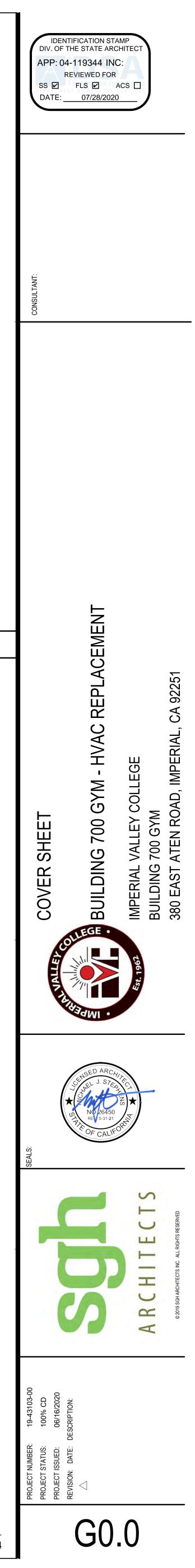
### GENERAL NOTES CODES AND STANDARDS APPLICABLE CODES CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS FOR ACCURACY AND CONSTRUCTABILITY. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY 2019 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R. 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. DISCREPANCIES. 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDINGS AND SHALL DETERMINE ANY DISCREPANCIES 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL NOTIFY THE 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. ARCHITECT AND OWNER OF ANY DISCREPANCIES. 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R. 2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R. CONTRACTOR SHALL THOROUGHLY INVESTIGATE, VERIFY AND BEAR RESPONSIBILITY FOR 2019 CALIFORNIA EXISITNG BUILDING (CEBC), PART 10, TITLE 24 CCR DIMENSIONS AND EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONDITION 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C REQUIRING MODIFICATION OR CHANGE PRIOR TO STARTING WORK. ANY WORK INSTALLED IN 2019 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R. CONFLICT WITH THE DRAWINGS WITHOUT PRIOR APPROVAL SHALL BE CORRECTED BY THE TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS CONTRACTOR AT THE CONTRACTOR'S EXPENSE. 2016 ASME A17.1/ CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER 2019 CBC PART 2 CH 35) WHERE EXISTING FINISHES, FACILITIES, AND SURFACES ARE DISTURBED, DAMAGED, OR REMOVED DURING THE COURSE OF CONSTRUCTION OPERATIONS. THE CONTRACTOR IS TO REPAIR OR REPLACE PARTIAL LIST OF APPLICABLE STANDARDS AS NECESSARY TO MATCH EXISTING. ALL NEW MATERIALS SHALL MATCH EXISTING IN ALL RESPECTS. 2016 EDITION NFPA 13 AUTOMATIC FIRE SPRINKLER SYSTEMS (CA AMENDED) LOCATIONS OF UTILITIES, WHERE SHOWN, ARE APPROXIMATE, AND CONTRACTOR SHALL EXERCISE NFPA 14 STANDPIPE AND HOSE SYSTEMS (CA AMENDED) 2016 EDITION EXTREME CAUTION IN EXCAVATING AND TRENCHING ON ALL SITES TO AVOID EXISTING DUCTS, PIPING, NFPA 17 DRY CHEMICAL EXTINGUISHING SYSTEMS 2017 FDITION OR CONDUITS, ETC. AND TO PREVENT HARM TO PERSONNEL AND/OR DAMAGE TO EXISTING UTILITIES 2017 EDITION NFPA 17a WET CHEMICAL EXTINGUISHING SYSTEMS AND STRUCTURES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER NFPA 72 NATIONAL FIRE ALARM & SIGNALING CODE (CA AMENDED) 2016 EDITION SHOULD UNIDENTIFIED CONDITIONS BE DISCOVERED. NFPA 80 FIRE DOORS AND OTHER OPENING PROTECTIVES 2016 EDITION UL 464 AUDIBLE SIGNAL APPLIANCES 2003 EDITION THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY WHERE THE PROPOSED WORK AFFECTS UL 521 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS 1999 EDITION UL 1971 STANDARD FOR SIGNALING DEVICES FOR HEARING IMPAIRED 2002 (R2010) THE EXISTING IRRIGATION SYSTEMS THE CONTRACTOR SHALL PERFORM ANY WORK NECESSARY TO MAINTAIN AN OPERATIONAL IRRIGATION SYSTEM. ICC 300 ICC STANDARDS ON BLEACHERS, FOLDING AND TELESCOPING 2017 EDITION SEATING, AND GRANDSTANDS THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2019CBC (SFM) CHAP CONSTRUCTION WORKERS WILL ONLY BE ALLOWED IN THE AREAS APPROPRIATE TO THE WORK AND CALIFORNIA FIR CODE CHAPTER 80 SHALL NOT DISTURB THE OWNER, STAFF, STUDENTS OR CUSTOMERS. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS. CONSTRUCTION WORKERS SHALL WEAR APPROPRIATE SAFETY GEAR & COMPLY WITH SAFETY REGULATIONS. COMPLIANCE WITH CFC CHAPTER 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITIE 0. CONSTRUCTION WORKERS SHALL DRESS & BEHAVIOR IN A MANNER APPROPRIATE TO THE JOB SITE AND BE ACCEPTABLE TO THE OWNER REPRESENTATIVES. I. SMOKING IS NOT PERMITTED ON THE CONSTRUCTION SITE. 2. THERE SHALL BE NO POSSESSION OR CONSUMPTION OF DRUGS OR ALCOHOLIC BEVERAGES ON THE JOB SITE BY ANY PERSON AT ANY TIME OR CONSUMPTION PRIOR THAT MAY IMPAIR THE USE OF EQUIPMENT IN A SAFE MANNER. **REGULATION NOTES** STATEMENT OF GENERAL CONFORM FOR ARCHITECTS / ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMIT ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR) PARTS 1 TO 6, 9 DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AN AND 12. CONSULTANTS. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL (APPLICATION NO. 04-119344 FILE NO. CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL THE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHE ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT. THIS DRAWING, PAGE OF SPECIFICATIONS / CALCULATIONS. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, | HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR. LICENSED AND / OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE BEEN EXAMINED BY ME FOR: ALL SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREM CHANGE DOCUMENT (CCD) OR ADDENDA, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION TITLE 24, CALIFORNIA CODE OF REGULATORS AND THE PROJECT SPEC AND INSTALLATION SECTION 4-338, PART 1, TITLE 24, CCR. SUBSTITUTIONS SHALL BE FOR ANY PREPARED BY ME AND MATERIAL, SYSTEM OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA. COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTA INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT. A "DSA CERTIFIED" CLASS 2 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS ME OF MY RIGHTS, DUTIES AND RESPONSIBILITIES UNDER SECTIONS 17302 ANI INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344" OF TITLE 24, PAR A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL 24, PART 1, SECTION 4-317(B)) CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT. I CERTIFY THAT: 🛛 ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR II 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 THIS DRAWING OR PAGE. EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION RE DISCOVER 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 1 IS / ARE IN GENERAL CONFORMANCE ☐ IS / ARE IN GENERAL CONF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED WITH THE PROJECT DESIGN, AND WITH THE PROJECT DESIG TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE HAS / HAVE BEEN COORDIN HAS / HAVE BEEN COORDINATED WITH 24, CCR). <sup>⅃</sup> THE PROJECT PLANS AND THE PROJECT PLANS AND GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND SPECIFICATIONS SPECIFICATIONS ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES. A COPY OF CCR TITLE 24, PARTS 1-6, 9 AND 12 SHALL BE KEPT ON SITE DURING CONSTRUCTION. 06/16/2020 10. A COPY OF THE APPROVED DRAWINGS, SPECIFICATIONS, ADDENDUMS AND CONSTRUCTION CHANGE SIGNATURE DATE SIGNATURE DOCUMENTS SHALL BE KEPT ON SITE DURING CONSTRUCTION. ARCHITECT OR ENGINEER DESIGNATED ARCHITECT OR ENGINEER DE TO BE IN GENERAL RESPONSIBLE TO BE IN GENERAL RESPONS 1. THE CONTRACTOR SHALL MAINTAIN CONSTRUCTION SAFE GUARDS IN ACCORDANCE WITH CHAPTER CHARGE. THIS PORTION OF THE WORK 33, PART 2 TITLE 24, CCR AND CHAPTER 33, PART 9 TITLE 24, CCR (2019 CBC) . THE CONTRACTOR SHALL PROVIDE CLEAN, SANITARY, TEMPORARY TOILET FACILITIES FOR THE MICHAEL STEPHENS CONSTRUCTION PERSONNEL. UNDER NO CIRCUMSTANCES SHALL CONSTRUCTION PERSONNEL BE ALLOWED TO UTILIZE THE PERMANENT SITE FACILITIES. ALL TEMPORARY FACILITIES SHALL BE PRINT NAME PRINT NAME REMOVED FROM THE SITE AT THE CONCLUSION OF CONSTRUCTION. C 26450 05/31/2021 EXPIRATION DATE LICENSE NUMBER LICENSE NUMBER EXPIR

# BUILDING 700 HVAC REPLACEMENT IMPERIAL VALLEY COLLEGE

# 380 EAST ATEN ROAD, IMPERIAL, CA 92251



	SCOPE OF WORK	PROJECT DIRECTORY	SHEET INDEX
E 24 C.C.R.	<ul> <li>SCOPE OF WORK LIMITED TO THE FOLLOWING @ BUILDING 700 ONLY:</li> <li>REMOVAL &amp; REPLACEMENT OF EXISTING HVAC EQUIPMENT</li> <li>REMOVAL OF EXISTING HYDRONIC PIPING FOR HVAC EQUIPMENT TO BE REMOVED</li> <li>INSTALLATION OF REFRIGERATION LINES FOR NEW HVAC EQUIPMENT</li> <li>MODIFICATIONS TO THE ELECTRICAL SYSTEM TO SUPPORT THE HVAC UPGRADES</li> <li>CONSTRUCTION OF CMU ENCLOSURE FOR NEW GROUND LEVEL HVAC EQUIPMENT</li> <li>PATCH AND REPAIR OF PAVING FOR NEW ELECTRICAL TRENCH</li> <li>COORDINATE OF REMOVAL OF HAZARDOUS MATERIALS W/ DISTRICT CONSULTANT</li> </ul>	CLIENT:       IMPERIAL VALLEY COLLEGE 380 EAST ATEN ROAD IMPERIAL, CA 92251 TELEPHONE: 760.457.6995 CONTACT:       JOE JACKSON EMAIL:         ARCHITECT:       SGH ARCHITECTS 707 BROOKSIDE AVENUE REDLANDS, CA 92373 TELEPHONE: 909.375.030 CONTACT:       MICHAEL STEPHENS, AIA EMAIL:         STRUCTURAL:       HOHBACH-LEWIN, INC. 511 MISSION STREET SOUTH PASADENA, CA 91030 TELEPHONE: 626.344.0905 CONTACT:       LES TSO EMAIL:         MECHANICAL:       P2S 5000 EAST SPRINGS ROAD, SUITE 8000 LONG BEACH, CA 90815 TELEPHONE: 632.497.2999 CONTACT:       Karl.fish@p2sinc.com	.GENERAL.         G0.0       COVER SHEET         G0.1       SYMBOLS AND ABBREVIATIONS         G0.2       FIRE ACCESS SITE PLAN         G0.3       ACCESSIBILITY SITE PLAN         SUB-TOTAL: 4
HAPTER 35 AND		ELECTRICAL: P2S 5000 EAST SPRINGS ROAD, SUITE 800 LONG BEACH, CA 90815 TELEPHONE: 582.497.2999 CONTACT: WES MCKEAN EMAIL: wes.mckean@p2sinc.com	.STRUCTURAL. * S0.01 GENERAL NOTES * S2.01 FOUNDATION PLAN - MAIN LEVEL * S2.02 FRAMING PLAN - MEZZANINE LEVEL * S2.03 FRAMING PLAN - ROOF LEVEL * S3.01 DETAILS
RMANCE	BUILDING DATA SUMMARY:         BUILDING         OCCUPANCY TYPE:       A-4, B (MIX OCCUPANCY)         CONSTRUCTION TYPE:       III-A         SPRINKLERED:       NO         TOTAL BUILDING S.F.:       43,345 SQ FT         ALLOWABLE AREA AND HEIGHT:       C.B.C. 2019 TABLE 504.4 AND 506.2         NUMBER OF STORIES:       2         BUILDING HEIGHT:       40'		SUB-TOTAL: 5  MECHANICAL.  MO01 GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX  MO02 SCHEDULES  MD201 DEMOLITION PLAN - LEVEL 1  MD202 DEMOLITION PLAN - LEVEL 1  M202 FLOOR PLAN - MEZZANINE  M201 FLOOR PLAN - MEZZANINE  M202 FLOOR PLAN - MEZZANINE  M203 ROOF PLAN  M203 ROOF PLAN  M204 ENLARGED PLAN - MAIN LOCKER ROOMS
IMITED TO SHOP S AND / OR SHEET MARKED *. NTS WHO ARE ATE. IT HAS	BUILDING AREA:43,345 SQ FTNUMBER OF STORIES:2BUILDING HEIGHT:40'BUILDING AREA:35,370 SQ FTMAIN LEVEL7,975 SQ FTMEZZANINE LEVEL43,345 SQ FTTOTAL		<ul> <li>M302 ENLARGED PLAN - TEAM LOCKER ROOMS/ MECHANICAL EQUIPMENT YARD</li> <li>M501 DIAGRAMS</li> <li>M502 DIAGRAMS</li> <li>M503 DIAGRAMS</li> <li>M504 DIAGRAMS</li> <li>M505 DIAGRAMS</li> <li>M506 DIAGRAMS</li> <li>M507 DIAGRAMS</li> <li>M507 DIAGRAMS</li> <li>M508 DIAGRAMS</li> <li>M508 DIAGRAMS</li> <li>M508 DIAGRAMS</li> <li>M508 DIAGRAMS</li> <li>M601 DETAILS</li> <li>M602 DETAILS</li> </ul>
EMENTS OF PECIFICATIONS PTABLE FOR O AS RELIEVING AND 81138 OF PART 1. (TITLE	OCCUPANCY AREA: B OCCUPANCY:LOCKER ROOM EAST:10,208 SQ.FT.LOCKER ROOM WEST:5,843 SQ.FT.VEIGHT ROOM WEST MEZZ:5,636 SQ.FT.TOTAL:21,687 SQ.FT. < 28,500 SQ.FT. MAX ALLOWED FOR B OCCUPANCY	VICINITY MAP	<ul> <li>M603 DETAILS</li> <li>M604 DETAILS</li> <li>M605 DETAILS</li> <li>M701 TITLE-24 COMPLIANCE DOCUMENTATION</li> <li>M702 TITLE 24 COMPLIANCE DOCUMENTATION</li> <li>M703 TITLE 24 COMPLIANCE DOCUMENTATION</li> <li>SUB-TOTAL: 25</li> </ul>
OR INDEX SHEET.	A4 OCCUPANCY: GYM + MEZZ. BLEACHERS: 21,687 SQ.FT. TOTAL: 21,687 SQ.FT. > 14,000 SQ.FT. MAX ALLOWED FOR A4 OCCUPANCY NON-COMFORMING BUILDING	PROJECT LOCATION Priving LED P Parking LED P Par	LECTRICAL         * E001       GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX         * E002       SCHEDULES         * E1201       FIRST FLOOR DEMOLITION PLAN - WEST GYM         * E202       FIRST FLOOR DEMOLITION PLAN - EAST LOCKER ROOM         * E203       MEZZANINE DEMOLITION PLAN - EAST LOCKER ROOM         * E214       FIRST FLOOR POWER PLAN - WEST GYM         * E212       FIRST FLOOR POWER PLAN - WEST GYM         * E213       FIRST FLOOR AUXILIARY PLAN - WEST GYM         * E214       FIRST FLOOR AUXILIARY PLAN - WEST GYM         * E212       FIRST FLOOR AUXILIARY PLAN - WEST GYM         * E223       FIRST FLOOR AUXILIARY PLAN - WEST GYM         * E224       MEZZANINE DAUXILIARY PLAN - WEST GYM         * E225       FIRST FLOOR AUXILIARY PLAN - WEST GYM         * E224       MEZZANINE AUXILIARY PLAN - WEST GYM         * E225       SINGLE LINE DIAGRAM - DEMOLITION         * E301       SINGLE LINE DIAGRAM - RENOVATION         * E303       SINGLE LINE DIAGRAM - RENOVATION         * E304       SINGLE LINE DIAGRAM - RENOVATION         * E304       SINGLE LINE DIAG



.TOTAL SHEET .

# ABBREVIATIONS

		-
<u>А</u> АВ	ANCHOR BOLT	<u>E</u> E
AC	ACOUSTICAL CEILING	EA
AC		EB EE
ACC ACCB	ACCESSIBLE ACCESSIBLE BENCH	EEW
ACST	ACOUSTIC	EEWS
ACT	ACOUSTIC CEILING TILE	EF
AD AD	ACCESS DOOR AREA DRAIN	EF EH
ADDN		EIFS
ADJ	ADJUSTABLE	EJ
adjt Admin	ADJACENT ADMINISTRATION	EL ELAS
ADMIN	ABOVE FINISH FLOOR	ELEC
ALT	ALTERNATE	ELEV
ALUM		EMER
ANCH AP	ANCHOR ACCESS PANEL	ENCL ENTR
APC	ACOUSTICAL PANEL CEILING	ERF
-	( APPROXIMATE	EQ
	ARCHITECTURAL ASPHALT	EQUIP ES
ASPH AV	AVERAGE	ES ES
AWP		EST
_		EW
<u>B</u> BCMU	BURNISHED CONCRETE MASONRY UNIT	EWC EWH
BD	BOARD	EWT
BET	BETWEEN	EXC
BFP	BACKFLOW PREVENTOR	EXH
BFR BL	BELOW FLOOR BUILDING LINE	EXIST EXP
BLDG	BUILDING	EXP
BLK	BLOCK	EXT
BLKG	BLOCKING	-
BM BM	BEAM BENCH MARK	<u>F</u> F
BOF	BOTTOM OF FOOTING	FA
BOTT	BOTTOM	FAB
BRKT	BRACKET	FB
BSMT BUR		FC FCMU
DOIX	BUET OF NOOF ING	FCO
<u>C</u>		FCU
CBD	CHALKBOARD	FD
CBC CD	CALIFORNIA BUILDING CODE CONDENSATE DRAIN	FD FDC
CER	CERAMIC	FDN
CG	CORNER GUARD	FE
CIP	CAST IN PLACE	FEC
CJ CL	CONTROL JOINT CENTERLINE	FF FFE
CLG	CEILING	FH
CLOS	CLOSET	FHC
CLR	CLEAR	FIG
CM CMU	CEILING MOUNTED CONCRETE MASONRY UNIT	FIN FIX
CMU	CLEAN OUT	FL
COL	COLUMN	FLASH
COMP		FLEX
COMPR CONC		FLG FLM
CONF		FM
CONN	CONNECTION	FO
CONST		FO
CONT CONTR		FOC FOF
CORR		FOM
CP	COVER PLATE	FOR
CPT		FOS
CR CS	CORROSION RESISTANT COUNTERSINK	FOS FOV
CSK	COUNTERSUNK	FOW
CSTJ		FP
CSWK CT	CASEWORK CERAMIC TILE	FR FR
CTR	CENTER	FR
CW	COLD WATER	FS
CY	CUBIC YARD	FSD
<u>D</u>		FSS FT
D	DEPTH	FTG
DBL	DOUBLE	FUT
d	PENNY (AS NAIL 10D)	FVC
DEG DEPT	DEGREE DEPARTMENT	FWC
DF	DRINKING FOUNTAIN	<u>G</u>
DG	DOOR GRILLE	G
DIA DIAG	DIAMETER DIAGONAL	GA GALV
DIAG	DIAGONAL	GALV GB
DIM	DIMENSION	GC
DN		GCMU
DN DO OR "	DOWNSPOUT NOZZLE DITTO	GD GEN
DPFG	DAMPROOFING	GEN
DR	DOOR	GFA
DR		GFI
DS DSA	DOWNSPOUT DEPARTMENT OF STATE ARCHITECT	GFRC GI
DTL	DETAIL	GL
DW	DISHWASHER	GL
DWG DWL	DRAWING DOWEL	GMU GOVT
DWR	DRAWER	GR

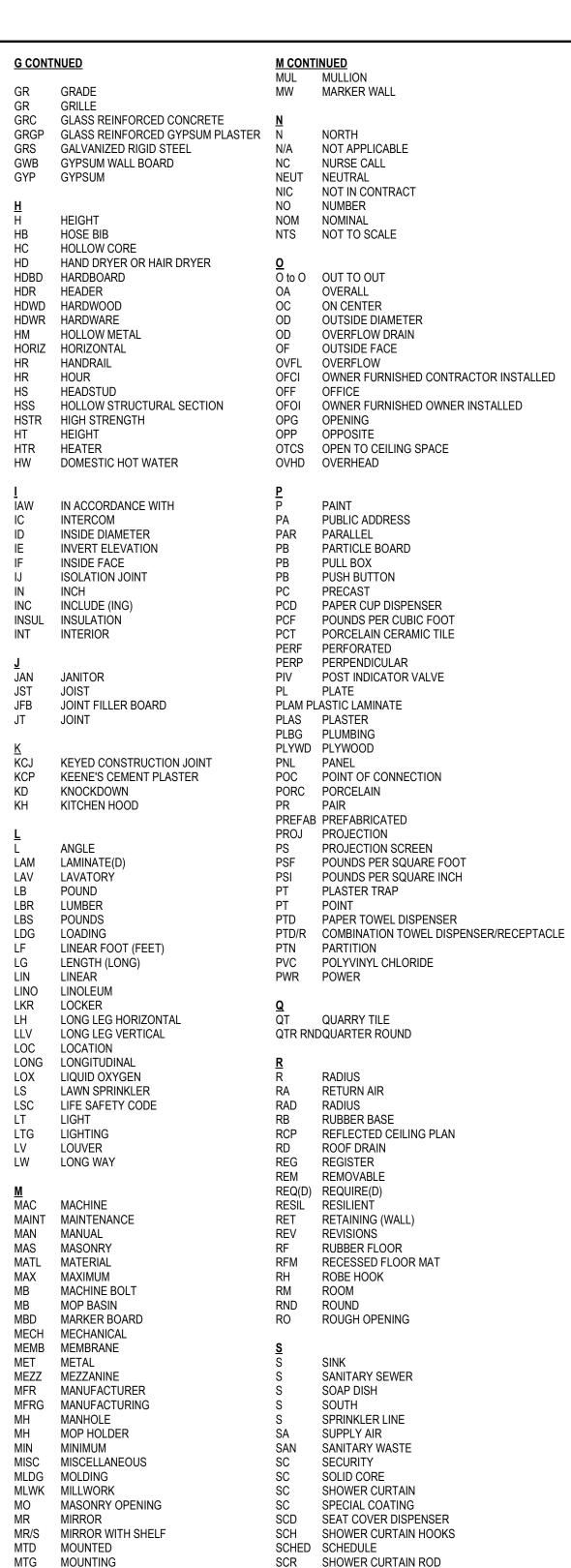
### EMERGENCY EYEWASH EMERGENCY EYEWASH/SHOWER EACH FACE EXHAUST FAN ELECTRICAL HEATER EXTERIOR INSULATION AND FINISH SYSTEM EXPANSION JOINT ELEVATION ELASTOMERIC ELECTRIC(AL) ELEVATOR EMERGENCY ENCLOSURE ENTRANCE EPOXY RESIN FLOORING EQUAL EQUIPMENT EMERGENCY SHOWER EXTRA STRONG ESTIMATE FACH WAY ELECTRIC WATER COOLER ELECTRIC WATER HEATER ENTERING WATER TEMPERATURE FXCAVATE EXHAUST EXISTING EXPANSION EXPOSED EXTERIOR FIRELINE FIRE ALARM FABRICATED FACE BRICK FOOT CANDLE FLUTED CONCRETE MASONRY UNIT FLOOR CLEAN OUT FAN COIL UNIT FIRE DAMPER FLOOR DRAIN FIRE DEPARTMENT CONNECTION FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISH FLOOR FINISH FLOOR ELEVATION FIRE HYDRANT FIRE HOSE CABINET FIGURE FINISH FIXTURE FLOOR FLASHING FLEXIBLE FLOORING FULL LENGTH MIRROR FIRE MAIN FACE OF FINISH OPENING FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY FUEL OIL RETURN FACE OF STUD FUEL OIL SUPPLY FUEL OIL VENT FACE OF WALL FIREPROOFING FIRE RESISTIVE FRAME FIBERGLASS REINFORCED PANEL FLOOR SINK FIRE/SMOKE DAMPER FOLDING SHOWER SEAT FEET (FOOT) FOOTING FUTURE FIRE VALVE CABINET FABRIC WALL COVERING GRILLE GAUGE GALVANIZED GRAB BAR GENERAL CONTRACTOR GLAZED CONCRETE MASONRY UNIT GARBAGE DISPOSAL

EAST

EACH

EXPANSION BOLT

EACH END



# **GENERAL NOTES**

CONSTRUCTION DOCUMENT NOTES:

THE GENERAL CONTRACTOR SHALL CAREFULLY REVIEW AND COMPARE THE CONTRACT DOCUMENTS PRIOR TO CONSTRUCTION AND SHALL AT ONCE REPORT TO THE ARCHITECT ANY ERROR, INCONSISTENCY, OR OMISSION THE CONTRACTOR MAY DISCOVER. IF THE CONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WITHOUT PRIOR NOTICE TO THE ARCHITECT, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY, AND SHALL BEAR ALL COSTS ATTRIBUTABLE THERETO FOR CORRECTION OF THE WORK.

GENERAL

GLASS

GENERATOR

GROSS FLOOR AREA

GALVANIZED IRON

GLUE LAMINATED

GOVERNMENT

GUAD RAIL

GLASS MASONRY UNIT

GROUND FAULT INTERRUPTER

GLASS FIBER REINFORCED CONCRETE

- CONTRACTOR SHALL REVIEW CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS FOR ACCURACY AND CONSTRUCTABILITY.
- CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE SITE BEFORE STARTING ANY WORK AND REPORT FOR CLARIFICATION ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- THE CONSULTING ENGINEERS' DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. SHOULD THERE BE A DISCREPANCY BETWEEN THE ARCHITECTURAL DRAWINGS AND THE CONSULTING ENGINEERS' DRAWINGS, SUCH DISCREPANCY IS TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT CONTRACTORS EXPENSE.
- NOTWITHSTANDING ANY OMISSIONS, IT SHALL BE THE SOLE DUTY AND RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL CONSTRUCTION DETAILS AND FABRICATE AND INSTALL SAID DESIGN IN ACCORDANCE WITH ACCEPTED BEST PRACTICES AND PROCEDURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND COORDINATION WITH OTHER TRADES AND THEIR WORK FOR COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE ALL WORK WITH THE SUBCONTRACTORS. IF A PORTION OF WORK FOR A SPECIFIC TRADE APPEARS IN A SECTION OF THESE DOCUMENTS OTHER THAN THAT WHICH IS SPECIFIC TO THAT TRADE, IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE SAID TRADE OF SUCH WORK.
- CONTRACTOR TO COORDINATE WITH N.I.C. EQUIPMENT CONTRACTOR(S) BEFORE STARTING WORK ADJACENT TO N.I.C. EQUIPMENT SHOWN ON DRAWINGS. VERIFY THAT ALL ITEMS (SUCH AS BELOW FLOOR PIPING AND ELECTRICAL CONDUITS, INSERTS, PIT AND PLATFORM, SIZES AND LOCATIONS, ETC.) HAVE BEEN PROVIDED AND INSTALLED AS REQUIRED FOR OPERATION OF THIS EQUIPMENT. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- VERIFY LOCATION AND SIZE OF OPENINGS, BLOCKING, INSERTS, AND EMBEDDED ITEMS ON APPLICABLE SHOP DRAWINGS BEFORE STARTING WORK.
- ). CONTRACTOR SHALL COORDINATE WITH ALL EQUIPMENT MANUFACTURERS FOR EQUIPMENT ROUGH-IN REQUIREMENTS.
- CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF ALL OPENINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT WITH RESPECTIVE SUBCONTRACTORS.
- THE GENERAL CONTRACTOR SHALL COORDINATE CUTOUTS FOR CASEWORK, MILLWORK, OR OTHER EQUIPMENT AS REQUIRED.
- ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED, AND INDICATED IN THE CONTRACTORS BID.
- THE USE OF THE WORD "PROVIDE" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN THAT SUCH SHALL BE FURNISHED, INSTALLED COMPLETE, CONNECTED AND TESTED FOR PROPER OPERATION WHERE SO REQUIRED.
- PROVIDE ALL PERTINENT SHOP DRAWINGS FOR APPROVAL IN ADVANCE OF FABRICATION AND INSTALLATION ALLOWING SUFFICIENT TIME FOR REVIEW AND CORRECTIVE ACTIONS SHOULD IT BE REQUIRED. SUBMIT CUT SHEETS OF ALL FIXTURES, EQUIPMENT AND SAMPLES OF ALL FINISHES SPECIFIED FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
- PRIOR TO SUBMITTAL OF BID, NOTIFY ARCHITECT IN WRITING, IF ANY SPECIFIED MATERIALS OR EQUIPMENT ARE EITHER UNAVAILABLE OR WILL CAUSE A DELAY IN THE CONSTRUCTION COMPLETION SCHEDULE.

17. ARCHITECT IS NOT RESPONSIBLE FOR THE ACCURACY OF INFORMATION CONTAINED IN OWNER SUPPLIED DOCUMENTS. 18. DO NOT SCALE DRAWINGS. IN CASE OF DISCREPANCIES, OBTAIN CLARIFICATION FROM THE

SCT STRUCTURAL CLAY TILE

- ARCHITECT 19. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS, CONTRACTOR TO
- NOTIFY ARCHITECT OF DISCREPANCIES. 20. DETAILS ARE NOT INTENDED TO SHOW METHOD AND MANNER OF ACCOMPLISHING WORK.
- 21. WHEN +/- SIGN OR V.I.F. ABBREVIATION IS ADJACENT TO A GIVEN DIMENSION, IT INDICATES THAT THE ACTUAL DIMENSION MIGHT VARY DUE TO EXISTING CONDITIONS. VERIFY DIMENSIONS BEFORE PROCEEDING WITH THE WORK; DISCREPANCIES BETWEEN THE NOTED DIMENSIONS AND ACTUAL DIMENSIONS ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
- HAZARDOUS MATERIAL NOTES:

MTL METAL

- THE ARCHITECT ASSUMES NO RESPONSIBILITY RELATING TO ANY HAZARDOUS OR TOXIC MATERIALS, INCLUDING ASBESTOS, AND ASSUMES NO RESPONSIBILITY FOR VERIFYING ITS EXISTENCE OR REMOVAL. THE OWNER/TENANT SHALL TAKE ACTION FOR DIRECTLY CONTRACTING WITH A CONSULTANT OR SPECIALIST FOR SUCH, LICENSED BY THE STATE OF CALIFORNIA, SHOULD THOSE SERVICES BE REQUIRED ON THE PROJECT. 23. NO PRODUCTS CONTAINING ASBESTOS OR LEAD IN ANY FORM SHALL BE USED ON ANY PART OF THE
- CONSTRUCTION NOTES:

WORK.

- 24. MAKE NECESSARY PROVISIONS TO PROTECT EXISTING CONSTRUCTION AND BUILDING IMPROVEMENTS, CONCRETE SIDEWALKS CURBS, ETC., AND UPON COMPLETION OF WORK REPAIR ANY DAMAGE THAT MAY OCCUR DURING CONSTRUCTION. MAKE NECESSARY PROVISIONS TO INCLUDE TEMPORARY DUST TIGHT PARTITIONS TO PREVENT SPREAD OF DUST AND DIRT TO INHABITED AREAS OF THE EXISTING BUILDINGS AND PROTECT EXISTING FACILITIES ON AND ADJACENT TO THE SITE. VERIFY EQUIPMENT LOCATIONS AND REQUIREMENTS WITH CONSULTANT'S DRAWINGS AND COORDINATE WITH CONTRACT DOCUMENTS. REMOVE AND LEGALLY DISPOSE OF DEBRIS, RUBBISH, ETC., LEAVING AREA CLEAR AND BROOM CLEAN READY FOR WORK. ROUTE FOR RUBBISH DISPOSAL SHALL BE APPROVED BY OWNER.
- 25. NEITHER THE OWNER NOR THE ARCHITECT SHALL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES DURING SHORING ND BRACING, AND SHALL SOLELY BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH REGULATIONS, STANDARDS AND LAWS.
- 26. THE GENERAL CONTRACTOR AND SUBCONTRACTORS PERFORMING WORK ON THE PREMISES SHALL BE RESPONSIBLE FOR MAINTAINING AND SUPERVISING THEIR SAFETY PROGRAM, INCLUDING, BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF DEBRIS OR TOOLS WHICH MIGHT ENDANGER VISITORS, PATIENTS OR EMPLOYEES OF THE FACILITY, ALL ROADS AND WALKWAYS SHALL REMAIN UNOBSTRUCTED. WHEN NECESSARY, ALTERNATE ROUTES OF TRAFFIC CONTROL MUST BE MAINTAINED, SHOULD UNSAFE CONDITIONS OCCUR.
- 27. CONTRACTOR SHALL PROVIDE BARRICADES AROUND ALL NEW AND EXISTING OPENINGS WHERE REQUIRED OR NECESSARY FOR SAFETY.
- 28. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC., AS REQUIRED TO PROTECT THE PUBLIC DURING THE PERIOD OF CONSTRUCTION. CONSTRUCTION BARRICADE WALLS TO BE EQUAL TO RATING OF THE WALL REPLACED.
- 29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS CLEAN UP OF THE SITE OF ALL DEBRIS WHETHER CREATED BY HIS WORK OR THE FAILURE OF HIS SUB-CONTRACTORS TO CLEAN UP AFTER THEIR WORK.
- 30. THE CONTRACTOR SHALL MAINTAIN EQUIPMENT, MATERIALS AND WORK IN A NEAT, CLEAN, ORDERLY AND SAFE CONDITION AT ALL TIMES
- 31. CONTRACTOR SHALL KEEP SITE AND BUILDING CLEAN, HAZARD FREE AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH, ETC. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE

### **GENERAL SYMBOLS** <u>PATTERNS</u> S CONTINUED W CONTINUED DETAIL NUMBER SOAP DISPENSER WEST EARTH W SMOKE DAMPER WIDE FLANGE SD W CALLOUT BUBBLE XX.XXSMOKE DETECTOR WITH W/ SD GRAVEL/BALLAST W/O WITHOUT STORM DRAIN SD - SHEET NUMBER SEC SECONDARY WC WALL COVERING WATER CLOSET SECT SECTION WC SAND SECY SECRETARY WCO WALL CLEAN OUT CONCRETE SQUARE FOOT WD WOOD SF XX.XX X INTERIOR ELEVATION SFCMU SPLIT-FACED CONCRETE MASONRY UNIT WDW WINDOW SGL SINGLE WASH FOUNTAIN WF ASPHALT CONCRETE SH SHOWER WALL HYDRANT WH SHEATH SHEATHING WATER HEATER WH SHM SECURITY HOLLOW METAL WROUGHT IRON W/I STEEL SHT SHEET WNSCT WAINSCOT SIM SIMILAR WP WEATHERPROOF EXTERIOR ELEVATION GYM FLOOR SHORT LEG WATER RESISTANT WR XX.XXSL WASTE RECEPTACLE WOOD SLNT SEALANT WR CONTINUOUS BLOCKING) SM SHEET METAL WSP WET STAND PIPE WT WEIGHT SPRINKLER MAIN WOOD (NON-CONTINUOUS BLOCKING) SM SANITARY NAPKIN DISPOSAL WWF WELDED WIRE FABRIC BUILDING SECTION SND XX.XX /SNV SANITARY NAPKIN VENDOR WOOD SPEC SPECIFICATIONS (TRIM/FINISH) XFMR TRANSFORMER SPI SPECIAI SPL BLK SPLASH BLOCK GLASS WALL SECTION SQ SQUARE XX.XX/YARD SERVICE SINK SS STONE SOLID SURFACE YH YARD HYDRANT SS SST STAINLESS STEEL STAIR ST SHINGLES / X DETAIL SECTION STAG'D STAGGERED AND XX.XX/CONCRETE MASONRY UNIT STD STANDARD AT THAT IS STL STEEL ZZZZZ BRICK VENEER STOR STORAGE NUMBER # STR STRUCTURAL - STRUCTURE DETAIL SECTION METAL / WOOD STUDS SUBEL SUBELOOR $\langle XX.XX \rangle$ SURF SURFACE STEEL (LARGE SCALE) SUSP SUSPENDED GLAZING ABBREVIATIONS: SV SHEET VINYL PLYWOOD (LARGE SCALE) SYM SYMMETRICAL CLEAR FLOAT GLASS CG (G.L.)— – — – — – GRID LINES CLEAR INSULATING GLASS CIG GYPSUM WALL BOARD CTG CLEAR TEMPERED FLOAT GLASS (LARGE SCALE) TEMPERED CTIG CLEAR TEMPERED INSULATING GLASS ELEVATION LEVEL THERMOSTAT FIRE-RATED GLASS FG T & B TOP & BOTTOM LAMINATED GLASS LAMINATED INSULATING GLASS TONGUE & GROOVE T& G LIG TREAD PATTERN GLASS PG (XX)DOOR TAG PATTERN INSULATING GLASS TA TRANSFER AIR SPANDREL GLASS TAN TANGENT - - SPRAY FOAM INSULATION SPANDREL INSULATING GLASS TOWEL BAR $\langle xx \rangle$ CURTAIN WALL / WIDOW TAG TACK BOARD TINTED FLOAT GLASS TEMPERATURE CONTROL TINTED INSULATING GLASS TIG MINERAL WOOL INSULATION TIME CLOCK TINTED TEMPERED FLOAT GLASS TTG $\langle x \rangle$ TRENCH DRAIN TTIG TINTED TEMPERED INSULATING GLASS WALL TAG PROTECTION BOARD TEI EPHONE TFI TEMP TEMPERED - TEMPORARY LIII CARPET (LARGE SCALE) xx FURNITURE, FIXTURE OR TERR TERRAZZO EQUIPMENT TAG TEXT TEXTURED ACOUSTICAL TILE (LARGE SCALE THRESHOLD TH TOWEL HOOK TH TILE (LARGE SCALE) FINISH TAG THK THICK(NESS) TMR TILT MIRROR UNIT TOB TOP OF BEAM ACCESSIBILITY CLEARANCES ? TOC TOP OF CONCRETE DEMOLITION KEYNOTE TOF TOP OF FOOTING TOIL TOILET 60" DIA. ACCESSIBLE TOP TOP OF PAVING ? LEGEND KEYNOTE に」」」「TURN AROUND TOS TOP OF STEEL TOW TOP OF WALL TPV TRAP PRIMER ? CONSTRUCTION KEYNOTE TRIP TR ACCESSIBLE CLEAR TRANS TRANSVERSE FLOOR SPACE TRD TREAD TERRAZZO TILE REVISION NUMBER <u>/#</u> \ TOILET TISSUE DISPENSER TTD ▶ <sup>-</sup> <sup>-</sup> <sup>-</sup> <sup>-</sup> <sup>-</sup> <sup>-</sup> <sup>-</sup> <sup>-</sup> <sup>2</sup> <sup>'</sup> - 0" EXT. **TELEVISION / MONITOR** 1'-6" INT. ROOM NAME ΤW TACK WALL ROOM NAME TAG TYP TYPICAL 101 FLOOR SPACE URINAL ROOM NAME UNDERWRITERS LABORATORIES 1' - 0" **X** - - - - -UNEX UNEXCAVATED 150 S.F UNFIN UNFINISHED ROOM OCCUPANCY TAG WALLS: SEE WALL TYPES SHEET UNO UNLESS NOTED OTHERWISE LOAD UR URINAL WALL US UTILITY SHELF WALL WITH ACCOUSTIC INS UTIL UTILITY 1-HR RATED WALL EGRESS / EXIT TAG VENT 2-HR RATED WALL VAV VARIABLE AIR VOLUME VB VAPOR BARRIER CEILING HEIGHT TAG VINYI BASE VR (9' - 0") VCB VENTED COVE BASE VCT VINYL COMPOSITION TILE VERT VERTICAL VEST VESTIBULE VINYL FLOOR VENEER PLASTER VINYL TILE

WATER SERVICE WIDE; WIDTH W

VTR VENT THROUGH ROOF

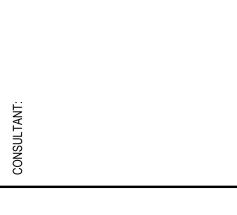
VWC VINYL WALLCOVERING

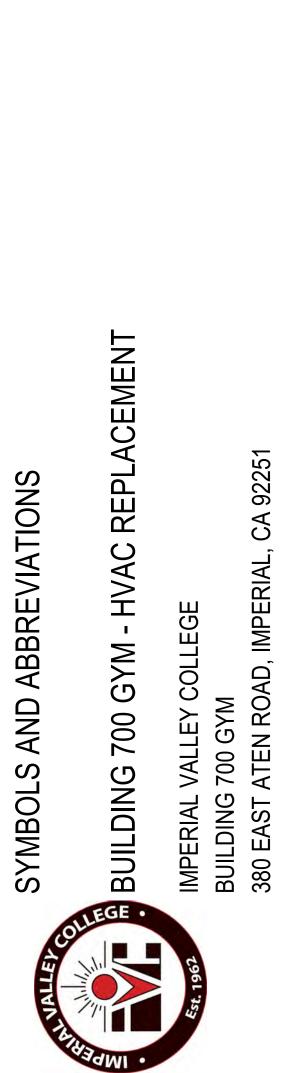
- WORK WHEN WORKERS ARE NOT ON THE PROJECT SITE. 33. CONTRACTOR TO SCHEDULE CONSTRUCTION ACTIVITIES TO HAVE THE LEAST IMPACT ON EXISTING BUILDING FUNCTIONS. THIS INCLUDES RESTRICTING TYPICAL DEMOLITION AND CONSTRUCTION ACTIVITIES TO THE HOURS DESIGNATED BY THE OWNER. CERTAIN ACTIVITIES SUCH AS THE USE OF JACKHAMMERS ON EXISTING BUILDINGS WILL NEED TO BE SCHEDULED AT SPECIAL TIMES. CONTACT THE OWNER FOR SCHEDULING OF ALL ACTIVITIES. 34. THE GENERAL CONTRACTOR SHALL MAKE SPECIAL PROVISIONS FOR NOISE AND DUST CONTROL SO AS NOT DISRUPT EXISTING ADJACENT OCCUPIED AREA. 35. THE CONTRACTOR SHALL COOPERATE WITH OWNER AS REQUIRED TO MINIMIZE INTERFERENCE WITH AND DISRUPTION OF OWNER ACTIVITIES. 36. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING SITE ACCESS, STAGING AREAS, USE OF SITE, USE OF UTILITY SERVICES AND FACILITIES.
- 37. CONTRACTOR SHALL MAINTAIN FIRE LANES, PEDESTRIAN AND VEHICULAR ACCESS, FIRE PROTECTIVE DEVICES AND ALARMS DURING CONSTRUCTION. 38. DO NOT STORE MATERIALS ON ANY FLOOR OR ROOF IN EXCESS OF ALLOWABLE LOAD.
- 39. ALL EXITS MUST BE CONTINUOUS AND TERMINATE IN A PUBLIC WAY OR EXIT COURT LEADING TO A PUBLIC WAY OR AN APPROVED AREA OF REFUGE.
- 40. WHENEVER THE BUILDING IS OCCUPIED, EXIT SIGNS SHALL BE ILLUMINATED SO THAT THEY ARE CLEARLY VISIBLE.
- 41. PROVIDE PORTABLE FIRE EXTINGUISHERS AT EACH FIRE EXTINGUISHER CABINET AS SHOWN ON DRAWINGS. ADDITIONAL FIRE EXTINGUISHERS AS REQUIRED BY FIRE DEPARTMENT OR STATE FIRE MARSHALL FIELD INSPECTORS ARE N.I.C.
- . GENERAL CONTRACTOR IS TO MAKE EXACT DETERMINATIONS AS TO THE LOCATION OF ALL EXISTING UTILITIES. DO NOT BEGIN WORK UNTIL THIS DETERMINATION HAS BEEN MADE. CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGE CAUSE BY FAILURE TO LOCATE AND PROTECT UTILITIES. 43. PROVIDE RE-ROUTING OF EXISTING UTILITIES SERVING OCCUPIED AREAS AS REQUIRED TO MAINTAIN
- OPERATIONS 44. SUPPLY TEMPORARY ELECTRICAL POWER TO THE JOB SITE FOR USE BY ALL CONSTRUCTION TRADES PRIOR TO CONNECTION OF THE SPECIFIED ELECTRICAL WORK.
- 45. NOTIFY OWNER AT LEAST SEVENTY-TWO HOURS PRIOR TO DISRUPTION OF UTILITIES.
- 46. PATCH SURFACES WHERE AFFECTED BY INSTALLATION OF NEW MECHANICAL, ELECTRICAL AND STRUCTURAL ITEMS. MATCH EXISTING ADJACENT SURFACES AND FINISHES EXCEPT WHERE OTHERWISE NOTED OR INDICATED.
- 47. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING AS REQUIRED TO COMPLETE THE WORK OR TO MAKE ITS PARTS FIT TOGETHER PROPERLY. PATCHING OF FINISHED WORK ALREADY INSTALLED AS A RESULT BY ERRORS, CHANGES OR OTHER REASONS IS ALSO THE CONTRACTOR'S RESPONSIBILITY. THE REFINISHED SURFACES SHALL MATCH THE ADJACENT SURFACES FOR COLOR, TEXTURE AND MATERIAL.
- 48. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER-DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE OR POST-TENSIONED) LOCATE THE PRESTRESSED TENDON BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.
- 49. PATCH AND REPAIR EXISTING FIRE-RATED ASSEMBLIES DAMAGED DURING DEMOLITION TO MAINTAIN RATED ASSEMBLY.
- 50. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND SHAFTS SHALL BE EQUIPPED WITH DAMPERS, SEALANTS, OR OTHER APPROPRIATE AND APPROVED U.L. LISTED ASSEMBLIES, MATERIALS AND METHODS SO AS TO MAINTAIN THAT RATING.

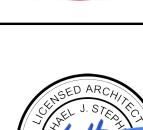
- 32. CONTRACTOR SHALL LEAVE WORK / PROJECT AREA IN A SECURE CONDITION DURING PERIOD OF THIS 51. ALL OPENINGS AT WINDOWS, OPENINGS FOR UTILITY PIPING AND WIRING, ETC., WITHIN THE AREA OF WORK SHALL BE CAULKED AND SEALED.
  - 52. PROVIDE BACKING FOR CASEWORK, TOILET ACCESSORIES, LOCKERS, ELECTRICAL PANELS, AND OTHER ANY WALL MOUNTED ITEMS AS INDICATED IN THE DRAWINGS.
  - 53. PROVIDE ALL NECESSARY BLOCKING, BACKING AND FRAMING FOR LIGHT FIXTURES, ELECTRICAL UNITS, MECHANICAL AND PLUMBING EQUIPMENT AND ALL OTHER ITEMS REQUIRING THE SAME AS INDICATED IN THE DRAWINGS.
  - 54. MECHANICAL, PLUMBING AND ELECTRICAL PLANS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF DUCTS, PIPES, CONDUIT, WIRING, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING AND EXISTING CONDITION. LOCATION OF THESE ITEMS MAY BE ADJUSTED CONDITIONAL UPON THE SATISFACTORY COMPLIANCE WITH ALL OTHER REQUIREMENTS.
  - 55. ALL PIPING AND CONDUITS SHALL BE CONCEALED WITHIN WALLS, UNDERGROUND, ABOVE CEILINGS OR IN ARCHITECT APPROVED UTILITY SPACES IN ALL CASES UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. EXPOSED ITEMS MUST BE LOCATED IN AREAS APPROVED BY THE ARCHITECT. EXPOSED ITEMS SHALL BE INSTALLED AND FINISHED TO PROVIDE MINIMAL VISUAL IMPACT. ALL EXPOSED ITEMS ARE TO BE PAINTED TO MATCH THE ADJACENT SURFACES UNLESS SCHEDULED FOR AN ACCENT COLOR.
  - 56. ALL PIPE DUCTS AND CONDUIT SHALL BE SUPPORTED AND SEISMICALLY BRACED USING AN APPROVED SEISMIC RESTRAINT SYSTEM AS SHOWN ON THE DRAWINGS.
  - 57. ANCHORAGE AND SUPPORTS OF ALL EQUIPMENT TO BE INSTALLED, AS A PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY 2016 CBC SECTION 1616A.1.8
  - 58. EQUIPMENT SUPPORTS, AND ANCHORAGE SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD AND OSHPD AS A PART OF HELD REVIEWS / OBSERVATIONS. THE INSPECTOR OF RECORD (IOR) SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.
  - 59. CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF 4" HIGH CONCRETE HOUSEKEEPING PADS WITH THE MECHANICAL AND ELECTRICAL EQUIPMENT SUPPLIERS.
  - 60. UNLESS NOTED OTHERWISE ALL WALL TO BE FULL HEIGHT. 61. PROVISIONS SHALL BE MADE AT FULL HEIGHT NON-BEARING WALLS FOR 1/2 INCH VERTICAL
  - MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH FIRE SAFING INSULATION ( FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. FILL AT SMOKE PARTITIONS WITH MATERIALS CAPABLE OF RESISTING THE PASSAGE OF SMOKE.
  - 62. SCRIBE GYPSUM BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF STRUCTURE AND ROOF DECK ABOVE.
  - 63. 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.

DOOR ACCESSIBLE CLEAR



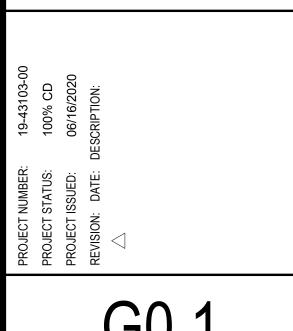


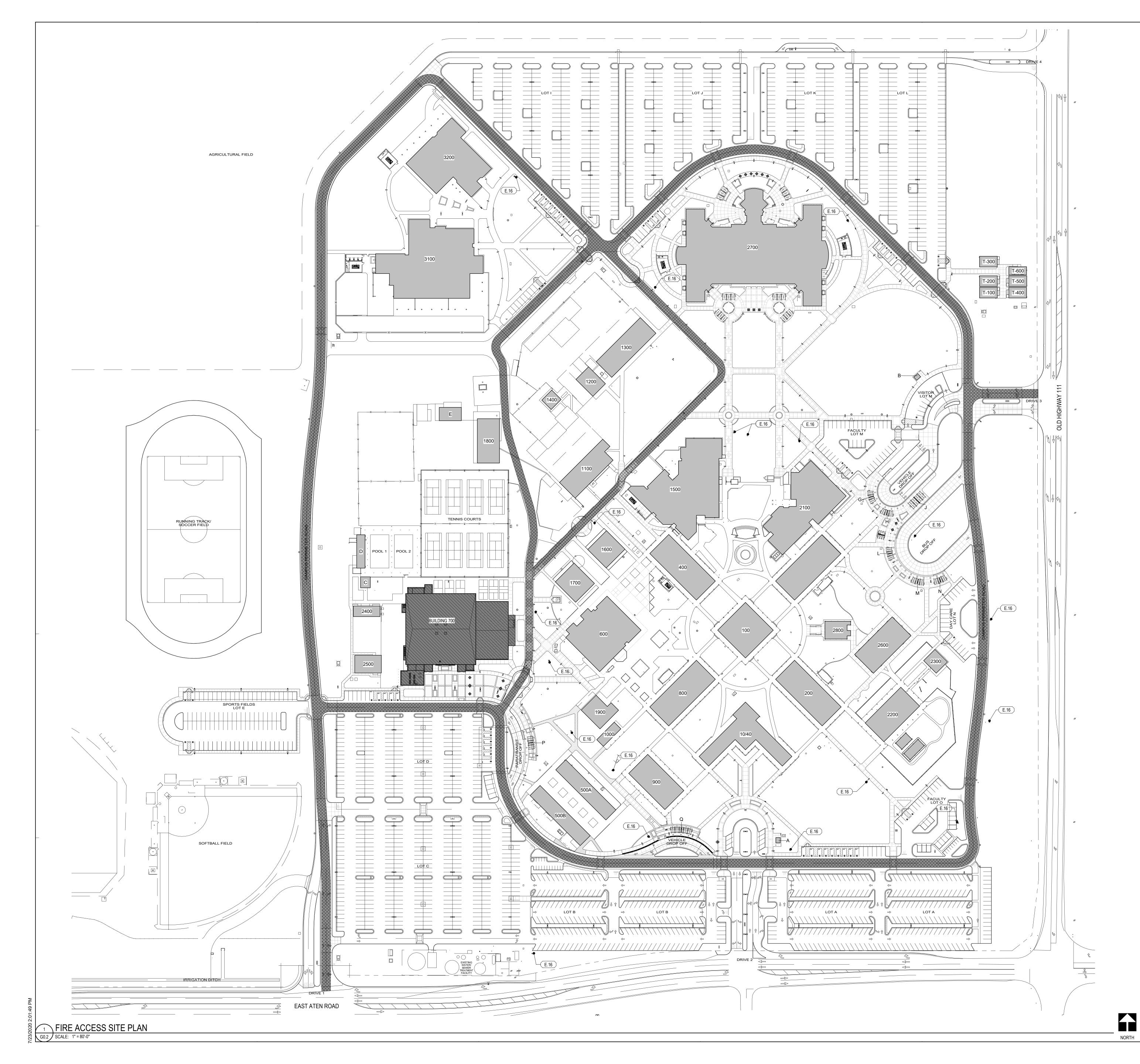












DESCRIPTION

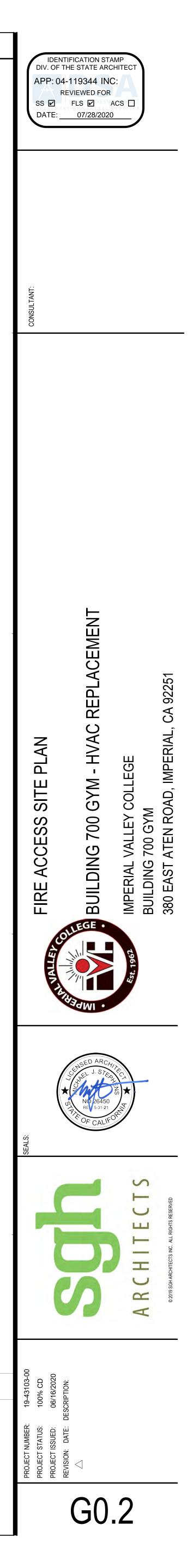
E.16 (E) FIRE HYDRANT

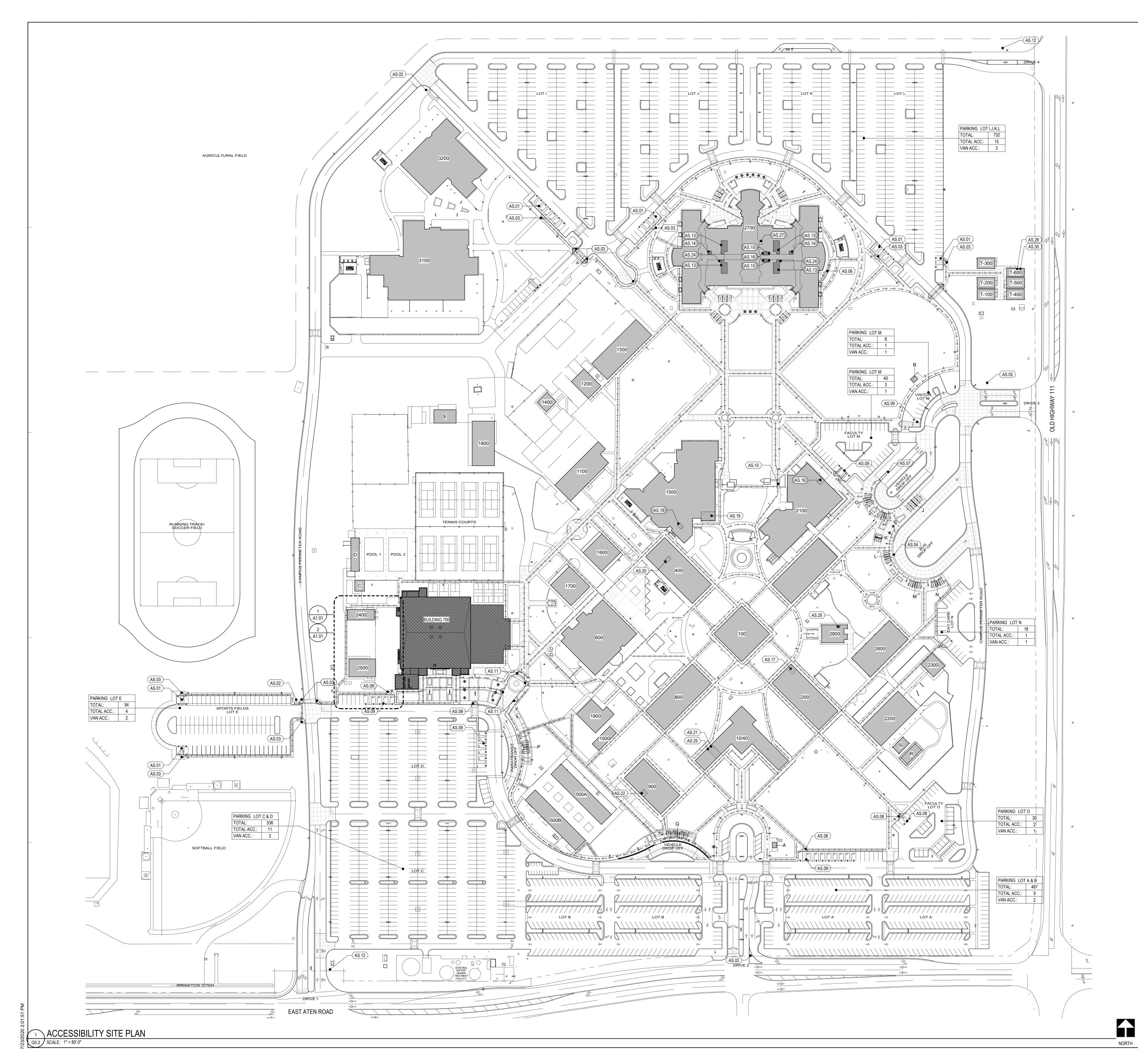
# FIRE ACCESS PLAN LEGEND

(E) FIRE LANE (A#04-118720) (E) BUILDINGS

(E) BUILDING 700 IN SCOPE OF WORK FOR HVAC REPLACEMENT

(E) FIRE HYDRANT





KEYNOTES
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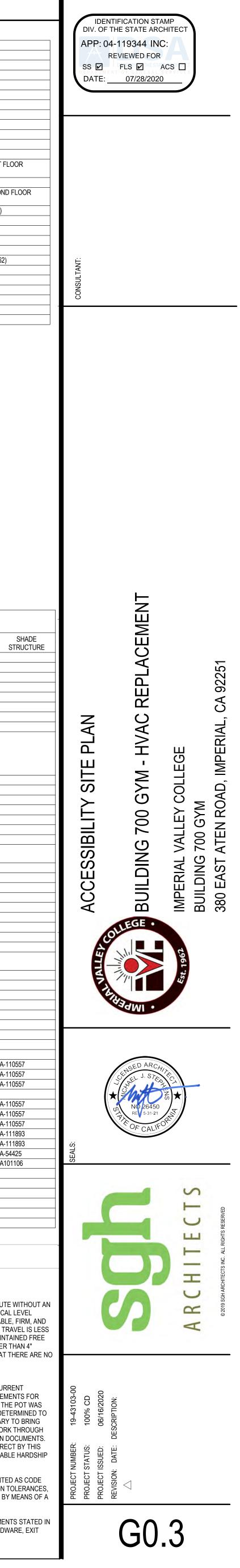
AS.01	EXISTING ACCESSIBILE PARKING (DSA#04-108533, 115279)
AS.02	EXSITING TOW-AWAY SIGN (DSA#04-108533, 115279)
AS.03	EXISTING ACCESSIBLE CURB RAMP (DSA#04-108533, 110973, 115279)
AS.04	EXISITNG TRUNCATED DOMES (DSA#04-108533)
AS.05	EXISITNG TOW-AWAY SIGN (DSA#04-110557, 115279)
AS.06	EXISITNG ACCESSIBLE RAMP (DSA#04-108533)
AS.07	EXISITNG ACCESSIBLE LOADING ZONE (DSA#04-108533)
AS.08	EXSITING ACCESSIBLE CURB RAMP (DSA#04-110557)
AS.09	EXISITNG ACCESSIBLE PARKING (DSA#04-110557)
AS.10	EXISITNG ACCESSIBLE RAMP (DSA# A-47276)
AS.11	EXISTING ACCESSIBLE CURB RAMP (DSA#04-111893)
AS.12	EXISTING TOW AWAY SIGN (DSA#04-112064, 115279)
AS.13	EXISITNG ACCESSIBLE MEN'S AND WOMEN'S STUDENT TOILET ROOM @ FIRST FL (DSA#04-108533)
AS.14	EXISTING ACCESSIBLE UNISEX TOILET ROOM @ FIRST FLOOR (DSA#108533)
AS.15	EXISITNG ACCESSIBLE MEN'S AND WOMEN'S STUDENT TOILET ROOM @ SECOND (DSA#04-108533)
AS.16	EXISTING ACCESSIBLE UNISEX TOILET ROOM @ SECOND FLOOR (DSA#108533)
AS.17	EXISITNG ACCESSIBLE STUDENT TOILETS (DSA#04-110557)
AS.18	EXISITNG ACCESSIBLE FACULTY TOILETS (DSA#04-110557)
AS.19	EXISITNG STUDENT TOILETS (DSA#04-110557)
AS.20	EXISTING ACCESSIBLE UNISEX TOILET ROOM (DSA#04-110775)
AS.21	EXISITNG ACCESSIBLE MEN'S AND WOMEN'S FACULTY TOILETS (DSA#04-111262)
AS.22	EXISITNG FACULTY TOILETS (DSA# A-21614, #04-111893)
AS.24	EXISITNG ACCESSIBLE DRINKING FOUNTAINS (DSA#04-108533)
AS.25	EXISITNG ACCESSIBLE DRINKING FOUNTAINS (DSA#04-111262)
AS.27	EXISITNG ELEVATOR (DSA#04-108533)
AS.29	EXISTING ACCESSIBLE FACULTY TOILET (DSA#04-110873, 115279)
AS.30	EXISTING STUDENT TOILETS (DSA#04-110973, 115279)

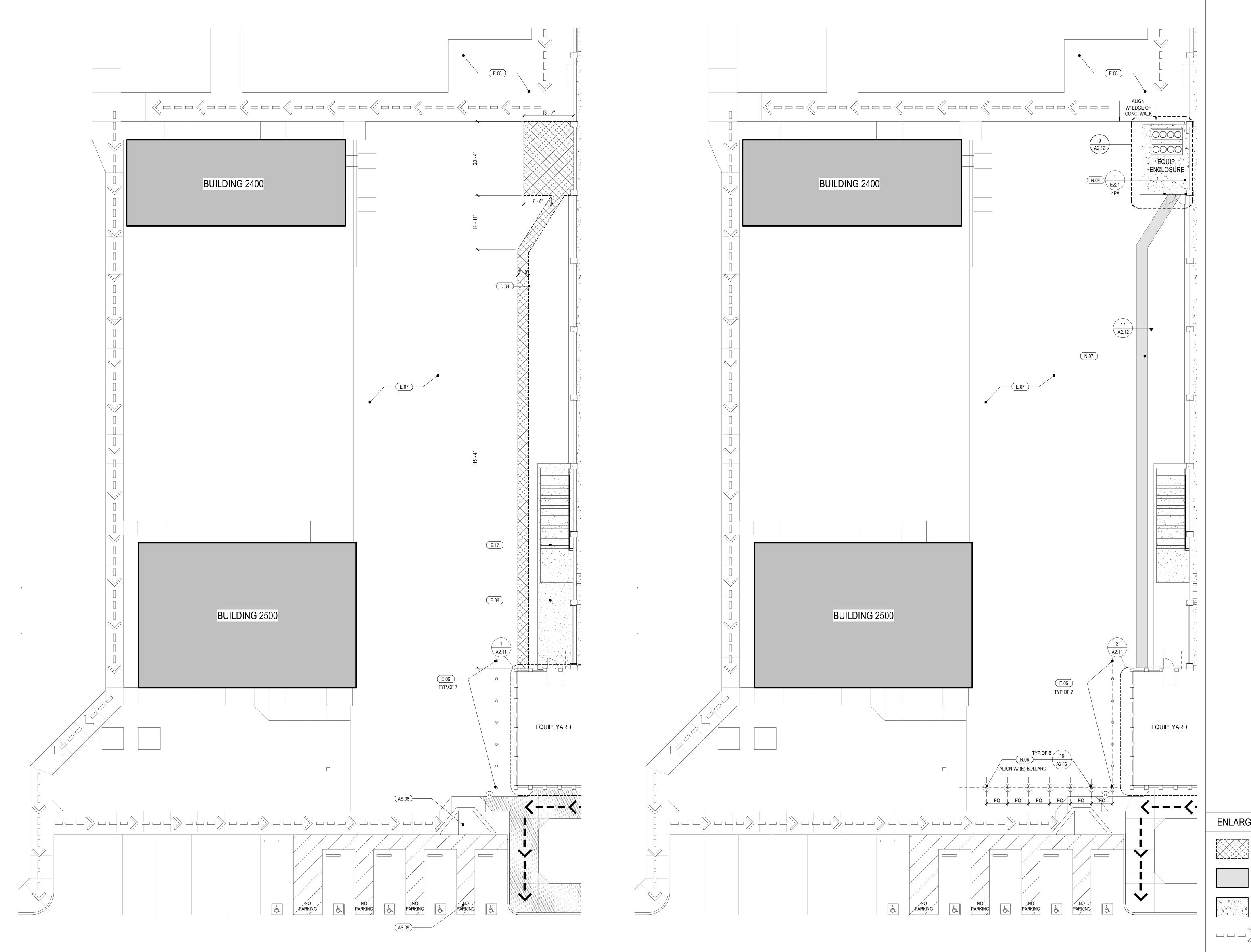
# DSA A# / BUILDING INFORMATION

BUILDING NAME /		E	BUILDING	
USE	BUILDING NAME	ORIGINAL	MODERNIZATION	
10/40	ADMINISTRATION	A-21614		
100	COUNSELING/ FINANCIAL AID	A-21614	A-38564, A-59185	
200	SOCIAL SCIENCES/ ENGLISH	A-21614		
300	FINE ART	A-21614		
400	ASSEMBLY CENTER/ CLASSROOMS	A-21614	A-111262	
500A	ENGLISH/ MATHEMATICS	A-20204	A-21614	
500B	REPROGRAPHICS/ PARKING	A-20204	A-21614	
600	WORKFORCE DEVELOPMENT CENTER	A-21614	A-29289, A-38800	
700	GYMNASIUM	A-21614	A-26153, A-27239, A-28378, A-30408, A-33594, A-35011, A-100778, A-104120	
800	BUSINESS	A-21614	A-29289, 04-118720	
900	MEYER BUSINESS BUILDING	A-33912	A-52343, A-112788	
1000	STUDENT AFFAIRS OFFICE	A-33912		
1100	AUTO TECHNOLOGY	A-21614		
1200	AUTO TECHNOLOGY/ HUMANITIES	A-33832		
1300	AUTO TECHNOLOGY/ HUMANITIES	A-33832		
1400	TOOL STORAGE	UNKNOWN		
1500	LIBRARY MEDIA CENTER	A-36944	A-100260, A-110557	
1600	TECHNOLOGY CENTER	A-38576		
1700	WORKFORCE DEVELOPMENT CENTER	UNKNOWN		
1800	MAINTENANCE/ WAREHOUSE	A-30409		1
1900	BOOKSTORE	UNKNOWN		
2100	HEALTH SCIENCES/ DISABLED STUDENT	A-47276		
2200	PRESCHOOL	A-54425		
2300	INFANT TODDLER CENTER	A-100748		
2400	HUMAN RESOURCES	NONE		
2500	MATH LAB CENTER			
2600	READING/ WRITING/ LANGUAGE	A-103704		
2700	SCIENCE	A-108533		
2800	ART GALLERY	A-110775		
3100	CAREER TECHNICAL	A-112064		
3200	CAREER TECHNICAL	A-112064		
A	INFORMATION BOOTH "A"	N/A		
B	INFORMATION BOOTH "B"	N/A		
C	SHOWERS/ TOILETS	UNKNOWN		
D	POOLS AND GRANDSTANDS	A-36933		
E	CARPENTER SHOP	UNKNOWN		
G	SHADE STRUCTURE			A-
H	SHADE STRUCTURE			A-
J	SHADE STRUCTURE			A-
K	KIOSK		A-110557	
L	SHADE STRUCTURE		A-110337	A-
M	SHADE STRUCTURE			-
N	SHADE STRUCTURE			A-
P				_
				A-
Q				A-
R				A-
S T 100		A 440070		A
T-100		A-110973		-
T-200		A-110973		1
T-300		A-110973		-
T-400		A-110973		$\vdash$
T-500	RELOCATABLE CLASSROOM	A-110973		$\perp$
T-600	RELOCATABLE CLASSROOM	A-110973		

## PATH OF TRAVEL NOTES:

- EXISTING ACCESSIBLE PATH OF TRAVEL (DSA#04-110557) ---->--->--->---> EXISITNG ACCESSIBLE PATH OF TRAVEL (DSA#04-111893) --->-->-->-->-->-->-->-->-->-->
- ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS ROUTE WITHOUT AN ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE. FIRM. AND SLIP RESISTANT. CROSS SLOE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4"
- PROJECTION FROM WALL ABOVE 27" AND LESS THAN 80". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLAINT WITH THE CURRENT CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR
- ALTERATIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NON COMPLAINT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE COPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS, AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECT BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP
- ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLAINT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS PART OF THIS PROJECT BY MEANS OF A "CONSTRUCTION CHANGE DOCUMENT"
- GATES IN THE ACCESSIBLE PATH OF TRAVEL SHALL COMPLY WITH ALL DOOR REQUIREMENTS STATED IN CBC SECTIONS 1010 AND 11B-404 FOR DOOR WIDTH, CLEARANCE, LANDINGS, DOOR HARDWARE, EXIT DEVICE, DOOR OPERATING FORCE AND SURFACES





1 ENLARGED SITE PLAN\_NEW A1.01 SCALE: 3/32" = 1'-0"

# KEYNOTES

- DESCRIPTION
- AS.08 EXSITING ACCESSIBLE CURB RAMP (DSA#04-110557)
- AS.09 EXISITNG ACCESSIBLE PARKING (DSA#04-110557) D.04 SAW CUT & REMOVE (E) A.C.PAVING FOR NEW CONSTRUCTION
- E.06 (E) BOLLARD, PROTECT IN PLACE
- E.07 (E) A.C. PAVING, PROTECT IN PLACE E.08 (E) CONCRETE PAVING
- E.17 (E) STAIR, PROTECT IN PLACE
- N.04 ELECTRICAL EQUIP., SEE ELEC. DWGSN.06 BOLLARD, 6'-0" MAX. O.C.
- N.07 A.C.PAVING TO MATCH EXISITNG

# ENLARGED SITE PLAN LEGEND

SAWCUT DEMO (E) A.C.PAVING

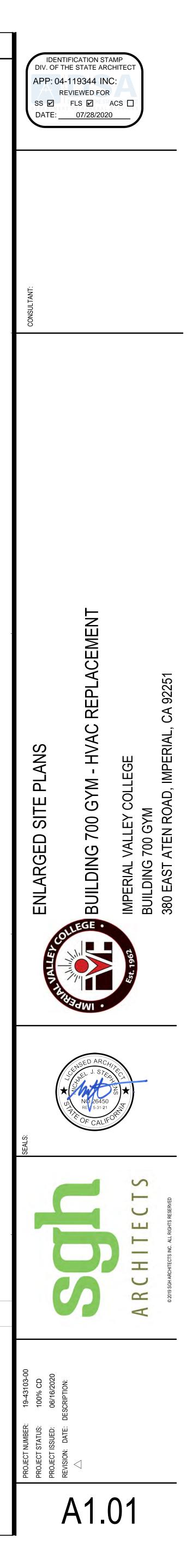
A.C. PAVING

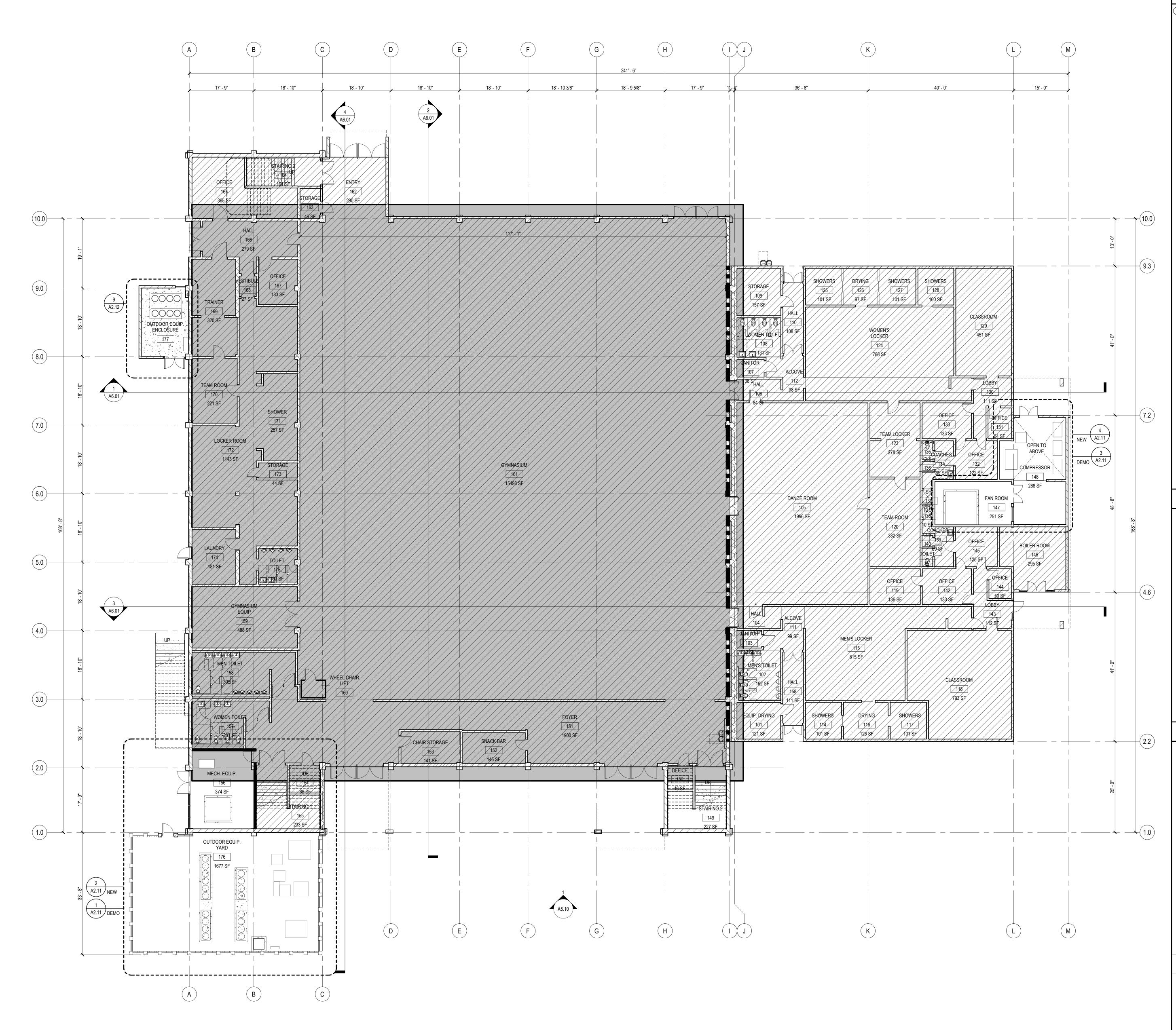


EXISTING ACCESSIBLE PATH OF TRAVEL (DSA#04-110557)

EXISITNG ACCESSIBLE PATH OF TRAVEL (DSA#04-111893)







# DESCRIPTION

# WALL LEGEND

c===================================

EXISTING CMU WALL	

- EXISTING 4 HR RATED CMU WALL
- EXISTING 1 HR. RATED WALL
- EXISTING NON-RATED WALL
- EXISTING NON-RATED WALL TO BE REMOVED

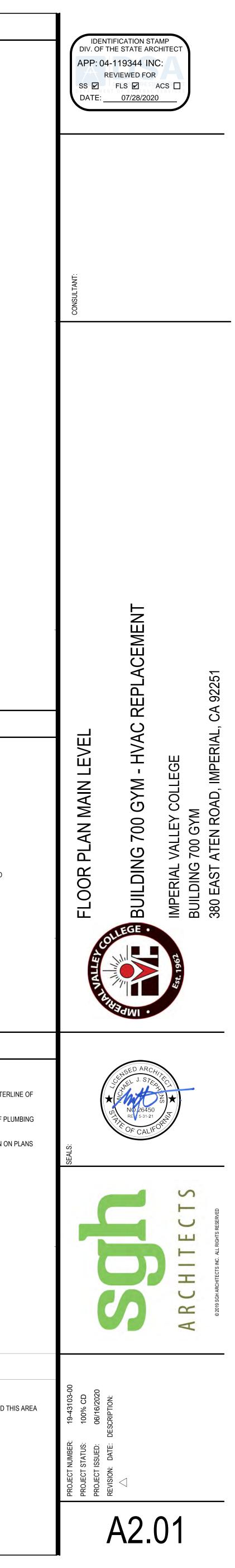
# NOTES

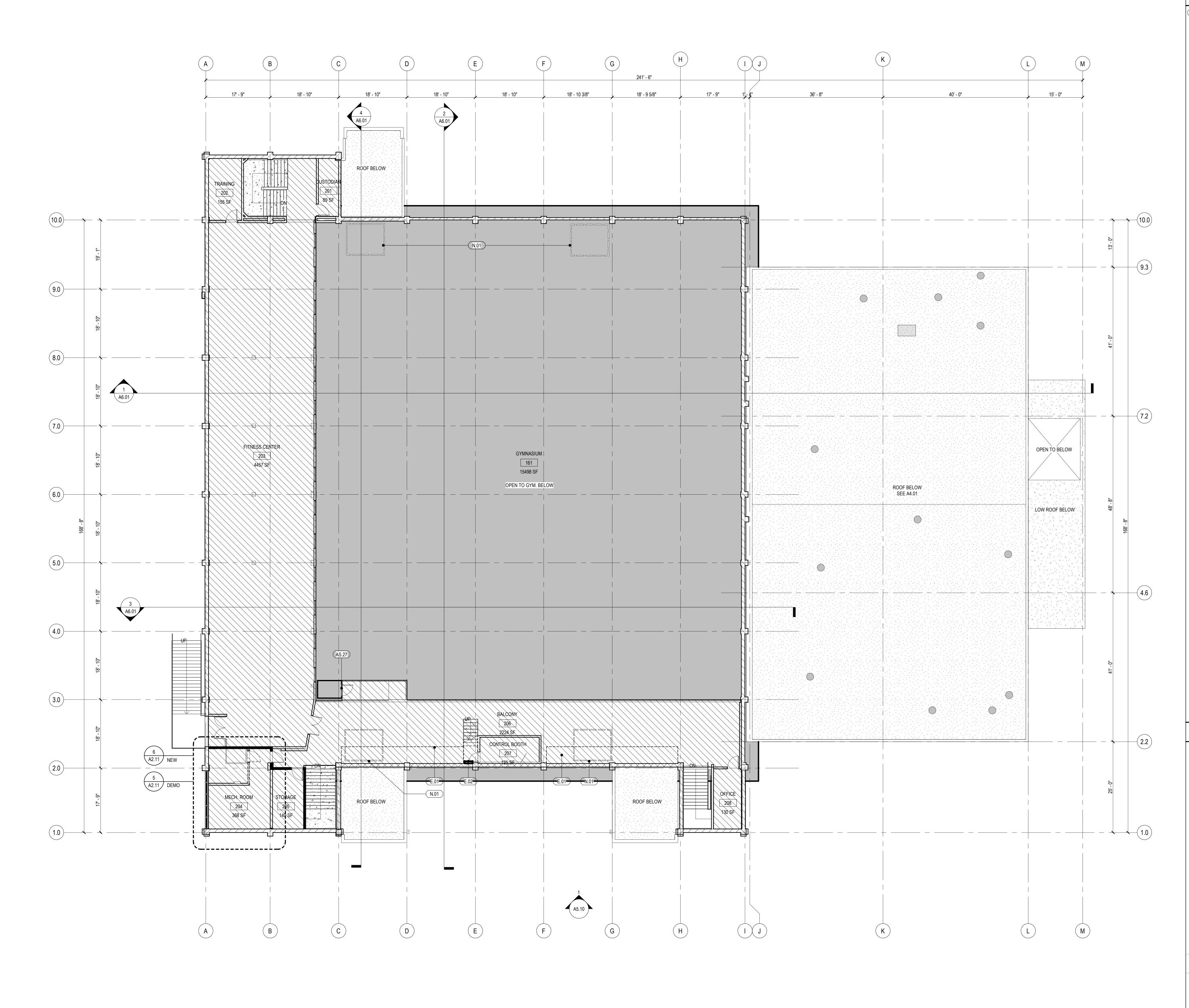
- 1. GENERAL NOTES APPLY TO THIS DRAWINGS
- ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF MASONRY, CENTERLINE OF DOORS OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.
- 3. ALL CLEARANCE DIMENISIONS ARE ACTUAL AND ARE TO FINISH FACE, CENTERLINE OF PLUMBING FIXTURES, AND DOOR OPENINGS, UNLESS NOTED OTHERWISE.
- 4. REFERENCE ADULTING MOUNTING HEIGHTS FOR ADDITIONAL DIMENSION NOT SHOWN ON PLANS AND ELEVATIONS.

# FLOOR PLAN LEGEND

NO DEMO OR NEW WORK IN THIS AREA, PROTECT IN PLACE REFER TO RCP/ MEP DRAWINGS FOR SELECTIVE WORK REQUIRED THIS AREA



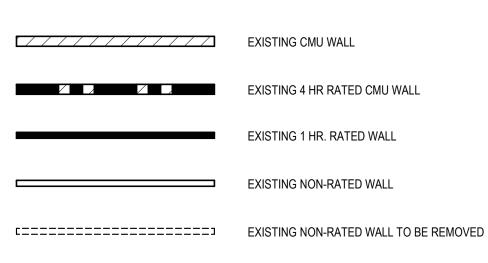




DESCRIPTION AS.27 EXISITNG ELEVATOR (DSA#04-108533) E.01 (E) BLEACHERS E.02 (E) ROOF ACCESS LADDER

N.01 REPLACEMENT AIR HANDLERS ON EXISTING PLATFORM ABOVE, SEE MECH DWGS

# WALL LEGEND



# FLOOR PLAN LEGEND

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MEZZANINE LEVEL FLOOR

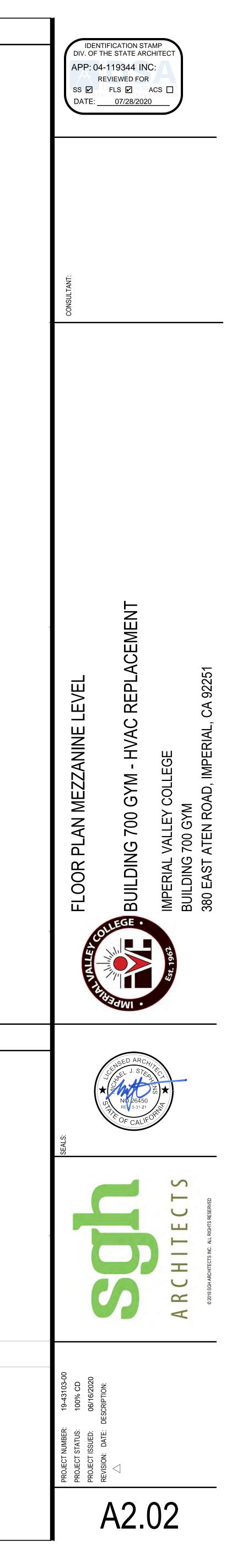
ROOF

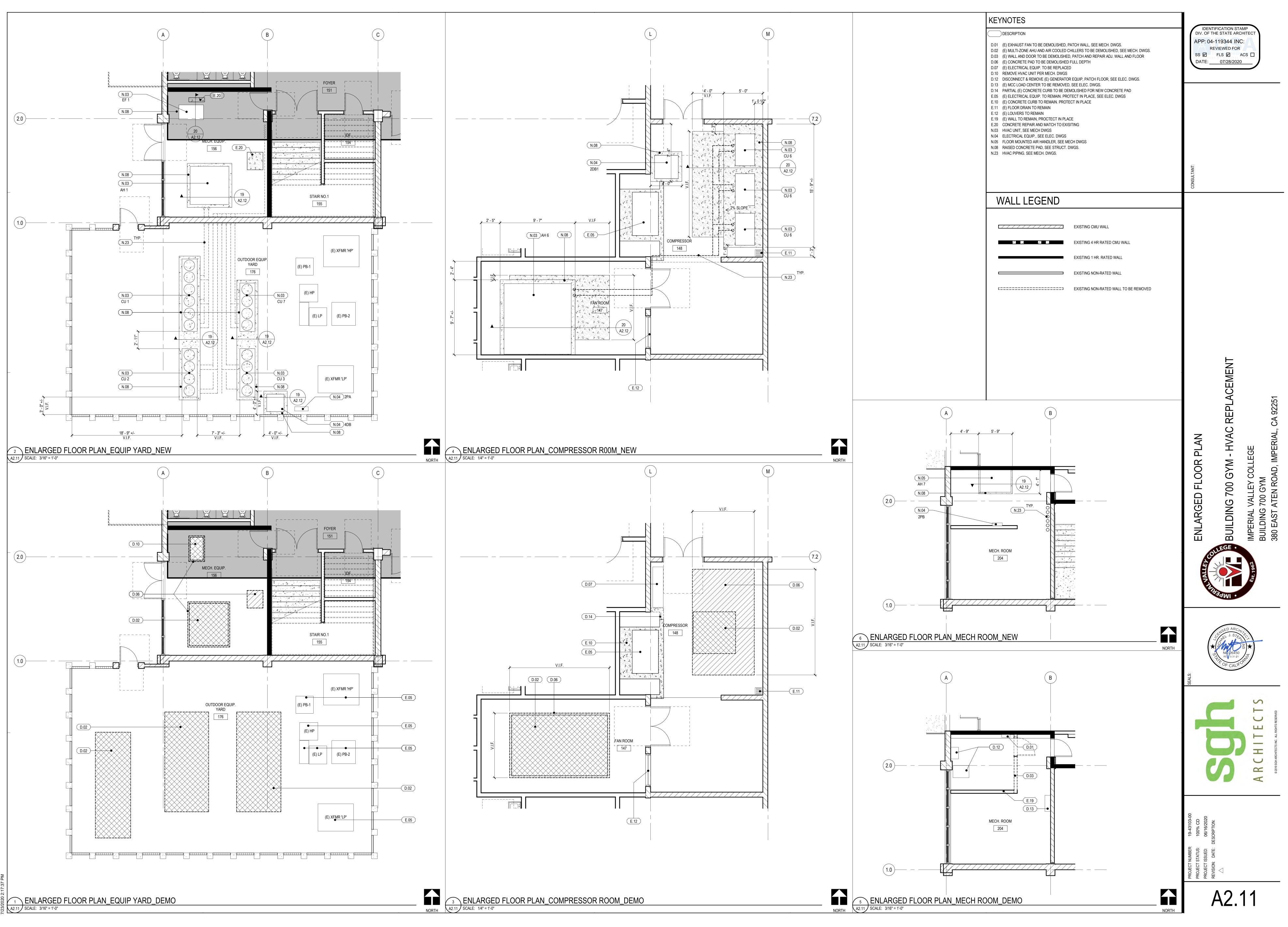
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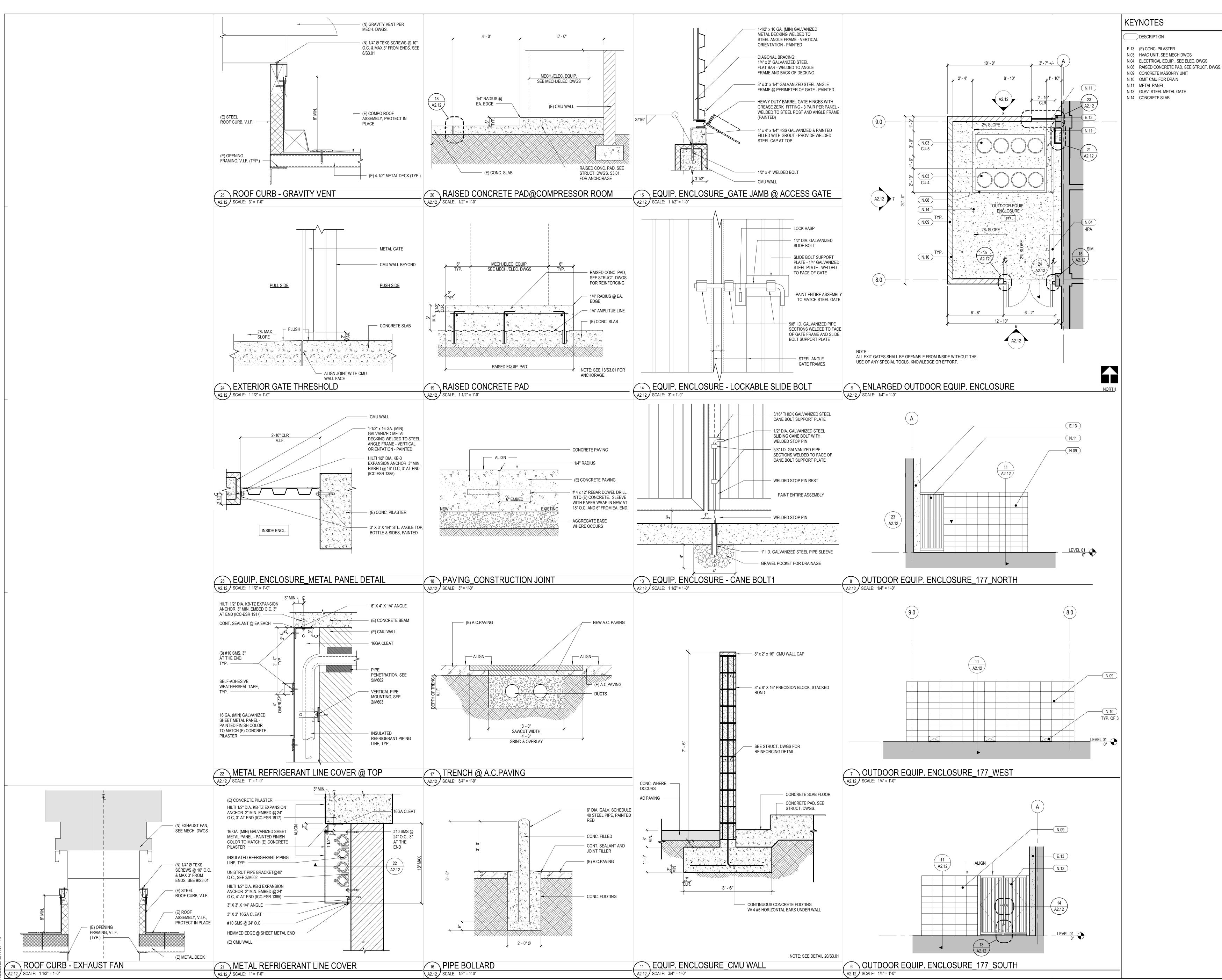
A.C. UNIT, SEE MECH. DRAWINGS.

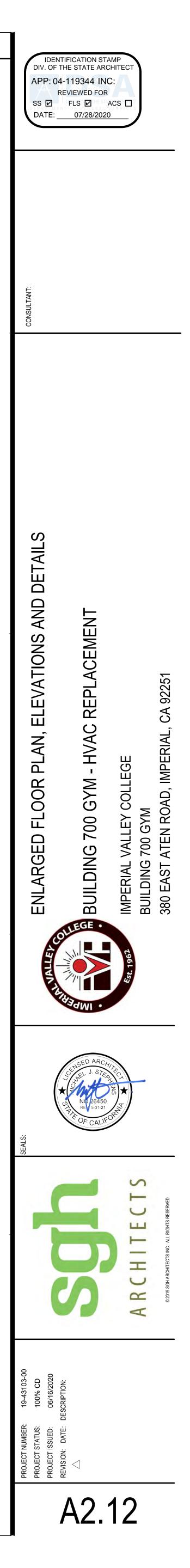
EXHAUST FAN/ GRAVITY VENT, SEE MECH. DRAWINGS.

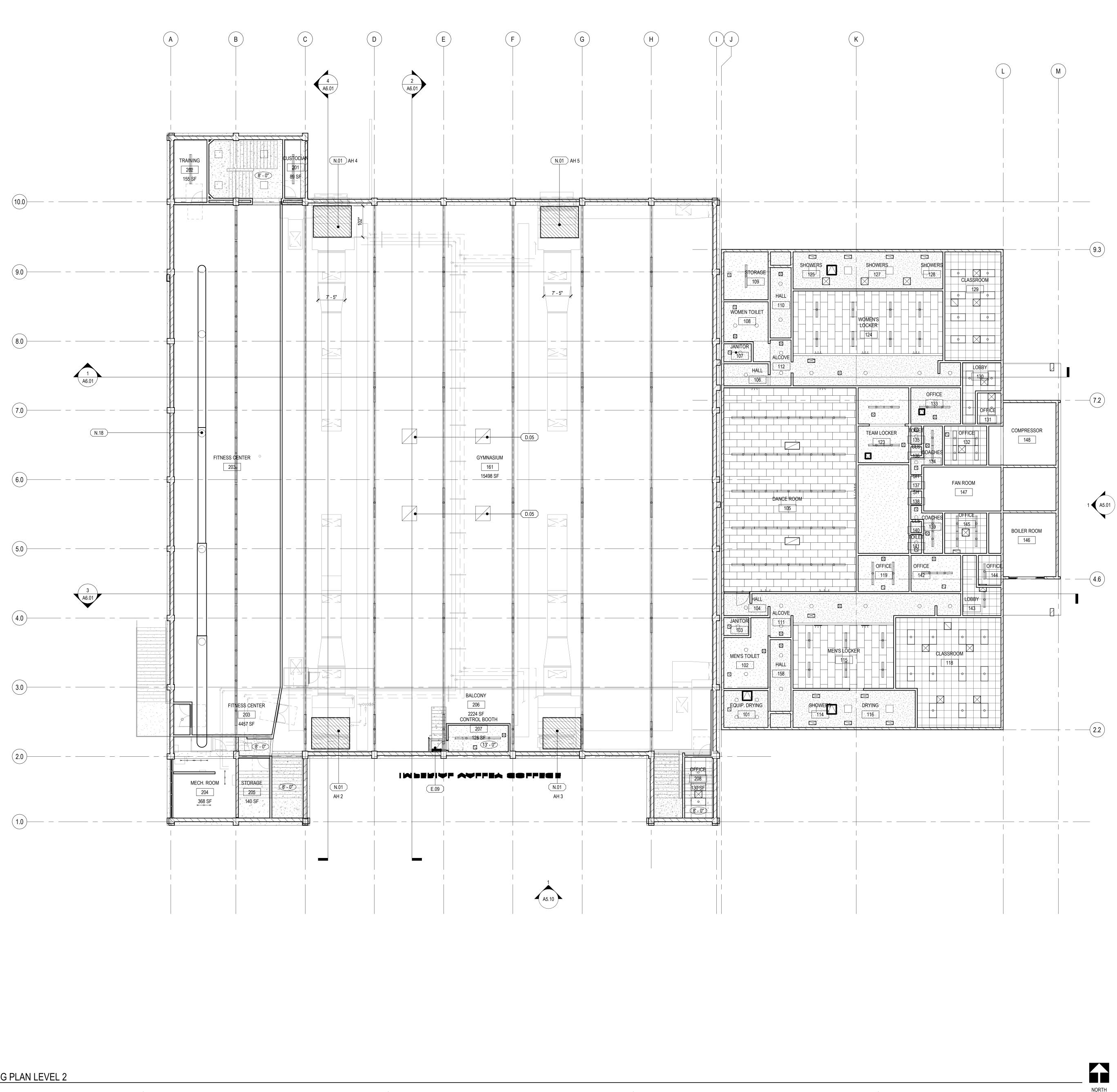






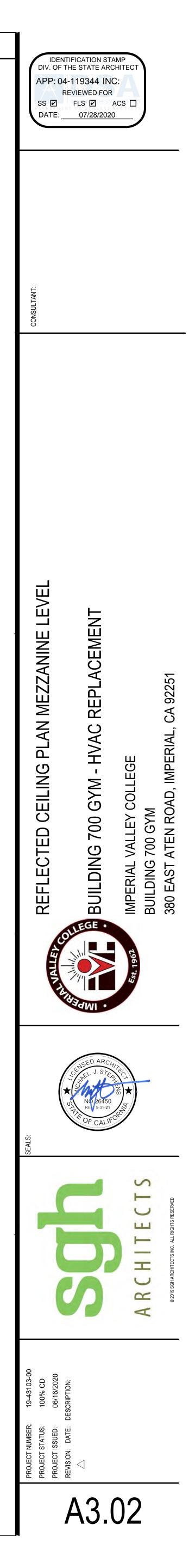


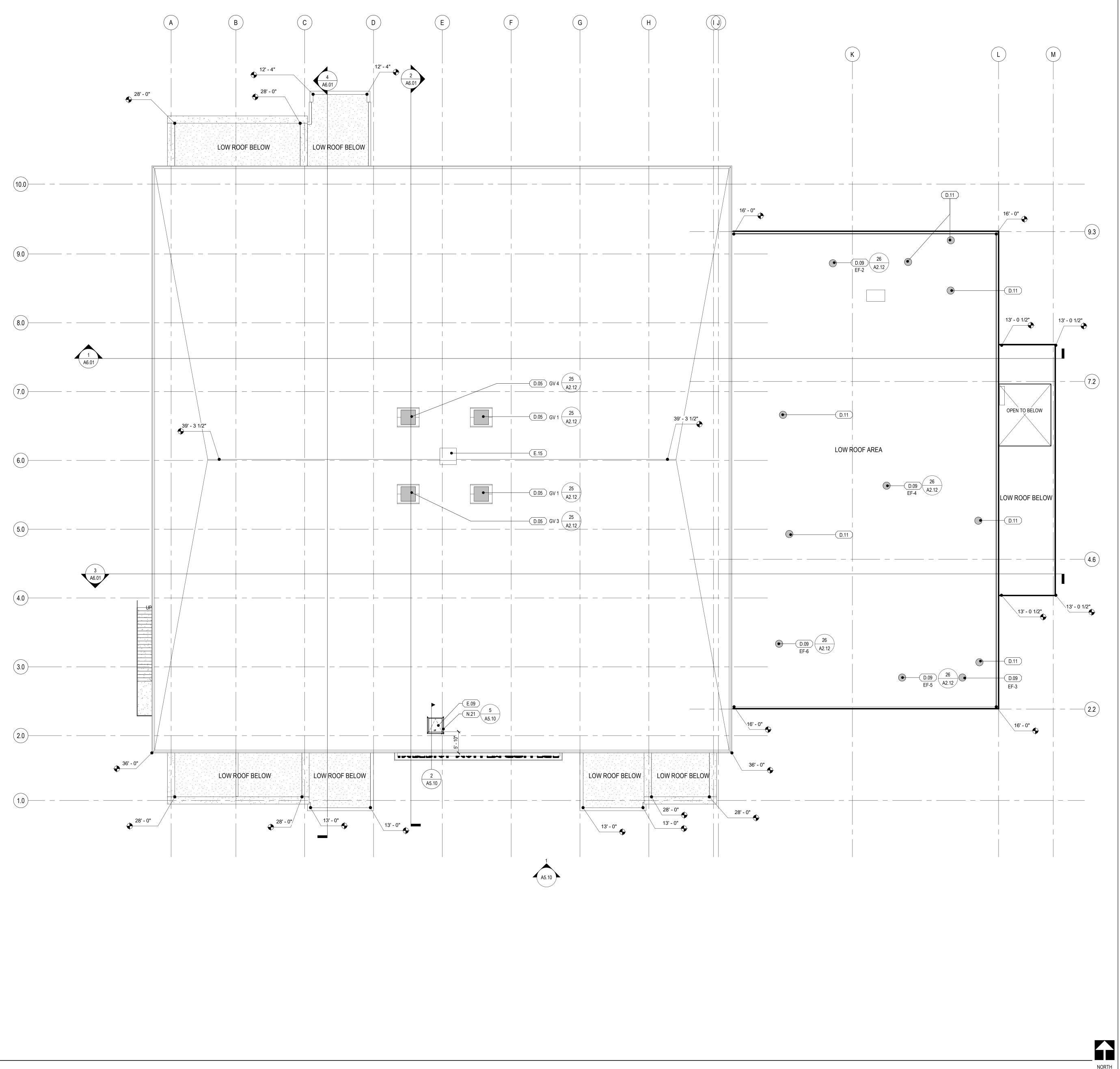




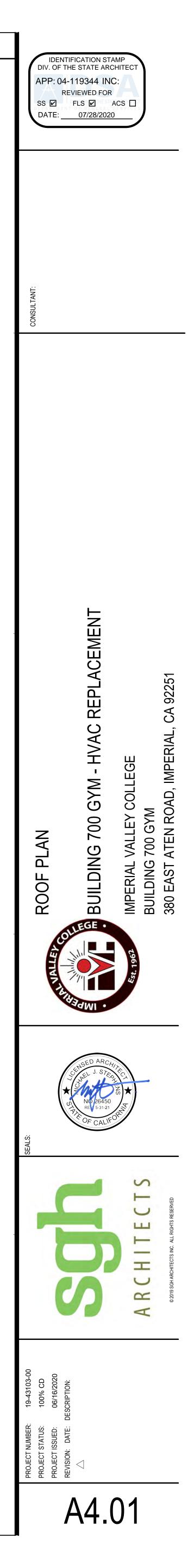
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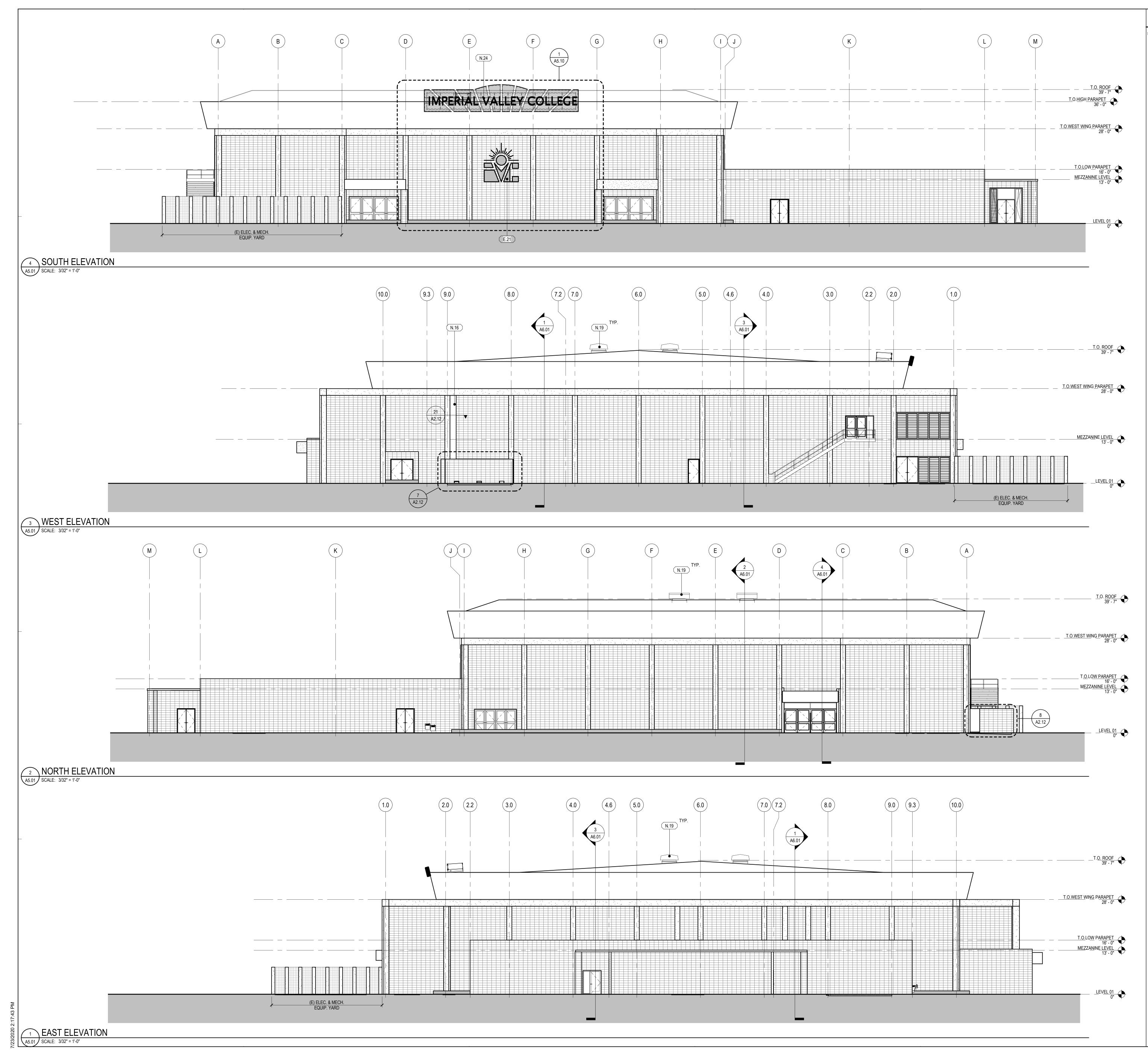
- D.05 (E) GRAVITY VENT TO BE REPLACED, PATCH/ REPAIR ROOF AT ACURB TO MATCH (E), SEE MÉCH. DWGS.
- N.01 REPLACEMENT AIR HANDLERS ON EXISTING PLATFORM ABOVE, SEE MECH DWGS N.18 HVAC DUCT/ REGISTERS, SEE MECH DWGS





- D.05 (E) GRAVITY VENT TO BE REPLACED, PATCH/ REPAIR ROOF AT ACURB TO MATCH (E), SEE
- MÉCH. DWGS.
  D.09 REMOVE/ REPLACE EXHAUST FAN PER MECH. DWGS, PATH & REPAIR ROOF AT CURB TO MATCH (E)
  D.11 REMOVE/ REPLACE GRAVITY FAN PER MECH. DWGS, PATH & REPAIR ROOF AT CURB TO
- MATCH (E)
- E.09 (E) ROOF HATCHE.15 (E) ANTENNA TOWER AND GUY WIRES, PROTECT IN PLACE
- N.21 ROOF HATCH SAFETY RAILING SYSTEM

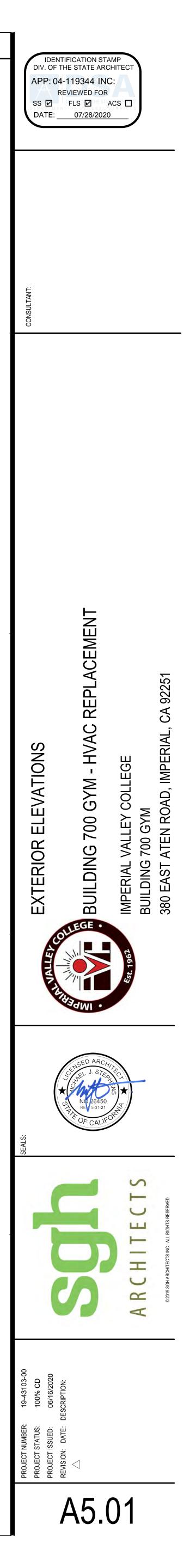


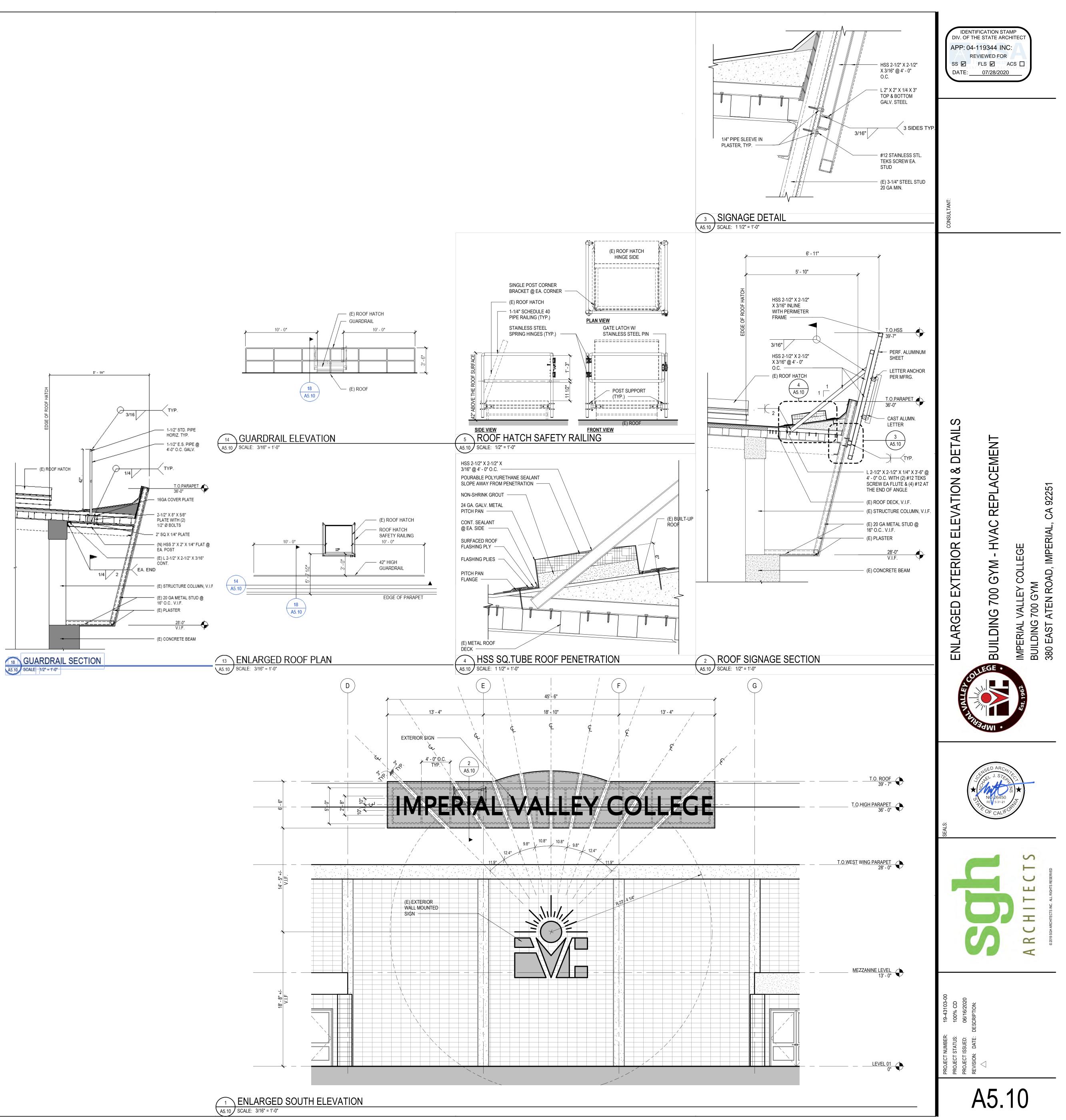


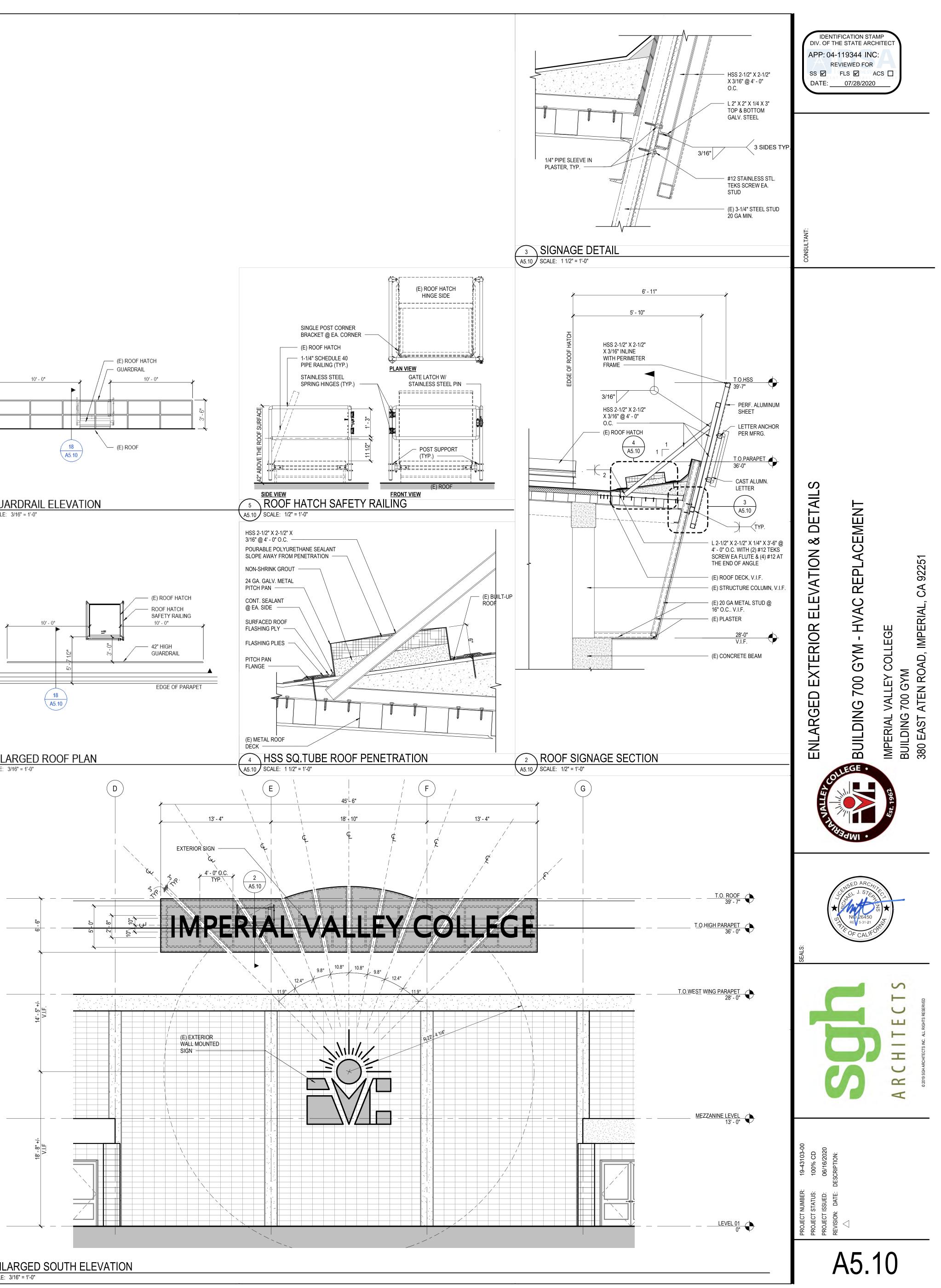
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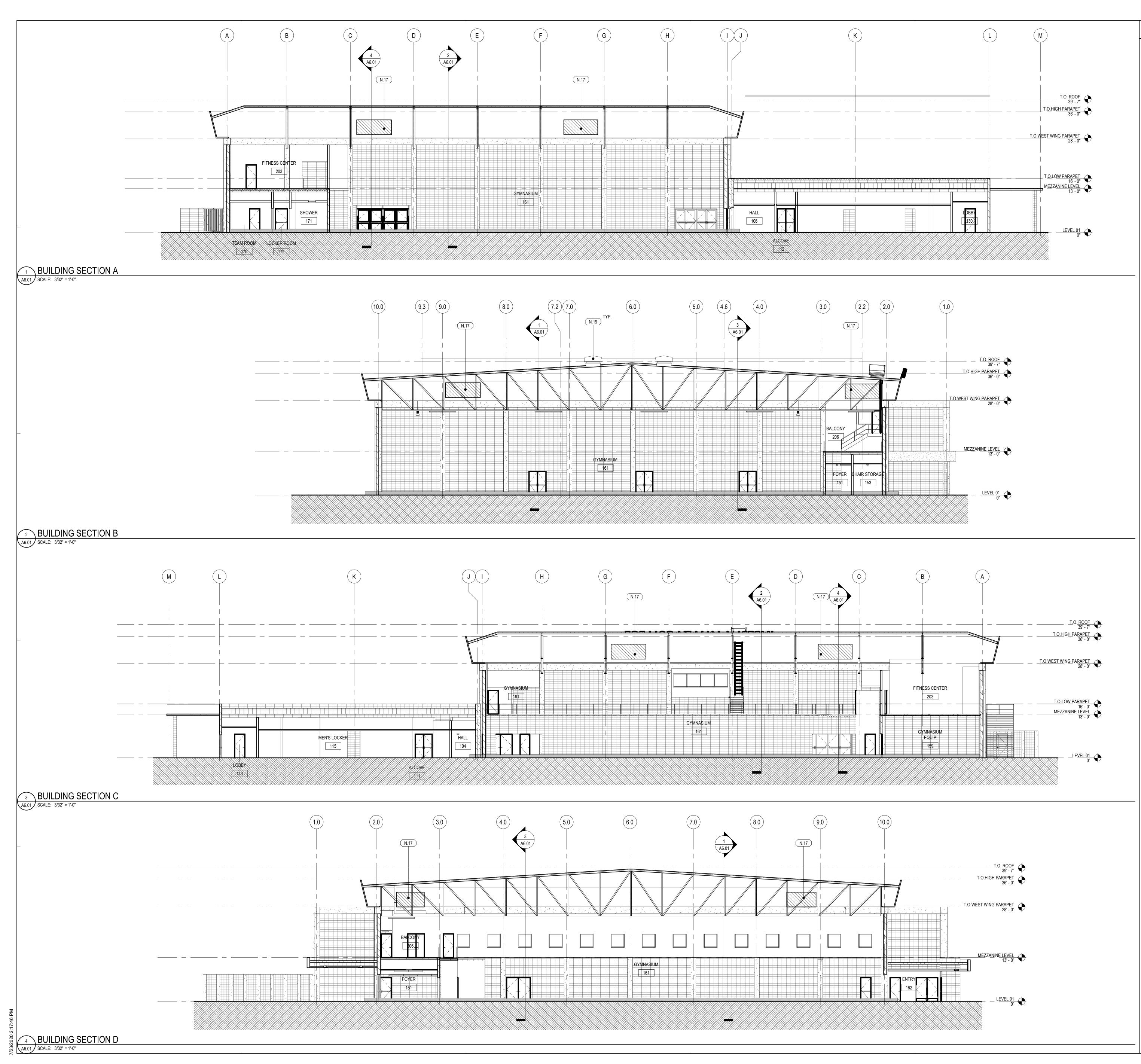
E.21 (E) EXTERIOR SIGN N.16 METAL REFRIGERANT LINE COVER

N.19 GRAVITY VENT, SEE MECH DWG N.24 EXTERIOR SIGN



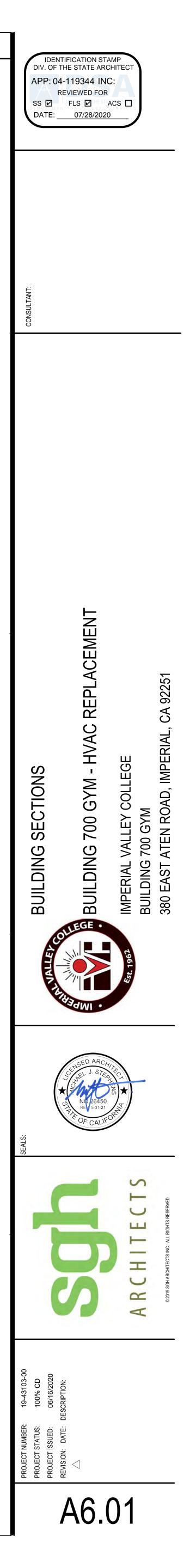






DESCRIPTION

N.17 AIR HANDLERS ATTACHED TO (E) MECH. PLATFORM, SEE MECH DWGSN.19 GRAVITY VENT, SEE MECH DWG



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¬. /	DESIGN BASIS APPLICABLE CODE:CA						
	1. DESIGN SEISM RISK CATEGO SEISMIC IMPO SITE CLASS : $S_s = 2.232g$ $S_1 = 0.795g$ $S_{DS} = 1.786g$ $S_{D1} = 0.742g$	IC CRITERIA (FOR († )RY : III )RTANCE FACTOR :	N) MECH <sup>'</sup> . UNÍT				
	ULTIMATE DES NOMINAL DESI WIND EXPOSU	CRITERIA: PER ASC IGN WIND SPEED: <u>1</u> GN WIND SPEED: <u>8</u> RE: C	105 mph				
	Kzt = 1.0 Kd = 0.85 G = 0.85 GCp = 1.4 AND GCp = VARIES GCpi = +/-0.18	ROM 0.85 TO 1.04 +1.0 FOR WALLS AI FROM -0-9 TO -3.2 ROM 1.40 TO 2.60		ND PARAPETS			
-	GEOTECHNICAL CRITE TABLE: 1806A.2 ALLOWABLE BEARING			M			
Д L	ALLOWABLE LATERAL E ATERAL SLINDING RES <u>CONCRETE</u>	BEARING = 100 PCF					
	CONCRETE SHALL BE S		CED IN ACCORI	DANCE WITH ACI (	318.		
	CONCRETE USE	STRENGTH AT 28 DAYS U.O.N.	W/C RATIO	MAX. AGGREGATE SIZE	WEIGHT	SHRINKAGE	
(	(N) CONCRETE PADS	3000 PSI	0.45 MAX.	3/4" TO 1" (LS)	145pcf	.045%	
C. S	STRENGTH: COMPRES	SIVE STRENGTH IN	PSI WHEN TES	TED IN ACCORDA	NCE WITH /	ASTM C39	1
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( (DS)	FLY ASH: ASTM C 618, ( CEMENTITIOUS MATER A PROJECTS FLY ASH: ASS F. RECOMMENDED	IAL IS 20%. MAXIMU ASTM C 618, ASTM	JM RECOMMEN C 311 CLASS N	DATION IS 25%. OR F AND DSA IF	R 19-3		S OI
- \ F	ADMIXTURES: MIX SHA TYPES OF ADMIXTURE: WORKABILITY. 1. ASTI REQUIREMENTS OF AS ADMIXTURES SHOULD	S ARE ALLOWED AS M C494, TYPES A, C, TM C 1017. 2. THE II	S PLASTICIZERS , E, G. HIGH RAI NITIAL SLUMP (	S AND/ OR SET AG	CCELERATC	NRS TO IMPROV LL ALSO MEET	
H. S	SHRINKAGE - CONTRAG		CONCRETE MIX	( HISTORY DATA (	or provide	E TESTING REP	ORT.
. ٢	2. CONC. FORMEI NO. 6 AND NO. 5 AND	R FOR CAST-IN-PLA GAINST AND PERMA D BELOW GRADE OF GREATER SMALLER POSED TO WEATHE	ANENTLY EXPO R EXPOSED TO	SED TO EARTH WEATHER: 2" 1 1/2"			
J. F	SLABS, W	ALLS, AND JOISTS: I ID COL: PRIMARY R	NO. 11 AND SM	ALLER	1"	2"	
<b>r</b>	<ol> <li>ALL REINFORC SECURED IN PO</li> <li>CHAMFER ALL</li> <li>CONSTRUCTIO</li> <li>CONCRETE SH CONSTRUCTIO</li> <li>USE VIBRATOR</li> </ol>	S TO CONSOLIDATE	PLACING CONC CRETE TO PRE <sup>V</sup> LL COMPLY TO A CONTINUOUS E CONCRETE. E	RETE. VENT DAMAGE. ACI 117. OPERATION BET	WEEN PREI	DETERMINED	
	MANNER. FOO 7. PATCHING OF ( THE CONCRET	ALL BE CONTINUOL FINGS ARE EXEMPT CONCRETE: ALL INS E SHALL BE FILLED	ED FROM THIS SERT HOLES AN	REQUIREMENT.	ECTIONS C	ON THE SURFAC	ES C
_	REINFORCING STEEL						
	REINFORCING STEEL S			- WITH ACI 315 AN	ם ACI 318.		
	REIN DEFORMED BARS/TIE	S/SPIRALS	· · · · · · · · · · · · · · · · · · ·	TYPE DE 60, TYP. (GRADE	<b>C</b> ,		
	WELDED REINF. TIE AND SPIRAL WIRE WELDED WIRE REINF.	REINF.	ASTM A706, GF ASTM A1064, G ASTM A1064, G		DINUTED		
	REINF.			TYPE			
	FOUNDATIONS (INCLUDI	NG SLAB-ON-GRADE)	ASTM A615, GF	RADE 60			
S	* THE ACTUAL YIELD S 18,000 PSI; AND THE STRENGTH IS NOT LES DO NOT FIELD BEND OF	RATIO OF THE ACT S THAN 1.25.	UAL TENSILE S	TRENGTH TO THE	E ACTUAL YI	ELD	

		<b>DO0</b>	
•	STEEL		<b>F-INSTALLED CONCRET</b>
A.	STRUCTURAL STEEL TO BE SUPPLIED DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.	[	ANCHORAGE AND SUPPORT DETAILED ON THE DRAWING EQUIPMENT SUPPORTS AND
В.	<ul> <li>U.O.N. STEEL SHALL BE AS FOLLOWS:</li> <li>1. WIDE FLANGE SHAPES: ASTM A992</li> <li>2. HOLLOW STRUCTURAL SECTIONS: ASTM A500 GR. B (Fy = 42 KSI, ROUND; 46 KSI RECT)</li> <li>3. PIPES: ASTM A53, GR. B</li> <li>4. OTHER SHAPES AND PLATES: ASTM A36, ASTM A572 GR. 50 AS NOTED.</li> <li>5. BOLTS: ASTM A307</li> <li>6. HIGH STRENGTH BOLTS: ASTM F3125 GR. A325, U.O.N.</li> <li>7. THREADED RODS: ASTM A36, U.O.N.</li> <li>8. ANCHOR RODS: F1554 GR. 36 TYP., U.O.N.</li> <li>9. WELDING ELECTRODES: E-70xx U.O.N. (E-90xx @ GRADE 60 REINF.)</li> <li>10. WELDED STUDS: FLUX FILLED HEADED STUDS CONFORMING TO ASTM A108 BY NELSON OR EQUAL.</li> </ul>	3.	REVIEWS/OBSERVATIONS. T EXPANSION ANCHORS SHAL SIZE TYPE EMBEDMENT EDGE DISTANCE SPACING TESTING REQUIREMENTS:
c.	WELDING TO CONFORM TO AWS AND TO BE PERFORMED BY CERTIFIED WELDERS.		
D.	BUTT WELDS ARE TO BE COMPLETE PENETRATION U.O.N. ALL FILLET WELDS SHOWN ARE MINIMUM REQUIRED BY STRESS. INCREASE WELDS TO A.I.S.C. MINIMUM SIZES BASED ON THICKNESS OF MATERIAL JOINED U.O.N.		
E.	STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSION POINTS OR GRID LINES, U.O.N.		
F.	STEEL NOT RECEIVING FIRE PROOFING SHALL BE SHOP PRIMED.	N	IOTES:
G.	ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP ZINC GALVANIZED U.O.N.	1	. ANCHOR DIAMETER REF
Н.	NON SHRINK GROUT: 7500 psi COMPRESSIVE STRENGTH, NON METALLIC CONFORMING TO ASTM C1107. MASTERFLOW 928 OR EQUAL.	2	2. APPLY PROOF TEST LOA THREADED COUPLER TO TEST LOAD.
I.	INTUMESCENT PAINT TO MEET REQUIREMENTS OF ASTM E119.	3	. REACTION LOADS FROM ANCHOR IS NOT RESTRA
		4	. TEST EQUIPMENT (INCLU IN ACCORDANCE WITH S

<u>CONCRETE MASONRY</u>

- A. CONCRETE MASONRY TO BE SUPPLIED PER 2019 CBC SECTION 2105A AND PLACED PER SECTION 2104A. f 'm = 2000 psi
- B. ASSEMBLY STRENGTH fm = 2000 psi AT 28 DAYS.
- C. UNITS: MEDIUM WEIGHT 2 CELL BLOCKS CONFORMING TO ASTM C90. SHRINKAGE OF BLOCKS SHALL NOT EXCEED .065% WHEN TESTED PER ASTM C426.
- D. MORTAR: ASTM C270, TYPE M. f'c = 1800 psi
- E. GROUT: ASTM C476. COMPRESSIVE STRENGTH AS REQUIRED TO ATTAIN SPECIFIED ASSEMBLY STRENGTH. ALL CELLS SHALL BE FULLY GROUTED. f 'c = 2000 psi
- F. USE LOW LIFT CONSTRUCTION WITH MAXIMUM GROUT POUR HEIGHT OF 4'. HIGH LIFT GROUTING IS ACCEPTABLE IF APPROVED IN WRITING BY THE ENGINEER.
- G. ALL MASONRY TO BE REINFORCED UNLESS SPECIFICALLY MARKED 'NOT REINFORCED'.
- H. SEE PLAN FOR LOCATIONS OF VERTICAL CONTROL JOINTS. HORIZONTAL BOND BEAM AND LINTEL REINFORCING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS.
- I. ALL CELLS, SHALL BE GROUTED SOLID. REINFORCING STEEL SHALL BE SECURED IN PLACE BEFORE GROUTING STARTS.

<u>CONTRACTOR SUBMITTALS</u>

SHOP DRAWINGS FOR REVIEW.

THE FOLLOWING IS A LISTING OF REQUIRED ITEMS TO BE SUBMITTED TO STRUCTURAL ENGINEER OF RECORD (TO BE PROVIDED IF MARKED):

SUBMITTAL	CERTIFICATE	SHOP DRAWINGS (2)	CALCS W/ ENG. STAMP	DEFERRED SUBMITTAL (1)
CONCRETE REINF. STEEL	×	X		
CONCRETE MIX DESIGN		X		
CONCRETE MASONRY UNITS	×	X		
GROUT MIX DESIGN	×			
REINFORCING STEEL	×	X		
STRUCTURAL STEEL	X	×		

(1) DEFERRED SUBMITTALS SHALL FIRST BE SUBMITTED TO THE PROJECT ARCHITECT AND/OR ENGINEER FOR REVIEW AND COORDINATION, THEN SUBMITTED TO THE

COMPLIANCE WITH THE INFORMATION PROVIDED WITHIN THE CONTRACT DOCUMENTS.

APPROPRIATE JURISDICTION FOR APPROVAL. THIS SUBMITTAL SHALL INCLUDE HOHBACH-LEWIN'S SHOP DRAWING STAMP INDICATING THE STRUCTURAL REVIEW HAS BEEN COMPLETED AND THAT THE PLANS AND CALCULATIONS FOR THE DEFERRED APPROVAL ITEMS ARE IN GENERAL

(2) ELECTRONIC SHOP DRAWINGS ARE TO BE SUBMITTED TO HOHBACH-LEWIN FOR REVIEW. AT HOHBACH-LEWIN'S REQUEST, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HARD COPIES OF

(3) PROVIDE CURRENT UNEXPIRED ICC ESR OR IAPMO ER REPORTS FOR ALL PROPRIETARY PRODUCTS USED, INCLUDING ALL SIMPSON STRONG-TIE, INC. AND HILTI, INC. PRODUCTS.

### D CONCRETE ANCHORS

AND SUPPORTS OF ALL EQUIPMENT TO BE INSTALLED AS A PART OF THIS POJECT SHALL BE THE DRAWINGS EXEMPT BY 2019 CBC SECTION 1910A.5. UPPORTS AND ANCHORAGE SHALL BE APPROVED BY SEOR AND DSA AS A PART OF FIELD ERVATIONS. THE IOR SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED. NCHORS SHALL BE HILTI KB-TZ (ICC NO. ESR-1917.) SEE DETAILS ON THIS SET OF PLANS FOR

NT		
FANCE		

TEST VALUES HARDRO

)(	CK OR LIGH	<u>FWEIGHT CC</u>	NCRETE
	ANCHOR	WEDGE	
	Diameter (in.)	Torque (Ft. lbs.)	
	3/8	25	
	1/2	40	
	5/8	60	
	3/4	150	

DIAMETER REFERS TO THE THREAD SIZE.

ONE-HALF (1/2) TURN OF THE NUT.

SUBJECT TO LIMITATIONS THERE IN.

VALUES.

S0.01

S2.01

S2.02

S2.03

S3.01

COOF TEST LOADS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A ) COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH TO APPLY THE

LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE S NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).

IPMENT (INCLUDING TORQUE WRENCHES) IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES. 5. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

a. <u>HYDRAULIC RAM METHOD</u>: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. b. <u>TORQUE WRENCH METHOD</u>: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS:

6. IF THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE IS LESS THAN THE TEST TORQUE NOTED IN THE TABLE, THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE SHOULD BE USED IN LIEU OF THE TABULATED

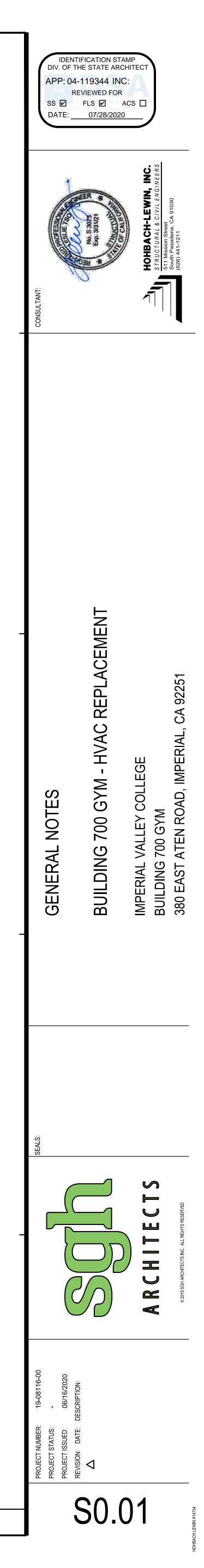
7. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PIN IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF 1" BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN. 8. ANCHORAGE TO CONCRETE SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS 1613A AND 1908A OR 1909A

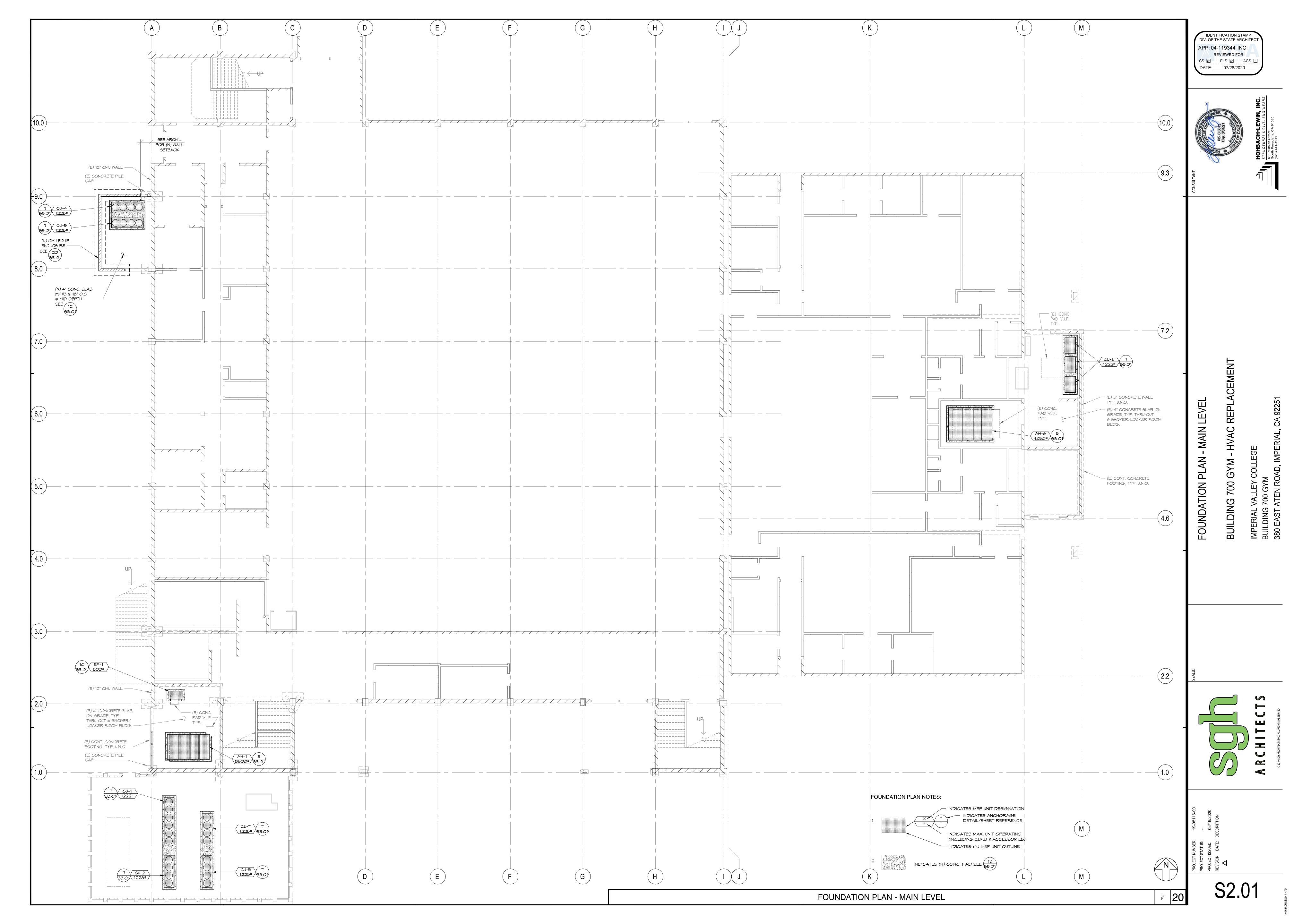
# STRUCTURAL SHEET INDEX

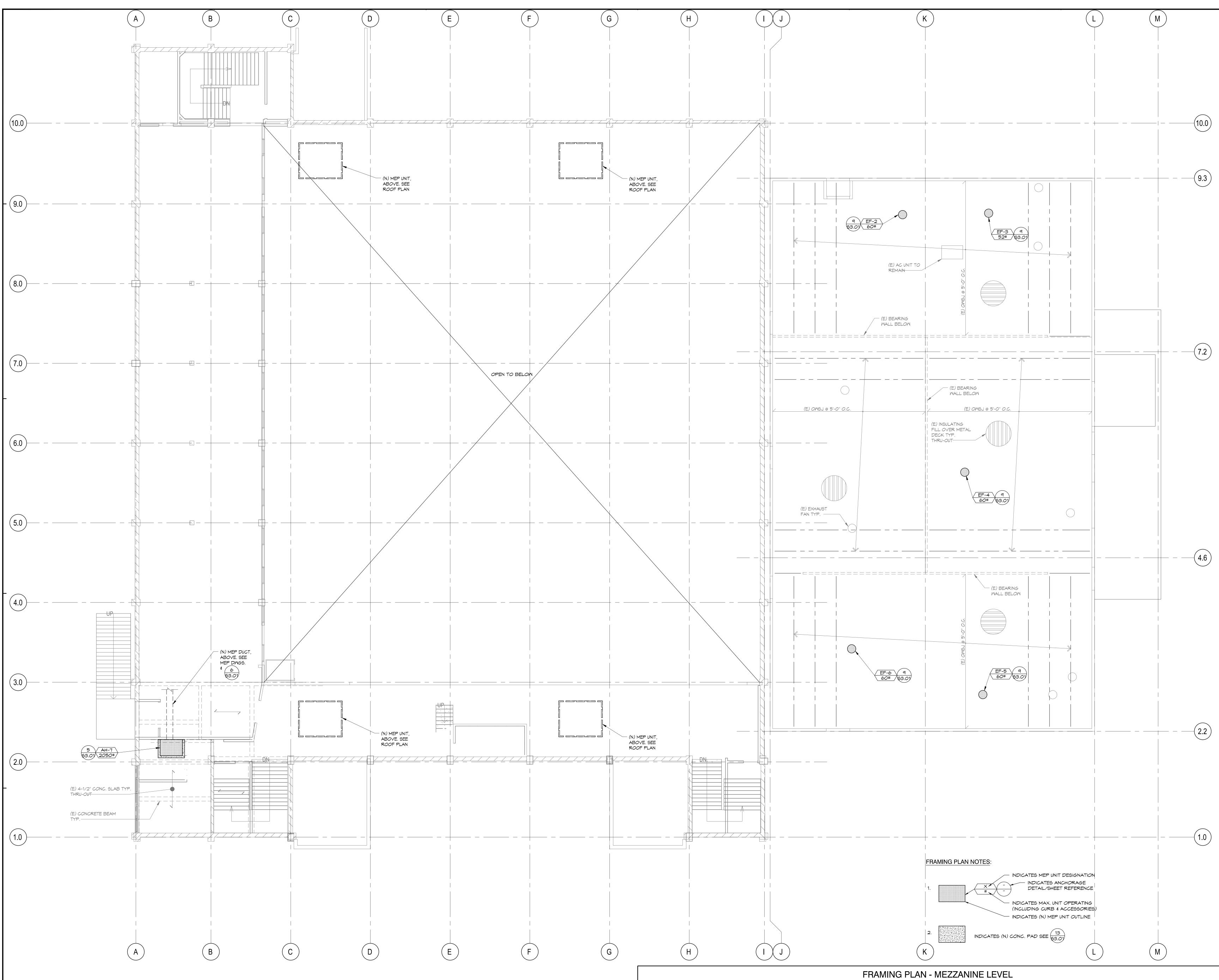
GENERAL NOTES FOUNDATION PLAN - MAIN LEVEL FRAMING PLAN - MEZZANINE LEVEL FRAMING PLAN - ROOF LEVEL

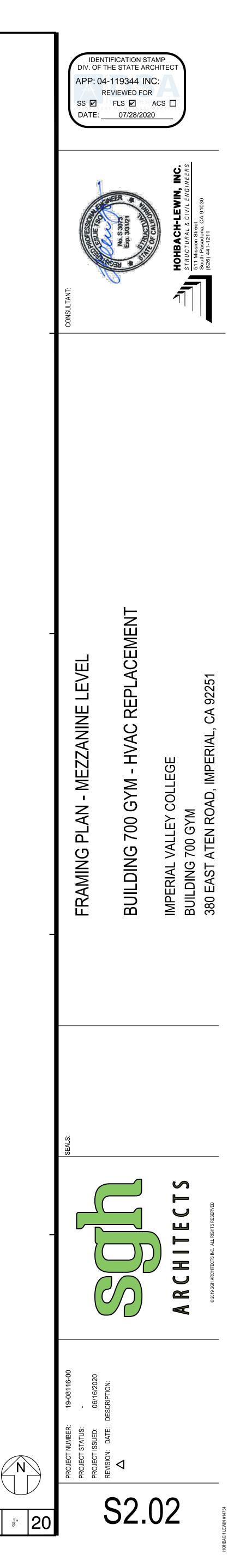
TOTAL NUMBER OF SHEETS = 5

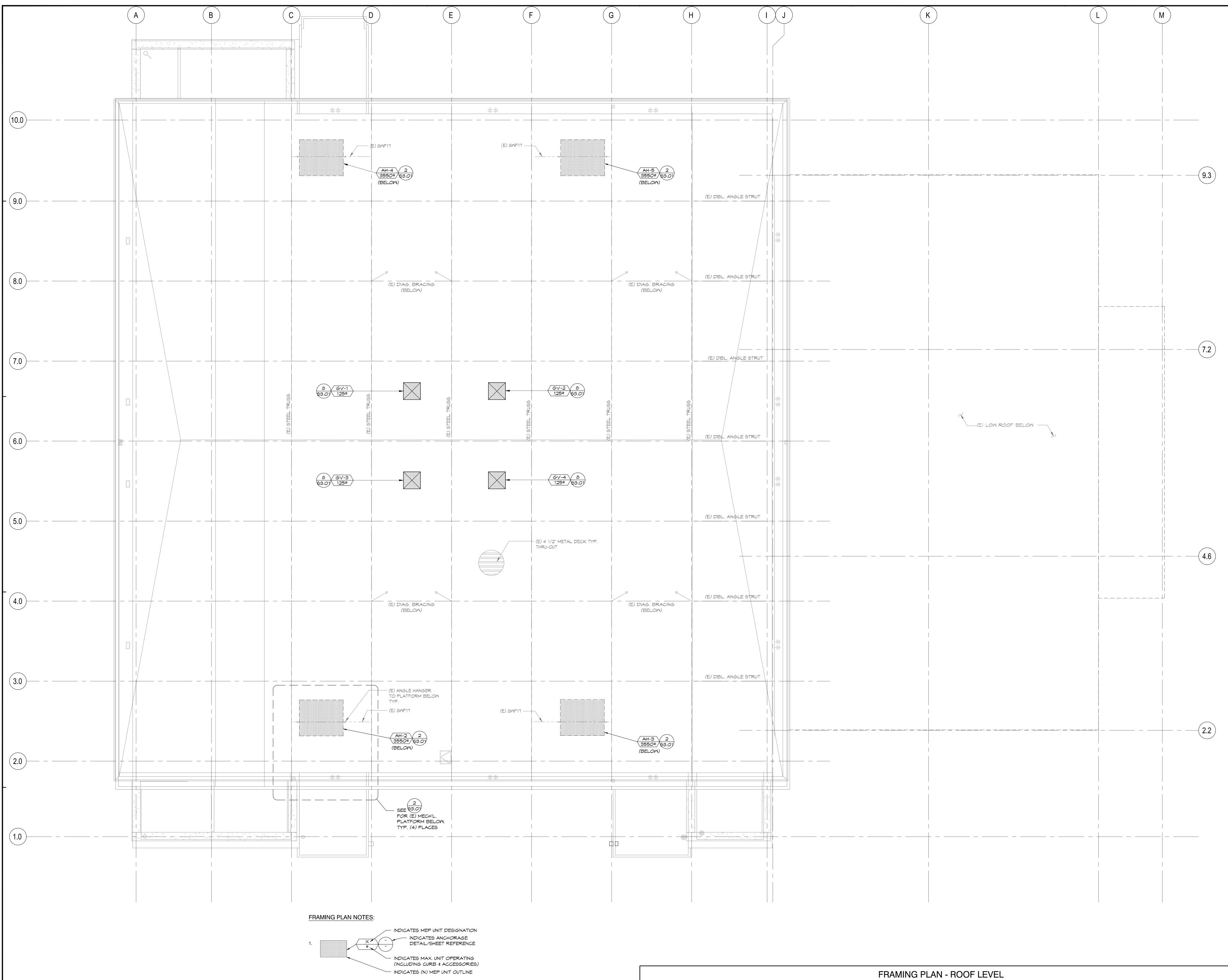
DETAILS

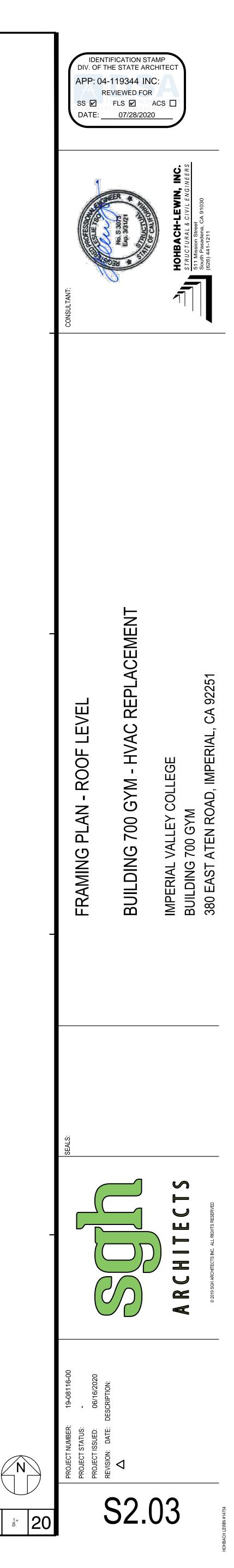


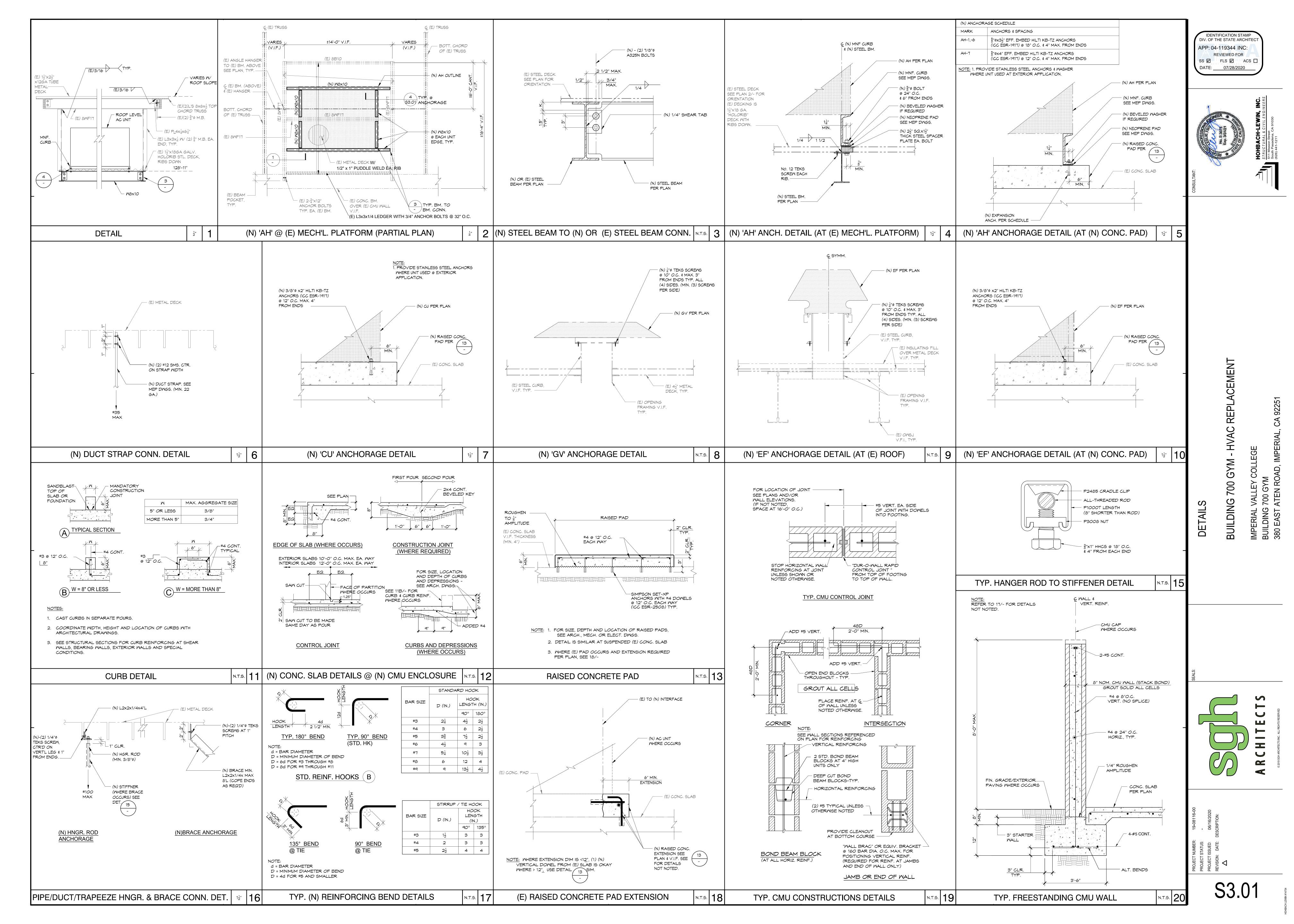


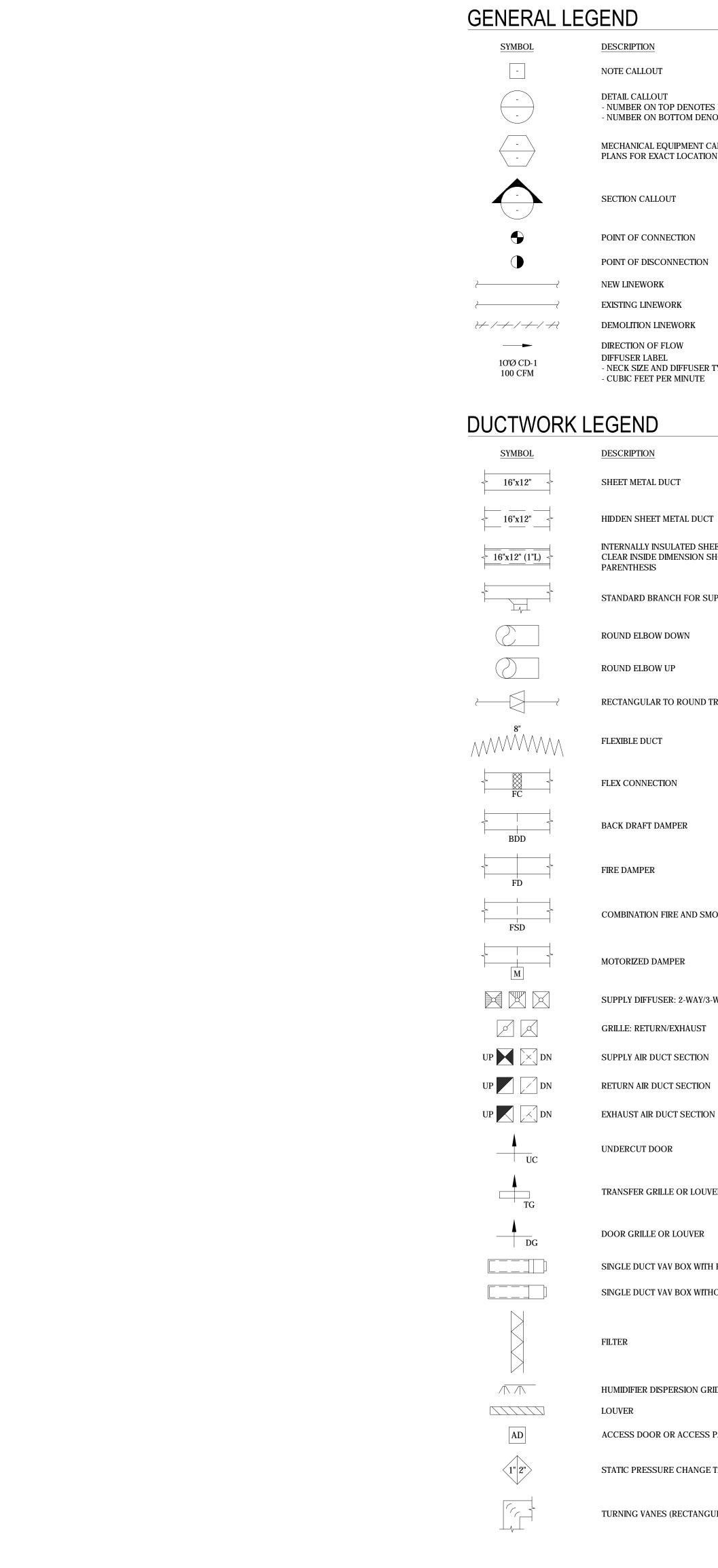












DESCRIPTION

NOTE CALLOUT

DETAIL CALLOUT - NUMBER ON TOP DENOTES DETAIL NUMBER - NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN
MECHANICAL EQUIPMENT CALLOUT, SEE MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS
SECTION CALLOUT
POINT OF CONNECTION
POINT OF DISCONNECTION
NEW LINEWORK
EXISTING LINEWORK
DEMOLITION LINEWORK
DIRECTION OF FLOW
DIFFUSER LABEL
- NECK SIZE AND DIFFUSER TYPE - CUBIC FEET PER MINUTE
- CODIC FEEL FER MINUTE

DESCRIPTION

HIDDEN SHEET METAL DUCT

INTERNALLY INSULATED SHEET METAL DUCT CLEAR INSIDE DIMENSION SHOWN, LINER THICKNESS IN PARENTHESIS

STANDARD BRANCH FOR SUPPLY AND RETURN

ROUND ELBOW DOWN

ROUND ELBOW UP

**RECTANGULAR TO ROUND TRANSITION** 

FLEX CONNECTION

BACK DRAFT DAMPER

COMBINATION FIRE AND SMOKE DAMPER

MOTORIZED DAMPER

SUPPLY DIFFUSER: 2-WAY/3-WAY/4-WAY

GRILLE: RETURN/EXHAUST

SUPPLY AIR DUCT SECTION

RETURN AIR DUCT SECTION

UNDERCUT DOOR

TRANSFER GRILLE OR LOUVER

DOOR GRILLE OR LOUVER

SINGLE DUCT VAV BOX WITH REHEAT COIL SINGLE DUCT VAV BOX WITHOUT REHEAT COIL

HUMIDIFIER DISPERSION GRID ACCESS DOOR OR ACCESS PANEL (AP) IN DUCTWORK

STATIC PRESSURE CHANGE TAG

TURNING VANES (RECTANGULAR)

SHEET

M001

M002

MD201

M201

M202

M203

M301

M302

M501

M502

M503

M504

M505

M506

M507

M508

M602

M603

M604

M605

M701

M702

M703

MD202

### DESCRIPTION GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX SCHEDULES **DEMOLITION PLAN - LEVEL-1** DEMOLITION PLAN - MEZZANINE

ENLARGED PLAN - MAIN LOCKER ROOMS ENLARGED PLAN - TEAM LOCKER ROOMS / MECHANICAL EQUIPMENT

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT	HP	HORSEPOWER
AFF	ABOVE FINISHED FLOOR	HT	HEIGHT
AHU	AIR HANDLING UNIT	HZ	HERTZ
4L	ALUMINUM	D	INSIDE DIAMETER
AP	ACCESS PANEL	IN	INCHES
APD	AIRSIDE PRESSURE DROP	KW	KILOWATTS
BD	BLOWDOWN	LAT	LEAVING AIR TEMPERATURE
BDD	BACK DRAFT DAMPER	LBS	POUNDS
BFC	BELOW FINISHED CEILING	LF	LINEAR FEET
BFP	BACK FLOW PREVENTER	LWT	LEAVING WATER TEMPERATURE
BHP	BRAKE HORSEPOWER	MAX	MAXIMUM
BLDG	BUILDING	MAX MBH	THOUSAND BTU PER HOUR
BOB	BOTTOM OF BEAM	MC	MECHANICAL CONTRACTOR
BOP	BOTTOM OF PIPE	MCA	MINIMUM CIRCUIT AMPS
BTU	BRITISH THERMAL UNIT	MH	MANHOLE
CFM	CUBIC FEET PER MINUTE	MIN	MINIMUM
CHWR	CHILLED WATER RETURN	MOCP	MAXIMUM OVERLOAD CIRCUIT PROTECTION
CHWS	CHILLED WATER SUPPLY	NFA	NET FREE AREA
CI	CAST IRON	NIC	NOT IN CONTRACT
CL	CENTER LINE	NPSHR	NET POSITIVE SUCTION HEAD REQUIRED
CP	CONDENSATE PUMP	OAT	OUTSIDE AIR TEMPERATURE
СТ	COOLING TOWER	OBD	OPPOSED BLADE DAMPER
CU	CONDENSING UNIT	OC	ON CENTER
CV	CONSTANT VOLUME BOX	OD	OUTSIDE DIAMETER
CWR	CONDENSER WATER RETURN	OA	OUTSIDE AIR
CWS	CONDENSER WATER SUPPLY	PD	PRESSURE DROP
CWFR	CONDENSER WATER SUTTER	PERF	PERFORATED
CWFS	CONDENSER WATER FILTER REFORM	PH	PHASE
DB	DRY BULB	POD	POINT OF DISCONNECT
DEG	DEGREES	PR	PRESSURE RELIEF
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DL	DOOR LOUVER	PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
DN	DOWN	PSIG	POUNDS PER SQUARE INCH GAUGE
DX	DIRECT EXPANSION	PVC	POLYVINYL CHLORIDE
(E)	EXISTING	RA	RETURN AIR
ΞA	EACH	RF	RETURN FAN
EAT	ENTERING AIR TEMPERATURE	RLA	RATED LOAD AMPS
EC	ELECTRICAL CONTRACTOR	RPM	REVOLUTIONS PER MINUTE
EFF	EFFICIENCY	SA	SUPPLY AIR
EL	ELEVATION	SF	SUPPLY FAN
ESP	EXTERNAL STATIC PRESSURE	SPEC	SPECIFICATION
EWT	ENTERING WATER TEMPERATURE	SS	STAINLESS STEEL
F	DEGREES FAHRENHEIT	STD	STANDARD
г FC	FLEX CONNECTION	JID	
FD		ጥላ ጉ	TDANSEED AD DUCT
	FIRE DAMPER	TAD	TRANSFER AIR DUCT
FG	FILTER GRILLE	TDH	TOTAL DYNAMIC HEAD
FLA	FULL LOAD AMPS	TEFC	TOTALLY ENCLOSED FAN COOLED
FLR	FLOOR	TSP	TOTAL STATIC PRESSURE
FOB	FLAT ON BOTTOM	TYP	TYPICAL
FOT	FLAT ON TOP	UC	UNDERCUT
FPI	FINS PER INCH	ТҮР	TYPICAL
FPM	FEET PER MINUTE	V	VOLTS
FSD	FIRE SMOKE DAMPER	VAV	VARIABLE AIR VOLUME
FT	FEET OR FOOT	VD	VOLUME DAMPER
GA	GAUGE	VFD	VARIABLE FREQUENCY DRIVE
GALV	GALVANIZED	VTR	VENT THRU ROOF
GC	GENERAL CONTRACTOR	W/	WITH
GPH	GALLONS PER HOUR	W/O	WITHOUT
GPM	GALLONS PER MINUTE	WB	WET BULB
HB	HOSE BIBB	WB WC	
			WATER COLUMN
HD HIMD	HEAD	WG	WATER GAUGE
HHWR HHWS HP	HEATING HOT WATER RETURN HEATING HOT WATER SUPPLY HEAT PUMP	WPD WT	WATER PRESSURE DROP WEIGHT

# DSA NOTES

ALL MECHANICAL 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 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

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 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.

THE ANCHORAGE OF ALL MECHANICAL 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.

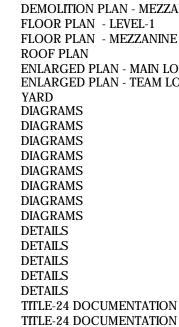
2. PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTE: PIPING AND DUCTWORK DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 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 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.

DISTRIBUTION SYSTEMS (E):

3. AIR FILTERS SHALL BE STATE FIRE MARSHAL APPROVED AND LISTED TYPE. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES SHALL BE CLASS 2 OR BETTER (AS SHOWN IN THE STATE FIRE MARSHAL LISTING). AIR FILTERS SHALL BE ACCESSIBLE FOR CLEANING OR REPLACEMENT PER CMC 304.0.

# ABBREVIATIONS



TITLE-24 DOCUMENTATION

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

### 1. MEP COMPONENT ANCHORAGE NOTE:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.

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.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL

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

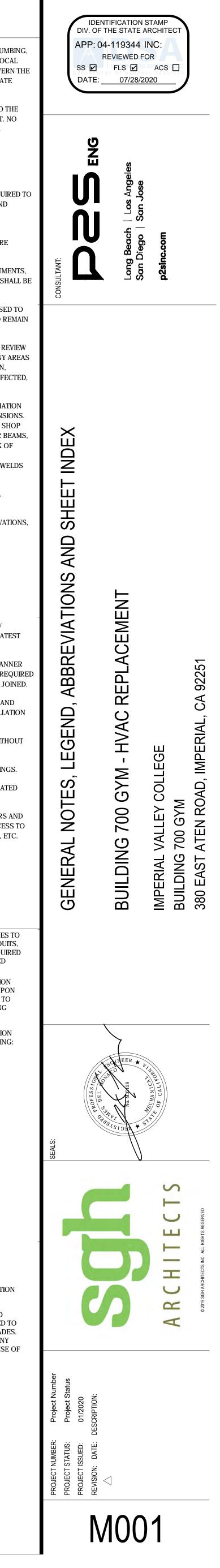
MP  $\times$  MD  $\times$  PP E - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #0043-13 AND #0052-13

# **GENERAL NOTES**

- 1. ALL WORK SHALL COMPLY WITH THE 2019 EDITIONS OF THE CALIFORNIA BUILDING, MECHANICAL, PLUMBING, AND OTHER APPLICABLE FEDERAL, STATE, OR LOCAL CODES AS ADOPTED AND ENFORCED BY THE LOCAL JURISDICTION. IN CASE THE PLANS SHOW MORE STRINGENT REQUIREMENTS, THE PLANS SHALL GOVERN THE DESIGN, YET NOTHING ON THE DESIGN DOCUMENTS SHALL BE INTERPRETED AS AUTHORITY TO VIOLATE CODE(S) OR REGULATION(S).
- 2. SUBMISSION OF BID IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH THE CONTRACTOR WILL BE OBLIGATED TO OPERATE UNDER THIS CONTRACT. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.
- 3. WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
- 4. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON DRAWINGS AND SPECIFICATIONS WITH CODE REQUIREMENTS, THE MORE STRINGENT STANDARD SHALL PREVAIL.
- 5. THIS CONTRACTOR SHALL FURNISH LABOR, MATERIALS, EQUIPMENT, AND TRANSPORTATION AS REQUIRED TO PROPERLY INSTALL ALL NEW HVAC SYSTEMS OR RELATED COMPONENTS AS INDICATED ON PLANS AND SPECIFIED HEREIN.
- 6. ALL NEW EQUIPMENT AND MATERIAL TO BE INSTALLED AS PART OF THIS PROJECT SHALL BEAR AN UNDERWRITERS' LABORATORIES LABEL (UL), AND INSTALLED IN SUCH A MENNER FOR WHICH THEY ARE DESIGNED AND APPROVED.
- 7. THIS CONTRACTOR SHALL DOCUMENT AND RELAY ANY MAJOR DEVIATIONS FROM THE DESIGN DOCUMENTS, AND ATTAIN APPROVAL FROM THE MECHANICAL ENGINEER BEFORE PROCEEDING. AS-BUILT COPIES SHALL BE PROVIDED INDICATING ALL CHANGES/DEVIATIONS MADE DURING CONSTRUCTION.
- 8. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.
- 9. NO PIPING, EQUIPMENT, ETC. SHALL BE REMOVED, DISCONNECTED OR SHUT DOWN WITHOUT PRIOR REVIEW WITH THE OWNER TO CONFIRM THAT AREAS TO REMAIN IN OPERATION WILL NOT BE AFFECTED. IF ANY AREAS NOT WITHIN THE SCOPE OF WORK ARE AFFECTED BY ANY SHUTDOWN, REMOVAL OR DISCONNECTION, SUFFICIENT ADVANCE NOTICE MUST BE GIVEN TO THE OWNER INDICATING WHICH AREAS WILL BE AFFECTED, WHEN THE PROPOSED SHUTDOWN WILL OCCUR, AND FOR HOW LONG A PERIOD OF TIME.
- 10. THE ARRANGEMENT OF EQUIPMENT AND PIPING SHOWN ON THE DRAWINGS IS BASED UPON INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF DESIGN AND IS NOT INTENDED TO SHOW EXACT DIMENSIONS. THIS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE SITE MAKING FIELD MEASUREMENTS AND SHOP DRAWINGS NECESSARY FOR FABRICATION OR ERECTION OF HVAC SYSTEMS. MAKE ALLOWANCE FOR BEAMS, PIPES AND OTHER OBSTRUCTIONS IN BUILDING CONSTRUCTION. CHECK DRAWINGS SHOWING WORK OF OTHER TRADES AND CONSULT WITH THE OWNER'S REPRESENTATIVE IN THE EVENT OF POTENTIAL INTERFERENCE. SHOP DRAWINGS SHALL BE MINIMUM 1/4"= 1'-0" SCALE, INDICATING FITTINGS, SIZES, WELDS AND CONFIGURATIONS AND SUBMITTED TO ENGINEER FOR REVIEW.
- 11. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK.
- 12. BEFORE COMMENCEMENT OF WORK, THIS CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS, AND CHARACTERISTICS OF ALL UTILITIES.
- 13. CONTRACTOR SHALL SECURE AND PAY ALL FEES AND PERMITS PERTAINING TO THE CONTRACT.
- 14. EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS, EXCEPT WHERE INDICATED AS BEING RELOCATED. 15. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN
- INSTRUCTIONS. 16. GALVANIZED SHEET METAL SHALL BE PROVIDED FOR ALL HVAC DUCT SYSTEMS, AND CONSTRUCTED/ SUPPORTED/INSTALLED IN ACCORDANCE WITH THE 2019 CALIFORNIA MECHANICAL CODE AND THE LATEST SMACNA STANDARDS.
- 17. ALL PIPING SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS IN A NEAT WORKMANSHIP-LIKE MANNER AND BE SUPPORTED AS REQUIRED BY CODES. PIPING SHALL BE SET UP AND DOWN AND OFFSET AS REQUIRED TO SUIT FIELD CONDITION. DIELECTRIC COUPLINGS SHALL BE USED WHERE DISSIMILAR METALS ARE JOINED.
- 18. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORTS FOR FIXTURES, DUCTWORK, PIPING, AND MECHANICAL EQUIPMENT. IN ORDER TO COMPLY WITH CALIFORNIA BUILDING CODE, SMACNA INSTALLATION STANDARDS, AND ALL RELATED LOCAL ORDINANCES.
- 19. THIS CONTRACTOR SHALL NOT BORE, NOTCH, CUT, OR PENETRATE INTO A STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM A DESIGNATED STRUCTURAL ENGINEER AND THE OWNER.
- 20. ALL PIPE ELBOWS SHALL BE LONG RADIUS UNLESS OTHERWISE SPECIFICALLY NOTED ON THE DRAWINGS. 21. INSTALL MANUAL VOLUME DAMPERS WITHIN DUCT BRANCHES TO BALANCE AIRFLOW CFM. ON INSULATED DUCTS, MOUNT DAMPER REGULATOR ON 2" STAND-OFF BRACKET TO CLEAR INSULATION.
- 22. COORDINATE ACCESS TO EQUIPMENT WITH WORK OF OTHER TRADES. PROVIDE DUCT ACCESS DOORS AND CEILING ACCESS DOORS TO ALLOW ACCESS FOR FILTER CHANGEOUT, CONTROLS ACCESS AND ACCESS TO SERVICE/REMOVE COMPONENTS INCLUDING, BUT NOT LIMITED TO, FANS, PULLEYS, SHEAVES, BELTS, ETC.

# **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. SHOP DRAWINGS SHALL BE REVIEWED BY COMMISSIONING AGENT, MEOR AND OWNER'S REPRESENTITIVE PRIOR TO SUBMITTAL.
- PROVIDE ORIGINALLY PREPARED CONTRACTOR'S SHOP DRAWINGS IN ELECTRONIC FORMAT. IN ADDITION TO THE REQUIREMENTS SPECIFIED ELSEWHERE, 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. UTILITY PROFILES FOR UNDERGROUND PIPING.
- 4. DO NOT COMMENCE WITH ANY INSTALLATION, ORDERING OF ANY EQUIPMENT OR MATERIAL FABRICATION WITHOUT AN APPROVED SHOP DRAWING SUBMITTAL.
- <sup>3.</sup> 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.



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AIR HANDLING UNIT SCHEDULE																																			
	MANUFACTURER					SUPPLY	FAN					C	DX C	COIL 4	]		HEATING		I	ELECTRIC	CAL		REFRI	GERANT			FI	LTERS			MINIMUM	DESIGN	OPERATING		
MARK	MODEL	LOCATION	SERVICE	AIRFLOW (CFM)	TSP (IN WC)	ESP (IN WC	c) RPM	BHP	HP	TOTAL (MBH)	SENSIBLI (MBH)	E ENTE (°F) DB	(°F)	R LEAVI		PD (IN WC)	TOTAL (MBH)	VOLTS	PHASE H	ERTZ F	TLA MCA	МОСР	TYPE	QUANTITY (LBS)	( TYPE	NO	SIZE (INCHES	) TYPE	NO	SIZE (INCHES)	OUTSIDE AIR		WEIGHT	ANCHORAGE DETAIL NO.	REMARKS
AH-1	SCOTT SPRINGFIELD 4EJ1206B	LEVEL-1 CEILING SPACE	WEST LOBBY/LOCKERS	7,500	4.22	2.5	2,130	4.4	5.3	342.13	224.81	80	67	55	54	0.66	376.34	460	3	60 1	0.8 12.2	15.0	410A	91.75	PREFILTE	R MERV-8	2	FINAL FILTER	MERV-13	4	1,165	3,765	3,600	5/S3.01	1 2 3 4
AH-2	SCOTT SPRINGFIELD 4EJ1203B	MEZZANINE CEILING SPACE	MAIN GYM	11,000	3.84	2.5	1,934	5.8	8	369.6	256.7	80	67	55	54	0.29	406.56	460	3	60 1	0.0 11.2	15.0	410A	240.8	PREFILTE	R MERV-8	2	FINAL FILTER	MERV-13	4	1,800	2,150	3,550	5/S3.01	123(E) EQUIPMENT WEI13IS 3,450 LBS
AH-3	SCOTT SPRINGFIELD 4EJ1203B	MEZZANINE CEILING SPACE	MAIN GYM	11,000	3.84	2.5	1,934	5.8	8	369.6	256.7	80	67	55	54	0.29	406.56	460	3	60 1	0.0 11.2	15.0	410A	240.8	PREFILTE	R MERV-8	2	FINAL FILTER	MERV-13	4	1,800	2,150	3,550	5/S3.01	123(E) EQUIPMENT WEI13IS 3,450 LBS
AH-4	SCOTT SPRINGFIELD 4EJ1203B	MEZZANINE CEILING SPACE	MAIN GYM	11,000	3.84	2.5	1,934	5.8	8	369.6	256.7	80	67	55	54	0.29	406.56	460	3	60 1	0.0 11.2	15.0	410A	240.8	PREFILTE	R MERV-8	2	FINAL FILTER	MERV-13	4	1,800	2,150	3,550	5/S3.01	1 2 3 (E) EQUIPMENT WEIG
AH-5	SCOTT SPRINGFIELD 4EJ1203B	MEZZANINE CEILING SPACE	MAIN GYM	11,000	3.84	2.5	1,934	5.8	8	369.6	256.7	80	67	55	54	0.29	406.56	460	3	60 1	0.0 11.2	15.0	410A	240.8	PREFILTE	R MERV-8	2	FINAL FILTER	MERV-13	4	1,800	2,150	3,550	5/S3.01	1   2   3   4   (E) EQUIPMENT     WEIGHT IS 3,450
AH-6	SCOTT SPRINGFIELD 4EN1006B	LEVEL-1 CEILING SPACE	EAST ADDITION	12,000	4.24	2.5	2,164	7.2	8	517.8	341.3	80	67	55	54	0.29	569.58	208	3	60 1	0.0 27.1	15.0	410A	80.94	PREFILTE	R MERV-8	2	FINAL FILTER	MERV-13	4	1,985	3,390	4,850	5/S3.01	1 2 3
AH-7	SCOTT SPRINGFIELD 4EJ1206B	MEZZANINE CEILING SPACE	LVEL 2 WORKOUT AREA	7,500	4.15	2.5	1,875	-	7.5	366.9	236.1	80	67	55	54	0.69	403.59	460	3	60 1	6.0 17	20.0	410A	290.9	PREFILTE	R MERV-8	2	FINAL FILTER	MERV-13	4	780	1,000	2,050	5/S3.01	1 2 3

1 PROVIDE WITH BASE MOUNTED, SPRING TYPE, SEISMIC VIBRATION ISOLATORS.

2 CONTRACTOR TO VERIFY REFRIGERANT LINE SIZES PRIOR TO BID AND PROCUREMENT.

3 PROVIDE WITH EC FAN MOTORS.

4 FOR SUB-ZONE COOLING AND HEATING, SEE ZONE SCHEDULE ON THIS SHEET.

MANUFACTURER					NAMEPL	ATE			OLING PACITY		ATING PACITY		PIPING CON INCHES	N	REFRIC	ERANT		EFFICIENCY		OPERATING	ANCHORAGE		
MARK	& MODEL	NOMINAL TONNAGE	LOCATION	SERVICE	$\frac{MODULE-1}{MCA / MOCP (A)} \frac{MODULE-2}{MCA / MOCP (B)} \frac{MODULE-3}{MCA / MOCP (C)} V/PH  \frac{AMB}{°F} BTU/H  \frac{AMB}{°F} BTU/H  \frac{AMB}{°F} MBH  LIQUID  \frac{SUCTION}{GAS}  \frac{DISCHARGE}{GAS} TYPE  \frac{CHARGE}{(LBS)}  \frac{COOLING}{EER / IEER}  COOLING ECOVING EC$	COP 17	WEIGHT (LBS)	DETAIL NO.	REMARKS														
CU-1	LG / ARUM432DTE5	36	OUTDOOR EQUIP YARD 184	AH-1	18.4 / 25	18.4 / 25	35.7 / 50	460 / 3	115	432.0	35	486.0	3/4	1 1/8	1 5/8	410A	106.88	10.5 / 20	3.22	2.17	1,225	5/S3.01	1 2
CU-2	LG / ARUM312DTE5	26	OUTDOOR EQUIP YARD 184	AH-2	16.4 / 25	38.3 / 50	-	460 / 3	115	312.0	35	351.0	3/4	1 3/8	1 3/8	410A	104.33	11 / 21	3.25	2.3	1,230	5/S3.01	1 2
CU-3	LG / ARUM312DTE5	26	OUTDOOR EQUIP YARD 184	AH-3	16.4 / 25	38.3 / 50	-	460 / 3	115	312.0	35	351.0	3/4	1 3/8	1 3/8	410A	104.33	11 / 21	3.25	2.3	1,230	5/S3.01	1 2
CU-4	LG / ARUM312DTE5	26	OUTDOOR EQUIP ENCLOSURE 186	AH-4	16.4 / 25	38.3 / 50	-	460 / 3	115	312.0	35	351.0	3/4	1 3/8	1 3/8	410A	104.33	11 / 21	3.25	2.3	1,230	5/S3.01	1 2
CU-5	LG / ARUM312DTE5	26	OUTDOOR EQUIP ENCLOSURE 186	AH-5	16.4 / 25	38.3 / 50	-	460 / 3	115	312.0	35	351.0	3/4	1 3/8	1 3/8	410A	104.33	11 / 21	3.25	2.3	1,230	5/S3.01	1 2
CU-6	LG / ARUM504BTE5	24	COMPRESSOR 131	AH-6	30.9 / 40	53.6 / 70	60.3 / 80	208 / 3	115	409.3	35	506.3	3/4	1 1/8	1 5/8	410A	112.69	9.6 / 17.5	3.21	2.1	1,225	5/S3.01	1 2
CU-7	LG / ARUM384DTE5	32	OUTDOOR EQUIP YARD 184	AH-7	28.5 / 35	38.3 / 50	-	460 / 3	115	384.0	35	432.0	3/4	1 5/8	1 5/8	410A	107.75	9.8 / 19.3	3.22	2.2	1,400	5/S3.01	1 2

2 VERIFY REFRIGERANT LINE SIZES PRIOR TO BID AND PROCUREMENT.

# FYHAUST FAN

EXH	EXHAUST FAN																
	MANUFACTURER					FAN				N	IOTOR			CONFC	OPERATING		
MARK	& MODEL	LOCATION	TYPE	SERVICE	AIRFLOW (CFM)	ESP (IN WG)	RPM	НР	BHP	VOLTS	PHASE	RPM	ENCLOSURE	SONES (dBA)	WEIGHT (LBS)	ANCHORAGE DETAIL NO.	REMARKS
EF-1	GREENHECK USF-15	MECH EQUIP 121	UTILITY SET	AH-1	2,921	0.837	2,187	1.1	1.1	208	1	1,770	TEFC	(74)	200	10/S3.01	
EF-2	GREENHECK CUE-099-VG	LOW ROOF	UPBLAST	STORAGE 155/ W. TOILET 168/ JANITOR 154	720	0.5	1,386	1/4	0.13	208	1	1,725	ODP	7.7	60	9/S3.01	2 3
EF-3	GREENHECK CUE-099-VG	LOW ROOF	UPBLAST	SHOWERS 134,173, 174/ DRYING 133	820	0.5	1,486	1/4	0.16	208	1	1,725	ODP	8.8	60	9/S3.01	2 3
EF-4	GREENHECK CUE-090-VG	LOW ROOF	UPBLAST	COACHES 144, 148	360	0.5	1,432	1/10	0.07	208	1	1,725	ODP	6.6	52	9/S3.01	2 3
EF-5	GREENHECK CUE-099-VG	LOW ROOF	UPBLAST	SHOWERS 176, 178/ DRYING 177	770	0.5	1,434	1/4	0.14	208	1	1,725	ODP	8.3	60	9/S3.01	2 3
EF-6	GREENHECK CUE-099-VG	LOW ROOF	UPBLAST	EQUIP. DRYING 163/ M. TOILET 167/ JANITOR 140	720	0.5	1,386	1/4	0.13	208	1	1,725	ODP	7.7	60	9/S3.01	2 3

1 PROVIDE WITH MOUNTING BASE AND VIBRATION ISOLATION.

2 PROVIDE WITH ROOF CURB AND INSECT SCREEN.

3 PROVIDE WITH BACKDRAFT DAMPER.



AHU	ZONE NO.	AIRFLOW (CFM)	COOLING (MBH)	HEATING (MBH)
1	1	3,205	146.2	160.8
1	2	1,195	54.5	60.0
1	3	2,550	116.3	128.0
1	4	550	25.1	27.6
6	1	2,130	91.9	101.1
6	2	770	33.2	36.5
6	3	1,250	53.9	59.3
6	4	2,660	114.8	126.3
6	5	630	27.2	29.9
6	6	900	38.8	42.7
6	7	3,000	129.5	142.4

# **GRAVITY VENT**

LOC	CATION	TYPE	SERVICE	THROAT SIZE	CFM	PRESSURE DROP (IN WC)	MATERIAL	ANCHORAGE DETAIL NO.	REMARKS
R	OOF	RELIEF	MAIN GYM	48"x48"	11,000	0.25	ALUMINUM	8/S3.01	1 2
- R	OOF	RELIEF	MAIN GYM	48"x48"	11,000	0.25	ALUMINUM	8/S3.01	1 2
L L L L L L L L L L L L L L L L L L L	OOF	RELIEF	MAIN GYM	48"x48"	11,000	0.25	ALUMINUM	8/S3.01	1 2
R	COOF	RELIEF	MAIN GYM	48"x48"	11,000	0.25	ALUMINUM	8/S3.01	1 2
	DEL HECK 18x48 HECK 18x48 HECK 18x48 HECK HECK	DEL LOCATION HECK ROOF HECK ROOF HECK ROOF HECK ROOF HECK ROOF	LOCATIONTYPEDELLOCATIONTYPEHECK 8x48ROOFRELIEFHECK 8x48ROOFRELIEFHECK 8x48ROOFRELIEFHECK 8x48ROOFRELIEF	DELLOCATIONTYPESERVICEHECK 8x48ROOFRELIEFMAIN GYMHECK 8x48ROOFRELIEFMAIN GYMHECK 8x48ROOFRELIEFMAIN GYMHECK 8x48ROOFRELIEFMAIN GYM	DELLOCATIONTYPESERVICETHROAT SIZEHECK 8x48ROOFRELIEFMAIN GYM48"x48"HECK 8x48ROOFRELIEFMAIN GYM48"x48"HECK 8x48ROOFRELIEFMAIN GYM48"x48"HECK 8x48ROOFRELIEFMAIN GYM48"x48"	DELLOCATIONTYPESERVICETHROAT SIZECFMHECK 8x48ROOFRELIEFMAIN GYM48"x48"11,000HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,000HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,000HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,000HECK HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,000	DELLOCATIONTYPESERVICETHROAT SIZECFMDROP (IN WC)HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25	DELLOCATIONTYPESERVICETHROAT SIZECFMDROP (IN WC)MATERIALHECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUMHECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUMHECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUMHECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUMHECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUM	DELLOCATIONTYPESERVICETHROAT SIZECFMDROP (IN WC)MATERIALANCHORAGE DETAIL NO.HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUM8/S3.01HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUM8/S3.01HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUM8/S3.01HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUM8/S3.01HECK 8x48ROOFRELIEFMAIN GYM48"x48"11,0000.25ALUMINUM8/S3.01

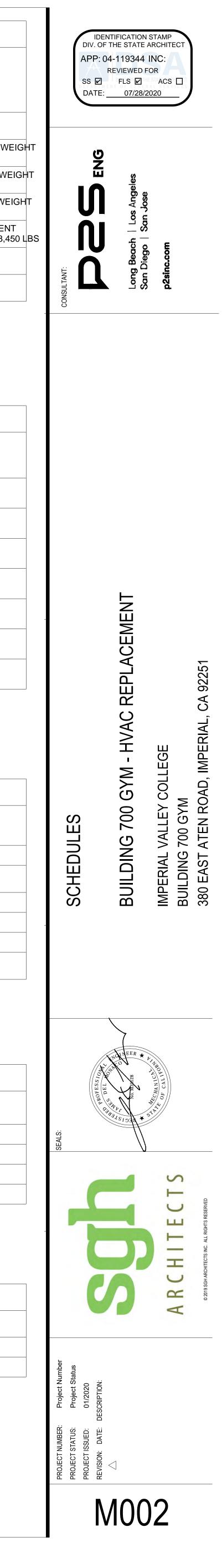
1 PROVIDE WITH ROOF CURB

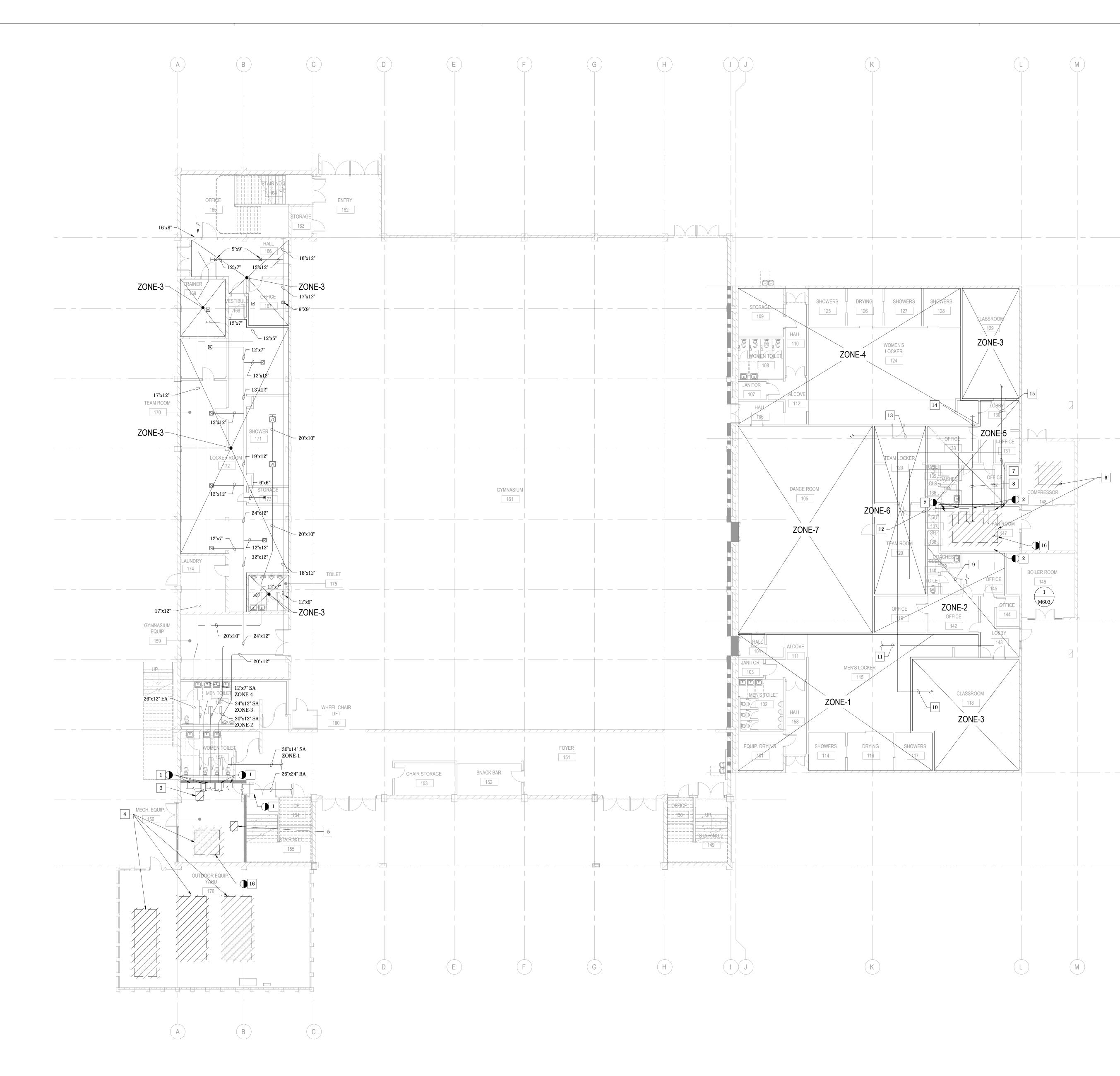
2 PROVIDE WITH BACKDRAFT DAMPER AND INSECT SCREEN.

# **ZONE SCHEDULE**

# **GRILLES, REGISTERS, DIFFUSERS**

MARK	DESCRIPTION	MATERIAL	FRONT BLADES	DAMPER	FINISH	REMARKS
CD-1	TITUS TMR	STEEL	(3) CONES	NO	STANDARD	-
RG-1	TITUS 350RL	STEEL	35° DEFLECTION	NO	STANDARD	-





1 DEMOLITION PLAN - LEVEL-1 M201 SCALE: 3/32" = 1'-0"

# GENERAL NOTES

(10.0)

(9.3)

-(7.2)

4.6

2.2

-(1.0)

ALL MECHANICAL, HYDRONIC PIPING SHALL BE REMOVED.
 ALL MECHANICAL DUCTWORK THAT IS ROUTED WITHIN
 THE MECHANICAL ROOMS SHALL BE REMOVED FROM THE

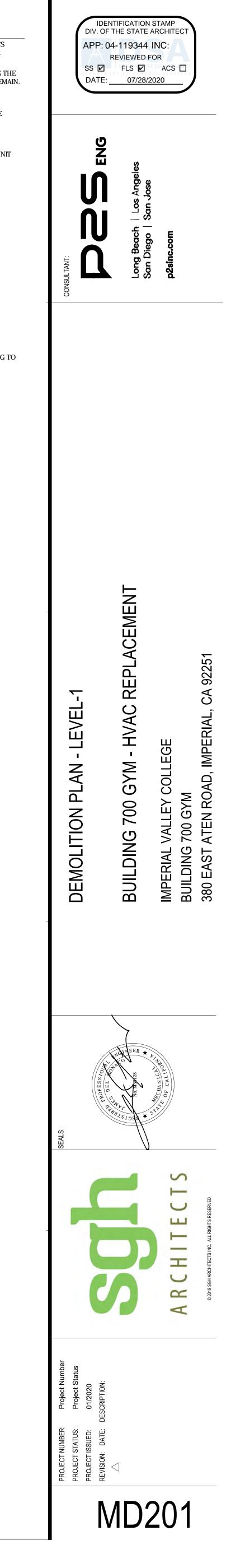
MULTIZONE UNITS TO THE POD'S SHOWN.

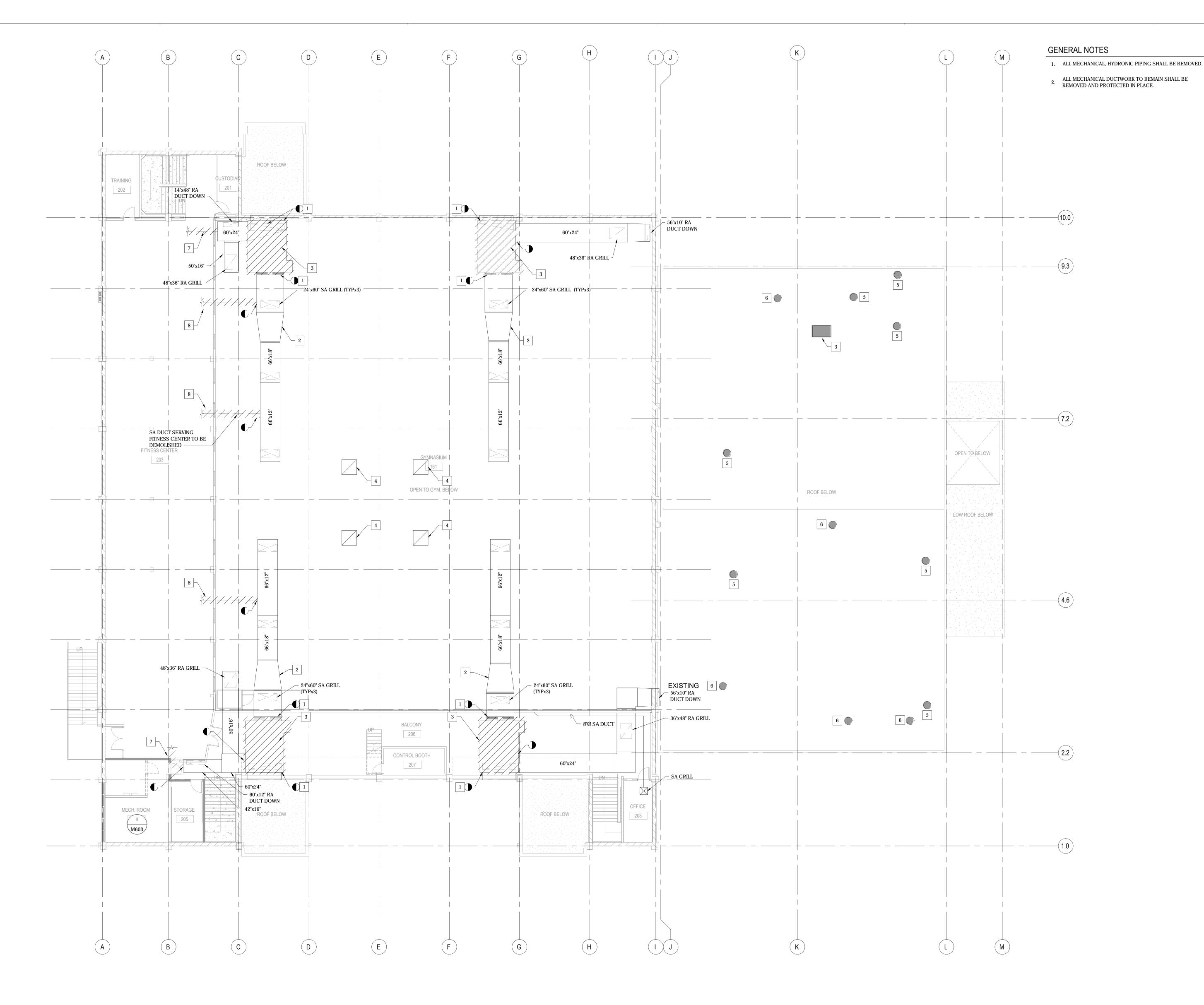
### NOTES

1	POD FOR SUPPLY, RETURN AND EXHAUST AIR DUCTS SERVING THE LOBBY AREA AND WEST SIDE LOCKER ROOMS.
2	POD FOR SUPPLY AND RETURN AIR DUCTS SERVING THE LOBBY AREA AND EAST SIDE LOCKER ROOMS TO REMAI
3	EXHAUST FAN TO BE DEMOLISHED.
4	MULTI-ZONE AHU AND AIR COOLED CHILLERS TO BE DEMOLISHED.
5	CHW PUMP TO BE DEMOLISHED.
6	MULTI-ZONE AHU AND AIR COOLED CONDENSING UNIT TO BE DEMOLISHED.
7	30"x8" SUPPLY DUCT SERVING ZONE-3
8	94"x12" RETURN DUCT SERVING ZONE-3
9	30"x8" SUPPLY DUCT SERVING ZONE-2
10	16"x8" SUPPLY DUCT SERVING ZONE-3
11	30"x16" SUPPLY DUCT SERVING ZONE-3
12	30"x8" SUPPLY DUCT SERVING ZONE-6
13	30"x24" SUPPLY DUCT SERVING ZONE-7
14	30"x16" SUPPLY DUCT SERVING ZONE-4

- 15 16"x8" SUPPLY DUCT SERVING ZONE-3
- 16 POD FOR CONDENSATE DRAIN. CONDENSATE PIPING TO REMAIN AND BE PROTECTED IN PLACE.





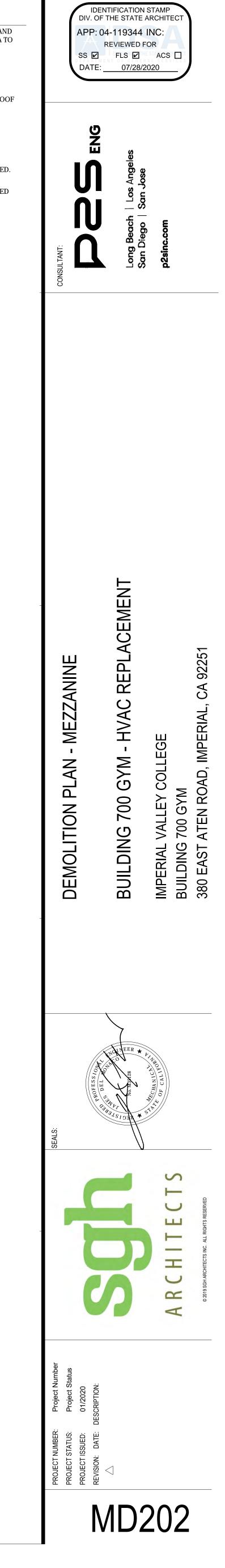


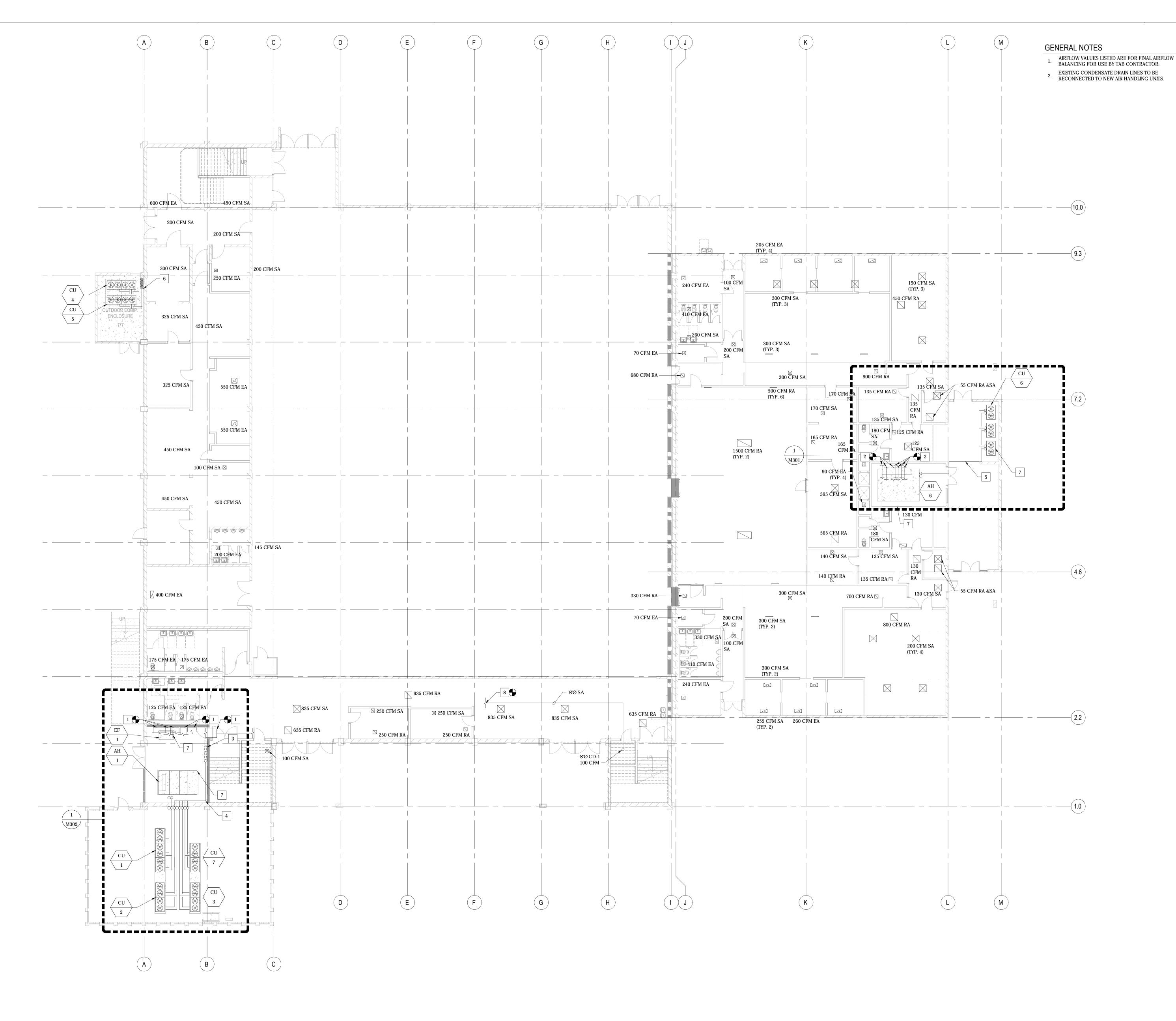
1 DEMOLITION PLAN - MEZZANINE M202 SCALE: 3/32" = 1'-0"

# NOTES

- POD FOR SUPPLY, RETURN AND OUTSIDE AIR DUCTS AND CONDENSATE DRAIN PIPING SERVING MAIN GYM AREA TO AH-2, AH-3, AH-4, AND AH-5.
- 2 DUCTWORK TO REMAIN.
- 3 AC UNIT TO BE REMOVED.
- 48"x48" RELIEF AIR DUCT TO GRAVITY VENT ON HIGH ROOF (TYP 4)
- 5 ROOF MOUNTED GRAVITY VENT TO REMAIN.
- 6 EXHAUST FAN TO BE REMOVED.
- 7 RA DUCT SERVING FITNESS CENTER TO BE DEMOLISHED.
- 8 SA DUCT SERVING FITNESS CENTER TO BE DEMOLISHED





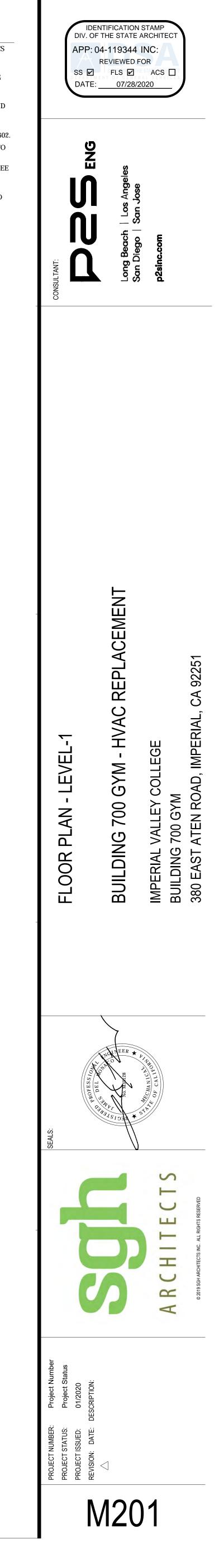


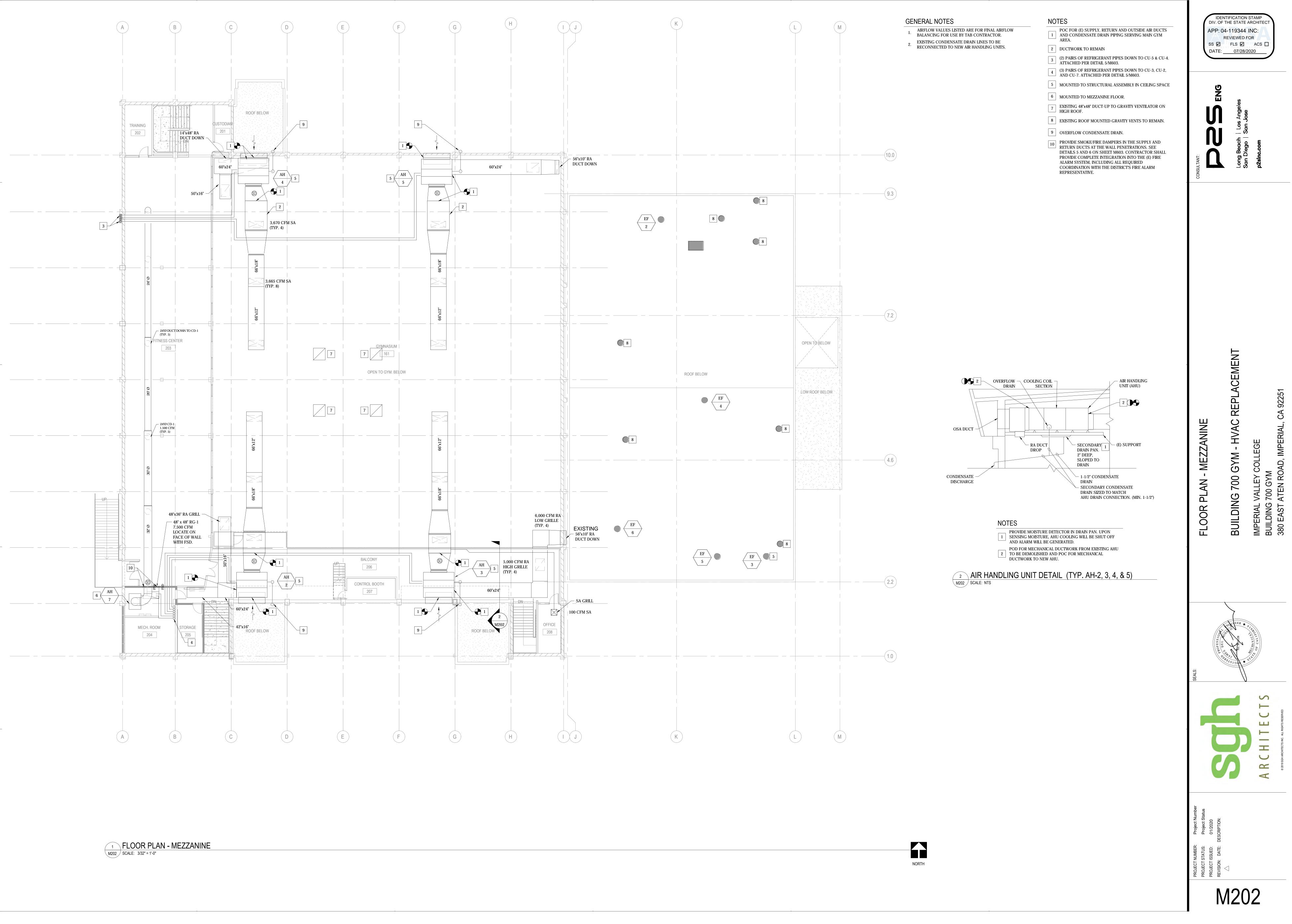
1 FLOOR PLAN - LEVEL - 1 M201 SCALE: 3/32" = 1'-0"

# NOTES

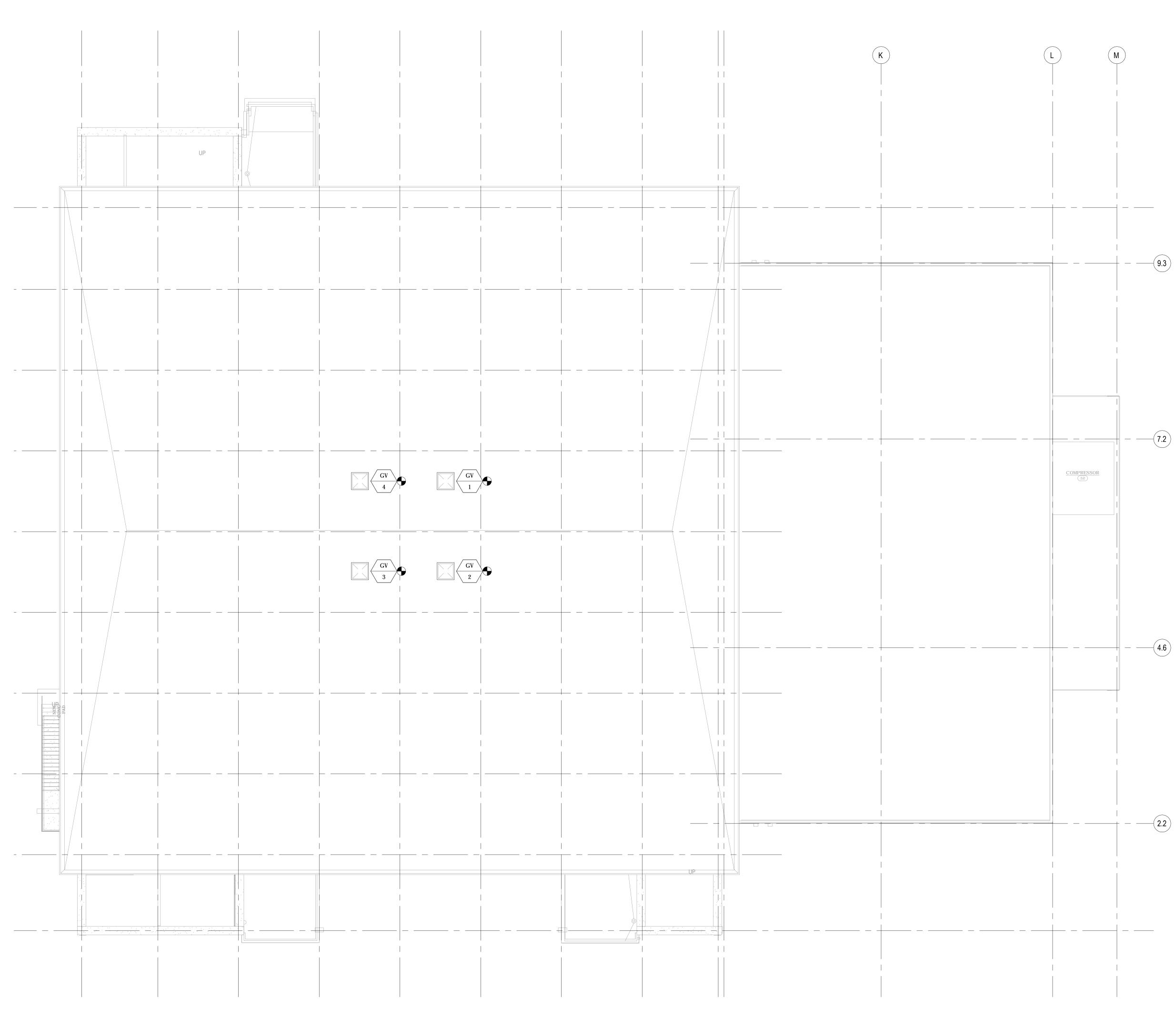
- POC FOR (E) SUPPLY, RETURN AND EXHAUST AIR DUCTS 1 SERVING THE LOBBY AREA AND WEST SIDE LOCKER ☐ ROOMS TO AH-1.
- POC FOR (E) SUPPLY AND RETURN AIR DUCTS SERVING 2 THE LOBBY AREA AND EAST SIDE LOCKER ROOMS TO
- AH-6. 3 (3) PAIRS OF REFRIGERANT PIPES UP TO AH-3, AH-2, AND AH-7. ATTACHED PER DETAIL 5/M603.
- (3) PAIRS OF REFRIGERANT PIPES, STACKED AND MOUNTED TIGHT TO WALL. ATTACHED PER DETAIL 3/M602.
- REFRIGERANT PIPES, STACKED AND MOUNTED TIGHT TO WALL. ATTACHED PER DETAIL 3/M602.
- (2) PAIRS OF REFRIGERANT PIPES UP TO AH-5 & AH-4. SEE 6 PIPING DIAGRAM FOR SIZES. ATTACHED PER DETAIL 5/M603. HOUSEKEEPING PAD TO BE MODIFIED AS REQUIRED TO
- 7 SUPPORT NEW MECHANICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR DETAILS.
- 8 POC FOR 8'Ø SUPPLY AIR DUCT TO OFFICE 150.

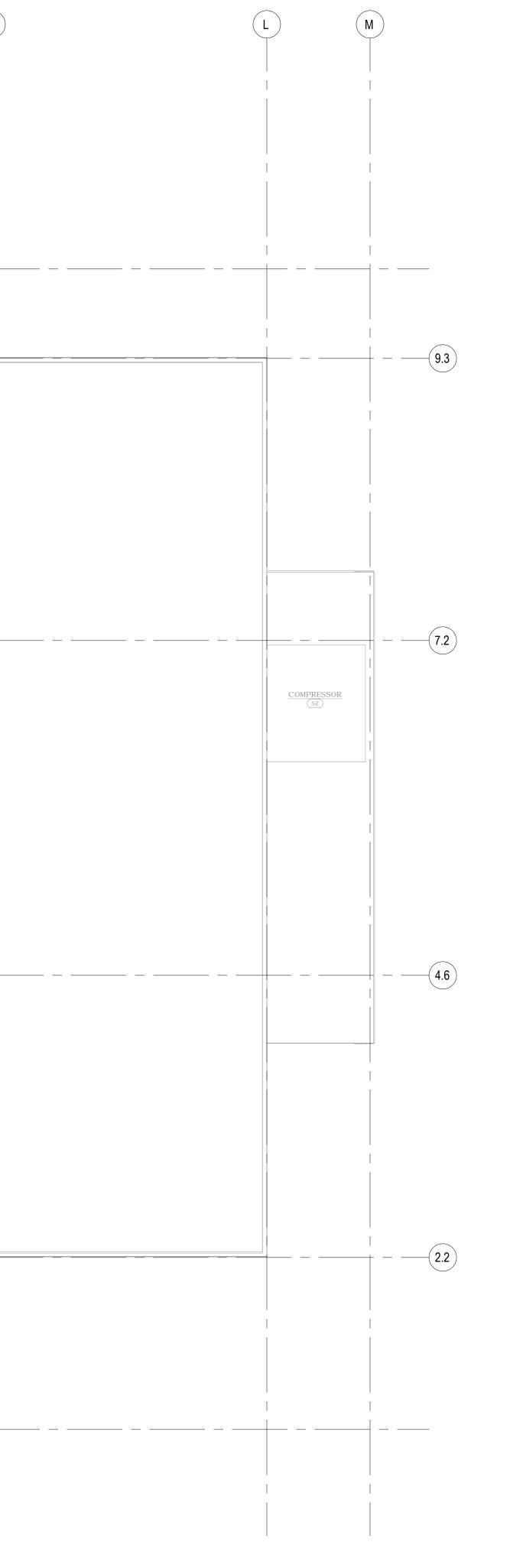




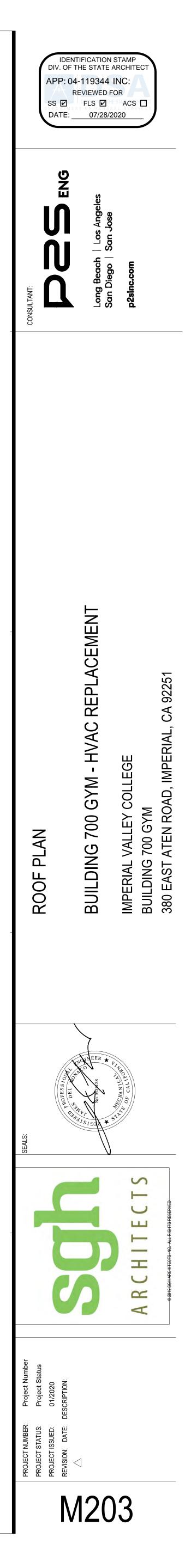


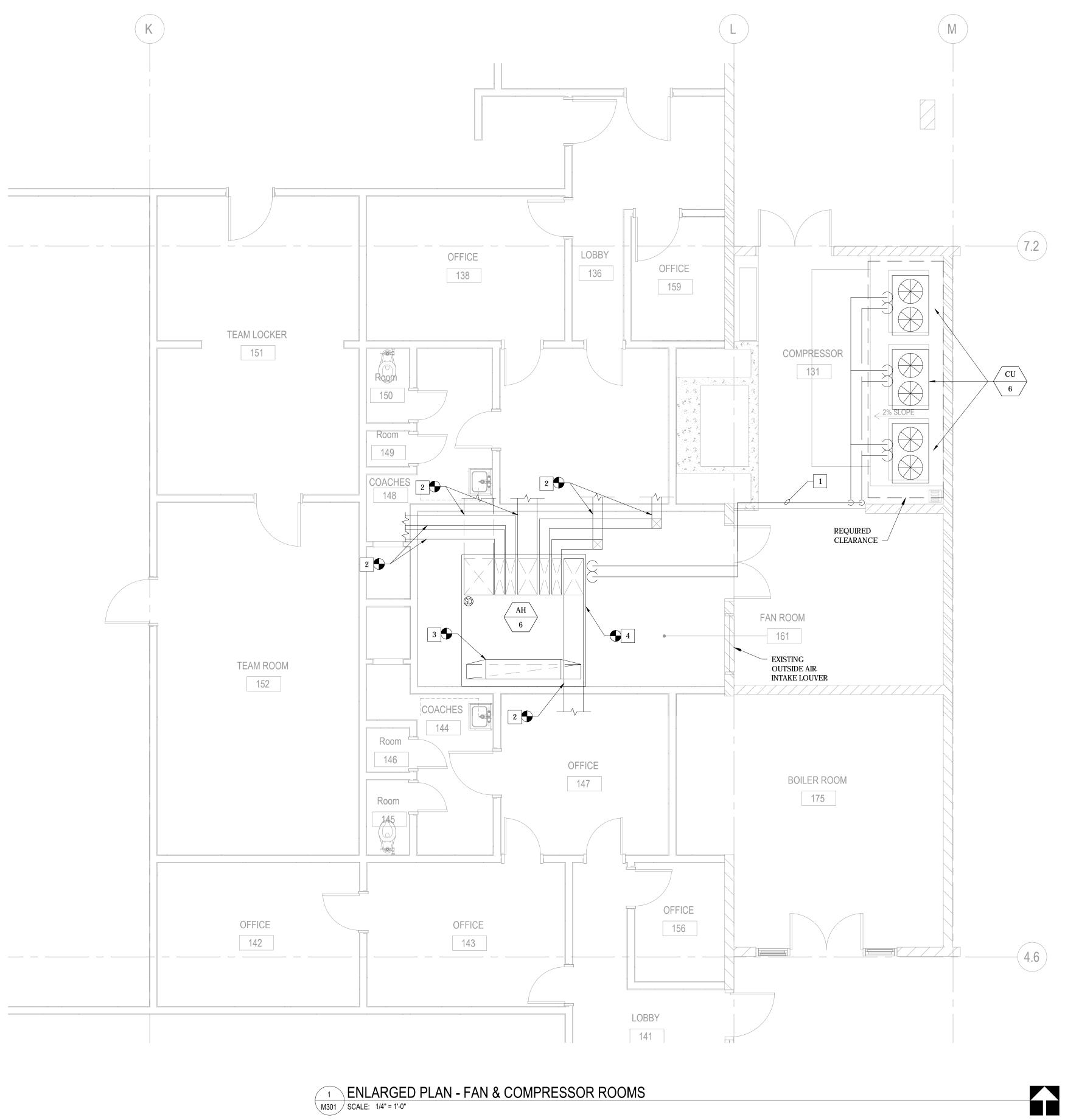










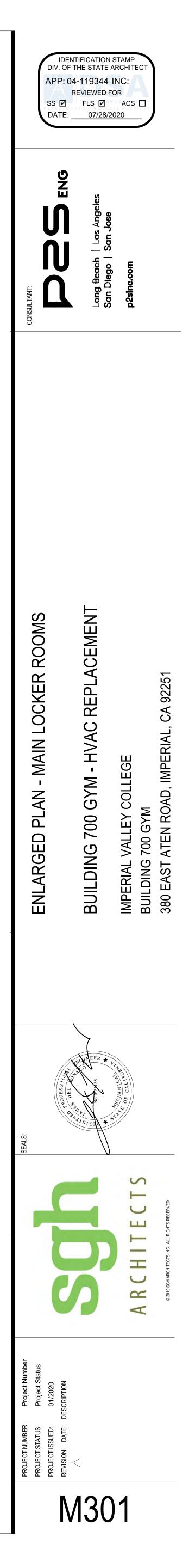


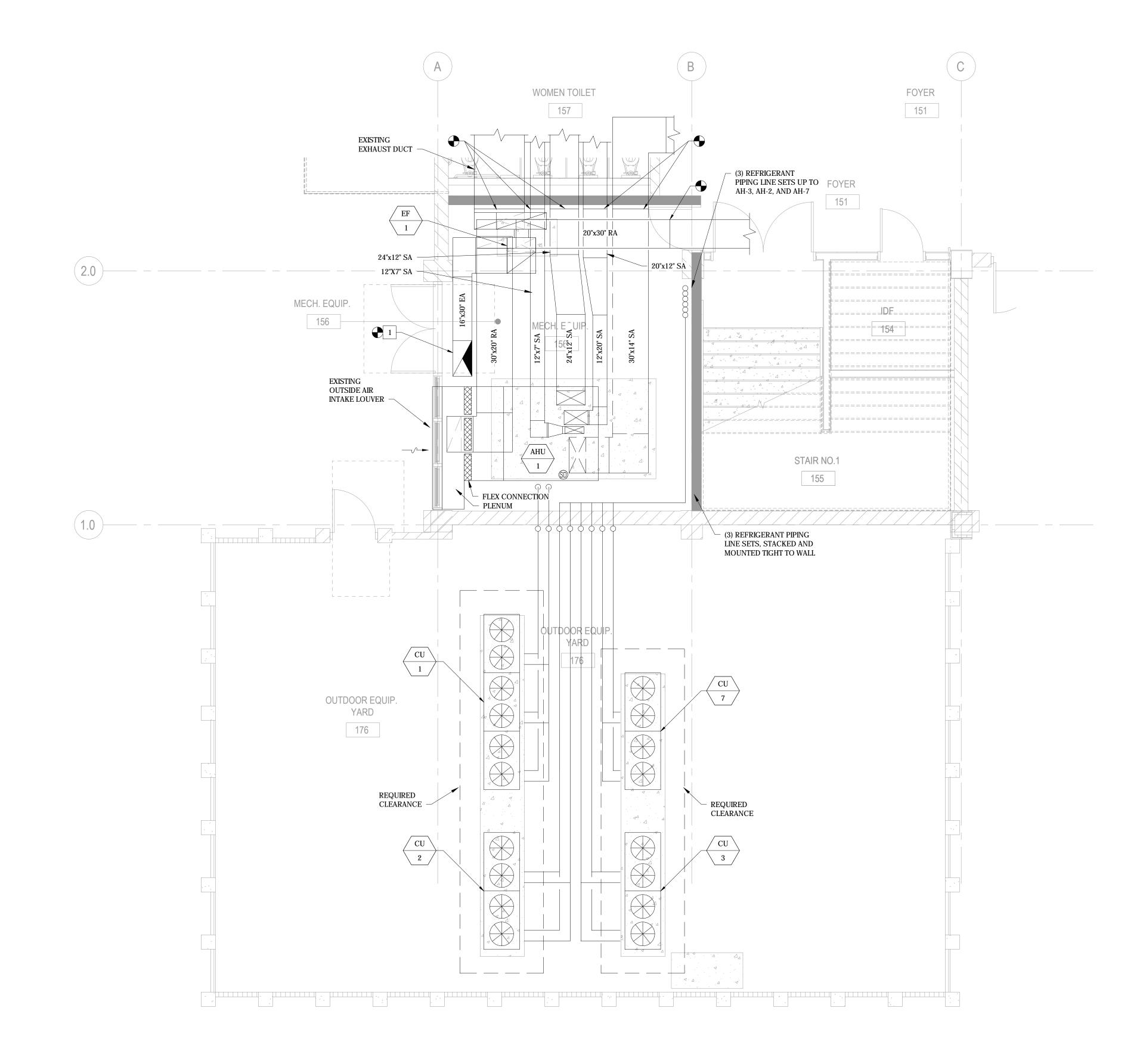
# NOTES

1 REFRIGERANT PIPING LINE SET, STACKED AND MOUNTED TIGHT TO WALL

NORTH

- POC FOR SA DUCT TO EXISTING DUCT ROUTED OUT TO BUILDING. CONNECT RA DUCT 1' FROM POINT OF ENTRY INTO FAN ROOM.
- BOC FOR RA DUCT ROUTED UP. CONNECT RA DUCT 1' FROM POINT OF ENTRY INTO FAN ROOM.
- 4 POC FOR EXISTING CONDENSATE DRAIN.



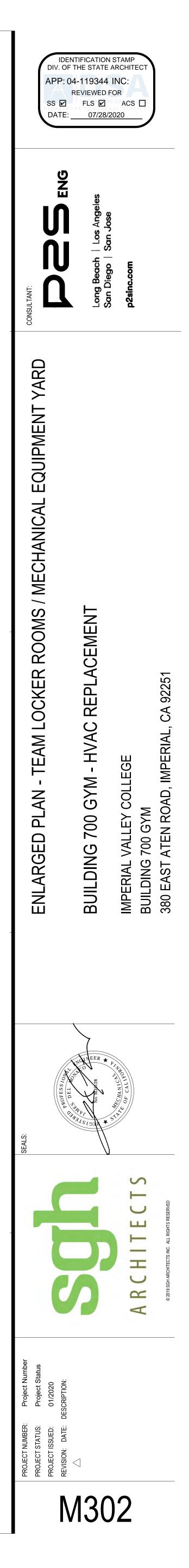


# 1 ENLARGED FLOOR PLAN MAIN LEVEL - EQUIP YARD M302 SCALE: 1/4" = 1'-0"

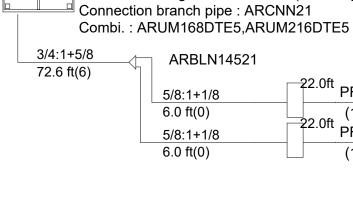


### NOTES

POC FOR EXHAUST DUCT TO SHALL BE WITHIN1MECHANICAL EQUIPMENT ROOM. CONNECT TO EXISTING<br/>RISER AND DISCHARGE ON ROOF



I	1		u
	3	/4:'	1+1
		~ ~	-





ARUM384DTE5 (309.45 kBtu/h) (377.34 kBtu/h)

Additional Refrigerant : 40.86 lbs (Precharged Refrigerant : 64.00 lbs)

22.0ft PRLK096A0 #AHU 7

(192.00 / -- kBtu/h) (192.00 kBtu/h) 22.0ft PRLK096A0 #AHU 7A

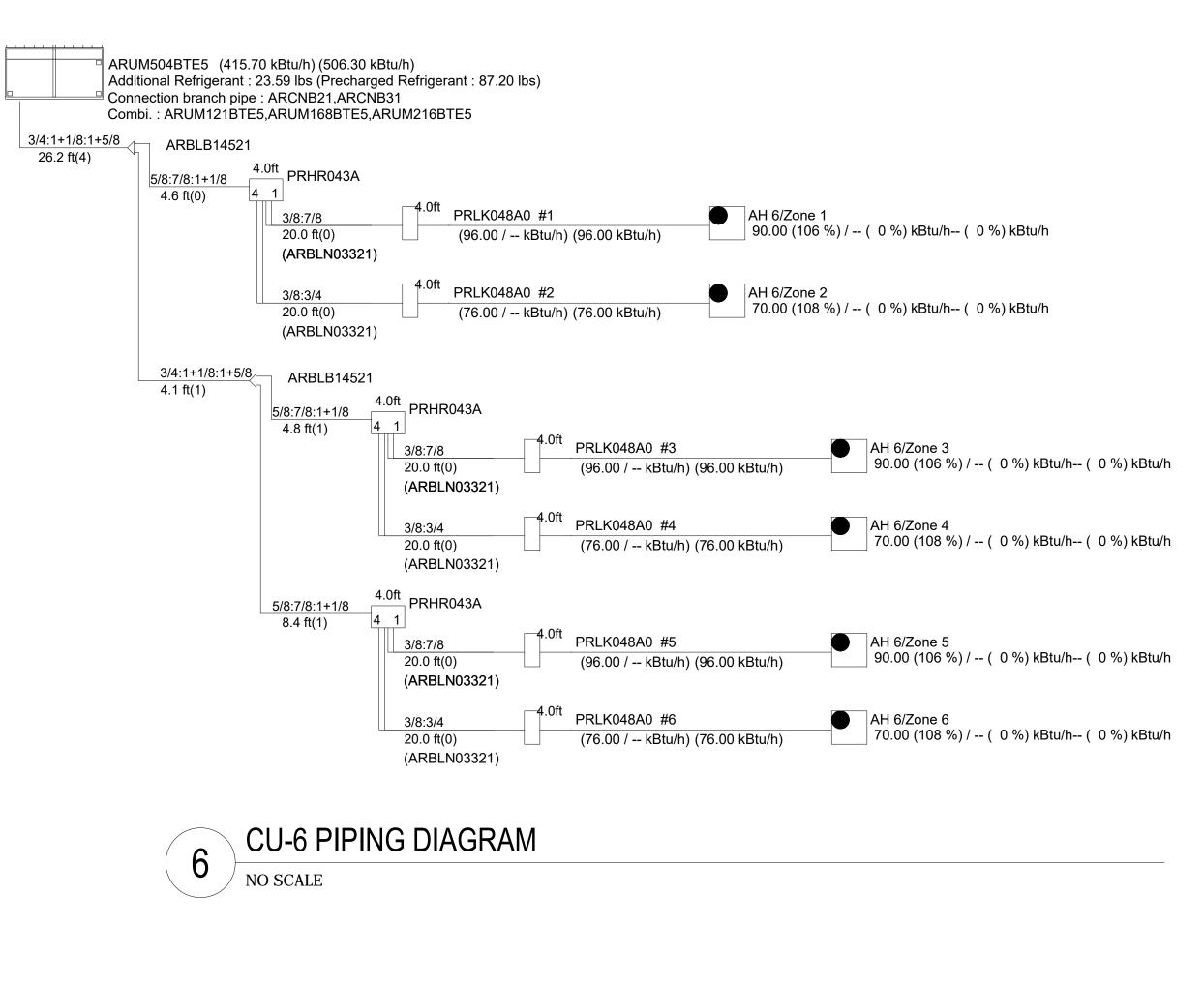
(192.00 / -- kBtu/h) (192.00 kBtu/h)

AH 7/AHU 7

AH 7/AHU 7

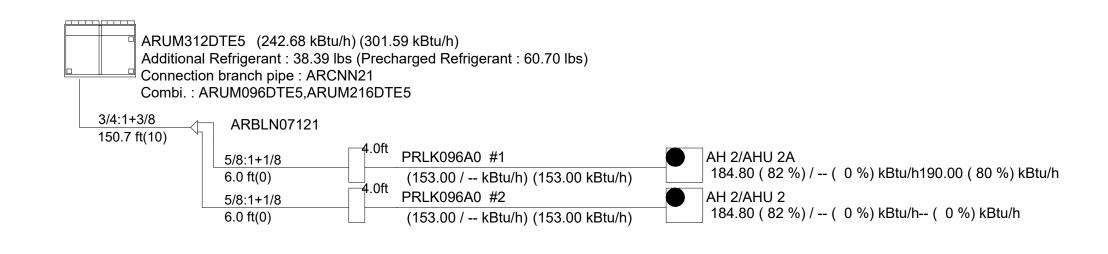
183.40 (104 %) / -- ( 0 %) kBtu/h183.40 (104 %) kBtu/h

183.40 (104 %) / -- ( 0 %) kBtu/h183.40 (104 %) kBtu/h

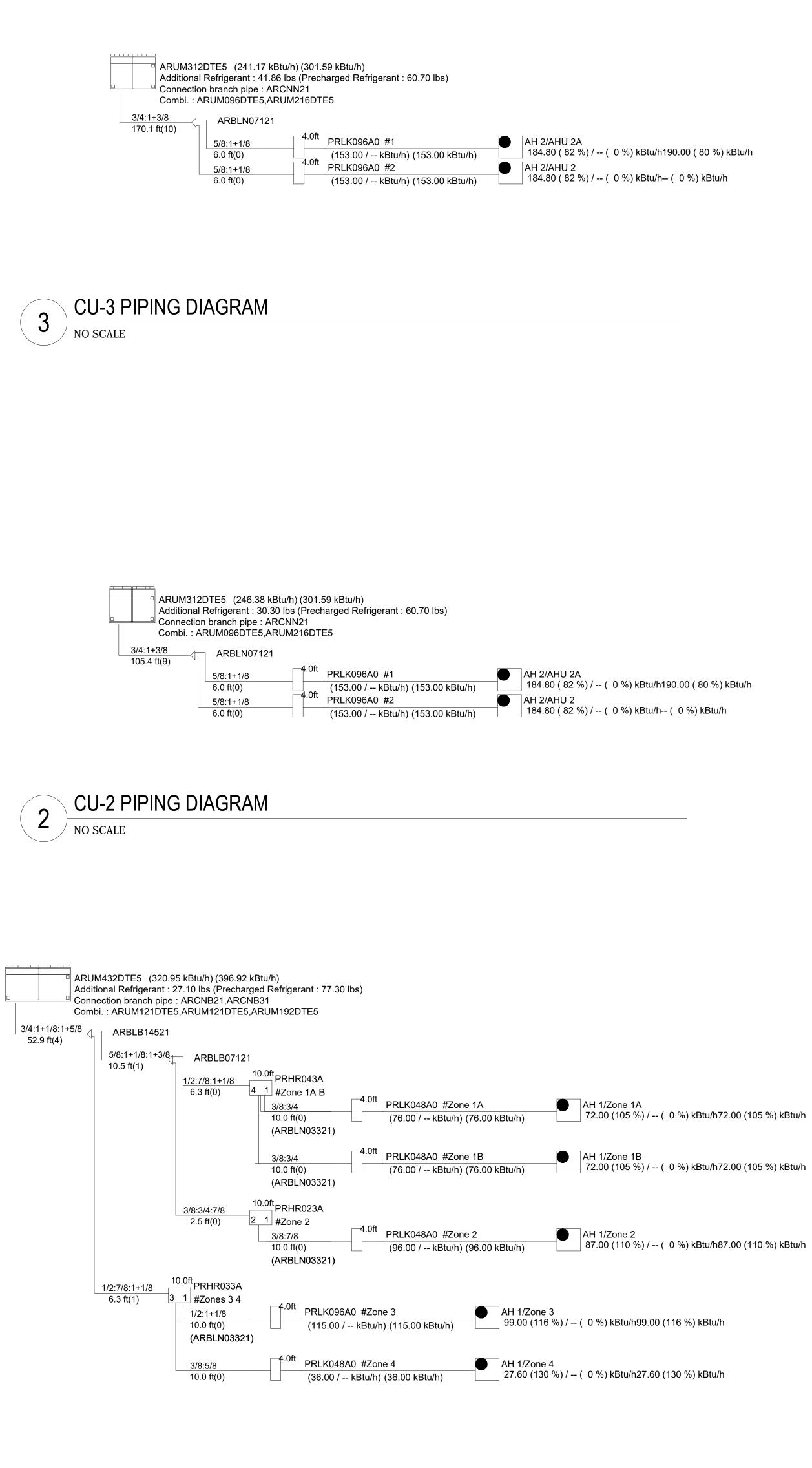


ARUM312DTE5 (240.39 kl Additional Refrigerant : 43.6 Connection branch pipe : AF Combi. : ARUM096DTE5,AF	3 lbs (Precharged Refrigerant : 60.70 lbs) CNN21	
3/4:1+3/8 180.0 ft(10) 5/8:1+1/8 6.0 ft(0) 5/8:1+1/8 6.0 ft(0)	4.0ft PRLK096A0 #1 (153.00 / kBtu/h) (153.00 kBtu/h) PRLK096A0 #2 (153.00 / kBtu/h) (153.00 kBtu/h)	AH 2/AHU 2A 184.80 ( 82 %) / ( 0 %) kBtu/h190.00 ( 80 %) kBtu/h AH 2/AHU 2 184.80 ( 82 %) / ( 0 %) kBtu/h ( 0 %) kBtu/h

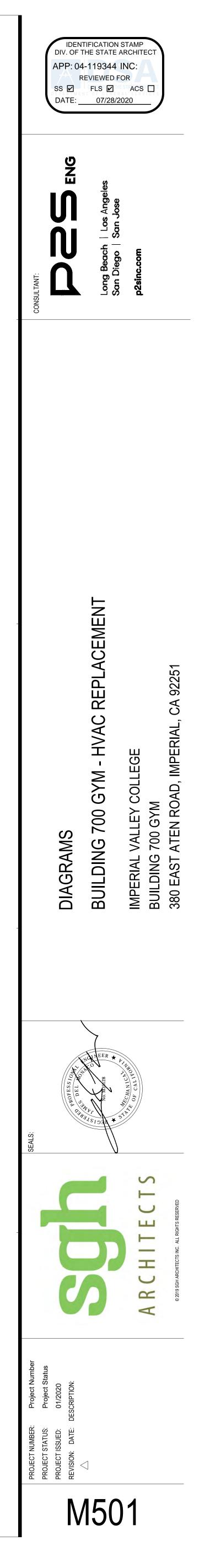


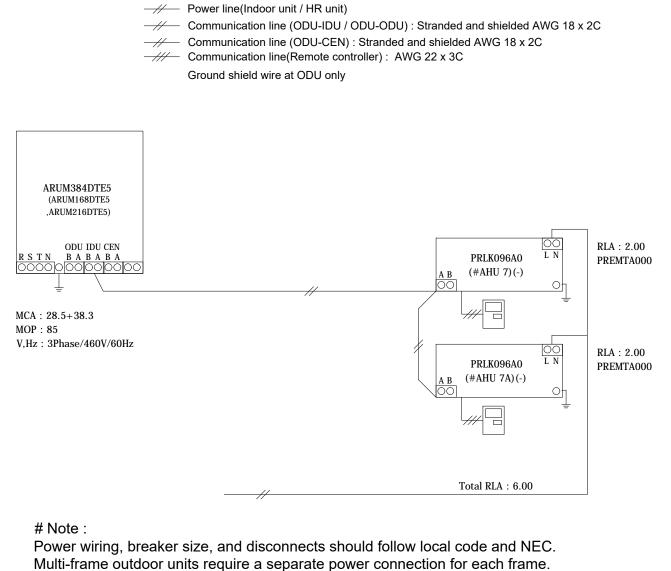






2 CU-1 PIPING DIAGRAM NO SCALE





-//// Power line(Outdoor unit)

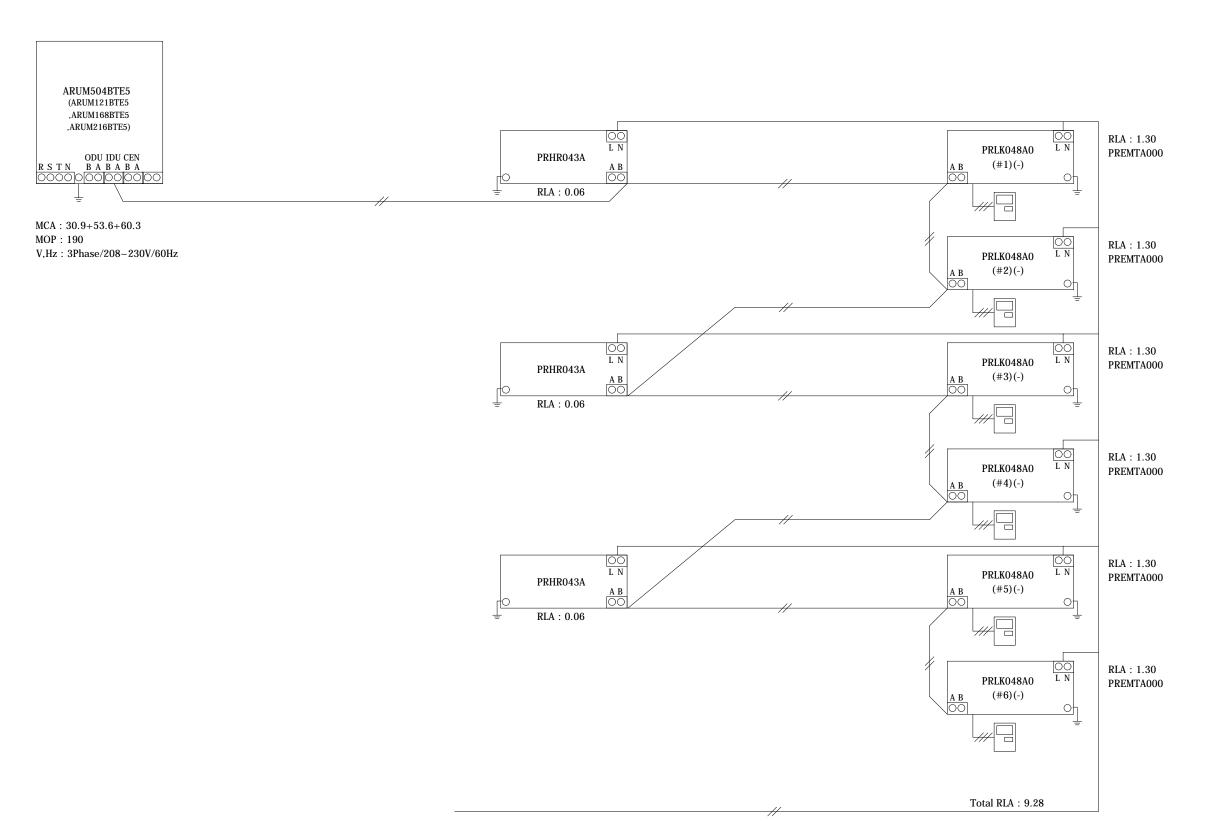
Multi-frame outdoor units require a separate power connection for each frame. Refer to the most up-to-date submittal sheets for applicable electrical data. See EEV Kit Installation Manual for wiring.



### # Note : Power wiring, breaker size, and disconnects should follow local code and NEC. Multi-frame outdoor units require a separate power connection for each frame. Refer to the most up-to-date submittal sheets for applicable electrical data. See EEV Kit Installation Manual for wiring.

-//// Power line(Outdoor unit) —//— Power line(Indoor unit / HR unit) —//— Communication line (ODU-IDU / ODU-ODU) : Stranded and shielded AWG 18 x 2C —//— Communication line (ODU-CEN) : Stranded and shielded AWG 18 x 2C -/// Communication line(Remote controller) : AWG 22 x 3C

Ground shield wire at ODU only



# 6 CU-6 WIRING DIAGRAM

NO SCALE

# Note : Power wiring, breaker size, and disconnects should follow local code and NEC. Multi-frame outdoor units require a separate power connection for each frame. Refer to the most up-to-date submittal sheets for applicable electrical data. See EEV Kit Installation Manual for wiring.

	Power line(Outdoor unit)
_//	Power line(Indoor unit / HR unit)

—//— Communication line (ODU-IDU / ODU-ODU) : Stranded and shielded AWG 18 x 2C -//- Communication line (ODU-CEN) : Stranded and shielded AWG 18 x 2C

\_\_\_\_\_

-/// Communication line(Remote controller) : AWG 22 x 3C Ground shield wire at ODU only

ARUM312DTE5 (ARUM096DTE5 ,ARUM216DTE5) ODU IDU CEN RLA: 2.00 RSTN BABABA PRLK096A0 PREMTA000 (#1)(-) Ŧ MCA: 16.4+38.3 MOP : 75 V,Hz : 3Phase/460V/60Hz RLA: 2.00 PRLK096A0 (#2)(-) PREMTA000 

# CU-5 WIRING DIAGRAM

NO SCALE

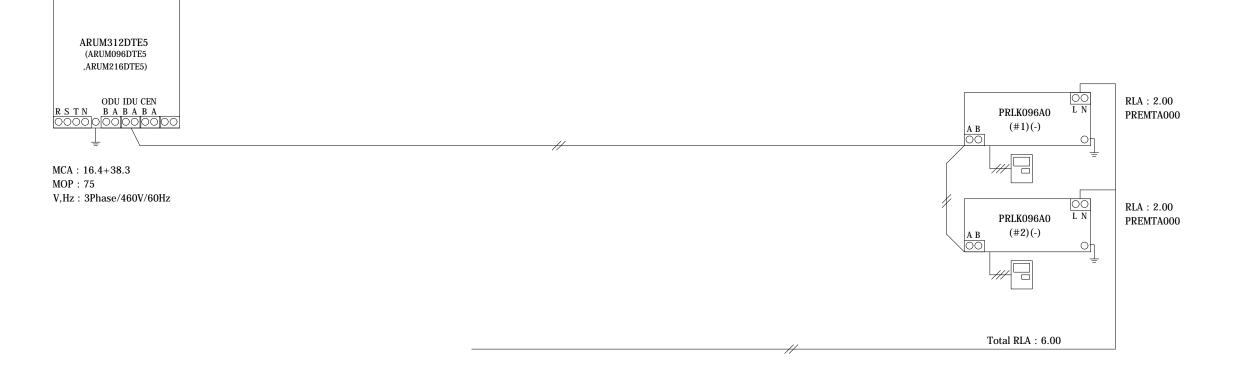
5

# Note : Power wiring, breaker size, and disconnects should follow local code and NEC. Multi-frame outdoor units require a separate power connection for each frame. Refer to the most up-to-date submittal sheets for applicable electrical data. See EEV Kit Installation Manual for wiring.

### -//// Power line(Outdoor unit)

—//— Power line(Indoor unit / HR unit) —//— Communication line (ODU-CEN) : Stranded and shielded AWG 18 x 2C -/// Communication line(Remote controller) : AWG 22 x 3C Ground shield wire at ODU only

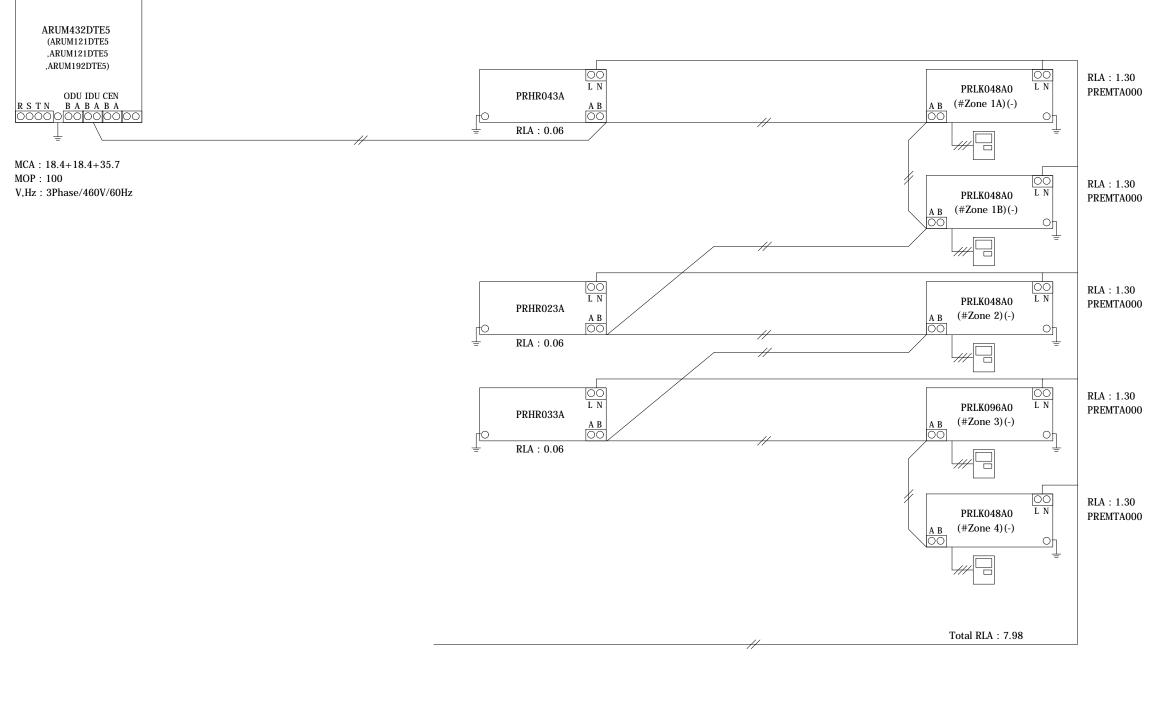
Total RLA : 6.00

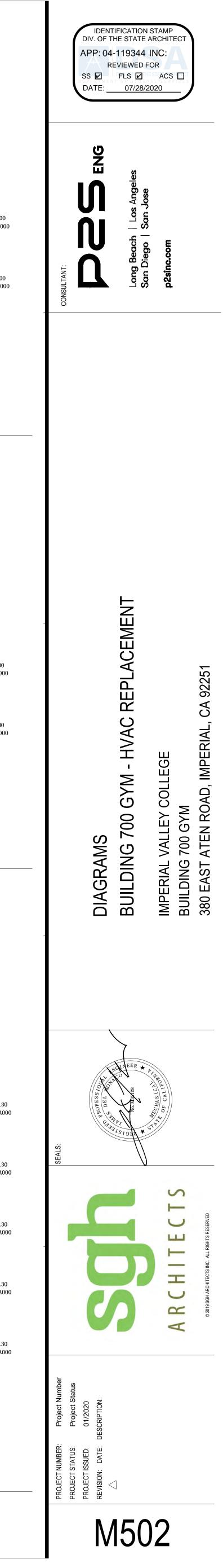


# CU-4 WIRING DIAGRAM

NO SCALE

	# Note : Power wiring, breaker size, and disconnects should follow local code and NEC. Multi-frame outdoor units require a separate power connection for each frame. Refer to the most up-to-date submittal sheets for applicable electrical data. See EEV Kit Installation Manual for wiring.	-//- -//			c
l M M	ARUM312DTE5 (ARUM096DTE5 ,ARUM216DTE5) ODU IDU CEN RSTN BABABA OOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO			PRLK096A0 $L$ N A B $(#1)(-)$ $\bigcirc$ PRLK096A0 $L$ N A B $(#2)(-)\bigcircTotal RLA : 6.00$	RLA : 2.00 PREMTA000 RLA : 2.00 PREMTA000
3	CU-3 WIRING DIAGRAM NO SCALE	-// -// -//		ODU) : Stranded and shielded AWG 18 x 2 nded and shielded AWG 18 x 2C ) : AWG 22 x 3C	c
⊆ M M	ARUM312DTE5 (ARUM096DTE5) ODU IDU CEN <u>AS T N B A B A B A</u> DOODOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO			PRLK096A0 L N A B (#1)(-)	RLA : 2.00 PREMTA000 RLA : 2.00 PREMTA000
2	CU-2 WIRING DIAGRAM No scale			Total RLA : 6.00	
	<ul> <li># Note :</li> <li>Power wiring, breaker size, and disconnects should follow local code and NEC.</li> <li>Multi-frame outdoor units require a separate power connection for each frame.</li> <li>Refer to the most up-to-date submittal sheets for applicable electrical data.</li> <li>See EEV Kit Installation Manual for wiring.</li> </ul>	-#- -#- -#-	<ul> <li>Power line(Outdoor unit)</li> <li>Power line(Indoor unit / HR unit)</li> <li>Communication line (ODU-IDU / ODU</li> <li>Communication line (ODU-CEN) : Stration</li> <li>Communication line(Remote controlle</li> <li>Ground shield wire at ODU only</li> </ul>		2C





Utility Demand/Response (values TBD by Imperial County Irrigation District)

- Upon receiving a signal from the utility demand/response signal via BACnet/IP, the DDC controller shall Raises the cooling temperature and lower the heating temperature setpoint by \_\_\_\_°F.
- Lower the fan speed by \_\_\_\_ %. Lower the LG capacity by \_\_\_%
- LG ODU Capacity Control:
- The KMC DDC System shall command the LG Capacity Control via a 0-10v hardwired analog output connected to the LG ODU as a Universal Input. Capacity control shall re-write target refrigerant temperature to the LG outdoor unit based upon LG furnished documentation.

### BUILDING MANAGEMENT SYSTEM REQUIREMENTS VIA BACnet IP INTERFACE WITH LG VRF CONTROLLER

- The VRF interface for use in BACnet IP shall provide the BACnet KMC building management
- system the capability to command and display the setpoint temperature in 1 DEG F increments with a range as defined in the VRF points list. Final display of room temperature information at
- the BMS shall be adjustable. • Error status generated by the indoor units and outdoor units shall be able to be displayed on the KMC BASview BACnet building management system in the event of system abnormality/error per capabilities of LG VRF system.

The following (but not limited to) basic operation shall be provided via the BACnet interface from VRF to BMS and shall be programmed by the installing controls contractor:

- 1. The interface for use in BACnet IP will provide the owner requested objects that can be
- monitored/controlled via building management system per LG system capabilities. 2. The building management system shall be programmed to support the following scheduling capability:
  - a. Each scheduled event shall include on/off & operation mode.
  - b. Setup (cooling) and setback (heating) setpoints when unit is off (unoccupied) c. An override shall be provided for use enabling indoor unit operation during the
  - unoccupied period by the KMC BACnet building management system programming. d. Changeover to cooling mode shall occur when the room temperature is great than or
  - equal to the cooling setpoint differential. e. Changeover to heating mode shall occur when room temperature is less than or equal to the heating setpoint differential.

### VRF FAN COIL SEQUENCE OF OPERATION

• During normal operation, all equipment controlled by the BMS shall be set up to operate based on the owner provided schedule. From the KMC BACview BMS workstation, the operator has the ability to override normal operation. Any alarms generated at the BMS shall provide a visual alarm.

LG VRF SELF-CONTAINED CONTROLS:

• The LG VRF System operates under its own internal control system. The LG system accepts DDC commands via BACnet IP including zone/AHU Discharge Air Temperature setpoint

# PAGE 3

command, Occupied & Unoccupied scheduling, capacity control input and additional read/write data • The LG System exposes & provides date via BACnet IP. Data to include, although not limited to: LG System Alarms, LG System/component status, operational feedback & additional data as requested.

### DDC System Control:

- System

### Building 700 System Enable:

- Coil Kits to "Run Mode".

- AHU-1 thru 7 Supply Fan Speed Control:
- cooling/heating load demand.

### AHU 1 & 7 Zone Control:

- occupied setpoints.
- requirements).
- required setpoint.
- well as the OWS graphic depiction.

٠	Each Gymnasium AHU contro communicate via CAT-6 Netw NETSENSOR includes an on- LCD readout, Override button
•	The override function shall op
During	Occupied Mode
1.	Upon a call for Occupancy, ei AHU's 2, 3, 4 & 5 shall all be a
2.	
3.	
4.	
5.	
6.	
7.	
8.	
Demar	nd Control Ventilation (All Zones
•	If any of the zone carbon diox the economizer dampers will I dilution levels are satisfied to <u>Multizone DCV Control</u> : In the (1000ppm adjustable), the Mu air for the benefit of all zones
<u>AHU A</u>	irFlow Measuring Stations
•	Outside Air Intake: DDC Syste the Ebtron Outside Air Measu Each AHU includes up to (4) i Monitoring via transducer and
<u>AHU F</u>	ilter Loading Alarm
•	AHU Filter Differential Pressu filter loading exceeding the ac
Exhau	st Fans
•	EF-1: shall be interlocked to s EF-2 thru 6: Exhaust fans sha Occupied & Unoccupied Build The DDC System shall monito An Operator Workstation gene enable/disable DDC command

PAGE 4

### DDC SYSTEM SEQUENCE OF OPERATION

• The existing KMC DDC System and BASview Web Operator Workstation Servers (updated CH-2) is the campus standard and controls all Campus Buildings HVAC, lighting, mechanical yards etc. IVC Building 700 Gymnasium shall be an extension of the Existing BAS, Inc. KMC BASview DDC

 All Web Based & local commands for the systems identified below shall be accessible via the existing Campus-Wide, internet accessible DDC System by Building Automation Systems, Inc. Modifications to the existing Building 700 Web Server Graphics are inclusive of this project and shall be performed by Building Automation Systems, Inc. personnel.

• Per CH-2 Webserver, BASview Operator Workstation scheduling commands, the KMC DDC scheduled Occupied Mode; The DDC System shall enable the AHU fan and the LG Outdoor &

 Upon the DDC System scheduled UnOccupied Mode schedule; the AHU fan & LG Systems shall be commanded to "OFF". Unoccupied Mode allows for system functionality to maintain predetermined after-hours setback temperatures and alternate equipment run status. The DDC System shall allow for zone-by-zone independent operation. In the event (1) zone is calling for occupied, the remaining zone dampers shall remain closed for supply airflow.

• The AHU ECM Fan Speed Control shall be controlled via a 0-10v signal from the DDC System. AHU's shall have multiple fans each requiring 0-10v-speed control via the local DDC Controller. AHU-2 Thru 5 & 7: The DDC System shall control the fan speed proportionally to the • AHU-1 & 6: THE DDC System shall control the fan speed proportionally to the average zone

damper commanded position. (with initial setup configuration from the TAB contractor).

 The KMC DDC System monitors each zone via a zone NETSENSOR (per requirements). Zone setpoints are determined via the BASview Operator Workstation and user adjustable zone • Zones shall have a user adjustable (and OWS) setpoint control (NETSENSORS as per

 The KMC DDC System shall command the LG Zone Kit (via BACnet IP) to the requested zone temperature setpoint and the KMC DDC shall modulate the zone damper actuators accordingly. The LG Zone Kit shall modulate the Zone Coil Kit to maintain the BACnet IP communicated

 The KMC DDC System shall monitor the zone duct Discharge Air Temperature located near the zone damper. The wall mounted zone NETSENSOR functionality includes displaying the DAT as

# PAGE 1

### AHU 2, 3, 4 & 5 Gymnasium Control:

ol includes a dedicated NETSENSOR. Each NETSENSOR shall work Cable with it's respective KMC DDC Controller. Each n-board CO2 sensor, temperature sensor, Multi-line & multi-mode w/password protection & Setpoint adjust w/password protection. perate initially for (1) hour (adjustable at the OWS).

either from the Operator workstation or local AHU-2 Override Button; activated to "Run Mode" serving a single gymnasium zone. d zone setpoint information via BACnet IP (Ethernet) to the LG AHU's perature. AHU's 2, 3, 4 & 5 ECM Supply fan speed control (0-10v) to control the proportionally to the cooling/heating load demand. Air, Return Air and Supply Air dampers to ensure adequate DCV

all monitor CO2 concentration and activate Demand Control ngs exceeding 1000ppm. S Alarms upon failure of an AHU to operate during a DDC command

larms to maintenance personnel upon receiving alarms from the LG ctivated via AHU Manufacturers' internal, factory wired procedures.

es, All AHU's)

oxide (CO2) sensor levels exceed a concentration of 1000 ppm (Adj.), I be commanded to open 10% for five (5) minutes until all zone CO2 b levels below 1000ppm. he event a single zone exceeds the allowable CO2 ppm limitation Iultizone Outside Air Damper shall modulate open, increasing fresh associated with the Multizone AHU.

stem shall graphically display each AHU's OSA intake in CFM from uring Stations. individual supply fans. Each Fan shall include CFM Airflow d shall be individually displayed on the AHU OWS graphic.

sure switch shall trigger an alarm at the Operator Workstation upon djustable setpoint as determined by the TAB contractor.

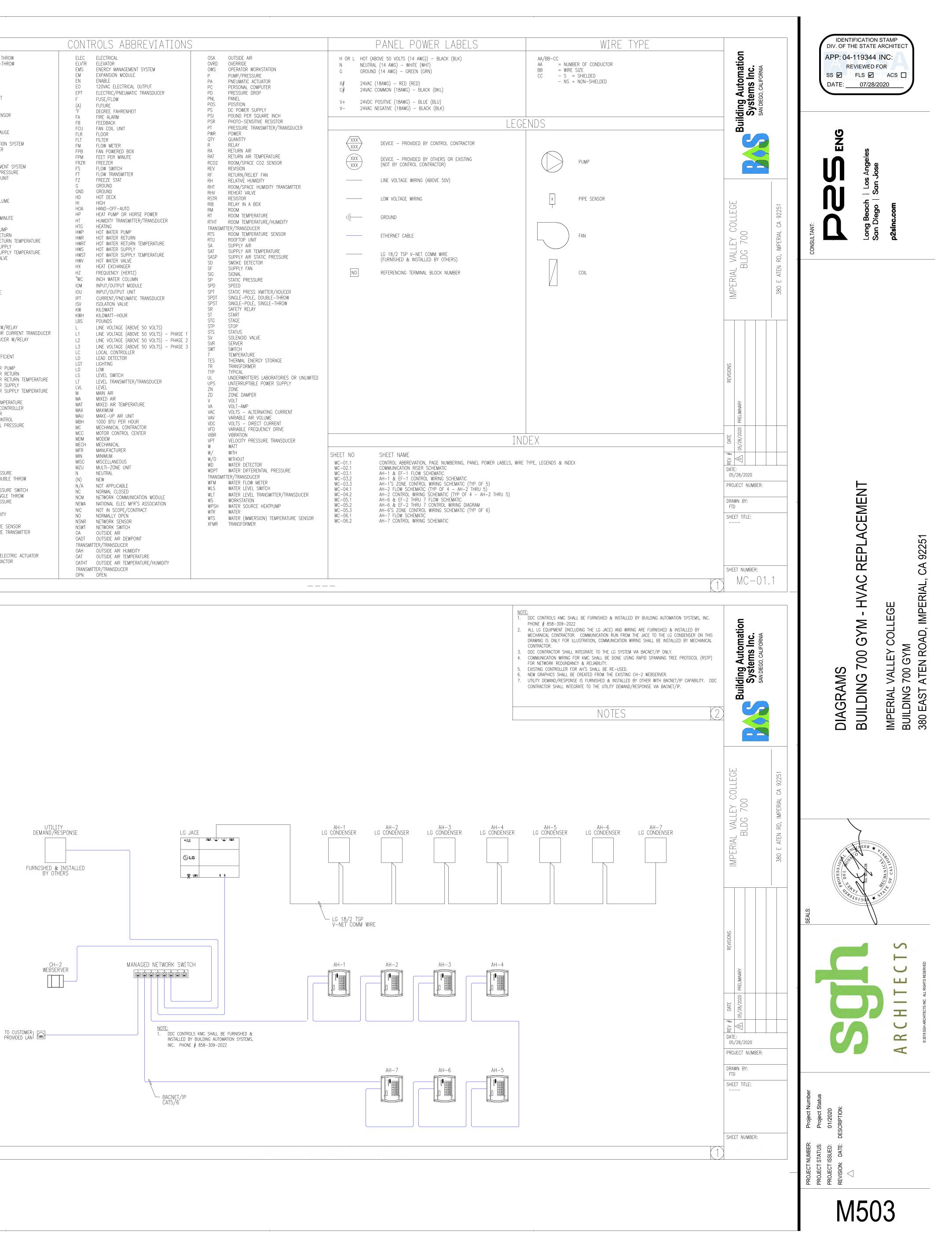
start and stop along with AHU-1 start/stop command. hall be enabled & disabled via the KMC DDC System per the Iding Schedule. itor exhaust fan status.

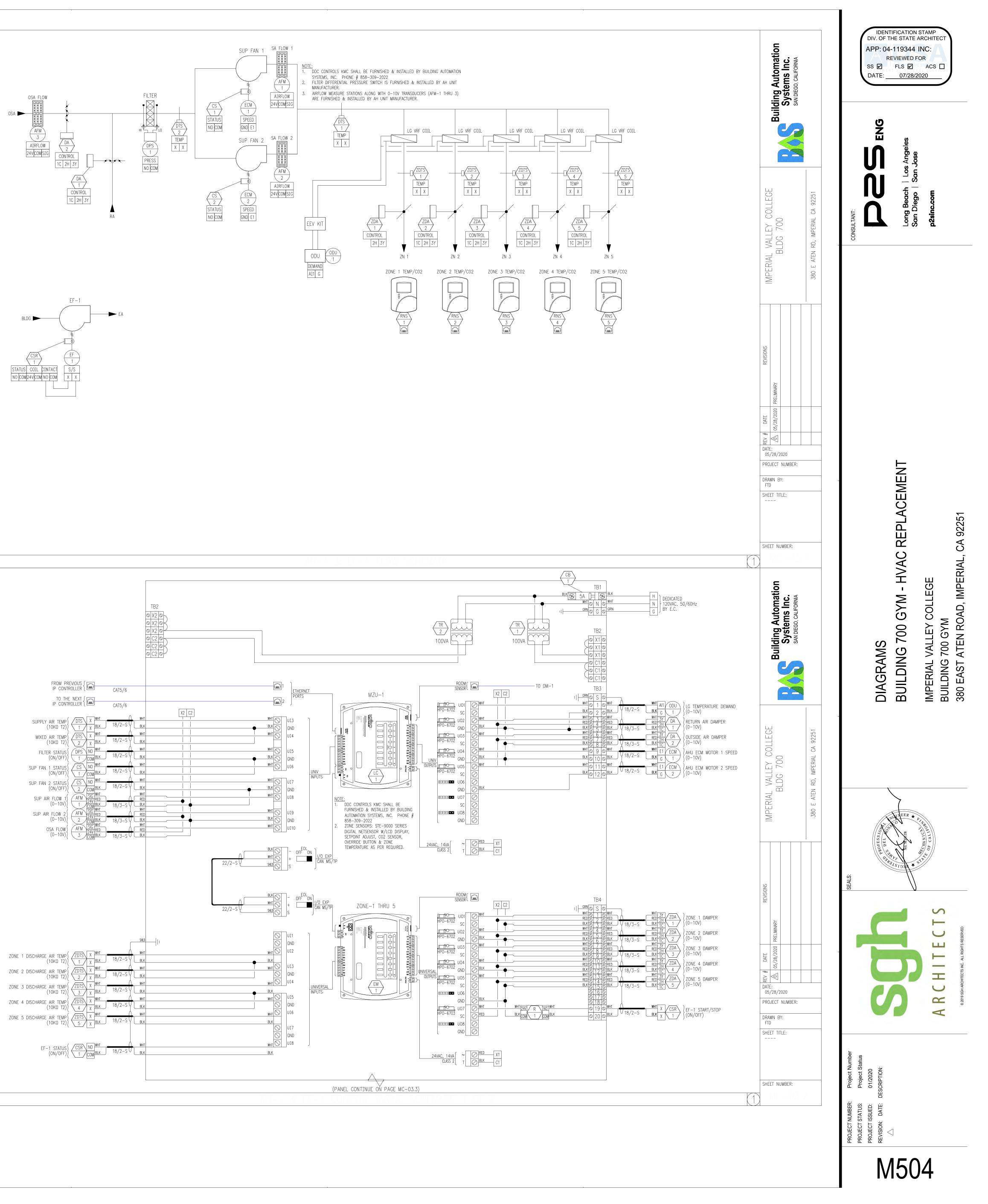
nerated alarm shall be activated upon a conflict between the and and the subsequent equipment status.

PAGE 2

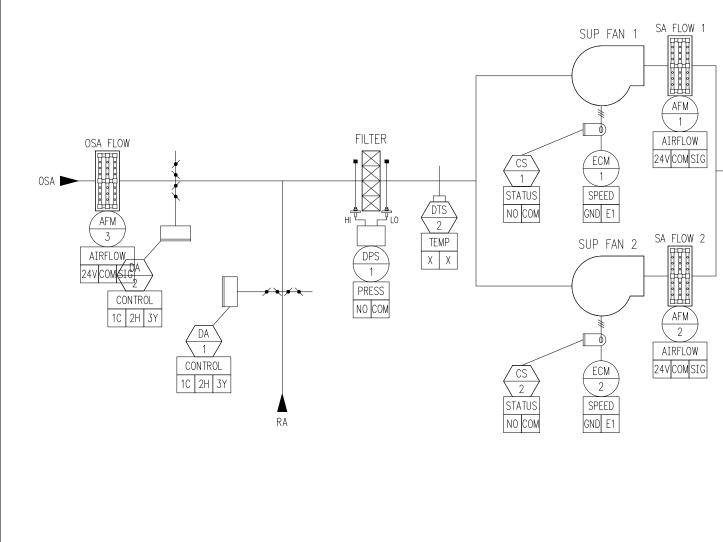
ZDDT	
3PDT 4PDT	3-POLE, DOUBLE THROW
AC	4-POLE, DOUBLE-THROW AIR CONDITIONING
AC	ADJUSTABLE
AFLW	AIR FLOW
AFM	AIR FLOW METER
AFS	AIR FLOW SWITCH
AHU	AIR HANDLING UNIT
Al	ANALOG INPUT
ALM	ALARM
ALS	AMBIENT LIGHT SENSOR
AO	ANALOG OUTPUT
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BD	BACKDRAFT DAMPER
BKR BLDG	BREAKER BUILDING
BLDG	BUILDING MANAGEMENT SYSTEM
BSP	BUILDING STATIC PRESSURE
BTU	BRITISH THERMAL UNIT
BPV	BYPASS VALVE
C	CONTRACTOR
°C	DEGREE CELSIUS
CAV	CONSTANT AIR VOLUME
СВ	CIRCUIT BREAKER
CD	COLD DECK
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHWP	CHILLED WATER PUMP
CHWR	CHILLED WATER RETURN TEMPERATURE
CHWRT	CHILLED WATER RETURN TEMPERATURE
CHWS CHWST	CHILLED WATER SUPPLY CHILLED WATER SUPPLY TEMPERATURE
CHWV	CHILLED WATER VALVE
CLG	COOL
CLS	CLOSE
CMD	COMMAND
CNFG	CONFIGURATION
CTRL	CONTROL
CO1	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COM	COMMON
СОММ	COMMUNICATION
CONT	CONTINUE
CONT CS	CONTINUE CURRENT SWITCH
CONT CS CSR	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY
CONT CS CSR CT	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER
CONT CS CSR CT CTR	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY
CONT CS CSR CT CTR CTR	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER
CONT CS CSR CT CTR	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT
CONT CS CSR CT CTR CTR CU	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER
CONT CS CSR CT CTR CTR CU CV CV CV CWP	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP
CONT CS CSR CT CTR CTR CU CV CV CV CWP CWR	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN
CONT CS CSR CT CTR CTR CU CV CV CV CWP CWR	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE
CONT CS CSR CT CTR CTR CU CV CV CV CWP CWR CWRT CWS	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE CONDENSER WATER SUPPLY
CONT CS CSR CT CTR CTR CU CV CV CV CWP CWR CWRT CWS CWST	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY
CONT CS CSR CT CTR CU CV CV CV CWP CWR CWR CWRT CWS CWST DA	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY TEMPERATURE DISCHARGE AIR
CONT CS CSR CT CTR CU CV CV CV CWP CWR CWRT CWS CWST DA DAT	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY TEMPERATURE DISCHARGE AIR DISCHARGE AIR TEMPERATURE
CONT CS CSR CT CTR CU CV CV CV CWP CWR CWRT CWS CWST DA DAT	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY DISCHARGE AIR DISCHARGE AIR TEMPERATURE DISCHARGE AIR TEMPERATURE DISCHARGE AIR TEMPERATURE
CONT CS CSR CT CTR CU CV CV CV CWP CWR CWRT CWS CWST DA DAT DBC DCO2	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY DISCHARGE AIR DISCHARGE AIR TEMPERATURE DISCHARGE AIR TEMPERATURE
CONT CS CSR CT CTR CU CV CV CV CWP CWR CWRT CWS CWST DA DAT	CONTINUE CURRENT SWITCH CURRENT SWITCH W/RELAY COOLING TOWER OR CURRENT TRANSDUCER CURRENT TRANSDUCER W/RELAY CENTER CONDENSING UNIT VALVE FLOW COEFFICIENT CONTROL VALVE CONDENSER WATER PUMP CONDENSER WATER RETURN CONDENSER WATER RETURN CONDENSER WATER RETURN TEMPERATURE CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY CONDENSER WATER SUPPLY DISCHARGE AIR DISCHARGE AIR TEMPERATURE DISCHARGE AIR TEMPERATURE DISCHARGE AIR TEMPERATURE
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JNIR	ULS ABBREVIATIONS
ELEC	ELECTRICAL
ELVTR	ELEVATOR
EMS	ENERGY MANAGEMENT SYSTEM
EM	EXPANSION MODULE
EN	ENABLE
EO	120VAC ELECTRICAL OUTPUT
EPT	ELECTRIC/PNEUMATIC TRANSDUCER
F	FUSE/FLOW
(A)	FUTURE
Ϋ́F	DEGREE FAHRENHEIT
FA FB	FIRE ALARM FEEDBACK
	FAN COIL UNIT
FLR	FLOOR
FLT	FILTER
FM	FLOW METER
	FAN POWERED BOX
FPM	FEET PER MINUTE
FRZR FS	FREEZER FLOW SWITCH
FT	FLOW TRANSMITTER
FZ	FREEZE STAT
G	GROUND
GND	GROUND
HD	HOT DECK
HI	HIGH
	HAND-OFF-AUTO HEAT PUMP OR HORSE POWER
	HUMIDITY TRANSMITTER/TRANSDUCER
HTG	HEATING
	HOT WATER PUMP
HWR	HOT WATER RETURN
	HOT WATER RETURN TEMPERATURE
	HOT WATER SUPPLY
	HOT WATER SUPPLY TEMPERATURE
HWV HX	HOT WATER VALVE HEAT EXCHANGER
HZ	FREQUENCY (HERTZ)
"WC	INCH WATER COLUMN
OM	INPUT/OUTPUT MODULE
00	INPUT/OUTPUT UNIT
PT	CURRENT/PNEUMATIC TRANSDUCER
SV	ISOLATION VALVE
KW	KILOWATT
	KILOWATT-HOUR
TR2	POUNDS
	LINE VOLTAGE (ABOVE 50 VOLTS)
	LINE VOLTAGE (ABOVE 50 VOLTS) - PHASE 1
L2	LINE VOLTAGE (ABOVE 50 VOLTS) - PHASE 2 LINE VOLTAGE (ABOVE 50 VOLTS) - PHASE 3
	LINE VOLTAGE (ABOVE SU VOLTS) – PHASE S LOCAL CONTROLLER
	LEAD DETECTOR
LGT	LIGHTING
	LOW
	LEVEL SWITCH
	LEVEL TRANSMITTER/TRANSDUCER
LVL	
	MAIN AIR MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MAU	MAKE-UP AIR UNIT
MBH	1000 BTU PER HOUR MECHANICAL CONTRACTOR MOTOR CONTROL CENTER
MC	MECHANICAL CONTRACTOR
	MOTOR CONTROL CENTER MODEM
MECH	
MFR	MECHANICAL MANUFACTURER
	MINIMUM MISCELLANEOUS
MISC	MISCELLANEOUS
MZU	MULTI-ZONE UNIT
	NEUTRAL
(N) N / A	
NC	NOT APPLICABLE NORMAL CLOSED NETWORK COMMUNICATION MODULE
NCM	NETWORK COMMUNICATION MODULE
NEMA	NETWORK COMMUNICATION MODULE NATIONAL ELEC MFR'S ASSOCIATION NOT IN SCOPE/CONTRACT NORMALLY OPEN
NIC	NOT IN SCOPE/CONTRACT
NO	NORMALLY OPÉN
NSNR	NORMALLY OPEN NETWORK SENSOR NETWORK SWITCH
NSWT	NETWORK SWITCH
OA OADT	OUTSIDE AIR
	ER/TRANSDUCER
ОАН	OUTSIDE AIR HUMIDITY
OAT	OUTSIDE AIR TEMPERATURE
OATHT	OUTSIDE AIR TEMPERATURE/HUMIDITY
	ER/TRANSDUCER
OPN	OPEN





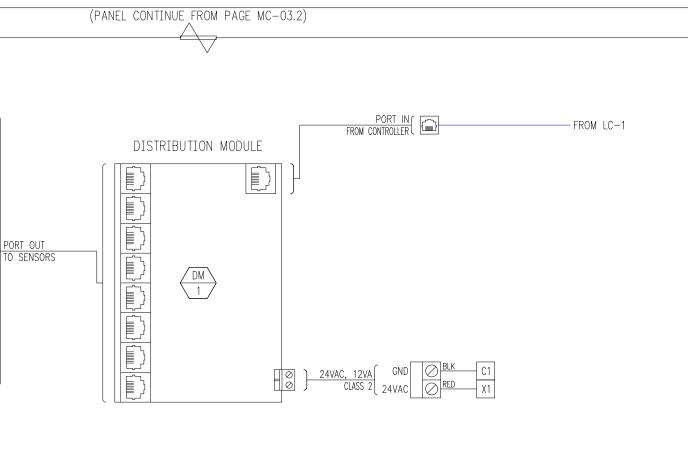
AH-1 &



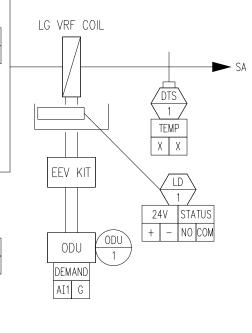
GRAVITY RELIEF DAMPER

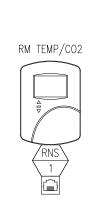
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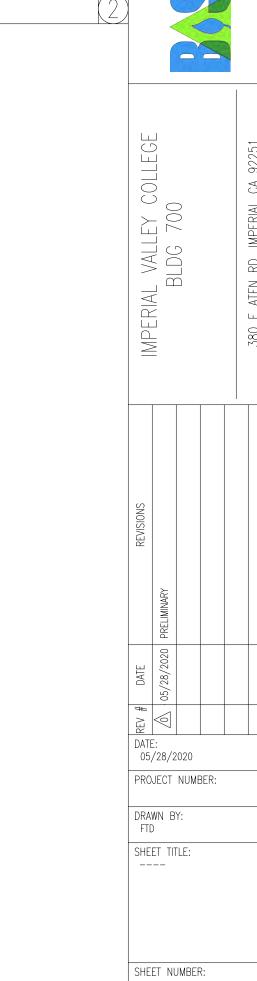


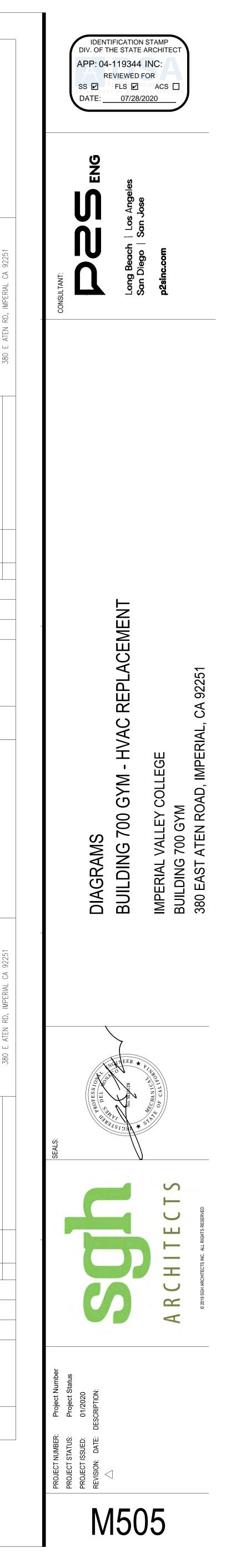
Building Automatio Systems Inc. SAN DIEGO, CALIFORNIA HAL VALLEY COLLEGE BLDG 700 PRELIMIN DATE: 05/28/2020 PROJECT NUMBER: DRAWN BY: FTD SHEET TITLE: SHEET NUMBER: <u>NOTE:</u>
1. DDC CONTROLS KMC SHALL BE FURNISHED & INSTALLED BY BUILDING AUTOMATION SYSTEMS, INC. PHONE # 858-309-2022
2. FILTER DIFFERENTIAL PRESSURE SWITCH IS FURNISHED & INSTALLED BY AH UNIT MANUFACTURER.
3. AIRFLOW MEASURE STATIONS ALONG 0-10V TRANSDUCERS (AFM-1 THRU 3) ARE FURNISHED & INSTALLED BY AH UNIT MANUFACTURER.
4. THE ROOM NETWORK SENSOR (RNS) IS CAPABLE OF PROVIDING OVERRIDE CONTROL WITH THE TIME RANGE OF 2 HOURS (ADJ.) TEMPORARY BYPASS CONTROL DURING UNOCCUPIED PERIOD. <u>.</u> Inc. Inc. Auto って Syl  $\mathbf{m}$ NOTES

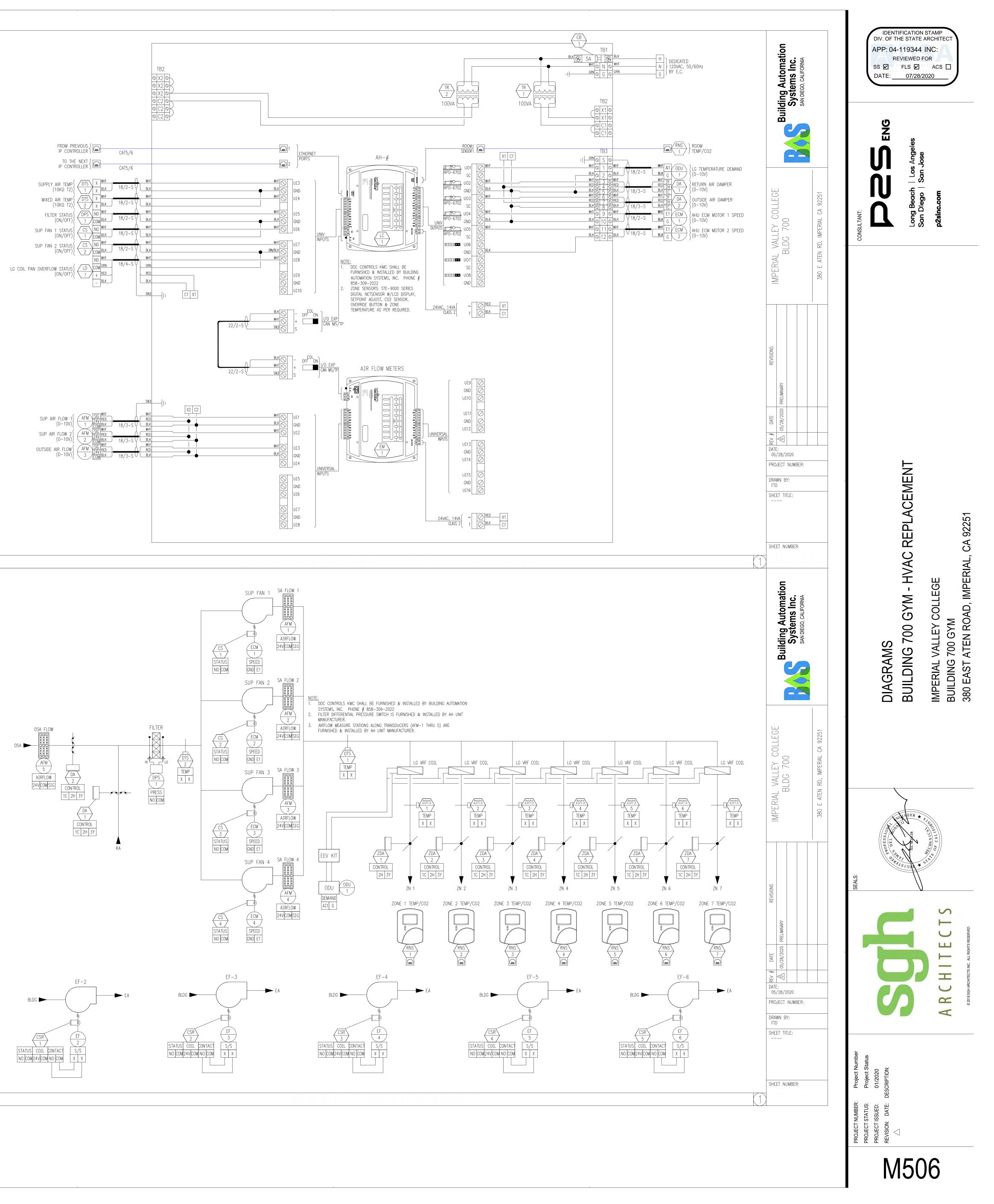




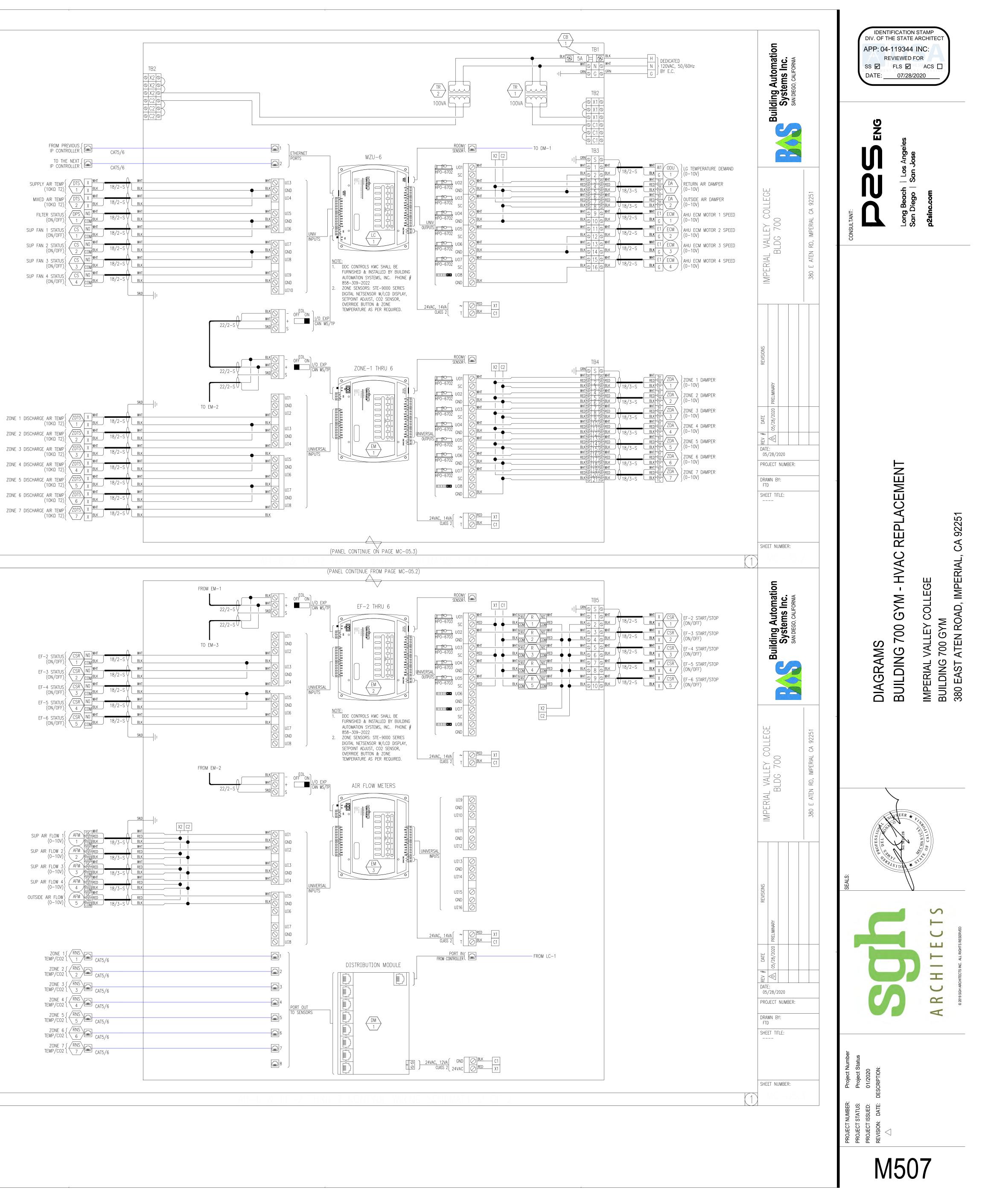


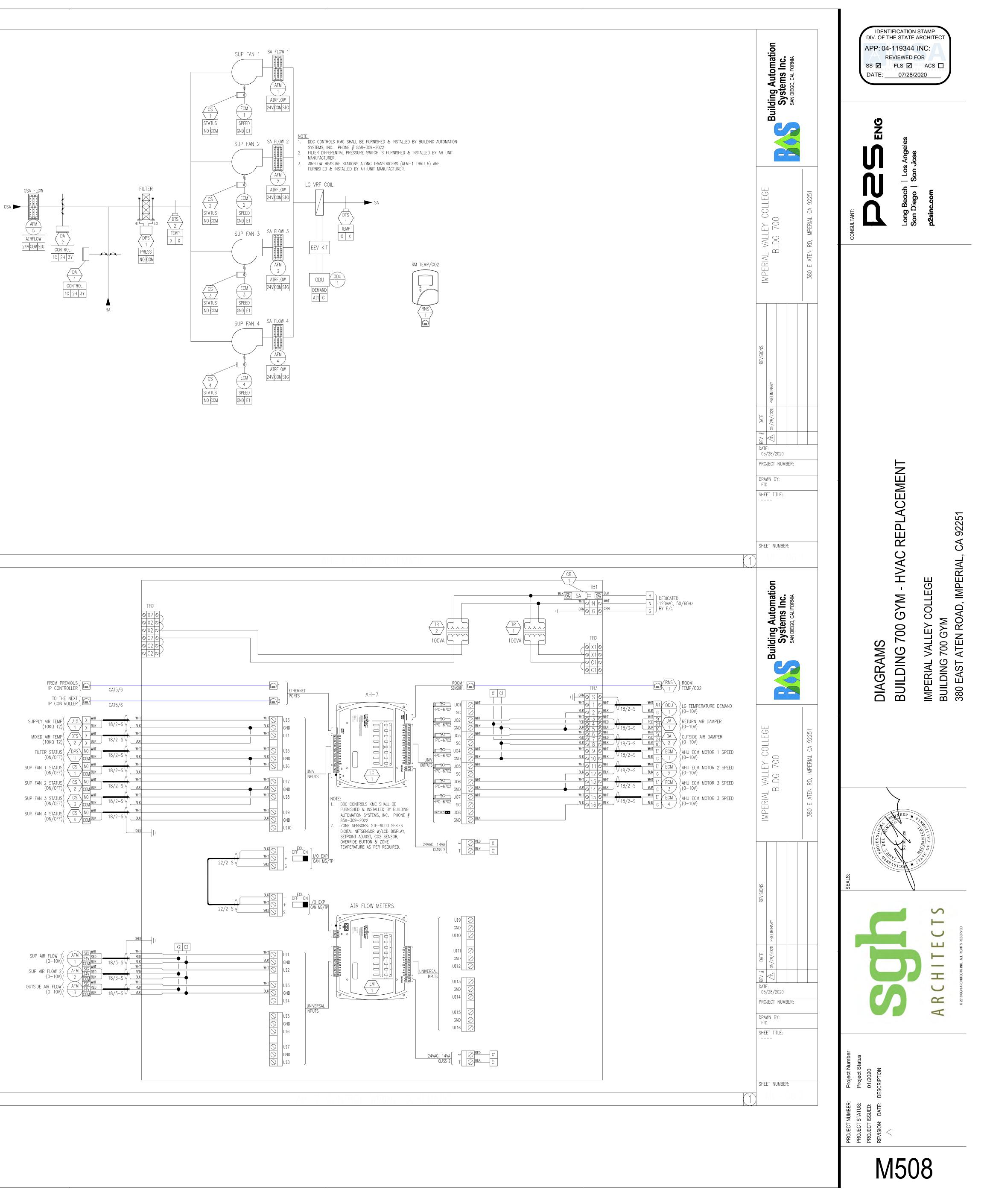


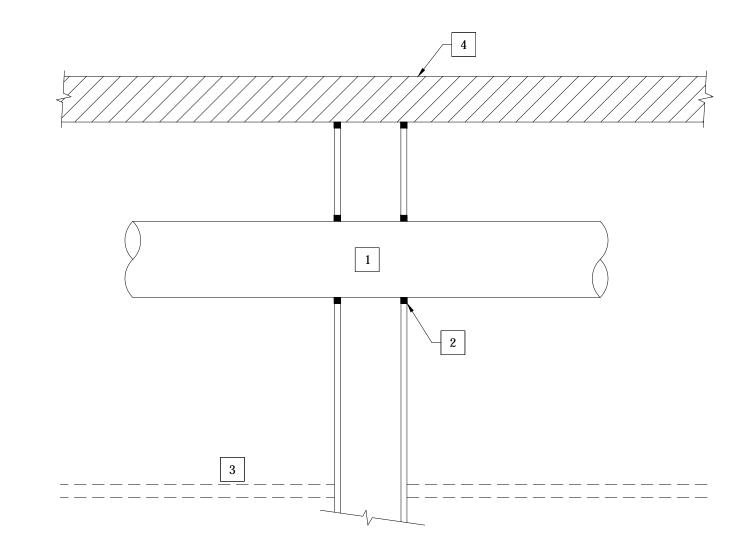












# NOTES

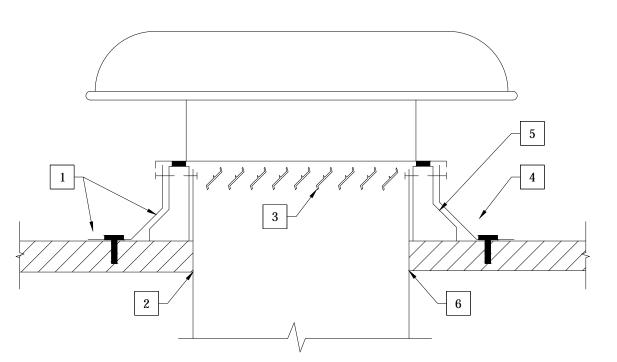
1 DUCT, PIPE OR CONDUIT

2 MAX 1/2" GAP FILLED WITH ACOUSTICAL SEALANT (TYP.)

3 CEILING

4 FLOOR OR ROOF STRUCTURE



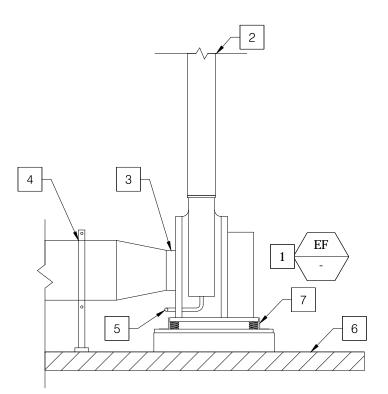


# NOTES

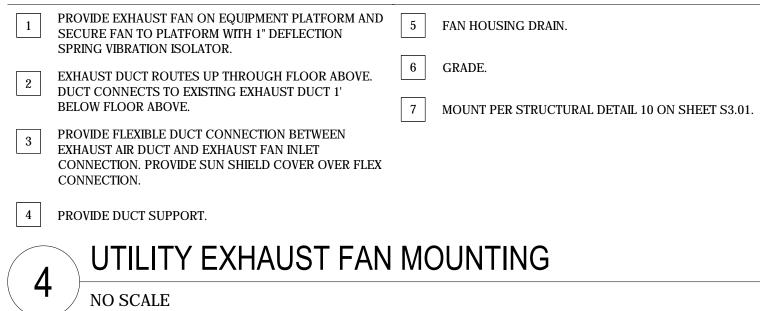
1ROOFING AND FLASHING, REFER TO ARCHITECTURAL<br/>DRAWINGS.

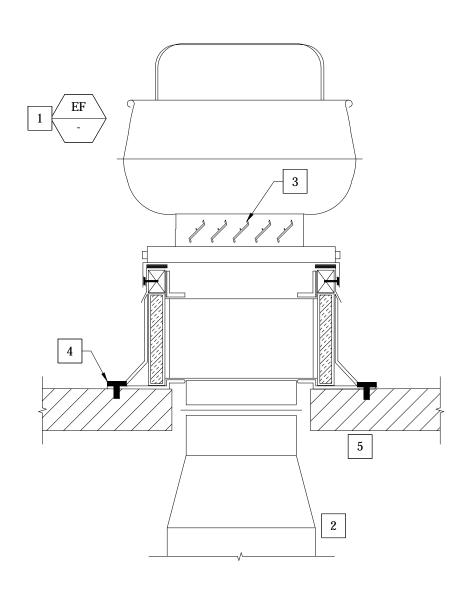
- 2 ROOF OPENING SHALL NOT BE LARGER THAN THE INSIDE DIMENSION OF CURB.
- 3 BACKDRAFT DAMPER
- 4 SEE STRUCTURAL DETAIL 8/S3.01 FOR ANCHORAGE.
- 5 MANUFACTURER'S PREFABRICATED CURB
- 6 FRAMING AT OPENING PER STRUCTURAL DRAWINGS

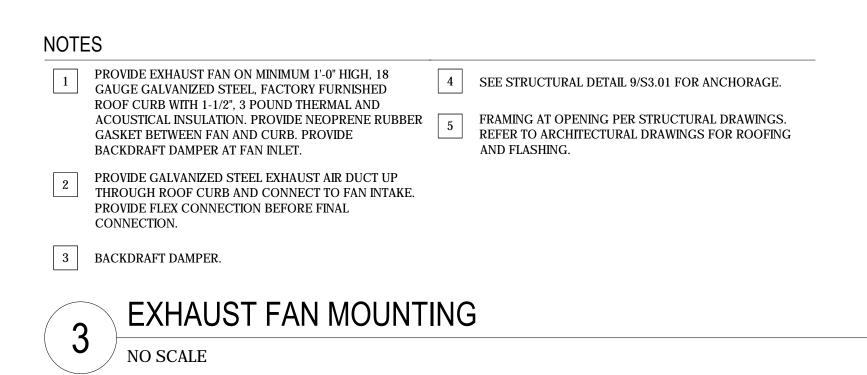


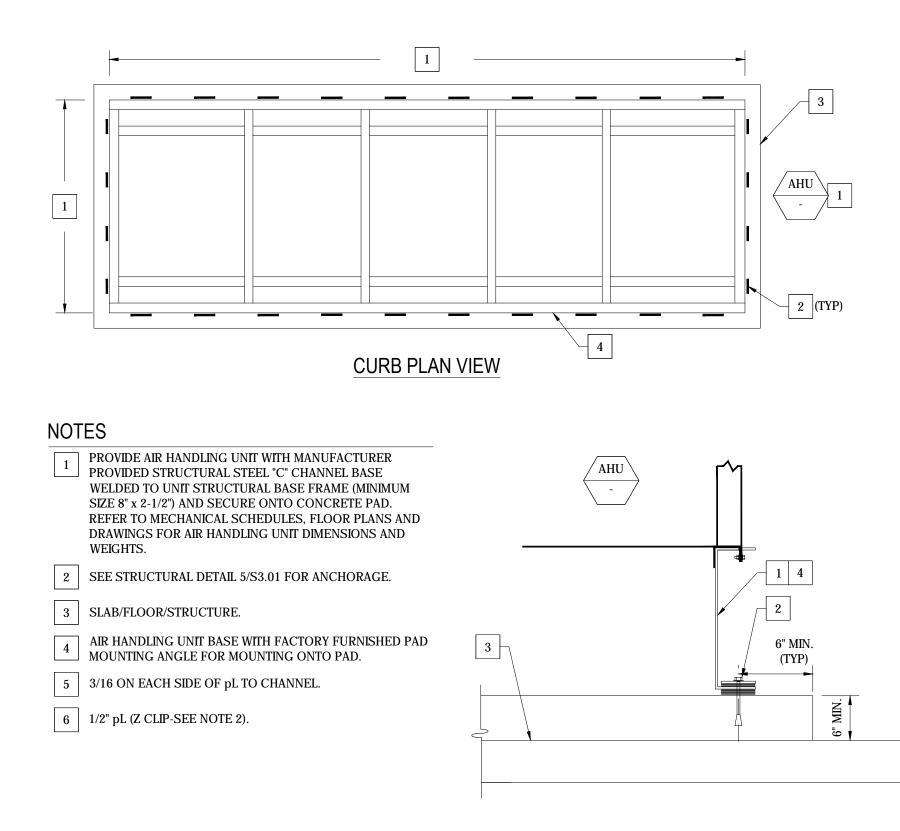


# NOTES

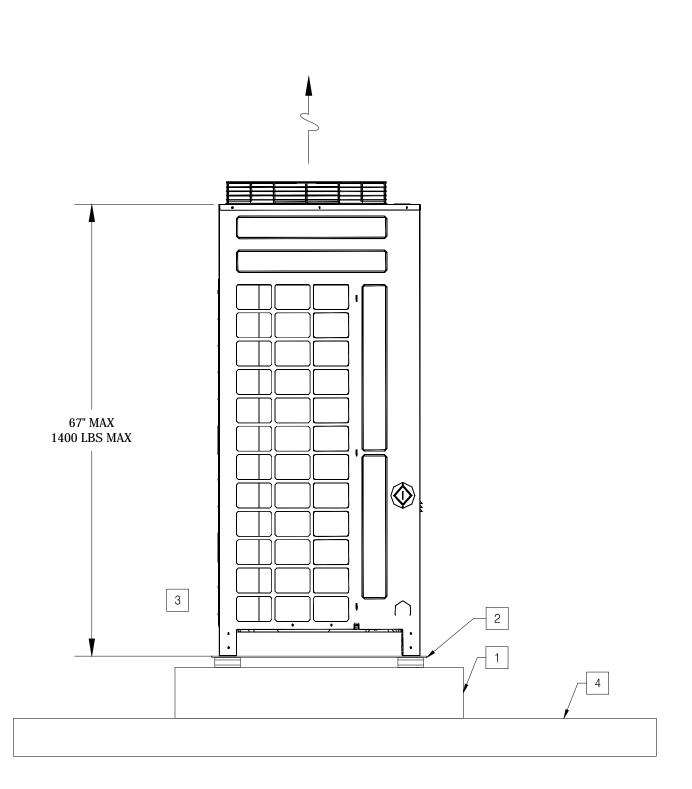








2 AIR HANDLING UNIT MOUNTING DETAIL NO SCALE

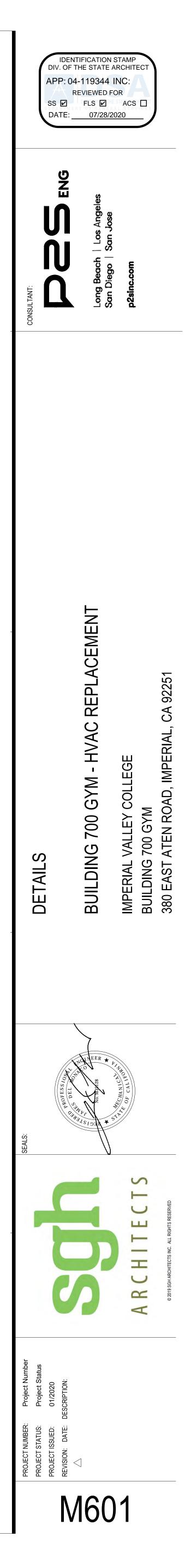


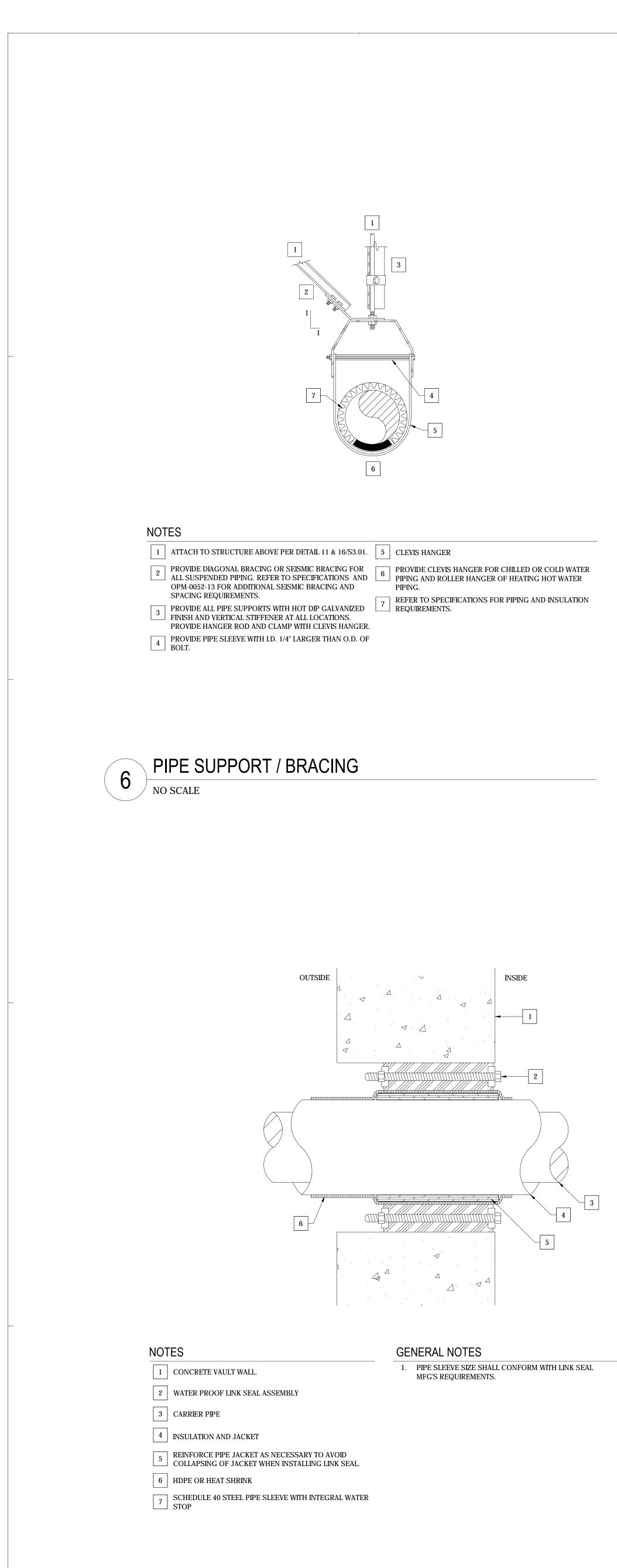
# NOTES

- 1 LEVEL PLATFORM. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
- 2 BASE FRAME MOUNTED ABOVE MASON INDUSTRIES TYPE NK WAFFLE PAD PER STRUCTURAL DETAIL 7 ON SHEET S3.01.
- 3
   ALL PIPING TO CONDENSING UNITS SHALL HAVE FLEXIBLE CONNECTIONS.
- 4 GRADE.

# 1 HEAT RECOVERY UNIT MOUNTED ON GRADE

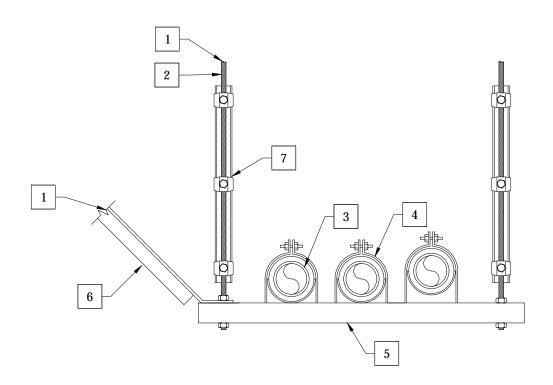
NO SCALE





5 PIPE PENETRATION THROUGH CONCRETE WALL NO SCALE

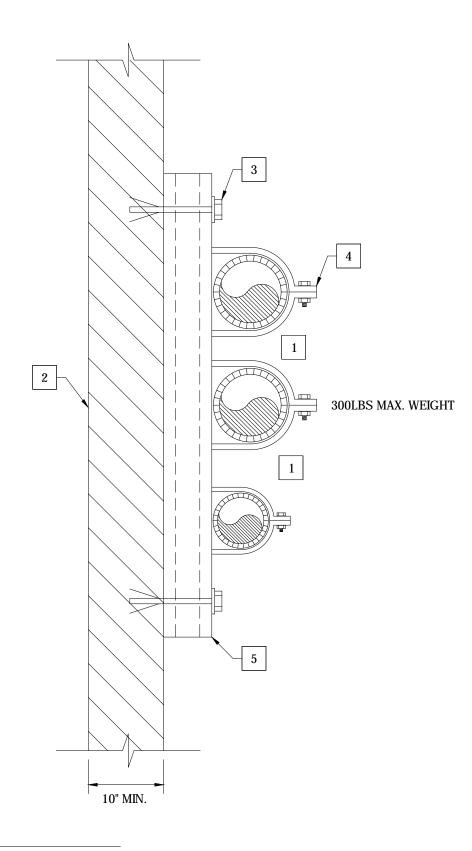
/ NO SCALE



# NOTES

- FOR ATTACHMENT TO ROOF STRUCTURE ABOVE, SEE DETAIL 11 & 16/S3.01. PROVIDE UNISTRUT M2037 SWIVEL CONNECTION OR EQUIVALENT WHEREVER DIAGONAL
- BRACING PER NOTE 6 IS NOT PROVIDED. 2 3/8" DIA THREADED HANGER ROD.
- 3 INSULATED PIPING. MAX QTY (3). MAX 1-1/2" DIAMETER. HANGER SPACING 6 FT OC MAX AND WITHIN 2 FT OF
- DIRECTION CHANGES.
- UNISTRUT P2558 SERIES PIPE CLAMPS INSTALLED 4 OUTSIDE PIPE INSULATION WITH 6 IN LONG GALVANIZED STEEL PIPE INSULATION SHIELD.
- 5 P1000 UNISTRUT. 36" MAX LENGTH.
- PROVIDE DIAGONAL BRACE WHERE REQUIRED TO PREVENT PIPING FROM IMPACTING ADJACENT BUILDING ELEMENTS DURING SEISMIC EVENT. REFER TO SPECIFICATIONS AND OPM-0052-13 FOR ADDITIONAL SEISMIC BRACING AND SPACING REQUIREMENTS.
- THREADED ROD STIFFENER PER 16/S3.01. REQUIRED ONLY WHEN DIAGONAL BRACE IS USED.





# NOTES

-	1	INSULATED PIPES SUPPORTED TO WALL STRUCTURE

- 2 WALL STRUCTURE
- 3 UNISTRUT P100 X 0'-9" WITH 6'-0" MAXIMUM VERTICAL SPACING. PROVIDE (1) 3/8"Ø HILTI KB-TZ WITH 2" EMBED EACH END PER ICC ESR-3785.
- 4 SPLIT TYPE B-LINE BVT OR EQUAL.
- 5 1-5/8" 12-GA STRUT FRAME, 48"O.C.

# PIPE WALL SUPPORT

3 NO SCALE

# CONDENSATE DRAIN PIPE SUPPORT

1 / NO SCALE 9 PROVIDE MASTIC TO MOUNT PIPE SUPPORT SYSTEM TO GRADE.

- 8 GRADE
- 7 H-BLOCK PRE-ENGINEERED PIPE SUPPORT SYSTEM. ONE PIPE PER SUPPORT.
- 6 UNISTRUT CHANNEL
- 2 UNISTRUT PIPE CLAMP

4 PIPE

- 3 INSULATION

- 1 RIGID INSULATION INSERT
- NOTES

- 6 9 8

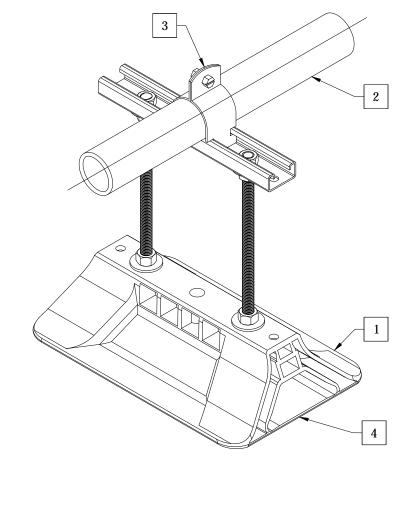
5 PIPE SADDLE

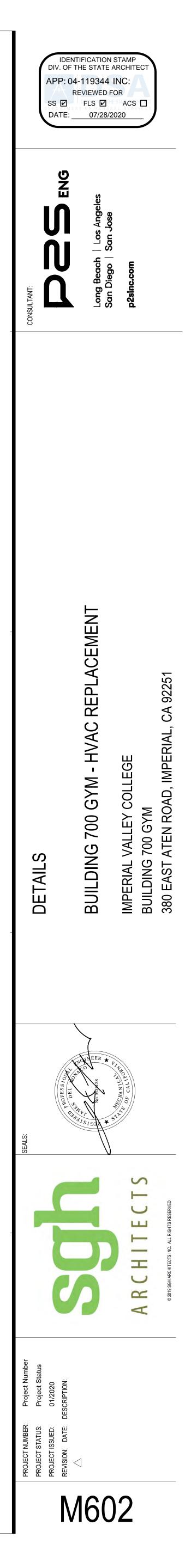
3 4

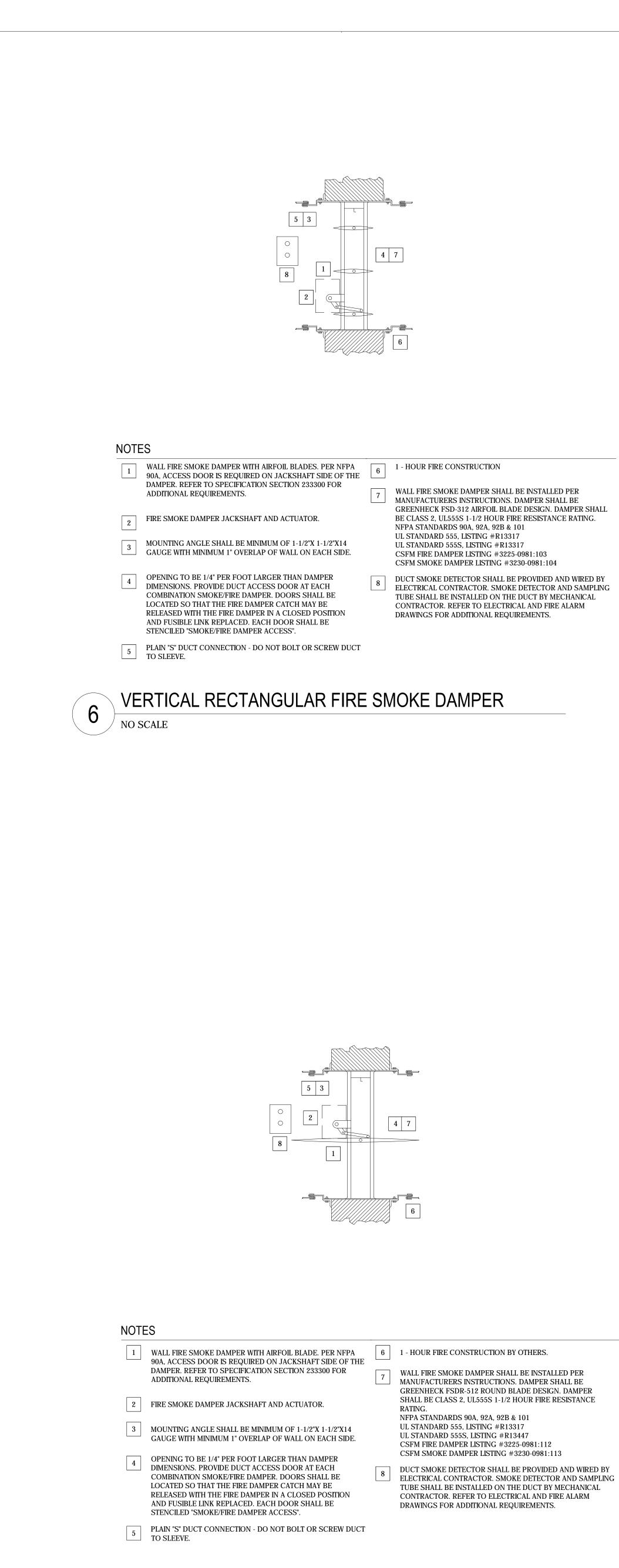
2 / NO SCALE

# CONDENSATE DRAIN PIPE SUPPORT

- 4 MASTIC
- 3 PIPE CLAMP
- 2 PIPE AND/OR CONDUIT. MAXIMUM 10 LB/FT OF WEIGHT PER SUPPORT
- CONDUIT, OR APPROVED EQUAL
- NOTES ERICO CADDY PYRAMID ST SERIES FOR PIPE AND

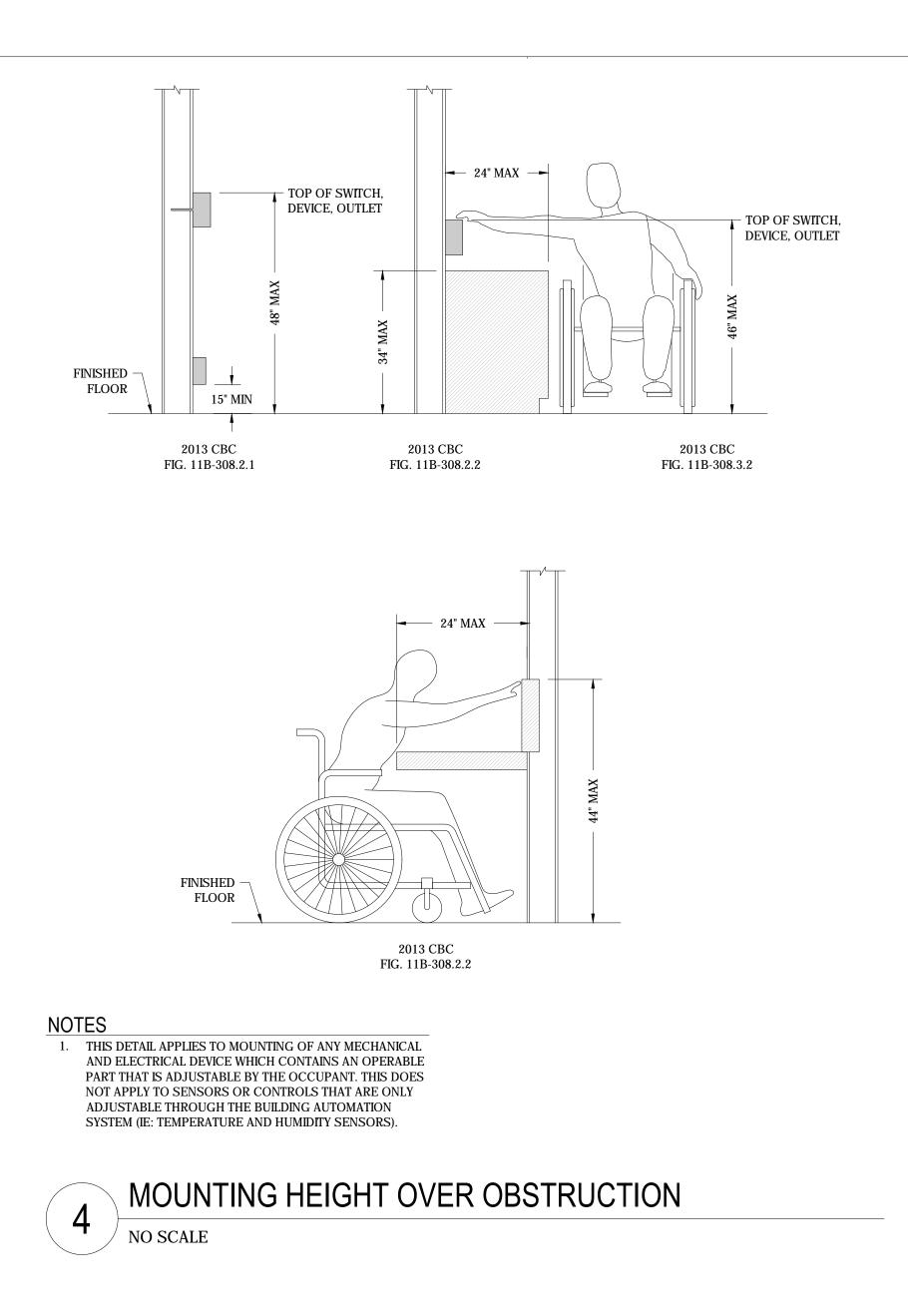


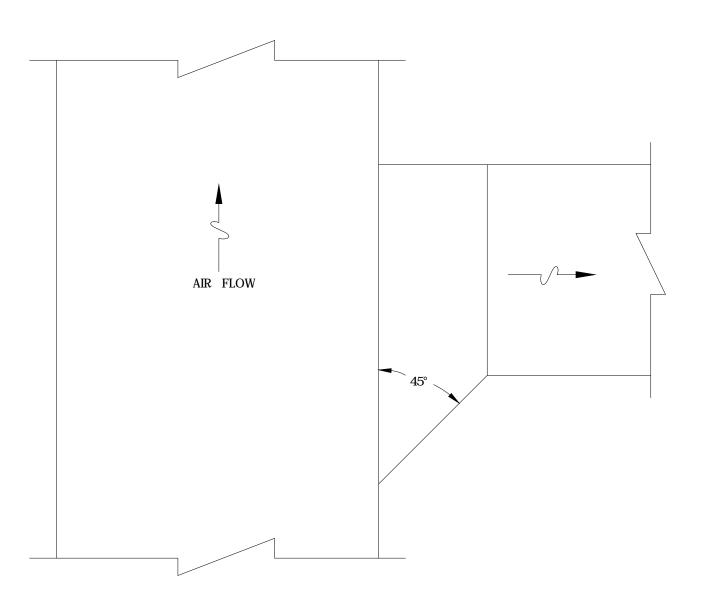




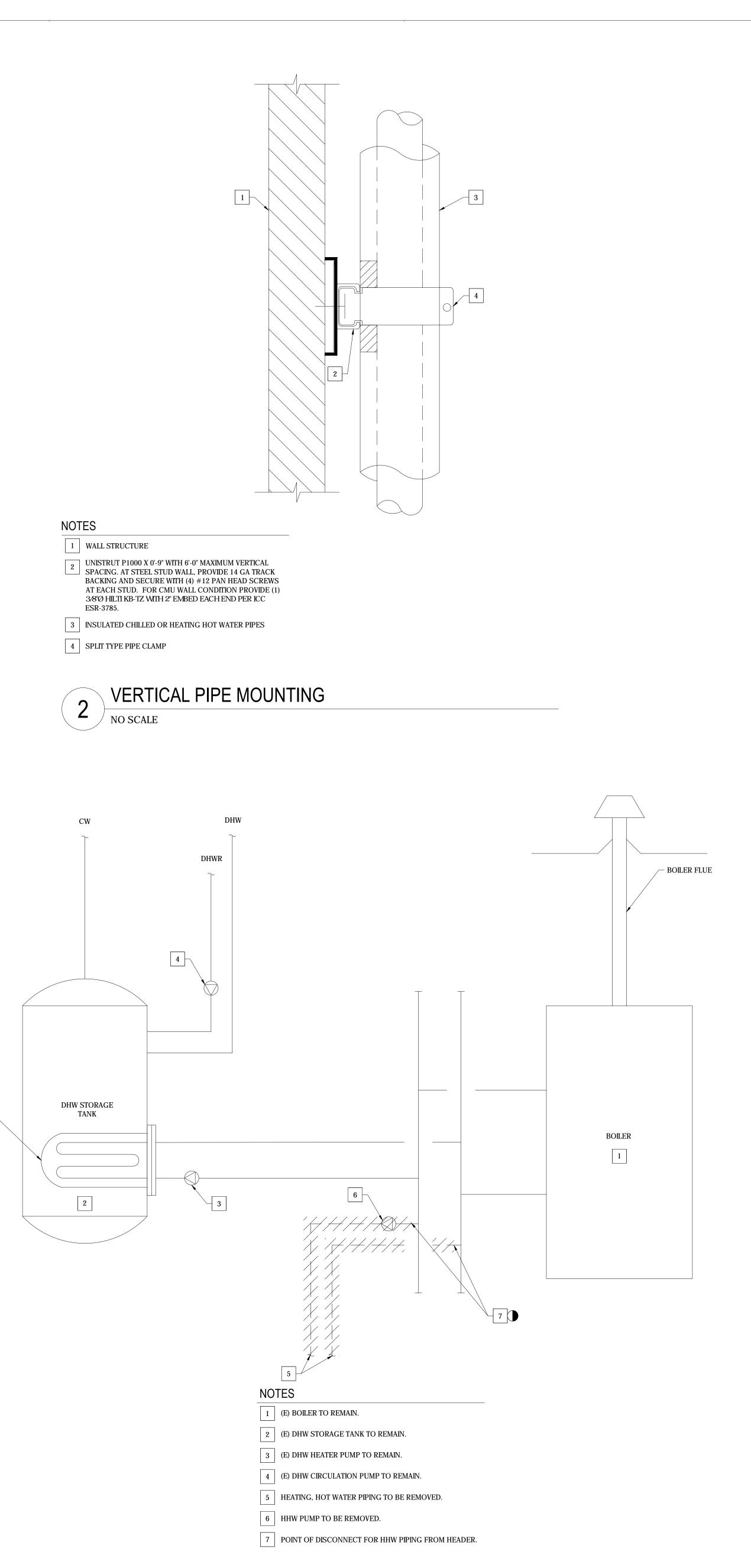
VERTICAL ROUND FIRE SMOKE DAMPER

5 NO SCALE





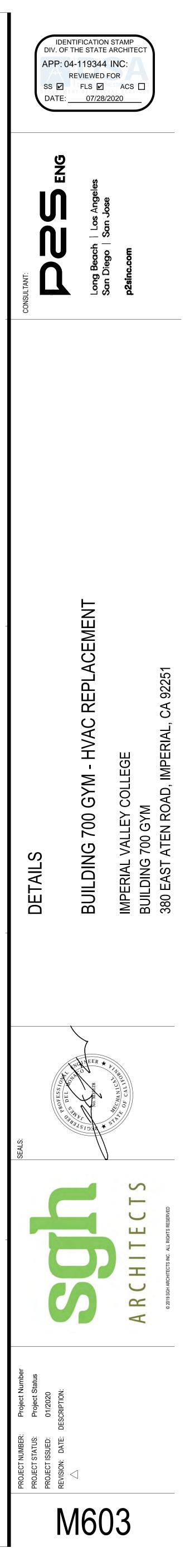


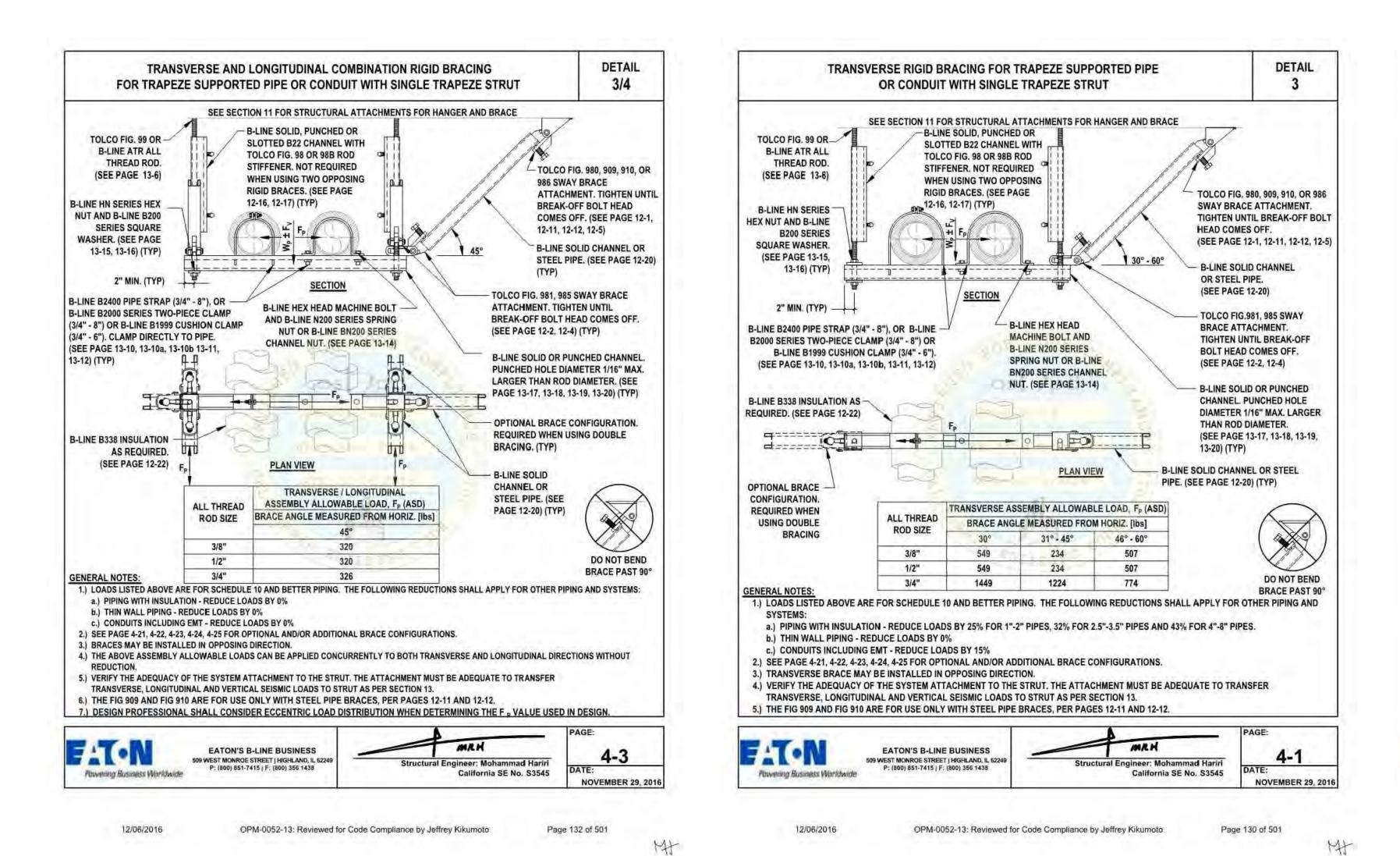


DHW SEPARATION FROM HOUSE SYSTEM

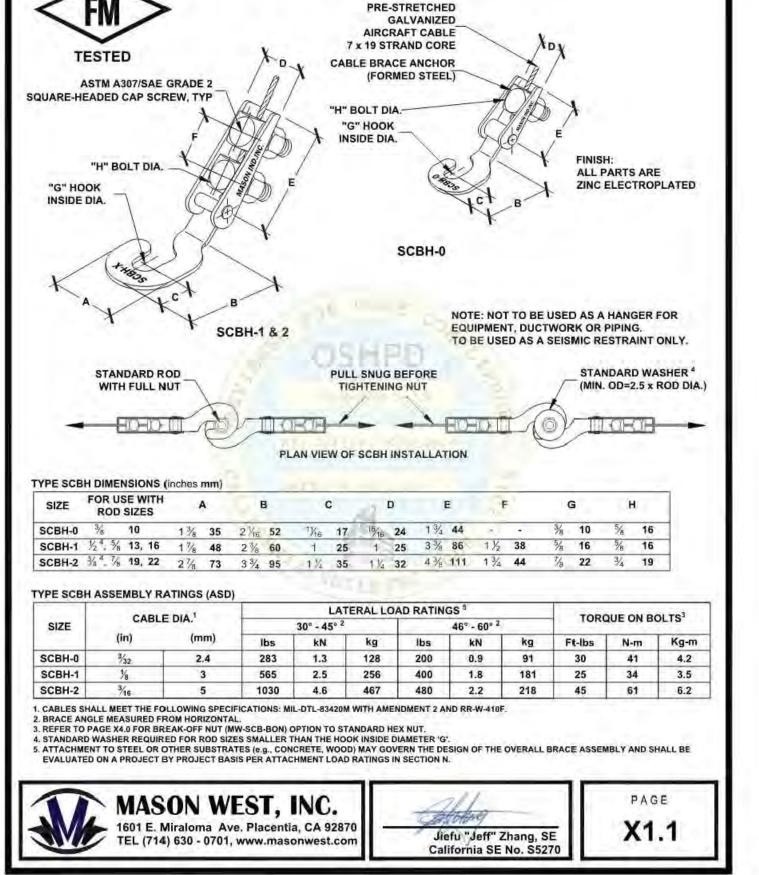
/ NO SCALE

TANK HEATER -



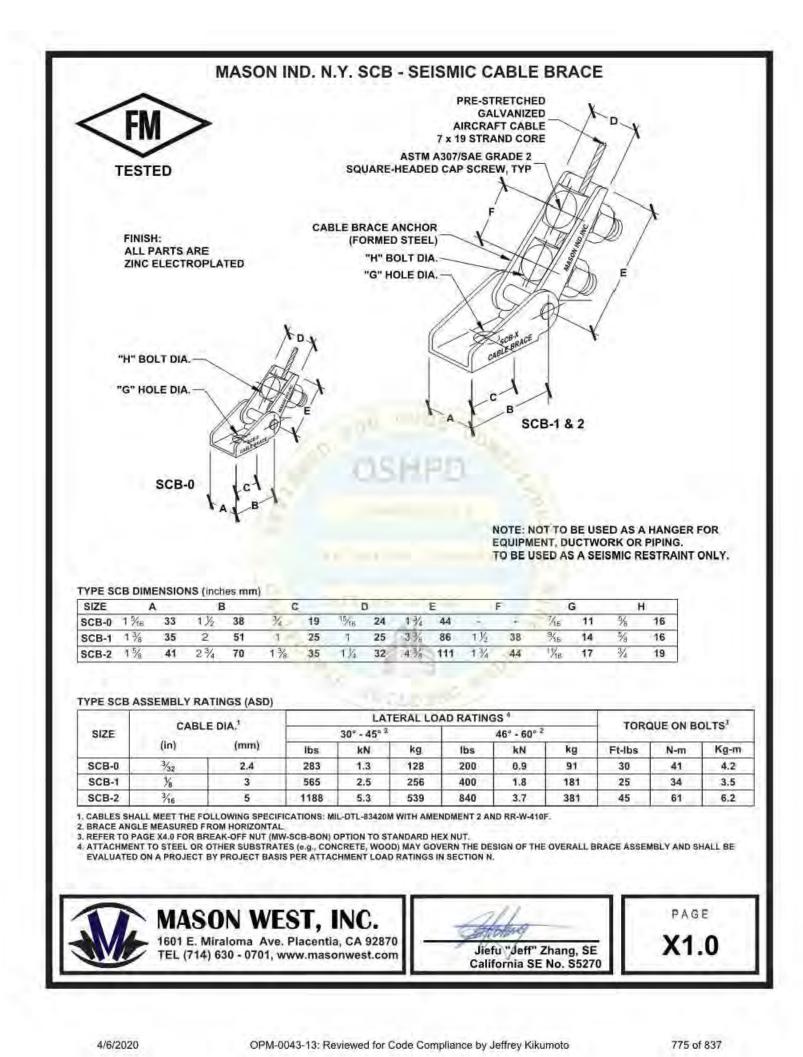


MASON IND. N.Y. SCBH - SEISMIC CABLE BRACE WITH HOOK ATTACHMENT PRE-STRETCHED GALVANIZED AIRCRAFT CABLE 7 x 19 STRAND CORE CABLE BRACE ANCHOR (FORMED STEEL)

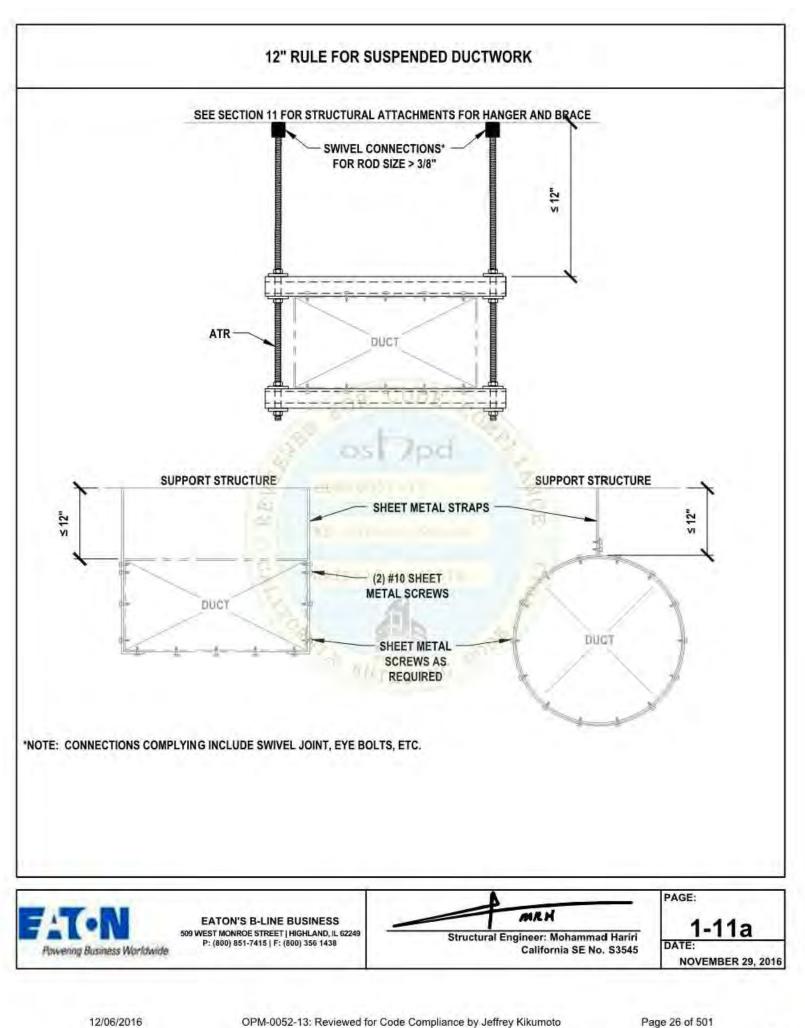


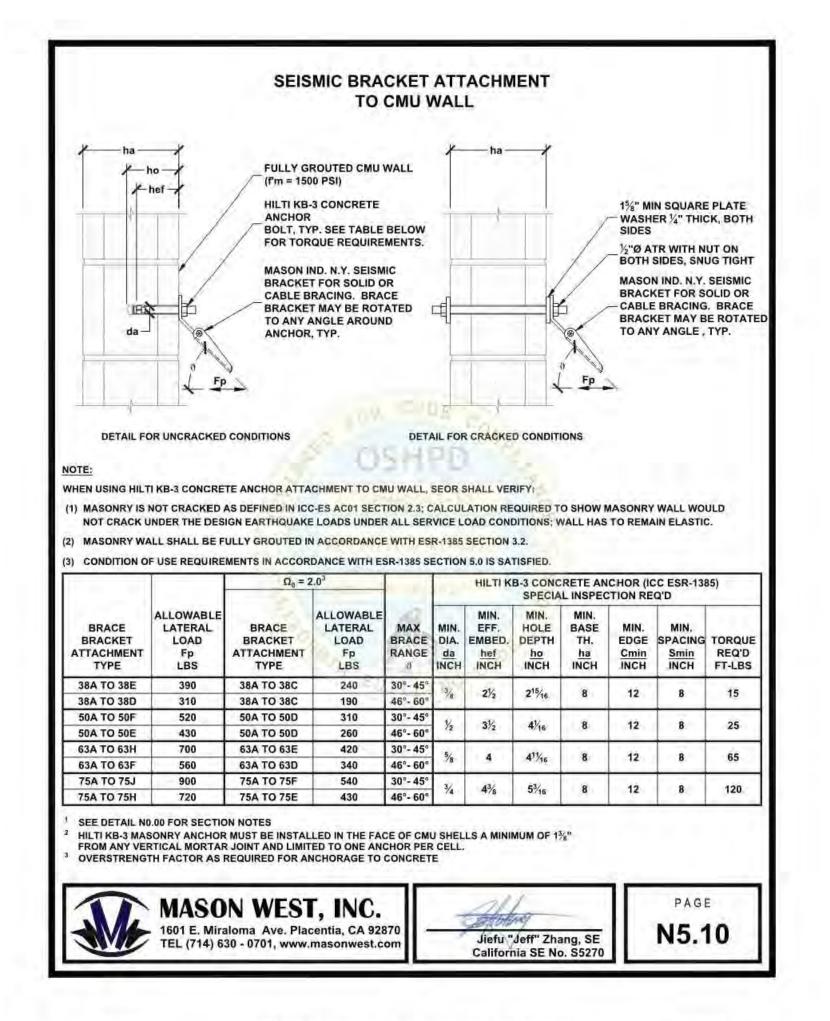
OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto

776 of 837



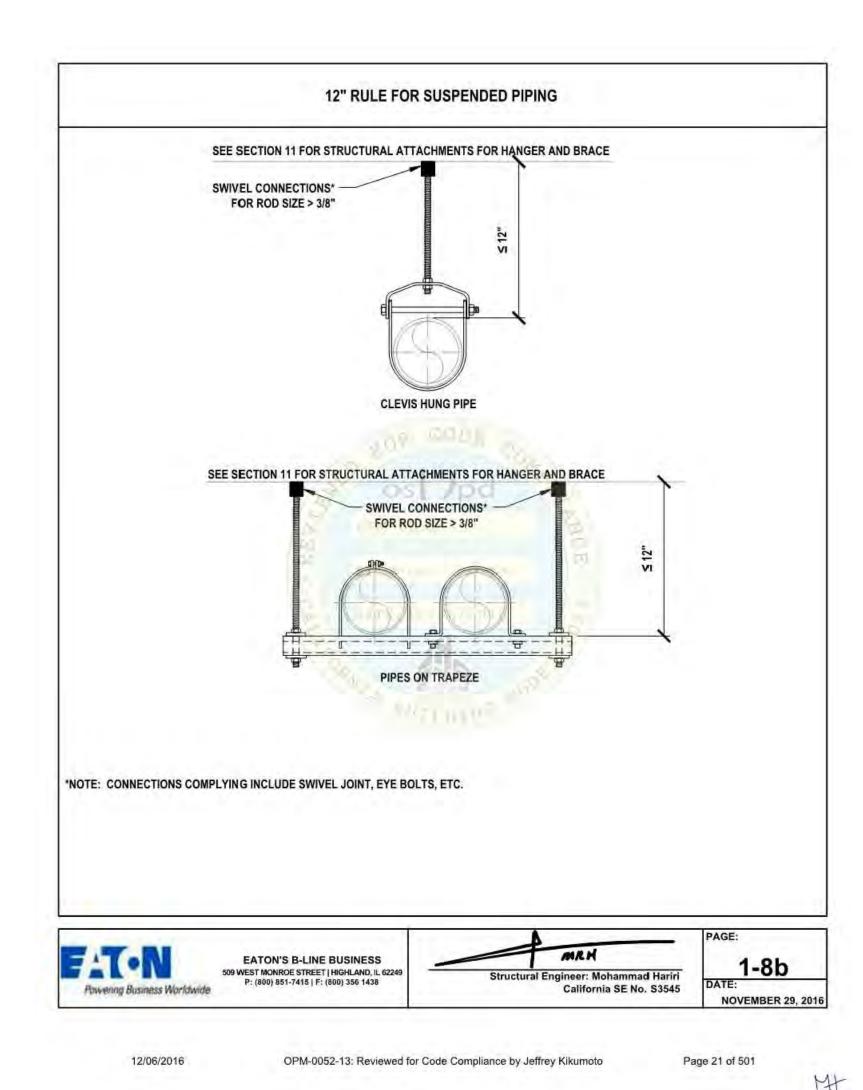
4/6/2020



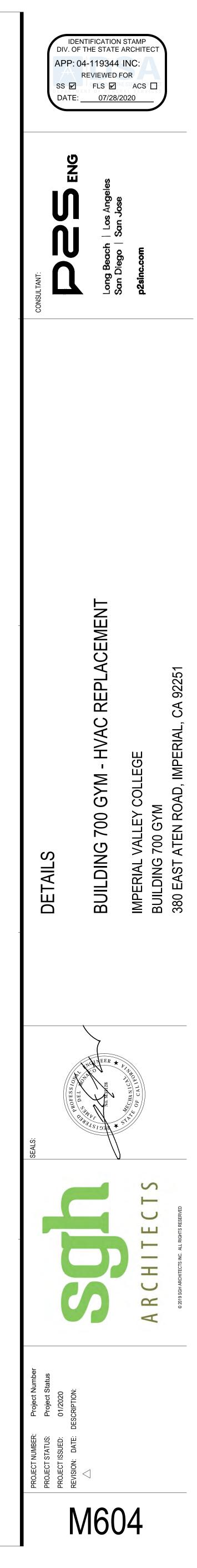


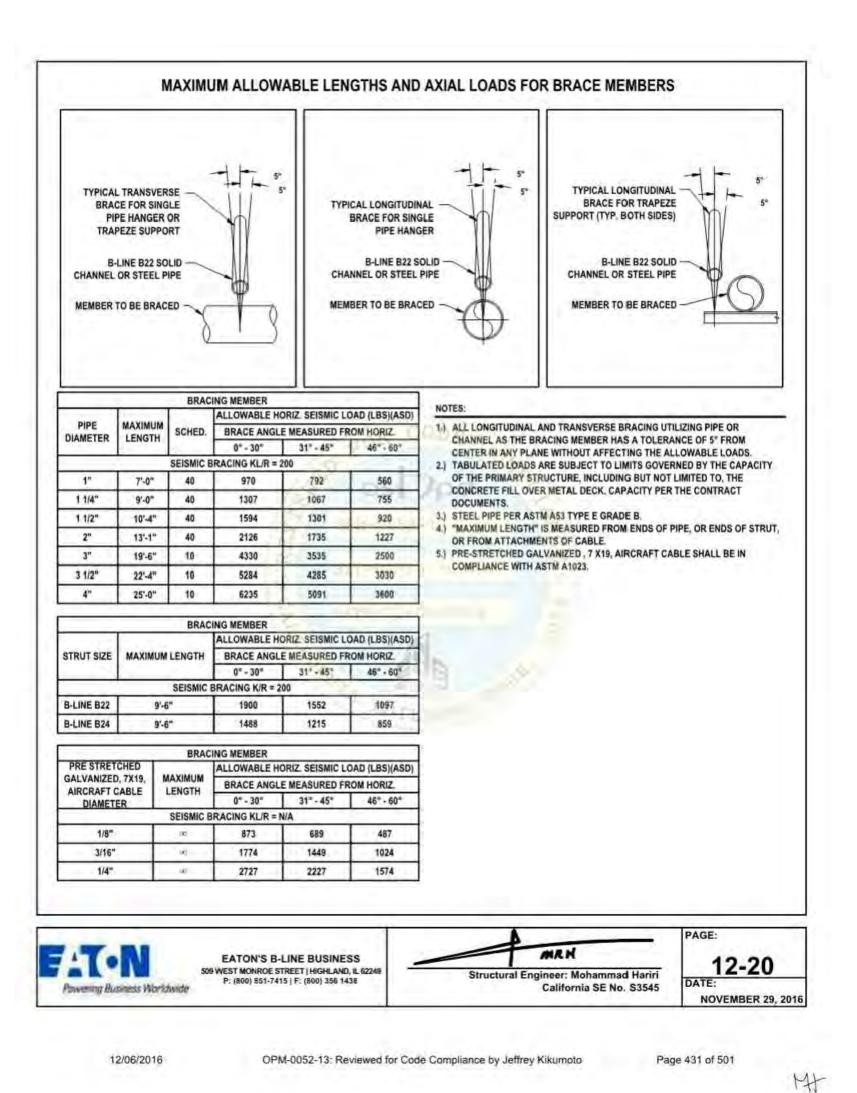
4/6/2020

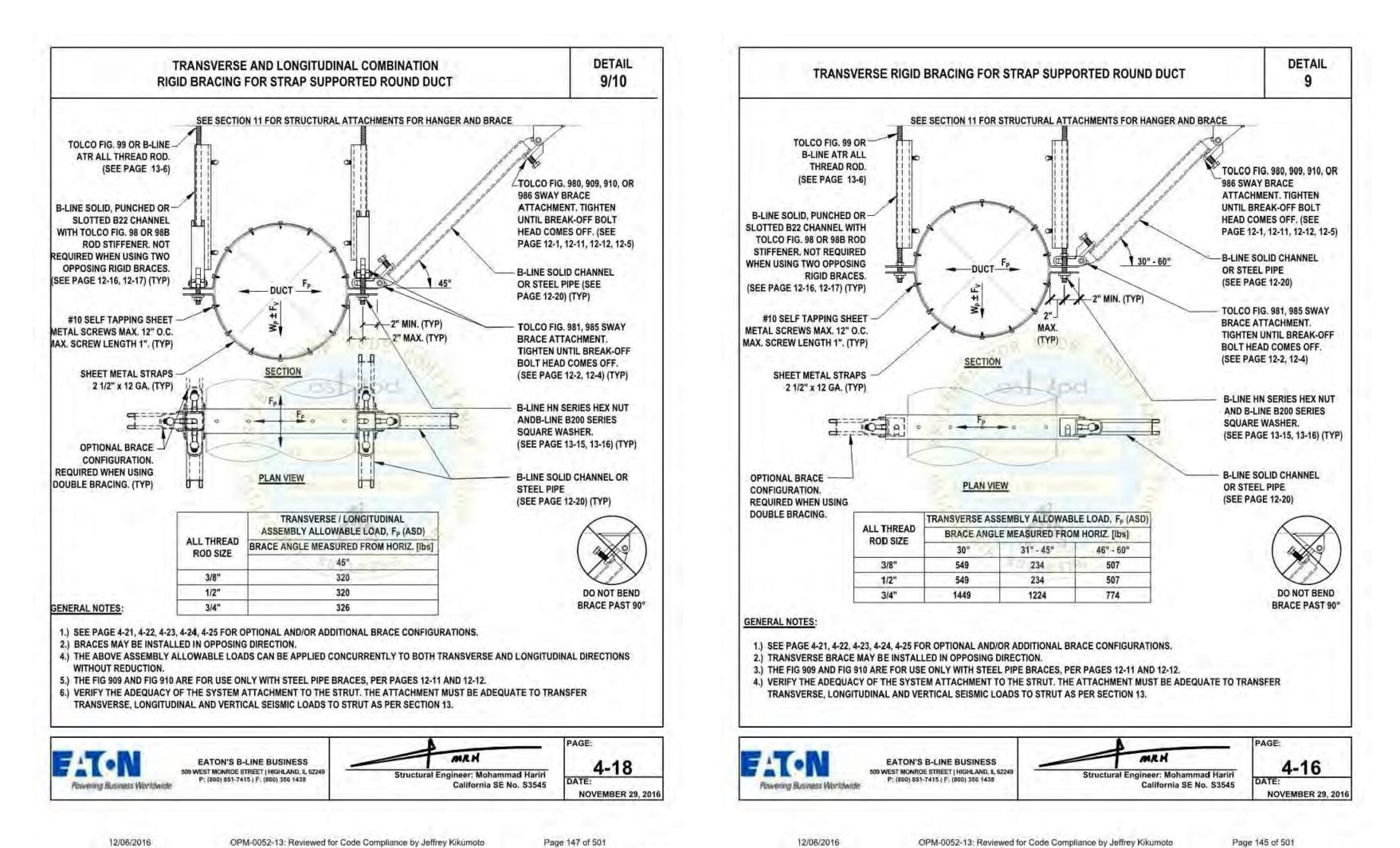


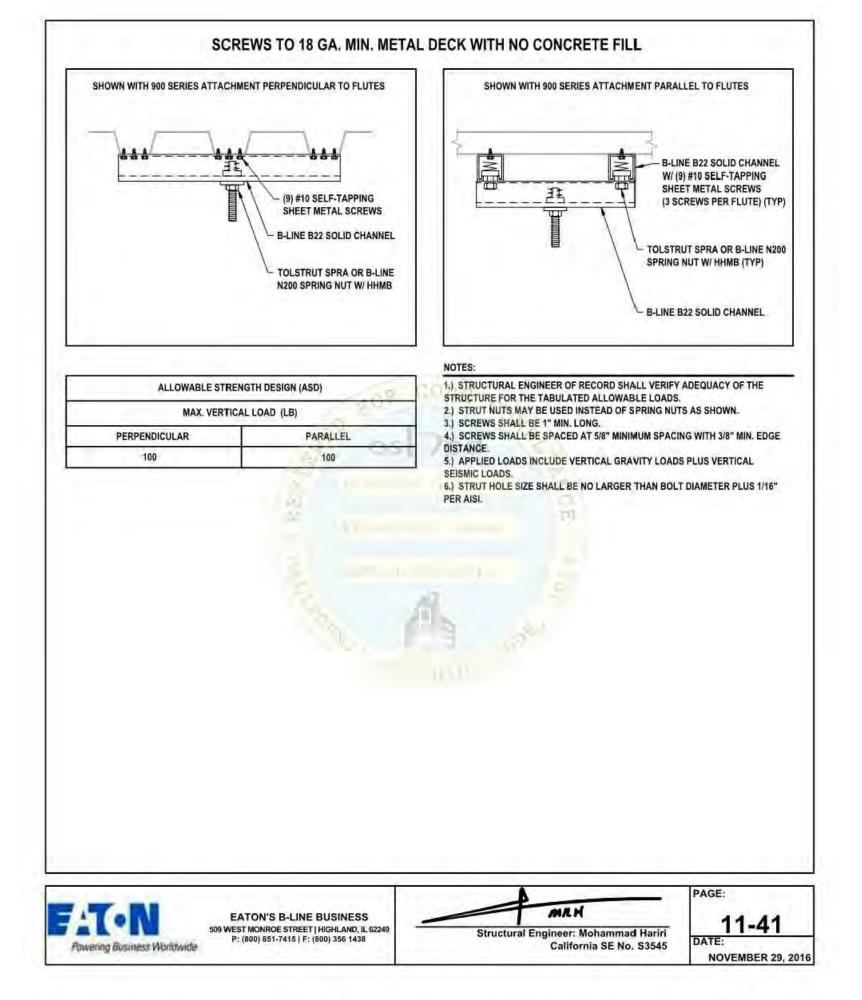


OPM-0043-13: Reviewed for Code Compliance by Jeffrey Kikumoto 725 of 837



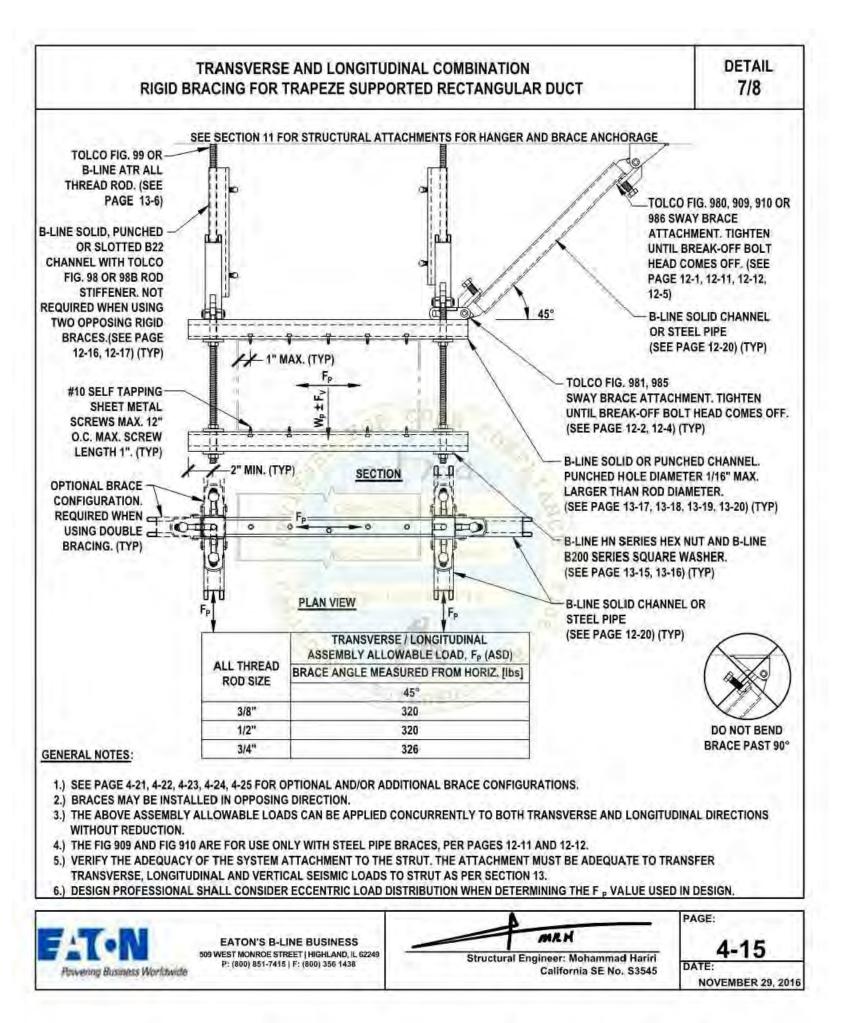






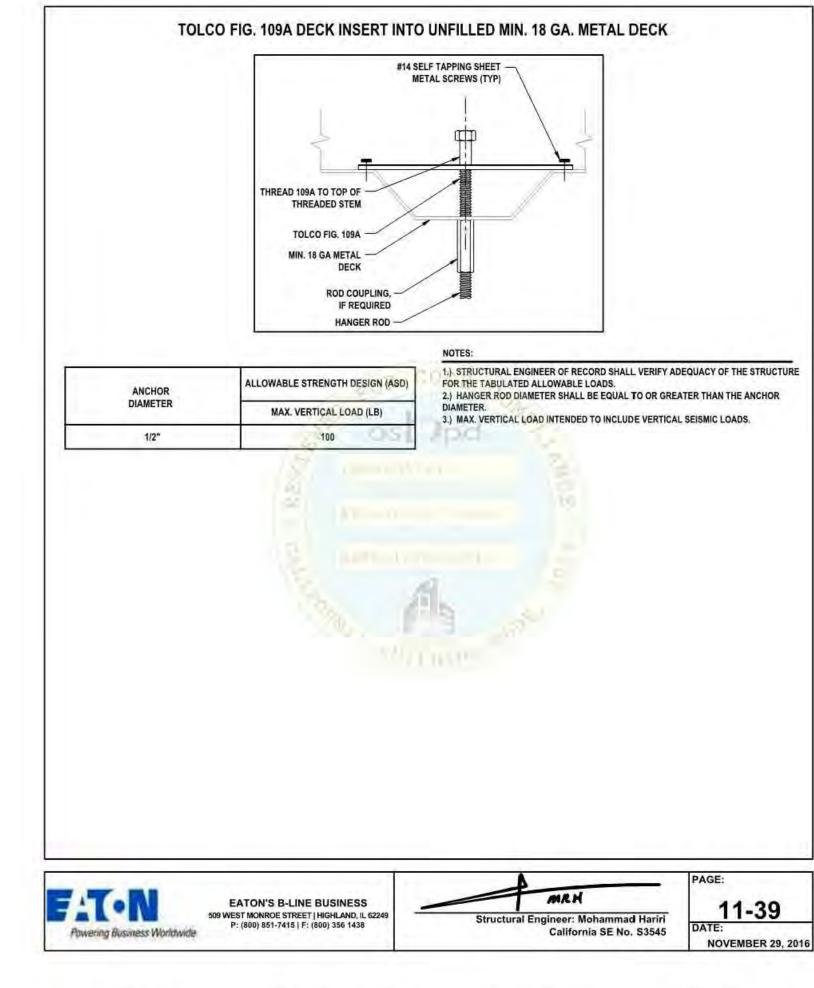
12/06/2016

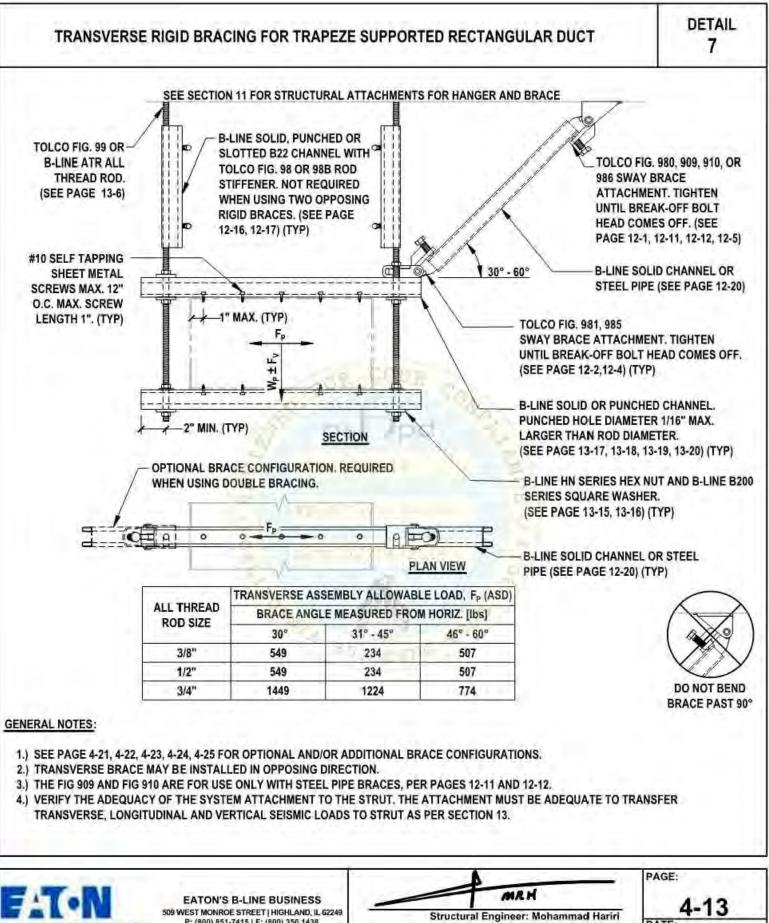
12/06/2016



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OPM-0052-13: Reviewed for Code Compliance by Jeffrey Kikumoto Page 389 of 501 Mt 12/06/2016





OPM-0052-13: Reviewed for Code Compliance by Jeffrey Kikumoto

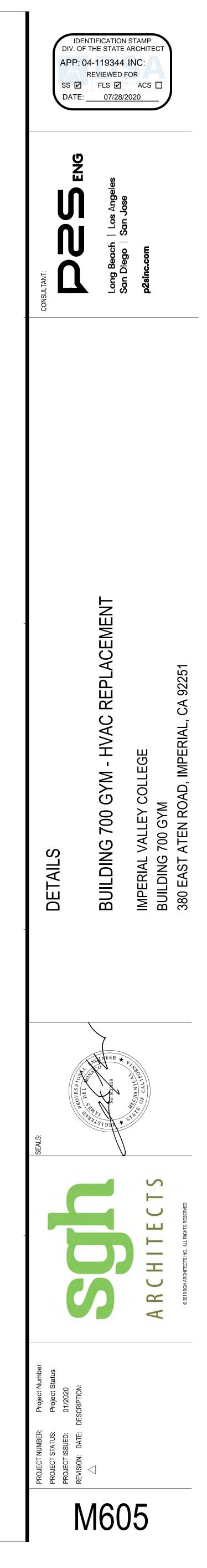
P: (800) 851-7415 | F: (800) 356 1438

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12/06/2016

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Page 387 of 501

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Mt

NOVEMBER 29, 201

Page 142 of 501

California SE No. S3545

### STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E (Created 6/20) CERTIFICATE OF COMPLIANCE Report Page: Date Prepared; Project Name: Imperial Valley College B700 Renovation Project Address: 380 E Aten Rd Table Continued Total System Design Supply Airflow (CFM): 11,000 Total System Design (B)HP: 3.9 Economizer Designed per §140.4(e) System Fan AH-4 System Name: **Fixed Temperature** Economizer:1 Controls: and (m) Type; 01 03 04 05 06 07 Maximum Design Fan Name or Design Qty Supply Airflow HP Unit<sup>2</sup> Fan Function Item Tag HP (CFM) Device None used AH-4 11,000 BHP 3.9 Supply 1 Calculated Adjustment (in H<sub>2</sub>O) Total System Design Supply Airflow (CFM): 11,000 Total System Design (B)HP: 3.9 Economizer Designed per §140.4(e) System Fan System Name: AH-5 Economizer: **Fixed Temperature** Controls: and (m) Type: 01 04 05 06 07 03 Maximum Design Fan Name or Design Qty Supply Airflow HP Unit<sup>2</sup> Fan Function Item Tag HP Device (CFM) None used AH-5 11,000 BHP Supply 3.0 Calculated Adjustment (in H<sub>2</sub>O) Total System Design (B)HP: Total System Design Supply Airflow (CFM): 11,000 3.9 Economizer Designed per §140.4(e) System Fan AH-6 System Name: Fixed Temperature Economizer Controls: and (m) Type: 01 05 06 07 04 03 Maximum Design Fan Name or Design Fan Function Qty Supply Airflow HP Unit<sup>2</sup> Item Tag HP (CFM) Device Table Continued

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

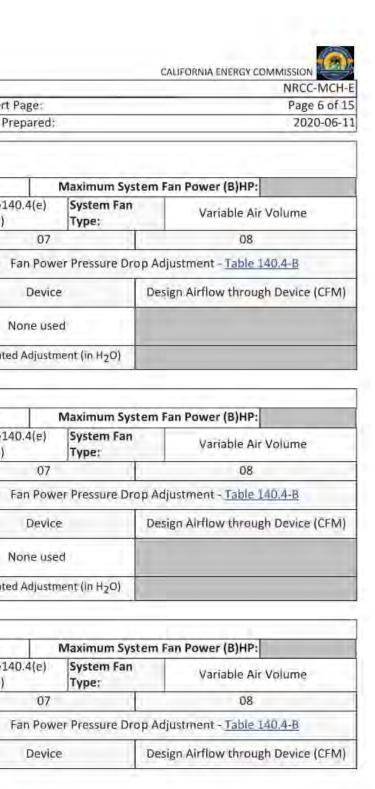
# STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E	(Created 6/20)						CALIF	-(
CERTIFICA	TE OF COMPLIANCE							
Project Na	me: Imperial Valley College	e B700 Renovation		Report	Page:			
Project Ad	dress: 380 E Aten Rd			Date P	repared:			
Dry Syster	n Equipment Sizing (includes	air conditioners, condensers, heat pu	mps, VRF, furnaces and	d unit heate	rs)			l
01	TE OF COMPLIANCE me: Imperial Valley Colle dress: 380 E Aten Rd n Equipment Sizing (include 02 Equipment Category per Tables 110.2 Variable Refrigerant Flow Variable Refrigerant Flow Variable Refrigerant	03	06	07	08	ſ		
				Equip	ment Sizin	g per Mech	nanical Sche	ŝ
				Hea	Cooling (			
Name or Item Tag		Equipment Type per Tables 110.2 & Title 20	Smallest Size Available <sup>1</sup> <u>\$140.4(a)</u>	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	
CU-5/AH-5		VRF heat pump, air cooled	Yes	242.19	351	O	215.28	
CU-6/AH-6		VRF heat pump, air cooled	Yes	298.72	596.3	0	241.49	
CU-7/AH-7	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	276.48	432	0	245.76	

<sup>1</sup> 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 <u>5140.4(a)</u>. Healthcare facilities are excepted. <sup>2</sup> It is common practice to show rated autput capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables. <sup>3</sup> If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank. <sup>4</sup> Authority Having Jurisdiction may ask for load calculations used for compliance per 5140.4(b).

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

01	02	03	04	05	06	07	08	09	
			Heating M	Cooling Mode					
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	
	>240.000	178FJL /4FPF.LL OFA	con		2.17	EER	9.5	10.5 20	
U-1/AH-1	≥240,000	17°Fdb/15°Fwb OSA	COP		2.17	IEER	12.7		
	>240.000	17PEUL AFPEUL OCA	COR		12	EER	9.5	11	
U-2/AH-2	≥240,000	17°Fdb/15°Fwb OSA	COP		2.3	IEER	12.7	21	



June 2020

_		CC-MCH-E			
		age 3 of 15			
09	10	11			
dule (kBtu	/h) 5140.4	(a&b)			
utput <sup>2,3</sup>	Load Calc	ulations <sup>3,4</sup>			
Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)			
312	132.63	212.28			
409.3	212.9	236.4			
384	144.5	244			

June 2020

### STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E (Created 6/20)

NRCC-MC Page 5 of		Report Page:				novation	ey College B700 Re		CERTIFICATE OF CO Project Name:
2020-06	5	Date Prepared;				() of a closely			Project Address: 3
			1	-	Ĩ	1	1		T.
	ed	None use	3	внр	7,500	ī	ply	Sup	AH-1
	ment (in H <sub>2</sub> O)	Calculated Adjustn	-						
	ed	Exhaust 1 2,765 BHP 0.89 None used		Februar		EF-1			
	Calculated Adjustment (in H <sub>2</sub> O)		0.20	C. 2. 9					
					-				
Fan Power (B)HP:				System Design	Total	10,265	Airflow (CFM):	esign Supply	Total System De
Variable Air Volume	ed per §140.4(e) System Fan and (m) Type:		Design	Economize Controls:	Temperature	Fixe	Economizer:'	AH-2	System Name:
08	07		06	05	04	03	2	0	01
ljustment - <u>Table 140.4-B</u>	ver Pressure Dro	Fan Pow	Design HP	HPUnit <sup>2</sup> De	Maximum Design ty Supply Airflow	Qty	Inction	an Name or Fan Function	
sign Airflow through Device (CFN	e	Device			(CFM)			Item Tag	
	ed	None use	3.9	внр	11,000	ı	ylq	Sup	AH-2
	ment (in H <sub>2</sub> O)	Calculated Adjustn							
					-A		7		
Fan Power (B)HP:				System Design	Total	11,000	Airflow (CFM):	esign Supply	Total System De
Variable Air Volume	System Fan Type:	ed per §140.4(e) and (m)	Design	Economize Controls:	Temperature	Fixe	Economizer:1	AH-3	System Name:
08		07	06	05	04	03	2	02	01
Justment Table 140 4 P	ver Pressure Dro	Fan Pow	Design	HP Unit <sup>2</sup>	aximum Design upply Airflow	Qty	inction	Fan Fu	Fan Name or Item Tag
njustment - Table 140.4-b		Devile	HP	He Office		(CFM)		Fan Function	
sign Airflow through Device (CFN	e	Devic	-		A			AH-3 Supply	
	ed	None use Calculated Adjustn	3.9	внр	11,000	1	ply	Sup	AH-3

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

## STATE OF CALIFORNIA Mechanical Systems

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NRCC-MCH-E (Created 6/20)	CALIFORNIA ENERGY COM
CERTIFICATE OF COMPLIANCE	
Project Name: Imperial Valley College B700 Renovation	Report Page:
Project Address: 380 E Aten Rd	Date Prepared;
D. EXCEPTIONAL CONDITIONS	
This table is auto-filled with uneditable comments because of selections made or o	data entered in tables throughout the form.

The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans. Table H indicates a Fan Power System Index that exceeds the maximum allowed per §140.4(c). Please revise to demonstrate compliance. Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation. E. ADDITIONAL REMARKS

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

# F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations. Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters) 04 05 06 07 08 09 10 01 02

02	03	04	05	06	07	08	09	10
			Equip	ment Sizin	g per Mech	nanical Sche	dule (kBtu	/h) §140.4
		Constant of	Hea	ating Outpu	ut <sup>2,3</sup>	Cooling	Load Calcu	
Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available <sup>1</sup> §140.4(a)	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)
Variable Refrigerant. Flow	VRF heat pump, air cooled	Yes	315.9	486	O	280.8	432	124.2
Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	242.19	351	Ø	215.28	312	132.63
Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	242.19	351	O	215.28	312	132.63
Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	242.19	351	Ø	215.28	312	132.63
	Equipment Category per Tables 110.2Variable Refrigerant FlowVariable Refrigerant FlowVariable Refrigerant FlowVariable Refrigerant FlowVariable Refrigerant FlowVariable Refrigerant Flow	Equipment Category per Tables 110.2Equipment Type per Tables 110.2 & Title 20Variable Refrigerant FlowVRF heat pump, air cooledVariable Refrigerant FlowVRF heat pump, air cooled	Equipment Category per Tables 110.2Equipment Type per Tables 110.2 & Title 20Smallest Size Available' §140.4(a)Variable Refrigerant FlowVRF heat pump, air cooledYesVariable Refrigerant FlowVRF heat pump, air cooledYes	Equipment Category per Tables 110.2Equipment Type per Tables 110.2 & Title 20Smallest Size Available' §140.4(a)Equip Heat Per Design (kBtu/h)Variable Refrigerant FlowVRF heat pump, air cooledYes315.9Variable Refrigerant FlowVRF heat pump, air cooledYes242.19Variable Refrigerant FlowVRF heat pump, air cooledYes242.19Variable Refrigerant FlowVRF heat pump, air cooledYes242.19	Equipment Category per Tables 110.2Equipment Type per Tables 110.2 & Title 20Smallest Size Available' \$140.4(a)Equipment Sizing Heating Output Per Design (kBtu/h)Variable Refrigerant FlowVRF heat pump, air cooledYes315.9486Variable Refrigerant FlowVRF heat pump, air cooledYes242.19351Variable Refrigerant FlowVRF heat pump, air cooledYes242.19351Variable Refrigerant FlowVRF heat pump, air cooledYes242.19351	Equipment Category per Tables 110.2Equipment Type per Tables 110.2 & Title 20Smallest Size Available' §140.4(a)Equipment Sizing per Mech Heating Output2,3Variable Refrigerant FlowVRF heat pump, air cooledYes315.94860Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510	Equipment Category per Tables 110.2Equipment Type per Tables 110.2 & Title 20Smallest Size Available' \$140.4(a)Equipment Sizing per Mechanical Sche Heating Output'?.3Variable Refrigerant FlowVRF heat pump, air cooledYes315.94860280.8Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510215.28Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510215.28Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510215.28	Equipment Category per Tables 110.2Equipment Type per Tables 110.2 & Title 20Smallest Size Available! \$140.4(a)Equipment Sizing per Mechanical Schedule (kBtu Heating Output2,3Variable Refrigerant FlowVRF heat pump, air cooledYes315.94860280.8432Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510215.28312Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510215.28312Variable Refrigerant FlowVRF heat pump, air cooledYes242.193510215.28312

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

STATE OF CALIFORNIA	
Mechanical System	15
A DESCRIPTION OF A DESC	

June 2020

NRCC-MCH-E (Creat CERTIFICATE O							CALIFORNIA ENERGY CO	NRCC MCH E				
Project Name:	Imperial Valley College	B700 Repovation			Report Page:			Page 4 of 15				
	:: 380 E Aten Rd	byob nenovation			Date Prepared: 2020-06-1							
			Province and the second									
		than Package Terminal Air C	1		T							
01	02	03	04	05	06	07	08	09				
			Heating M	ode			Cooling Mode					
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per <u>Tables 110.2</u> / <u>Title 20</u>	Design Efficiency	Efficiency Unit	Min Efficiency Required per <u>Tables 110.2</u> / <u>Title 20</u>	Design Efficiency				
EL DIALL	≥240,000	17°Fdb/15°Fwb OSA	COP		2.3	EER	9.5	11				
CU-3/AH-3	2240,000	17 F00/15 FW0 USA	COP		2.5	IEER	12.7	21				
		Ante Il Jacob I. and		1		EER	9.5	11				
CU-4/AH-4	≥240,000	17°Fdb/15°Fwb OSA	COP		2.3	IEER	12.7	21				
		America I. Jacob J. and		1		EER	9.5	11				
CU-5/AH-5	≥240,000	17°Fdb/15°Fwb OSA	COP		2.3	IEER	12.7	21				
	Care was	Andre M. Kanner J. Same	100 100 Kg	1	2.1	EER	9.5	9.6				
CU-6/AH-6	≥240,000	17°Fdb/15°Fwb OSA	COP	COP		IEER	12.7	17.5				
are average	diada .		1.12		1.22	EER	9.5	9.8				
CU-7/AH-7	≥240,000	17°Fdb/15°Fwb OSA	COP		2.2	IEER	12.7	19.3				

C DUBADC

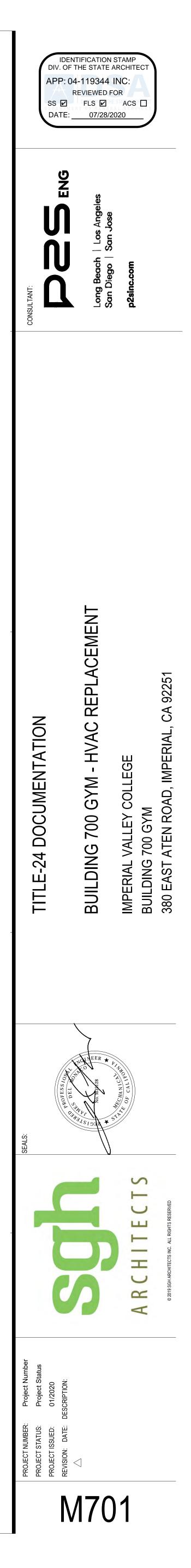
This Section Does	Not Apply								
H. FAN SYSTEMS	& AIR ECO	NOMIZERS							
	em details, t	hen add fans with	in that	system to document c	ompliance with	fan power	requirements. For	n systems servir	D.4(c), §140.4(e) and §140.4(m). First ag only process loads are exempt from
and the second s		a construction of the	1	ixed Temperature	Economize	Designed per §140.4(e) and (m)		System Fan	and the state of the
System Name:	AH-1	Economizer:1		ixed remperature	Controls:	1.0	and (m)	Type:	Variable Air Volume
System Name: 01	AH-1 0		03	04	Controls: 05	06	and (m) 07	Туре:	08
	21.20-10	2		- F	1	06 Design	07	1.4	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

June 2020

June 2020

CERTIFICATE	ated 6/	Carlo Car									-				NERGY COMMISSION	
This documen	t is us	ed to demons					ns tha	t are within th	ne scop	pe of the perm	it app	lication and a	re den	nonstrating cor	mpliance using the	
1.0.1		and the second second second		5141.0(b)2 fo		ations.										
roject Name			Colleg	ge B700 Renov	ation		Report Page:								Page 1 of 1	
Project Addre	ss: 38	SO E Aten Rd	-							Date	Prepa	ared:			2020-06-	
. GENERAL	INFO	RMATION														
01 Project L	ocatio	on (city)				Imperial		0	4 Tot	al Conditioned	Floor	r Area			37,175	
02 Climate	Zone					15		0	5 Tot	al Uncondition	ned Fl	oor Area	11:		987	
03 Occupar	upancy Types Within Project:					0	6 # 0	f Stories (Habi	table	Above Grade)			2			
Office (B)				il (M)				] Non-	-refrigerated V	Vareh	ouse (S)					
Hotel/ Motel Guest Rooms (R-1)				ol (E)				] Heal	thcare Facility	(1)						
High-Rise Residential (R-2/R-3)				catabl	e Class Bldg (	E)	1	Othe	er (Write In):	1		Gyn	nnasium	6		
FOOTNOTES	: Clima	ite zone can b	ne det	ermined on th	e Calif	ornia Energy	Comm	ission's webs	ite at [	http://www.er	neray.	ca.gov/maps/	renew	able/building	climate_zones.html	
											_		_			
. PROJECT											-					
				ical systems th	nat are	e within the so	cope o	f the permit a	pplica	ition and are d	emon	strating comp	oliance	using the pres	criptive path outlined in	
140.4, 01 914	1.0[0	2 for alteration	ons.			Mun	rolact	consists of la	hocks	II that apply)	-					
		01				INIY PI	oject	02	necka	in that apply)	- 1			03		
-			1-1		-						Dry System Components					
21 116 miles A	- Cust	Air System	(S)		-	Wet System Components					Air Economizer					
Heating A					-	Water Economizer										
Cooling Ai			Sec. 16		-	Pumps					_	Electric Resistance Heat				
	-	Aechanical Co	10000			Hydronic System Piping					_	Fan Systems				
new)	al Con	trois (existing	to re	main, altered	or	Cooling Towers					_	Ductwork (existing to remain, altered or new)				
newy					-	Chillers					_	Ventilation				
						Boilers					_	Zonal Systems/ Terminal Boxes				
COMPLIA	NCER	ESUITS													6	
	0000	2.44	his tal	ble says "DOE	NOT	COMPLY" or	сом	PLIES with Exc	entior	nal Conditions'	refer	to Table D. fr	or auia	lance.		
										06					09	
System						System										
Summary		Dumme		Fans/		and the second se		Vontilation		Terminal Box		Distribution		Cooling		
<u>§110.1</u> ,	AND	Pumps §140.4(k)	AND	Economizers §140.4(c),	AND		AND	Ventilation §120.1	AND	and the second	AND	and the second se	AND	Towers	Compliance Results	
<u>§110.2</u> ,		2210.1111		§140.4(e)		<u>\$120.2</u> ,		JACOLA		5140.4(d)		§140.4(I)		5110.2(e)2	compnance Results	
§140.4		10		000000		§140.4(f)		VC T-bl- II		10- T-11-11		16 T-1-11		Contrible M		
See Table F)	-	(See Table G)	AND	(See Table H)	AND	(See Table I)	AND	(See Table J)	AND	(See Table K)	0.010	(See Table L)	-	(See Table M)	001401150	
outer approximit	AND		AND	Yes	AND	Yes	AND	Yes	AND	tory Measure	AND	It and the	AND	0.6 - 0 - 10	COMPLIES	
Yes								n n	aanda	TOTY MOSCIIPO	c ( nm	aniiance isee	anio	() for Detaile)	COMPLIES	



# STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE	OF COM	PLIANCE							
Project Name	e: Imp	erial Valley College B700 Renovation	Report Page:						
Project Addre	ess: 380	E Aten Rd	Date Prepared:						
۲	C	NRCA-MCH-02-A Outdoor Air must be submitted for all newl Note: MCH02-A can be performed in conjunction with MCH-0 activities overlap.							
С		NRCA-MCH-03-A Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Co scope, permit applicant should move this form to "Yes".	onstant Volume Single Zone HVAC Systems are included in the						
C	۲	NRCA-MCH-04-A Air Distribution Duct Leakage							
۲	C	NRCA-MCH-05-A Air Economizer Controls	and the second sec						
C		NRCA-MCH-06-A Demand Control Ventilation Systems Accep demand controlled ventilation (refer to §120.1(c)3) can vary carbon dioxide (CO2) concentration setpoints.	stance must be submitted for all systems required to employ outside ventilation flow rates based on maintaining interior						
	C	NRCA-MCH-07-A Supply Fan Variable Flow Controls							
C	(	RCA-MCH-08-A Valve Leakage Test							
C		IRCA-MCH-09-A Supply Water Temperature Reset Controls							
C	(	NRCA-MCH-10-A Hydronic System Variable Flow Controls							
	C	NRCA-MCH-11-A Automatic Demand Shed Controls							
C	۲	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units							
C	۲	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Z	one Terminal Units Acceptance						
C		NRCA-MCH-14-A Distributed Energy Storage DX AC Systems / NOTE: This form does not automatically move to "Yes". If Dis permit applicant should move this form to "Yes".	Acceptance stributed Energy Storage DX AC Systems are included in the scor						
ç	6		illed Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil Extern Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systen						
C		NRCA-MCH-16-A Supply Air Temperature Reset Controls							
C		NRCA-MCH-17-A Condenser Water Temperature Reset Contr	rols						
۲	C	NRCA-MCH-18 Energy Management Control Systems							
C	۲	NRCA-MCH-19 Occupancy Sensor Controls							
C	۲	NRCA-MCH-20 Multi-Family Ventilation							
C	۲	NRCA-MCH-21 Multi-Family Envelope Leakage							

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

# STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E (Create	d 6/20)					(	CALIFOR
CERTIFICATE OF	COMPLIANCE						
Project Name:	Imperial Valley Co	ollege B700 Reno	vation		Report P	age:	
Project Address:	380 E Aten Rd				Date Pre	pared:	
01	02	03	04	05	06	07	
System Name	System Zoning	Conditioned Floor Area Being Served (ft <sup>2</sup> )	Thermostats <u>§110.2(b) &amp; (c)</u> <sup>1</sup> , <u>§120.2(a)</u> or <u>§141.0(b)2E</u>	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response <u>§110.12</u> and <u>§120.2(b)</u>	SL Ter §
AH-5	single zone	≤ 25,000 ft²	EMCS	EMCS	NA: Single Zone	EMCS	NA
AH-6	multi-zone w/ DDC to zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	Exe
AH-7	single zone	≤ 25,000 ft <sup>2</sup>	EMCS	EMCS	NA: Single Zone	EMCS	NA

<sup>1</sup> 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.

\* NOTES: Controls with a \* require a note in the space below explaining how compliance is achieved. EX: System 1: SA Temp Reset: Exempt because zones compliant with 5140.4(d); EXCEPTION 1 to 5140.4(f)

AH-1 SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

AH-6 SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

# J. VENTILATION AND INDOOR AIR QUALITY

residential and	hotel/motel occupancies. For	ble to demonstrate compliance with mand alterations, only ventilation systems being ilation rates and airflows may be shown o	altered within the scope of the permit	application need to
01		project is showing ventilation calculation		
02	Check this box if the	e project includes Nonresidential or Hotel	/Motel spaces	
	Check this box if the	e project includes new or altered high-rise	residential dwelling units	
03	Check the box if the	project is using natural ventilation in any	spaces to meet required ventilation ra	tes per §120.1(c)2
Nonresidentia	l and Hotel/ Motel Ventilation	Systems		
	04	05	06	
Table Continue	ed			

	Pa	RCC-MCH-E age 12 of 15 2020-06-11
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		0
ope,		
ernal ems		

Mechanical Systems CALIFORNIA ENERGY COMMISSION NRCC-MCH-E (Created 6/20) CERTIFICATE OF COMPLIANCE Project Name: Imperial Valley College B700 Renovation Report Page: Project Address: 380 E Aten Rd Date Prepared: O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE Table Instructions: 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/NRCA/ YES Form/Title NO

June 2020

NRCC-MCH-E Page 9 of 15 2020-06-11 08 09 Supply Air Window Temp. Reset <u>§140.4(f)</u> Interlocks per §140.4(n) \_\_\_\_\_ NA: No A: Single operable Zone windows -NA: No exempt\* operable windows \_ NA: No NA: Single Zone operable windows B for all nonresidential, high-rise to be documented in this table. adsheet. ompleting this table.

STATE OF CALIFORNIA

## STATE OF CALIFORNIA Mechanical Systems

NRCC-MCH-E (Created	6/20)						CALIFORNIA ENERGY COMMIS
CERTIFICATE OF C	OMPLIANCE						N
Project Name: I	Imperial Valley College B7	700 Renovatio	on			Report Page:	1
Project Address:	380 E Aten Rd					Date Prepared:	
01	02	03	04	05	06	07	08
Fan Name or	For Furnition	0.00	Maximum Design	HP Unit <sup>2</sup>	Design	Fan Power Pressure Di	rop Adjustment - <u>Table 140.4</u> -
Item Tag	Fan Function	Qty	Supply Airflow (CFM)	HP UNIC	HP	Device	Design Airflow through Dev
AH-7	Supply	i	7,500	внр	3	None used	
1.000						Calculated Adjustment (in H <sub>2</sub> O)	1
1							
-							

Maximum System Fan Power (B)HP: Total System Design Supply Airflow (CFM): 7,500 Total System Design (B)HP: 3 <sup>1</sup> FOOTNOTE: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document. <sup>2</sup> The unit used for HP must be consistent for all fans within a system.

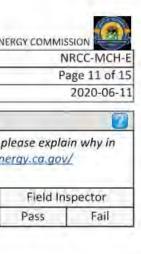
# I. SYSTEM CONTROLS

01	02	03	04	05	06	07	08	
System Name	System Zoning	Conditioned Floor Area Being Served (ft <sup>2</sup> )	Thermostats <u>§110.2(b) &amp; (c)</u> 1, <u>§120.2(a)</u> or <u>§141.0(b)2E</u>	Shut-Off Controls <u>§120.2(e)</u>	Isolation Zone Controls <u>§120.2(g)</u>	Demand Response <u>§110.12</u> and <u>§120.2(b)</u>	Supply Air Temp. Reset <u>§140.4(f)</u>	۷ Inter <u>51</u>
AH-1	multi-zone w/ DDC to zone	≤ 25,000 ft <sup>2</sup>	EMCS	EMCS	EMCS	EMCS	Exempt*	NA ope win
AH-2	single zone	≤ 25,000 ft <sup>2</sup>	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA ope win
AH-3	single zone	≤ 25,000 ft <sup>2</sup>	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA ope win
AH-4	single zone	≤ 25,000 ft <sup>2</sup>	EMCS	EMCS	NA: Single Zone	EMCS	NA: Single Zone	NA ope win

June 2020

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

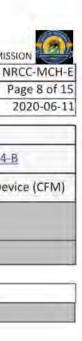
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards



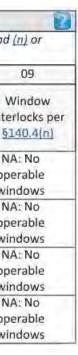
### STATE OF CALIFORNIA Mechanical Systems NRCC-MCH-E (Created 6/20) CERTIFICATE OF COMPLIANCE NRCC-MCH-E Project Name: Imperial Valley College B700 Renovation Report Page: Page 10 of 15 Project Address: 380 E Aten Rd Date Prepared: 2020-06-11 **Table Continued** Air Filtration per <u>§120.1(c)</u> and <u>§141.0(b)2</u><sup>2</sup> System Design System Design OA System Name: CFM Air Flow1: Transfer Air CFM: 10 11 12 13 14 15 08 09 16 Exh. Vent. per §120.1(c)4 Mechanical Ventilation Required per §120.1(c)33 Conditioned # of # of Required Required Provided per Floor showerheads # of # of Min OA Minimum Provided per Area (ft²) / toilets # of CFM CFM CFM Design CFM Space Name or DCV or Occupant Sensor Controls Item Tag per §120.1(d)3, §120.1(d)5 & §120.2(e)3 Occupancy Type<sup>4</sup> Occ Sensor 17 Total System Required Min OA CFM Ventilation for this System Complies? 18 K. TERMINAL BOX CONTROLS This Section Does Not Apply L. DISTRIBUTION (DUCTWORK AND PIPING) This Section Does Not Apply M. COOLING TOWERS This Section Does Not Apply N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION Table Instructions: 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/ Field Inspector YES Form/Title NO Pass Fail . NRCI-MCH-01-E - Must be submitted for all buildings.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

June 2020



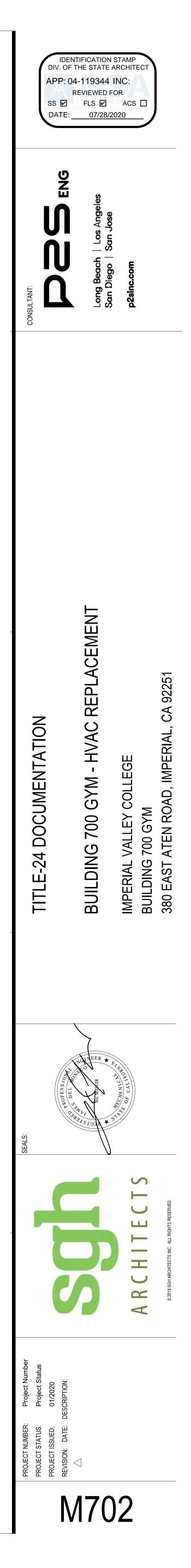
June 2020



June 2020

STATE OF CALIFORNIA
<b>Mechanical System</b>
NRCC-MCH-E (Created 6/20)

CERTIFICATE OF C	6/20) OMPLIANCE							CALIFORNIA ENERGY COMMISSION NRCC-MCH-
	mperial Valley College B700 R	enovation				Report Page	1	Page 7 of 1
Project Address:	380 E Aten Rd					Date Prepar	ed:	2020-06-1
AH-6	Supply	ì	12,000	BHP	3.2	None	used	
						Calculated Adju	ustment (in H <sub>2</sub> O)	
			4.5	1		None	used	
EF-2	Exhaust	1	720	внр	0.13	Calculated Adj	ustment (in H <sub>2</sub> O)	
EF-3	Exhaust	1	820	внр	0.16	None	used	
6753	Exhidust	1	620	BHF	0.10	Calculated Adj	ustment (in H <sub>2</sub> O)	
EF-4	Exhaust	1	360	внр	0.07	None	used	
	Linderst	-		Junit,	0.01	Calculated Adju	ustment (in H <sub>2</sub> O)	
EF-5	Exhaust	1	770	внр	0.14	None	used	
	LAUGUL	-		bin.	0.21	Calculated Adju	ustment (in H <sub>2</sub> O)	
EF-6	Exhaust	1	720	внр	0.13	None	used	
	Linnay	-	120		0.15	Calculated Adju	ustment (in H <sub>2</sub> O)	
Total System D	esign Supply Airflow (CFM):	15,390	Total	System Design (E	ны	3.83	Maximum System	Fan Power (B)HP-
System Name:	AH-7 Economizer:1		Temperature	Economizer Controls:		ned per §140.4(e and (m)	and the second se	Variable Air Volume



## STATE OF CALIFORNIA Mechanical Systems

CERTIFICATE OF COMPL		1.000 CT	NRCC-M(
Project Name: Imper	rial Valley College B700 Renovation	Report Page:	Page 15 c
Project Address: 380 E	Aten Rd	Date Prepared;	2020-0
DOCUMENTATION A	UTHOR'S DECLARATION STATEMENT		
1. I certify that this Cert	tificate of Compliance documentation is accurate and	complete.	All
Documentation Author	Name: Jordan Katz	Documentation Author Signature	: Notin
Company:	P2S Inc.	Signature Date:	J 7 06/11/2020
Address:	9665 Chesapeake Dr. Suite 230	CEA/ HERS Certification Identifica	tion (if applicable):
City/State/Zip:	San Diego/CA/92123	Phone:	(619) 618-2347
The second state of the se	S DECLARATION STATEMENT		
I certify the following u	inder penalty of perjury, under the laws of the State	of California:	
1 The information pro	vided on this Certificate of Compliance is true and co	prect	

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: James Del Monaco Responsible Designer Signature: 06/11/2020 P2S Inc. Date Signed: Company :

9665 Chesapeake Dr. Suite 230	License:	M35128
San Diego/CA/92123	Phone:	(619) 618-2347
	a contract of the second	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

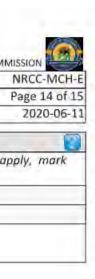


# STATE OF CALIFORNIA Mechanical Systems

incentancel systems			
NRCC-MCH-E (Created 6/20)		c	CALIFORNIA ENERGY COMMIS
CERTIFICATE OF COMPLIANCE			N
Project Name: Imperial Valley College B700 Renovation		Report Page:	Pa
Project Address: 380 E Aten Rd		Date Prepared;	
Q. MANDATORY MEASURES DOCUMENTATION LOCATION			
Table Instructions: Indicate where mandatory measures are docume the plan sheet or construction document location as "N/A", any act	and the second sec		easures that do not app
01		02	
01		Plan sheet or construction document location	
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	SHEET MO02	

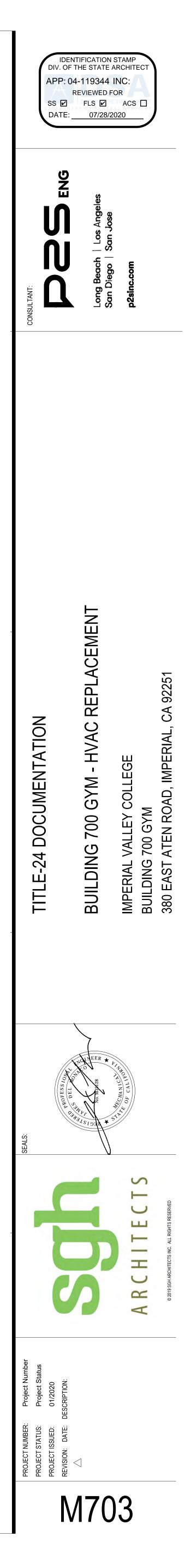
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

System Name	AH-1	System Design OA CFM Airflow	2,765	System Design Transfer Air CFM	0	Air Filtration per 120.1c and 141.0b2	Yes		
		0000000000000000	# of	000000000000000000000000000000000000000	Required		Vent CFM		
Space Name or Item Tag	Occupancy Type	Conditioned Floor Area (ft^2)	showerheads/ toilets	# of people	Min OA CFM	Required Min Vent CFM	Provided per Design	DCV	Occ Sensor
AH-1	Corridor	2,435		12	365	-23	e e sign	Yes	N/A
EF-1	Locker Room	3,150	8	~	400	400	2,000	Yes	N/A
EF-1	Restroom	550	8		400	400	765	Yes	N/A
			181				1012773		
System Name	AH-2	System Design OA CFM Airflow	2,150	System Design	0	Air Filtration per 120.1c and 141.0b2	Yes		
		CENTAILIOW	# of	Transfer Air CFM	Required	120.10 800 141.002	Vent CFM		
Space Name	Occupancy Type	Conditioned Floor	showerheads/	# of people	Min OA	Required Min Vent	Provided per	DCV	Occ Senso
or Item Tag		Area (ft^2)	toilets	100	CFM	CFM	Design		
AH-2	Gymnasium	4,370	ತ	40	1800	1800	2,150	Yes	N/A
System Name	AH-3	System Design OA CFM Airflow	2,150	System Design Transfer Air CFM	0	Air Filtration per 120.1c and 141.0b2	Yes		
Coore Name		Conditioned Flans	# of		Required	Required Min Vent	Vent CFM		
Space Name or Item Tag	Occupancy Type	Conditioned Floor Area (ft^2)	showerheads/	# of people	Min OA	CFM	Provided per	DCV	Occ Sense
			toilets		CFM		Design		
AH-3	Gymnasium	4,370	÷	40	1800	1800	2,150	Yes	N/A
System Name	AH-4	System Design OA	2,150	System Design	0	Air Filtration per	Yes		
	600 A 4	CFM Airflow	82537960745	Transfer Air CFM		120.1c and 141.0b2			
Space Name or Item Tag	Occupancy Type	Conditioned Floor Area (ft^2)	# of showerheads/	# of people	Required Min OA	Required Min Vent CFM	Vent CFM Provided per	DCV	Occ Sense
AH-4	Gymnasium	4,370	toilets	40	CFM 1800	1800	Design 2,150	Yes	N/A
- DU 3	o y milosioni	4,570			1000	1000	1,150		
System Name	AH-5	System Design OA	2,150	System Design	0	Air Filtration per	Yes		
	0.1.2	CFM Airflow	# of	Transfer Air CFM	Required	120.1c and 141.0b2	Vent CFM		
Space Name or Item Tag	Occupancy Type	Conditioned Floor Area (ft^2)	showerheads/ toilets	# of people	Min OA CFM	Required Min Vent CFM	Provided per Design	DCV	Occ Senso
AH-5	Gymnasium	4,370	2000. 2	40	1800	1800	2,150	Yes	N/A
System Name	AH-6	System Design OA	3,390	System Design Transfer Air CFM	O	Air Filtration per	Yes		
		CFM Airflow	# of	and target with the Wi	Required	120.1c and 141.0b2	Vent CFM		
Space Name	Occupancy Type	Conditioned Floor	showerheads/	# of people	Min OA	Required Min Vent	Provided per	DCV	Occ Senso
or Item Tag	120220200000000000000000000000000000000	Area (ft^2)	toilets	un calles cleared	CFM	CFM	Design		
AH-6	Offices	7,695	1000000000 20	77	1155	20		Yes	N/A
EF-2	Restroom	360	4	31°	200	200	720	Yes	N/A
EF-3	Locker Room	410	4	24	200	200	820	Yes	N/A
EF-4	Storage	180	-	0	30	30	360	Yes	N/A
EF-5	Locker Room	385	4	24	200	200	770	Yes	N/A
EF-6	Restroom	360	4	ι <del>ε</del>	200	200	720	Yes	N/A
	2420400	System Design OA		System Design	1420	Air Filtration per	742217		
System Name	AH-7	CFM Airflow	1,000	Transfer Air CFM	0	120.1c and 141.0b2	Yes		
			# of		Required	1910 Control 4 (1910) S (1910)	Vent CFM		
Space Name		Conditioned Floor		Statistical and control of the second		Required win vent	Value and a column	1 Table Sector	
Space Name or Item Tag	Occupancy Type	Conditioned Floor Area (ft <sup>2</sup> )	showerheads/	# of people	Min OA	Required Min Vent CFM	Provided per	DCV	Occ Senso
1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	Occupancy Type Weight Room			# of people 30	Min OA CFM 780		Provided per Design 1,000	DCV Yes	Occ Senso



June 2020

ERTIFICAT	E OF COMP	LIANCE		CALIFORNIA ENERGY COMMIS	RCC-MCH
roject Nam	ne: Impe	rial Valley College B700 Renovation	Report Page:	P	age 13 of 1
roject Add	ress: 380 l	Aten Rd	Date Prepared:		2020-06-
DECLAR	ATION OF	REQUIRED CERTIFICATES OF VERIFICATION			
	1			1 perioda	
YES	NO		Form/Title		spector
YES	NO	NRCV-MCH-04-H Duct Leakage Test NOTE: Must be completed by a HERS Rater	Form/Title	Field In Pass	spector Fail
		and the second	Form/Title	Pass	-
С		NOTE: Must be completed by a HERS Rater NRCV-MCH-24 Enclosure Air Leakage Worksheet	Form/Title	Pass	



LEGEND		<u>ABBR</u>	EVIATIONS
SYMBOL	DESCRIPTION	ABBREVIATI	ON DESCRIPTION
-	NOTE CALLOUT	1/C &	SINGLE CONDUCTOR AND
-	DETAIL CALLOUT	@ A OR AMP ABV	AT AMPERES ABOVE
-	- NUMBER ON TOP DENOTES DETAIL NUMBER - NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN	A.C. AF	ABOVE ASPHALT CONCRETE AMPERE FUSE RATING
	MECHANICAL EQUIPMENT CALLOUT, SEE MECHANICAL PLANS FOR	AFC AFF	AVAILABLE FAULT CURRENT ABOVE FINISHED FLOOR
-	EXACT LOCATION AND REQUIREMENTS	AFG AIC AL	ABOVE FINISH GRADE AMPERE INTERRUPTING CAPACITY ALUMINUM
$\checkmark$		AL APPROX. ARCH.	APPROXIMATE ARCHITECT; ARCHITECTURAL
	SECTION CALLOUT	AS ASCC	AMPERE SWITCH RATING AVAILABLE SHORT CIRCUIT CURRENT
	FEEDER CALLOUT	ATC ATO ATS	AIR TERMINAL CHAMBER AUTOMATIC THROW-OVER (SWITCH) AUTOMATIC TRANSFER SWITCH
<u> </u>	EXISTING FEEDER CALLOUT	AUTO AUX	AUTOMATIC AUXILIARY
 	NEW LINEWORK	AWG BAT	AMERICAN WIRE GAUGE BATTERY
· · · · · · · · · · · · · · · · · · ·	EXISTING LINEWORK	BEL BKBD BKR	BELOW BACKBOARD BREAKER
<u>,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DEMOLISHED LINEWORK	BLDG B.S.	BUILDING BARE STRANDED
· · · · · · · · · · · · · · · · · · ·	CONDUIT CONCEALED IN WALL OR ABOVE CEILING	C CB	CONDUIT CIRCUIT BREAKER
,	CONDUIT EXPOSED	CC CEC CF	CONSTANT CURRENT CALIFORNIA ELECTRICAL CODE CUBIC FEET
	CONDUIT EXPOSED	CKT CL	CIRCUIT CENTER LINE
		CLG CMU	CEILING CONCRETE MASONRY UNIT
		C.O. COL CP	CONDUIT ONLY WITH PULL WIRE COLUMN COMMUNICATION PROCESSOR
,		CPT CR	CONTROL POWER TRANSFORMER CONTROL RELAY
۰ ب ٦		CSFD CT CW	COMBINATION SMOKE FIRE DAMPER CURRENT TRANSFORMER
]		CW CU DIAG	COLD WATER COPPER DIAGRAM
<u>→ A-1</u>	BRANCH CIRCUIT HOMERUN TO PANELBOARD AND CIRCUITS AS INDICATED	DIST. DL	DISTANCE DAMP LOCATION LISTING
	3/4" CONDUIT, TICK MARKS INDICATE QUANTITY OF #12 AWG WIRES (UNLESS NOTED OTHERWISE, NO MARKS INDICATES 2#12 & 1#12 GND	DM DMM DP	DIGITAL METER DIGITAL METER MODULE DISTRIBUTION PANEL
< <u> </u>	WIRES) - SMALL MARK DENOTES HOT WIRE	DIST. DWG	DISTRIBUTION PANEL DISTANCE DRAWING
	- LARGE MARK DENOTES NEUTRAL WIRE - DIAGONAL DENOTES GROUND WIRE	DWP EA	DEPARTMENT OF WATER & POWER EACH
G	GENERATOR	ECM ELEC. EM	ELECTRONIC CIRCUIT MONITOR ELECTRICAL EMERGENCY
%	SWITCH	EMH EMT	ELECTRICAL MANHOLE ELECTRICAL METALLIC TUBING
م م	CIRCUIT BREAKER	EPO EPR EQUIP	EMERGENCY POWER OFF ETHYLENE PROPYLENE RUBBER EQUIPMENT
<i>ل</i> م	UNCUT DREAKER	EQUIP ER ERR	EQUIPMENT EXISTING TO BE REMOVED EXISTING TO BE RELOCATED AND -
°,°	2-WAY SWITCH, TRANSFER SWITCH	EXIST/(E)	RECONNECTED EXISTING
	FUSE	EXP FA	EXPLOSION PROOF FIRE ALARM
	TRANSFORMER	FFE FIN. FIP.	FINISHED FLOOR ELEVATION FINISH FIELD INTERFACE PANEL
	GROUND CONNECTION	FIXT FLA	FIXTURE FULL LOAD AMPS
<u>+</u>	GROUND CONNECTION	FLR FLUOR FT	FLOOR FLUORESCENT FEET
$\bigcirc$	MOTOR - SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER	FT FACP FATC	FEET FIRE ALARM CONTROL PANEL FIRE ALARM TERMINAL CABINET
	METER	FMC FO	FLEXIBLE METAL CONDUIT FIBER OBTIC
ECM	ELECTRONIC CIRCUIT MONITOR	FTG GEN GFI	FOOTING GENERATOR GROUND FAULT INTERRUPTER
~		GFR GG	GROUND FAULT RELAY GREEN GROUND
ک	480V DRAWOUT BREAKER	GND HOA	GROUND HAND-OFF-AUTOMATIC
\$		HP HT HTR	HORSEPOWER HEIGHT HEATER
VFD	VARIABLE FREQUENCY DRIVE	HZ ICON	HERTZ INTEGRATED COMMUNICATIONS OPTICAL
		IE	NETWORK INVERT ELEVATION
	PANEL	IED IMC ISC	INTELLIGENT ELECTRONIC DEVICES INTERMEDIATE METAL CONDUIT SHORT CIRCUIT CURRENT
	FUSED DISCONNECT SWITCH	INCAND J, JB, J-BOX	INCADESCENT JUNCTION BOX
	NON-FUSED DISCONNECT SWITCH	KCMIL KV	THOUSAND CIRCULAR MILS KILOVOLT
	COMBINATION STARTER/DISCONNECT SWITCH		NT ABBREVIATIONS NOT MENTIONED HEREIN A ABBREVIATIONS, AND OTHER STANDARD INDU
S <sup>M</sup>			
ž	SWITCH MOTOR RATED		
	SPLICE		
<b></b>	TERMINATION		
Δ	EXISTING TERMINATION		
	MEDIUM VOLTAGE - AIR CIRCUIT BREAKER		
52 ¥	DRAWOUT BREAKER		
ູ			
Å	MEDIUM VOLTAGE FUSED DISCONNECT SWITCH		
⊔ <b>∓</b>	MEDIUM VOLTAGE MODULAR SPLICE		
<b>▼</b>	MEDIUM VOLTAGE MODULAR SPLICE		
۲ <b>.</b> ۲			
	PANELBOARD - SURFACE MOUNTED		
—			

ABBREVIATION	DESCRIPTION
KVA KW	KILOVOLT-AMPERES KILOWATT
LF	
LFMC LGST	LIQUIDTIGHT FLEXIBLE METAL CONDUIT LARGEST
LIS	LOAD INTERRUPTER SWITCH
LOC.	LOCATION LOCK-OUT & TAG-OUT
LOTO LSI	LOCK-OUT & TAG-OUT LONG TERM, SHORT TERM, INSTANTANEOUS
LTG	LIGHTING
LV M	LOW VOLTAGE METER
MAX	MAXIMUM
MCA MCC	MAXIMUM CIRCUIT AMPACITY MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFGR, MFR	MANUFACTURER
MH MI.	MANHOLE MECHANICAL INTERLOCK
MRCT	MULTI-RATIO CURRENT TRANSFORMER
MIN MOCP	MINIMUM MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG MTR	MOUNTING MOTOR
MTTB	MAIN TELEPHONE TERMINAL BOARD
MV	MEDIUM VOLTAGE
N NAC	NORTH NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NEC NF	NATIONAL ELECTRICAL CODE NON-FUSED
NIC	NON-FOSED NOT IN CONTRACT
NL	NIGHT LIGHT- 24HRS ON
NO. OC	NUMBER ON CENTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OD OE	OUTSIDE DIAMETER OVERHEAD ELECTRICAL
OFC	OIL FUSED CUTOUT
OH	OVERHEAD OIL LEVER SWITCH
OL P	POLE
PAC	PROGRAMMABLE AUTOMATION CONTROLLER
PB PC	PULL BOX PHOTOCELL
PCB	POLYCHLORINATED BIPHENYL
PDS PF	PRESSURE DIFFERENTIAL SWITCH POWER FACTOR
PHORØ	PHASE
PILC	PAPER INSULATED, LEAD COVER
PIV PL	POST INDICATING VALVE PLATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL POC	PANEL POINT OF CONNECTION
PREF.	PREFERRED
PRI. PVC	PRIMARY POLY-VINYL CHLORIDE
PWR	POWER
REC/RECEPT	RECEPTACLE
REQ'D RGS	REQUIRED RIGID GALVANIZED STEEL
RMC	RIGID METAL CONDUIT
RPBP RM	REDUCED PRESSURE BACK FLOW PREVENTER
RTAC	REAL TIME AUTOMATION CONTROLLER
SCCR SCE	SHORT CIRCUIT CURRENT RATING SOUTHERN CALIFORNIA EDISON
SF	SQUARE FEET
SHT SIG.	SHEET SIGNAL
SP	SPARE
SPECS	SPECIFICATIONS
ST STD	STREET STANDARD
STP	SHIELDED TWISTED PAIR
SW SWBD	SWITCH SWITCHBOARD
SWGR	SWITCHGEAR
SWST TB	SWITCHING STATION TERMINAL BLOCK
TEL./TELE	TELEPHONE
TMH T.O.D.	TELEPHONE MANHOLE TOP OF DUCTBANK
T.O.M.	TOP OF DUCTBANK TOP OF MANHOLE
TPS	TWISTED SHIELDED PAIR
TRANSF,XFMR TS	TRANSFORMER TAMPER SWITCH
TYP	TYPICAL
UG UON	UNDERGROUND UNLESS OTHERWISE NOTED
V	VOLTS
VA VB	VOLT-AMPERES VIBRATION SWITCH
VB VFD	VARIABLE FREQUENCY DRIVE
W W//	WATTS
W/ W/O	WITH WITHOUT
WCR	WITHSTAND CLOSE-ON RATING
WP Z	WEATHERPROOF IMPEDANCE
EUSED BEEEREN	CE WILL BE MADE TO ANSI Y1.1, MILITARY

REIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY D INDUSTRY CONVENTIONS.

SHEET E001 E002 E201 E202 E203 E204 E211 E212 E213 E221 E222 E223 E224 E301 E501 E502 E503

> E504 E601

E602

# **GENERAL NOTES**

1. ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL AND STATE. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN BUT THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.

2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS' LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.

3. THE CONTRACTOR SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT OR STRUCTURAL ENGINEER.

4. MEP COMPONENT ANCHORAGE NOTE:

ALL 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 2019 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 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 ELECTRICAL 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.

5. ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

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 2019 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 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.

 $\mathsf{MP} \ \square \ \mathsf{MD} \ \square \ \mathsf{PP} \ \square \ \mathsf{E} \ \square \ - \ \mathsf{OPTION} \ 2: \mathsf{SHALL} \ \mathsf{COMPLY} \ \mathsf{WITH} \ \mathsf{THE} \ \mathsf{APPLICABLE} \ \mathsf{OSHPD}$ PRE-APPROVAL (OPM #) #

# SHEET INDEX

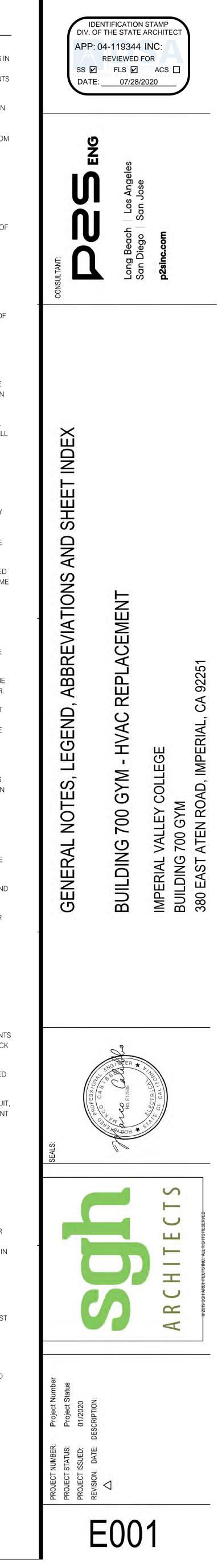
- DESCRIPTION
- GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
- SCHEDULES
- FIRST FLOOR DEMOLITION PLAN WEST GYM
- FIRST FLOOR DEMOLITION PLAN EAST LOCKER ROOM
- MEZZANINE DEMOLITION PLAN WEST GYM
- MEZZANINE DEMOLITION PLAN EAST LOCKER ROOM
- FIRST FLOOR POWER PLAN WEST GYM
- FIRST FLOOR POWER PLAN EAST LOCKER ROOM
- MEZZANINE POWER PLAN WEST GYM
- FIRST FLOOR AUXILIARY PLAN WEST GYM
- FIRST FLOOR AUXILIARY PLAN EAST LOCKER ROOM
- MEZZANINE AUXILIARY PLAN WEST GYM
- MEZZANINE AUXILIARY PLAN EAST LOCKER ROOM
- ENLARGED PLANS
- SINGLE LINE DIAGRAM DEMOLITION
- SINGLE LINE DIAGRAM RENOVATION
- SINGLE LINE DIAGRAM RENOVATION
- SINGLE LINE DIAGRAM RENOVATION
- DETAILS DETAILS

# **DEMOLITION NOTES**

- 1. WORK INCLUDED: ALL LABOR, MATERIAL, APPLIANCES, TOOLS, EQUIPMENT, FACILITIES, TRANSPORTATION AND SERVICES NECESSARY AND INCIDENTAL TO PERFORMING ALL OPERATIONS IN CONNECTION WITH THE DEMOLITION, DISPOSAL, TRANSPORTATION AND RECONNECTION OF EXISTING REMAINING EQUIPMENT/DEVICES. COMPLETE AS INDICATED IN THE CONTRACT DOCUMENTS AS SPECIFIED HEREIN.
- 2. THE FOLLOWING IS INTENDED TO COVER THE COMPLETE DEMOLITION, DISPOSAL, TRANSPORTATION AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT. THE OMISSION OF EXPRESSED REFERENCE TO ANY ITEM OF LABOR OR MATERIAL FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH PRESENT PRACTICE OF THE TRADE SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH ADDITIONAL LABOR AND MATERIALS.
- 3. REFER TO THE CONTRACT DOCUMENTS FOR ADDITIONAL DEMOLITION REQUIREMENTS WHICH AFFECT THE PROPER EXECUTION OF THIS WORK. DIAGRAMS AND SYMBOLS SHOWING ELECTRICAL CONNECTIONS ARE DIAGRAMMATIC ONLY. WIRING DIAGRAMS DO NOT NECESSARILY SHOW THE EXACT PHYSICAL ARRANGEMENT OF THE EQUIPMENT.
- 4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL FEATURES OF THE BUILDING AND SITE WHICH MAY AFFECT THE PROPER PERFORMANCE OF THIS WORK.
- 5. PORTIONS OF THESE PLANS HAVE BEEN DERIVED FROM INFORMATION TAKEN FROM ORIGINAL ELECTRICAL PLANS. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE FOR THE REMOVAL AND DISPOSAL OF ALL ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, OUTLET BOXES, CONDUIT, WIRING, ETC. AS DEFINED HEREIN AND AS INDICATED ELSEWHERE IN THE CONTRACT DOCUMENTS.
- 6. IT IS UNDERSTOOD AND AGREED THAT THIS CONTRACT DOES NOT CONTEMPLATE THE HANDLING OF ASBESTOS, PCB OR ANY HAZARDOUS WASTE MATERIAL. IF ASBESTOS, PCB OR ANY HAZARDOUS WASTE MATERIAL IS ENCOUNTERED, NOTIFY THE ELECTRICAL ENGINEER IMMEDIATELY. DO NOT DISTURB, HANDLE OR ATTEMPT TO REMOVE.
- 7. THE SCOPE OF DEMOLITION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE FOLLOWING: A. SUBMIT PROPOSED OUTAGE SCHEDULE. PROVIDE A SEQUENCE OF DEMOLITION TO INSURE THE UNINTERRUPTED USE OF OCCUPIED PORTIONS OF THE FACILITY WHICH ARE TO REMAIN

OPERATIONAL DURING THE CONTRACT PERIOD.

- B. SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER, IN WRITING. WORK WHICH COULD RESULT IN A ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK.
  - 1) COORDINATE WITH THE OWNER AND DESIGNATE A PORTION OF THE FACILITY FOR SAFELY STORING ALL REMOVED AND SALVAGED MATERIALS.
- C. ALL REMOVED MATERIALS AND EQUIPMENT WHICH IN THE OPINION OF THE OWNER/ARCHITECT ARE SALVAGEABLE, SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON PREMISES AS DIRECTED, NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. DO NOT REUSE MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY INDICATED ON PLANS OR SPECIFIED. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY THE OWNER/ARCHITECT TO BE SCRAP.
- D. PERFORM CUTTING AND PATCHING OF THE CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER DEMOLITION OF THE ELECTRICAL WORK. PATCHING SHALL BE OF THE SAME MATERIAL, THICKNESS, WORKMANSHIP AND FINISH AS EXISTING AND ACCURATELY MATCH SURROUNDING WORK TO THE SATISFACTION OF THE OWNER. CUTTING OF STRUCTURAL MEMBERS SHALL NOT BE DONE WITHOUT FIRST OBTAINING APPROVAL FROM THE OWNER AND/OR STRUCTURAL ENGINEER OF RECORD.
  - 1) PATCHING OF OPENINGS IN RATED PARTITIONS, BARRIERS, FLOORS, CEILINGS, ETC. SHALL BE EXECUTED USING UL AND NEPA FIRE STOP MATERIAL EQUAL TO THE FIRE RATINGS OF THE PENETRATED SURFACE.
  - 2) WHERE MATERIALS AND EQUIPMENT HAVE BEEN REMOVED AND NOT REPLACED THE EXPOSED SURFACE SHALL BE PAINTED TO MATCH SURROUNDING SURFACE COLOR.
- E. AS INDICATED, DISCONNECT AND REMOVE EXISTING ELECTRICAL EQUIPMENT, DISCONNECT SWITCHES, RECEPTACLES, MOUNTING HARDWARE AND ASSOCIATED RACEWAYS, CONDUCTORS AND OUTLET BOXES. WHERE OUTLET BOXES ARE FLUSH AND CONDUITS ARE CONCEALED IN EXISTING REMAINING WALLS, REMOVE WIRING AND ABANDON CONDUIT IN PLACE.
- F. EXCEPT AS NOTED OTHERWISE DISCONNECT AND REMOVE EXISTING FIRE ALARM SYSTEM EQUIPMENT, DEVICES, MOUNTING HARDWARE AND ASSOCIATED RACEWAYS, CONDUCTORS AND OUTLET BOXES. WHERE OUTLET BOXES ARE FLUSH AND CONDUITS ARE CONCEALED IN EXISTING REMAINING WALLS, REMOVE WIRING AND ABANDON CONDUITS IN PLACE.
- G. WHERE INDICATED BY THE DRAWINGS REMOVE EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT INCLUDING SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, LOAD CENTERS, ETC. MODIFICATIONS TO THE MAIN SWITCHBOARD SHALL NOT TAKE PLACE UNTIL THE SERVING UTILITY POWER COMPANY IS NOTIFIED. COMPLY WITH ALL POWER OUTAGE RESTRICTIONS INDICATED ELSEWHERE IN THE CONTRACT DOCUMENTS.
- H. EXCEPT AS NOTED OTHERWISE REMOVE EXISTING TIMESWITCHES CONTACTORS, RELAYS AND ASSOCIATED CONDUITS AND CONDUCTORS CONTROLLING HVAC SYSTEMS.
- I. WHERE EXISTING WALL AND CEILINGS ARE TO REMAIN, PROVIDE BLANK COVER PLATES FOR OUTLETS WHERE EQUIPMENT OR DEVICES ARE REMOVED UNDER THIS CONTRACT. PRIME BLANK PLATES AND PAINT TO MATCH SURROUNDING AREA.
- J. REFER TO THE DRAWINGS FOR ALL EQUIPMENT TO BE RELOCATED AND REUSED.
- K. THE CONTRACTOR SHALL FIELD VERIFY EXISTING EQUIPMENT, DEVICES, AND/OR CIRCUITS THAT ARE REMAINING. CIRCUITS SHALL BE RECONNECTED TO NEW OR EXISTING POWER DISTRIBUTION EQUIPMENT AND FUNCTION IN THE MANNER THEY WERE ORIGINALLY DESIGNED. PROVIDE ADDITIONAL EQUIPMENT, DEVICES, OUTLET BOXES, CONDUIT, WIRING, ETC. AS REQUIRED TO RESTORE CONTINUITY TO THESE CIRCUITS.
- WHERE FIXTURES, EQUIPMENT, DEVICES, ETC. ARE SPECIFIED BY THE CONTRACT DOCUMENTS FOR REMOVAL, THE CONTRACTOR SHALL REMOVE ALL CIRCUIT CONDUCTORS/CABLING BACK TO THE NEAREST REMAINING JUNCTION BOX AND/OR POINT OF TERMINATION.
- M. PROVIDE ADDITIONAL CONDUIT, CONDUCTORS, CABLING, OUTLET BOXES, ETC. AS REQUIRED FOR THE RELOCATION OF ELECTRICAL APPARATUS.
- N. RELOCATION AND/OR REMOVAL OF EXISTING EQUIPMENT, DEVICES, OUTLET BOXES, CONDUIT, WIRING, ETC. MAY AFFECT THE OPERATION OF EXISTING, REMAINING ELECTRICAL EQUIPMENT /DEVICES. THE CONTRACTOR SHALL PROVIDE ADDITIONAL MATERIALS AS REQUIRED TO MAINTAIN AND/OR RESTORE CONTINUITY OF SERVICE TO EXISTING, REMAINING ELECTRICAL/DEVICES.
- O. PROVIDE ALL NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED RACEWAYS, CONDUCTORS, CABLING, OUTLET BOXES, RECEPTACLES, SWITCHES, EQUIPMENT, ETC.
- P. WHERE IT IS NOT FEASIBLE TO REMOVE UNUSED FLUSH MOUNTED OUTLET BOXES AND CONCEALED RACEWAYS IN EXISTING, REMAINING WALLS AND/OR CEILINGS REMOVE ALL WIRING AND PROVIDE BLANK COVER PLATES OVER OUTLET BOXES.
- Q. ALL CONDUITS RISING FROM BELOW GRADE TO AREAS WHERE PARTITIONS, WALLS, AND/OR OTHER CONSTRUCTION ENTITIES ARE INDICATED AS BEING REMOVED SHALL BE CUT TO BELOW FINISH FLOOR, CAPPED AND ABANDONED. PROVIDE PATCHING AS REQUIRED. SEAL IN A MANNER ACCEPTABLE TO THE OWNER.
- R. COVER UNUSED AND/OR ABANDONED OUTLETS WITH BLANK COVER PLATES.
- S. SEAL ALL ABANDONED FLOOR PENETRATIONS IN A MANNER ACCEPTABLE TO THE OWNER.
- T. DISCONNECT ABANDONED CIRCUITS AT EXISTING PANELBOARDS AND REMOVE WIRE TO LAST REMAINING DEVICE. LABEL ALL ABANDONED CIRCUIT BREAKERS "SPARE".
- U. PROVIDE WEATHERPROOF CAPS ON ABANDONED CONDUITS PENETRATING THE ROOF. REPAIR ROOFING DAMAGED BY REMOVAL OF EXISTING ELECTRICAL EQUIPMENT.
- V. PROVIDE NEW TYPEWRITTEN DIRECTORIES FOR RE-USED PANELBOARDS THAT ARE ALTERED AS PART OF THE DEMOLITION.
- W. EXISTING CIRCUITS THAT ARE REMOVED AND NOT RE-USED SHALL BE IDENTIFIED ON THE PANEL DIRECTORIES AS "SPARE".
- X. THE CONTRACTOR SHALL PROVIDE CIRCUIT NUMBERS AND LOADS FOR ALL EXISTING REMAINING EQUIPMENT. PRIOR TO RECONNECTION, REASSIGN CIRCUITS AS REQUIRED TO BALANCE LOADS EVENLY ACROSS PHASES WHEN RECONNECTED. PROVIDE COMPLETE "AS-BUILTS" DRAWINGS.



# MECHA EQUIP. ID / EF / FF $\left\langle \begin{array}{c} 6 \end{array} \right\rangle$ GENERAL NOTES:

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DESCRIPTION	LOCATION	VOLTAGE	PHASE	HP	KW	MCA	DISCONNECT/ FUSE	FEEDER	PANEL-CIRCUIT	REMARKS
AIR HANDLING UNIT	LEVEL-1 CEILING SPACE	208	3	7		17.8A	(1) 3P30/20AF	SEE SHEET E503	4DB-11	
AIR HANDLING UNIT	MEZZANINE CEILING SPACE	480	3	÷	2	11.2A	(1) 3P30/15AF	SEE SHEET E503	4DB-12	
AIR HANDLING UNIT	MEZZANINE CEILING SPACE	480	3	÷	-	11.2Å	(1) 3P30/15AF	SEE SHEET E503	4DB-13	
AIR HANDLING UNIT	MEZZANINE CEILING SPACE	480	3	÷	-	11.2A	(1) 3P30/15AF	SEE SHEET E503	4DB-14	
AIR HANDLING UNIT	MEZZANINE CEILING SPACE	480	3	<del>z</del> ,	Ð	11.2A	(1) 3P30/15AF	SEE SHEET E503	4DB-15	
AIR HANDLING UNIT	LEVEL-1 CEILING SPACE	208	3	-	-	27.1A	(1) 3P60/35AF	SEE SHEET E504	2DB1-4	
AIR HANDLING UNIT	MEZZANINE CEILING SPACE	480	3			17A	(1) 3P30/20AF	SEE SHEET E503	4DB-16	
CONDENSING UNIT	OUTDOOR EQUIP YARD 184	480	3		- E	(2) 18.4A, (1) 35.7A	(2) 3P30/25AF, (1) 3P60/50AF	SEE SHEET E503	4DB-1, 4DB-2, 4DB-3	
CONDENSING UNIT	OUTDOOR EQUIP YARD 184	480	3			(1) 16.4A, (1) 38.3A	(1) 3P30/25AF, (1) 3P60/50AF	SEE SHEET E503	4DB-4, 4DB-5	
CONDENSING UNIT	OUTDOOR EQUIP YARD 184	480	3		5	(1) 16.4A, (1) 38.3A	(1) 3P30/25AF, (1) 3P60/50AF	SEE SHEET E503	4DB-6, 4DB-7	
CONDENSING UNIT	EXTERIOR/WEST OF GYM	480	3	-	÷.	(1) 16.4A, (1) 38.3A	(1) 3P30/25AF, (1) 3P60/50AF	(1) 3/4"C - 3#10, #10G (1) 1"C - 3#6, #10G	4PA-1,3,5; 4PA-7,9,11	
CONDENSING UNIT	EXTERIOR/WEST OF GYM	480	3	-	<del>.</del>	(1) 16.4A, (1) 38.3A	(1) 3P30/25AF, (1) 3P60/50AF	(1) 3/4"C - 3#10, #10G (1) 1"C - 3#6, #10G	4PA-13,15,17; 4PA-19,21,23	
CONDENSING UNIT	COMPRESSOR 131	208	3	4°	-	(1) 30.9A, (1) 53.6A, (1) 60.3A	(1) 3P60/40AF, (1) 3P100/70AF, (1) 3P100/80AF	SEE SHEET E504	2DB1-1, 2DB1-2, 2DB1-3	
CONDENSING UNIT	OUTDOOR EQUIP YARD 184	480	3	÷.		(1) 28.5A, (1) 38.3A	(1) 3P60/35AF, (1) 3P60/50AF	SEE SHEET E503	4DB-3, 4DB-9	
EXHAUST FAN	MECH EQUIP 121	208	1	1	τ.		2P30/20AF	3/4"C - 2#12, #12G	2PB-1,3	
EXHAUST FAN	LOW ROOF	208	1	1/4	-		2P30/20AF	3/4"C - 2#12, #12G	2PB-5,7	
EXHAUST FAN	LOW ROOF	208	1	1/4	-		2P30/20AF	3/4"C - 2#12, #12G	2PB-9,11	
EXHAUST FAN	LOW ROOF	208	1	1/10	4	9	2P30/20AF	3/4"C - 2#12, #12G	2PB-13,15	
EXHAUST FAN	LOW ROOF	208	1	1/4	-		2P30/20AF	3/4"C - 2#12, #12G	2PB-17,19	
EXHAUST FAN	LOW ROOF	208	1	1/4	-		2P30/20AF	3/4"C - 2#12, #12G	2PB-21,23	

1. REFER TO MECHANICAL SCHEDULES ON SHEET M002 FOR ADDITIONAL INFORMATION.

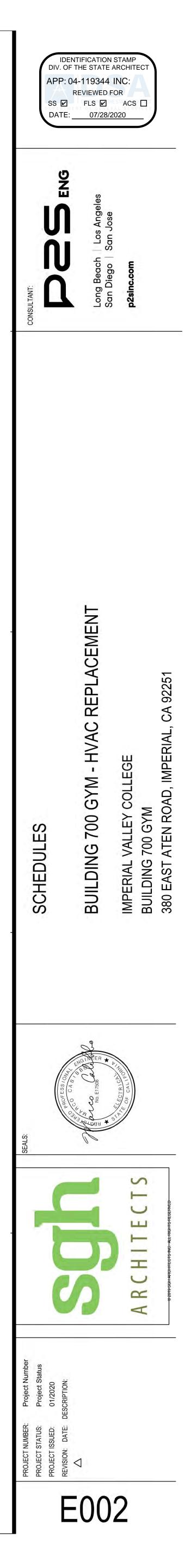
1. NOT USED.

NOTES:

LOCATION : EXTERIOR FLOOR : FIRST FLC MOUNTING : SURFACE	OR		BUS A	HASE : 277 AMPS : 225 AKER : ML	A	4W		D FROM : 4DE RATING : 14K		PANEL LOCATION FLOOR MOUNTING	: GENERAT : SECOND	FLR				BUS A	HASE : 12 AMPS : 10 AKER : 10	AO	3Ø, 4W			ROM : 2PA FING : 10KAIC
LOADS NOTE L		Transferration and the second s		EABCPO	ECKT	VOLT-AMPS A B C	OUTLETS		LOADS	LOADS				DLT-AMF B			R/ BI				OUTLETS *	
J-4	4,545			3 * 20,					SPARE	EF-1	INCIL		426				2 * 3					1 (E) P-2L
	4,	545	ii)	- * - 20,					SPARE					426			_*_		100000000000000000000000000000000000000	1,000		-
				* 20,					SPARE	EF-2					000000000000000000000000000000000000000		2*			1,000		-
4	###			3 * 20,					SPARE				343		CONTRACTOR OF CONT		* 3					1 (E) P-1L
	#	CONTRACTOR OF CONT		- * - 20					SPARE	EF-3				343			2 - * -			1,000		-
		###		* 20,					SPARE						343 1	1	*	- 12		100		-
5	4,545		i i i i i i i i i i i i i i i i i i i	3 * 20,					SPARE	EF-4			260		1	3 20/2	2 * 2	0/1 14				SPARE
	4,			- * - 20,					SPARE					260	1	5	- * - 2	0/1 16				SPARE
		4,545		* 20,					SPARE	EF-5					343 1	7 20/2	2* 2	0/1 18				SPARE
5	###			3 * 20,					SPARE	<u>12</u>			343		1	9	* 2	0/1 20				SPARE
	#	##		- * - 20,	10100000				SPARE	EF-6				343			2 -*- 2					SPARE
		###		* 20,	100000				SPARE						343 2	3	* 2	0/1 24				SPARE
ARE				1 * 20,					SPARE	FSD			100		2	25 20/	1 * 2	0/1 26				SPARE
ARE				1 - * - 20,					SPARE	SPARE				[	2	7 20/	1 - * - 2	0/1 28				SPARE
ARE				1* 20,					SPARE	SPARE					2	9 20/	1* 2	0/1 30				SPARE
ARE				1* 20,					SPARE	SPARE					3	1 20/	1* 2	0/1 32				SPARE
ARE				1 * 20,					SPARE	SPARE					3	3 20/	1 * 2	0/1 34				SPARE
ARE				1 - * - 20,					SPARE	SPARE					3	5 20/	1 - * - 2	0/1 36				SPARE
ACE			37	*	38				SPACE	SPACE					3	37	*	38				SPACE
ACE			39	- * -	40				SPACE	SPACE					3	9	_ * _	40				SPACE
ACE			41	*	42				SPACE	SPACE					4	1	*	42				SPACE
TOTAL $ØA = ###$ VOL TOTAL $ØB = ###$ VOL TOTAL $ØC = ###$ VOL LCL = 0 VOL	T-AMPS T-AMPS				TES: DENOTES I	ONG CONTINU	OUS LOAD			TOTAL ØA TOTAL ØB TOTAL ØC	= 3,372 VO	DLT-AMPS DLT-AMPS					* "[]			IG CONTINUOUS TYPE AND SIZE F		ONNECTION.

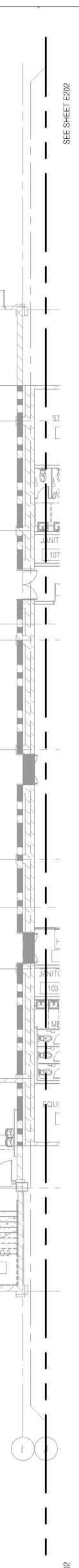
PANEL:	2PB
LOCATION :	GENERATOR ROOM
FLOOR :	SECOND FLR

		LOCATION : OUTDOOR EQUIP. YARD FLOOR : FIRST FLOOR MOUNTING : SURFACE				В	E/PH/ US AN BREAK	IPS :	225A	1	FED FROM : LP RATING : 10KAIC						
12.324	SEE *	OOILLIO		DLT-AM			BKR/		BKR/			OLT-AM	-	OUTLETS	* SEE		
LOADS	NOTE	LTG RECMISC	C A	B	С		POLE				A	B	С	LTG RECMISC	NOTE		
SPARE						1			20/1	2					-	SPARE	
SPARE			_			3			20/1	4						SPARE	
SPARE						5			20/1	6						SPARE	
SPARE						7			20/1	8						SPARE	
SPARE			_			9			20/1							SPARE	
SPARE						11			20/1							SPARE	
SPARE							20/1									SPARE	
SPARE							20/1									SPARE	
SPARE						17			20/1						1	SPARE	
SPARE						19									-	SPARE	
SPARE						21			20/1							SPARE	
SPARE						23	20/1	*	20/1	24						SPARE	
SPARE						25	20/1	*	20/1	26						SPARE	
SPARE						27	20/1	- * -	20/1	28						SPARE	
SPARE						29	20/1	*	20/1	30						SPARE	
SPARE						31	20/1	*	20/1	32						SPARE	
SPARE						33	20/1	*	20/1	34						SPARE	
SPARE						35	20/1	- * -	20/1	36						SPARE	
SPACE						37		*	100/3	38	3,372					2PB	
SPACE						39		- * -		40		3,372					
SPACE						41		*		42			2,472				





# FIRST FLOOR DEMOLTION PLAN - WEST GYM 3/32"=1'-0"



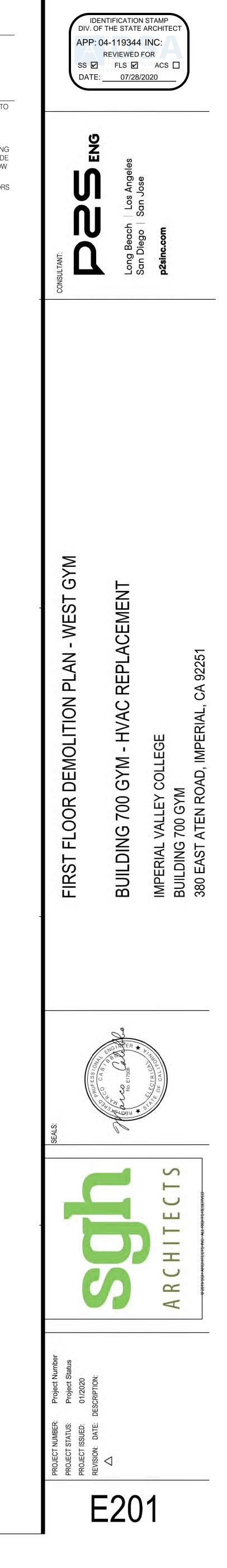
# GENERAL NOTES

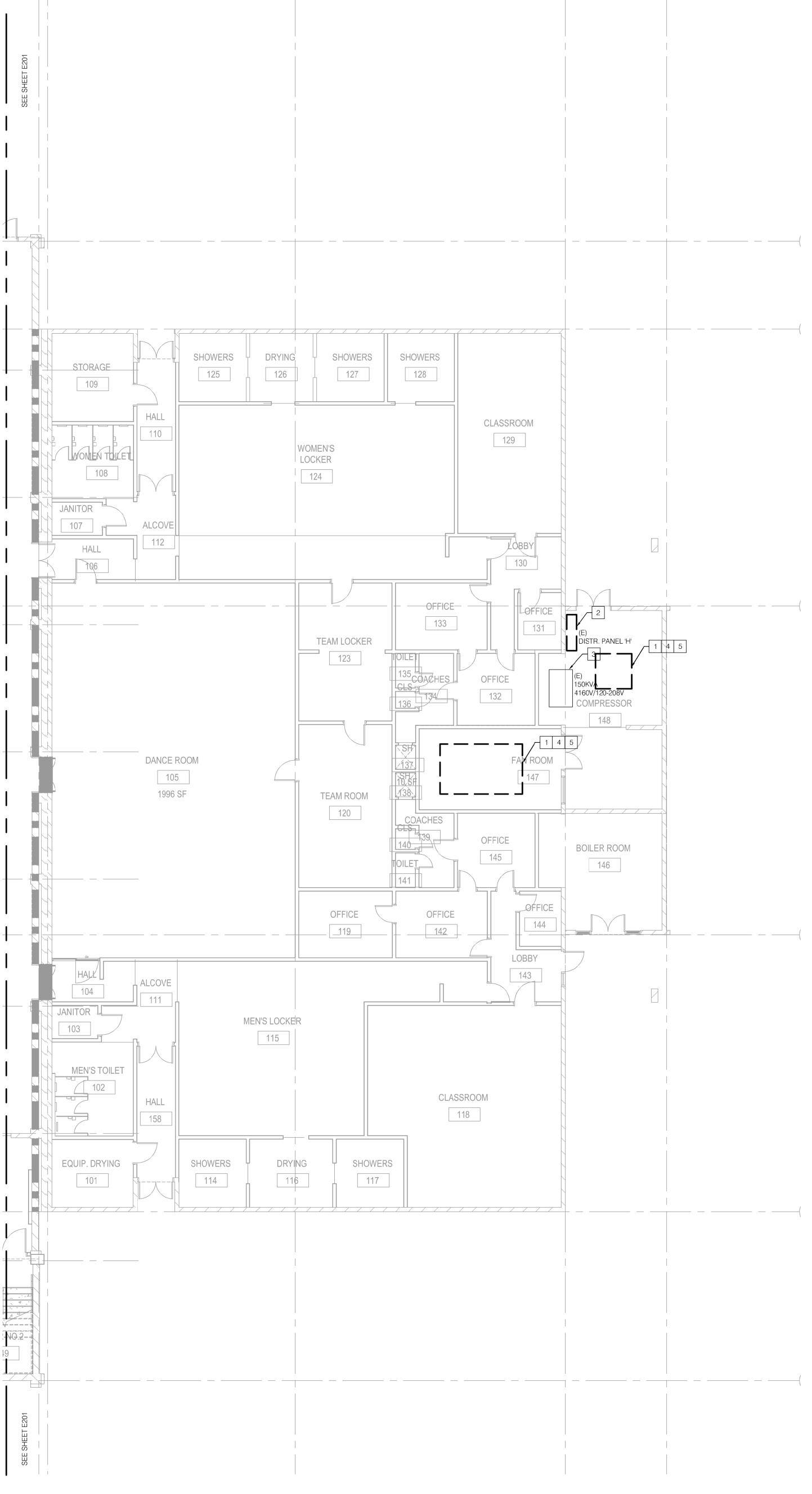
1. REFER TO MECHANICAL DEMOLITION SHEETS, MD201 AND MD202, FOR ADDITIONAL INFORMATION.

NOTES

- DISCONNECT AND REMOVE CONDUIT AND WIRE BACK TO SOURCE PANEL.
- 2 REFER TO DEMOLITION SINGLE LINE DIAGRAM, SHEET E501, FOR ADDITIONAL INFORMATION.
- 3 CONTRACTOR SHALL DISCONNECT AND RETAIN EXISTING FIRE ALARM RELAYS FOR SHUT DOWN OF FANS. PROVIDE
- NEW CONDUIT, WIRE AND RECONNECT RELAY TO ALLOW SHUT DOWN OF NEW EQUIPMENT.
- 4 CONTRACTOR SHALL RETAIN EXISTING DUCT DETECTORS TO ALLOW SHUT DOWN OF EQUIPMENT.

NORTH





FIRST FLOOR DEMOLITION PLAN - EAST LOCKER ROOM ADDTION

# GENERAL NOTES

1. REFER TO MECHANICAL DEMOLITION SHEETS, MD201 AND MD202, FOR ADDITIONAL INFORMATION.

NOTES

1	DISCONNECT AND REMOVE CONDUIT AND WIRE BACK TO SOURCE PANEL.
	CONTRACTOR SHALL DISCONNECT AND REMOVE

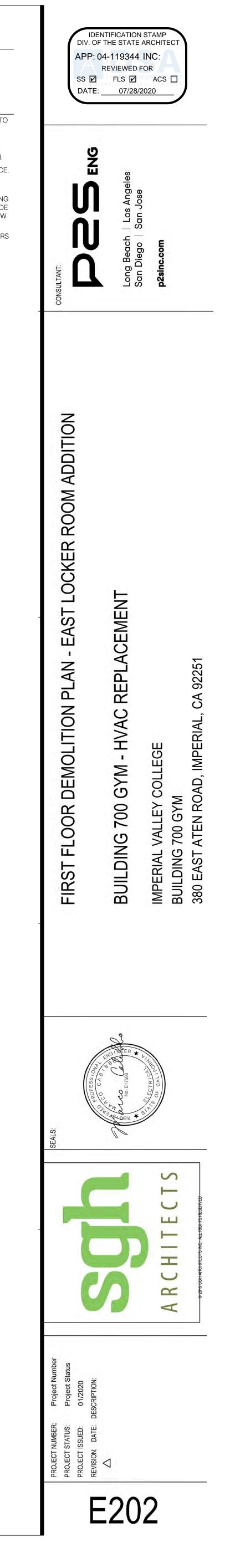
EXISTING DISTRIBUTION BOARD REFER TO SINGLE LINE DIAGRAM, SHEET E501, FOR ADDITIONAL INFORMATION.

3 EXISTING TRANSFORMER TO REMAIN. PROTECT IN-PLACE. REFER TO SINGLE LINE DIAGRAM, SHEET E504, FOR ADDITIONAL INFORMATION.

4 CONTRACTOR SHALL DISCONNECT AND RETAIN EXISTING FIRE ALARM RELAYS FOR SHUT DOWN OF FANS. PROVIDE NEW CONDUIT, WIRE AND RECONNECT RELAY TO ALLOW SHUT DOWN OF NEW EQUIPMENT.

5 CONTRACTOR SHALL RETAIN EXISTING DUCT DETECTORS TO ALLOW SHUT DOWN OF EQUIPMENT.







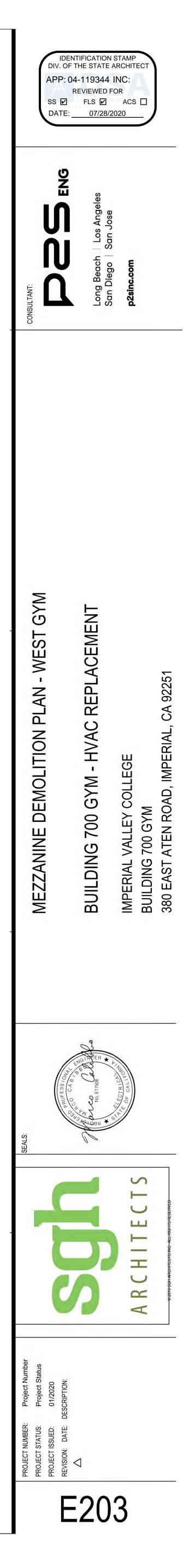
# GENERAL NOTES

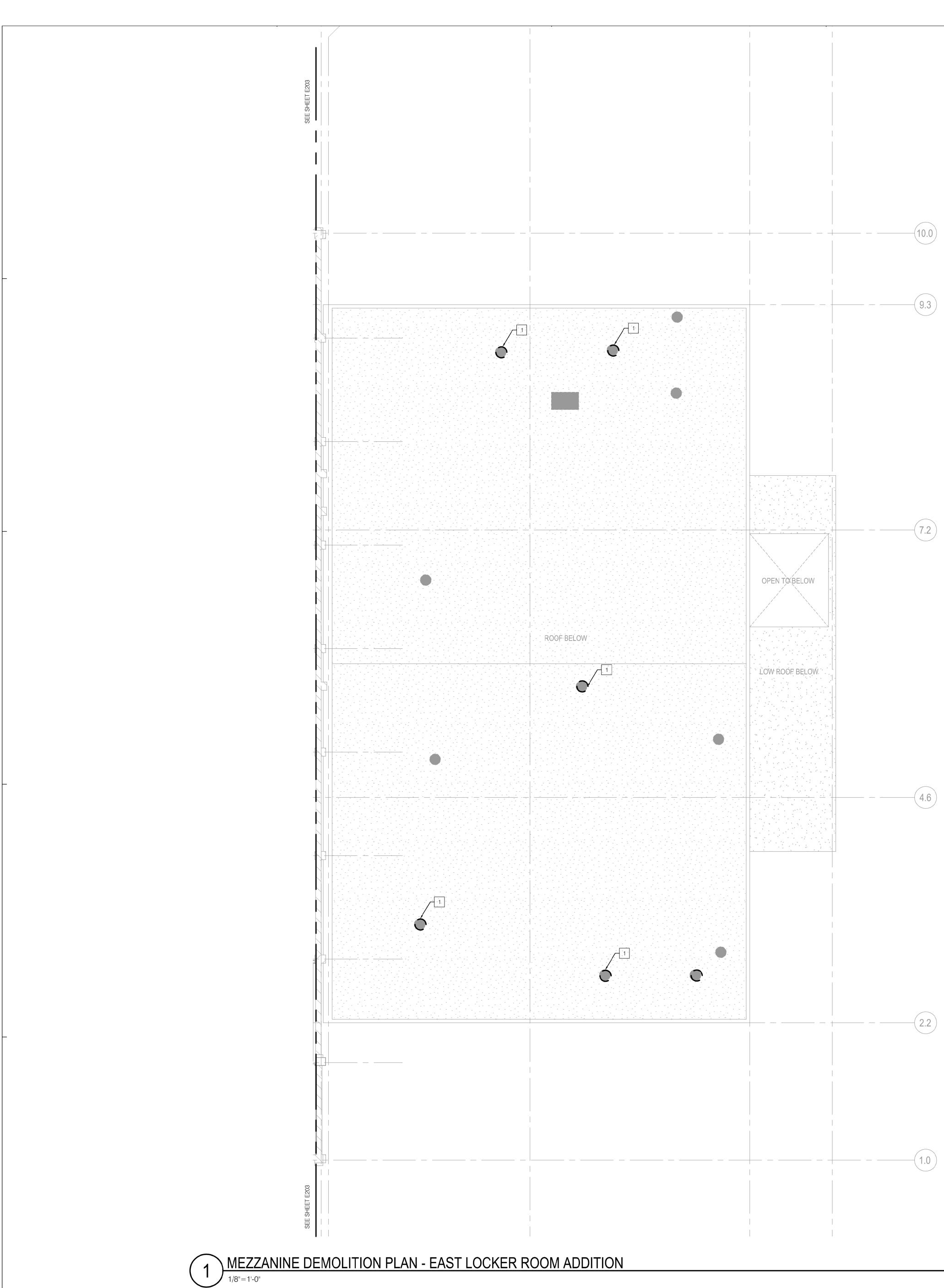
1. REFER TO MECHANICAL DEMOLITION SHEETS, MD201 AND MD202, FOR ADDITIONAL INFORMATION.

NOTES

1	DISCONNECT AND REMOVE CONDUCTORS BACK TO SOURCE PANEL. RETAIN CONDUIT IN-PLACE FOR RENO WORK.

- 2 CONTRACTOR SHALL DISCONNECT AND RETAIN EXISTING FIRE ALARM RELAYS FOR SHUT DOWN OF FANS. PROVIDE NEW CONDUIT, WIRE AND RECONNECT RELAY TO ALLOW SHUT DOWN OF NEW EQUIPMENT.
- 3 CONTRACTOR SHALL RETAIN EXISTING DUCT DETECTORS TO ALLOW SHUT DOWN OF EQUIPMENT.
- 4 CONTRACTOR SHALL DISCONNECT EXISTING MCC. LOADS TO REMAIN SHALL BE RECONNECTED TO PANEL '2PB' IN LOCATION IN ROOM 189. REFER TO SHEETS E501 AND E502 FOR ADDITIONAL INFORMATION.
- 5 DISCONNECT AND REMOVE GENERATOR AND ASSOCIATED EQUIPMENT.
- 6 DISCONNECT AND REMOVE EXISTING PANEL. PULL CONDUCTORS BACK TO SOURCE PANEL.



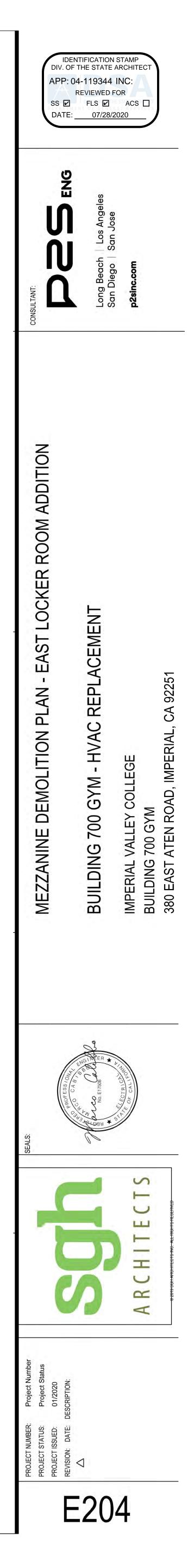


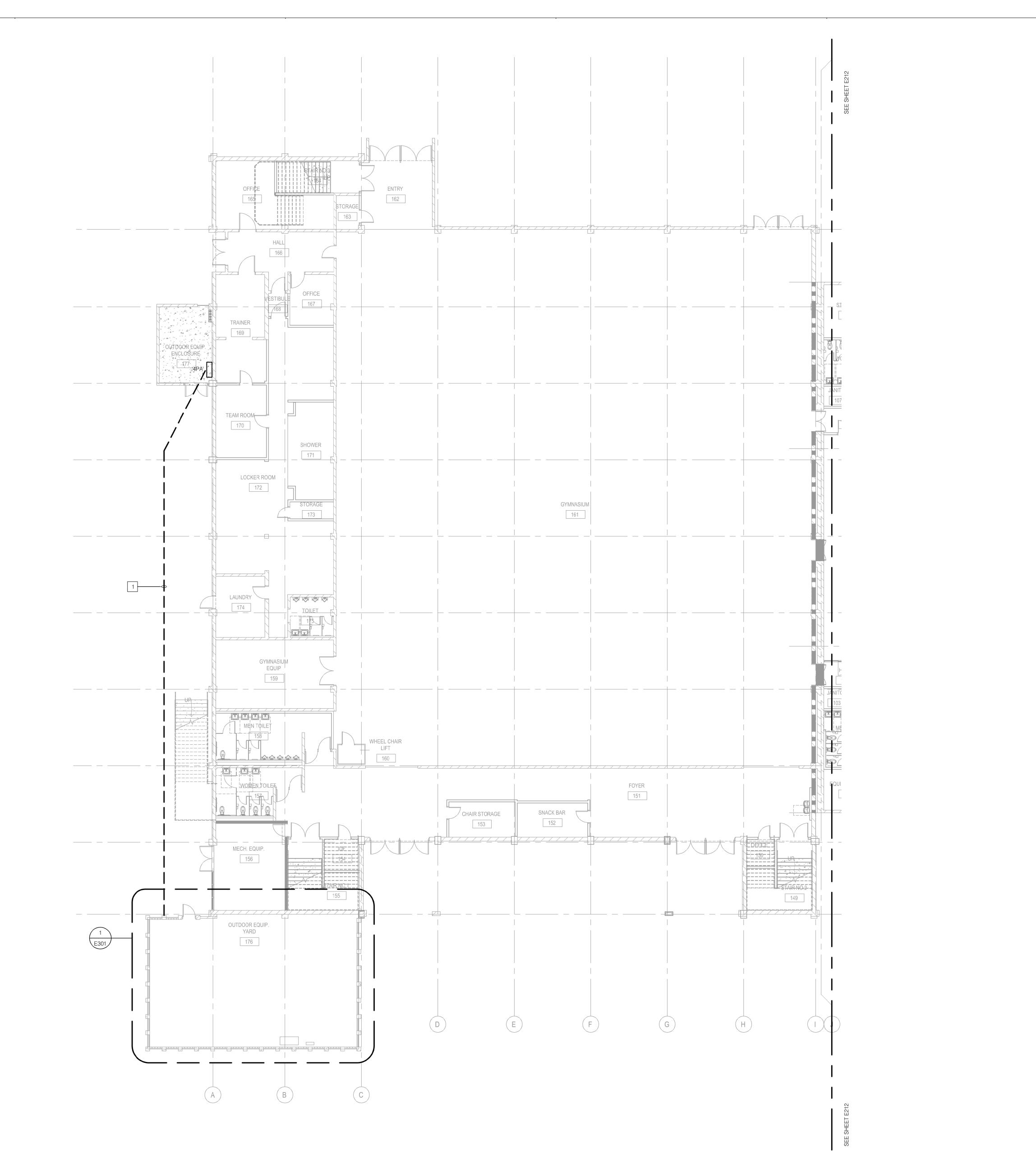
GENERAL NOTES

1. REFER TO MECHANICAL DEMOLITION SHEETS, MD201 AND MD202, FOR ADDITIONAL INFORMATION.

NOTES

1 DISCONNECT AND REMOVE CONDUCTORS BACK TO SOURCE PANEL.



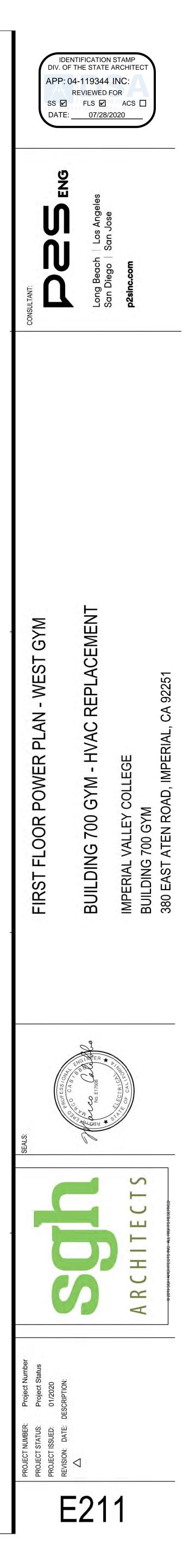


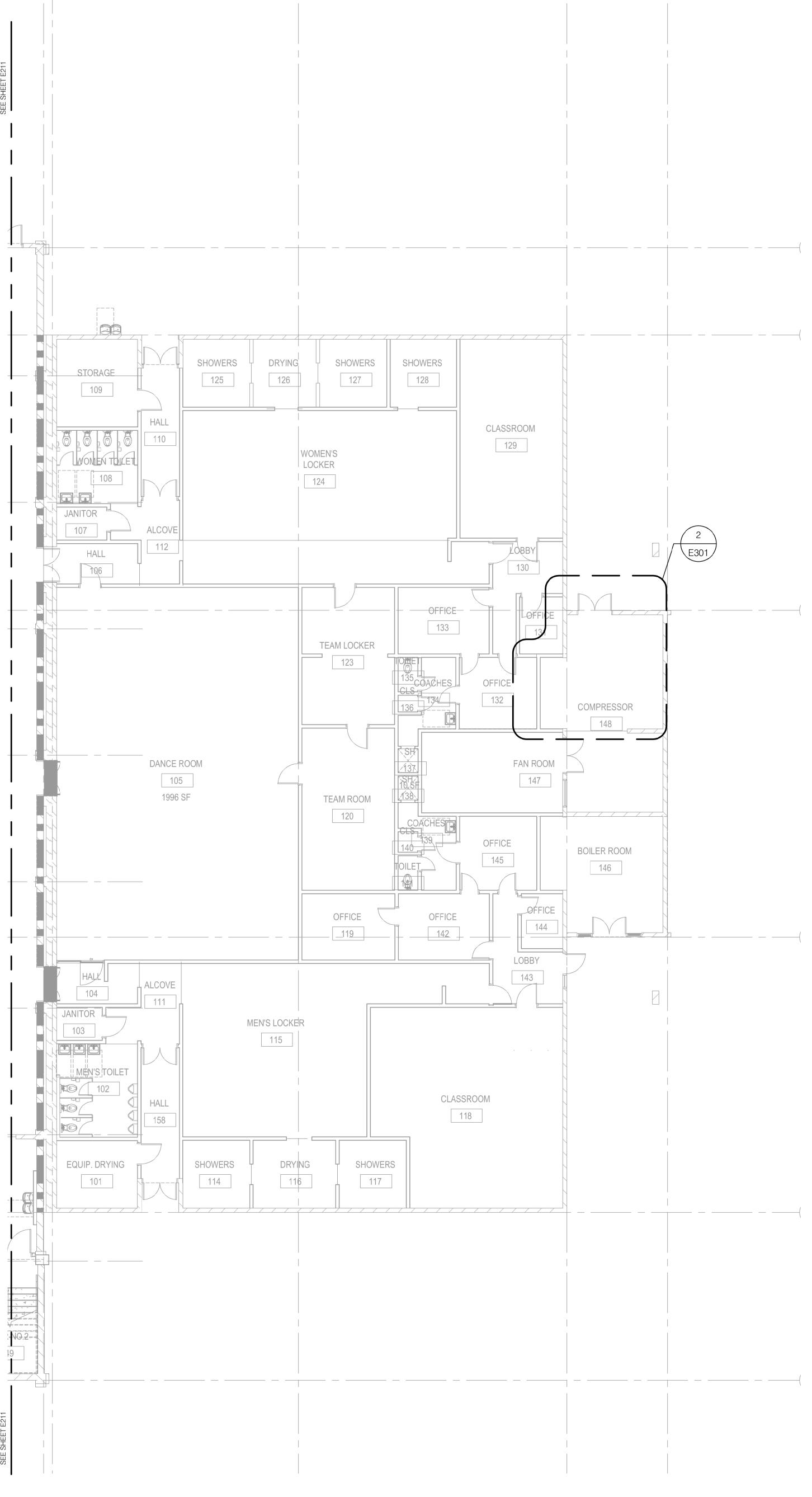
 FIRST FLOOR POWER PLAN - WEST GYM

 3/32"=1'-0"

1 CONTRACTOR SHALL SAW CUT EXISTING ASPHALT PARKING LOT, TRENCH, ROUTE CONDUIT, BACKFILL, COMPACT AND REPAIR TO MATCH EXISTING.





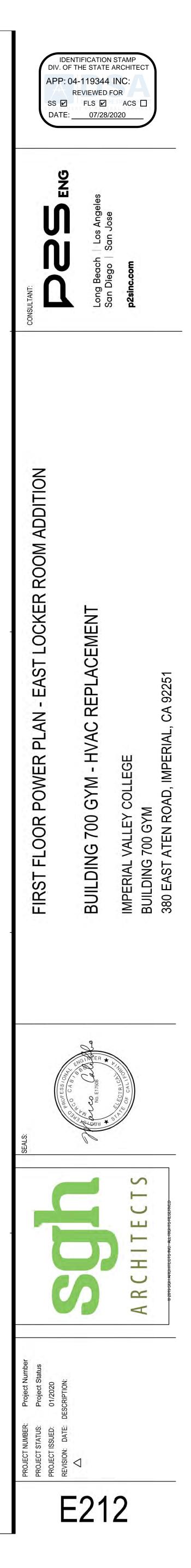


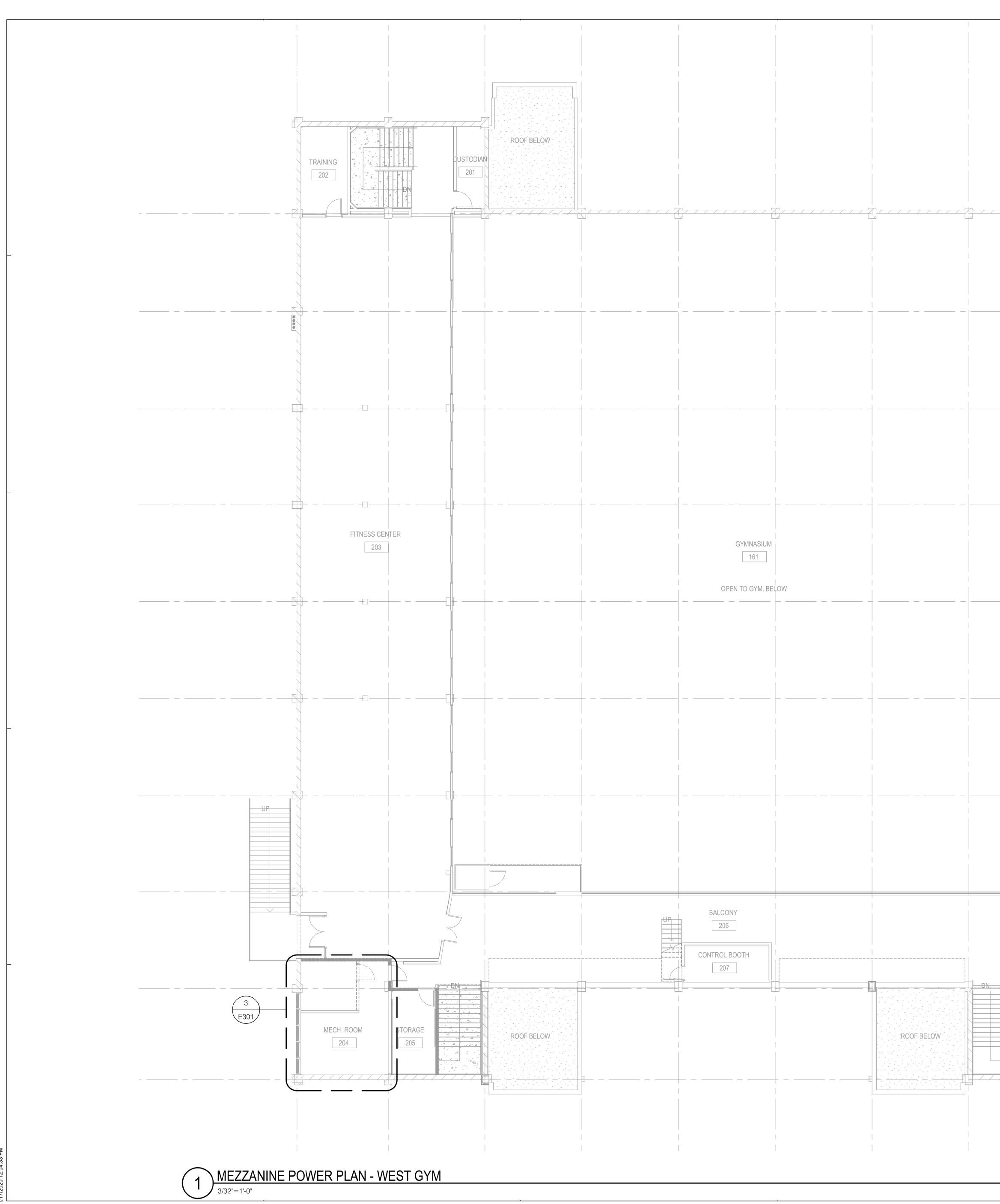
1 FIRST FLOOR DEMOLITION PLAN - EAST LOCKER ROOM ADDTION



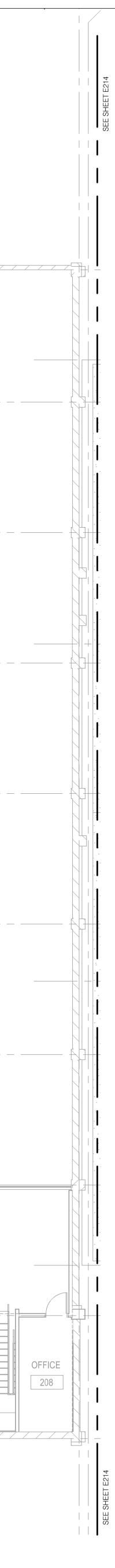


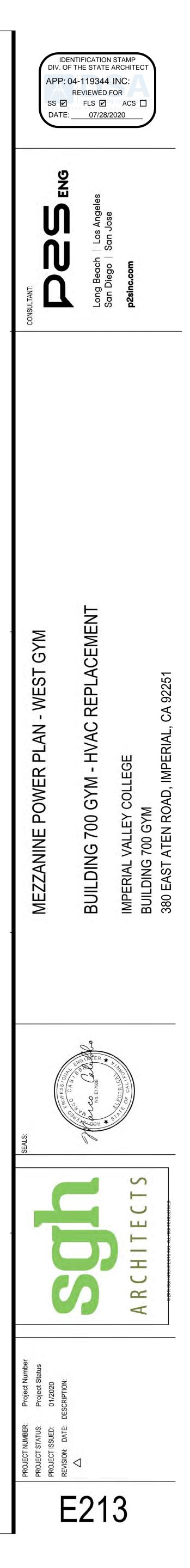
NORTH

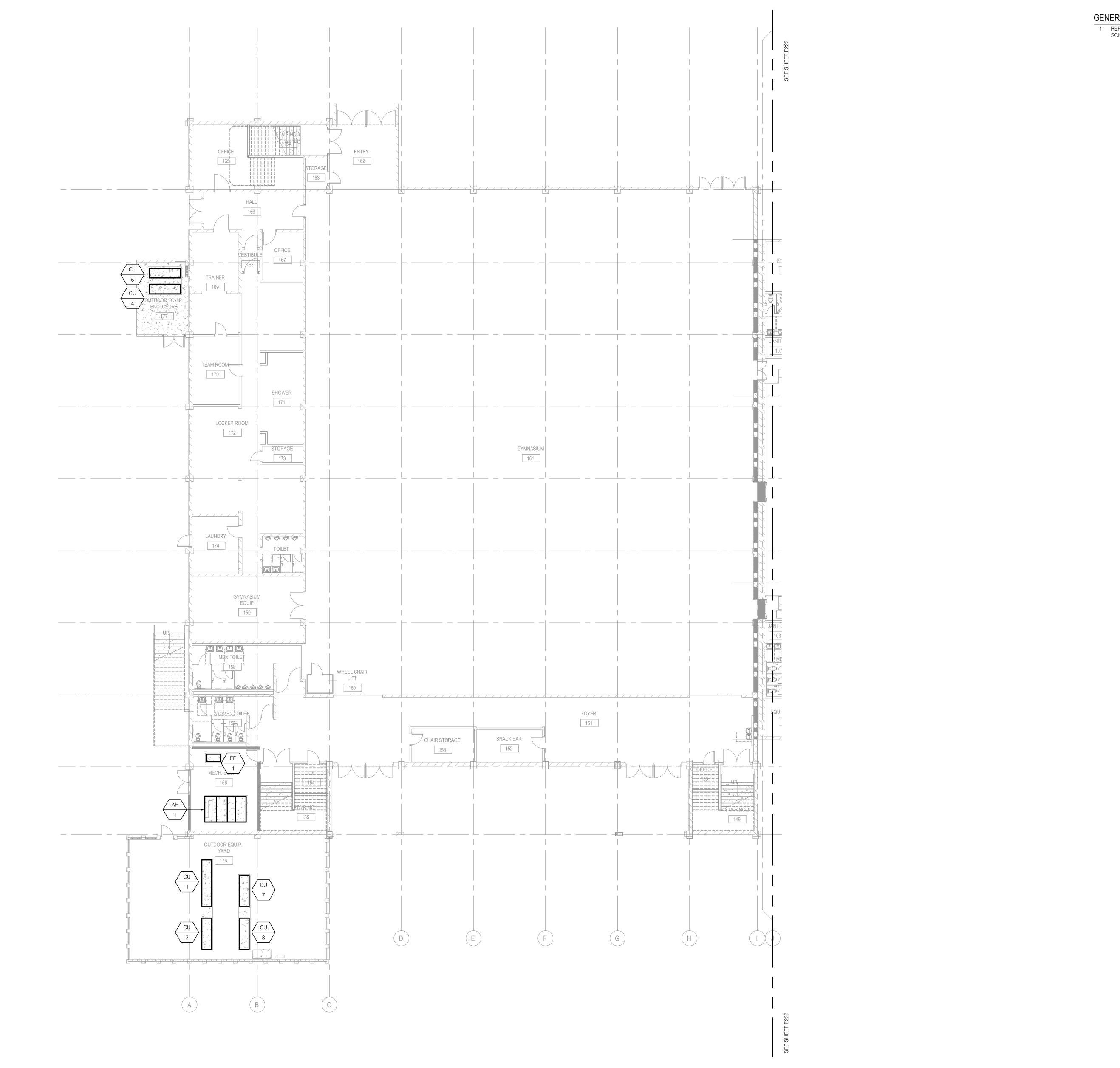




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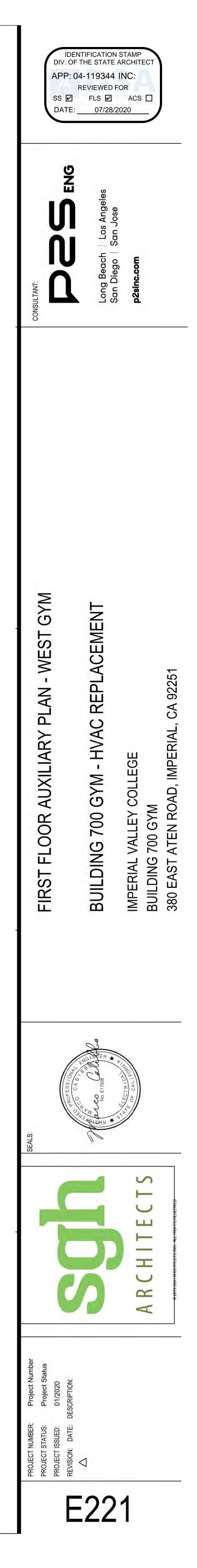


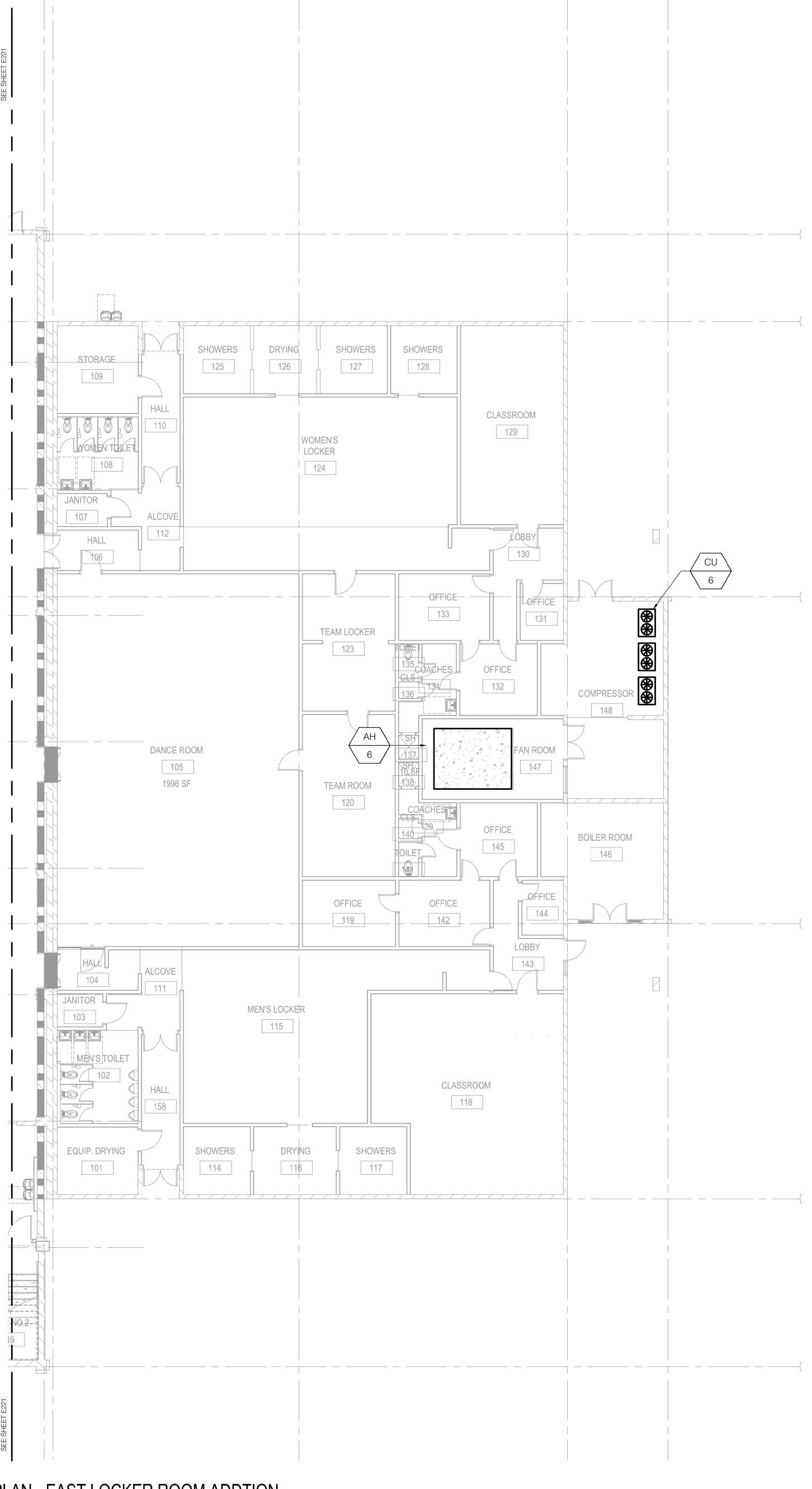
1 FIRST FLOOR AUXILIARY PLAN - WEST GYM

GENERAL NOTES

1. REFER TO MECHANICAL ELECTRICAL CONNECTION SCHEDULE, SHEET E002, FOR ADDITIONAL INFORMATION.

NORTH





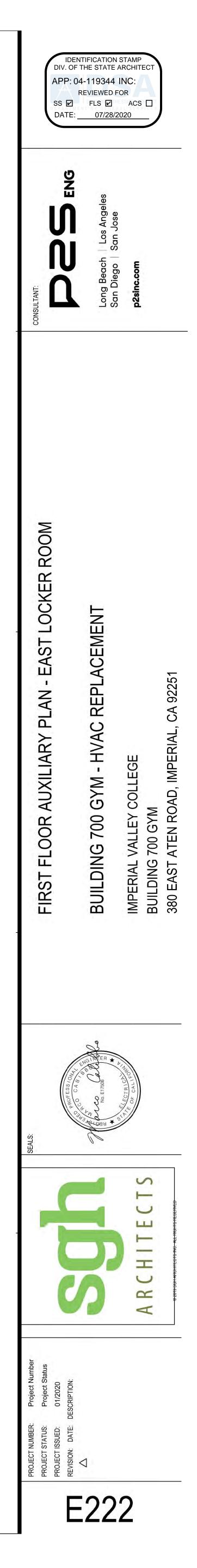
1 FIRST FLOOR AUXILIARY PLAN - EAST LOCKER ROOM ADDTION

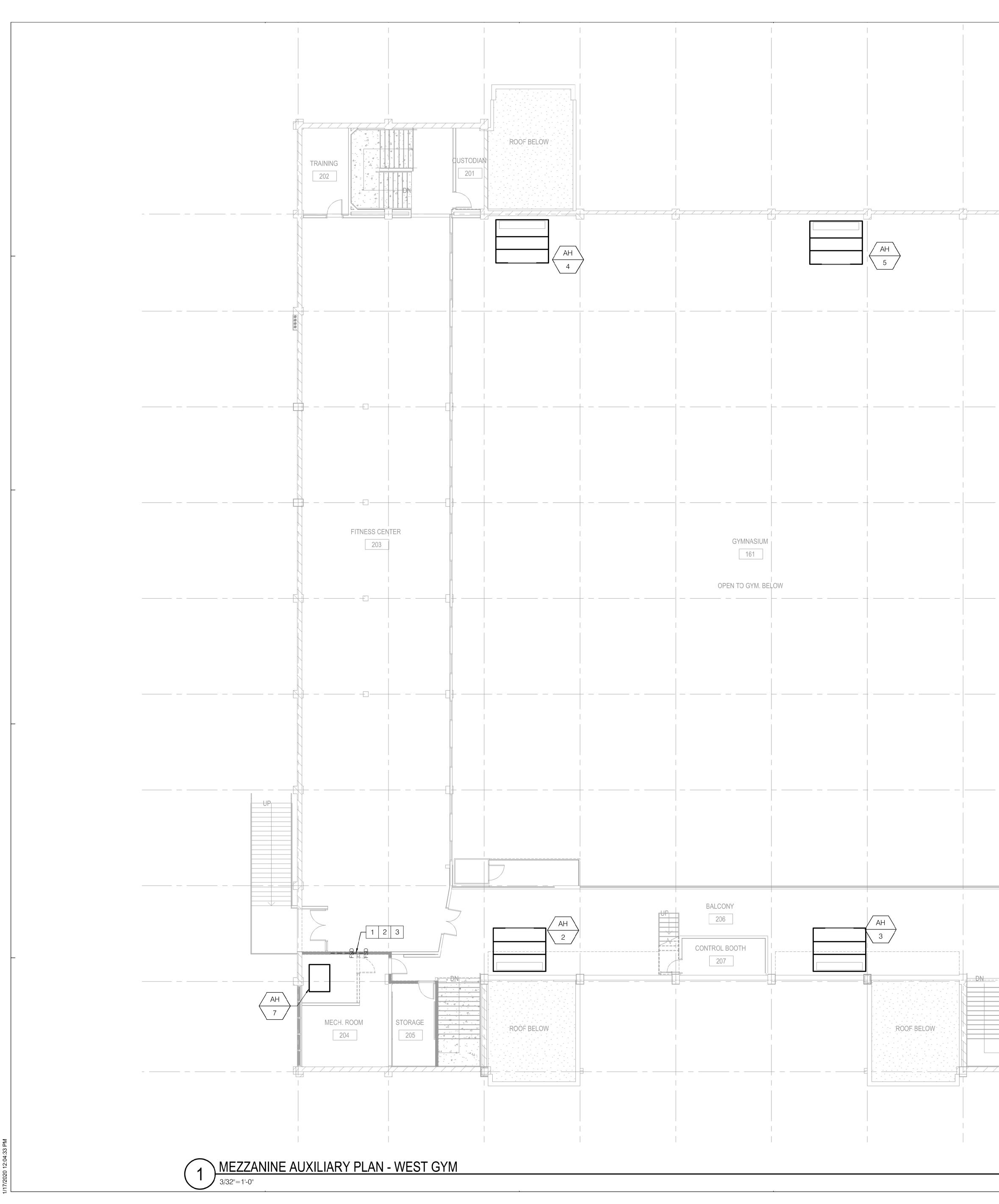
.

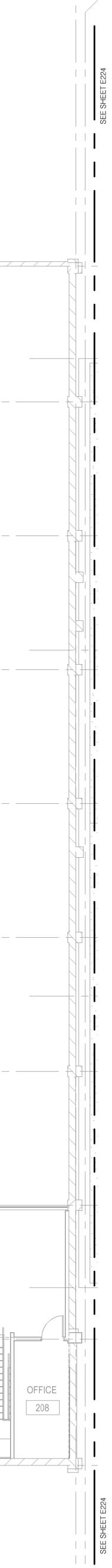
GENERAL NOTES

1. REFER TO MECHANICAL ELECTRICAL CONNECTION SCHEDULE, SHEET E002, FOR ADDITIONAL INFORMATION.









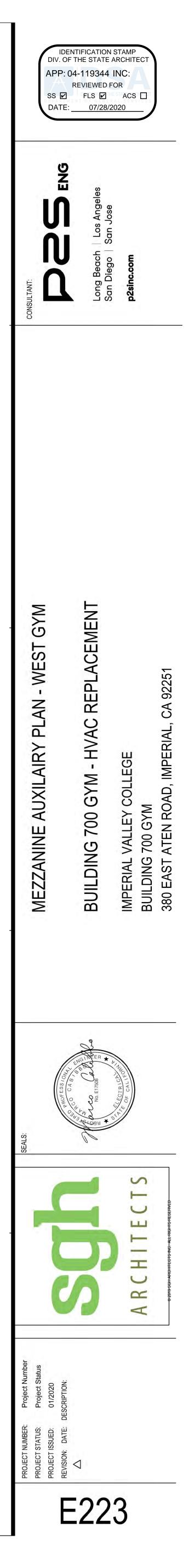
# GENERAL NOTES

1. REFER TO MECHANICAL ELECTRICAL CONNECTION SCHEDULE, SHEET E002, FOR ADDITIONAL INFORMATION.

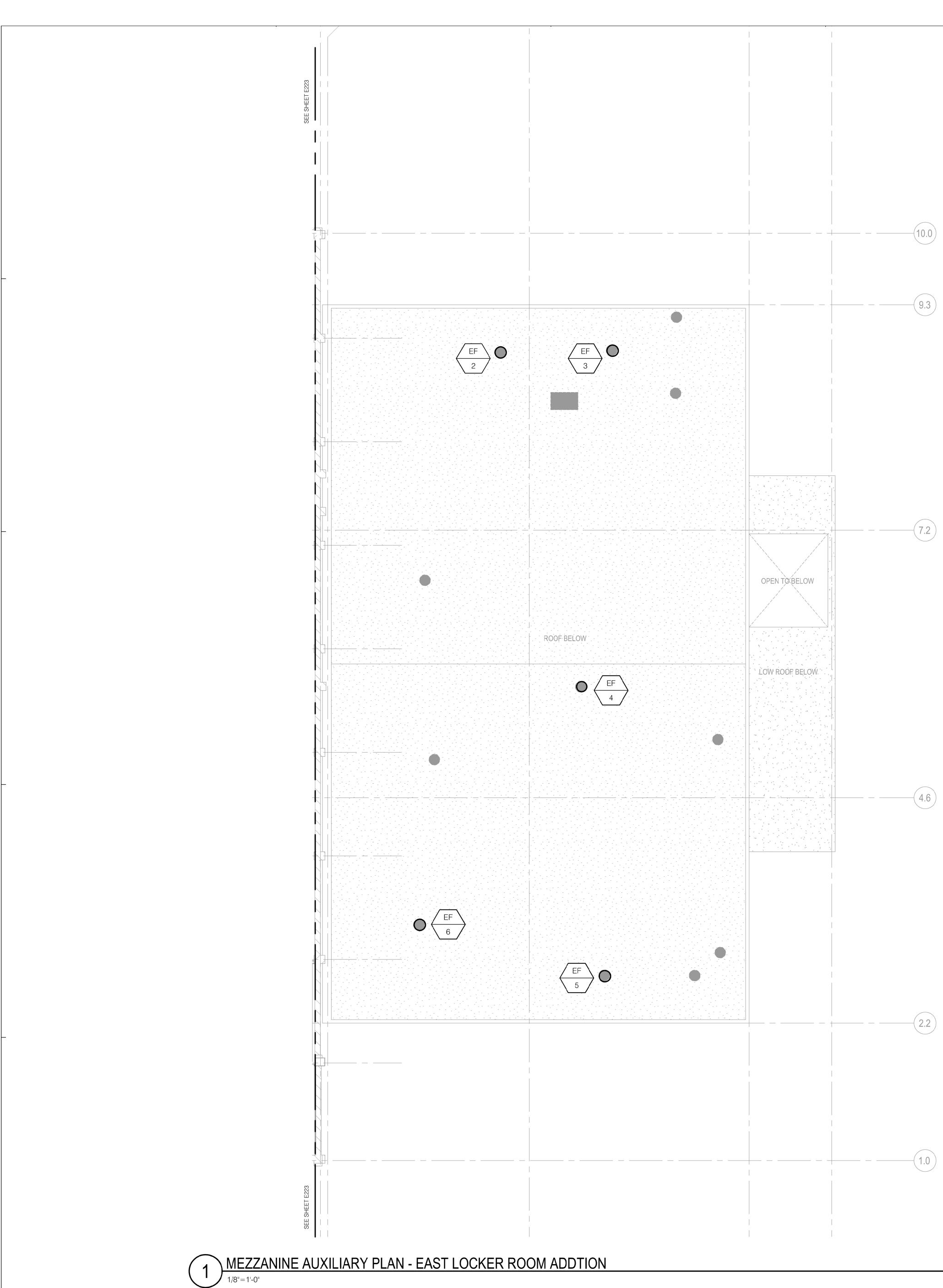
NOTES

1	CONTRACTOR SHALL PROVIDE 3/4"C - 2#12, 1#12 CU ANI
	CONNECT THE FIRE SMOKE DAMPER TO 2PB-25. ROUTE
	THE CIRCUIT THROUGH A FIRE ALARM RELAY SO THAT
	TEH DAMPER CLOSES WHEN THE FIRE ALARM IS IN ALAR
	MODE. PROVIDE 3/4"C FIRE ALARM CONDUCTORS AND
	CONNECT RELAY TO THE FIRE ALARM PANEL.

- 2 CONTRACTOR SHALL PROVIDE COMPLETE FIRE ALARM DRAWINGS WITH FLOOR PLANS, WIRING, RISER DIAGRAM, VOLTAGE DROP, AND BATTERY CALCULATIONS TO ALLOW THE NEW DEVICES FOR THE NEW FIRE ALARM PANEL. CONTRACTOR SHALL UPGRADE BATTERIES AS REQUIRED TO ALLOW NEW DEVICES. CONTRACTOR SHALL INCLUDE ALL PROGRAMMING COSTS IN THEIR BID TO ALLOW THE NEW DEVICES AND REVISIONS.
- 3 PROVIDE DUCT SMOKE DETECTOR, SAMPLING TUBE, CONDUIT, WIRE AND CONNECT TO EXISTING SIMPLEX FIRE ALARM PANEL LOCATED IN ROOM 154. CONTRACTOR SHALL INCLUDE ALL COSTS FOR PROGRAMMING OF THE SYSTEM FOR THE NEW DUCT SMOKE DETECTOR.

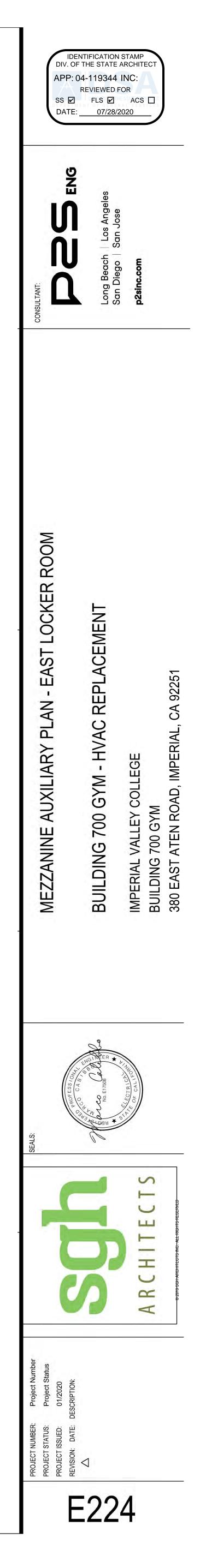


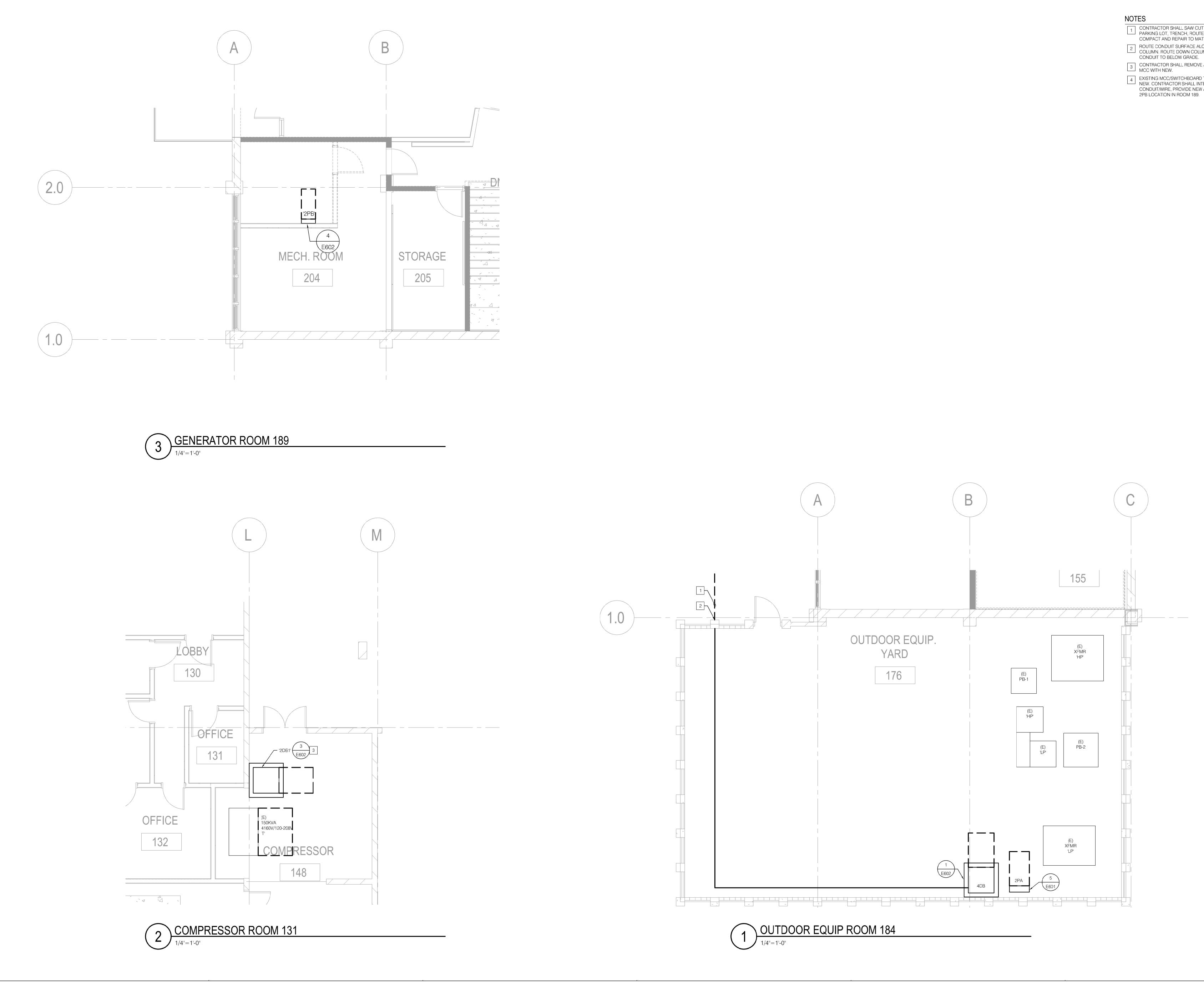
U AND ALARM



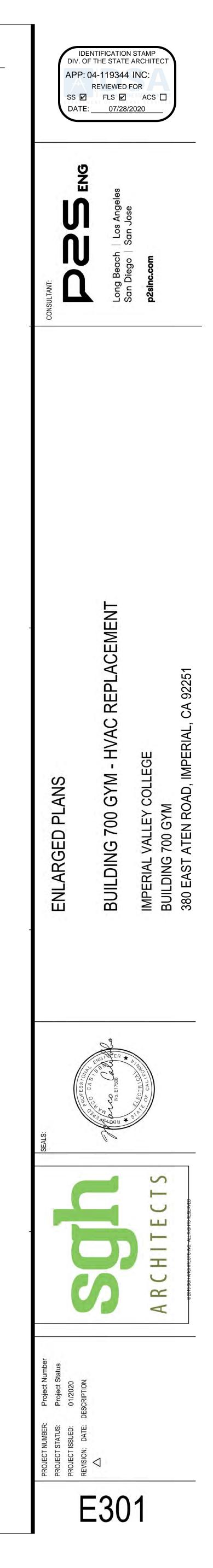
GENERAL NOTES

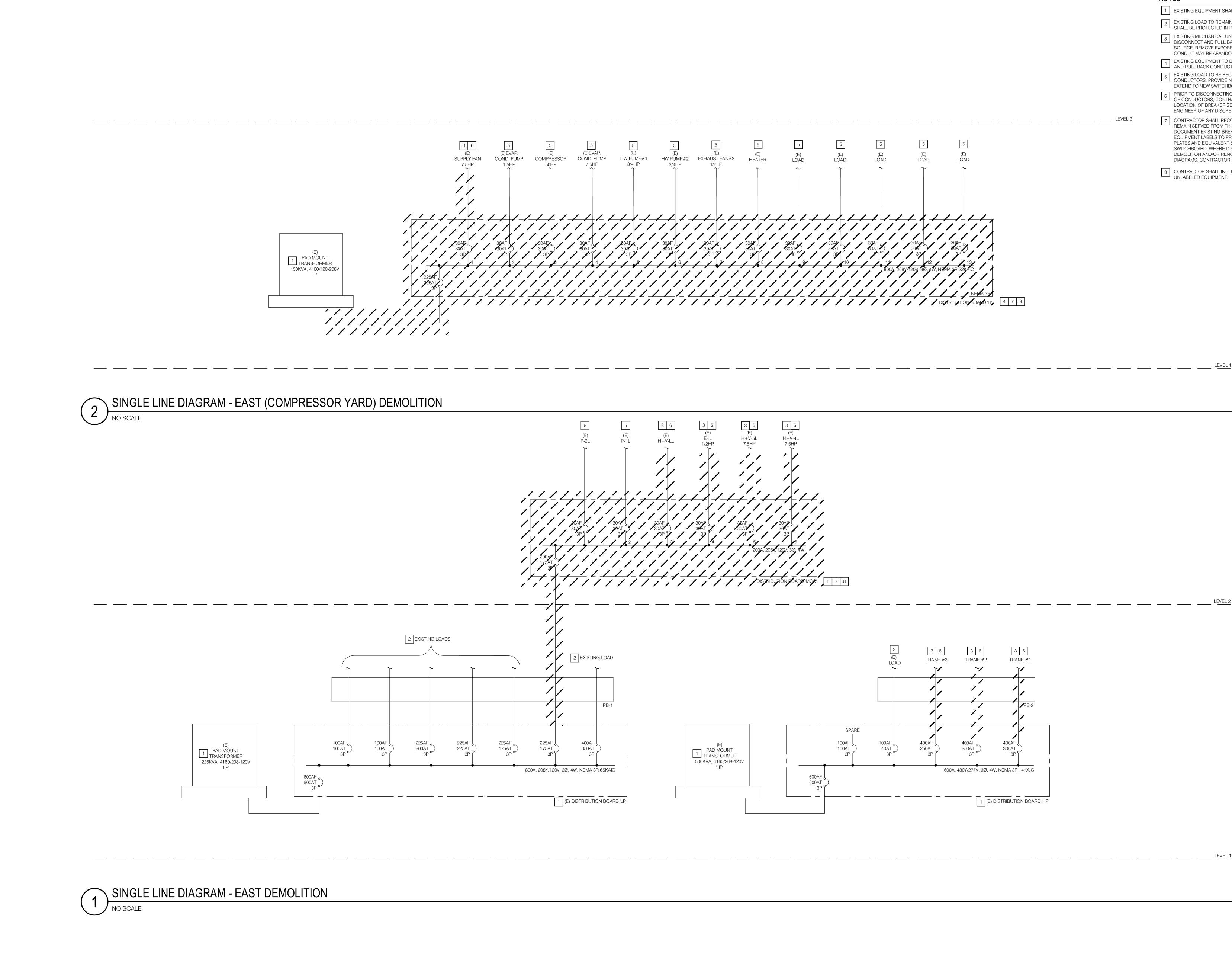
1. REFER TO MECHANICAL ELECTRICAL CONNECTION SCHEDULE, SHEET E002, FOR ADDITIONAL INFORMATION.





- CONTRACTOR SHALL SAW CUT EXISTING ASPHALT PARKING LOT, TRENCH, ROUTE CONDUIT, BACKFILL, COMPACT AND REPAIR TO MATCH EXISTING. 2 ROUTE CONDUIT SURFACE ALONG CEILING DECK TO COLUMN. ROUTE DOWN COLUMN AND TRANSITION
- CONDUIT TO BELOW GRADE.
- 3 CONTRACTOR SHALL REMOVE AND REPLACE EXISTING MCC WITH NEW.
- 4 EXISTING MCC/SWITCHBOARD TO BE REPLACED WITH NEW. CONTRACTOR SHALL INTERCEPT EXISTING CONDUIT/WIRE, PROVIDE NEW AND EXTEND TO THE NEW





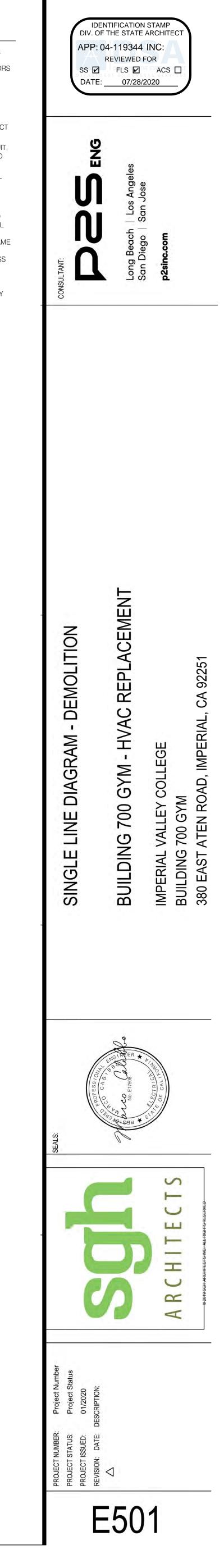
NOT	ES
1	EXISTING EQUIPMENT SHALL BE PROTECTED IN PLACE.
2	EXISTING LOAD TO REMAIN. CONDUIT AND CONDUCTOR SHALL BE PROTECTED IN PLACE.
3	EXISTING MECHANICAL UNIT TO BE DEMOLISHED. DISCONNECT AND PULL BACK CONDUCTORS TO SOURCE. REMOVE EXPOSED CONDUIT, CONCEALED CONDUIT MAY BE ABANDONED IN PLACE.
4	EXISTING EQUIPMENT TO BE DEMOLISHED. DISCONNECT AND PULL BACK CONDUCTORS TO TRANSFORMER
5	EXISTING LOAD TO BE RECONNECTED. RETAIN CONDUIT CONDUCTORS. PROVIDE NEW CONDUIT AND WIRE AND EXTEND TO NEW SWITCHBOARD.
6	PRIOR TO DISCONNECTING EQUIPMENT AND REMOVAL OF CONDUCTORS, CONTRACT SHALL FIELD VERIFY LOCATION OF BREAKER SERVING EQUIPMENT. NOTIFY ENGINEER OF ANY DISCREPANCIES.
7	CONTRACTOR SHALL RECONNECT ALL EQUIPMENT TO REMAIN SERVED FROM THIS UNIT. CONTRACTOR SHALL DOCUMENT EXISTING BREAKERS, CONDUCTOR, AND EQUIPMENT LABELS TO PROVIDE PROVIDE PROPER NAM PLATES AND EQUIVALENT SIZED BREAKERS IN NEW SWITCHBOARD. WHERE DISCREPANCIES EXIST, ACROSS DEMOLITION AND/OR RENOVATION SINGLE LINE DIAGRAMS, CONTRACTOR SHALL NOTIFY ENGINEER.

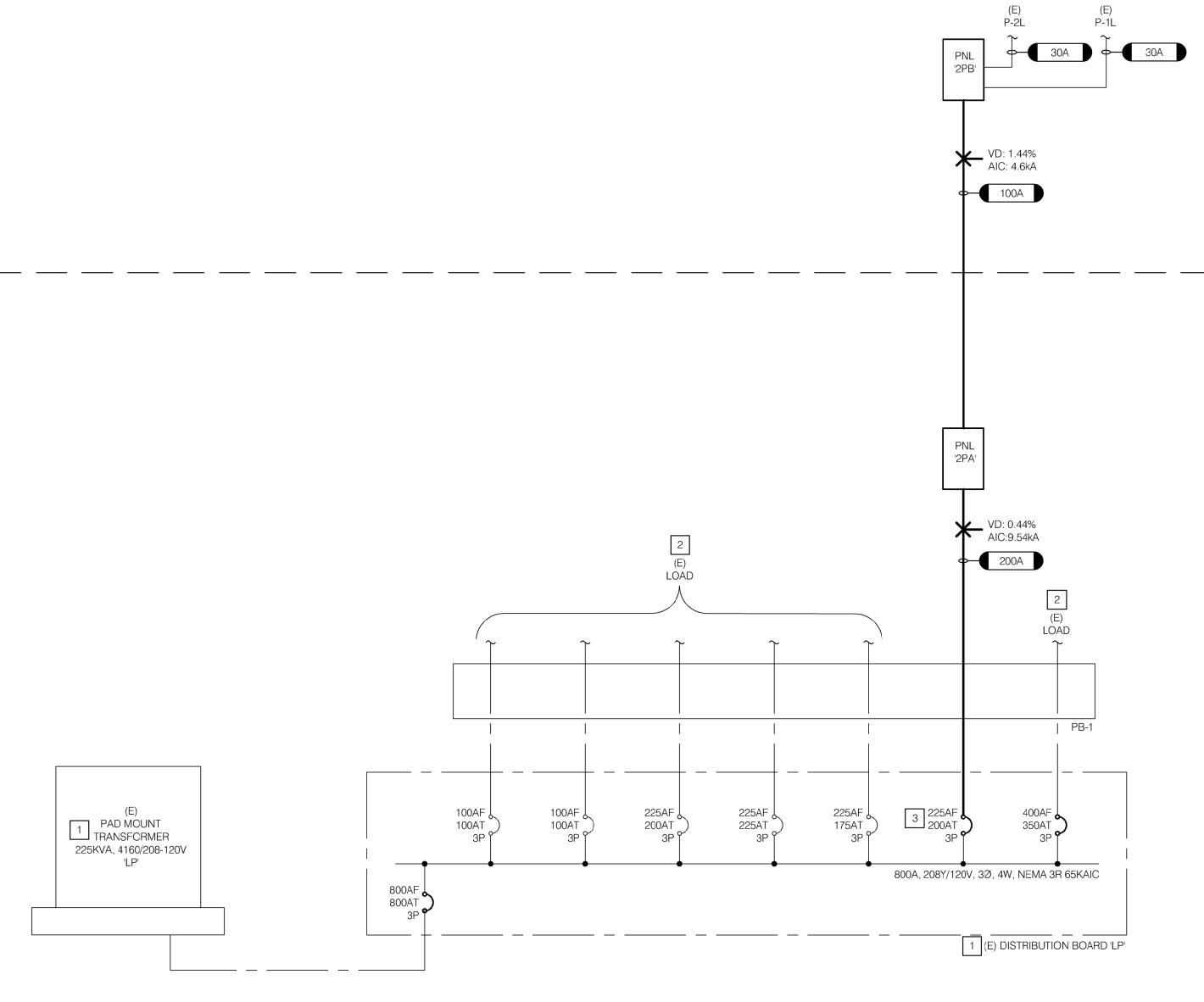
LEVEL 2



LEVEL 1

LEVEL 1







4 5

4 5

# GENERAL NOTES

- 1. WHERE CONNECTION FROM EXISTING EQUIPMENT EXISTS, CONTRACTOR SHALL FIELD VERIFY SPECIFIED BREAKER CAN BE ACCOMMODATED IN EXISTING GEAR. REFER TO DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION, SHEET E501. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO DISCONNECTING EQUIPMENT AND PRIOR TO PURCHASE OF NEW EQUIPMENT.
- 2. WHERE RECONNECTION OF EXISTING EQUIPMENT EXISTS, CONTRACTOR SHALL FIELD VERIFY SPECIFIED BREAKER TYPE, BREAKER SIZE, AND ASSOCIATED CONDUCTORS ARE ADEQUATE FOR RECONNECTION OF EXISTING LOAD. REFER TO DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION, SHEET E501. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO DISCONNECTING EQUIPMENT AND PRIOR TO

# NOTES

- 1 EXISTING EQUIPMENT SHALL BE PROTECTED IN PLACE. 2 EXISTING LOAD TO REMAIN. CONDUIT AND CONDUCTORS SHALL BE PROTECTED IN PLACE.
- 3 PROVIDE NEW 200A/3P BREAKER, MAKE AND MANUFACTURER TO MATCH EXISTING.

PURCHASE OF NEW EQUIPMENT.

- 4 EXTEND CONDUIT AND WIRE AND RECONNECT EXISTING LOAD TO NEW EQUIPMENT. 5 PROVIDE MOTOR STARTER FOR CONTROL OF RECONNECTED EQUIPMENT. LOCATE ENCLOSURE ADJACENT TO PANEL. FIELD COORDINATE EXACT

FE	EDER SCHEDULE
SYMBOLS	FEEDER
30A	3/4"C - 3#10, 1#10G
100A	1-1/2"C - 3#2, 1#8G
200A	2"C - 3#3/0, 1#6G

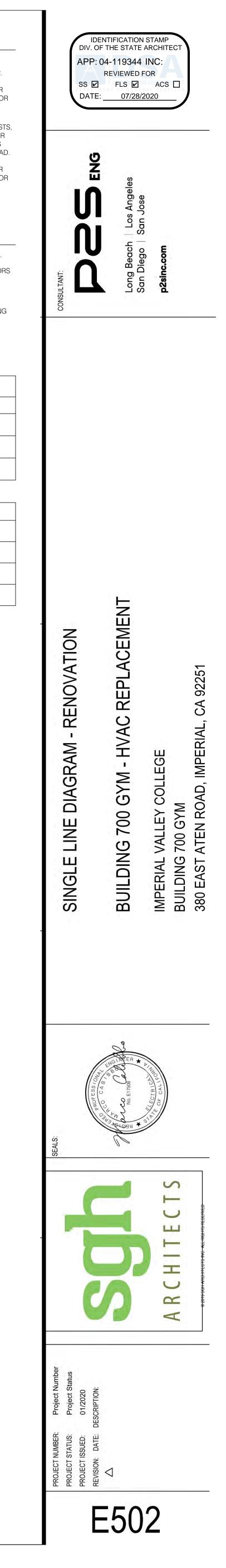
LOCATION.

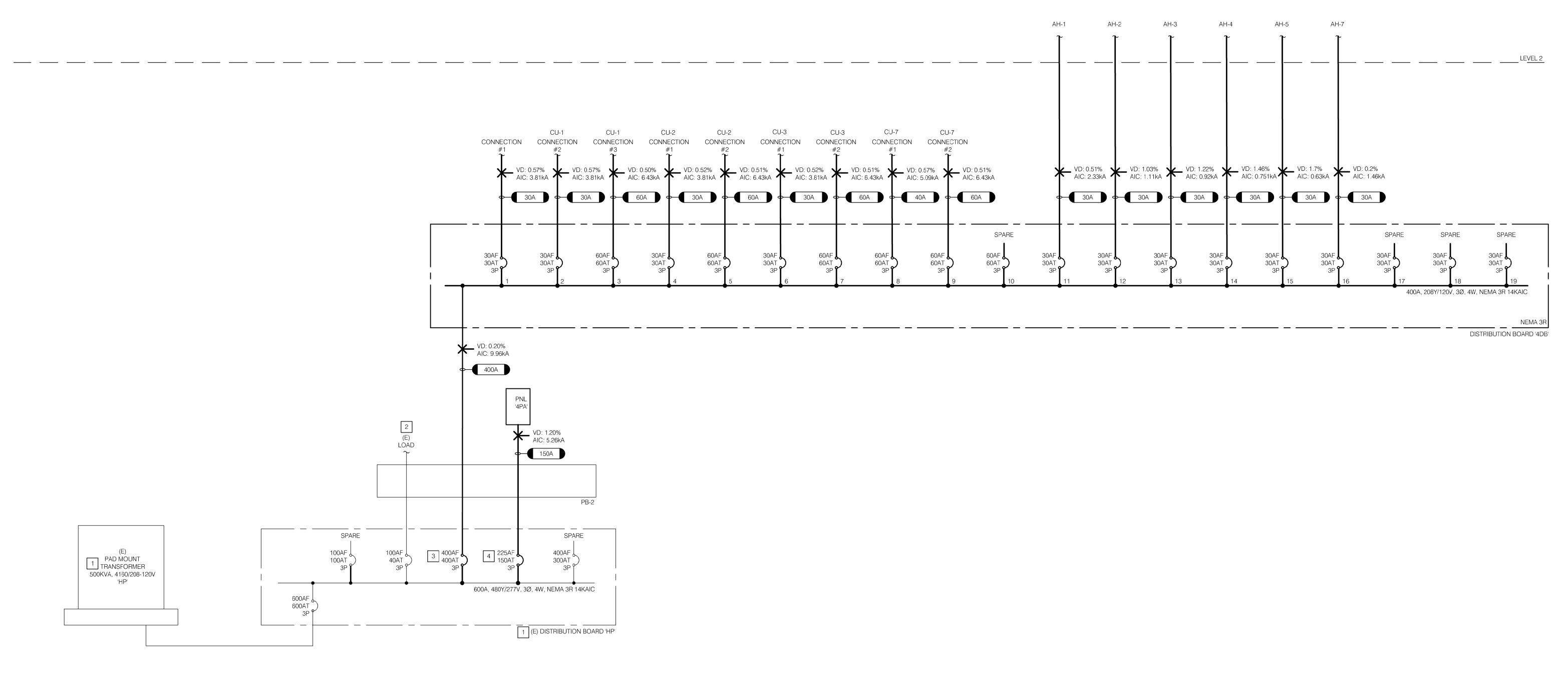
# 'LP' LOAD SUMMARY

DESCRIPTION	LOAD
'2PA' LOAD	9,272 VA
EXISTING LOAD	144,000 VA
TOTAL CONNECTED LOAD	153,272 VA, 425A @208V, 3PH

LEVEL 2

\_\_\_\_\_ LEVEL 1





1 SINGLE LINE DIAGRAM - WEST (OUTDOOR EQUIPMENT YARD) RENOVATION NO SCALE



# GENERAL NOTES

1. WHERE CONNECTION FROM EXISTING EQUIPMENT EXISTS, CONTRACTOR SHALL FIELD VERIFY SPECIFIED BREAKER CAN BE ACCOMMODATED IN EXISTING GEAR. REFER TO DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION, SHEET E501. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO DISCONNECTING EQUIPMENT AND PRIOR TO PURCHASE OF NEW EQUIPMENT.

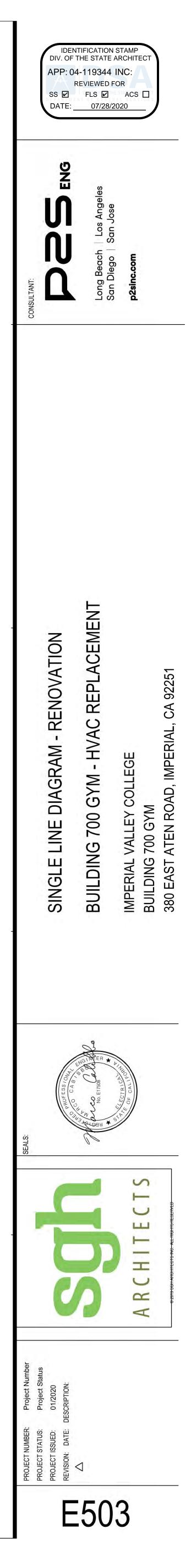
# NOTES

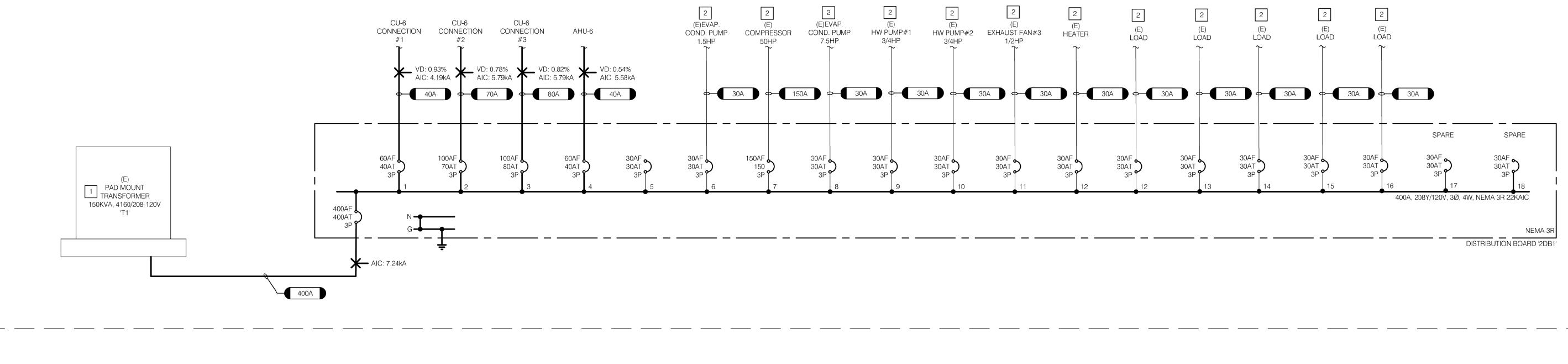
- 1 EXISTING EQUIPMENT SHALL BE PROTECTED IN PLACE.
- 2 EXISTING LOAD TO REMAIN. CONDUIT AND CONDUCTORS SHALL BE PROTECTED IN PLACE.
- 3 PROVIDE NEW 400A/3P BREAKER, MAKE AND MANUFACTURER TO MATCH EXISTING.
- 4 PROVIDE NEW 150A/3P BREAKER, MAKE AND MANUFACTURER TO MATCH EXISTING.

FEEDER SCHEDULE		
SYMBOLS	FEEDER	
30A	3/4"C - 3#10, 1#10G	
40A	3/4"C - 3#8, 1#10G	
60A	1"C - 3#6, 1#10G	
150A	2"C - 3#1/0, 1#6G	
225A	2-1/2"C - 3#4/0, 1#4G	
400A	(2) 2-1/2"C - 4#3/0, 1#2G(EA)	

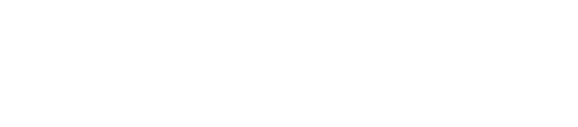
'HP' LOAD SUMMARY		
DESCRIPTION	LOAD	
'4DB' LOAD	257,313 VA	
'4PA' LOAD	90, 953 VA	
EXISTING LOAD	25,000 VA	
TOTAL CONNECTED LOAD	373,267 VA, 449A @480V, 3PH	

LEVEL 1





1 SINGLE LINE DIAGRAM - COMPRESSOR YARD RENOVATION NO SCALE



# GENERAL NOTES

1. WHERE RECONNECTION OF EXISTING EQUIPMENT EXISTS, CONTRACTOR SHALL FIELD VERIFY SPECIFIED BREAKER TYPE, BREAKER SIZE, AND ASSOCIATED CONDUCTORS ARE ADEQUATE FOR RECONNECTION OF EXISTING LOAD. REFER TO DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION, SHEET E501. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO DISCONNECTING EQUIPMENT AND PRIOR TO PURCHASE OF NEW EQUIPMENT.

# NOTES

1 EXISTING EQUIPMENT SHALL BE PROTECTED IN PLACE.

2 PROVIDE NEW CONDUIT AND WIRE AND RECONNECT EXISTING LOAD TO NEW SWITCHBOARD.

FE	FEEDER SCHEDULE	
SYMBOLS	FEEDER	
30A	3/4"C - 3#10, 1#10G	
40A	3/4"C - 3#8, 1#10G	
70A	1-1/2"C - 3#4, 1#8G	
A08	1-1/2"C - 3#4, 1#8G	
150A	2"C - 3#1/0, 1#6G	
400A	(2) 2-1/2"C - 3#3/0, 1#2G(EA)	

# '2DB1' LOAD SUMMARY

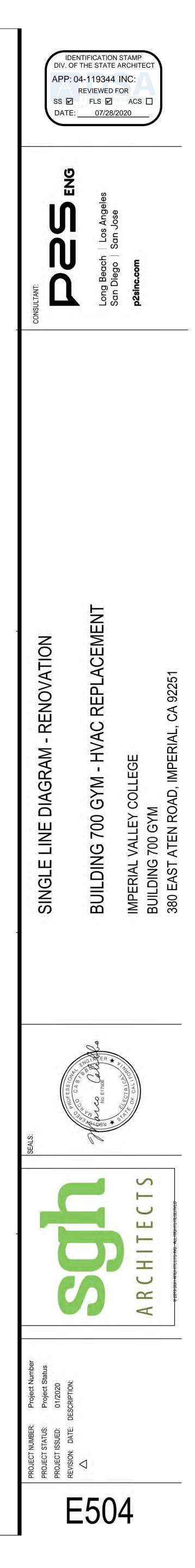
DESCRIPTION	LOAD
NEW LOAD	61,930 VA
EXISTING LOAD	51,820 VA
TOTAL CONNECTED LOAD	113,750 VA, 315A @208V, 3PH

\_\_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_

\_\_\_\_\_

\_\_\_\_\_ LEVEL 2

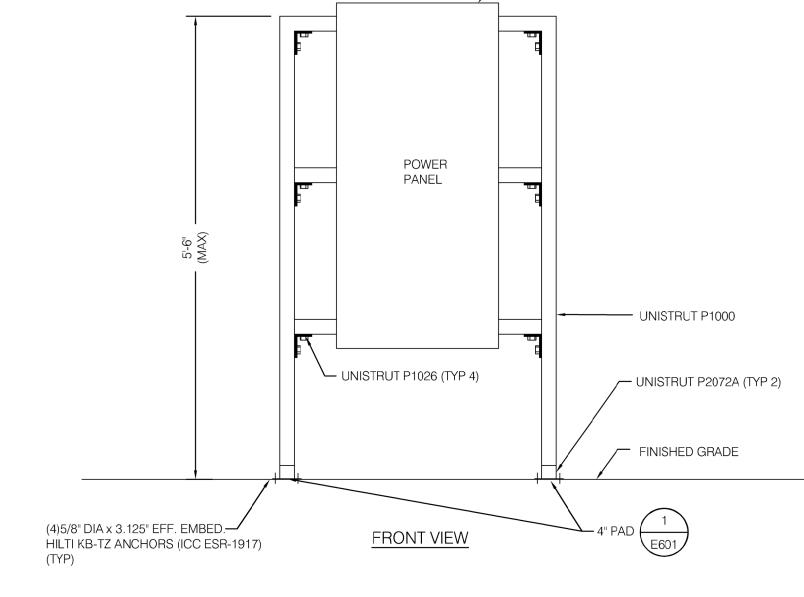
\_\_\_\_\_ LEVEL 1





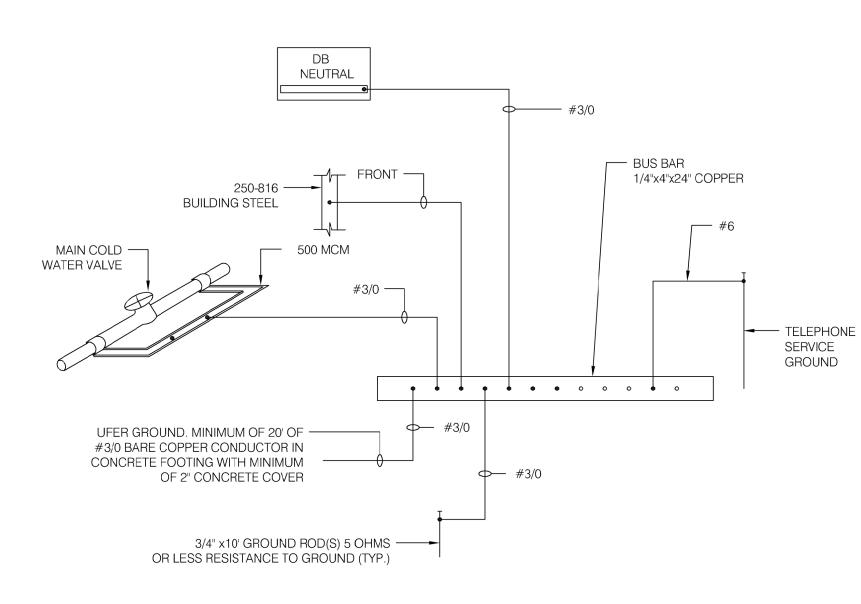
1. UNISTRUT SHALL BE HOT DIPPED GALVANIZED.

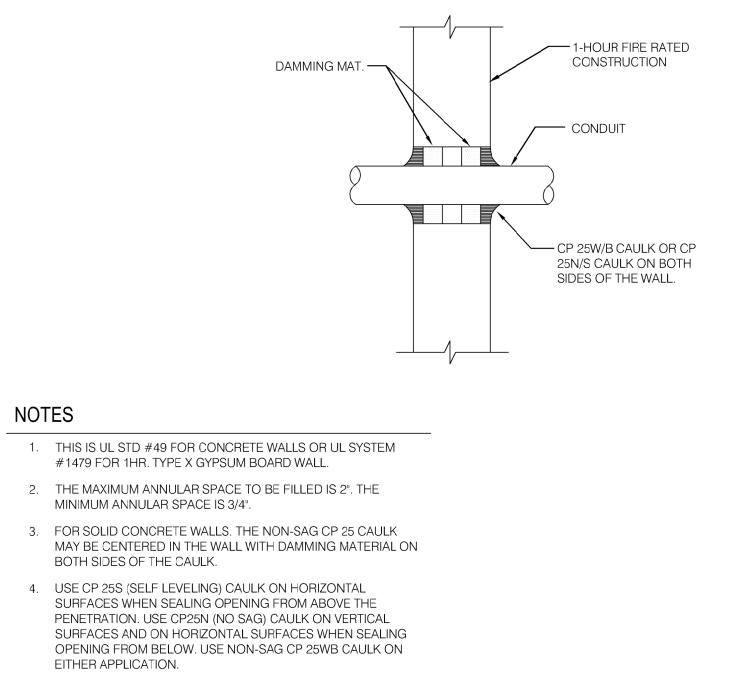
NOTES



 $E \xrightarrow{4B} FOR PANEL ANCHORAGE TO UNISTRUT, SIM.$ 



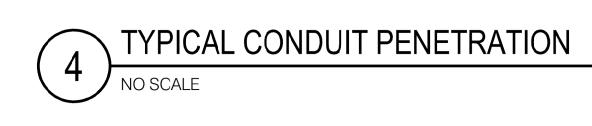


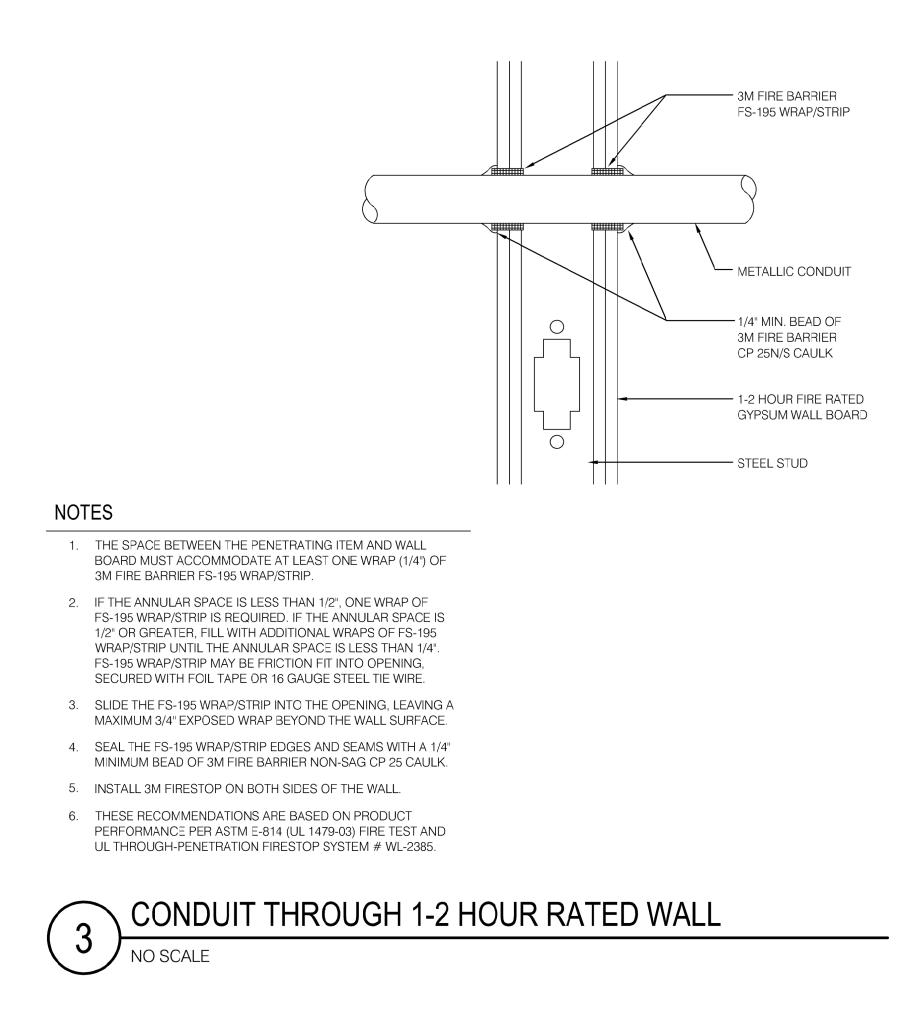


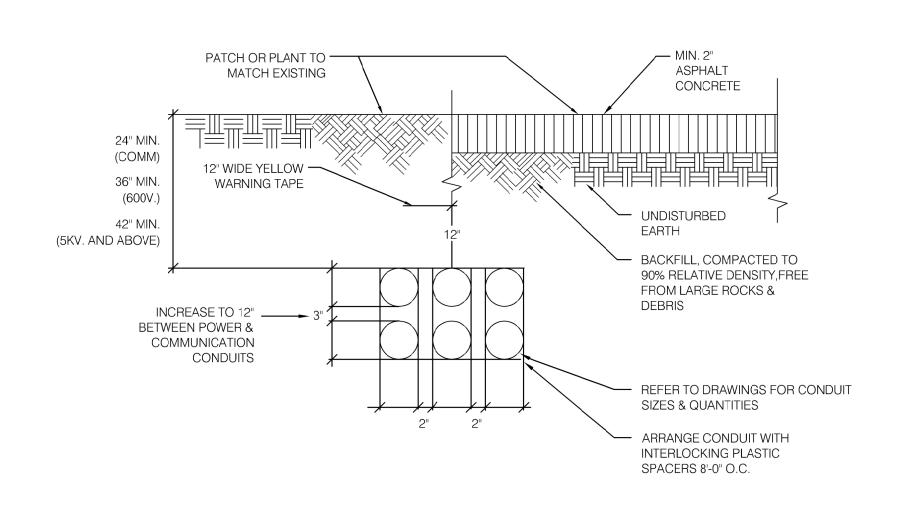
- 5. SHRINKAGE OF NON-SAG CP 25 CAULKS IS ACCEPTABLE AFTER WET DEPTH INSTALLATION.
- 6. THE DEPTH OF THE NON-SAG CP 25 CAULKS DEPENDS ON THE INSULATION THICKNESS,
- CAULK DEPTH (MIN.)
   INSULATION

   1"
   1" THICK

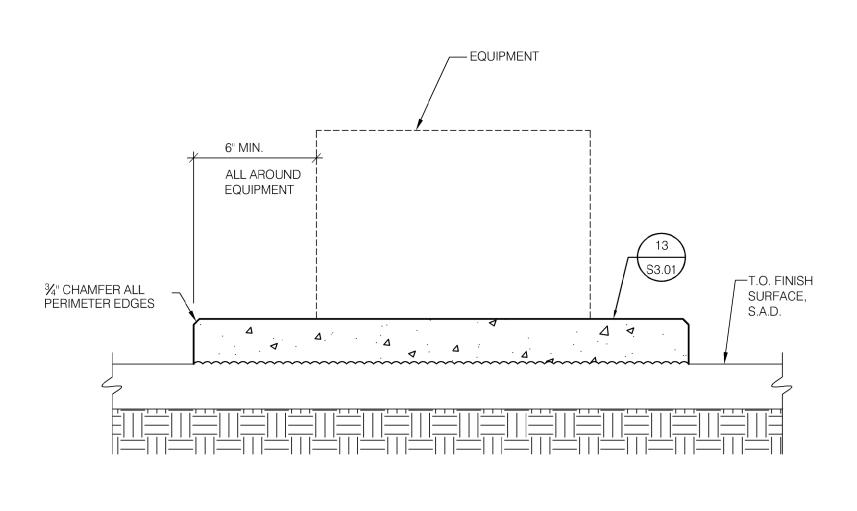
   2"
   2-3" THICK











**SECTION** 



