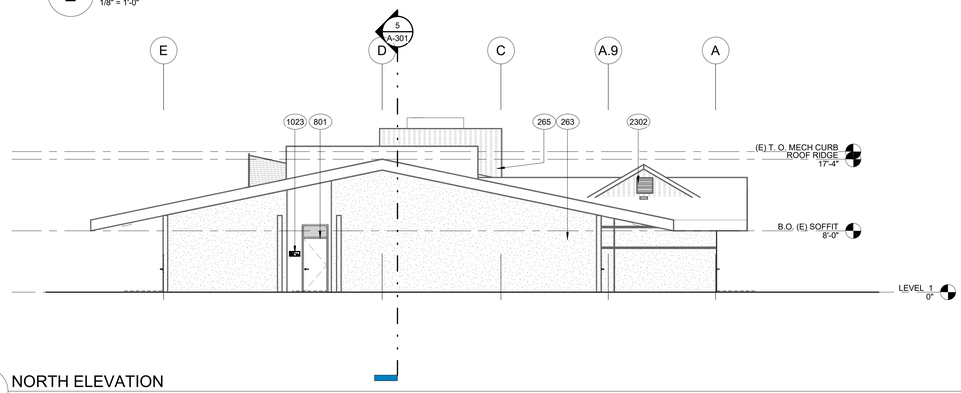
1 EAST ELEVATION

1/8" = 1'-0"



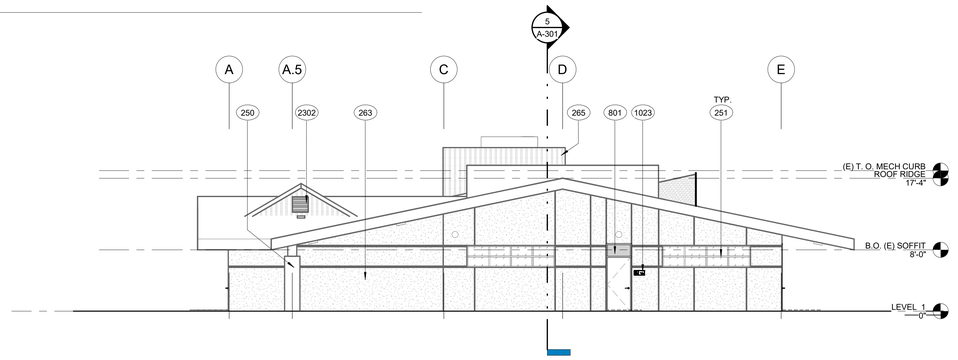
2 WEST ELEVATION

1/8" = 1'-0"



4 NORTH ELEVATION

1/8" = 1'-0"



3 SOUTH ELEVATION

1/8" = 1'-0"

GENERAL NOTES

1. REMOVE AND REPLACE 6" OF PLASTER AROUND PERIMETER OF NEW DOOR FRAME, SEE DETAILS 7 & 10/A-561.
2. PROTECT (E) BUILDING PAPER FROM DAMAGE. REPLACE AS NEEDED.

KEYNOTE LEGEND

023	NEW HEADER AT THIS LOCATION PER 3/S-502
250	(E) CONC. COLUMN TO REMAIN
251	(E) NON-OPERABLE WINDOW TO REMAIN, PROTECT IN PLACE.
262	(E) BUILDING IDENTIFICATION SIGN, PROTECT IN PLACE. 12" HIGH ALUMINUM LETTERS.
263	(E) CEMENT PLASTER TO REMAIN, PROTECT IN PLACE.
264	(E) CONTROL JOINT TO REMAIN.
265	(E) MECHANICAL SCREEN TO REMAIN, PROTECT IN PLACE.
801	DOOR PER DOOR SCHEDULE SHEET A-601
902	PATCH WITH NEW PLASTER FINISH. FINISH TO MATCH ADJACENT FINISH, PAINT. SEE GENERAL NOTES ON A-201 FOR ADDITIONAL INFO.
1023	SIGNAGE, REFER TO SIGNAGE SCHEDULE ON SHEET G-002
2302	REMOVE (E) EXHAUST FAN AT DORMER AND REPLACE WITH NEW. REFER TO M-104 FOR ADDITIONAL INFORMATION AND 3/S-551 FOR ATTACHMENT DETAILS.

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Exterior Elevations

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A-201

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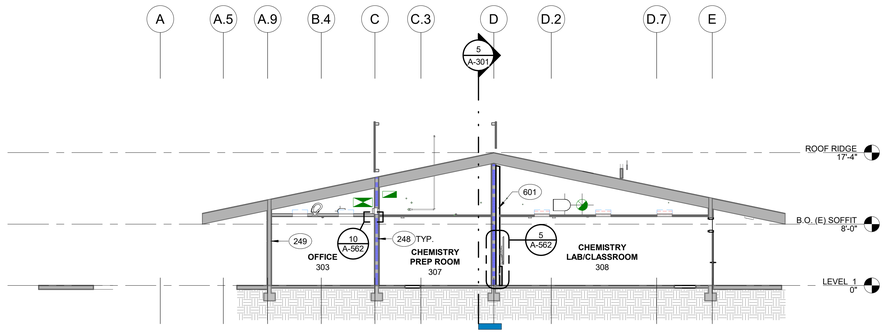
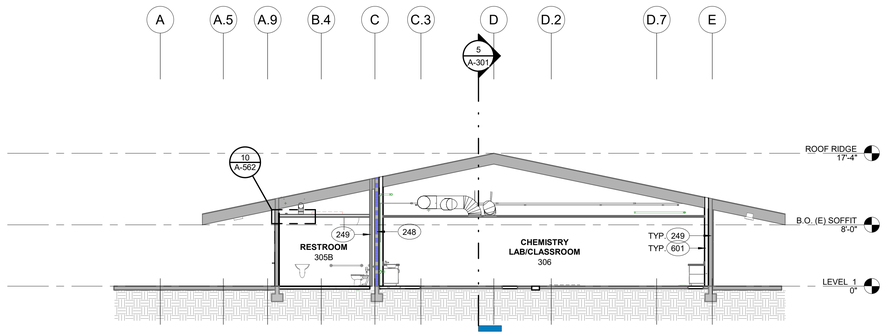


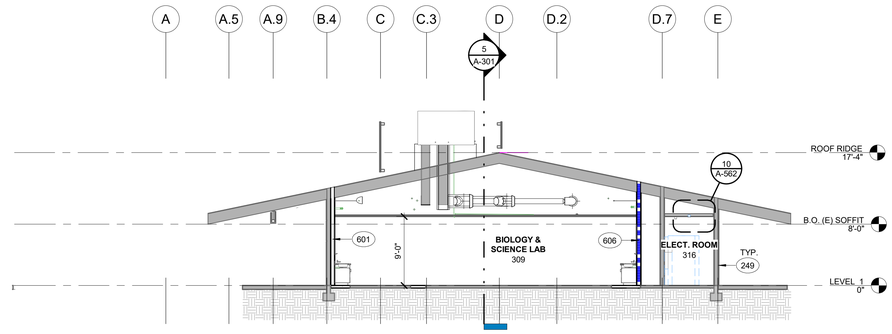
2 SECTION - 2

1/8" = 1'-0"



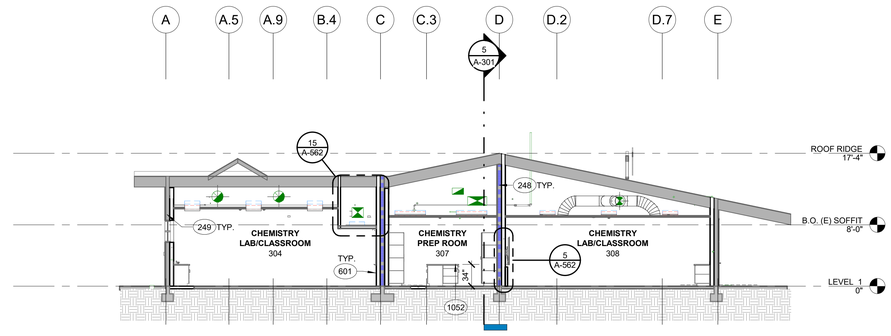
4 SECTION - 4

1/8" = 1'-0"



1 SECTION - 1

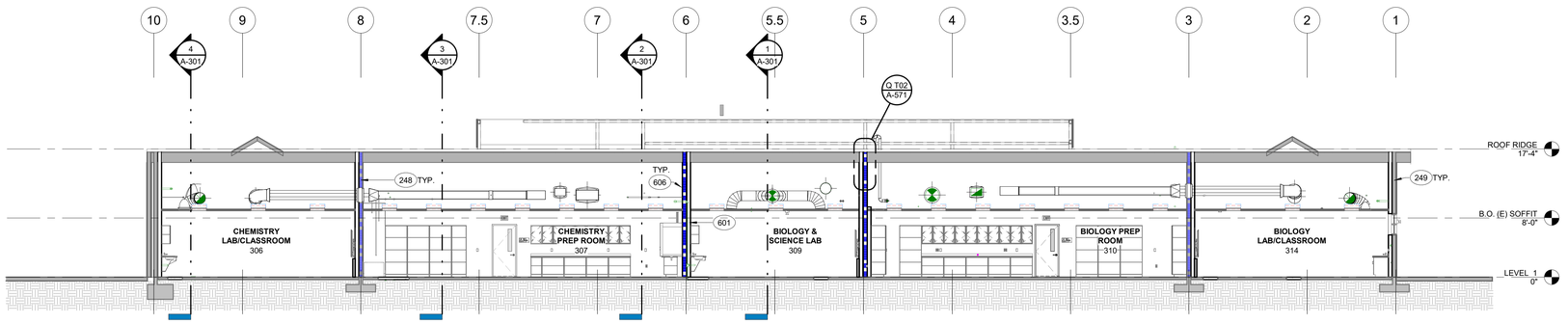
1/8" = 1'-0"



NOTE: CUT AT CENTER OF ROOM TO SHOW CASEWORK ISLAND

3 SECTION - 3

1/8" = 1'-0"



5 SECTION - 7

1/8" = 1'-0"

KEYNOTE LEGEND

248	(E) FIRE RATED WALL PER PLAN
249	(E) WALL PER PLAN
601	FURRING WALL PER PLAN
606	(N) FIRE RATED WALL PER PLAN
1052	EPOXY COUNTERTOP SIMILAR TO 9/A-581

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Building Sections

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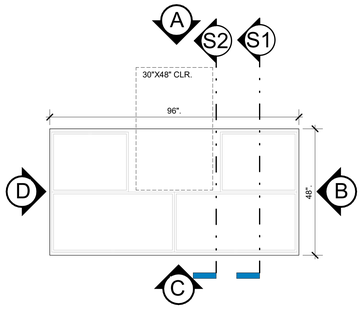
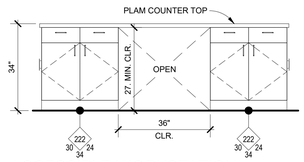
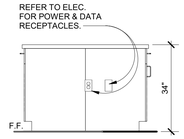


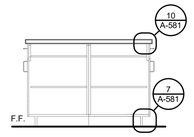
10 ENLARGED PLAN - ACC. WORKSTATION
1/2" = 1'-0"



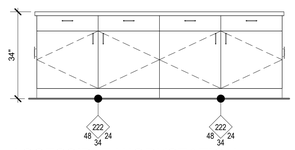
A ACCESSIBLE WORKSTATION ELEVATION - A
1/2" = 1'-0"



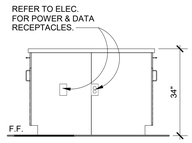
B ACCESSIBLE WORKSTATION ELEVATION - B
1/2" = 1'-0"



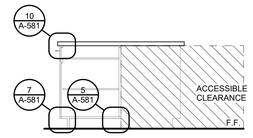
S1 ACC. WORKSTATION SECTION - 1
1/2" = 1'-0"



C ACCESSIBLE WORKSTATION ELEVATION - C
1/2" = 1'-0"



D ACCESSIBLE WORKSTATION ELEVATION - D
1/2" = 1'-0"



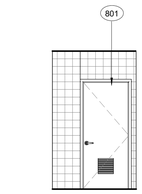
S2 ACC. WORKSTATION SECTION - 2
1/2" = 1'-0"

RESTROOM GENERAL NOTES

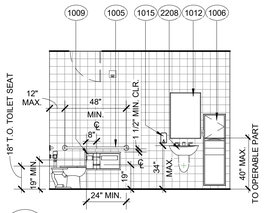
1. AT RESTROOM, ALL DIMENSIONS ARE TO FACE OF FINISH (F.O.F.)
2. FOR ALL TYPICAL ACCESSORIES MOUNTING, REFER TO SHEET A-575
3. DRAIN GRATE SHALL HAVE OPENINGS OF 1/4" MAX. IN ALL DIRECTIONS.
4. RESTROOM FLOOR SHALL HAVE SLOPES OF 2% MAX. IN ALL DIRECTIONS.
5. CONFIGURE THE WATER CLOSET SUPPLY WATER ROUGH-IN SO THAT THE MANUAL FLUSH BUTTON IS LOCATED ON THE OPEN-SIDE OF THE WATER CLOSET.
6. REFER TO SHEET A-101 FOR ADDITIONAL NOTES, LEGEND, AND DIMENSIONS.

KEYNOTE LEGEND

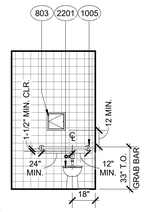
801	DOOR PER DOOR SCHEDULE SHEET A-601
803	FLUSH ACCESS PANEL, REFER TO SPEC SECTION 08 31 13 FOR ADDITIONAL INFO.
903	MARLITE SYMMETRIX SMARTSEAM FRP TILE WALL PANELS, SEE 8/A-562 FOR ADDITIONAL INFO.
1005	GRAB BARS (36"&48"), SEE DTL 15/A-575
1006	SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE, SEE 14/A-575
1009	RECESSED COMBINATION TISSUE / SEAT COVER DISPENSER WITH NAPKIN DISPOSAL, SIMILAR TO BOBRICK B-3091 & B-3092. SEE DETAIL 13/A-575 FOR ADDITIONAL INFORMATION.
1012	SURFACE MOUNTED STAINLESS STEEL FRAMED MIRROR, SEE DETAIL 10 & 14/A-575
1015	SURF. MOUNTED LIQUID SOAP DISPENSER, SEE DTL 14/A-575
1023	SIGNAGE, REFER TO SIGNAGE SCHEDULE ON SHEET G-002
2201	FLOOR MOUNTED ACCESSIBLE WATER CLOSET
2206	FLOOR DRAIN TILE FLOOR REFER TO 7/A-562
2208	WALL MOUNTED STANDARD (ADULT) HEIGHT LAVATORY, SEE DETAIL 11/A-575



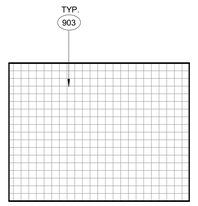
9 305B RR - WEST
1/4" = 1'-0"



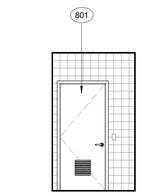
8 305B RR - SOUTH
1/4" = 1'-0"



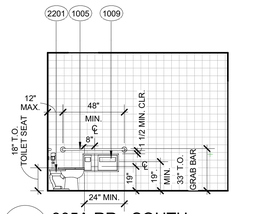
7 305B RR - EAST
1/4" = 1'-0"



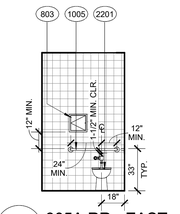
6 305B RR - NORTH
1/4" = 1'-0"



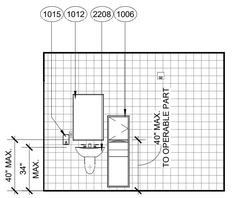
5 305A RR - WEST
1/4" = 1'-0"



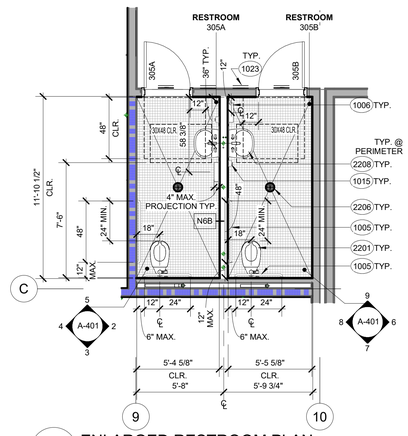
4 305A RR - SOUTH
1/4" = 1'-0"



3 305A RR - EAST
1/4" = 1'-0"



2 305A RR - NORTH
1/4" = 1'-0"



1 ENLARGED RESTROOM PLAN
1/4" = 1'-0"

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NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

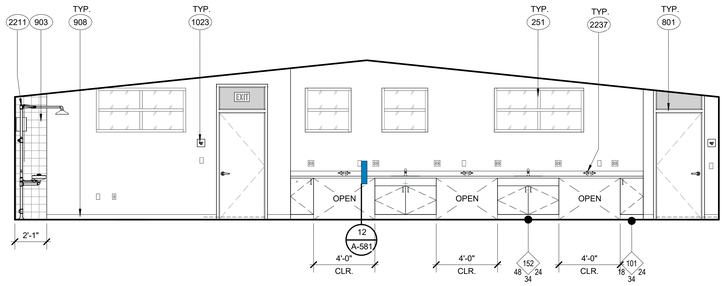
Enlarged Floor Plans

2023-GU001-010 ©2023

A-401

Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

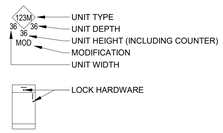
10/29/2024 6:16:45 AM



12 304 CHEMISTRY LAB - WEST
1/4" = 1'-0"

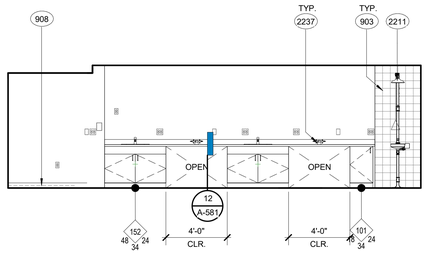
CASEWORK LEGEND

UNIT TYPE AS DEFINED BY CDS
(AWI/NAAWI CABINET DESIGN
SERIES NUMBER)

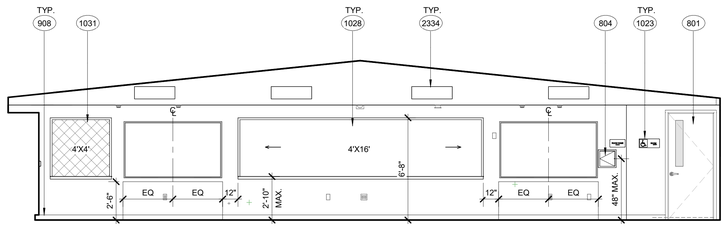


KEYNOTE LEGEND

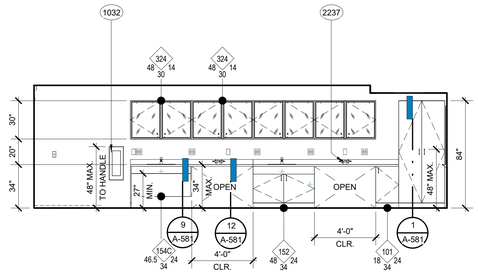
251	(E) NON-OPERABLE WINDOW TO REMAIN, PROTECT IN PLACE.
801	DOOR PER DOOR SCHEDULE SHEET A-601
804	GAS SHUTOFF VALVE FLUSH ACCESS PANEL, REFER TO SPEC SECTION 08 31 13 FOR ADDITIONAL INFO.
903	MARLITE SYMMETRIX SMARTSEAM FRP TILE WALL PANELS, SEE 8/A-562 FOR ADDITIONAL INFO.
908	WALL BASE PER FINISH SCHEDULE, SEE A-601
1023	SIGNAGE, REFER TO SIGNAGE SCHEDULE ON SHEET G-002
1028	SLIDING WHITE BOARD, SEE DTL 3/A-562
1031	VINYL COVERED TACKBOARD, REFER TO 2/A-562 SIM. W/ EXT. GRADE DISPLAY CASE.
1032	SEMI RECESSED FIRE EXTINGUISHER CABINET, SEE DTL 1/A-562
1052	EPOXY COUNTERTOP SIMILAR TO 9/A-581
1053	86" WALL MOUNTED TV, SEE 5/A-562
2210	EMERGENCY EYEWASH, SEE PLUMBING DRAWINGS AND 12/A-575 FOR ADDITIONAL INFO.
2211	SAFETY SHOWER / EYE WASH, SEE 4/A-575
2237	GAS VALVE, REFER TO PLUMBING DRAWINFS FOR ADDITIONAL INFORMATION.
2334	MECHANICAL DIFFUSER, SEE MECHNICAL DWGS.
2603	CEILING MTD. EXIT LIGHT



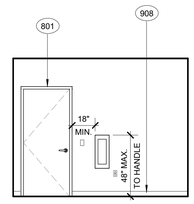
11 304 CHEMISTRY LAB - SOUTH
1/4" = 1'-0"



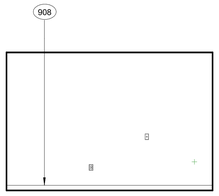
10 304 CHEMISTRY LAB - EAST
1/4" = 1'-0"



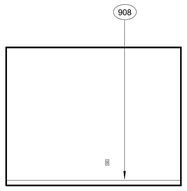
9 304 CHEMISTRY LAB - NORTH
1/4" = 1'-0"



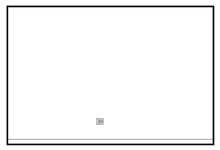
8 302 OFFICE - WEST
1/4" = 1'-0"



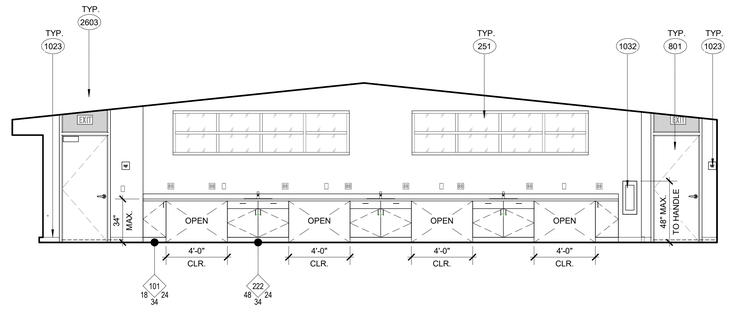
7 302 OFFICE - SOUTH
1/4" = 1'-0"



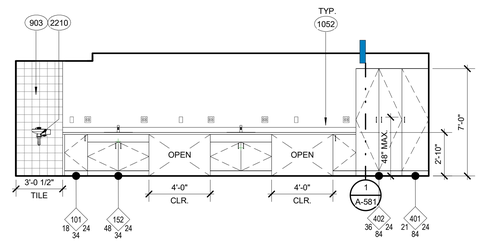
6 302 OFFICE - EAST
1/4" = 1'-0"



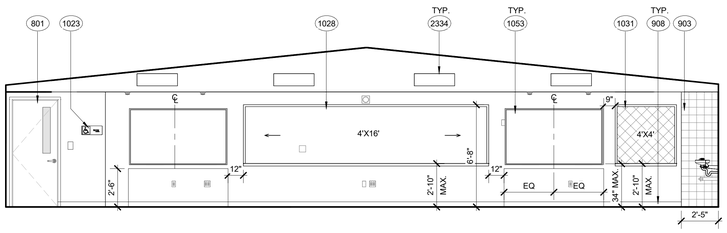
5 302 OFFICE - NORTH
1/4" = 1'-0"



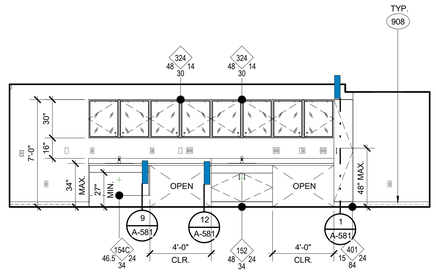
4 301 BIOLOGY CLASSROOM - WEST
1/4" = 1'-0"



3 301 BIOLOGY CLASSROOM - SOUTH
1/4" = 1'-0"



2 301 BIOLOGY CLASSROOM - EAST
1/4" = 1'-0"



1 301 BIOLOGY CLASSROOM - NORTH
1/4" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

GROSSMONT UNION HIGH SCHOOL DISTRICT
EST 1920

Grossmont Union
High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S
Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

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WWW.HED.DESIGN

Interior Elevations
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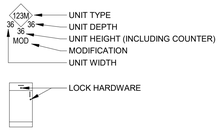
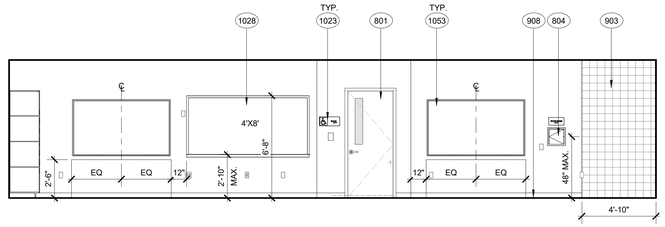
CASEWORK LEGEND

UNIT TYPE AS DEFINED BY CDS (AWI/NAAWI CABINET DESIGN SERIES NUMBER)

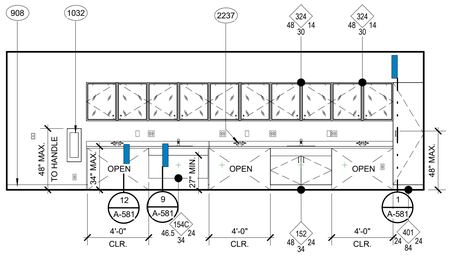


KEYNOTE LEGEND

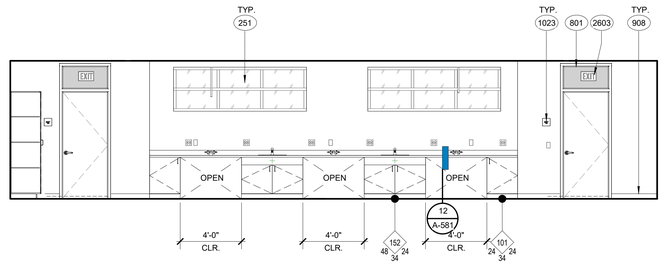
251	(E) NON-OPERABLE WINDOW TO REMAIN, PROTECT IN PLACE.
801	DOOR PER DOOR SCHEDULE SHEET A-601
804	GAS SHUTOFF VALVE FLUSH ACCESS PANEL, REFER TO SPEC SECTION 08 31 13 FOR ADDITIONAL INFO.
903	MARLITE SYMMETRIX SMARTSEAM FRP TILE WALL PANELS, SEE 8/A-562 FOR ADDITIONAL INFO.
908	WALL BASE PER FINISH SCHEDULE, SEE A-601
1023	SIGNAGE, REFER TO SIGNAGE SCHEDULE ON SHEET G-002
1028	SLIDING WHITE BOARD, SEE DTL 3/A-562
1031	VINYL COVERED TACKBOARD, REFER TO 2/A-562 SIM. W/ EXT. GRADE DISPLAY CASE.
1032	SEMI RECESSED FIRE EXTINGUISHER CABINET, SEE DTL 1/A-562
1053	86" WALL MOUNTED TV, SEE 5/A-562
1107	DISHWASHER (GE MODEL # GDT550PGR), O.F.C.I.
1108	SIDE-BY-SIDE REFRIGERATOR (SAMSUNG MODEL # RS27T5200SR), PROVIDE ANTI-TIP BRACKET. O.F.C.I.
1112	FUME HOOD, REFER TO 13/A-581 AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2211	SAFETY SHOWER / EYE WASH, SEE 4/A-575
2237	GAS VALVE, REFER TO PLUMBING DRAWINFS FOR ADDITIONAL INFORMATION.
2603	CEILING MTD. EXIT LIGHT



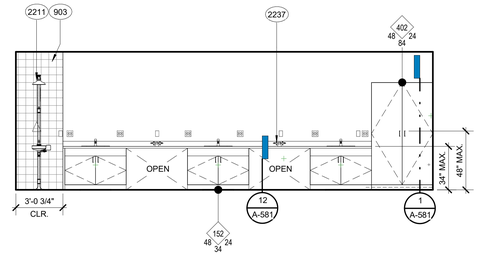
12 308 CHEMISTRY LAB - WEST
1/4" = 1'-0"



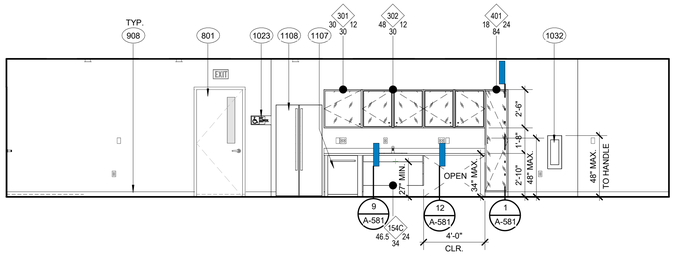
11 308 CHEMISTRY LAB - SOUTH
1/4" = 1'-0"



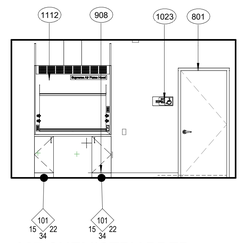
10 308 CHEMISTRY LAB - EAST
1/4" = 1'-0"



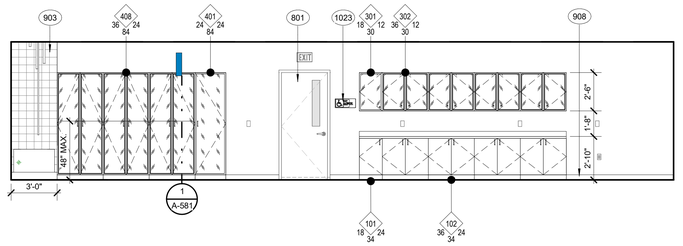
9 308 CHEMISTRY LAB - NORTH
1/4" = 1'-0"



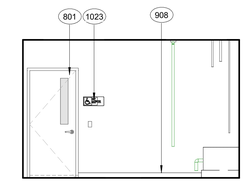
8 307 CHEMISTRY PREP ROOM/STORAGE - WEST
1/4" = 1'-0"



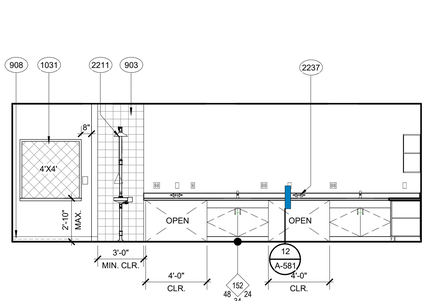
7 307 CHEMISTRY PREP ROOM/STORAGE - SOUTH
1/4" = 1'-0"



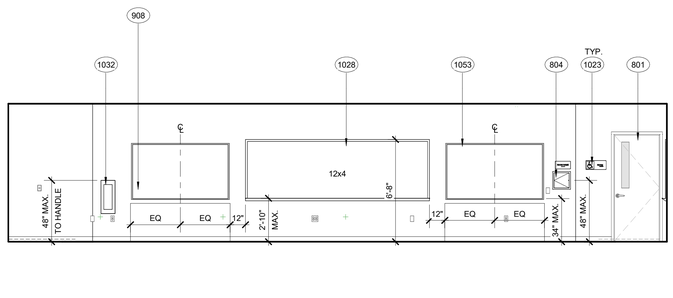
6 307 CHEMISTRY PREP ROOM/STORAGE - EAST
1/4" = 1'-0"



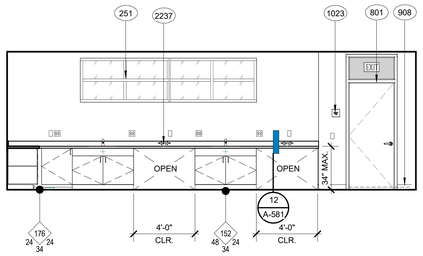
5 307 CHEMISTRY PREP ROOM/STORAGE - NORTH
1/4" = 1'-0"



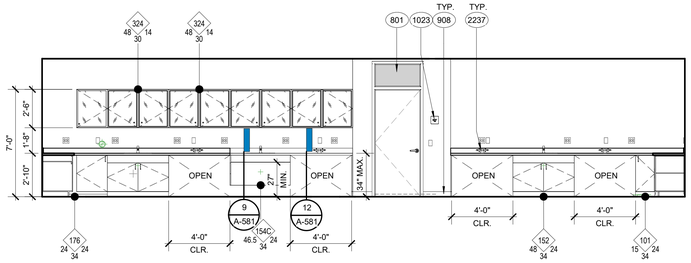
4 306 CHEMISTRY LAB - WEST
1/4" = 1'-0"



3 306 CHEMISTRY LAB - SOUTH
1/4" = 1'-0"



2 306 CHEMISTRY LAB - EAST
1/4" = 1'-0"



1 306 CHEMISTRY LAB - NORTH
1/4" = 1'-0"

IDENTIFICATION STAMP
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SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

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NO. C 29425
REN. 5/31/2025
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San Diego, California
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Interior Elevations

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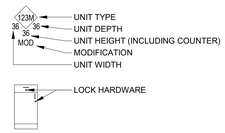
Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

10/29/2024 6:17:02 AM

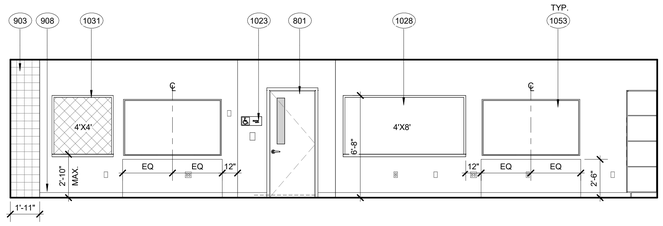
CASEWORK LEGEND

UNIT TYPE AS DEFINED BY CDS
(AWI/NAAWI CABINET DESIGN
SERIES NUMBER)

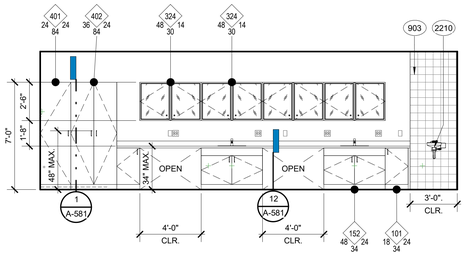


KEYNOTE LEGEND

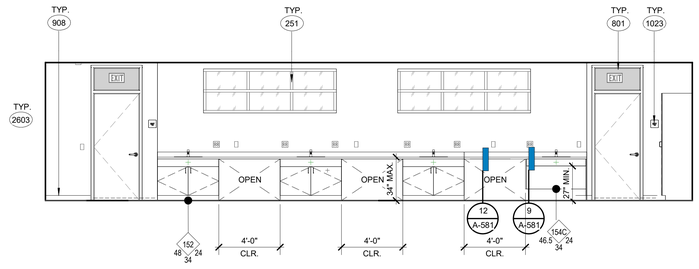
251	(E) NON-OPERABLE WINDOW TO REMAIN, PROTECT IN PLACE.
801	DOOR PER DOOR SCHEDULE SHEET A-601
903	MARLITE SYMMETRIX SMARTSEAM FRP TILE WALL PANELS, SEE 8/A-562 FOR ADDITIONAL INFO.
908	WALL BASE PER FINISH SCHEDULE, SEE A-601
1023	SIGNAGE, REFER TO SIGNAGE SCHEDULE ON SHEET G-002
1028	SLIDING WHITE BOARD, SEE DTL 3/A-562
1031	VINYL COVERED TACKBOARD, REFER TO 2/A-562 SIM. W/ EXT. GRADE DISPLAY CASE.
1032	SEMI RECESSED FIRE EXTINGUISHER CABINET, SEE DTL 1/A-562
1053	86" WALL MOUNTED TV, SEE 5/A-562
1102	WASHING MACHINE (GE MODEL # GFW655SSVWW). FRONT- LOAD W/ RISER TYPE. O.F.C.I.
1103	DRYER (GE MODEL # GFD65GSSVWW). FRONT- LOAD W/ RISER TYPE. O.F.C.I.
1107	DISHWASHER (GE MODEL # GDT550PGR), O.F.C.I.
1108	SIDE-BY-SIDE REFRIGERATOR (SAMSUNG MODEL # RS27T5200SR), PROVIDE ANTI-TIP BRACKET, O.F.C.I.
2210	EMERGENCY EYEWASH, SEE PLUMBING DRAWINGS AND 12/A-575 FOR ADDITIONAL INFO.
2603	CEILING MTD. EXIT LIGHT



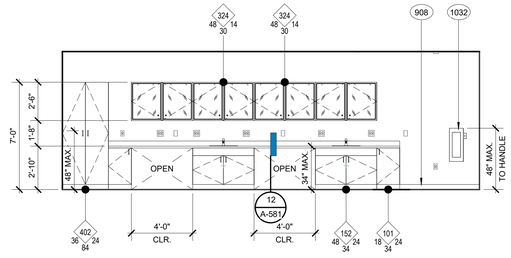
12 311 BIOLOGY CLASSROOM - WEST
1/4" = 1'-0"



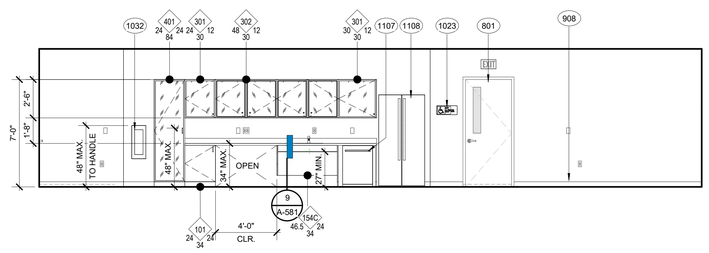
11 311 BIOLOGY CLASSROOM - SOUTH
1/4" = 1'-0"



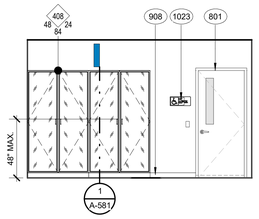
10 311 BIOLOGY CLASSROOM - EAST
1/4" = 1'-0"



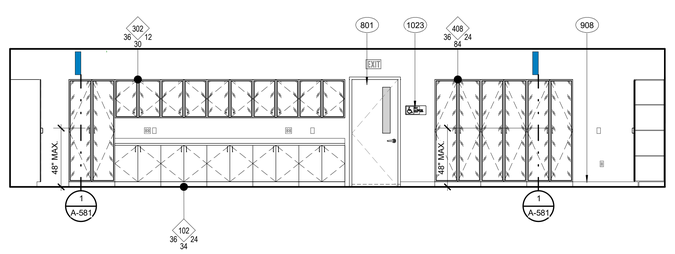
9 311 BIOLOGY CLASSROOM - NORTH
1/4" = 1'-0"



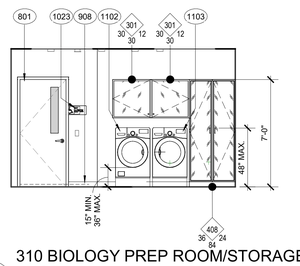
8 310 BIOLOGY PREP ROOM/STORAGE - WEST
1/4" = 1'-0"



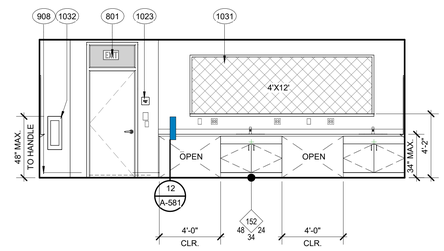
7 310 BIOLOGY PREP ROOM/STORAGE - SOUTH
1/4" = 1'-0"



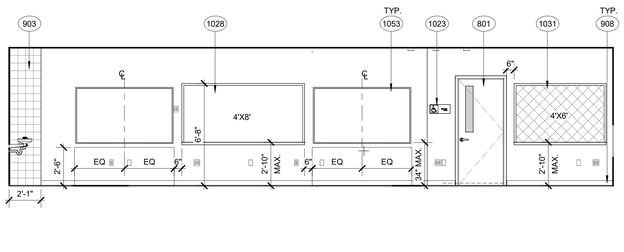
6 310 BIOLOGY PREP ROOM/STORAGE - EAST
1/4" = 1'-0"



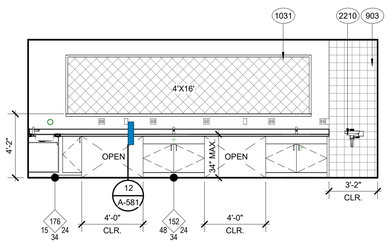
5 310 BIOLOGY PREP ROOM/STORAGE - NORTH
1/4" = 1'-0"



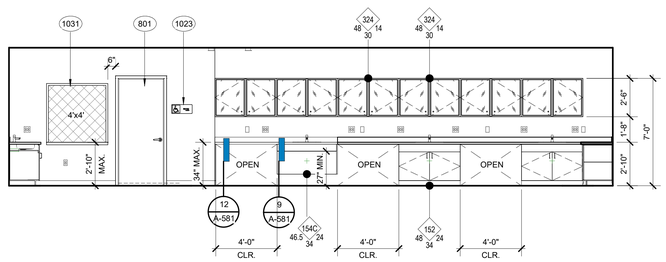
4 309 BIOLOGY & SCIENCE LAB - WEST
1/4" = 1'-0"



3 309 BIOLOGY & SCIENCE LAB - SOUTH
1/4" = 1'-0"



2 309 BIOLOGY & SCIENCE LAB - EAST
1/4" = 1'-0"



1 309 BIOLOGY & SCIENCE LAB - NORTH
1/4" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union
High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S
Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

Interior Elevations
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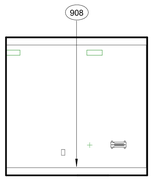
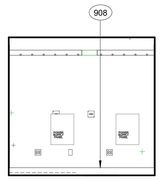


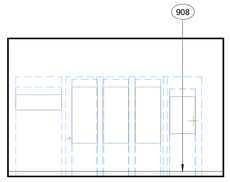
12 317 IDF ROOM - WEST
1/4" = 1'-0"



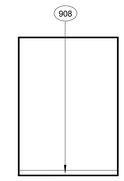
11 317 IDF ROOM - SOUTH
1/4" = 1'-0"

10 317 IDF ROOM - EAST
1/4" = 1'-0"

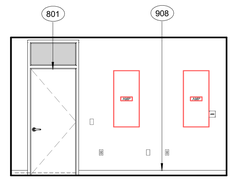
9 317 IDF ROOM - NORTH
1/4" = 1'-0"



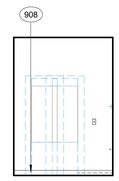
8 316 ELECT. ROOM - WEST
1/4" = 1'-0"



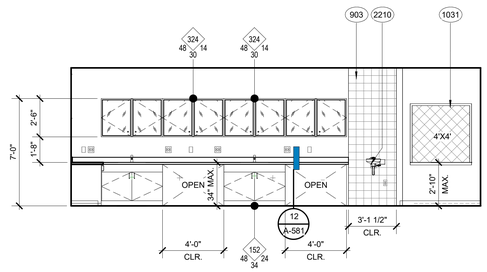
7 316 ELECT. ROOM - SOUTH
1/4" = 1'-0"



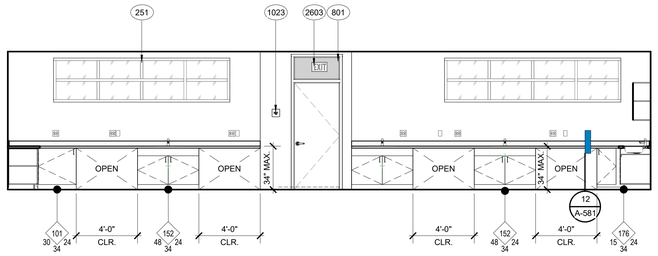
6 316 ELECT. ROOM - EAST
1/4" = 1'-0"



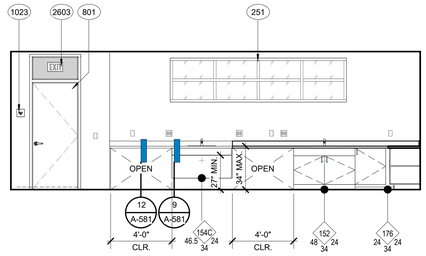
5 316 ELECT. ROOM - NORTH
1/4" = 1'-0"



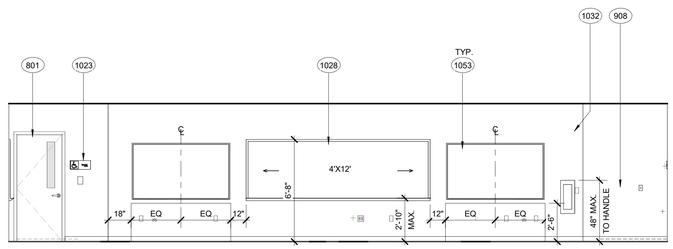
4 314 BIOLOGY CLASSROOM - WEST
1/4" = 1'-0"



3 314 BIOLOGY CLASSROOM - SOUTH
1/4" = 1'-0"



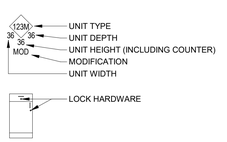
2 314 BIOLOGY CLASSROOM - EAST
1/4" = 1'-0"



1 314 BIOLOGY CLASSROOM - NORTH
1/4" = 1'-0"

CASEWORK LEGEND

UNIT TYPE AS DEFINED BY CDS (AWI/NAAWI CABINET DESIGN SERIES NUMBER)



KEYNOTE LEGEND

251	(E) NON-OPERABLE WINDOW TO REMAIN, PROTECT IN PLACE.
801	DOOR PER DOOR SCHEDULE SHEET A-601
903	MARLITE SYMMETRIX SMARTSEAM FRP TILE WALL PANELS, SEE 8/A-562 FOR ADDITIONAL INFO.
908	WALL BASE PER FINISH SCHEDULE. SEE A-601
1023	SIGNAGE, REFER TO SIGNAGE SCHEDULE ON SHEET G-002
1028	SLIDING WHITE BOARD, SEE DTL 3/A-562
1031	VINYL COVERED TACKBOARD, REFER TO 2/A-562 SIM. W/ EXT. GRADE DISPLAY CASE.
1032	SEMI RECESSED FIRE EXTINGUISHER CABINET, SEE DTL 1/A-562
1053	86" WALL MOUNTED TV, SEE 5/A-562
2210	EMERGENCY EYEWASH, SEE PLUMBING DRAWINGS AND 12/A-575 FOR ADDITIONAL INFO.
2603	CEILING MTD. EXIT LIGHT

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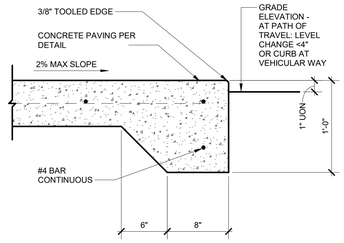
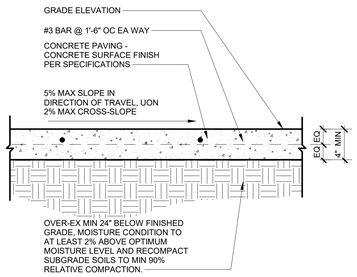
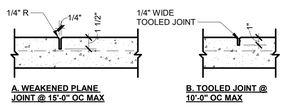


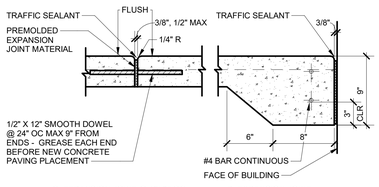
16 CONCRETE WALK @ GRADE
1 1/2" = 1'-0"



NOTE: FOR CONCRETE JOINTS SEE DETAIL 14/A-521

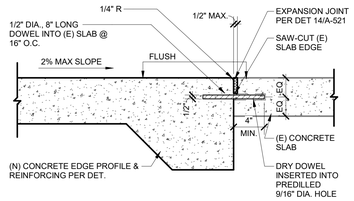
15 CONCRETE WALK
1 1/2" = 1'-0"



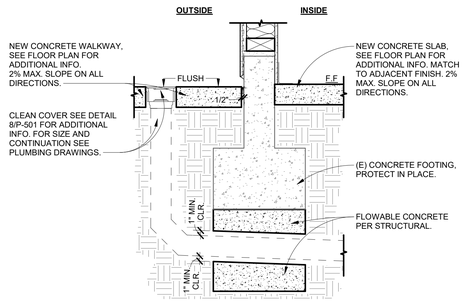


NOTE: PROVIDE EXPANSION JOINT SIMILAR TO D. AT ALL VERTICAL SURFACES

14 CONCRETE CONTROL JOINTS
1 1/2" = 1'-0"

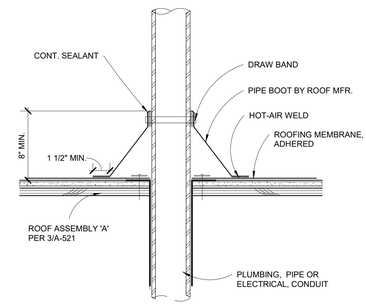


13 CONC. PAVING JOINT @ (E) CONC.
1 1/2" = 1'-0"

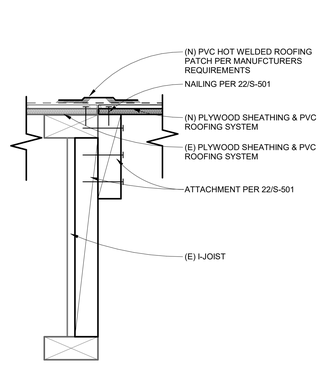


NOTE:
FOR ADDITIONAL INFORMATION REFER TO DETAILS 23/S-501 AND 8/S-502

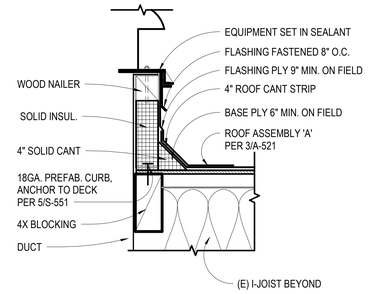
5 EXTERIOR TO INTERIOR TRENCH
1" = 1'-0"



8 ROOF PENETRATION FLASHING-PIPE&CONDUIT
3" = 1'-0"

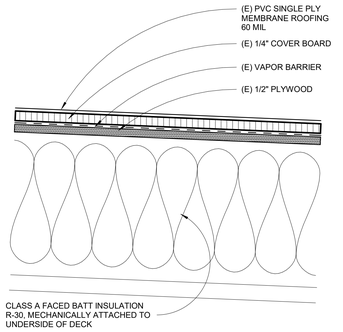


7 ROOF INFILL
3" = 1'-0"



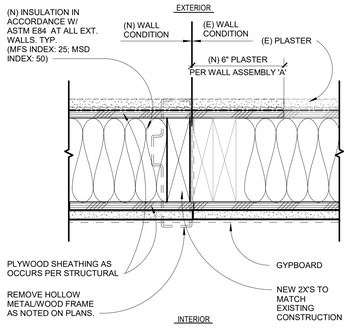
NOTE:
FOR ANCHORAGE INFORMATION REFER TO STRUCTURAL DETAILS 5 & 6/S-551.
FOR MECHANICAL CURB PLATFORM @ EXHAUST FAN REFER TO 5/M-502 AND FOR GRAVITY RELIEF REFER TO 6/M-502.

4 EXHAUST FAN @ ROOF
1 1/2" = 1'-0"

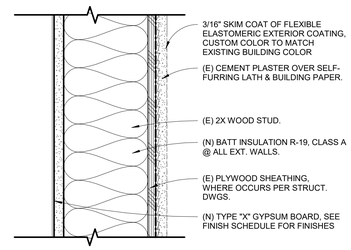


NOTE: PROVIDE ALL NEW AT ROOF INFILLS, AND AS NEEDED FOR PATCH AND REPAIR FOR INSTALLATION OF NEW EQUIPMENT/PENETRATIONS ON ROOF.

3 ROOF ASSEMBLY 'A'
3" = 1'-0"



2 EXTERIOR INFILL
3" = 1'-0"



1 WALL ASSEMBLY 'A'
3" = 1'-0"

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GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

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LICENCED ARCHITECT JENNETTE LAQUIRE NO. C 29425 REN. 5/31/2025 STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

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Exterior Details

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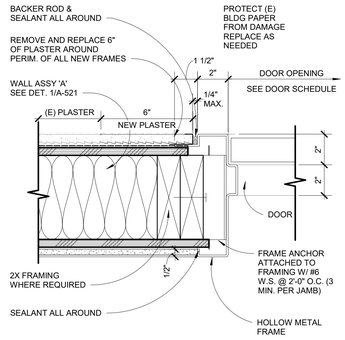
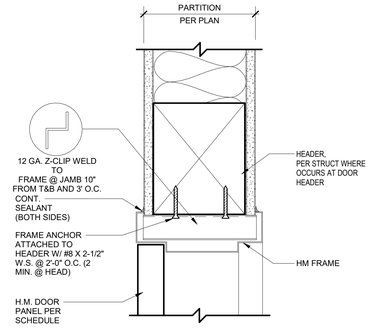
EXTERIOR OPENING NOTES

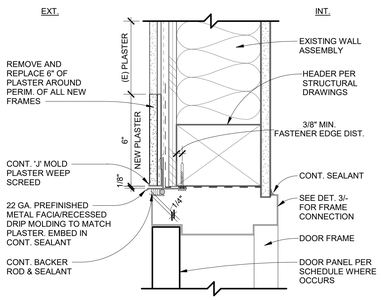
1. REMOVE AND REPLACE 6" OF PLASTER AROUND PERIMETER OF ALL OPENINGS WITH SCOPE.
2. PROTECT (E) BUILDING PAPER FROM DAMAGE. REPLACE AS NEEDED.



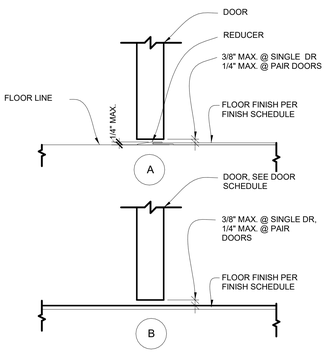
7 DOOR JAMB @ EXT. WALL W/ PLASTER REMOVAL
3" = 1'-0"



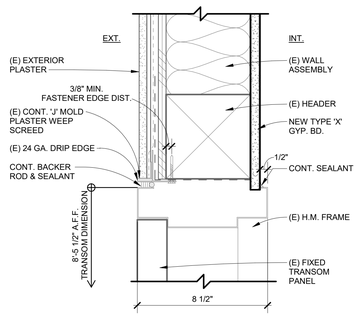
3 INT. HM DOOR FRAME JAMB (HEAD SIM)
3" = 1'-0"



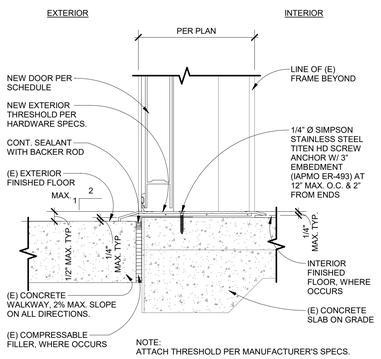
10 EXT. H.M. DOOR HEAD
3" = 1'-0"



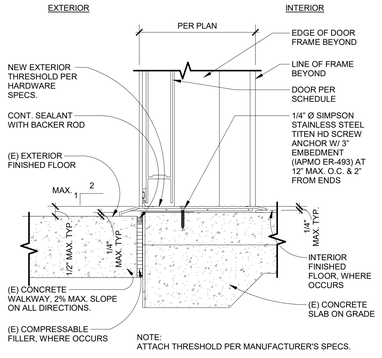
6 FLOORING TRANSITION @ INT. DOOR
3" = 1'-0"



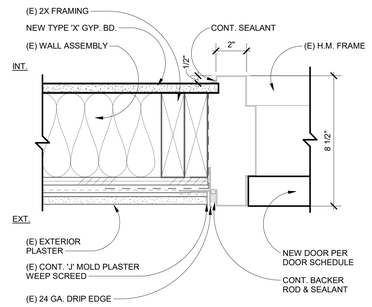
2 (E) EXT. FRAME DOOR HEAD
3" = 1'-0"



9 (E) EXT. THRESHOLD
3" = 1'-0"



5 EXT. THRESHOLD @ HM FRAME
3" = 1'-0"



1 (E) EXT. FRAME DOOR JAMB
3" = 1'-0"

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(858) 398-3800
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Opening Details

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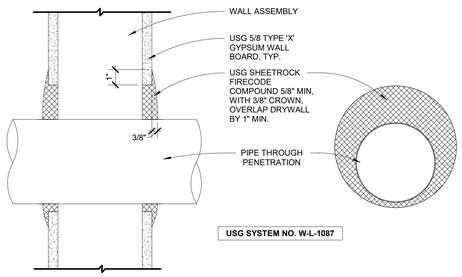
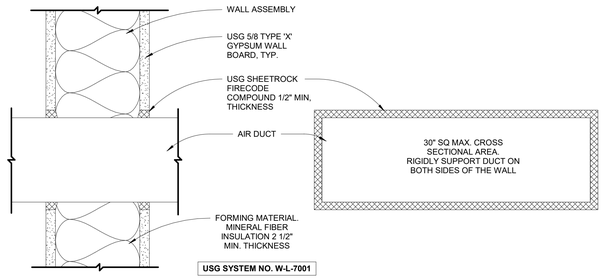
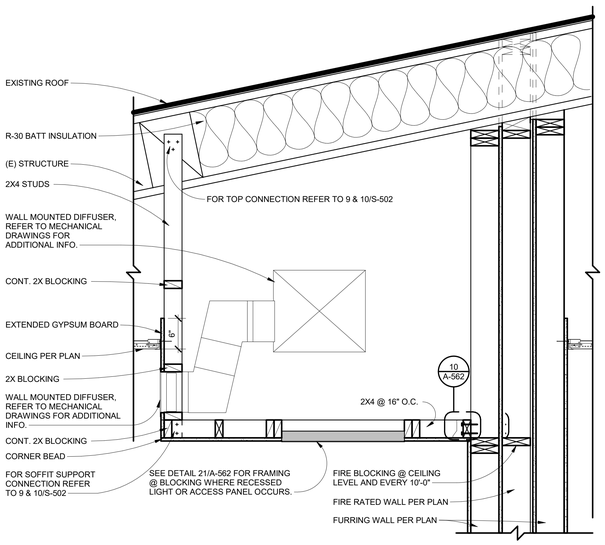


24 1-HR RATED PENETRATION
3" = 1'-0"

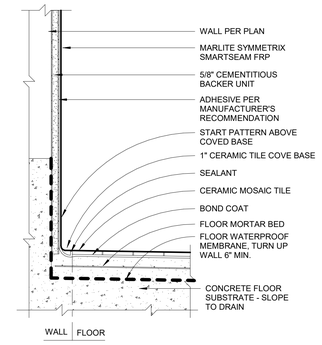


23 1-HR RATED DUCT PENETRATION
3" = 1'-0"

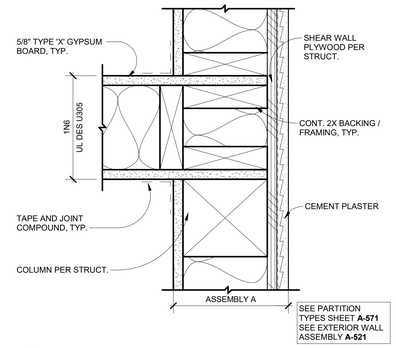


NOTE:
FOR ADDITIONAL SOFFIT FRAMING INFORMATION REFER TO 9 & 10/S-502

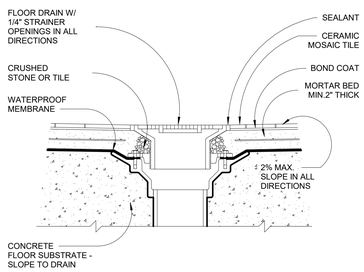
15 INTERIOR SOFFIT
1" = 1'-0"



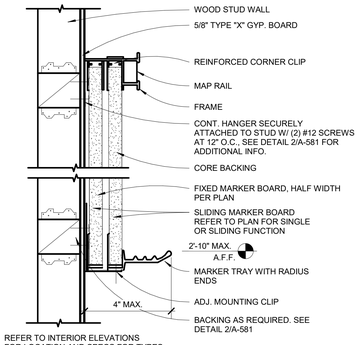
8 FRP WALL AND TILE FLOOR
3" = 1'-0"



4 RATED WALL INTERSECTION EXT.
3" = 1'-0"

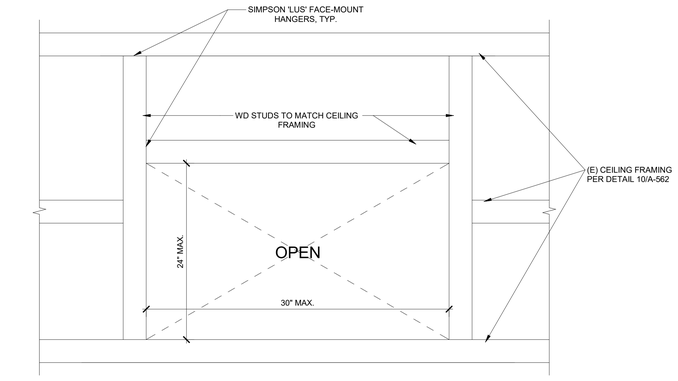


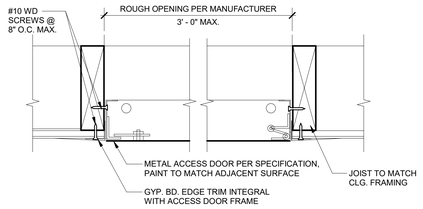
7 FLOOR DRAIN TILE FLOOR (MORTAR BED)
3" = 1'-0"



REFER TO INTERIOR ELEVATIONS FOR LOCATION AND SPECS FOR TYPES

3 SLIDING MARKERBOARD/TACKBOARD
1 1/2" = 1'-0"

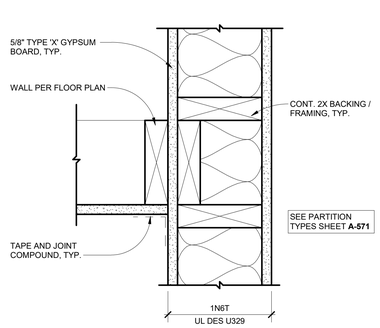




OPENING @ WD STD CEILING

NOTES:
1. 14" X 14" MIN. OPENING SIZE - TYP.N AT WALL CONDITION.
2. ALL ACCESS PANELS IN DRAWINGS ARE SHOWN AS 24" X 30" CONTRACTOR TO VERIFY THE DEPTH OF THE EXISTING ATTIC SPACE IN HARD-LID CEILINGS, AND PROVIDE THE APPROPRIATE ACCESS DOOR SIZE BASED ON NOTE 3 BELOW.
3. 18"X 18" MIN. OPENING SIZE - TYP. AT CEILING, WHERE ATTIC SPACE EXCEEDS 30" IN VERTICAL HEIGHT SIZE TO BE 24" X 30"
4. IF EXISTING CONDITIONS IN ATTIC SPACE DO NOT ALLOW THE USE OF THIS DETAIL CONTRACTOR TO PROVIDE PROPOSED SOLUTION FOR ARCHITECTS APPROVAL.

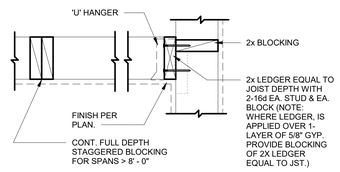
21 CEILING ACCESS PANEL
3" = 1'-0"



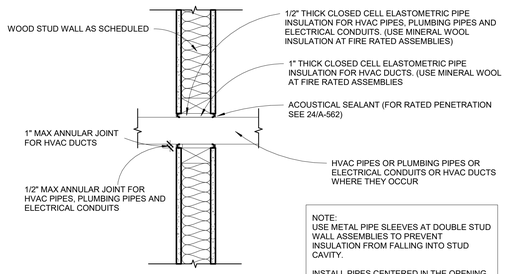
14 RATED WALL INTERSECTION INT.
3" = 1'-0"

TYP. INTERIOR CEILING JOIST SCHEDULE		
STUD DEPTH	STUD SPACING	MAX. UNSUPPORTED LENGTH
2 x 4	16" O.C.	8' - 0"
2 x 6	16" O.C.	13' - 0"
2 x 8	16" O.C.	17' - 0"

NOTES:
1. DEFLECTION LIMIT L/240
2. MAXIMUM LOAD IS 6 PSF
3. NOT FOR SUPPORT OF STUCCO FINISH
4. NOT FOR ACCESSIBLE CEILINGS



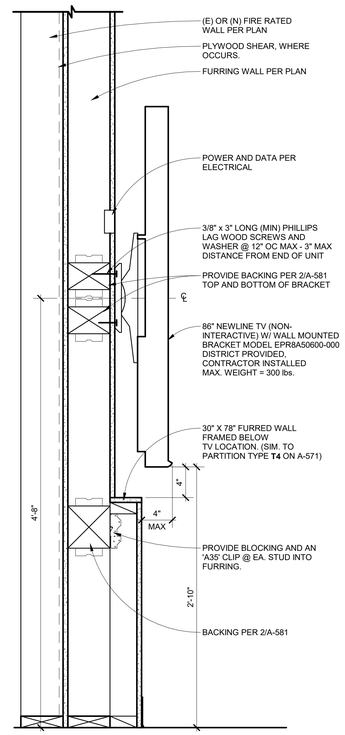
10 WOOD STUD CEILING JOIST
1 1/2" = 1'-0"



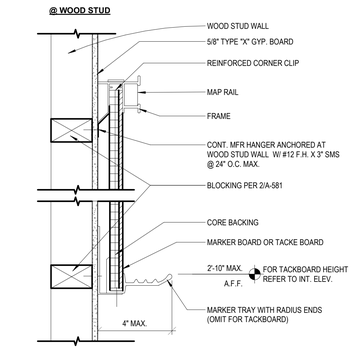
NOTE:
USE METAL PIPE SLEEVES AT DOUBLE STUD WALL ASSEMBLIES TO PREVENT INSULATION FROM FALLING INTO STUD CAVITY.

INSTALL PIPES CENTERED IN THE OPENING. PIPES SHALL NOT TOUCH ADJACENT STUDS OR GYPSUM BOARD.

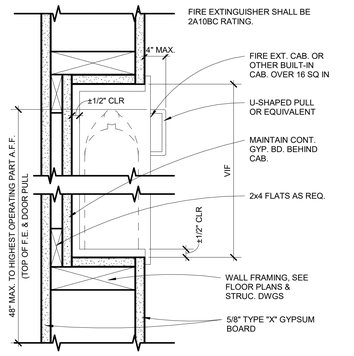
13 WALL PENETRATION DETAIL
1 1/2" = 1'-0"



5 WALL MOUNTED TV
1 1/2" = 1'-0"



2 FIXED WHITE BOARD / TACKBOARD
1 1/2" = 1'-0"



1 SEMI-RECESSED FIRE EXTINGUISHER CABINET
3" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

Interior Details

2023-GU001-010 ©2023

A-562

Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

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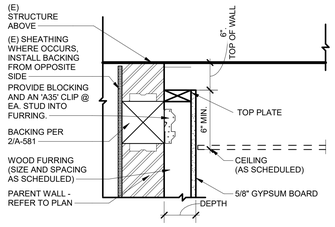
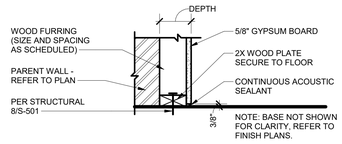


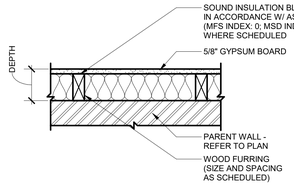
RS, EXTEND
/ITHIN 3/8" OF
:AL

TYPE	DEPTH	FRAMING WIDTH	FRAMING SPACING (OC)	DETAILS BOTTOM	DETAILS TOP	INSUL THK	FIRE RATING	TESTED ASSEMBLY	STC RATING
CT6	6 1/8"	5 1/2"	16"	T-B01	T-T01	5 1/2"			
CT6D	6 7/32"	5 1/2"	16"	T-B01	T-T01	5 1/2"			
T4	4 1/8"	3 1/2"	16"	T-B01	T-T01	3 1/2"			
T-D	23/32"	1 1/2"	16"	T-B01	T-T01	——			

T / T01 PARTITION DETAIL T-T01
1 1/2" = 1'-0"



T / B01 PARTITION DETAIL T-B01
1 1/2" = 1'-0"

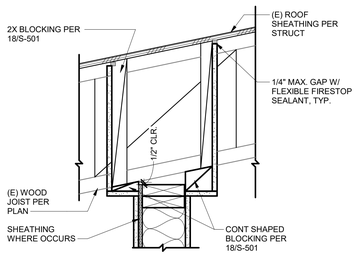


T PARTITION T
1 1/2" = 1'-0"

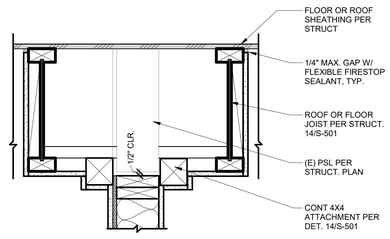
TYPE T

PARTITION NOTES

1. PROVIDE NON-COMPOSITE METAL FRAMING ASSEMBLIES OF METAL STUD DEPTH AND SPACING AS INDICATED FOR PROJECT SPECIFIC SPANS MEETING AN ALLOWABLE DEFLECTION OF L/240 WITH LATERAL LOAD OF AT LEAST 5 PSF FOR LIMITING HEIGHTS. PROVIDE 20 GA. STUDS (MINIMUM). PROVIDE HEAVIER GAUGE AND/OR WIDER FLANGE WIDTH TO MEET STATED PERFORMANCE REQUIREMENTS FOR LIMITING HEIGHTS. COMPLY WITH METAL FRAMING MANUFACTURER'S REQUIREMENTS FOR BRACING STUD FLANGES AND PROVIDING HORIZONTAL BRIDGING AT 48" O.C. MAXIMUM VERTICAL SPACING.
2. TO THE EXTENT POSSIBLE, FIRE RATED WALLS SHALL BE COMPLETELY AND CONTINUOUSLY CONSTRUCTED FIRST (EXCEPT FOR FINAL FINISH), WITH OTHER NON-RATED WALLS CONSTRUCTED TO THEM.
3. FIRE RATED WALLS EXTEND FULL HEIGHT TO STRUCTURE ABOVE AND SEAL TO DECK UNLESS DETAILED OTHERWISE. FOR END WALL DESIGN SEE 4 & 14/A-562
4. USE GALVANIZED CORNER BEADS AND EDGE TRIM IN EXPOSED WORK.
5. MOVEMENT CONTROL:
   A. PROVIDE FOR VERTICAL MOVEMENT AT THE HEAD OF CONSTRUCTION AS INDICATED IN THE NOTES ON THE DRAWINGS. CONNECT HEAD RUNNER CHANNEL TO THE UNDERSIDE OF STRUCTURE AS INDICATED ON THE DRAWINGS; CUT STUDS SHORT TO ALLOW FOR VERTICAL MOVEMENT IN ACCORDANCE WITH NOTE BELOW, AND DO NOT FASTEN TO HEAD RUNNER CHANNEL; FASTEN GYPSUM BOARD TO STUDS ONLY.
   B. ALLOW FOR A MIN OF 1" VERTICAL MOVEMENT FOR PARTITIONS BELOW SLABS, BEAMS OR TRUSSES.
   C. ALLOW FOR ½" RACKING OF PARTITIONS BUILT NEXT TO VERTICAL ELEMENTS (i.e. COLUMNS, WALLS, EXTERIOR WALLS).
6. PROVIDE ABUSE RESISTANT GYPSUM BOARD AT STAIR SIDES OF STAIR ENCLOSURE PARTITIONS..
7. SOUND CONTROL:
   A. SEAL OPENINGS AT OUTLETS, SWITCHES, MECHANICAL OPENINGS AND PERIMETER CONDITIONS WITH ACOUSTIC SEALANT.
   B. PROVIDE SOUND ATTENUATION BLANKETS WHERE INDICATED.
8. PENETRATIONS AT SMOKE AND FIRE RATED ASSEMBLIES SHALL BE PROTECTED, SEALED AND DAMPERED, USING UL OR OTHER AHJ APPROVED METHODS, MATERIALS AND INSTALLATION, AS REQUIRED TO MAINTAIN THE ASSEMBLY'S RATING AND SMOKE RESISTANT REQUIREMENTS. ALL MATERIALS AND INSTALLATION DETAILS SHALL CONFORM TO UL LISTINGS FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS" WHERE APPLICABLE. CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS, FURNISHED BY THE MANUFACTURER, OF THE FIRE STOP MATERIAL, THAT SHOW COMPLETE CONFORMANCE TO THE UL LISTING AND SUCH DRAWINGS SHALL BE AVAILABLE TO AHJ INSPECTORS. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION TYPE.
9. WHERE IDENTIFIED ON DRAWINGS, SMOKE BARRIERS/PARTITIONS SHALL BE CONTINUOUS FROM INSIDE FACE OF SHEATHING OF OUTSIDE WALLS, FROM FIRE BARRIER TO FIRE BARRIER, FROM SMOKE BARRIER TO SMOKE BARRIER AND FROM FLOOR SLAB TO FLOOR OR ROOF SLAB ABOVE, THEREBY PROVIDING CONTINUITY THROUGH ALL CONCEALED SPACES. COMPLETELY SEAL ALL OPENINGS WHERE THE SMOKE BARRIER ABUTS OTHER SMOKE BARRIERS, FIRE BARRIERS, EXTERIOR WALLS, THE FLOOR BELOW AND THE FLOOR OR CEILING ABOVE.
10. LIGHT GAUGE METAL FRAMING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ASTM 754, "STANDARD SPECIFICATIONS FOR INSTALLATION OF STEEL FRAMING MEMBERS".
11. WALL TYPES SHOW BASE WALL CONSTRUCTION. BASE, TILE, WOOD PANELING / TRIM, ACOUSTICAL PANELS, ETC. MAY OCCUR AS SCHEDULED OR DETAILED ELSEWHERE.
12. AT FULL- HEIGHT PARTITIONS WHERE DUCTWORK OR OTHER OBSTACLES PREVENT EXTENSION OF ALL STUDS TO DECK, FRAME STUDS AROUND OBSTACLES WITH HEADERS AND BRACING AS NECESSARY. PROVIDE DOUBLED STUDS AT ENDS OF OPENINGS TO DECK ABOVE..
13. LOCATE VERTICAL CONTROL JOINTS AT 30'-0" 0.C.(MAX.) OR AS SHOWN ON PLANS OR NOTED AS "CJ" ON ELEVATIONS. CONFIRM CONTROL JOINT LOCATIONS WITH ARCHITECT PRIOR TO FRAMING.
14. PROVIDE 5/8" CEMENTITIOUS BACKER BOARD AT TILE (REFER TO ROOM FINISH PLANS/SCHEDULES FOR LOCATIONS AND HEIGHT). AT CONTRACTOR'S OPTION, PROVIDE 5/8" FIBERGLASS MAT TILE BACKER BOARD AT PARTITIONS SCHEDULED TO RECEIVE TILE IN NON-WET AREAS. SHOWER AREAS AND AREAS WITH TERRAZZO BASE TO RECEIVE CEMENTITIOUS BACKER BOARD ONLY.
15. GYPSUM BOARD FINISH TO BE LEVEL 4 UON.



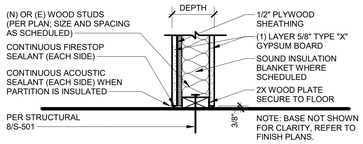
WALL PERPENDICULAR TO JOIST



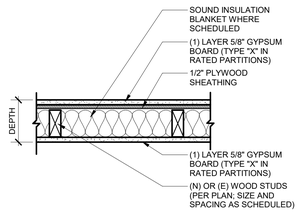
WALL PARALELL TO JOIST

TYPE	DEPTH	FRAMING WIDTH	FRAMING SPACING (OC)	DETAILS BOTTOM	DETAILS TOP	INSUL THK	FIRE RATING	TESTED ASSEMBLY	STC RATING
1Q6	7 1/4"	5 1/2"	16"	Q-B02	Q-T02	5 1/2"	60	U344	
1Qe	7 1/4"	5 1/2"	16"	Q-B02	Q-T02	5 1/2"	60	U344	
1QeD	7 11/32"	5 1/2"	16"	Q-B02	Q-T02	5 1/2"	60	U344	

Q / T02 PARTITION DETAIL Q-T02
1 1/2" = 1'-0"



Q / B02 PARTITION DETAIL Q-B02
1 1/2" = 1'-0"



Q PARTITION Q
1 1/2" = 1'-0"

TYPE Q

PARTITION TYPES - NAMING

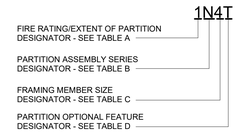


TABLE A - RATING/EXTENT OF PARTITION

DES.	CONDITION
(NOT USED)	NON-RATED, FULL-HEIGHT
1, 2, 3	RATING IN HOURS, FULL HEIGHT
C	FINISH 6" ABOVE CEILING
U	PARTITION UNDER CEILING
B	SMOKE BARRIER, 1 HOUR RATED
P	SMOKE PARTITION, NON-RATED
H	PARTIAL HEIGHT PARTITION

TABLE B - PARTITION ASSEMBLY SERIES

TYPE	SHEATHING	FRAMING	SHEATHING
N	1 LAYER	WD STUD	1 LAYER
P	2 LAYERS	WD STUD	2 LAYERS
Q	1 LAYER	WD STUD	2 LAYERS
R	1 LAYER	WD STUD	NONE
S	2 LAYERS	WD STUD	NONE
T	1 LAYER	WD FURRING	NONE
U	2 LAYERS	WD FURRING	NONE

TABLE C - FRAMING MEMBER SIZE

DES.	WD STUD WIDTH (NOM)
-	*
0	1"
1	
2	2"
3	-
4	4"
6	6"
8	8"
e	**

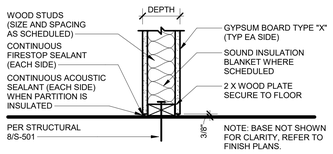
* = MATCH EXISTING ADJACENT STUD SIZE

** = EXISTING STUD SIZE

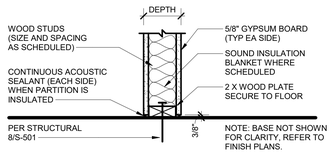
TABLE D - PARTITION OPTIONAL FEATURES

DES.	CONDITION
T	CONCRETE BASE & FRP
B	CONCRETE BASE & FRP BOTH SIDES
D	CERAMIC FRP

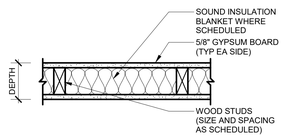
TYPE	DEPTH	FRAMING WIDTH	FRAMING SPACING (OC)	DETAILS BOTTOM	DETAILS TOP	INSUL THK	FIRE RATING	TESTED ASSEMBLY	STC RATING
1N6	6 3/4"	5 1/2"	16"	N-B02	Q-T02	5 1/2"	60	U305	
1N6D	6 27/32"	5 1/2"	16"	N-B02	Q-T02	5 1/2"	60	U329	
1Ne	6 3/4"	5 1/2"	16"	N-B02	Q-T02	5 1/2"	60	U305	
N4D	4 27/32"	4 1/2"	16"	N-B01	Q-T02	3 1/2"			
N6	6 3/4"	5 1/2"	16"	N-B01	Q-T02	5 1/2"			
N6B	6 15/16"	5 1/2"	16"	N-B01	Q-T02	5 1/2"			
Ne	6 3/4"	5 1/2"	16"	N-B01	Q-T02	5 1/2"			



1N / B02 PARTITION DETAIL N-B02
1 1/2" = 1'-0"



N / B01 PARTITION DETAIL N-B01
1 1/2" = 1'-0"



N PARTITION N
1 1/2" = 1'-0"

TYPE N

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District
1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization
8585 Blossom Lane
Spring Valley, CA 91977

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1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA
(858) 398-3800
WWW.HED.DESIGN

Partition Types
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A-571

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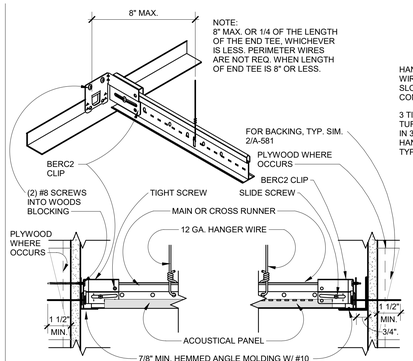
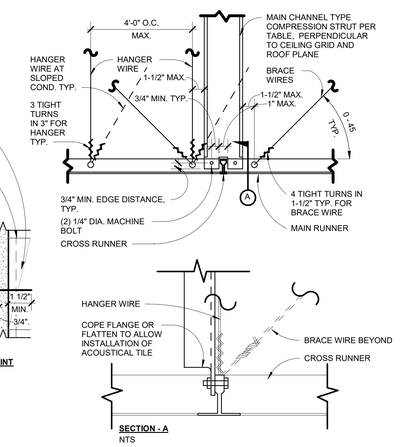


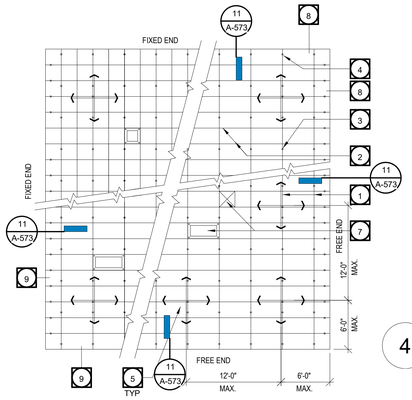
11 WALL/SUSPENDED CLG. INTERSECTION

3" = 1'-0"

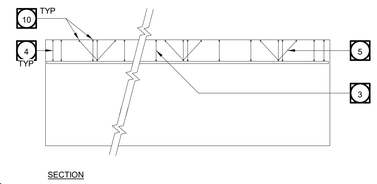


NOTE: FOR CONNECTION TO ROOF REFER TO DETAIL

SUSPENDED ACOUSTICAL CEILING - CHANNEL TYPE STRUT



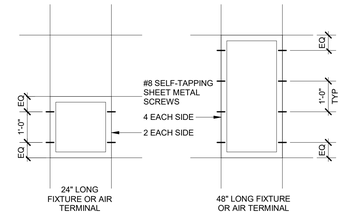
PLAN



SECTION

KEY NOTES

1. MAIN RUNNER @ 48" O.C. MAXIMUM
2. CROSS RUNNERS @ 24" O.C. MAXIMUM
3. 12 GA. HANGER WIRES @48" O.C. MAXIMUM ALONG MAIN RUNNERS.
4. 12 GA HANGER WIRE 8" OR 1/4 LENGTH OF END TEE FROM WALL, WHICH EVER IS LEAST.
5. BRACING ASSEMBLY CONSISTING OF FOUR 12 GA SPLAYED BRACING WIRES & COMPRESSION POST, SEE DETAIL 5/A-573
6. NOT USED
7. LIGHT FIXTURES & HVAC GRILLES- SEE NOTES SECTION 6, SEE DETAIL 1/A-573
8. CEILING GRID MEMBER ATTACHED TO TWO ADJACENT WALLS ONLY. SEE DETAIL 11/A-573
9. CEILING GRID MEMBERS NOT ATTACHED TO ADJACENT WALLS SHALL BE SUPPORTED BY A CONTINUOUS RUNNER WHICH IS SPLICED IN ACCORDANCE WITH ASTM E580 SECTION 5.1.2
10. HANGER WIRE AND BRACING WIRE ATTACHMENT TO STRUCTURE. SEE DETAILS 9/A-573

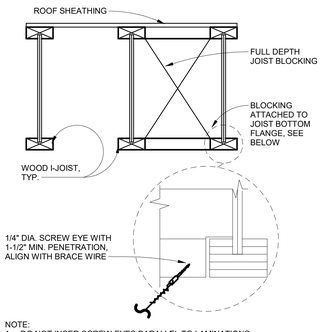


ATTACHMENT OF LIGHT FIXTURES AND AIR TERMINALS TO CEILING GRID

NOTE: FOR LIGHT FIXTURES WEIGHING GREATER THAN 10 LBS BUT LESS THAN OR EQUAL TO 56 LBS, PROVIDE A MIN OF (2) #12 GA SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE. SEE DETAIL 1/A573

4 LIGHT FIXTURE ATTACHMENT

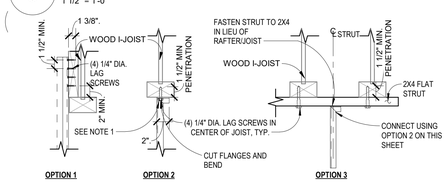
1/2" = 1'-0"



NOTE:
1. DO NOT INSER SCREW EYES PARALLEL TO LAMINATIONS.
2. WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES WITH SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION.

3 STRUT CONNECTION TO I-JOINST

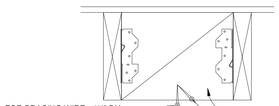
1 1/2" = 1'-0"



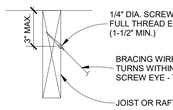
NOTES:
1. WEB CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.

2 HANGER WIRE BRACING CONNECTION @ I-JOIST

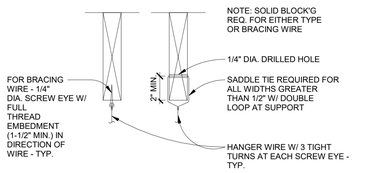
1 1/2" = 1'-0"



A HANGER OR BRACING WIRE TO BOTTOM OF JOIST OR BLOCKING



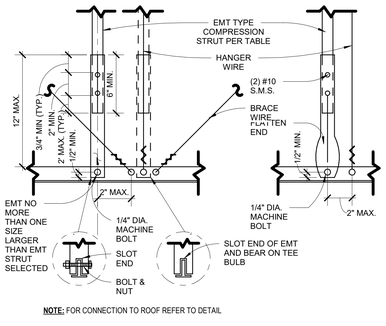
B BRACING WIRE AT WOOD JOIST OR RAFTER



C HANGER WIRE TO BOTTOM OF JOIST OR BLOCKING

9 HANGER & BRACING WIRE CONNECTION AT FRAMING

3" = 1'-0"



NOTE: FOR CONNECTION TO ROOF REFER TO DETAIL

SUSPENDED ACOUSTICAL CEILING - EMT TYPE STRUT

COMPRESSION POST TABLE PER IR 25-2.13, TABLE AT SHEET 3.21

EMT COMPRESSION STRUT	MAXIMUM LENGTH
1/2" DIA. EMT (0.042" WALL THICKNESS)	3' - 11"
3/4" DIA. EMT (0.049" WALL THICKNESS)	6' - 4"
1" DIA. EMT (0.057" WALL THICKNESS)	9' - 9"
1 1/4" DIA. EMT (0.065" WALL THICKNESS)	12' - 9"
1 1/2" DIA. EMT (0.065" WALL THICKNESS)	14' - 9"
2" DIA. EMT (0.065" WALL THICKNESS)	18' - 10"

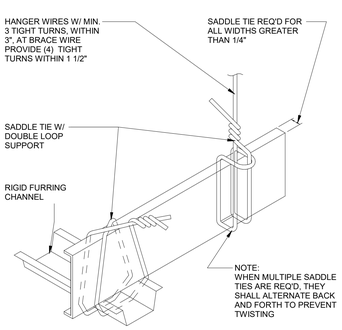
CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5' - 0"
250S137-33	6' - 10"
362S137-33	8' - 0"
250137-43	8' - 10"
400S137-43	10' - 10"

7 COMPRESSION STRUT

3" = 1'-0"

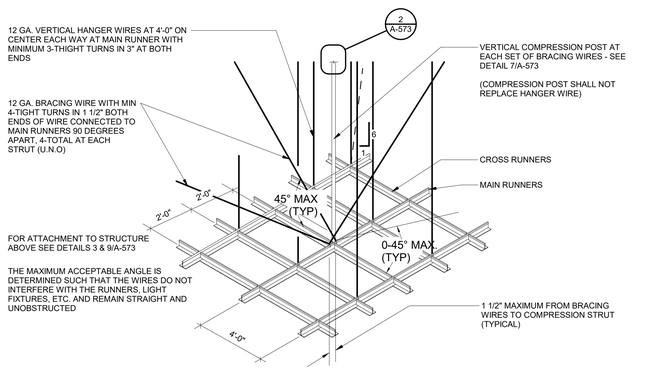
6 SUSPENDED CEILING SCHEMATIC PLAN

1" = 1'-0"



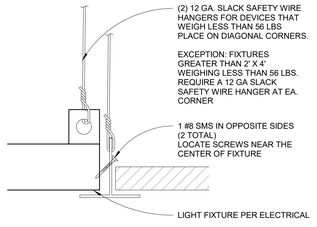
8 TYP. SADDLE TIE @ TRAPEZE

6" = 1'-0"



5 ISOMETRIC OF SUSPENDED CEILING BRACING ASSEMBLY2

1" = 1'-0"



1 LIGHT FIXTURE SUPPORT DETAIL

3" = 1'-0"

LAY-IN ACOUSTICAL CEILING NOTES PER DSA IR 25-2

THE DESIGN AND INSTALLATION OF SUSPENDED ACOUSTIC CEILING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS CONTAINED IN TITLE 24, PART 2 - CALIFORNIA BUILDING CODE 2022, AND WITH THE FOLLOWING ADDITIONAL REQUIREMENTS AS NOTED:

CBC 1616A 1.20, CALIFORNIA BUILDING CODE (PART 2, TITLE 24, CALIFORNIA CODE OF REGULATIONS) FOR SUSPENDED CEILING SYSTEMS IN PUBLIC SCHOOL BUILDINGS. DIVISION OF THE STATE ARCHITECT, INTERPRETATION OF REGULATIONS DOCUMENT IR 25-2.13 (DATED 11-09-2017) DEVIATIONS OR SPECIAL SITUATIONS NOT ADDRESSED BY THESE NOTES REQUIRE REVIEW AND APPROVAL BY THE DIVISION OF THE STATE ARCHITECT (DSA) FOR PUBLIC SCHOOL BUILDINGS.

THE FOLLOWING REQUIREMENTS APPLY TO CEILING SYSTEMS WHOSE TOTAL WEIGHT, INCLUDING CEILING MOUNTED AIR TERMINALS, SERVICES AND LIGHT FIXTURES, DOES NOT EXCEED FOUR (4) PSF. HEAVIER SYSTEMS, AND THOSE SUPPORTING LATERAL LOADS FROM PARTITIONS, WILL REQUIRE SPECIAL DESIGN DETAILS. SEE SPECIFICATIONS SECTION 09 51 00 FOR ADDITIONAL INFORMATION REGARDING THE SUSPENDED ACOUSTICAL CEILING SYSTEM.

FOR FULL SEISMIC REHABILITATION, ALL CEILING WORKS TO COMPLY WITH 2022 CBC

1. CEILING SYSTEM GENERAL NOTES:

1.01 CEILING SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635 AND SECTION 5.1 OF ASTM E580

1.02 THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635.

1.03 CEILING SYSTEMS. THE FOLLOWING CEILING SYSTEM(S) IS/ARE PART OF THE SCOPE OF THIS PROJECT:

MANUFACTURER'S NAME: **AMRSTRONG WORLD INDUSTRIES, INC.**
PRODUCT NAME: **SUPERFINE XL & SUPERFINE XL HRC**
PRODUCT EVALUATION REPORT TYPE AND NUMBER: **(ESR-1308) ASTM C635 SECTION 5.1 OF ASTM E580.**
MANUFACTURER'S MODEL NUMBER - MAIN RUNNER: **SUPRAFINE XL & SUPRAFINE XL HRC - 7501**
MANUFACTURER'S CATALOG NUMBER - CROSS RUNNER: **SUPRAFINE XL & SUPRAFINE XL HRC - XL7549 (16.42 PLF).**

1.04 SEISMIC WALL CLIP: **YES**
MANUFACTURER'S MODEL: **ARMSTRONG - BERC2**

1.05 CEILING PANELS SHALL NOT SUPPORT ANY LUMINAIRES, AIR TERMINALS ORDEVICES.

1.06 FOR CEILING INSTALLATIONS UTILIZING ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE ¼" CLEARANCE BETWEEN THE ACOUSTICAL TILE PANELS AND THE WALL ON THE SIDES OF THE CEILING WHICH ARE FREE TO SLIP. FOR ALL OTHER CEILING PANEL TYPES, PROVIDE ¼" CLEARANCE BETWEEN THE CEILING PANEL AND THE WALL ON THE SIDES OF THE CEILING FREE TO SLIP. CLEARANCE BETWEEN CEILING GRID RUNNERS/MEMBERS AND WALLS SHALL COMPLY WITH THE DETAILS ON THESE DRAWINGS REGARDLESS OF CEILING TILE MATERIAL.

2. MATERIALS:

2.01 CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVANIZED) CARBON STEEL CONFORMING TOASTM A641. WIRE SHALL BE #12 GAUGE (0.106" DIAMETER) WITH SOFT TEMPER AND MINIMUM ULTIMATE TENSILE STRENGTH = 70 KSI.

2.02 GALVANIZED SHEET STEEL (INCLUDING THAT USED FOR METAL STUD AND TRACK COMPRESSION STRUTS/POST) SHALL CONFORM TO ASTM A653, OR OTHER EQUIVALENT SHEET STEEL LISTED IN SECTION A3.1 OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, (AISI S100). MATERIAL 43 MIL (18 GAUGE) AND LIGHTER SHALL HAVE MINIMUM YIELD STRENGTH OF 33 KSI. MATERIAL 54 MIL (16 GAUGE) AND HEAVIER SHALL HAVE A MINIMUM YIELD STRENGTH OF 50KSI.

2.03 ELECTRICAL METALLIC TUBE (EMT) SHALL BE ANSI C80.3/UL 797 CARBON STEEL WITH G90 GALVANIZING. EMT SHALL HAVE MINIMUM YIELD STRENGTH (FY) OF 30 KSI AND MINIMUM ULTIMATE STRENGTH (FU) OF 48 KSI.

3. **ATTACHMENT OF HANGER AND BRACING WIRES**

3.01 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST 6 INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.

3.02 HANGER AND BRACING WIRES SHALL NOT ATTACH TO OR BEND AROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO PIPING, DUCTWORK, CONDUIT AND EQUIPMENT.

3.03 HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.

3.04 SLACK SAFETY WIRES SHALL BE CONSIDERED HANGER WIRES FOR INSTALLATION AND TESTING REQUIREMENTS.

3.05 HANGER AND BRACING WIRE ANCHORAGE TO THE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHORAGE ALIGNS CLOSELY WITH THE DIRECTION OF THE WIRE (E.G., BRACING WIRE CEILING CLIPS MUST BE BENT AS SHOWN IN THE DETAILS AND ROTATED AS REQUIRED TO ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE. SCREW EYES IN WOOD MUST BE INSTALLED SO THEY ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, ETC.).

4. FASTENERS AND WELDING:

4.01 SHEET METAL SCREWS SHALL COMPLY WITH ASTM C1513, ASME B18.6.3. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.

4.02 EXPANSION ANCHORS SHALL BE:
MANUFACTURER'S NAME: **HILTI**
PRODUCT NAME AND EVALUATION REPORT TYPE/NUMBER: **KWIK BOLT TZ2 ICC-ESR-4266**
MANUFACTURER'S LOAD FOR EACH SIZE SPECIFIED (PER CBC 1913A.7.2) **SEE SHEET S1.0**

4.03 POWER-ACTUATED FASTENERS SHALL BE:
MANUFACTURER'S NAME: **HILTI**
PRODUCT NAME AND EVALUATION REPORT TYPE/NUMBER: **X-U ICC-ESR-2269**

4.04 IF NOT OTHERWISE SPECIFIED IN THE EVALUATION REPORT, POWER-ACTUATED FASTENERS INSTALLED IN STEEL SHALL BE INSTALLED SO THE ENTIRE POINTED END OF THE FASTENER IS DRIVEN THROUGH THE STEEL MEMBER

4.05 POWER-ACTUATED FASTENERS IN CONCRETE OR MASONRY ARE NOT PERMITTED FOR BRACING WIRES.

4.06 CONCRETE REINFORCEMENT AND PRESTRESSING TENDONS SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO INSTALLING POST-INSTALLED ANCHORS.

4.07 WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING E60XX SERIES ELECTRODES.

5. **TESTING**

5.01 ALL FIELD TESTING MUST BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR.

5.02 POST-INSTALLED ANCHORS IN CONCRETE USED TO SUPPORT HANGER WIRES SHALL BE TESTED AT A FREQUENCY OF 10 PERCENT. POWER-ACTUATED FASTENERS IN CONCRETE SHALL BE FIELD TESTED FOR 200 POUNDS IN TENSION. ALL OTHER POST-INSTALLED ANCHORS IN CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1910A.5.

5.03 POST-INSTALLED ANCHORS IN CONCRETE USED TO ATTACH BRACING WIRES SHALL BE TESTED AT A FREQUENCY OF 50 PERCENT IN ACCORDANCE WITH CBC SECTION 1910A.5.

6. **LUMINAIRES**

6.01 ALL LUMINAIRES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE LUMINAIRE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LUMINAIRE, PER ASTM E580 SECTION 5.3.1.

6.02 SURFACE-MOUNTED LUMINAIRES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAUGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAUGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN A LUMINAIRE IS 8 FEET OR LONGER OR EXCEEDS 56 POUNDS. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED 8 FEET.

6.03 LUMINAIRES WEIGHING LESS THAN OR EQUAL TO 10 POUNDS MAY BESUPPORTED DIRECTLY ON THE CEILING RUNNERS, SHALL HAVE A MINIMUM OF ONE #12 GAUGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.

6.04 LUMINAIRES WEIGHING GREATER THAN 10 POUNDS BUT LESS THAN OR EQUAL TO 56 POUNDS MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO #12 GAUGE SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTUREABOVE.

EXCEPTION: ALL LUMINAIRES GREATER THAN TWO BY FOUR FEET WEIGHING LESS THAN 56 POUNDS SHALL HAVE A #12 GAUGE SLACK SAFETY WIRE AT EACH CORNER.

6.05 ALL LUMINAIRES WEIGHING GREATER THAN 56 POUNDS SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR TAUT #12 GAUGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR TAUT #12 GAUGEWIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR TIMES THE WEIGHT OF THE FIXTURE.

7. NOT USED

8. **OTHER DEVICES WITHIN THE CEILING**

8.01 ALL LIGHTWEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGNS, ETC., SHALL BE ATTACHED TO THE CEILING GRID. IN ADDITION, DEVICES WEIGHING MORE THAN 10 POUNDS SHALL HAVE A #12 GAUGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE. DEVICES WEIGHING MORE THAN 20 POUNDS SHALL BE SUPPORTED INDEPENDENTLY FROM THE STRUCTURE ABOVE

NOTE:
CLASS A: ASTM E84SURFACE BURNING CHARACTERISTICS. FLAME SPREAD INDES (FSI): 25 OR LESS; SMOKE DEVELOPED INDEX (SDI): 50 OR LESS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

GROSSMONT UNION HIGH SCHOOL DISTRICT
EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

Acoustical Tile - Ceiling Details

2023-GU001-010 ©2023

A-573

Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

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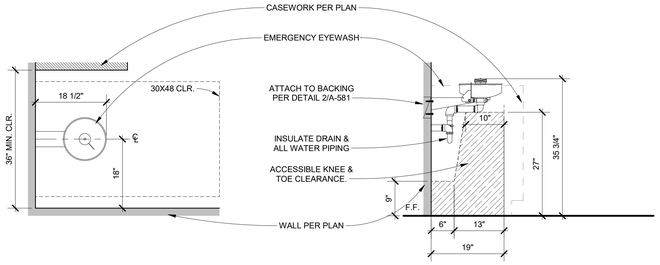
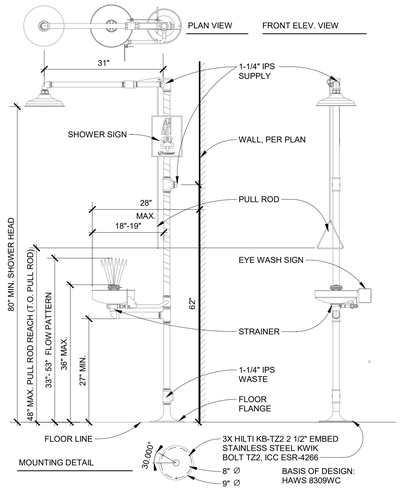
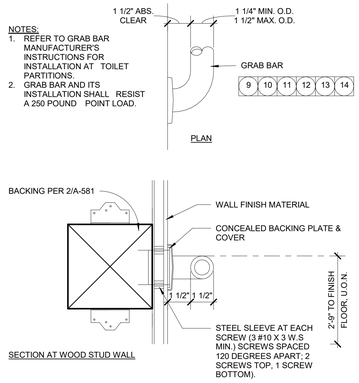


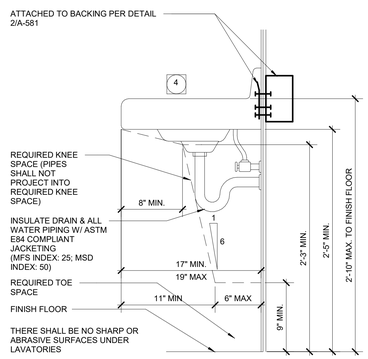
12 EMERGENCY EYE WASH
3/4" = 1'-0"



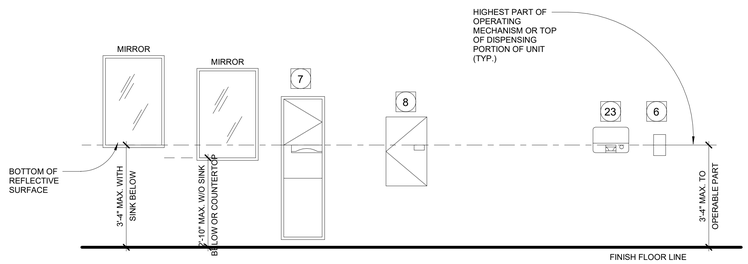
4 SAFETY SHOWER & EYE WASH
3/4" = 1'-0"



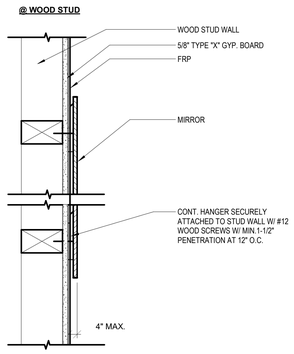
15 GRAB BAR
3" = 1'-0"



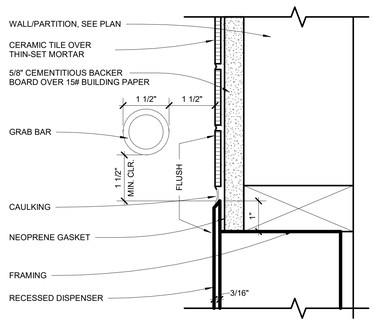
11 WALL-MOUNTED ACCESSIBLE LAVATORY
1 1/2" = 1'-0"



14 TOILET ACCESSORIES MOUNTING HEIGHT
1/2" = 1'-0"



10 MIRROR
1 1/2" = 1'-0"



13 RECESSED DISPENSER AT GRAB BAR
6" = 1'-0"

NOTES FOR SANITARY FACILITIES PLANS, ELEVATIONS AND DETAILS

1. FOR FULL DESCRIPTION OF TOILET ROOM ACCESSORIES SEE SPECIFICATIONS.
2. FOR FULL DESCRIPTION OF PLUMBING FIXTURES SEE SPECIFICATIONS.
3. SEE FINISH SCHEDULE AND SPECIFICATIONS FOR TOILET ROOM FINISHES.
4. DIMENSIONS ARE TO FINISH SURFACES OF WALLS, FLOORS AND TOILET PARTITIONS, TO EDGES OF PLUMBING FIXTURES, TO ENDS OF GRAB BARS, AND TO EDGE OF TOILET ACCESSORY, AS INDICATED ON PLANS AND ELEVATIONS.
5. CONFIGURE THE WATER CLOSET SUPPLY WATER ROUGH-IN SO THAT THE MANUAL FLUSH BUTTON IS LOCATED ON THE OPEN-SIDE OF THE WATER CLOSET.
6. AT ACCESSIBLE WATER CLOSETS, SET CENTER LINE OF WATER CLOSET 17 1/2" FROM FINISH FACE OF ADJACENT SIDE WALL OR PARTITION.
7. SEE DETAILS 14/- FOR MOUNTING HEIGHTS OF ACCESSORIES.

SANITARY FACILITIES KEY NOTES

1 WATER CLOSET
2 ACCESSIBLE WATER CLOSET
3 ACCESSIBLE/ STANDARD URINAL
4 ACCESSIBLE/ STANDARD WALL-MOUNTED LAVATORY
5 COUNTERTOP-MOUNTED LAVATORY
6 LAVATORY OR SURFACE-MOUNTED SOAP DISPENSER
7 SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE
8 RECESSED SANITARY NAPKIN DISPENSER
9 GRAB BAR - "L" SHAPED, NOMINAL 36" X 54" (USED ONLY WHERE TOILET ROOM FLOOR PLANS INDICATE A SINGLE GRAB BAR.) WHERE TWO SEPARATE GRAB BARS ARE INDICATED ON FLOOR PLANS, USE:
36" LONG 12 AT REAR WALL
48" LONG 14 AT SIDE WALL
10 GRAB BAR - "L" SHAPED, NOMINAL 24" X 36"
11 GRAB BAR - "L" SHAPED, NOMINAL 16" X 30"
12 GRAB BAR - NOMINAL 36" LONG (36" MIN.)
13 GRAB BAR - NOMINAL 42" LONG (42" MIN.)
14 GRAB BAR - NOMINAL 48" LONG (48" MIN.)
15 PARTITION MOUNTED COMBINATION TOILET SEAT COVER DISPENSER AND TOILET TISSUE DISPENSER (SERVES TWO STALLS)
16 ~~PARTITION MOUNTED COMBINATION TOILET SEAT COVER DISPENSER AND TOILET TISSUE DISPENSER (SERVES TWO STALLS - FLUSH ON ACCESSIBLE STALL SIDE OF PARTITION)~~
17 RECESSED COMBINATION TOILET SEAT COVER DISPENSER AND TOILET TISSUE DISPENSER
18 SURFACE MOUNTED COMBINATION TOILET SEAT COVER DISPENSER AND TOILET TISSUE DISPENSER
19 PARTITION MOUNTED COMBINATION TOILET SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, AND TOILET TISSUE DISPENSER (SERVES TWO STALLS)
20 ~~PARTITION MOUNTED COMBINATION TOILET SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, AND TOILET TISSUE DISPENSER (SERVES TWO STALLS - FLUSH ON ACCESSIBLE STALL SIDE OF PARTITION)~~
21 RECESSED COMBINATION TOILET SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, AND TOILET TISSUE DISPENSER
22 SURFACE MOUNTED COMBINATION TOILET SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, AND TOILET TISSUE DISPENSER
23 ELECTRIC HAND DRYER, 4" MAX. PROJECTION

M INDICATES ACCESSORY IN MENS FACILITY
W INDICATES ACCESSORY IN WOMENS FACILITY

NOTE: THESE NOTES AND KEYNOTES APPLY TO SHEET A-575 ONLY.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA
(858) 398-3800
WWW.HED.DESIGN

Sanitary Facility Details

2023-GU001-010 ©2023

A-575

Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

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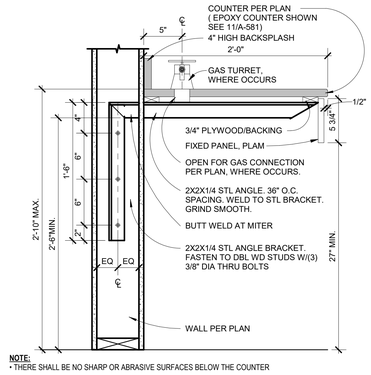
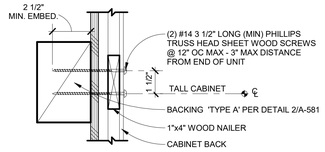


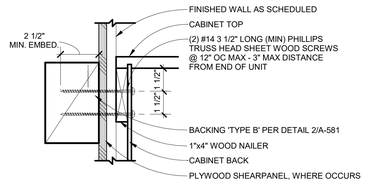
NOTE:
• THERE SHALL BE NO SHARP OR ABRASIVE SURFACES BELOW THE COUNTER

12 TYP. WORK COUNTER
1 1/2" = 1'-0"



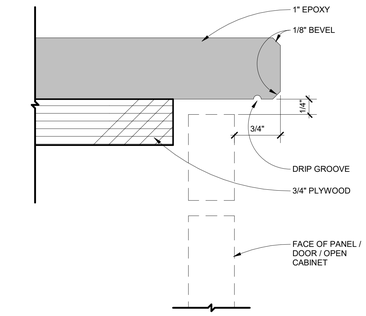
NOTE: PROVIDE CONCEALED ANCHORS @ ALL OPEN SHELVES, CABINETS, ETC.

8 TYP. TALL CABINET MIDPOINT ANCHORAGE
3" = 1'-0"

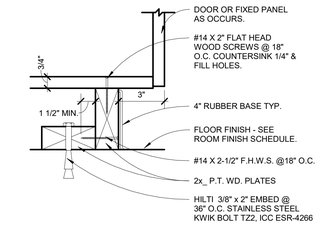


NOTE: PROVIDE CONCEALED ANCHORS @ ALL OPEN SHELVES, CABINETS, ETC

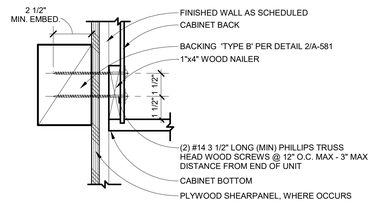
4 TYP. UPPER/TALL CABINET ANCHORAGE
3" = 1'-0"



11 EPOXY RESIN EDGE
12" = 1'-0"



7 TYP. CABINET ANCHORAGE @ TOE
3" = 1'-0"

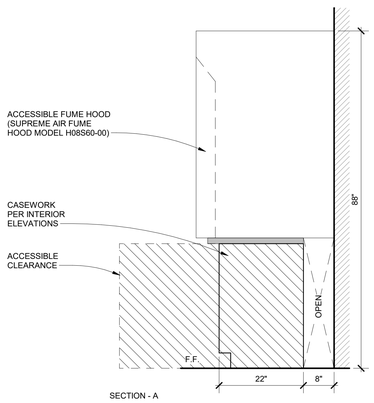


NOTE: PROVIDE CONCEALED ANCHORS @ ALL OPEN SHELVES, CABINETS, ETC.

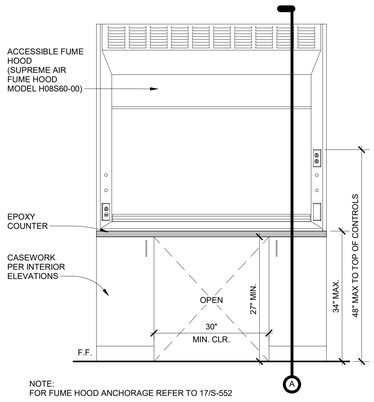
3 TYP. UPPER CABINET ANCHORAGE
3" = 1'-0"

CASEWORK NOTES

1. CASEWORK & ARCHITECTURAL WOODWORK CONTRACTOR(S) SHALL CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS TO PROPERLY DETERMINE CONTRACTUAL RESPONSIBILITIES.
2. FOR ACTUAL ROOM DIMENSIONS REFER TO FLOOR PLANS. CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS BEFORE FABRICATION.
3. OVERALL LENGTH OF TOPS SHALL BE DETERMINED BY CASEWORK AND DIMENSIONS AS INDICATED ON PLANS. SUCH LENGTHS SHALL REMAIN CONSTANT REGARDLESS OF SUCCESSFUL BIDDERS'S STANDARDS. TOPS SHALL OVERHANG 1" AT EACH END AND 1" FROM THE FRONT OF BASE CABINET OR HORIZ. RAIL.
4. INSTALLATION OF CASEWORK SHALL BEGIN AT THE HIGH POINT OF THE ROOM WITH THE LEVELERS IN AS FAR AS POSSIBLE, OBSERVING ADA HEIGHTS AND CLEARANCES.
5. COUNTERTOPS AND SPLASHES SHALL BE SCRIBED TO MATCH IRREGULARITIES AND CONTOURS OF WALLS.
6. PROVIDE FINISHED BACK & END PANELS TO COMPLETE THE ENCLOSURE OF ALL CABINETRY TO WALLS AND ADJACENT CABINETRY.
7. REFER TO ELECTRICAL DRAWINGS FOR RELATED ADDITIONAL INFORMATION.
8. PROVIDE EQUAL SIZED FILLERS AT WALLS WHERE CONTINUOUS RUN OF CASEWORK ABUTS TWO WALLS, U.N.O.
9. PROVIDE SUPPORT BRACKET AT ANY COUNTER OR SHELF SPANNING MORE THAN 4'-0"
10. ALL CASEWORK MATERIAL (NOT INCLUDING BLOCKING) SHALL BE 3/4" MIN. U.O.N.
11. ANY TYPE OF WALL HUNG CASEWORK AND/OR SHELVING SHALL BE COORDINATED TO CLEAR ANY IN WALL ELECTRICAL OR MECHANICAL DEVICES.
12. ALL SHELVES IN WALL OR BASE CABINET SHALL BE ADJUSTABLE U.O.N.
13. MAXIMUM DRAWER WIDTH FOR ALL CABINETS SHALL BE 30", U.O.N.
14. U.O.N., ALL PULLS TO BE U-SHAPED.
15. TOPS OF ALL BACKSPLASHES ARE TO ALIGN REGARDLESS OF COUNTER HEIGHT (SEE INTERIOR ELEVATIONS FOR COUNTER HEIGHTS); TOP OF BACKSPLASH TO BE 40" A.F.F. U.O.N.
16. ALL WATER SUPPLY & DRAIN PIPES UNDER SINK SHALL BE INSULATED
17. U.O.N. ALL COUNTERS AND SPLASHES TO BE PER DETAIL 11/A-581, AND WALL ATTACHMENTS TO BE PER DETAIL 2/A-581
18. ALL DOORS/DRAWERS SHALL BE PROVIDED WITH LOCKS
19. PROVIDE CONCEALED ANCHORS@ ALL OPEN SHELVES, CABINETS, ETC
20. FINISHES SEE SHEET A-601 FOR TYPES.
    U.O.N:
    -COUNTERS TO BE EP-1.
    -AT LABS: DOORS, DRAWERS, EXPOSED-TO-VIEW PANELS AND SHELVES, TO BE PLAM-3
    -WHERE NOTED, DOORS, DRAWERS, EXPOSED-TO-VIEW PANELS AND SHELVES, TO BE PLAM-1
    -ALL NON-EXPOSED-TO-VIEW PANELS AND SHELVES TO BE WHITE MELAMINE
    -ALL EDGES (EXPOSED & NON-EXPOSED) TO BE 3MM PVC. (COLOR TO MATCH ADJ. PANEL)

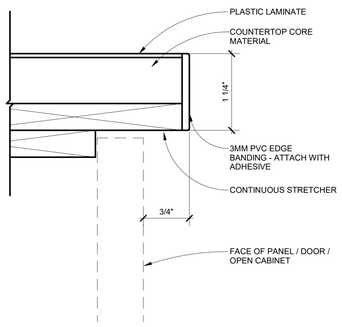


SECTION - A

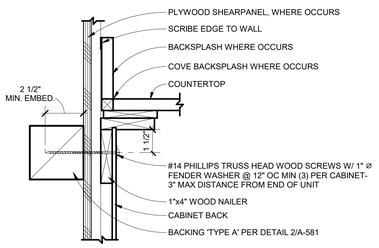


NOTE:
FOR FUME HOOD ANCHORAGE REFER TO 17/S-552

13 FUME HOOD ATTACHMENT
3/4" = 1'-0"

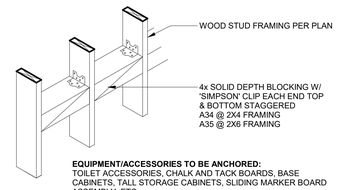


10 TYP. PLAM COUNTERTOP EDGE
12" = 1'-0"



NOTE: PROVIDE CONCEALED ANCHORS @ ALL OPEN SHELVES, CABINETS, ETC.

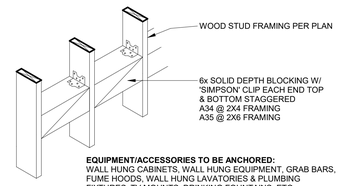
6 TYP. BASE CABINET ANCHORAGE
3" = 1'-0"



EQUIPMENT/ACCESSORIES TO BE ANCHORED:
TOILET ACCESSORIES, CHALK AND TACK BOARDS, BASE CABINETS, TALL STORAGE CABINETS, SLIDING MARKER BOARD ASSEMBLY, ETC

MOUNT ITEM TO BACKING WITH #12 WOOD SCREWS @ 12" OC, UON

TYPE A - WOOD STUD WALL



EQUIPMENT/ACCESSORIES TO BE ANCHORED:
WALL HUNG CABINETS, WALL HUNG EQUIPMENT, GRAB BARS, FUME HOODS, WALL HUNG LAVATORIES & PLUMBING FIXTURES, TV MOUNTS, DRINKING FOUNTAINS, ETC

MOUNT ITEM TO BACKING WITH #12 WOOD SCREWS @ 12" OC, UON

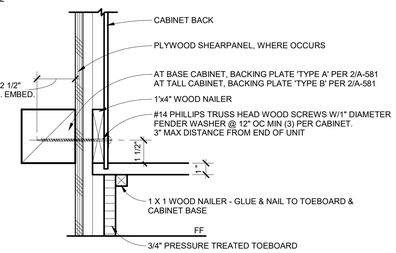
TYPE B - WOOD STUD WALL

TYPICAL NOTES:
1. VERIFY LENGTH, HEIGHT, LOCATION AND NUMBER REQUIRED WITH EQUIPMENT AND ACCESSORY MANUFACTURER.
2. CONTRACTOR IS RESPONSIBLE TO INSURE WALL FINISH IS SMOOTH & PLUMB FOR THE ITEM THAT WOOD BACKING IS INTENDED FOR.
3. DETAIL APPLIES AT BOTH STUD WALLS AND FURRING WALLS WHERE REQUIRED FOR MOUNTING EQUIPMENT/ACCESORIES.
4. ALL BACKING MUST BE INSTALLED FROM THE OPPOSITE SIDE OF WHERE THE STRUCTURAL SHEATHING OCCURS.

2 WOOD STUD BACKING
3/4" = 1'-0"

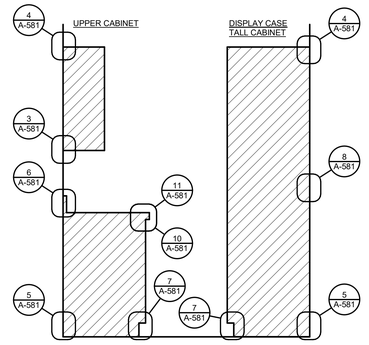
NOTE:
• ALL WATER SUPPLY & DRAIN PIPES UNDER SINK SHALL BE INSULATED
• THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES
• EPOXY TOP @ ALL CABINETS, WATERFALL EDGE @ EMERGENCY EYEWASH / EMERGENCY SHOWER LOCATION.

9 ACC. BASE CABINET W/ SINK
1" = 1'-0"



NOTE: PROVIDE CONCEALED ANCHORS @ ALL OPEN SHELVES, CABINETS, ETC.

5 TYP. BASE/TALL CABINET ANCHORAGE
3" = 1'-0"



1 TYP. CASEWORK ATTACHMENT
1 1/2" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

Casework Details

2023-GU001-010 ©2023

A-581

Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

10/29/2024 6:17:48 AM

DOOR SCHEDULE

MARK	DOORS SIZE WIDTH	SIZE HEIGHT	SIZE THK	TYPE - MTL	FINISH	GLAZING	FRAME TYPE-MTL	FRAME FINISH	FRAME GLAZING	FIRE RATING LABEL (MINS)	HEAD	JAMB	SILL	HW SET	HW LOCKABLE FROM INSIDE	NOTES
LEVEL 1																
301-A	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
301-B	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
302	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	001-HM1	PT	---		10/A-561	7/A-561	5/A-561	02	Yes	
303	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	001-HM1	PT	---		10/A-561	7/A-561	5/A-561	02	Yes	
304-A	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
304-B	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
305A	3'-0"	7'-0"	1 3/4"	L-HM	PT	---	001-HM1	PT	---		10/A-561	7/A-561	5/A-561	03	Yes	
305B	3'-0"	7'-0"	1 3/4"	L-HM	PT	---	001-HM1	PT	---		10/A-561	7/A-561	5/A-561	03	Yes	
306-A	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
306-B	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
307-A	3'-0"	7'-0"	1 3/4"	N-HM	PT	---	(E) B/D-HM	PT	---	60	3/A-561	3/A-561	6/A-561	05	Yes	
307-B	3'-0"	7'-0"	1 3/4"	N-HM	PT	---	(E) B/D-HM	PT	---	60	3/A-561	3/A-561	6/A-561	05	Yes	
307-C	3'-0"	7'-0"	1 3/4"	N-HM	PT	---	(E) B/D-HM	PT	---	60	3/A-561	3/A-561	6/A-561	05	Yes	
307-D	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	001-HM1	PT	---	60	3/A-561	3/A-561	6/A-561	05	Yes	
308-A	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
308-B	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
309	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
310-A	3'-0"	7'-0"	1 3/4"	N-HM	PT	---	(E) B/D-HM	PT	---	60	3/A-561	3/A-561	6/A-561	05	Yes	
310-B	3'-0"	7'-0"	1 3/4"	N-HM	PT	---	001-HM1	PT	---	60	3/A-561	3/A-561	6/A-561	05	Yes	
310-C	3'-0"	7'-0"	1 3/4"	N-HM	PT	---	001-HM1	PT	---	60	3/A-561	3/A-561	6/A-561	06	Yes	
310-D	3'-0"	7'-0"	1 3/4"	N-HM	PT	---	(E) B/D-HM	PT	---	60	3/A-561	3/A-561	6/A-561	05	Yes	
311-A	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
311-B	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
314-A	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
314-B	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	01	Yes	
316	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	04	No	
317	3'-0"	7'-0"	1 3/4"	F-HM	PT	---	(E) A-HM	PT	---		2/A-561	1/A-561	9/A-561	04	No	

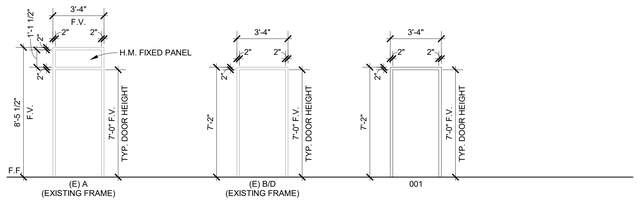
FINISH MATERIALS LIST *(ALL INTERIOR FINISHES SHALL COMPLY WITH CFC, CBC, AND TITLE 19)*

Symbol	Material	Manufacturer	Style	Product #	Color	Comments
BASE						
CTB-1	CERAMIC TILE BASE	DALTILE	4"H FLAT TOP COVE BASE, SEMI-GLOSS			AT RESTROOMS
RB-1	RUBBER BASE	JOHNSONITE	4" RUBBER WALLL BASE		TBD	
CASEWORK						
EP-1	EPOXY COUNTER		EPOXY			AT ALL LAB COUNTERS
PLAM-1	LAMINATE	WILSONART	STANDARD HPL FINISH	4939K-18	VAPOR STRANDZ	AT CLASSROOM PANELS
PLAM-2	LAMINATE	WILSONART	LAMINATE	LINEARITY FINISH	BLACK 1595	AT CLASSROOM COUNTERS
PLAM-3	LAMINATE	WILSONART	LAMINATE		WOOD VENEER	AT LAB PANELS
CEILING						
ACT	ACOUSTIC CEILING TILE	ARMSTRONG	ULTIMA BEVELED TEGULAR, 24"X48" X 3/4"	1915	WHITE	
GYP	GYPSUM BOARD CEILING					INTERIOR FIELD PAINT
FLOORING						
CONC/P	POLISHED CONCRETE	MOXIE SHIELD	ADMIXTURE 180 + ULTR FLOOR POLISHED CONCRETE SYSTEM			REFER TO ROOM SCHEDULE FOR LOCATIONS
CTF-1	CERAMIC TILE FLOORING	DALTILE	KEYSTONES 1"X1" SQUARE	D175	ELEMENT TAN SPC	
PAINT						
PT-1	PAINT	DUN EDWARDS		DET648	WHITE PICKET FENCE	INTERIOR FIELD PAINT
PT-2	PAINT	SHERWIN WILLIAMS	INTERIOR ENAMEL EGGSHELL FINISH	SW 7664	STEELY GRAY	INTERIOR ACCENT PAINT
PT-3	PAINT	SHERWIN WILLIAMS	INTERIOR ENAMEL EGGSHELL FINISH	SW 7600	BOLERO	INTERIOR ACCENT PAINT
PT-4	PAINT	SHERWIN WILLIAMS		SW 7674	PEPPERCORN	DOORS FRAMES, WINDOW FRAMES EXP. BEAMS, COLUMNS
WALL FINISH						
FRP	FRP	MARLITE	SYMMETRIX SMARTSEAM FRP	-	WHITE	
GB	GYPSUM BOARD CEILING					PAINT PER ROOM SCHEDULE
VTB	VYNIL TACKBOARD	KOROSEAL	INSIGHT	6322-55	GILT	

ROOM FINISH SCHEDULE

ROOM NO	NAME	FLOOR	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING	NOTES
LEVEL 1									
301	BIOLOGY LAB/CLASSROOM	CONC/P	RB-1	P-1	P-3	P-1	P-1	P-1	
302	OFFICE	CONC/P	RB-1	P-1	P-3	P-1	P-1	P-1	
303	OFFICE	CONC/P	RB-1	P-1	P-3	P-1	P-1	P-1	
304	CHEMISTRY LAB/CLASSROOM	CONC/P	RB-1	P-1	P-3	P-1	P-1	P-1	
305A	RESTROOM	CTF-1	CTB-1	FRP	FRP	FRP	FRP	P-1	
305B	RESTROOM	CTF-1	CTB-1	FRP	FRP	FRP	FRP	P-1	
306	CHEMISTRY LAB/CLASSROOM	CONC/P	RB-1	P-1	P-1	P-3	P-1	P-1	
307	CHEMISTRY PREP ROOM	CONC/P	RB-1	P-2	P-1	P-2	P-1	P-1	
308	CHEMISTRY LAB/CLASSROOM	CONC/P	RB-1	P-1	P-1	P-1	P-3	P-1	
309	BIOLOGY & SCIENCE LAB	CONC/P	RB-1	P-1	P-1	P-3	P-1	P-1	
310	BIOLOGY PREP ROOM	CONC/P	RB-1	P-2		P-2		P-1	
311	BIOLOGY LAB/CLASSROOM	CONC/P	RB-1	P-1	P-1	P-1	P-3	P-1	
314	BIOLOGY LAB/CLASSROOM	CONC/P	RB-1	P-3	P-1	P-1	P-1	P-1	
316	ELECT. ROOM	CONC/P	RB-1	P-1	P-1	P-1	P-1	P-1	
317	IDF ROOM	CONC/P	RB-1	P-1	P-1	P-1	P-1	P-1	

FRAME TYPES



FRAME TYPES

PANEL TYPES

PANEL TYPES

MATERIAL LEGEND

MATERIAL (MTL)

AL	ALUMINUM
EX	EXISTING
GL	GLASS
HM	HOLLOW METAL
SS	STAINLESS STEEL
STL	STEEL
WD	WOOD

FINISH

FF	FACTORY FINISH
PNT	PAINT (AS SCHEDULED)
CLR ANO	CLEAR ANODIZED ALUMINUM
PLAM	PLASTIC LAMINATE

GLAZING

GL-1	45 MIN. FIRE RATED GLAZING
(T)	INDICATES TEMPERED GLAZING

NOTE: ALL DOORS ARE UNDERCUT 5/8". PROVIDE 3/4" UNDERCUT AT ALL TOILET ROOM, HOUSEKEEPING (HK), SOILED UTILITY AND LOCKER ROOM DOORS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

LICENCED ARCHITECT
JENNETTE LAQUIRE
NO. C 29425
REN. 5/31/2025
STATE OF CALIFORNIA

HED
350 Camino De La Reina
Suite 510
San Diego, California
92108 USA

(858) 398-3800

WWW.HED.DESIGN

Schedules

2023-GU001-010 ©2023

A-601

Autodesk Docs://2023-GU001-010_MMHS Bldg 300S Modernization/2023-GU001-010_Arch_HED.rvt

10/24/2024 9:08:04 AM

DSA NOTES

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED 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 COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

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

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG 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 DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.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. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP☐ MD☐ PP☒ E ☐ — OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

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

PLUMBING LEGEND AND ABBREVIATIONS

SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
	POC	POINT OF CONNECTION		ABV	ABOVE
	W	WASTE OR SEWER ABOVE SLAB		A/C	ABOVE CEILING
	V	SANITARY VENT		A.F.F.	ABOVE FINISH FLOOR
	CW	COLD WATER		A.F.G.	ABOVE FINISH GRADE
	HW	HOT WATER		A/G	ABOVE GRADE
	HWR	HOT WATER RETURN		A.P.	ACCESS PANEL
G	G	LOW PRESSURE NATURAL GAS		B/F	BELOW FLOOR
MPG	MPG	MEDIUM PRESSURE NATURAL GAS		B/G	BELOW GRADE
	SOV	SHUT OFF VALVE		CFH	CUBIC FEET PER HOUR
	BLV	BALANCING VALVE		DWGS.	DRAWINGS
	PRV	PRESSURE REDUCING VALVE		EA.	EACH
	FS	FLOOR SINK		EXIST.	EXISTING
	FD	FLOOR DRAIN		(E)	EXISTING
	FCO	FLOOR CLEAN-OUT		FT.	FEET OR FOOT
	WCO	WALL CLEAN-OUT		FLR.	FLOOR
	GCO	GRADE CLEAN-OUT		G.P.F.	GALLONS PER FLUSH
	DN	DOWN OR DROP		G.P.H.	GALLONS PER HOUR
	UP	RISE OR RISER		G.P.M.	GALLONS PER MINUTE
	HB	HOSE BIBB		I.E.	INVERT ELEVATION
		VALVE ON RISE OR DROP		MSA	MEDIUM PRESSURE GAS METER
	U	UNION		NTS	NOT TO SCALE
	RV	TEMPERATURE & PRESSURE RELIEF VALVE		LB	POUNDS
				PSI	POUNDS PER SQUARE INCH
CD	CD	CONDENSATE DRAIN PIPING		RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
	CP	CIRCULATING PUMP		SF	SQUARE FEET
	CV	CHECK VALVE		T.D.H.	TOTAL DEVELOPED HEAD
	TP	TRAP PRIMER		TP	TRAP PRIMER
	WHA	WATER HAMMER ARRESTOR		V.T.R.	VENT THROUGH ROOF
				W.C.	WATER COLUMN
	REG	GAS REGULATOR W/SHUT-OFF VALVE		WHA	WATER HAMMER ARRESTOR
C	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER			
		APPROXIMATE LOCATION OF DEMOLITION			

GENERAL NOTES

1. NO PLUMBING SHALL BE INSTALLED UNTIL ALL REQUIRED PLUMBING PLAN CHECK PERMITS AND APPROVALS HAVE BEEN OBTAINED FROM ALL REQUIRED AGENCIES.
2. LAVATORY FAUCETS, SINK FAUCETS (NOT INCLUDING SERVICE SINK FAUCETS OR FAUCETS DESIGNATED AS INSTITUTIONAL) SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS.
3. COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES AND DRAINS.
4. HOSE BIBBS SHALL BE PROTECTED BY AN APPROVED NON-REMOVABLE TYPE BACKFLOW PROTECTION DEVICE. HOSE BIBBS SHALL BE MOUNTED AT +18" ABOVE FLOOR UNLESS OTHERWISE NOTED.
5. PROVIDE ALL TAILPIECES, TRAPS, STOPS, SUPPLY PIPES TO LAVATORIES DESIGNED AS ACCESSIBLE, WITH PREFORMED INSULATION JACKET.
6. COORDINATE AND VERIFY SIZES, LOCATIONS, DEPTHS AND PRESSURIZED PIPING PRESSURES OF ALL BUILDING UTILITIES WITH CIVIL.
7. COORDINATE AND SCHEDULE TIMING FOR UTILITY SERVICE CONNECTION.
8. ALL LINES BELOW SLAB ON GRADE TO BE LOCATED AWAY FROM ALL LOAD BEARING FOOTINGS.
9. FOR PIPE PENETRATION THROUGH STRUCTURAL MEMBERS, SEE STRUCTURAL DRAWINGS FOR CONSTRUCTION.
10. ALL VENTS THRU ROOF SHALL BE MINIMUM OF 18 INCHES VERTICAL AND FIFTEEN FEET HORIZONTAL AWAY FROM ALL AIR CONDITIONING FRESH AIR INTAKES AND PROVIDED WITH VANDAL PROOF HOODS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, ROOFS, FOOTINGS, FLOORS, INCLUDING ALL SAW CUTTING AND CORE DRILLING. COORDINATE ALL SAW CUTTING AND CORE DRILLING WITH STRUCTRUAL DRAWINGS. ANY CUTTING AND DRILLING REQUIRED OF STRUCTURAL ELEMENTS THAT IS NOT SPECIFICALLY SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO CUTTING AND DRILLING. CONTRACTOR SHALL SUBMIT PROPOSED LOCATION AND SIZES OF SUCH CUTTING AND DRILLING FOR THE ARCHITECTS AND STRUCTURAL ENGINEERS APPROVAL.
12. COORDINATE ALL EQUIPMENT LOCATIONS, PIPE PENETRATIONS AND EQUIPMENT PAD LOCATIONS WITH STRUCTURAL DRAWINGS PRIOR TO WORK.
13. COORDINATE INSTALLATION OF ALL EQUIPMENT AND PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. ENSURE THAT ALL CONTROL DEVICES, SHUT-OFF VALVES, ETC. ARE ACCESSIBLE FOR MAINTENANCE. WHERE ACCESS PANELS IN FINISHED SPACES, OTHER THAN THAT SHOWN, CONTRACTOR SHALL PROVIDE AND COORDINATE EXACT LOCATION OF PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
14. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT ARRANGED TO ALLOW SERVICE, MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUT-DOWN.
15. ANY STRUCTURAL FIREPROOFING DAMAGED DURING INSTALLATION OF PLUMBING EQUIPMENT, PIPING, ETC. SHALL BE REPAIRED AT NO COST TO THE OWNER. REPAIRS SHALL BE AS DIRECTED BY THE ARCHITECT.
16. PROVIDE VACUUM BREAKERS AT HOSE BIBBS.
17. FAUCETS, OTHER THAN LAVATORIES, SHALL BE 1.8 GPM MAXIMUM.
18. WATER HEATER TO BE USED SHALL BE ON CALIFORNIA ENERGY COMMISSION (CEC) LIST.
19. PROVIDE EXPANSION TANK OR OTHER APPROVED METHOD OF RELIEVING PRESSURE (SECTION 608.3 CPC).
20. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT.
21. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO BID.
22. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO ORDERING ANY EQUIPMENT.
23. UPON INSTALLATION OF ALL EQUIPMENT, DEVICES, VIBRATION ISOLATION, ETC., PROVIDE WRITTEN CONFIRMATION BY EQUIPMENT MANUFACTURER'S REPRESENTATIVES TO ENSURE COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS.
24. PROVIDE DETAILS AND SEISMIC CALCULATIONS FOR ALL EQUIPMENT ON VIBRATION ISOLATION. ALL DETAILS SHALL BE STAMPED BY A STRUCTURAL ENGINEER FROM VIBRATION ISOLATIONS MANUFACTURER.
25. FOR EACH SUBMITTAL, THE CONTRACTOR SHALL PROVIDE A LETTER (ON COMPANY LETTERHEAD) AND SIGNED BY THE PROJECT MANAGER INDICATING THE SUBMITTAL HAS BEEN FULLY IN HOUSE REVIEWED TO ENSURE FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND COORDINATION WITH OTHER TRADES. ANY EXCEPTIONS TO THE CONTRACT DOCUMENTS SHALL BE CLEARLY INDICATED ON THIS LETTER. ANY DISCREPANCIES/EXCEPTIONS NOT IDENTIFIED IN WRITING SHALL BE CORRECTED AT THE SOLE EXPENSE OF THE CONTRACTOR AND AT NO EXPENSE TO THE OWNER AND ENGINEER.
26. THE CONTRACTOR SHALL SELECT ALL CIRCUIT SETTERS/BALANCING VALVES FOR ACTUAL FLOW THROUGH THE PIPE AND THE PROPER PRESSURE DROP TO ENSURE PROPER OPERATION AND NOT BASED ON PIPE SIZES.
27. A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT OR 1 PERCENT IS PROVIDED FOR DRAINAGE PIPING 4 INCHES OR LARGER ONLY WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER, TO THE STRUCTURAL FEATURES, OR TO THE ARRANGEMENT OF A BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF 1/4 INCH PER FOOT OR 2 PERCENT AND THAT IS SUBJECT TO THE INSPECTOR'S APPROVAL.
28. DOMESTIC HOT WATER PIPING SHALL BE INSULATED PER SECTION 609.11 CPC.
29. LABEL MEDIUM PRESSURE GAS EVERY FIVE FEET.
30. EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES ABOVE THE FLOOD-LEVEL RIM OF THE FIXTURE SERVED BEFORE OFFSETTING HORIZONTALLY OR BEFORE BEING CONNECTED TO ANY OTHER VENT.
31. CONFIGURE THE WATER CLOSET SUPPLY WATER ROUGH-IN SO THAT THE MANUAL FLUSH BUTTON IS LOCATED ON THE OPEN-SIDE OF THE WATER CLOSET.

GAS LOAD SUMMARY

ITEM	QTY	CFH EACH	TOTAL CFH
AC (EXISTING)	7	80	560
GAS OUTLET	46	5	230
LAB HOOD	1	5	5
WATER HEATER WH-1	1	75.1	75.1
DRYER	1	25	25
TOTAL CFH			895.1

PIPE SIZING BASED ON 250 FT TOTAL DEVELOPED LENGTH, TABLE 1216.2(1), 2022 CPC

PIPE MATERIALS

1. WATER ABOVE GRADE: COPPER TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER JOINT FITTINGS.
2. WATER BELOW GRADE: COPPER TYPE "K" WITH CAST SOLDER JOINT FITTINGS. ROUGH SOLDER JOINT FITTINGS, OR FLARED JOINT FITTINGS.
3. SOIL/WASTE AND VENT ABOVE GRADE: HUBLESS CAST IRON PIPE AND FITTINGS.
4. SOIL/WASTE AND VENT BELOW GRADE: POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS PER ASTM D2665.
5. NATURAL GAS ABOVE GRADE: BLACK STEEL, SCHEDULE 40 WITH MALLEABLE IRON-THREADED FITTINGS.
6. NATURAL GAS BELOW GRADE: POLYETHYLENE (PE), SDR 11 PIPE WITH SOCKET FUSION FITTINGS.
7. CONDENSATE DRAIN: COPPER TYPE "M" HARD DRAWN WITH WROUGHT COPPER SOLDER JOINT FITTINGS.

STATE OF CALIFORNIA
WATER HEATING SYSTEM GENERAL INFORMATION
CEC-NRCC-PLB-01-E (Revised 07/18) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-PLB-01-E
Water Heating System General Information	(Page 1 of 2)
Project Name: MOUNT MIGUEL HIGH SCHOOL BLDG 300S MODERNIZATION	Date Prepared: 05/06/2024

A. GENERAL INFORMATION/SYSTEM INFORMATION

01	Water Heater System Name:	WH-1
02	Water Heater System Configuration:	Central System
03	Water Heater System Type:	Domestic Hot Water
04	Building Type:	Nonresidential
05	Total Number of Water Heaters in Systems:	1
06	Central DHW Distribution Type:	Demand Recirculation
07	Dwelling Unit DHW Distribution Type:	Standard Distribution System (STD)

B. WATER HEATER INFORMATION
Each water heater type requires a separate compliance document.

01	Water Heater Type:	Large Storage - Gas
02	Fuel Type:	Gas
03	Manufacture Name:	AO SMITH
04	Model Number:	BL-80
05	Number of Identical Water Heaters:	1
06	Installed Water Heater System Efficiency:	80%
07	Required Minimum Efficiency:	80%
08	Standby Loss Percent or Standby Loss Total:	N/A
09	Rated Input:	75,100 BTUH
10	Pilot Energy:	N/A
11	Water Heater Tank Storage Volume:	75
12	Exterior Insulation on Water Heater:	N/A
13	Volume of Supplemental Storage:	N/A
14	Internal Insulation on Supplemental Storage:	N/A
15	Exterior Insulation on Supplemental Storage:	N/A

C. PLUMBING COMPLIANCE FORMS & WORKSHEETS
Check box if worksheet is included.
For detailed instructions on the use of this and all Energy Standards compliance documents, refer to the 2016 Nonresidential Manual
Note: The Enforcement Agency may require all compliance documents to be incorporated onto the building plans.

YES	NO	Doc/Worksheet #	Title
◉	○	NRCC-PLB-01-E	Certificate of Compliance, Declaration. Required on plans for all submittals.
○	○	NRCI-PLB-01-E	Certificate of Installation. Required on plans for all submittals.
○	○	NRCI-PLB-02-E	Certificate of Installation, required on central systems in high-rise residential, hotel/motel application.
○	○	NRCI-PLB-03-E	Certificate of Installation, required on single dwelling unit systems in high-rise residential, hotel/motel application.
○	○	NRCI-PLB-21-H	Certificate of Installation, required on HERS verified central systems in high-rise residential, hotel/motel application.
○	○	NRCI-PLB-22-H	Certificate of Installation, required on HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.
○	○	NRCI-STH-01-E	Certificate of Installation, required on any solar water heating

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance — January 2016

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APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal
3	09/26/24	DSA Backcheck

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PLUMBING LEGEND & GENERAL NOTES

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PLUMBING EQUIPMENT SCHEDULE

SYMBOL	TYPE	ELECTRICAL DATA				CAPACITY		STORAGE VOLUME (GALLON)	WEIGHT (LBS)	DESCTIPTION	LOCATION
		POWER (HP)	VOLTS (V)	PHASE (PH)	HERTZ (HZ)	INPUT (MBH)	OUTPUT (MBH)				
WH 1	WATER HEATER	--	--	--	--	75.1	--	74	1000	AO SMITH CONSERVATIONIST ULTRA LOW NOX BL-80, 81 GPH RECOVERY RATING @ 90°F TEMPERATURE RISE, 150 PSI MAXIMUM WORKING PRESSURE, 14" W.C. MAXIMUM GAS INLET PRESSURE, 80% THERMAL EFFICIENCY, PROVIDE T&P RELIEF VALVE.	CHEMISTRY PREP ROOM 307
ET 1	EXPANSION TANK	--	--	--	--	--	--	2	30	AMTROL THERM-X-TROL ST-5C-DD, 0.45 MAX ACCEPTANCE FACTOR, 150 PSIG WORKING PRESSURE, DEEP DRAWIN STEEL, DIAPHRAGM CONSTRUCTION.	CHEMISTRY PREP ROOM 307
CP 1	CIRCULATION PUMP	1/12	115	1	60	--	--	--	--	GRUNDFOS UPS 15-55 SFC, 3.21 GM @ 11.52 FT OF HEAD, THREE-SPEED CIRCULATOR PUMP, CORROSION FREE, STAINLESS STEEL PUMP HOUSING.	CHEMISTRY PREP ROOM 307
TMX 1	THERMOSTATIC MIXING VALVE	--	--	--	--	--	--	--	--	LEONARD ECO-MIX TM-26-LF, 1 GPM MINIMUM FLOW CAPACITY, BASED OFF A 8 GPM @ 9 PSI PRESSURE DROP SIZING.	CHEMISTRY PREP ROOM 307
SX 1	SAMPLE BOX	--	--	--	--	--	--	--	1300	JENSEN PRECAST 24322-2, H-20 TRAFFIC RATED, CAST IRON FRAME AND COVER WITH GASKET.	EXTERIOR
TMX 2	THERMOSTATIC MIXING VALVE	--	--	--	--	--	--	--	--	HAWS 9201E AXION. FOR EMERGENCY EYEWASH & SHOWER USE.	VARIOUS
TMX 3	THERMOSTATIC MIXING VALVE	--	--	--	--	--	--	--	--	HAWS 9201EW AXION, TEMPERING VALVE.	VARIOUS

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	ROUGH-IN					VALVE/FAUCET TYPE					REMARKS
		HW	CW	W	TRAP	V	MANUAL	PUSH BUTTON	BATTERY	ELECTRIC	FLOW	
WC 1	WATER CLOSET - ACCESSIBLE	--	1"	4"	INTEGRAL	2"	--	--	X	--	1.28 GPF	AMERICAN STANDARD MADERA FLOWISE 3461.001, FLOOR-MOUNTED @ 16-1/2", ELONGATED BOWL, TOP SPUD, EVERCLEAN, WHITE VITREOUS CHINA, SIPHON JET, WATER SENSE LABELED. ZURN ZER6000PL-CPM-HET, EXPOSED, DIAPHRAGM, CHROME PLATED, MOTOR ACTUATOR, MANUAL OVERRIDE PUSH BUTTON, VANDAL RESISTANT, TOP SPUD, WATER SENSE LABELED. OLSONITE 10SSCT, HEAVY-DUTY, PLASTIC, ELONGATED, OPEN FRONT LESS OCVER, PLASTIC SELF-SUSTAINING CHECK HINGES, NON-CORRODING 300 SERIES STAINLESS STEEL POSTS AND PINTLES, 1-1/8" THICK.
L 1	LAVATORY - ACCESSIBLE	1/2"	1/2"	2"	1 1/2"	1 1/2"	X	--	--	--	0.5 GPM	AMERICAN STANDARD LUCERNE 0356.421, WALL-HUNG @ ACCESSIBLE HEIGHT, SINGLE HOLE, WHITE VITREOUS CHINA, FRONT OVERFLOW, D-SHAPED BOWL. CHICAGO FAUCETS 3501-E2805ABCP, DECK-MOUNTED, METERING, SINGLE HOLE, VANDAL PROOF, PROVIDE BACK CHECK TEE.
S 1	SINK	--	1/2"	2"	1 1/2"	1 1/2"	X	--	--	--	1.5 GPM	JUST MANUFACTURING SLADA1921A55-J, SINGLE BOWL, DROP-IN, 304 STAINLESS STEEL, LUSTROUS SATIN, 18 GAUGE, 22"X19-1/2"X5-1/2" DIM. CHICAGO FAUCETS 928-317SAM, DECK-MOUNTED, SINGLE-HOLE, RIGID/SWING GOOSENECK, ASTMOSHPERIC VACUUM BREAKER, LAB NOZZLE WITH 10 SERRATIONS, VANDAL PROOF, WRISTBLADE HANDLES. ORION T10, 1.5 US GALLON TANK, TOP CLEANOUT, SINGLE MIP OUTLET.
S 2	SINK - ACCESSIBLE	--	1/2"	2"	1 1/2"	1 1/2"	X	--	--	--	1.5 GPM	JUST MANUFACTURING SLADA1921A55-J, SINGLE BOWL, DROP-IN, 304 STAINLESS STEEL, LUSTROUS SATIN, 18 GAUGE, 22"X19-1/2"X5-1/2" DIM. CHICAGO FAUCETS 928-317SAM, DECK-MOUNTED, SINGLE-HOLE, RIGID/SWING GOOSENECK, ASTMOSHPERIC VACUUM BREAKER, LAB NOZZLE WITH 10 SERRATIONS, VANDAL PROOF, WRISTBLADE HANDLES. ORION T10, 1.5 US GALLON TANK, TOP CLEANOUT, SINGLE MIP OUTLET.
FD 1	FLOOR DRAIN	--	--	3"	2"	1 1/2"	--	--	--	--	--	JAY R. SMITH 2005, DUCO CAST IRON BODY, FLASHING COLLAR, NICKEL BRONZE STRAINER, TRAP PRIMER CONNECTION, HEELPROOF GRATE.
FS 1	FLOOR SINK	--	--	3"	2"	1 1/2"	--	--	--	--	--	JAY R. SMITH 3100Y, NO HUB, SQUARE NICKEL BRONZE TOP, 8-1/2" TOP, DUCO CAST IRON RECEPTOR.
EEWSH 1	EMERGENCY EYEWASH SHOWER - ACCESSIBLE	1 1/2"	1 1/2"	--	--	--	X	--	--	--	--	HAWS AXION MSR 8309WC, PLASTIC SHOWERHEAD, STAINLESS STEEL BOWL.
EEW 1	EMERGENCY EYEWASH - ACCESSIBLE	1/2"	1/2"	--	--	--	X	--	--	--	--	HAWS AXION 7360BTWC, STAINLESS STEEL BOWL.
TP 1	TRAP PRIMER	--	1/2"	--	--	--	--	--	--	--	--	PLUMBING PRECISION PRODUCTS P2-500, PRESSURE DROP ACTIVATED, SERVES UP TO 4 FLOOR DRAINS, REQUIRED 10 PSI PRESSURE DROP, BRASS CONSTRUCTION.
HB 1	HOSE BIBB	--	3/4"	--	--	--	--	--	--	--	--	ACORN 8126CP-LF, POLISHED CHROME-PLATED, VACUUM BREAKER, HEAVY ROUGH BRASS BODY, REMOVABLE LOOSE KEY WHEEL HANDLE.
HB 2	HOSE BIBB	--	3/4"	--	--	--	--	--	--	--	--	ACORN 8151, STAINLESS STEEL, VACUUM BREAKER, RECESSED, LEAD FREE.
GO 1	GAS OUTLET	--	--	--	--	--	--	--	--	--	--	CHICAGO FAUCETS 900 SERIES 982-WSV909LEB, DECK-MOUNTED, TWO-VALVES @ 90°, 10 SERRATION NOZZLE, FOR NATURAL GAS USE, DUAL BALL VALVE, CHROME PLATED.
CWB 1	CLOTHES WASHER BOX	3/4"	3/4"	3"	3"	2"	--	--	--	--	--	GUY GRAY 82032, CENTER DRAIN, GALVANIZED WASHING MACHINE OUTLET BOX, PROVIDE SHUT-OFF VALVE, VACUUM BREAKER, WATER HAMMER ARRESTOR.
SB 1	SUPPLY BOX	--	3/4"	--	--	--	--	--	--	--	--	GUY GRAY, WATER HAMMER ARRESTOR, SHUT OFF VALVE, VACUUM BREAKER.

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PLUMBING SCHEDULES

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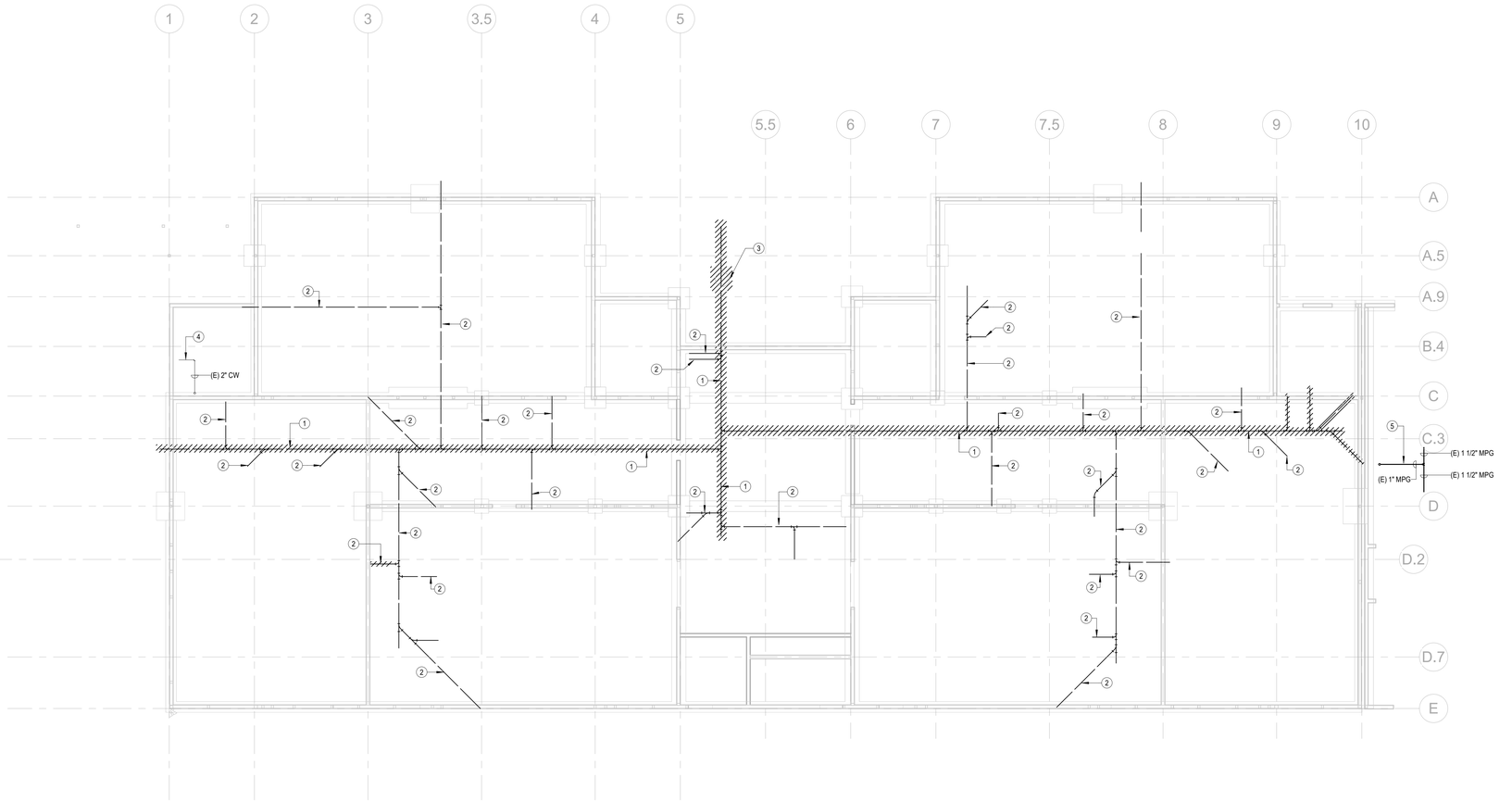

1 PLUMBING BLDG 300S UNDERGROUND PLAN - DEMO
1/8" = 1'-0"

N

FLOOR PLAN NOTES

1 REMOVE EXISTING SANITARY WASTE PIPING.
2 ABANDON IN PLACE EXISTING WASTE LINE.
3 REMOVE EXISTING SAMPLE BOX.
4 EXISTING 2" COLD WATER TO REMAIN. PROTECT IN PLACE.
5 EXISTING 1" MPG TO REMAIN. PROTECT IN PLACE.

GENERAL NOTES

A. REMOVE ALL EXISTING SANITARY WASTE PIPING AS NOTED.
B. REMOVE EXISTING SAMPLE BOX.
C. CONTRACTOR TO CONFIRM EXISTING CONDITIONS PRIOR TO WORK.
D. PROTECT IN PLACE ALL EXISTING UNDERGROUND GAS.
E. ABANDON IN PLACE EXISTING SANITARY WASTE PIPING IF IT DOES NOT INTERFER WITH NEW SANITARY WASTE PIPE ROUTING.

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APP: 04-123438 INC:
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DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal
3	09/26/24	DSA Backcheck

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PLUMBING BLDG 300S UNDERGROUND PLAN - DEMO

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P-100

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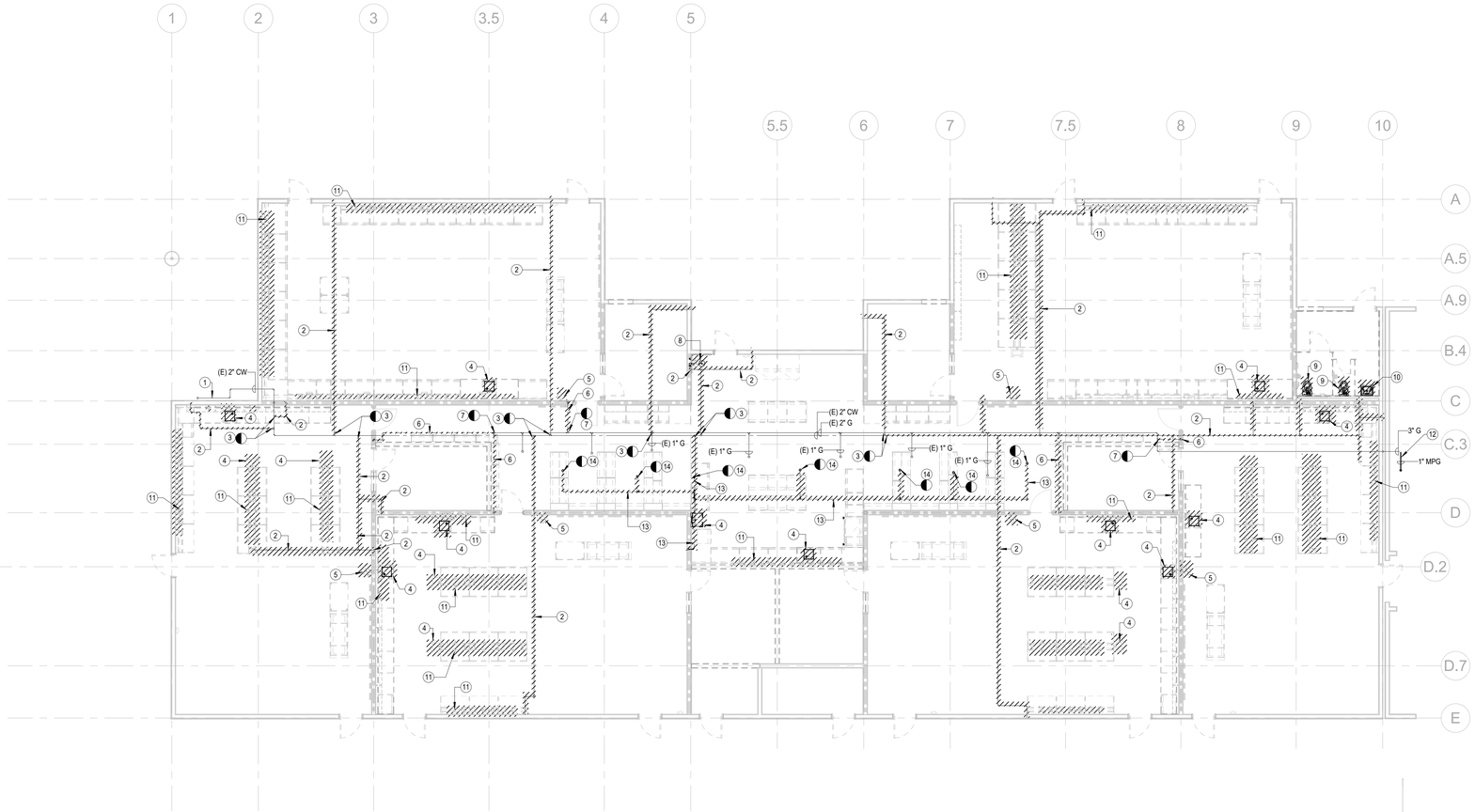

1 PLUMBING BLDG 300S FLOOR PLAN - DEMO
1/8" = 1'-0"

N

FLOOR PLAN NOTES

1 EXISTING REDUCED PRESSURE BACKFLOW PREVENTER WITH MAIN BUILDING SOV TO REMAIN. PROTECT IN PLACE.
2 REMOVE EXISTING COLD WATER LINE ABOVE CEILING.
3 CAP EXISTING WATER LINE.
4 REMOVE EXISTING SINK.
5 REMOVE EXISTING EMERGENCY EYE WASH.
6 REMOVE EXISTING GAS.
7 CAP EXISTING GAS LINE.
8 REMOVE EXISTING EMERGENCY EYE WASH/SHOWER.
9 REMOVE EXISTING WATER CLOSET.
10 REMOVE EXISTING LAVATORY.
11 REMOVE EXISTING GAS OUTLETS AND WATER OUTLETS. BACK TO MAINS AS SHOWN ON P-101.
12 EXISTING GAS PRESSURE REGULATOR TO REMAIN. PROTECT IN PLACE.
13 REMOVE EXISTING CONDENSATE LINE.
14 POINT OF DISCONNECT FROM EXISTING 3/4" CONDENSATE DRAIN LINE.

GENERAL NOTES

A. REMOVE ALL EXISTING SANITARY VENT PIPING.
B. REMOVE ALL EXISTING SANITARY WASTE PIPING.
B. REMOVE ALL EXISTING PLUMBING FIXTURES.
C. REMOVE ALL EXISTING GAS TURRETS AND ALL EXISTING WATER SPOUTS.
D. CONTRACTOR TO CONFIRM EXISTING CONDITIONS PRIOR TO WORK.
E. REMOVE ALL EXISTING CONDENDSATE DRAIN LINES EXCEPT FOR THE VERTICAL LINES DROPPING FROM THE ROOF.
F. ALL PLUMBING PIPING ON SHEET P-101 IS ABOVE CEILING.

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GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union
High School District

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MMHS Bldg 300S
Modernization

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Spring Valley, CA 91977

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1	03/13/24	SD/DD Submittal
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PLUMBING
BLDG 300S
FLOOR PLAN -
DEMO

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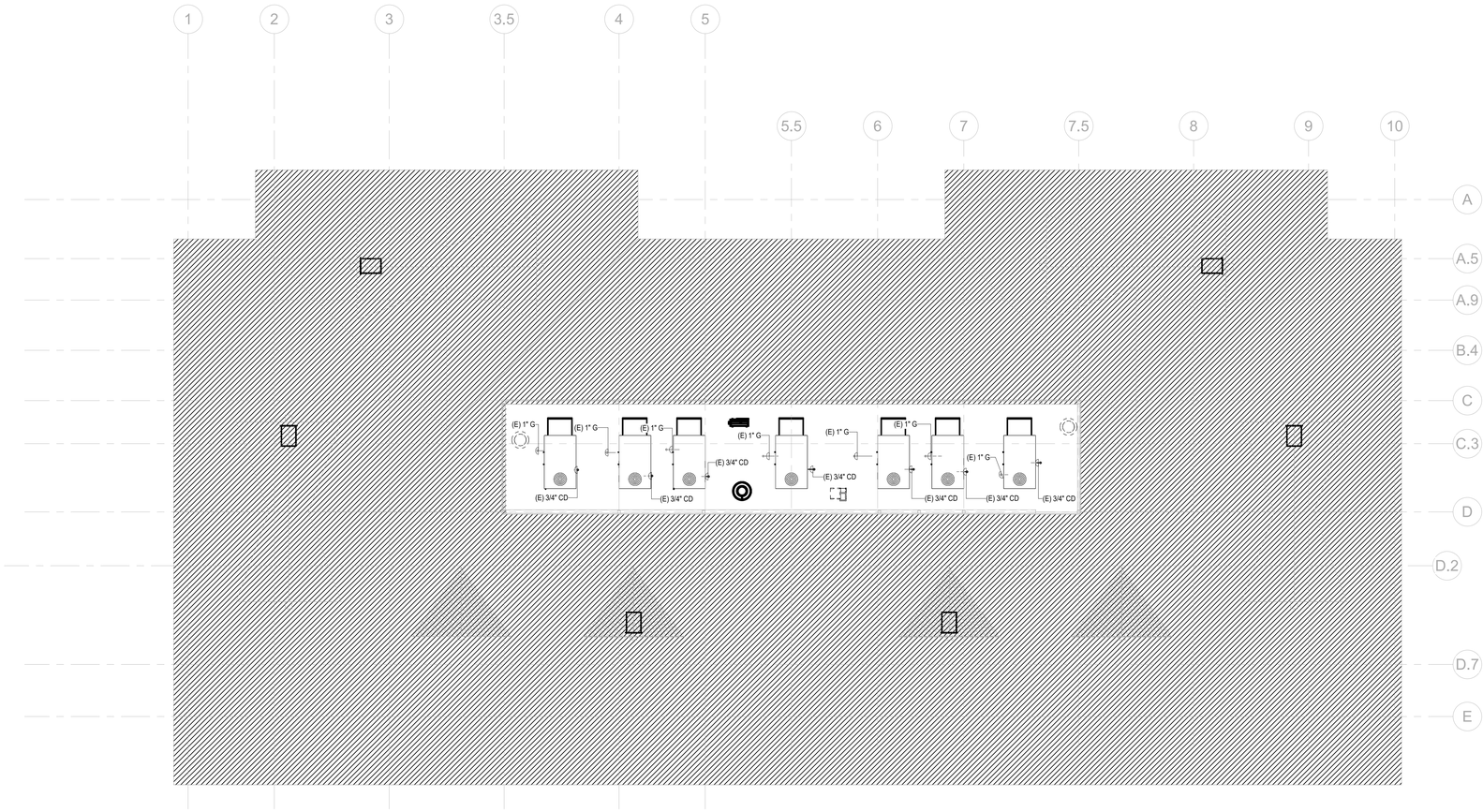

1 PLUMBING BLDG 300S ROOF PLAN - DEMO
1/8" = 1'-0"

N

FLOOR PLAN NOTES

GENERAL NOTES

A. REMOVE ALL EXISTING WATER PIPING AND WATER PIPING ON ROOF.
B. ALL GAS AND GAS EQUIPMENT IS TO REMAIN. PROTECT IN PLACE.
C. REMOVE ALL EXISTING SANITARY VENT PIPING ON ROOF.
D. ALL CONDENSATE PIPING ON ROOF IS TO REMAIN. PROTECT IN PLACE.

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Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
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PLUMBING BLDG 300S ROOF PLAN - DEMO

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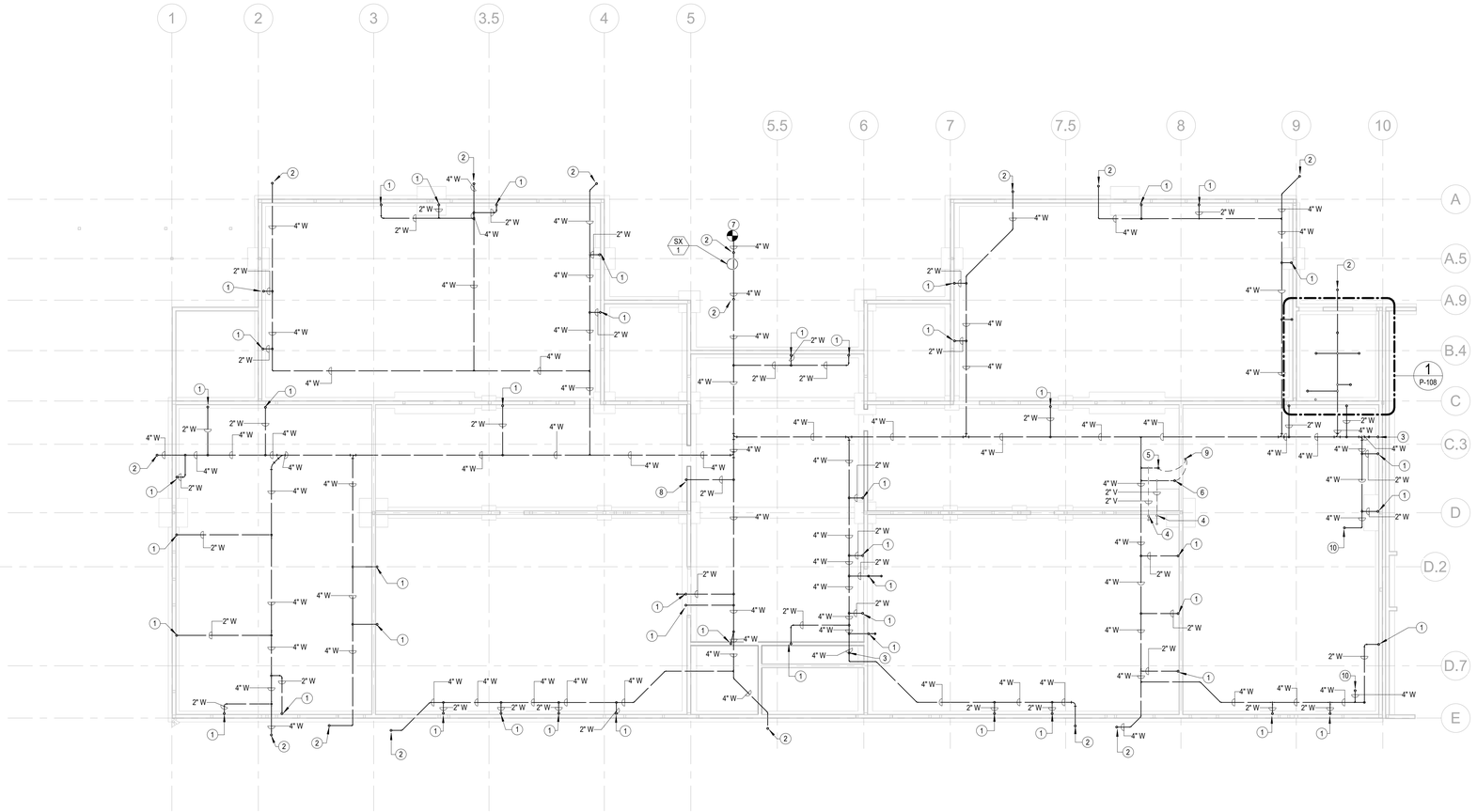

1 PLUMBING BLDG 300S UNDERGROUND PLAN - NEW
1/8" = 1'-0"

N

FLOOR PLAN NOTES

1 2" WASTE UP TO SINK.
2 4" WASTE UP TO GRADE CLEANOUT.
3 4" WASTE UP TO WALL CLEANOUT.
4 2" VENT UP TO CEILING.
5 3" WASTE UP TO FLOOR DRAIN.
6 3" WASTE UP TO FLOOR SINK.
7 4" WASTE BELOW FINISHED GRADE. POC TO EXISTING 4" WASTE LINE. PER THE PROVIDED AS-BUILTS WASTE INVERT ELEVATION IS 4.4" BELOW FINISHED GRADE.
8 2" WASTE UP TO CLOTHES WASHER BOX.
9 1/2" CW UP TO TRAP PRIMER.
10 4" WASTE UP TO FLOOR CLEANOUT.

GENERAL NOTES

A. A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT OR 1 PERCENT IS PROVIDED FOR DRAINAGE PIPING 4 INCHES OR LARGER ONLY WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER, TO THE STRUCTURAL FEATURES, OR TO THE ARRANGEMENT OF A BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF 1/4 INCHE PER FOOT OR 2 PERCENT AND THAT IS SUBJECT TO THE INSPECTOR'S APPROVAL.

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Grossmont Union High School District

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MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

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PLUMBING BLDG 300S UNDERGROUND PLAN - NEW

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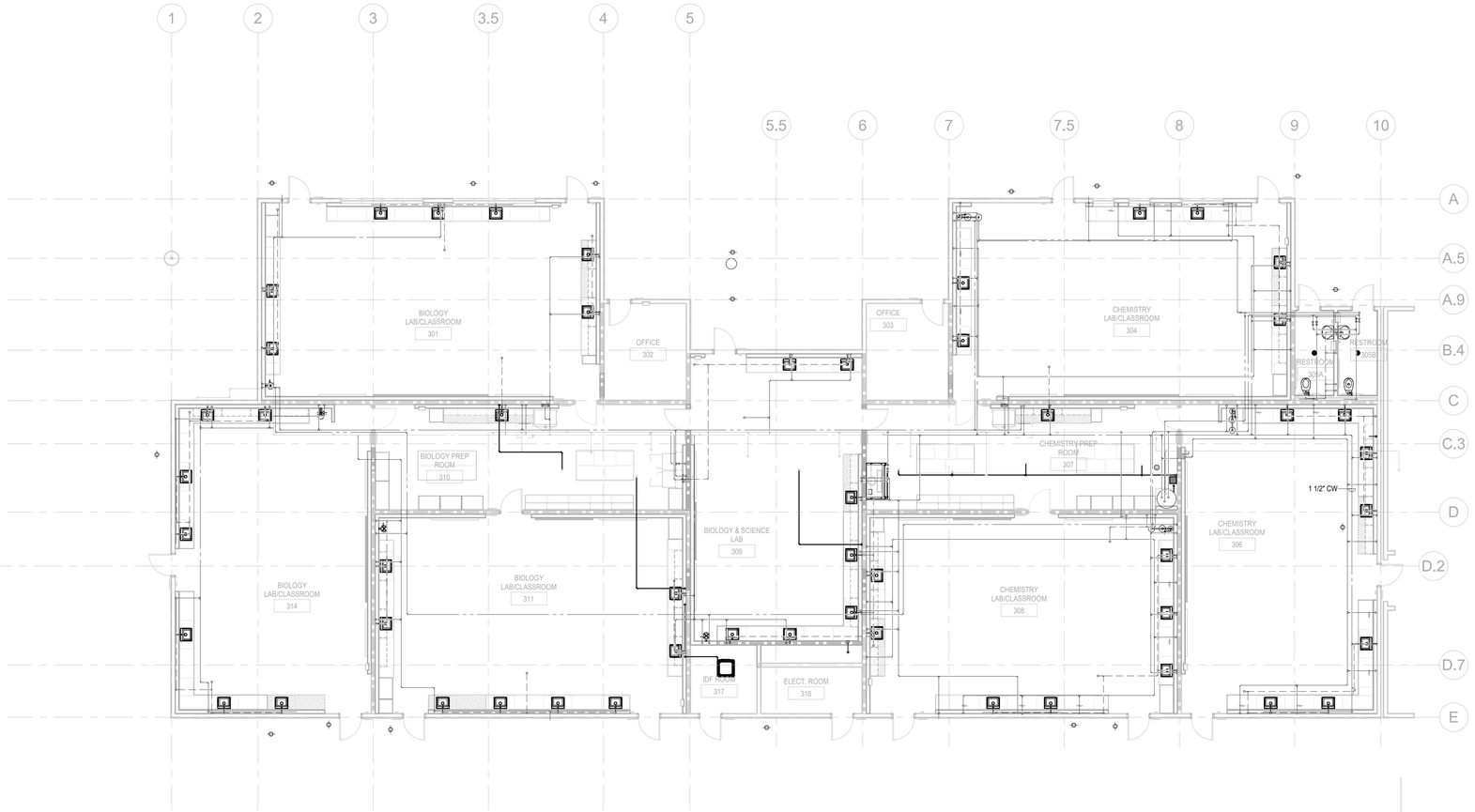

1 PLUMBING BLDG 300S FLOOR PLAN - NEW - OVERALL
1/8" = 1'-0"

N

FLOOR PLAN NOTES

GENERAL NOTES

WALL LEGEND

NEW WALL

1 HOUR BARRIER

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1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S
Modernization

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Spring Valley, CA 91977

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1	03/13/24	SD/DD Submittal
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PLUMBING
BLDG 300S
FLOOR PLAN -
NEW - OVERALL

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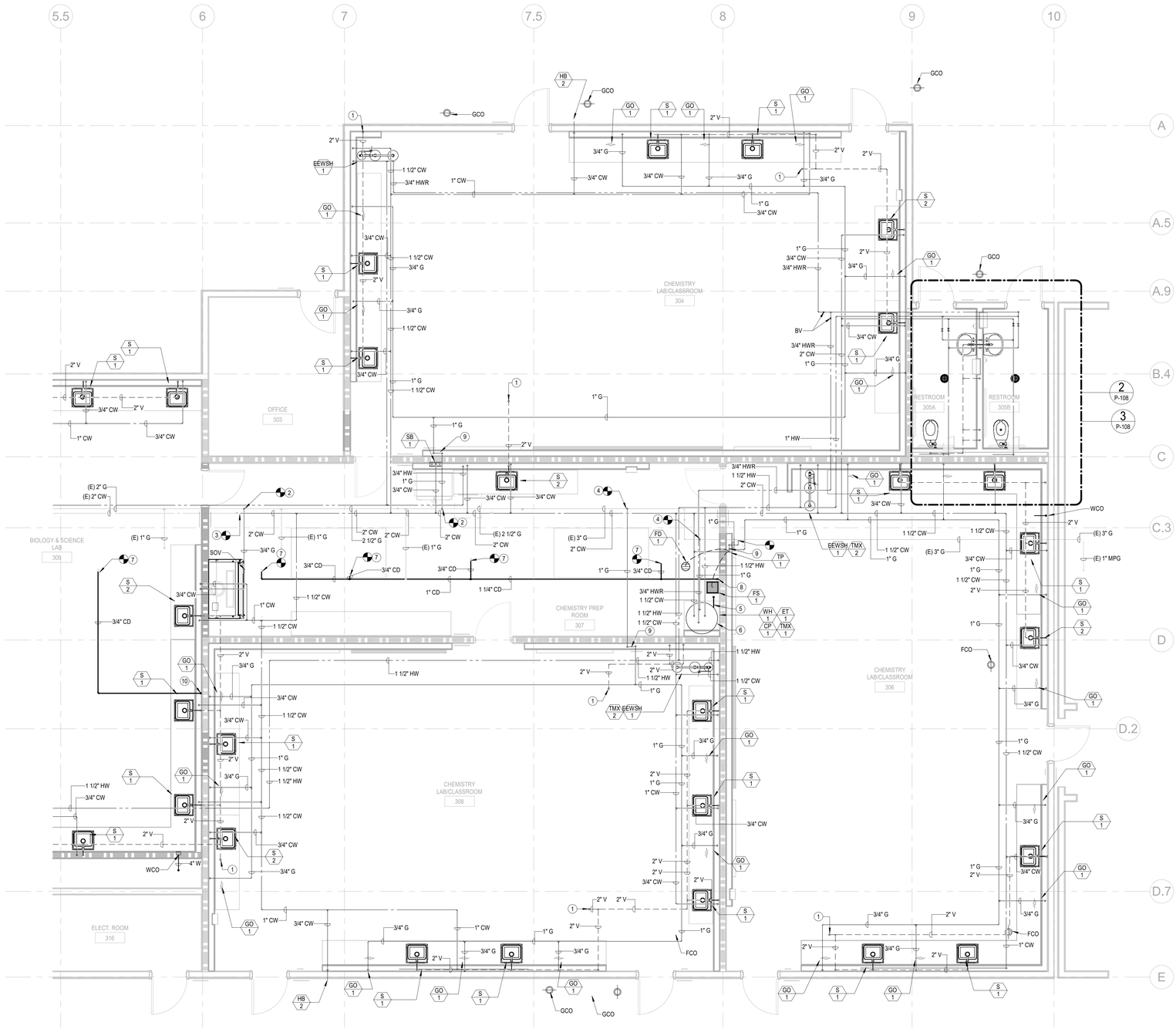

1 PLUMBING BLDG 300S FLOOR PLAN - NEW - NORTH
1/4" = 1'-0"

FLOOR PLAN NOTES

1 2" VTR.
2 1" GAS POC TO EXISTING 2-1/2" GAS LINE.
3 2" COLD WATER POC TO EXISTING 2" WATER LINE.
4 1" GAS POC TO EXISTING 3" GAS LINE.
5 TEMPERATURE AND PRESSURE RELIEF VALVE. DRAIN TO FLOOR SINK.
6 WATER HEATER. SEE WATER HEATER DETAIL FOR MORE INFORMATION.
7 POINT OF CONNECTION TO EXISTING 3/4" CONDENSATE DRAIN LINE.
8 2" CONDENSATE DRAIN DN TO FLOOR SINK.
9 CLASSROOM MASTER GAS SHUTOFF VALVE.
10 3/4" CONDENSATE DRAIN DOWN IN WALL. EXTEND TO SINK TRAP. SEE DETAIL 5/P-501.

GENERAL NOTES

A. A NEUTRALIZATION TRAP SHALL BE PROVIDED AT ALL SINKS.
B. SHUTOFF VALVE FOR LABORATORIES. EACH LABORATORY SPACE CONTAINING TWO (2) OR MORE GAS OUTLETS INSTALLED ON TABLES, BENCHES, OR IN HOODS IN EDUCATIONAL, RESEARCH, COMMERCIAL AND INDUSTRIAL OCCUPANCIES SHALL HAVE A SINGLE SHUTOFF VALVE THROUGH WHICH ALL SUCH GAS OUTLETS ARE SUPPLIED. THE SHUTOFF VALVE SHALL BE ACCESSIBLE AND SHALL BE LOCATED WITHIN THE LABORATORY OR LOCATED ADJACENT TO THE LABORATORY'S EGRESS DOOR AN SHALL BE IDENTIFIED [NFPA 53-.7.8.2.4].

WALL LEGEND

NEW WALL
1 HOUR BARRIER

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Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

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1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal
3	09/26/24	DSA Backcheck

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PLUMBING BLDG 300S FLOOR PLAN - NEW - NORTH

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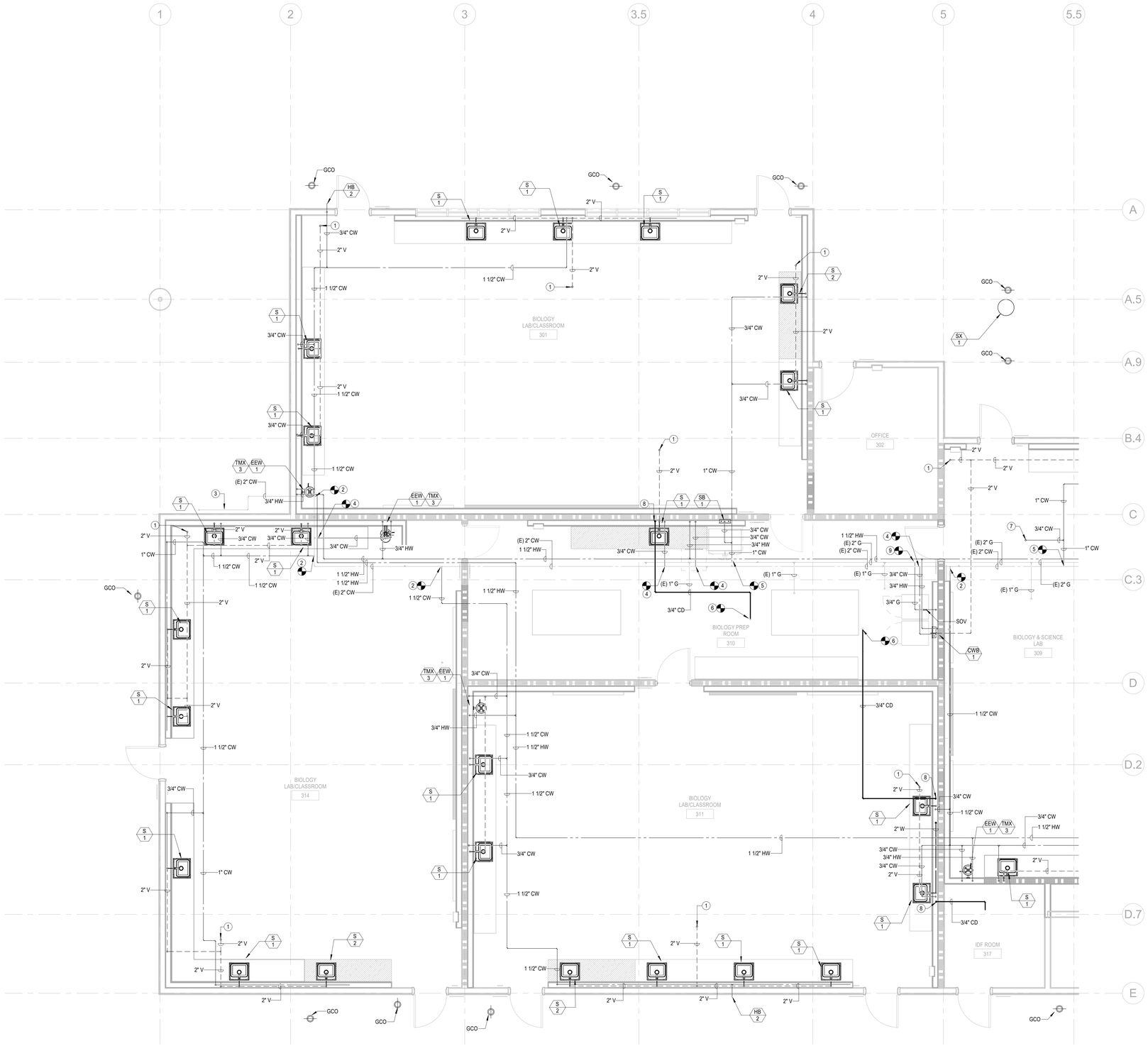

FLOOR PLAN NOTES

1 2" VTR.
2 1-1/2" COLD WATER POC TO EXISTING 2" WATER LINE.
3 EXISTING REDUCED PRESSURE BACKFLOW PREVENTER WITH MAIN BUILDING SOV TO REMAIN. PROTECT IN PLACE.
4 3/4" COLD WATER POC TO EXISTING 2" WATER LINE.
5 1" COLD WATER POC TO EXISTING 2" WATER LINE.
6 POINT OF CONNECTION TO EXISTING 3/4" CONDENSATE DRAIN LINE.
7 3/4" CW UP TO HOSE BIBB ON ROOF.
8 3/4" CONDENSATE DRAIN DOWN IN WALL. EXTEND TO SINK TRAP. SEE DETAIL 5/P-501.
9 3/4" LOW PRESSURE GAS CONNECT TO EXISTING 2" LOW PRESSURE GAS LINE.

GENERAL NOTES

A. A NEUTRALIZATION TRAP SHALL BE PROVIDED AT ALL SINKS.

WALL LEGEND

NEW WALL
1 HOUR BARRIER

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MMHS Bldg 300S Modernization

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Spring Valley, CA 91977

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PLUMBING BLDG 300S FLOOR PLAN - NEW - SOUTH

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P-106

1 PLUMBING BLDG 300S FLOOR PLAN - NEW - SOUTH
1/4" = 1'-0"

N

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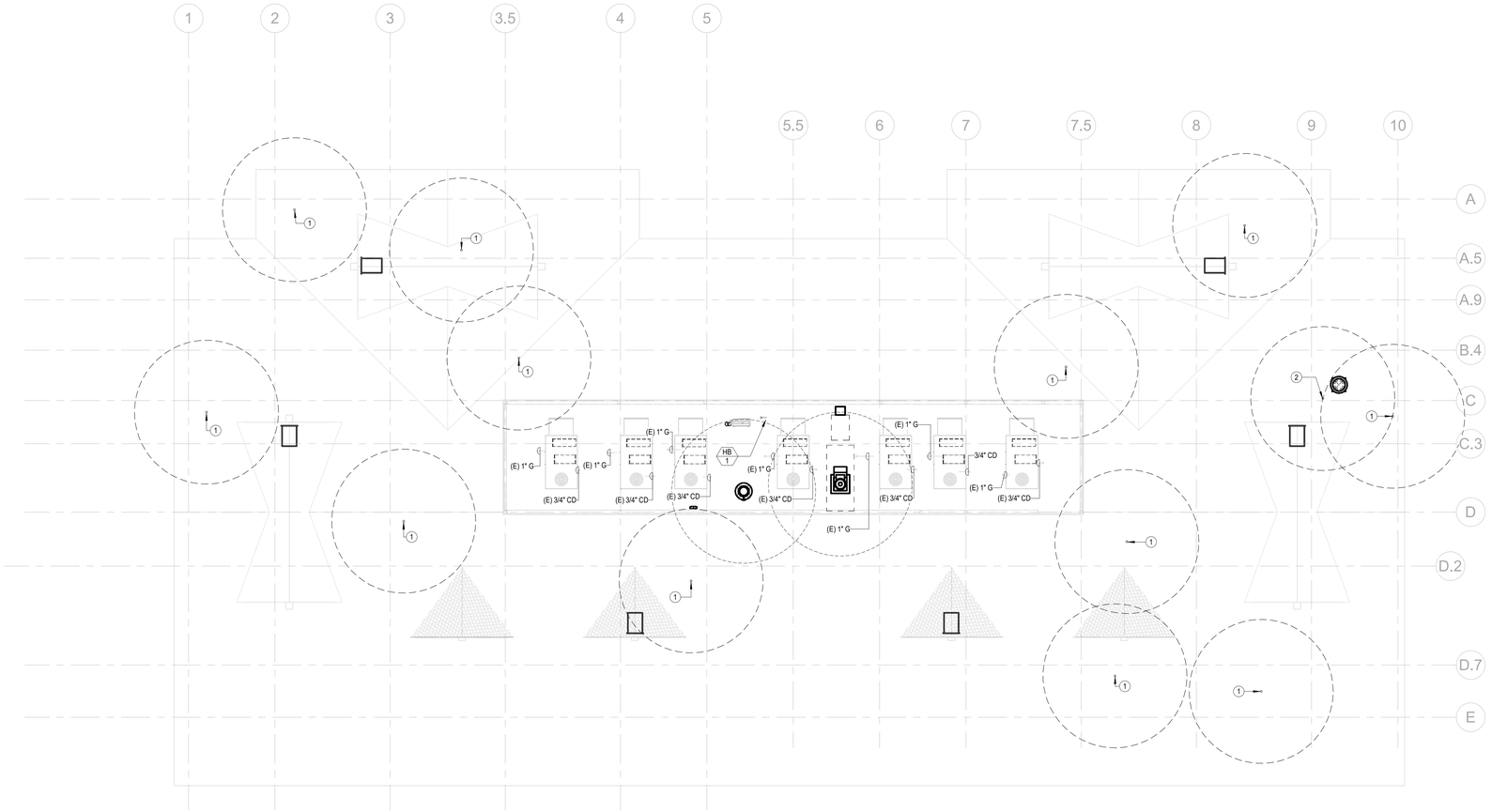

1 PLUMBING BLDG 300S ROOF PLAN
1/8" = 1'-0"

N

FLOOR PLAN NOTES

1 2" VTR.
2 4" VTR.

GENERAL NOTES

A. ALL PLUMBING SANITARY VENTS PENETRATING THROUGH THE ROOF SHALL HAVE AT MINIMUM A 10 FOOT CLEARANCE FROM ANY OPERABLE WINDOW AND INTAKE.

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PLUMBING
BLDG 300S
ROOF PLAN

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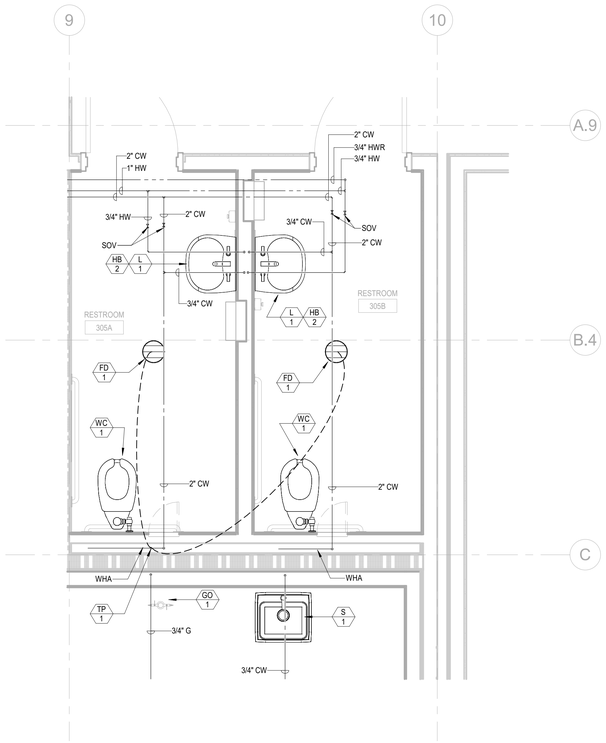
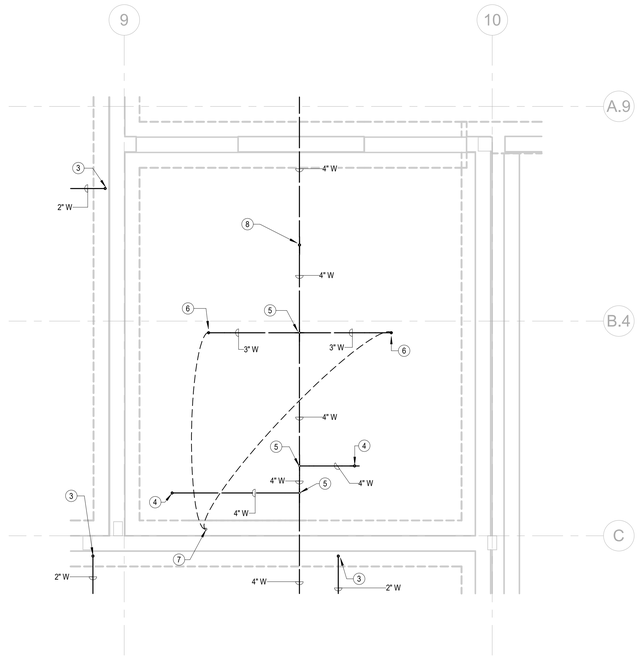
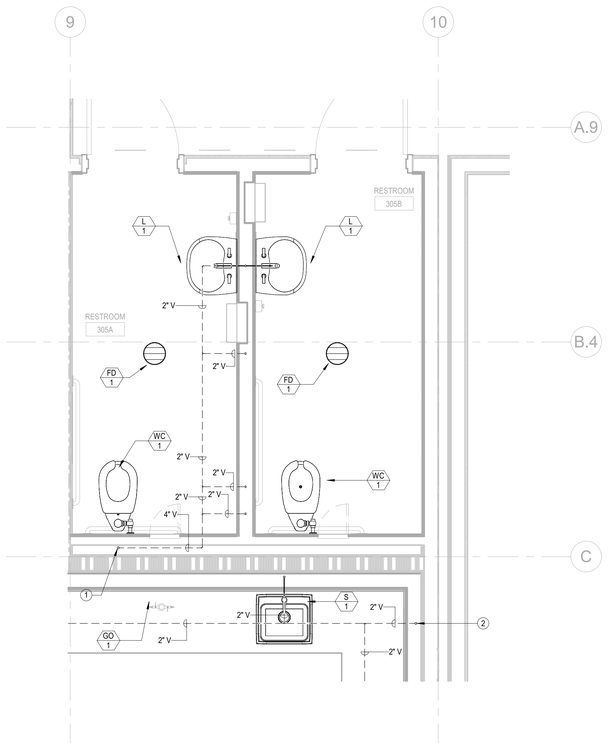


3 PLUMBING BLDG 300S ENLARGED PLAN - NEW - RESTROOMS - DOMESTIC WATER
1/2" = 1'-0"



1 PLUMBING BLDG 300S ENLARGED PLAN - NEW - RESTROOMS - UNDERGROUND
1/2" = 1'-0"



2 PLUMBING BLDG 300S ENLARGED PLAN - NEW - RESTROOMS - WASTE & VENT
1/2" = 1'-0"

FLOOR PLAN NOTES

1 4" VTR.
2 2" VTR.
3 2" WASTE UP TO SINK.
4 4" WASTE UP TO WATER CLOSET.
5 2" VENT UP TO CEILING.
6 3" WASTE UP TO FLOOR DRAIN.
7 1/2" CW UP TO TRAP PRIMER.
8 2" WASTE UP TO LAVATORY.

GENERAL NOTES

IDENTIFICATION STAMP
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GROSSMONT UNION HIGH SCHOOL DISTRICT

Grossmont Union
High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S
Modernization

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PLUMBING
ENLARGED
PLANS

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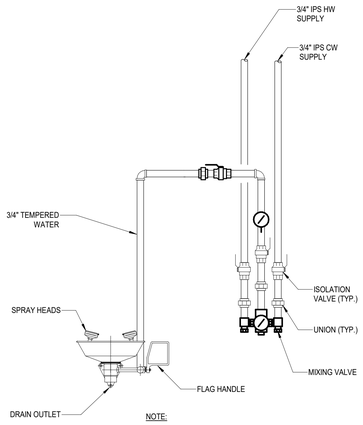
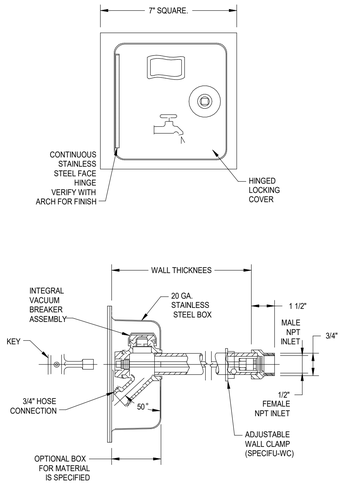


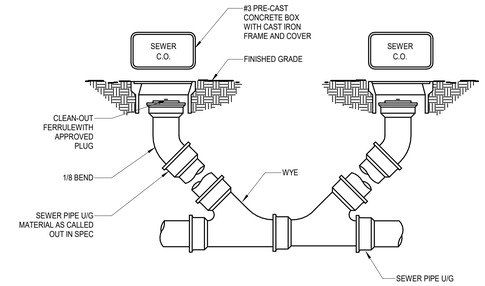
NOTE:

1. INSTALLATION FOR EMERGENCY EYE WASH AND TEMPERING VALVE PER MANUFACTURERS INSTALLATION INSTRUCTIONS.

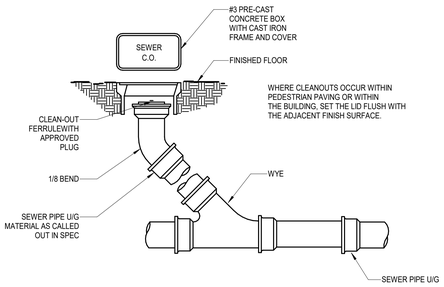
7 EMERGENCY EYE-WASH DETAIL
NO SCALE



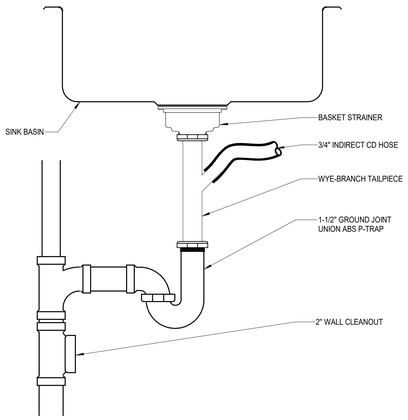
4 HOSE BIBB DETAIL (BOX TYPE)
NO SCALE



1 TWO-WAY GRADE CLEAN OUT DETAIL
NO SCALE



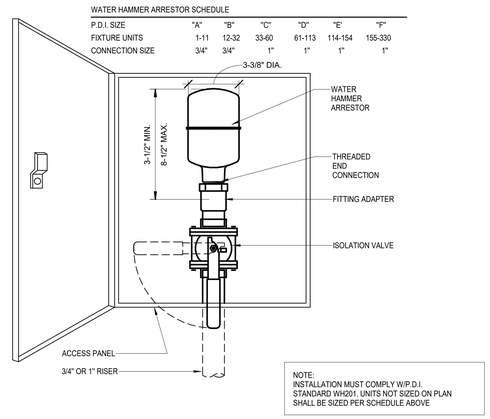
8 FLOOR CLEAN OUT DETAIL
NO SCALE



5 INDIRECT CONDENSATE WASTE CONNECTION
NO SCALE

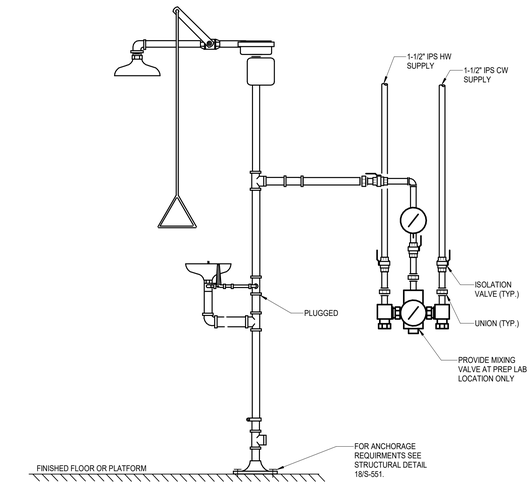
WATER HAMMER ARRESTOR SCHEDULE

P.D.I. SIZE	"A"	"B"	"C"	"D"	"E"	"F"
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330
CONNECTION SIZE	3/4"	3/4"	1"	1"	1"	1"

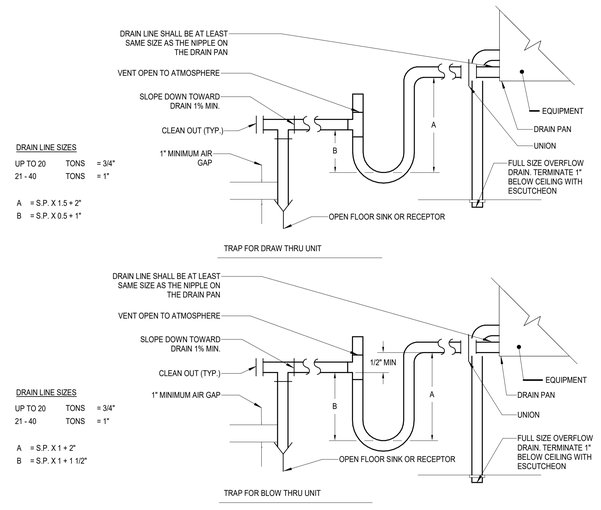


NOTE:
INSTALLATION MUST COMPLY W/P.D.I. STANDARD WH201. UNITS NOT SIZED ON PLAN SHALL BE SIZED PER SCHEDULE ABOVE

2 WATER HAMMER ARRESTOR ASSEMBLY DETAIL
NO SCALE



6 COMBINATION EMERGENCY SHOWER & EYEWASH DETAIL
NO SCALE



3 TYPICAL CONDENSATE DRAIN DETAIL
NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal
3	09/26/24	DSA Backcheck

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WWW.HED.DESIGN

PLUMBING DETAILS

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P-501

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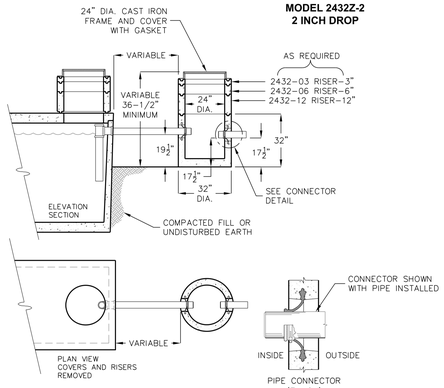
10/24/2024 9:08:38 AM

24" DIA. SAMPLE BOX WITH PIPE CONNECTORS

MODEL 2432Z-2
2 INCH DROP



PIPE CONNECTOR CAST INTEGRALLY IN WALL.
PIPE O.D. (INCHES)
4.25" MINIMUM TO 6.25" MAXIMUM

SEE Z-LOK PIPE CONNECTOR PAGE FOR ADDITIONAL INFORMATION

SAMPLE BOX WEIGHT: 1,250 LBS.
BOX DESIGN LOAD: H-20 TRAFFIC

SAMPLE BOX MUST BE PLACED ON SUITABLE BASE OF COMPACTED SOIL OR UNDISTURBED EARTH IN TRAFFIC CONDITION.

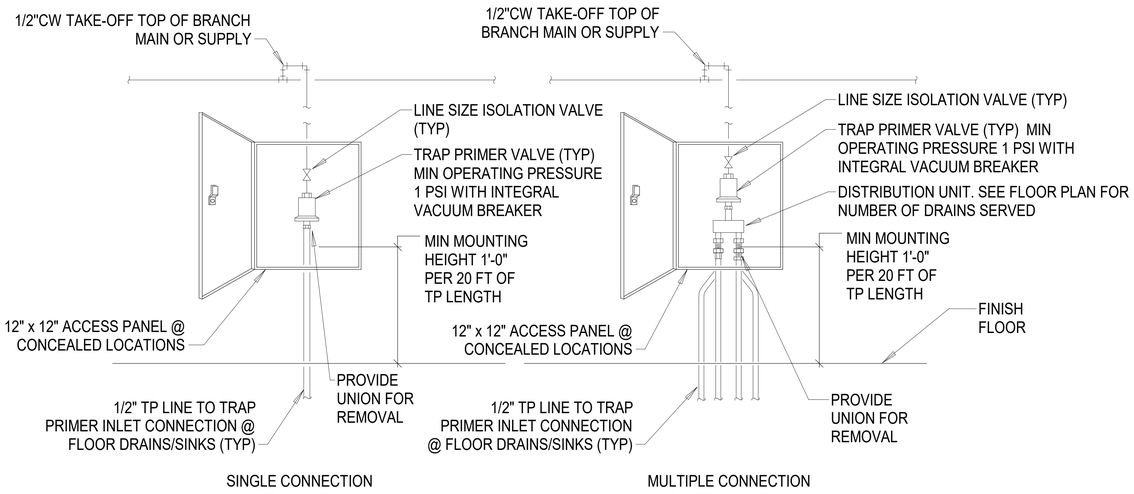
FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

A Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.

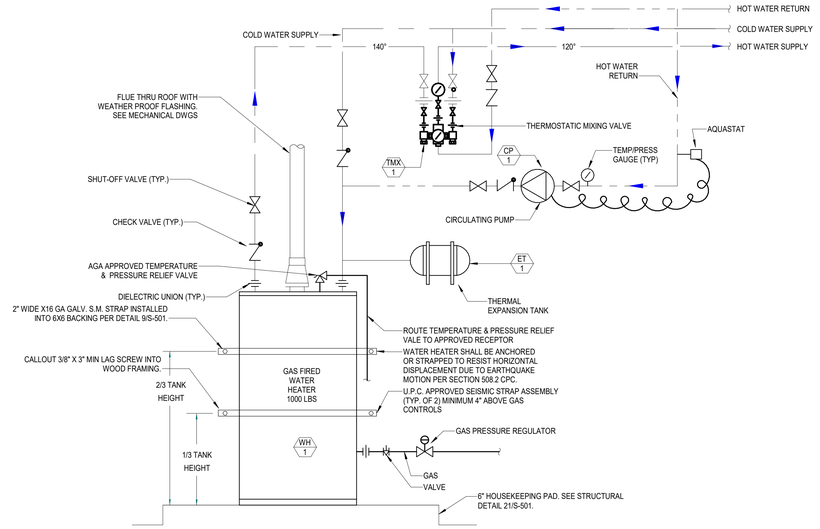
5/13/2020
D2432Z-2 SAMPLE BOX_A.DWG
©2020

JENSEN PRECAST EST. 1968

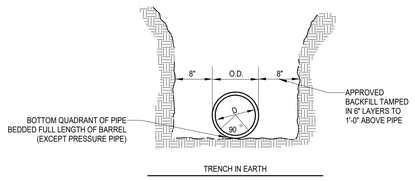
3 SAMPLE BOX DETAIL
NO SCALE



1 TRAP PRIMER IN ACCESS PANEL DETAIL
NO SCALE



2 WATER HEATER ATMOSPHERIC GAS FIRED DETAIL
NO SCALE



4 PIPE TRENCH BEDDING DETAIL
NO SCALE

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REGISTERED PROFESSIONAL ENGINEER — MICHAEL PEAK — No. M14607 — MECHANICAL — STATE OF CALIFORNIA
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(858) 398-3800

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PLUMBING DETAILS

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MECHANICAL LEGEND

SYMBOL	ABBREV	DESCRIPTION
		REMOVE EXISTING WORK HATCHED AND SHOWN DASHED
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT
T AC-#	T'STAT	THERMOSTAT OR TEMPERATURE SENSOR (NUMBER INDICATES EQUIPMENT ZONE SERVED)
T/CO2 AC-#	T/CO2	T/CO2 SENSOR
H	H'STAT	HUMIDISTAT
C2		CARBON DIOXIDE SENSOR
S		EMS TEMPERATURE SENSOR
℄	CFM	CUBIC FEET PER MINUTE
ø	DIA	DIAMETER
OR		SYMBOL, SEE EQUIPMENT SCHEDULE
	CD	CONDENSATE DRAIN (A.C.)
	RD	REFRIGERANT DISCHARGE
	RL	REFRIGERANT LIQUID
	RS	REFRIGERANT SUCTION
		PIPE UP
		PIPE DOWN

SYMBOL	ABBREV	DESCRIPTION
	CD	CEILING DIFFUSER
	RR	RETURN REGISTER
	ER	EXHAUST REGISTER
	SA	SA DUCT UP (RECTANGULAR)
	SA	SA DUCT DOWN (RECTANGULAR)
	RA/OA	RA/OA DUCT UP (RECTANGULAR)
	RA/OA	RA/OA DUCT DOWN (RECTANGULAR)
	EA	EA DUCT UP (RECTANGULAR)
	EA	EA DUCT DOWN (RECTANGULAR)
	SA	SA DUCT UP (ROUND)
	SA	SA DUCT DOWN (ROUND)
	RA/OA	RA/OA DUCT UP (ROUND)
	RA/OA	RA/OA DUCT DOWN (ROUND)
	EA	EA DUCT UP (ROUND)
	EA	EA DUCT DOWN (ROUND)
24"x12" 18"x12"		RECTANGULAR DUCT TRANSITION
24"ø 18"ø		ROUND DUCT TRANSITION
24"x24" 18"ø		RECTANGULAR TO ROUND DUCT TRANSITION
24"x12"		DUCTWORK (1ST NUMBER INDICATES WIDTH SHOWN), NET INSIDE DIMENSION
	TV	SQUARE ELBOW WITH TURNING VANES
		RADIUS ELBOW
	MVD	MANUAL VOLUME DAMPER
M	MOD	MOTOR OPERATED DAMPER
BD	BDD	BACKDRAFT DAMPER
FD	FD	FIRE DAMPER
SFD	SFD	AUTOMATIC SMOKE AND FIRE DAMPER
SD	SD	DUCT MOUNTED SMOKE DETECTOR
	FLEX	FLEXIBLE CONNECTION (DUCTWORK)
	FLEX	FLEXIBLE CONNECTION OR SEISMIC JOINT
		LINED DUCTWORK (OR PLENUM)

ABBREV	DESCRIPTION
AD/AP	ACCESS DOOR / ACCESS PANEL
AFF	ABOVE FINISHED FLOOR
AMB	AMBIENT
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE (AFF)
BHP	BRAKE HORSE POWER
CAP	CAPACITY
CLG	CEILING
CD	CEILING DIFFUSER
CONC	CONCRETE
CONT	CONTINUATION
°F	DEGREES FAHRENHEIT
DBA	A-WEIGHTED DECIBELS
DN	DOWN
DWGS	DRAWINGS
DB	DRY BULB
DTR	DUCT THROUGH ROOF
(E)	EXISTING
EDB	ENTERING DRY BULB
EA	EXHAUST AIR
ER	EXHAUST REGISTER
EFF	EFFICIENCY
ELEV	ELEVATION
EER	ENERGY EFFICIENCY RATIO
ESP	EXTERNAL STATIC PRESSURE
ENT	ENTERING
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
FF	FINISHED FLOOR
FIN	FINISH
FLR	FLOOR
FT	FEET
GAL	GALLON
GPM	GALLONS PER MINUTE
HOA	HAND-OFF-AUTOMATIC
HD	HEAD
Hz	HERTZ
HP	HORSEPOWER
IN	INCH
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
LD	LINEAR DIFFUSER
LRA	LOCKED ROTOR AMPS
MAX	MAXIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MBH	ONE THOUSAND B.T.U.'S PER HOUR
MECH	MECHANICAL
MIN	MINIMUM
MCA	MINIMUM CIRCUIT AMPS
MTD	MOUNTED
MTG	MOUNTING
NG	NATURAL GAS
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OPER	OPERATING
OA	OUTSIDE AIR
PH	PHASE
LBS	POUNDS
PSIG	POUNDS PER SQUARE INCH GAUGE
PD	PRESSURE DROP
RLA	RATED LOAD AMPS
REF	REFRIGERANT
REG	REGISTER
RR	RETURN REGISTER
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SENS	SENSIBLE
SS	STAINLESS STEEL
ST	STEAM
SA	SUPPLY AIR
SF	SQUARE FEET
TEMP	TEMPERATURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UOS	UNLESS OTHERWISE SPECIFIED
UTR	UP THROUGH ROOF
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
V	VOLTS
WG	WATER GAUGE
WB	WET BULB
W/	WITH

DSA NOTES

MEP COMPONENT ANCHORAGE NOTE

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 COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL
DIRECTIONS:

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

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG 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 DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.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: WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP☒ MD☒ PP☐ E ☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) OPM-0043-13

PLAN CHECK NOTES

1. ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTION 110.1-110.3, 110.5, 120.1-120.4 TITLE 24 ENERGY STANDARDS 2022.
2. PROVIDE SMOKE DETECTORS IN MAIN SUPPLY AIR DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2000 CFM PER SECTION 608.0 CMC 2022.
3. EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER SEC. 504.0 CMC 2022.
4. A WATERTIGHT PAN OF CORROSION RESISTANT MATERIAL SHALL BE PROVIDED BENEATH HVAC UNITS PER SECTION 310.2 CMC 2022.
5. ROOF ACCESS LADDER SHALL COMPLY WITH SECTION 304 CMC 2022.
6. HVAC DUCT INSULATION SHALL BE R-8 AT EXTERIOR INSTALLED DUCTWORK.
7. ACTORY MADE FLEXIBLE AIR DUCTS AND CONNECTORS SHALL NOT BE MORE THAN 5 FEET IN LENGTH PER SECTION 603.4.1 CMC 2022.

TITLE 24 NOTES

1. HVAC SYSTEMS SHALL MEET THE LATEST CONTROL REQUIREMENTS OF SECTIONS 110.2 & 120.2 TITLE 24 ENERGY STANDARDS 2022.
2. DOORS AND WINDOWS SHALL MEET MINIMUM INFILTRATION REQUIREMENTS OF SECTION 110.6 AND 110.7 TITLE 24 ENERGY STANDARDS 2022.
3. INSULATION AND FLEXIBLE DUCT SHALL COMPLY WITH STATE FIRE MARSHAL CRITERIA AND SHALL NOT EXCEED FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 450 PER ASTM-84, NFPA-225, AND U.L. 723.
4. ALL WORK SHALL BE IN ACCORDANCE WITH STATE CODES, CALIFORNIA ENERGY CONSERVATION STANDARDS, TITLE -24, AND ALL OTHER APPLICABLE CODES.
5. ALL ENVELOPE AND MECHANICAL CERTIFICATE OF ACCEPTANCE FORMS AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.
6. ALL PIPING AND DUCT WORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 120.3, 120.4 AND 120.7 TITLE 24 ENERGY STANDARDS 2022 AND CHAPTER 6 OF CMC 2022.

CA GREEN BUILDING NOTES

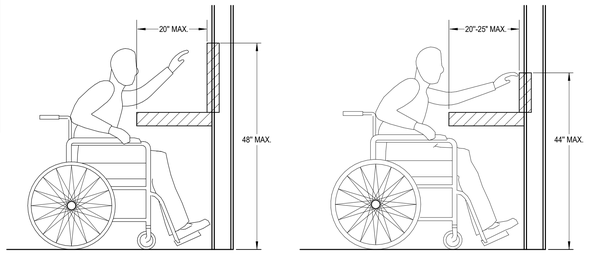
1. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE OCCUPIED AREAS OF BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDES AT LEAST MERV OF 13, SECTION 5.504.5.3 CGBSC 2022.
2. PROVIDE TESTING AND ADJUSTING OF HVAC SYSTEMS AND CONTROLS PER 5.410.4.3.1 CGBSC 2022.
3. COMMISSIONING IS REQUIRED FOR COMMERCIAL BUILDINGS 10,000 SF AND OVER PER SECTION 5.410.2 CGBSC 2022.
4. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF ADDITION OR ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, RETURN AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992 SHALL BE USED. ALL FILTERS SHALL BE REPLACED IMMEDIATELY PRIOR TO OCCUPANCY OR AT THE CONCLUSION OF CONSTRUCTION (5.504.1 CGBSC 2022).
5. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM (5.504.3 CGBSC 2022).
6. IN MECHANICALLY VENTILATED BUILDINGS, REGULARLY OCCUPIED AREAS OF THE BUILDING SHALL BE PROVIDED WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL (5.504.5.3 CGBSC 2022).
7. WHERE OUTDOOR AREAS ARE PROVIDED FOR SMOKING, PROHIBIT SMOKING WITHIN THE BUILDING AS ALREADY PROHIBITED BY OTHER LAWS OR REGULATIONS; OR AS ENFORCED BY ORDINANCES, REGULATIONS, OR POLICIES OF ANY CITY, COUNTY, CITY AND COUNTY, CALIFORNIA COMMUNITY COLLEGE, CAMPUS OF THE CALIFORNIA STATE UNIVERSITY, OR CAMPUS OF THE UNIVERSITY OF CALIFORNIA, WHICHEVER ARE MORE STRINGENT. WHEN ORDINANCES, REGULATIONS, OR POLICIES ARE NOT IN PLACE, SIGNAGE SHALL BE POSTED TO INFORM BUILDING OCCUPANTS OF THE PROHIBITIONS.
8. MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS SHALL MEET THE MINIMUM REQUIREMENTS OF SECTION 121 (REQUIREMENTS FOR VENTILATION) OF THE 2022 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8. (CAL GREEN SECTION 5.506.1)
9. FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2022 CALIFORNIA ENERGY CODE, SECTION 120.1(C)(4), (5.506.2 CGBSC 2022).
10. BUILDING ASSEMBLIES AND COMPONENTS WITH STC VALUES DETERMINED IN ACCORDANCE WITH ASTM E90 AND ASTM E413 SHALL BE EMPLOYED.
11. WALL AND ROOF-CEILING ASSEMBLIES EXPOSED TO THE NOISE SOURCE MAKING UP THE BUILDING OR ADDITION ENVELOPE OR ALTERED ENVELOPE SHALL MEET A COMPOSITE STC RATING OF AT LEAST 50 OR A COMPOSITE OITC RATING OF NO LESS THAN 40, WITH EXTERIOR WINDOWS OF A MINIMUM STC OF 40 OR OITC OF 30 IF LOCATED WITHIN THE 65 CNEL NOISE INDUSTRIAL SOURCE OR FIXED-GUIDEWAY SOURCE AS DETERMINED BY THE NOISE ELEMENT OF THE GENERAL PLAN. (5.507.4.1 CGBSC) SEE EXCEPTIONS 1&2 ON SEC. 5.507.4.1.
12. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2 CGBSC 2022. HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CHLOROFLUOROCARBONS (CFCs) AND SHALL NOT CONTAIN HALONS (5.508.1 CGBSC 2022).
13. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS, THE NEBB PROCEDURAL STANDARDS; OR AABC NATIONAL STANDARDS.
14. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, 5.410.4.5 CGBSC 2022, AND OTHER RELATED REGULATIONS.

GENERAL NOTES

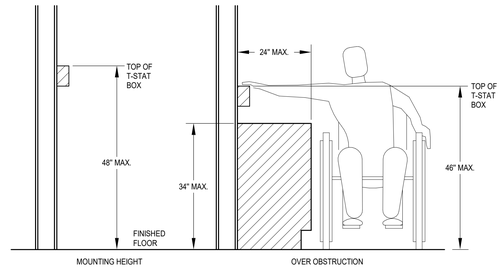
1. THESE DRAWINGS ARE A GENERAL GRAPHIC PRESENTATION OF THE WORK. DUCTWORK, PIPING, AND EQUIPMENT, AS SHOWN, ARE SCHEMATIC. FABRICATE AND INSTALL BASED ON ACTUAL FIELD MEASUREMENT. COORDINATE WITH OTHER TRADES. PROVIDE A COMPLETE SET OF SHOP DRAWINGS REFLECTING ACTUAL INSTALL, ACCESS REQUIREMENTS, AND DETAILS BASED UPON THE ACTUAL EQUIPMENT PROCURED. MAINTAIN AN UP TO DATE SET OF AS-BUILT DRAWINGS AT THE JOB SITE.
2. THESE DRAWINGS ARE TO BE CONSIDERED NOT FOR CONSTRUCTION UNTIL THEY ARE STAMPED, SIGNED, AND PERMITTED. UNTIL THEN THEY ARE SUBJECT TO CHANGE WITHOUT NOTICE.
3. REVIEW ALL DRAWINGS AND SPECIFICATIONS INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL. ANY QUESTIONS SHALL BE BROUGHT UP, IN WRITING, TO THE ATTENTION OF THE ENGINEER BEFORE THE START OF CONSTRUCTION.
4. PROVIDE ACCESS AND CLEARANCE FOR MAINTENANCE FOR MECHANICAL EQUIPMENT AND COMPONENTS AS RECOMMENDED BY EQUIPMENT MANUFACTURER AND APPLICABLE CODES.
5. HANDLE, STORE AND INSTALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
6. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT ARRANGED TO ALLOW SERVICE MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUT-DOWN.
7. BRACE AND SUPPORT PIPES, CONDUIT, AND DUCTWORK IN ACCORDANCE WITH SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL AND PLUMBING PIPING SYSTEM.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS, REGISTERS, GRILLES, AND ACCESS PANELS.
9. ALL DUCT DIMENSIONS, AS SHOWN ON MECHANICAL DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
10. COMMISSION AND START-UP THE MECHANICAL SYSTEMS TO ASSURE A COMPLETE AND OPERATIONAL HVAC SYSTEM IN ACCORDANCE WITH ASHRAE AND NEBB.
11. ALL SQUARE ELBOWS IN DUCTWORK SHALL HAVE DOUBLE THICKNESS TURNING VANES. ALL RADIUS ELBOWS IN DUCTWORK SHALL BE MINIMUM 1.5W (1.5xWIDTH) AND HAVE 3 SPLITTER VANES. PROVIDE MANUAL VOLUME DAMPER AT EACH BRANCH DUCT TAKE- OFF SERVING EACH AIR TERMINAL DEVICE. PROVIDE BALANCING DAMPERS FOR EACH MAIN DUCT TAKE-OFF IN ACCORDANCE WITH SMACNA IN ORDER TO ASSURE A COMPLETELY BALANCED SYSTEM.
12. FIRE DAMPER ASSEMBLIES, INCLUDING LOCATION, SLEEVES, AND INSTALLATION PROCEDURES SHALL BE APPROVED BY THE BUILDING INSPECTOR PRIOR TO PROCUREMENT AND INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF FIRE RATED WALLS AND SMOKE SEPARATIONS.
13. COORDINATE WITH ELECTRICAL AND CONTROL CONTRACTORS FOR ALL POWER REQUIREMENTS PRIOR TO BID.
14. UPON INSTALLATION OF ALL EQUIPMENT, DEVICES, VIBRATION ISOLATION, ETC., PROVIDE WRITTEN CONFIRMATION BY EQUIPMENT MANUFACTURER'S REPRESENTATIVES TO ENSURE COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS.
15. PROVIDE DETAILS AND SEISMIC CALCULATIONS FOR ALL EQUIPMENT ON VIBRATION ISOLATION. ALL DETAILS SHALL BE STAMPED BY A STRUCTURE ENGINEER FROM VIBRATION ISOLATION MANUFACTURER.
16. THE CONTRACTOR SHALL SELECT ALL CIRCUIT SETTERS/BALANCING VALVES FOR ACTUAL FLOW THROUGH THE PIPE AND THE PROPER PRESSURE DROP TO ENSURE PROPER OPERATION AND NOT BASED ON PIPE SIZES.
17. PROVIDE ALL MULTI-MOTOR EQUIPMENT WITH HIGH SCCR RATING.

PROJECT NOTES

1. CONTRACTOR SHALL COORDINATE ARCHITECTURAL REFLECTED CEILINGS PLANS WITH ALL DISCIPLINES TO VERIFY CLEARANCES BETWEEN HVAC DUCTS, HVAC PIPING, LIGHT FIXTURES, ELECTRICAL DATA CONDUITS, PLUMBING LINES, FIRE PROTECTION LINES, STRUCTURAL MEMBERS, ETC. SPECIAL ATTENTION IS REQUIRED ALONG THE LENGTH OF MAIN MECHANICAL SUPPLY AND RETURN AIR DUCTS WHERE THERE IS LIMITED CLEARANCE FOR PASSAGE OR ROUTING OF UTILITIES.
2. THE SPACE FOR DUCT WORK & MECHANICAL EQUIPMENT FOR THIS PROJECT IS LIMITED. COORDINATION WITH OTHER TRADES IS CRITICAL. PROCEED WITH PREPARATION OF SHOP DRAWINGS IMMEDIATELY UPON RECEIVING AN AUTHORIZATION TO PROCEED FOR THE PROJECT. COMPLETE SHOP DRAWINGS PRIOR TO MATERIAL FABRICATION AND INSTALLATION.
3. PROVIDE ORIGINALLY PREPARED CONTRACTOR'S SHOP DRAWINGS IN ELECTRONIC FORMAT. THE SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING:
   a. DUCT, PIPE AND PLUMBING ELEVATIONS.
   b. DOUBLE LINE DUCTWORK AND PIPING (6" AND LARGER).
   c. ACTUAL SIZE OF PURCHASED EQUIPMENT. PER APPROVED CONTRACTOR'S SHOP DRAWINGS.
   d. ACCESS PANELS INCLUDING CEILING PANELS.
   e. ACCESS CLEARANCES FOR EQUIPMENT.
   f. ACTUAL LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND RETURN REGISTERS.
   g. LOCATIONS OF STRUCTURAL MEMBERS SUCH AS BEAMS.
   h. ACTUAL LOCATIONS OF CONTROL PANELS AND POWER CONNECTIONS TO EQUIPMENT.
   i. COLOR CODED DUCT AND PIPING BASED ON MATERIAL USED.
   j. MINIMUM 1/4"=1'0" SCALE DRAWINGS.
   k. LABEL AND TAG SCHEDULE FOR EQUIPMENT.
   l. DUCT TRANSITIONS TO CLEAR BEAMS OR TIGHT AREAS.
   m. ROOM TEMPERATURE SENSOR LOCATIONS.
   n. POINT OF CONNECTION TO UTILITIES OUTSIDE THE BUILDING.
   o. SECTIONS OR 3-D DRAWINGS OF CONGESTED AREAS.
   p. GRID LINES.
   q. UNDERGROUND PIPING.
4. DO NOT COMMENCE WITH ANY INSTALLATION. ORDERING OF ANY EQUIPMENT OR MATERIAL FABRICATION WITHOUT AN APPROVED SHOP DRAWING SUBMITTAL.
5. FOR EACH SUBMITTAL, THE CONTRACTOR SHALL PROVIDE A LETTER (ON COMPANY LETTERHEAD) AND SIGNED BY THE PROJECT MANAGER INDICATING THE SUBMITTAL HAS BEEN FULLY IN HOUSE REVIEWED TO ENSURE FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND COORDINATION WITH OTHER TRADES. ANY EXCEPTIONS TO THE CONTRACT DOCUMENTS SHALL BE CLEARLY INDICATED ON THIS LETTER.



2 OBSTRUCTED HEIGHT FORWARD REACH
NO SCALE



1 MOUNTING HEIGHT OVER OBSTRUCTION
NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

GROSSMONT UNION HIGH SCHOOL DISTRICT
EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

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MECHANICAL LEGEND & GENERAL NOTES

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M-001

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10/24/2024 10:02:47 AM

EXISTING ROOFTOP PACKAGED (GAS/ELECTRIC) UNIT SCHEDULE

SYMBOL	DESCRIPTION	AREA SERVED	SUPPLY FAN				COOLING CAPACITY							HEATING			ELECTRICAL					MIN. OSA CFM	FILTERS		MAX. OPER. WT. (LBS)	REMARKS
			CFM	E.S.P.	DRIVE	B.H.P.	AMB (°F)	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	TOTAL CAP. (MBH)	SENSIBLE CAP. (MBH)	INPUT MBH	OUTPUT MBH	MIN. AFUE/TE	MCA	MOCP	VOLT	PHASE	Hz		MERV	THICKNESS		
EAC 1	TRANE PREC YHJ072AS0L	BIOLOGY LAB/CLASSROOM 314	2400	1.0	DIRECT	1.06	95	80	67	59	57.3	76.57	58.55	80	64.8	0.81	38	50	208	3	60	1160	13	2"	3	1 2 4	--
EAC 2	TRANE PREC YHJ072AS0L	BIOLOGY LAB/CLASSROOM 311	2400	1.0	DIRECT	1.06	95	80	67	59	57.3	76.57	58.55	80	64.8	0.81	38	50	208	3	60	1195	13	2"	3	1 2 4	--
EAC 3	TRANE PREC YHJ072AS0L	CHEMISTRY LAB/CLASSROOM 308	2400	1.0	DIRECT	1.06	95	80	67	59	57.3	76.57	58.55	80	64.8	0.81	38	50	208	3	60	1180	13	2"	3	1 2 4	--
EAC 4	TRANE PREC YHJ072AS0L	CHEMISTRY LAB/CLASSROOM 306 CHEMISTRY PREP ROOM 307	2400	1.0	DIRECT	1.06	95	80	67	59	57.3	76.57	58.55	80	64.8	0.81	38	50	208	3	60	1795	13	2"	3	1 2 4	--
EAC 5	TRANE PREC YHJ072AS0L	BIOLOGY LAB/CLASSROOM 301 OFFICE 302	2400	1.0	DIRECT	1.06	95	80	67	59	57.3	76.57	58.55	80	64.8	0.81	38	50	208	3	60	1425	13	2"	3	1 2 4	--
EAC 6	TRANE PREC YHJ072AS0L	CHEMISTRY LAB/CLASSROOM OFFICE 304	2400	1.0	DIRECT	1.06	95	80	67	59	57.3	76.57	58.55	80	64.8	0.81	38	50	208	3	60	1425	13	2"	3	1 2 4	--
EAC 7	TRANE PREC YHJ072AS0L	BIOLOGY & SCIENCE LAB 309 BIOLOGY PREP ROOM 310	2400	1.0	DIRECT	1.06	95	80	67	59	57.3	76.57	58.55	80	64.8	0.81	38	50	208	3	60	1655	13	2"	3	1 2 4	--

1 SCHEDULED FOR REFERENCE ONLY. 2 REBALANCE MINIMUM OSA DAMPER. 3 EXISTING TO REMAIN. 4 PROVIDE WITH AUTOMATIC SHUTOFF AS REQUIRED PER CMC 609.

EXISTING DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE

SYMBOL	DESCRIPTION	AREA SERVED	INDOOR FAN UNIT												OUTDOOR UNIT								COOLING CAPACITY					HEATING		REMARKS
			INDOOR FAN MOTOR							FILTERS		MIN. OSA CFM	OPER. WT. (LBS.)				ELECTRICAL DATA			OPER. WT. (LBS.)									
			CFM	E.S.P.	DRIVE	H.P.	VOLT	PHASE	Hz	FLA	MERV	THICKNESS				MCA	MOCP	VOLT	PHASE	Hz									
EFC 1	FUJITSU ACUH12LUAS1/AOUH12LUAS1	IDF ROOM 317	355	--	DIRECT	--	208	1	60	--	--	--	--	35	EC 1	11.3	15	208	1	60	85	12.0	12.0	95	80	67	47	16.0	1 2 3	--

1 SCHEDULED FOR REFERENCE ONLY. 2 RELOCATE EXISTING INDOOR UNIT. SEE DETAIL 9/M501. 3 EXISTING OUTDOOR UNIT TO REMAIN.

AIR DISTRIBUTION SCHEDULE

SYMBOL	TYPE	NECK SIZE	CFM RANGE	MODEL	ACCESSORIES	STYLE	REMARKS
A	SUPPLY AIR	8x8	0-230	FOR INSTALLATION IN LAY-IN CEILING: TITUS PMC PERFORATED FACE.	--	MODULAR CORE	1 2 3
		10x10	231-350				
		12x12	351-500				
		14x14	501-680	FOR INSTALLATION IN HARD CEILING, DUCTWORK OR FOR NECK SIZES ABOVE 18x18: TITUS MCD			
		16x16	681-840				
		18x18	841-960				
B TG	RETURN, EXHAUST, OR TRANSFER AIR GRILLE	8x8	200	FOR INSTALLATION IN LAY-IN CEILING: TITUS PAR PERFORATED FACE.	--	PERFORATED FACE AND LOUVERED FACE	1 2 3
		10x10	300				
		12x12	450				
		14x14	600				
		16x16	800				
		18x18	1000	FOR INSTALLATION IN HARD CEILING, DUCTWORK OR FOR NECK SIZES ABOVE 22x22: TITUS 350RL			
		20x20	1200				
		22x22	1400				
C	SUPPLY AIR	SEE PLANS	SEE PLANS	TITUS 300 RS	--	SIDEWALL	1 2 3
D	RETURN, EXHAUST AIR	SEE PLANS	SEE PLANS	TITUS 350 RL	--	SIDEWALL	1 2 3

1 PROVIDE SIZES AND LOCATIONS AS INDICATED IN DRAWINGS.
2 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING/WALL TYPE GRILLES TO DETERMINE REQUIRED FRAME TYPE.
3 COORDINATE CUSTOM COLORS WITH ARCHITECT.

EXHAUST FAN SCHEDULE

SYMBOL	DESCRIPTION	AREA SERVED	CFM	E.S.P.	DRIVE	RPM	MIN. WHEEL DIA.	MOTOR				DBA	MAX. OPER WT. (LBS.)	REMARKS
								B.H.P.	H.P.	VOLT	PHASE			
EF 300S-1	GREENHECK SE1-16-428-VG	CLASSROOM/LAB EXHAUST(S)	2400	0.35	DIRECT	1725	-	0.59	3/4	115	1	68	140	1 2 3 4 5 13 14 15 16 21 --
EF 300S-2	GREENHECK CUE-160-VG	BIOLOGY & SCIENCE LAB 309, BIOLOGY PREP ROOM 310	2400	0.5	DIRECT	1200	-	0.49	3/4	115	1	64	130	4 5 6 13 14 15 17 --
EF 300S-3	GREENHECK VEKTOR-H-10	CHEMISTRY PREP ROOM 307 FUME HOOD	800	1.0	DIRECT	3500	-	0.44	1	208	3	70	540	7 8 9 10 11 12 13 14 18 20 --
EF 300S-4	GREENHECK SQ-80-VG	RESTROOM 305A, RESTROOM 305B	260	0.5	DIRECT	1725	-	0.07	1/10	115	1	57/53	80	4 5 13 14 19 --

1 FAN TO BE SIDEWALL MOUNTED AT ROOF DORMERS. 2 PROVIDE WITH VERTICAL MOUNT EXHAUST GRAVITY BACKDRAFT DAMPER. 3 PROVIDE WITH SHORT WALL HOUSING. 4 PROVIDE WITH EC MOTOR. 5 PROVIDE WITH MOTOR MOUNTED SPEED CONTROL. 6 PROVIDE WITH ROOF CURB, BIRDSCREEN, AND BACKDRAFT DAMPER. 7 PROVIDE WITH VFD RATED MOTOR. 8 PROVIDE WITH BYPASS AIR PLENUM. 9 PROVIDE WITH BYPASS AND ISOLATION DAMPER. 10 PROVIDE WITH WEATHERHOOD OVER BYPASS DAMPER WITH INLET SCREEN. 11 PROVIDE WITH BOTTOM INTAKE ROOF CURB. 12 PROVIDE WITH VFD. 13 EXHAUST FAN TO BE CONTROLLED BY DDC. 14 EXHAUST FAN TO OPERATE ON TIME OF DAY SCHEDULE. 15 FAN SPEED TO BE CONTROLLED BY THE DDC TO MAINTAIN ROOM PRESSRUE. 16 SEE DETAIL 4/M-502. 17 SEE DETAIL 5/M-502. 18 SEE DETAIL 3/M-502. 19 SEE DETAIL 9/M-501. 20 STACK VELOCITY IS 4,082 FPM. 21 PROVIDE EC MOTOR WITH 0-10VDC CONTROL SIGNAL

GRAVITY RELIEF SCHEDULE

SYMBOL	MAKE AND MODEL	AREA SERVED	LOCATION	CFM	ESP	MAX OPER WEIGHT (LBS)	REMARKS
GR 300S-1	GREENHECK GRSR-8	RESTROOM 305A, RESTROOM 305B	ROOF	260	0.05	30	1 2

1 PROVIDE WITH ROOF CURB, BIRDSCREEN AND BACKDRAFT DAMPER. 2 SEE DETAIL 6/M-502.

VFD SCHEDULE

SYMBOL	DESCRIPTION	LOCATION	SERVICE	MOTOR				MAX. OPER. WT. (LBS)	REMARKS
				HP	V	Ø	HZ		
VFD 300S-1	ABB ACH580-PCR	ROOF	EF 300S-3	1	208	3	60	100	1 2 3 4 5 6 7 8 9 10

1 PROVIDE WITH COOLBLUE INDUCTIVE ABSORBERS. 2 PROVIDE WITH NEMA 3R ENCLOSURE. 3 AT MINIMUM, VFD SHALL INCLUDE 5% IMPEDANCE VIA 5% AC LINE REACTOR OR DUAL DC BUS CHOKES SIZED TO 5% EQUIVALENT IMPEDANCE. REACTORS OR CHOKES SHALL BE SWINGING DESIGN.
4 PROVIDE UL1449 TYPE 2 SURGE SUPPRESSION DEVICE. 5 VFD SHALL INCLUDE ALPHA-NUMERIC KEYPAD INTERFACE, WITH DISPLAY IN PLAIN ENGLISH. (DISPLAYS RELYING SOLELY ON CODES ARE NOT ACCEPTABLE). 6 PROVIDE INTERNAL EMI/RFI FILTER PER IEC 61800-3. VFD INPUT AMPS SHALL NOT EXCEED VFD OUTPUT AMPS.
7 VFD SHALL BE BTL LISTED FOR BACNET MS/TP, AND ALSO INCLUDE MODBUS AND N2. 8 VFD SHALL INCLUDE REAL TIME CLOCK WITH BATTERY BACKUP (INCLUDE 10 YEAR BATTERY). 9 INCLUDE FAST ACTING DRIVE ISOLATION FUSES. 10 SEE DETAIL 7/M-502.

BOOSTER FAN SCHEDULE

SYMBOL	DESCRIPTION	AREA SERVED	CFM	E.S.P.	DRIVE	RPM	MIN. WHEEL DIA.	MOTOR				MAX. OPER WT. (LBS.)	REMARKS
								BHP	HP	VOLT	PHASE		
BF 1	FANTECH DEDPV-705	BIOLOGY PREP ROOM 310	175	--	--	2559	--	--	71.9W	120	1	15	1 2 3 --

1 PROVIDE WITH DB10 PRESSURE SWITCH KIT. 2 PROVIDE WITH DBLT4W SECONDARY LINT TRAP. 3 SEE DETAIL 8/M-502.

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DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

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MECHANICAL SCHEDULES

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10/24/2024 10:02:49 AM

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.	
Project Name:	**Report Page: (Page 1 of 11)**
Project Address:	**Date Prepared:** 4/23/2024

A. GENERAL INFORMATION

01	Project Location (city)		04	Total Conditioned Floor Area	9896
02	Climate Zone	10	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

● Classroom ● All Other Occupancies

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01 Air System(s)	02 Wet System Components	03 Dry System Components
☒ Heating Air System	☐ Water Economizer	☐ Air Economizer
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☐ Fan Systems
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☐ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name:	**Report Page: (Page 2 of 11)**
	Date Prepared: 4/23/2024

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
	AND		AND		AND	Yes	AND	Yes	AND		AND		AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)										COMPLIES					

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.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat

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Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
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	Date Prepared: 4/23/2024

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)

[1]FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.
[2]It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
[3] If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
[4] Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This section does not apply to this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name:	**Report Page: (Page 4 of 11)**
	Date Prepared: 4/23/2024

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D

[1]FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and d:\24refnolink\{160.2, 160.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05			06			07
System Name	(E) AC-1 (Chem Phys Classroom 114)	System Design OA CFM Airflow[3]		174	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name:	**Report Page: (Page 5 of 11)**
	Date Prepared: 4/23/2024

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
(E) AC-1 (Chem Phys Classroom 114)	Science Laboratories	1159			173.8	1159	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				174	18	Ventilation for this System Complies?		Yes

04		05			06			07
System Name	(E) AC-2 (Chem Phys Classroom 111)	System Design OA CFM Airflow[3]		179	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
(E) AC-2 (Chem Phys Classroom 111)	Science Laboratories	1194			179.1	1194	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				179	18	Ventilation for this System Complies?		Yes

04		05			06			07
System Name	(E) AC-3 (Biology Lab 108)	System Design OA CFM Airflow[3]		177	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name:	**Report Page: (Page 6 of 11)**
	Date Prepared: 4/23/2024

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
(E) AC-3 (Biology Lab 108)	Science Laboratories	1180			177	1180	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				177	18	Ventilation for this System Complies?		Yes

04		05			06			07
System Name	(E) AC-4 (Biology Lab 106)	System Design OA CFM Airflow[3]		269	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
(E) AC-4 (Biology Lab 106)	Science Laboratories	1794			269.1	1794	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				269	18	Ventilation for this System Complies?		Yes

04		05			06			07
System Name	(E) AC-5 (Chem Phys Classroom 101)	System Design OA CFM Airflow[3]		214	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name:	**Report Page: (Page 7 of 11)**
	Date Prepared: 4/23/2024

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
(E) AC-5 (Chem Phys Classroom 101)	Science Laboratories	1425			213.7	1425	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				214	18	Ventilation for this System Complies?		Yes

04		05			06			07
System Name	(E) AC-6 (Biology Lab 104 Office 103)	System Design OA CFM Airflow[3]		215	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
(E) AC-6 (Biology Lab 104 Office 103)	Science Laboratories	1433			215	1433	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				215	18	Ventilation for this System Complies?		Yes

04		05			06			07
System Name	(E) AC-7 (Bio Lab 112 Prep 113 &107)	System Design OA CFM Airflow[3]		248	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name:	**Report Page: (Page 8 of 11)**
	Date Prepared: 4/23/2024

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
(E) AC-7 (Bio Lab 112 Prep 113 &107)	Science Laboratories	1652			247.8	1652	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				248	18	Ventilation for this System Complies?		Yes

04		05			06			07
System Name	DFC-300S-1 (IDF Room 117)	System Design OA CFM Airflow[3]		0	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2] Provided
08	09	10	11	12	13	14	15	16

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
DFC-300S-1 (IDF Room 117)	All others	59			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes

[1] FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system
[2] Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
[3] Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name:	**Report Page: (Page 9 of 11)**
	Date Prepared: 4/23/2024

J. VENTILATION AND INDOOR AIR QUALITY

[4] See Standards Tables 120.1-A and 120.1-B.
[5] For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
[6] 120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft^2 or smaller, multipurpose rooms less than 1,000 ft^2, classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This section does not apply to this project.

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

REGISTERED PROFESSIONAL ENGINEER
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P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location M-Sheets

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	Report Page:	(Page 11 of 11)
Project Address:	Date Prepared:	4/23/2024

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Vince Vegas	Documentation Author Signature:
Company: M.A. Engineers, INC.	Signature Date: 05/06/2024
Address: 5160 Carroll Canyon Rd, Suite 200	CEA/ HERS Certification Identification (if applicable): NR0809565
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: Vince Vegas	Responsible Designer Signature:
Company: M.A. Engineers, INC.	Date Signed: 2024-04-23
Address: 5160 Carroll Canyon Road	License: M35029
City/State/Zip: San Diego, California 92121	Phone: 858-200-0030

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GROSSMONT UNION HIGH SCHOOL DISTRICT
EST 1920

Grossmont Union
High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S
Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

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TITLE 24
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FLOOR PLAN NOTES

1. CAP EXISTING OUTSIDE AIR DUCT.
2. RELOCATE EXISTING FC-1 TO LOCATION SHOWN ON M-103.

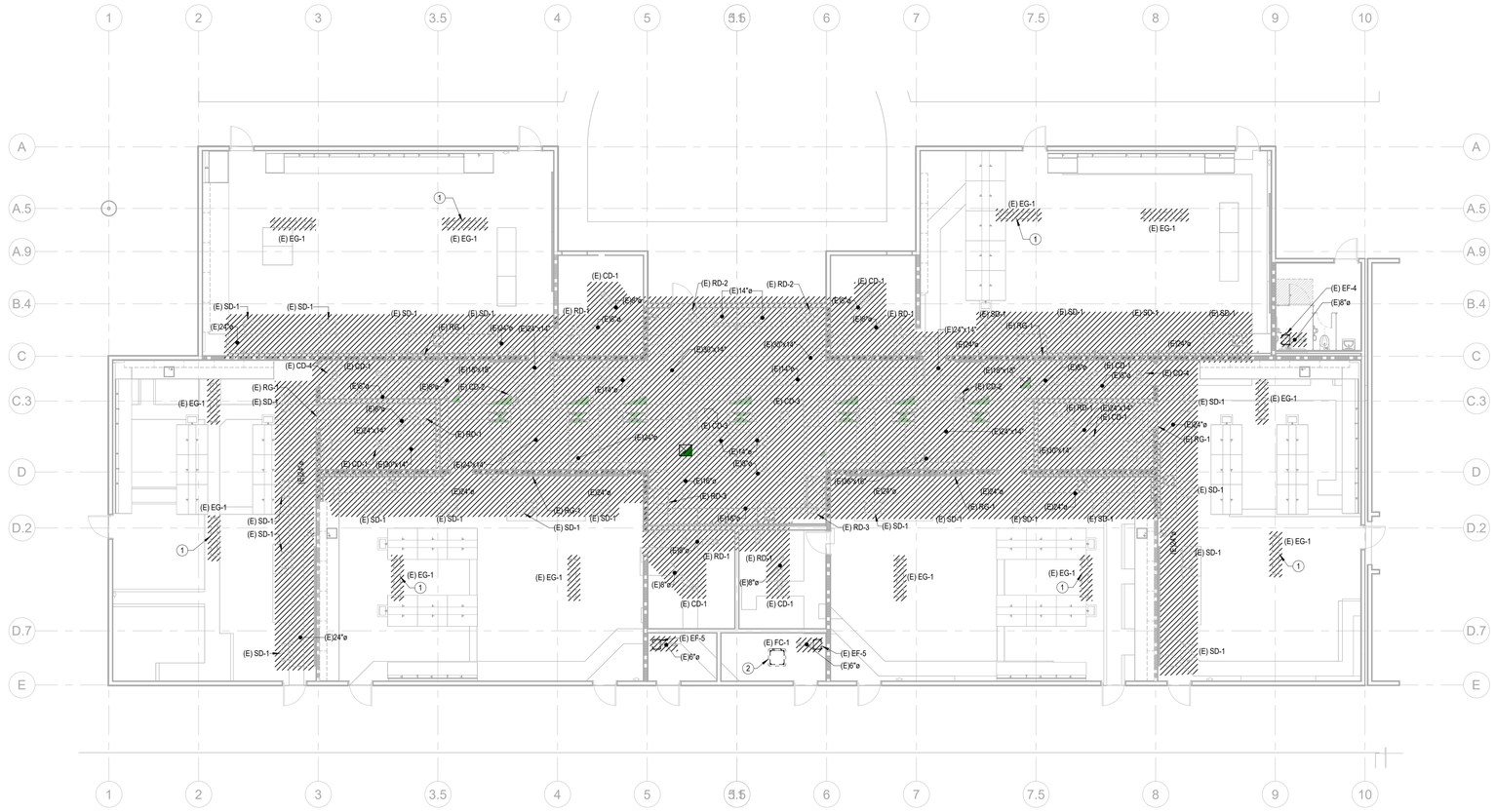
GENERAL NOTES

A. CONTRACTOR TO VERIFY IN FIELD ALL EXISTING CONDITIONS PRIOR TO BID. REPORT DISCREPANCIES TO ENGINEER AND OWNER VIA ARCHITECT.

B. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF ANY DEMOLITION.

C. DEMO CROSSHATCHED MECHANICAL DUCTWORK, EQUIPMENT, AND ASSOCIATED MATERIALS.

D. EXISTING DUCT TEMPERATURE SENSOR WIRING IS TO BE SAFED OFF BEFORE DEMO.



1 MECHANICAL BLDG 300S FLOOR PLAN - DEMO
1/8" = 1'-0"

N

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DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
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Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

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1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

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MECHANICAL BLDG 300S FLOOR PLAN - DEMO

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FLOOR PLAN NOTES

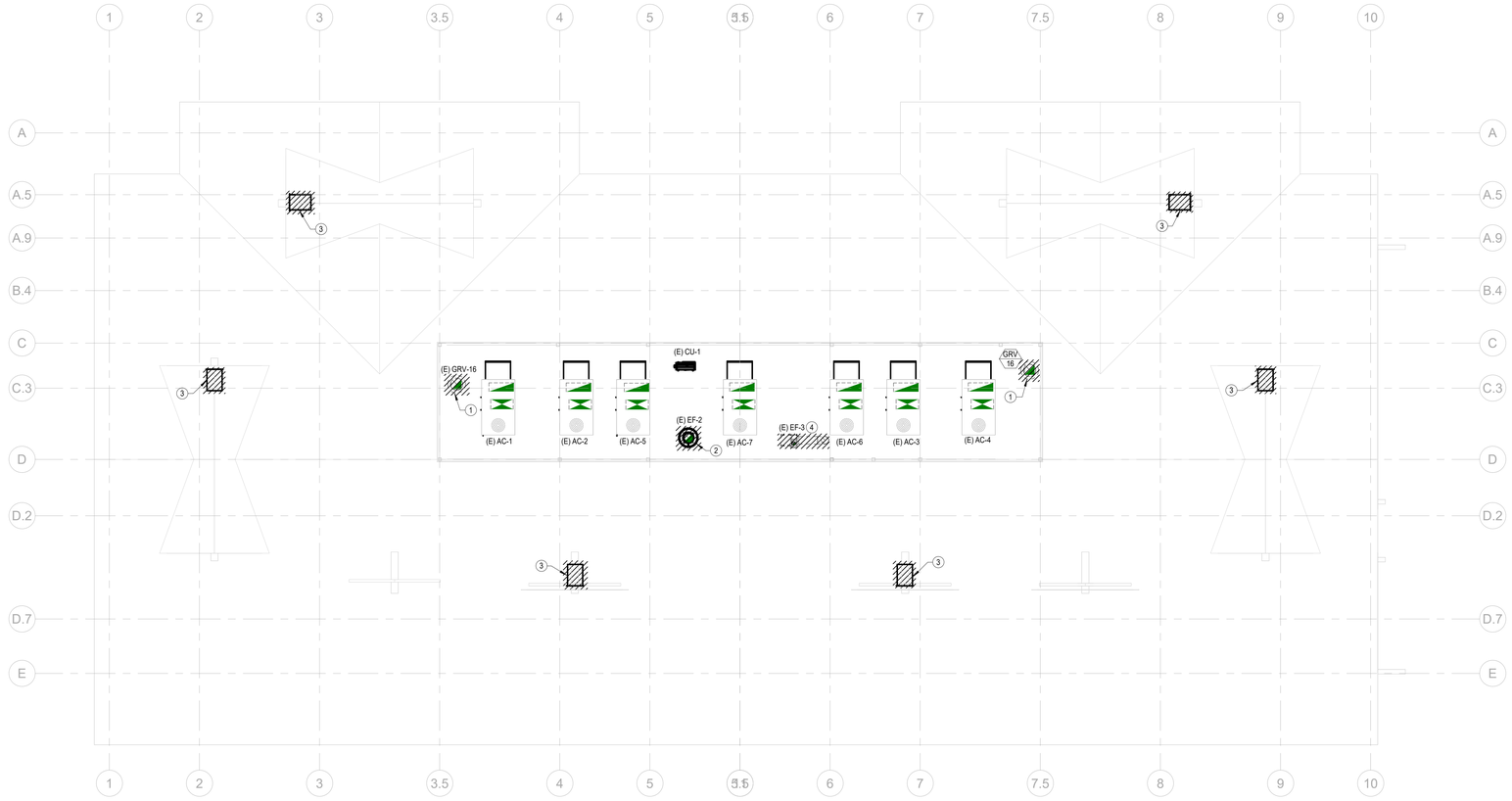
1. DEMO AND REMOVE EXISTING GRV. PATCH AND REPAIR ROOF PENETRATION.
2. DEMO AND REPLACE EXISTING EXHAUST FAN.
3. DEMO AND REPLACE EXISTING EXHAUST FAN INSIDE DORMERS.
4. DEMO AND REMOVE EXISTING EF-3. PATCH AND REPAIR ROOF PENETRATION.

GENERAL NOTES

A. CONTRACTOR TO VERIFY IN FIELD ALL EXISTING CONDITIONS PRIOR TO BID. REPORT DISCREPANCIES TO ENGINEER AND OWNER VIA ARCHITECT.

B. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF ANY DEMOLITION.

C. DEMO CROSSHATCHED MECHANICAL DUCTWORK, EQUIPMENT, AND ASSOCIATED MATERIALS.



1 MECHANICAL BLDG 300S ROOF PLAN - DEMO
1/8" = 1'-0"

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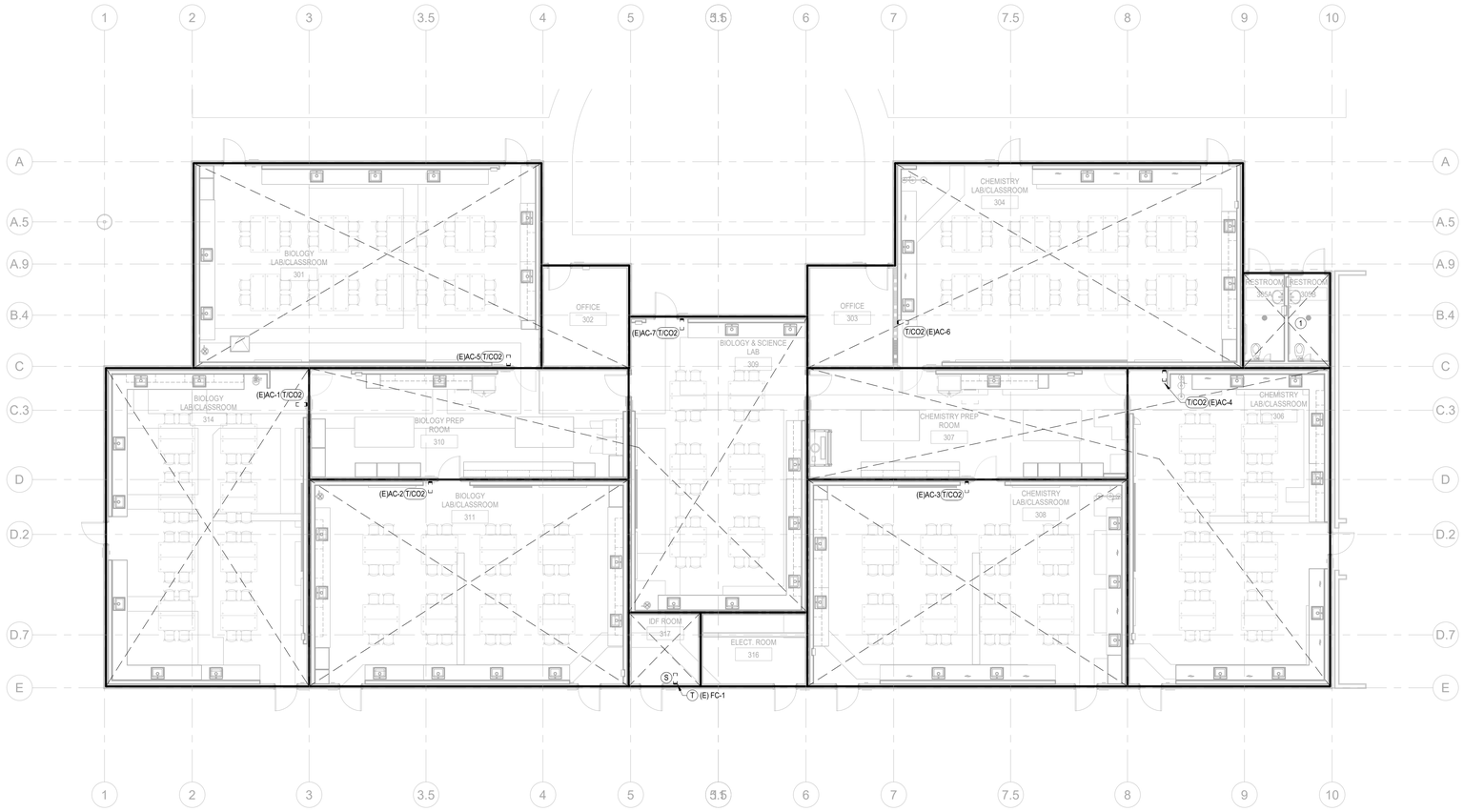
FLOOR PLAN NOTES

1 PROVIDE WITH VENTILATION ONLY.

GENERAL NOTES

A. COORDINATE FINAL LOCATION OF THERMOSTAT WITH ARCHITECT AND OWNER.

B. PROVIDE WITH HONEYWELL TR42-CO2 ROOM TEMPERATURE / CO2 SENSOR. CO2 SENSOR SHALL BE HARD-WIRED OR PLUGGED IN AND MOUNTED TO THE WALL BETWEEN THREE AND SIX FEET ABOVE FINISHED FLOOR AND AT LEAST 5 FEET AWAY FROM EXTERIOR DOORS AND OPERABLE WINDOWS



1 MECHANICAL BLDG 300S FLOOR PLAN - ZONING
1/8" = 1'-0"

N

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Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

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MECHANICAL BLDG 300S FLOOR PLAN - ZONING

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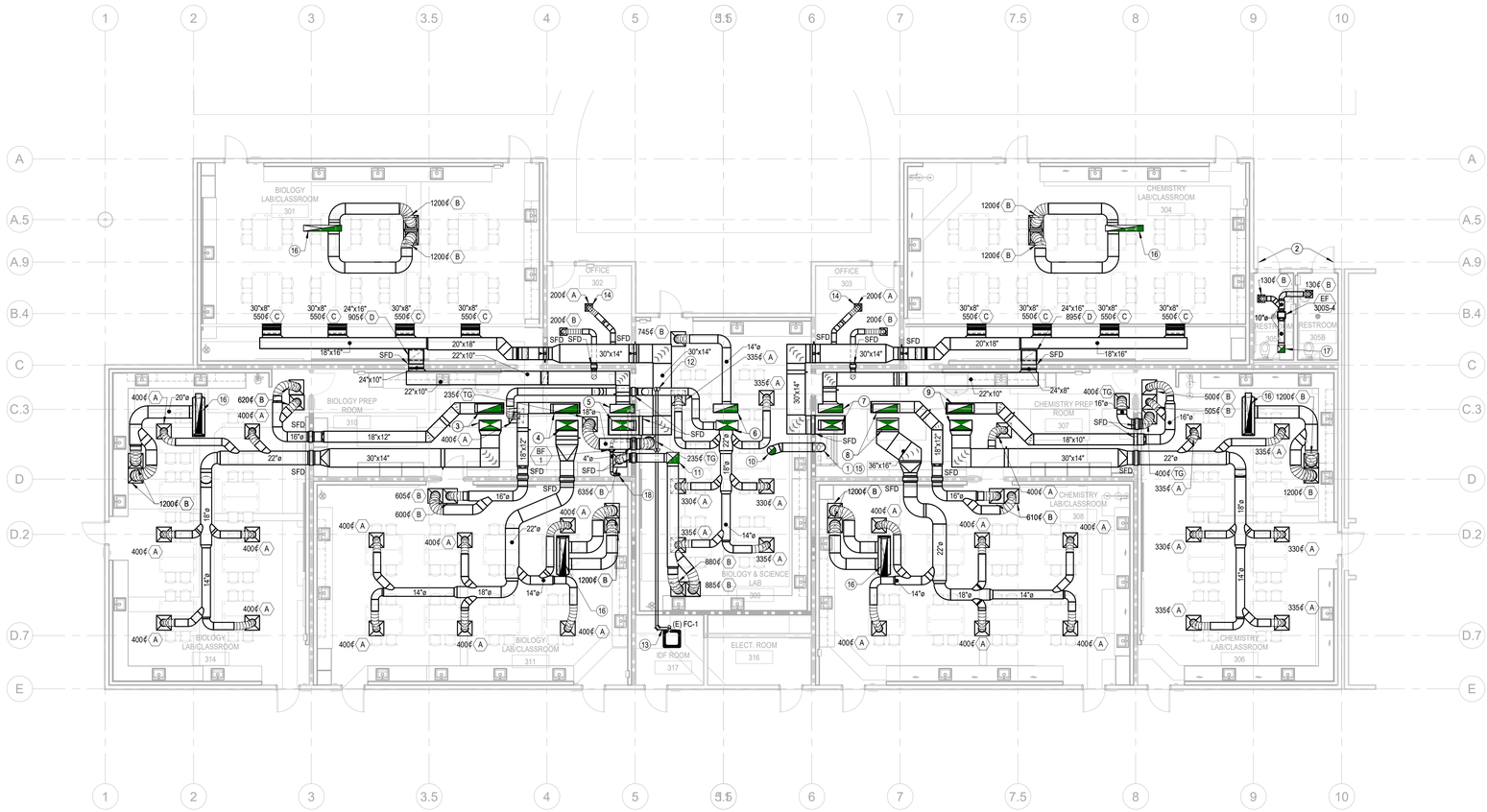
FLOOR PLAN NOTES

1 EXHAUST DUCT SHALL BE FLAMEBAR DUCT OR 3M FIRE WRAPPED.
2 PROVIDE MAKEUP AIR LOUVER MIN 0.30 SQFT FREE AREA.
3 36"x16" SA & 40"x14" RA UTR TO (E)AC-1.
4 36"x16" SA & 40"x14" RA UTR TO (E)AC-2.
5 36"x16" SA & 40"x14" RA UTR TO (E)AC-5.
6 36"x16" SA & 40"x14" RA UTR TO (E)AC-7.
7 36"x16" SA & 40"x14" RA UTR TO (E)AC-6.
8 36"x16" SA & 40"x14" RA UTR TO (E)AC-3.
9 36"x16" SA & 40"x14" RA UTR TO (E)AC-4.
10 14"ø EA UTR TO EF-300S-3.
11 20"x18" EA UTR TO EF-300S-2.
12 REFRIGERANT PIPES UTR TO (E)CU-1.
13 ROUTE AND SIZE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATION.
14 PROVIDE WITH YOUNG REGULATOR VARIABLE AIR VOLUME CEILING DIFFUSER WITH RELIEF RING. CONTROLS CONTRACTOR TO PROVIDE HONEYWELL ACTUATOR.
15 POC TO FUME HOOD.
16 62"x10" EA UP TO ROOF DORMERS TO EF-300S-1.
17 12"x12" EA UTR TO GR-300S-1.
18 4"ø DRYER EXHAUST UP TO ROOF.

GENERAL NOTES

A. ROUTE DUCTWORK THROUGH EXISTING SHEAR WALL PENETRATION LOCATIONS.



1 MECHANICAL BLDG 300S FLOOR PLAN - NEW
1/8" = 1'-0"

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GROSSMONT UNION HIGH SCHOOL DISTRICT EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA
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San Diego, California 92121
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www.ma-engr.com

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Suite 100
San Diego, California
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(858) 398-3800

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MECHANICAL BLDG 300S FLOOR PLAN - NEW

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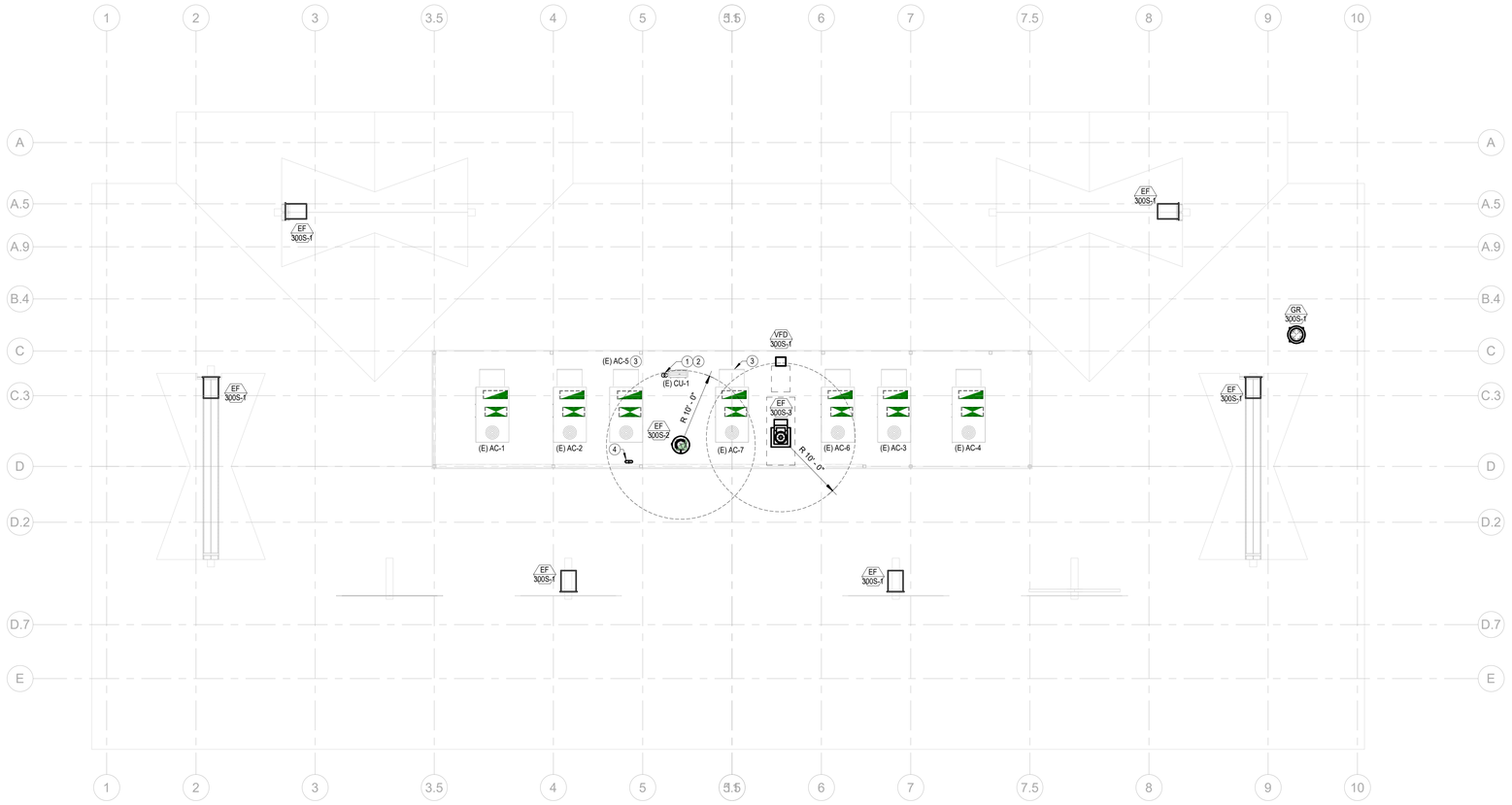
FLOOR PLAN NOTES

1 REFRIGERANT PIPES DOWN THROUGH ROOF TO (E)FC-1.
2 ROUTE AND SIZE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATION.
3 EXTEND OUTSIDE AIR HOOD TO MAINTAIN CODE REQUIRED MINIMUM 10' FROM EXHAUST OUTLETS.
4 4"ø DRYER EXHAUST WITH APPROVED TERMINATION.



1 MECHANICAL BLDG 300S ROOF PLAN
1/8" = 1'-0"

N

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DATE: 11/05/2024

Grossmont Union High School District

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MECHANICAL BLDG 300S ROOF PLAN

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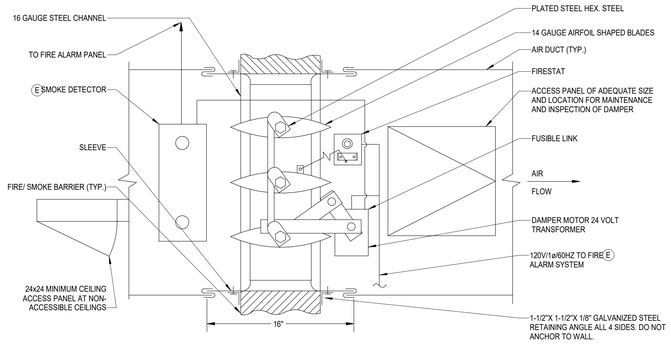
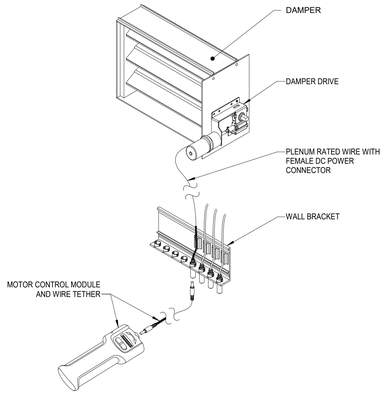


NOTES:

1. ACTUATOR SHALL HAVE 5 YEAR WARRANTY.
2. DAMPER SHALL BE CONSTRUCTED, TESTED & INSTALLED IN ACCORDANCE WITH UNDERWRITERS LABORATORIES STANDARDS 555 LATEST APPROVED EDITION & 555S LATEST APPROVED EDITIONS.
3. ACTUATOR SHALL HAVE MICROPROCESSOR BASED MOTOR CONTROLLER PROVIDING INAUDIBLE HOLDING NOISE LEVEL AND SHALL DRAW NO MORE THAN .25A AT 120V RUNNING OR .1A AT 120V HOLDING (27VA AND 10VA RESPECTIVELY FOR 24 VAC) FOR 70 LB-IN OF TORQUE.
4. FIRE DAMPERS AND SMOKE DAMPERS SHALL CARRY CURRENT CSFM LISTING NUMBER AND INSTALLATION SHALL BE STRICTLY PER THE MANUFACTURER'S PRINTED INSTRUCTIONS.
5. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AGENCY.
6. COORDINATE WITH ELECTRICAL AND DIVISION 26.
7. PROVIDE AND INSTALL ALL REQUIRED COMPONENTS AND WIRING UNLESS OTHERWISE SPECIFIED UNDER DIVISION 26. COORDINATE WITH ELECTRICAL.
8. E BY ELECTRICAL.

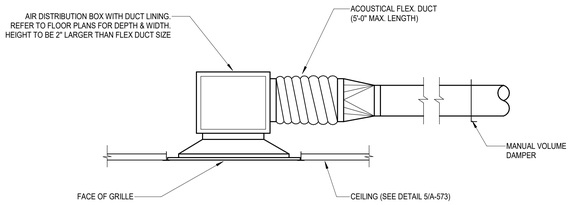
7 WALL FIRE-SMOKE DAMPER DETAIL
NO SCALE



NOTES:

1. PROVIDE REMOTE OPERATED DAMPERS WHERE MANUAL DAMPERS ARE INACCESSIBLE.
2. PROVIDE REMOTE OPERATED DAMPERS ABOVE HARDLID CEILINGS.

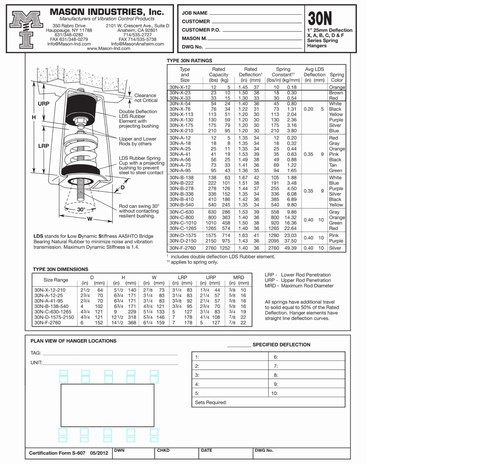
4 REMOTELY CONTROLLED VOLUME DAMPER DETAIL
NO SCALE



BRANCH DUCT SIZES SUPPLY AIR	
MAX. CFM	SIZE
0-95	6"ø
95-210	8"ø
210-370	10"ø
370-600	12"ø
600-900	14"ø
900-1290	16"ø
1290-1750	18"ø
1750-2300	20"ø

BRANCH DUCT SIZES RETURN / EXHAUST AIR	
MAX. CFM	SIZE
0-190	8"ø
190-340	10"ø
340-560	12"ø
560-840	14"ø
840-1190	16"ø
1190-1610	18"ø
1610-2150	20"ø
2150-2750	22"ø

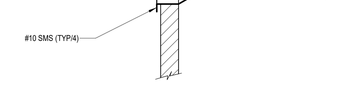
1 AIR DISTRIBUTION CONNECTION DETAIL
NO SCALE



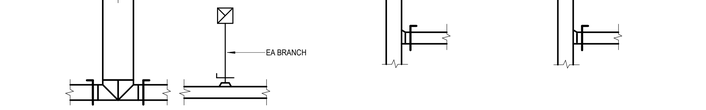
NOTES:

EF-300S-4: 30N-X-23
(E) FC-1: 30N-X-33

8 MASON 30N DETAIL
NO SCALE



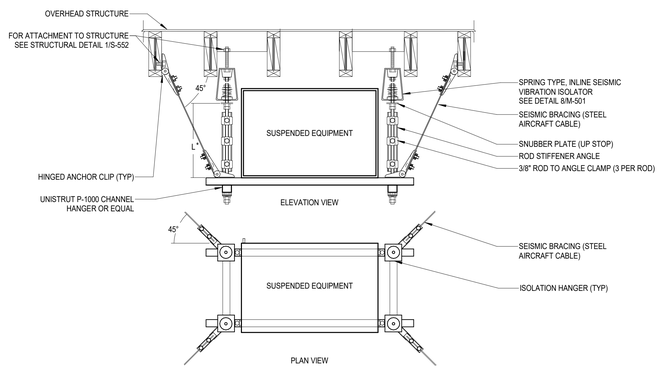
5 DUCT CONNECTION TO AIR DISTRIBUTION
NO SCALE



NOTES:

1. PROVIDE MANUAL VOLUME DAMPER AT EACH MAIN, SUB-MAIN, BRANCH MAIN, AND BRANCH TAKE-OFF. PROVIDE CEILING ACCESS TO ALL DAMPERS OR PROVIDE REMOTE OPERATED DAMPERS.
2. PROVIDE CEILING ACCESS TO ALL DAMPERS OR PROVIDE REMOTE OPERATED DAMPERS.

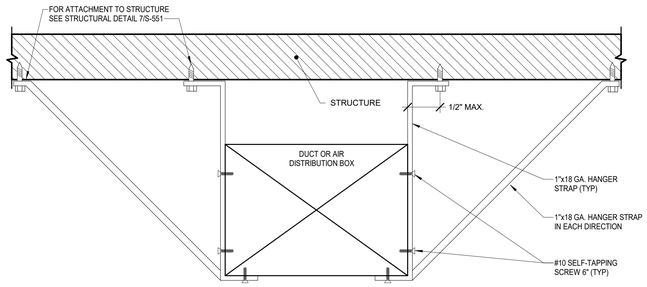
2 TYPICAL MANUAL VOLUME DAMPER LOCATION DIAGRAM
NO SCALE



NOTES:

1. INSTALL UNDER STRICT INSTRUCTION OF VIBRATION ISOLATOR MFGR.
2. WHERE L>18", PROVIDE ROD STIFFENERS PER THIS DETAIL.
3. PROVIDE FLEXIBLE DUCT AND PIPE CONNECTORS TO EQUIPMENT.

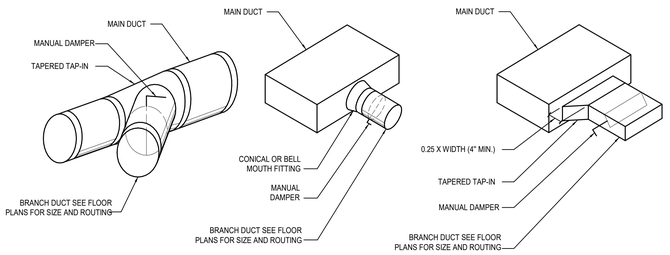
9 SUSPENDED EQUIPMENT MOUNTING DETAIL
NO SCALE



NOTE:

SPACING OF SUPPORTS SHALL BE AT 8'-0" O.C. MAX.

6 DUCT SUPPORT DETAIL
NO SCALE



3 BRANCH DUCT TAKE OFF DETAIL
NO SCALE

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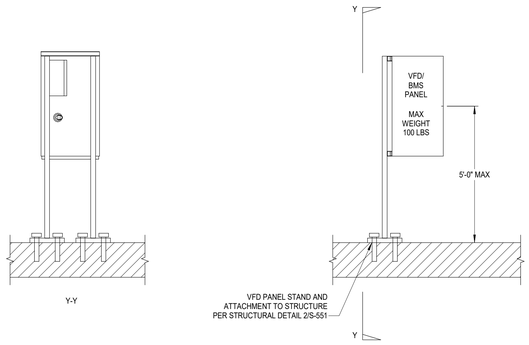
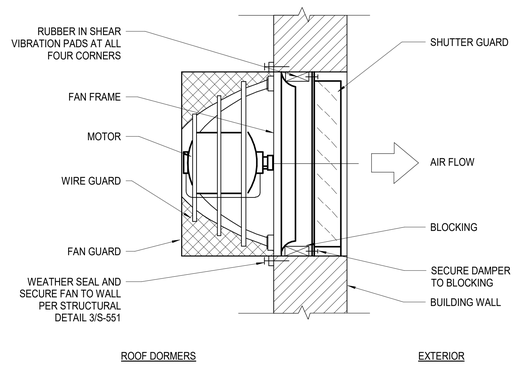
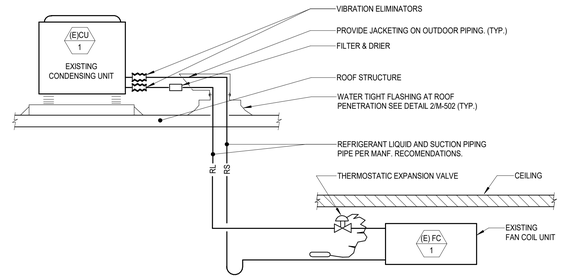


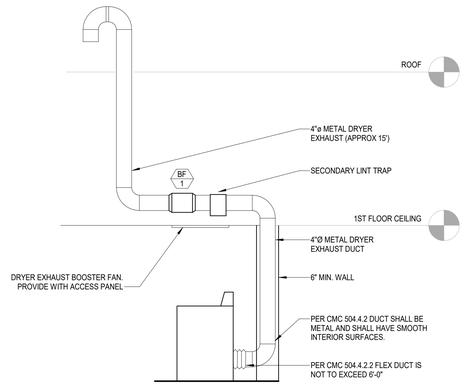
7 VFD PANEL MOUNTING DETAIL
NO SCALE



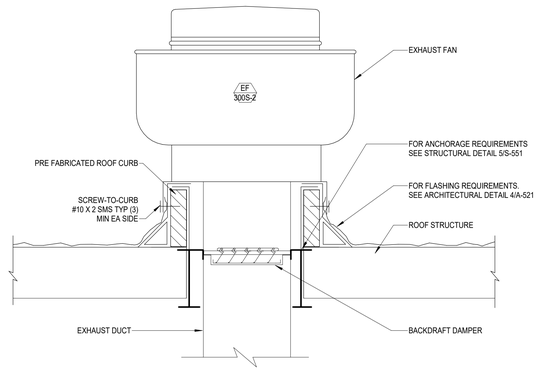
4 WALL FAN DETAIL
NO SCALE



1 REFRIGERANT PIPING DIAGRAM
NO SCALE

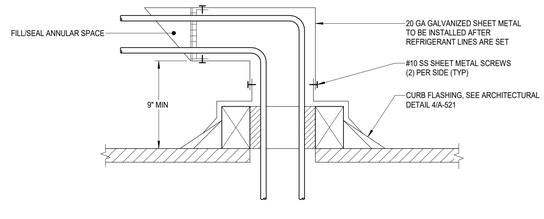


8 DRYER EXHAUST VENT UP THRU ROOF
NO SCALE

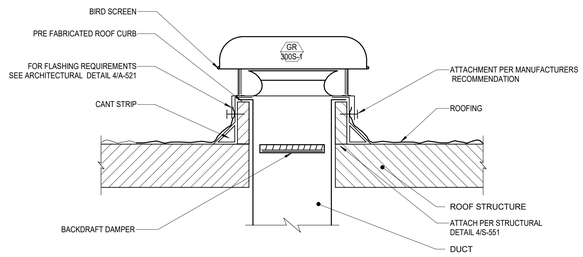


NOTE:
1. FAN & PRE-FAB CURB SHALL SIT LEVEL. PROVIDE LEVEL BASE IF ROOF IS PITCHED.

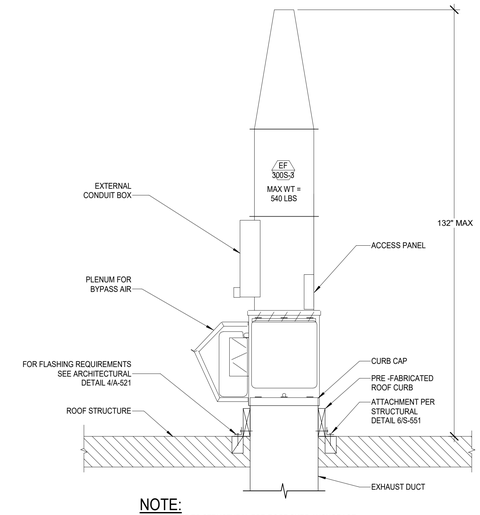
5 ROOF MOUNTED UPBLAST EXHAUST FAN DETAIL
NO SCALE



2 REFRIGERANT PIPING ROOF PENETRATION DETAIL
NO SCALE



6 ROOF MOUNTED GRAVITY RELIEF FAN DETAIL
NO SCALE



NOTE:
1. REFER TO STRUCTURAL FOR ROOF CURB ANCHORAGE.

3 SCIENCE CLASSROOM EXHAUST FAN MOUNTING DETAIL (STROBIC)
NO SCALE

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Modernization

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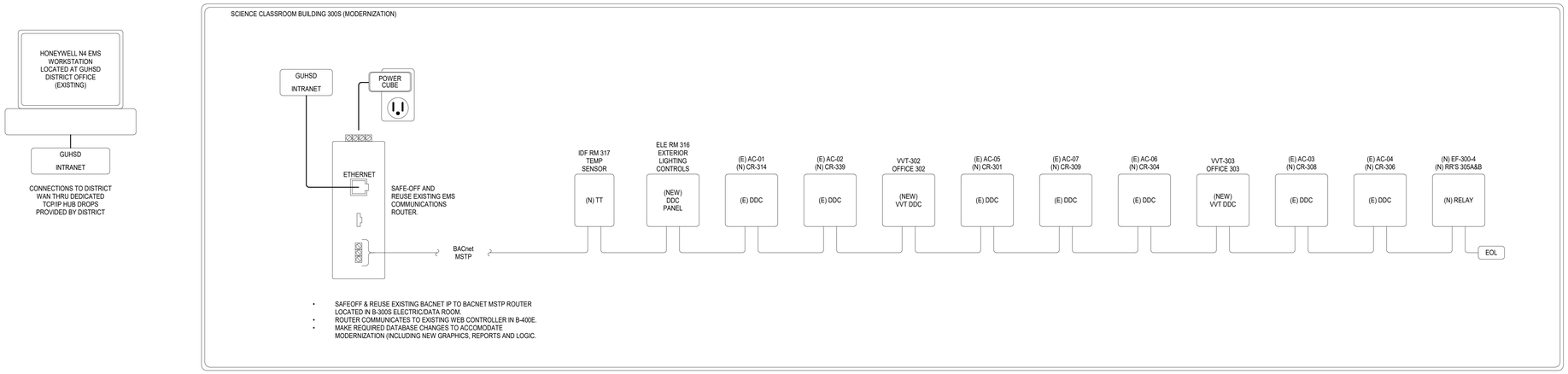

1 ENERGY MANAGEMENT SYSTEM ARCHITECTURE
NOT TO SCALE

SAFEOFF ALL COMMUNICATIONS WIRING ON THIS PROJECT BEFORE ANY DUCTWORK DEMOLITION BEGINS.
REUSE EXISTING BACnet MSTP WIRING IF POSSIBLE.
REPAIR/REPLACE ANY DAMAGED COMMUNICATIONS WIRING.

BACNET WIRE ALLOWED SHALL BE:
PLENUM: CONNECT-AIR W/241P-2000FRIB TWISTED PAIR, ORG JACKET, 24AWG, SHLD, 100 Ω IMPEDANCE (OR EQUAL).
NOTE:
ANY DEVIATION FROM THE PART NUMBERS LISTED ABOVE REQUIRES PRIOR WRITTEN APPROVAL FROM THE INSTALLING CONTRACTOR. USE OF THE SAME IMPEDANCE RATED CABLE IS REQUIRED FOR THE ENTIRE NETWORK.

BACNET WIRE CONNECTION DETAIL:

NOTE:
• TWIST CONDUCTORS TOGETHER BEFORE PLACING BACNET WIRE UNDER SCREW TERMINAL.
• BACNET PROTOCOL IS POLARITY SENSITIVE. CONDUCTORS ARE TO BE TWISTED TOGETHER (INCLUDING THE SHIELD).

MT MIGUEL HS - B-300S - MODERNIZATION - EMS CONTROLS NOTES:
• DUCTWORK EXISTING BUILDING 300-S IS TO BE DEMOLISHED AND REPLACED.
• EXISTING ROOFTOP AC UNITS AND CONTROLS ARE TO REUSED.
• SAFE-OFF OF ALL CONTROLS SENSORS, AND COMMUNICATIONS WIRING BELOW THE ROOFLINE BEFORE COMMENCEMENT OF DEMOLITION.
• ROOFTOP AC UNIT CONTROLS WILL REQUIRE PROGRAMMING MODIFICATIONS TO ACCOMODATE NEW ROOM PRESSURE TRANSMITTERS, EXHAUST FAN CONTROLS AND OUTDOOR AIR DAMPER POSITIONCFM CHANGES.
• NEW LAB EXHAUST FANS WILL NEED TO BE CONTROLLED TO ALLOW EMS TO ACCOMODATE ADDITIONAL DAMPER POSITIONS AT DIFFERENT SPEEDS. MINIMUM CLASSROOM EXHAUST (OR GREATER) IS REQUIRED. THE DDC SHALL CONTROL EF SPEED.
• CONTROLS FOR RESTROOM EXHAUST FAN FROM THE EMS SHALL BE REQUIRED.

CONTROLS CONTRACTOR NOTES:
• CONTROLS CONTRACTOR SHALL BE LISTED AS A LOCAL "HONEYWELL ACI ELITE".
• CONTROLS CONTRACTOR SHALL BE BASED WITHIN 15 MILES OF GUHSD DISTRICT OFFICE.
• CONTROLS MODIFICATIONS ARE TO BE MADE TO THE EXISTING CONTROLS ON-SITE AND MUST INTEGRATE INTO GUHSD HONEYWELL EMS VIA EXISTING SITE ROUTER AND WEB CONTROLLER.

THE LOCAL HONEYWELL ACI ELITE CONTROLS CONTRACTOR / INTEGRATOR IN SAN DIEGO IS:
R&R CONTROLS, INC.
4564 ALVARADO CANYON ROAD SUITE B
SAN DIEGO, CALIFORNIA 92120
PHONE: (619) 516-1880

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Blossom Lane Spring

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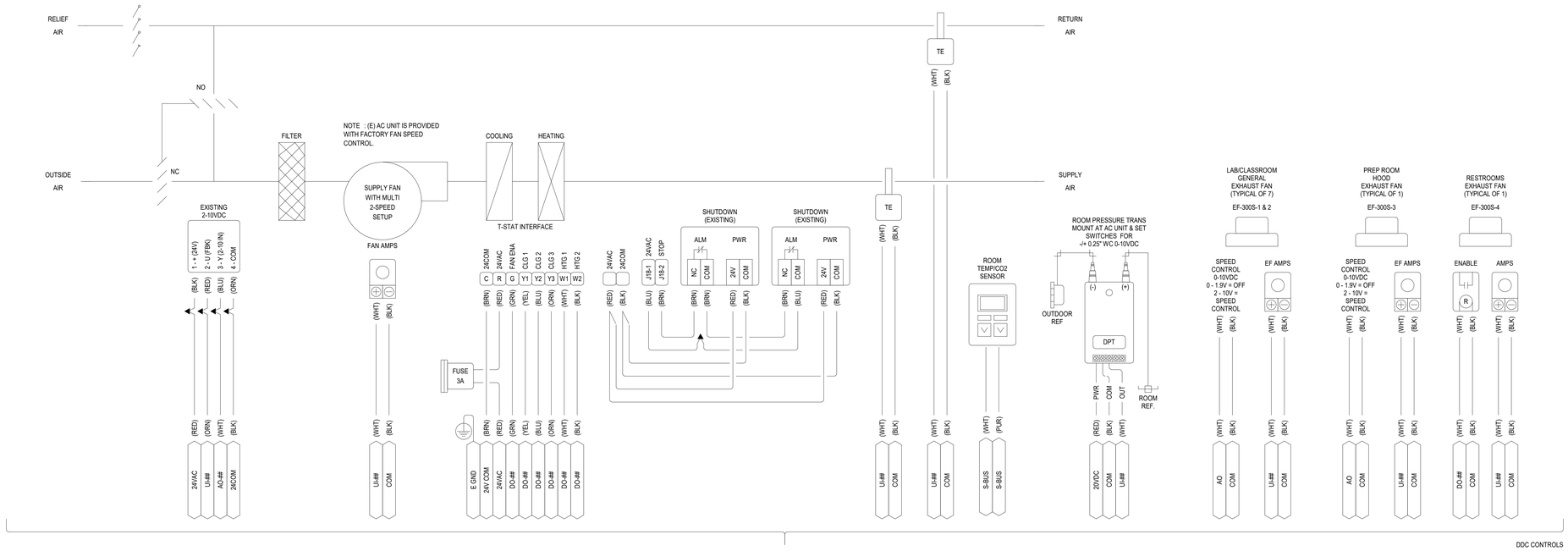

SEQUENCE OF OPERATION: (MODIFY EXISTING AS REQUIRED TO ACCOMODATE OUTDOOR AIR VOLUME CHANGES)

SINGLE ZONE RTU
THE AC UNIT WILL BE ENABLED BASED ON A TIME-OF-DAY SCHEDULE FROM THE GUHSD EMS. THE SYSTEM CAN ALSO BE STARTED VIA THE ROOM TEMP/CO2 SENSOR BYPASS BUTTON.
WHEN THE AC IS RUNNING THE DDC CONTROLLER WILL ENABLE THE HEATING AND COOLING STAGES AND ADJUST THE ECONOMIZER DAMPERS BASED ON THE ZONE LOAD VS. SETPOINT. THE AC UNIT WILL CONTROL THE SUPPLY FAN SPEED BASED ON CALL FOR COOLING OR HEATING. THE DDC CONTROLLER WILL CONTROL THE LAB EXHAUST FAN SPEED AND MONITOR AMPS VIA AMP TRANSDUCER. THE OUTDOOR AIR DAMPERS POSITION WILL NEED TO BE ADJUSTED BASED ON SF SPEED AND EXHAUST FAN SPEED TO ALLOW FOR MINIMUN LAB EXHAUST PLUS FULL EXHAUSTWHEN ECONOMIZER IS IN 100% OUTDOOR AIR. ACTUAL SEQUENCE AND SETTINGS ARE TO BE DETERMINED DURING TAB.

CO2 CONTROL:
WHEN THE ROOM CO2 LEVEL DROPS BELOW AN ADJUSTABLE CO2 SETPOINT THE OUTDOOR DAMPER MINIMUM POSITION WILL BE DECREASED TO BRING IN LESS OUTDOOR AIR (DCV). A HIGHER MINIMUM OUTDOOR AIR DAMPER POSITIONS WILL BE PROGRAMMED FOR USE DURING LOW SPEED OPERATION. A SECOND MINIMUM POSITION WILL BE AVAILABLE FOR HIGH SPEED. THEY WILL BE ADJUSTABLE FROM THE EMS. DRY BULB ECONOMIZER STRATEGY WILL BE IMPLEMENTED.

THE EMS WILL MONITOR THE VARIOUS DATA POINTS AS SHOWN ON THIS DRAWING.
VERIFY THAT UNITS WITH SMOKE DETECTORS ARE WIRED TO SHUTDOWN THE AC UNIT WHEN SMOKE IS DETECTED.

THE FOLLOWING SOFTWARE FUNCTIONS AND DDC HARDWARE I/O SHALL BE FURNISHED:

- ADVANCED DIGITAL ECONOMIZER CONTROL (ADEC) - FURNISH FULL DDC CONTROL OF THE ECONOMIZER DAMPERS. WHEN THE OUTSIDE AIR IS ACCEPTABLE FOR FREE COOLING THE OUTSIDE AIR DAMPERS WILL BE MODULATED OPEN AS NEEDED. DAMPER POSITION WILL BE TRENDED.
- DEMAND CONTROL VENTILATION (DCV) - FURNISH AND IMPLEMENT AUTOMATIC CONTROL ADJUSTMENTS TO THE OUTSIDE AIR DAMPER TO ACCOMODATE ROOM CO2 CONDITIONS (ON UNITS WHERE CO2 CONTROL IS SPECIFIED).
- DEMAND LIMIT CONTROL (DLC) - FURNISH AND IMPLEMENT ROUTINE(S) TO SHED THE SITE LOAD BY SHIFTING OUT THE CONTROL SETPOINTS WHEN REQUESTED FROM THE EMS.
- FAULT DETECTION & DIAGNOSTICS (FDD) - FURNISH AND IMPLEMENT FAULT DETECTION ROUTINE(S) TO ENSURE THE ECONOMIZERS AND AC UNIT ARE WORKING PROPERLY.

B-300S MODERNIZATION NOTES:
- · MONITORING AND CONTROL OF LAB EXHAUST FAN IS REQUIRED TO PROVIDE MINIMUM LAB EXHAUST.
- · THE CONTROLS WILL CHANGE THE OUTSIDE AIR DAMPER POSITION WHEN THE EXHAUST FAN IS RUNNING AND THE ROOM PRESSURE IS NOT CORRECT. SUPPLY FAN SPEED WILL ALSO NEED TO BE ACCOUNTED FOR.
- · ANY EXISTING CONTROLS, SENSORS AND WIRING BELOW THE ROOFLINE WILL NEED TO BE SAFED-OFF BEFORE DEMOLITION OF DUCTWORK AND CEILINGS.
- · EXISTING ROOM TEMPERATURE/CO2 SENSOR MODULES MAY BE RE-USED IF IN GOOD OPERATING CONDITION BEFORE DEMO.
- · EXISTING COMMUNICATIONS BUS MAY BE REUSED IF IT REMAINS INTACT.
- · PROVIDE FOR SPEED CONTROL OF (7) LAB GENERAL EF'S - (6) EF-300S-1 & (1) EF-300S-2.
- · PROVIDE EMS S/S & STATUS FOR (1) REST ROOM EXHAUST FAN EF-300S-4.

TYPICAL FOR B-300S EXISTING AC UNITS:

(E) AC 1 | (E) AC 2 | (E) AC 3 | (E) AC 4 | (E) AC 5 | (E) AC 6 | (E) AC 7

1 GAS/ELECTRIC ROOFTOP AC UNIT CONTROLS

NO SCALE

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MECHANICAL CONTROLS

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M-601

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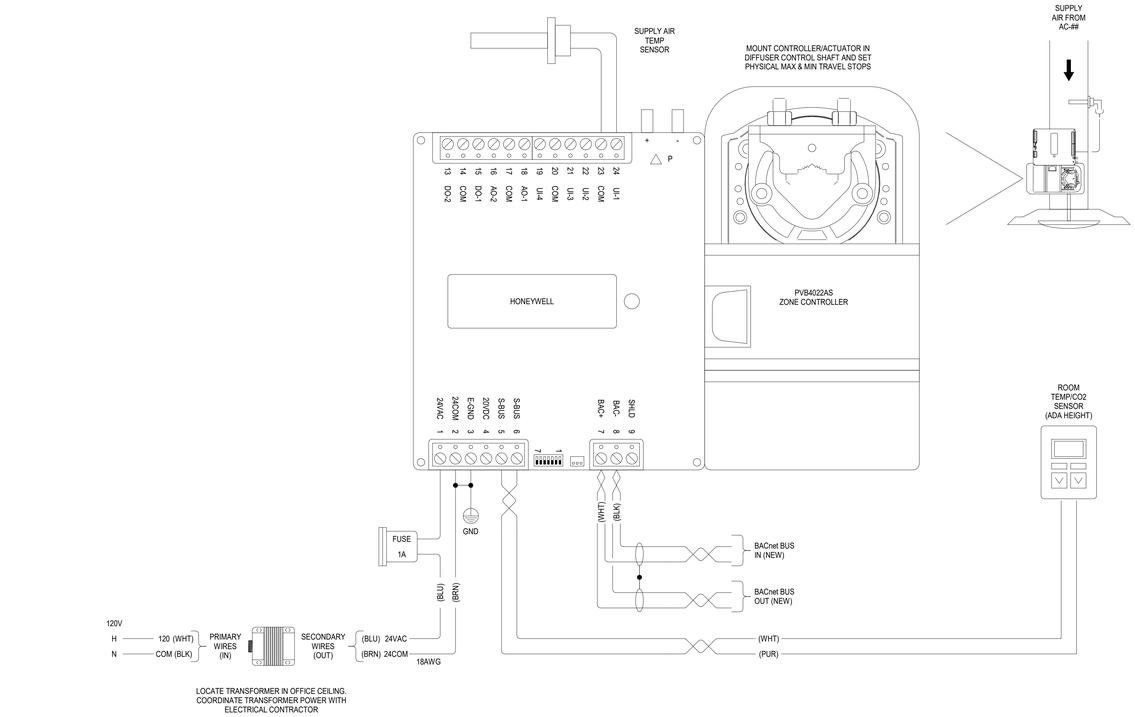
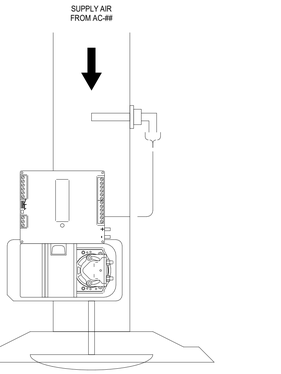


VARIABLE AIR VOLUME DIFFUSER CONTROLS - VVT

MECHANICAL CONTRACTOR SHALL PROVIDE A YOUNG REGULATOR MODEL 9100 VARIABLE AIR VOLUME CEILING DIFFUSER.
R&R CONTROLS SHALL PROVIDE AND INSTALL EMS CONTROLS. CONTROLLER/ACTUATOR SHALL MOUNT ONTO THE REGULATOR SHAFT.



DIFFUSER SETUP (ENLARGED VIEW)

DETERMINE FINAL MOUNTING DETAILS AND TRAVEL LIMITS DURING INSTALLATION.

SEQUENCE OF OPERATION TF-1:
THE VAV/VVT ZONE CONTROLLER WILL CONTROL THE DAMPER POSITION (WITHIN SOFTWARE ADJUSTABLE POSTION LIMITS) TO MAINTAIN THE REQUIRED ZONE TEMPERATURE. THE CONTROLLER WILL BASE IT'S ACTION ON THE SUPPLY AIR TEMPERATURE.
THE DIFFUSER CONTROL WILL NOT BE USED TO CONTROL THE AC UNIT HEATING OR COOLING. IT WILL ALLOW FOR TRIMMING BACK THE AMOUNT OF AIR TO THE OFFICE IT SERVES IF THE AIR IS NOT REQUIRED (BASED ON TEMPERATURE).

TYPICAL FOR NEW VAV DIFFUSER:

1 VARIABLE AIR VOLUME DIFFUSER (OFFICES)

NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For
1	03/13/24	SD/DD Submittal
2	05/08/24	DSA Submittal

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MECHANICAL CONTROLS

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ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
$	SWITCH - SINGLE POLE MOUNT AT +48".
$_D$	DIMMER - LED MOUNT AT +48".
$_{D3}$	DIMMER - LED - 3-WAY MOUNT AT +48".
$_{DO}$	DIMMER - WALL DIMMER OCCUPANCY SENSOR GREEN GATE #OSW-D-010-W MOUNT AT +48".
LS	DAYLIGHT LEVEL SENSOR
PC	PHOTOCELL
OC	OCCUPANCY SENSOR - DUAL TECHNOLOGY CEILING MOUNTED
OC	OCCUPANCY SENSOR - DUAL TECHNOLOGY - WALL MOUNTED AT +8'-0"
S_D	COMBINATION DIMMER WITH OCCUPANCY SENSOR.
S_O	SWITCH - OCCUPANCY SENSOR WALL SWITCH GREEN GATE #ONW-D-W MOUNT AT +48".
S_{O2}	SWITCH - OCCUPANCY SENSOR AND DUAL SWITCH GREEN GATE #ONW-D-1001-DWV-C MOUNT AT +48".
S_{LV}	LOW VOLTAGE LIGHTING CONTROL AT +48".

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
			LINEAR LUMINAIRES
			TROFFER
			WALL SCONCE LUMINAIRE
			DOWNLIGHT LUMINAIRE
	REFER TO LUMINAIRE SCHEDULE		INDUSTRIAL LUMINAIRE
			SINGLE FACE EXIT SIGN
			DOUBLE FACE EXIT SIGN

ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
E / E	ELECTRICAL CONNECTION
J / J	JUNCTION BOX
TV	TV ANTENNA OUTLET ROUGH-IN
DPM	DIGITAL POWER METER
	PANELBOARD - RECESS MOUNT
	PANELBOARD - SURFACE MOUNT
	MANUAL SWITCH / STARTER / COMBINATION STARTER/ CIRCUIT BREAKER.
	TRANSFORMER.
	CIRCUIT BREAKER - SURFACE MOUNTED.
	CIRCUIT BREAKER - FLUSH MOUNTED.
$_H$	HEAVY DUTY FUSED DISCONNECT.

ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
O	DUPLEX RECEPTACLE CONTROLLED BY OCCUPANCY
O	QUAD RECEPTACLE CONTROLLED BY OCCUPANCY. CONNECT ONLY ONE DUPLEX RECEPTACLE TO ROOM CONTROLLER VIA POWER SUPPLY
	DUPLEX RECEPTACLE, 125V
	DUPLEX GFI RECEPTACLE, 125V
WP	DUPLEX GFI WEATHERPROOF RECEPTACLE 125V PROVIDE FLUSH WALL MOUNTED COLE #3/0 SERIES LOCKABLE ENCLOSURE FOR WALL MOUNTED EXTERIOR GFI RECEPTACLE.
	QUAD RECEPTACLE, 125V
	QUAD GFI RECEPTACLE, 125V
WP	QUAD GFI WEATHERPROOF RECEPTACLE, 125V PROVIDE FLUSH WALL MOUNTED COLE #3/0 SERIES LOCKABLE ENCLOSURE FOR WALL MOUNTED EXTERIOR GFI RECEPTACLE.
C	FLUSH CEILING MOUNTED QUAD RECEPTACLE
	FLUSH FLOOR MOUNTED QUAD RECEPTACLE
C	FLUSH CEILING MOUNTED DATA OUTLET WITH (2) DATA JACKS. RUN (2) CAT-6A DATA CABLE TO IDF.
3	FLUSH FLOOR MOUNTED DATA OUTLET WITH (3) DATA JACKS. RUN 1" CONDUIT TO CEILNG SPACE VIA NEAREST WALL AND PULL (3) CAT-6A DATA CABLES TO IDF.
CR	FLUSH CEILING MOUNTED WHITE INDUSTRIAL CORD REEL WITH YELLOW PORTABLE OUTLET BOX (2 - 20A DUPLEX RECEPTACLES), GFCI MODULE PLENUM RATED ENCLOSURE. PROVIDE DUPLEX RECEPTACLE INSIDE CORD REEL ENCLOSURE. HUBBELL #HBL145123GF220 WITH PLENUM RATED ENCLOSURE(HBL1PRBOX). REFER TO MOUNTING DETAIL # 6 ON SHEET E-302.

ELECTRICAL SYMBOL LIST

SYMBOL:	DESCRIPTION:
M	UTILITY COMPANY METER
GFI	GROUND FAULT PROTECTION
	CIRCUIT BREAKER
C	DRY TYPE TRANSFORMER
	GROUNDING
2	FLUSH WALL MOUNTED DATA OUTLET WITH (2) DATA JACKS AT +18"O.C. UON RUN 3/4" CONDUIT WITH (2) CAT-6A DATA CABLES TO IDF
3	FLUSH WALL MOUNTED DATA OUTLET WITH (3) DATA JACKS AT +18"O.C. UON RUN 1" CONDUIT WITH (3) CAT-6A DATA CABLES TO IDF
WAP	FLUSH WALL MOUNTED DATA OUTLET WITH (2) DATA JACKS AT +10' FOR INDOOR WIRELESS ACCESS POINT. RUN 3/4" CONDUIT WITH (2) CAT-6A DATA CABLES TO IDF. WIRELESS ACCESS DEVICE SHALL BE FURNISHED AND INSTALLED BY THE OWNER.
WP WAP	FLUSH WALL MOUNTED WP DATA OUTLET WITH (2) DATA JACKS AT +10' FOR INDOOR WIRELESS ACCESS POINT. RUN 3/4" CONDUIT WITH (2) CAT-6A DATA CABLES TO IDF. WIRELESS ACCESS DEVICE INCLUDING MOUNTING HARDWARES SHALL BE FURNISHED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.
WAP	CEILING MOUNTED OUTLET FOR INDOOR WIRELESS ACCESS POINT. PROVIDE (2) DATA JACKS AND RUN 3/4" CONDUIT WITH (2) CAT-6A DATA CABLES TO IDF. WIRELESS ACCESS DEVICE SHALL BE FURNISHED AND INSTALLED BY THE OWNER AND CONTRACTOR.
	FLUSH WALL MOUNTED IP CLOCK/SPEAKER AT +90". PROVIDE BACKBOX AND (1) DATA JACK RUN 3/4" CONDUIT WITH (1) CAT-6A CABLE TO DATA CABINET, IP CLOCK/SPEAKER SHALL BE FURNISHED AND INSTALLED BY THE OWNER. PROVIDE DATA JACK INSIDE ENCLOSURE. COORDINATE EXACT LOCATION WITH THE OWNER.
W	FLUSH WALL MOUNTED OUTLET AT +48" FOR WALL PHONE. RUN 3/4" CONDUIT WITH (1) CAT-6A DATA CABLE TO IDF
C	WALL MOUNTED OUTLET FOR CCTV CAMERA. PROVIDE (1) DATA JACK AND RUN 3/4"C. WITH (1) CAT-6A DATA CABLES TO IDF. PROVIDE 4S DEEP FLUSH WALL MOUNTED BOX WITH ENVIRONMENTAL STAINLESS STEEL DOUBLE GANG PLATE CENTERNED IN CMU BLOCK.
SI W	WALL MOUNTED INTRUSION SYSTEM MOTION DETECTOR AT 8'-0". RUN 3/4"C. WITH INTRUSION CABLE TO INTRUSION PANEL OR POWER SUPPLY.
K	FLUSH WALL MOUNTED INTRUSION SYSTEM KEY PAD AT +60". RUN 1"C. WITH INTRUSION CABLE TO INTRUSION PANEL.
SI	CEILING MOUNTED 360 INTRUSION SYSTEM MOTION DETECTOR. RUN 3/4"C. WITH INTRUSION CABLE TO INTRUSION PANEL/POWER SUPPLY.
AV	FLUSH WALL MOUNTED AV OUTLET REFER TO DETAIL #1 ON E-302 FOR REQUIREMENT.
RC	ROOM CONTROLLER FOR LIGHTING CONTROL. LOCATE ABOVE CEILING(GREEN GATE)
S WP	EXTERIOR WEATHERPROOF ANALOG PA SPEAKER WITH FLUSH WALL MOUNTED SQUARE BACKBOX AT +96". RUN 3/4" CONDUIT WITH PA SPEAKER TO IDF ROOM. ANALOG SPEAKER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
	CEILING MOUNTED LED EXIT SIGN WITH BUILT-IN BATTERY PACK.
	WALL MOUNTED LED EXIT SIGN WITH BUILT-IN BATTERY PACK.
	WALL MOUNTED LUMINARE

ELECTRICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
GFI	GROUND FAULT INTERRUPTER
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
SV	SOLENOID VALVE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

ELECTRICAL INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
3. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +48" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
4. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
5. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
6. CONNECTION FOR ELECTRIC WATER COOLERS (EWC) SHALL BE A JUNCTION BOX CONCEALED BEHIND WATER COOLER ACCESS PLATE OR BE A GFI RECEPTACLE LOCATED DIRECTLY BELOW AND CENTERED ON EWC. CONTRACTOR SHALL VERIFY TYPE OF EWC TO BE INSTALLED.
7. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
9. CONTRACTOR SHALL REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
10. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
11. ELECTRICAL INDENTIFICATION. REFER TO SPECIFICATION FOR COLOR/LABEL REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.
12. PROVIDE DEDICATED NEUTRAL FOR ALL 120V/277V MULTI-WIRES BRANCH CIRCUITS.

LUMINAIRE SYMBOL KEY

SYMBOL:	DESCRIPTION:
	NORMAL BRANCH LUMINAIRE
E	EMERGENCY BRANCH LUMINAIRE WITH BUILT-IN BATTERY PACK MINIMUM 90 MINUTES BACK UP TIME. PROVIDE UN-SWITCHED HOT CIRCUIT CONDUCTOR TO BATTERY PACK

ELECTRICAL DEMOLITION SYMBOLS

SYMBOL:	DESCRIPTION:
E	EQUIPMENT WITH "E" ADJACENT IS EXISTING TO REMAIN.
R	EQUIPMENT WITH "R" ADJACENT IS EXISTING TO BE COMPLETELY DISCONNECTED AND REMOVED.
RP	REPLACE EXISTING EQUIPMENT AND WIRING.
RR	EQUIPMENT WITH "RR" ADJACENT IS EXISTING TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED.
ER	RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.
E	EXISTING CONDUIT RUN TO REMAIN. EXISTING CONDUCTORS TO REMAIN UNLESS NOTED OTHERWISE ON DRAWINGS.
EA	EXISTING CONDUIT RUN TO BE ABANDONED. REMOVE CONDUCTORS AND CAP ENDS OF CONDUIT. DIMENSION END OF CONDUIT ON AS-BUILT DRAWINGS.
EX	EXISTING CONDUIT RUN TO BE REWIRED. REFER TO PLANS FOR WIRING REQUIREMENTS. CROSS LINES INDICATE NEW CONDUCTORS. PROVIDE OTHER SYSTEM CONDUCTORS PER SPECIFICATIONS.
R	EXISTING CONDUIT AND WIRE RUN TO BE COMPLETELY DISCONNECT AND REMOVED BACK TO LAST REMAINING OUTLET OR DEVICE.
R X E	"X" INDICATES APPROXIMATE POINT OF INTERCEPTION OF EXISTING CONDUIT RUN. CONDUIT TO BE REMOVED AT "R" SIDE OF "X" REMOVE ALL CONDUCTORS PRIOR TO CUTTING CONDUIT. EXACT LOCATION OF ALL CONDUITS SHALL BE FIELD VERIFIED. EXTEND CONDUIT AS INDICATED ON PLANS.
B-1,3	CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER.

MEP COMPONENT ANCHORAGE NOTES:

1. EQUIPMENT ANCHORAGE NOTE:

   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 CAND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTION 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. HARED WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTION 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 MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENTS IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG 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.

2. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS BRACING NOTE.

   PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENT PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED INS ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.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. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2013 OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE STAR OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

   MP☐MD☐PP☐E☑OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

   MP☐MD☐PP☐E☐OPTION 2: SHALL COMPLY WITH HACI (OSHPD) PRE APPROVAL (OPM#) #____ AS INDICATED IN THESE DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

LIST OF APPLICABLE CODES:

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

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR

2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR

2022 CALIFORNICA 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, (CAL GREEN), PART 11, TITLE 24 CCR

2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

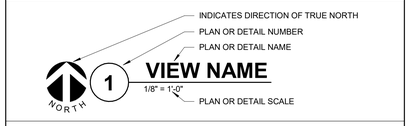
APPLICABLE STANDARDS:

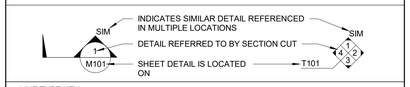
FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

VIEW KEY

NAME — LEVEL NAME
10' - 0" — HEIGHT ABOVE PROJECT 0' - 0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



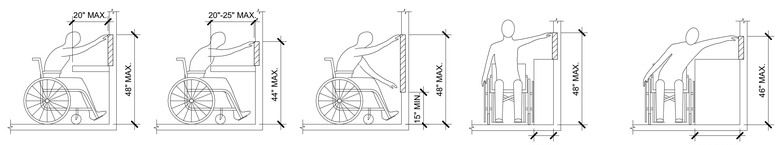


LINE TYPE KEY:

- NEW WORK BY THIS CONTRACTOR
- NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR
- E — EXISTING CONDUIT TO REMAIN
- R — EXISTING CONDUIT TO BE REMOVED
- EX — EXISTING CONDUIT TO BE REWIRED
- EA — EXISTING CONDUIT TO BE ADDITION
- CONDUIT RUN CONCEALED IN WALL OR CEILING

ELECTRICAL SHEET INDEX

E-001	ELECTRICAL COVERSHEET
E-002	GENERAL NOTES
E-003	SINGLE LINE DIAGRAM
E-004	PANEL SCHEDULES
E-005	LIGHTING FIXTURE SCHEDULE
E-006	TITLE-24 INTERIOR
ES101	OVERALL SITE PLAN - ELECTRICAL
ES102	DEMOLITION SITE PLAN - ELECTRICAL
ES103	REMODEL SITE PLAN - ELECTRICAL
ED101	DEMOLITION FLOOR PLAN - LIGHTING
ED102	DEMOLITION FLOOR PLAN - POWER
ED103	DEMOLITION FLOOR PLAN - SIGNAL
ED104	DEMOLITION FLOOR PLAN - FIRE ALARM
ED105	DEMOLITION ROOF PLAN - ELECTRICAL
E-101	FLOOR PLAN - LIGHTING
E-102	FLOOR PLAN - POWER
E-103	FLOOR PLAN - SIGNAL
E-104	FLOOR PLAN - FIRE ALARM
E-105	ROOF PLAN - ELECTRICAL
E-301	DETAILS
E-302	DETAILS
E-303	DETAILS
E-304	DETAILS
E-305	DETAILS
E-401	FIRE ALARM COVER AND SCHEDULES
E-402	FIRE ALARM RISER DIAGRAM
E-403	FIRE ALARM DETAILS
GRAND TOTAL: 27	



ADA STANDARDS FOR ACCESSIBLE DESIGN

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For

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ELECTRICAL COVERSHEET

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E-001

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ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME RATING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AT	AMPERE TRIP RATING
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
CONC	CONCRETE
CU	COPPER
CEC	CALIFORNIA ELECTRICAL CODE
CFC	CALIFORNIA FIRE CODE
DET	DETAIL
DISC	DISCONNECT
DN	DOWN
DSA	DEPARTMENT OF STATE ARCHITECT
DWG	DRAWING
EA	EACH
EMERG	EMERGENCY
EQUIP	EQUIPMENT
ELEC	ELECTRICAL
EXIST	EXISTING
EWC	ELECTRIC WATER COOLER
(E)	EXISTING
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HT	HEIGHT
IG	ISOLATED GROUND
INC	INCANDESCENT
ISC	AVAILABLE SHORT CIRCUIT CURRENT
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILLS
KV	KILO-VOLT
KVA	KILO-VOLT-AMPERE
KW	KILOWATT
LCL	LONG CONTINUOUS LOAD
LTG	LIGHTING
LV	LOW VOLTAGE
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NC	NORMALLY CLOSED
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
(N)	NEW
OC	ON CENTER
OD	OUTSIDE DIAMETER
P	POLE OR PHASE
PA	PUBLIC ADDRESS
PB	PULL BOX
PF	POWER FACTOR
PNL	PANEL
PWR	POWER
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
QUAD	QUADRUPLEX
REQD	REQUIRED
REQMT	REQUIREMENT
RGS	RIGID GALVANIZED STEEL
RM	ROOM
SHT	SHEET
SPEC	SPECIFICATION
SW	SWITCH
SWBD	SWITCHBOARD
TC	TIME CLOCK
TEL	TELEPHONE
TERM	TERMINAL
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT OR WIRE
WH	WATT-HOUR
WP	WEATHERPROOF
WT	WEATHERTIGHT
Z	IMPEDANCE
ø	PHASE
°C / °F	CELSIUS DEGREE/FARENHEIT DEGREE

GENERAL NOTES

1. ALL ELECTRICAL PREFABRICATED EQUIPMENT SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER THAT ALL PORTIONS, ELEMENTS, SUB-ASSEMBLIES AND/OR PARTS OF SAID EQUIPMENT, AND THE EQUIPMENT AS A WHOLE INCLUDING ITS ATTACHMENTS, WILL RESIST A LOAD WHICH EXCEEDS THE FORCE LEVEL USED TO RESTRAIN AND ANCHOR THE EQUIPMENT TO THE SUPPORTING STRUCTURE.

2. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATORIES (UL) AND BEAR THEIR LABEL, OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY WHERE UL DOES NOT HAVE A LISTING. CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER ATTESTING TO ITS SAFETY. IN ADDITION, THE MATERIALS, EQUIPMENT, AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:

   AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
   INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
   NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
   AMERICAN STANDARD ASSOCIATION (ASA)
   NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
   AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
   CALIFORNIA ELECTRICAL CODE (CEC) - 2022 EDITION
   CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)
   INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
   ALL STATE CODES HAVING JURISDICTION.

   WHERE THE CODES HAVE DIFFERENT LEVELS OF REQUIREMENTS, THE MOST STRINGENT RULE SHALL APPLY.

3. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS AND SPECIFICATIONS. HE SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM DOING THE WORK IN COMPLETE ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

5. ALL ITEMS SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCTS, CONCRETE PADS, TRANSFORMERS, RISERS, MANHOLES, PULL BOXES, AND PROTECTIVE COVERING FROM SERVICE LOCATION SHALL BE PROVIDED AND INSTALLED, AND SHALL BE VERIFIED WITH THE SERVING UTILITY COMPANY. THE CONTRACTOR SHALL INSTALL THE SERVICE IN COMPLIANCE WITH THE SERVING UTILITY COMPANY, AND SHALL PAY ALL CHARGES LEVIED BY THE SERVING UTILITY COMPANY FOR HIS SERVICE EXCEPT THE FIRST BILLING DEPOSIT. WHERE THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE, THE DOCUMENTS SHALL GOVERN.

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

7. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE [ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

8. THE CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE RECORD SET OF DRAWINGS. THESE PRINTS SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE USED ONLY AS A RECORD SET. THIS SHALL NOT BE CONSTRUED AS AUTHORIZATION FOR THE CONTRACTOR TO MAKE CHANGES IN THE LAYOUT WITHOUT DEFINITE INSTRUCTION IN EACH CASE. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE ARCHITECT, AND ALL CHANGES AS NOTED ON THE RECORD SET OF DRAWINGS SHALL BE INCORPORATED THEREON WITH BLACK INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER. FAILURE TO KEEP RECORD DRAWINGS UP-TO-DATE SHALL CONSTITUTE CAUSE FOR WITHHOLDING OF PROGRESS PAYMENTS.

9. IN SOME INSTANCES, IT MAY BE NECESSARY TO DEFER WORK IN CERTAIN AREAS AND LOCATIONS UNTIL SUCH TIME AS EXISTING FACILITIES CAN BE TEMPORARILY OR PERMANENTLY REARRANGED BY THE OWNER BUILDING AUTHORITY. THEREFORE, WHENEVER IT BECOMES NECESSARY FOR THE CONTRACTOR TO PERFORM WORK UNDER THIS CONTRACT IN EXISTING AREAS IN WHICH THE OWNER'S WORK IS BEING PERFORMED, THE CONTRACTOR SHALL ADVISE THE ARCHITECT AND THE OWNER RELATIVE TO THIS REQUIREMENT AND SHALL FOLLOW CLOSELY THE DIRECTIVE ISSUED BY THE ARCHITECT INSOFAR AS TIME AND PROCEDURE ARE CONCERNED. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL PREMIUM TIME TO WHICH HE MAY BE SUBJECTED FOR PERFORMING WORK IN SUCH PROCEDURE AND AT SUCH TIMES AS MAY BE NECESSARY TO CAUSE THE LEAST INTERFERENCE WITH THE OPERATIONS OF THE OWNER.

10. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER, WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ENGINEER 14 DAYS PRIOR TO THE OUTAGE. ANY OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS OR SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION OR WHERE SAID FEEDERS OR SYSTEMS REQUIRE EMERGENCY STANDBY POWER.

12. SHOP DRAWINGS SHALL BE SUBMITTED WITHIN THIRTY DAYS AFTER AWARD OF THE CONTRACT. THE CONTRACTOR SHALL SUBMIT EIGHT COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT INCLUDING MANUFACTURER AND MODEL NUMBER PROPOSED FOR THE JOB. SHOP DRAWINGS SHALL INCLUDE JOB DESCRIPTION, ARCHITECT AND ENGINEER IDENTIFICATION, AND ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS, AND MANUFACTURER'S BROCHURES. SHOP DRAWINGS SHALL BE SUBMITTED FOR ITEMS LISTED IN SPECIFICATIONS. PARTIAL, INCOMPLETE, OR UNBOUND SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.

13. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM [TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE].

14. THE CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF SUBSTANTIAL COMPLETION.

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

16. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE ARCHITECT AND REVIEWED AND APPROVED BY DSA. PERFORM CORING, SAW CUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. NO STRUCTURAL MEMBER, FLOOR OR WALL SHALL BE CUT, NOTCHED OR BORED UNLESS SPECIFICALLY DETAILED ON THE APPROVED PLANS OR REVIEWED AND APPROVED BY THE ARCHITECT OF RECORD AND DSA PRIOR TO BEGINNING SUCH WORK. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.

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

18. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED IN WALLS, OR BELOW SLAB ON GRADE UNLESS NOTED OTHERWISE.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAWCUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM HIS WORK. ATTENTION IS CALLED TO THE FACT THAT THERE ARE EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.

20. WHENEVER A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT DEVICES, CIRCUIT BREAKERS, GROUND FAULT PROTECTION SYSTEMS, ETC. (ALL MATERIALS), ARISES ON THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.

21. REFER TO SINGLE LINE DIAGRAM AND FEEDER SCHEDULES FOR CONDUIT AND CONDUCTOR SIZE TO PANELS, TRANSFORMERS, MECHANICAL AND PLUMBING EQUIPMENT, ETC. CONDUIT RUNS MAY NOT BE SHOWN ON DRAWINGS, BUT ARE PART OF THIS CONTRACT.

22. STRAIGHT FEEDER, BRANCH CIRCUIT, AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.

23. THE NUMERALS SHOWN AT TOP OF LIGHT FIXTURE IDENTIFICATION SYMBOLS INDICATING THE NUMBER OF LIGHT FIXTURES REQUIRED SHALL NOT BE USED BY THE CONTRACTOR FOR HIS QUANTITY TAKE-OFF AT BIDDING, NOR FOR DETERMINATION OF HOW MANY FIXTURES WILL BE INSTALLED. THE CONTRACTOR SHALL INSTALL A LIGHT FIXTURE WHEREVER A FIXTURE OUTLET IS SHOWN ON THE DRAWINGS.

24. THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN. UNLESS OTHERWISE NOTED, MOUNT ELECTRICAL DEVICES AT THE FOLLOWING HEIGHTS:

   WALL SWITCH +4'-0" SET VERTICALLY TO TOP OF DEVICE
   CONVENIENCE RECEPTACLE +1'-3" SET VERTICALLY TO BOTTOM OF DEVICE
   TELEPHONE/DATA OUTLETS +1'-3" SET VERTICALLY TO BOTTOM OF DEVICE
   OUTLETS AT COUNTERS +6" ABOVE COUNTERS

   REVIEW ARCHITECTURAL ELEVATIONS OF CASEWORK. OUTLETS MOUNTED ABOVE OR BELOW, OR ADJACENT TO CASEWORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS, PRIOR TO FINAL ROUGH-IN. ELECTRICAL DRAWINGS SHALL GOVERN NUMBER AND TYPE OF OUTLETS. HOWEVER, LOCATIONS SHALL BE AS INDICATED ON ARCHITECTURAL ELEVATIONS. PROVIDE CONDUIT, WIRES, AND OUTLETS FOR WORK REQUIRED IN CASEWORK INSTALLATIONS. REFERENCE ARCHITECTURAL DETAILS FOR METHOD OF ROUTING CONDUIT WITHIN CASEWORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT-OUTS IN TILE OR COUNTER SPLASHES WHERE RECEPTACLES, OUTLETS, ETC., OCCUR. PROVIDE BOX EXTENSIONS THROUGH ALL CASEWORK. FINISH FLUSH WITH FACE OF SPLASH, CABINET, ETC.

   MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO CENTER OF DEVICES AND EQUIPMENT UNLESS OTHERWISE NOTED. BOXES INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

25. DRAWINGS ARE DIAGRAMMATIC ONLY. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER SECTIONS. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, OR MECHANICAL ITEMS OR FEATURES.

26. CONTRACTOR SHALL CROSS REFERENCE SINGLE-LINE AND RISER DIAGRAMS WITH SITE AND FLOOR PLANS FOR ALL SYSTEMS.

27. ALL RECEPTACLES AT THE FOLLOWING LOCATIONS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER:

   1. BATHROOMS
   2. KITCHENS
   3. SINKS (WITHIN 6FT.)
   4. INDOOR WET AREAS
   5. LOCKER ROOMS
   6. GARAGE, SERVICE BAYS OR SIMILAR
   7. ROOFTOPS
   8. OUTDOORS

28. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS, SPECIFICATIONS AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT IN GENERAL CHARGE OF DESIGN AND DELEGATED RESPONSIBILITY COVERING THE WORK SHOWN ON A PARTICULAR PLAN OR SPECIFICATION.

29. SIGNAL AND COMMUNICATIONS SYSTEMS (INTERCOM,VOICE, DATA, PAGING, INTRUSION AND CLOCK): PROVIDE A COMPLETE AND OPERABLE EXTENSION TO THE EXISTING SYSTEMS AS INDICATED ON THE DRAWINGS. THESE SYSTEMS SHALL BE PROVIDED AS A SINGLE SUBCONTRACT UNDER THE ELECTRICAL CONTRACT. IN THE INTEREST OF MAINTENANCE CONVENIENCE AND CAPABILITY, THE NEW EQUIPMENT SHALL MATCH THAT OF EXISTING SYSTEMS AS INSTALLED IN ADJACENT AREAS. ALL EQUIPMENT AND CABLE SHALL BE PROVIDED BY THE FACTORY AUTHORIZED DISTRIBUTOR. PROVIDE ALL BACKBOXES AND CABLING PER MANUFACTURER'S REQUIREMENTS. SUBMIT ENGINEERED SHOP DRAWINGS FOR EACH SIGNAL AND COMMUNICATION SYSTEM TO THE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.

30. PROVIDE 24" X 30" ACCESS PANEL IN NEW-ACCESSABLE CEILING TO ACCESS JUNCTION BOXES AND ATTIC HEAT DETECTORS

31. PAINT ALL EXPOSED PULLBOXES, CONDUITS AND SUPPORTS TO MATCH WALL/CEILING FINISH.

DEMOLITION NOTES

1. ALL CIRCUIT NUMBERS AND EXISTING CONDUIT HOMERUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF HOMERUNS, AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS IF REQUIRED.

2. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL AND LOW VOLTAGE SYSTEMS, EQUIPMENT, ETC., REMAINING IN OPERATION WHICH ARE BEING FED BY AN ABANDONED OUTLET TERMINAL CABINET, LOW VOLTAGE EQUIPMENT OR PANELBOARD. MAINTAINING CONTINUITY SHALL CONSIST OF REROUTING CONDUIT, WIRING, ETC., AS REQUIRED.

3. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT, AND TURN OVER REMOVED EQUIPMENT THAT THE OWNER REQUESTS IN AN "AS-FOUND" CONDITION. EQUIPMENT THAT IS TO BE TURNED OVER SHALL BE BOXED AND TAGGED TO IDENTIFY THE SPECIFIC EQUIPMENT.

4. WHERE NEW CIRCUITS ARE SHOWN TO EXISTING PANELS, INSTALL NEW BREAKERS (MINIMUM 20 AMP, SINGLE POLE) AS CALLED FOR ON DRAWINGS. IDENTIFY EACH NEW CIRCUIT ON PANEL SCHEDULE.

5. EXISTING CONDUIT MAY BE REUSED IF ADEQUATELY SIZED, BUT IN NO CASE SHALL ANY EXISTING CONDUCTORS BE REUSED.

6. IN SOME INSTANCES, IT MAY BE NECESSARY FOR THE ELECTRICAL CONTRACTOR TO TEMPORARILY RELOCATE, REROUTE, ETC., EXISTING ELECTRICAL EQUIPMENT. THIS SHALL BE DONE SO THAT THE SYSTEMS IN ALL PHASES (THOSE COMPLETED AND THOSE YET TO BEGIN), ARE IN COMPLETE, OPERABLE, CONDITION AS CONSTRUCTION PROCEEDS THROUGH EACH PHASE.

7. WHERE NEW CIRCUITS ARE SHOWN CROSSING PHASING BOUNDARIES (I.E., CORRIDOR LIGHTING, ETC.) THIS CONTRACTOR SHALL CONNECT ALL EQUIPMENT, FIXTURES, ETC., IN THE PHASE WHICH IS THEN UNDER CONSTRUCTION. CONTRACTOR SHALL STUB OUT ALL REQUIRED CONDUIT AND WIRING ACROSS PHASE BOUNDARIES; THEN, PICK UP AND EXTEND THESE CONDUIT RUNS WHEN CONSTRUCTION BEGINS IN THE ADJACENT PHASE.

8. DURING EACH PHASE OF DEMOLITION, ALL CIRCUITS FROM EXISTING PANELS WHICH FEED AREAS OUTSIDE THE BOUNDARIES OF THAT PHASE, SHALL BE MAINTAINED.

9. ALL DEMOLITION SHALL COMPLY WITH CHAPTER 33 CBC AND CHAPTER 33 CFC. REQUIREMENT.

ENERGY ACCEPTANCE TESTING

MANDATORY ACCEPTANCE TESTING PER CEC 2022 ENERGY CODE APPENDIX A SHALL BE PROVIDED AS LISTED BELOW:

NOTE: DIVISION 26 CONTRACTOR WILL RETAIN AN AABC CERTIFIED AGENCY TO PERFORM AND DOCUMENT THE REQUIRED ACCEPTANCE TESTING AS DESCRIBED IN CHAPTER 13 OF THE 2022 NON-RESIDENTIAL COMPLIANCE MANUAL. THIS WORK INCLUDES COMPLETING THE FORMS, SIGNING THE FORMS, AND SUBMITTING THE FORMS TO THE AUTHORITY HAVING JURISDICTION. THE FORMS AND REQUIREMENTS CAN BE OBTAINED FROM THE CEC WEBISTE: HTTP://WWW.ENERGY.CA.GOV/TITLE 24/2022 STANDARDS/NONRES_COMPLIANCE_FORMS INCLUDE FORMS WHICH APPLY TO THE SCOPE OF WORK IN THIS SET OF DRAWINGS AND SPECIFICATIONS. THE LIST OF FORMS IS REFERENCED BELOW:

1. NRCA-ILT-02-A LIGHTING CONTROL ACCEPTANCE DOCUMENT
2. NRCA-ILT-03-A AUTOMATIC DAYLIGHTING CONTROL ACCEPTANCE DOCUMENT
3. NRCA-ILT-04-A DEMAND RESPONSIVE LIGHTING CONTROL ACCEPTANCE DOCUMENT
4. NRCA-OLT-02-A NA7.7 OUTDOOR LIGHTING ACCEPTANCE TESTS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

GROSSMONT UNION HIGH SCHOOL DISTRICT
EST 1920

Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For

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WWW.HED.DESIGN

GENERAL NOTES

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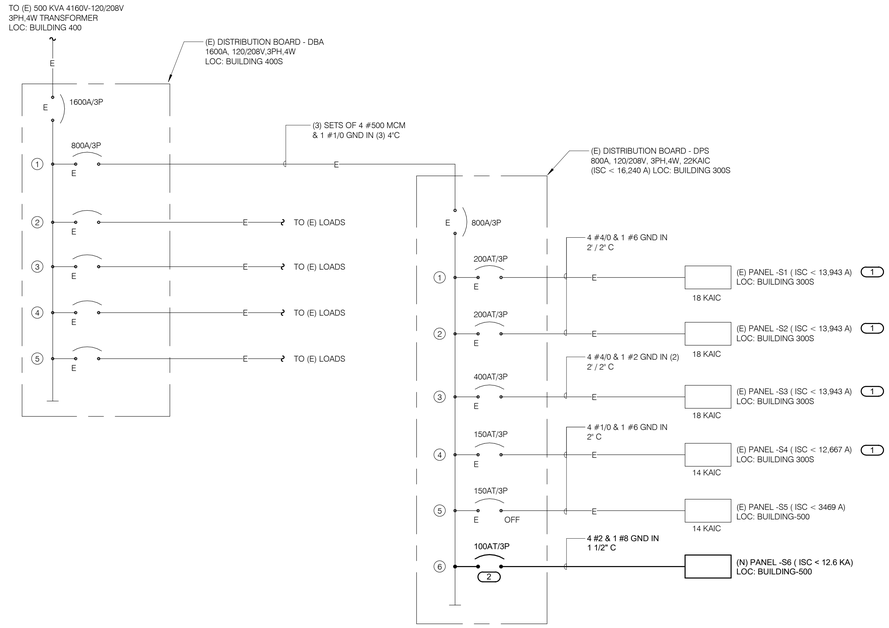
LOAD SUMMARY FOR - DPS	
(E)PANEL-S1	= 58.8A
(E)PANEL-S2	= 48.9A
(E)PANEL-S3	= 294.2A
(E)PANEL-S4	= 33.8A
(E)PANEL-S5	= 23.0A
(E)PANEL-S6	= 30.0A
TOTAL CONNECTE LOAD	= 488.7A



1 SINGLE LINE DIAGRAM

12" = 1'-0"

KEYNOTES:

1. PROVIDE UPDATED PRINTED PANEL DIRECTORY.
2. PROVIDE MATCHING BREAKER AND ENGRAVED NAME PLATE.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

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SINGLE LINE DIAGRAM

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(E) PANEL- S1

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 200AT/3P @DPS
LOCATION: ELECT. ROOM 316

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 18 kA
ISC: 13.94 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	WIRE SIZE N	WIRE SIZE G	VD %	A	B	C	VD %	WIRE SIZE G	WIRE SIZE N	WIRE SIZE H	OCPD P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
1	1	(N) RECEPT. RM.301	20 A	1					0.72	0.54						1	20 A	(N) RECEPT. RM.311	2	1
1	3	(N) RECEPT. RM.301	20 A	1						0.72	0.54					1	20 A	(N) RECEPT. RM.311	4	1
1	5	(N) RECEPT. RM.301	20 A	1							0.54	0.72				1	20 A	(N) RECEPT. RM.311	6	1
1	7	(N) RECEPT. RM.301	20 A	1					0.36	0.54						1	20 A	(N) RECEPT. RM.311	8	1
1	9	(N) RECEPT. RM.301	20 A	1						0.54	0.36					1	20 A	(N) RECEPT. RM.311	10	1
1	11	(N) RECEPT. RM.301	20 A	1							0.54	0.36				1	20 A	(N) RECEPT. RM.311	12	1
1	13	(N) RECEPT. RM.301	20 A	1					0.72	0.72						1	20 A	(N) RECEPT. RM.311	14	1
1	15	(N) RECEPT. RM.301	20 A	1						0.54	0.54					1	20 A	(N) RECEPT. RM.311	16	1
1	17	(N) RECEPT. RM.301	20 A	1							0.36	0.36				1	20 A	(N) RECEPT. RM.311	18	1
1	19	(N) RECEPT. RM.301	20 A	1					0.36	0.36						1	20 A	(N) RECEPT. RM.311	20	1
1	21	(N) RECEPT. RM.314	20 A	1						0.54	0.54					1	20 A	(N) RECEPT. RM.309	22	1
1	23	(N) RECEPT. RM.314	20 A	1							0.72	0.54				1	20 A	(N) RECEPT. RM.309	24	1
1	25	(N) RECEPT. RM.314	20 A	1					0.72	0.54						1	20 A	(N) RECEPT. RM.309	26	1
1	27	(N) RECEPT. RM.314	20 A	1						0.54	0.36					1	20 A	(N) RECEPT. RM.309	28	1
1	29	(N) RECEPT. RM.314	20 A	1							0.36	0.72				1	20 A	(N) RECEPT. RM.309	30	1
1	31	(N) RECEPT. RM.314	20 A	1					0.36	0.54						1	20 A	(N) RECEPT. RM.309	32	1
1	33	(N) RECEPT. RM.310	20 A	1						0.9	0.36					1	20 A	(N) RECEPT. RM.309	34	1
1	35	(N) RECEPT. RM.310	20 A	1							0.72	0.36				1	20 A	(N) RECEPT. RM.309	36	1
1	37	(N) RECEPT. RM.314	20 A	1					0.54	0						1	20 A	(N) IRRIGATION CONTROL	38	2
1	39	(N) RECEPT. RM.314	20 A	1						0.54	0.36					1	20 A	(N) RECEPT. RM.309	40	2
2	41	(N) EXTERIOR RECEPTS	20 A	1							0.54	0.54				1	20 A	(N) RECEPT. RM.309	42	2
								Total Load:	7.02 kVA	7.38 kVA	7.38 kVA									
								Total Amps:	58.50	61.96	61.96									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	2.88 kVA	100.00%	2.88 kVA
Receptacles	18.9 kVA	76.46%	14.45 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	21.78 kVA
TOTAL ESTIMATED DEMAND LOAD:	17.33 kVA
TOTAL CONNECTED AMPS:	60.46 A
TOTAL ESTIMATED DEMAND AMPS:	48.1 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: 1. CONNECT NEW CIRUCIT TO EXISTING BREAKER. 2. PROVIDE NEW MATCHING BREAKER.

NOTE: PROVIDE NEW PRINTED PANEL DIRECTORY.

(E) PANEL- S2

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 200AT/3P @DPS
LOCATION: ELECT. ROOM 316

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 18 kA
ISC: 13.94 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	WIRE SIZE N	WIRE SIZE G	VD %	A	B	C	VD %	WIRE SIZE G	WIRE SIZE N	WIRE SIZE H	OCPD P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
1	1	(N) RECEPT. RM. 308	20 A	1					0.54	0.72						1	20 A	(N) RECEPT. RM.304	2	1
1	3	(N) RECEPT. RM. 308	20 A	1						0.36	0.54					1	20 A	(N) RECEPT. RM.304	4	1
1	5	(N) RECEPT. RM. 308	20 A	1							0.54	0.54				1	20 A	(N) RECEPT. RM.304	6	1
1	7	(N) RECEPT. RM. 308	20 A	1					0.54	0.54						1	20 A	(N) RECEPT. RM.304	8	1
1	9	(N) RECEPT. RM. 308	20 A	1						0.54	0.54					1	20 A	(N) RECEPT. RM.304	10	1
1	11	(N) RECEPT. RM. 308	20 A	1							0.54	0.54				1	20 A	(N) RECEPT. RM.304	12	1
1	13	(N) RECEPT. RM. 308	20 A	1					0.72	0.54						1	20 A	(N) RECEPT. RM.304	14	1
1	15	(N) RECEPT. RM. 308	20 A	1						0.54	0.54					1	20 A	(N) RECEPT. RM.304	16	1
1	17	(N) RECEPT. RM. 308	20 A	2							0.72	0.72				2	20 A	(N) RECEPT. RM.304	18	1
1	19	--	--	--	--	--	--	--	0.72	0.72			--	--	--	--	--	--	20	1
1	21	(N) RECEPT. RM. 306	20 A	1						0.72	0.9					1	20 A	(N) RECEPT. RM.307	22	1
2	23	(N) RECEPT. RM. 306	20 A	1							0.54	0.72				1	20 A	(N) RECEPT. RM.307	24	1
1	25									0.18						1	20 A	(N) RECEPT. RM.307	26	1
1	27	(N) RECEPT. RM. 306	20 A	1						0.72	0.36					1	20 A	(N) RECEPT. RM.307	28	1
1	29	(N) RECEPT. RM. 306	20 A	1							0.9	0.72				1	20 A	(N) RECEPT. RM.302 & 303	30	1
1	31	(N) RECEPT. RM. 306	20 A	1					0.54	0.72						1	20 A	(N) RECEPT. RM.302 & 303	32	2
1	33	(N) RECEPT. RM. 306	20 A	1						0.54	0		--	--	--	1	20 A	(N) CFD	34	1
1	35	(N) RECEPT. RM. 306	20 A	2							0.72	0	--	--	--	1	20 A	(N) CFD	36	2
1	37	--	--	--	--	--	--	0.72	0				--	--	--	1	20 A	SPARE	38	2
2	39	SPARE	20 A	1	--	--	--			0	0		--	--	--	1	20 A	SPARE	40	2
2	41	SPARE	20 A	1	--	--	--				0	0	--	--	--	1	20 A	SPARE	42	2
								Total Load:	7.20 kVA	6.30 kVA	7.20 kVA									
								Total Amps:	61.15	52.50	61.15									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	4.32 kVA	100.00%	4.32 kVA
Receptacles	16.38 kVA	80.53%	13.19 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	20.70 kVA
TOTAL ESTIMATED DEMAND LOAD:	17.51 kVA
TOTAL CONNECTED AMPS:	57.46 A
TOTAL ESTIMATED DEMAND AMPS:	48.6 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: 1. CONNECT NEW CIRUCIT TO EXISTING BREAKER. 2. PROVIDE NEW MATCHING BREAKER.

NOTE: PROVIDE NEW PRINTED PANEL DIRECTORY.

(E) PANEL- S3

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 400AT/3P @ DPS
LOCATION: ELECT. ROOM 316

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 400 A MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 18 kA
ISC: 13.94 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	WIRE SIZE N	WIRE SIZE G	VD %	A	B	C	VD %	WIRE SIZE G	WIRE SIZE N	WIRE SIZE H	OCPD P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
3	1	(E) AC-1	50 A	3	--	--	--		4.64	4.64						3	50 A	(E) AC-5	2	3
3	3	--	--	--	--	--	--			4.64	4.64					--	--	--	4	3
3	5	--	--	--	--	--	--				4.64	4.64	--	--	--	--	--	--	6	3
3	7	(E) AC-3	50 A	3	--	--	--		4.64	4.64						3	50 A	(E) AC-4	8	3
3	9	--	--	--	--	--	--			4.64	4.64		--	--	--	--	--	--	10	3
3	11	--	--	--	--	--	--				4.64	4.64	--	--	--	--	--	--	12	3
3	13	(E) AC-2	50 A	3	--	--	--		4.64	4.64						3	50 A	(E) AC-6	14	3
3	15	--	--	--	--	--	--			4.64	4.64		--	--	--	--	--	--	16	3
3	17	--	--	--	--	--	--				4.64	4.64	--	--	--	--	--	--	18	3
3	19	(E) CAMERA-ROOF	20 A	1	--	--	--		0.5	4.64						3	50 A	(E) AC-7	20	3
1	21	(E) ROOF RECEPT	20 A	1							0.72	4.64				--	--	--	22	3
3	23	SPARE	20 A	1	--	--	--					0	4.64	--	--	--	--	--	24	3
3	25	SPARE	20 A	1	--	--	--		0	0.5									1	20 A	(N) EF-300-S1	26	1
1	27	(N) EF-300-S1	20 A	1							0.5	0.5							1	20 A	(N) EF-300-S1	28	1
1	29	(N) EF-300-S1	20 A	1								0.5	0.5						1	20 A	(N) EF-300-S1	30	1
1	31	(N) EF-300-S4	20 A	1					0.5	0.5									1	20 A	(N) EF-300-S2	32	1
2	33	SPARE	20 A	1	--	--	--				0	0.9				--	--	--	2	15 A	(E) CONDENSING UNIT	34	3
2	35	SPARE	20 A	1	--	--	--					0	0.9	--	--	--	--	--	--	--	--	36	3
1	37	(N) EF-300-S1	20 A	1					0.5	6									3	100 A	(E) PANEL	38	3
2	39	SPARE	20 A	1	--	--	--				0	6				--	--	--	--	--	--	40	3
2	41	SPARE	20 A	1	--	--	--					0	6	--	--	--	--	--	--	--	--	42	3
								Total Load:	40.98 kVA	41.10 kVA	40.38 kVA									
								Total Amps:	342.27	343.27	336.50									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Lighting	1 kVA	100.00%	1 kVA
Other	0.5 kVA	100.00%	0.5 kVA
Power	2.5 kVA	100.00%	2.5 kVA
Receptacles	0.72 kVA	100.00%	0.72 kVA
Spare	117.74 kVA	80.00%	94.192 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	122.46 kVA
TOTAL ESTIMATED DEMAND LOAD:	98.912 kVA
TOTAL CONNECTED AMPS:	339.91 A
TOTAL ESTIMATED DEMAND AMPS:	274.6 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: 1. CONNECT NEW CIRUCIT TO EXISTING BREAKER. 2. PROVIDE NEW MATCHING BREAKER. 3. EXISTING CIRCUIT TO REMAIN.

NOTE: PROVIDE NEW PRINTED PANEL DIRECTORY.

(E) PANEL- S4

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 150AT/3P @ DPS
LOCATION: ELECT. ROOM 316

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 14 kA
ISC: 12.66 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	WIRE SIZE N	WIRE SIZE G	VD %	A	B	C	VD %	WIRE SIZE G	WIRE SIZE N	WIRE SIZE H	OCPD P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
1	1	(N) LIGHTING-RM 309	20 A	1					0.81	0.36						1	20 A	RECEPTACLE	2	2
1	3	(N) LIGHTING-RM 304	20 A	1						1.09	0.72					1	20 A	(N) RECEPT. IDF ROOM	4	2
	5	SPARE	20 A	1	--	--	--				0	0.54				1	20 A	(N) RECEPT. IDF ROOM	6	2
	7	SPARE	20 A	1	--	--	--		0	1.15						1	20 A	(N) LIGHTING-RM 301,302	8	
	9	SPARE	20 A	1	--	--	--				0	0.65				1	20 A	(N) LIGHTING-RM 311	10	2
	11	SPARE	20 A	1	--	--	--					0	0.65			1	20 A	(N) LIGHTING-RM 314	12	2
2	13	(N) LIGHTING-RM 308	20 A	1					0.81	0.6						1	20 A	(N) LIGHTING-RM 310	14	2
2	15	RECEPTACLE	20 A	1							0.65	0.54				1	20 A	(N) RECEPT.-ELECTRICAL	16	2
2	17	(N) LIGHTING-RM303	20 A	1								0.69	0			1	20 A	(N) RPS/AMP	18	3
2	19	RECEPT BATHROOMS	20 A	1					0.36	0						1	20 A	INTRUSION PS	20	2
2	21	SPARE	20 A	1	--	--	--				0	0				1	20 A	DDC CONTROL	22	2
2	23	SPARE	20 A	1	--	--	--					0	0.5	--	--	1	20 A	LIGHTING RELAY PANEL	24	4
2	25	SPARE	20 A	1	--	--	--		0	0.36						1	20 A	RECEPT. EXTERIOR	26	4
4	27	SPARE	20 A	1	--	--	--				0	0		--	--	2	20 A	SPARE	28	4
4	29	SPARE	20 A	1	--	--	--					0	0	--	--	--	--	--	30	4
2	31	(E) CIRUCIT	20 A	1	--	--	--		0.9	0.2						--	--	--	1	20 A	(N) LIGHTING CONTROL PANEL	32	1
1	33	(E) EXTERIOR LIGHTS	20 A	1	--	--	--			1.5	1.5					--	--	--	1	20 A	(E) EXTERIOR LGHTS	34	1
1	35	(E) EXTERIOR LIGHTS	20 A	1	--	--	--				0	0				--	--	--	1	20 A	SPARE	36	2
2	37	SPARE	20 A	1	--	--	--		0	0						--	--	--	1	20 A	SPARE	38	2
2	39	SPARE	20 A	1	--	--	--			0	0					--	--	--	1	20 A	SPARE	40	2
2	41	SPARE	20 A	1	--	--	--				0	0				--	--	--	1	20 A	SPARE	42	2
								Total Load:	5.55 kVA	6.64 kVA	2.37 kVA									
								Total Amps:	50.34	59.37	19.78									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Lighting	7.08 kVA	100.00%	7.08 kVA
Power	0.18 kVA	100.00%	0.18 kVA
Receptacles	2.7 kVA	100.00%	2.7 kVA
Spare	4.6 kVA	80.00%	3.68 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	14.56 kVA
TOTAL ESTIMATED DEMAND LOAD:	13.64 kVA
TOTAL CONNECTED AMPS:	40.41 A
TOTAL ESTIMATED DEMAND AMPS:	37.9 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: 1. CONNECT NEW CIRUCIT TO EXISTING BREAKER. 2. PROVIDE NEW MATCHING BREAKER. 3. PROVIDE RED COLOR LOCK-ON DEVICE TO BREAKER HANDLE AND RED COLOR CIRUCIT IDENTIFICATION. 4. REMOVE 2 POLE BREAKER AND PROVIDE 20A/1P MATCHING BREAKER.

NOTE: PROVIDE NEW PRINTED PANEL DIRECTORY.

PANEL- S6

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 100A/3P @ DPS
LOCATION: ELECT. ROOM 316

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 100 A MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 18 kA
ISC: 13.60 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	WIRE SIZE N	WIRE SIZE G	VD %	A	B	C	VD %	WIRE SIZE G	WIRE SIZE N	WIRE SIZE H	OCPD P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	EF-300 S3	15 A	3					0.5	1						1	20 A	WASHER	2	
	3	--	--	--	--	--	--	--			0.5	0.25				2	30 A	DRYER	4	
	5	--	--	--	--	--	--	--				0.5	0.25	--	--	--	--	--	6	
	7	REFRIGERATOR	20 A	1					1	1.5						1	20 A	FUME HOOD	8	
	9	DISH WASHER	20 A	1							1	0.5				1	20 A	WH & CIR. PUMP	10	
	11	REFRIGERATOR	20 A	1								1	0.18			1	20 A	DRYER	12	
	13	DISH WASHER	20 A	1					1	0.36						1	20 A	RECEPT-RM-310	14	
	15	SPARE	20 A	1	--	--					0	0.36				1	20 A	RECEPT-RM-310	16	
	17	SPARE	20 A	1	--	--	--					0	0	--	--	1	20 A	SPARE	18	
	19	SPARE	20 A	1	--	--	--		0	0				--	--	1	20 A	SPARE	20	
	21	SPARE	20 A	1	--	--	--				0	0		--	--	1	20 A	SPARE	22	
	23	SPARE	20 A	1	--	--	--					0	0	--	--	1	20 A	SPARE	24	
	25	SPACE	--	1	--	--	--		--	--				--	--	1	--	SPACE	26	
	27	SPACE	--	1	--	--	--				--	--		--	--	1	--	SPACE	28	
	29	SPACE	--	1	--	--	--							--	--	1	--	SPACE	30	
								Total Load:	5.36 kVA	2.61 kVA	1.93 kVA									
								Total Amps:	45.54	22.62	16.08									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	3.5 kVA	100.00%	3.5 kVA
Receptacles	6.4 kVA	100.00%	6.4 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	9.90 kVA
TOTAL ESTIMATED DEMAND LOAD:	9.9 kVA
TOTAL CONNECTED AMPS:	27.48 A
TOTAL ESTIMATED DEMAND AMPS:	27.5 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District
1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization
8585 Blossom Lane
Spring Valley, CA 91977

△ Date Issued For

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO JR.
Lic. E16934
Exp. 6-30-2025
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PANEL SCHEDULES
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S1	S2	S3
S4	S6	

E-004

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LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	TYPE				LAMPS		VOLTAGE	WATTAGE	BALLAST	DESCRIPTION	FINISH	MOUNTING	REMARKS	REFERENCE MOUNTING DETAIL
	LED	FLUOR	HPMH	OTHER	NUMBER	TYPE								
F1	◦					LED 4000K	MVOLT	45.7	LED DIMMABLE DRIVER	RECESSED 2'x4' LED LIGHT FIXTURE. METALUX #24CZ2-70-VHE-UNV-L840-CD1-U	WHITE	T-BAR CEILING	NOTE 1	#2 ON E-301
F2	◦					LED 4000K	MVOLT	38.7	LED DIMMABLE DRIVER	RECESSED 2'x4' LED LIGHT FIXTURE. METALUX #24CZ2-60-VHE-UNV-L840-CD1-U	WHITE	SLOPPED T-BAR CEILING	NOTE 1	#2 ON E-301
F3	◦					LED 4000K	MVOLT	44.1	LED DIMMABLE DRIVER	RECESSED 2'X2' LED FIXTURE METALUX #22CZ2-60-VHE-UNV-L840-CD1-U	WHITE	GYP. BOARD CEILING	NOTE 1, 2	PROVIDE PLASTER RING FOR INSTALLATION TO GYP. BOARD CEILING
F4	◦					LED 4000K	MVOLT	29.8	LED DIMMABLE DRIVER	RECESSED 1'x4' LED LIGHT FIXTURE FOR DAMP LOCATION COOPER LIGHTING #14GR-LD5-32-F125-UNV-L840-CD1-U-DF14W-U	WHITE	GYP. BOARD CEILING	NOTE 1, 2	#6 ON E-301
F5	◦					LED 4000K	MVOLT	18.3	LED DIMMABLE DRIVER	4' SURFACE CEILING MOUNTED LED FIXTURE COOPER LIGHTING #4WSNLED-LD4-20SL-F-UNV-L840-CD1-U MOUNT AT ± 8'0".	WHITE	GYP. BOARD CEILING	NOTE 1, 3	#3 ON E-304
X1	◦					LED 4000K	MVOLT	1.1	LED	SURFACE WALL MOUNTED LED EXIT SIGN WITH BATTERY PACK SURE LITE #TPX-7-1-G-WH	WHITE	WALL OR CEILING	NOTE 1, 4	PROVIDE RECESSED BACK BOX AT +90"

NOTES:

1. PROVIDE EMERGENCY BATTERY PACK INSIDE LIGHT FIXTURE WITH SHADED SYMBOL
2. PROVIDE FLANGE FOR RECESSED FIXTURES LOCATED IN GYP. BOARD CEILING.
3. MOUNT FIXTURE SURFACE MOUNTED ON GYP. BOARD CEILING.
4. REFER TO LIGHTING PLANS FOR DIRECTION ARROW REQUIREMENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District
1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization
8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For

REGISTERED PROFESSIONAL ENGINEER
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LIGHTING FIXTURE SCHEDULE

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This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	SPRING VALLEY	04 Total Conditioned Floor Area (ft²)	9,927
02	Climate Zone	10	05 Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06 # of Stories (Habitable Above Grade)	1

● Classroom ● Office ● Support Areas ● All Other Occupancies

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Area Category Method	9927	Area Category Method	0
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	9927		0	

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)					Compliance Results
	01	02	03	04		05	06	07		08		09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)		**Total Allowed** (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)		**Total Adjusted** (Watts) *Includes Adjustments		**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)				
Conditioned		5,942	0		=	5,942	≥ 5,932	0	=	5932		COMPLIES
Unconditioned					=		≥		=			
Controls Compliance (See Table H for Details)												COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)												

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
F1	F1	No	NA	38.7	Mfr. Spec	121	No	4,682.7	☐	☐
F2	F2	No	NA	38.7	Mfr. Spec	22	No	851.4	☐	☐
F3	F3	No	NA	44.1	Mfr. Spec	6	No	264.6	☐	☐
F4	F4	No	NA	29.8	Mfr. Spec	2	No	59.6	☐	☐
F5	F5	No	NA	18.3	Mfr. Spec	4	No	73.2	☐	☐
							Total Designed Watts: CONDITIONED SPACES	5,932		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Pass	Fail

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Required >= 4,000W subject to multilevel	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
					13				
					Plan Sheet Showing Daylit Zones:				

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
CLASSROOM	Classroom, Lecture, or Training Vocational	0.6	9,316	5,589.6	No	No
OFFICE	Office (<=250 square feet)	0.65	306	198.9	No	No
REST ROOM	Restroom	0.65	126	81.9	No	No
ELECTRICAL	Electrical Mechancial Telephone Room	0.4	179	71.6	No	No
		TOTALS:	9,927	5,942	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have 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-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Whole Building Time Switch;
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	Whole Building Demand Response;

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: NESTOR C. IGNACIO	Documentation Author Signature:
Company: IMEG Corp	Signature Date: 2024-5-06
Address: SUITE 400	CEA/ HERS Certification Identification (if applicable): 901 VIA PIEMONTE
City/State/Zip: ONTARIO CA 91764	Phone: (909)942-554

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: NESTOR C. IGNACIO	Responsible Designer Signature:
Company: IMEG	Date Signed: 2024-05-06
Address: SUITE 400	License: 901 VIA PIEMONTE
City/State/Zip: ONTARIO CA 91764	Phone: (909)942-554

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District
1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization
8585 Blossom Lane
Spring Valley, CA 91977

△ Date Issued For

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TITLE-24 INTERIOR

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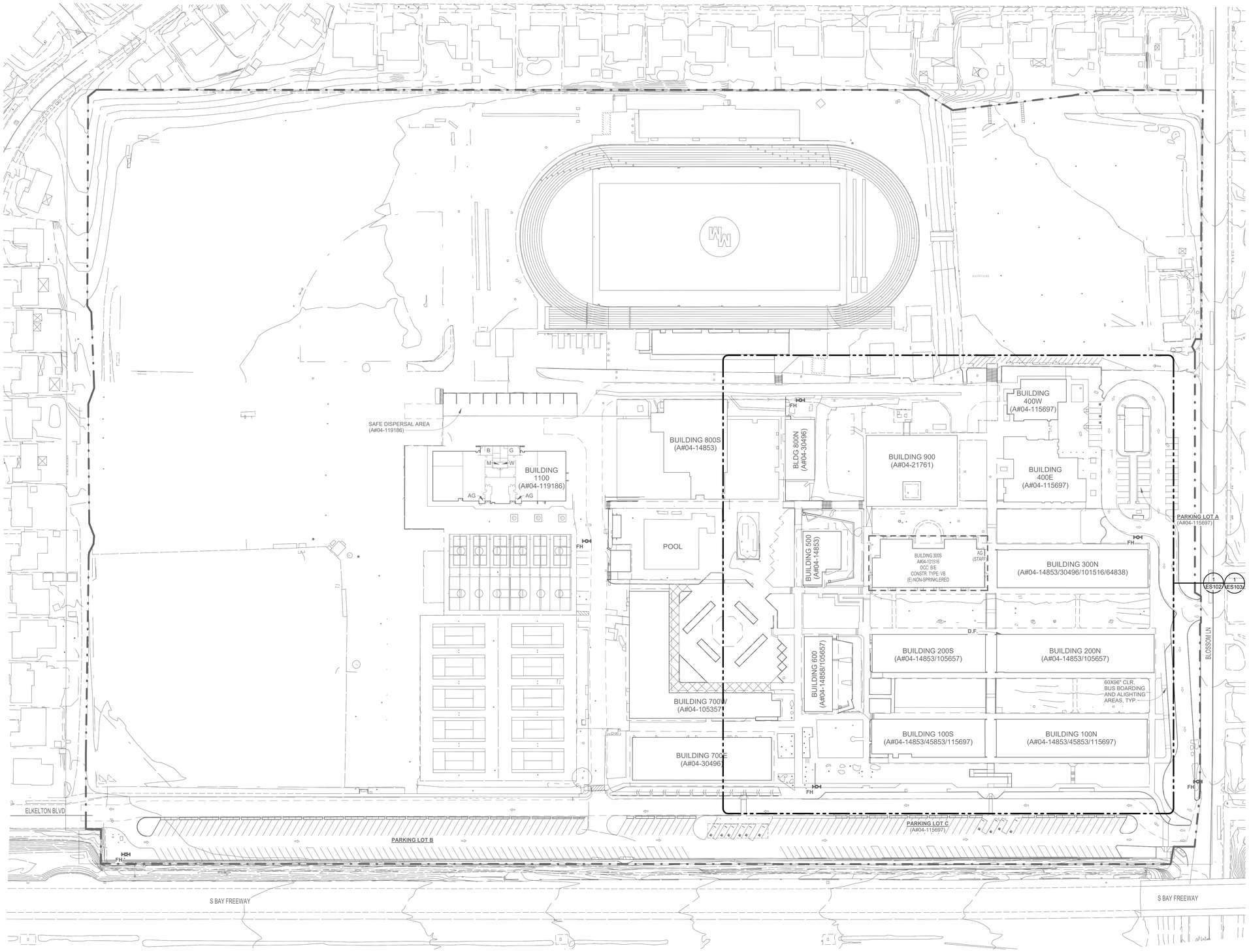

NORTH

1 OVERALL SITE PLAN - ELECTRICAL

1" = 60'-0"

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OVERALL SITE PLAN - ELECTRICAL

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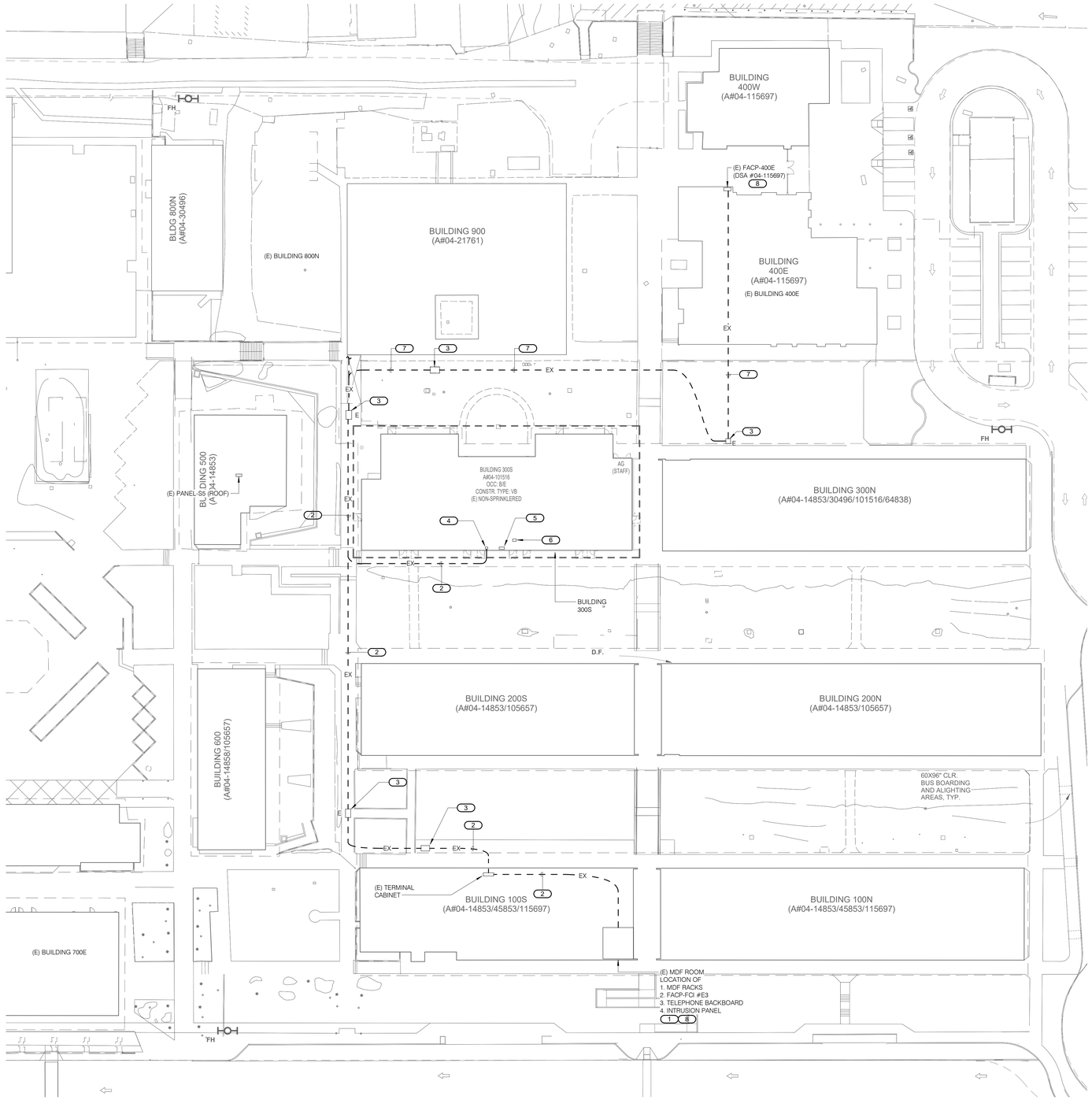

NORTH

1 DEMOLITION SITE PLAN - ELECTRICAL

1" = 30'-0"

KEYNOTES:

1. DISCONNECT AND REMOVE EXISTING CABLES (VOICE/DATA, INTRUSION & FIRE ALARM) ASSOCIATED WITH BUILDING 300S.
2. REMOVE EXISTING CABLES (VOICE/DATA, INTRUSION & FIRE ALARM) FROM EXISTING CONDUITS ASSOCIATED WITH BUILDING 300S.
3. EXISTING UNDERGROUND SIGNAL PULLBOX TO REMAIN. REMOVE WATER AND CLEAN DEBRIS FROM PULLBOX.
4. EXISTING PULLBOX LOCATED IN CUSTODIAN ROOM TO REMAIN. REMOVE CONDUITS WITH CABLES (VOICE/DATA, INTRUSION & FIRE ALARM) UP TO ELECTRICAL ROOM.
5. REMOVE EXISTING SURFACE MOUNTED SIGNAL TERMINAL CABINETS AND FIRE SMOKE DAMPERS CABINET AND FIRE ALARM POWER SUPPLY INCLUDING ASSOCIATED CONDUITS WITH CABLING FROM WALL. PROTECT EXISTING FIRE ALARM TERMINAL CABINET AND WALL MOUNTED WIRE GUTTER.
6. REMOVE EXISTING FLOOR MOUNTED IDF CABINET INCLUDING ASSOCIATED CONDUITS WITH VOICE/DATA CABLING. TURN OVER CABINET TO OWNER.
7. PULL OUT EXISTING FIRE ALARM WIRING AND PREPARE TO PULL NEW WIRING IN EXISTING UNDERGROUND CONDUIT.
8. RE-PROGRAM EXISTING FIRE ALARM CONTROL PANEL.

GENERAL NOTES:

1. ALL DEMOLITION SHALL COMPLY WITH CHAPTER 33 CEC AND CHAPTER 33 CFC REQUIREMENTS.

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Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

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DEMOLITION SITE PLAN - ELECTRICAL

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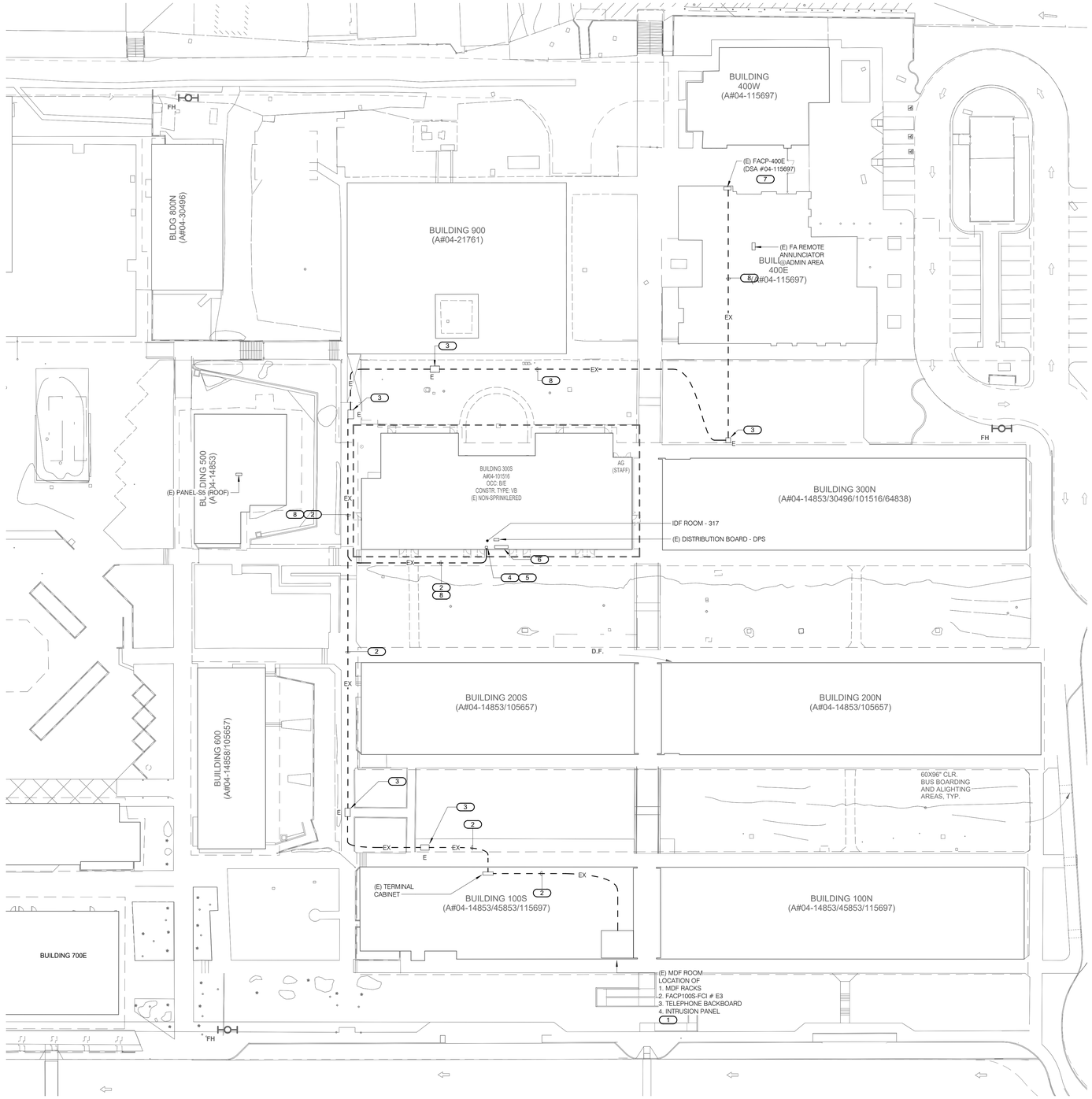

PARKING LOT C
(A#04-115697)

1 REMODEL SITE PLAN - ELECTRICAL

1" = 30'-0"

KEYNOTES:

1. TERMINATE NEW CABLES TO RESPECTIVE EQUIPMENT.
2. PULL FOLLOWING CABLES IN EXISTING CONDUITS
   1. (1) 24 STRAND OM4 MM INDOOR/OUTDOOR RATED FIBER OPTIC CABLE.
   2. (1) 25 PAIR WET LOCATION LISTED TELEPHONE CABLE.
   3. (1) WET LOCATION LISTED INTRUSION CABLE.
3. EXISTING UNDERGROUND SIGNAL PULLBOX. CLEAN WATER AND DEBRIS FROM PULLBOX.
4. EXISTING WALL MOUNTED PULLBOX IN IDF ROOM TO REMAIN.
5. RUN CONDUITS WITH CABLING TO RESPECTIVE EQUIPMENT PER SIGNAL AND FIRE ALARM PLANS.
6. LOCATION EXISTING OF FIRE ALARM PULLBOX NEW RPS-300, AMP-300 AND DOCUMENT CABINET IN ELECTRICAL ROOM. EXTEND EXISTING FIRE ALARM CONDUIT WITH WIRING PER FIELD CONDITION.
7. TERMINATE FIRE ALARM CABLES AND RE-PROGRAM EXISTING FIRE ALARM PANEL. PROVIDE AM50 AMPLIFIER IN EXISTING CONTROL PANEL.
8. PULL WET LOCATION LISTED FIRE ALARM WIRING (DD,SS) IN EXISTING UNDERGROUND CONDUIT. RE-PULL EXISTING FIRE ALARM WIRING AS REQUIRED.

GENERAL NOTES:

1. ALL UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTING AND ALL WIRES TO BE APPROVED FOR WET LOCATIONS REQUIREMENTS.

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Grossmont Union
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MMHS Bldg 300S
Modernization

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REMODEL SITE PLAN - ELECTRICAL

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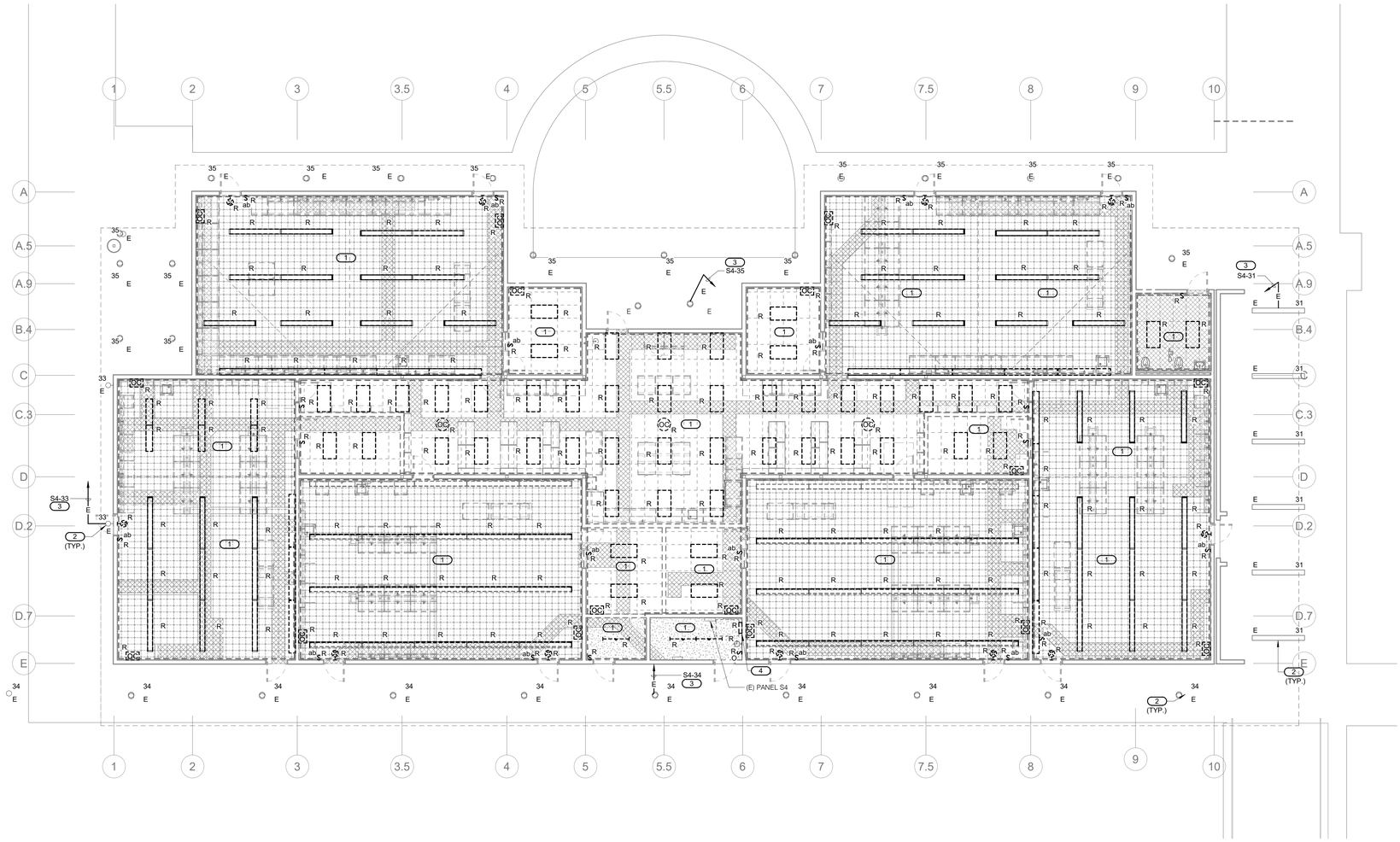

DEMOLITION PLAN - LIGHTING

1/8" = 1'-0"

KEYNOTES:

1. DISCONNECT AND REMOVE INTERIOR LIGHTING INCLUDING WALL MOUNTED EXIT SIGNS, WALL MOUNTED SWITCHES. OCCUPANCY SENSORS, CEILING MOUNTED OCCUPANCY SENSORS, POWER SUPPLY AND ASSOCIATED CONDUITS WITH WIRING COMPLETELY WEATHER SHOWN ON DRAWINGS OR NOT FROM ENTIRE ROOM. FIELD VERIFY EXISTING CONDITION PRIOR TO BID.
2. EXISTING EXTERIOR LIGHTING AND ASSOCIATED CONDUITS WITH WIRING TO REMAIN. PROTECT DURING CONSTRUCTION. RE-ROUTE EXISTING CIRCUIT CONDUIT AS REQUIRED PER FIELD CONDITION.
3. PROTECT EXISTING CONDUIT WITH WIRING DURING DEMOLITION WORK. RE-ROUTE CONDUIT AND WIRING AS REQUIRED PER REMODEL WORK.
4. REMOVE EXISTING WALL MOUNTED TIME CLOCK AND CONTACTORS PANEL FOR EXTERIOR LIGHTING CONTROL INCLUDING 120V CIRCUIT. PREPARE TO PROVIDE CONNECTION TO DDC PANEL.

GENERAL NOTES:

1. ALL DEMOLITION SHALL COMPLY WITH CHAPTER 33 CEC AND CHAPTER 33 CFC REQUIREMENTS.

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DEMOLITION FLOOR PLAN - LIGHTING

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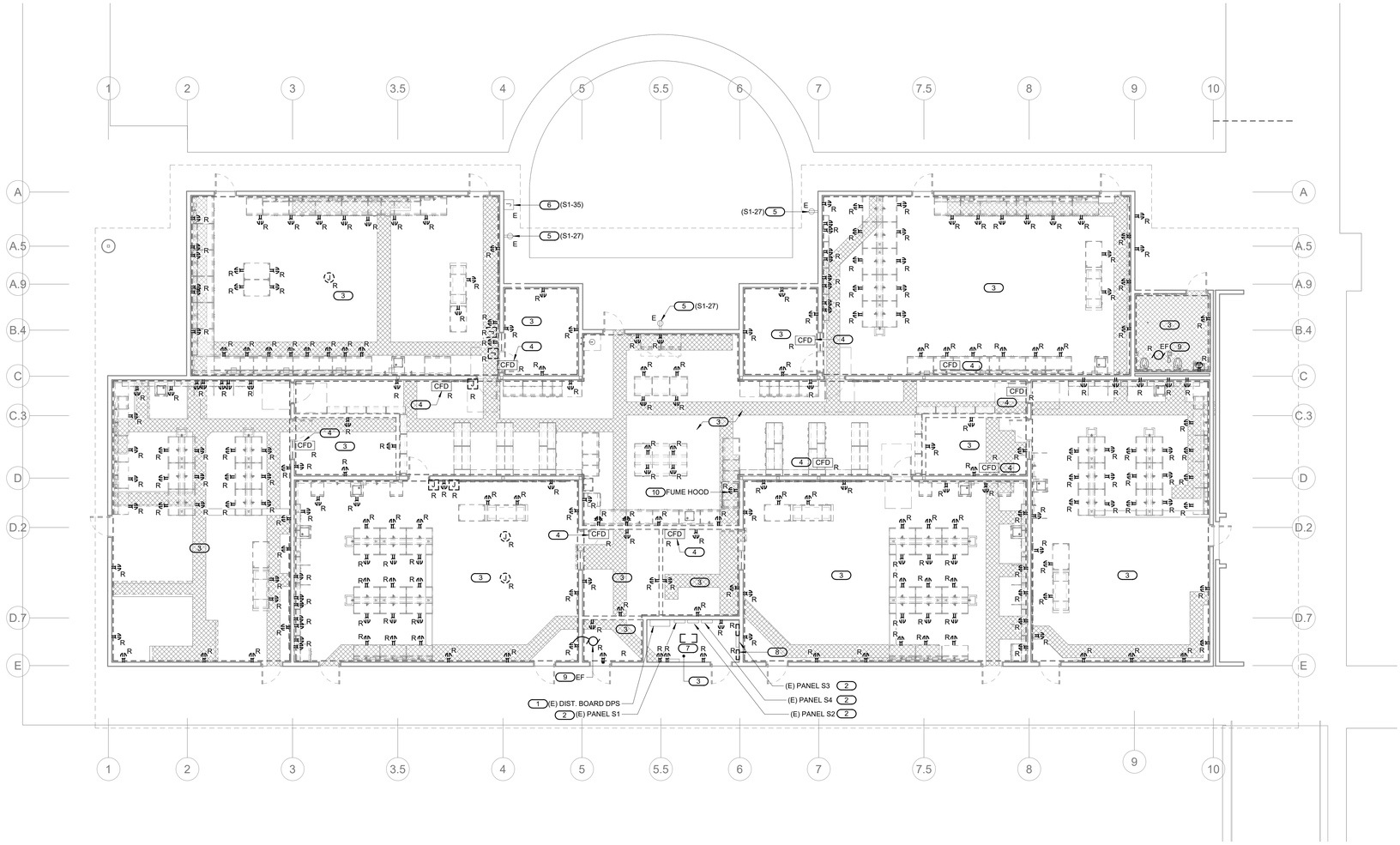

KEYNOTES:

1. EXISTING DISTRIBUTION BOARD TO REMAIN. PROTECT DURING CONSTRUCTION.
2. EXISTING PANELS TO REMAIN. DISCONNECT AND REMOVE EXISTING BRANCH CIRCUITS WIRING FROM PANEL. REMOVE EXPOSED CONDUITS AND ABANDON UNDERGROUND CONDUITS PER FIELD CONDITION.
3. DISCONNECT AND REMOVE INTERIOR RECEPTACLES, POWER TO EQUIPMENT INCLUDING CONDUITS WITH WIRING COMPLETELY WEATHER SHOWN ON DRAWINGS OR NOT FROM ENTIRE ROOM. FILED VERIFY EXISTING CONDITION PRIOR TO BID. PULL OUT CONDUCTORS AND ABANDON/REMOVE BELOW GRADE CONDUITS. CUT/CAP REMAINING CONDUIT BELOW SLAB.
4. DISCONNECT AND REMOVE EXISTING POWER TO EXISTING FIRE SMOKE DAMPERS. EXISTING FIRE SMOKE DAMPER TO BE REMOVED BY THE MECHANICAL CONTRACTOR. COORDINATE WITH MECHANICAL DRAWINGS. PULL OUT CONDUCTORS AND ABANDON/REMOVE BELOW GRADE CONDUITS. CUT/CAP REMAINING CONDUIT BELOW SLAB.
5. EXISTING EXTERIOR RECEPTACLE LOCATION AND ASSOCIATED CONDUITS WITH WIRING TO REMAIN. PROTECT DURING CONSTRUCTION. RE-ROUTE THE EXISTING CIRCUIT CONDUIT A REQUIRED PER FIELD CONDITION. REPLACE RECEPTACLE INCLUDING COVER PLATE.
6. EXISTING JUNCTION BOX AND POWER TO IRRIGATION CONTROLLER TO REMAIN. PROTECT DURING CONSTRUCTION.
7. DISCONNECT AND REMOVE EXISTING POWER (S3-34,36) TO CEILING MOUNTED FAN COIL UNIT. FAN COIL UNIT TO BE RELOCATED IN NEW IDF ROOM.
8. REMOVE WALL MOUNTED GROUNDING BAR AND ASSOCIATED CONDUIT WITH WIRING.
9. DISCONNECT AND REMOVE ELECTRICAL INSTALLATION ASSOCIATED WITH EXHAUST FAN.
10. DISCONNECT AND REMOVE ELECTRICAL INSTALLATION ASSOCIATED WITH FUME HOOD.

GENERAL NOTES:

1. ALL DEMOLITION SHALL COMPLY WITH CHAPTER 33 CEC AND CHAPTER 33 CFC REQUIREMENTS.

NORTH

1 DEMOLITION PLAN - POWER

1/8" = 1'-0"

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MMHS Bldg 300S Modernization

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Spring Valley, CA 91977

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DEMOLITION FLOOR PLAN - POWER

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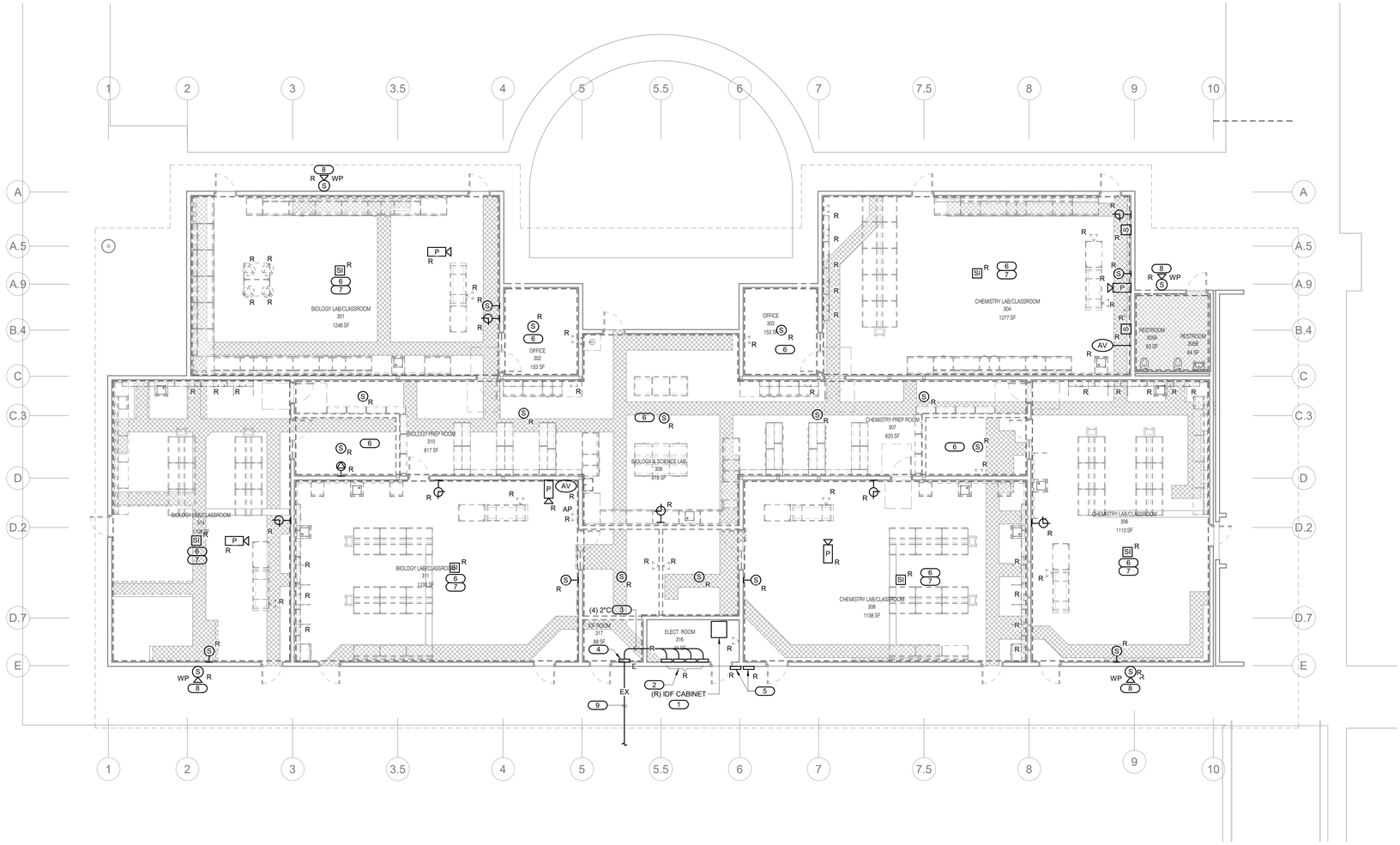

NORTH

1 DEMOLITION PLAN - SIGNAL

1/8" = 1'-0"

KEYNOTES:

1. DISCONNECT AND REMOVE VOICE/DATA OUTLETS, WIRELESS ACCESS POINTS, AUDIO-VISUAL SYSTEMS, IP CLOCK/SPEAKERS, PROJECTORS, INTRUSION DEVICES, PA SPEAKERS AND ASSOCIATED WIRING COMPLETELY FROM THE BUILDING WHETHER SHOWN ON PLAN OR NOT. TURN OVER IDF CABINET, WIRELESS ACCESS DEVICES, PROJECTORS, IP/CLOCK SPEAKERS TO THE OWNER.
2. DISCONNECT AND REMOVE EXISTING SIGNAL SYSTEM TERMINAL CABINETS/PULL BOXES INCLUDING CONDUITS WITH WIRING FROM THE BUILDING. PROTECT EXISTING WALL MOUNTED WIRE GUTTER LOCATED BELOW.
3. PULLOUT CABLES AND REMOVE CONDUITS.
4. EXISTING WALL MOUNTED PILLBOX TO REMAIN. PULLOUT SIGNAL CABLES. REFER TO SITE PLAN FOR REQUIREMENT.
5. DISCONNECT AND REMOVE EXTERIOR WALL MOUNTED PULL BOX AND ASSOCIATED CONDUIT WIRING.
6. DISCONNECT AND REMOVE EXISTING VOICE/DATA OUTLETS, CLOCKS, IP CLOCK/SPEAKER, FLUSH WALL MOUNTED SPEAKERS, INTRUSION MOTION DETECTORS, WIRELESS ACCESS DEVICES INCLUDING ASSOCIATED CONDUITS WITH WIRING ENTIRELY FROM THE BUILDING WEATHER SHOWN ON PLANS OR NOT. THE CONTRACTOR TO FIELD VERIFY EXISTING CONDITION PRIOR TO BID. TURN OVER IP CLOCK/SPEAKERS AND WIRE LESS ACCESS DEVICES TO THE OWNER.
7. DISCONNECT AND REMOVE EXISTING WALL/CEILING MOUNTED PROJECTOR, WALL MOUNTED SPEAKERS, WALL MOUNTED AV OUTLETS INCLUDING CONDUITS/SURFACE RACEWAY AND WIRING FROM THE ROOM. TURN OVER PROJECTOR TO THE OWNER.
8. DISCONNECT AND REMOVE EXISTING EXTERIOR FLUSH WALL MOUNTED SQUARE PA SPEAKER INCLUDING WIRING. PROTECT BACK BOX FOR INSTALLATION OF NEW SPEAKER.
9. RE-WIRE EXISTING (5) 2" SIGNAL AND (1) 2" FIRE ALARM UNDERGROUND CONDUIT PER REMODEL SITE PLAN ES103.

GENERAL NOTES:

1. ALL DEMOLITION SHALL COMPLY WITH CHAPTER 33 CEC AND CHAPTER 33 CFC REQUIREMENTS.

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EST 1920

Grossmont Union High School District

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DEMOLITION FLOOR PLAN - SIGNAL

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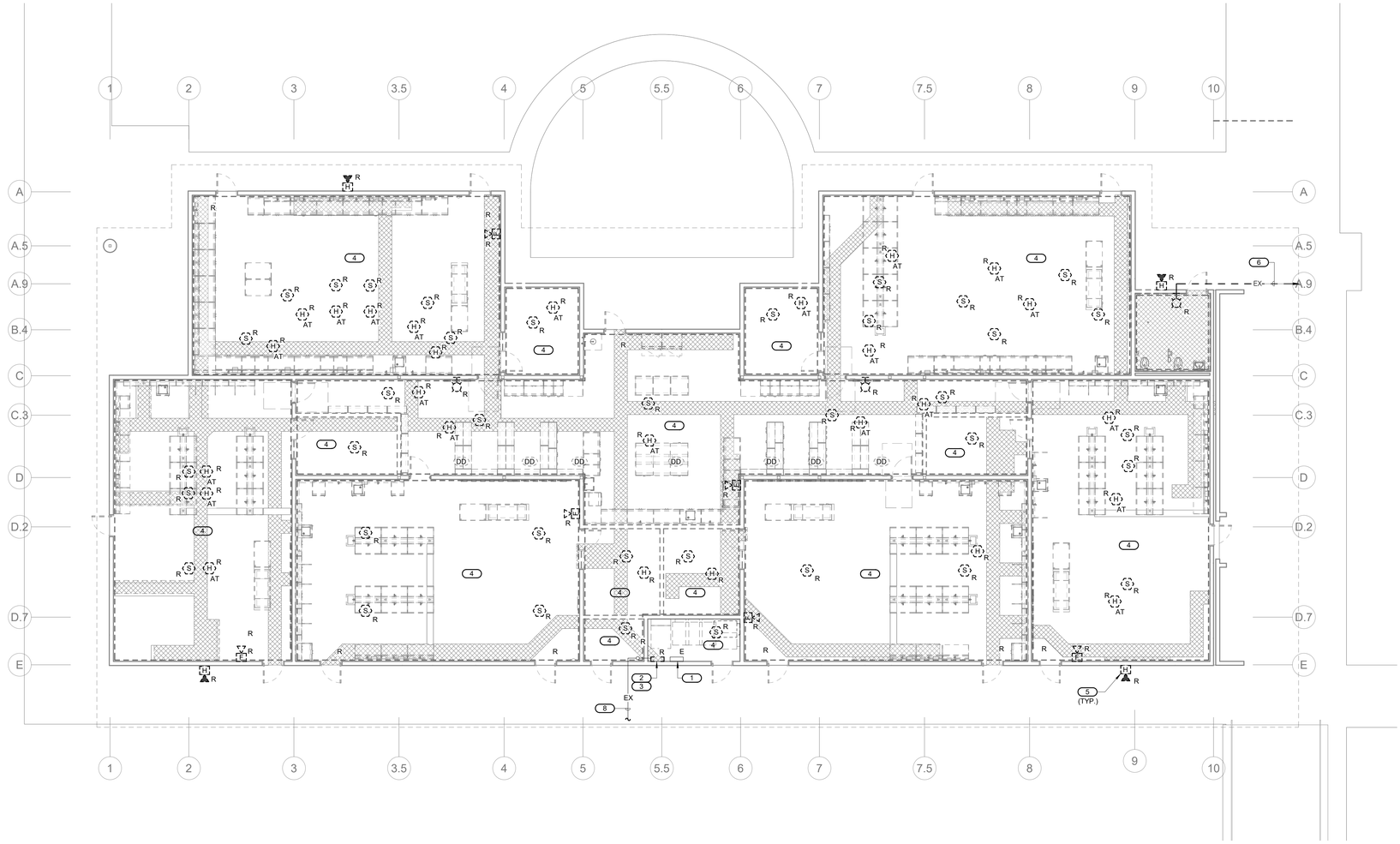

DEMOLITION PLAN - FIRE ALARM

1/8" = 1'-0"

NORTH

KEYNOTES:

1. EXISTING FIRE ALARM TERMINAL CABINET TO REMAIN. REMOVE FIRE ALARM WIRING.
2. REMOVE EXISTING FIRE ALARM REMOTE POWER SUPPLY AND ASSOCIATED. CONDUITS WITH WIRING.
3. REMOVE EXISTING PULLBOX LOCATED ABOVE POWER SUPPLY FOR FIRE SMOKE DAMPER AND WIRING.
4. DISCONNECT AND REMOVE FIRE ALARM DEVICES INCLUDING ASSOCIATED CONDUITS WITH WIRING FROM ROOM COMPLETELY WEATHER SHOWN ON DRAWINGS OR NOTE. FIELD VERIFY PRIOR TO BID.
5. DISCONNECT AND REMOVE EXTERIOR FLUSH WALL MOUNTED HORN INCLUDING OUTLET BOX AND CONDUIT WITH WIRING.
6. EXISTING FIRE ALARM CONDUIT WITH WIRING TO (2) 15CD STROBES LOCATED IN RESTROOMS TO REMAIN, RE-WIRE PER REMODEL PLAN.
7. EXISTING 2" FIRE ALARM CONDUIT TO REMAIN. RE-WIRE PER FIRE ALARM PLAN.
8. RE-WIRE EXISTING 2" UNDERGROUND CONDUIT PER REMODEL SITE PLAN ES103.

GENERAL NOTES:

1. ALL DEMOLITION SHALL COMPLY WITH CHAPTER 33 CEC AND CHAPTER 33 CFC REQUIREMENTS.

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DEMOLITION
FLOOR PLAN -
FIRE ALARM

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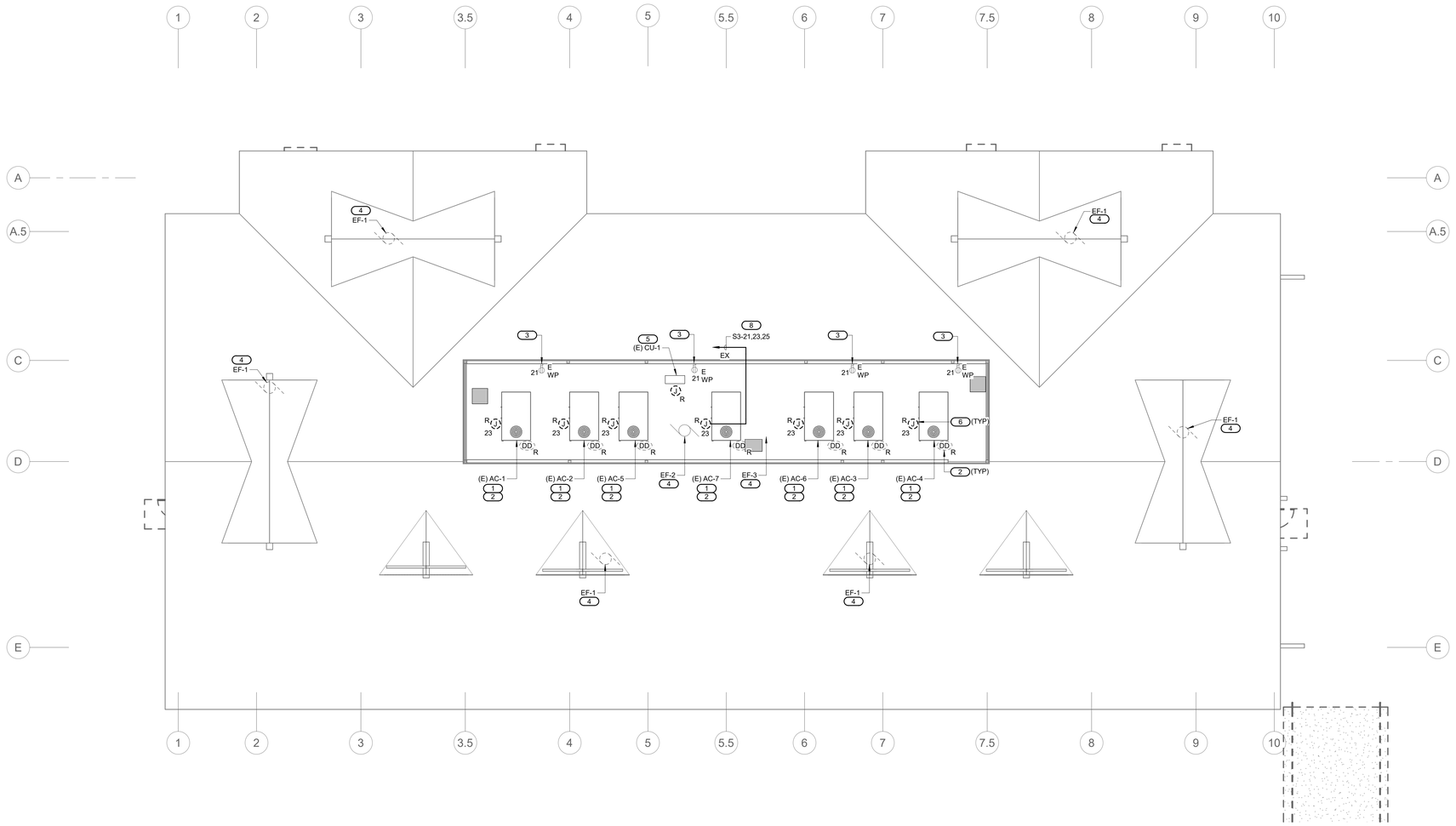

1 DEMOLITION ROOF PLAN - ELECTRICAL

1/8" = 1'-0"

KEYNOTES:

1. EXISTING AC UNIT TO REMAIN. REPLACE FUSED DISCONNECT. PROVIDE NEW CONDUIT WITH CONDUCTORS PER. PULL OUT CONDUCTORS AND REMOVE CONDUIT UP TO PANEL AND RE-WIRE PER REMODEL PLAN UP TO PANEL.
2. DISCONNECT AND REMOVE DUCT DETECTOR AND ASSOCIATED FIRE ALARM CONDUIT WITH WIRING.
3. EXISTING WP RECEPTACLE LOCATION TO REMAIN. REPLACE WITH GFI TYPE INCLUDING WP WHILE-IN-USE COVER. PULL OUT CONDUCTORS AND REMOVE CONDUIT AND RE-WIRE PER REMODEL PLAN UP TO PANEL.
4. DISCONNECT AND REMOVE CONDUIT WITH WIRING ASSOCIATED WITH EXHAUST FAN INCLUDING CONTROLS.
5. EXISTING CONDENSING UNIT TO REMAIN. PROTECT EXISTING CIRCUITS DURING DEMOLITION. PULL OUT CONDUCTORS AND REMOVE CONDUIT AND RE-WIRE PER REMODEL PLAN UP TO PANEL.
6. REMOVE WP JUNCTION BOX FOR HVAC CONTROL POWER. INCLUDING ASSOCIATED CONDUIT WITH WIRING.
7. REMOVE WP JUNCTION BOX FOR HEATER. INCLUDING ASSOCIATED CONDUIT WITH WIRING.
8. RE-WIRE EXISTING CONDUIT RUN.

GENERAL NOTES:

1. ALL DEMOLITION SHALL COMPLY WITH CHAPTER 33 CEC AND CHAPTER 33 CFC REQUIREMENTS.

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DEMOLITION ROOF PLAN - ELECTRICAL

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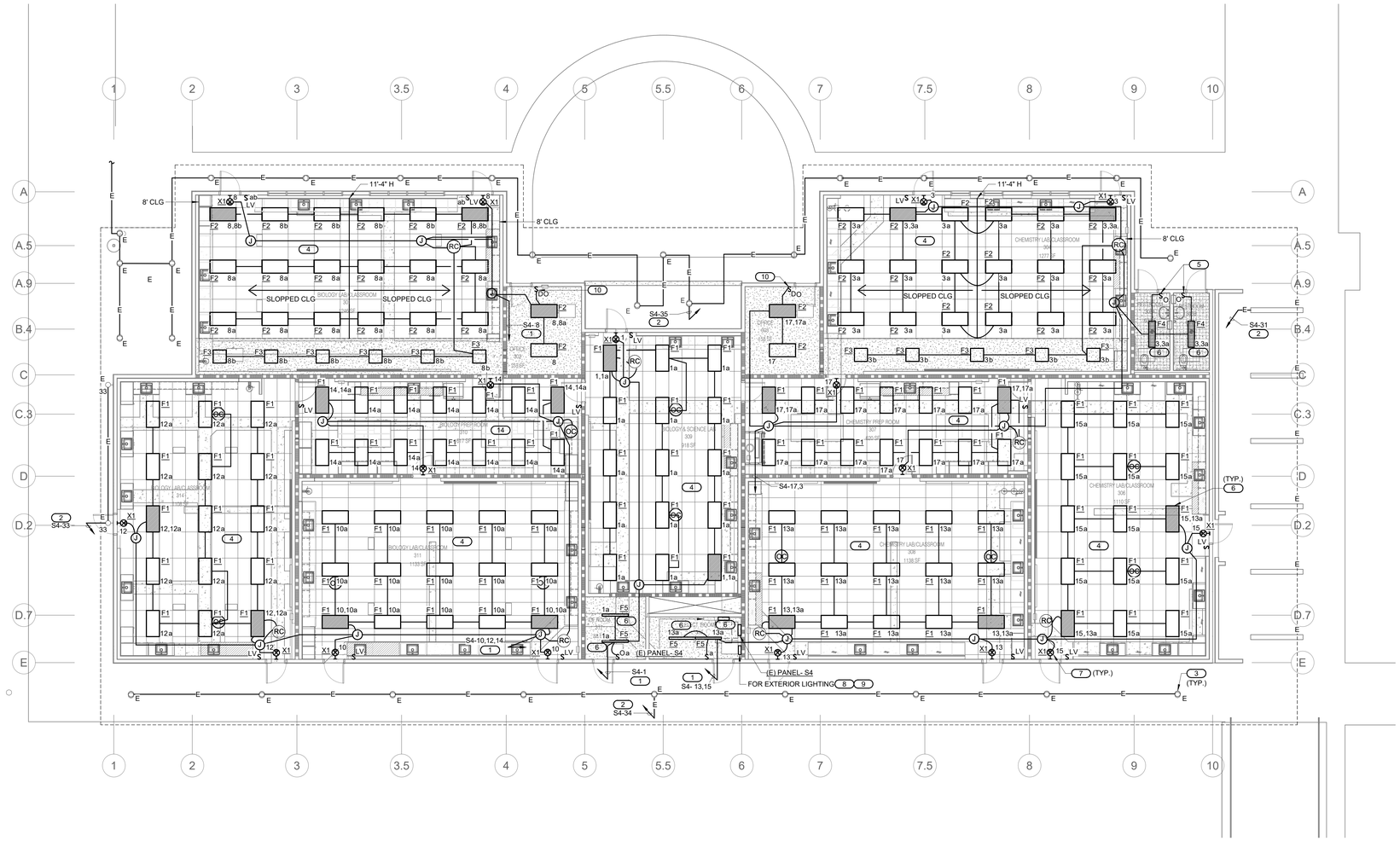

FLOOR PLAN - LIGHTING

1/8" = 1'-0"

KEYNOTES:

1. CONNECT TO EXISTING CIRCUITS IN PANEL.
2. EXISTING EXTERIOR LIGHTING CIRCUIT TO REMAIN. EXTEND TO LIGHTING CONTROL PANEL.
3. EXISTING EXTERIOR LIGHTING TO REMAIN. EXTEND TO LIGHTING CONTROL PANEL.
4. REFER TO TYPICAL CLASS ROOM LIGHTING CONTROL WIRING DIAGRAM #3 ON SHEET E303.
5. PROVIDE DUAL TECHNOLOGY WALL MOUNTED OCCUPANCY SENSOR TO CONTROL ROOM LIGHTING.
6. FIXTURE WITH BUILT-IN BATTERY PACK. PROVIDE UNSWITCHED CIRCUIT TO BATTERY PACK.
7. MOUNT ON WALL AT +90" ABOVE DOOR.
8. EXTERIOR LIGHTING RELAY PANEL-EMSDDC LOCATED ADJACENT TO EXISTING PANEL-S4 (PROVIDED BY THE CONTROL CONTRACTOR-R & R CONTROLS INC.). RUN EXTERIOR LIGHTING CIRCUITS S4-31,33,34 & 35) VIA LIGHTING RELAY PANEL. COORDINATE WITH R & R CONTROLS FOR WIRING REQUIREMENT.
9. MOUNT EMS CONTROLLER BACNET MSTP INSIDE RELAY PANEL. PROVIDE CIRCUIT S4-24.
10. PROVIDE COMBINATIN OCCUPANCY SENSOR WITH LED DIMMER TO CONTROL BOARD LIGHTING.

GENERAL NOTES:

1. ALL UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTING AND ALL WIRES TO BE APPROVED FOR WET LOCATIONS REQUIREMENT.

FIRE RATED WALL

1-HOURE FIRE RATED WALL

NOTE:

CONDUIT PENETRATION THRU FIRE RATED WALL SHALL BE FIRE SEAL PER DETAIL #7 ON E-3.0.

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FLOOR PLAN - LIGHTING

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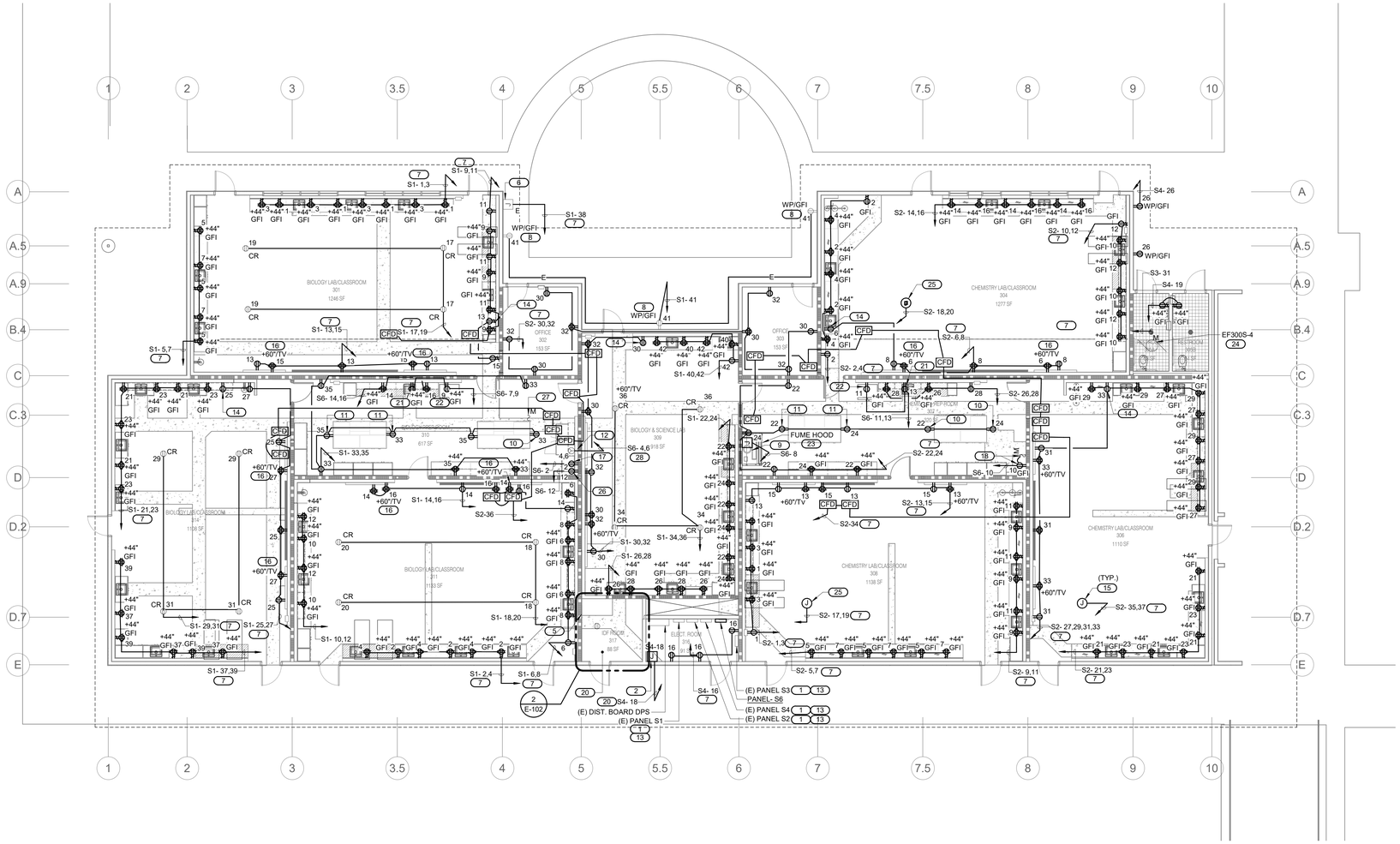
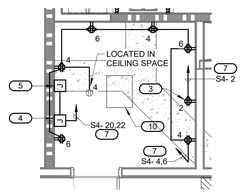


1 FLOOR PLAN - POWER

1/8" = 1'-0"



2 IDF ROOM-117 POWER

1/4" = 1'-0"

KEYNOTES:

1. PROVIDE UPDATED PRINTED PANEL DIRECTORY.
2. JUNCTION BOX FOR POWER TO RPS-300S/AMP-300A.
3. LOCATED AT CABLE TRAY FOR IDF.
4. JUNCTION BOX FOR POWER TO INTRUSION POWER SUPPLY.
5. JUNCTION BOX FOR POWER TO DDC CONTROL PANEL.
6. EXISTING FLUSH WALL MOUNTED JUNCTION BOX.
7. CONNECT TO EXISTING CIRCUIT BREAKERS IN PANEL. PROVIDE NEW CIRCUIT BREAKERS PER PANEL SCHEDULE.
8. REPLACE EXISTING FLUSH WALL MOUNTED RECEPTACLE INCLUDING WP COVER PLATE WHILE IN-USE CAST ALUMINUM COVER.
9. JUNCTION BOX FOR POWER TO FUME HOOD.
10. CONNECT EXISTING CIRCUIT (S3-34,36) FROM CONDENSING UNIT TO RELOCATED CEILING MOUNTED FAN COIL UNIT IN IDF ROOM. PROVIDE 15A/2P DISCONNECT IN CEILING SPACE.
11. FLUSH MOUNTED ON SIDE OF CASE WORK AT +36".
12. 30A/250V/2P/3W OUTLET AT +44" FOR DRYER.
13. PROVIDE NEW MATCHING BREAKERS.
14. LOCATE IN UPPER CABINET FOR GOGGLES.
15. FLUSH CEILING MOUNTED CORD REEL WITH PLENUM ENCLOSURE. REFER TO DETAIL #6 ON E302 FOR INSTALLATION AND SHEET.
16. LOCATED BEHIND WALL MOUNTED TV MONITOR. REFER TO ARCHITECTURAL ELEVATOR PLANS FOR EXACT LOCATION OF TV MONITOR.
17. DUPLEX GFI RECEPTACLE. MOUNT AT +44" FOR WASHER.
18. FOR WATER HEATER AND CIRCULATING PUMP.
19. RUN EXHAUST FAN CIRCUIT VIA EACH REST ROOM OCCUPANCY SENSOR (RELAY # 2) FOR CONTROL.
20. PROVIDE RED COLOR LOCK-ON DEVICE TO BREAKER HANDLE AND RED NAME PLATE TO CIRCUIT IDENTIFICATION.
21. FOR DISH WASHER, LOCATE RECEPTACLE UNDER SINK AT +18".
22. GFI RECEPTACLE FOR REFRIGERATOR AT +44".
23. PROVIDE CONTROL FOR EXHAUST FAN AND CONDUIT WITH WIRING TO VFD AT ROOF.
24. EXHAUST FAN CONTROL BY DCC CONTROL. REFER TO CONTROL WIRING DIAGRAM ON MECHANICAL DRAWINGS.
25. LOCATE IN CEILING SPACE FOR FUTURE CONNECTION TO CORD REELS.
26. DUPLEX GFI RECETPACLE. MOUNT AT +44" FOR DRYER.
27. PROVIDE MOTOR RATED 20A/1P SWITCH ON WALL ADJACENT TO DRYER VENT BOOSTER FAN AND CONNECT TO 120V DRYER RECEPTACLE (S6-12).
28. 3/4"C-2#10 & 1#10 GND.

GENERAL NOTES:

1. ALL UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTING AND ALL WIRES TO BE APPROVED FOR WET LOCATIONS REQUIREMENT.

FIRE RATED WALL

1-HOURE FIRE RATED WALL

NOTE:

CONDUIT PENETRATION THRU FIRE RATED WALL SHALL BE FIRE SEAL PER DETAIL #7 ON E-3.0.

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FLOOR PLAN - POWER

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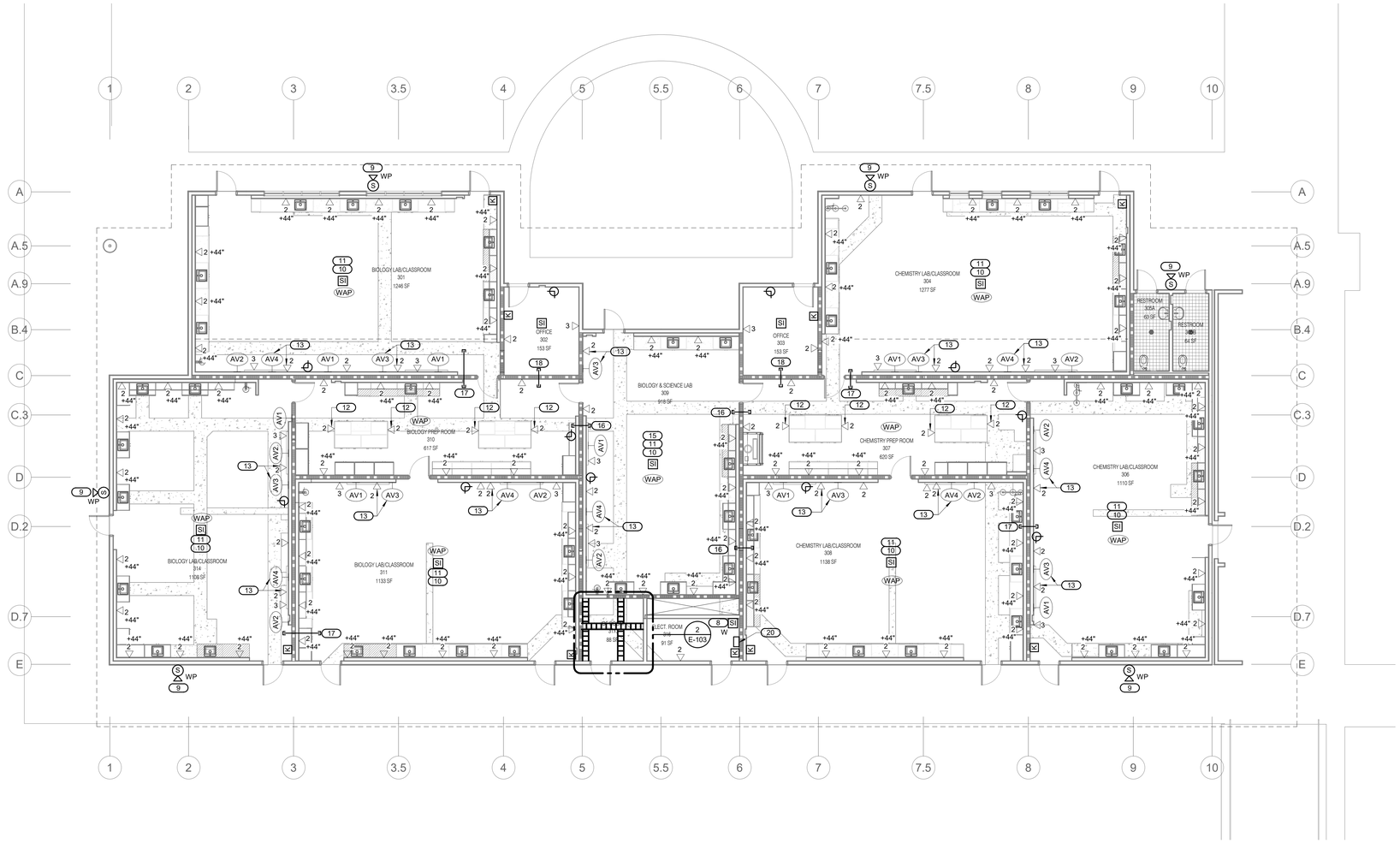
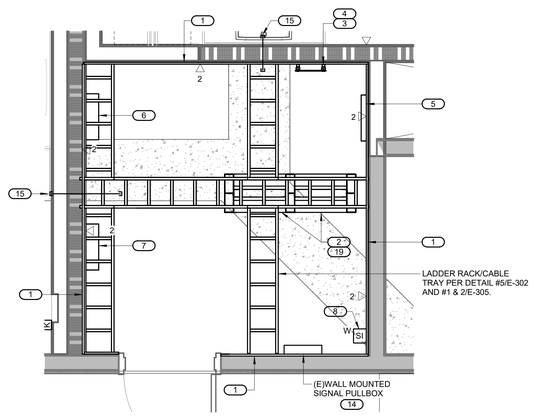


1 FLOOR PLAN - SIGNAL

1/8" = 1'-0"



2 IDF ROOM 117 - SIGNAL

1/2" = 1'-0"

KEYNOTES:

1. WALL MOUNTED 3/4' THICK X 8' H FIRE RATED PAINTED WHITE PLYWOOD BACK BOARD MOUNTED TO ROOM WALL.
2. FLOOR MOUNTED 84"H DATA RACKS 9 IDF 300S. REFER TO ANCHORAGE DETAIL #1 ON E305.
3. WALL MOUNTED TELECOM GROUND BAR AT 24" AFF. REFER TO DETAIL # 2 ON SHEET E-302.
4. RUN 1"C.- 1#8 GND TO DISTRIBUTION BOARD.
5. WALL MOUNTED TELEPHONE TERMINAL BLOCK AT 60" AFF. TERMINATE COPPER CABLE TO TERMINAL BLOCK.
6. WALL MOUNTED INTRUSION POWER SUPPLY.
7. WALL MOUNTED DDC CONTROL PANEL. PROVIDE DATA CONNECTION TO PANEL.
8. WALL MOUNTED INTRUSION SENSOR AT 8'-0" AFF.
9. PROVIDE FLUSH WALL MOUNTED SQUARE BACK BOX FOR EXTERIOR PA SPEAKER.
10. PROVIDE PORTABLE ASSISTIVE LISTENING SYSTEM PER SPECIFICATION.
11. REFER TO AV SYSTEM WIRING DIAGRAM DETAIL # 1 ON SHEET E-302.
12. FLUSH MOUNTED DATA OUTLET ON SIDE OF CASEWORK AT 36" AFF. RUN 1" CONDUIT BELOW CONCRETE SLAB TO NEAREST WALL TO CEILING SPACE AND PULL (2) CAT-6A CABLES TO IDF CABINET.
13. LOCATED BEHIND TV MONITOR AT +66".
14. RUN FOLLOWING CONDUIT FROM PULLBOX.
    1. 2" C WITH FIBER OPTIC CABLE @ TOP OF DATA RACK.
    2. 2" C WITH TELEPHONE CABLE @ TOP OF TELEPHONE TERMINAL BLOCK.
    3. 2" C WITH INTRUSION CABLE TO INTRUSION POWER SUPPLY.
15. PROVIDE (8) 2" CONDUITS SLEEVE THRU FULL HEIGHT RATED WALL.
16. PROVIDE (6) 2" CONDUITS SLEEVE THRU FULL HEIGHT RATED WALL.
17. PROVIDE (4) 2" CONDUITS SLEEVE THRU FULL HEIGHT RATED WALL.
18. PROVIDE (2) 2" CONDUITS SLEEVE THRU FULL HEIGHT RATED WALL.
19. RUN 3/4"C. (1) CAT-6A CABLE TO (E) CAMERA LOCATED ON ROOF.
20. RUN 3/4"C. (1) CAT-6E DATA CABLE FROM LIGHTING REALY PANEL TO IDF RACK IN IDF ROOM-117.

GENERAL NOTES:

1. ALL UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTING AND ALL WIRES TO BE APPROVED FOR WET LOCATIONS REQUIREMENT.

FIRE RATED WALL

1-HOURE FIRE RATED WALL

NOTE:

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FLOOR PLAN - SIGNAL

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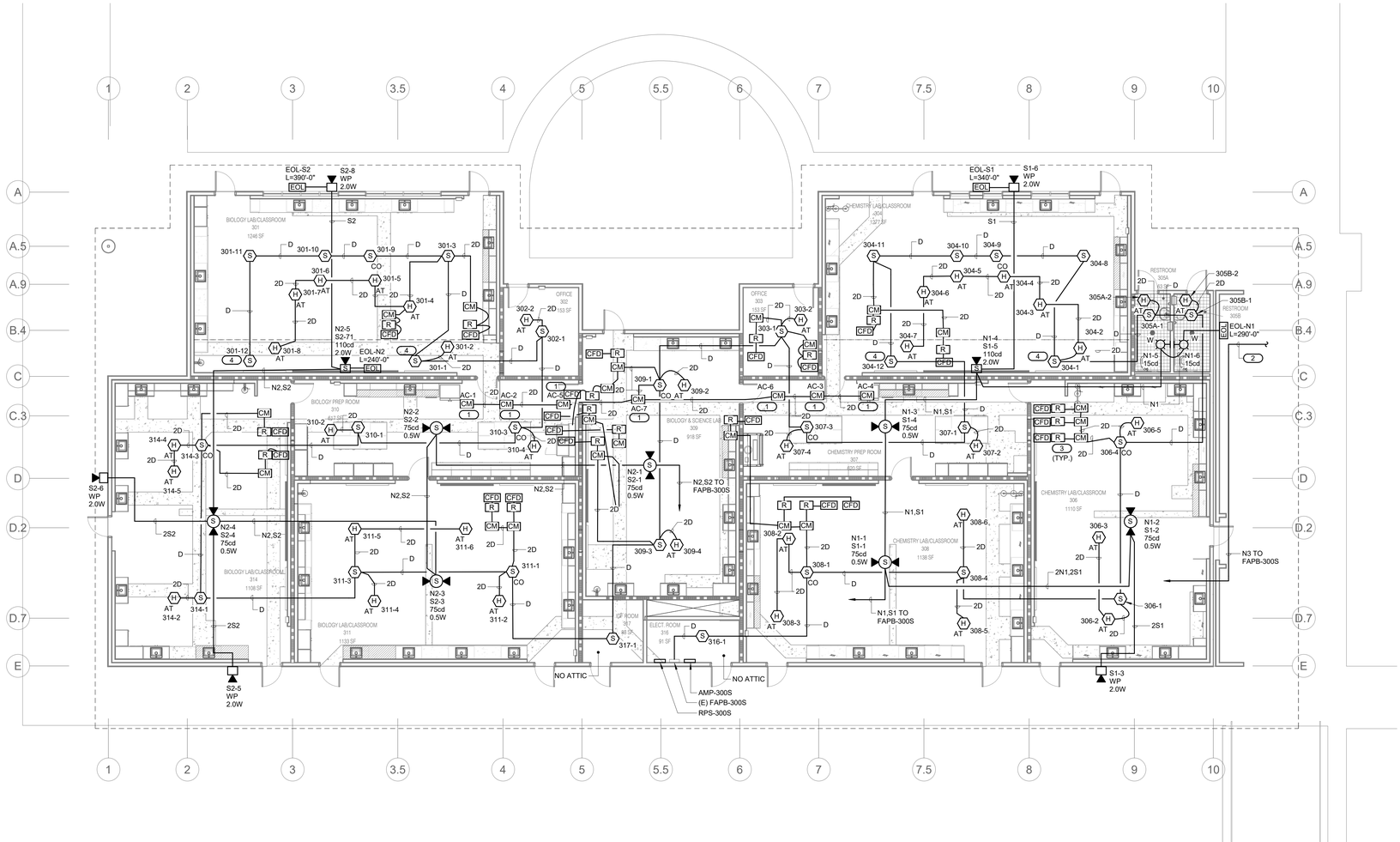

1 FLOOR PLAN - FIRE ALARM

1/8" = 1'-0"

KEYNOTES:

1. CONTROL MODULE FOR ROOF TOP AC UNIT SHUT-DOWN. RUN 1/2"C WITH WIRING TO RESPECTIVE AC UNIT. LOCATED ON FOR SHUT ROOF DOWN.
2. CONNECT TO (E) TWO 15CD STROBES IN BUILDING 300N.
3. RUN 120V POWER FOR COMBINATION FIRE SMOKE DAMPER VIA FIRE ALARM RELAY FOR DAMPER CLOSURE. ALSO RUN 1/2"C WITH WIRING TO RESPECTIVE AC UNIT SERVING. FIRE SMOKE DAMPERS FOR UNIT SHUT DOWN.
4. LOCATED AT GYPBOARD SOFFIT @ 8'-0".

FIRE RATED WALL

1-HOURE FIRE RATED WALL

NOTE:

CONDUIT PENETRATION THRU FIRE RATED WALL SHALL BE FIRE SEAL PER DETAIL #7 ON E-3.0.

GENERAL NOTES:

1. WHEN THE AUTOMATIC ACTIVATION OF A SMOKE FIRE DAMPER OCCURS THE HVAC SYSTEMS SERVING SUCH DAMPERS SHALL IMMEDIATELY SHUT DOWN PER CMC605.8.
2. ACTIVATION OF CO DETECTOR SHALL SOUND ALARM AT FACP/REMOTE ANNUNCIATOR LOCATED ADMIN OFFICE PER CFC 915.2.3.
3. NOTIFICATION APPLIANCES USED FOR SIGNALING OTHER THAN FIRE ALARM SHALL NOT HAVE THE WORD "FIRE". PER NFPA 72 SECTION 18.3.3.2.
4. ALL UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATION.

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FLOOR PLAN - FIRE ALARM

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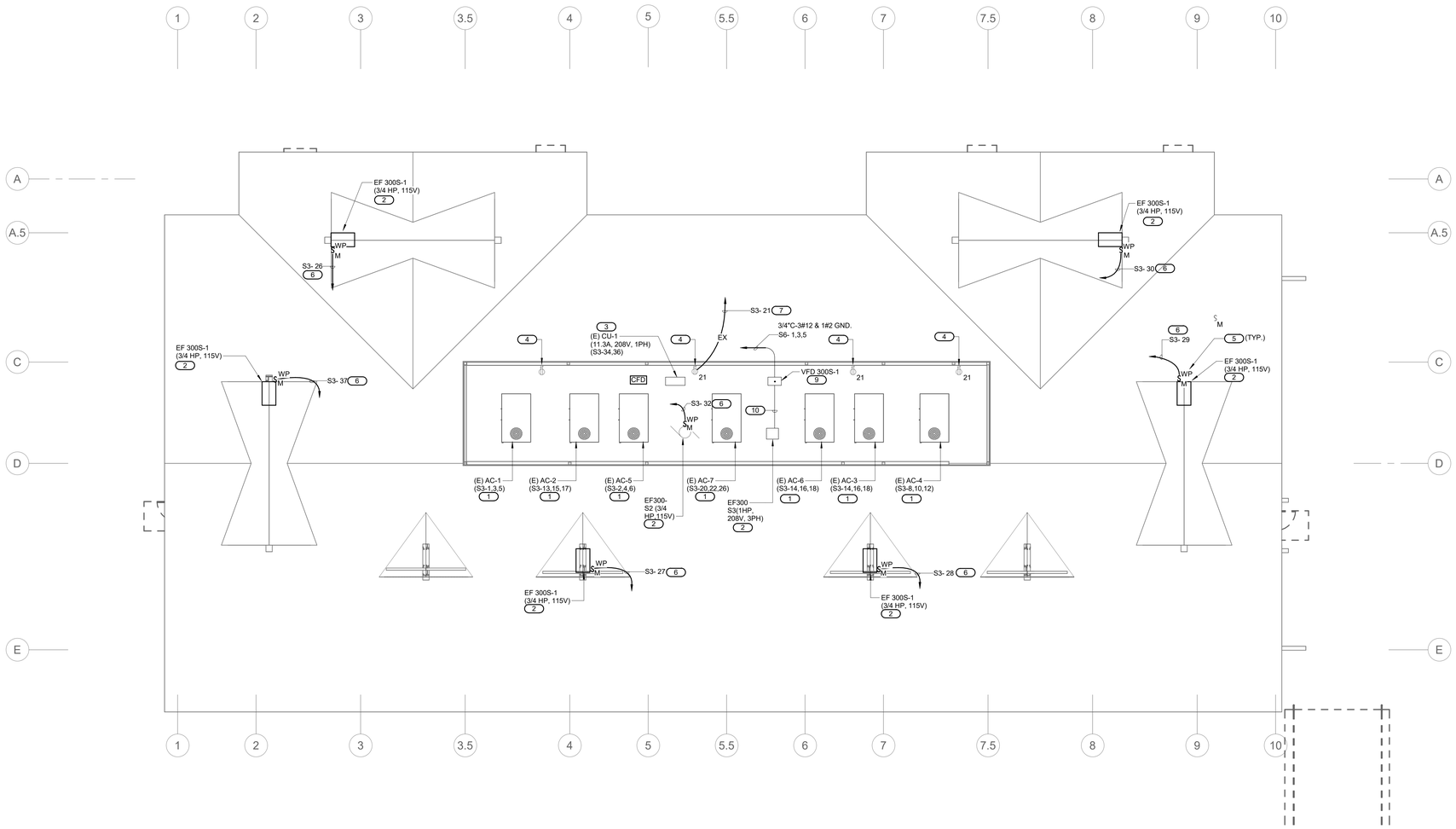

KEYNOTES:

1. (E) AC UNIT. PROVIDE NEW NEMA-3R 60AS/50AF/3P FUSED DISCONNECT AND RUN 1"C.-3#6 & 1#10 GND TO EXISTING PANEL-S3. PROVIDE CONNECTION FROM NEW FIRE ALARM RELAY FOR SHUT-DOWN. REFER TO FIRE ALARM DRAWINGS FOR REQUIREMENT. RUN 1"C-3#6 GND TO EXISTING PANEL-S4.
2. NEW EXHAUST FAN. REFER TO MECHANICAL DRAWINGS.
3. EXISTING CU-1 TO REMAIN. PROVIDE NEMA-3R 30AS/20AF/2P FUSED DISCONNECT. RUN 3/4"C-2#12 & 1#12 GND TO PANEL-S4 AND TO INDOOR FAN COIL UNIT.
4. PROVIDE GFI RECEPTACLE WITH WP CAST ALUMINUM WHILE-IN-USE COVER AT EXISTING LOCATION. RUN 3/4"C-2#12 & 1#12 GND TO PANEL-S3.
5. LOCATE WEATHER PROOF MANUAL MOTOR STARTER SWITCH PER FIELD CONDITION.
6. RUN 3/4"C.2#12 & 1#12 GND AND CONNECT TO EXISTING CIRCUIT BREAKER IN PANEL.
7. RUN 3/4"C-2#2 & 1#2 GND TO PANEL.
8. EXISTING CIRCUIT FOR AC UNIT TO REMAIN. RE-ROUTE TO PANEL PER FIELD CONDITION PER REMODEL PLAN.
9. REFER TO MECHANICAL DRAWINGS FOR REQUIREMENT.
10. RUN 3/4"C.-3#12 & 1#2 GND BELOW ROOF TOP EXHAUST FAN. SEAL CONDUT PENETRATION THRU ROOF WATER TIGHT.

AC-1 TO AC-6 MCA : 38A, 208V, 3PH NEMA-3R FUSED DISCONNECT

SIZE : 60AS/50AF/3P/WP

CONDUIT & CONDUCTORS SIZE : 3#6 & 1#10 GND IN 1"C.

FIRE ALARM CONNECTION : PROVIDE CONTROL RELAY FOR UNIT SHUT-DOWN.

GENERAL NOTES:

1. ALL UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTING AND ALL WIRES TO BE APPROVED FOR WET LOCATIONS REQUIREMENT.

FIRE RATED WALL

1-HOURE FIRE RATED WALL

NOTE:

CONDUIT PENETRATION THRU FIRE RATED WALL SHALL BE FIRE SEAL PER DETAIL #7 ON E-3.0.

1 ROOF PLAN - ELECTRICAL

1/8" = 1'-0"

NORTH

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EST 1920

Grossmont Union
High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S
Modernization

8585 Blossom Lane
Spring Valley, CA 91977

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ROOF PLAN -
ELECTRICAL

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E-105

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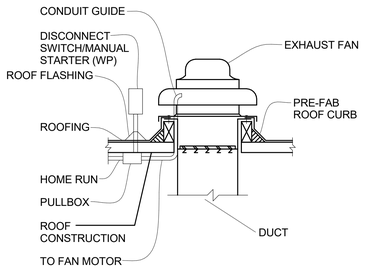
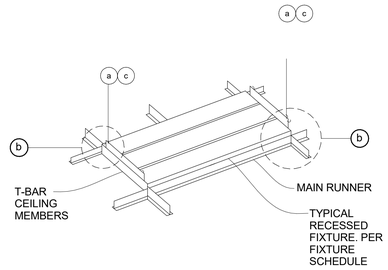


DETAIL FOR ELECTRICAL MOUNTING INFORMATION ONLY, REFER TO MECHANICAL & STRUCTURAL (SEE DETAILS 5/S-551 DRAWINGS FOR EXHAUST FAN MOUNTING INFORMATION

3 DISCONNECT SWITCH MOUNTING FOR ROOF TOP EXHAUST FAN

E-301 SCALE: NONE



FOR FIXTURES WEIGHING LESS THAN 56 POUNDS

(a) MINIMUM (2) 12 GAUGE SLACK WIRE FROM OPPOSITE FIXTURE CORNERS TO STRUCTURE ABOVE. ATTACH DIRECTLY TO FIXTURE WITH 3 TURN TIGHT WRAP MINIMUM. ATTACH TO STRUCTURE PER ACOUSTICAL CEILING ATTACHMENT DETAILS. SET WIRE SLIGHTLY SLACK TO ALLOW FULL SEATING INTO T-BAR.

(b) POSITIVELY ATTACH FIXTURE WITH METAL SCREW THROUGH T-BAR INTO FIXTURE AT ALL CORNERS AND PER DETAIL #1 ON A-573.

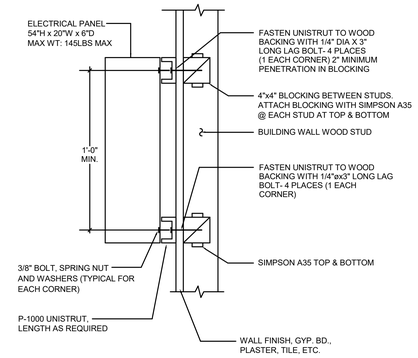
(c) REFER TO DETAIL #7 ON A-573 FOR HANGER WIRE ATTACHMENT TO FRAMING.

NOTE:

1. PROVIDE SUITABLE GYPBOARD CEILING FRAME TO MOUNT FIXTURE ON GYPBOARD CEILING.
2. REFER TO DETAIL #1 ON A-573 FOR ADDITIONAL REQUIREMENT.

2 RECESSED LAY-IN CEILING FIXTURE MOUNTING DETAIL

E-301 SCALE: NONE



1 SURFACE MOUNTED PANEL/CABINET WOOD FRAMING

E-301 SCALE: NONE

GENERAL NOTE:

1. WHERE PROVIDED, THROUGH-PENETRATION FIRESTOP SYSTEM AND MEMBRANE PENETRATION DETAILS ARE FOR REFERENCE ONLY. THROUGH-PENETRATION AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 Pa) OF WATER OR AS OTHERWISE PERMITTED BY CBC, SECITON 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED FOR HCAI FDD REVIEW AND APPROVAL PRIOR TO INSTALLATION.

1. WALL ASSEMBLY- THE 1,2,3 OR 4 HOUR FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS- WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 H FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF MON 2 BY 4 IN. LUMBER SPACED 16 INCHES OC WITH NOM 2 BY 4 INCH LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN. 3-3/5 INCH WIDE BY 1-3/8 INCH DEEP CHANNELS SPACED MAX 24 INCH OC.

   B. GYPSUM BOARD*- NOM 1/2 OR 5/8 INCH THICK, 4 FEET WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 13-1/2 IN.

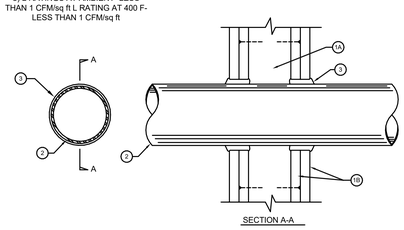
2. PIPE OR CONDUIT- NOM 12 INCHES DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 12 IN DIAM. (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. DIAM. (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 4 IN DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING OR NOM 1 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN DIAM MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

3. FILL, VOID OR CAVITY MATERIAL*- CAULK- CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT IT'S EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING ON THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

MAX PIPE OR CONDUIT DIAM. IN.	ANNULAR SPACE IN.	F RATING HR	T RATING HR
1	0 TO 3/16	1 OR 2	0+, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1-1/2	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

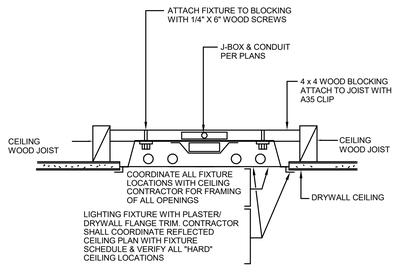
WHEN COPPER PIPE IS USED, T RATING IS 0H.
3M COMPANY- CP 25WB+
* BEARING THE UL CLASSIFICATION MARK

SYSTEM NO. W-L-1001 (FORMERLY SYSTEM NO. 147) F RATINGS- 1,2,3 AND 4 HR (SEE ITEMS 2 AND 3) T RATINGS- 0,1,2,3 AND 4 HR (SEE ITEM 3) L RATINGS AT AMBIENT- LESS THAN 1 CFM/sq ft L RATING AT 400 F- LESS THAN 1 CFM/sq ft



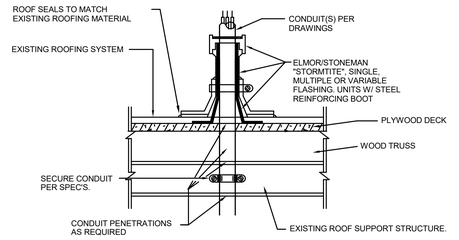
7 FIRE STOP DETAIL @ GYP WALL

E-301 SCALE: NONE



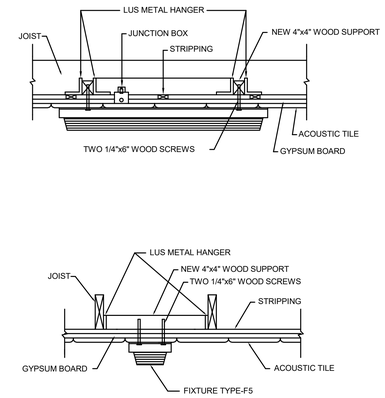
6 RECESSED FIXTURE IN GYP BOARD CEILING DETAIL

E-301 SCALE: NONE



5 CONDUIT ROOF PENETRATION DETAIL

E-301 SCALE: NONE



4 SURFACE MOUNTED LED FIXTURE DETAIL

E-301 SCALE: NONE

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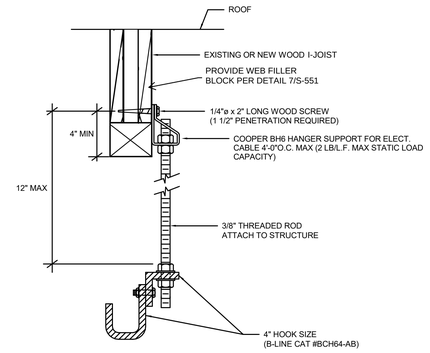
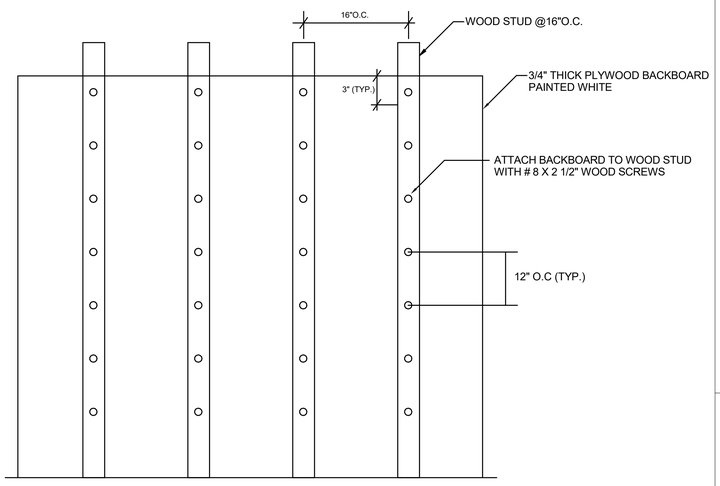


3 "J" HOOK ATTACHMENT FOR LOW VOLTAGE WIRING ABOVE CEILING

E-302 SCALE: NONE

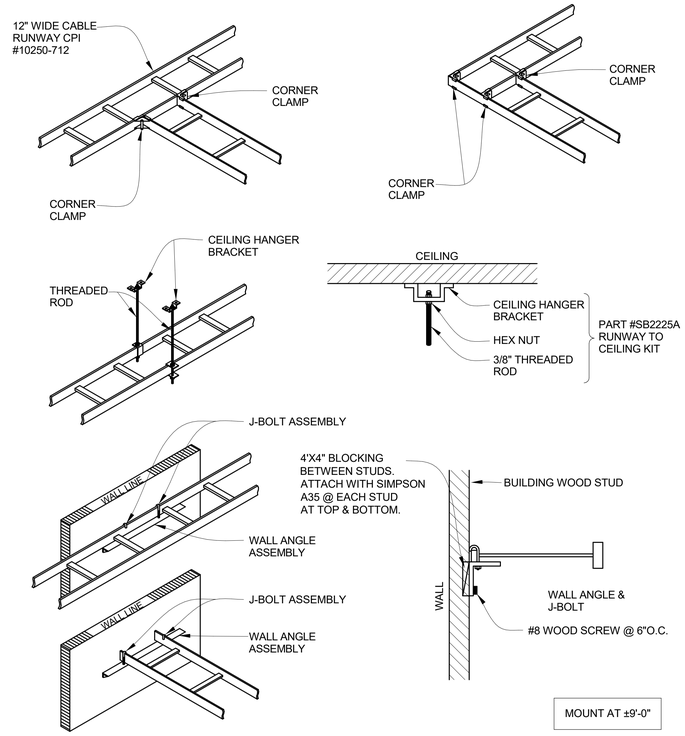


4 PLYWOOD BACKBOARD MOUNTING DETAIL

E-302 SCALE: NONE

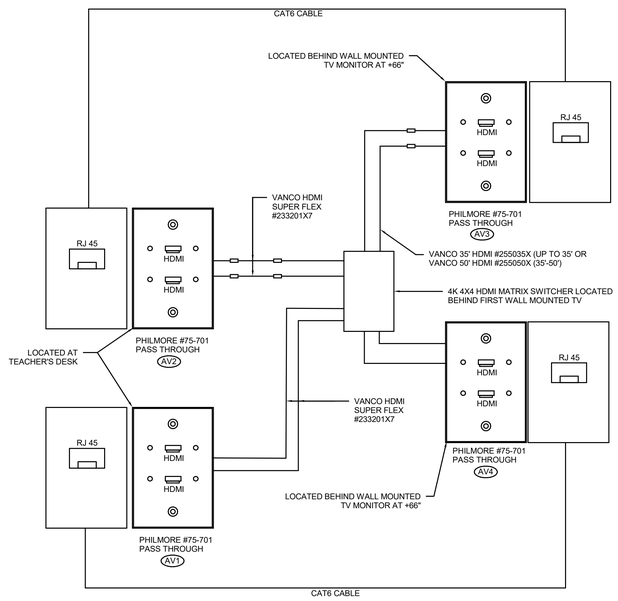
7 NOT USED

E-302 SCALE: NONE



5 CABLE TRAY (LADDER RACK) DETAIL (FOR DATA ROOM)

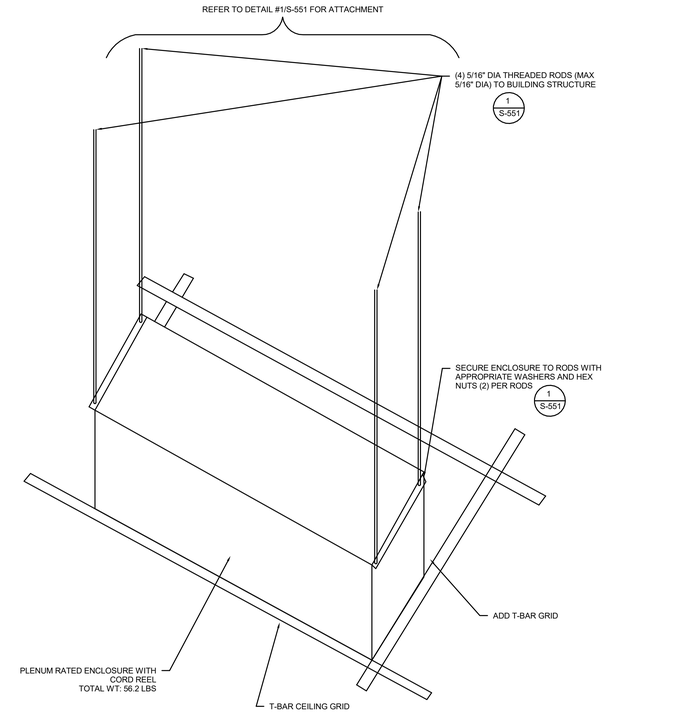
E-302 SCALE: NONE

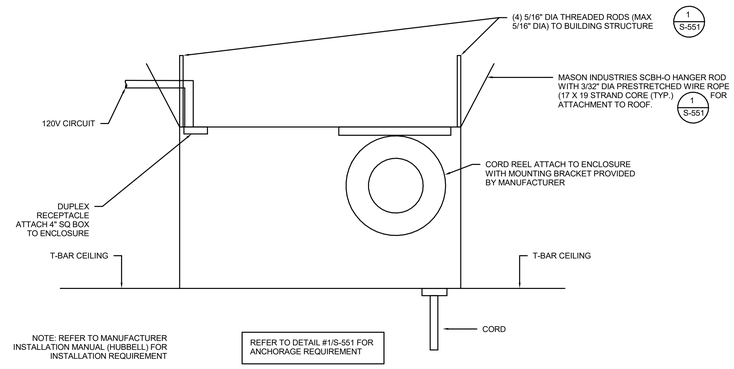


NOTE:
1. PROVIDE USB PASS THROUGH TO SECOND HDMI CABLE.
2. PROVIDE TWO-GANG EXTRA DEEP OUTLET BOX FOR ALL AV LOCATIONS (AV1 THRU AV4)

1 AUDIO-VISUAL SYSTEM WIRING DIAGRAM

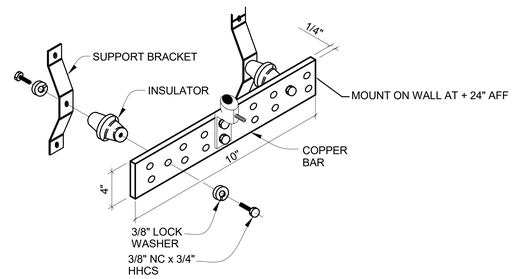
E-302 SCALE: NONE





6 CORD REEL INSTALLATION DETAIL

E-302 SCALE: NONE



NOTE: RUN 1"C - 1#6 GND. TO NEAREST ELECTRICAL PANEL

PROVIDE "CPI # 10622-010" GROUND BAR ASSEMBLY OR EQUAL.

2 TELECOM GROUNDING BAR

E-302 SCALE: NONE

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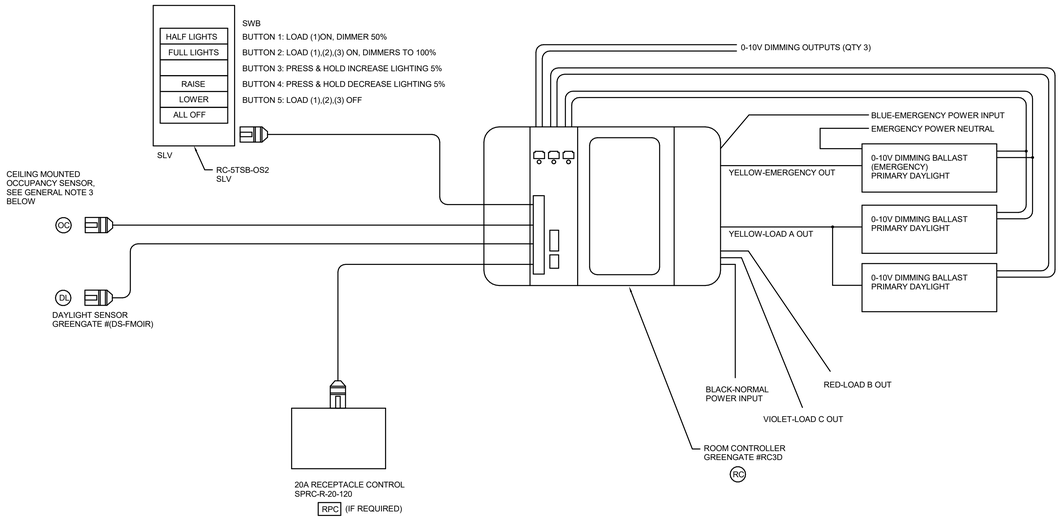


GENERAL NOTES:

1. WIRING ON THIS PLAN IS DIAGRAMMATIC WITHOUT SHOWING THE REQUIRED ROOM CONTROLLER AND CONNECTIONS. INSTALL IN ACCESSIBLE SPACE TO ACCOMPLISH SWITCHING SCHEME OF OCCUPANCY SENSOR AS INDICATED. SEE THIS WIRING DIAGRAM FOR GENERAL REQUIREMENTS.
2. CEILING MOUNTED OCCUPANCY SENSOR SHALL BE PLACED AT MINIMUM OF 6' AWAY FROM ANY HVAC SUPPLY. OCCUPANCY SENSOR SHALL NOT BE PLACED AS TO SEE CROSS TRAFFIC AT DOORWAY.
3. CONTRACTOR SHALL PROVIDE TYPE "A" OR TYPE "B" OCCUPANCY SENSOR, DEPENDING ON SIZE OF ROOM. ROOM COVERAGE REQUIREMENT SHALL BE PER SENSOR MANUFACTURER'S RECOMMENDATION.
4. OCCUPANCY SENSORS SHALL BE MICROSET SELF ADAPTIVE AND HAVE UP TO 30 MINUTES TIME DELAY.

SLVA = RC-2TLB-ES1 (ENTRY STATION)

SLVB = RC-5TSB-OS2 (TEACHER STATION)

SLVC = RC-3TLB-OS1 (KITCHEN)

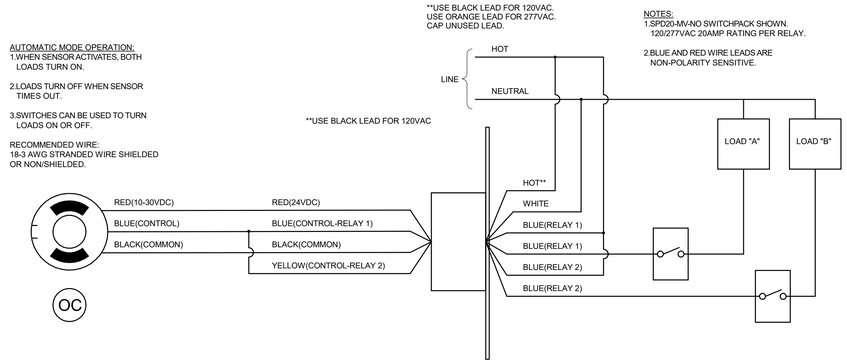
SLVD = RC-SS1-W (SLIDE STATION FOR OFFICE)

GENERAL NOTES:

1. OCCUPANCY SENSOR SCHEDULE:

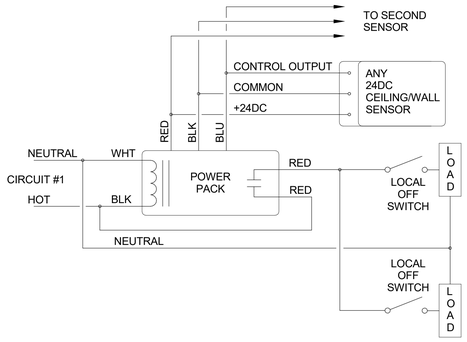
   (OC) CEILING MOUNTED 360° DUAL TECHNOLOGY OCCUPANCY SENSOR 1000-2000 SQ FT GREENGATE #OAC-DT-2000 WITH POWER SUPPLY

   [OC] WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR AT +8'-0" GREEN GATE #OAWC-DT WITH POWER SUPPLY.
2. POWER:OCC SENSOR POWER SHALL BE PROVIDED BY GREENGATE RC3DE ROOM CONTROLLER MAXIMUM OF 2 SENSORS ON EACH ROOM CONTROLLER. CONSULT FACTORY FOR ADDITION SENSOR WIRING DIAGRAMS.
3. WIRING ON THIS PLAN IS DIAGRAMMATIC WITHOUT SHOWING THE REQUIRED ROOM CONTROLLERS AND CONNECTIONS. PROVIDE ROOM CONTROLLERS AS NEEDED AND INSTALLED IN ACCESSIBLE SPACE TO ACCOMPLISH SWITCHING SCHEME OF OCCUPANCY SENSOR AS INDICATED. SEE THIS WIRING DIAGRAM FOR GENERAL REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE OCCUPANCY SENSOR THROUGHOUT. CONTRACTOR SHALL REVISE OCCUPANCY SENSOR WIRING LAYOUT, ETC. AS REQUIRED. OCCUPANCY SENSOR LAYOUTS SHALL BE PROVIDED BY THE MANUFACTURER.
5. CONTRACTOR SHALL LOCATE OCCUPANCY SENSOR PER MANUFACTURER'S RECOMMENDATION FOR COMPLETE MAXIMUM COVERAGE OF LIGHTING FIXTURES CONTROLLED. CONTRACTOR SHALL TAKE RESPONSIBILITY FOR ADDITIONAL OCCUPANCY SENSORS REQUIRED FOR COMPLETE COVERAGE OF AREA LIGHTS BEING CONTROLLED.
6. CONTRACTOR SHALL PROVIDE COMPLETE SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING.

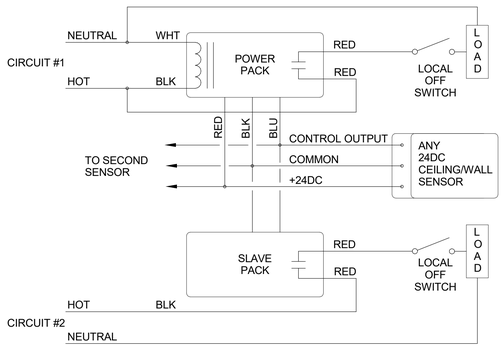


1 E-303 TYPICAL LIGHTING CONTROL WIRING DIAGRAM
SCALE: NONE

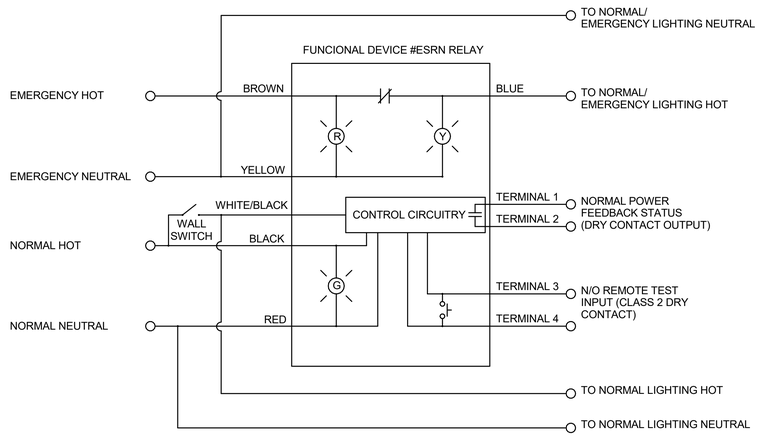
3 E-303 TYPICAL ROOM LIGHTING CONTROL WIRING DIAGRAM (GREEN GATE)
SCALE: NONE



5 E-303 OCCUPANCY SENSOR CONTROL WIRING DIAGRAM
SCALE: NONE



4 E-303 OCCUPANCY SENSOR CONTROL WIRING DIAGRAM
SCALE: NONE



2 E-303 EMERGENCY LIGHTING RELAY WIRING DIAGRAM
SCALE: NONE

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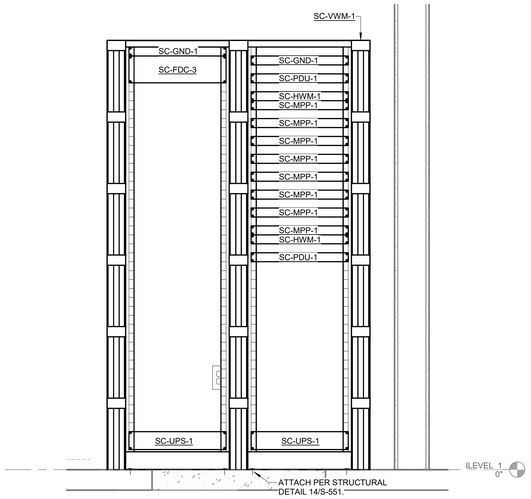
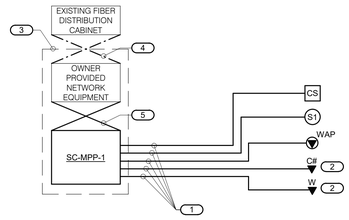


1 IDF-EQUIPMENT RACK ELEVATION
NO SCALE



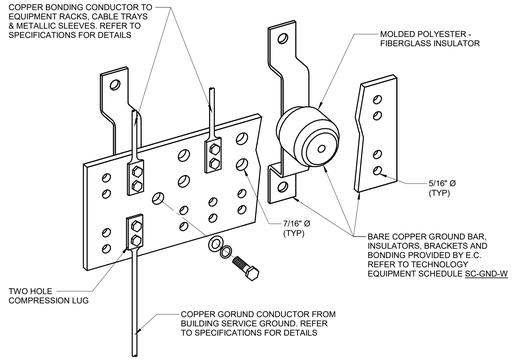
2 CONNECTIVITY RISER DIAGRAM
NO SCALE

NOTES:

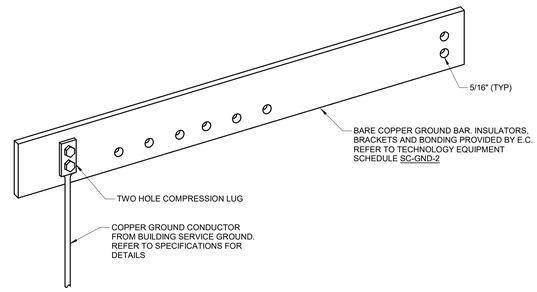
1. THIS RISER IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CABLE TYPE. ALL INFORMATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO FLOOR PLANS FOR MORE SPECIFIC ROUTING AND QUANTITY INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. REFER TO FLOOR PLANS FOR QUANTITY OF CABLES AND JACKS TO BE INSTALLED AT EACH INFORMATION OUTLET.

KEYNOTES: (#)

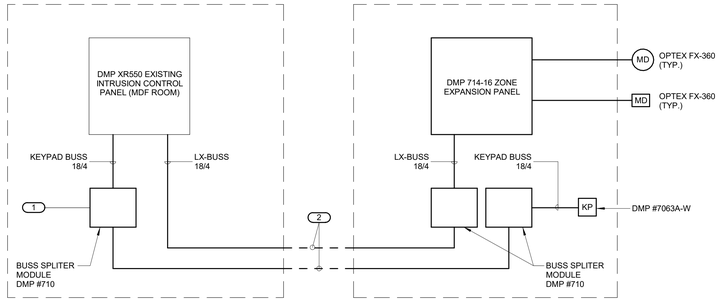
1. 23/24 GAUGE, 4-PAIR, CATEGORY 6A, UNSHIELDED TWISTED PAIR CABLE, REFER TO SPECIFICATIONS.
2. "C#" INDICATES VOICE/DATA FACEPLATE CONFIGURATION. REFER TO FLOOR PLANS AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
3. FIBER OPTIC PATCH CORDS.
4. RJ-45 TO RJ-45 CATEGORY CAT 6A UTP PATCH CORD. REFER TO SPECIFICATIONS.



3 BONDING BUS BAR DETAIL
NO SCALE
T_032_15



4 RACK MOUNT BONDING BUS BAR DETAIL
NO SCALE
T_162_15



5 INTRUSION DIAGRAM
NO SCALE

NOTES:
1. DISCONNECT EXISTING KEYPAD BUS WIRING FROM EXISTING SECURITY CONTROL PANEL AND RECONNECT TO ID-SP-W, ID-SP-W TO CONNECT DIRECTLY TO THE KEYPAD BUS ON EXISTING SECURITY CONTROL PANEL.
2. COORDINATE LX-BUS CONNECTION WITH OWNER.

KEYNOTES:
1. TO EXISTING KEYPAD BUS DEVICES.
2. OSP RATED 18/4 COPPER CABLING.

6 ABOVE CEILING INFORMATION OUTLET MOUNTING DETAIL
NO SCALE
T_173_01

NOTES:

1. THIS DIAGRAM MAY NOT REPRESENT THE QUANTITY OF CABLES TO EACH INFORMATION OUTLET JUNCTION BOX. REFER TO THE DRAWINGS AND THE INFORMATION OUTLET SCHEDULE FOR ADDITIONAL INFORMATION.
2. ALL DEVICES ARE INSTALLED ABOVE THE CEILING UNLESS OTHERWISE NOTED.

KEYNOTES: (#)

1. 2-PORT PLENUM RATED SURFACE MOUNTED BOX, SUPPORT FROM J-HOOK.
2. MOUNT A DEDICATED J-HOOK TO THE NEAREST CEILING SUBSTRUCTURE, COLUMN, JOIST, OR WALL ABOVE THE CEILING AS SHOWN ON THE DRAWINGS. PROVIDE THE PROPER SUPPORT WHEN HANGING FROM THE CEILING SUBSTRUCTURE OR COLUMN WALL OR JOIST. REFER TO SPECIFICATION SECTION 27 05 28 FOR ADDITIONAL REQUIREMENTS.
3. REFER TO SECTION 27 15 00 FOR SLACKLOOP LENGTH. MAINTAIN THE MANUFACTURERS BEND RADIUS FOR SLACKLOOP SIZE.
4. PROVIDE AND INSTALL A VELCRO CABLE STRAP ON THE SLACKLOOP APPROXIMATELY EVERY 6" ALONG THE SLACKLOOP. FOR SLACKLOOPS GREATER THAN 3' A MINIMUM OF (4) STRAPS WILL BE INSTALLED.

NOTES:

1. THIS DIAGRAM IS FOR REFERENCE ONLY AND DOES NOT REPRESENT ALL CONDITIONS OF J-HOOK INSTALLATION REQUIREMENTS.
2. TRAPEZE ASSEMBLIES ARE TO BE USED WITH 3/8" DIA. ROD HANGERS NOT EXCEEDING 12 IN. IN LENGTH FROM RACEWAY SUPPORT POINT TO THE CONNECTION AT THE SUPPORTING STUCTURE AND TOTAL WEIGHT SUPPORTED BY SINGLE TRAPEZE IS 100LB OR LESS.
3. TRAPEZE ASSEMBLIES ARE TO BE USED WITH 1/2" DIA. ROD HANGERS NOT EXCEEDING 24 IN. IN LENGTH FROM RACEWAY SUPPORT POINT TO THE CONNECTION AT THE SUPPORTING STUCTURE AND TOTAL WEIGHT SUPPORTED BY SINGLE TRAPEZE IS 100LB OR LESS.
4. SPACE CABLE SUPPORT CLIPS PER MANUFACTURER'S DIRECTIONS BASED ON CABLE LOAD AND QUANTITY. DISTANCE BETWEEN J-HOOKS SHALL BE LESS THAN 5' TO LIMIT CABLE SAG TO NO GREATER THAN 12" FROM HORIZONTAL. REFER TO SPECIFICATION SECTION 27 05 28 FOR FURTHER INFORMATION.
5. LATERAL MOTION OF J-HOOK SYSTEM SHALL NOT CAUSE IMPACT WITH OTHER SYSTEMS (E.G. UTILITIES, FINISHES, EQUIPMENT, STRUCTURE, SPRINKLER HEADS, FIXTURES, ETC.) WHEN SWINGING 45 DEGREES IN ANY DIRECTION. IF ANY OF THE REQUIREMENTS CAN'T BE MET PER THESE NOTES, PROVIDE BRACING PER COMPRESSION STRUT PLUS DIAGONAL & LONGITUDINAL BRACING

7 TECHNOLOGY J-HOOK PATHWAY DETAIL
NO SCALE
T_140_01

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123438 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2024

Grossmont Union High School District
1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization
8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For

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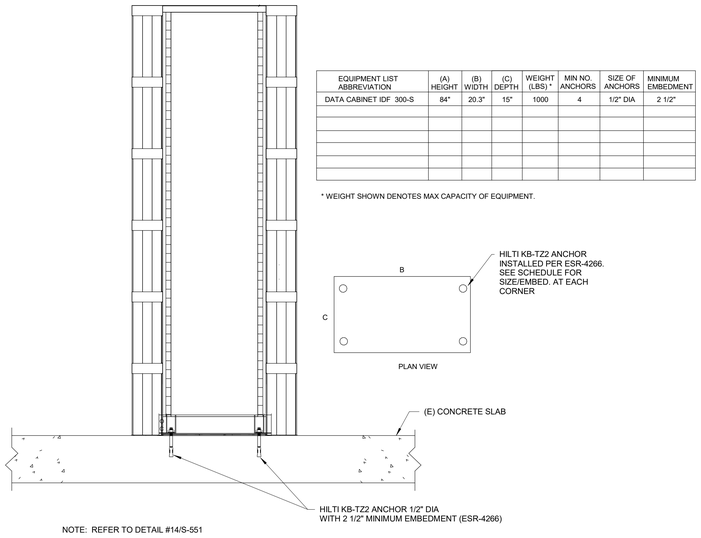
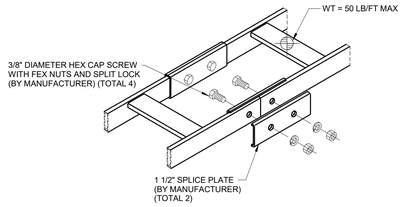


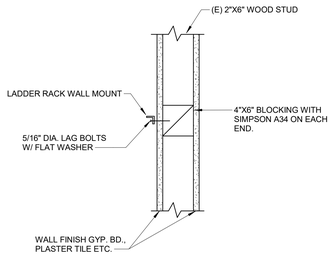
EQUIPMENT LIST ABBREVIATION	(A) HEIGHT	(B) WIDTH	(C) DEPTH	WEIGHT (LBS) *	MIN NO. ANCHORS	SIZE OF ANCHORS	MINIMUM EMBEDMENT
DATA CABINET IDF 300-S	84"	20.3"	15"	1000	4	1/2" DIA	2 1/2"

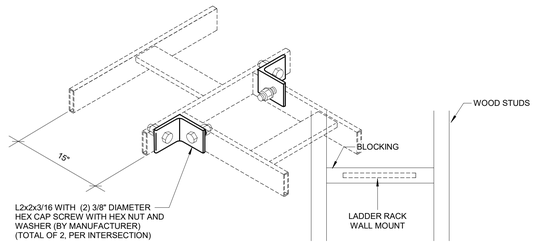
* WEIGHT SHOWN DENOTES MAX CAPACITY OF EQUIPMENT.

NOTE: REFER TO DETAIL #14/S-551

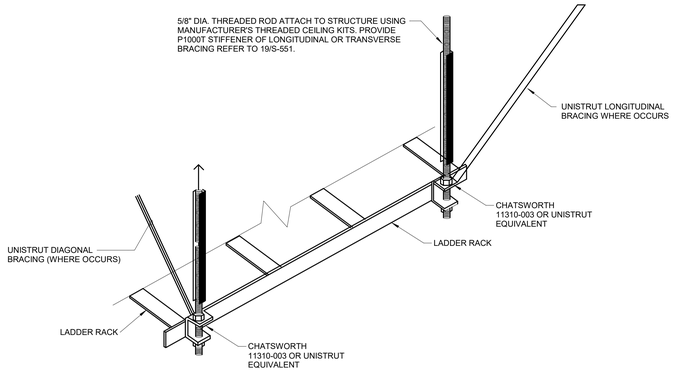
1 TECHNOLOGY EQUIPMENT ANCHORAGE SCHEDULE
NO SCALE

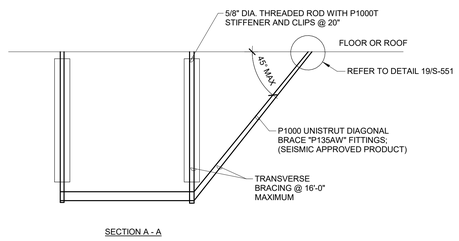




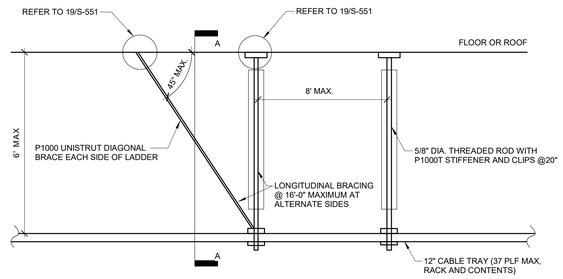


2 LADDER RACK DETAILS
NO SCALE





SECTION A - A



NORTH

3 LADDER RACK MOUNTING DETAIL
1/8" = 1'-0"

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STROBE SIGNAL CIRCUIT SCHEDULE

BLDG. NO.	PANEL NO.	CIRCUIT NO.	15cd STROBE 0.066 AMPS		30cd STROBE 0.094 AMPS		15cd STROBE/SPEAKER 0.065 AMPS		30cd STROBE/SPEAKER 0.086 AMPS		75cd STROBE/SPEAKER 0.111 AMPS		110cd STROBE/SPEAKER 0.148 AMPS		TOTAL CIRCUIT	WIRE SIZE (CU) #	WIRE SIZE (CU) CIRC. MILLS	FEEDER LENGTH IN FT. (FROM PANEL TO EOL)	VOLTAGE DROP (%)	REMARKS
			NO.	AMPS	NO.	AMPS	NO.	AMPS	NO.	AMPS	NO.	AMPS	NO.	AMPS	AMPS					
BLDG-300S	RPS-300S	N1	2	0.132	0	0.000	0	0.000	0	0.000	3	0.333	1	0.148	0.613	12	6530	290	2.45	
BLDG-300S	RPS-300S	N2	0	0.000	0	0.000	0	0.000	0	0.000	4	0.444	1	0.148	0.592	12	6530	240	1.96	
BLDG-300S	RPS-300S	N3	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0.000	12	6530	0	0.00	SPARE
BLDG-300S	RPS-300S	N4	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0.000	12	6530	0	0.00	SPARE

BATTERY CALCULATION FOR FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLIES

DESCRIPTION	(E) FACP 400E QTY	(E) FACP 400E SUPERVISORY CURRENT UNIT	(E) FACP 400E SUPERVISORY CURRENT TOTAL	(E) FACP 400E ALARM CURRENT UNIT	(E) FACP 400E ALARM CURRENT TOTAL	RPS-300S QTY	RPS-300S SUPERVISORY CURRENT UNIT	RPS-300S SUPERVISORY CURRENT TOTAL	RPS-300S ALARM CURRENT UNIT	RPS-300S ALARM CURRENT TOTAL
(E) FACP 400E & DEVICES	1	0.24000	0.24000	0.12000	0.12000					
(E) FIRE ALARM ANNUNCIATOR	1	0.06000	0.06000	0.06500	0.06500					
(N) REMOTE POWER SUPPLY	0					1	0.00200	0.00200	0.00200	0.00200
SMOKE DETECTOR	23	0.00020	0.00460	0.00200	0.04600					
CO/SMOKE DETECTOR COMBO	9	0.00030	0.00270	0.00650	0.05850					
ATTIC HEAT DETECTOR	36	0.00020	0.00720	0.00200	0.07200					
COMBINATION OF FIRE SMOKE DAMPER	19	0.00530	0.100700	0.00530	0.10070					
RELAY MODULE	19	0.01800	0.342000	0.01800	0.34200					
CONTROL MODULE	26	0.00375	0.097500	0.00650	0.16900					
STROBE (15cd) - WALL	0			0.03000	0.00000	2			0.06600	0.13200
SPEAKER/STROBE COMBO (75cd)	0			0.15900	0.00000	7			0.11100	0.77700
SPEAKER/STROBE COMBO (110cd)	0			0.20300	0.00000	2			0.14800	0.29600
SPEAKER - WEATHERPROOF	0			0.09000	0.00000	5			0.09000	0.45000
TOTAL			0.855		0.973			0.002		1.657
			0.855 A		0.973 A			0.002 A		1.657 A
			x 24 H		x 0.25 H			x 24 H		x 0.25 H
			20.513 AH		0.243 AH			0.048 AH		0.414 AH
				20.513 AH, STANDBY					0.048 AH, STANDBY	
FIRE ALARM DEVICE QUANTITIES ARE SHOWN				0.243 AH, ALARM					0.414 AH, ALARM	
SOLELY FOR ENGINEERING CALCULATIONS.				20.756 AH, SUB TOTAL					0.462 AH, SUB TOTAL	
IT SHALL NOT BE USED FOR BID QUANTITY TAKEOFFS.				4.151 (20% SAFETY FACTOR)					0.092 (20% SAFETY FACTOR)	
				24.907 TOTAL					0.555 TOTAL	
				34 AH, BATTERY CAPACITY (EXISTING)					7 AH, BATTERY CAPACITY	
				9.093 AH, SPARE CAPACITY					6.445 AH, SPARE CAPACITY	

SEQUENCE OF OPERATION

	BUILDING POWER FAILURE	SMOKE DETECTOR	CO DETECTOR	HEAT DETECTOR	ATTIC HEAT DETECTOR	OPEN,SHORT OR GROUND
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM, SUPERVISION & TROUBLE)	YES	YES	YES	YES	YES	YES
SOUND CONTROL PANEL TROUBLE BUZZER	YES	ON WIRING FAULT	YES	ON WIRING FAULT	ON WIRING FAULT	YES
ACTIVATE AUDIBLE ALARM SIGNALS (UNTIL SILENCE) TEMPORAL FOUR	NO	NO	YES	NO	NO	NO
ACTIVATE AUDIBLE ALARM SIGNALS (UNTIL SILENCE) TEMPORAL THREE	NO	YES	NO	YES	YES	NO
ACTIVATE VISUAL ALARM SIGNALS (UNTIL RESET)	NO	YES	NO	YES	YES	NO
ACTIVATE EMERGENCY VOICE SYSTEM SIGNALS (UNTIL RESET)	NO	YES	NO	YES	YES	NO
REPORT TO CENTRAL STATION	YES	YES	NO	YES	YES	NO
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (LOCATED IN ADMIN LOBBY)	YES	YES	YES	YES	YES	YES
SHUTDOWN HVAC UNIT	NO	YES	NO	YES	NO	NO
CLOSE FIRE SMOKE DAMPER	NO	YES	NO	YES	NO	NO
ANNUNCIATE AT REMOTE ANNUNCIATOR FOR CO DETECTOR	NO	NO	YES	NO	NO	NO

SPEAKER CIRCUIT LOAD CALCULATION

SPEAKER CIRCUIT DESCRIPTION	PANEL CIRCUIT NUMBER	WIRE GAUGE (18, 16, 14, 12)	CIRCUIT VOLTAGE (25 OR 70 VRMS)	APPLIANCES QUANTITIES / TAP VALUES SPEAKER TAP .25 Watt	SPEAKER TAP .5 Watt	SPEAKER TAP 1. Watt	SPEAKER TAP 2. Watt	TOTAL CIRCUIT LOAD (WATTS)	ESTIMAT... CIRCUIT LENGTH (FEET)
AMP-300S	S1	16	70 vrms	0	3	0	3	7.5 Watts	340 ft.
AMP-300S	S2	16	70 vrms	0	4	0	4	10. Watts	390 ft.
AMP-300S	S3(SPARE)	16	70 vrms	0	0	0	0	. Watts	ft.
AMP-300S	S4(SPARE)	16	70 vrms	0	0	0	0	. Watts	ft.

Appliance Summary				Total Load (Watts)
0	7	0	7	17.50

	Amplifier Total (Watts)	Total Load (Watts)	Spare Load (Watts)	Spare Percentage
AMP	50	17.50	32.50	65.00%

MAXIMUM -3 dB DROP PER CIRCUIT

ACTUAL WIRE/LOSS (dB)	MAXIMUM ALLOWABLE CKT. LENGTH (FEET)	TOTAL CIRCUIT RESISTANCE (OHMS)
-.04 db	30086 ft.	3.057 Ohms
-.06 db	22564 ft.	3.506 Ohms
. db	ft.	. Ohms
. db	ft.	. Ohms

FIRE ALARM SYMBOL LIST

SYMBOL	MFG.	PART NO.	DESCRIPTION	REMARKS	CSFM LISTING NO.	QTY.
FACP 100S	GAMEWELL FCI	E3 SERIES WITH INCC-MIC	EXISTING FIRE ALARM CONTROL PANEL WITH EMERGENCY EVACUATION AND DIGITAL ALARM COMMUNICATOR TRANSMITTER WITH HONEYWELL HON-CGW-MBB CELOUAR DIA	LOCATED IN BUILDING 100	7165-1703:0125	EXIST
FAA	GAMEWELL FCI	LCD-SLP WITH INCC-MIC	EXISTING FIRE ALARM ANNUNCIATOR WITH MICROPHONE	LOCATED IN ADMIN BUILDING	7165-1703:0176	EXIST
FADC	SPACE AGE	TC2-32	FIRE ALARM DOCUMENT CABINET		7300-0553:0110	1
RPS	GAMEWELL FCI	HPF-PS10B	REMOTE POWER SUPPLY		7315-1637-0505	1
AMP	GAMEWELL FCI	INX	INTELLIGENT NETWORK TRANSPONDER-CABINET		7165-1703:0125	1
	GAMEWELL FCI	AM-50	AMPLIFIER (AM-50-25)			
	GAMEWELL FCI	INI-VGX-UTP	COMMAND CENTER VOICE GATEWAY			
	GAMEWELL FCI	PM-9	POWER SUPPLY FOR THE INX			
S	GAMEWELL FCI SYSTEM SENSOR	ASD-PL3 B300-6	SMOKE DETECTOR - PHOTOELECTRIC DETECTOR BASE		7272-1703:0501 7300-1653:0109	23
S CO	GAMEWELL FCI SYSTEM SENSOR	MCS-COF3 B210LP	SMOKE /CARBON MONOXIDE DETECTOR DETECTOR BASE	24 VOLT POWER (P) NOT REQUIRED FOR CO DETCTOR BASE	7272-1703:0508 7300-1653:0109	9
H AT	GAMEWELL FCI SYSTEM SENSOR	ATD-L3H-WH B300-6	190° ATTIC HEAT DETECTOR MOUNTED ABOVE CEILING, FIXED TEMPERATURE AND RATED OF RISE DETCETOR BASE	PROVIDE 24"X24" ACCESS PANEL	7270-1703:0502 7300-1653:0109	36
15cd	SYSTEM SENSOR	SRK	STROBE WALL MOUNT WITH CANDELA (cd) RATING AS SHOWN - WITHOUT WORD "FIRE"	SEE DETAIL FOR WIRING & MOUNTING SEE GENERAL NOTES #3 & 5 THIS SHEET	7300-1653:0187	2
S 110cd 2.0W	SYSTEM SENSOR	SPSWL-P	COMBINATION SPEAKER/STROBE (ADJUSTABLE) WALL MOUNT WITH CANDELA (cd) & SPEAKER RATING AS SHOWN - WITHOUT WORD "FIRE".	SEE DETAIL FOR WIRING & MOUNTING SEE GENERAL NOTES #3 & 5 THIS SHEET	7320-1653:0505	2
S 75cd 1/2W	SYSTEM SENSOR	SPSCWL-P	COMBINATION SPEAKER/STROBE (ADJUSTABLE) CEILING MOUNT WITH CANDELA (cd) RATTING AND SPEAKER RATING (WATTS) AS SHOWN - WITHOUT WORD "FIRE"		7320-1653:0505	7
WP 2W	WHEELOCK	ET1010-R/WFPA	WEATHERPROOF SPEAKER WITH SPEAKER RATING AS (WATTS) SHOWN	MOUNT AT +90" A.F.F.	7320-0785:0105 7300-0785:0177	5
CM	GAMEWELL FCI	AOM-2SF	FIRE ALARM ADDRESSABLE CONTROL MODULE		7300-1703:0102	26
R	APOLLO	MR-101/C/R	MULTI VOLTAGE RELAY (24VDC,24VAC,120VAC)		7300-1004:0101	19
CFD			COMBINATION FIRE SMOKE DAMPER	RUN 120V POWER VIA RELAY FOR DAMPER CLOSER		19
——			FIRE ALARM CONDUIT WITH WIRING MINIMUM 3/4" CONDUIT.			
EOL			END OF LINE RESISTOR "EOLR"			

1. PROVIDE FOLLOWING SYSTEM SENSOR AUDIO/VISION DEVICES FOR CO DETECTORS.

   FIRE RED = SPSRL / ALERT WHITE = SPSWL - CLEAR - ALERT
   FIRE RED = SPSCRL / ALERT WHITE = SPCWL - CLEAR - ALERT

2. PROVIDE NOTIFICATION DEVICE WITHOUT THE WORD "FIRE" FOR CO DETECTOR LOCAL NOTIFICATION.

FIRE ALARM NOTES (CONTINUED)

27. STROBES SHALL FLASH AT A RATE NOT EXCEEDING TWO FLASHES PER SECOND NOR BE LESS THAN ONE FLASH EVERY SECOND. (2022 NFPA 72 SEC. 18.5.3.1)
28. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
29. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)/DSA AFTER COMPLETION OF OPERATION ACCEPTANCE TEST. (2022 NFPA 72 SEC. 7.5.6. & 2022 CFC 901.6.2)
30. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
31. THE INSTALLING CONTRACTOR SHALL PROVIDE A STATEMENT OF COMPLIANCE ALONG WITH THE REQUEST FOR ACCEPTANCE TESTING PER 2022 NFPA-72.
32. OCCUPANCY OF THE BUILDINGS IS PROHIBITED UNTIL THE FIRE ALARM SYSTEM IS COMPLETED, TESTED, AND APPROVED PER 2022 NFPA 72.
33. SMOKE DETECTORS SHALL BE TESTED PER THE METHOD SHOWN IN 2022 CFC.
34. RECEPTACLE TESTING SHALL BE PERFORMED AS REQUIRED BY 2022 NFPA 72.
35. ALL BACKUP BATTERIES FOR FIRE ALARM SYSTEM EQUIPMENT SHALL BE VISUALLY CHECKED FOR DATE OF INSTALLATION. ALL BATTERIES OVER 5 YEARS OLD SHALL BE REPLACED WITH NEW BATTERIES OF THE SAME MANUFACTURER, TYPE, AND AMP-HOUR RATING.
36. FIRE ALARM SYSTEMS SHALL BE SUPERVISED BY AN APPROVED UL LISTED CENTRAL STATION, OR REMOTE STATION (UUFX) MONITORING COMPANY (UUJS) (2022 CFC, 907.2.3.5, 907.6.5.3.)
37. A SINGLE FAULT ON A PATHWAY CONNECTED TO THE ADDRESSABLE DEVICES SHALL NOT CAUSE THE LOSS OF MORE THAN 50 ADDRESSABLE DEVICES (2022 NFPA 72 SECTION 23.6.1)
39. PROVIDE FIRE ALARM DOCUMENTATION CABINET AT EXISTING FACP AND AT EACH RPS/AMP LOCATION PER 2022 NEPA 72 7.7.2.1.
40. FIRE ALARM CONTROL PANEL MICROPHONE SHALL HAVE PRINTED OPERATING INSTRUCTION PER 2022 NFPA72 24.3.2.
41. FIRE ALARM 120V POWER CIRCUIT SHALL COMPLY WITH FOLLOWING REQUIREMENT PER NFPA 72.10.6.5.2
    1. DEDICATED 20A/120V CIRCUIT FROM ELECTRICAL PANEL.
    2. RED LOCK-ON DEVICE ON CIRCUIT BREAKER HANDLE SERVING FIRE ALARM CONTROL PANEL/REMOTE POWERSUPPLY/REMOTE AMPLIFIER.
    3. ELECTRICAL PANEL WITH LOCKABLE DOOR ACCESSIBLE ONLY TO AUTHORIZED PERSONAL.
    4. ENGRAVED RED LABEL INDICATION "FIRE ALARM" AT FIRE ALARM CIRCUIT IN ELECTRICAL PANEL.
    5. LOCATION OF CIRCUIT BREAKER (PANEL AND CIRCUIT NUMBER) PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL PANEL/REMOTE POWER SUPPLY/REMOTE AMPLIFIER.
42. THE DISTRICT SHALL RETAIN RECORD DRAWINGS ON THE PREMISES FOR A MINIMUM OF 3 YEARS, IN A DEDICATED FIRE ALARM RECORD DOCUMENT CABINET IN ACCORDANCE WITH NFPA 72, 7.7.2.
    - EVERY NEW FIRE ALARM SYSTEM SHALL PROVIDE A DOCUMENTATION CABINET, INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION.
    - THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED, "SYSTEM RECORD DOCUMENTS".
    - ALL RECORED AND TESTING DOCUMENTATION SHALL BE STORED IN THE CABINET.
    - CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY.
    - WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT, ITS LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT.

      SYSTEM DOCUMENTS AS APPLICABLE:
    - RECORD DRAWINGS/AS-BUILTS
    - EQUIPMENT CUT SHEETS & CA SFM LISTINGS
    - ALTERNATIVE MEANS AND METHODS
    - PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72, 7.3.7)
    - SYSTEM RECORED OF COMPLETION & ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION (NFPA 72, 7.8.2)
    - EMERGENCY RESPONSE PLAN (NFPA 72, 7.3.8)
    - EVALUATION DOCUMENTATION (NFPA 72, 7.3.9)
    - SOFTWARE & FIRMWARE CONTROL DOCUMENTATION (NFPA 72, 23.2.2)
43. EXTRA DEVICES

    DUE TO UNFORESEEN CONDITION, THE FOLLOWING EXTRA DEVICES SHALL BE INCLUDED IN THE CONTRACTORS BID:

a.	SMOKE DETECTORS	12 EACH
b.	COMBO SMOKE/CO DETECTORS	5 EACH
c.	ATTIC HEAT DETECTORS	40 EACH
d.	SPEAKER/STROBE	6 EACH
e.	STROBE	6 EACH
f.	WP SPEAKER	6 EACH
g.	MONITOR/CONTROL MODULES	6 EACH
h.	120V RELAY	6 EACH
i.	24" X 24" ACCESS PANEL	6 EACH

    FOR BID PURPOSES, ALLOW TWENTY (30) FEET OF 3/4" CONDUIT WITH WIRING AND ITS SUPPORT SYSTEM TO INCLUDE FITTINGS, WIRES AND LABOR PER EACH OF THE DEVICES LISTED ABOVE.

FIRE ALARM NOTES

1. THIS IS A COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL PER 2022 CFC 907.2.3 AND 2022 CBC 907.2.3.
2. THE NEW FIRE ALARM SYSTEM EXTENSION IS CONFIGURED TO A FULLY AUTOMATIC SYSTEM, AS IS THE EXISTING INSTALLATION.
3. THE FIRE ALARM SYSTEM INDICATED ON THESE DRAWINGS IS APPROVED BY CALIFORNIA STATE FIRE MARSHAL AND SHALL BE INSTALLED AS DESCRIBED ON THESE DRAWINGS AND AS NOTED IN THE SPECIFICATIONS. ANY CHANGES TO THESE PLANS, I.E., DELETION, RELOCATION OR ADDING OF DEVICES SHALL BE RESUBMITTED TO THE STATE FIRE MARSHAL FOR APPROVAL. INSTALLATION OF FIRE ALARM SYSTEM NOT BE START UNTIL SHOP DRAWINGS APPROVED BY AOR & EEOR. THE FIRE ALARM CONTRACTOR SHALL PREPARED DETAIL SHOP DRAWINGS INCLUDING CALCULATION WIRING DIAGRAM MOUNTING AND EQUIPMENT CUT SHEETS AND SUBMIT TO AOR/EEOR FOR APPROVAL. PRIOR TO INSTALLATION DSA APPROVED PLANS SHALL BE USED FOR BIDDING PURPOSE ONLY.
4. ALL WIRING AND INITIATING DEVICES SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION (F/A PANEL TO SUPERVISE ALL CIRCUITS AND INITIATING DEVICES).
5. WIRING SHALL NOT BE LOOPED THROUGH DEVICES; WIRE MUST BE CUT FOR IN AND FOR OUT.
6. ALL WIRING TO BE IN CONDUIT.
7. ALL TERMINATIONS IN JUNCTION BOXES, PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS. DO NOT USE WIRE NUTS FOR SPLICING. DO NOT SPLICE WIRES IN ANY BOXES.
8. ALL CONDUIT SIZES INDICATED IN DRAWINGS ARE MINIMUM. CONTRACTOR TO ADJUST SIZE FOR FIELD CONDITIONS BUT SHALL NOT BE SMALLER THAN 3/4 INCH.
9. ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS.
10. FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE ONLY. CONTRACTOR TO ROUTE CONDUIT AS FIELD CONDITIONS INDICATE.
11. CONDUIT AND JUNCTION/BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
12. THE SYSTEM SHALL CONFORM TO TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
13. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF, AND IN A MANNER ACCEPTABLE TO, THE ENFORCING AGENCY.
14. THE CONTRACTOR SHALL REPROGRAM AND CERTIFY ADDRESSABLE FIRE ALARM CONTROL PANEL TO ACCOMMODATE ADDITIONAL DEVICES.
15. FIRE ALARM SYSTEM SHALL BE INSTALLED BY FACTORY AUTHORIZED REPRESENTATIVE.
16. CONDUCTOR LENGTHS AND DEVICE QUANTITIES ARE SHOWN SOLELY FOR PURPOSES ONLY, AND SHALL NOT BE USED FOR BID TAKE-OFF.
17. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF CALIFORNIA ELECTRICAL CODE. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY AOR/EEOR. 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 FIRE AUTHORITY HAVING JURISDICTION.
18. PENETRATIONS OF PIPES, CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TEST ASSEMBLY ACCEPTABLE TO DSA-ORS.
19. ALL FIRE ALARM AND COMMUNICATIONS WIRES AND CABLES SHALL BE ONE CONTINUOUS LENGTH FROM A BUILDING TERMINAL CABINET TO ANOTHER BUILDING TERMINAL CABINET OR JUNCTION BOX. ABSOLUTELY NO SUBGRADE SPLICES WILL BE PERMITTED! PROVIDE TERMINAL BLOCKS WITH MOUNTING IN TERMINAL CABINETS ONLY AS REQUIRED.
20. EVERY ALARM SIGNALING DEVICE INSTALLED SHALL BE OF THE SAME BASIC TYPE (BELLS, HORNS, CHIMES, SPEAKERS, ETC.) AS ALL OTHER SIGNALING DEVICES IN THE FACILITY, (EXCEPTION: ANY SIGNALING DEVICES REQUIRED FOR THE DEAF OR HEARING IMPAIRED PER 2022 NFPA-72.
21. INSULATED CONDUCTORS USED IN WET LOCATIONS SHALL BE (1) LEAD-COVERED, (2) TYPES RHW,TW, THW, THHW, THWN, XHHW; OR (3) OF A TYPE LISTED FOR USE IN WET LOCATIONS. CABLES OF ONE OR MORE CONDUCTORS USED IN WET LOCATIONS SHALL BE OF A TYPE LISTED FOR USE IN WET LOCATIONS. CONDUCTORS USED FOR DIRECT BURIAL APPLICATIONS SHALL BE OF A TYPE LISTED FOR SUCH USE (PER 2022 CEC ARTICLE 310).
22. THE FIRE ALARM DEVICE SUPPLIER SHALL FURNISH ALL SURFACE MOUNT ENCLOSURES FOR PULLSTATIONS AND SKIRTS FOR ALL VISUAL AND AUDIO VISUAL DEVICES TO CONCEAL 4S BACK BOXES.
23. AFTER THE SYSTEM IS COMPLETED, ALL ADDRESSABLE DEVICES SHALL BE PROGRAMMED AT THE FACP ACCORDING TO THE ACTUAL BUILDING ROOM NUMBER. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE SCHOOL DISTRICT TO OBTAIN ACCURATE ROOM NUMBER INFORMATION.
24. POWER SERVICES SHALL BE ON A DEDICATED BRANCH CIRCUIT WITH A RED MARKING & LOCKING DEVICE AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL".
25. PROVIDE CALIFORNIA TEMPORAL-THREE TONE DISTINCTIVE FIRE ALARM SOUND. (2022 CFC SEC. 907.6.2.1.3 & 2022 NFPA 72 SEC. 18.4.2.1)
26. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL IN ALL OCCUPIABLE AREAS (2022 NFPA 72 SEC. 18.4.3.1) (i.e. CLASSROOM AVERAGE AMBIENT ROOM NOISE IS45dBA PLUS 15dBA EQUAL = 60dBA MINIMUM ALARM TONE REQUIRED)

FIRE ALARM WIRE DESIGNATION CHART

SYMBOL	DESCRIPTION	NUMBER OF CONDUCTORS	SIZE	TYPE
N	NOTIFICATION APPLIANCE CIRCUIT (VISUAL)	TWO	#12	THHN/THWN
S	VOICE EVACUATION CIRCUIT - ABOVE GRADE	TWISTED PAIR	#14	WEST PENN #D990
D	SIGNALING LINE CIRCUIT (SLC) - ABOVE GRADE	TWISTED PAIR	#14	WEST PENN #AQC225
UD	SIGNALING LINE CIRCUIT (SLC) - BELOW GRADE	TWISTED PAIR	#14	WEST PENN #D991
US	VOICE EVACUATION CIRCUIT - BELOW GRADE	AQUA SEAL TWISTED SHIELDED PAIR	#16	WEST PENN #AQC294
P	24 POWER	TWISTED SHIELDE PAIR	2#12	THHN/THWN

NOTE: 1. SYMBOL INDICATES QTY & I.D. OF CIRCUIT. I.E. 2N2, INDICATES (2) 2#12 CI CABLE FOR N CIRCUIT 2.
2. ALL CONDUIT USED FOR FIRE ALARM SHALL BE 3/4" MINIMUM ABOVE GRADE AND 1" MINIMUM BELOW GRADE UNLESS NOTED OTHERWISE.
3. ALL WIRING USED IN UNDERGROUND CONDUITS SHALL BE LISTED FOR WET AREA APPLICATION, IN IN ACCORDANCE WITH CEC 760.

FIRE ALARM SYSTEM IS ADDRESSABLE. NAC DEVICES ARE 2-WIRE DEVICES. ALL NAC CIRCUITS ARE SYNCHRONIZED.

THE CONTRACTOR SHALL PROVIDE FIRE WATCH DURING DURATION OF FIRE ALARM SYSTEM SHUT-DOWN.

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Grossmont Union High School District

1100 Murray Drive, El Cajon, CA 92020

MMHS Bldg 300S Modernization

8585 Blossom Lane
Spring Valley, CA 91977

△	Date	Issued For

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FIRE ALARM COVER AND SCHEDULES

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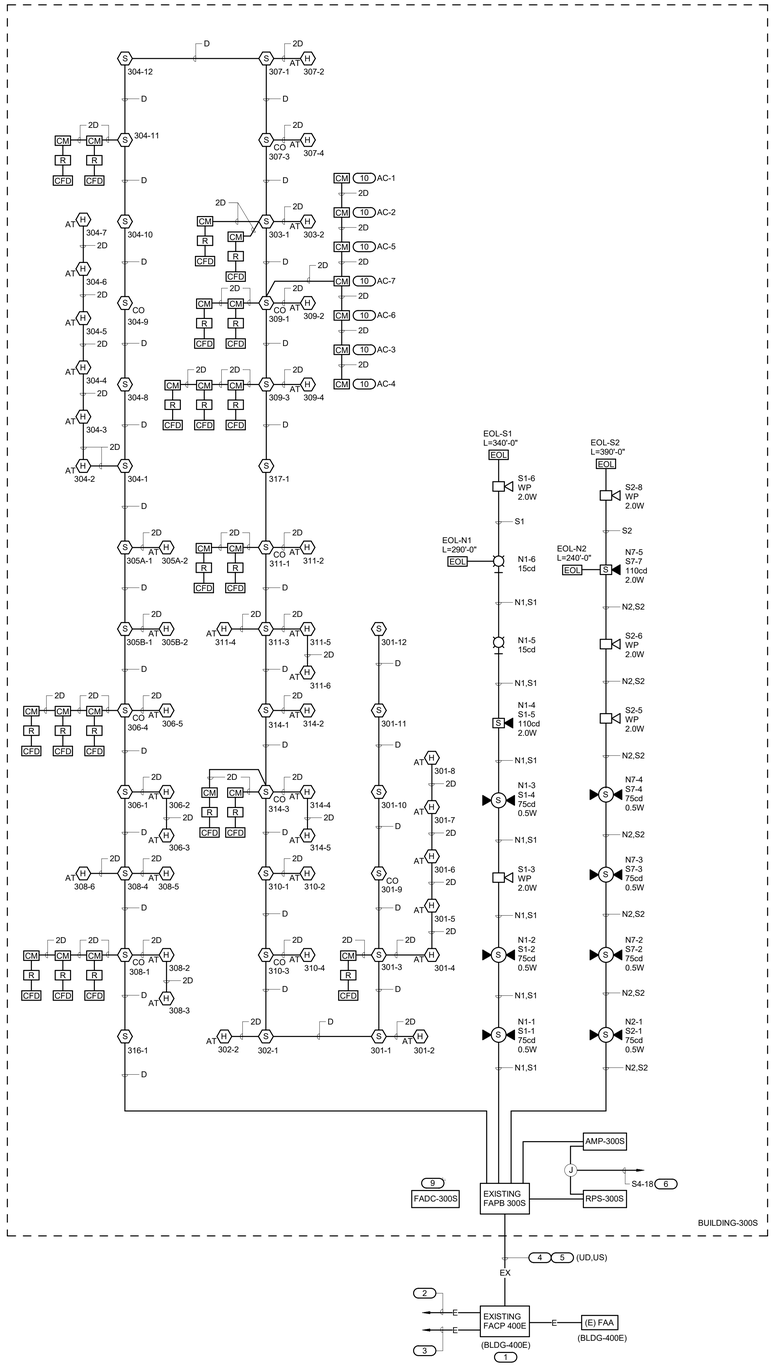

KEYNOTES:

1. RE-PROGRAM EXISTING FIRE ALARM CONTROL PANEL.
2. EXISTING 120V DEDICATED CIRCUIT WITH LOCK-ON DEVICE TO BREAKER.
3. EXISTING DEDICATED (2) PHONE LINES FOR REMOVE MONITORING.
4. PULL NEW FIRE ALARM WIRING IN EXISTING CONDUIT.
5. EXTEND EXISTING CONDUIT TO FATC-1000 IN COMM ROOM.
6. PROVIDE DEDICATED CIRCUIT WITH RED LOCK-ON DEVICE TO BREAKER AND RED LABEL TO CIRCUIT.
7. NOT USED
8. NOT USED
9. PROVIDE DOCUMENT CABINET.
10. CONTROL MODULE FOR ROOF TOP AC UNIT SHUT-DOWN. RUN 1/2"C WITH WIRING TO RESPECTIVE AC UNIT FOR SHUT DOWN.

FIRE ALARM 120V POWER CIRCUIT SHALL COMPLY WITH FOLLOWING REQUIREMENT PER NFPA 72.10.6.5.2

1. DEDICATED 20A/120V CIRCUIT FROM ELECTRICAL PANEL.
2. RED LOCK-ON DEVICE ON CIRCUIT BREAKER HANDLE SERVING FIRE ALARM CONTROL PANEL/REMOTE POWER SUPPLY/REMOTE AMPLIFIER.
3. ELECTRICAL PANEL WITH LOCKABLE DOOR ACCESSIBLE ONLY TO AUTHORIZED PERSONAL.
4. ENGRAVED RED LABEL INDICATION " FIRE ALARM" AT FIRE ALARM CIRCUIT IN ELECTRICAL PANEL.
5. LOCATION OF CIRCUIT BREAKER (PANEL AND CIRCUIT NUMBER) PERMANENTLY IDENTIFIED AT FIRE ALARM CONTROL PANEL/REMOTE POWER SUPPLY/REMOTE AMPLIFIER.

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EST 1920

Grossmont Union
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Modernization

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FIRE ALARM
RISER DIAGRAM

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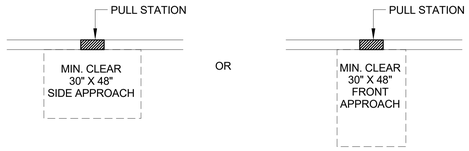
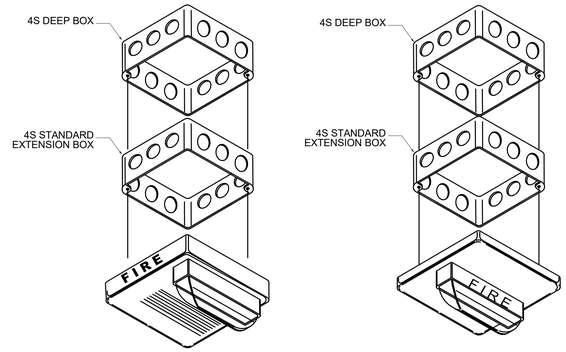


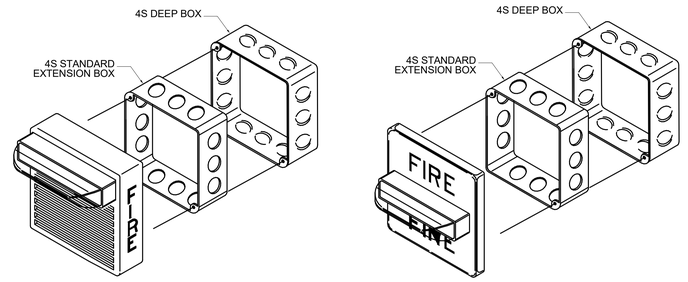
7 CLEAR SPACE REQUIREMENTS AT FIRE ALARM PULL STATIONS

E6-23 SCALE: NONE



5 CEILING MOUNT AUDIO/ VISUAL DEVICE DETAIL

E6-23 SCALE: NONE



1 WALL MOUNT AUDIO/ VISUAL DEVICE DETAIL

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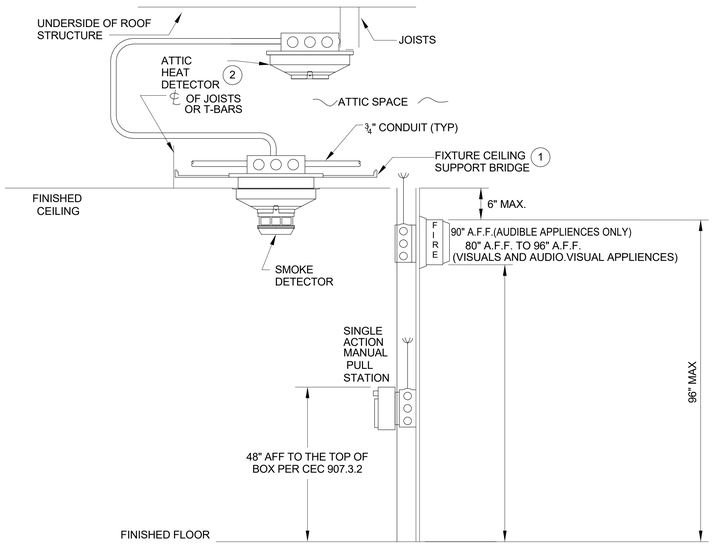
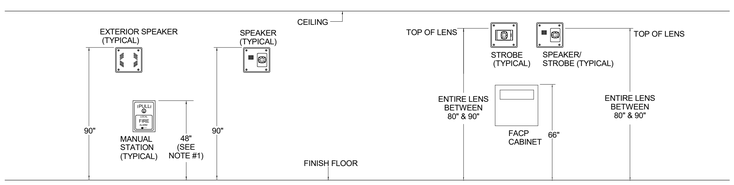


NOTES:

1. DEPENDING ON CEILING TYPE AND CONSTRUCTION.
2. ADJACENT HEAT DETECTOR LOCATION AND REMOVE INSULATION AROUND HEAT DETECTOR FOR CLEARANCE.

8 TYP FIRE ALARM DETAIL

E6-23 SCALE: NONE

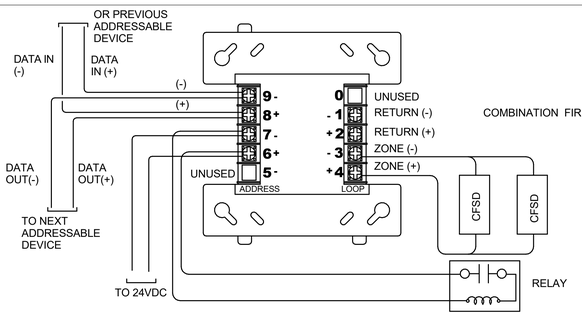


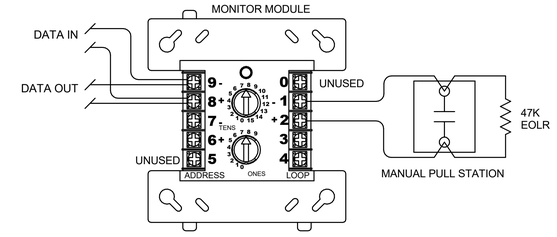
NOTES:

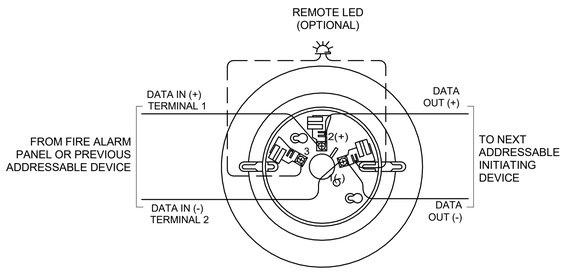
1. MANUAL STATION SHALL BE INSTALLED AT 48" AFF TO THE TOP OF BOX PER CEC 907.3.2.
2. EXTERIOR SPEAKER SHALL BE WALL MOUNTED A MINIMUM OF 90" ABOVE THE FLOOR. MEASUREMENTS ARE TO BE TAKEN FROM THE HIGHEST PORTION OF THE SPEAKER.
3. FACP CABINET SHALL BE LOCATED 66" ABOVE THE SURFACE OF THE FINISHED FLOOR.
4. COORDINATE ALL WALL AND CEILING MOUNTED DEVICES LOCATION WITH ARCHITECT/CONSTRUCTION MANAGER/GENERAL CONTRACTOR TO AVOID ANY CONFLICT WITH OTHER EQUIPMENTS PRIOR TO INSTALLATION. ADJUST DEVICE LOCATION PER FIELD CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE TO RELOCATE DEVICES AND RELATED INSTALLATION INCLUDING ALL COST ASSOCIATED WITH.

9 TYP FIRE ALARM DETAIL

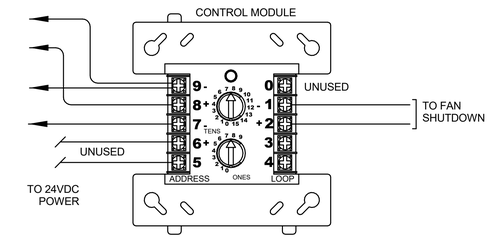
E6-23 SCALE: NONE





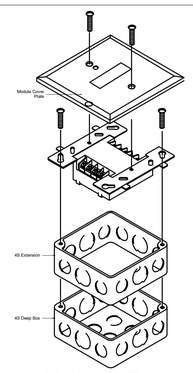


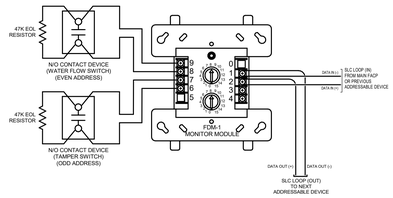
ADDRESSABLE SMOKE DETECTOR OR ADDRESSABLE HEAT DETECTOR



6 TYPICAL FIRE ALARM DEVICE WIRING DIAGRAM

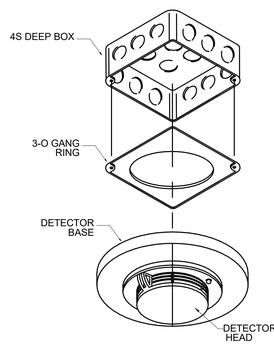
E6-23 SCALE: NONE

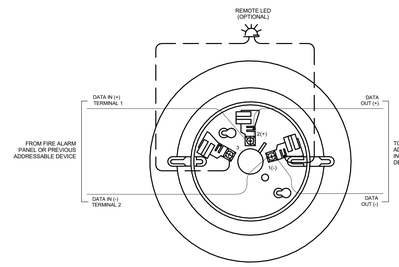




2 MONITOR MODULE WIRING DETAIL

E6-23 SCALE: NONE





3 SMOKE/HEAT DETECTOR BASE WIRING DETAIL

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4

E6-23

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FIRE ALARM DETAILS

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